APPENDIX A

HEC-RAS MODELING RESULTS – DEVELOPED A (METRIC)

0.2% ACE (500-YR)

0.5% ACE (200-YR)

1% ACE (100-YR)

2% ACE (50-YR)

5% ACE (20-YR)

10% ACE (10-YR)

20% ACE (5-YR)

50% ACE (2-YR)

67% ACE (1.5-YR)

5% BY DURATION

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	0.2% - 500yr	1381.86	1282.26	1278.12	3.09	2.45	48.47	27.43	110.15	458.89	3.58	2	4.14	4.14
Sweet Grass County	A1	RM 478.10	225378	0.2% - 500yr	1381.86	1281.73	1277.66	3.8	3.29	80.5	48.81	115.1	483.75	2.65	1.61	4.06	4.06
Sweet Grass County	A1	RM 478.00	224862	0.2% - 500yr	1381.86	1281.23	1277.97	3.64	3.37	76.89	60.48	137.18	432.31	2.37	1.86	3.27	3.27
Sweet Grass County	A1	RM 477.91	224362	0.2% - 500yr	1381.86	1280.63	1277.65	4.16	3.34	90.07	54.24	88.2	503.75	2.56	1.54	2.98	2.98
Sweet Grass County	A1	RM 477.81	223862	0.2% - 500yr	1381.86	1280.21	1276.96	3.6	3.05	59.22	42.42	127.58	406.63	2.17	1.55	3.25	3.25
Sweet Grass County	A1	RM 477.72	223354	0.2% - 500yr	1381.86	1279.93	1276.32	2.72	2.35	45.48	31.55	185.23	568.24	1.98	1.37	3.61	3.61
Sweet Grass County	A1	RM 477.63	222892	0.2% - 500yr	1381.86	1279.83	1275.76	1.84	1.58	19.8	13.4	265.2	761.7	2.28	1.54	4.07	4.07
Sweet Grass County	A1	RM 477.49	222220	0.2% - 500yr	1381.86	1279.65	1276.07	1.81	1.51	17.81	12.55	256.97	804.93	2.14	1.5	3.59	3.59
Sweet Grass County	A1	RM 477.40	221702	0.2% - 500yr	1381.86	1279.6	1275.47	1.46	1.06	11.53	7.73	242.4	873.82	2.88	1.92	4.13	4.13
Sweet Grass County	A1	RM 477.31	221259	0.2% - 500yr	1381.86	1279.11	1275.74	3.24	1.75	57.38	23.92	122.85	892.82	2.84	1.17	3.37	3.37
Sweet Grass County	A1	RM 477.21	220767	0.2% - 500yr	1381.86	1278.87	1275.28	3.06	1.75	49.62	19.37	126.43	888.39	3.06	1.19	3.59	3.59
Sweet Grass County	A1	RM 477.11	220252	0.2% - 500yr	1381.86	1278.57	1274.86	3.13	1.8	56.39	28.55	147.45	887.1	2.43	1.22	3.71	3.71
Sweet Grass County	A1	RM 477.04	219860	0.2% - 500yr	1381.86	1278.26	1275.13	3.29	1.83	60.99	30.56	131.95	892.8	2.54	1.27	3.13	3.13
Sweet Grass County	A1	RM 476.95	219422	0.2% - 500yr	1381.86	1277.76	1274.55	3.53	2.17	74.8	38.93	155.66	862.06	2.12	1.1	3.21	3.21
Sweet Grass County	A1	RM 476.84	218828	0.2% - 500yr	1381.86	1277.46	1273.95	2.93	2.01	48.72	25.72	134.66	827.66	2.52	1.32	3.51	3.51
Sweet Grass County	A1	RM 476.75	218345	0.2% - 500yr	1381.86	1277.15	1273.54	2.87	2.05	43.87	22.91	172.58	826.38	2.43	1.26	3.61	3.61
Sweet Grass County	A1	RM 476.66	217855	0.2% - 500yr	1381.86	1276.83	1273.45	3.02	1.94	48.78	25.08	160.17	903.49	2.41	1.23	3.38	3.38
Sweet Grass County	A1	RM 476.57	217396	0.2% - 500yr	1381.86	1276.46	1273.09	3.46	1.97	64.78	29.04	98.93	887.09	2.9	1.29	3.37	3.37
Sweet Grass County	A1	RM 476.47	216861	0.2% - 500yr	1381.86	1276.1	1273.04	3.27	2.14	60.46	28.35	126.17	867.76	2.54	1.19	3.06	3.06
Sweet Grass County	A1	RM 476.38	216362	0.2% - 500yr	1381.86	1275.93	1272.1	2.8	1.77	41.37	21.02	105.41	890.07	3.11	1.58	3.83	3.83
Sweet Grass County	A1	RM 476.28	215816	0.2% - 500yr	1381.86	1275.16	1271.85	4.06	3.31	91.88	39.32	100.31	775.41	2.67	1.14	3.31	3.31
Sweet Grass County	A1	RM 476.15	215126	0.2% - 500yr	1381.86	1274.71	1271.76	3.31	2.61	62.88	40.27	133.16	731.59	2.4	1.54	2.95	2.95
Sweet Grass County	A1	RM 476.01	214437	0.2% - 500yr	1381.86	1274.44	1270.96	2.67	2.38	38.78	25.64	142.38	499.82	2.88	1.9	3.48	3.48
Sweet Grass County	A1	RM 475.91	213787	0.2% - 500yr	1381.86	1273.91	1270.35	3.15	2.84	54.45	43.55	150.4	225.2	2.8	2.24	3.57	3.57
Sweet Grass County	A1	RM 475.76	213072	0.2% - 500yr	1381.86	1273.46	1270.22	3.22	2.55	57.31	38.39	146.41	330.67	2.7	1.81	3.24	3.24
Sweet Grass County	A1	RM 475.63	212347	0.2% - 500yr	1381.86	1273.27	1269.34	2.46	2.02	32.34	24.61	173.18	296.85	3.03	2.3	3.93	3.93
Sweet Grass County	A1	RM 475.47	211539	0.2% - 500yr	1381.86	1272.69	1268.97	3.22	2.87	54.02	40.52	128.96	215.72	3.22	2.42	3.72	3.72
Sweet Grass County	A1	RM 475.35	210875	0.2% - 500yr	1381.86	1272	1268.88	3.85	3.4	80.23	49.15	120.05	249.92	2.91	1.77	3.12	3.12
Sweet Grass County	A1	RM 475.24	210333	0.2% - 500yr	1381.86	1272.03	1267.53	2.71	2.33	35.59	24.38	118.16	342.58	4.1	2.78	4.5	4.5
Sweet Grass County	A2	RM 475.12	209673	0.2% - 500yr	1381.86	1271.03	1267.9	4.42	3.72	110.68	72.63	116.67	270.42	2.53	1.66	3.13	3.13
Sweet Grass County	A2	RM 475.00	209034	0.2% - 500yr	1381.86	1270.26	1266.93	3.56	3.55	74.07	70.08	167.97	208.04	2.31	2.19	3.32	3.32
Sweet Grass County	A2	RM 474.87	208359	0.2% - 500yr	1381.86	1270.09	1266.75	2.71	2.44	38.75	29.46	80.83	371.63	3.2	2.38	3.34	3.34
Sweet Grass County	A2	RM 474.76	207797	0.2% - 500yr	1381.86	1269.55	1266.42	3.65	2.79	72.1	38.15	77.58	369.61	2.95	1.53	3.13	3.13
Sweet Grass County	A2	RM 474.67	207305	0.2% - 500yr	1381.86	1269.07	1266.29	3.76	3.1	79.12	50.14	66.54	322.05	2.72	1.67	2.78	2.78
Sweet Grass County	A2	RM 474.54	206635	0.2% - 500yr	1381.86	1268.77	1264.92	2.87	2.53	44.04	31.41	128.46	350.14	3.04	2.16	3.85	3.85
Sweet Grass County	A2	RM 474.43	205945	0.2% - 500yr	1381.86	1268.45	1265.16	3.04	2.13	49.16	20.5	89.64	511.19	3.1	1.27	3.28	3.28
Sweet Grass County	A2	RM 474.30	205321	0.2% - 500yr	1381.86	1268.2	1264.46	2.74	1.76	39.7	19.54	133.9	663.94	3.12	1.53	3.74	3.74
Sweet Grass County	A2	RM 474.21	204877	0.2% - 500yr	1381.86	1267.76	1264.22	3.52	2.08	65.07	22.92	103.41	702.93	3.16	1.1	3.54	3.54
Sweet Grass County	A2	RM 474.12	204378	0.2% - 500yr	1381.86	1267.64	1263.24	2.76	1.71	40.91	20.7	140.42	824.65	3	1.51	4.39	4.39
Sweet Grass County	A2	RM 474.01	203787	0.2% - 500yr	1381.86	1266.97	1263.55	3.66	2.48	76.62	37.7	138.78	672.58	2.45	1.2	3.43	3.43
Sweet Grass County	A2	RM 473.87	203072	0.2% - 500yr	1381.86	1266.55	1263.52	3.29	2.17	58.39	21.28	100.52	828.18	2.69	0.98	3.04	3.04
Sweet Grass County	A2	RM 473.74	202395	0.2% - 500yr	1381.86	1266.23	1263.06	2.83	1.98	44.2	19.89	121.34	764.84	2.71	1.21	3.17	3.17
Sweet Grass County	A2	RM 473.62	201781	0.2% - 500yr	1381.86	1265.95	1262.63	2.71	1.77	41.71	19.78	150.66	831.23	2.5	1.18	3.33	3.33
Sweet Grass County	A2	RM 473.50	201110	0.2% - 500yr	1381.86	1265.66	1261.83	2.5	1.83	35.06	17.67	179.13	804.33	2.65	1.32	3.83	3.83
Sweet Grass County	A2	RM 473.36	200362	0.2% - 500yr	1381.86	1265.42	1261.08	2.52	1.87	32.11	14.67	133.21	669.59	3.6	1.63	4.34	4.34
Sweet Grass County	A2	RM 473.27	199862	0.2% - 500yr	1381.86	1265.16	1260.81	2.9	2.23	43.3	22.96	117.77	514.48	3.4	1.79	4.35	4.35
Sweet Grass County	A2	RM 473.17	199362	0.2% - 500yr	1381.86	1264.88	1260.56	3.09	2.34	46.53	17.65	102.94	412.02	3.99	1.5	4.32	4.32
Sweet Grass County	A2	RM 473.08	198879	0.2% - 500yr	1381.86	1264.32	1260.56	3.89	3.29	78.91	42.97	105	339.55	3.22	1.75	3.76	3.76
Sweet Grass County	A2	RM 472.98	198340	0.2% - 500yr	1381.86	1264.17	1260.21	3.18	2.52	52.1	23.45	120.55	438.11	3.35	1.5	3.97	3.97
Sweet Grass County	A2	RM 472.89	197862	0.2% - 500yr	1381.86	1263.57	1260.5	4.06	2.75	91.19	40.34	108.06	462.99	2.72	1.2	3.07	3.07
Sweet Grass County	A2	RM 472.79	197362	0.2% - 500yr	1381.86	1263.33	1259.98	3.26	2.29	58.51	24.95	136.27	560.89	2.72	1.16	3.34	3.34
Sweet Grass County	A2	RM 472.70	196862	0.2% - 500yr	1381.86	1262.68	1259.35	3.91	2.69	87.41	37.93	125.74	486.46	2.44	1.06	3.33	3.33
Sweet Grass County	A2	RM 472.60	196360	0.2% - 500yr	1381.86	1262.61	1259.01	2.53	2	36.81	23.48	181.89	452.94	2.41	1.54	3.6	3.6
Sweet Grass County	A2	RM 472.50	195816	0.2% - 500yr	1381.86	1262.29	1258.53	2.7	2.12	42.13	28.36	177.8	421.21	2.41	1.61	3.76	3.76
Sweet Grass County	A2	RM 472.41	195349	0.2% - 500yr	1381.86	1262.01	1258.52	2.69	2.19	42.2	29.91	198.55	430.63	2.31	1.64	3.49	3.49
Sweet Grass County	A2	RM 472.31	194860	0.2% - 500yr	1381.86	1261.77	1258.34	2.73	2.05	39.75	22.15	149.41	444.72	3	1.67	3.43	3.43
Sweet Grass County	A2	RM 472.22	194356	0.2% - 500yr	1381.86	1261.6	1257.3	2.77	1.91	37.13	17.48	115.58	451.64	3.48	1.6	4.3	4.3
Sweet Grass County	A2	RM 472.09	193660	0.2% - 500yr	1381.86	1260.94	1257.45	3.87	2.48	80.53	33.2	93.59	456.77	3.05	1.22	3.48	3.48
Sweet Grass County	A2	RM 471.95	192935	0.2% - 500yr	1381.86	1260.88	1256.05	2.61	1.67	33.12	15.92	103.53	430.75	4.08	1.92	4.82	4.82
Sweet Grass County	A2	RM 471.86	192442	0.2% - 500yr	1381.86	1260.21	1256.23	4.1	2.55	86.03	40.32	76.65	336.53	3.52	1.61	3.98	3.98
Sweet Grass County	A2	RM 471.75	191870	0.2% - 500yr	1381.86	1260.08	1256.47	2.95	2.04	46.16	25.02	134.52	407.26	3.07	1.67	3.62	3.62

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	0.2% - 500yr	1381.86	1259.35	1256.54	4.01	2.67	91.64	38.05	124.48	506.88	2.48	1.02	2.82	2.82
Sweet Grass County	A2	RM 471.52	190686	0.2% - 500yr	1381.86	1259.05	1255.75	2.94	1.94	46.74	21.35	127.76	537.19	2.93	1.33	3.31	3.31
Sweet Grass County	A2	RM 471.38	189910	0.2% - 500yr	1381.86	1258.32	1255.44	3.51	2.55	76.71	41.04	150.55	539.46	1.88	1	2.88	2.88
Sweet Grass County	A2	RM 471.28	189362	0.2% - 500yr	1381.86	1257.72	1254.65	2.75	2.3	49.88	37.55	228.65	546.97	1.6	1.2	3.07	3.07
Sweet Grass County	A2	RM 471.18	188875	0.2% - 500yr	1381.86	1257.37	1254.2	2.79	2.15	41.58	24.26	155.58	573.49	1.99	1.16	3.17	3.17
Sweet Grass County	A2	RM 471.06	188150	0.2% - 500yr	1381.86	1257.04	1253.95	2.42	1.62	35.04	21.5	140.6	654.56	2.13	1.31	3.09	3.09
Sweet Grass County	A2	RM 470.94	187526	0.2% - 500yr	1381.86	1256.65	1253.58	2.85	1.96	43.96	23.11	108.67	584.64	2.51	1.32	3.07	3.07
Sweet Grass County	A2	RM 470.84	186938	0.2% - 500yr	1381.86	1256.43	1252.88	2.42	1.72	34.1	20.09	157.2	664.28	2.35	1.38	3.54	3.54
Sweet Grass County	A2	RM 470.73	186362	0.2% - 500yr	1381.86	1256.29	1253.49	1.89	1.58	21.24	15.44	189.13	611.7	2.16	1.56	3.22	3.22
Sweet Grass County	A2	RM 470.65	185977	0.2% - 500yr	1381.86	1256.04	1252.18	2.32	1.76	30	16.79	202.91	671.52	2.65	1.47	3.86	3.86
Sweet Grass County	A2	RM 470.56	185491	0.2% - 500yr	1381.86	1255.93	1252.52	2.11	1.61	24.41	14.76	189.32	674.6	2.82	1.69	3.42	3.42
Sweet Grass County	A2	RM 470.44	184875	0.2% - 500yr	1381.86	1255.81	1251.39	2.02	1.49	20.44	11.62	158.35	446.87	3.69	2.07	4.42	4.42
Sweet Grass County	A2	RM 470.35	184363	0.2% - 500yr	1381.86	1254.8	1251.52	4.39	3.56	108.18	65.56	113.84	247.97	2.59	1.57	3.28	3.28
Sweet Grass County	A2	RM 470.23	183828	0.2% - 500yr	1381.86	1254.5	1251.51	3.04	2.49	53.72	36.84	180.8	346.67	2.32	1.6	2.99	2.99
Sweet Grass County	A2	RM 470.13	183304	0.2% - 500yr	1381.86	1254.27	1249.86	2.66	2.33	40.29	30.91	162.28	306.3	2.54	1.93	4.41	4.41
Sweet Grass County	A2	RM 470.05	182914	0.2% - 500yr	1381.86	1254.17	1250.59	2.23	2.02	27.73	22.52	175.23	321.59	2.62	2.13	3.58	3.58
Sweet Grass County	A2	RM 469.93	182267	0.2% - 500yr	1381.86	1253.45	1249.62	3.68	2.95	72.57	37.14	105.63	306.94	3	1.53	3.83	3.83
Sweet Grass County	A2	RM 469.85	181860	0.2% - 500yr	1381.86	1253.33	1249.59	3.22	2.23	53.36	27.82	96.24	383.76	3.36	1.74	3.74	3.74
Sweet Grass County	A2	RM 469.75	181348	0.2% - 500yr	1381.86	1253.31	1248.77	2.29	1.6	26.22	14.38	116.21	424.41	3.75	2.03	4.54	4.54
Sweet Grass County	A2	RM 469.68	180952	0.2% - 500yr	1381.86	1253.17	1249.31	2.42	1.63	29.79	17.56	135.73	462.82	3.45	2.02	3.85	3.85
Sweet Grass County	A2	RM 469.58	180427	0.2% - 500yr	1381.86	1253.1	1247.94	2.09	1.58	20.7	13.61	130.56	402.27	4.4	2.87	5.16	5.16
Sweet Grass County	A2	RM 469.47	179860	0.2% - 500yr	1381.86	1252.44	1247.85	3.53	3.13	58.68	51.15	90.31	360.31	4.04	3.52	4.59	4.59
Sweet Grass County			179808	0.2% - 500yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	0.2% - 500yr	1381.86	1252.39	1247.84	3.19	3.16	50.2	48.16	112.89	351.75	3.83	3.68	4.55	4.55
Sweet Grass County	A2	RM 469.39	179400	0.2% - 500yr	1381.86	1251.82	1248.45	4.05	3.68	90.04	72.95	118.53	306.19	2.78	2.25	3.37	3.37
Sweet Grass County	A2	RM 469.30	178975	0.2% - 500yr	1381.86	1251.83	1247.55	3.05	2.45	46.08	29.26	106.16	405.62	3.82	2.39	4.29	4.29
Sweet Grass County	A2	RM 469.21	178467	0.2% - 500yr	1381.86	1251.19	1248.31	4.1	3.11	93.86	52.56	107.26	389.89	2.61	1.46	2.88	2.88
Sweet Grass County	A2	RM 469.09	177862	0.2% - 500yr	1381.86	1250.88	1247.12	2.53	1.91	35.42	22.48	118.23	498.82	2.68	1.7	3.76	3.76
Sweet Grass County	A2	RM 469.00	177350	0.2% - 500yr	1381.86	1250.24	1247.58	3.88	2.53	88.15	41.52	89.39	546.91	2.31	1.08	2.67	2.67
Sweet Grass County	A2	RM 468.90	176865	0.2% - 500yr	1381.86	1249.92	1246.48	2.6	1.96	34.78	20.22	157.69	544.3	2.44	1.41	3.44	3.44
Sweet Grass County	A2	RM 468.80	176341	0.2% - 500yr	1381.86	1249.61	1246.11	2.87	2.09	46.31	23.88	136.31	599.5	2.59	1.32	3.49	3.49
Sweet Grass County	A2	RM 468.71	175823	0.2% - 500yr	1381.86	1249.31	1246.41	2.82	2.22	47.5	28.89	147.29	585.07	2.15	1.31	2.9	2.9
Sweet Grass County	A2	RM 468.57	175192	0.2% - 500yr	1381.86	1249.14	1245.17	2.06	1.59	23.53	14.79	178.26	723.65	2.7	1.68	3.97	3.97
Sweet Grass County	A2	RM 468.42	174099	0.2% - 500yr	1381.86	1248.41	1244.97	3.08	2.39	54.53	33.67	168.48	536.18	2.42	1.49	3.45	3.45
Sweet Grass County	A3	RM 468.25	173324	0.2% - 500yr	1381.86	1248.22	1242.97	2.47	1.7	30.28	14.9	129.09	598.98	3.79	1.84	5.24	5.24
Sweet Grass County	A3	RM 468.16	172855	0.2% - 500yr	1381.86	1248	1243.58	2.86	1.94	42.73	22.96	119.05	593.52	3.22	1.72	4.42	4.42
Sweet Grass County	A3	RM 468.07	172364	0.2% - 500yr	1381.86	1247.96	1243.89	2.18	1.61	24.76	14.45	136.65	663.21	3.23	1.87	4.07	4.07
Sweet Grass County	A3	RM 467.97	171839	0.2% - 500yr	1381.86	1247.27	1244.32	4.05	2.85	94.22	53.13	92.44	553.97	2.46	1.36	2.96	2.96
Sweet Grass County	A3	RM 467.87	171312	0.2% - 500yr	1381.86	1247.03	1243.46	2.68	2.34	39.67	27.17	159.56	557.41	2.73	1.87	3.57	3.57
Sweet Grass County	A3	RM 467.78	170840	0.2% - 500yr	1381.86	1246.48	1243.74	3.71	2.92	79.34	46.32	100.58	397.19	2.38	1.39	2.74	2.74
Sweet Grass County	A3	RM 467.69	170376	0.2% - 500yr	1381.86	1246.19	1242.96	3.12	2.48	55.04	33.9	115.51	525.24	2.57	1.57	3.24	3.24
Sweet Grass County	A3	RM 467.55	169614	0.2% - 500yr	1381.86	1245.82	1242.1	2.54	2.15	37.89	25.89	133.88	620.08	2.3	1.56	3.72	3.72
Sweet Grass County	A3	RM 467.41	168870	0.2% - 500yr	1381.86	1245.62	1241.15	2.26	1.47	26.16	12.74	133.26	855.7	3.4	1.64	4.47	4.47
Sweet Grass County	A3	RM 467.30	168362	0.2% - 500yr	1381.86	1244.98	1242.15	4.02	2.23	90.07	33.69	90.65	862.63	2.68	0.99	2.82	2.82
Sweet Grass County	A3	RM 467.16	167641	0.2% - 500yr	1381.86	1244.66	1240.78	2.36	1.44	30.37	13.37	159.04	875.71	2.81	1.23	3.87	3.87
Sweet Grass County	A3	RM 467.00	166780	0.2% - 500yr	1381.86	1244.22	1240.48	2.83	1.63	45.24	20.66	141.03	863.73	2.55	1.15	3.75	3.75
Sweet Grass County	A3	RM 466.83	165902	0.2% - 500yr	1381.86	1243.77	1239.84	2.92	1.64	44.8	19.19	111.13	805.86	3.15	1.34	3.93	3.93
Sweet Grass County	A3	RM 466.73	165364	0.2% - 500yr	1381.86	1243.43	1239.81	3.13	1.88	52.03	21.36	115.43	627.4	3.05	1.25	3.62	3.62
Sweet Grass County	A3	RM 466.64	164858	0.2% - 500yr	1381.86	1242.92	1239.36	3.8	2.32	72.37	27.08	100.5	646.78	2.75	1.02	3.55	3.55
Sweet Grass County	A3	RM 466.49	164108	0.2% - 500yr	1381.86	1242.55	1239.67	3.04	1.85	51.61	27.2	107.44	675.05	2.64	1.39	2.88	2.88
Sweet Grass County	A3	RM 466.25	162845	0.2% - 500yr	1381.86	1241.28	1238.71	4	2.58	92.04	33.36	79.36	612.35	2.52	0.88	2.57	2.57
Sweet Grass County	A3	RM 465.79	160351	0.2% - 500yr	1381.86	1240.31	1236.48	2.32	1.17	28.95	13.16	110.96	873.79	3.07	1.35	3.82	3.82
Sweet Grass County	A3	RM 465.01	155919	0.2% - 500yr	1381.86	1238.06	1234.44	3.53	2.59	68.61	28.53	129.45	522.66	2.77	1.15	3.61	3.61
Sweet Grass County	A3	RM 464.68	154254	0.2% - 500yr	1381.86	1237.05	1233.35	2.91	2.22	48.07	25.21	171.81	610.15	2.49	1.3	3.71	3.71
Sweet Grass County	A3	RM 464.48	153160	0.2% - 500yr	1381.86	1236.52	1232.71	2.58	1.85	38.25	20.55	183.52	613.71	2.42	1.3	3.81	3.81
Sweet Grass County	A3	RM 464.33	152378	0.2% - 500yr	1381.86	1236.12	1232.61	2.6	1.8	38.52	20.65	183.37	630.47	2.47	1.32	3.51	3.51
Sweet Grass County	A3	RM 464.16	151621	0.2% - 500yr	1381.86	1235.8	1232.45	2.48	1.68	35.01	19.23	167.98	917.4	2.51	1.37	3.35	3.35
Sweet Grass County	A3	RM 464.04	150961	0.2% - 500yr	1381.86	1235.54	1231.48	2.61	1.62	34.47	17.56	118.42	878.71	3.56	1.79	4.05	4.05
Sweet Grass County	A3	RM 463.88	150174	0.2% - 500yr	1381.86	1234.87	1231.85	3.51	2.54	70.69	42.9	136.95	694.28	2.44	1.47	3.02	3.02
Sweet Grass County	A3	RM 463.78	149616	0.2% - 500yr	1381.86	1234.53	1230.54	3.06	2.37	52.01	35.59	149.53	555.67	2.68	1.83	4	4
Sweet Grass County	A3	RM 463.67	149069	0.2% - 500yr	1381.86	1234.26	1230.86	2.98	2.08	49.14	32.95	136.34	749.53	2.7	1.81	3.4	3.4

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	0.2% - 500yr	1381.86	1234.05	1230.39	2.87	1.93	43.76	28.13	135.08	1297.3	3.03	1.95	3.66	3.66
Sweet Grass County	A3	RM 463.49	148111	0.2% - 500yr	1381.86	1233.23	1229.73	4.12	2.94	96.51	51.2	122.87	1221.06	2.49	1.31	3.5	3.5
Sweet Grass County	A3	RM 463.34	147326	0.2% - 500yr	1381.86	1232.74	1229.72	2.76	1.94	44.9	27.42	179.41	1428.13	2.21	1.35	3.03	3.03
Sweet Grass County	A3	RM 463.20	146616	0.2% - 500yr	1381.86	1232.46	1228.95	2.35	1.54	32.45	19.83	124.46	1522.73	2.28	1.37	3.5	3.5
Sweet Grass County	A3	RM 463.06	145881	0.2% - 500yr	1381.86	1232.29	1228.89	1.75	1	17.67	11.8	147.76	1518.49	2.42	1.61	3.4	3.4
Sweet Grass County	A4	RM 462.79	144435	0.2% - 500yr	1381.86	1232.18	1228.25	1.25	0.68	8.19	5.43	133.61	1487.71	3.22	2.1	3.93	3.93
Sweet Grass County	A4	RM 462.16	141146	0.2% - 500yr	1381.86	1229.59	1226.15	3.61	2.31	74.53	34.56	109.43	880.97	2.48	1.13	3.44	3.44
Sweet Grass County		RM 461.97	140135	0.2% - 500yr	1381.86	1229.07	1226.06	2.68	1.62	42.04	25.33	120.82	741.99	2.26	1.36	3.01	3.01
Sweet Grass County	A4	RM 461.71	138705	0.2% - 500yr	1381.86	1227.57	1224.75	3.96	3.07	96.15	48.03	101.5	509.62	2.01	1	2.82	2.82
Sweet Grass County	A4	RM 461.52	137683	0.2% - 500yr	1381.86	1227.17	1222.31	2.58	1.84	32.82	14.17	85.64	710.27	3.99	1.65	4.86	4.86
Sweet Grass County	A4	RM 461.33	136718	0.2% - 500yr	1381.86	1226.94	1223.38	2.2	1.65	26.61	16.77	125.5	845.02	2.72	1.71	3.57	3.57
Sweet Grass County	A4	RM 461.14	135736	0.2% - 500yr	1381.86	1226.24	1222.44	3.27	2.15	57.2	26.68	117.37	596.54	3.03	1.4	3.8	3.8
Sweet Grass County	A4	RM 460.99	134951	0.2% - 500yr	1381.86	1225.85	1221.98	3.08	2.1	49.92	23.37	121.6	549.03	3.16	1.47	3.86	3.86
Sweet Grass County	A4	RM 460.85	134214	0.2% - 500yr	1381.86	1225.65	1222.07	2.54	1.85	33.09	20.52	147.93	477.02	3.07	1.9	3.58	3.58
Sweet Grass County	A4	RM 460.74	133616	0.2% - 500yr	1381.86	1225.52	1220.27	2.29	1.81	24.77	15.97	125.57	485.34	4.44	2.84	5.26	5.26
Sweet Grass County	A4	RM 460.63	133067	0.2% - 500yr	1381.86	1225.51	1218.9	1.84	1.32	14.36	5.87	106.45	624.28	6.19	2.46	6.61	6.61
Sweet Grass County			132957	0.2% - 500yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	0.2% - 500yr	1381.86	1224.64	1221.09	3.65	2.8	71.31	35.19	112.67	536.69	2.98	1.46	3.55	3.55
Sweet Grass County	A4	RM 460.50	132281	0.2% - 500yr	1381.86	1223.8	1221.12	4.07	3.74	98.48	68.41	151.99	504.25	2.16	1.5	2.68	2.68
Sweet Grass County	A4	RM 460.38	131785	0.2% - 500yr	1381.86	1223.6	1220.5	2.74	2.29	41.13	26.75	139.17	620.9	2.38	1.55	3.11	3.11
Sweet Grass County	A4	RM 460.29	131287	0.2% - 500yr	1381.86	1223.36	1219.97	2.69	2.2	40.69	23.62	135.07	501.56	2.58	1.49	3.39	3.39
Sweet Grass County	A4	RM 460.19	130793	0.2% - 500yr	1381.86	1223.19	1219.38	2.49	2.05	32.86	22.3	118.6	360.86	3.09	2.1	3.81	3.81
Sweet Grass County	A4	RM 460.08	130210	0.2% - 500yr	1381.86	1222.82	1218.23	2.87	2.36	41.83	23.41	132.3	406.24	3.47	1.93	4.6	4.6
Sweet Grass County	A4	RM 459.99	129763	0.2% - 500yr	1381.86	1222.47	1218.01	3.33	2.89	55.69	35.92	110.76	362	3.62	2.32	4.46	4.46
Sweet Grass County	A4	RM 459.90	129246	0.2% - 500yr	1381.86	1222.3	1217.62	3.11	2.77	46.94	33.73	106.75	256.56	4.03	2.88	4.69	4.69
Sweet Grass County	A4	RM 459.81	128792	0.2% - 500yr	1381.86	1221.25	1218.15	4.8	4.6	125.43	94.98	99.73	264.33	2.86	2.16	3.1	3.1
Sweet Grass County	A4	RM 459.72	128310	0.2% - 500yr	1503.63	1221.32	1217.31	3.3	2.66	56.45	34.14	127.21	379.12	3.29	1.98	4.01	4.01
Sweet Grass County	A4	RM 459.62	127798	0.2% - 500yr	1503.63	1221.18	1217.46	2.9	2.36	44.35	25.89	128.42	450.26	3.08	1.8	3.72	3.72
Sweet Grass County	A5	RM 459.53	127324	0.2% - 500yr	1503.63	1220.38	1217.26	3.95	3.76	89.6	61.33	156.91	269.01	2.41	1.65	3.12	3.12
Sweet Grass County	A5	RM 459.44	126881	0.2% - 500yr	1503.63	1220.24	1216.93	3.02	2.87	50.9	41.54	185.47	489.62	2.65	2.16	3.32	3.32
Sweet Grass County	A5	RM 459.31	126192	0.2% - 500yr	1503.63	1219.81	1215.66	3.14	2.85	52.63	38.75	153.23	578.72	3.06	2.24	4.14	4.14
Sweet Grass County	A5	RM 459.24	125848	0.2% - 500yr	1503.63	1219.46	1215.69	3.49	3.15	65.83	49.15	145.56	637	2.9	2.16	3.77	3.77
Sweet Grass County	A5	RM 459.16	125420	0.2% - 500yr	1503.63	1218.79	1215.82	4.07	4.02	96.5	83.19	158.87	390.92	2.32	2	2.97	2.97
Sweet Grass County	A5	RM 459.02	124624	0.2% - 500yr	1503.63	1218.59	1214.8	2.63	2.43	37.69	26.99	200.81	615.14	2.8	2	3.79	3.79
Sweet Grass County	A5	RM 458.79	123371	0.2% - 500yr	1503.63	1217.63	1214.02	3.46	3.13	65.4	34.92	152.03	344.08	2.8	1.49	3.61	3.61
Sweet Grass County	A5	RM 458.48	121727	0.2% - 500yr	1503.63	1216.52	1213.35	2.92	2.79	51.5	47.47	165.37	310.5	2.09	1.93	3.17	3.17
Sweet Grass County	A5	RM 458.36	121100	0.2% - 500yr	1503.63	1215.52	1212.73	4.17	3.62	100.62	68.48	117.71	272.37	2.24	1.52	2.79	2.79
Sweet Grass County	A5	RM 458.25	120543	0.2% - 500yr	1503.63	1215.52	1211.35	2.55	2.21	33.58	24.86	122.03	270.24	3.4	2.51	4.17	4.17
Sweet Grass County	A5	RM 458.13	119849	0.2% - 500yr	1503.63	1215.25	1211.21	2.61	2.38	35.7	29.24	131.08	238.81	3.25	2.65	4.04	4.04
Sweet Grass County	A5	RM 458.03	119256	0.2% - 500yr	1503.63	1215.09	1210.09	2.53	2.24	30.71	21.45	122.91	228.89	4.21	2.93	5.01	5.01
Sweet Grass County	A5	RM 457.87	118444	0.2% - 500yr	1503.63	1214.71	1209.57	3.01	2.83	41.72	29.02	104.9	222	4.72	3.27	5.14	5.14
Sweet Grass County	A5	RM 457.76	117858	0.2% - 500yr	1503.63	1214.48	1210.24	3.09	2.99	48.47	42.06	137.04	199.31	3.52	3.06	4.24	4.24
Sweet Grass County	A5	RM 457.66	117350	0.2% - 500yr	1503.63	1214.16	1210.03	3.31	3.16	56.29	46.32	132.62	273.85	3.39	2.79	4.14	4.14
Sweet Grass County	A5	RM 457.54	116694	0.2% - 500yr	1503.63	1213.75	1209.93	3.45	3.18	62.06	47.86	131.05	252.04	3.24	2.5	3.82	3.82
Sweet Grass County	A5	RM 457.35	115703	0.2% - 500yr	1503.63	1212.33	1209.69	4.49	4.49	120.57	120.57	156.67	156.67	2.14	2.14	2.64	2.64
Sweet Grass County	A5	RM 457.20	114921	0.2% - 500yr	1503.63	1212.2	1208.7	2.66	2.66	38.32	38.01	197.6	199.22	2.86	2.84	3.49	3.49
Sweet Grass County	A5	RM 457.02	113974	0.2% - 500yr	1503.63	1211.75	1208.04	3.11	2.28	50.27	26.56	103.04	381.02	3.29	1.73	3.7	3.7
Sweet Grass County	A5	RM 456.84	113009	0.2% - 500yr	1503.63	1211.22	1206.55	3.11	2.8	47.5	29.81	120.66	219.25	3.92	2.45	4.67	4.67
Sweet Grass County	A5	RM 456.68	112164	0.2% - 500yr	1503.63	1210.4	1206.59	4.03	3.88	84.26	68.62	113.81	145.83	3.26	2.66	3.81	3.81
Sweet Grass County	A5	RM 456.55	111455	0.2% - 500yr	1503.63	1210.18	1206.19	3.12	3.04	50.71	43.16	146.88	177.8	3.26	2.78	4	4
Sweet Grass County	A5	RM 456.43	110857	0.2% - 500yr	1503.63	1209.84	1205.33	3.34	3.11	54.52	39.34	110.87	235.42	4	2.87	4.51	4.51
Sweet Grass County	A6	RM 456.29	110121	0.2% - 500yr	1503.63	1209.3	1205.45	3.74	3.49	68.51	53.54	118.64	298.38	3.34	2.61	3.85	3.85
Sweet Grass County	A6	RM 456.18	109508	0.2% - 500yr	1503.63	1208.82	1205.45	3.78	3.71	77.62	70.42	139.71	357.37	2.84	2.59	3.37	3.37
Sweet Grass County	A6	RM 456.03	108721	0.2% - 500yr	1503.63	1208.4	1204.59	3.14	2.98	54.84	45.49	176.21	398.42	2.68	2.22	3.81	3.81
Sweet Grass County	A6	RM 455.84	107742	0.2% - 500yr	1503.63	1208.03	1204.05	2.66	2.45	36.1	25.41	183.51	394.46	3.04	2.14	3.99	3.99
Sweet Grass County	A6	RM 455.70	106976	0.2% - 500yr	1503.63	1207.7	1203.14	2.85	2.81	39.39	35.78	143.46	345.89	3.66	3.33	4.56	4.56
Sweet Grass County	A6	RM 455.56	106256	0.2% - 500yr	1503.63	1207.16	1203.35	3.54	3.16	62.36	35.59	119.56	398.21	3.43	1.95	3.81	3.81
Sweet Grass County	A6	RM 455.39	105360	0.2% - 500yr	1503.63	1206.95	1202.74	2.73	2.49	37.75	29	151.06	318.75	3.49	2.68	4.21	4.21
Sweet Grass County	A6	RM 455.26	104667	0.2% - 500yr	1503.63	1205.88	1202.83	4.46	3.73	111.69	68.65	125.73	299.64	2.54	1.56	3.04	3.04
Sweet Grass County	A6	RM 455.09	103771	0.2% - 500yr	1503.63	1205.57	1201.58	2.65	2.22	36.33	22.78	159.87	322.01	3.38	2.11	3.99	3.99
Sweet Grass County	A6	RM 454.95	103072	0.2% - 500yr	1503.63	1204.92	1201.94	3.51	3.2	73.44	57.64	179.76	274.09	2.18	1.71	2.97	2.97

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	0.2% - 500yr	1503.63	1204.65	1200.61	2.58	2.44	37.25	33.21	179.16	255.1	2.72	2.42	4.04	4.04
Sweet Grass County	A6	RM 454.72	101863	0.2% - 500yr	1503.63	1204.2	1200.47	3.08	3.08	49.95	49.34	193.59	195.85	2.52	2.49	3.73	3.73
Sweet Grass County	A6	RM 454.64	101419	0.2% - 500yr	1503.63	1204.09	1199.69	2.57	2.57	34.07	33.37	195.79	225.93	2.99	2.93	4.4	4.4
Sweet Grass County	A6	RM 454.53	100846	0.2% - 500yr	1503.63	1203.52	1199.59	3.51	3.42	61.36	48.48	120.59	243.39	3.53	2.79	3.94	3.94
Sweet Grass County	A6	RM 454.43	100338	0.2% - 500yr	1503.63	1203.22	1199	3.56	3.47	64.26	49.03	115.82	249.88	3.62	2.76	4.23	4.23
Sweet Grass County	A6	RM 454.29	99597	0.2% - 500yr	1503.63	1202.75	1198.71	3.66	3.61	67.88	57.9	114.12	215.92	3.59	3.06	4.04	4.04
Sweet Grass County	A6	RM 454.15	98861	0.2% - 500yr	1503.63	1202.45	1198.68	3.27	3.08	53.61	40.58	136.69	196.17	3.29	2.49	3.78	3.78
Sweet Grass County	A6	RM 454.00	98105	0.2% - 500yr	1503.63	1202.07	1198.53	3.08	3.07	47.43	46.67	195.3	198.55	2.5	2.46	3.54	3.54
Sweet Grass County	A6	RM 453.89	97523	0.2% - 500yr	1503.63	1201.73	1198.31	3.07	2.97	49.95	46.36	181.46	207.7	2.62	2.44	3.43	3.43
Sweet Grass County	A6	RM 453.78	96929	0.2% - 500yr	1503.63	1201.57	1197.07	2.64	2.44	34.96	20.59	153.06	288.67	3.64	2.14	4.5	4.5
Sweet Grass County	A6	RM 453.67	96361	0.2% - 500yr	1503.63	1201.28	1197.77	2.99	2.55	46.91	33.08	151.58	280.61	2.97	2.1	3.52	3.52
Sweet Grass County	A6	RM 453.58	95863	0.2% - 500yr	1503.63	1201.18	1196.37	2.52	2.5	30.39	29.17	182.6	192.03	3.83	3.68	4.81	4.81
Sweet Grass County	A6	RM 453.48	95355	0.2% - 500yr	1503.63	1200.41	1196.86	4.04	3.88	84.23	60.55	118.04	172.19	3.13	2.25	3.54	3.54
Sweet Grass County	A6	RM 453.35	94633	0.2% - 500yr	1503.63	1199.79	1196.43	3.98	3.83	83.34	70.25	133.91	232.62	2.8	2.36	3.36	3.36
Sweet Grass County	A7	RM 453.23	93994	0.2% - 500yr	1503.63	1199.43	1196.41	3.42	3.22	62.8	56.88	113	257.93	2.53	2.29	3.02	3.02
Sweet Grass County	A7	RM 453.11	93361	0.2% - 500yr	1503.63	1199.25	1195.68	2.53	2.5	27.29	26.9	275.44	294.03	2.08	2.05	3.57	3.57
Sweet Grass County	A7	RM 453.01	92863	0.2% - 500yr	1503.63	1198.84	1195.38	3.1	3	35.04	34.66	259.27	294.39	1.72	1.7	3.46	3.46
Sweet Grass County	A7	RM 452.91	92363	0.2% - 500yr	1503.63	1198.72	1194.85	2.77	2.24	37.86	24.2	117.27	336.43	3.17	2.02	3.88	3.88
Sweet Grass County	A7	RM 452.82	91863	0.2% - 500yr	1503.63	1198.43	1194.65	2.88	2.74	43.09	39.24	111.14	183.56	3.27	2.99	3.78	3.78
Sweet Grass County	A7	RM 452.72	91363	0.2% - 500yr	1503.63	1198.36	1193.29	2.44	2.31	28.42	22.83	144.32	192.27	4.22	3.39	5.06	5.06
Sweet Grass County	A7	RM 452.64	90932	0.2% - 500yr	1503.63	1198.12	1194.02	2.94	2.36	43.76	32.55	133.5	295.25	3.49	2.6	4.1	4.1
Sweet Grass County	A7	RM 452.53	90362	0.2% - 500yr	1503.63	1197.62	1193.87	3.59	3.2	65.01	47.56	116.37	198.48	3.24	2.37	3.76	3.76
Sweet Grass County	A7	RM 452.43	89864	0.2% - 500yr	1503.63	1197.3	1193.52	3.63	3.19	66.33	46.05	111.78	204.89	3.32	2.3	3.78	3.78
Sweet Grass County	A7	RM 452.33	89331	0.2% - 500yr	1503.63	1197.02	1193.16	3.41	3.17	58.06	45.57	134.45	292.96	3.14	2.46	3.85	3.85
Sweet Grass County	A7	RM 452.25	88863	0.2% - 500yr	1503.63	1196.71	1192.91	3.45	3.15	59.84	44.47	138.6	232.99	3.1	2.3	3.8	3.8
Sweet Grass County	A7	RM 452.16	88399	0.2% - 500yr	1503.63	1196.44	1192.68	3.53	2.79	62.96	39.28	119.78	367.94	3.29	2.05	3.76	3.76
Sweet Grass County	A7	RM 452.06	87882	0.2% - 500yr	1503.63	1196.2	1192.4	3.32	2.67	56.07	29.94	120.32	429.95	3.48	1.85	3.8	3.8
Sweet Grass County	A7	RM 451.96	87394	0.2% - 500yr	1503.63	1196.01	1191.9	3.18	2.46	52.36	30.66	125.87	315.31	3.31	1.94	4.11	4.11
Sweet Grass County	A7	RM 451.86	86835	0.2% - 500yr	1503.63	1195.82	1191.79	2.98	2.31	43.3	28.26	122.39	280.51	3.56	2.32	4.03	4.03
Sweet Grass County	A7	RM 451.75	86230	0.2% - 500yr	1503.63	1195.42	1191.43	3.22	3.21	51.53	50.84	134.08	135.9	3.49	3.44	3.99	3.99
Sweet Grass County	A7	RM 451.61	85483	0.2% - 500yr	1503.63	1195.15	1190.7	2.95	2.92	44.87	40.94	152.65	298.33	3.34	3.05	4.45	4.45
Sweet Grass County	A7	RM 451.49	84861	0.2% - 500yr	1503.63	1194.56	1191.07	3.68	3.33	68.02	43.72	126.46	223	3.15	2.02	3.5	3.5
Sweet Grass County	A7	RM 451.34	84113	0.2% - 500yr	1503.63	1194.54	1190.06	2.46	2.34	29.5	20.79	150.96	492.94	3.99	2.8	4.48	4.48
Sweet Grass County	A7	RM 451.20	83363	0.2% - 500yr	1503.63	1193.75	1189.8	3.92	3.61	77.38	43.73	103.86	272.79	3.62	2.04	3.96	3.96
Sweet Grass County	A7	RM 451.10	82863	0.2% - 500yr	1503.63	1193.64	1189.79	3.25	3.12	53.62	40.19	133.83	271.85	3.43	2.57	3.85	3.85
Sweet Grass County	A7	RM 451.00	82325	0.2% - 500yr	1503.63	1193.54	1189.55	2.81	2.54	40.02	28.57	118.3	320.38	3.49	2.48	3.99	3.99
Sweet Grass County	A7	RM 450.86	81602	0.2% - 500yr	1503.63	1193.39	1188.29	2.28	1.99	48.63	22.75	90.13	334.59	5.01	2.26	5.1	5.1
Sweet Grass County	A7	RM 450.73	80923	0.2% - 500yr	1503.63	1192.2	1188.46	4.49	3.91	107.46	68.77	101.7	195.84	3.09	1.96	3.74	3.74
Sweet Grass County	A7	RM 450.63	80374	0.2% - 500yr	1503.63	1191.91	1188.16	3.66	3.44	71.63	46.54	135.95	240.88	2.98	1.94	3.75	3.75
Sweet Grass County	A7	RM 450.53	79863	0.2% - 500yr	1503.63	1191.67	1187.88	3.28	3.13	54.63	40.63	151.61	216.7	2.98	2.22	3.79	3.79
Sweet Grass County	A7	RM 450.43	79300	0.2% - 500yr	1503.63	1191.44	1187.72	3.06	2.78	46.85	31.98	133.66	275.55	2.89	1.97	3.72	3.72
Sweet Grass County	A7	RM 450.34	78849	0.2% - 500yr	1580.08	1191.18	1188.05	3.12	2.82	52.54	40.36	125.83	266.6	2.74	2.1	3.13	3.13
Sweet Grass County	A7	RM 450.23	78298	0.2% - 500yr	1580.08	1191.06	1186.92	2.39	2.18	28.98	21.74	195.92	503.83	3.32	2.49	4.13	4.13
Sweet Grass County	A7	RM 450.14	77822	0.2% - 500yr	1580.08	1190.84	1186.4	2.75	2.16	38.82	19.86	152.44	484.82	3.42	1.72	4.43	4.43
Sweet Grass County	A7	RM 450.05	77362	0.2% - 500yr	1580.08	1190.09	1187.2	3.99	3.64	87.51	58.58	139.97	367.44	2.77	1.85	2.89	2.89
Sweet Grass County	A7	RM 449.96	76841	0.2% - 500yr	1580.08	1189.88	1186.28	3.4	2.84	59.31	39.19	128.63	378.76	3.41	2.24	3.6	3.6
Sweet Grass County	A7	RM 449.86	76356	0.2% - 500yr	1580.08	1189.49	1185.58	3.7	2.79	68.95	33.82	110.58	564.45	3.61	1.76	3.91	3.91
Sweet Grass County	A7	RM 449.77	75860	0.2% - 500yr	1580.08	1189.13	1185.68	3.69	3.16	68.09	49.8	168.44	421.46	2.4	1.76	3.45	3.45
Sweet Grass County	A7	RM 449.68	75373	0.2% - 500yr	1580.08	1188.83	1185.9	3.13	2.83	57.65	48.84	220.37	480.25	2.23	1.89	2.93	2.93
Sweet Grass County	A7	RM 449.59	74904	0.2% - 500yr	1580.08	1188.71	1184.15	2.83	2.34	38.91	22.42	112.53	451.1	4.11	2.32	4.56	4.56
Sweet Grass County	A7	RM 449.48	74351	0.2% - 500yr	1580.08	1188.29	1184.86	3.5	2.88	69.15	45.06	121.9	390.52	2.55	1.66	3.44	3.44
Sweet Grass County	A7	RM 449.37	73741	0.2% - 500yr	1580.08	1188.18	1184.73	2.27	1.88	28.79	18.41	210.35	621.79	2.62	1.68	3.45	3.45
Sweet Grass County	A7	RM 449.26	73165	0.2% - 500yr	1580.08	1188.1	1184.33	2.01	1.25	19.94	12.31	128.66	855	3.21	1.95	3.77	3.77
Sweet Grass County	A7	RM 449.10	72364	0.2% - 500yr	1580.08	1187.24	1183.97	4.21	2.11	94.14	40.62	87.4	842.08	3.15	1.32	3.28	3.28
Sweet Grass County	A7	RM 449.00	71858	0.2% - 500yr	1580.08	1186.7	1183.97	3.61	2.21	75.31	41.58	113.75	769.83	2.43	1.32	2.74	2.74
Sweet Grass County	A7	RM 448.88	71223	0.2% - 500yr	1580.08	1186.63	1183.11	1.86	1.6	19.3	13.77	232.17	729.19	2.63	1.88	3.52	3.52
Sweet Grass County	A7	RM 448.76	70537	0.2% - 500yr	1580.08	1186.61	1182.01	1.18	1.14	7.55	7.05	312.73	707.96	2.88	2.69	4.59	4.59
Sweet Grass County	A7	RM 448.55	69424	0.2% - 500yr	1580.08	1186.41	1181.8	1.85	1.53	16.48	10.57	154.14	783.39	4.14	2.65	4.61	4.61
Sweet Grass County	A7	RM 448.41	68815	0.2% - 500yr	1580.08	1185.83	1181.16	3.45	3.01	53.46	39.48	108.05	471.56	3.93	2.85	4.67	4.67
Sweet Grass County	A7	RM 448.32	68353	0.2% - 500yr	1580.08	1185.95	1179.91	2.23	2.16	21.8	19.72	126.03	553.02	5.6	5.06	6.04	6.04
Sweet Grass County	A7	RM 448.23	67851	0.2% - 500yr	1580.08	1185.69	1179.82	2.78	2.7	34.39	31.06	105.4	419.05	5.36	4.83	5.87	5.87

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	0.2% - 500yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	0.2% - 500yr	1580.08	1184.69	1180.89	4.5	4.44	105.72	98.73	107.64	275.31	3.25	3.04	3.8	3.8
Sweet Grass County	A7	RM 448.07	67043	0.2% - 500yr	1580.08	1184.39	1180.7	3.36	2.99	59.81	41.93	149.15	461.94	3.07	2.15	3.68	3.68
Sweet Grass County	A7	RM 447.94	66348	0.2% - 500yr	1580.08	1183.96	1180.22	3.46	2.63	61.18	26.28	125.42	547.86	3.43	1.47	3.75	3.75
Sweet Grass County	A7	RM 447.85	65863	0.2% - 500yr	1580.08	1183.67	1180.39	3.51	2.29	66.79	29.13	136.95	581.99	2.88	1.25	3.29	3.29
Sweet Grass County	A7	RM 447.75	65363	0.2% - 500yr	1580.08	1183.55	1179.55	2.87	2.03	39.21	17.99	143.24	479.23	3.56	1.63	4	4
Sweet Grass County	A7	RM 447.66	64865	0.2% - 500yr	1580.08	1183.17	1179.59	3.41	2.14	59.73	23.91	121.32	543.98	3.42	1.36	3.58	3.58
Sweet Grass County	A7	RM 447.56	64365	0.2% - 500yr	1580.08	1182.6	1179.67	3.99	2.48	90.2	42.7	136.94	537.71	2.51	1.19	2.93	2.93
Sweet Grass County	A7	RM 447.49	64001	0.2% - 500yr	1580.08	1182.43	1179.82	3.13	2.3	55.79	32	193.72	508.05	2.36	1.35	2.61	2.61
Sweet Grass County	A7	RM 447.39	63473	0.2% - 500yr	1580.08	1181.88	1178.85	3.97	2.47	83.99	36.14	94.16	574.31	2.66	1.14	3.03	3.03
Sweet Grass County	A7	RM 447.27	62880	0.2% - 500yr	1580.08	1181.53	1178.26	3.35	2.27	63.11	29.53	108.82	583.5	2.59	1.19	3.28	3.28
Sweet Grass County	A7	RM 447.17	62358	0.2% - 500yr	1580.08	1181.22	1177.92	3.17	1.98	56.69	29.41	112.86	600.89	2.59	1.33	3.3	3.3
Sweet Grass County	A7	RM 447.08	61863	0.2% - 500yr	1580.08	1180.81	1177.91	3.26	1.98	63.64	37.5	102.95	630.53	2.16	1.26	2.9	2.9
Sweet Grass County	A7	RM 446.98	61358	0.2% - 500yr	1580.08	1180.31	1177.28	3.47	2.06	64.44	28.68	95.82	692.46	2.69	1.19	3.02	3.02
Sweet Grass County	A7	RM 446.89	60841	0.2% - 500yr	1580.08	1179.97	1176.94	3.51	2.01	68.29	31.52	81.06	745.5	2.71	1.24	3.03	3.03
Sweet Grass County	A7	RM 446.80	60396	0.2% - 500yr	1580.08	1179.76	1175.92	2.93	1.92	45.83	25.09	96.31	777.1	3.03	1.64	3.85	3.85
Sweet Grass County	A7	RM 446.70	59903	0.2% - 500yr	1580.08	1179.53	1176.22	3.31	2.1	57.98	26.11	65.99	763.44	3.26	1.39	3.31	3.31
Sweet Grass County	A7	RM 446.60	59371	0.2% - 500yr	1580.08	1179.29	1175.91	3.02	1.99	47.17	23.83	77.2	666.49	3.11	1.53	3.38	3.38
Sweet Grass County	A7	RM 446.51	58868	0.2% - 500yr	1580.08	1179.13	1175.24	2.71	2.04	38.72	21.68	117.15	580.76	3.15	1.75	3.88	3.88
Sweet Grass County	A7	RM 446.41	58363	0.2% - 500yr	1580.08	1178.94	1174.39	2.52	1.88	31.62	16.36	148.64	553.47	3.29	1.7	4.55	4.55
Sweet Grass County	A7	RM 446.30	57762	0.2% - 500yr	1580.08	1178.73	1174.85	2.63	1.89	34.52	16.2	123.97	532.51	3.35	1.57	3.89	3.89
Sweet Grass County	A7	RM 446.22	57365	0.2% - 500yr	1580.08	1177.99	1174.39	3.96	3.59	82.13	40.51	129.44	297.88	3.02	1.48	3.59	3.59
Sweet Grass County	A7	RM 446.12	56852	0.2% - 500yr	1580.08	1177.81	1174.04	3.33	2.66	55.98	23.42	140.19	447.59	3.18	1.32	3.77	3.77
Sweet Grass County	A7	RM 446.02	56303	0.2% - 500yr	1580.08	1177.72	1173.3	2.88	2.01	39.85	18.35	98.42	406.36	4.34	1.93	4.43	4.43
Sweet Grass County	A7	RM 445.94	55871	0.2% - 500yr	1580.08	1176.89	1173.6	4.54	3.51	111.2	48.36	95.11	359.99	2.99	1.28	3.29	3.29
Sweet Grass County	A7	RM 445.82	55236	0.2% - 500yr	1580.08	1176.87	1173.05	2.57	2.34	36.12	28.47	209.16	366.15	2.79	2.2	3.82	3.82
Sweet Grass County	A7	RM 445.71	54753	0.2% - 500yr	1580.08	1176.71	1172.38	2.45	2.34	29.28	25.18	210.48	335.89	3	2.58	4.33	4.33
Sweet Grass County	A7	RM 445.60	54202	0.2% - 500yr	1580.08	1176.48	1172.32	2.62	2.49	34.32	30.88	190.57	310.95	3.1	2.8	4.16	4.16
Sweet Grass County	A7	RM 445.46	53453	0.2% - 500yr	1580.08	1175.96	1171.04	3.36	2.91	55.35	38.53	132.44	258.88	3.23	2.25	4.92	4.92
Sweet Grass County	A7	RM 445.36	52888	0.2% - 500yr	1580.08	1175.77	1170.25	3.15	2.49	49.32	32.19	105.4	407.53	3.81	2.47	5.52	5.52
Sweet Grass County	A7	RM 445.26	52344	0.2% - 500yr	1580.08	1174.89	1171.35	4.45	3.72	105.72	56.13	106	319.5	3.04	1.61	3.54	3.54
Sweet Grass County	A7	RM 445.17	51873	0.2% - 500yr	1580.08	1174.45	1171.83	4.13	3.68	96.92	56.69	137.48	353.7	2.51	1.46	2.61	2.61
Sweet Grass County	A7	RM 445.07	51376	0.2% - 500yr	1580.08	1174.53	1170.28	2.49	2.19	32.59	21.56	181.57	490.63	3.21	2.12	4.25	4.25
Sweet Grass County	A7	RM 444.97	50844	0.2% - 500yr	1580.08	1173.98	1170.19	3.45	3	61.04	32.65	148.01	390.5	2.96	1.57	3.79	3.79
Sweet Grass County	A7	RM 444.88	50352	0.2% - 500yr	1580.08	1173.75	1170.05	3.24	2.58	53.8	26.64	144.09	398.38	3.15	1.56	3.7	3.7
Sweet Grass County	A7	RM 444.79	49860	0.2% - 500yr	1580.08	1173.48	1169.94	3.32	2.42	57.73	27.81	132.48	451.16	3.19	1.53	3.54	3.54
Sweet Grass County	A7	RM 444.69	49316	0.2% - 500yr	1580.08	1173.22	1169.55	3.23	2.31	54.24	29.17	131.94	509.65	3.26	1.75	3.66	3.66
Sweet Grass County	A7	RM 444.60	48863	0.2% - 500yr	1580.08	1173.14	1167.23	2.87	1.96	36.73	15.78	88.72	678.6	5.51	2.27	5.91	5.91
Sweet Grass County	A7	RM 444.50	48367	0.2% - 500yr	1580.08	1172.96	1168.66	3.17	2.35	50.51	30.88	103.9	680.57	3.65	2.22	4.29	4.29
Sweet Grass County	A7	RM 444.41	47863	0.2% - 500yr	1580.08	1172.86	1168.6	2.62	2.32	33.28	22.5	129.86	737.33	3.7	2.5	4.26	4.26
Sweet Grass County	A7	RM 444.30	47336	0.2% - 500yr	1580.08	1172.79	1168.26	2.22	1.84	23.8	16.55	167.8	741.34	3.87	2.69	4.53	4.53
Sweet Grass County	A7	RM 444.20	46789	0.2% - 500yr	1580.08	1171.81	1167.97	4.39	3.51	101.53	57.43	107.59	611.47	3.19	1.79	3.84	3.84
Sweet Grass County	A7	RM 444.12	46346	0.2% - 500yr	1580.08	1171.28	1167.62	4.53	3.64	107.04	53.9	100.92	304.6	3.33	1.64	3.65	3.65
Sweet Grass County	A7	RM 444.02	45829	0.2% - 500yr	1580.08	1171.1	1167.57	3.61	3	63.85	31.12	143.97	724.68	2.93	1.43	3.53	3.53
Sweet Grass County	A7	RM 443.91	45243	0.2% - 500yr	1580.08	1170.81	1167.08	3.26	2.54	58.03	25.69	153.96	824.03	2.81	1.23	3.73	3.73
Sweet Grass County	A7	RM 443.84	44853	0.2% - 500yr	1580.08	1170.38	1167.23	3.57	2.93	74.03	35.22	173.99	694.14	2.33	1.11	3.15	3.15
Sweet Grass County	A7	RM 443.75	44415	0.2% - 500yr	1580.08	1170.19	1166.67	2.94	2.48	47.32	21.69	183.8	777.61	2.79	1.28	3.52	3.52
Sweet Grass County	A7	RM 443.64	43870	0.2% - 500yr	1580.08	1170.17	1166.09	2.28	1.62	26.56	14.54	110.6	891.83	3.41	1.85	4.07	4.07
Sweet Grass County	A7	RM 443.53	43290	0.2% - 500yr	1580.08	1170.01	1165.72	2.45	1.81	29.24	15.47	87.59	839.26	4	2.09	4.29	4.29
Sweet Grass County	A8	RM 443.45	42860	0.2% - 500yr	1580.08	1169.48	1165.25	3.37	2.78	57.72	28.02	139.17	765.79	3.22	1.56	4.23	4.23
Sweet Grass County	A8	RM 443.35	42363	0.2% - 500yr	1580.08	1168.52	1164.95	4.73	4.2	120	73.44	101.62	601.61	3.03	1.84	3.57	3.57
Sweet Grass County	A8	RM 443.25	41863	0.2% - 500yr	1580.08	1168.34	1165.05	3.47	2.78	65.13	35.19	127.8	730.2	2.9	1.56	3.29	3.29
Sweet Grass County	A8	RM 443.16	41342	0.2% - 500yr	1580.08	1168.09	1165.43	3.04	2.17	54.05	31.15	152.93	903.27	2.29	1.32	2.66	2.66
Sweet Grass County	A8	RM 443.07	40863	0.2% - 500yr	1580.08	1167.73	1164.49	3.15	2	56.71	29.29	139	957.13	2.45	1.26	3.24	3.24
Sweet Grass County	A8	RM 442.97	40345	0.2% - 500yr	1580.08	1167.43	1164.28	2.81	1.91	42.28	27.02	162.59	760.39	2.36	1.5	3.15	3.15
Sweet Grass County	A8	RM 442.88	39863	0.2% - 500yr	1580.08	1167.21	1164.06	2.47	1.87	34.7	22.03	177.36	830.74	2.29	1.45	3.16	3.16
Sweet Grass County	A8	RM 442.78	39363	0.2% - 500yr	1580.08	1166.43	1164.18	3.83	3.17	94.58	58.88	146.08	664.83	1.7	1.06	2.57	2.57
Sweet Grass County	A8	RM 442.68	38840	0.2% - 500yr	1580.08	1166.22	1162.8	2.7	2.03	36.06	21.07	117.57	660.82	2.59	1.51	3.41	3.41
Sweet Grass County	A8	RM 442.60	38390	0.2% - 500yr	1580.08	1166.14	1162.57	2.02	1.65	22.53	13.58	157.4	592.65	2.75	1.66	3.57	3.57
Sweet Grass County	A8	RM 442.50	37863	0.2% - 500yr	1580.08	1165.66	1162.29	3.48	2.33	58.79	26.32	102.55	587.44	2.62	1.17	3.37	3.37
Sweet Grass County	A8	RM 442.42	37461	0.2% - 500yr	1580.08	1165.47	1162.07	3.08	2.24	45.25	24.1	121.06	563.89	2.42	1.28	3.4	3.4

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	0.2% - 500yr	1580.08	1165.21	1161.85	2.97	2.19	48.37	23.71	107.71	572.04	2.78	1.35	3.36	3.36
Sweet Grass County	A8	RM 442.24	36451	0.2% - 500yr	1580.08	1164.93	1161.75	3.01	2.3	46.43	24.24	130.05	612.76	2.39	1.25	3.19	3.19
Sweet Grass County	A8	RM 442.12	35820	0.2% - 500yr	1580.08	1164.64	1161.12	2.9	2.13	41.71	19.63	123.17	743.87	2.69	1.26	3.52	3.52
Sweet Grass County	A8	RM 442.03	35367	0.2% - 500yr	1580.08	1164.31	1161.18	3.14	2.37	55.63	29.08	123.16	693.76	2.52	1.32	3.14	3.14
Sweet Grass County	A8	RM 441.95	34945	0.2% - 500yr	1580.08	1164.27	1160.28	2.29	1.65	27.9	13.7	133.86	872.63	3.1	1.5	3.98	3.98
Sweet Grass County	A8	RM 441.84	34360	0.2% - 500yr	1580.08	1163.79	1160.33	3.04	2.11	47.52	24.14	186.27	626.48	2.36	1.2	3.47	3.47
Sweet Grass County	A8	RM 441.74	33863	0.2% - 500yr	1580.08	1163.45	1160.06	3.14	2.09	51.61	23.4	171.23	778.57	2.5	1.13	3.39	3.39
Sweet Grass County	A8	RM 441.65	33357	0.2% - 500yr	1580.08	1163.34	1159.78	2.46	1.55	31.73	15.44	173.66	1000.34	2.98	1.44	3.56	3.56
Sweet Grass County	A8	RM 441.53	32732	0.2% - 500yr	1580.08	1162.86	1159.44	3.2	1.91	56.64	22.54	152.04	972.67	2.74	1.08	3.42	3.42
Sweet Grass County	A8	RM 441.47	32366	0.2% - 500yr	1580.08	1162.7	1158.95	3.01	1.74	47.9	17.25	138.98	953.83	3.11	1.11	3.75	3.75
Sweet Grass County	A8	RM 441.38	31928	0.2% - 500yr	1580.08	1162.75	1158.24	1.92	1.22	18.86	10.5	153.74	1089.1	3.44	1.91	4.51	4.51
Sweet Grass County	A8	RM 441.27	31350	0.2% - 500yr	1580.08	1162.22	1158.76	3.59	2.15	69.65	25.6	97.16	1130.69	2.93	1.07	3.46	3.46
Sweet Grass County	A8	RM 441.18	30882	0.2% - 500yr	1580.08	1161.99	1158.5	2.65	1.61	36.3	15.09	126.18	1056.01	2.86	1.18	3.48	3.48
Sweet Grass County	A8	RM 441.07	30295	0.2% - 500yr	1580.08	1161.84	1158.19	2.38	1.5	30.41	13.27	149.54	1004.75	2.95	1.28	3.65	3.65
Sweet Grass County	A8	RM 441.00	29913	0.2% - 500yr	1580.08	1161.75	1157.63	2.26	1.43	27.37	12.79	146.59	956.58	2.97	1.38	4.12	4.12
Sweet Grass County	A8	RM 440.80	28852	0.2% - 500yr	1580.08	1161.02	1157.49	3.65	2.33	68.23	23.85	103.86	759.22	3.07	1.07	3.53	3.53
Sweet Grass County	A8	RM 440.60	27841	0.2% - 500yr	1580.08	1160.21	1157.2	2.98	2.15	49.61	24.58	121.05	601.01	2.63	1.3	3	3
Sweet Grass County	A8	RM 440.51	27361	0.2% - 500yr	1580.08	1159.41	1156.41	4.13	2.96	97.94	50.43	109.89	518.77	2.45	1.25	3	3
Sweet Grass County	A8	RM 440.42	26862	0.2% - 500yr	1580.08	1159.13	1156.26	3.31	2.49	61.99	32.72	89.34	585.29	2.53	1.33	2.86	2.86
Sweet Grass County	A8	RM 440.30	26223	0.2% - 500yr	1580.08	1159.1	1155.63	1.76	1.46	16.94	12.37	97.18	648.41	2.82	2.05	3.47	3.47
Sweet Grass County	A8	RM 440.17	25466	0.2% - 500yr	1580.08	1158.93	1154.7	2.24	1.71	25.29	15.97	64.56	487.4	3.69	2.25	4.23	4.23
Sweet Grass County	A8	RM 440.06	24863	0.2% - 500yr	1580.08	1158.68	1153.97	2.51	1.99	31.42	18.14	131.05	411.21	3.74	2.14	4.7	4.7
Sweet Grass County	A8	RM 439.96	24366	0.2% - 500yr	1580.08	1158.42	1154.18	3.04	2.2	45.31	24.9	95.94	482.39	3.89	2.13	4.23	4.23
Sweet Grass County	A8	RM 439.87	23863	0.2% - 500yr	1580.08	1157.93	1153.59	3.59	2.56	60.89	21.31	103.39	490.12	3.96	1.38	4.34	4.34
Sweet Grass County	A8	RM 439.77	23365	0.2% - 500yr	1580.08	1157.7	1153.6	3.45	2.61	58.25	21.6	124.68	521.39	3.4	1.26	4.11	4.11
Sweet Grass County	A8	RM 439.68	22863	0.2% - 500yr	1580.08	1157.45	1153.45	3.4	2.55	56.1	23.63	135.36	510.68	3.11	1.3	4	4
Sweet Grass County	A8	RM 439.58	22363	0.2% - 500yr	1580.08	1157.4	1153.39	2.64	1.84	34.92	16.66	150.28	575.34	3.34	1.59	4	4
Sweet Grass County	A8	RM 439.49	21863	0.2% - 500yr	1580.08	1157.23	1152.86	2.75	1.83	36.45	14.73	116.13	563.09	4.09	1.64	4.36	4.36
Sweet Grass County	A8	RM 439.39	21363	0.2% - 500yr	1580.08	1157.11	1153.06	2.64	1.84	34.91	15.69	131.98	580.81	3.6	1.6	4.05	4.05
Sweet Grass County	A8	RM 439.30	20863	0.2% - 500yr	1580.08	1156.85	1152.92	3.05	2	46.21	19.71	110.38	575.08	3.56	1.51	3.93	3.93
Sweet Grass County	A8	RM 439.20	20353	0.2% - 500yr	1580.08	1156.25	1152.64	3.86	2.77	74.94	26.28	111.19	571.64	3.21	1.12	3.61	3.61
Sweet Grass County	A8	RM 439.11	19864	0.2% - 500yr	1580.08	1155.81	1152.34	3.21	2.41	54.07	23.8	98.01	600.72	3.19	1.4	3.47	3.47
Sweet Grass County	A8	RM 439.01	19360	0.2% - 500yr	1580.08	1155.29	1152.4	3.68	2.79	72.12	31.37	130.29	594.28	2.35	1.02	2.89	2.89
Sweet Grass County	A8	RM 438.91	18848	0.2% - 500yr	1580.08	1155.17	1151.92	2.77	1.98	39.8	17.77	121.85	657.99	2.82	1.26	3.26	3.26
Sweet Grass County	A8	RM 438.82	18363	0.2% - 500yr	1580.08	1154.84	1151.23	3.05	2.31	50.38	24.09	120.42	572.8	2.87	1.37	3.61	3.61
Sweet Grass County	A8	RM 438.73	17853	0.2% - 500yr	1580.08	1154.62	1151.37	2.75	2.16	39.31	25.23	124.01	486.55	2.57	1.65	3.25	3.25
Sweet Grass County	A8	RM 438.63	17363	0.2% - 500yr	1580.08	1154.51	1150.74	2.29	1.91	27.18	19.31	100.37	389.05	3.33	2.37	3.77	3.77
Sweet Grass County	A8	RM 438.54	16863	0.2% - 500yr	1580.08	1154.37	1150.59	2.36	2.06	28.35	18.89	105.71	330.22	3.55	2.33	3.78	3.78
Sweet Grass County	A8	RM 438.43	16307	0.2% - 500yr	1580.08	1154.09	1149.52	2.62	2.44	34.68	24.65	165.05	297.7	3.57	2.53	4.58	4.58
Sweet Grass County	A9	RM 438.36	15889	0.2% - 500yr	1580.08	1153.96	1149.4	2.64	2.54	31.76	27.3	187.56	292.03	3.14	2.7	4.55	4.55
Sweet Grass County	A9	RM 438.26	15363	0.2% - 500yr	1580.08	1153.24	1149.84	4.08	3.2	86.87	40.92	115.65	396.91	2.98	1.4	3.4	3.4
Sweet Grass County	A9	RM 438.16	14863	0.2% - 500yr	1580.08	1152.97	1149.31	3.61	2.49	65.07	28.3	123.27	499.54	3.13	1.36	3.66	3.66
Sweet Grass County	A9	RM 438.07	14394	0.2% - 500yr	1580.08	1152.63	1149.19	3.69	2.41	74.46	31.79	129.05	578.2	2.82	1.2	3.44	3.44
Sweet Grass County	A9	RM 437.96	13827	0.2% - 500yr	1580.08	1152.47	1149.19	2.99	1.89	49.63	23.73	121.26	680.24	2.71	1.29	3.28	3.28
Sweet Grass County	A9	RM 437.88	13363	0.2% - 500yr	1580.08	1152.28	1148.94	2.95	1.8	44.31	21.63	109.09	708.23	2.71	1.31	3.34	3.34
Sweet Grass County	A9	RM 437.78	12844	0.2% - 500yr	1580.08	1151.89	1148.72	3.41	2.03	61.28	26.75	99.77	712.44	2.74	1.19	3.17	3.17
Sweet Grass County	A9	RM 437.69	12354	0.2% - 500yr	1580.08	1151.71	1148.45	2.65	1.81	40.11	21.11	147.13	694.47	2.46	1.29	3.25	3.25
Sweet Grass County	A9	RM 437.59	11863	0.2% - 500yr	1580.08	1151.43	1148.76	2.73	1.91	45.33	24.61	151.34	750.05	2.03	1.1	3.02	3.02
Sweet Grass County	A9	RM 437.50	11362	0.2% - 500yr	1580.08	1151.19	1148.29	2.46	1.79	35.73	18.92	189.39	758.26	2.19	1.16	2.9	2.9
Sweet Grass County	A9	RM 437.41	10902	0.2% - 500yr	1580.08	1150.9	1148.26	2.68	1.92	43.54	23.66	175.96	735.11	2.06	1.12	2.65	2.65
Sweet Grass County	A9	RM 437.31	10361	0.2% - 500yr	1580.08	1150.5	1147.37	2.98	2.02	51.86	26	148.16	673.67	2.32	1.16	3.13	3.13
Sweet Grass County	A9	RM 437.20	9764	0.2% - 500yr	1580.08	1150.19	1147.02	2.89	1.9	42.88	20.19	110.89	699.28	2.54	1.19	3.17	3.17
Sweet Grass County	A9	RM 437.08	9128	0.2% - 500yr	1580.08	1149.76	1146.9	2.83	2.11	45.18	23.96	196.32	682.05	2.07	1.1	2.86	2.86
Sweet Grass County	A9	RM 436.95	8363	0.2% - 500yr	1580.08	1149.52	1145.32	2.61	1.66	27.84	14.27	106.12	679.81	2.79	1.4	4.2	4.2
Sweet Grass County	A9	RM 436.83	7805	0.2% - 500yr	1580.08	1149.37	1145.93	2.02	1.54	25	16.53	154.6	766.76	2.02	1.33	3.44	3.44
Sweet Grass County	A9	RM 436.75	6857	0.2% - 500yr	1580.08	1148.83	1145.61	3.41	1.82	65.05	24.93	67.61	865.94	2.65	1	3.21	3.21
Sweet Grass County	A9	RM 436.66	6193	0.2% - 500yr	1580.08	1148.36	1145.68	3.13	1.9	56.75	22.73	97.51	894.85	2.32	0.93	2.67	2.67
Sweet Grass County	A9	RM 436.56	5280	0.2% - 500yr	1580.08	1147.96	1144.44	3.13	1.83	43.39	19.41	68.28	796.23	2.68	1.13	3.52	3.52
Sweet Grass County	A9	RM 436.40	4576	0.2% - 500yr	1580.08	1147.76	1144.05	2.6	1.58	35.57	14.28	57.78	844.32	3.3	1.26	3.72	3.72
Sweet Grass County	A9	RM 436.29	3787	0.2% - 500yr	1580.08	1147.31	1144.44	3.04	2.14	53.03	27.45	99.03	850.88	2.43	1.25	2.87	2.87
Sweet Grass County	A9	RM 436.16	3087	0.2% - 500yr	1580.08	1146.56	1143.57	3.52	2.69	71.7	35.2	107.65	884.55	2.38	1.16	2.98	2.98

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	0.2% - 500yr	1580.08	1146.31	1143.09	3.13	2.37	52.02	28.52	102.06	975.61	2.38	1.29	3.22	3.22
Sweet Grass County	A9	RM 435.98	2200	0.2% - 500yr	1580.08	1145.97	1142.85	3.18	2.33	58.82	28.14	80.01	974.67	2.36	1.11	3.13	3.13
Sweet Grass County	A9	RM 435.88	1580	0.2% - 500yr	1580.08	1145.67	1142.56	2.37	1.91	34.94	21.55	85.86	959.23	1.93	1.18	3.1	3.1
Sweet Grass County	A9	RM 435.73	890	0.2% - 500yr	1580.08	1145.31	1141.99	2.5	2.05	35.14	22.18	80.13	911.31	2.62	1.61	3.32	3.32
Sweet Grass County	A9	RM 435.62	104	0.2% - 500yr	1580.08	1144.99	1141.54	2.63	1.75	39.13	16.56	130.4	874.42	2.54	1.06	3.45	3.45

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	0.2% - 500yr	1580.08	1144.85	1140.73	1.67	1.35	15.15	8.4	151.59	951.94	2.85	1.58	4.16	4.16
Stillwater County	A9	RM 435.38	231282.1	0.2% - 500yr	1580.08	1144.64	1139.61	1.88	1.36	18.1	9.31	197.46	849.72	3.41	1.75	5.03	5.03
Stillwater County	A9	RM 435.25	230611.3	0.2% - 500yr	1580.08	1144.11	1138.48	3.29	2.07	54.85	20.64	118.64	586.31	3.51	1.31	5.63	5.63
Stillwater County	A9	RM 435.16	230122.9	0.2% - 500yr	1580.08	1143.97	1138.39	2.99	1.79	44.59	18.36	118.38	594.02	3.67	1.51	5.58	5.58
Stillwater County	A9	RM 435.07	229649	0.2% - 500yr	1580.08	1143.92	1137.85	2.63	1.56	33.06	14.02	103.72	616.14	4.2	1.77	6.06	6.06
Stillwater County	A9	RM 434.97	229153	0.2% - 500yr	1580.08	1143.59	1137.87	3.13	1.91	47.63	20.23	105.26	521.64	4.01	1.7	5.72	5.72
Stillwater County	A9	RM 434.84	228443.5	0.2% - 500yr	1580.08	1143.35	1137	3.11	2.14	46.25	20.2	103.65	631.11	4.19	1.82	6.35	6.35
Stillwater County	A9	RM 434.73	227855.5	0.2% - 500yr	1580.08	1142.95	1135.61	3.56	2.69	57.89	25.06	82.85	599.06	4.93	2.1	7.34	7.34
Stillwater County	A9	RM 434.63	227328.2	0.2% - 500yr	1580.08	1142.55	1135.42	3.85	3.73	69.76	37.41	91.85	446.79	4.45	2.37	7.13	7.13
Stillwater County	A9	RM 434.57	227011.2	0.2% - 500yr	1580.08	1142.43	1136.35	3.73	3.55	67.43	41.44	104.18	541.11	4.03	2.47	6.08	6.08
Stillwater County	A9	RM 434.53	226817.6	0.2% - 500yr	1580.08	1142.33	1136.73	3.67	3.57	67.75	54.3	118.94	596.58	3.6	2.88	5.6	5.6
Stillwater County	A10	RM 434.49	226573.3	0.2% - 500yr	1580.08	1142.26	1137.23	3.36	3.33	56.49	52.33	126.91	670.05	3.69	3.42	5.03	5.03
Stillwater County			226533.4	0.2% - 500yr	Bridge												
Stillwater County	A10	RM 434.47	226483	0.2% - 500yr	1580.08	1142.06	1137.49	3.37	3.36	58	56.41	135.7	721.39	3.45	3.36	4.57	4.57
Stillwater County	A10	RM 434.42	226233.2	0.2% - 500yr	1580.08	1141.95	1137.1	3.3	3.12	55.84	39.98	138.92	732.83	3.39	2.42	4.85	4.85
Stillwater County	A10	RM 434.37	225940.2	0.2% - 500yr	1580.08	1141.6	1136.51	3.74	3.61	72.08	59.79	124.51	606.29	3.35	2.78	5.09	5.09
Stillwater County	A10	RM 434.24	225278.2	0.2% - 500yr	1580.08	1141.26	1136.56	3.55	3.23	64.81	35.93	117.53	408.18	3.39	1.88	4.7	4.7
Stillwater County	A10	RM 434.15	224819.6	0.2% - 500yr	1580.08	1141.08	1137.06	3.13	2.58	52.88	31.6	157.63	415.22	2.94	1.75	4.02	4.02
Stillwater County	A10	RM 434.07	224366.5	0.2% - 500yr	1580.08	1140.75	1136.55	3.4	2.73	63.31	33.79	116.1	435.77	2.8	1.5	4.35	4.35
Stillwater County	A10	RM 433.98	223883.5	0.2% - 500yr	1580.08	1140.67	1136.28	2.54	2.31	34.68	23.76	137.26	653.16	2.97	2.04	4.39	4.39
Stillwater County	A10	RM 433.87	223309.3	0.2% - 500yr	1580.08	1140.41	1135.82	2.81	2.52	40.35	28.35	107.67	644.6	3.45	2.41	4.59	4.59
Stillwater County	A10	RM 433.78	222850	0.2% - 500yr	1580.08	1140.17	1135.54	2.84	2.6	42.94	29.52	177.68	739.5	3.07	2.1	4.63	4.63
Stillwater County	A10	RM 433.66	222201.9	0.2% - 500yr	1580.08	1139.75	1135.16	3.2	2.82	53.06	26.86	146	618.31	3.29	1.66	4.59	4.59
Stillwater County	A10	RM 433.54	221596.6	0.2% - 500yr	1580.08	1139.37	1135.33	3.37	2.8	59.36	24.68	139.88	745.47	3.2	1.32	4.04	4.04
Stillwater County	A10	RM 433.42	220956.2	0.2% - 500yr	1580.08	1138.78	1134.88	3.76	3.28	75.25	35.71	135.06	630.58	3.02	1.43	3.9	3.9
Stillwater County	A10	RM 433.31	220362.5	0.2% - 500yr	1580.08	1138.65	1134.67	2.75	2.3	42.13	21.04	205.31	859.3	2.66	1.33	3.98	3.98
Stillwater County	A10	RM 433.20	219758.6	0.2% - 500yr	1580.08	1138.61	1134.17	1.99	1.49	21.2	14.74	148.63	1008.2	3	2.09	4.44	4.44
Stillwater County	A10	RM 433.09	219185.2	0.2% - 500yr	1580.08	1138.29	1133.45	2.49	2.21	32.04	20.72	180.45	866.24	3.33	2.15	4.84	4.84
Stillwater County	A10	RM 432.97	218599.7	0.2% - 500yr	1580.08	1137.92	1133.57	3.02	2.75	47.22	32.98	153.1	799.47	3.28	2.29	4.35	4.35
Stillwater County	A10	RM 432.84	217905.9	0.2% - 500yr	1580.08	1137.73	1132.7	2.76	2.07	37.98	17.96	136.55	898.92	3.72	1.76	5.03	5.03
Stillwater County	A10	RM 432.69	217146.9	0.2% - 500yr	1580.08	1137.12	1131.51	3.7	2.84	65.22	28.76	90.53	663.42	4.29	1.88	5.61	5.61
Stillwater County	A10	RM 432.60	216656.8	0.2% - 500yr	1580.08	1136.85	1132.1	3.67	3	65.84	34.7	102.29	559.8	4.01	2.09	4.75	4.75
Stillwater County	A10	RM 432.45	215889.7	0.2% - 500yr	1580.08	1136.54	1132.07	3.3	2.55	56.2	24.25	138.19	838.27	3.32	1.43	4.47	4.47
Stillwater County	A10	RM 432.35	215361.3	0.2% - 500yr	1580.08	1136.44	1132.33	2.71	1.81	37.99	16.76	159.19	901.54	3.31	1.45	4.11	4.11
Stillwater County	A10	RM 432.20	214585.3	0.2% - 500yr	1625.39	1135.67	1131.29	3.79	2.74	74.63	22.91	125.07	747.27	3.27	1	4.38	4.38
Stillwater County	A10	RM 432.10	214039.1	0.2% - 500yr	1625.39	1135.43	1130.7	3.47	2.37	61.99	24.43	124.1	775.1	3.36	1.33	4.73	4.73
Stillwater County	A10	RM 432.02	213606.1	0.2% - 500yr	1625.39	1135.38	1130.52	2.71	1.97	38.25	15.52	161.07	911.14	3.22	1.3	4.86	4.86
Stillwater County	A10	RM 431.87	212811.5	0.2% - 500yr	1625.39	1135.12	1129.24	2.5	1.87	34.72	17.35	210.92	945.34	2.68	1.34	5.88	5.88
Stillwater County	A10	RM 431.74	212127.4	0.2% - 500yr	1625.39	1134.99	1129.66	2.19	1.32	24.37	12.27	161.11	970.36	3.5	1.76	5.33	5.33
Stillwater County	A10	RM 431.60	211373.6	0.2% - 500yr	1625.39	1134.35	1129.96	3.4	2.61	59.38	18.04	134.23	784.51	3.36	1.02	4.39	4.39
Stillwater County	A10	RM 431.49	210820.2	0.2% - 500yr	1625.39	1134.13	1129.62	3.18	2.25	51.79	15.48	134.24	858.77	3.45	1.02	4.51	4.51
Stillwater County	A10	RM 431.41	210365.9	0.2% - 500yr	1625.39	1133.65	1129.57	3.72	2.98	72.28	24.05	130.45	610	3.19	1.06	4.08	4.08
Stillwater County	A10	RM 431.28	209716.5	0.2% - 500yr	1625.39	1133.38	1129.79	3.15	2.44	53.77	20.17	165.04	630.93	2.88	1.08	3.59	3.59
Stillwater County	A10	RM 431.14	208918.5	0.2% - 500yr	1625.39	1133.05	1129.82	2.64	2.33	39.29	18.1	132.66	585.98	2.58	1.19	4.3	4.3
Stillwater County	A10	RM 431.03	208358.8	0.2% - 500yr	1625.39	1132.65	1128.56	2.99	2.95	51.63	40.72	128.58	480.57	2.4	1.89	4.09	4.09
Stillwater County	A10	RM 430.93	207821.9	0.2% - 500yr	1625.39	1132.53	1128.76	2.47	2.14	33.45	25.34	126.38	600.05	2.76	2.1	3.77	3.77
Stillwater County	A10	RM 430.83	207325.6	0.2% - 500yr	1625.39	1132.3	1127.66	2.63	2.26	36.73	24.43	160.64	503.98	3.03	2.02	4.64	4.64
Stillwater County	A10	RM 430.70	206629.1	0.2% - 500yr	1625.39	1132.21	1126.9	2.09	1.66	22.32	10.67	150.14	590.72	3.73	1.79	5.31	5.31
Stillwater County	A10	RM 430.59	206064.9	0.2% - 500yr	1625.39	1132.07	1127.2	2.3	1.68	25.81	11.79	134.54	631.77	3.96	1.81	4.87	4.87
Stillwater County	A10	RM 430.51	205629.5	0.2% - 500yr	1625.39	1131.63	1126.28	3.37	2.42	55.84	20.11	107.05	610.46	3.87	1.38	5.35	5.35
Stillwater County	A10	RM 430.43	205204.2	0.2% - 500yr	1625.39	1131.39	1126.08	3.49	2.42	59.09	20.46	98.33	560.75	4.03	1.39	5.31	5.31
Stillwater County	A10	RM 430.34	204728.4	0.2% - 500yr	1625.39	1130.87	1126.07	4.04	3.07	82.49	29.28	103.36	539.41	3.55	1.26	4.8	4.8
Stillwater County	A11	RM 430.23	204119.7	0.2% - 500yr	1625.39	1130.83	1126.63	2.78	2.2	40.56	21.76	169.33	705.02	3.19	1.71	4.2	4.2
Stillwater County	A11	RM 430.12	203479.6	0.2% - 500yr	1625.39	1130.62	1126.96	2.9	2.2	44.49	22.17	112.27	809.13	3.07	1.53	4.09	4.09
Stillwater County	A11	RM 430.04	202968.2	0.2% - 500yr	1625.39	1130.37	1127.24	3.04	2.32	50.22	23.17	112.83	838.59	2.87	1.31	3.72	3.72
Stillwater County	A11	RM 429.95	202589.5	0.2% - 500yr	1625.39	1130.2	1126.33	2.69	2.04	40.22	21.23	142.06	807.91	2.7	1.42	3.87	3.87
Stillwater County	A11	RM 429.88	202224.7	0.2% - 500yr	1625.39	1130.04	1125.62	2.71	1.88	39.4	20.01	127.52	802.72	2.95	1.49	4.42	4.42
Stillwater County	A11	RM 429.78	201933.6	0.2% - 500yr	1625.39	1129.76	1123.72	3.19	2.02	51.48	21.78	92.39	662.29	3.47	1.45	6.03	6.03
Stillwater County	A11	RM 429.69	201539.9	0.2% - 500yr	1625.39	1129.1	1123.39	4.18	2.93	93.27	34.58	91.42	529.65	3.03	1.11	5.71	5.71
Stillwater County	A11	RM 429.58	200961.9	0.2% - 500yr	1625.39	1128.9	1124.69	3.09	2	52.63	26.49	116.91	592.28	2.73	1.37	4.21	4.21

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	0.2% - 500yr	1625.39	1128.5	1125.15	2.42	1.83	33.44	20.41	184.87	585.88	2.48	1.51	4.07	4.07
Stillwater County	A11	RM 429.28	199644.1	0.2% - 500yr	1625.39	1128.22	1123.59	2.61	1.9	37.69	20.1	148.58	596.1	2.7	1.43	4.63	4.63
Stillwater County	A11	RM 429.18	199152	0.2% - 500yr	1625.39	1128.05	1124.66	2.26	1.74	29.24	17.82	144.34	628.36	2.44	1.49	4.14	4.14
Stillwater County	A11	RM 429.10	198708.6	0.2% - 500yr	1625.39	1127.71	1124.26	2.88	2.05	46.75	24.58	87.69	587.34	2.57	1.35	4.13	4.13
Stillwater County	A11	RM 429.00	198203.8	0.2% - 500yr	1625.39	1127.54	1123.47	2.4	1.93	33.06	21.92	124.54	529.35	2.39	1.59	4.07	4.07
Stillwater County	A11	RM 428.89	197650.5	0.2% - 500yr	1625.39	1127.32	1121.26	2.63	1.95	35.8	19.71	150.77	459.19	3.3	1.82	6.06	6.06
Stillwater County	A11	RM 428.81	197194.1	0.2% - 500yr	1625.39	1127.14	1121.47	2.88	2.04	41.02	21.45	98.54	415.96	3.77	1.96	5.67	5.67
Stillwater County	A11	RM 428.66	196404.4	0.2% - 500yr	1625.39	1126.98	1122.31	2.22	1.82	26.49	17.75	204.39	688.68	2.95	1.97	4.67	4.67
Stillwater County	A11	RM 428.52	195702.6	0.2% - 500yr	1625.39	1126.73	1122.1	2.37	2.01	30.19	20.06	206.65	666.6	2.96	1.96	4.63	4.63
Stillwater County	A11	RM 428.44	195293.8	0.2% - 500yr	1625.39	1126.49	1121.18	2.8	2.27	39.8	22.35	146.38	657.04	3.52	1.98	5.31	5.31
Stillwater County	A11	RM 428.39	195075.5	0.2% - 500yr	1625.39	1126.31	1120.72	3.14	2.48	49.14	25.67	122.37	734.49	3.69	1.93	5.59	5.59
Stillwater County	A11	RM 428.33	194724.6	0.2% - 500yr	1625.39	1126.22	1121.22	2.92	2.42	42.72	26.02	135.66	707.15	3.64	2.22	5	5
Stillwater County	A11	RM 428.28	194450.8	0.2% - 500yr	1625.39	1126.13	1121.2	2.87	2.51	41.72	28.78	147.26	670.38	3.52	2.43	4.93	4.93
Stillwater County	A11	RM 428.23	194235.2	0.2% - 500yr	1625.39	1125.99	1120.74	3	2.81	44.93	37.13	143.06	615.32	3.63	3.01	5.25	5.25
Stillwater County	A11	RM 428.20	194033.4	0.2% - 500yr	1625.39	1125.93	1120.37	2.98	2.79	42.94	36.26	121.13	572.22	4.03	3.4	5.56	5.56
Stillwater County			193969.6	0.2% - 500yr	Bridge												
Stillwater County	A11	RM 428.17	193915	0.2% - 500yr	1625.39	1125.67	1120.32	3.12	2.92	47.5	40.32	115.85	564.69	3.97	3.37	5.35	5.35
Stillwater County			193871.1	0.2% - 500yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	0.2% - 500yr	1625.39	1125.45	1120.23	3.15	2.91	49.1	40.52	114.51	586.51	3.82	3.15	5.22	5.22
Stillwater County	A11	RM 428.11	193602.7	0.2% - 500yr	1625.39	1125.43	1119.42	2.84	2.57	40.7	31.36	131.19	574.44	3.61	2.77	6.01	6.01
Stillwater County	A11	RM 428.09	193436.6	0.2% - 500yr	1625.39	1125.3	1119.9	3.07	2.68	47.96	33.29	120.2	568.93	3.53	2.44	5.4	5.4
Stillwater County	A11	RM 428.05	193246.1	0.2% - 500yr	1625.39	1125.27	1120.1	2.84	2.43	41.23	26.8	126.82	593.81	3.47	2.24	5.17	5.17
Stillwater County	A11	RM 428.00	192989.8	0.2% - 500yr	1625.39	1125.21	1120.28	2.66	2.21	35.6	21.84	128.45	639.75	3.62	2.21	4.93	4.93
Stillwater County	A11	RM 427.95	192728.8	0.2% - 500yr	1625.39	1125.17	1119.57	2.49	1.94	30.7	18.19	134.33	646.56	3.74	2.21	5.6	5.6
Stillwater County	A11	RM 427.88	192333.2	0.2% - 500yr	1625.39	1124.95	1119.27	2.96	2.17	42.57	22.92	105.31	703.75	4.03	2.15	5.68	5.68
Stillwater County	A11	RM 427.83	192088.8	0.2% - 500yr	1625.39	1124.79	1119.18	3.16	2.48	48.74	29.74	105.64	666.46	3.98	2.41	5.61	5.61
Stillwater County	A11	RM 427.76	191724.1	0.2% - 500yr	1625.39	1124.64	1119.07	3.12	2.84	46.69	37.6	101.84	567.57	4.21	3.37	5.57	5.57
Stillwater County			191581.1	0.2% - 500yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	0.2% - 500yr	1625.39	1124.19	1118.71	3.56	3.39	62.76	53.23	114.36	198.56	3.82	3.23	5.48	5.48
Stillwater County	A11	RM 427.65	191155.9	0.2% - 500yr	1625.39	1124.17	1118.58	2.81	2.59	38.21	30.66	139.89	708.58	4.03	3.24	5.59	5.59
Stillwater County	A11	RM 427.53	190509.6	0.2% - 500yr	1625.39	1123.51	1117.37	3.91	3.57	73.01	47.37	96.4	574.7	4.24	2.73	6.14	6.14
Stillwater County	A11	RM 427.41	189886.1	0.2% - 500yr	1625.39	1123.24	1118.73	3.64	3.47	65.42	47.07	115.97	561.35	3.82	2.74	4.51	4.51
Stillwater County	A11	RM 427.29	189253.3	0.2% - 500yr	1625.39	1122.95	1119.12	3.28	3.12	59.1	45.89	176.94	553.41	2.77	2.15	3.83	3.83
Stillwater County	A11	RM 427.17	188639.5	0.2% - 500yr	1625.39	1122.78	1118.44	2.66	2.23	38.31	27.17	197.68	598.72	2.87	2.04	4.34	4.34
Stillwater County	A11	RM 427.09	188179.7	0.2% - 500yr	1625.39	1122.39	1118.34	3.31	2.28	56.43	25.45	127.59	540.18	3.38	1.52	4.05	4.05
Stillwater County	A11	RM 427.00	187745.4	0.2% - 500yr	1625.39	1122.28	1117.71	2.88	2.16	43.23	27.98	143.34	568.78	3.25	2.11	4.57	4.57
Stillwater County	A11	RM 426.92	187309.3	0.2% - 500yr	1625.39	1122.14	1117.32	2.58	2.16	36.2	26.84	205.73	545.1	2.81	2.09	4.82	4.82
Stillwater County	A11	RM 426.86	186960.4	0.2% - 500yr	1625.39	1122.03	1116.77	2.45	2.11	32.24	24.28	210.76	531.71	2.97	2.24	5.26	5.26
Stillwater County	A11	RM 426.75	186401.3	0.2% - 500yr	1625.39	1121.83	1116.11	2.55	2.14	34.01	26.23	182.86	485.75	3.21	2.48	5.72	5.72
Stillwater County	A11	RM 426.67	185983.5	0.2% - 500yr	1625.39	1121.53	1115.84	2.98	2.74	43.64	30.04	138.91	365.57	3.86	2.66	5.69	5.69
Stillwater County	A11	RM 426.59	185580.4	0.2% - 500yr	1625.39	1121.08	1115.47	3.76	3.34	68.57	35.23	106	243.95	4	2.05	5.6	5.6
Stillwater County	A11	RM 426.52	185166.5	0.2% - 500yr	1625.39	1120.84	1115.54	3.75	3.65	68.61	45.54	108.17	173.58	3.99	2.64	5.3	5.3
Stillwater County	A11	RM 426.43	184738.3	0.2% - 500yr	1625.39	1120.61	1115.89	3.72	3.62	69.04	57.09	117.17	146.82	3.7	3.06	4.72	4.72
Stillwater County	A11	RM 426.32	184158.4	0.2% - 500yr	1625.39	1120.3	1116.39	3.58	3.56	65.78	57.12	133.45	154.61	3.4	2.95	3.91	3.91
Stillwater County	A11	RM 426.20	183517.2	0.2% - 500yr	1625.39	1120.05	1116.07	2.97	2.92	49.92	45.23	216.15	243.22	2.52	2.29	3.98	3.98
Stillwater County	A11	RM 426.11	183030.7	0.2% - 500yr	1625.39	1119.91	1115.37	2.42	2.38	32.48	31.63	270.07	314.61	2.46	2.4	4.54	4.54
Stillwater County	A11	RM 426.00	182442.5	0.2% - 500yr	1625.39	1119.72	1115.74	2.31	2.1	29.61	25.81	243.38	477.91	2.71	2.36	3.98	3.98
Stillwater County	A11	RM 425.89	181895	0.2% - 500yr	1625.39	1119.45	1115.1	2.59	2.29	35.08	22.36	187.02	506.07	3.23	2.06	4.35	4.35
Stillwater County	A11	RM 425.72	181043.5	0.2% - 500yr	1625.39	1119.1	1113.77	2.83	2.36	40.47	23.98	151.05	462.93	3.57	2.11	5.33	5.33
Stillwater County	A11	RM 425.58	180310.5	0.2% - 500yr	1625.39	1118.5	1112.19	3.69	2.92	64.87	27.16	98.64	453.4	4.23	1.76	6.31	6.31
Stillwater County	A11	RM 425.46	179669.9	0.2% - 500yr	1625.39	1117.79	1112.78	4.39	3.53	96.75	37.8	96.07	365.66	3.66	1.42	5.01	5.01
Stillwater County	A11	RM 425.34	179022.4	0.2% - 500yr	1625.39	1117.79	1113.64	2.96	2.53	45.49	30.51	137.83	290.29	3.3	2.21	4.15	4.15
Stillwater County	A11	RM 425.24	178485.9	0.2% - 500yr	1625.39	1117.55	1114.19	2.83	2.51	43.96	35.25	126.45	383.58	2.78	2.24	3.41	3.41
Stillwater County	A11	RM 425.18	178205.8	0.2% - 500yr	1625.39	1117.26	1113.81	3.18	2.92	56.31	46.09	128.32	255.82	2.65	2.18	3.95	3.95
Stillwater County	A11	RM 425.11	177826.8	0.2% - 500yr	1625.39	1116.99	1113.29	3.17	2.95	55.6	41.3	120.72	273.77	2.7	2.01	4.7	4.7
Stillwater County	A11	RM 425.04	177454.7	0.2% - 500yr	1625.39	1116.77	1112.86	3.2	2.69	54.56	38.47	106.76	282.69	3.05	2.15	4.3	4.3
Stillwater County	A11	RM 424.97	177098.9	0.2% - 500yr	1625.39	1116.41	1113.11	3.48	3.05	66.12	41.91	106.81	309.93	2.79	1.77	3.4	3.4
Stillwater County	A11	RM 424.89	176675.9	0.2% - 500yr	1625.39	1116.29	1112.27	2.65	2.42	39.12	32.63	136.62	431.49	2.66	2.23	5.49	5.49
Stillwater County	A11	RM 424.81	176242.8	0.2% - 500yr	1625.39	1115.83	1112.25	3.13	3	58.96	52.06	139.22	501.96	2.09	1.85	3.83	3.83
Stillwater County	A11	RM 424.70	175789.3	0.2% - 500yr	1625.39	1115.69	1111.91	2.6	2.41	37.13	30.04	161.26	550.5	2.78	2.25	3.78	3.78

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	0.2% - 500yr	1625.39	1115.33	1111.34	2.99	2.55	50.24	34.74	132.39	478.23	2.6	1.8	3.99	3.99
Stillwater County	A11	RM 424.51	174723.2	0.2% - 500yr	1625.39	1115.11	1110.93	2.69	2.39	42.36	33.32	140.84	529.8	2.25	1.78	4.18	4.18
Stillwater County	A11	RM 424.38	174051	0.2% - 500yr	1625.39	1114.69	1110.98	2.91	2.35	49.68	27.02	135.76	696.01	2.26	1.23	3.71	3.71
Stillwater County	A11	RM 424.30	173607.9	0.2% - 500yr	1625.39	1114.47	1110.75	2.73	2.09	45.43	26.22	158.99	771.5	2	1.15	3.72	3.72
Stillwater County	A11	RM 424.21	173153.7	0.2% - 500yr	1625.39	1114.23	1110.74	2.41	1.77	34.61	18.47	188.24	873.21	2.15	1.14	3.49	3.49
Stillwater County	A11	RM 424.13	172713.5	0.2% - 500yr	1625.39	1114.04	1110.43	2.4	1.46	34.14	18.7	103.4	925.46	2.2	1.2	3.69	3.69
Stillwater County	A11	RM 424.05	172309.3	0.2% - 500yr	1625.39	1113.91	1110.18	1.84	1.32	20.12	12.88	155.55	870.51	2.2	1.41	3.73	3.73
Stillwater County	A11	RM 423.98	171892.1	0.2% - 500yr	1625.39	1113.83	1110.15	1.67	1.21	15.49	9.45	252.66	836.15	2.63	1.6	3.68	3.68
Stillwater County	A11	RM 423.90	171454.2	0.2% - 500yr	1625.39	1113.68	1109.55	2.18	1.4	25.67	13.06	156.66	784.73	2.93	1.48	4.13	4.13
Stillwater County	A11	RM 423.84	171147.5	0.2% - 500yr	1625.39	1113.6	1109.08	2.17	1.34	24.09	11.68	126.81	739.96	3.39	1.64	4.52	4.52
Stillwater County	A11	RM 423.74	170686.3	0.2% - 500yr	1625.39	1113.56	1108.91	1.75	1.13	15.43	9.05	124.33	690.18	3.57	2.09	4.65	4.65
Stillwater County	A11	RM 423.69	170436.3	0.2% - 500yr	1625.39	1113.42	1108.49	2.34	1.5	27.39	13.98	88.65	631.61	3.7	1.87	4.93	4.93
Stillwater County	A11	RM 423.57	169782.9	0.2% - 500yr	1625.39	1113.1	1108.2	2.57	2	33.26	19.54	159.21	699.09	3.59	2.11	4.9	4.9
Stillwater County	A11	RM 423.47	169296.5	0.2% - 500yr	1625.39	1112.6	1107.67	3.51	2.67	61.86	24.82	120.55	600.11	3.64	1.46	4.93	4.93
Stillwater County	A11	RM 423.39	168860.7	0.2% - 500yr	1625.39	1112.27	1107.7	3.8	2.77	72.24	26.5	107.8	543.12	3.65	1.33	4.56	4.56
Stillwater County	A11	RM 423.27	168178	0.2% - 500yr	1625.39	1111.64	1107.36	4.05	3.22	85.97	32.37	118.28	425.5	3.2	1.2	4.28	4.28
Stillwater County	A12	RM 423.17	167687.7	0.2% - 500yr	1625.39	1111.5	1107.46	3.26	2.65	56.87	28.99	153.74	516.28	3	1.52	4.04	4.04
Stillwater County	A12	RM 423.08	167239.6	0.2% - 500yr	1625.39	1111.28	1107.21	3.2	2.54	54.9	28.45	129.63	532.98	2.99	1.55	4.07	4.07
Stillwater County	A12	RM 423.01	166844.5	0.2% - 500yr	1625.39	1111.1	1106.84	2.95	2.39	48.63	29.65	144.56	568.27	2.65	1.61	4.26	4.26
Stillwater County	A12	RM 422.91	166338	0.2% - 500yr	1625.39	1110.72	1106.54	3.33	2.51	58.3	29.1	112.6	577.66	3.16	1.58	4.18	4.18
Stillwater County	A12	RM 422.80	165757.6	0.2% - 500yr	1625.39	1110.42	1106.83	3.11	2.45	52.54	26.36	148.94	585.14	2.87	1.44	3.59	3.59
Stillwater County	A12	RM 422.70	165279.2	0.2% - 500yr	1625.39	1110.35	1105.79	2.37	1.82	30.66	18.39	203.12	653.09	2.79	1.68	4.56	4.56
Stillwater County	A12	RM 422.63	164895.4	0.2% - 500yr	1625.39	1110.27	1105.43	2.15	1.57	25.05	14.79	179.41	730.55	2.83	1.67	4.84	4.84
Stillwater County	A12	RM 422.53	164348.1	0.2% - 500yr	1625.39	1110.12	1104.76	2.18	1.67	25.06	15.05	167.27	698.97	3.1	1.85	5.36	5.36
Stillwater County	A12	RM 422.39	163609.2	0.2% - 500yr	1625.39	1109.84	1104.22	2.59	1.94	33.05	16.53	132.53	554.1	3.87	1.92	5.62	5.62
Stillwater County	A12	RM 422.30	163120.4	0.2% - 500yr	1625.39	1109.28	1104.18	3.64	2.94	64.78	24.72	109.03	404.33	3.89	1.48	5.1	5.1
Stillwater County	A12	RM 422.19	162534.3	0.2% - 500yr	1625.39	1109.1	1103.72	3.22	2.76	50.8	24.86	122.19	308.4	3.93	1.91	5.38	5.38
Stillwater County	A12	RM 422.08	161934.5	0.2% - 500yr	1625.39	1108.47	1104.18	4	3.57	81.69	43.72	113.23	246.53	3.46	1.85	4.29	4.29
Stillwater County	A12	RM 421.98	161402.1	0.2% - 500yr	1625.39	1108.35	1103.86	3.22	3.05	52.4	39.41	142.02	201.92	3.5	2.64	4.49	4.49
Stillwater County	A12	RM 421.90	161037.7	0.2% - 500yr	1625.39	1108.18	1103.14	3.12	3.09	51.57	41.58	168.63	212.04	3.08	2.48	5.04	5.04
Stillwater County	A12	RM 421.86	160799.3	0.2% - 500yr	1625.39	1108.09	1102.54	2.99	2.9	49.07	39.99	193.24	339.28	2.79	2.27	5.55	5.55
Stillwater County	A12	RM 421.81	160535.9	0.2% - 500yr	1625.39	1107.97	1102.38	2.83	2.73	45	34.08	222.31	345.01	2.57	1.94	5.59	5.59
Stillwater County	A12	RM 421.77	160279.4	0.2% - 500yr	1625.39	1107.79	1102.41	3.02	2.63	50.53	31.03	182.53	373.55	2.7	1.65	5.38	5.38
Stillwater County	A12	RM 421.69	159875.5	0.2% - 500yr	1625.39	1107.64	1102.56	2.92	2.2	42.29	18.99	130.2	434.64	3.8	1.7	5.08	5.08
Stillwater County	A12	RM 421.60	159411.4	0.2% - 500yr	1625.39	1107.24	1103.26	3.54	2.69	66.38	27.76	131.13	469.25	3.08	1.29	3.98	3.98
Stillwater County	A12	RM 421.53	159038	0.2% - 500yr	1625.39	1106.79	1102.81	3.95	3.25	86.28	36.59	133.17	437.48	2.7	1.14	3.98	3.98
Stillwater County	A12	RM 421.45	158590.5	0.2% - 500yr	1625.39	1106.66	1103.26	3.07	2.59	52.28	27.53	155.02	503.08	2.7	1.42	3.4	3.4
Stillwater County	A12	RM 421.32	157930.2	0.2% - 500yr	1625.39	1106.28	1102.82	2.96	2.6	51.8	29.88	99.41	576.36	2.2	1.27	3.46	3.46
Stillwater County	A12	RM 421.24	157513	0.2% - 500yr	1625.39	1106.04	1103.05	2.73	2.34	45.55	31.03	127.11	521.75	2	1.37	3.56	3.56
Stillwater County	A12	RM 421.13	156951.5	0.2% - 500yr	1625.39	1105.88	1100.38	2.29	1.99	29.69	22.3	118.8	484.56	2.5	1.88	5.5	5.5
Stillwater County	A12	RM 421.05	156536.5	0.2% - 500yr	1625.39	1105.8	1102.11	1.96	1.78	21.85	18.03	103.99	550.73	2.48	2.04	3.69	3.69
Stillwater County	A12	RM 420.94	155960.1	0.2% - 500yr	1625.39	1105.49	1101.68	2.34	2.1	28.77	15.93	213.29	574.92	3.16	1.75	3.81	3.81
Stillwater County	A12	RM 420.85	155473.6	0.2% - 500yr	1625.39	1104.81	1100.98	3.91	2.73	84.69	42.96	135.54	497.34	2.67	1.36	3.83	3.83
Stillwater County	A12	RM 420.75	154957.2	0.2% - 500yr	1625.39	1104.74	1099.95	2.77	1.97	40.82	20.73	157.51	561.64	3.02	1.53	4.78	4.78
Stillwater County	A12	RM 420.66	154483	0.2% - 500yr	1625.39	1104.57	1099.89	2.62	1.85	35.73	21.49	165.17	800.66	3.25	1.95	4.68	4.68
Stillwater County	A12	RM 420.58	154037.5	0.2% - 500yr	1625.39	1104.17	1100.13	3.37	2.21	58.37	24.55	122.25	633.48	3.37	1.42	4.04	4.04
Stillwater County	A12	RM 420.52	153691.5	0.2% - 500yr	1625.39	1104.03	1099.7	3.2	2.07	53.47	20.35	131.23	687.28	3.23	1.23	4.33	4.33
Stillwater County	A12	RM 420.46	153398	0.2% - 500yr	1625.39	1103.75	1099.36	3.45	2.41	63.85	23.81	139.88	610.75	2.97	1.11	4.39	4.39
Stillwater County	A12	RM 420.38	152998.3	0.2% - 500yr	1625.39	1103.69	1099.19	2.68	1.85	39.01	19.34	177.26	634.37	2.85	1.41	4.5	4.5
Stillwater County	A12	RM 420.30	152566.4	0.2% - 500yr	1625.39	1103.64	1099.43	2.05	1.48	23.03	14.34	230.5	688.3	2.8	1.75	4.21	4.21
Stillwater County	A12	RM 420.21	152106.2	0.2% - 500yr	1625.39	1103.5	1098.69	2.13	1.61	25.53	17.6	238.7	657.8	2.59	1.78	4.81	4.81
Stillwater County	A12	RM 420.15	151738.6	0.2% - 500yr	1625.39	1103.39	1098.38	2.08	1.76	21.84	14.82	260.73	500.01	2.78	1.88	5.01	5.01
Stillwater County	A12	RM 420.08	151399.3	0.2% - 500yr	1625.39	1103.23	1097.97	2.36	1.98	28.95	16.76	196.82	434.06	3.27	1.89	5.26	5.26
Stillwater County	A12	RM 420.03	151123.2	0.2% - 500yr	1625.39	1103.06	1097.96	2.74	2.06	37.44	19.25	142.7	412.83	3.74	1.92	5.1	5.1
Stillwater County	A12	RM 419.96	150779.4	0.2% - 500yr	1625.39	1102.88	1098.1	3.02	2.09	45.83	22.55	128.1	436.46	3.62	1.78	4.78	4.78
Stillwater County	A12	RM 419.91	150511.3	0.2% - 500yr	1625.39	1102.51	1097.83	3.68	2.53	66.55	24.94	102.77	445.01	3.9	1.45	4.68	4.68
Stillwater County	A12	RM 419.85	150192.4	0.2% - 500yr	1625.39	1102.13	1097.85	4.1	2.81	86.28	33.35	106.79	443.32	3.39	1.3	4.28	4.28
Stillwater County	A12	RM 419.78	149807.6	0.2% - 500yr	1625.39	1101.99	1097.13	3.67	2.39	66.78	26.62	104.97	454.31	3.78	1.5	4.86	4.86
Stillwater County	A12	RM 419.70	149371.5	0.2% - 500yr	1625.39	1101.67	1097.73	3.69	2.8	72.59	34.06	138.38	412.7	3	1.41	3.94	3.94
Stillwater County	A12	RM 419.63	149047.6	0.2% - 500yr	1625.39	1101.54	1097.92	3.25	2.62	57.24	30.56	168.37	406.2	2.86	1.53	3.62	3.62

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	0.2% - 500yr	1625.39	1101.24	1097.22	3.23	2.49	58.77	35.53	136.75	425.49	2.54	1.54	4.02	4.02
Stillwater County	A12	RM 419.46	148117.9	0.2% - 500yr	1625.39	1101.07	1097.34	2.84	2.15	44.96	26.84	133.46	489.48	2.63	1.57	3.98	3.98
Stillwater County	A12	RM 419.38	147728.5	0.2% - 500yr	1625.39	1100.92	1097.36	2.36	1.97	31.75	24.71	149.23	438.87	2.47	1.93	3.56	3.56
Stillwater County	A12	RM 419.31	147342.9	0.2% - 500yr	1625.39	1100.83	1096.9	2.09	1.86	23.06	17.56	114.45	405.86	3.08	2.35	3.93	3.93
Stillwater County	A12	RM 419.19	146720.3	0.2% - 500yr	1625.39	1100.67	1096.42	1.95	2.03	20.01	16.33	106.51	433	3.13	2.56	6.27	6.27
Stillwater County	A12	RM 419.10	146243.9	0.2% - 500yr	1625.39	1100.51	1095.09	2.44	2.09	28.73	14.82	156.37	530.96	4.08	2.1	5.41	5.41
Stillwater County	A12	RM 419.03	145859.8	0.2% - 500yr	1625.39	1100.13	1095.88	3.23	2.85	57.08	30.93	172.66	484.15	2.81	1.52	4.25	4.25
Stillwater County	A12	RM 418.95	145435.3	0.2% - 500yr	1625.39	1099.92	1095.15	2.98	2.54	50.56	27.34	207.31	570	2.5	1.35	4.77	4.77
Stillwater County	A12	RM 418.84	144864	0.2% - 500yr	1625.39	1099.57	1094.92	2.93	2.34	49.83	25.28	222.59	690.27	2.32	1.18	4.64	4.64
Stillwater County	A12	RM 418.69	144066	0.2% - 500yr	1625.39	1098.99	1095.29	3.17	2.33	57.33	26.43	169.57	712.81	2.44	1.12	3.7	3.7
Stillwater County	A12	RM 418.57	143452.8	0.2% - 500yr	1625.39	1098.53	1095.1	3.33	2.34	62.9	24.27	135.5	750.9	2.48	0.96	3.42	3.42
Stillwater County	A12	RM 418.49	143008.1	0.2% - 500yr	1625.39	1098.47	1094.94	2.29	1.56	29.05	15.26	169.36	848.82	2.71	1.42	3.53	3.53
Stillwater County	A12	RM 418.35	142310.9	0.2% - 500yr	1625.39	1098.02	1093.15	3.04	1.86	51.49	22.3	129.02	800.01	2.57	1.11	4.87	4.87
Stillwater County	A12	RM 418.25	141740.8	0.2% - 500yr	1625.39	1097.81	1093.71	2.32	1.67	31.33	21.11	178.18	715.15	2.32	1.56	4.1	4.1
Stillwater County	A12	RM 418.08	140894.8	0.2% - 500yr	1625.39	1097.53	1092.65	2.29	1.83	28.33	15.84	139.46	635.57	2.88	1.61	4.88	4.88
Stillwater County	A12	RM 417.89	139893.7	0.2% - 500yr	1625.39	1096.8	1092.75	3.47	2.63	63.65	25.96	128.08	622.72	3.12	1.27	4.04	4.04
Stillwater County	A12	RM 417.79	139376.4	0.2% - 500yr	1625.39	1096.62	1091.64	3.07	2.25	50.29	24.96	128.51	646.63	3.03	1.5	4.98	4.98
Stillwater County	A12	RM 417.65	138633.4	0.2% - 500yr	1625.39	1096.17	1091.57	3.4	2.6	58.43	26.73	97.66	644.43	3.56	1.62	4.6	4.6
Stillwater County	A12	RM 417.54	138089.5	0.2% - 500yr	1625.39	1095.43	1091.15	4.33	3.48	98.83	49	94.1	336.75	3.15	1.56	4.28	4.28
Stillwater County	A12	RM 417.40	137321.3	0.2% - 500yr	1843.43	1095.24	1091.71	2.98	2.47	48.59	32.37	128.55	593.49	2.77	1.84	3.53	3.53
Stillwater County	A12	RM 417.30	136818.2	0.2% - 500yr	1843.43	1094.92	1091.51	2.89	2.53	47.14	30.61	209.14	491.44	2.56	1.66	3.41	3.41
Stillwater County	A12	RM 417.20	136304	0.2% - 500yr	1843.43	1094.86	1091.27	2.04	1.94	22.65	19.66	205.84	569.84	2.8	2.43	3.59	3.59
Stillwater County	A13	RM 417.09	135706	0.2% - 500yr	1843.43	1094.17	1090.35	3.5	2.87	68.02	41.55	189.98	484.92	2.65	1.62	3.82	3.82
Stillwater County	A13	RM 417.01	135303.6	0.2% - 500yr	1843.43	1094.09	1090	2.68	2.39	40.29	27.11	255.34	563.1	2.61	1.76	4.09	4.09
Stillwater County	A13	RM 416.94	134899.8	0.2% - 500yr	1843.43	1093.64	1089.69	3.34	2.92	56.5	34.89	231.03	491.64	2.33	1.44	3.95	3.95
Stillwater County	A13	RM 416.85	134457.6	0.2% - 500yr	1843.43	1093.43	1089.62	3.07	2.44	50.15	23.58	188.01	534.48	3.04	1.42	3.81	3.81
Stillwater County	A13	RM 416.73	133843.5	0.2% - 500yr	1843.43	1092.93	1089.6	3.37	2.74	65.09	34.88	214.87	516.13	2.43	1.3	3.33	3.33
Stillwater County	A13	RM 416.63	133286.1	0.2% - 500yr	1843.43	1092.53	1089.3	3.34	2.81	65.69	37.06	134.05	519.7	2.23	1.26	3.23	3.23
Stillwater County	A13	RM 416.52	132717.9	0.2% - 500yr	1843.43	1092.3	1089.09	2.71	2.04	43.25	27.08	104.23	639.54	2.25	1.41	3.21	3.21
Stillwater County	A13	RM 416.43	132250.3	0.2% - 500yr	1843.43	1092.03	1088.74	2.54	2.01	38.17	25.13	115.63	741.13	2.18	1.43	3.28	3.28
Stillwater County	A13	RM 416.33	131707.5	0.2% - 500yr	1843.43	1091.82	1088.02	2.35	1.9	31.87	20.83	132.56	816.76	2.35	1.54	3.8	3.8
Stillwater County	A13	RM 416.22	131140.9	0.2% - 500yr	1843.43	1091.43	1087.56	3.22	2.24	54.88	28.05	84.28	816.12	3.07	1.57	3.87	3.87
Stillwater County	A13	RM 416.13	130626.3	0.2% - 500yr	1843.43	1091.08	1086.65	3.14	2.33	52.98	27.81	148.11	801.26	2.96	1.56	4.42	4.42
Stillwater County	A13	RM 416.04	130164.9	0.2% - 500yr	1843.43	1090.82	1085.03	3.25	2.01	55.37	25.83	125.82	874.48	3.21	1.49	5.79	5.79
Stillwater County	A13	RM 415.96	129734.7	0.2% - 500yr	1843.43	1090.79	1085.48	2.39	1.44	29.13	13.5	133.05	1015.34	3.45	1.59	5.31	5.31
Stillwater County	A13	RM 415.90	129423.4	0.2% - 500yr	1843.43	1090.72	1085.77	2.03	1.28	21.5	12.5	159.69	942.81	3.22	1.87	4.95	4.95
Stillwater County	A13	RM 415.83	129071.6	0.2% - 500yr	1843.43	1090.64	1085.89	1.98	1.32	19.84	12.49	152.97	889.15	3.48	2.19	5.31	5.31
Stillwater County	A13	RM 415.74	128639.5	0.2% - 500yr	1843.43	1090.44	1084.72	2.52	1.55	31.08	16.85	154.02	871.7	3.95	2.14	5.72	5.72
Stillwater County	A13	RM 415.72	128521.2	0.2% - 500yr	1843.43	1090.31	1084.8	2.87	1.75	40.01	21.08	132.67	820.52	4.03	2.11	5.51	5.51
Stillwater County	A13	RM 415.65	128106.2	0.2% - 500yr	1843.43	1090.21	1083.7	2.73	1.9	38.25	25.96	170.19	850.2	3.39	2.3	6.51	6.51
Stillwater County	A13	RM 415.59	127828.3	0.2% - 500yr	1843.43	1089.85	1083.61	3.39	2.75	57.13	40.45	136.01	815.02	3.75	2.65	6.24	6.24
Stillwater County	A13	RM 415.55	127620.5	0.2% - 500yr	1843.43	1089.82	1082.84	2.84	2.81	36.88	33.72	132.97	487.92	4.87	4.46	6.98	6.98
Stillwater County			127503	0.2% - 500yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	0.2% - 500yr	1843.43	1089.35	1082.96	2.99	2.98	40.49	39.27	122.78	281.65	5.01	4.88	6.39	6.39
Stillwater County	A13	RM 415.50	127340.9	0.2% - 500yr	1843.43	1089.17	1083.14	3.27	3.24	53.33	45.72	152.45	576.48	3.7	3.17	6.03	6.03
Stillwater County	A13	RM 415.45	127087.4	0.2% - 500yr	1843.43	1088.76	1083.18	3.91	3.89	82.45	73.02	160.08	656.42	2.94	2.6	5.58	5.58
Stillwater County	A13	RM 415.39	126788	0.2% - 500yr	1843.43	1088.63	1084.07	3.56	3.45	66.23	56.25	162.04	769.17	3.19	2.71	4.56	4.56
Stillwater County	A13	RM 415.34	126499.1	0.2% - 500yr	1843.43	1088.55	1084.45	3.37	3.09	59.35	44.9	129.56	768.72	3.17	2.4	4.1	4.1
Stillwater County	A13	RM 415.25	126040.7	0.2% - 500yr	1843.43	1088.27	1082.42	3.5	2.98	62.8	37.41	123.59	695.95	3.37	2.01	5.84	5.84
Stillwater County	A13	RM 415.18	125663.1	0.2% - 500yr	1843.43	1088.13	1083.81	3.19	2.67	51.91	28.06	135.23	711.08	3.44	1.86	4.32	4.32
Stillwater County	A13	RM 415.10	125251.2	0.2% - 500yr	1843.43	1087.62	1083.01	3.94	3.46	80.77	47.39	111.67	520.53	3.29	1.93	4.61	4.61
Stillwater County	A13	RM 414.97	124585.1	0.2% - 500yr	1843.43	1087.28	1082.64	3.51	2.9	64.59	43.31	121.02	523.59	3.2	2.15	4.63	4.63
Stillwater County	A13	RM 414.88	124110.1	0.2% - 500yr	1843.43	1087.03	1083.02	3.32	2.84	57.35	37.88	124.65	516.43	3.26	2.16	4.01	4.01
Stillwater County	A13	RM 414.71	123222	0.2% - 500yr	1843.43	1086.43	1080.88	3.35	3.28	57.99	48.17	165.46	525.97	3.32	2.76	5.55	5.55
Stillwater County	A13	RM 414.57	122473.6	0.2% - 500yr	1843.43	1085.78	1081.21	3.83	3.21	77.08	40.32	146.86	518.07	3.17	1.65	4.57	4.57
Stillwater County	A13	RM 414.43	121696.6	0.2% - 500yr	1843.43	1085.27	1080.49	3.59	2.93	69.9	36.55	170.98	784.36	2.84	1.49	4.78	4.78
Stillwater County	A13	RM 414.21	120527.7	0.2% - 500yr	1843.43	1084.55	1080.81	3.04	2.6	53.69	36.64	222.52	747.82	2.31	1.58	3.74	3.74
Stillwater County	A13	RM 413.90	118914.7	0.2% - 500yr	1843.43	1083.22	1079.28	3.57	2.4	69.16	27.24	157.35	681.26	2.87	1.13	3.94	3.94
Stillwater County	A13	RM 413.65	117570.4	0.2% - 500yr	1843.43	1082.47	1078.15	3.26	1.81	56.13	25.88	143.12	713.84	3.1	1.43	4.31	4.31
Stillwater County	A14	RM 413.44	116446.3	0.2% - 500yr	1843.43	1081.7	1076.4	3.51	1.87	65.88	23.48	147.72	928.33	2.98	1.06	5.3	5.3

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	0.2% - 500yr	1843.43	1081.17	1077.8	3.22	1.81	59.32	27.53	176.76	919.4	2.43	1.13	3.37	3.37
Stillwater County	A14	RM 413.11	114697.4	0.2% - 500yr	1843.43	1080.66	1077.12	2.91	1.77	47.94	21.09	197.3	1081.69	2.53	1.11	3.54	3.54
Stillwater County	A14	RM 412.99	114113.2	0.2% - 500yr	1843.43	1080.33	1076.41	2.92	1.8	48.42	23.51	190.79	1045.12	2.49	1.2	3.92	3.92
Stillwater County	A14	RM 412.88	113533.6	0.2% - 500yr	1843.43	1079.98	1076.03	3.06	2.1	49.69	22.05	145.23	857.12	3.05	1.35	3.95	3.95
Stillwater County	A14	RM 412.73	112742.6	0.2% - 500yr	1843.43	1079.52	1074.72	3.11	2.07	53.44	30.33	174.97	775.79	2.71	1.53	4.8	4.8
Stillwater County	A14	RM 412.59	112005.5	0.2% - 500yr	1843.43	1079.13	1074.72	2.92	1.99	46.71	27.72	198.19	875.59	2.76	1.64	4.41	4.41
Stillwater County	A14	RM 412.49	111442.5	0.2% - 500yr	1843.43	1079.1	1074.54	2.1	1.53	23.13	12.36	189.08	938.16	3.21	1.71	4.56	4.56
Stillwater County	A14	RM 412.31	110522	0.2% - 500yr	1843.43	1078.75	1072.96	2.6	1.83	32.16	15	144.87	771	4.31	2	5.79	5.79
Stillwater County	A14	RM 412.19	109955.3	0.2% - 500yr	1843.43	1077.86	1071.57	4.4	3.22	96.4	38.89	103.6	426.69	3.74	1.49	6.29	6.29
Stillwater County	A14	RM 412.05	109175.2	0.2% - 500yr	1843.43	1077.64	1072.08	3.53	2.45	60.86	25.2	118.28	520.12	3.91	1.61	5.56	5.56
Stillwater County	A14	RM 411.92	108510.2	0.2% - 500yr	1843.43	1077.36	1072.88	3.26	2.85	52.99	24.4	146.42	378.23	3.73	1.71	4.48	4.48
Stillwater County	A14	RM 411.81	107950.5	0.2% - 500yr	1843.43	1076.73	1070.62	3.98	3.97	80.99	79.69	135.94	256.35	3.41	3.36	6.11	6.11
Stillwater County	A14	RM 411.71	107391.9	0.2% - 500yr	1843.43	1076.4	1070.83	3.87	3.82	72.75	60.74	119.39	256.05	3.99	3.33	5.57	5.57
Stillwater County	A14	RM 411.58	106721	0.2% - 500yr	1843.43	1076.12	1071.65	3.46	3.26	62.09	44.02	161.95	452.73	3.27	2.31	4.46	4.46
Stillwater County	A14	RM 411.47	106133.7	0.2% - 500yr	1843.43	1075.86	1071.87	3.24	2.52	55.05	28.94	162.43	477.63	3.16	1.66	3.99	3.99
Stillwater County	A14	RM 411.32	105338.4	0.2% - 500yr	1843.43	1075.33	1069.29	3.4	2.77	60.79	37.12	163.29	491.32	3.15	1.92	6.04	6.04
Stillwater County	A14	RM 411.14	104374.6	0.2% - 500yr	1843.43	1074.25	1067.92	4.36	2.96	97.8	38.5	115.23	477.33	3.39	1.33	6.33	6.33
Stillwater County	A14	RM 411.00	103638.4	0.2% - 500yr	1843.43	1073.72	1069.6	3.92	2.79	84.69	45.44	143.86	451.89	2.73	1.46	4.12	4.12
Stillwater County	A14	RM 410.85	102835.8	0.2% - 500yr	1843.43	1073.36	1069.92	2.9	2.16	49.28	28.14	83.64	1068.51	2.28	1.3	3.44	3.44
Stillwater County	A14	RM 410.74	102286.3	0.2% - 500yr	1843.43	1072.95	1068.99	3.11	2.09	54.89	29.22	75.92	1117.94	2.51	1.32	3.96	3.96
Stillwater County	A14	RM 410.63	101668.3	0.2% - 500yr	1843.43	1072.72	1068.37	2.55	1.82	34.71	21.1	83.69	1212.88	3	1.81	4.35	4.35
Stillwater County	A14	RM 410.52	101115.7	0.2% - 500yr	1843.43	1072.35	1067.81	2.94	2.28	45.57	26.13	123.09	1384.29	3.13	1.79	4.53	4.53
Stillwater County	A14	RM 410.42	100568.4	0.2% - 500yr	1843.43	1071.9	1066.66	3.17	2.92	57.3	37.79	149.68	916.57	2.49	1.64	5.24	5.24
Stillwater County	A14	RM 410.33	100099.2	0.2% - 500yr	1843.43	1071.66	1066.6	2.88	2.46	44.16	30.98	198.78	1118.6	3.03	2.13	5.06	5.06
Stillwater County	A14	RM 410.22	99589.26	0.2% - 500yr	1843.43	1071.11	1066.94	3.66	2.8	71.56	35.86	153.26	1130.09	3.02	1.51	4.17	4.17
Stillwater County	A14	RM 410.12	99057.4	0.2% - 500yr	1843.43	1070.68	1065.8	3.67	2.89	75.64	46.14	177.78	1173.39	2.56	1.56	4.88	4.88
Stillwater County	A14	RM 410.03	98630.66	0.2% - 500yr	1843.43	1070.38	1065.33	3.35	2.75	64.46	40.18	207.31	1176.24	2.4	1.5	5.05	5.05
Stillwater County	A14	RM 409.99	98385.41	0.2% - 500yr	1843.43	1070.17	1065.38	3.38	2.64	65.96	38.42	207.86	1175.31	2.37	1.37	4.79	4.79
Stillwater County	A14	RM 409.94	98072.09	0.2% - 500yr	1843.43	1070.05	1065.51	2.92	2.11	47.56	25.23	206.82	1408.1	2.65	1.4	4.54	4.54
Stillwater County	A14	RM 409.87	97717.24	0.2% - 500yr	1843.43	1070	1065.52	2.5	1.6	31.52	14.86	166.7	1407.48	3.6	1.69	4.48	4.48
Stillwater County	A14	RM 409.76	97130.84	0.2% - 500yr	1843.43	1069.61	1065.37	3.21	1.98	53.79	21.71	146.97	1371.29	3.22	1.3	4.24	4.24
Stillwater County	A14	RM 409.60	96278.7	0.2% - 500yr	1843.43	1068.62	1064.65	4.13	2.8	99.11	40.59	166.1	719.34	2.34	0.96	3.96	3.96
Stillwater County	A14	RM 409.43	95381.62	0.2% - 500yr	1843.43	1067.91	1063.55	3.53	2.29	67.78	31.77	135.5	911.19	2.84	1.33	4.36	4.36
Stillwater County	A14	RM 409.24	94405.29	0.2% - 500yr	1843.43	1067.24	1064.55	2.51	1.9	41.13	29.36	159.47	1008.36	1.62	1.16	3.03	3.03
Stillwater County	A14	RM 409.15	93912.54	0.2% - 500yr	1843.43	1066.84	1064.27	2.34	1.92	34.89	25.72	168.43	746.65	1.78	1.31	4.77	4.77
Stillwater County	A14	RM 408.99	93008.08	0.2% - 500yr	1843.43	1066.16	1063.94	2.69	2.36	46.83	28.36	164.74	768.41	1.67	1.02	3.62	3.62
Stillwater County	A14	RM 408.84	92229.27	0.2% - 500yr	1843.43	1065.69	1062.1	2.59	2.3	43.01	27.79	190.33	710.08	1.74	1.13	3.59	3.59
Stillwater County	A14	RM 408.63	91072.98	0.2% - 500yr	1843.43	1065.26	1061.85	2.1	1.86	25.54	21.94	211.69	498.92	2.37	2.04	3.67	3.67
Stillwater County	A14	RM 408.41	89726.16	0.2% - 500yr	1843.43	1064.83	1059.04	2.62	1.98	32.54	17.9	105.48	397.64	4.32	2.36	5.79	5.79
Stillwater County	A14	RM 408.26	88966.66	0.2% - 500yr	1843.43	1064.56	1058.13	2.77	2.15	36.1	20.54	130.93	367.23	4.42	2.5	6.43	6.43
Stillwater County	A14	RM 408.10	88091.52	0.2% - 500yr	1843.43	1063.38	1057.78	4.65	3.94	105.69	41.66	98.48	302.26	3.94	1.55	5.6	5.6
Stillwater County	A14	RM 408.02	87720.33	0.2% - 500yr	1843.43	1063.34	1058.61	3.89	3.19	75.91	38.64	127.15	350.82	3.61	1.83	4.73	4.73
Stillwater County	A14	RM 407.83	86708.48	0.2% - 500yr	1843.43	1062.8	1058.65	3.26	2.76	61.45	38.57	160.99	454.32	2.34	1.47	4.15	4.15
Stillwater County	A14	RM 407.71	86078.99	0.2% - 500yr	1843.43	1062.33	1057.9	3.55	2.69	67.64	31.15	121.34	500.21	2.97	1.37	4.43	4.43
Stillwater County	A14	RM 407.61	85508.29	0.2% - 500yr	1843.43	1062.1	1058.36	2.9	2.41	48.29	28.99	170.8	528.47	2.41	1.45	3.74	3.74
Stillwater County	A14	RM 407.50	84909.3	0.2% - 500yr	1843.43	1061.87	1058.55	2.68	2.23	41.81	26.32	179.43	569.26	2.3	1.45	3.81	3.81
Stillwater County	A14	RM 407.41	84433.26	0.2% - 500yr	1843.43	1061.74	1057.85	2.48	1.9	33.91	19.39	122.26	620.43	2.74	1.57	4.08	4.08
Stillwater County	A14	RM 407.36	84180.66	0.2% - 500yr	1843.43	1061.59	1057.59	2.89	1.91	44.27	21.77	101.75	643.69	3.07	1.5	4	4
Stillwater County	A14	RM 407.29	83775.88	0.2% - 500yr	1843.43	1061.29	1057.08	2.6	2.38	38.22	23.43	155.75	500.75	2.52	1.55	4.47	4.47
Stillwater County	A14	RM 407.13	82954.84	0.2% - 500yr	1843.43	1061.02	1056.27	2.28	2.11	28.29	20.62	281.86	424.85	2.82	2.05	4.75	4.75
Stillwater County	A14	RM 406.98	82156.72	0.2% - 500yr	1843.43	1060.81	1056.37	2.33	2.08	26.85	16.42	200.47	440.54	3.79	2.32	4.44	4.44
Stillwater County	A14	RM 406.86	81532.92	0.2% - 500yr	1843.43	1059.78	1055.69	4.42	4.08	99.47	65.32	115.89	216.59	3.5	2.29	4.09	4.09
Stillwater County	A14	RM 406.77	81053.3	0.2% - 500yr	1843.43	1059.49	1053.84	4.16	3.49	86.72	46.66	112.47	272.97	3.67	1.97	5.65	5.65
Stillwater County	A14	RM 406.64	80405.13	0.2% - 500yr	1843.43	1059.16	1054.89	3.69	3.32	70.09	42.38	140.3	535.79	3.38	2.04	4.27	4.27
Stillwater County	A14	RM 406.48	79524.79	0.2% - 500yr	1843.43	1058.73	1054.8	3.11	2.42	52.1	33.45	214.11	610.48	2.33	1.49	3.93	3.93
Stillwater County	A14	RM 406.25	78337.26	0.2% - 500yr	1843.43	1058.08	1054.03	3.11	2.19	50.54	21.53	146.6	757.48	3.25	1.37	4.05	4.05
Stillwater County	A14	RM 406.08	77409.13	0.2% - 500yr	1843.43	1057.83	1052.87	2.66	1.65	35.9	16.71	131.8	734.52	3.57	1.64	4.96	4.96
Stillwater County	A14	RM 405.93	76624.91	0.2% - 500yr	1843.43	1056.92	1052.64	4.02	3.19	80.57	31.82	114.34	469.44	3.74	1.47	4.28	4.28
Stillwater County	A14	RM 405.81	75994.44	0.2% - 500yr	1843.43	1056.5	1051.93	3.89	3.72	77.43	71.23	133.87	305.13	3.42	3.16	4.57	4.57
Stillwater County	A15	RM 405.77	75764.36	0.2% - 500yr	1843.43	1056.19	1052.63	4.23	3.83	97.17	64.78	142.49	262.52	2.85	1.9	3.56	3.56

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	0.2% - 500yr	1843.43	1055.91	1052.06	3.52	3.01	66.45	41.04	82.19	369.62	2.97	1.84	3.84	3.84
Stillwater County	A15	RM 405.61	74883.52	0.2% - 500yr	1843.43	1055.76	1051.81	3.59	2.72	66.1	36.42	69.55	528.24	3.38	1.87	3.95	3.95
Stillwater County	A15	RM 405.52	74415.92	0.2% - 500yr	1843.43	1055.34	1051.43	4.12	2.81	86.94	43.09	52.24	667.33	3.44	1.7	3.91	3.91
Stillwater County	A15	RM 405.45	74031.34	0.2% - 500yr	1843.43	1055.31	1051.1	3.19	2.05	50.14	30.04	57.4	881.23	3.8	2.28	4.22	4.22
Stillwater County	A15	RM 405.34	73437.72	0.2% - 500yr	1843.43	1054.81	1050.67	3.47	2.75	60.73	33.59	116.05	930.11	3.56	1.97	4.14	4.14
Stillwater County	A15	RM 405.18	72616.33	0.2% - 500yr	1843.43	1054.44	1049.45	3.49	2.76	58.57	28.91	94.83	890.72	4.14	2.03	4.99	4.99
Stillwater County	A15	RM 405.09	72171.48	0.2% - 500yr	1843.43	1054.3	1049.09	3.12	2.66	47.33	28.14	115.98	935.82	4.02	2.39	5.21	5.21
Stillwater County	A15	RM 405.02	71774.52	0.2% - 500yr	1843.43	1053.81	1048.59	4.09	3.26	80.92	30.98	88.03	734.36	4.07	1.54	5.22	5.22
Stillwater County	A15	RM 404.97	71526.86	0.2% - 500yr	1843.43	1053.76	1048.35	3.56	3.14	61.81	39.78	105.86	982.37	3.93	2.53	5.42	5.42
Stillwater County	A15	RM 404.90	71150.58	0.2% - 500yr	1843.43	1053.62	1048.99	3.47	2.91	59.06	30.38	104.62	1060.88	3.89	2	4.63	4.63
Stillwater County	A15	RM 404.84	70801.47	0.2% - 500yr	1843.43	1053.61	1049.19	2.93	2.35	42.04	22.94	118.04	1213.46	3.9	2.12	4.42	4.42
Stillwater County	A15	RM 404.77	70415.17	0.2% - 500yr	1843.43	1053.5	1048.51	3.11	2.19	46.11	19.93	86.33	1175.61	4.29	1.82	4.99	4.99
Stillwater County	A15	RM 404.71	70152.7	0.2% - 500yr	1843.43	1053.43	1048.14	2.86	2.32	38.94	21.68	86.12	1107.97	4.36	2.39	5.3	5.3
Stillwater County	A15	RM 404.59	69477.61	0.2% - 500yr	1843.43	1052.63	1047.56	4.12	3.12	84.52	23.45	110.64	597.49	3.76	1.02	5.07	5.07
Stillwater County	A15	RM 404.54	69214.33	0.2% - 500yr	1843.43	1052.58	1047.65	3.6	2.71	66.3	23.63	133.67	596.51	3.46	1.22	4.93	4.93
Stillwater County	A15	RM 404.35	68254.38	0.2% - 500yr	1843.43	1052.19	1048.18	3.04	2.47	49.33	25.29	147.66	512.14	2.99	1.54	4.42	4.42
Stillwater County	A15	RM 404.23	67606.98	0.2% - 500yr	1843.43	1051.68	1047.77	3.4	3.28	61.41	50.97	132.49	381.53	3.05	2.55	3.91	3.91
Stillwater County	A15	RM 404.10	66934.17	0.2% - 500yr	1843.43	1051.35	1047.61	3.17	2.94	52.31	40.17	123.69	513.07	3.21	2.46	3.74	3.74
Stillwater County	A15	RM 403.94	66110.59	0.2% - 500yr	1843.43	1051.09	1045.27	2.95	2.33	44.02	27.35	113.06	547.69	3.56	2.21	5.82	5.82
Stillwater County	A15	RM 403.85	65604.39	0.2% - 500yr	1843.43	1050.58	1044.79	3.87	3.19	72.56	47.73	79.41	533.71	4.09	2.67	5.79	5.79
Stillwater County	A15	RM 403.75	65058.55	0.2% - 500yr	1843.43	1049.73	1046.13	4.77	4.12	122.08	87.16	101.02	347.49	2.97	2.11	3.6	3.6
Stillwater County	A15	RM 403.69	64721.22	0.2% - 500yr	1843.43	1049.72	1046.02	3.35	3.2	61.88	56.1	135.84	491.13	2.74	2.49	3.7	3.7
Stillwater County	A15	RM 403.62	64341.29	0.2% - 500yr	1843.43	1049.49	1045.75	3.42	3.11	66.74	50.88	93.52	530.98	2.44	1.87	3.74	3.74
Stillwater County	A15	RM 403.55	63997.04	0.2% - 500yr	1843.43	1049.42	1045.95	2.79	2.32	43.53	33.02	118.23	538.38	2.63	2	3.47	3.47
Stillwater County	A15	RM 403.38	62985.06	0.2% - 500yr	1843.43	1049.17	1043.43	2.23	2.03	25.72	21	194.68	506.36	3.32	2.71	5.74	5.74
Stillwater County	A15	RM 403.24	62260	0.2% - 500yr	1843.43	1048.77	1043.43	2.86	2.59	40.37	27.18	167.56	514.67	3.79	2.55	5.34	5.34
Stillwater County	A15	RM 403.15	61770.95	0.2% - 500yr	1843.43	1048.13	1042.51	3.96	3.38	79.68	40.59	130.41	499.52	3.49	1.77	5.62	5.62
Stillwater County	A15	RM 403.05	61263.44	0.2% - 500yr	1843.43	1047.8	1043.23	3.83	3.41	76.33	45.46	146.94	390.88	3.23	1.92	4.57	4.57
Stillwater County	A15	RM 402.97	60777.65	0.2% - 500yr	1843.43	1047.56	1043.89	3.4	3.22	62.9	51.45	190.96	412.28	2.81	2.3	3.67	3.67
Stillwater County	A15	RM 402.83	60113.9	0.2% - 500yr	1843.43	1046.98	1043.49	3.44	3.4	70.37	63.01	246.5	465.52	2.17	1.94	3.49	3.49
Stillwater County	A15	RM 402.68	59309.8	0.2% - 500yr	1843.43	1046.51	1042.55	2.91	2.41	47.56	29.04	233.75	845.96	2.58	1.58	3.96	3.96
Stillwater County	A15	RM 402.53	58529.61	0.2% - 500yr	1843.43	1046.05	1040.51	3.31	1.94	53.31	16.98	121.12	965.09	4	1.27	5.54	5.54
Stillwater County	A15	RM 402.37	57665.93	0.2% - 500yr	1843.43	1045.53	1041.09	3.42	2.27	69.13	30.85	213.78	947.39	2.2	0.98	4.44	4.44
Stillwater County	A15	RM 402.24	56987.42	0.2% - 500yr	1843.43	1045.44	1040.75	2.16	1.47	25.62	14.12	251.22	959.69	2.75	1.51	4.69	4.69
Stillwater County	A15	RM 402.07	56034.67	0.2% - 500yr	1843.43	1044.86	1041.1	2.98	2	49.92	25.35	204.99	703.82	2.58	1.31	3.76	3.76
Stillwater County	A15	RM 401.87	54972.92	0.2% - 500yr	1843.43	1044.41	1040.1	2.9	1.73	43.52	20.39	150.47	694.15	3.27	1.53	4.3	4.3
Stillwater County	A15	RM 401.69	54002.29	0.2% - 500yr	1843.43	1044.3	1038.43	1.9	1.49	18.68	12.06	248.14	589.69	3.26	2.1	5.87	5.87
Stillwater County	A15	RM 401.55	53267.48	0.2% - 500yr	1843.43	1043.32	1036.56	4.37	3.1	86.82	25.14	74.7	421.42	4.95	1.41	6.76	6.76
Stillwater County	A15	RM 401.41	52506.25	0.2% - 500yr	1843.43	1043.3	1037.91	3	2.45	44.7	30.22	136.71	373.65	3.74	2.53	5.39	5.39
Stillwater County	A15	RM 401.31	51997.63	0.2% - 500yr	1843.43	1042.93	1038.08	3.48	2.82	60.43	34.87	119.22	372.23	3.68	2.13	4.85	4.85
Stillwater County	A15	RM 401.17	51259.17	0.2% - 500yr	1843.43	1042.4	1037.38	3.59	2.88	66.07	28.78	146.36	502.49	3.4	1.48	5.02	5.02
Stillwater County	A15	RM 401.03	50507.04	0.2% - 500yr	1843.43	1042	1036.56	3.58	2.57	63.05	23.47	125.18	497.16	3.88	1.44	5.43	5.43
Stillwater County	A15	RM 400.90	49826.69	0.2% - 500yr	1843.43	1041.23	1036.25	4.19	3.65	95.38	59.81	150.93	408.98	2.83	1.79	4.98	4.98
Stillwater County	A15	RM 400.74	49002.09	0.2% - 500yr	1843.43	1040.87	1037.21	3.44	2.48	61.73	35.77	111.86	420.97	3.23	1.86	3.66	3.66
Stillwater County	A15	RM 400.61	48243.95	0.2% - 500yr	1843.43	1040.67	1035.99	2.54	2.19	34.23	26.03	144.82	359.52	3.09	2.34	4.68	4.68
Stillwater County	A15	RM 400.50	47710.55	0.2% - 500yr	1843.43	1040.34	1035.67	2.92	2.55	44.99	29.6	149.16	350.74	3.13	2.06	4.67	4.67
Stillwater County	A15	RM 400.42	47243.72	0.2% - 500yr	1843.43	1039.96	1034.87	3.5	2.9	61.65	33.4	103.89	326.74	3.61	1.94	5.09	5.09
Stillwater County	A15	RM 400.34	46832.6	0.2% - 500yr	1843.43	1039.79	1034.91	3.4	2.68	56.68	28.26	95.8	356.71	3.87	1.93	4.88	4.88
Stillwater County	A15	RM 400.25	46335.82	0.2% - 500yr	1843.43	1039.65	1035.01	3.1	2.4	47.82	27.39	107.99	356.67	3.77	2.15	4.64	4.64
Stillwater County	A15	RM 400.18	45999.89	0.2% - 500yr	1843.43	1039.5	1034.98	3.14	2.49	49.7	30.17	115.05	343.83	3.57	2.16	4.52	4.52
Stillwater County	A15	RM 400.13	45714.33	0.2% - 500yr	1843.43	1039.38	1035.2	3.07	2.44	47.37	30.26	122.23	375.22	3.64	2.32	4.18	4.18
Stillwater County	A15	RM 400.11	45623.77	0.2% - 500yr	1843.43	1039.3	1035.11	3.13	2.48	50.37	34.31	129.57	678.87	3.4	2.3	4.19	4.19
Stillwater County	A15	RM 400.09	45529.19	0.2% - 500yr	1843.43	1039.18	1035.05	3.37	2.73	59.69	41.62	128.18	664.3	3.17	2.21	4.13	4.13
Stillwater County	A15	RM 400.03	45177.97	0.2% - 500yr	1843.43	1039.01	1034.82	3.18	2.82	52.98	43.06	137.4	543.21	3.19	2.6	4.19	4.19
Stillwater County	A15	RM 399.95	44761.86	0.2% - 500yr	1843.43	1038.7	1033.69	3.29	3.28	53.88	52.84	149.97	427.69	3.73	3.67	5.01	5.01
Stillwater County	A16	RM 399.85	44225.61	0.2% - 500yr	1843.43	1038.17	1033.63	3.85	3.84	76.76	75.38	144.73	309.07	3.31	3.26	4.54	4.54
Stillwater County	A16	RM 399.74	43664.16	0.2% - 500yr	1843.43	1037.98	1033.48	3.19	3.19	54.19	53.51	188.33	336.63	3.07	3.04	4.5	4.5
Stillwater County	A16	RM 399.62	43026.17	0.2% - 500yr	1843.43	1037.69	1033.67	2.93	2.92	46.46	44.88	219.02	613.07	2.88	2.78	4.02	4.02
Stillwater County	A16	RM 399.50	42404.94	0.2% - 500yr	1843.43	1037.36	1031.89	3.07	3.03	47.59	36.75	167.47	561.41	3.58	2.76	5.47	5.47
Stillwater County	A16	RM 399.39	41801.43	0.2% - 500yr	1843.43	1036.93	1031.8	3.44	3.43	60.77	55.1	156.53	376.77	3.42	3.1	5.13	5.13

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.2% - 500yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	0.2% - 500yr	1843.43	1036.62	1031.14	3.58	3.21	65.99	47.09	146.13	367.05	3.34	2.38	5.48	5.48
Stillwater County	A16	RM 399.19	40736.83	0.2% - 500yr	1843.43	1035.92	1031.46	4.22	3.55	93.98	51.57	134.81	338.23	3.1	1.7	4.46	4.46
Stillwater County	A16	RM 399.09	40202.15	0.2% - 500yr	1843.43	1035.59	1031.09	3.86	3.07	76.61	34.87	129.05	390.32	3.4	1.54	4.5	4.5
Stillwater County	A16	RM 399.00	39710.39	0.2% - 500yr	1843.43	1035.42	1031.41	3.36	2.57	60.05	38.37	144.92	377.58	3.02	1.93	4.01	4.01
Stillwater County	A16	RM 398.91	39231.58	0.2% - 500yr	1843.43	1035.14	1031.73	3.1	2.43	56.14	39.93	180.87	473.68	2.29	1.63	3.41	3.41
Stillwater County	A16	RM 398.80	38666.26	0.2% - 500yr	1843.43	1034.75	1031.55	3.02	2.29	52.42	34.22	191.32	522.28	2.39	1.56	3.2	3.2
Stillwater County	A16	RM 398.73	38275.64	0.2% - 500yr	1843.43	1034.51	1030.78	2.82	2.17	40.68	28.43	227.26	552.39	2.2	1.54	3.73	3.73
Stillwater County	A16	RM 398.62	37715.08	0.2% - 500yr	1843.43	1034.19	1030.19	2.75	2.26	39.47	28.26	211.66	499.97	2.28	1.63	4	4
Stillwater County	A16	RM 398.51	37115.9	0.2% - 500yr	1843.43	1033.86	1030.68	2.74	2.28	42.48	29.62	212.08	487.55	2.54	1.77	3.2	3.2
Stillwater County	A16	RM 398.40	36522.49	0.2% - 500yr	1843.43	1033.7	1028.27	2.33	1.93	26.08	20.13	225.87	496.06	2.49	1.92	5.43	5.43
Stillwater County	A16	RM 398.29	35952.65	0.2% - 500yr	1843.43	1033.33	1027.62	2.66	2.25	41.21	27.87	282.82	519.8	2.34	1.58	5.71	5.71
Stillwater County	A16	RM 398.17	35320.39	0.2% - 500yr	1843.43	1033.1	1028.88	2.46	2.16	31.81	18.08	233.17	477.9	3.15	1.79	4.22	4.22
Stillwater County	A16	RM 398.04	34597.07	0.2% - 500yr	1843.43	1032.81	1027.24	2.52	2.27	42.04	29.61	256.39	530.98	2.79	1.96	5.57	5.57
Stillwater County	A16	RM 397.95	34133.39	0.2% - 500yr	1843.43	1032.47	1027.15	2.87	2.62	46.03	30.58	240.56	412.76	2.63	1.74	5.32	5.32
Stillwater County	A16	RM 397.81	33366.95	0.2% - 500yr	1843.43	1032.23	1027.05	2.45	2.21	31.71	23.25	238.11	399.83	3.09	2.27	5.18	5.18
Stillwater County	A16	RM 397.68	32754.86	0.2% - 500yr	1843.43	1032	1026.97	2.61	2.3	34.61	23.2	195.63	411.34	3.51	2.36	5.02	5.02
Stillwater County	A16	RM 397.56	32104.4	0.2% - 500yr	1843.43	1031.18	1026.76	4.01	3.42	83.04	38.39	135	721.63	3.33	1.54	4.42	4.42
Stillwater County	A16	RM 397.40	31237.31	0.2% - 500yr	1843.43	1030.59	1026.27	3.65	3.16	73.19	52.29	176.35	757.62	2.76	1.97	4.32	4.32
Stillwater County	A16	RM 397.17	30082.69	0.2% - 500yr	1843.43	1030.01	1025.84	2.7	2.01	42.77	27.34	269.26	1179.99	2.25	1.44	4.17	4.17
Stillwater County	A16	RM 396.97	29050.44	0.2% - 500yr	1843.43	1029.63	1025.61	2.24	1.49	28.23	16.9	280.04	1254.62	2.55	1.52	4.02	4.02
Stillwater County	A16	RM 396.71	27639.86	0.2% - 500yr	1843.43	1029.08	1022.48	2.91	1.37	41.95	15.1	127.44	1167.53	3.83	1.36	6.6	6.6
Stillwater County	A16	RM 396.62	27103.31	0.2% - 500yr	1843.43	1028.54	1022.36	3.8	1.89	69.51	17.88	99.61	1095.56	4.18	1.06	6.18	6.18
Stillwater County	A16	RM 396.52	26616.35	0.2% - 500yr	1843.43	1028.31	1023.41	3.74	1.77	70	19.68	108.11	1012.07	3.7	1.03	4.9	4.9
Stillwater County	A16	RM 396.29	25423.1	0.2% - 500yr	1843.43	1028.04	1023.53	2.48	1.45	33.04	15.59	188.51	973.9	2.96	1.4	4.51	4.51
Stillwater County	A16	RM 396.14	24635.78	0.2% - 500yr	1843.43	1026.97	1022.46	4.29	3.22	101.08	47.24	129.98	644.46	2.75	1.28	4.51	4.51
Stillwater County	A16	RM 396.03	24026.24	0.2% - 500yr	1843.43	1026.9	1024.1	2.67	2.03	40.81	24.69	186.55	882.84	2.42	1.47	2.8	2.8
Stillwater County	A16	RM 395.89	23301.08	0.2% - 500yr	1843.43	1026.43	1022.79	2.96	2.02	51.78	27.55	152.52	963.26	2.2	1.17	3.64	3.64
Stillwater County	A16	RM 395.73	22420.29	0.2% - 500yr	1843.43	1026.06	1022.66	1.82	1.42	19.64	12.58	186.62	1096.72	2.21	1.41	3.4	3.4
Stillwater County	A16	RM 395.64	21923.33	0.2% - 500yr	1843.43	1025.81	1022.13	2.39	1.53	32.78	15.7	144.53	1257.25	2.42	1.15	3.99	3.99
Stillwater County	A16	RM 395.57	21526.11	0.2% - 500yr	1843.43	1025.38	1021.61	3.23	1.84	56.98	19.67	78.2	1383.91	2.84	0.97	3.77	3.77
Stillwater County	A16	RM 395.48	21053.74	0.2% - 500yr	1843.43	1025.03	1021.89	2.86	2.05	49.7	22.98	116.25	1231.92	2.05	0.95	3.14	3.14
Stillwater County	A16	RM 395.36	20532.68	0.2% - 500yr	1843.43	1024.76	1021.53	2.54	1.84	36.96	16.39	131.95	1224.3	2.42	1.07	3.23	3.23
Stillwater County	A16	RM 394.98	18666.37	0.2% - 500yr	1843.43	1024.16	1020.31	3.02	2.05	51.58	21.71	111.01	987.13	2.52	1.06	3.85	3.85
Stillwater County	A16	RM 394.80	17678.79	0.2% - 500yr	1843.43	1023.82	1019.23	2.81	2.16	45.6	26.28	140.79	681.54	2.37	1.36	4.59	4.59
Stillwater County	A16	RM 394.71	17254.4	0.2% - 500yr	1843.43	1023.62	1019.74	2.54	2.01	36.06	17.49	146.7	813.78	2.61	1.26	3.88	3.88
Stillwater County	A16	RM 394.65	16921.48	0.2% - 500yr	1843.43	1023.37	1019.93	2.54	2.22	38.11	22.56	172.91	845.68	2.21	1.3	4.37	4.37
Stillwater County	A16	RM 394.59	16622.61	0.2% - 500yr	1843.43	1022.98	1019.92	2.59	2.51	43	32.2	182.67	808.56	1.72	1.29	3.41	3.41
Stillwater County	A16	RM 394.53	16295.21	0.2% - 500yr	1843.43	1022.73	1019.83	2.52	2.27	38.9	31.27	158.81	622.23	1.97	1.58	3.72	3.72
Stillwater County	A16	RM 394.45	15858.14	0.2% - 500yr	1843.43	1022.22	1019.03	3.27	2.81	61.71	36.46	113.58	538.44	2.37	1.4	3.34	3.34
Stillwater County	A16	RM 394.20	14503.23	0.2% - 500yr	1843.43	1021.56	1016.38	2.95	2.34	47.32	20.32	149.53	650.11	2.84	1.22	5.18	5.18
Stillwater County	A16	RM 394.12	14088.57	0.2% - 500yr	1843.43	1021.09	1016.74	3.55	2.75	70.53	30.12	152.43	603.82	2.59	1.11	4.35	4.35
Stillwater County	A16	RM 393.99	13393.6	0.2% - 500yr	1843.43	1020.74	1017.11	2.85	2.16	47.32	25.45	126.2	687.83	2.3	1.24	3.63	3.63
Stillwater County	A16	RM 393.85	12650.05	0.2% - 500yr	1843.43	1020.26	1016.49	2.64	2.2	42.4	27.2	179.1	637.65	2.05	1.31	3.77	3.77
Stillwater County	A16	RM 393.59	11240.84	0.2% - 500yr	1843.43	1019.73	1015.45	2.06	1.54	24.25	13.1	272.87	914.3	2.42	1.31	4.28	4.28
Stillwater County	A16	RM 393.27	9813.245	0.2% - 500yr	1843.43	1018.69	1013.32	3.14	2.74	64.42	37.84	265.64	700.24	1.64	0.96	5.37	5.37
Stillwater County	A16	RM 393.10	8870.543	0.2% - 500yr	1843.43	1018.11	1013.34	2.32	2.1	33.53	26.88	340.95	575.12	1.91	1.53	4.77	4.77
Stillwater County	A16	RM 392.95	8114.595	0.2% - 500yr	1843.43	1017.33	1014.13	2.92	2.82	56.35	51.16	363.46	455.47	1.58	1.43	3.19	3.19
Stillwater County	A16	RM 392.69	6912.838	0.2% - 500yr	1843.43	1016.82	1012.43	2.17	1.79	26.65	14.68	192.3	1049.13	2.55	1.4	4.39	4.39
Stillwater County	A16	RM 392.44	5710.825	0.2% - 500yr	1843.43	1016.19	1011.68	2.87	1.94	44.09	19.23	135.35	1177.06	2.98	1.3	4.51	4.51
Stillwater County	A17	RM 392.20	4388.056	0.2% - 500yr	1843.43	1015.18	1010.8	3.43	2.33	68.35	33.61	201.47	1000.83	2.33	1.15	4.38	4.38
Stillwater County	A17	RM 392.00	3345.174	0.2% - 500yr	1843.43	1014.52	1009.53	3.18	2.28	55.07	22.09	166.87	781.54	2.85	1.14	4.99	4.99
Stillwater County	A17	RM 391.84	2491.214	0.2% - 500yr	1843.43	1014.2	1010.51	2.6	1.89	38.93	19.94	154.94	865.33	2.4	1.23	3.79	3.79
Stillwater County	A17	RM 391.68	1656.536	0.2% - 500yr	1843.43	1013.86	1010.5	2.14	1.68	28.05	17.7	255.36	883.77	1.97	1.24	3.36	3.36
Stillwater County	A17	RM 391.58	1120.168	0.2% - 500yr	1843.43	1013.61	1009.55	2.16	1.61	28.44	16.91	363.9	971.95	1.99	1.18	4.06	4.06
Stillwater County	A17	RM 391.46	505.9	0.2% - 500yr	1843.43	1013.37	1009.4	2.17	1.46	27.45	14.67	297.18	1031.63	2.33	1.24	3.97	3.97

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	500-yr	1843.43	1012.93	1008.74	2.66	1.62	39.17	17.47	211.2	952.67	2.68	1.2	4.19	4.19
Yellowstone County	A17	RM 391.14	149661.4	500-yr	1843.43	1012.47	1007.82	2.75	1.66	51.62	27.53	204.17	793.08	2.63	1.4	4.65	4.65
Yellowstone County	A17	RM 390.83	149168.3	500-yr	1843.43	1011.48	1007.89	2.64	2	44.52	24.85	270.59	843.43	2.08	1.16	3.59	3.59
Yellowstone County	A17	RM 390.51	148644.1	500-yr	1843.43	1010.77	1006	1.95	1.5	31.88	15.58	204.64	1130.95	3.04	1.48	4.77	4.77
Yellowstone County	A17	RM 390.34	148387.5	500-yr	1843.43	1010.39	1005.26	2.51	1.82	50.09	22.98	157.04	978.21	3.13	1.43	5.13	5.13
Yellowstone County	A17	RM 390.13	148054.9	500-yr	1843.43	1009.72	1005.54	2.99	2.3	63.91	39.32	148.23	421.06	3.09	1.9	4.18	4.18
Yellowstone County	A17	RM 389.96	147776.4	500-yr	1843.43	1009.44	1004.81	2.25	1.72	31.99	16.86	175.73	1045.44	2.94	1.55	4.63	4.63
Yellowstone County	A17	RM 389.76	147468.2	500-yr	1843.43	1009.19	1004.52	1.75	1.55	25.21	17.66	307.38	749.63	3.1	2.16	4.67	4.67
Yellowstone County	A17	RM 389.55	147162.3	500-yr	1843.43	1008.61	1003.2	2.37	2.34	65.22	58.13	323.02	977.13	2.4	2.14	5.41	5.41
Yellowstone County	A17	RM 389.31	146731.1	500-yr	1843.43	1007.8	1003.49	2.47	2.26	36.23	29.67	256.17	350.01	2.84	2.33	4.31	4.31
Yellowstone County	A17	RM 389.08	146349	500-yr	1843.43	1007.28	1001.61	1.96	1.68	49.29	31.47	309.81	737.59	2.39	1.52	5.67	5.67
Yellowstone County	A17	RM 388.92	146095.5	500-yr	1843.43	1006.93	1002.49	2.06	1.4	23.86	9.07	267.66	1245.03	2.8	1.06	4.44	4.44
Yellowstone County	A17	RM 388.79	145883.6	500-yr	1843.43	1006.7	1002.14	2.36	1.53	30.34	14.96	163.94	658.81	3.76	1.83	4.56	4.56
Yellowstone County	A17	RM 388.61	145594.9	500-yr	1843.43	1006.18	1000.48	3.01	2.08	69.37	36.17	147.91	544.21	3.14	1.63	5.7	5.7
Yellowstone County	A17	RM 388.58	145547	500-yr	1843.43	1005.99	1000.28	3.05	2.19	84.09	40.03	154.88	1341.02	3.18	1.51	5.7	5.7
Yellowstone County	A17	RM 388.36	145196.7	500-yr	1843.43	1005.35	1001.21	2.87	1.95	51.7	23.49	164.28	703.03	2.96	1.34	4.14	4.14
Yellowstone County	A17	RM 388.22	144960.1	500-yr	1843.43	1004.77	1000.23	3.27	2.27	68.34	34.1	162.16	851.64	2.28	1.14	4.54	4.54
Yellowstone County	A17	RM 388.09	144745.8	500-yr	1843.43	1004.27	999.87	2.67	1.95	46.18	25.01	236.81	1015.92	1.96	1.06	4.4	4.4
Yellowstone County	A17	RM 387.91	144452	500-yr	1843.43	1003.61	999.77	1.67	1.76	33.36	27.51	428.74	890.27	1.47	1.21	3.84	3.84
Yellowstone County	A17	RM 387.79	144255.2	500-yr	1843.43	1003.47	999.17	1.34	1.24	7.8	7.62	652.73	1065.06	1.47	1.43	4.3	4.3
Yellowstone County	A17	RM 387.59	143932.9	500-yr	1843.43	1003.16	998.1	1.23	1.22	39.07	37.26	998.6	1121.62	1.41	1.35	5.06	5.06
Yellowstone County	A17	RM 387.36	143562.1	500-yr	1843.43	1002.27	997.78	1.78	1.71	19.67	16.86	860.61	1072.93	1.19	1.02	4.49	4.49
Yellowstone County	A17	RM 387.24	143353.9	500-yr	1843.43	1001.86	997.71	2.11	2.1	21.06	20.6	619.56	648.56	1.41	1.38	4.15	4.15
Yellowstone County	A17	RM 387.04	143026.2	500-yr	1843.43	1001.38	996.49	1.9	1.79	20.65	18.82	685.1	876.98	1.31	1.19	4.89	4.89
Yellowstone County	A17	RM 386.86	142750.4	500-yr	1843.43	1000.84	997.01	1.72	1.53	50.26	37.5	492.32	855.53	1.91	1.43	3.83	3.83
Yellowstone County	A17	RM 386.74	142538.5	500-yr	1843.43	1000.38	996.31	2.03	1.74	32.57	18.68	353.32	798.25	2.35	1.34	4.07	4.07
Yellowstone County	A17	RM 386.61	142318.4	500-yr	1843.43	999.78	995.9	3	2.35	57.67	22.7	188.64	719.04	2.77	1.09	3.88	3.88
Yellowstone County	A17	RM 386.47	142095.8	500-yr	1843.43	999.42	995.18	2.77	2.03	46.56	21.26	175.5	699.55	2.85	1.3	4.24	4.24
Yellowstone County	A17	RM 386.33	141875.1	500-yr	1843.43	998.96	994.36	3.07	2.02	47.72	22.96	170	697.47	2.71	1.31	4.6	4.6
Yellowstone County	A17	RM 386.17	141622.7	500-yr	1843.43	998.52	993.9	2.81	2.16	50.06	25.01	207.61	652.41	2.62	1.31	4.62	4.62
Yellowstone County	A17	RM 386.08	141479.6	500-yr	1843.43	998.65	994.12	1.11	0.66	9.07	3.75	179.92	1963.97	3.43	1.41	4.53	4.53
Yellowstone County	A17	RM 386.03	141389.2	500-yr	1843.43	998.4	993.82	2.26	1.82	27.47	15.51	234.49	625.89	2.87	1.62	4.58	4.58
Yellowstone County	A17	RM 385.96	141289.2	500-yr	1843.43	998.36	993.01	1.94	1.65	18.9	12.49	244.54	575.43	3.43	2.27	5.35	5.35
Yellowstone County	A17	RM 385.91	141204.9	500-yr	1843.43	998.26	992.33	2.05	1.94	21.72	17.7	267.52	527.47	3.32	2.7	5.93	5.93
Yellowstone County	A17	RM 385.84	141096	500-yr	1843.43	997.91	990.57	2.87	2.87	41.38	41.38	345.53	456.49	4.36	4.36	7.34	7.34
Yellowstone County		RM 342.71	141053	500-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	500-yr	1843.43	997.55	992.45	3.28	3.28	89.54	89.54	145.69	161.96	3.86	3.86	5.1	5.1
Yellowstone County	A17	RM 385.79	141006	500-yr	1843.43	997.55	992.48	3.05	3.05	42.38	42.26	167.14	407.63	3.62	3.61	5.07	5.07
Yellowstone County	A18	RM 385.69	140846.5	500-yr	1843.43	997.33	992.9	2.83	2.52	75.88	57.64	213.88	533.77	2.97	2.25	4.43	4.43
Yellowstone County	A18	RM 385.60	140705.5	500-yr	1843.43	996.93	992.71	3.01	2.62	67.85	49.47	204.48	513.53	2.87	2.09	4.22	4.22
Yellowstone County	A18	RM 385.50	140538.8	500-yr	1843.43	996.55	990.71	3.1	2.4	68.84	27.5	152	530.31	3.64	1.45	5.84	5.84
Yellowstone County	A18	RM 385.39	140367.1	500-yr	1843.43	996.24	992.41	3.08	2.49	49.17	26.23	205.72	510.8	2.71	1.45	3.83	3.83
Yellowstone County	A18	RM 385.30	140231.3	500-yr	1843.43	995.93	992.53	3.05	2.57	71.91	46.47	239.85	477.29	2.33	1.5	3.4	3.4
Yellowstone County	A18	RM 385.23	140108.3	500-yr	1843.43	995.71	992.01	2.55	2.29	51.58	39.66	233.42	451.67	2.32	1.79	3.7	3.7
Yellowstone County	A18	RM 385.12	139921.2	500-yr	1843.43	994.9	991.37	3.29	3.01	76.25	60.76	258.94	441.56	1.74	1.38	3.53	3.53
Yellowstone County	A18	RM 384.93	139688.7	500-yr	1843.43	994.53	991.06	2.42	2.1	32.48	21.52	247.69	591.38	2.24	1.48	3.47	3.47
Yellowstone County	A18	RM 384.75	139352.1	500-yr	1843.43	993.4	989.77	4.02	3.12	116.61	53.5	120.34	555.25	2.39	1.09	3.63	3.63
Yellowstone County	A18	RM 384.63	139146.9	500-yr	1843.43	993.16	989.58	1.97	1.8	25.5	21.73	198.82	926.38	1.83	1.56	3.58	3.58
Yellowstone County	A18	RM 384.48	138904.5	500-yr	1843.43	992.85	989.55	1.67	1.79	26.26	14.37	185.74	853.57	2.25	1.23	3.5	3.5
Yellowstone County	A18	RM 384.34	138682.4	500-yr	1843.43	992.6	988.23	1.78	1.58	42.46	20.83	170.12	997.16	2.94	1.44	4.37	4.37
Yellowstone County	A18	RM 384.26	138551.1	500-yr	1843.43	992.35	987.34	2.51	1.7	68.88	29.59	94.5	998.76	3.34	1.42	5.01	5.01
Yellowstone County	A18	RM 384.15	138370.3	500-yr	1843.43	991.42	987.39	4.13	2.86	125.47	39.48	80.78	712.31	2.91	0.9	4.03	4.03
Yellowstone County	A18	RM 384.06	138235.3	500-yr	1843.43	991.17	987.31	3.09	2.07	57.12	29.02	87.87	844.61	2.74	1.38	3.86	3.86
Yellowstone County	A18	RM 383.96	138072.3	500-yr	1843.43	990.81	987.67	2.58	2.25	43.83	29.51	141.07	662.34	1.84	1.24	3.14	3.14
Yellowstone County	A18	RM 383.86	137914.6	500-yr	1843.43	990.61	987.24	2.13	1.86	26.26	15.89	157.51	680.26	2.41	1.45	3.37	3.37
Yellowstone County	A18	RM 383.75	137749.9	500-yr	1843.43	990.37	986.55	1.92	1.91	29.65	20.19	209.51	738.88	1.94	1.31	3.89	3.89
Yellowstone County	A18	RM 383.62	137544.5	500-yr	1843.43	990.15	986.32	1.84	1.56	21.14	14.57	178.05	765.47	2.25	1.55	4.53	4.53
Yellowstone County	A18	RM 383.54	137415.7	500-yr	1843.43	990.06	984.41	1.68	1.4	15.87	10.48	392.45	778.61	2.56	1.69	5.65	5.65
Yellowstone County	B1	RM 383.39	137175.7	500-yr	2370.12	989.65	984.98	2.4	2.24	25.08	19.45	621.91	870.04	1.57	1.22	4.67	4.67
Yellowstone County	B1	RM 383.31	137040.5	500-yr	2370.12	989.49	984.86	2.06	1.78	23.43	21.66	684.34	917.64	1.57	1.45	4.63	4.63
Yellowstone County	B1	RM 383.16	136817.2	500-yr	2370.12	989.28	984.9	1.63	1.43	15.83	15.51	784.43	999.17	1.7	1.66	4.38	4.38

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	500-yr	2370.12	988.88	983.64	1.68	1.5	18.53	17.06	629.22	850.85	2.02	1.86	5.24	5.24
Yellowstone County	B1	RM 382.61	135921.1	500-yr	2370.12	988.31	982.68	2.6	1.7	35.6	11.83	196.01	1078.1	3.91	1.3	5.63	5.63
Yellowstone County	B1	RM 382.44	135657.8	500-yr	2370.12	987.82	981.56	3.38	2.2	57.13	26.34	132.77	554.48	4.22	1.94	6.26	6.26
Yellowstone County	B1	RM 382.28	135389.1	500-yr	2370.12	987.72	981.45	2.52	1.56	34.44	11.45	139.32	996.49	4.59	1.52	6.27	6.27
Yellowstone County	B1	RM 382.11	135122	500-yr	2370.12	987.2	980.52	3.34	2.08	62.43	20.13	134.28	833.57	4.26	1.37	6.68	6.68
Yellowstone County	B1	RM 381.93	134829.3	500-yr	2370.12	986.84	981.3	2.85	2.17	70.65	27.17	182.96	735.57	3.87	1.48	5.54	5.54
Yellowstone County	B1	RM 381.79	134602.8	500-yr	2370.12	986.37	981.63	3.17	2.33	55	21.98	167.95	665.37	3.86	1.53	4.74	4.74
Yellowstone County	B1	RM 381.69	134426.2	500-yr	2370.12	986.29	981.06	2.45	1.93	37.12	17.4	207.55	639.77	4.12	1.92	5.23	5.23
Yellowstone County	B1	RM 381.58	134232.5	500-yr	2370.12	986.12	981.02	2.34	1.97	31.72	20.82	271.39	792.2	3.39	2.22	5.1	5.1
Yellowstone County	B1	RM 381.47	134047.3	500-yr	2370.12	985.94	980.95	2.01	1.75	50.05	31.22	333.31	897.36	3.1	1.93	4.99	4.99
Yellowstone County	B1	RM 381.35	133871.9	500-yr	2370.12	985.63	980.79	1.96	1.69	54.48	29.01	366.2	899.68	2.94	1.56	4.84	4.84
Yellowstone County	B1	RM 381.22	133659.2	500-yr	2370.12	985.06	979.74	2.18	2.14	74.72	64.3	432.75	516.17	2.49	2.14	5.32	5.32
Yellowstone County	B1	RM 381.11	133491.4	500-yr	2370.12	984.62	979.61	2.09	2	61.91	42.65	287.45	627.02	2.75	1.89	5.01	5.01
Yellowstone County	B1	RM 381.00	133302.9	500-yr	2370.12	984	978.23	3.2	2.53	52.18	26.08	190.07	717.84	3.21	1.6	5.77	5.77
Yellowstone County	B1	RM 380.92	133180	500-yr	2370.12	983.89	976.97	2.9	2.21	51.93	23.64	152.78	784.62	4.06	1.84	6.92	6.92
Yellowstone County	B1	RM 380.81	132986.3	500-yr	2370.12	983.54	978.55	3.06	2.35	52.2	26.87	193.61	994.71	3.45	1.77	4.99	4.99
Yellowstone County	B1	RM 380.69	132800.2	500-yr	2370.12	983.41	978.53	2.47	1.93	32.83	19.14	264.93	1202.89	3.19	1.86	4.88	4.88
Yellowstone County	B1	RM 380.57	132628.6	500-yr	2370.12	983.22	978.7	2.41	1.99	44.55	25.29	229.16	1280.86	3.46	1.97	4.52	4.52
Yellowstone County	B1	RM 380.48	132470	500-yr	2370.12	982.99	978.24	2.54	2.04	43.85	24.3	201.91	1354.24	3.7	2.05	4.75	4.75
Yellowstone County	B1	RM 380.34	132222.4	500-yr	2370.12	982.61	977.37	2.87	2.24	44.82	28.68	205.99	1252.99	3.33	2.13	5.24	5.24
Yellowstone County	B1	RM 380.22	132032.4	500-yr	2370.12	981.83	977.02	3.94	3.58	83.51	56.82	172.71	1200.04	3.27	2.22	4.81	4.81
Yellowstone County	B1	RM 380.11	131847.7	500-yr	2370.12	981.66	976.29	3.2	2.69	62.02	37.56	181.17	566.58	3.12	1.89	5.37	5.37
Yellowstone County	B1	RM 380.01	131671.4	500-yr	2370.12	981.45	976.21	2.82	2.08	55.64	30.4	174.5	736.04	3.27	1.78	5.24	5.24
Yellowstone County	B1	RM 379.92	131538.8	500-yr	2370.12	981.17	976.69	3.01	2.17	47.88	25.56	194.68	703.41	2.91	1.56	4.48	4.48
Yellowstone County	B1	RM 379.84	131406.9	500-yr	2370.12	981.12	975.94	2.05	1.69	24.06	17.36	420.29	1027.63	2.54	1.83	5.18	5.18
Yellowstone County	B1	RM 379.75	131265.1	500-yr	2370.12	980.92	974.98	2.22	1.83	34	22.89	375.93	727.61	2.64	1.78	5.94	5.94
Yellowstone County	B1	RM 379.65	131104.3	500-yr	2370.12	980.76	975.6	2.09	1.7	24.96	15.78	379.84	840.79	2.63	1.66	5.16	5.16
Yellowstone County	B1	RM 379.56	130964.3	500-yr	2370.12	980.63	975.94	2.09	1.79	25.3	18.48	313.71	1661.6	2.85	2.08	4.69	4.69
Yellowstone County	B1	RM 379.46	130794	500-yr	2370.12	980.44	974.74	2.24	1.72	27.16	17.27	299.1	1435.46	2.72	1.73	5.7	5.7
Yellowstone County	B1	RM 379.36	130642.3	500-yr	2370.12	980.37	975.71	1.94	1.27	28.38	15.51	247.15	1098.76	3.62	1.97	4.66	4.66
Yellowstone County	B1	RM 379.27	130496.2	500-yr	2370.12	980.03	974.66	2.89	1.72	69.58	33.76	165.2	842.15	3.39	1.64	5.37	5.37
Yellowstone County	B1	RM 379.17	130345.7	500-yr	2370.12	979.44	973.93	3.65	2.08	84.52	32.88	154.92	862.4	3.4	1.32	5.51	5.51
Yellowstone County	B1	RM 379.04	130142	500-yr	2370.12	979.21	974.79	2.92	1.74	46.21	23.52	203.31	902.17	2.97	1.51	4.42	4.42
Yellowstone County	B1	RM 378.97	130026.7	500-yr	2370.12	978.94	974.64	3.06	1.91	52.56	25.84	231.05	921.56	2.74	1.35	4.3	4.3
Yellowstone County	B1	RM 378.86	129850.9	500-yr	2370.12	978.58	974.4	3.06	1.93	56.91	28.45	250.72	958.05	2.57	1.28	4.18	4.18
Yellowstone County	B1	RM 378.76	129682.3	500-yr	2370.12	978.29	974.17	2.84	1.83	46.31	23.07	272.82	997.09	2.61	1.3	4.12	4.12
Yellowstone County	B1	RM 378.67	129541.3	500-yr	2370.12	978.16	973.97	2.46	1.49	30.41	17.68	297.59	1129.72	2.43	1.41	4.2	4.2
Yellowstone County	B1	RM 378.61	129443.1	500-yr	2370.12	978.08	973.83	1.78	1.44	41.2	28.53	265.11	1361.96	2.38	1.65	4.25	4.25
Yellowstone County	B1	RM 378.52	129297.7	500-yr	2370.12	977.92	973.62	1.66	1.34	17.67	14.81	565.81	1407.72	2.18	1.83	4.3	4.3
Yellowstone County	B1	RM 378.46	129200.8	500-yr	2370.12	977.89	973.48	1.33	1	13.73	8.96	613.46	1466.67	2.48	1.62	4.41	4.41
Yellowstone County	B1	RM 378.40	129112.2	500-yr	2370.12	977.81	973.41	1.4	1.25	29.51	23.34	605.91	1438.96	2.55	2.01	4.4	4.4
Yellowstone County	B1	RM 378.29	128929.4	500-yr	2370.12	977.73	972.93	1.22	1.03	9.93	6.9	567.41	1598.13	3.19	2.22	4.79	4.79
Yellowstone County	B1	RM 378.13	128673.7	500-yr	2370.12	977.53	971.4	1.78	1.59	16.2	12.74	438.15	1774.81	2.89	2.27	6.13	6.13
Yellowstone County	B1	RM 378.07	128569	500-yr	2370.12	977.42	970.46	2.01	1.86	18.88	15.92	347.76	1728.07	3.34	2.81	6.96	6.96
Yellowstone County	B1	RM 377.96	128380.3	500-yr	2370.12	976.59	968.85	3.71	3.71	102.84	102.84	112.58	112.58	5.67	5.67	7.74	7.74
Yellowstone County		RM 338.83	128364	500-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	500-yr	2370.12	976.49	967.19	3.54	3.54	105	105	111.33	111.33	6.02	6.02	9.3	9.3
Yellowstone County	B1	RM 377.87	128244.4	500-yr	2370.12	976.29	970.56	3.37	3.37	74.59	74.57	223.61	375.33	3.21	3.21	5.73	5.73
Yellowstone County	B1	RM 377.79	128118	500-yr	2370.12	976.14	970.94	2.87	2.87	43.91	43.88	345.01	735.67	2.4	2.39	5.2	5.2
Yellowstone County	B1	RM 377.69	127964.3	500-yr	2370.12	975.96	969.86	2.47	2.37	33.35	29.92	423.76	784.96	2.24	2.01	6.1	6.1
Yellowstone County	B1	RM 377.61	127824.8	500-yr	2370.12	975.46	970.53	3.18	3.01	42.65	33.83	432.58	725.87	1.71	1.36	4.93	4.93
Yellowstone County	B1	RM 377.55	127735.1	500-yr	2370.12	975.35	970.41	2.77	2.65	33.48	27.58	461.84	674.84	1.84	1.51	4.94	4.94
Yellowstone County	B1	RM 377.48	127618.1	500-yr	2370.12	975.16	970.26	2.64	2.57	35.62	29.97	470.49	863.19	1.91	1.6	4.9	4.9
Yellowstone County	B1	RM 377.39	127466.6	500-yr	2370.12	975.02	969.73	2.23	1.5	25.55	12.13	421.15	1564.08	2.14	1.01	5.29	5.29
Yellowstone County	B1	RM 377.34	127391.5	500-yr	2370.12	974.68	969.95	2.76	2.4	128.72	84.68	410.66	767.9	1.96	1.29	4.73	4.73
Yellowstone County	B1	RM 377.25	127241.9	500-yr	2370.12	974.45	970.26	2.11	1.87	23.97	17.04	486.8	1257.21	2.19	1.56	4.19	4.19
Yellowstone County	B1	RM 377.16	127097.7	500-yr	2370.12	974.31	969.82	2.06	1.86	25.83	18.49	410.87	750.04	2.38	1.71	4.49	4.49
Yellowstone County	B1	RM 377.08	126969	500-yr	2370.12	974.26	969	1.68	1.41	15.71	10.82	417.58	811.34	3.01	2.08	5.26	5.26
Yellowstone County	B1	RM 377.04	126900.8	500-yr	2370.12	974.17	968.6	1.74	1.6	49.65	41.5	570.04	781.39	2.27	1.9	5.57	5.57
Yellowstone County	B1	RM 376.98	126797.5	500-yr	2370.12	973.99	969.02	1.92	1.71	22.33	18.13	531.66	764.32	2.25	1.82	4.97	4.97
Yellowstone County	B1	RM 376.92	126710.1	500-yr	2370.12	973.91	969.01	1.68	1.53	38.42	31.36	505.97	718.75	2.64	2.15	4.9	4.9

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	500-yr	2370.12	973.82	967.73	1.49	1.37	17.85	15.17	449.92	684.81	2.97	2.53	6.09	6.09
Yellowstone County	B1	RM 376.75	126442.1	500-yr	2370.12	973.69	967.82	1.62	1.58	26.54	23.42	406.87	542.41	3.15	2.79	5.87	5.87
Yellowstone County	B1	RM 376.67	126309	500-yr	2370.12	973.49	967.23	1.97	1.89	43.48	36.58	333.94	474.53	3.14	2.65	6.26	6.26
Yellowstone County	B1	RM 376.58	126174.1	500-yr	2370.12	973.15	966.82	2.4	2.35	59.49	53.23	308.29	1694.1	2.95	2.64	6.33	6.33
Yellowstone County	B1	RM 376.51	126058.2	500-yr	2370.12	972.78	966.77	2.85	2.85	54.92	54.19	267.85	271.77	3.1	3.06	6.01	6.01
Yellowstone County	B1	RM 376.42	125918.5	500-yr	2370.12	972.63	967.68	2.64	2.62	37.77	35.19	257.43	278.7	3.48	3.24	4.95	4.95
Yellowstone County	B1	RM 376.35	125809.8	500-yr	2370.12	972.49	966.71	2.71	2.71	36.82	35.96	225.28	230.82	3.88	3.79	5.78	5.78
Yellowstone County	B1	RM 376.28	125697	500-yr	2370.12	972.02	966.28	3.58	3.58	71.22	69.74	223.32	228.22	2.96	2.9	5.74	5.74
Yellowstone County	B1	RM 376.20	125565.9	500-yr	2370.12	971.79	966.16	3.27	3.05	61.62	35.74	253.31	1655.36	2.81	1.63	5.63	5.63
Yellowstone County	B1	RM 376.10	125404.8	500-yr	2370.12	971.5	966.61	3.1	2.75	52.81	32.96	272.23	1616.92	2.56	1.6	4.89	4.89
Yellowstone County	B1	RM 376.00	125250.5	500-yr	2370.12	971.19	967.42	3.05	2.52	56.26	38.22	244.6	1433.12	2.79	1.89	3.77	3.77
Yellowstone County	B1	RM 375.88	125055.1	500-yr	2370.12	970.88	966.01	2.92	2.07	55.06	28.89	185.92	1051.32	3.24	1.7	4.87	4.87
Yellowstone County	B1	RM 375.78	124897.3	500-yr	2370.12	970.69	965.37	2.63	1.8	44.21	21.52	188.53	1005.43	3.12	1.52	5.32	5.32
Yellowstone County	B1	RM 375.67	124708.2	500-yr	2370.12	970.5	965.8	2.45	1.8	37.84	19.35	229.57	899.86	2.86	1.46	4.7	4.7
Yellowstone County	B1	RM 375.58	124564.2	500-yr	2370.12	970.21	966.54	2.75	2.03	46.36	21.4	226.72	899.82	2.82	1.3	3.67	3.67
Yellowstone County	B1	RM 375.23	124013.6	500-yr	2370.12	969.57	965.23	2.41	1.6	37.99	14.63	230.98	1255.56	3.06	1.18	4.34	4.34
Yellowstone County	B1	RM 375.10	123799.5	500-yr	2370.12	968.92	963.88	3.64	2.12	88.46	23.41	126.64	1160.73	3.67	0.96	5.04	5.04
Yellowstone County	B1	RM 374.97	123580.4	500-yr	2370.12	968.71	963.97	2.68	1.67	54.69	17.73	136.64	1248.14	3.58	1.14	4.74	4.74
Yellowstone County	B1	RM 374.83	123365.5	500-yr	2370.12	968.48	963.52	2.35	1.5	32.91	12.2	133.1	1273.6	3.37	1.24	4.96	4.96
Yellowstone County	B1	RM 374.73	123195.7	500-yr	2370.12	968.4	963.36	1.85	1.23	18.11	7.43	144.18	1346.97	3.5	1.43	5.04	5.04
Yellowstone County	B1	RM 374.61	123010.3	500-yr	2370.12	968.19	963.49	2.25	1.5	38.36	13.41	163.89	1383.18	3.45	1.2	4.7	4.7
Yellowstone County	B1	RM 374.53	122875.3	500-yr	2446.58	967.94	963.14	2.63	1.84	42.84	15.91	186.43	1069	3.35	1.24	4.8	4.8
Yellowstone County	B1	RM 374.44	122726.7	500-yr	2446.58	967.64	963.04	3.06	1.91	67.39	21.42	128.47	1044.8	3.88	1.23	4.6	4.6
Yellowstone County	B1	RM 374.32	122535.1	500-yr	2446.58	967.45	962.82	2.19	1.82	45.63	21.14	207.68	1003.89	2.9	1.34	4.63	4.63
Yellowstone County	B1	RM 374.22	122379	500-yr	2446.58	967.25	960.92	2.51	1.53	35.41	13.76	134.27	1048.26	3.92	1.52	6.33	6.33
Yellowstone County	B1	RM 374.13	122231.1	500-yr	2446.58	967.14	960.11	2.54	1.54	33.23	15.05	137.18	985.28	3.58	1.62	7.03	7.03
Yellowstone County	B1	RM 373.97	121972.4	500-yr	2446.58	966.96	958.8	2.04	1.48	28.57	13.64	235.01	1008.2	3.45	1.64	8.16	8.16
Yellowstone County	B1	RM 373.88	121829.3	500-yr	2446.58	966.79	962.21	2.27	1.54	35.8	15.95	194.77	1105.44	3.58	1.59	4.58	4.58
Yellowstone County	B1	RM 373.79	121688.7	500-yr	2446.58	966.68	961.66	2.1	1.43	34.38	17.1	192.66	1130.27	3.58	1.77	5.02	5.02
Yellowstone County	B1	RM 373.69	121523.5	500-yr	2446.58	966.51	961.11	2.18	1.5	27.99	16.6	202.68	1045.94	3.47	2.05	5.4	5.4
Yellowstone County	B1	RM 373.56	121314.3	500-yr	2446.58	966.03	959.37	3.01	2.18	55.54	26	204.77	726.81	3.31	1.54	6.66	6.66
Yellowstone County	B1	RM 373.39	121015.9	500-yr	2446.58	965.41	958.78	3.25	2.67	68.02	23.9	187.29	691.62	3.79	1.32	6.63	6.63
Yellowstone County	B1	RM 373.26	120802.3	500-yr	2446.58	965.34	960.81	2.12	1.92	27.85	21.39	355.66	1663.02	3.1	2.39	4.53	4.53
Yellowstone County	B1	RM 373.09	120539.5	500-yr	2446.58	964.91	959.94	2.64	2.42	39.87	33.04	304.46	1481.62	2.93	2.43	4.97	4.97
Yellowstone County	B1	RM 372.99	120365.2	500-yr	2446.58	964.7	959.69	2.38	2.09	46.77	34.49	329.9	1479.01	2.88	2.13	5.01	5.01
Yellowstone County	B1	RM 372.82	120107.7	500-yr	2446.58	964.47	959.03	1.9	1.83	21.47	19.92	469.06	1564.32	2.7	2.51	5.44	5.44
Yellowstone County	B1	RM 372.72	119922.5	500-yr	2446.58	964.23	958.92	2.1	2.06	38.87	36.44	442.03	1512.82	2.61	2.45	5.31	5.31
Yellowstone County	B1	RM 372.65	119797.7	500-yr	2446.58	964.05	957.32	2.19	2.1	30.83	29.39	397.89	1551.91	2.76	2.63	6.73	6.73
Yellowstone County	B1	RM 372.58	119676.6	500-yr	2446.58	963.97	958.2	1.93	1.86	22.67	20.56	441.67	1548.45	2.83	2.56	5.77	5.77
Yellowstone County	B1	RM 372.41	119395.9	500-yr	2446.58	963.8	958.82	1.74	1.66	16.7	15.33	485.58	1583.13	2.83	2.6	4.98	4.98
Yellowstone County	B1	RM 372.32	119268.8	500-yr	2446.58	963.68	957.24	1.7	1.64	41.96	36.35	534.32	670.06	2.58	2.24	6.44	6.44
Yellowstone County	B1	RM 372.20	119079.1	500-yr	2446.58	963.37	956.93	1.67	1.55	45.6	34.12	512.44	1367.06	2.5	1.87	6.44	6.44
Yellowstone County	B1	RM 372.08	118886.4	500-yr	2446.58	962.91	956.2	1.95	1.87	58.48	49.7	471.99	1106.59	2.5	2.12	6.71	6.71
Yellowstone County	B1	RM 371.94	118669.8	500-yr	2446.58	962.24	957.58	2.31	2.3	66.77	64.32	446.92	820.73	2.37	2.28	4.66	4.66
Yellowstone County	B1	RM 371.83	118490.4	500-yr	2446.58	961.9	957.52	2.2	2.07	39.45	30.39	393.72	813.21	2.68	2.07	4.38	4.38
Yellowstone County	B1	RM 371.74	118350.7	500-yr	2446.58	961.72	957.48	2.23	1.96	31.04	21.71	386.04	834.14	2.63	1.84	4.24	4.24
Yellowstone County	B1	RM 371.62	118155.6	500-yr	2446.58	961.55	956.41	2.19	1.4	31.46	13.48	220.59	1155.03	3.76	1.61	5.14	5.14
Yellowstone County	B1	RM 371.53	118001.4	500-yr	2446.58	961.26	955.99	2.66	1.92	40.64	22.78	235.31	1181.9	3.26	1.82	5.27	5.27
Yellowstone County	B1	RM 371.43	117839.2	500-yr	2446.58	961	955.47	2.59	1.87	69.02	32.65	253.33	1201.73	3	1.41	5.53	5.53
Yellowstone County	B1	RM 371.37	117745.1	500-yr	2446.58	960.86	955.72	2.47	1.71	32.17	16.35	292.28	1083.98	2.97	1.51	5.14	5.14
Yellowstone County	B1	RM 371.32	117662.6	500-yr	2446.58	960.85	956.41	2	1.4	31.07	16.18	299.65	1033.15	3.25	1.7	4.44	4.44
Yellowstone County	B1	RM 371.25	117560.3	500-yr	2446.58	960.77	955.99	1.86	1.42	19.54	13.99	378.1	965.99	3.05	2.18	4.78	4.78
Yellowstone County	B1	RM 371.21	117499	500-yr	2446.58	960.75	955.72	1.74	1.44	17.35	13.41	357.71	686.43	3.2	2.48	5.03	5.03
Yellowstone County	B1	RM 371.12	117353.9	500-yr	2446.58	960.59	955.54	1.97	1.93	22.5	20.95	392.6	864.15	3.15	2.93	5.05	5.05
Yellowstone County	B1	RM 371.04	117225.1	500-yr	2446.58	960.01	954.84	3.23	3.23	59.68	59.68	236.1	557.96	3.21	3.21	5.17	5.17
Yellowstone County		RM 335.51	117205	500-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	500-yr	2446.58	959.9	954.9	3.2	3.2	60.8	60.8	232.07	454.37	3.29	3.29	5	5
Yellowstone County	B1	RM 370.94	117054.9	500-yr	2446.58	959.77	955.57	2.77	2.11	50.56	24.23	242.96	1394.69	3.42	1.63	4.2	4.2
Yellowstone County	B1	RM 370.85	116910.9	500-yr	2446.58	959.35	954.47	3.25	2.74	68.09	39.6	220.21	1057.19	3.3	1.91	4.88	4.88
Yellowstone County	B1	RM 370.77	116793.6	500-yr	2446.58	959.12	953.84	3.27	2.48	55.73	30.67	224.11	1262.74	3.12	1.72	5.28	5.28
Yellowstone County	B1	RM 370.72	116711.6	500-yr	2446.58	958.88	953.13	3.63	2.41	77.14	33.63	165.01	1112.21	3.53	1.53	5.75	5.75

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	500-yr	2446.58	958.93	953.05	3.07	2.06	47.47	26.06	201.49	1164.79	3.17	1.74	5.88	5.88
Yellowstone County	B1	RM 370.63	116558.9	500-yr	2446.58	958.75	953.42	2.94	1.99	70.08	29.33	184.3	1189.84	3.75	1.57	5.33	5.33
Yellowstone County	B1	RM 370.56	116440.6	500-yr	2446.58	958.65	953.34	2.72	1.65	33.92	13.71	178.41	1202.21	4.18	1.68	5.31	5.31
Yellowstone County	B1	RM 370.44	116241.1	500-yr	2446.58	958.3	952.03	3.29	1.8	66.06	22.04	134.51	929.74	4.43	1.46	6.27	6.27
Yellowstone County	B1	RM 370.34	116071.6	500-yr	2446.58	958.14	949.79	3.09	1.62	59.97	16.67	118.14	1099.62	5	1.37	8.35	8.35
Yellowstone County	B1	RM 370.24	115908.6	500-yr	2446.58	958	950.22	2.94	1.6	49.66	14.55	117.55	1017.82	5.18	1.5	7.78	7.78
Yellowstone County	B1	RM 370.11	115705	500-yr	2446.58	957.68	952.12	3.07	1.95	59.99	23.3	161	812.2	3.98	1.54	5.56	5.56
Yellowstone County	B1	RM 370.00	115535.2	500-yr	2446.58	957.39	952.2	2.66	2.2	78.48	45.25	262.67	713.21	2.71	1.56	5.19	5.19
Yellowstone County	B1	RM 369.89	115356.1	500-yr	2446.58	957.04	953.15	2.45	2.14	32.37	23.6	419.05	709.74	2.21	1.61	3.89	3.89
Yellowstone County	B1	RM 369.77	115164.3	500-yr	2446.58	956.77	952.34	2.3	2.17	30.15	25.33	497.76	858.39	2.11	1.77	4.43	4.43
Yellowstone County	B1	RM 369.64	114965.6	500-yr	2446.58	956.51	951.9	2.14	1.93	31.48	25.47	503.19	827.39	2.12	1.72	4.61	4.61
Yellowstone County	B1	RM 369.54	114789.5	500-yr	2446.58	956.34	952.38	1.93	1.61	21.56	16.73	506.38	1012.88	2.24	1.74	3.96	3.96
Yellowstone County	B1	RM 369.45	114650.1	500-yr	2446.58	956.22	951	1.83	1.6	21.22	16.5	466.31	781.34	2.53	1.95	5.22	5.22
Yellowstone County	B1	RM 369.32	114431.1	500-yr	2446.58	956.01	951.1	1.89	1.59	30.7	21.53	377.04	711.81	3.09	2.17	4.91	4.91
Yellowstone County	B1	RM 369.17	114210.5	500-yr	2446.58	955.68	949.85	2.33	2.13	46.61	24.74	199.28	622.65	3.48	1.84	5.83	5.83
Yellowstone County	B1	RM 369.06	114022.4	500-yr	2446.58	955.03	949.89	3.57	2.7	77.37	39.23	153.44	495.62	3.61	1.83	5.14	5.14
Yellowstone County	B1	RM 368.96	113871.2	500-yr	2446.58	954.87	949.68	3.02	2.23	56.44	31.64	171.42	536.64	3.65	2.05	5.19	5.19
Yellowstone County	B1	RM 368.88	113745.9	500-yr	2446.58	954.73	948.77	2.71	2.02	43.01	25.97	215.75	694.83	3.26	1.96	5.96	5.96
Yellowstone County	B1	RM 368.82	113641	500-yr	2446.58	954.61	948.47	2.41	1.94	43.26	31.18	298.33	647.77	2.71	1.95	6.14	6.14
Yellowstone County	B1	RM 368.72	113477.3	500-yr	2446.58	954.48	948.45	1.91	1.58	29.1	22.54	350.81	684.24	2.93	2.26	6.03	6.03
Yellowstone County	B1	RM 368.63	113328.9	500-yr	2446.58	954.37	947.82	1.76	1.43	25.06	16.2	315.25	841.69	3.15	2.04	6.55	6.55
Yellowstone County	B1	RM 368.54	113195.6	500-yr	2446.58	954.23	947.51	1.99	1.41	24.25	12.67	271.4	911.36	3.65	1.9	6.72	6.72
Yellowstone County	B1	RM 368.44	113035.8	500-yr	2446.58	954.08	947.4	2.06	1.56	44.46	26.05	259.39	755.25	3.55	2.08	6.68	6.68
Yellowstone County	B1	RM 368.35	112878.7	500-yr	2446.58	954	946.64	1.74	1.52	16.26	12.08	283.07	452.74	4.79	3.56	7.36	7.36
Yellowstone County	B1	RM 368.26	112737.6	500-yr	2446.58	953.68	946.23	2.61	2.6	94.11	92.64	227.9	231.41	4.11	4.06	7.45	7.45
Yellowstone County	B1	RM 368.18	112604.7	500-yr	2446.58	953.23	947.11	3.27	3.26	60.58	59.26	163.48	1561.96	4.58	4.49	6.12	6.12
Yellowstone County	B2	RM 368.09	112456.7	500-yr	2446.58	952.89	947.7	3.48	3.48	98.14	94.78	168.45	174.64	4.17	4.03	5.19	5.19
Yellowstone County	B2	RM 368.00	112314.4	500-yr	2446.58	952.86	947.56	2.72	2.71	39.13	38.31	198.48	2430.1	4.53	4.45	5.3	5.3
Yellowstone County	B2	RM 367.86	112104.7	500-yr	2446.58	952.4	946.1	3.25	3.08	89.76	32.28	192.91	572.39	3.88	1.39	6.3	6.3
Yellowstone County	B2	RM 367.79	111989.2	500-yr	2446.58	952.02	945.04	3.46	3.46	107.39	106.58	171.1	171.99	4.13	4.11	6.98	6.98
Yellowstone County	B2	RM 367.72	111876.5	500-yr	2446.58	951.86	945.45	3.36	2.99	58.78	39.32	149.5	469.76	4.6	3.08	6.41	6.41
Yellowstone County	B2	RM 367.64	111739.2	500-yr	2446.58	951.63	945.68	3.47	2.79	79.21	38.23	140.83	458.94	4.48	2.15	5.95	5.95
Yellowstone County	B2	RM 367.50	111519.9	500-yr	2446.58	951.25	945.21	3.46	2.56	83.42	36.46	137.76	497.95	4.43	1.92	6.04	6.04
Yellowstone County	B2	RM 367.40	111357.1	500-yr	2446.58	951	944.36	3.51	2.45	67	26.42	113.81	517.38	4.97	1.93	6.64	6.64
Yellowstone County	B2	RM 367.31	111214.8	500-yr	2446.58	950.83	945.36	3.33	2.36	54.32	24.9	144.65	522.97	4.35	1.99	5.47	5.47
Yellowstone County	B2	RM 367.19	110992.7	500-yr	2446.58	950.71	945.91	2.57	2.03	35.33	22.89	245.31	577.41	3.46	2.23	4.8	4.8
Yellowstone County	B2	RM 367.11	110813.5	500-yr	2446.58	950.58	945.17	2.32	1.8	29.95	20.63	295.2	618.94	3.19	2.19	5.41	5.41
Yellowstone County	B2	RM 367.03	110669.4	500-yr	2446.58	950.58	945.89	1.64	0.93	14.52	5.34	418.55	2438.68	3.05	1.12	4.69	4.69
Yellowstone County	B2	RM 366.95	110543	500-yr	2446.58	950.53	945.34	1.34	1.26	19.88	18.87	560.16	654.13	3.12	2.96	5.19	5.19
Yellowstone County	B2	RM 366.84	110376	500-yr	2446.58	950.48	944.61	1.03	0.69	11.97	5.28	603.9	2415.55	3.34	1.47	5.87	5.87
Yellowstone County	B2	RM 366.78	110300.8	500-yr	2446.58	950.41	943.84	1.22	1.08	17.29	13.92	562.74	2511.89	3.36	2.7	6.57	6.57
Yellowstone County	B2	RM 366.73	110074.8	500-yr	2446.58	950.2	943.42	1.61	1.59	27.13	25.81	436.83	768.04	3.47	3.3	6.78	6.78
Yellowstone County	B2	RM 366.68	109931.6	500-yr	2446.58	949.98	942.77	2.01	1.93	44.19	37.83	319.03	392.92	3.79	3.23	7.21	7.21
Yellowstone County	B2	RM 366.53	109747.6	500-yr	2446.58	949.45	940.86	3.14	3.14	46.07	46.07	169.86	169.86	4.58	4.58	8.59	8.59
Yellowstone County	B2	RM 366.38	109510.8	500-yr	2446.58	948.79	941.55	3.94	3.94	106.48	105.83	116.5	117.05	5.33	5.31	7.24	7.24
Yellowstone County	B2	RM 366.27	109345.5	500-yr	2446.58	948.89	942.72	2.47	2.47	46.45	46.33	226.89	494.69	4.37	4.36	6.17	6.17
Yellowstone County	B2	RM 366.15	109158.9	500-yr	2446.58	948.63	941.59	2.37	2.37	69.67	69.67	294.58	550.75	3.5	3.5	7.04	7.04
Yellowstone County	B2	RM 366.04	108972.6	500-yr	2446.58	948.35	941.41	2.48	2.44	28.01	24.15	314.21	371.92	3.13	2.7	6.94	6.94
Yellowstone County	B2	RM 365.94	108818.8	500-yr	2446.58	948.27	940.93	2.19	2.19	23.09	22.97	365.42	367.26	3.05	3.04	7.34	7.34
Yellowstone County	B2	RM 365.83	108647.5	500-yr	2446.58	948.07	939.93	2.17	2.11	72.68	68.28	332.61	372.14	3.32	3.11	8.14	8.14
Yellowstone County	B2	RM 365.75	108521.3	500-yr	2446.58	947.83	941.33	2.14	2.08	61.57	52.95	265.35	380.5	3.6	3.09	6.5	6.5
Yellowstone County	B2	RM 365.71	108446.5	500-yr	2446.58	947.66	941.83	2.37	2.06	61.04	45.23	235.57	398.06	4.04	2.98	5.83	5.83
Yellowstone County	B2	RM 365.64	108343.5	500-yr	2446.58	947.54	942.19	2.14	1.82	48.73	37.05	306.44	505.02	3.5	2.66	5.35	5.35
Yellowstone County	B2	RM 365.57	108220.5	500-yr	2446.58	947.34	942.08	2.32	1.94	48.86	33.13	252.77	485.71	3.85	2.6	5.26	5.26
Yellowstone County	B2	RM 365.51	108118.9	500-yr	2446.58	947.22	941.87	2.22	1.83	51.32	33.61	265.35	535.58	3.82	2.49	5.35	5.35
Yellowstone County	B2	RM 365.46	108042.9	500-yr	2446.58	947.19	941.73	1.87	1.62	27.33	19.33	317.69	548.21	3.89	2.75	5.46	5.46
Yellowstone County	B2	RM 365.41	107956.5	500-yr	2446.58	947.14	941.46	1.78	1.63	24.87	18.61	326.34	498.22	4.04	3.02	5.68	5.68
Yellowstone County	B2	RM 365.37	107905.7	500-yr	2446.58	947.09	940.74	1.86	1.78	18.38	14.24	309.36	425.83	4.18	3.24	6.35	6.35
Yellowstone County	B2	RM 365.31	107792.4	500-yr	2446.58	946.99	939.27	2.11	1.94	22.24	16.1	257.08	400.39	4.36	3.16	7.72	7.72
Yellowstone County	B2	RM 365.27	107727.9	500-yr	2446.58	946.93	939.34	2.21	2.03	27.03	20.58	251.44	373.73	4.23	3.22	7.59	7.59
Yellowstone County	B2	RM 365.23	107674.2	500-yr	2446.58	946.85	939.52	2.39	2.19	26.99	20.03	230.94	931.49	4.28	3.17	7.33	7.33

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	500-yr	2446.58	946.82	939.93	2.25	2.13	31.07	23.05	240.86	349.34	4.44	3.28	6.89	6.89
Yellowstone County	B2	RM 365.15	107534.7	500-yr	2446.58	946.77	939.68	2.3	2.11	26.68	18.52	214.78	981.67	4.8	3.32	7.09	7.09
Yellowstone County	B2	RM 365.10	107466	500-yr	2446.58	946.68	938.61	2.47	2.16	30.22	17.34	186.92	391.29	5.07	2.9	8.07	8.07
Yellowstone County	B2	RM 365.06	107396.2	500-yr	2446.58	946.65	939.07	2.45	2.12	33.5	20.64	170.56	344.19	5.46	3.35	7.58	7.58
Yellowstone County	B2	RM 365.01	107325.8	500-yr	2446.58	946.62	939.22	2.27	2.06	47.05	32.23	175.43	301.06	5.77	3.94	7.4	7.4
Yellowstone County	B2	RM 364.99	107287.5	500-yr	2446.58	946.57	939.27	2.35	2.16	53.4	39.26	170.9	271.89	5.66	4.16	7.3	7.3
Yellowstone County	B2	RM 364.90	107128.3	500-yr	2446.58	946.25	937.97	2.89	2.6	36.55	30.01	150.29	208.72	5.52	4.54	8.28	8.28
Yellowstone County		RM 331.55	107100	500-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	500-yr	2446.58	946.13	938.58	2.87	2.63	36.03	30.06	153.19	215.04	5.49	4.6	7.55	7.55
Yellowstone County	B2	RM 364.81	106996.1	500-yr	2446.58	946.17	938.93	2.2	2.19	22.49	22.1	257.78	261.85	4.32	4.27	7.24	7.24
Yellowstone County	B2	RM 364.74	106893.3	500-yr	2446.58	945.97	938.94	2.7	2.56	45.5	41.68	164.71	710.26	5.42	5.04	7.03	7.03
Yellowstone County	B2	RM 364.64	106739.2	500-yr	2446.58	945.54	939.09	3.42	3.28	51.08	46.58	136.52	763.13	5.56	5.09	6.45	6.45
Yellowstone County		RM 331.32	106722	500-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	500-yr	2446.58	945.33	939.16	3.47	3.36	61.74	58.24	144.13	187.21	5.3	5.02	6.17	6.17
Yellowstone County	B2	RM 364.61	106686.8	500-yr	2446.58	945.37	939.21	3.1	3.1	43.48	43.17	158.49	556.59	4.98	4.94	6.16	6.16
Yellowstone County	B2	RM 364.60	106666.6	500-yr	2446.58	945.25	939.26	3.33	3.33	50.7	50.7	153.33	153.33	4.8	4.8	5.99	5.99
Yellowstone County		RM 331.14	106644	500-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	500-yr	2446.58	945.14	939.21	3.33	3.33	50.23	50.23	157.91	157.91	4.98	4.98	5.93	5.93
Yellowstone County	B2	RM 364.53	106558.4	500-yr	2446.58	945.11	939.11	3.08	2.99	42.65	35.46	166.93	206.73	4.75	3.95	6	6
Yellowstone County	B2	RM 364.49	106490.3	500-yr	2446.58	945.05	939.24	3.08	2.96	48.83	40.19	162.03	463.23	4.88	4.01	5.81	5.81
Yellowstone County	B2	RM 364.43	106394	500-yr	2446.58	944.95	939.13	3.07	2.83	50.38	33.8	160.5	262.54	4.93	3.29	5.82	5.82
Yellowstone County	B2	RM 364.37	106296.4	500-yr	2446.58	944.87	938.98	3.05	2.64	42.36	27.01	149.77	281.06	5.22	3.3	5.89	5.89
Yellowstone County	B2	RM 364.32	106215.1	500-yr	2446.58	944.8	938.52	2.99	2.58	69.39	45.76	155.09	285.1	5.07	3.32	6.28	6.28
Yellowstone County	B2	RM 364.29	106172.9	500-yr	2446.58	944.86	938.13	2.32	2.06	67.24	49.95	191	881.91	5.21	3.86	6.73	6.73
Yellowstone County	B2	RM 364.26	106126.6	500-yr	2446.58	944.59	937.7	3.08	2.5	80.75	45.87	148.69	490.04	4.92	2.78	6.89	6.89
Yellowstone County	B2	RM 364.22	106055.2	500-yr	2446.58	944.28	938.15	3.49	3.12	101.95	53.46	138.21	302.2	4.98	2.6	6.13	6.13
Yellowstone County	B2	RM 364.14	105927.3	500-yr	2446.58	943.79	938.12	3.99	3.31	126.69	76.92	126.93	267.01	4.59	2.77	5.67	5.67
Yellowstone County	B2	RM 364.06	105809.9	500-yr	2446.58	943.67	938.22	3.37	2.71	81.68	47.27	157.82	359.58	4.35	2.51	5.45	5.45
Yellowstone County	B2	RM 363.96	105648.3	500-yr	2446.58	943.56	938.28	2.62	2.47	47.86	42.78	248.54	390.89	3.68	3.29	5.28	5.28
Yellowstone County	B2	RM 363.85	105472.4	500-yr	2446.58	943.19	936.25	3.24	2.68	49.38	31.35	150.54	327.68	4.43	2.79	6.94	6.94
Yellowstone County	B2	RM 363.76	105316.8	500-yr	2446.58	943.03	937.03	3.08	2.61	64.1	38.67	148.7	344.03	4.52	2.72	6	6
Yellowstone County	B2	RM 363.63	105118.1	500-yr	2446.58	942.75	937.93	2.51	2.51	63.02	63.02	341.49	341.49	2.86	2.86	4.82	4.82
Yellowstone County	B2	RM 363.52	104943.9	500-yr	2446.58	942.41	937.54	2.31	2.16	57.17	47.41	372.43	494.81	2.77	2.29	4.87	4.87
Yellowstone County	B2	RM 363.46	104841.5	500-yr	2446.58	942.27	937.16	2.16	1.87	42.58	30.75	330.96	865.64	3.24	2.33	5.11	5.11
Yellowstone County	B2	RM 363.33	104622.9	500-yr	2446.58	941.97	936.36	2.07	1.6	51.97	33.17	303.86	957.09	3.06	1.95	5.61	5.61
Yellowstone County	B2	RM 363.20	104414.5	500-yr	2446.58	941.63	936.48	2.25	1.49	37.57	20.58	282.91	1074.13	3.15	1.72	5.15	5.15
Yellowstone County	B2	RM 363.10	104256.4	500-yr	2446.58	941.37	936.25	2.42	1.62	44.1	21.91	275.99	1004.03	3.02	1.5	5.12	5.12
Yellowstone County	B2	RM 363.03	104144.8	500-yr	2446.58	941.24	936.22	2.33	1.51	35	17.99	285.45	1177.2	3.08	1.58	5.02	5.02
Yellowstone County	B2	RM 362.86	103869.6	500-yr	2446.58	941.12	934.32	1.67	1.2	15.72	9.19	405.06	1127.46	3.1	1.81	6.8	6.8
Yellowstone County	B2	RM 362.74	103671.4	500-yr	2446.58	940.94	934.52	2.02	1.42	23.06	13.09	371.39	1094.84	2.79	1.58	6.42	6.42
Yellowstone County	B2	RM 362.63	103493.2	500-yr	2446.58	940.79	934.5	1.82	1.34	34.3	20.54	388.17	1094.17	2.8	1.67	6.29	6.29
Yellowstone County	B2	RM 362.52	103330.7	500-yr	2446.58	940.62	934.5	1.64	1.28	29.9	18.63	435.44	1056.07	2.92	1.81	6.12	6.12
Yellowstone County	B2	RM 362.43	103185.5	500-yr	2446.58	940.49	934.1	1.7	1.51	16.57	14.81	439.12	820.4	3.12	2.78	6.39	6.39
Yellowstone County	B2	RM 362.36	103070.8	500-yr	2446.58	940.39	932.98	1.84	1.76	17.85	16.95	405.44	527.17	3.23	3.06	7.41	7.41
Yellowstone County	B2	RM 362.27	102929.3	500-yr	2446.58	940.1	932.93	2.63	2.63	32.37	32.37	199.98	199.98	4.65	4.65	7.17	7.17
Yellowstone County	B2	RM 362.20	102813.3	500-yr	2446.58	939.17	933.37	4.6	4.6	106.39	106.39	112.79	112.79	4.72	4.72	5.8	5.8
Yellowstone County	B2	RM 362.13	102693.1	500-yr	2446.58	938.89	933.47	4.57	4.57	99.77	99.51	126.09	170.52	4.25	4.24	5.42	5.42
Yellowstone County	B3	RM 362.05	102570.9	500-yr	2446.58	938.9	933.85	3.64	3.55	66.06	54.4	184.28	231.13	3.63	2.98	5.05	5.05
Yellowstone County	B3	RM 362.00	102488.8	500-yr	2446.58	938.94	934.11	2.9	2.9	47.93	47.18	244.3	318.71	3.45	3.4	4.83	4.83
Yellowstone County	B3	RM 361.93	102368.8	500-yr	2446.58	938.87	934.31	2.47	2.47	32.44	32.24	367.9	371.68	3.08	3.06	4.56	4.56
Yellowstone County	B3	RM 361.86	102261.1	500-yr	2446.58	938.71	934.36	2.51	2.48	53.34	52.15	365.12	457.44	2.66	2.6	4.35	4.35
Yellowstone County	B3	RM 361.78	102138.9	500-yr	2446.58	938.63	933.72	2.03	1.98	23.94	22.8	409.03	532.23	2.94	2.8	4.91	4.91
Yellowstone County	B3	RM 361.68	101970.2	500-yr	2446.58	938.53	933.64	1.82	1.77	20.58	19.72	426.61	565.96	3.11	2.98	4.89	4.89
Yellowstone County	B3	RM 361.65	101918.4	500-yr	2446.58	938.51	933.71	1.73	1.68	19.46	18.33	403.7	633.91	3.48	3.28	4.8	4.8
Yellowstone County	B3	RM 361.61	101855.6	500-yr	2446.58	938.39	932.7	2.09	2.06	24.72	24	335.34	637.7	3.48	3.38	5.69	5.69
Yellowstone County	B3	RM 361.56	101767.4	500-yr	2446.58	938.27	930.29	2.32	2.28	27.88	26.57	267.33	641.66	3.94	3.76	7.98	7.98
Yellowstone County	B3	RM 361.48	101644.6	500-yr	2446.58	938	929.97	2.9	2.51	59.09	38.42	181.61	771.38	4.48	2.9	8.03	8.03
Yellowstone County	B3	RM 361.42	101546.2	500-yr	2446.58	937.78	932.36	3.19	2.62	48.49	32.38	186.79	1535.83	3.9	2.61	5.42	5.42
Yellowstone County	B3	RM 361.37	101468.9	500-yr	2446.58	937.76	932.21	2.95	2.3	41.38	25.56	171.32	1712.46	4.43	2.74	5.55	5.55
Yellowstone County	B3	RM 361.33	101409.4	500-yr	2446.58	937.66	932.02	3.13	2.33	48.5	28.07	163.06	1546.16	4.23	2.44	5.64	5.64
Yellowstone County	B3	RM 361.29	101346	500-yr	2446.58	937.89	930.51	1.58	0.67	11.88	4.85	140.23	1893.16	4.77	1.93	7.38	7.38

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	500-yr	2446.58	936.75	928.42	4.75	3.62	111.69	48.87	123.7	1649.77	3.82	1.65	8.33	8.33
Yellowstone County	B3	RM 361.21	101251.*	500-yr	2446.58	936.83	927.55	3.78	2.9	133.94	53.78	119.16	1598.31	4.78	1.9	9.28	9.28
Yellowstone County		RM 361.21	101217.5	500-yr	2446.58	936.85	926.68	3.41	2.55	56.37	23.91	114.36	1799.29	5.66	2.38	10.17	10.17
Yellowstone County	B3	RM 361.18	101167.2	500-yr	2446.58	936.86	928.03	3.13	2.37	58.55	21.75	137.56	1742.39	4.98	1.84	8.83	8.83
Yellowstone County	B3	RM 361.16	101134.2	500-yr	2446.58	936.91	928.92	2.63	2.18	45.42	23.44	210.71	1727.06	4	2.06	7.99	7.99
Yellowstone County	B3	RM 361.09	101028.7	500-yr	2446.58	936.79	931.28	2.47	2.41	33.29	29.82	360.27	1750.51	2.74	2.46	5.51	5.51
Yellowstone County	B3	RM 361.01	100891.3	500-yr	2446.58	936.59	931.55	2.51	2.5	36.68	35.2	369.41	1860.2	2.64	2.53	5.04	5.04
Yellowstone County	B3	RM 360.92	100756	500-yr	2446.58	936.46	931.05	2.04	2.02	43.95	42.14	461.19	2236.23	2.59	2.49	5.41	5.41
Yellowstone County	B3	RM 360.81	100570.1	500-yr	2446.58	936.15	929.52	1.98	1.94	41.97	39.4	479.5	1909.16	2.56	2.4	6.63	6.63
Yellowstone County	B3	RM 360.69	100383.5	500-yr	2446.58	936.01	930.6	1.72	1.27	23.35	13.12	340.51	2163.1	3.46	1.95	6.12	6.12
Yellowstone County	B3	RM 360.59	100227.2	500-yr	2446.58	935.78	930.53	2.27	1.7	28.91	19.08	269.12	2214.6	3.38	2.23	5.57	5.57
Yellowstone County	B3	RM 360.50	100081	500-yr	2446.58	935.46	930.55	2.81	2.3	48.31	33.15	214.5	2167.73	3.75	2.56	4.91	4.91
Yellowstone County	B3	RM 360.42	99970.7	500-yr	2446.58	935.24	929.97	3.06	2.43	52.91	35.73	194.88	2201.19	3.74	2.52	5.27	5.27
Yellowstone County	B3	RM 360.36	99862.66	500-yr	2446.58	935.16	929.68	2.69	2.22	38.79	29.46	242.5	2098.02	3.48	2.64	5.48	5.48
Yellowstone County	B3	RM 360.27	99717.18	500-yr	2446.58	934.84	929.52	3.27	2.52	55.92	38.37	149.73	1919.75	3.94	2.71	5.32	5.32
Yellowstone County	B3	RM 360.18	99578.06	500-yr	2446.58	934.23	929.32	4.05	3.13	101.9	52.59	135.46	1666.54	4.19	2.14	4.91	4.91
Yellowstone County	B3	RM 360.11	99458.59	500-yr	2446.58	934.39	929.38	2.77	2.09	38.68	26.12	148.51	1715.8	3.92	2.66	5.01	5.01
Yellowstone County	B3	RM 360.03	99328	500-yr	2466.4	934.3	929.58	2.48	1.89	43.33	27.74	168.97	1853.17	3.93	2.52	4.72	4.72
Yellowstone County	B3	RM 359.96	99226.54	500-yr	2466.4	934.16	929.2	2.68	1.83	42.33	23.8	163.81	1647.31	4	2.25	4.96	4.96
Yellowstone County	B3	RM 359.88	99098.18	500-yr	2466.4	933.92	927.78	3.08	2.08	49.62	25.47	144	1533.82	4.28	2.19	6.14	6.14
Yellowstone County	B3	RM 359.78	98940.52	500-yr	2466.4	933.77	928.1	2.96	1.97	58.85	29.01	150.37	1483.33	4.34	2.13	5.67	5.67
Yellowstone County	B3	RM 359.70	98813.18	500-yr	2466.4	933.07	928.32	4.24	2.89	128.96	46.4	127.91	1443.68	3.74	1.33	4.75	4.75
Yellowstone County	B3	RM 359.61	98663.44	500-yr	2466.4	932.94	928.8	2.52	2	41.97	23.82	311.7	1466.31	2.83	1.6	4.14	4.14
Yellowstone County	B3	RM 359.50	98492.66	500-yr	2466.4	932.68	928.22	2.58	2.04	37.32	20.5	322.28	1501.98	2.62	1.44	4.46	4.46
Yellowstone County	B3	RM 359.38	98291.15	500-yr	2466.4	932.35	927.09	2.36	2.04	60.09	38.64	380.94	1431.39	2.24	1.44	5.26	5.26
Yellowstone County	B3	RM 359.26	98107.42	500-yr	2466.4	932.06	927.71	2.16	1.59	29.29	16.79	417.54	1597.85	2.22	1.27	4.35	4.35
Yellowstone County	B3	RM 359.18	97966.53	500-yr	2466.4	931.91	927.28	2.18	1.5	27.32	13.96	299.78	1319.29	2.83	1.44	4.63	4.63
Yellowstone County	B3	RM 359.10	97841.82	500-yr	2466.4	931.74	926.69	2.22	1.66	29.02	19.37	374.84	1233.05	2.48	1.66	5.05	5.05
Yellowstone County	B3	RM 359.01	97692.75	500-yr	2466.4	931.58	925.91	2.11	1.48	37.63	26.25	329.94	1113.38	2.65	1.85	5.67	5.67
Yellowstone County	B3	RM 358.90	97524.59	500-yr	2466.4	931.08	926.77	2.97	1.89	58.86	30.11	227.3	877.47	2.92	1.49	4.31	4.31
Yellowstone County	B3	RM 358.81	97374.99	500-yr	2466.4	930.58	926.37	3.43	2.21	60.97	27.52	225.13	875.91	2.82	1.27	4.21	4.21
Yellowstone County	B3	RM 358.74	97267.71	500-yr	2466.4	930.46	925.53	3.13	1.74	75.01	35.1	167.2	1493.13	3.09	1.44	4.93	4.93
Yellowstone County	B3	RM 358.67	97155.8	500-yr	2466.4	930.37	925.59	2.36	1.59	31.2	17.35	278.31	1502.04	2.53	1.41	4.78	4.78
Yellowstone County	B3	RM 358.61	97062.24	500-yr	2466.4	930.31	925.74	1.84	1.41	26.42	16.05	389.39	1590.45	2.45	1.49	4.57	4.57
Yellowstone County	B3	RM 358.56	96985.92	500-yr	2466.4	930.25	926.2	1.67	1.31	19.71	12.81	457.52	1553.66	2.34	1.52	5.66	5.66
Yellowstone County	B3	RM 358.50	96888.4	500-yr	2466.4	930.19	925.64	1.52	1.21	14.41	10.73	550.02	1501.66	2.19	1.63	4.55	4.55
Yellowstone County	B3	RM 358.43	96788.43	500-yr	2466.4	930.16	925.27	1.12	0.99	11.81	9.81	650.58	1465.92	2.26	1.88	4.89	4.89
Yellowstone County	B3	RM 358.30	96638.82	500-yr	2466.4	930.11	924.7	1.06	0.9	8.9	6.93	686.1	1387.21	2.83	2.2	5.41	5.41
Yellowstone County	B3	RM 358.24	96561.93	500-yr	2466.4	930.08	923.57	1.13	0.96	9.36	7.72	644.55	1350.12	2.68	2.2	6.51	6.51
Yellowstone County	B3	RM 358.20	96500.79	500-yr	2466.4	930.01	922.99	1.44	1.26	13.95	8.74	618.33	1328.32	2.53	1.58	7.02	7.02
Yellowstone County	B3	RM 358.14	96404.93	500-yr	2466.4	929.95	922.57	1.49	1.23	13.16	8.9	543.4	1329.24	2.7	1.82	7.38	7.38
Yellowstone County	B3	RM 358.12	96368.05	500-yr	2466.4	929.93	922.78	1.6	1.15	15.18	8.51	349.09	1326.79	3.29	1.84	7.15	7.15
Yellowstone County	B3	RM 358.04	96244.75	500-yr	2466.4	929.81	923.22	2.17	1.31	37.64	13.93	162.23	1233.61	4.14	1.52	6.59	6.59
Yellowstone County	B3	RM 358.00	96168.44	500-yr	2466.4	929.73	923.39	2.52	1.29	40.45	14.62	101.88	1205.91	4.45	1.59	6.34	6.34
Yellowstone County	B3	RM 357.93	96065.49	500-yr	2466.4	929.59	923.1	2.76	1.38	34.88	12.76	106.83	1158.19	4.26	1.55	6.49	6.49
Yellowstone County	B3	RM 357.88	95975.44	500-yr	2466.4	929.61	923.91	1.96	1.18	22.55	9.91	153.56	1178.07	4.06	1.78	5.7	5.7
Yellowstone County	B3	RM 357.82	95884.99	500-yr	2466.4	929.52	924.01	2.07	1.4	24.9	10.53	193.1	1148.19	4.05	1.71	5.51	5.51
Yellowstone County	B3	RM 357.78	95821.69	500-yr	2466.4	929.48	924.08	1.84	1.51	25.25	11.12	257.61	1054.91	3.53	1.55	5.4	5.4
Yellowstone County	B3	RM 357.69	95683.91	500-yr	2466.4	929.32	923.81	2.09	1.67	22.12	11.19	304.72	858.88	3.41	1.72	5.51	5.51
Yellowstone County	B4	RM 357.62	95571.15	500-yr	2466.4	929.14	921.84	2.47	1.91	36.08	14.13	253.84	971	3.43	1.33	7.3	7.3
Yellowstone County	B4	RM 357.56	95469.4	500-yr	2466.4	929.06	918.46	2.29	1.83	32.69	15.54	225.69	1304.42	4.27	2.01	10.6	10.6
Yellowstone County	B4	RM 357.48	95351.48	500-yr	2466.4	928.67	922.69	3.16	2.62	53.66	30.11	199.17	1245.54	3.7	2.06	5.98	5.98
Yellowstone County	B4	RM 357.44	95275.91	500-yr	2466.4	928.64	922.22	2.85	1.93	45.74	14.86	197.44	1221.1	3.79	1.22	6.42	6.42
Yellowstone County	B4	RM 357.34	95127.12	500-yr	2466.4	928.19	923.1	3.41	2.97	63.91	40.81	182.69	340.14	3.84	2.45	5.09	5.09
Yellowstone County	B4	RM 357.23	94939.75	500-yr	2466.4	927.94	920.81	3.32	2.55	65.25	27.04	143.53	1159.16	4.63	1.9	7.13	7.13
Yellowstone County	B4	RM 357.13	94789.23	500-yr	2466.4	927.77	921.26	3.29	2.52	53.83	27.31	139.5	641.4	4.15	2.09	6.51	6.51
Yellowstone County	B4	RM 357.01	94595.53	500-yr	2466.4	927.63	921.72	2.77	1.95	37.06	19.02	185.55	595.06	4.16	2.13	5.91	5.91
Yellowstone County	B4	RM 356.90	94412.13	500-yr	2466.4	927.44	921.02	2.74	2.02	37.98	21.89	234.48	619.08	3.42	1.97	6.42	6.42
Yellowstone County	B4	RM 356.81	94272.48	500-yr	2466.4	927.32	919.95	2.6	1.84	37.16	20.86	233.74	832.27	3.31	1.85	7.37	7.37
Yellowstone County	B4	RM 356.73	94148.77	500-yr	2466.4	927.23	921.15	2.25	1.69	27.95	16.57	299.9	955.56	2.94	1.74	6.08	6.08
Yellowstone County	B4	RM 356.66	94030.68	500-yr	2466.4	927.14	921.75	2.14	1.53	24.19	13.07	300.18	1018.01	3.12	1.68	5.39	5.39

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	500-yr	2466.4	927.07	921.88	2.02	1.36	26.11	12.38	252.57	1070.01	3.66	1.74	5.19	5.19
Yellowstone County	B4	RM 356.50	93782.14	500-yr	2466.4	926.92	921.75	2.39	1.45	37.56	14.84	153.48	1060.38	4.26	1.67	5.17	5.17
Yellowstone County	B4	RM 356.44	93670.16	500-yr	2466.4	926.75	921.33	2.76	1.61	36.25	13.83	135.34	1016.52	4.19	1.59	5.42	5.42
Yellowstone County	B4	RM 356.35	93525.27	500-yr	2466.4	926.61	919.71	2.78	1.66	52.71	19.01	116.04	948.71	4.64	1.65	6.9	6.9
Yellowstone County	B4	RM 356.26	93386.36	500-yr	2466.4	926.42	919.77	2.91	1.71	36.29	14.1	125.06	900.27	4.78	1.85	6.65	6.65
Yellowstone County	B4	RM 356.18	93264.31	500-yr	2466.4	926.37	919.95	2.61	1.73	40.28	16.76	128.53	719.41	4.81	1.98	6.42	6.42
Yellowstone County	B4	RM 356.11	93150.71	500-yr	2466.4	926.3	920.24	2.22	1.55	40.18	18.45	179.94	778.92	4.5	2.05	6.06	6.06
Yellowstone County	B4	RM 356.04	93034.25	500-yr	2466.4	926.11	920.36	2.5	1.76	54.9	23.75	173.68	785.63	4.15	1.78	5.75	5.75
Yellowstone County	B4	RM 355.97	92927.46	500-yr	2466.4	925.93	920.09	2.7	1.79	50.41	20.57	154.28	831.98	4.09	1.65	5.84	5.84
Yellowstone County	B4	RM 355.91	92825.82	500-yr	2466.4	925.88	919.82	2.37	1.49	26.43	13.17	153.74	945.22	4.34	2.15	6.06	6.06
Yellowstone County	B4	RM 355.82	92688.73	500-yr	2466.4	925.81	919.51	2.17	1.41	26.78	14.28	155.48	952.71	4.47	2.36	6.3	6.3
Yellowstone County	B4	RM 355.69	92483.67	500-yr	2466.4	924.83	919.96	4.56	3.1	107.5	61.79	108.06	819.39	3.65	2.09	4.87	4.87
Yellowstone County	B4	RM 355.68	92480	500-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	500-yr	2466.4	924.83	919.92	3.88	2.71	73.43	43.98	123	835.87	3.98	2.38	4.91	4.91
Yellowstone County	B4	RM 355.66	92419.94	500-yr	2466.4	924.93	919.8	3.09	2.38	46.04	27.61	139.95	863.8	4.07	2.45	5.13	5.13
Yellowstone County	B4	RM 355.60	92333.48	500-yr	2466.4	924.84	919.42	3.01	2.22	47.44	25.33	148.04	920.82	4.06	2.18	5.42	5.42
Yellowstone County	B4	RM 355.49	92159.95	500-yr	2466.4	924.76	918.52	2.25	1.79	46.54	25.63	141.27	1017.41	4.14	2.28	6.24	6.24
Yellowstone County	B4	RM 355.43	92061.2	500-yr	2466.4	924.65	918.67	2.23	1.74	44.38	23.52	134.53	965.59	4.48	2.37	5.98	5.98
Yellowstone County	B4	RM 355.41	92020.68	500-yr	2466.4	924.65	919.02	1.78	1.55	37.45	22.71	159.91	1240.86	4.12	2.49	5.63	5.63
Yellowstone County	B4	RM 355.38	91976.12	500-yr	2466.4	924.6	919.25	2.09	1.54	32.31	17.76	125.74	1201.57	4.58	2.51	5.35	5.35
Yellowstone County	B4	RM 355.35	91933.98	500-yr	2466.4	924.57	919.21	2.14	1.45	23.81	12.82	109.82	1169.87	4.86	2.6	5.36	5.36
Yellowstone County	B4	RM 355.32	91885.87	500-yr	2466.4	924.55	919.16	2.13	1.42	23.51	12.74	107.08	1301.7	4.82	2.59	5.39	5.39
Yellowstone County	B4	RM 355.29	91828.99	500-yr	2466.4	924.51	918.93	2.23	1.45	25.02	13.6	104.17	1379.39	4.84	2.6	5.98	5.98
Yellowstone County	B4	RM 355.23	91732.97	500-yr	2466.4	924.42	918.68	2.36	1.69	32.07	17.83	101.56	1403.45	4.99	2.75	5.98	5.98
Yellowstone County	B4	RM 355.14	91596.1	500-yr	2466.4	924.28	918.52	2.47	1.95	30.58	21.62	118.49	1290.59	4.88	3.43	5.76	5.76
Yellowstone County	B4	RM 354.94	91268.08	500-yr	2466.4	923.81	917.25	2.79	2.29	75.07	56.62	167.19	1469.58	4.72	3.57	6.56	6.56
Yellowstone County	B4	RM 354.86	91153.59	500-yr	2466.4	923.43	917.03	3.37	2.55	87.98	52.82	125.07	1595.32	5.22	3.13	6.4	6.4
Yellowstone County	B4	RM 354.80	91056.05	500-yr	2466.4	923.22	915.66	3.53	2.47	93.91	50.16	117.98	1668.4	5.06	2.68	7.56	7.56
Yellowstone County	B4	RM 354.70	90880.27	500-yr	2466.4	922.91	915.38	3.28	2.82	92.03	64.93	153.63	1734.53	4.17	2.95	7.53	7.53
Yellowstone County	B4	RM 354.61	90744.35	500-yr	2466.4	922.77	917.13	2.83	2.6	39.09	35	215.25	1777.75	3.63	3.27	5.64	5.64
Yellowstone County	B4	RM 354.53	90609.24	500-yr	2466.4	922.74	916.52	2.31	2.2	29.65	25.22	238.32	1588.38	4.17	3.56	6.22	6.22
Yellowstone County	B4	RM 354.45	90486.63	500-yr	2466.4	922.54	915.87	2.69	2.49	46.86	35.64	205.43	1616.99	3.95	3	6.67	6.67
Yellowstone County	B4	RM 354.39	90385.43	500-yr	2466.4	922.3	915.24	3.1	2.7	56.08	35.95	165.51	1709.83	4.08	2.61	7.06	7.06
Yellowstone County	B4	RM 354.33	90291.31	500-yr	2466.4	922.3	915.37	2.64	2.23	33.02	22.01	150.94	1541.03	4.34	2.89	6.93	6.93
Yellowstone County	B4	RM 354.23	90133.96	500-yr	2466.4	921.78	915.46	3.71	2.73	91.47	45.71	118.76	1744.95	4.65	2.31	6.32	6.32
Yellowstone County	B4	RM 354.13	89983.48	500-yr	2466.4	921.42	914.94	3.66	2.78	105.75	49.84	134.11	1778.59	4.59	2.16	6.48	6.48
Yellowstone County	B4	RM 354.00	89778.46	500-yr	2466.4	921.25	916.2	2.95	2.09	63.27	33.05	158.7	1823.11	4	2.08	5.05	5.05
Yellowstone County	B5	RM 353.90	89604.28	500-yr	2466.4	920.89	917.06	3	2.29	59.18	31.83	232.93	1837.7	3.19	1.71	3.99	3.99
Yellowstone County	B5	RM 353.80	89446.75	500-yr	2613.65	920.63	916.36	2.74	2.26	64.22	41.44	301.86	1867.37	2.89	1.86	4.27	4.27
Yellowstone County	B5	RM 353.70	89288.94	500-yr	2613.65	920.41	915.92	2.2	1.83	51.25	35.15	392.11	1877.94	2.69	1.84	4.49	4.49
Yellowstone County	B5	RM 353.65	89204.58	500-yr	2613.65	920.23	915.49	2.1	1.73	53.69	36.56	403.84	1760.99	2.64	1.79	4.74	4.74
Yellowstone County	B5	RM 353.56	89077.56	500-yr	2613.65	920.02	914.2	2.04	1.58	48.4	29.52	364.75	1577.4	2.85	1.73	5.82	5.82
Yellowstone County	B5	RM 353.50	88982.39	500-yr	2613.65	919.92	914.58	1.85	1.34	35.5	18.84	310.27	1457.88	3.47	1.84	5.34	5.34
Yellowstone County	B5	RM 353.41	88846.15	500-yr	2613.65	919.71	914.41	2.09	1.41	40.92	18.86	232.12	1369.77	3.41	1.56	5.3	5.3
Yellowstone County	B5	RM 353.32	88709.14	500-yr	2613.65	919.55	913.6	2.27	1.34	36.65	16.45	194.16	1200.71	3.64	1.63	5.95	5.95
Yellowstone County	B5	RM 353.25	88587.13	500-yr	2613.65	919.36	912.76	2.62	1.44	41.72	17.8	160.68	1142.4	3.75	1.59	6.6	6.6
Yellowstone County	B5	RM 353.15	88438.48	500-yr	2613.65	919.24	912.71	2.41	1.43	33.39	17.33	215.51	1173.59	3	1.55	6.53	6.53
Yellowstone County	B5	RM 353.08	88321.13	500-yr	2613.65	919.2	912.99	2.05	1.29	23.32	12.01	197.65	1141.4	3.45	1.78	6.21	6.21
Yellowstone County	B5	RM 353.01	88210.34	500-yr	2613.65	919.15	913.13	1.73	1.25	19.57	11.93	249.61	1016.64	3.38	2.05	6.02	6.02
Yellowstone County	B5	RM 352.94	88090.6	500-yr	2613.65	919.11	912.5	1.66	1.25	17.54	10.11	175.48	861.6	4.21	2.42	6.61	6.61
Yellowstone County	B5	RM 352.86	87957.76	500-yr	2613.65	919.02	913.38	1.99	1.51	27.76	15.11	122.52	697.56	4.6	2.49	5.64	5.64
Yellowstone County	B5	RM 352.79	87857.09	500-yr	2613.65	919.04	913.06	1.28	0.65	14.21	4.99	107.63	2570.9	4.51	1.56	5.98	5.98
Yellowstone County	B5	RM 352.72	87748.15	500-yr	2613.65	918.76	911.97	2.69	2.09	52.58	29.84	92.31	432.97	5.15	2.88	6.79	6.79
Yellowstone County	B5	RM 352.68	87677.1	500-yr	2613.65	918.55	912.27	2.61	2.61	87.31	87.31	336.91	336.91	2.97	2.97	6.28	6.28
Yellowstone County	B5	RM 352.64	87605.18	500-yr	2613.65	917.93	911.68	3.52	3.52	132.7	132.62	230.64	235.08	3.22	3.22	6.25	6.25
Yellowstone County	B5	RM 352.63	87594	500-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	500-yr	2613.65	917.7	911.45	3.54	3.54	121.61	121.61	229.33	229.33	3.22	3.22	6.25	6.25
Yellowstone County	B5	RM 352.54	87461.4	500-yr	2613.65	917.55	912.57	2.82	2.52	48.44	34.86	267.77	627.24	3.26	2.33	4.98	4.98
Yellowstone County	B5	RM 352.47	87340.46	500-yr	2613.65	917.46	912.2	2.53	1.92	37.97	24.11	231.7	1189.14	3.01	1.91	5.26	5.26
Yellowstone County	B5	RM 352.39	87216.99	500-yr	2613.65	916.91	912.01	3.81	2.63	83.08	37.67	188.1	2320.39	2.48	1.13	5.72	5.72
Yellowstone County	B5	RM 352.31	87079.16	500-yr	2613.65	916.57	910.66	3.49	2.51	85.29	37.89	184.54	1821.38	2.46	1.09	5.91	5.91

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	500-yr	2613.65	916.34	911.35	2.61	2.35	45.47	27.78	260.97	1762.96	1.97	1.2	4.99	4.99
Yellowstone County	B5	RM 352.18	86873.5	500-yr	2613.65	916.44	911.21	1.21	1.28	8.75	7.1	237.02	1507.55	2.54	2.06	5.23	5.23
Yellowstone County	B5	RM 352.09	86723.6	500-yr	2613.65	916.2	912.18	2.59	1.96	42.54	19.83	175.77	1407.57	2.82	1.31	4.02	4.02
Yellowstone County	B5	RM 351.99	86568.41	500-yr	2613.65	915.7	912.6	3.63	2.51	72.71	30.07	149.62	1281.83	2.6	1.07	3.12	3.12
Yellowstone County	B5	RM 351.93	86466.74	500-yr	2613.65	915.6	911.69	2.9	2.06	50.74	31.02	176.53	1266.55	2.3	1.4	3.91	3.91
Yellowstone County	B5	RM 351.88	86386.8	500-yr	2613.65	915.54	911.38	2	1.59	32.34	25.36	192.54	1855.13	2.1	1.65	4.16	4.16
Yellowstone County	B5	RM 351.81	86277.68	500-yr	2613.65	915.45	910.99	1.78	1.41	22.33	19.54	243.82	1936.45	1.95	1.71	4.46	4.46
Yellowstone County	B5	RM 351.74	86159.62	500-yr	2613.65	915.16	911.37	1.68	1.59	20.55	19.97	347.85	1823.73	1.38	1.34	4.33	4.33
Yellowstone County	B5	RM 351.67	86034.59	500-yr	2613.65	914.91	911.31	2.05	1.6	30.77	16.82	208.8	1475.62	2.1	1.15	4.53	4.53
Yellowstone County	B5	RM 351.58	85891.33	500-yr	2613.65	914.72	911.47	1.84	1.61	25.12	14.83	240.42	1578.95	2.09	1.24	4.63	4.63
Yellowstone County	B5	RM 351.52	85811.35	500-yr	2613.65	914.57	911.37	2.17	1.79	27.73	17.44	255.1	1185.17	2.04	1.28	3.85	3.85
Yellowstone County	B5	RM 351.47	85728.2	500-yr	2613.65	914.46	911.17	2.17	1.78	25.79	13.2	206.85	1527.21	2.29	1.17	3.92	3.92
Yellowstone County	B5	RM 351.40	85601.48	500-yr	2613.65	914.32	910.26	2.23	1.7	28.08	18.4	162.81	1797.22	2.29	1.5	4.41	4.41
Yellowstone County	B5	RM 351.34	85482.66	500-yr	2613.65	914.23	909.98	1.57	1.51	31.06	17.59	146.46	1685.69	2.72	1.54	4.26	4.26
Yellowstone County	B5	RM 351.25	85342.53	500-yr	2613.65	914.12	909.91	1.6	1.33	19.13	14.12	263.5	1628.93	2.16	1.59	4.24	4.24
Yellowstone County	B5	RM 351.21	85257.19	500-yr	2613.65	914.05	909.48	1.76	1.29	21.05	14.62	213.72	1650.17	2.2	1.52	4.57	4.57
Yellowstone County	B5	RM 351.12	85127.55	500-yr	2613.65	913.98	909.49	1.8	1.32	21.08	13.55	177.75	1567.68	2.45	1.56	4.49	4.49
Yellowstone County	B5	RM 351.04	84988.05	500-yr	2613.65	913.85	908.79	2.19	1.39	28.57	13.28	126.92	1521.1	3.22	1.47	5.06	5.06
Yellowstone County	B5	RM 350.90	84769.91	500-yr	2613.65	913.8	909.27	1.55	1.19	17.52	9.01	104.23	1709.4	3.51	1.77	4.53	4.53
Yellowstone County	B5	RM 350.75	84536.19	500-yr	2613.65	913.64	909.72	1.39	1.55	29.77	19.83	278.75	1407.55	2.37	1.58	4.26	4.26
Yellowstone County	B5	RM 350.66	84383.33	500-yr	2613.65	913.45	909.32	1.84	1.68	39.27	22.2	176.08	1113.94	2.78	1.57	4.13	4.13
Yellowstone County	B5	RM 350.57	84244.69	500-yr	2613.65	913.15	908.48	2.28	1.8	53.97	26.39	152.25	953.84	3.14	1.53	4.67	4.67
Yellowstone County	B5	RM 350.50	84128.62	500-yr	2613.65	912.88	908.49	2.47	1.94	61.09	31.17	161.33	918.01	2.89	1.47	4.39	4.39
Yellowstone County	B5	RM 350.40	83974.24	500-yr	2613.65	912.66	908.73	1.93	1.73	31.53	23.57	318.92	900.03	2.24	1.67	3.93	3.93
Yellowstone County	B5	RM 350.33	83868.06	500-yr	2613.65	912.53	908.17	1.96	1.69	25.71	19.91	326.5	895.47	2.27	1.76	4.36	4.36
Yellowstone County	B5	RM 350.23	83712.91	500-yr	2613.65	912.3	907.61	2.18	1.74	34.33	24.17	300.73	1001.55	2.27	1.59	4.69	4.69
Yellowstone County	B5	RM 350.14	83563.43	500-yr	2613.65	912.12	907.94	1.97	1.57	29.91	20.61	302.77	1129.97	2.34	1.6	4.18	4.18
Yellowstone County	B5	RM 350.06	83419.86	500-yr	2613.65	911.91	907.84	1.8	1.48	29.74	19.72	344.59	1172.05	2.28	1.51	4.07	4.07
Yellowstone County	B5	RM 349.94	83229.4	500-yr	2613.65	911.7	906.93	1.88	1.45	27.85	16.5	275.98	1378.06	2.54	1.5	4.77	4.77
Yellowstone County	B5	RM 349.83	83071.99	500-yr	2613.65	911.55	907.36	1.86	1.25	18.17	9.1	370.02	1575.19	3.17	1.59	4.19	4.19
Yellowstone County	B5	RM 349.68	82904.73	500-yr	2613.65	911.37	906.92	2.19	1.47	35.59	18.06	348.15	1588.98	2.68	1.36	4.45	4.45
Yellowstone County	B5	RM 349.54	82632.78	500-yr	2613.65	910.98	906.29	2.19	1.68	30.57	17.03	449.31	1176.95	2.38	1.32	4.69	4.69
Yellowstone County	B5	RM 349.33	82276.28	500-yr	2613.65	910.72	906.45	1.48	1.3	18.85	12.83	351.95	1187.36	2.5	1.7	4.27	4.27
Yellowstone County	B5	RM 349.19	82046.53	500-yr	2613.65	910.41	905.16	2.2	1.42	28.13	15.5	282.11	1284.21	2.61	1.44	5.25	5.25
Yellowstone County	B5	RM 349.04	81800.47	500-yr	2752.4	910.24	904.5	1.79	1.32	19.25	11.25	345.54	1271.19	2.81	1.64	5.74	5.74
Yellowstone County	B5	RM 348.89	81574.02	500-yr	2752.4	910.12	904.75	1.41	1.18	20.49	12.56	550.23	2121.53	3.03	1.85	5.37	5.37
Yellowstone County	B5	RM 348.77	81370.46	500-yr	2752.4	909.98	905.09	1.47	1.21	24.6	14.68	461.82	1985.9	3.15	1.87	4.89	4.89
Yellowstone County	B5	RM 348.64	81138.52	500-yr	2752.4	909.81	903.35	1.83	1.23	18.79	8.8	292.71	1848.85	3.82	1.78	6.46	6.46
Yellowstone County	B5	RM 348.52	80960.09	500-yr	2752.4	909.69	902.88	2.09	1.4	34.13	14.42	208.37	1684.33	4.23	1.77	6.81	6.81
Yellowstone County	B5	RM 348.38	80737.31	500-yr	2752.4	909.49	902.85	2.34	1.33	37.42	11.22	187.56	1613.97	4.32	1.28	6.64	6.64
Yellowstone County	B5	RM 348.26	80551.51	500-yr	2752.4	909.21	902.73	2.67	1.93	56.46	27.69	168.51	1416.21	4.48	2.18	6.47	6.47
Yellowstone County	B5	RM 348.09	80276.34	500-yr	2752.4	908.48	901.64	3.51	2.74	78.9	30.88	171.66	1043.61	4.09	1.59	6.84	6.84
Yellowstone County	B5	RM 347.95	80055.79	500-yr	2752.4	908.34	902.96	2.91	2.08	39.91	14.35	165.09	1207.42	4.4	1.58	5.38	5.38
Yellowstone County	B5	RM 347.82	79844.2	500-yr	2752.4	908.25	902.93	2.31	1.58	42.59	16.38	180.88	1227.15	4.13	1.58	5.32	5.32
Yellowstone County	B5	RM 347.77	79751.93	500-yr	2752.4	908.16	902.38	2.29	1.47	42.95	16.31	178.59	1180.07	4.17	1.58	5.78	5.78
Yellowstone County	B5	RM 347.70	79643.98	500-yr	2752.4	908.07	901.91	2.16	1.37	37.59	16.6	182.31	1222	4.12	1.81	6.16	6.16
Yellowstone County	B5	RM 347.61	79501.64	500-yr	2752.4	907.98	902.2	2.04	1.25	20.27	11.7	192.93	1345.82	4.42	2.55	5.78	5.78
Yellowstone County	B5	RM 347.51	79347.38	500-yr	2752.4	907.48	900.54	3.61	2.16	58.7	26.33	112.36	566.26	5.04	2.25	6.94	6.94
Yellowstone County	B5	RM 347.42	79196.21	500-yr	2752.4	907.4	900.73	2.96	2.18	79.75	43.87	148.41	520.91	4.41	2.42	6.67	6.67
Yellowstone County	B5	RM 347.35	79079.87	500-yr	2752.4	907.48	900.77	1.55	1.51	11.72	9.4	499.33	640.7	3.54	2.84	6.71	6.71
Yellowstone County	B5	RM 347.23	78895.71	500-yr	2752.4	907.38	900.89	1.65	1.63	15.9	15.18	510.63	1678.45	3.26	3.11	6.49	6.49
Yellowstone County	B5	RM 347.13	78732.21	500-yr	2752.4	907.25	900.98	1.76	1.64	33.43	23.94	441.51	1601.91	3.4	2.43	6.27	6.27
Yellowstone County	B5	RM 346.93	78400.21	500-yr	2752.4	906.67	900.98	2.05	1.92	78.06	66.16	465.4	1632.05	2.76	2.33	5.69	5.69
Yellowstone County	B5	RM 346.80	78193.27	500-yr	2752.4	906.14	900.02	2.09	1.75	58.22	43.81	455.03	808.97	2.58	1.94	6.12	6.12
Yellowstone County	B5	RM 346.64	77938.83	500-yr	2752.4	905.85	900.47	2.24	1.51	25.67	13.22	247.7	926.37	3.85	1.97	5.38	5.38
Yellowstone County	B5	RM 346.49	77706.6	500-yr	2752.4	905.61	900.21	2.64	1.52	40.55	15.71	176.88	1205.42	4.04	1.55	5.4	5.4
Yellowstone County	B6	RM 346.35	77480.6	500-yr	2752.4	905.43	900.33	2.35	1.44	37.55	17.3	214.96	1104.2	3.95	1.81	5.1	5.1
Yellowstone County	B6	RM 346.23	77285.9	500-yr	2752.4	905.18	900.11	2.7	1.55	36.82	15.01	177.82	1040.13	4.22	1.7	5.07	5.07
Yellowstone County	B6	RM 346.11	77095.33	500-yr	2752.4	904.94	899.75	2.8	1.88	53.38	27.81	182.61	999.95	4.15	2.15	5.19	5.19
Yellowstone County	B6	RM 346.00	76926.16	500-yr	2752.4	904.75	899.8	2.74	1.79	43.14	20.25	178.25	1042.33	4.3	2	4.95	4.95
Yellowstone County	B6	RM 345.90	76766.95	500-yr	2752.4	904.45	899.51	3.07	2	60.36	28.92	179.39	1039.69	4.06	1.94	4.94	4.94

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	500-yr	2752.4	904.29	899.04	2.78	1.88	45.05	22.66	200.74	1129.77	4.06	2.04	5.39	5.39
Yellowstone County	B6	RM 345.73	76484.99	500-yr	2752.4	904.14	899.01	2.84	1.84	45.78	22	198.24	1070.97	3.78	1.82	5.24	5.24
Yellowstone County	B6	RM 345.67	76386.71	500-yr	2752.4	904.07	899.1	2.52	1.67	35.86	18.19	212.75	855.18	4.07	2.06	5.17	5.17
Yellowstone County	B6	RM 345.60	76268.76	500-yr	2752.4	903.96	899.22	2.47	1.71	39.17	21.31	235.37	842.1	3.71	2.02	5.06	5.06
Yellowstone County	B6	RM 345.50	76118.1	500-yr	2752.4	903.82	899.07	2.12	1.74	47.31	32.26	280.8	880.55	3.34	2.27	4.92	4.92
Yellowstone County	B6	RM 345.37	75909.53	500-yr	2752.4	903.36	897.51	2.56	2.06	50.97	27.55	316.61	1082.58	3.13	1.68	5.85	5.85
Yellowstone County	B6	RM 345.27	75751.01	500-yr	2752.4	903.12	898.15	2.67	1.82	42.42	19.86	252.45	1171.18	3.53	1.64	4.97	4.97
Yellowstone County	B6	RM 345.07	75427.56	500-yr	2752.4	902.92	897.07	2.2	1.53	25.3	11.78	241.2	1231.65	4.08	1.89	5.85	5.85
Yellowstone County	B6	RM 344.90	75166.64	500-yr	2752.4	902.82	897.3	1.86	1.32	19.03	8.53	294.53	1177.84	3.96	1.77	5.52	5.52
Yellowstone County	B6	RM 344.75	74927.69	500-yr	2752.4	902.65	896.02	2.11	1.48	34.07	14.49	236.23	1059.82	4.15	1.75	6.63	6.63
Yellowstone County	B6	RM 344.64	74743.45	500-yr	2752.4	902.31	895.93	2.9	1.77	43.03	14.5	158.71	976.52	4.73	1.59	6.38	6.38
Yellowstone County	B6	RM 344.53	74576.12	500-yr	2752.4	902.23	895.39	2.45	1.54	48.43	17.64	162.09	1087.57	4.52	1.64	6.84	6.84
Yellowstone County	B6	RM 344.43	74405.67	500-yr	2752.4	902.13	896.11	2.19	1.27	23.15	9.57	179.43	1273.66	4.39	1.81	6.02	6.02
Yellowstone County	B6	RM 344.29	74192.79	500-yr	2752.4	901.94	895.87	2.38	1.65	32	14.93	179.75	1180.65	4.56	2.12	6.07	6.07
Yellowstone County	B6	RM 344.13	73931.76	500-yr	2752.4	901.67	895.4	2.68	1.92	39.5	20.27	157.02	1212.62	4.91	2.51	6.27	6.27
Yellowstone County	B6	RM 343.87	73520.95	500-yr	2752.4	901.42	895.23	2.24	1.82	24.85	18.43	287.43	1424.58	3.92	2.91	6.19	6.19
Yellowstone County	B6	RM 343.80	73403.19	500-yr	2752.4	901.37	894.69	1.87	1.67	36.74	31.48	356.81	1339.42	3.74	3.2	6.68	6.68
Yellowstone County	B6	RM 343.66	73173.16	500-yr	2752.4	901.05	894.63	1.98	1.91	56.27	51.33	396.35	1316.89	3.4	3.1	6.42	6.42
Yellowstone County	B6	RM 343.55	72997.33	500-yr	2752.4	900.76	894.63	2.02	1.94	52.41	45.6	370.7	1148.83	3.57	3.1	6.13	6.13
Yellowstone County	B6	RM 343.45	72840.49	500-yr	2752.4	900.5	894.78	2.09	2.08	46.58	45.47	402.05	1034.25	3.26	3.19	5.72	5.72
Yellowstone County	B6	RM 343.37	72718.86	500-yr	2752.4	900.16	894.5	2.55	2.55	74.67	74.66	343.37	1008.86	3.14	3.14	5.66	5.66
Yellowstone County	B6	RM 343.29	72586.22	500-yr	2752.4	899.87	894.28	2.62	2.39	64.44	53.1	280.79	1010.18	3.58	2.96	5.59	5.59
Yellowstone County	B6	RM 343.21	72458.03	500-yr	2752.4	899.65	893.99	2.31	2.09	73.61	60.35	357.36	1018.86	3.13	2.56	5.66	5.66
Yellowstone County	B6	RM 343.14	72328.78	500-yr	2752.4	899.34	893.94	2.15	1.92	72.7	59.71	433.09	1026.88	2.72	2.23	5.4	5.4
Yellowstone County	B6	RM 343.04	72174.44	500-yr	2752.4	899.18	894.12	1.84	1.53	21.79	17.41	485.75	1091.76	2.84	2.27	5.06	5.06
Yellowstone County	B6	RM 342.96	72046.7	500-yr	2752.4	899.06	894.17	1.68	1.46	40.95	31.57	507.17	1175.8	2.71	2.08	4.89	4.89
Yellowstone County	B6	RM 342.87	71890.42	500-yr	2752.4	898.8	893.92	1.62	1.42	44.41	30.66	541.82	1298.47	2.54	1.75	4.88	4.88
Yellowstone County	B6	RM 342.78	71759.64	500-yr	2752.4	898.67	893.85	1.61	1.32	15.43	11.56	525.57	1748.17	2.57	1.92	4.82	4.82
Yellowstone County	B6	RM 342.71	71649.64	500-yr	2752.4	898.61	893.88	1.53	1.3	14.23	11.06	525.87	2673.94	2.5	1.94	4.73	4.73
Yellowstone County	B6	RM 342.64	71534.72	500-yr	2752.4	898.49	893.45	1.5	1.41	33.93	30.37	689.85	1063.76	2.49	2.23	5.04	5.04
Yellowstone County	B6	RM 342.59	71441.82	500-yr	2752.4	898.33	893.13	1.61	1.6	40.6	40.54	690.22	2835.32	2.48	2.48	5.2	5.2
Yellowstone County	B6	RM 342.49	71299.94	500-yr	2752.4	898.17	892.73	1.43	1.43	26.26	26.22	660.26	2941	2.92	2.92	5.44	5.44
Yellowstone County	B6	RM 342.40	71182.23	500-yr	2752.4	898.09	892.4	1.32	1.32	22.18	22.11	593.4	2968.64	3.52	3.51	5.69	5.69
Yellowstone County	B6	RM 342.29	70973.95	500-yr	2752.4	897.85	891.26	1.75	1.75	33.42	33.27	479.55	2790.39	3.28	3.27	6.59	6.59
Yellowstone County	B6	RM 342.17	70788.09	500-yr	2752.4	897.36	891.21	2.54	2.54	75.83	75.83	381.21	2397.11	2.85	2.85	6.15	6.15
Yellowstone County	B6	RM 342.09	70668.79	500-yr	2752.4	897.17	892.22	2.2	2.11	52.71	43.49	378.9	2258.17	3.21	2.64	4.95	4.95
Yellowstone County	B6	RM 341.96	70472.35	500-yr	2752.4	896.99	891.5	1.92	1.86	21.95	19.28	504.19	2006.85	2.79	2.45	5.49	5.49
Yellowstone County	B6	RM 341.82	70207.79	500-yr	2752.4	896.85	890.89	1.5	1.42	20.95	17.23	582.05	1295.82	2.99	2.46	5.96	5.96
Yellowstone County	B6	RM 341.68	69974.03	500-yr	2752.4	896.62	890.38	1.72	1.63	29.89	24.9	481.57	1039.94	3.17	2.64	6.24	6.24
Yellowstone County	B6	RM 341.57	69788.71	500-yr	2752.4	896.35	889.58	2.2	1.94	25.28	15.28	434.65	859.78	2.74	1.65	6.77	6.77
Yellowstone County	B6	RM 341.47	69629.19	500-yr	2752.4	896.15	889.76	2.03	1.9	59.09	43.56	395.38	849.39	3.13	2.3	6.39	6.39
Yellowstone County	B6	RM 341.32	69391.37	500-yr	2752.4	895.67	890.36	2.1	1.94	57.64	43.61	401.66	624.38	3.01	2.28	5.31	5.31
Yellowstone County	B6	RM 341.24	69252.71	500-yr	2752.4	895.56	890.28	1.91	1.64	20.32	14.29	396.74	990.64	3.23	2.27	5.28	5.28
Yellowstone County	B6	RM 341.11	69044.61	500-yr	2752.4	895.26	890	2.4	1.83	43.14	26.9	324.72	776.9	3.12	1.94	5.26	5.26
Yellowstone County	B6	RM 340.94	68773.18	500-yr	2752.4	894.97	889.22	2.27	1.52	36.34	19.65	280.24	1008.76	3.44	1.86	5.75	5.75
Yellowstone County	B6	RM 340.81	68556.42	500-yr	2752.4	894.87	889.05	1.67	1.13	22.53	12.55	315.44	1200.29	3.65	2.02	5.82	5.82
Yellowstone County	B6	RM 340.65	68325.7	500-yr	2752.4	894.65	888.87	2.32	1.31	25.52	11.63	204.11	1088.55	4.24	1.93	5.78	5.78
Yellowstone County	B6	RM 340.52	68126.27	500-yr	2752.4	894.46	887.3	2.69	1.46	46.71	17.11	130.27	978.14	5.31	1.93	7.16	7.16
Yellowstone County	B6	RM 340.40	67936.51	500-yr	2752.4	894.33	886.73	2.34	1.45	43.88	19.41	170.6	896.17	4.82	2.12	7.6	7.6
Yellowstone County	B7	RM 340.26	67715.84	500-yr	2752.4	894.04	887.99	2.32	1.72	59.56	32.95	252.4	753.95	3.86	2.12	6.05	6.05
Yellowstone County	B7	RM 340.16	67550.99	500-yr	2752.4	893.76	888.43	2.19	1.75	67.82	42.06	313.83	759.57	3.35	2.07	5.33	5.33
Yellowstone County	B7	RM 340.06	67387.35	500-yr	2752.4	893.46	888.74	2.2	1.86	50.64	31.02	315.76	699.96	3.45	2.11	4.72	4.72
Yellowstone County	B7	RM 339.96	67234.59	500-yr	2752.4	893.19	888.85	2.42	2.18	32.68	22.99	361.18	605.64	2.98	2.09	4.34	4.34
Yellowstone County	B7	RM 339.88	67094.07	500-yr	2752.4	893.04	888.78	2.12	1.98	46.58	36.82	445.51	633.51	2.77	2.19	4.26	4.26
Yellowstone County	B7	RM 339.79	66960.51	500-yr	2752.4	892.74	888.98	2.34	2.32	38.62	36.77	512.36	542.28	2.3	2.19	3.76	3.76
Yellowstone County	B7	RM 339.72	66843.76	500-yr	2752.4	892.63	888.72	2.07	1.97	28.07	25.31	514.42	615.73	2.52	2.27	3.91	3.91
Yellowstone County	B7	RM 339.66	66753.41	500-yr	2752.4	892.58	887.9	1.82	1.72	20.35	17.94	525.64	716.13	2.78	2.45	4.68	4.68
Yellowstone County	B7	RM 339.52	66527.74	500-yr	2752.4	892.39	887.31	2.1	1.61	22.89	15.5	312.36	976.81	3.63	2.45	5.08	5.08
Yellowstone County	B7	RM 339.37	66324.85	500-yr	2752.4	892.21	887.17	2.24	1.63	46.45	26.78	232.31	756.99	3.87	2.23	5.04	5.04
Yellowstone County	B7	RM 339.24	66108.49	500-yr	2752.4	891.71	886.45	3.05	2.17	48.52	27.21	218.09	724.74	3.31	1.86	5.26	5.26
Yellowstone County	B7	RM 339.13	65940.41	500-yr	2752.4	891.49	885.31	3.1	1.99	57.06	28.13	143.34	1180.39	3.91	1.91	6.18	6.18

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	500-yr	2752.4	891.13	886.09	3.15	2.16	51.91	24.64	187.64	1121.68	3.49	1.66	5.04	5.04
Yellowstone County	B7	RM 338.94	65621.59	500-yr	2752.4	891.07	886.36	2.6	1.82	35.55	21.7	223.57	1219.61	3.32	2.03	4.71	4.71
Yellowstone County	B7	RM 338.83	65433.26	500-yr	2752.4	890.91	886.37	2.29	1.66	37.02	21.51	225.04	1098.27	3.37	1.96	4.88	4.88
Yellowstone County	B7	RM 338.72	65256.88	500-yr	2752.4	890.64	886.18	2.45	2.02	45.97	30.29	205.92	810	3.58	2.36	4.84	4.84
Yellowstone County	B7	RM 338.62	65095.08	500-yr	2752.4	890.25	886.28	3.14	2.36	52	30.63	179.43	824.2	3.36	1.98	4.63	4.63
Yellowstone County	B7	RM 338.49	64891.36	500-yr	2752.4	890.08	885.05	2.72	2.06	38.66	23.35	174.43	911.63	3.5	2.11	5.03	5.03
Yellowstone County	B7	RM 338.40	64742.15	500-yr	2752.4	890.07	884.28	1.87	1.56	17.65	12.22	166.15	954.63	3.65	2.52	5.79	5.79
Yellowstone County	B7	RM 338.29	64577.05	500-yr	2752.4	889.95	884.18	2.25	1.58	25.96	12.77	123.01	1024.12	4.04	1.98	5.77	5.77
Yellowstone County	B7	RM 338.19	64384.71	500-yr	2752.4	889.9	885.23	1.58	1.27	14.78	11.01	393.33	1216.19	3.07	2.29	4.67	4.67
Yellowstone County	B7	RM 338.06	64164.59	500-yr	2752.4	889.82	884.64	1.62	1.12	15.63	9.67	284.25	1197.43	3.6	2.23	5.18	5.18
Yellowstone County	B7	RM 337.91	63921.69	500-yr	2752.4	889.65	884.16	2.08	1.27	20.82	11.36	205.66	1223.14	3.88	2.12	5.49	5.49
Yellowstone County	B7	RM 337.83	63789.53	500-yr	2752.4	889.34	882.72	2.98	1.73	50.54	22.53	178.59	928.32	3.87	1.71	6.62	6.62
Yellowstone County	B7	RM 337.75	63667.96	500-yr	2752.4	888.97	881.69	3.6	2.02	67.19	25.4	143.56	892.93	4.07	1.52	7.28	7.28
Yellowstone County	B7	RM 337.68	63550.4	500-yr	2752.4	888.76	882.49	3.48	2.18	71.37	25.31	161.63	867.88	4.11	1.45	6.27	6.27
Yellowstone County	B7	RM 337.58	63396.62	500-yr	2752.4	888.54	883.62	3.31	2.12	55.96	23.74	189.36	868.81	3.52	1.49	4.92	4.92
Yellowstone County	B7	RM 337.47	63212.44	500-yr	2752.4	888.41	883.31	2.77	1.8	45.72	17.98	178.55	1054.81	3.71	1.45	5.09	5.09
Yellowstone County	B7	RM 337.38	63064.58	500-yr	2752.4	888.22	883.29	2.85	1.69	40.93	16.07	177.51	1162.74	3.59	1.4	4.93	4.93
Yellowstone County	B7	RM 337.27	62894.98	500-yr	2752.4	888.21	883.15	1.94	1.22	18.38	8.81	210.44	1288.21	3.65	1.75	5.06	5.06
Yellowstone County	B7	RM 337.16	62717.85	500-yr	2752.4	888.16	882.57	1.49	1.13	11.53	7.74	400.37	1656.33	3.25	2.17	5.59	5.59
Yellowstone County	B7	RM 337.04	62524.52	500-yr	2752.4	888.09	879.61	1.77	1.16	15.59	7.28	154.88	1610.51	5.12	2.38	8.48	8.48
Yellowstone County	B7	RM 336.96	62390.64	500-yr	2752.4	888.02	880.21	1.88	1.33	25.1	12.58	186.19	1587.08	4.55	2.26	7.81	7.81
Yellowstone County	B7	RM 336.87	62246.97	500-yr	2752.4	887.87	881.41	2.28	1.49	28	13.36	156.32	1721.55	4.71	2.23	6.46	6.46
Yellowstone County	B7	RM 336.80	62131.42	500-yr	2752.4	887.81	881.33	2.14	1.47	35.21	18.05	162.29	1145.11	4.35	2.22	6.48	6.48
Yellowstone County	B7	RM 336.72	62005.73	500-yr	2752.4	887.57	881.38	2.75	1.71	55.86	20.78	136.15	1248.52	4.55	1.68	6.19	6.19
Yellowstone County	B7	RM 336.66	61902.64	500-yr	2752.4	887.08	881.45	3.82	2.38	98.57	29.28	117.37	927.72	4.24	1.25	5.63	5.63
Yellowstone County	B7	RM 336.59	61800.43	500-yr	2752.4	886.97	880.66	3.24	2.08	74.57	23.42	135.93	919.84	4.59	1.44	6.31	6.31
Yellowstone County	B7	RM 336.52	61689.55	500-yr	2752.4	886.81	881.76	3.13	1.99	60.09	22.94	145.49	915.47	3.95	1.51	5.05	5.05
Yellowstone County	B7	RM 336.46	61580.5	500-yr	2752.4	886.69	882.13	2.82	1.89	59.25	24.43	162.48	967.38	3.65	1.5	4.56	4.56
Yellowstone County	B7	RM 336.40	61491.01	500-yr	2752.4	886.52	882.03	2.92	1.87	61.17	25.82	162.53	936.95	3.72	1.57	4.49	4.49
Yellowstone County	B7	RM 336.34	61394.22	500-yr	2752.4	886.36	881.93	2.98	1.83	56.37	26.28	163.69	913.32	3.54	1.65	4.43	4.43
Yellowstone County	B7	RM 336.27	61278.9	500-yr	2752.4	886.19	881.67	2.89	1.73	52.91	24.25	169.95	987.98	3.51	1.61	4.52	4.52
Yellowstone County	B7	RM 336.19	61159.07	500-yr	2752.4	886.02	882.11	2.75	1.81	40.48	21.64	211.78	1018.72	2.79	1.49	3.91	3.91
Yellowstone County	B7	RM 336.09	60993.57	500-yr	2752.4	885.86	882.16	2.17	1.48	28.99	18.55	319.78	1090.59	2.66	1.7	3.7	3.7
Yellowstone County	B7	RM 335.98	60812.26	500-yr	2752.4	885.71	881.93	1.58	1.44	30.69	24.98	442.1	1057.81	2.23	1.81	3.98	3.98
Yellowstone County	B7	RM 335.89	60669.74	500-yr	2752.4	885.52	880.16	1.8	1.63	19.6	17.46	737.52	1017.91	1.87	1.66	5.36	5.36
Yellowstone County	B7	RM 335.77	60465.85	500-yr	2752.4	885.19	880.49	1.71	1.66	49.76	44.26	881.3	1121.06	1.66	1.48	4.7	4.7
Yellowstone County	B7	RM 335.68	60324.8	500-yr	2752.4	884.88	880.65	1.92	1.78	20.13	17.6	885.5	1705.82	1.54	1.34	4.23	4.23
Yellowstone County	B7	RM 335.59	60183.7	500-yr	2752.4	884.69	880.3	1.89	1.74	21.2	17.9	921.67	1836.52	1.5	1.26	4.39	4.39
Yellowstone County	B7	RM 335.51	60046.12	500-yr	2752.4	884.51	880.03	1.85	1.66	19.13	12.61	944.99	1701.21	1.49	0.98	4.48	4.48
Yellowstone County	B7	RM 335.41	59899.97	500-yr	2752.4	884.41	879.45	1.47	1.26	14.67	11.22	911.11	1630.07	1.87	1.43	4.96	4.96
Yellowstone County	B7	RM 335.36	59814.82	500-yr	2752.4	884.39	878.65	1.14	0.95	7.53	5.62	896.25	1891.29	2.43	1.82	5.74	5.74
Yellowstone County	B7	RM 335.12	59393.71	500-yr	2752.4	884.15	878.54	1.91	1.06	19.89	8.53	331.92	2023.97	3	1.28	5.61	5.61
Yellowstone County	B7	RM 335.03	59228.59	500-yr	2752.4	883.89	876.8	2.88	1.31	54.97	16.49	149.84	1987.28	3.53	1.06	7.09	7.09
Yellowstone County	B7	RM 334.91	59041.32	500-yr	2752.4	883.69	878.31	2.28	1.16	35.83	14.25	229.84	1986.91	3.01	1.2	5.38	5.38
Yellowstone County	B7	RM 334.85	58937.73	500-yr	2752.4	883.57	878.66	2.24	1.12	36.08	14.44	224.38	1992.96	3.08	1.23	4.91	4.91
Yellowstone County	B7	RM 334.73	58737.5	500-yr	2752.4	883.25	879.52	2.71	1.27	42.59	15.19	192.81	1902.79	3.19	1.14	3.87	3.87
Yellowstone County	B7	RM 334.63	58573.32	500-yr	2752.4	883.18	878.31	2.14	1.14	23.65	10.08	187.59	1739.76	3.27	1.39	4.87	4.87
Yellowstone County	B7	RM 334.54	58424.99	500-yr	2752.4	883.16	877.09	1.15	1	12.88	6.08	154.81	1675.86	3.5	1.65	6.07	6.07
Yellowstone County	B7	RM 334.22	57821.07	500-yr	2752.4	882.79	875.76	2.32	1.54	24.35	13.28	197.92	2100.32	4.39	2.39	7.03	7.03
Yellowstone County	B7	RM 334.09	57621.62	500-yr	2752.4	882.64	875.55	2.73	1.67	57.65	25.98	119.41	849.05	4.32	1.94	7.09	7.09
Yellowstone County	B7	RM 333.98	57440.64	500-yr	2752.4	882.44	875.46	2.71	1.7	35.92	13.96	140.01	817.31	5.1	1.98	6.98	6.98
Yellowstone County	B7	RM 333.83	57207.78	500-yr	2752.4	882.22	875.4	2.71	2.08	51.97	30.49	163.55	538.6	4.21	2.46	6.82	6.82
Yellowstone County	B7	RM 333.69	56989.22	500-yr	2752.4	881.95	873.45	2.21	1.97	49.41	29.98	337.33	1137.5	3.56	2.15	8.5	8.5
Yellowstone County	B7	RM 333.54	56738.21	500-yr	2752.4	881.81	874.22	1.51	1.32	25.16	16.55	409.8	1157.58	3.99	2.62	7.59	7.59
Yellowstone County	B7	RM 333.42	56552.03	500-yr	2752.4	881.64	873.42	1.64	1.46	33.08	18.13	426.38	1007.81	3.43	1.87	8.22	8.22
Yellowstone County	B7	RM 333.30	56351.75	500-yr	2752.4	881.32	875.65	1.86	1.68	55.5	32.78	449.89	936.62	2.98	1.75	5.67	5.67
Yellowstone County	B7	RM 333.19	56177.76	500-yr	2752.4	880.91	875.72	2.2	2.08	50.43	36.1	399.11	637.17	2.91	2.08	5.19	5.19
Yellowstone County	B7	RM 333.09	56027.56	500-yr	2752.4	880.77	875.59	2.01	1.78	22.49	18.65	430.25	1517.06	3.02	2.5	5.18	5.18
Yellowstone County	B7	RM 332.99	55855.76	500-yr	2752.4	880.59	873.86	2.01	1.69	49.63	37.19	388.58	713.31	3.06	2.29	6.73	6.73
Yellowstone County	B7	RM 332.88	55687.68	500-yr	2752.4	880.48	874.43	1.69	1.49	18.31	13.49	409.46	2045.43	3.3	2.43	6.05	6.05
Yellowstone County	B7	RM 332.77	55504.73	500-yr	2752.4	880.42	875.49	1.52	1.25	12.4	8.55	376.01	2325.24	3.84	2.64	4.93	4.93

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	500-yr	2752.4	880.34	874.96	1.64	1.3	18.21	12.29	334.72	2134.78	3.86	2.6	5.37	5.37
Yellowstone County	B7	RM 332.56	55182.74	500-yr	2752.4	880.23	874.54	1.77	1.25	20.04	11.02	312.51	2263.03	4.18	2.29	5.69	5.69
Yellowstone County	B7	RM 332.47	55059.84	500-yr	2752.4	880.22	873.95	1.54	1.1	16.35	8.54	281.38	2331.33	4.47	2.32	6.26	6.26
Yellowstone County	B7	RM 332.38	54913.1	500-yr	2752.4	880.08	873.16	2.12	1.24	28.8	10.16	159.71	2114.06	5.22	1.81	6.92	6.92
Yellowstone County	B7	RM 332.33	54822.67	500-yr	2752.4	880.13	872.5	1.26	0.71	15.41	5.52	188.81	2249.97	4.82	1.72	7.63	7.63
Yellowstone County	B7	RM 332.21	54626.48	500-yr	2752.4	879.92	873.4	2.03	1.32	33.49	11.76	177.38	1493.75	5.11	1.78	6.52	6.52
Yellowstone County	B7	RM 332.20	54613	500-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	500-yr	2752.4	879.59	873.19	2.31	1.57	49.3	16.36	194.04	1330.28	4.49	1.48	6.4	6.4
Yellowstone County	B7	RM 332.17	54575.38	500-yr	2752.4	879.54	872.76	2.26	1.41	36.54	11.6	145.13	1442.85	5.27	1.64	6.78	6.78
Yellowstone County	B7	RM 332.16	54558	500-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	500-yr	2752.4	879.39	872.47	2.56	1.46	33.8	9.86	130.77	1443.64	5.41	1.56	6.92	6.92
Yellowstone County	B7	RM 332.08	54422.01	500-yr	2752.4	879.29	873.77	2.46	1.5	38.9	11.93	155.85	1437.1	4.68	1.42	5.52	5.52
Yellowstone County	B7	RM 331.96	54224.76	500-yr	2752.4	879.14	873.18	2.11	1.48	41.54	15.58	205.19	1227.98	4.09	1.52	5.96	5.96
Yellowstone County	B7	RM 331.85	54057.19	500-yr	2752.4	878.96	873.16	2	1.46	50.41	20.43	250.41	1183.01	3.96	1.6	5.8	5.8
Yellowstone County	B7	RM 331.74	53882.8	500-yr	2752.4	878.33	872.62	3.42	2.11	73.95	19.43	150.37	1125.25	4.47	1.16	5.71	5.71
Yellowstone County	B8	RM 331.66	53744.64	500-yr	2752.4	878.26	871.68	2.63	1.86	50.81	18	219.63	1035.63	4.06	1.43	6.58	6.58
Yellowstone County	B8	RM 331.55	53575.67	500-yr	2752.4	878.12	872.61	2.41	1.68	42.19	16.98	204.4	1069.35	3.82	1.53	5.51	5.51
Yellowstone County	B8	RM 331.41	53354.89	500-yr	2752.4	877.84	872.56	2.6	1.75	45.07	18.13	218.29	1065.83	3.68	1.47	5.28	5.28
Yellowstone County	B8	RM 331.32	53209.79	500-yr	2752.4	877.67	871.92	2.33	1.61	37.17	20.76	275.52	985.91	3.11	1.73	5.75	5.75
Yellowstone County	B8	RM 331.23	53053.99	500-yr	2752.4	877.53	871.53	1.95	1.51	26.62	18.22	376.7	935.62	2.86	1.95	6	6
Yellowstone County	B8	RM 331.14	52919.44	500-yr	2752.4	877.46	871.72	1.67	1.35	20.32	12.92	309.55	1158.6	3.32	2.1	5.74	5.74
Yellowstone County	B8	RM 331.08	52820.06	500-yr	2752.4	877.37	871.29	1.83	1.35	23.08	12.44	305.99	1039.02	3.66	1.96	6.08	6.08
Yellowstone County	B8	RM 331.01	52700.37	500-yr	2752.4	877.27	871.8	1.88	1.43	25.38	16.11	299.81	840.78	3.62	2.29	5.47	5.47
Yellowstone County	B8	RM 330.93	52576.5	500-yr	2752.4	877.15	871.67	2	1.68	29.32	18.87	250.76	626.55	4.07	2.61	5.47	5.47
Yellowstone County	B8	RM 330.83	52418.21	500-yr	2752.4	876.98	870.75	2.48	1.4	32.4	9.18	141.59	1412	4.97	1.39	6.23	6.23
Yellowstone County	B8	RM 330.77	52321.13	500-yr	2752.4	876.73	870.68	2.91	2.4	52.29	32.59	174.99	1525.6	4.13	2.58	6.05	6.05
Yellowstone County	B8	RM 330.68	52174.9	500-yr	2752.4	876.43	870.33	3.38	2.57	58.86	29.27	130.01	1717.18	4.53	2.24	6.1	6.1
Yellowstone County	B8	RM 330.58	52000.46	500-yr	2752.4	876.26	869.72	3.16	2.39	70.21	32.85	118.14	1641.64	4.8	2.22	6.54	6.54
Yellowstone County	B8	RM 330.48	51852.83	500-yr	2752.4	876.02	868.81	3.32	2.36	72.59	32.99	106.21	551.46	5.08	2.27	7.21	7.21
Yellowstone County	B8	RM 330.39	51701.57	500-yr	2752.4	875.87	869.32	3.08	2.12	47.99	20.84	134.45	694.7	4.34	1.88	6.55	6.55
Yellowstone County	B8	RM 330.32	51592.04	500-yr	2752.4	875.77	869.57	3.07	1.9	44.44	15.77	135.54	1020.19	4.51	1.59	6.2	6.2
Yellowstone County	B8	RM 330.25	51473.55	500-yr	2752.4	875.69	868.38	2.84	1.8	42.21	17.13	145.33	953.44	4.21	1.69	7.31	7.31
Yellowstone County	B8	RM 330.17	51344.77	500-yr	2752.4	875.54	869.9	2.85	1.85	43.59	17.73	152.37	912.48	4.04	1.63	5.64	5.64
Yellowstone County	B8	RM 330.10	51243.99	500-yr	2752.4	875.34	870.02	2.98	1.94	51.93	22.53	186.69	903.96	3.63	1.57	5.32	5.32
Yellowstone County	B8	RM 330.05	51150.67	500-yr	2752.4	875.33	869.94	2.18	1.57	28.65	17.03	299.19	977.29	3.02	1.79	5.39	5.39
Yellowstone County	B8	RM 329.95	50995.78	500-yr	2752.4	875.16	869.67	2.11	1.64	30.2	18.49	399.38	957.42	2.87	1.76	5.49	5.49
Yellowstone County	B8	RM 329.86	50853.11	500-yr	2752.4	875.05	869.99	1.81	1.49	28.71	19.22	443.98	1000.84	2.76	1.84	5.06	5.06
Yellowstone County	B8	RM 329.75	50682.47	500-yr	2752.4	874.87	869.45	1.52	1.35	35.88	27.73	611.92	1094.24	2.41	1.86	5.42	5.42
Yellowstone County	B8	RM 329.66	50540.7	500-yr	2752.4	874.59	869.45	1.66	1.52	42.09	33.63	667.18	1138.01	2	1.59	5.14	5.14
Yellowstone County	B8	RM 329.57	50390.78	500-yr	2752.4	874.37	869.17	1.82	1.54	18.41	15.43	629.37	1040.75	2.06	1.72	5.2	5.2
Yellowstone County	B8	RM 329.49	50267.58	500-yr	2752.4	874.24	869.52	1.91	1.56	20.92	16.83	544.15	984.78	2.23	1.8	4.72	4.72
Yellowstone County	B8	RM 329.43	50165.22	500-yr	2752.4	874.19	869.82	1.63	1.36	15.24	11.02	543.15	965.38	2.9	2.09	4.37	4.37
Yellowstone County	B8	RM 329.37	50053.96	500-yr	2752.4	874.15	869.58	1.57	1.27	14.01	10.26	447.42	968.23	3.05	2.23	4.57	4.57
Yellowstone County	B8	RM 329.31	49969.13	500-yr	2752.4	874.09	869.66	1.67	1.29	20	14.18	378.18	1006.98	2.99	2.12	4.43	4.43
Yellowstone County	B8	RM 329.26	49883.05	500-yr	2752.4	874.02	868.74	1.75	1.32	17.17	11.56	376.88	1034.47	2.99	2.01	5.28	5.28
Yellowstone County	B8	RM 329.20	49785.51	500-yr	2752.4	873.96	868.71	1.77	1.32	18.06	12.41	397.53	1067.67	2.85	1.96	5.25	5.25
Yellowstone County	B8	RM 329.15	49699.71	500-yr	2998.75	873.9	868.64	1.66	1.3	22.56	15.92	463.75	1078.79	3.04	2.15	5.26	5.26
Yellowstone County	B8	RM 329.08	49597.49	500-yr	2998.75	873.83	869.34	1.52	1.21	21.27	15.63	472.19	1112.46	3.04	2.24	4.49	4.49
Yellowstone County	B8	RM 328.96	49388.08	500-yr	2998.75	873.73	868.99	1.66	1.15	18.24	11.87	306.43	1185.55	3.4	2.21	4.74	4.74
Yellowstone County	B8	RM 328.85	49197.37	500-yr	2998.75	873.6	866.79	1.75	1.35	17.02	13.14	473.26	1097.4	2.62	2.02	6.81	6.81
Yellowstone County	B8	RM 328.75	49036.09	500-yr	2998.75	873.53	866.93	1.58	1.27	17.15	13.39	424.64	1064.41	2.85	2.22	6.6	6.6
Yellowstone County	B8	RM 328.68	48920.76	500-yr	2998.75	873.39	867.09	2.01	1.39	24.68	15.07	303.39	1061.03	3.33	2.03	6.3	6.3
Yellowstone County	B8	RM 328.60	48788.86	500-yr	2998.75	873.17	866.36	2.68	1.62	34.79	15.96	196.32	1010.68	4.06	1.83	6.81	6.81
Yellowstone County	B8	RM 328.52	48664.7	500-yr	2998.75	873.22	867.75	1.79	1.29	16.74	10.36	167.5	995.9	3.81	2.34	5.47	5.47
Yellowstone County	B8	RM 328.44	48539.46	500-yr	2998.75	872.92	867.34	2.97	1.77	55.75	21.76	137.95	933.29	4.74	1.82	5.58	5.58
Yellowstone County	B8	RM 328.36	48405.85	500-yr	2998.75	872.61	867.12	3.51	1.99	57.54	23.28	131.95	859.5	4.42	1.75	5.49	5.49
Yellowstone County	B8	RM 328.28	48276.93	500-yr	2998.75	872.58	867.73	2.58	1.85	52.79	25.31	191.8	839.17	4.03	1.93	5.47	5.47
Yellowstone County	B8	RM 328.16	48097.58	500-yr	2998.75	872.39	866.7	2.32	1.75	44.65	24.86	224.09	884.83	3.49	1.94	5.69	5.69
Yellowstone County	B8	RM 328.05	47914.16	500-yr	2998.75	872.22	866.62	2.12	1.59	33.11	18.85	264.18	952.02	3.49	1.99	5.6	5.6
Yellowstone County	B8	RM 327.93	47729.4	500-yr	2998.75	871.99	865.67	2.38	1.7	28.96	16.27	305.74	965.63	3.26	1.83	6.32	6.32
Yellowstone County	B8	RM 327.88	47641.03	500-yr	2998.75	871.88	866	2.58	1.66	38.5	19.86	246.29	1002.01	3.5	1.8	5.88	5.88

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	500-yr	2998.75	871.73	866.29	2.81	1.7	36.76	16.33	183.5	952.01	4.19	1.86	5.44	5.44
Yellowstone County	B8	RM 327.75	47432.57	500-yr	2998.75	871.43	865.09	3.54	1.97	55.44	20.05	136.82	907.04	4.67	1.68	6.34	6.34
Yellowstone County	B8	RM 327.69	47341.24	500-yr	2998.75	870.95	864.48	4.62	2.57	89.34	28.79	108.52	851.73	4.32	1.37	6.47	6.47
Yellowstone County	B8	RM 327.62	47227.31	500-yr	2998.75	871.15	863.86	3.01	1.86	43.03	18.52	130.03	872.94	4.32	1.84	7.29	7.29
Yellowstone County	B8	RM 327.56	47124.87	500-yr	2998.75	871.16	864.46	2.42	1.62	27.85	14.9	158.59	884.52	3.92	2.1	6.7	6.7
Yellowstone County	B8	RM 327.51	47053.82	500-yr	2998.75	871.1	865.84	2.23	1.68	27.07	20.15	311.44	878.6	2.73	2.03	5.26	5.26
Yellowstone County	B8	RM 327.44	46933.28	500-yr	2998.75	871.1	866.93	1.41	1.37	13.11	11.75	391.77	884.81	2.77	2.48	4.48	4.48
Yellowstone County	B8	RM 327.37	46817.72	500-yr	2998.75	870.97	866.26	1.99	1.54	25.82	17.3	342.21	959.47	3.03	2.03	4.71	4.71
Yellowstone County	B8	RM 327.29	46687.12	500-yr	2998.75	870.89	866.04	1.96	1.43	22.58	14.25	304.88	1049.62	3.18	2	4.85	4.85
Yellowstone County	B8	RM 327.23	46600.07	500-yr	2998.75	870.82	866.25	2.06	1.45	24.22	15.11	287.86	1053.03	3.16	1.97	4.97	4.97
Yellowstone County	B8	RM 327.16	46485.25	500-yr	2998.75	870.69	865.67	2.22	1.45	31.42	17.92	271.45	1119.27	3.24	1.85	5.02	5.02
Yellowstone County	B8	RM 327.08	46360.36	500-yr	2998.75	870.65	864.94	1.86	1.25	20.44	11.74	266.92	1139.85	3.67	2.11	5.71	5.71
Yellowstone County	B8	RM 327.00	46240.1	500-yr	2998.75	870.52	864.56	2.09	1.5	31.81	14.46	227.91	999.88	4.4	2	5.96	5.96
Yellowstone County	B8	RM 326.94	46091.8	500-yr	2998.75	870.4	864.04	2.25	1.56	23.82	11.38	223.67	916.97	4.38	2.09	6.36	6.36
Yellowstone County	B8	RM 326.88	46003.77	500-yr	2998.75	870.31	864.08	2.51	1.72	39.6	18.13	170.66	913.73	4.16	1.91	6.23	6.23
Yellowstone County	B8	RM 326.82	45901.15	500-yr	2998.75	870.23	864.18	2.39	1.68	34.22	18.31	201.73	989.77	3.36	1.8	6.05	6.05
Yellowstone County	B8	RM 326.78	45830.7	500-yr	2998.75	870.17	864.46	2.46	1.66	30.41	15.35	163.64	1006.25	3.55	1.79	5.71	5.71
Yellowstone County	B8	RM 326.70	45707.6	500-yr	2998.75	870.11	864.66	2.11	1.53	21.77	13.02	264.67	1069.15	3.08	1.83	5.45	5.45
Yellowstone County	B8	RM 326.64	45589.72	500-yr	2998.75	870.03	864.92	1.75	1.56	48.51	31.37	431.17	1109.9	2.68	1.73	5.11	5.11
Yellowstone County	B8	RM 326.55	45430.24	500-yr	2998.75	869.78	864.83	2.2	1.77	26.48	16.25	350.63	859.84	3.22	1.97	4.95	4.95
Yellowstone County	B8	RM 326.45	45281.78	500-yr	2998.75	869.67	864.12	2.23	1.84	28.79	17.88	340.76	815.38	3.23	2	5.55	5.55
Yellowstone County	B8	RM 326.41	45207.36	500-yr	2998.75	869.66	864.32	1.84	1.6	18.81	14.26	432.08	1166.32	3.14	2.38	5.34	5.34
Yellowstone County	B8	RM 326.35	45106.57	500-yr	2998.75	869.62	864.43	1.64	1.35	14.61	10.63	483.02	1085.27	3.44	2.5	5.19	5.19
Yellowstone County	B8	RM 326.28	45022.31	500-yr	2998.75	869.64	864.61	1.2	1.03	7.15	5.21	548.28	1321.61	4.1	2.99	5.03	5.03
Yellowstone County	B8	RM 326.07	44588.61	500-yr	2998.75	869.44	862.39	1.71	1.43	14.93	10.9	711.63	1301.44	2.22	1.61	7.05	7.05
Yellowstone County	B8	RM 326.00	44481.07	500-yr	2998.75	869.37	861.24	1.66	1.41	14	10.51	749.88	1285.83	2.2	1.65	8.13	8.13
Yellowstone County	B8	RM 325.94	44379.11	500-yr	2998.75	869.31	861.85	1.32	1.21	28.68	23.41	828.78	1293.33	2.35	1.91	7.46	7.46
Yellowstone County	B8	RM 325.89	44304.17	500-yr	2998.75	869.22	863	1.28	1.21	27.98	24.06	845.57	1298.75	2.43	2.08	6.22	6.22
Yellowstone County	B8	RM 325.86	44262.16	500-yr	2998.75	869.17	863.76	1.38	1.23	10.75	9.22	823.84	1143.11	2.5	2.14	5.42	5.42
Yellowstone County	B8	RM 325.81	44176.46	500-yr	2998.75	869.14	863.1	1.35	1.19	10.79	9.58	846.47	1175.29	2.42	2.14	6.04	6.04
Yellowstone County	B8	RM 325.76	44089.5	500-yr	2998.75	869.09	862.66	1.21	1.11	23.83	20.13	851.44	1304.76	2.54	2.14	6.43	6.43
Yellowstone County	B8	RM 325.69	43989.97	500-yr	2998.75	869.02	862.55	1.37	1.06	10.38	7.16	625.32	1419.13	3.04	2.09	6.47	6.47
Yellowstone County	B8	RM 325.58	43809.68	500-yr	2998.75	868.94	862.61	1.34	1.05	26.45	16.63	476.8	1285.18	3.55	2.22	6.33	6.33
Yellowstone County	B8	RM 325.50	43680.96	500-yr	2998.75	868.8	862.6	1.53	1.2	31.61	18.18	434.18	1246.03	3.54	2.01	6.2	6.2
Yellowstone County	B8	RM 325.43	43556.76	500-yr	2998.75	868.68	860.89	1.55	1.22	34.05	19.2	387.2	1164.62	3.78	2.12	7.79	7.79
Yellowstone County	B8	RM 325.37	43461.41	500-yr	2998.75	868.62	861.36	1.44	1.18	29.2	16.28	345.34	1146	4	2.23	7.26	7.26
Yellowstone County	B8	RM 325.30	43343.13	500-yr	2998.75	868.5	861.56	1.78	1.29	27.52	13.38	267.26	1102.33	4.37	2.11	6.94	6.94
Yellowstone County	B8	RM 325.21	43210.67	500-yr	2998.75	868.34	861.34	2.23	1.49	30.67	12.4	204.96	1023.71	4.89	1.96	7	7
Yellowstone County	B8	RM 325.13	43078.9	500-yr	2998.75	868.18	861.36	2.61	1.64	43.1	15.6	149.6	920.89	5.56	1.99	6.82	6.82
Yellowstone County	B8	RM 325.06	42966.54	500-yr	2998.75	867.8	860.78	3.52	2.13	76.42	24.6	123.39	833.94	5.32	1.69	7.02	7.02
Yellowstone County	B8	RM 324.99	42864.51	500-yr	2998.75	867.73	861.24	3.1	1.88	63.39	24.15	135.73	846.33	5.01	1.89	6.49	6.49
Yellowstone County	B8	RM 324.91	42729.7	500-yr	2998.75	867.5	860.76	3.22	1.95	70.41	25.68	133.57	818.87	5.2	1.88	6.74	6.74
Yellowstone County	B8	RM 324.81	42573.19	500-yr	2998.75	867.23	860.39	3.31	2.17	77.57	28.12	140.39	757.92	5.06	1.82	6.84	6.84
Yellowstone County	B8	RM 324.73	42451.12	500-yr	2998.75	867.12	861.59	2.96	2.05	55.72	24.73	179.41	748.08	4.42	1.95	5.53	5.53
Yellowstone County	B8	RM 324.65	42323.44	500-yr	2998.75	867.07	861.99	2.15	1.77	48.39	31.96	300.92	720.7	3.56	2.35	5.08	5.08
Yellowstone County	B8	RM 324.56	42178.25	500-yr	2998.75	866.91	861.76	2.13	1.71	22.95	18.64	404.18	787.09	2.75	2.23	5.15	5.15
Yellowstone County	B8	RM 324.48	42039.74	500-yr	2998.75	866.77	861.58	1.89	1.62	49.15	37.33	477.36	891.92	2.74	2.08	5.19	5.19
Yellowstone County	B8	RM 324.42	41946.09	500-yr	2998.75	866.66	861.04	1.66	1.39	35	24.74	478.13	951.43	3.21	2.26	5.62	5.62
Yellowstone County	B8	RM 324.34	41812.99	500-yr	2998.75	866.45	861.07	1.93	1.47	52.73	33.46	378.78	1023.45	3.13	1.99	5.38	5.38
Yellowstone County	B8	RM 324.28	41712.42	500-yr	2998.75	866.29	859.64	1.84	1.47	49.8	31.2	364.85	1072.05	3.04	1.9	6.65	6.65
Yellowstone County	B8	RM 324.20	41597.64	500-yr	2998.75	866.22	860.59	1.21	1.13	20.64	16.31	675.53	1093.94	3.06	2.42	5.63	5.63
Yellowstone County	B8	RM 324.16	41526.97	500-yr	2998.75	866.12	861.07	1.58	1.39	15.22	11.26	664.77	1177.37	2.57	1.9	5.05	5.05
Yellowstone County	B8	RM 324.10	41434.55	500-yr	2998.75	866.07	860.81	1.38	1.27	24.96	17.78	691.44	1178.62	2.83	2.01	5.26	5.26
Yellowstone County	B8	RM 324.04	41346.42	500-yr	2998.75	866.01	860.39	1.28	1.17	17.06	12.29	637.89	1191.51	3.01	2.16	5.62	5.62
Yellowstone County	B8	RM 323.97	41219.29	500-yr	2998.75	865.94	860.64	1.21	1.13	15.1	11.26	573.41	1146.4	3.12	2.32	5.3	5.3
Yellowstone County	B8	RM 323.83	40977.08	500-yr	2998.75	865.83	860.31	1.39	1.06	13.26	8.37	454.24	1241.2	3.64	2.29	5.52	5.52
Yellowstone County	B8	RM 323.71	40786.71	500-yr	2998.75	865.64	858.49	2.19	1.32	28.38	12.46	221.5	1188.97	4.37	1.91	7.15	7.15
Yellowstone County	B8	RM 323.60	40615.85	500-yr	2998.75	865.63	858.06	1.77	1.18	18.64	7.98	122.37	1147.06	5.26	2.22	7.57	7.57
Yellowstone County	B8	RM 323.55	40536.83	500-yr	2998.75	865.24	857.58	3.41	1.73	72.09	23.02	115.42	1151.9	4.77	1.51	7.66	7.66
Yellowstone County	B8	RM 323.49	40429.96	500-yr	2998.75	865.04	858.37	3.47	1.76	69.7	21.88	119.27	1130.93	4.84	1.51	6.67	6.67
Yellowstone County	B8	RM 323.41	40309.21	500-yr	2998.75	864.92	859.41	3.12	1.75	68.96	24.8	135.74	1085.78	4.4	1.58	5.51	5.51

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	500-yr	2998.75	864.83	859.58	2.62	1.56	36.92	17.09	175.88	1024.44	4.09	1.88	5.25	5.25
Yellowstone County	B8	RM 323.27	40082.34	500-yr	2998.75	864.7	859.66	2.68	1.59	43.92	21.02	188.89	999.66	3.95	1.88	5.04	5.04
Yellowstone County	B8	RM 323.21	39985.33	500-yr	2998.75	864.59	859.54	2.63	1.59	43.95	23.35	211.17	988.98	3.61	1.91	5.05	5.05
Yellowstone County	B8	RM 323.16	39899.29	500-yr	2998.75	864.55	859.55	1.99	1.4	37.23	23.48	276.01	1021.57	3.33	2.1	5	5
Yellowstone County	B8	RM 323.06	39735.77	500-yr	2998.75	864.31	858.56	1.82	1.49	40.38	22.84	311.52	1407.34	3.05	1.72	5.75	5.75
Yellowstone County	B8	RM 322.93	39531.81	500-yr	2998.75	864.12	859.35	1.71	1.26	27	14.55	322.23	1528.63	3.34	1.79	4.77	4.77
Yellowstone County	B8	RM 322.79	39301.41	500-yr	2998.75	863.88	858.62	2.14	1.34	29.02	14.19	220.82	1542.82	3.91	1.91	5.26	5.26
Yellowstone County	B8	RM 322.69	39142.64	500-yr	2998.75	863.76	857.47	2.33	1.42	25.98	12.8	200.75	1402.31	4.05	2	6.29	6.29
Yellowstone County	B8	RM 322.58	38982.22	500-yr	2998.75	863.16	856.56	4.02	2.53	96.43	38.65	116.27	737.3	4.04	1.61	6.6	6.6
Yellowstone County	B9	RM 322.51	38859.49	500-yr	2998.75	863.09	858.28	3.15	2.14	60.34	28.11	163.72	781.88	3.86	1.79	4.81	4.81
Yellowstone County	B9	RM 322.41	38696.02	500-yr	2998.75	863.02	857.62	1.81	1.67	38.37	26.69	457.67	971.32	2.76	1.91	5.41	5.41
Yellowstone County	B9	RM 322.34	38586.33	500-yr	2998.75	862.93	857.65	1.49	1.41	24.53	18.88	590.21	1065.58	2.65	2.04	5.28	5.28
Yellowstone County	B9	RM 322.23	38396.25	500-yr	2998.75	862.81	857.13	1.15	1.15	19.4	16.45	754.61	1142.78	2.7	2.28	5.68	5.68
Yellowstone County	B9	RM 322.13	38239.27	500-yr	2998.75	862.69	857.1	1.04	1.09	20.66	18.86	880.36	1171.26	2.57	2.35	5.59	5.59
Yellowstone County	B9	RM 322.03	38090.48	500-yr	2998.75	862.49	856.15	1.17	1.26	36.56	35.57	970.71	1137.14	2.15	2.09	6.34	6.34
Yellowstone County	B9	RM 321.91	37898.13	500-yr	2998.75	862.25	856.85	1.55	1.55	14.19	13.86	912.88	936.31	2.12	2.07	5.4	5.4
Yellowstone County	B9	RM 321.82	37758.36	500-yr	2998.75	862.2	856.34	1.39	1.38	9	8.58	832.71	878.75	2.59	2.47	5.86	5.86
Yellowstone County	B9	RM 321.70	37567.01	500-yr	2998.75	862.11	855.27	1.27	1.26	22.82	21.41	809.33	891.06	2.86	2.68	6.84	6.84
Yellowstone County	B9	RM 321.60	37414.63	500-yr	2998.75	862.05	854.48	1.11	1.08	11.66	10.13	755.74	903.9	3.53	3.06	7.57	7.57
Yellowstone County	B9	RM 321.48	37188.51	500-yr	2998.75	861.88	855.03	1.52	1.4	24.34	18.56	546.18	828.19	3.39	2.58	6.86	6.86
Yellowstone County	B9	RM 321.38	37016.94	500-yr	2998.75	861.74	854.75	1.67	1.43	24.33	15.34	471.9	985.02	3.39	2.13	6.99	6.99
Yellowstone County	B9	RM 321.28	36857.57	500-yr	2998.75	861.69	855.3	1.41	1.11	12.69	8.27	459.37	1105.61	4.04	2.62	6.39	6.39
Yellowstone County	B9	RM 321.13	36652.19	500-yr	2998.75	861.57	854.69	1.71	1.29	27.24	19.13	274.03	1029.71	4.82	3.35	6.88	6.88
Yellowstone County	B9	RM 321.05	36531.25	500-yr	2998.75	861.33	855.36	2.45	1.75	46.61	24.61	190.29	983.94	5.31	2.77	5.97	5.97
Yellowstone County	B9	RM 321.00	36446.98	500-yr	2998.75	861.25	855.12	2.77	1.56	47.95	18.02	130.21	978.4	5.37	1.97	6.13	6.13
Yellowstone County	B9	RM 320.71	36404.1	500-yr	2998.75	860.82	855.12	3.81	2.46	66.22	29.86	133.15	1014.25	4.86	2.15	5.7	5.7
Yellowstone County	B9	RM 320.62	36361.3	500-yr	2998.75	860.73	855.12	3.88	2.52	69.22	31.69	136.1	1226.4	4.68	2.1	5.61	5.61
Yellowstone County	B9	RM 320.92	36318.56	500-yr	2998.75	860.64	855.12	3.91	2.59	112.85	52.9	139.04	558.86	4.5	2.07	5.52	5.52
Yellowstone County	B9	RM 320.44	36258.3	500-yr	2998.75	860.35	855.19	4.19	2.84	79.03	35.63	145.02	549.63	4.33	1.92	5.17	5.17
Yellowstone County	B9	RM 320.38	36198.1	500-yr	2998.75	860.28	855.26	4.04	2.81	74.38	35.95	151.01	514.15	4.36	2.07	5.02	5.02
Yellowstone County	B9	RM 320.80	36137.92	500-yr	2998.75	860.24	855.33	3.74	2.59	96.52	45.62	156.99	1431.1	4.4	2.04	4.91	4.91
Yellowstone County	B9	RM 320.71	35990.21	500-yr	2998.75	860.29	854.38	2.28	1.85	43.16	23.91	275.47	1495.07	4.33	2.38	5.9	5.9
Yellowstone County	B9	RM 320.54	35839.45	500-yr	2998.75	860.15	853.99	2.23	1.75	34.53	19.44	324.02	1534.29	3.74	2.09	6.16	6.16
Yellowstone County	B9	RM 320.44	35717.45	500-yr	2998.75	860.07	854.32	2.1	1.57	25.25	14.67	334.82	1352.6	3.57	2.06	5.75	5.75
Yellowstone County	B9	RM 320.62	35556.9	500-yr	2998.75	859.98	854.17	1.92	1.41	38.74	20.37	262.96	1563.8	3.76	1.95	5.81	5.81
Yellowstone County	B9	RM 320.38	35461.42	500-yr	2998.75	859.86	854.17	2.19	1.38	32.28	13.52	199.43	1548.83	4.56	1.87	5.69	5.69
Yellowstone County	B9	RM 320.32	35359.13	500-yr	2998.75	859.73	854.57	2.61	1.56	50.98	17.25	140.58	1545.28	4.86	1.6	5.16	5.16
Yellowstone County	B9	RM 320.25	35241.01	500-yr	2998.75	859.36	854.29	3.57	2	78.34	25.95	110.85	1561.49	4.65	1.49	5.06	5.06
Yellowstone County	B9	RM 320.20	35163.52	500-yr	2998.75	859.27	854.2	3.18	2.01	77.37	30.78	134.69	1524.94	4.13	1.6	5.07	5.07
Yellowstone County	B9	RM 320.14	35071.29	500-yr	2998.75	859.1	854.32	3.1	2.02	62.4	28.67	161.57	1528.49	3.91	1.77	4.77	4.77
Yellowstone County	B9	RM 320.01	34865.89	500-yr	2998.75	858.51	854.42	3.35	2.99	56.64	42.35	122.19	1427.3	3.09	2.3	4.16	4.16
Yellowstone County		RM 319.44	34790	500-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	500-yr	2998.75	858.51	854.66	1.87	2.04	22.63	19.19	143.74	792.31	3.23	2.71	4.93	4.93
Yellowstone County	B9	RM 319.86	34625.68	500-yr	2998.75	858.46	854.6	1.77	1.95	25.6	20.44	153.74	1051.83	3.11	2.46	4.9	4.9
Yellowstone County	B9	RM 319.78	34508.06	500-yr	2998.75	858.33	854.51	2.57	2.12	43.72	28.32	111.07	1124.5	3.53	2.25	4.81	4.81
Yellowstone County	B9	RM 319.73	34426.63	500-yr	2998.75	857.97	854.69	3.69	2.12	70.55	50.17	156.77	972.4	2.97	2.1	4.5	4.5
Yellowstone County	B9	RM 319.66	34314.84	500-yr	2998.75	857.97	854.51	2.42	1.93	29.27	21.71	158.66	931.45	2.95	2.18	4.54	4.54
Yellowstone County	B9	RM 319.57	34163.05	500-yr	2998.75	857.84	853.93	2.37	1.93	26.89	19.46	198.21	738.14	3.04	2.19	4.5	4.5
Yellowstone County	B9	RM 319.44	33955.96	500-yr	2998.75	857.75	853.14	2.16	1.83	29.39	18.14	153.57	813.62	3.33	2.03	4.61	4.61
Yellowstone County	B9	RM 319.39	33872.4	500-yr	2998.75	857.7	852.65	2.27	1.72	25.39	15.66	137.96	870.53	3.49	2.11	5.05	5.05
Yellowstone County	B9	RM 319.34	33786.83	500-yr	2998.75	857.66	852.83	2.16	1.6	22.1	14.02	178.14	859.81	3.48	2.19	4.83	4.83
Yellowstone County	B9	RM 319.22	33580.15	500-yr	2998.75	857.62	851.79	2.2	1.4	20.95	11.11	80.63	891.41	4.69	2.4	5.82	5.82
Yellowstone County	B9	RM 319.17	33497.33	500-yr	2998.75	857.6	851.64	1.74	1.34	15.67	9.62	121.71	1045.82	3.89	2.34	5.96	5.96
Yellowstone County	B9	RM 319.09	33368.53	500-yr	2998.75	857.37	851.25	2.68	1.93	57.69	24.57	136.29	881.23	4.29	1.78	6.12	6.12
Yellowstone County	B9	RM 319.04	33287.21	500-yr	2998.75	857.16	851.49	3.17	2.05	79.1	28.89	113.42	952.24	4.68	1.65	5.67	5.67
Yellowstone County	B9	RM 318.96	33153.16	500-yr	2998.75	856.94	851.64	3.02	2.05	65.93	26.06	157.62	964.96	4.24	1.65	5.3	5.3
Yellowstone County	B9	RM 318.91	33065.54	500-yr	2998.75	856.87	851.86	2.63	1.96	61.71	27.22	189.76	964.64	3.94	1.72	5.01	5.01
Yellowstone County	B9	RM 318.82	32939.33	500-yr	2998.75	856.56	851.86	3.2	2.1	47.98	18.57	160.72	909.35	4.17	1.59	4.7	4.7
Yellowstone County	B9	RM 318.74	32833.24	500-yr	2998.75	856.63	851.86	2.06	1.52	27.09	13.11	185.42	985.93	4.17	2	4.77	4.77
Yellowstone County	B9	RM 318.62	32649.76	500-yr	2998.75	856.48	850.67	1.9	1.64	33.24	20.39	316.37	909.21	3.35	2.04	5.81	5.81
Yellowstone County	B9	RM 318.42	32315.28	500-yr	2998.75	856.07	850.15	2.3	1.93	28.77	15.69	347.98	1156.21	3.53	1.91	5.92	5.92

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	500-yr	2998.75	855.74	849.17	2.38	1.42	35.09	13.01	211.8	1479.26	4.59	1.67	6.57	6.57
Yellowstone County	B9	RM 317.97	31551.39	500-yr	2998.75	855.39	848.35	2.7	1.87	31.97	13.9	238.16	1157.51	4.2	1.81	7.04	7.04
Yellowstone County	B10	RM 317.87	31388.76	500-yr	2998.75	855.24	848.78	2.95	1.76	44.25	16.01	164.28	1187.94	4.66	1.65	6.46	6.46
Yellowstone County	B10	RM 317.78	31248.07	500-yr	2998.75	855.24	848.75	2.37	1.4	28.01	9.9	143.48	1456.71	5.36	1.86	6.49	6.49
Yellowstone County	B10	RM 317.70	31120.75	500-yr	2998.75	855.27	848.56	1.58	1.13	13.03	6.82	173.19	1511.62	4.75	2.44	6.71	6.71
Yellowstone County	B10	RM 317.61	30982.56	500-yr	2998.75	855.19	848.29	1.91	1.26	17.31	8.64	195.11	1505.42	4.52	2.22	6.9	6.9
Yellowstone County	B10	RM 317.53	30849.94	500-yr	2998.75	855.15	848.5	1.62	1.21	14.19	8.03	345.3	1495.77	3.98	2.23	6.65	6.65
Yellowstone County	B10	RM 317.45	30723.4	500-yr	2998.75	855.1	848.47	1.65	1.25	16.02	10.45	370.22	1490.38	3.55	2.3	6.62	6.62
Yellowstone County	B10	RM 317.37	30601.88	500-yr	2998.75	855.06	848.17	1.45	1.18	15.91	11.54	371.73	1451.29	3.53	2.54	6.89	6.89
Yellowstone County	B10	RM 317.30	30483.81	500-yr	2998.75	854.98	848.41	1.72	1.25	14.81	9.48	274.1	1398.12	4.24	2.68	6.57	6.57
Yellowstone County	B10	RM 317.19	30302.33	500-yr	2998.75	854.93	848.84	1.83	1.11	16.08	7.49	162.57	1308.92	5.58	2.54	6.09	6.09
Yellowstone County	B10	RM 317.05	30079.26	500-yr	2998.75	854.61	848.38	2.73	1.9	32.49	13.63	159.02	1085.9	5.66	2.34	6.23	6.23
Yellowstone County	B10	RM 316.93	29889.26	500-yr	2998.75	854.2	847.25	3.4	2.6	63.25	35.67	150.51	806.25	5.4	2.99	6.95	6.95
Yellowstone County	B10	RM 316.79	29668.4	500-yr	2998.75	854.05	847.89	3.09	2.14	53.18	20.63	146.89	649.55	5.68	2.16	6.15	6.15
Yellowstone County	B10	RM 316.66	29466.39	500-yr	2998.75	853.78	847.86	3.16	2.37	52.2	24.48	163.35	511.5	5.35	2.47	5.92	5.92
Yellowstone County	B10	RM 316.58	29329.04	500-yr	2998.75	853.67	847.74	2.96	2.05	61.16	31.87	174.67	626.23	5	2.58	5.93	5.93
Yellowstone County	B10	RM 316.51	29227.18	500-yr	2998.75	853.5	847.41	3.08	2.09	57.44	30.7	183.91	594.86	4.56	2.41	6.09	6.09
Yellowstone County	B10	RM 316.43	29091.4	500-yr	2998.75	853.36	847.41	2.75	2.02	59.75	38.4	240.42	604.51	3.87	2.46	5.95	5.95
Yellowstone County	B10	RM 316.33	28935.99	500-yr	2998.75	853.08	847.74	2.67	2.08	65.03	44.44	286.77	619.55	3.42	2.33	5.34	5.34
Yellowstone County	B10	RM 316.24	28786.65	500-yr	2998.75	852.88	847.5	2.17	1.92	53.52	39.29	356.21	650.98	3.27	2.4	5.39	5.39
Yellowstone County	B10	RM 316.14	28628.02	500-yr	2998.75	852.65	846.92	2.2	1.8	41.98	27.74	330.46	676.82	3.74	2.46	5.73	5.73
Yellowstone County	B10	RM 316.05	28475.44	500-yr	2998.75	852.37	846.73	2.48	1.95	54.35	30.5	295.19	747.96	3.68	2.05	5.64	5.64
Yellowstone County	B10	RM 315.97	28355.68	500-yr	2998.75	852.23	846.43	2.48	1.94	29.2	18.42	303.88	689.34	3.57	2.24	5.8	5.8
Yellowstone County	B10	RM 315.84	28140.65	500-yr	2998.75	851.88	846.58	2.98	2.18	74.32	33.26	181.2	779.78	3.99	1.76	5.3	5.3
Yellowstone County	B10	RM 315.71	27926.69	500-yr	2998.75	851.57	846.34	2.97	1.94	38.71	17.95	208.55	1028.84	3.59	1.65	5.24	5.24
Yellowstone County	B10	RM 315.58	27720.72	500-yr	2998.75	851.6	846.16	1.74	1.32	24.39	12.19	155.87	1134.55	4.12	2.01	5.44	5.44
Yellowstone County	B10	RM 315.44	27505.06	500-yr	2998.75	851.35	846.09	2.49	1.36	34.11	12.21	152.39	1321.78	4.76	1.67	5.26	5.26
Yellowstone County	B10	RM 315.30	27283.58	500-yr	2998.75	851.28	844.45	1.65	1.1	17.9	9.99	317.48	1478.75	3.35	1.85	6.83	6.83
Yellowstone County	B10	RM 315.18	27097.16	500-yr	2998.75	851.24	844.72	1.34	1	9.66	6.31	454.19	1581.9	2.92	1.89	6.51	6.51
Yellowstone County	B10	RM 315.01	26818.99	500-yr	2998.75	851.11	844.66	1.58	1.12	18.24	9.93	477.22	1615.7	3.06	1.65	6.44	6.44
Yellowstone County	B10	RM 314.85	26559.67	500-yr	2998.75	850.84	844.84	2.43	1.34	37.76	11.32	167.65	1553.95	4.96	1.44	6	6
Yellowstone County	B10	RM 314.69	26324.37	500-yr	2998.75	850.6	844.24	2.69	1.49	42.28	12.41	174.02	1490.62	4.73	1.35	6.36	6.36
Yellowstone County	B10	RM 314.57	26132.54	500-yr	2998.75	850.33	844.63	3.03	1.65	55.71	14.58	147.42	1385.29	5.13	1.32	5.7	5.7
Yellowstone County	B10	RM 314.46	25963.96	500-yr	2998.75	850.25	844.48	2.48	1.49	40.86	13.69	201.77	1350.3	4.53	1.49	5.77	5.77
Yellowstone County	B10	RM 314.35	25782.69	500-yr	2998.75	850.05	844.51	2.37	1.75	56.56	20.23	269.19	1227.36	3.95	1.4	5.54	5.54
Yellowstone County	B10	RM 314.24	25607.48	500-yr	2998.75	849.86	844.14	2.43	1.76	24.31	9.76	289.52	1145.21	3.79	1.49	5.71	5.71
Yellowstone County	B10	RM 314.15	25461.23	500-yr	2998.75	849.74	844.05	2.25	1.81	54.51	24.84	306.39	1002.75	3.68	1.65	5.69	5.69
Yellowstone County	B10	RM 314.06	25326.45	500-yr	2998.75	849.7	843.63	1.72	1.37	14.76	8.7	455.22	1095.43	3.52	2.06	6.07	6.07
Yellowstone County	B10	RM 313.98	25189.4	500-yr	2998.75	849.65	843.05	1.45	1.21	22.64	16.09	559.69	1099.33	3.2	2.26	6.61	6.61
Yellowstone County	B10	RM 313.83	24942.42	500-yr	2998.75	849.5	843.2	1.5	1.27	16.33	8.35	476.74	1210.71	3.86	1.95	6.3	6.3
Yellowstone County	B10	RM 313.72	24768.08	500-yr	2998.75	849.41	842.35	1.71	1.24	16.95	8.26	330.48	1134.39	4.4	2.12	7.06	7.06
Yellowstone County	B10	RM 313.66	24671.51	500-yr	2998.75	849.33	843.14	1.92	1.32	19.2	9.26	286.85	1059.77	4.49	2.14	6.19	6.19
Yellowstone County	B10	RM 313.57	24513.04	500-yr	2998.75	849.26	842.47	1.91	1.36	19.86	10.73	303.74	949.66	4.33	2.32	6.79	6.79
Yellowstone County	B10	RM 313.47	24364.02	500-yr	2998.75	849.16	841.55	2	1.5	21.43	11.34	283.74	815.55	4.71	2.46	7.61	7.61
Yellowstone County	B10	RM 313.33	24143.26	500-yr	2998.75	848.86	842.65	2.7	1.86	56.4	24.05	187.53	752.14	5.09	2.14	6.21	6.21
Yellowstone County	B10	RM 313.18	23899.74	500-yr	2998.75	848.16	842.19	3.61	2.56	111.58	46.57	166.39	651.74	4.39	1.8	5.96	5.96
Yellowstone County	B10	RM 313.07	23728.15	500-yr	2998.75	847.65	842.62	3.83	2.95	78.47	29.27	164.01	609.79	4.54	1.67	5.04	5.04
Yellowstone County	B10	RM 312.98	23590.93	500-yr	2998.75	847.7	842.5	2.94	2.27	38.87	18.27	201.2	649.83	4.35	2.03	5.2	5.2
Yellowstone County	B10	RM 312.90	23455.11	500-yr	2998.75	847.63	842.38	2.63	2.13	51.15	26.75	204.15	782.75	4.47	2.32	5.25	5.25
Yellowstone County	B10	RM 312.75	23227.05	500-yr	2998.75	847.41	841.71	2.59	1.86	37.53	19.39	224.95	776.3	4.05	2.07	5.7	5.7
Yellowstone County	B10	RM 312.65	23058.61	500-yr	2998.75	847.31	841.61	2.27	1.72	30.79	19.14	273.98	772.66	3.65	2.25	5.7	5.7
Yellowstone County	B10	RM 312.53	22873.59	500-yr	2998.75	847.22	841.37	2.09	1.51	24.03	13.66	239.51	761.3	4.64	2.61	5.85	5.85
Yellowstone County	B10	RM 312.49	22797.96	500-yr	2998.75	847.11	841.34	2.45	1.67	32.36	17.21	206.11	745.91	4.57	2.41	5.77	5.77
Yellowstone County	B10	RM 312.39	22646.67	500-yr	2998.75	846.97	840.85	2.74	1.78	47.38	24.6	153.26	759.78	4.34	2.22	6.12	6.12
Yellowstone County	B10	RM 312.33	22536.68	500-yr	2998.75	846.77	840.82	3.1	1.91	55.55	25.4	139.06	769.2	4.56	2.04	5.95	5.95
Yellowstone County	B10	RM 312.22	22360.55	500-yr	2998.75	846.73	840.91	2.49	1.73	39.49	17.27	128.68	812.1	4.97	2.13	5.81	5.81
Yellowstone County	B10	RM 312.13	22230.65	500-yr	2998.75	846.67	840.94	1.93	1.54	24.33	14.42	350.72	847.85	3.9	2.3	5.73	5.73
Yellowstone County	B10	RM 312.04	22082.88	500-yr	2998.75	846.53	840.82	2.1	1.66	30.09	18.05	346.94	831.75	3.65	2.18	5.71	5.71
Yellowstone County	B10	RM 311.95	21934.61	500-yr	2998.75	846.38	840.79	2.18	1.72	31.02	19.2	350.23	1037.2	3.63	2.24	5.59	5.59
Yellowstone County	B10	RM 311.89	21840.24	500-yr	2998.75	846.31	840.76	2.08	1.6	33.2	16.41	325.27	959.11	3.98	1.96	5.55	5.55
Yellowstone County	B10	RM 311.77	21651.91	500-yr	2998.75	846.14	840.18	2.27	1.66	32.98	14.53	226.3	973.58	5.06	2.21	5.95	5.95

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	500-yr	2998.75	845.97	839.85	2.74	1.68	45.65	16.29	150.93	1243.01	5.49	1.9	6.12	6.12
Yellowstone County	B10	RM 311.58	21350.77	500-yr	2998.75	845.86	839.63	2.53	1.53	39.47	15.29	171.57	1317.68	4.89	1.86	6.22	6.22
Yellowstone County	B10	RM 311.48	21191.11	500-yr	2998.75	845.77	839.42	2.22	1.37	27.14	11.38	228.87	1233.54	4.28	1.77	6.36	6.36
Yellowstone County	B10	RM 311.37	21010.53	500-yr	2998.75	845.7	839.18	1.84	1.22	21.33	10.78	336.85	1316.49	3.72	1.87	6.52	6.52
Yellowstone County	B10	RM 311.27	20852.82	500-yr	2998.75	845.6	838.96	1.88	1.27	22.76	12.99	322.76	1257.45	3.82	2.16	6.64	6.64
Yellowstone County	B10	RM 311.19	20716.8	500-yr	2998.75	845.53	838.84	1.92	1.2	22.6	10.83	247.96	1207.92	4.74	2.23	6.69	6.69
Yellowstone County	B10	RM 311.09	20559.11	500-yr	2998.75	845.21	839.14	3.02	1.63	49.75	18.16	144.57	1094.52	5.15	1.84	6.07	6.07
Yellowstone County	B10	RM 310.97	20364.78	500-yr	2998.75	845.09	839.45	2.68	1.54	42.58	16.12	173.49	1054.69	4.95	1.85	5.64	5.64
Yellowstone County	B10	RM 310.87	20211.96	500-yr	2998.75	844.96	839.02	2.63	1.56	39.83	15.11	190.23	1074.71	4.77	1.78	5.93	5.93
Yellowstone County	B10	RM 310.76	20019.23	500-yr	2998.75	844.47	839.18	3.56	2.08	67.36	20.34	144.5	1014.03	4.85	1.42	5.3	5.3
Yellowstone County	B11	RM 310.67	19877.9	500-yr	2998.75	844.43	839.11	2.87	1.73	62.45	21.81	174.84	1105.53	4.55	1.57	5.31	5.31
Yellowstone County	B11	RM 310.57	19727.96	500-yr	2998.75	844.25	839.08	2.68	1.61	57.71	20.88	195.83	1183.77	4.4	1.58	5.17	5.17
Yellowstone County	B11	RM 310.48	19578.86	500-yr	2998.75	844.1	838.96	2.56	1.49	45.18	16.89	210.72	1264.1	4.31	1.59	5.13	5.13
Yellowstone County	B11	RM 310.39	19437.53	500-yr	2998.75	844.03	838.54	2.25	1.37	23.06	10.02	264.94	1276.51	3.99	1.72	5.49	5.49
Yellowstone County	B11	RM 310.31	19317.45	500-yr	2998.75	843.95	838.23	2.17	1.46	21.84	11.1	357.08	1224.35	3.31	1.68	5.72	5.72
Yellowstone County	B11	RM 310.24	19187.47	500-yr	2998.75	843.91	838.23	1.62	1.31	37.43	22.99	461.89	1184.27	3.16	1.93	5.68	5.68
Yellowstone County	B11	RM 310.16	19069.04	500-yr	2998.75	843.77	837.93	1.52	1.34	35.4	22.94	569.52	1159.01	3	1.93	5.85	5.85
Yellowstone County	B11	RM 310.09	18955.28	500-yr	2998.75	843.68	837.93	1.6	1.27	13.4	9.5	555.01	1136.96	2.95	2.08	5.76	5.76
Yellowstone County	B11	RM 309.97	18765.62	500-yr	2998.75	843.63	837.59	1.24	1.06	16.73	11.2	601.54	1163.75	3.64	2.43	6.03	6.03
Yellowstone County	B11	RM 309.90	18643.48	500-yr	2998.75	843.55	837.5	1.42	1.16	10.24	6.92	625.69	1236.57	3.1	2.08	6.05	6.05
Yellowstone County	B11	RM 309.82	18525.48	500-yr	2998.75	843.5	837.5	1.27	1.19	24.74	20.62	698.4	1037.63	2.92	2.43	6	6
Yellowstone County	B11	RM 309.73	18379.74	500-yr	2998.75	843.4	837.35	1.15	1.09	18.94	15.93	803.57	1066.9	3.06	2.57	6.05	6.05
Yellowstone County	B11	RM 309.65	18253.83	500-yr	2998.75	843.35	837.38	1	0.96	13.06	10.58	876.43	1158.26	3.33	2.69	5.97	5.97
Yellowstone County	B11	RM 309.52	18029.98	500-yr	2998.75	843.22	836.68	1.18	1.14	18.77	15.12	816.46	1070.59	3.07	2.47	6.54	6.54
Yellowstone County	B11	RM 309.39	17824.11	500-yr	2998.75	843.14	836.74	1.04	1.02	11.59	9.19	768.02	988.85	3.75	2.97	6.4	6.4
Yellowstone County	B11	RM 309.22	17557.23	500-yr	2998.75	842.94	836.07	1.76	1.49	17.57	9.96	335.44	749.32	4.79	2.69	6.87	6.87
Yellowstone County	B11	RM 309.06	17331.95	500-yr	2998.75	842.68	835.79	2.43	1.76	62.39	27.45	191.59	729.03	5.42	2.33	6.89	6.89
Yellowstone County	B11	RM 308.94	17142.36	500-yr	2998.75	841.83	835.4	4.16	2.91	105.19	44.19	121.56	507.46	4.98	2.03	6.44	6.44
Yellowstone County	B11	RM 308.83	16971.41	500-yr	2998.75	841.82	836.04	2.97	2.24	60.04	30.06	159.75	524.15	5.18	2.55	5.78	5.78
Yellowstone County	B11	RM 308.71	16778.65	500-yr	2998.75	841.76	835.91	2.35	1.83	24.89	14.85	251.14	624.16	4.44	2.63	5.84	5.84
Yellowstone County	B11	RM 308.62	16631.4	500-yr	2998.75	841.68	835.85	2.06	1.64	53.82	34.27	300.08	748.08	3.87	2.45	5.82	5.82
Yellowstone County	B11	RM 308.55	16518.64	500-yr	2998.75	841.52	835.85	1.96	1.61	48.27	31.62	368.88	847.72	3.38	2.2	5.67	5.67
Yellowstone County	B11	RM 308.43	16328.3	500-yr	2998.75	841.29	834.51	1.69	1.43	40.58	27.58	420.94	929.47	3.35	2.26	6.78	6.78
Yellowstone County	B11	RM 308.35	16192.95	500-yr	2998.75	841.16	834.88	1.64	1.3	26.39	17.16	402.97	975.59	3.65	2.36	6.28	6.28
Yellowstone County	B11	RM 308.24	16015.46	500-yr	2998.75	841.07	834.63	1.62	1.19	16.16	10.43	363.15	959.53	4.08	2.62	6.43	6.43
Yellowstone County	B11	RM 308.12	15826.82	500-yr	2998.75	841	834.63	1.54	1.19	14.21	9.42	382.83	917.16	4.18	2.76	6.37	6.37
Yellowstone County	B11	RM 308.02	15675.58	500-yr	2998.75	840.92	834.76	1.74	1.27	14.27	7.87	304.26	870.57	4.95	2.71	6.16	6.16
Yellowstone County	B11	RM 307.88	15434.86	500-yr	2998.75	840.57	834.45	3.19	1.89	60.63	24.31	113.52	785.44	5.19	2.02	6.12	6.12
Yellowstone County	B11	RM 307.77	15261.75	500-yr	2998.75	840.11	834.45	3.67	2.41	92.32	37.89	128.93	685.88	4.54	1.81	5.66	5.66
Yellowstone County	B11	RM 307.68	15125.28	500-yr	2998.75	839.94	834.85	3.14	2.18	64.61	31.34	159.09	631.34	4.56	2.18	5.09	5.09
Yellowstone County	B11	RM 307.60	14980.1	500-yr	2998.75	839.88	834.36	2.32	1.91	29.61	17.1	274.46	622.99	4.39	2.52	5.53	5.53
Yellowstone County	B11	RM 307.52	14873.7	500-yr	2998.75	839.68	834.12	2.74	2.2	44.2	26.08	254.11	591.38	3.95	2.31	5.57	5.57
Yellowstone County	B11	RM 307.46	14779.11	500-yr	2998.75	839.56	833.6	2.58	2.18	75.43	50.06	313.79	628.32	3.33	2.19	5.96	5.96
Yellowstone County	B11	RM 307.39	14664.34	500-yr	2998.75	839.4	833.63	2.53	2.09	27.53	19.97	365.52	667.78	2.98	2.15	5.77	5.77
Yellowstone County	B11	RM 307.30	14517.89	500-yr	2998.75	839.24	833.81	2.29	2.04	61.07	46.73	407.44	697.32	2.76	2.11	5.42	5.42
Yellowstone County	B11	RM 307.22	14385.45	500-yr	2998.75	838.98	833.87	2.23	1.96	47.99	35.77	396.39	701.07	2.93	2.18	5.11	5.11
Yellowstone County	B11	RM 307.14	14262.57	500-yr	2998.75	838.84	833.51	2.15	1.81	35.59	23.16	334.95	732.25	3.5	2.27	5.33	5.33
Yellowstone County	B11	RM 307.08	14166.72	500-yr	2998.75	838.78	833.11	2.01	1.67	22.31	14.6	348.63	755.04	3.66	2.38	5.67	5.67
Yellowstone County	B11	RM 307.01	14050.92	500-yr	2998.75	838.69	832.65	2.07	1.72	20.38	13.98	376.22	786.32	3.26	2.22	6.04	6.04
Yellowstone County	B11	RM 306.95	13949.23	500-yr	2998.75	838.58	832.35	2.26	1.74	29.7	20.69	324.62	763.24	3.26	2.26	6.23	6.23
Yellowstone County	B11	RM 306.90	13869.87	500-yr	2998.75	838.46	832.56	2.37	1.81	36.16	23.87	350.3	794.67	3.19	2.09	5.9	5.9
Yellowstone County	B11	RM 306.82	13726.64	500-yr	2998.75	838.34	832.62	2.17	1.69	29.69	19.45	361.85	820.6	3.32	2.16	5.72	5.72
Yellowstone County	B11	RM 306.72	13574.53	500-yr	2998.75	838.2	831.8	2.39	1.64	33.4	17.7	222.2	879.87	3.97	2.07	6.4	6.4
Yellowstone County	B11	RM 306.62	13414.11	500-yr	2998.75	838.05	832.77	2.48	1.79	45.61	22.89	215.2	871.31	3.87	1.92	5.27	5.27
Yellowstone County	B11	RM 306.52	13251.36	500-yr	2998.75	837.63	832.87	3.34	2.08	60.02	22.65	152.64	900.36	4.32	1.6	4.76	4.76
Yellowstone County	B11	RM 306.42	13099.73	500-yr	2998.75	837.29	832.74	3.74	2.38	71.85	24.79	135.79	923.98	4.06	1.37	4.55	4.55
Yellowstone County	B11	RM 306.34	12958.96	500-yr	2998.75	837.27	832.84	2.59	1.81	41.48	18.97	236.52	1085.62	3.63	1.65	4.43	4.43
Yellowstone County	B11	RM 306.25	12825.95	500-yr	2998.75	837.11	832.35	2.51	1.77	38.76	19.1	312.9	1237.38	3.01	1.47	4.77	4.77
Yellowstone County	B11	RM 306.16	12673.7	500-yr	2998.75	836.93	832.41	2.33	1.72	38.1	20.68	366.13	1210.59	2.67	1.44	4.52	4.52
Yellowstone County	B11	RM 306.11	12592.39	500-yr	2998.75	836.79	832.17	2.43	1.81	49.16	26.63	322.44	1086.46	2.84	1.53	4.62	4.62
Yellowstone County	B11	RM 306.03	12457.47	500-yr	2998.75	836.64	831.25	2.21	1.67	30.63	19	370.37	1053.38	2.77	1.71	5.39	5.39

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	500-yr	2998.75	836.45	831.25	2.31	1.8	37.59	21.18	359.22	1117.68	2.66	1.49	5.2	5.2
Yellowstone County	B11	RM 305.84	12159.82	500-yr	2998.75	836.23	831.1	2.48	1.9	39.39	18.33	268.58	1085.68	3.16	1.45	5.14	5.14
Yellowstone County	B11	RM 305.74	11989.73	500-yr	2998.75	835.96	830.64	2.72	1.87	52.85	17.55	198.59	1230.92	3.99	1.3	5.32	5.32
Yellowstone County	B11	RM 305.67	11883.31	500-yr	2998.75	835.8	830.43	2.94	1.81	50.58	15.68	162.93	1317.73	4.14	1.26	5.37	5.37
Yellowstone County	B11	RM 305.60	11764.11	500-yr	2998.75	835.84	830.18	1.75	1.37	16.78	8.44	168.35	1414.33	3.47	1.71	5.66	5.66
Yellowstone County	B11	RM 305.52	11651.48	500-yr	2998.75	835.72	830.18	2.24	1.46	27.31	10.91	151.74	1436.33	3.67	1.43	5.53	5.53
Yellowstone County	B11	RM 305.44	11514.64	500-yr	2998.75	835.65	830.43	1.95	1.24	17.91	7.25	158.15	1590.75	3.8	1.51	5.22	5.22
Yellowstone County	B11	RM 305.40	11441.77	500-yr	2998.75	835.54	830.61	1.98	1.44	17.23	8.11	239	1773.25	3.12	1.46	4.93	4.93
Yellowstone County	B11	RM 305.32	11312.15	500-yr	2998.75	835.5	830.61	1.87	1.23	20.76	9.73	167.71	1711.21	3.6	1.67	4.89	4.89
Yellowstone County	B11	RM 305.24	11186.22	500-yr	2998.75	835.49	830.43	1.24	0.94	10.07	6.12	156.67	1698.9	3.57	2.13	5.06	5.06
Yellowstone County	B11	RM 305.06	10905.09	500-yr	2998.75	835.43	830.15	1.18	0.92	6.9	5.04	302.98	1729.95	3.23	2.34	5.27	5.27
Yellowstone County	B11	RM 304.71	10460.6	500-yr	2998.75	835.31	828.96	1.37	1.19	11.86	9.23	399.03	1399.48	3.41	2.64	6.35	6.35
Yellowstone County	B11	RM 304.62	10332.33	500-yr	2998.75	835.29	829.09	1.34	1.13	9.9	6.43	207.28	1390.08	4.77	3.05	6.2	6.2
Yellowstone County	B11	RM 304.50	10132.63	500-yr	2998.75	835.02	829.09	2.57	2.03	52.92	24.62	123.2	1196.69	5.19	2.35	5.93	5.93
Yellowstone County	B11	RM 304.42	10011.11	500-yr	2998.75	834.94	829.18	2.22	1.82	39.1	18.42	152.73	1143.07	4.92	2.28	5.76	5.76
Yellowstone County	B11	RM 304.34	9873.393	500-yr	2998.75	834.77	828.78	2.32	1.9	26.87	15.72	263.04	1046.13	4.55	2.65	5.99	5.99
Yellowstone County	B11	RM 304.25	9735.197	500-yr	2998.75	834.57	828.39	2.73	2.05	48.18	23.27	200.3	923.67	4.91	2.34	6.18	6.18
Yellowstone County	B11	RM 304.18	9615.178	500-yr	2998.75	834.44	828.54	2.76	2.12	34.52	18.76	216.76	1004.56	4.64	2.5	5.9	5.9
Yellowstone County	B11	RM 304.09	9478.266	500-yr	2998.75	834.25	828.6	2.98	2.27	53.55	25.25	183.24	1070.42	5.02	2.34	5.65	5.65
Yellowstone County	B11	RM 304.00	9326.206	500-yr	2998.75	834.16	828.39	2.69	1.89	46.85	20.49	190.99	1260.79	5.12	2.21	5.78	5.78
Yellowstone County	B11	RM 303.91	9177.479	500-yr	2998.75	834.12	828.14	2.23	1.5	35.45	17.2	215.99	1316.13	4.93	2.37	5.98	5.98
Yellowstone County	B11	RM 303.78	8973.508	500-yr	2998.75	833.87	827.93	2.67	1.64	43.96	15.69	164.42	1159.51	5.27	1.83	5.94	5.94
Yellowstone County	B11	RM 303.65	8773.522	500-yr	2998.75	833.7	827.9	2.62	1.65	49.58	17.13	171	1066.75	5.02	1.7	5.81	5.81
Yellowstone County	B11	RM 303.55	8608.195	500-yr	2998.75	833.6	827.65	2.37	1.61	25.85	10.38	248.54	1152.74	4.21	1.66	5.94	5.94
Yellowstone County	B11	RM 303.43	8422.329	500-yr	2998.75	833.55	827.87	1.71	1.36	30.8	14.57	330.41	1238.18	3.8	1.78	5.68	5.68
Yellowstone County	B11	RM 303.34	8276.308	500-yr	2998.75	833.49	826.92	1.6	1.18	13.73	6.24	325.32	1261.88	4.47	2.01	6.57	6.57
Yellowstone County	B11	RM 303.26	8138.725	500-yr	2998.75	833.36	826.98	1.96	1.54	40.55	17.04	305.54	1163.38	4.03	1.67	6.38	6.38
Yellowstone County	B11	RM 303.18	8018.762	500-yr	2998.75	833.23	826.22	1.94	1.61	42.8	21.44	308.83	943.26	3.99	1.98	7.01	7.01
Yellowstone County	B11	RM 303.09	7876.674	500-yr	2998.75	833.09	825.43	1.84	1.54	37.16	18.67	338.06	1014.86	3.86	1.92	7.66	7.66
Yellowstone County	B11	RM 302.99	7711.603	500-yr	2998.75	832.98	826.22	1.61	1.38	25.55	16.27	336.71	834.54	4.12	2.61	6.76	6.76
Yellowstone County	B11	RM 302.89	7556.419	500-yr	2998.75	832.82	825.73	1.92	1.63	33.46	20.45	290.36	687.53	4.45	2.68	7.09	7.09
Yellowstone County	B11	RM 302.81	7423.411	500-yr	2998.75	832.65	825.86	2.26	1.84	40.82	22.78	221.32	589.77	5.02	2.76	6.8	6.8
Yellowstone County	B11	RM 302.70	7257.14	500-yr	2998.75	832.51	826.01	2.38	1.82	29.37	15.23	184.02	544.14	5.89	3.02	6.5	6.5
Yellowstone County	B12	RM 302.56	7050.708	500-yr	2998.75	831.66	825.25	3.89	3.89	81.84	81.84	168.61	487.58	4.67	4.67	6.41	6.41
Yellowstone County		RM 300.55	7034	500-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	500-yr	2998.75	831.52	825.95	3.86	3.84	78.2	75.31	170.48	341.87	4.9	4.72	5.58	5.58
Yellowstone County	B12	RM 302.49	6918.549	500-yr	2998.75	831.42	825.92	3.63	3.37	73.1	54.76	170.36	614.72	4.76	3.55	5.5	5.5
Yellowstone County	B12	RM 302.41	6794.522	500-yr	2998.75	831.38	825.64	3.3	2.79	47.32	29.58	161.6	815.03	4.7	2.91	5.74	5.74
Yellowstone County	B12	RM 302.34	6674.634	500-yr	2998.75	831.28	825.76	3	2.45	62.12	39.52	214.69	919.77	4.04	2.55	5.52	5.52
Yellowstone County	B12	RM 302.22	6485.378	500-yr	2998.75	831.21	825.76	2.23	1.79	30.93	21.12	235.89	846.4	3.85	2.61	5.45	5.45
Yellowstone County	B12	RM 302.14	6360.047	500-yr	2998.75	830.99	825.76	2.79	1.94	47.75	23.23	178.16	839.06	4.18	2.01	5.22	5.22
Yellowstone County	B12	RM 302.08	6267.13	500-yr	2998.75	830.91	825.79	2.56	1.94	29.98	15.98	265.5	813.61	3.59	1.9	5.11	5.11
Yellowstone County	B12	RM 301.98	6100.949	500-yr	2998.75	830.84	825.34	2.13	1.67	29.69	15.94	257.2	797.83	4.24	2.26	5.51	5.51
Yellowstone County	B12	RM 301.88	5944.005	500-yr	2998.75	830.74	824.7	2.06	1.6	24.95	15.5	307.5	807.31	3.83	2.36	6.05	6.05
Yellowstone County	B12	RM 301.79	5801.18	500-yr	2998.75	830.68	824.36	1.92	1.59	17.62	12.55	369.92	737.82	3.6	2.55	6.31	6.31
Yellowstone County	B12	RM 301.72	5685.105	500-yr	2998.75	830.6	824.85	2.01	1.64	24.34	16.71	328.47	714.1	3.74	2.56	5.75	5.75
Yellowstone County	B12	RM 301.65	5569.191	500-yr	2998.75	830.48	824.61	2.21	1.77	32.08	21.43	311.48	716.01	3.56	2.37	5.87	5.87
Yellowstone County	B12	RM 301.59	5465.51	500-yr	2998.75	830.37	824.42	2.24	1.85	35.19	22.97	318.53	721.93	3.45	2.24	5.95	5.95
Yellowstone County	B12	RM 301.53	5366.723	500-yr	2998.75	830.29	824.12	2	1.75	39.02	26.74	364.63	750.67	3.34	2.28	6.17	6.17
Yellowstone County	B12	RM 301.47	5270.902	500-yr	2998.75	830.18	824.12	2.01	1.74	37.81	24.69	353.58	770.31	3.45	2.24	6.06	6.06
Yellowstone County	B12	RM 301.39	5140.04	500-yr	2998.75	830.13	824.36	1.65	1.42	22.69	16.57	345.85	837.43	3.94	2.86	5.76	5.76
Yellowstone County	B12	RM 301.33	5044.575	500-yr	2998.75	830.03	824.12	1.88	1.53	22.03	13.48	331.22	869.88	4.09	2.48	5.91	5.91
Yellowstone County	B12	RM 301.24	4906.408	500-yr	2998.75	829.92	823.87	2.06	1.65	23.91	14.71	314.05	873.09	3.94	2.41	6.05	6.05
Yellowstone County	B12	RM 301.18	4802.631	500-yr	2998.75	829.82	823.17	2.2	1.77	28.31	18.61	314.04	924.25	3.54	2.3	6.65	6.65
Yellowstone County	B12	RM 301.12	4698.913	500-yr	2998.75	829.66	823.81	2.41	2.02	33.27	22.11	309.31	853.16	3.71	2.45	5.85	5.85
Yellowstone County	B12	RM 301.07	4611.142	500-yr	2998.75	829.61	824	2.31	1.88	29.44	18.04	286.35	804.53	4.11	2.5	5.61	5.61
Yellowstone County	B12	RM 301.02	4531.484	500-yr	2998.75	829.51	823.81	2.47	2.01	27.08	16.36	261	708.76	4.22	2.54	5.7	5.7
Yellowstone County	B12	RM 300.97	4453.011	500-yr	2998.75	829.28	823.9	3.1	2.48	41.18	22.38	196.12	511.18	4.38	2.36	5.38	5.38
Yellowstone County	B12	RM 300.89	4332.618	500-yr	2998.75	829.12	823.66	3.17	2.62	63.66	32.35	198.89	549.21	4.12	2.08	5.46	5.46
Yellowstone County	B12	RM 300.83	4232.362	500-yr	2998.75	828.94	823.78	3.31	2.69	66.38	35.05	175.01	526.91	4.05	2.12	5.15	5.15
Yellowstone County	B12	RM 300.77	4151.049	500-yr	2998.75	828.8	823.75	3.18	2.71	70.56	45.73	176.61	414.72	4.17	2.67	5.05	5.05

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	500-yr	2998.75	828.72	823.63	2.7	2.12	34.35	20.81	206.18	643.39	4.35	2.61	5.09	5.09
Yellowstone County	B12	RM 300.55	3793.957	500-yr	2998.75	828.6	822.93	2.23	1.77	34.16	22.12	263.47	813.18	3.76	2.41	5.67	5.67
Yellowstone County	B12	RM 300.45	3633.035	500-yr	2998.75	828.45	822.53	1.8	1.69	38.6	28.6	335.99	734.78	3.27	2.42	5.92	5.92
Yellowstone County	B12	RM 300.35	3461.833	500-yr	2998.75	828.16	822.66	2.31	1.74	25.43	18.16	389.33	827.84	2.92	2.08	5.5	5.5
Yellowstone County	B12	RM 300.24	3286.175	500-yr	2998.75	827.94	822.47	2.2	1.84	56.14	42.02	421.27	784.29	2.78	2.07	5.47	5.47
Yellowstone County	B12	RM 300.15	3141.724	500-yr	2998.75	827.65	822.47	2.1	1.87	51.55	40.92	481.67	745.77	2.72	2.15	5.18	5.18
Yellowstone County	B12	RM 300.10	3054.752	500-yr	2998.75	827.53	822.35	2.18	1.85	20.9	17.09	462.66	780.16	2.59	2.12	5.18	5.18
Yellowstone County	B12	RM 300.00	2887.728	500-yr	2998.75	827.34	821.22	2.05	1.89	52.68	38.36	467.25	1228.71	2.7	1.96	6.12	6.12
Yellowstone County	B12	RM 299.91	2736.431	500-yr	2998.75	827.17	821.5	2.06	1.75	26.26	15.21	350.2	1238.39	3.12	1.8	5.67	5.67
Yellowstone County	B12	RM 299.83	2614.069	500-yr	2998.75	827.03	821.41	2.03	1.85	37.62	22.53	388.69	1224.96	2.7	1.61	5.62	5.62
Yellowstone County	B12	RM 299.72	2484.158	500-yr	2998.75	826.84	820.89	2.11	1.74	38.02	19.92	425	1139.2	3.1	1.61	5.95	5.95
Yellowstone County	B12	RM 299.59	2312.328	500-yr	2998.75	826.55	821.13	2.72	1.88	38.58	17.94	221.2	1161.13	3.69	1.69	5.42	5.42
Yellowstone County	B12	RM 299.48	2160.343	500-yr	2998.75	826.3	821.13	3.25	1.97	47.11	17.47	138.95	1148.42	4.27	1.56	5.17	5.17
Yellowstone County	B12	RM 299.38	1995.229	500-yr	2998.75	826.23	821.13	2.49	1.68	59.62	24.15	140.74	1311.53	4.07	1.62	5.1	5.1
Yellowstone County	B12	RM 299.31	1874.433	500-yr	2998.75	825.87	821.22	3.23	1.98	46.43	17.68	150.46	1256.5	3.83	1.44	4.65	4.65
Yellowstone County	B12	RM 299.22	1738.666	500-yr	2998.75	825.73	821.16	3.15	1.78	53.77	19.57	129.2	1282.45	4.19	1.49	4.57	4.57
Yellowstone County	B12	RM 299.15	1613.992	500-yr	2998.75	825.69	820.95	2.44	1.32	31.66	14.61	154.73	1363.71	4.04	1.84	4.75	4.75
Yellowstone County	B12	RM 299.06	1473.748	500-yr	2998.75	825.66	820.64	2.09	1.19	28.16	12.01	116.53	1352.2	4.48	1.86	5.01	5.01
Yellowstone County	B12	RM 298.99	1360.532	500-yr	2998.75	825.59	820.46	1.95	1.26	30.63	12.88	103.4	1359.27	4.4	1.79	5.13	5.13
Yellowstone County	B12	RM 298.93	1269.876	500-yr	2998.75	825.53	820.46	1.89	1.25	31.23	13.65	109.55	1345.99	4.23	1.79	5.07	5.07
Yellowstone County	B12	RM 298.88	1195.725	500-yr	2998.75	825.46	820.43	2.03	1.25	32.71	14.83	119.96	1322.85	4.13	1.81	5.03	5.03
Yellowstone County	B12	RM 298.82	1096.849	500-yr	2998.75	825.27	820.58	2.7	1.41	37	17.42	156.35	1295.22	3.55	1.64	4.68	4.68
Yellowstone County	B12	RM 298.77	1018.392	500-yr	2998.75	825.2	820.4	2.36	1.35	33.43	16.54	185.77	1287.28	3.53	1.72	4.8	4.8
Yellowstone County	B12	RM 298.67	854.844	500-yr	2998.75	825.13	819.39	2.13	1.33	20.24	11.7	244.95	1340.58	2.95	1.68	5.73	5.73
Yellowstone County	B12	RM 298.59	724.135	500-yr	2998.75	825.06	819.55	1.75	1.35	21.21	12.46	276.38	1358.26	2.82	1.64	5.51	5.51
Yellowstone County	B12	RM 298.49	579.164	500-yr	2998.75	824.96	819.27	1.97	1.25	18.29	9.5	214.03	1332.68	3.51	1.8	5.69	5.69
Yellowstone County	B12	RM 298.42	469.573	500-yr	2998.75	824.89	819.27	2.03	1.25	28.16	13.37	176.57	1307.14	3.94	1.83	5.61	5.61
Yellowstone County	B12	RM 298.35	368.049	500-yr	2998.75	824.76	819.97	2.4	1.34	30.65	12.38	147.33	1264.2	4.46	1.77	4.78	4.78
Yellowstone County	B12	RM 298.30	290.003	500-yr	2998.75	824.73	819.82	2.09	1.22	20.39	10.46	197.73	1233.19	3.92	1.99	4.91	4.91
Yellowstone County	B12	RM 298.26	211.35	500-yr	2998.75	824.67	819.82	2.1	1.35	25.51	13.81	221.87	1166.09	3.55	1.9	4.85	4.85
Yellowstone County	B12	RM 298.19	83.499	500-yr	2998.75	824.54	819.49	2.35	1.58	25.77	15.32	192.15	932.89	3.47	2.04	5.06	5.06

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	500-yr	3341.4	824.39	820.43	1.99	1.38	19.86	10.67	197.15	1786.31	3.67	1.95	3.96	3.96
Treasure County	C1	RM 297.89	61639	500-yr	3341.4	824.21	820.07	1.95	1.53	20.16	12.59	362.24	1346.2	3.04	1.89	4.14	4.14
Treasure County	C1	RM 297.76	61392	500-yr	3341.4	824.03	819.93	2.05	1.67	25.64	14.29	331	1216.3	3.1	1.72	4.1	4.1
Treasure County	C1	RM 297.62	61179	500-yr	3341.4	823.97	819.69	1.64	1.26	13.55	8.55	290.46	1388.27	3.35	2.1	4.28	4.28
Treasure County	C1	RM 297.5	60985	500-yr	3341.4	823.81	819.39	2.32	1.42	26.02	12.3	159.01	1321.37	4.12	1.93	4.42	4.42
Treasure County	C1	RM 297.36	60767	500-yr	3341.4	823.68	819.14	2.24	1.45	24.36	12.52	169.82	1147.65	4	2.03	4.54	4.54
Treasure County	C1	RM 297.22	60535	500-yr	3341.4	823.57	819	2.08	1.44	20.97	10.75	149.14	1177.88	4.08	2.06	4.58	4.58
Treasure County	C1	RM 297.08	60314	500-yr	3341.4	823.45	818.76	2.13	1.38	21.69	11.39	194.31	1358.6	4.21	2.18	4.69	4.69
Treasure County	C1	RM 296.94	60093	500-yr	3341.4	823.32	818.42	2.22	1.45	23.54	12.54	177.08	1515.39	4.2	2.21	4.9	4.9
Treasure County	C1	RM 296.79	59847	500-yr	3341.4	823.24	817.97	1.75	1.36	14.85	9.44	246.81	1275.63	4.09	2.58	5.27	5.27
Treasure County	C1	RM 296.64	59608	500-yr	3341.4	823.16	817.9	1.82	1.28	15.75	9.08	177.49	1102.25	4.31	2.46	5.26	5.26
Treasure County	C1	RM 296.51	59386	500-yr	3341.4	823.11	817.8	1.46	1.17	10.14	6.52	477.13	1065.07	4.18	2.68	5.31	5.31
Treasure County	C1	RM 296.33	59113	500-yr	3341.4	823	817.52	1.71	1.27	13.32	7.61	335.57	1052.88	4.92	2.79	5.48	5.48
Treasure County	C1	RM 296.16	58839	500-yr	3341.4	822.03	817.46	4.57	2.87	99.4	38.9	137.37	712.13	4.32	1.66	4.57	4.57
Treasure County	C1	RM 296.01	58583	500-yr	3341.4	821.77	817.45	2.92	2.3	42.59	23.84	259.72	693.36	3.85	2.14	4.32	4.32
Treasure County	C1	RM 295.83	58296	500-yr	3341.4	821.62	817.4	1.99	1.96	21.1	19.32	627.05	760.04	2.66	2.44	4.23	4.23
Treasure County	C1	RM 295.66	58032	500-yr	3341.4	821.29	817.27	2.31	2.31	28.14	28.04	561.89	563.97	2.57	2.56	4.03	4.03
Treasure County	C1	RM 295.52	57800	500-yr	3341.4	821.19	816.19	1.73	1.73	16.81	16.8	660.79	668.09	2.92	2.92	5.01	5.01
Treasure County	C1	RM 295.31	57474	500-yr	3341.4	821.06	815.61	1.62	1.52	13.32	11.74	554.61	711.01	3.51	3.09	5.44	5.44
Treasure County	C1	RM 295.13	57174	500-yr	3341.4	820.88	815.57	1.93	1.49	20.01	11.44	360.88	988.92	3.99	2.27	5.31	5.31
Treasure County	C1	RM 294.94	56877	500-yr	3341.4	820.35	815.46	3.28	2.15	50.93	18.66	189.73	1063.5	4.26	1.54	4.89	4.89
Treasure County	C1	RM 294.76	56587	500-yr	3341.4	820.09	815.45	2.85	1.99	38.83	16.22	257.05	1056.16	3.83	1.59	4.64	4.64
Treasure County	C1	RM 294.55	56261	500-yr	3341.4	819.83	815.36	2.74	1.91	36.37	16.2	194.71	985.39	4.02	1.78	4.47	4.47
Treasure County	C1	RM 294.38	55980	500-yr	3341.4	819.64	815.07	2.44	1.75	30.35	13.82	227.09	1202.99	3.51	1.59	4.57	4.57
Treasure County	C1	RM 294.21	55714	500-yr	3341.4	819.35	814.88	2.74	1.59	36.61	12.09	201.2	1622.48	3.97	1.3	4.47	4.47
Treasure County	C1	RM 294.02	55401	500-yr	3341.4	819.14	814.59	2.45	1.51	28.86	11.24	231.94	1663.37	3.44	1.33	4.55	4.55
Treasure County	C1	RM 293.83	55100	500-yr	3341.4	818.98	814.3	2.08	1.31	21.13	8.88	274.8	1850.4	3.31	1.38	4.67	4.67
Treasure County	C1	RM 293.63	54777	500-yr	3341.4	818.8	813.55	1.99	1.21	17.69	6.06	332.83	1940.2	4.2	1.42	5.25	5.25
Treasure County	C1	RM 293.43	54432	500-yr	3341.4	818.51	813.29	2.66	1.26	33.04	9.83	202.13	1988.58	4.53	1.33	5.23	5.23
Treasure County	C1	RM 293.26	54152	500-yr	3341.4	818.39	813.24	2.36	1.11	26.06	10.62	247.33	2028.34	3.67	1.48	5.16	5.16
Treasure County	C1	RM 293.07	53839	500-yr	3341.4	818.24	813.24	2.2	0.96	24.02	10.26	241.79	2236.44	3.72	1.57	5	5
Treasure County	C1	RM 292.83	53458	500-yr	3341.4	818.18	813.1	1.43	0.79	10.65	5.25	380.97	2423.31	3.77	1.85	5.08	5.08
Treasure County	C1	RM 292.6	53082	500-yr	3341.4	817.97	812.6	2.11	1.1	20.52	5.98	238.91	2388.17	4.71	1.37	5.37	5.37
Treasure County	C2	RM 292.32	52612	500-yr	3341.4	817.83	811.76	2.11	1.07	19.74	7.01	207.17	1855.56	4.83	1.69	6.06	6.06
Treasure County	C2	RM 292.09	52256	500-yr	3341.4	817.71	811.6	2.17	1.24	20.48	7.48	174.28	1484.8	5.07	1.82	6.11	6.11
Treasure County	C2	RM 291.9	51956	500-yr	3341.4	817.6	811.55	2	1.24	18.95	8.75	240.72	1351.79	4.4	2.01	6.04	6.04
Treasure County	C2	RM 291.71	51639	500-yr	3341.4	817.02	811.5	3.16	2.1	70.19	27.87	244.86	1166.13	3.49	1.37	5.52	5.52
Treasure County	C2	RM 291.52	51333	500-yr	3341.4	816.8	811.46	2.56	1.55	30.08	12.49	214.15	1099.36	4.78	1.96	5.34	5.34
Treasure County	C2	RM 291.33	51042	500-yr	3341.4	816.55	811.46	2.68	1.8	34.16	15.51	232.04	967.94	4.27	1.92	5.1	5.1
Treasure County	C2	RM 291.15	50747	500-yr	3341.4	816.5	811.4	1.88	1.43	16.34	8.24	297.47	986.81	4.72	2.36	5.1	5.1
Treasure County	C2	RM 290.94	50437	500-yr	3341.4	816.34	811.31	2.12	1.39	21.6	12.66	259.99	993.88	4.17	2.42	5.03	5.03
Treasure County	C2	RM 290.78	50179	500-yr	3341.4	816.23	810.97	1.8	1.32	16.3	11.58	393.13	1135.81	3.68	2.6	5.26	5.26
Treasure County	C2	RM 290.6	49891	500-yr	3341.4	816.13	810.54	1.6	1.39	12.27	7.25	473.72	1737.4	4.22	2.49	5.6	5.6
Treasure County	C2	RM 290.43	49607	500-yr	3341.4	815.94	810.13	2.2	1.54	23.17	9.47	273.61	1713.26	4.31	1.74	5.81	5.81
Treasure County	C2	RM 290.23	49287	500-yr	3341.4	815.21	810.07	3.74	2.34	64.29	15.96	154.05	1350.78	4.83	1.17	5.14	5.14
Treasure County	C2	RM 290.04	48976	500-yr	3341.4	815.08	810.04	2.68	1.79	32.89	10.23	209.93	1683.98	4.86	1.49	5.04	5.04
Treasure County	C2	RM 289.85	48667	500-yr	3341.4	814.98	809.87	1.98	1.42	19.52	8.27	359.02	1735.19	3.8	1.6	5.11	5.11
Treasure County	C2	RM 289.67	48372	500-yr	3341.4	814.83	809.87	1.83	1.3	17.42	8.04	397.84	1508.08	3.71	1.7	4.97	4.97
Treasure County	C2	RM 289.46	48067	500-yr	3341.4	814.73	809.56	1.64	1.23	12.18	6.87	411.53	1216.62	3.98	2.23	5.17	5.17
Treasure County	C2	RM 289.27	47769	500-yr	3341.4	814.51	809.32	2.16	1.51	22.77	11.22	320.68	1152.32	3.92	1.92	5.19	5.19
Treasure County	C2	RM 289.11	47515	500-yr	3341.4	814.31	809	2.41	1.59	26.24	10.96	228.59	1026.79	4.94	2.05	5.31	5.31
Treasure County	C2	RM 288.94	47232	500-yr	3341.4	814.03	808.59	2.84	1.73	36.39	13.58	186.98	1031.28	5.12	1.88	5.44	5.44
Treasure County	C2	RM 288.76	46939	500-yr	3341.4	813.89	808.33	2.51	1.43	29	12.26	217.33	1196.44	4.73	1.97	5.56	5.56
Treasure County	C2	RM 288.55	46613	500-yr	3341.4	813.5	808.24	2.97	1.91	42.84	17.82	224.04	1055.53	4.05	1.66	5.26	5.26
Treasure County	C2	RM 288.36	46302	500-yr	3341.4	813.37	807.91	2.4	1.51	25.49	8.05	219.5	1358.51	5.29	1.64	5.46	5.46
Treasure County	C2	RM 288.18	46008	500-yr	3341.4	813.26	807.77	2.19	1.33	22.4	7.94	246.58	1644.72	4.42	1.54	5.5	5.5
Treasure County	C2	RM 287.99	45713	500-yr	3341.4	813.19	807.58	1.79	1.06	14.7	5.74	241.63	1832.38	4.51	1.74	5.61	5.61
Treasure County	C2	RM 287.81	45421	500-yr	3341.4	813.03	807.25	2.06	1.36	19.55	5.51	229.88	1874.92	4.7	1.31	5.78	5.78
Treasure County	C2	RM 287.62	45112	500-yr	3341.4	812.68	807.19	3.06	1.72	42.27	8.83	138.95	1931.43	5.08	1.03	5.49	5.49
Treasure County	C2	RM 287.42	44789	500-yr	3341.4	812.34	807.15	3.2	1.79	47.1	10.66	159.89	1870.46	4.76	1.06	5.19	5.19

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	500-yr	3341.4	812.28	806.81	1.91	1.39	18.25	6.24	420.05	2057.44	3.63	1.23	5.47	5.47
Treasure County	C2	RM 287.06	44222	500-yr	3341.4	812.19	806.77	1.61	1.25	13.97	5.94	515.12	1980.5	3.5	1.48	5.42	5.42
Treasure County	C2	RM 286.9	43958	500-yr	3341.4	812.02	806.52	2.06	1.33	19.56	6.09	277.39	1944.07	4.75	1.46	5.49	5.49
Treasure County	C2	RM 286.72	43671	500-yr	3341.4	811.66	802.22	3.1	1.56	39.64	8.55	122.22	1955.72	6.79	1.41	9.44	9.44
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	500-yr	3341.4	811.54	802.22	3.36	1.83	46.81	9.83	122.4	1843.4	6.6	1.34	9.32	9.32
Treasure County	C3	RM 286.58	43448	500-yr	3341.4	811.48	806.32	2.9	1.7	38.62	14.25	179.06	1907.61	4.81	1.75	5.17	5.17
Treasure County	C3	RM 286.51	43344	500-yr	3341.4	811.37	806.32	2.89	2.02	38.8	16.35	209.74	1917.2	4.6	1.92	5.05	5.05
Treasure County	C3	RM 286.46	43257	500-yr	3341.4	811.26	804.36	2.97	2.14	40.2	17.72	196.83	1751.36	4.88	2.12	6.9	6.9
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	500-yr	3341.4	810.91	804.36	3.53	2.57	58.38	24.83	203.75	1430.22	4.48	1.89	6.55	6.55
Treasure County	C3	RM 286.37	43117	500-yr	3341.4	810.87	806.17	3.02	2.24	45.12	19.75	311.55	1730.65	3.84	1.67	4.71	4.71
Treasure County	C3	RM 286.26	42931	500-yr	3341.4	810.65	806.17	2.92	1.88	76.28	26.89	219.45	1951.74	3.57	1.24	4.48	4.48
Treasure County	C3	RM 286.06	42624	500-yr	3341.4	810.4	806.08	2.11	1.24	22.35	8.39	354.48	2411.89	3.47	1.29	4.32	4.32
Treasure County	C3	RM 285.81	42213	500-yr	3341.4	810.17	805.78	1.97	1.06	18.36	7.79	222.29	3542.73	2.85	1.19	4.39	4.39
Treasure County	C3	RM 285.56	41812	500-yr	3341.4	809.95	805.34	1.97	0.98	18.26	5.09	237.24	3629.02	4.35	1.2	4.61	4.61
Treasure County	C3	RM 285.23	41280	500-yr	3341.4	809.72	805.17	2.14	0.94	23.08	7.16	152.4	3940.8	3.63	1.1	4.55	4.55
Treasure County	C3	RM 284.69	40395	500-yr	3341.4	809.3	804.85	2.59	1.25	35.35	9.48	159.53	3243.05	3.15	0.83	4.45	4.45
Treasure County	C3	RM 284.26	39705	500-yr	3341.4	808.88	804.6	2.14	1.36	24.18	6.8	348.37	2756.57	3.3	0.93	4.28	4.28
Treasure County	C3	RM 283.96	39199	500-yr	3341.4	808.58	804.3	2.17	1.15	24.03	6.24	244.91	3266.66	3.48	0.89	4.27	4.27
Treasure County	C3	RM 283.69	38766	500-yr	3341.4	808.38	803.9	2.08	1	20.98	5.25	191.09	3327.94	4.07	1	4.48	4.48
Treasure County	C3	RM 283.35	38229	500-yr	3341.4	808.17	803.42	1.84	1.05	17.08	6.2	290.99	2766.19	3.51	1.26	4.75	4.75
Treasure County	C3	RM 283.05	37749	500-yr	3341.4	807.86	803.32	2.44	1.16	29.55	7.55	194.22	3059.83	3.75	0.94	4.54	4.54
Treasure County	C3	RM 282.78	37306	500-yr	3341.4	807.62	803.11	2.04	1.01	20.07	6.53	259.85	3101.49	3.33	1.07	4.51	4.51
Treasure County	C3	RM 282.56	36942	500-yr	3341.4	807.52	802.83	1.55	0.82	12.34	4.7	282.1	3269.8	3.31	1.24	4.68	4.68
Treasure County	C3	RM 282.31	36546	500-yr	3341.4	807.38	802.74	1.77	0.79	15.1	4.99	187.32	3112.32	4.22	1.36	4.65	4.65
Treasure County	C3	RM 282.09	36195	500-yr	3341.4	807.2	802.56	2.33	1.07	27.44	10.1	181.69	2845.87	3.59	1.3	4.63	4.63
Treasure County	C4	RM 281.73	35619	500-yr	3341.4	806.92	801.74	1.94	1.21	17.97	7.21	426.96	2810.29	3.05	1.21	5.18	5.18
Treasure County	C4	RM 281.35	35005	500-yr	3341.4	806.73	801.53	1.68	0.98	13.09	4.32	316.27	2689.84	4.68	1.53	5.2	5.2
Treasure County	C4	RM 281.03	34521	500-yr	3341.4	806.55	801.19	2.1	1.02	20.61	6.4	228.85	2698.21	4.48	1.37	5.36	5.36
Treasure County	C4	RM 280.73	34051	500-yr	3341.4	806.45	800.82	1.34	0.92	9.75	6.05	693.36	2451.45	2.6	1.61	5.63	5.63
Treasure County	C4	RM 280.5	33687	500-yr	3341.4	806.35	800.66	1.2	0.87	8.61	5.56	756.46	2366.34	2.68	1.73	5.69	5.69
Treasure County	C4	RM 280.27	33304	500-yr	3341.4	806.27	800.31	1.07	0.79	7.25	4.67	759.73	2227.5	2.98	1.92	5.95	5.95
Treasure County	C4	RM 279.95	32800	500-yr	3341.4	806.18	800.08	1.13	0.71	7.43	3.52	503.81	2585.72	3.88	1.83	6.1	6.1
Treasure County	C4	RM 279.6	32231	500-yr	3341.4	805.85	799.98	2.25	1.23	24.7	8.84	304.47	2151.93	3.58	1.27	5.87	5.87
Treasure County	C4	RM 279.33	31805	500-yr	3341.4	805.21	799.98	3.16	1.89	49.14	15.75	244.79	1568.47	3.67	1.16	5.23	5.23
Treasure County	C4	RM 279.14	31495	500-yr	3341.4	805.04	799.96	2.51	1.42	29	7.92	239.63	2084.4	4.25	1.15	5.08	5.08
Treasure County	C4	RM 278.96	31209	500-yr	3341.4	804.98	799.87	1.81	1.15	16.62	4.67	367.55	2643.68	4.18	1.17	5.11	5.11
Treasure County	C4	RM 278.76	30894	500-yr	3341.4	804.83	799.6	1.85	1.15	16.79	5.22	423.69	2904.54	3.47	1.07	5.23	5.23
Treasure County	C4	RM 278.56	30571	500-yr	3341.4	804.66	799.53	1.99	1.07	19.66	5.8	336.63	2962.8	3.74	1.09	5.14	5.14
Treasure County	C4	RM 278.37	30259	500-yr	3341.4	804.57	799.26	1.68	1.02	13.29	3.99	369.33	2503.15	4.44	1.32	5.31	5.31
Treasure County	C5	RM 278.16	29915	500-yr	3341.4	804.29	798.81	2.54	1.3	30.7	7.72	207.39	2165.86	4.76	1.18	5.47	5.47
Treasure County	C5	RM 277.99	29648	500-yr	3341.4	803.96	798.77	3.01	1.63	43.08	9.85	189.71	1952.11	4.67	1.05	5.18	5.18
Treasure County	C5	RM 277.8	29336	500-yr	3341.4	803.72	798.74	2.81	1.69	36.6	9.38	212.34	1671.13	4.66	1.18	4.98	4.98
Treasure County	C5	RM 277.61	29041	500-yr	3341.4	803.51	798.72	2.73	1.62	34.55	10.02	216.71	1554.08	4.62	1.32	4.79	4.79
Treasure County	C5	RM 277.43	28747	500-yr	3341.4	803.39	798.48	2.21	1.47	23.62	8.84	306.39	1486.8	4.13	1.52	4.91	4.91
Treasure County	C5	RM 277.22	28415	500-yr	3341.4	803.14	798.47	2.23	1.7	24.36	11.83	424.41	1290.77	3.15	1.52	4.67	4.67
Treasure County	C5	RM 277.04	28123	500-yr	3341.4	802.93	798.4	2.15	1.74	21.28	12.29	459.83	1081.44	3.14	1.81	4.53	4.53
Treasure County	C5	RM 276.81	27791	500-yr	3341.4	802.82	797.8	1.77	1.35	14.82	7.48	376.57	1144.75	4.35	2.19	5.02	5.02
Treasure County	C5	RM 276.63	27499	500-yr	3341.4	802.6	797.4	2.41	1.51	27.28	10.87	234.28	1276.18	4.44	1.75	5.19	5.19
Treasure County	C5	RM 276.4	27133	500-yr	3341.4	802.38	797.1	2.38	1.5	26.57	10.98	239.33	1218.63	4.53	1.85	5.28	5.28
Treasure County	C5	RM 276.19	26801	500-yr	3341.4	802.19	796.87	2.47	1.61	28.47	12.1	189.04	1092.21	4.59	1.93	5.32	5.32
Treasure County	C5	RM 276.01	26502	500-yr	3341.4	802.01	796.74	2.56	1.56	29.93	10.86	159.13	1236.67	4.92	1.75	5.27	5.27
Treasure County	C5	RM 275.81	26193	500-yr	3341.4	801.92	796.61	2.12	1.29	20.69	7.55	179.56	1542.19	4.76	1.71	5.31	5.31
Treasure County	C5	RM 275.63	25896	500-yr	3341.4	801.79	796.49	2.28	1.26	23.61	8.55	134.65	1499.02	5.05	1.79	5.3	5.3
Treasure County	C5	RM 275.45	25606	500-yr	3341.4	801.73	796.37	1.82	1.24	15.3	6.63	153.92	1691.4	4.65	1.98	5.35	5.35
Treasure County	C5	RM 275.26	25299	500-yr	3341.4	801.47	796.16	2.24	1.63	22.49	9.7	251.91	1732.56	5.07	2.17	5.31	5.31
Treasure County	C5	RM 275.09	25033	500-yr	3341.4	801.12	796.13	2.97	2.21	40.18	18.5	199.32	1377.69	4.85	2.21	4.99	4.99
Treasure County	C6	RM 274.89	24716	500-yr	3341.4	800.97	796.04	2.51	1.59	29.42	14.3	229.39	2646.47	4.51	2.17	4.93	4.93
Treasure County	C6	RM 274.72	24440	500-yr	3341.4	800	796.04	4.21	3.08	91.74	36.52	214.5	1593.43	3.31	1.31	3.96	3.96

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	500-yr	3341.4	800	795.79	2.26	1.49	28.55	12.82	294.37	2821.03	3.07	1.37	4.2	4.2
Treasure County	C6	RM 274.38	23892	500-yr	3341.4	799.81	795.55	2.13	1.28	23.01	8.11	229.3	3068.13	3.57	1.25	4.26	4.26
Treasure County	C6	RM 274.13	23491	500-yr	3341.4	799.6	795.16	2.24	1.3	26.3	9.31	224.37	3204.85	3.17	1.11	4.45	4.45
Treasure County	C6	RM 273.83	22999	500-yr	3341.4	799.4	794.46	2.05	1.09	20.3	5.71	184.4	3652.43	4.14	1.14	4.94	4.94
Treasure County	C6	RM 273.58	22595	500-yr	3341.4	799.13	794.04	2.48	1.14	28.14	7.45	179.25	3676.28	3.83	1	5.09	5.09
Treasure County	C6	RM 273.35	22238	500-yr	3341.4	798.92	794.04	2.12	1.02	21.88	8.27	230.93	3750.32	3.12	1.16	4.88	4.88
Treasure County	C6	RM 273.15	21916	500-yr	3341.4	798.78	793.92	1.8	0.94	16.32	6.65	266.7	3895.19	3.14	1.26	4.87	4.87
Treasure County	C6	RM 272.83	21397	500-yr	3341.4	798.65	793.79	1.67	0.86	13.02	4.69	263.82	4248.18	3.57	1.27	4.86	4.86
Treasure County	C6	RM 272.5	20872	500-yr	3341.4	798.45	793.46	2.11	0.97	23.55	8.53	229.86	4192.95	3.26	1.16	4.99	4.99
Treasure County	C6	RM 272.19	20368	500-yr	3341.4	798.14	793.34	2.29	1.07	25.08	7.97	247.4	3732.66	3.81	1.2	4.81	4.81
Treasure County	C6	RM 271.91	19902	500-yr	3341.4	797.93	793.18	2.27	1.11	24.63	7.15	227.32	3958.42	4.2	1.2	4.75	4.75
Treasure County	C6	RM 271.68	19534	500-yr	3341.4	797.6	792.81	2.83	1.46	39.19	10.69	192.12	3351.97	3.96	1.07	4.79	4.79
Treasure County	C6	RM 271.41	19102	500-yr	3341.4	797.55	792.54	1.59	0.99	12.58	6.03	302.07	3227.91	3.68	1.75	5.01	5.01
Treasure County	C6	RM 271.06	18548	500-yr	3341.4	797.04	792.18	3.13	1.72	48.67	11.87	172.42	3029.08	3.77	0.9	4.86	4.86
Treasure County	C6	RM 270.64	17870	500-yr	3341.4	796.84	792.05	1.78	0.99	16.11	5.95	234.57	3387.58	3.5	1.28	4.79	4.79
Treasure County	C6	RM 270.05	16897	500-yr	3341.4	796.58	791.48	2.08	0.95	19.55	7.27	174.33	3008.74	3.96	1.45	5.1	5.1
Treasure County	C6	RM 269.75	16413	500-yr	3341.4	796.26	791.35	2.46	1.19	29.46	9.57	224.88	3449.92	4	1.28	4.91	4.91
Treasure County	C6	RM 269.47	15967	500-yr	3341.4	795.84	791.23	2.88	1.61	39.75	8.69	209.73	3203.11	4.17	0.9	4.61	4.61
Treasure County	C7	RM 269.27	15645	500-yr	3341.4	795.72	791.23	2.21	1.34	23.51	6.58	279.64	2992.72	3.89	1.08	4.48	4.48
Treasure County	C7	RM 269.06	15308	500-yr	3341.4	795.62	791.01	1.68	1.02	14.3	5.06	197.37	3021.84	3.61	1.26	4.61	4.61
Treasure County	C7	RM 268.83	14957	500-yr	3341.4	795.54	790.6	1.17	0.78	7.06	3.19	267.05	3104.29	3.35	1.5	4.94	4.94
Treasure County	C7	RM 268.55	14516	500-yr	3341.4	795.42	790.17	1.55	0.82	11.42	3.9	224.66	3257.26	4.31	1.45	5.25	5.25
Treasure County	C7	RM 268.2	13976	500-yr	3341.4	795.19	789.62	2.12	0.92	21.32	6.56	234.34	3541.63	4.37	1.33	5.56	5.56
Treasure County	C7	RM 267.87	13439	500-yr	3341.4	794.84	789.53	2.55	1.07	29.37	9.82	227.32	2696.58	4.09	1.35	5.31	5.31
Treasure County	C7	RM 267.53	12884	500-yr	3341.4	794.13	789.5	3.25	1.46	52.99	15.64	242.41	2582.75	3.3	0.96	4.63	4.63
Treasure County	C7	RM 267.14	12253	500-yr	3341.4	793.92	789.26	2.07	1.09	20.94	6.75	227.28	2668.77	3.73	1.19	4.66	4.66
Treasure County	C7	RM 266.8	11700	500-yr	3341.4	793.78	789.2	1.87	0.97	17.37	5.93	214.75	2751.69	3.82	1.29	4.58	4.58
Treasure County	C7	RM 266.41	11078	500-yr	3341.4	793.58	789.14	2.23	1.05	25.28	8.86	159.5	2632.5	3.51	1.21	4.44	4.44
Treasure County	C7	RM 266.11	10593	500-yr	3341.4	793.37	788.83	2.06	1.08	21.77	7.46	259.43	2751.24	3.42	1.16	4.54	4.54
Treasure County	C7	RM 265.92	10283	500-yr	3341.4	793.28	788.65	1.71	1.03	14.59	6.01	341.48	2817.84	2.89	1.18	4.63	4.63
Treasure County	C7	RM 265.68	9915	500-yr	3341.4	792.97	788.21	2.6	1.45	31.62	7.44	180	2192.41	4.56	1.05	4.76	4.76
Treasure County	C7	RM 265.52	9650	500-yr	3341.4	792.84	788.07	2.44	1.33	29.44	9.34	162.02	2100.69	3.84	1.2	4.77	4.77
Treasure County	C7	RM 265.34	9362	500-yr	3341.4	792.61	788.07	2.39	1.34	29.27	10.49	179.19	2086.73	3.41	1.2	4.54	4.54
Treasure County	C7	RM 265.16	9071	500-yr	3341.4	792.42	787.95	1.96	1.32	22.53	9.06	297.09	2094.96	3.04	1.21	4.47	4.47
Treasure County	C7	RM 264.98	8775	500-yr	3341.4	792.25	787.59	1.87	1.31	18.29	10.19	462.04	2153.41	2.13	1.18	4.66	4.66
Treasure County	C7	RM 264.81	8508	500-yr	3341.4	792.15	787.35	1.25	1.02	12.94	7.34	661.85	2355.26	2.45	1.38	4.8	4.8
Treasure County	C7	RM 264.64	8216	500-yr	3341.4	792.03	787.22	1.32	1.05	12.66	7.13	652.13	2291.05	2.48	1.39	4.81	4.81
Treasure County	C7	RM 264.39	7803	500-yr	3341.4	791.81	786.86	1.83	1.21	19.79	7.29	343.32	2354.52	3.21	1.17	4.96	4.96
Treasure County	C7	RM 264.15	7406	500-yr	3341.4	791.72	786.6	1.5	1.03	11.74	5.15	202.21	2237.47	3.37	1.46	5.12	5.12
Treasure County	C7	RM 263.97	7116	500-yr	3341.4	791.59	786.49	1.86	1.17	15.99	4.7	179.44	2128.01	4.71	1.36	5.1	5.1
Treasure County	C7	RM 263.79	6834	500-yr	3341.4	791.42	786.49	2.26	1.27	24.76	9.08	204.2	2617.66	3.76	1.36	4.93	4.93
Treasure County	C7	RM 263.6	6534	500-yr	3341.4	791.24	786.37	2.15	1.2	22.3	7.67	207.01	2019.08	4.1	1.39	4.87	4.87
Treasure County	C7	RM 263.39	6194	500-yr	3341.4	791.07	786.25	1.77	1.23	15.4	6.03	459.15	2174.23	3.51	1.37	4.83	4.83
Treasure County	C7	RM 263.19	5862	500-yr	3341.4	790.89	786	1.99	1.08	20.57	8.23	333.53	2360.94	3.31	1.31	4.88	4.88
Treasure County	C7	RM 262.95	5479	500-yr	3341.4	790.62	785.85	2.03	1.22	19.03	7.72	417.03	2172.41	3.12	1.26	4.76	4.76
Treasure County	C7	RM 262.78	5206	500-yr	3341.4	790.53	785.76	1.58	0.95	14.16	7.22	440.96	2286.28	3.02	1.53	4.77	4.77
Treasure County	C7	RM 262.58	4883	500-yr	3341.4	790.45	785.64	1.22	0.78	9.21	5.42	621.05	2371.75	3.1	1.82	4.81	4.81
Treasure County	C7	RM 262.42	4613	500-yr	3341.4	790.39	785.54	1.11	0.73	7.27	4.29	655.56	2444.13	3.2	1.88	4.85	4.85
Treasure County	C7	RM 262.24	4323	500-yr	3341.4	790.33	785.43	1.06	0.8	6.1	3.4	839.62	2480.42	3.34	1.86	4.9	4.9
Treasure County	C7	RM 261.95	3917	500-yr	3341.4	790.2	785.28	1.33	0.98	10.36	5.77	654.59	1784.67	3.42	1.9	4.92	4.92
Treasure County	C7	RM 261.7	3519	500-yr	3341.4	790	784.87	1.44	1.26	28.86	14.72	605.89	1510.55	3.45	1.75	5.13	5.13
Treasure County	C7	RM 261.53	3256	500-yr	3341.4	789.74	784.51	1.54	1.34	31.61	19.77	623.93	1291.89	3.11	1.94	5.23	5.23
Treasure County	C7	RM 261.35	2959	500-yr	3341.4	789.62	784.33	1.34	1.16	9.13	5.7	580.98	1153.57	4	2.49	5.29	5.29
Treasure County	C7	RM 261.2	2720	500-yr	3341.4	789.52	784.14	1.42	1.26	25.87	15.99	545.92	1140.9	3.77	2.32	5.38	5.38
Treasure County	C7	RM 261.03	2441	500-yr	3341.4	789.39	783.66	1.57	1.19	11.8	5.64	401.64	1233.04	4.82	2.28	5.73	5.73
Treasure County	C7	RM 260.84	2142	500-yr	3341.4	789.27	783.41	1.8	1.23	15.13	6.42	341.22	1336.22	4.82	2.03	5.85	5.85
Treasure County	C7	RM 260.66	1863	500-yr	3341.4	789.2	783.29	1.69	1.12	13.59	6.56	351.21	1365.62	4.56	2.19	5.91	5.91
Treasure County	C8	RM 259.9	634	500-yr	3341.4	788.04	782.46	3.66	2.31	60.37	21.73	151.91	869.81	5.1	1.81	5.59	5.59
Treasure County	C8	RM 259.72	347	500-yr	3341.4	787.82	782.45	3.24	2.07	47.44	16.56	179.3	940.56	4.97	1.71	5.37	5.37
Treasure County	C8	RM 259.55	68	500-yr	3341.4	787.75	782.2	2.22	2.13	23.94	12.28	399.72	821.64	3.74	1.91	5.55	5.55

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	500-yr	3341.4	787.75	782.19	2.78	2.26	34.28	11.78	221.77	852	5.1	1.74	5.56	5.56
Rosebud County	C8	RM 259.41	87598	500-yr	3341.4	787.44	781.96	2.99	2.69	43.65	19.47	209.53	552.09	5.21	2.31	5.48	5.48
Rosebud County	C8	RM 259.22	87292	500-yr	3341.4	787.3	781.55	2.61	2.16	30.76	11.97	233.09	773.3	5.18	2	5.75	5.75
Rosebud County	C8	RM 259.04	87004	500-yr	3341.4	787.1	781	2.71	2.14	37.85	18.02	211.67	647	5.17	2.42	6.1	6.1
Rosebud County	C8	RM 258.85	86696	500-yr	3341.4	786.92	780.9	2.44	1.84	26.94	13.15	288.74	902.39	4.17	2.02	6.02	6.02
Rosebud County	C8	RM 258.66	86399	500-yr	3341.4	786.68	780.78	2.73	1.87	32.4	11.65	183.46	895.1	5.65	1.99	5.9	5.9
Rosebud County	C8	RM 258.47	86098	500-yr	3341.4	786.5	780.65	2.69	1.75	32.84	11.72	202.57	1132.73	4.79	1.69	5.85	5.85
Rosebud County	C8	RM 258.28	85798	500-yr	3341.4	786.32	780.53	2.52	1.68	28.98	12.89	222.43	1007.02	4.48	1.97	5.79	5.79
Rosebud County	C8	RM 258.1	85498	500-yr	3341.4	786.04	780.14	2.8	1.8	34.6	12.88	180.25	943.97	5.4	1.98	5.9	5.9
Rosebud County	C8	RM 257.91	85200	500-yr	3341.4	785.9	780.14	2.51	1.55	29.91	10.95	224.43	1496.82	4.35	1.57	5.76	5.76
Rosebud County	C8	RM 257.71	84875	500-yr	3341.4	785.68	780.14	2.52	1.54	31.06	11.16	219.86	1598.28	3.96	1.4	5.54	5.54
Rosebud County	C8	RM 257.54	84597	500-yr	3341.4	785.54	780.17	2.31	1.29	24.16	8.5	209	1820.07	4.51	1.56	5.37	5.37
Rosebud County	C8	RM 257.36	84298	500-yr	3341.4	785.41	780.05	2.25	1.24	23.49	9.01	188.65	1861.3	4.42	1.69	5.36	5.36
Rosebud County	C8	RM 257.16	83984	500-yr	3341.4	785.36	780	1.54	1	10.57	4.4	305.45	2169.88	5.1	2.12	5.36	5.36
Rosebud County	C8	RM 256.87	83608	500-yr	3341.4	784.98	779.89	2.87	1.65	37.48	13.69	181.39	1495.2	4.74	1.71	5.09	5.09
Rosebud County	C8	RM 256.65	83257	500-yr	3341.4	784.97	779.82	1.86	1.24	16.13	7.49	171.34	1988.06	4.81	2.21	5.14	5.14
Rosebud County	C8	RM 256.45	82941	500-yr	3341.4	784.77	779.67	2.14	1.44	20.85	8.09	222.18	2091.6	4.94	1.9	5.1	5.1
Rosebud County	C8	RM 256.26	82630	500-yr	3341.4	784.6	779.58	1.97	1.44	32.72	19.6	369.93	1887.19	3.61	2.15	5.02	5.02
Rosebud County	C8	RM 256.1	82375	500-yr	3341.4	784.46	779.42	1.69	1.56	13.35	8.31	594.72	1792	3.26	2.02	5.04	5.04
Rosebud County	C8	RM 255.91	82077	500-yr	3341.4	784.39	779.09	1.43	1.25	9.56	5.33	591.1	2514.26	3.78	2.1	5.3	5.3
Rosebud County	C8	RM 255.7	81747	500-yr	3341.4	784.18	778.73	2.06	1.48	19.48	7.28	306.33	2098.54	4.56	1.69	5.45	5.45
Rosebud County	C8	RM 255.51	81446	500-yr	3341.4	784	778.49	2.25	1.6	23.71	10.86	269.19	1013.75	4.55	2.06	5.51	5.51
Rosebud County	C8	RM 255.31	81125	500-yr	3341.4	783.84	778.36	2.18	1.52	26.94	10.13	242.95	1174.18	5.02	1.87	5.48	5.48
Rosebud County	C8	RM 255.14	80856	500-yr	3341.4	783.59	778.24	2.57	1.77	29.57	12.48	210.87	880.49	5.14	2.15	5.35	5.35
Rosebud County	C8	RM 254.95	80554	500-yr	3341.4	783.36	778.12	2.73	1.88	33.62	14.04	205.86	852.43	5.04	2.09	5.24	5.24
Rosebud County	C8	RM 254.76	80251	500-yr	3341.4	783.19	778	2.59	1.78	30.29	13.16	218.15	867.43	5.02	2.16	5.19	5.19
Rosebud County	C8	RM 254.58	79960	500-yr	3341.4	782.99	777.88	2.6	1.82	30.58	11.64	229.98	991.15	4.98	1.88	5.11	5.11
Rosebud County	C8	RM 254.39	79658	500-yr	3341.4	782.93	777.41	2.04	1.45	18.94	8.12	296.93	1226.45	4.85	2.07	5.52	5.52
Rosebud County	C8	RM 254.2	79359	500-yr	3341.4	782.63	777.39	2.61	1.96	32.16	15.01	269.75	849.68	4.32	2.01	5.24	5.24
Rosebud County	C8	RM 254.01	79052	500-yr	3341.4	782.34	776.82	2.82	1.98	35.14	12.36	209.61	945.02	5.2	1.82	5.52	5.52
Rosebud County	C9	RM 253.82	78779	500-yr	3341.4	782.15	776.24	2.71	1.83	38.37	13.92	246.84	1337.32	4.28	1.53	5.91	5.91
Rosebud County	C9	RM 253.63	78478	500-yr	3341.4	781.79	776.12	2.78	1.67	73.85	23.06	180.25	1464.93	4.5	1.38	5.67	5.67
Rosebud County	C9	RM 253.45	78178	500-yr	3341.4	781.49	775.97	2.6	1.43	31.52	12.11	172.93	1427.07	4.38	1.65	5.52	5.52
Rosebud County	C9	RM 253.26	77879	500-yr	3341.4	781.36	775.72	2.14	1.17	18.76	8.02	240.93	1506.05	4.52	1.91	5.64	5.64
Rosebud County	C9	RM 253.07	77578	500-yr	3341.4	781.02	775.57	2.92	1.52	37.67	13.44	189.99	1527.33	4.13	1.45	5.45	5.45
Rosebud County	C9	RM 252.88	77278	500-yr	3341.4	780.88	775.45	2.33	1.39	26.46	8.98	221.89	1818.64	3.97	1.33	5.43	5.43
Rosebud County	C9	RM 252.69	76962	500-yr	3341.4	780.79	775.33	1.78	0.97	15.19	5.68	260.67	2557.52	4.16	1.54	5.46	5.46
Rosebud County	C9	RM 252.49	76646	500-yr	3341.4	780.42	775.36	2.99	1.34	40.22	10.41	161.39	2917.66	4.11	1.04	5.06	5.06
Rosebud County	C9	RM 252.24	76252	500-yr	3341.4	780.22	775.4	2.35	1.12	28.09	8.36	167.1	3259.31	3.79	1.11	4.82	4.82
Rosebud County	C9	RM 252.01	75885	500-yr	3341.4	780.06	775.39	1.85	0.98	24.4	7.68	252.1	3592.5	3.55	1.11	4.67	4.67
Rosebud County	C9	RM 251.7	75438	500-yr	3341.4	779.92	775.01	1.44	0.91	9.55	4.32	603.69	3505.09	2.6	1.17	4.91	4.91
Rosebud County	C9	RM 251.49	75098	500-yr	3341.4	779.82	775.02	1.26	0.84	10.63	6.41	716.44	3269.49	2.09	1.25	4.8	4.8
Rosebud County	C9	RM 251.23	74691	500-yr	3341.4	779.63	775.05	1.37	0.87	10.3	5.51	754.16	3551.98	2.14	1.14	4.58	4.58
Rosebud County	C9	RM 251.01	74322	500-yr	3341.4	779.49	774.84	1.43	0.82	9.11	4.31	595.57	3801.88	2.51	1.18	4.65	4.65
Rosebud County	C9	RM 250.79	73973	500-yr	3341.4	779.38	774.42	1.55	0.85	11.54	4.6	417.99	3552.04	3.22	1.28	4.96	4.96
Rosebud County	C9	RM 250.6	73678	500-yr	3341.4	779.25	774.17	1.58	0.94	20.91	8.19	376.03	3903.1	3.01	1.17	5.08	5.08
Rosebud County	C9	RM 250.37	73306	500-yr	3341.4	778.94	774.05	2.36	1.08	25.09	7.29	233.23	2922.03	4.03	1.16	4.89	4.89
Rosebud County	C9	RM 250.17	72982	500-yr	3341.4	778.78	773.93	2.41	1.04	28.99	10.6	214.36	2633.03	3.4	1.23	4.85	4.85
Rosebud County	C9	RM 249.95	72617	500-yr	3341.4	778.48	773.83	2.49	1.21	30.17	8.49	226.06	2519.57	3.93	1.1	4.65	4.65
Rosebud County	C9	RM 249.73	72253	500-yr	3341.4	778.29	773.71	2.24	1.1	24.64	8.27	273.96	2571.89	3.53	1.18	4.58	4.58
Rosebud County	C9	RM 249.53	71936	500-yr	3341.4	778.18	773.38	1.74	0.92	14.31	4.99	362.14	2746.44	3.81	1.33	4.8	4.8
Rosebud County	C9	RM 249.31	71579	500-yr	3341.4	777.93	773.14	2.16	1.22	26.17	8.86	363.92	3504.52	2.97	1	4.79	4.79
Rosebud County	C9	RM 249.13	71274	500-yr	3341.4	777.73	772.84	2.06	1.03	21.24	6.29	301.37	3556.63	3.84	1.13	4.89	4.89
Rosebud County	C9	RM 248.94	70978	500-yr	3341.4	777.5	772.56	2.47	1.05	29.37	7.67	201.69	3576.25	3.9	1.02	4.94	4.94
Rosebud County	C9	RM 248.76	70681	500-yr	3341.4	777.43	772.32	1.52	0.89	12.08	4.28	424.32	3050.48	3.71	1.31	5.11	5.11
Rosebud County	C9	RM 248.53	70312	500-yr	3341.4	777.37	772.17	1.44	0.68	9.37	3.39	164.13	3183.05	4.32	1.55	5.2	5.2
Rosebud County	C9	RM 248.31	69962	500-yr	3341.4	777.2	772.04	1.92	0.95	18.38	6.72	277.15	2654.87	3.63	1.32	5.16	5.16
Rosebud County	C9	RM 248.08	69603	500-yr	3341.4	777.02	771.92	2.23	0.94	21.49	6.15	211.49	3038.12	4.14	1.18	5.1	5.1
Rosebud County	C9	RM 247.88	69253	500-yr	3341.4	776.9	771.92	1.75	0.97	24.11	9.8	348.22	3022.06	2.83	1.14	4.98	4.98
Rosebud County	C9	RM 247.64	68836	500-yr	3341.4	776.65	771.95	1.86	1.05	18.83	7.24	416.51	2791.77	2.99	1.14	4.7	4.7

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	500-yr	3341.4	776.51	771.87	1.7	0.85	13.55	4.08	282.85	3257.93	4.2	1.26	4.64	4.64
Rosebud County	C9	RM 247.11	67963	500-yr	3341.4	776.25	771.45	2.62	1.21	33.77	9.3	199.91	2891	3.65	1	4.8	4.8
Rosebud County	C9	RM 246.83	67502	500-yr	3341.4	776.08	770.97	2.11	1.03	22.88	6.38	194.9	2723.05	4.52	1.25	5.11	5.11
Rosebud County	C9	RM 246.52	67019	500-yr	3341.4	775.92	770.61	1.95	1.04	17.5	5.12	225.63	2826.59	4.69	1.36	5.31	5.31
Rosebud County	C9	RM 246.22	66538	500-yr	3341.4	775.22	770.53	3.47	1.65	60.99	17.67	217.05	2750.76	3.14	0.9	4.69	4.69
Rosebud County	C9	RM 245.94	66068	500-yr	3341.4	774.7	770.29	2.39	1.57	29.81	9.25	297.16	2281.29	3.16	0.97	4.41	4.41
Rosebud County	C9	RM 245.66	65624	500-yr	3341.4	774.57	769.81	1.7	0.97	14.95	5.36	198.01	2304.89	4.5	1.59	5.33	5.33
Rosebud County	C9	RM 245.4	65205	500-yr	3341.4	774.37	769.59	1.95	1.27	17.48	8.53	376.4	2025.99	2.68	1.3	5.21	5.21
Rosebud County	C9	RM 245.15	64804	500-yr	3341.4	774.11	769.41	1.64	1.3	37.1	17.05	329.11	2269.24	2.49	1.13	4.95	4.95
Rosebud County	C9	RM 244.89	64387	500-yr	3341.4	773.44	769.41	3	1.71	44.91	11.48	189.43	2088.29	3.72	0.94	4.41	4.41
Rosebud County	C9	RM 244.7	64085	500-yr	3341.4	773.46	769.37	1.54	1.06	12.05	4.3	221.5	2515.26	3.51	1.25	4.55	4.55
Rosebud County	C9	RM 244.51	63776	500-yr	3341.4	773.39	769.35	1.34	0.92	10.2	4.24	264.21	2481.04	3.52	1.46	4.48	4.48
Rosebud County	C9	RM 244.33	63499	500-yr	3341.4	773.37	769.16	0.88	0.73	4.11	2.36	274.46	2394.7	3.34	1.91	4.94	4.94
Rosebud County	C9	RM 244.14	63224	500-yr	3341.4	773.33	768.52	1.12	0.75	6.02	2.85	208.4	2346.97	4.05	1.9	4.9	4.9
Rosebud County	C9	RM 243.96	62927	500-yr	3341.4	773.26	768.13	1.48	0.86	10.41	4.18	176.71	2330.49	4.26	1.71	5.13	5.13
Rosebud County	C9	RM 243.77	62617	500-yr	3341.4	773.23	767.57	1.03	0.71	4.77	2.41	160.76	1833.98	5.17	2.58	5.66	5.66
Rosebud County	C9	RM 243.59	62327	500-yr	3341.4	773.14	766.98	1.67	0.91	14.38	4.75	122.45	2331.22	5.75	1.84	6.16	6.16
Rosebud County	C9	RM 243.39	62012	500-yr	3341.4	772.91	766.86	2.35	1.11	24.67	6.69	156.08	2434.93	5.17	1.37	6.05	6.05
Rosebud County	C9	RM 243.21	61718	500-yr	3341.4	772.77	766.74	2.27	1.14	22.65	5.98	203.35	2398.35	5.51	1.43	6.03	6.03
Rosebud County	C10	RM 243.03	61422	500-yr	3341.4	772.57	766.73	2.71	1.24	34.13	10.53	174.23	2257.85	4.66	1.41	5.84	5.84
Rosebud County	C10	RM 242.84	61125	500-yr	3341.4	772.11	766.76	3.35	1.63	53.22	15.1	172.04	1665.99	4.49	1.25	5.35	5.35
Rosebud County	C10	RM 242.65	60825	500-yr	3341.4	771.97	766.76	2.63	1.43	32.93	10.05	204.7	1669.55	4.73	1.42	5.21	5.21
Rosebud County	C10	RM 242.47	60527	500-yr	3341.4	771.84	766.77	2.29	1.31	24.42	7.42	241.01	1849.93	4.81	1.46	5.07	5.07
Rosebud County	C10	RM 242.29	60239	500-yr	3341.4	771.72	766.64	2.13	1.33	21.93	6.72	282.31	1870.38	4.63	1.41	5.08	5.08
Rosebud County	C10	RM 242.1	59939	500-yr	3341.4	771.57	766.29	2.15	1.21	22.98	8.15	280	1849.22	4.25	1.49	5.28	5.28
Rosebud County	C10	RM 241.9	59618	500-yr	3341.4	771.45	765.95	1.99	1.01	17.7	6.29	249.51	1915.53	4.88	1.72	5.5	5.5
Rosebud County	C10	RM 241.72	59324	500-yr	3341.4	771.37	765.5	1.73	0.99	13.5	5.13	289.97	1790.92	4.98	1.88	5.87	5.87
Rosebud County	C10	RM 241.53	59025	500-yr	3341.4	771.21	765.17	2.28	1.1	25.84	7.85	160	1806.07	5.64	1.68	6.04	6.04
Rosebud County	C10	RM 241.34	58725	500-yr	3341.4	771.12	765.02	2	0.95	17.64	6.38	177.78	1785.35	5.52	1.97	6.1	6.1
Rosebud County	C10	RM 241.16	58424	500-yr	3341.4	771.08	764.97	1.63	0.87	11.73	5.12	171.92	1681.48	5.31	2.29	6.11	6.11
Rosebud County	C10	RM 240.97	58132	500-yr	3341.4	771.01	764.83	1.6	0.86	11.16	4.88	189.7	1615.77	5.58	2.41	6.18	6.18
Rosebud County	C10	RM 240.78	57818	500-yr	3341.4	770.99	764.56	1.3	0.71	7.12	3.34	159.68	1663.91	6.1	2.82	6.43	6.43
Rosebud County	C10	RM 240.56	57467	500-yr	3341.4	770.94	764.28	1.37	0.8	11.42	5.88	212.38	1607.23	5.75	2.93	6.66	6.66
Rosebud County	C10	RM 240.41	57228	500-yr	3341.4	770.87	763.91	1.46	0.93	11.12	5.93	216.4	1401.01	6.29	3.32	6.96	6.96
Rosebud County	C10	RM 240.22	56944	500-yr	3341.4	770.65	763.51	2.35	1.39	23.42	12.12	157.35	1099.99	6.82	3.42	7.14	7.14
Rosebud County	C10	RM 240.09	56741	500-yr	3341.4	770.21	763.47	3.56	2.11	42.49	22.6	120.86	952.08	6.32	3.28	6.74	6.74
Rosebud County	C10	RM 239.97	56546	500-yr	3341.4	770.06	763.47	3.26	2.64	58.23	40.07	155.75	736.69	6.08	4.14	6.59	6.59
Rosebud County	C10	RM 239.86	56371	500-yr	3341.4	770.02	760.88	2.63	2.61	30.82	29.79	205.85	466.01	6.15	5.95	9.14	9.14
Rosebud County			56353	500-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	500-yr	3341.4	769.96	760.88	2.63	2.6	23.25	22.33	202.33	367.3	6.28	6.04	9.08	9.08
Rosebud County	C10	RM 239.68	56093	500-yr	3341.4	769.46	763.02	3.57	3.2	46.09	35.17	172.44	260.64	5.29	4.01	6.44	6.44
Rosebud County	C10	RM 239.56	55888	500-yr	3341.4	769.13	757.33	3.9	3.27	49.68	29.84	119.6	251.11	6.96	4.07	11.8	11.8
Rosebud County			55879	500-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	500-yr	3341.4	769.03	757.33	4.05	3.38	53.27	29.66	112.19	256.1	7.14	3.86	11.7	11.7
Rosebud County	C10	RM 239.41	55655	500-yr	3341.4	768.62	763.17	4.4	3.63	69.76	40.66	144.11	314.02	5.1	2.93	5.45	5.45
Rosebud County	C10	RM 239.25	55398	500-yr	3341.4	768.36	763.17	4.09	3.46	61.29	40.64	164.41	305.87	4.81	3.16	5.19	5.19
Rosebud County	C10	RM 239.07	55108	500-yr	3341.4	768.41	763.2	2.84	2.51	29.36	23.41	219.55	342.5	4.89	3.89	5.21	5.21
Rosebud County	C10	RM 238.89	54826	500-yr	3341.4	768.16	763.23	3.14	2.39	36.05	24.1	191.74	440.93	4.78	3.17	4.93	4.93
Rosebud County	C10	RM 238.73	54570	500-yr	3341.4	767.97	763.38	2.97	2.36	33.05	21.77	242.11	489.64	4.41	2.89	4.59	4.59
Rosebud County	C10	RM 238.51	54223	500-yr	3341.4	767.9	762.88	2.03	1.98	20.99	19.58	435.56	615.27	3.76	3.51	5.02	5.02
Rosebud County	C10	RM 238.33	53926	500-yr	3341.4	767.69	762.37	2.25	1.91	24.32	15.94	306.34	804.75	4.61	3	5.32	5.32
Rosebud County	C10	RM 238.14	53626	500-yr	3341.4	767.38	762.25	2.83	1.91	36.54	19.45	214.01	1062.79	4.75	2.53	5.13	5.13
Rosebud County	C10	RM 237.95	53321	500-yr	3341.4	767.15	762.09	2.88	1.84	37.87	17.76	189.37	1512.7	4.82	2.25	5.06	5.06
Rosebud County	C10	RM 237.77	53027	500-yr	3341.4	767.13	761.85	1.97	1.35	17.66	9.42	294.75	1753.82	4.78	2.54	5.28	5.28
Rosebud County	C10	RM 237.56	52703	500-yr	3341.4	767.07	761.46	1.57	1.04	12.31	7.12	410.69	2247	4.15	2.38	5.61	5.61
Rosebud County	C10	RM 237.36	52386	500-yr	3341.4	767.01	761.22	1.37	0.86	8.97	5.26	443.16	2513.08	4.3	2.51	5.79	5.79
Rosebud County	C10	RM 237.15	52029	500-yr	3341.4	766.94	760.88	1.43	0.9	9.37	5.29	385.86	2473.29	4.76	2.67	6.06	6.06
Rosebud County	C10	RM 236.99	51756	500-yr	3341.4	766.68	760.22	2.48	1.33	20.77	8.37	177.1	2264.95	6.15	2.43	6.46	6.46
Rosebud County	C10	RM 236.83	51500	500-yr	3341.4	766.37	760.07	3.16	1.82	35.09	15.47	167.82	2167.81	5.41	2.34	6.3	6.3
Rosebud County	C10	RM 236.66	51221	500-yr	3341.4	766.28	760.07	2.75	2.04	26.14	13.43	188.48	1610.71	5.74	2.91	6.21	6.21

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	500-yr	3341.4	766.12	759.94	2.75	2.09	26.03	11.94	193.41	717.39	5.83	2.64	6.18	6.18
Rosebud County	C11	RM 236.29	50623	500-yr	3341.4	766.02	760	2.61	1.96	23.72	10.42	211.22	750.91	5.56	2.42	6.02	6.02
Rosebud County	C11	RM 236.1	50327	500-yr	3341.4	765.75	760	2.97	2.28	31.56	12.67	206.87	868.67	5.06	2.01	5.75	5.75
Rosebud County	C11	RM 235.91	50024	500-yr	3341.4	765.4	760	3.39	2.4	51.81	22.25	170.49	644.79	5.1	2.16	5.4	5.4
Rosebud County	C11	RM 235.73	49726	500-yr	3341.4	765.33	760.15	2.46	2.15	28.25	20.33	243.8	522.52	4.65	3.34	5.18	5.18
Rosebud County	C11	RM 235.57	49480	500-yr	3341.4	765.23	760.02	2.16	1.89	21.58	11.92	318.23	1057.82	4.65	2.55	5.21	5.21
Rosebud County	C11	RM 235.36	49133	500-yr	3341.4	765.06	759.74	2.08	1.79	19.61	11.75	428.22	1190.8	3.55	2.12	5.32	5.32
Rosebud County	C11	RM 235.17	48830	500-yr	3341.4	764.9	759.55	2.01	1.75	20.03	11.99	455.8	1226.62	3.46	2.07	5.35	5.35
Rosebud County	C11	RM 235	48571	500-yr	3341.4	764.76	759.29	2.05	1.58	19.34	9.58	320.92	1440.34	4.67	2.3	5.47	5.47
Rosebud County	C11	RM 234.82	48271	500-yr	3341.4	764.14	759.21	3.57	2.47	60.43	22.17	190.08	1233.16	4.32	1.57	4.93	4.93
Rosebud County	C11	RM 234.63	47978	500-yr	3341.4	764.02	759.21	2.67	1.87	33.39	14.62	238.2	991.02	4.31	1.88	4.81	4.81
Rosebud County	C11	RM 234.45	47692	500-yr	3341.4	763.84	759.12	2.39	1.75	27.51	12.75	283.79	1164.29	4.14	1.92	4.72	4.72
Rosebud County	C11	RM 234.2	47305	500-yr	3341.4	763.74	758.6	1.7	1.42	12.65	9.18	528.71	1207.09	3.13	2.26	5.14	5.14
Rosebud County	C11	RM 234.01	47006	500-yr	3341.4	763.68	758.27	1.25	1.12	8.2	7.42	818.93	1377.29	3.08	2.78	5.41	5.41
Rosebud County	C11	RM 233.84	46737	500-yr	3341.4	763.57	758.12	1.44	1.2	11.21	7.42	583.98	1239.4	3.61	2.39	5.45	5.45
Rosebud County	C11	RM 233.61	46365	500-yr	3341.4	763.41	757.67	1.8	1.26	14.12	5.47	302.81	1305.23	5.42	2.1	5.74	5.74
Rosebud County	C11	RM 233.35	45943	500-yr	3341.4	763.24	757.03	2.19	1.26	21.57	8.06	214.65	1449.9	5	1.85	6.21	6.21
Rosebud County	C11	RM 233.13	45584	500-yr	3341.4	763.02	756.45	2.37	1.41	24.4	6.99	206.27	1516.66	5.67	1.6	6.57	6.57
Rosebud County	C11	RM 232.94	45281	500-yr	3341.4	762.72	756.15	2.93	1.71	37.19	9.28	169.36	1635.37	5.72	1.4	6.57	6.57
Rosebud County	C11	RM 232.75	44978	500-yr	3341.4	762.64	756.03	2.44	1.54	25.7	7.03	204.86	1786.09	5.81	1.56	6.61	6.61
Rosebud County	C11	RM 232.56	44674	500-yr	3341.4	762.51	755.79	2.35	1.56	24.79	8.08	241.61	1734.43	5.11	1.63	6.72	6.72
Rosebud County	C11	RM 232.37	44366	500-yr	3341.4	762.29	755.72	2.67	1.54	32.52	11.88	206.42	1480.99	4.9	1.76	6.57	6.57
Rosebud County	C11	RM 232.19	44074	500-yr	3341.4	762.08	755.67	2.67	1.69	31.87	11.66	204.11	1167.96	5.23	1.88	6.41	6.41
Rosebud County	C11	RM 232.01	43791	500-yr	3341.4	761.91	755.65	2.6	1.75	31.2	13.28	232.27	1306.9	4.7	1.98	6.26	6.26
Rosebud County	C11	RM 231.81	43473	500-yr	3341.4	761.62	755.6	2.86	1.65	37.81	17.42	201.55	1145.5	4.52	2.05	6.02	6.02
Rosebud County	C11	RM 231.62	43160	500-yr	3341.4	761.37	755.57	2.8	1.85	33.45	14.26	230.71	1591.51	4.17	1.75	5.8	5.8
Rosebud County	C11	RM 231.42	42835	500-yr	3341.4	761.32	755.45	2.05	1.32	18.51	8.17	229.33	1521.12	5.48	2.39	5.87	5.87
Rosebud County	C11	RM 231.22	42522	500-yr	3341.4	761.16	755.45	2.35	1.4	24.28	11.2	204	1607.43	4.9	2.23	5.71	5.71
Rosebud County	C11	RM 230.99	42160	500-yr	3341.4	760.63	755.45	3.5	1.83	57.32	21.91	154.03	1431.16	4.55	1.7	5.18	5.18
Rosebud County	C11	RM 230.79	41841	500-yr	3341.4	760.4	755.43	2.88	1.7	38.32	15.01	202.2	1317.64	4.69	1.81	4.97	4.97
Rosebud County	C11	RM 230.53	41415	500-yr	3341.4	760.3	755.17	1.95	1.47	18.87	9.4	299.8	1549.96	3.71	1.83	5.13	5.13
Rosebud County	C11	RM 230.29	41045	500-yr	3341.4	760.04	755.15	2.35	1.54	25.9	10.24	234.88	1522.48	4.07	1.59	4.89	4.89
Rosebud County	C11	RM 230.06	40676	500-yr	3341.4	759.78	754.81	2.32	1.59	27.27	9.58	287.47	1788.91	3.51	1.22	4.97	4.97
Rosebud County	C11	RM 229.81	40276	500-yr	3341.4	759.63	754.74	1.87	1.05	16.88	7.09	320.68	1887.17	4.07	1.69	4.89	4.89
Rosebud County	C11	RM 229.6	39937	500-yr	3341.4	759.49	754.58	1.91	1.06	16.81	9.48	412.79	1940.35	2.9	1.62	4.91	4.91
Rosebud County	C11	RM 229.4	39596	500-yr	3341.4	759.33	754.34	1.95	1.09	18.31	6.59	283.63	1979.29	4.34	1.55	4.99	4.99
Rosebud County	C11	RM 229.2	39273	500-yr	3341.4	759	754.15	2.85	1.54	39.93	12.48	214.46	1818.82	3.87	1.2	4.85	4.85
Rosebud County	C11	RM 229.02	38994	500-yr	3341.4	758.8	754.12	2.69	1.37	35.36	10.82	211.31	2018.12	3.98	1.21	4.68	4.68
Rosebud County	C11	RM 228.82	38676	500-yr	3341.4	758.63	753.8	2.32	1.31	26.2	8.6	271.56	1979.86	3.96	1.29	4.83	4.83
Rosebud County	C11	RM 228.64	38383	500-yr	3341.4	758.49	753.73	2.22	1.19	23.98	8.31	224.38	2024.49	4.03	1.38	4.8	4.8
Rosebud County	C11	RM 228.46	38093	500-yr	3341.4	758.42	753.53	1.71	0.98	14.17	5.7	301.72	2096.15	4.1	1.63	4.89	4.89
Rosebud County	C11	RM 228.26	37771	500-yr	3341.4	758.36	753.35	1.53	0.82	11.22	5.09	273.91	2129.66	4.25	1.91	5.01	5.01
Rosebud County	C11	RM 228.03	37408	500-yr	3341.4	758.25	753.16	1.78	0.85	14.96	6.44	233.4	2090.92	4.4	1.87	5.09	5.09
Rosebud County	C11	RM 227.74	36949	500-yr	3341.4	758.1	752.95	1.99	1.05	18.36	6.43	167.04	1970.73	4.67	1.61	5.15	5.15
Rosebud County	C11	RM 227.49	36537	500-yr	3341.4	758.01	752.83	1.9	0.99	16.7	5.32	175.55	2310.96	4.67	1.46	5.18	5.18
Rosebud County	C11	RM 227.2	36062	500-yr	3341.4	757.9	752.41	1.85	1	15.83	5.75	180.83	2551.37	4.62	1.66	5.49	5.49
Rosebud County	C11	RM 226.98	35709	500-yr	3341.4	757.61	752.31	2.51	1.33	29.96	11.09	211.99	1869.41	4.28	1.57	5.3	5.3
Rosebud County	C11	RM 226.79	35400	500-yr	3341.4	757.47	752.25	2.03	1.32	22.49	10.22	268.83	1293.14	4.41	1.99	5.22	5.22
Rosebud County	C11	RM 226.56	35065	500-yr	3341.4	757.35	751.83	1.8	1.32	18.3	11.73	338.41	957.68	4.44	2.84	5.51	5.51
Rosebud County	C11	RM 226.36	34743	500-yr	3341.4	757.09	751.68	2.24	1.66	26.28	13.83	303.18	973.28	4.31	2.25	5.41	5.41
Rosebud County	C11	RM 226.2	34476	500-yr	3341.4	757.04	751.25	1.63	1.25	13.43	8.29	424.72	1254.34	4.1	2.52	5.79	5.79
Rosebud County	C11	RM 226.01	34177	500-yr	3341.4	756.95	750.81	1.66	1.14	21.04	10	284.2	1800.34	5.12	2.4	6.14	6.14
Rosebud County	C11	RM 225.83	33884	500-yr	3341.4	756.69	750.59	2.55	1.33	28.56	12.47	159.74	1341.31	5.52	2.37	6.1	6.1
Rosebud County	C11	RM 225.64	33580	500-yr	3341.4	756.6	750.56	2.02	1.37	18.67	10.87	293.96	1546	4.75	2.75	6.04	6.04
Rosebud County	C11	RM 225.45	33275	500-yr	3341.4	756.51	750.31	1.85	1.44	15.33	9.21	332.17	1587.42	5.05	3.02	6.2	6.2
Rosebud County	C11	RM 225.26	32969	500-yr	3341.4	756.35	750.25	2.11	1.67	19.9	12.11	291.78	1533.32	5.1	3.08	6.1	6.1
Rosebud County	C11	RM 225.16	32805	500-yr	3341.4	756.12	750.19	2.65	2.22	31.24	20.06	224.54	1199.36	5.37	3.42	5.93	5.93
Rosebud County	C11	RM 225.06	32646	500-yr	3341.4	755.65	747.9	3.5	3.3	51.95	41.09	169.61	1065.92	5.57	4.38	7.75	7.75
Rosebud County			32620	500-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	500-yr	3341.4	755.47	747.9	3.59	3.48	56.8	46.38	169.8	1134.32	5.44	4.43	7.57	7.57

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	500-yr	3341.4	755.44	750.09	2.62	2.39	31.08	20.49	249.97	1082.15	4.93	3.24	5.35	5.35
Rosebud County	C12	RM 224.71	32083	500-yr	3341.4	755.3	750.04	2.31	2.13	24.72	18.96	393.37	601.42	3.54	2.7	5.26	5.26
Rosebud County	C12	RM 224.53	31796	500-yr	3341.4	755.06	749.96	2.39	2.27	24.98	20.05	412.38	738.49	3.34	2.68	5.1	5.1
Rosebud County	C12	RM 224.34	31486	500-yr	3341.4	754.9	750.03	1.94	1.75	22.15	17.93	480.32	882.74	3.05	2.46	4.87	4.87
Rosebud County	C12	RM 224.16	31195	500-yr	3341.4	754.72	749.78	2.13	1.61	20.97	10.97	263.29	1529.09	4.36	2.26	5.04	5.04
Rosebud County	C12	RM 223.96	30878	500-yr	3341.4	754.54	749.48	2.38	1.58	26.21	11.29	179.51	1519.4	4.7	2.01	5.16	5.16
Rosebud County	C12	RM 223.76	30567	500-yr	3341.4	754.4	749.18	2.45	1.58	28.63	12.6	162.95	1531.7	4.3	1.87	5.22	5.22
Rosebud County	C12	RM 223.55	30235	500-yr	3341.4	754.25	748.87	2.2	1.39	21.67	7.85	229.9	1638.4	5.09	1.82	5.38	5.38
Rosebud County	C12	RM 223.37	29952	500-yr	3341.4	754.02	748.72	2.58	1.5	29.92	10.54	208.3	1560.21	5.05	1.76	5.3	5.3
Rosebud County	C12	RM 223.2	29681	500-yr	3341.4	753.87	748.51	2.52	1.45	28.3	9.91	209.66	1730.98	5.17	1.79	5.36	5.36
Rosebud County	C12	RM 223.02	29391	500-yr	3341.4	753.78	748.51	2.13	1.3	20.79	8.65	265.78	2034.85	4.72	1.95	5.27	5.27
Rosebud County	C12	RM 222.82	29071	500-yr	3341.4	753.67	748.5	2.01	1.19	18.45	7.91	268.13	2270.53	4.77	2.03	5.17	5.17
Rosebud County	C12	RM 222.64	28787	500-yr	3341.4	753.51	748.46	2.24	1.29	22.93	10.9	236.97	2178.72	4.8	2.27	5.05	5.05
Rosebud County	C12	RM 222.45	28479	500-yr	3341.4	753.4	748.44	2.02	1.2	19.3	10.45	281.49	1981.67	4.37	2.35	4.96	4.96
Rosebud County	C12	RM 222.22	28128	500-yr	3341.4	753.27	748.15	1.95	1.17	17.35	8.61	261.1	2446.16	4.83	2.38	5.12	5.12
Rosebud County	C12	RM 222.01	27784	500-yr	3341.4	753.19	747.57	1.55	1.03	11.68	6.35	372.22	2812.69	4.55	2.46	5.62	5.62
Rosebud County	C12	RM 221.77	27401	500-yr	3341.4	753.14	747.18	1.04	0.87	7.04	5.34	725.95	2797.33	3.71	2.8	5.96	5.96
Rosebud County	C12	RM 221.55	27042	500-yr	3341.4	753.07	747.07	1	0.86	7.44	5.94	807.88	2784.32	3.65	2.91	6	6
Rosebud County	C12	RM 221.34	26708	500-yr	3341.4	753.02	746.94	0.98	0.79	5.56	4.02	648.68	2793.14	3.94	2.83	6.08	6.08
Rosebud County	C12	RM 221.15	26406	500-yr	3341.4	752.89	746.7	1.7	1.13	12.45	5.58	265.14	2302.59	5.76	2.55	6.19	6.19
Rosebud County	C12	RM 220.96	26081	500-yr	3341.4	752.53	746.66	3.12	1.85	43.69	18.87	138.93	1711.92	5.22	2.2	5.87	5.87
Rosebud County	C12	RM 220.77	25779	500-yr	3341.4	751.82	746.73	3.88	2.85	69.43	26.79	163.4	1237.95	4.76	1.81	5.09	5.09
Rosebud County	C12	RM 220.6	25513	500-yr	3341.4	751.91	746.72	2.38	1.88	25.75	13.69	256.78	1227.67	4.91	2.59	5.19	5.19
Rosebud County	C12	RM 220.4	25183	500-yr	3341.4	751.78	746.88	2.03	1.65	20.04	12.69	395.04	1435.99	3.56	2.24	4.9	4.9
Rosebud County	C12	RM 220.23	24914	500-yr	3341.4	751.73	746.8	1.43	1.23	9.67	7.45	642.64	2093.77	3.16	2.43	4.93	4.93
Rosebud County	C12	RM 220.02	24578	500-yr	3341.4	751.63	746.54	1.32	1.19	9.65	8.16	792.77	1790.19	2.91	2.46	5.09	5.09
Rosebud County	C12	RM 219.83	24268	500-yr	3341.4	751.55	746.18	1.2	1.08	8.01	6.73	775.68	1102.42	3.35	2.82	5.37	5.37
Rosebud County	C12	RM 219.63	23947	500-yr	3341.4	751.39	745.79	1.56	1.41	14.18	11.42	587.54	1067.42	3.42	2.75	5.6	5.6
Rosebud County	C12	RM 219.47	23683	500-yr	3341.4	751.26	745.56	1.76	1.39	15.43	8.53	380.14	1270.36	4.49	2.46	5.7	5.7
Rosebud County	C12	RM 219.29	23386	500-yr	3341.4	750.96	745.27	2.66	1.72	32.46	12.87	208.04	1193.93	4.82	1.89	5.69	5.69
Rosebud County	C12	RM 219.11	23085	500-yr	3341.4	750.8	745.15	2.6	1.61	31.02	13.04	176.7	1040.94	4.85	2.01	5.65	5.65
Rosebud County	C12	RM 218.92	22783	500-yr	3341.4	750.67	745.15	2.22	1.39	23.28	11.39	229.91	1145.29	4.33	2.1	5.52	5.52
Rosebud County	C12	RM 218.73	22473	500-yr	3341.4	750.48	745.06	2.29	1.38	23.58	10.36	226.8	1096.92	5.09	2.21	5.42	5.42
Rosebud County	C12	RM 218.54	22180	500-yr	3341.4	750.33	744.99	2.24	1.56	23.16	13.3	274.48	793.78	4.69	2.7	5.34	5.34
Rosebud County	C12	RM 218.38	21902	500-yr	3341.4	750.2	744.43	2.27	1.51	22.87	10.62	234.82	988.03	5.24	2.42	5.77	5.77
Rosebud County	C12	RM 218.18	21580	500-yr	3341.4	749.92	743.9	2.83	1.6	36.12	15.75	182.74	963.38	5.08	2.19	6.02	6.02
Rosebud County	C12	RM 217.99	21276	500-yr	3341.4	749.74	743.66	2.65	1.52	32.45	13.1	211.96	1199.32	4.65	1.85	6.08	6.08
Rosebud County	C12	RM 217.81	20981	500-yr	3341.4	749.68	743.51	1.96	1.31	16.85	6.18	293.45	1425.77	5.17	1.88	6.17	6.17
Rosebud County	C12	RM 217.64	20702	500-yr	3341.4	749.29	743.41	3.11	1.69	43.74	12.37	176.29	1427.04	5	1.39	5.88	5.88
Rosebud County	C12	RM 217.45	20392	500-yr	3341.4	749.11	743.29	2.86	1.46	37.82	12.19	184.69	1525.81	4.72	1.49	5.82	5.82
Rosebud County	C12	RM 217.25	20070	500-yr	3341.4	749.04	743.29	2.23	1.15	22.02	6.79	191.77	1781.62	5.37	1.63	5.75	5.75
Rosebud County	C12	RM 217	19662	500-yr	3341.4	748.78	743.25	2.56	1.3	29.78	8.78	192.47	1793.3	4.94	1.43	5.53	5.53
Rosebud County	C12	RM 216.77	19300	500-yr	3341.4	748.6	743.25	2.44	1.28	28.12	10.08	217.02	1691.21	4.35	1.54	5.35	5.35
Rosebud County	C12	RM 216.53	18912	500-yr	3341.4	748.47	743.3	1.95	1.01	18.17	7.93	274.18	1783.33	4.28	1.85	5.17	5.17
Rosebud County	C12	RM 216.27	18500	500-yr	3341.4	748.36	743.24	1.69	0.99	13.83	7.02	358.3	1637.6	4.07	2.06	5.12	5.12
Rosebud County	C12	RM 215.98	18038	500-yr	3341.4	748.27	743.12	1.57	0.87	11.59	5.33	273.73	1903.76	4.37	2.01	5.15	5.15
Rosebud County	C12	RM 215.68	17550	500-yr	3341.4	748.12	742.31	1.75	0.99	13.31	5.05	269.37	1830.91	5.52	2.09	5.81	5.81
Rosebud County	C12	RM 215.41	17101	500-yr	3341.4	747.89	741.82	2.28	1.37	23.22	8.38	218.66	1561.91	5.21	1.86	6.07	6.07
Rosebud County	C12	RM 215.21	16781	500-yr	3341.4	747.56	741.65	3.05	1.7	41.76	14.14	159.7	1558.28	5.09	1.69	5.91	5.91
Rosebud County	C12	RM 215.02	16479	500-yr	3341.4	747.13	741.68	3.54	2.11	56.47	19.16	146.57	1119.77	5.09	1.69	5.45	5.45
Rosebud County	C13	RM 214.86	16220	500-yr	3341.4	747.14	741.64	2.32	1.75	23.82	13.27	252.91	1025.93	5.29	2.92	5.5	5.5
Rosebud County	C13	RM 214.65	15883	500-yr	3341.4	746.97	741.6	2.17	1.87	22.66	14.27	399.8	868.57	3.7	2.31	5.37	5.37
Rosebud County	C13	RM 214.46	15577	500-yr	3341.4	746.84	741.6	1.95	1.52	16.72	11.15	460.74	1205.73	3.34	2.21	5.24	5.24
Rosebud County	C13	RM 214.27	15282	500-yr	3341.4	746.74	741.59	1.67	1.31	12.84	7.95	505.93	1243.96	3.33	2.05	5.15	5.15
Rosebud County	C13	RM 214.07	14957	500-yr	3341.4	746.62	741.54	1.57	1.11	15.52	7.95	425.03	1593.5	4.1	2.08	5.08	5.08
Rosebud County	C13	RM 213.9	14672	500-yr	3341.4	746.41	741.37	2	1.46	19.36	7.17	363.41	1912.29	4.14	1.52	5.04	5.04
Rosebud County	C13	RM 213.7	14343	500-yr	3341.4	745.99	740.88	2.83	2.07	36.79	10.67	232.58	1814.95	4.76	1.37	5.11	5.11
Rosebud County	C13	RM 213.54	14083	500-yr	3341.4	745.64	740.59	3.29	2.01	50.35	13.47	191.86	2014.46	4.63	1.22	5.05	5.05
Rosebud County	C13	RM 213.36	13792	500-yr	3341.4	745.53	740.39	2.55	1.56	31.05	10.11	246.24	2037.67	4.24	1.37	5.14	5.14
Rosebud County	C13	RM 213.16	13475	500-yr	3341.4	745.36	740.27	2.46	1.4	28.52	9.23	214.1	2199.05	4.06	1.3	5.09	5.09

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	500-yr	3341.4	745.23	740.31	2.22	1.23	22.19	8.06	212.05	2185.54	3.94	1.41	4.92	4.92
Rosebud County	C13	RM 212.79	12880	500-yr	3341.4	745.04	740.19	2.36	1.18	25.75	8.11	178.07	2113.79	4.64	1.44	4.85	4.85
Rosebud County	C13	RM 212.6	12572	500-yr	3341.4	744.85	739.79	2.25	1.13	23.26	7.35	240.96	2157.76	4.74	1.48	5.06	5.06
Rosebud County	C13	RM 212.42	12284	500-yr	3341.4	744.73	739.58	2.28	1.13	24.62	7.87	211.31	2097.32	4.48	1.42	5.15	5.15
Rosebud County	C13	RM 212.23	11983	500-yr	3341.4	744.67	739.17	1.78	0.95	14.93	5.64	257.92	2115.01	4.45	1.66	5.5	5.5
Rosebud County	C13	RM 212.05	11688	500-yr	3341.4	744.51	738.83	2.1	1.11	19.95	5.96	227.41	2046.9	5	1.47	5.68	5.68
Rosebud County	C13	RM 211.85	11386	500-yr	3341.4	744.34	738.79	2.3	1.32	24.92	7.83	251.66	1852.95	4.39	1.36	5.55	5.55
Rosebud County	C13	RM 211.65	11066	500-yr	3341.4	744.17	738.58	2.3	1.27	24.67	7.55	248.86	1944.49	4.49	1.36	5.59	5.59
Rosebud County	C13	RM 211.44	10724	500-yr	3341.4	744.05	738.38	2.23	1.09	22.8	7.92	199.53	1993.7	4.78	1.64	5.67	5.67
Rosebud County	C13	RM 211.21	10353	500-yr	3341.4	743.93	737.87	2.08	1.11	18.6	7.22	207.36	1641.15	4.79	1.84	6.07	6.07
Rosebud County	C13	RM 210.96	9946	500-yr	3341.4	743.63	737.72	2.74	1.45	34.67	13.05	169.56	1306.97	4.76	1.76	5.91	5.91
Rosebud County	C13	RM 210.75	9612	500-yr	3341.4	743.56	737.48	2.21	1.26	21.95	7.9	191.27	1454.91	5.15	1.83	6.08	6.08
Rosebud County	C13	RM 210.57	9317	500-yr	3341.4	743.48	737.5	1.97	1.16	17.36	6.12	244	1610.91	5.12	1.79	5.98	5.98
Rosebud County	C13	RM 210.36	8986	500-yr	3341.4	743.15	737.54	2.76	1.48	35.2	11.65	194.77	1521.38	4.73	1.55	5.61	5.61
Rosebud County	C13	RM 210.16	8674	500-yr	3341.4	742.91	737.53	2.56	1.68	31.88	13.35	288.57	1201.68	3.99	1.66	5.38	5.38
Rosebud County	C13	RM 209.98	8382	500-yr	3341.4	742.91	737.25	1.7	1.14	13.02	5.3	307.03	1986.41	4.99	2.01	5.66	5.66
Rosebud County	C13	RM 209.8	8091	500-yr	3341.4	742.8	736.96	1.94	1.1	16.22	4.85	218.68	2506.24	5.7	1.68	5.84	5.84
Rosebud County	C13	RM 209.6	7774	500-yr	3341.4	742.67	736.72	2.23	1.01	21.64	6.36	179.37	2560.66	5.54	1.6	5.95	5.95
Rosebud County	C13	RM 209.41	7482	500-yr	3341.4	742.61	736.53	1.85	0.96	15.34	5.31	238.7	2481.52	5.06	1.73	6.08	6.08
Rosebud County	C13	RM 209.21	7161	500-yr	3341.4	742.42	736.29	2.28	1.24	23.27	6.76	197.21	2071.05	5.19	1.49	6.13	6.13
Rosebud County	C13	RM 209.03	6871	500-yr	3341.4	742.29	736.14	2.36	1.25	24.69	7.4	186.26	1948.92	5.29	1.55	6.15	6.15
Rosebud County	C13	RM 208.85	6571	500-yr	3341.4	742.22	736.03	2.01	1.14	17.95	5.46	229.12	2078.71	5.32	1.6	6.19	6.19
Rosebud County	C13	RM 208.65	6257	500-yr	3341.4	742.14	735.74	1.97	1.14	17.51	6.4	218.32	1955.18	5.09	1.83	6.4	6.4
Rosebud County	C13	RM 208.46	5945	500-yr	3341.4	741.91	735.69	2.41	1.56	27.34	10.83	204.54	1538.85	4.57	1.78	6.22	6.22
Rosebud County	C13	RM 208.29	5682	500-yr	3341.4	740.97	735.63	4.47	3.09	91.61	21.85	116.29	961.36	4.87	1.13	5.34	5.34
Rosebud County	C14	RM 208.1	5374	500-yr	3341.4	740.8	735.61	3.14	2.39	44.58	16.5	201.37	901.95	4.98	1.82	5.19	5.19
Rosebud County	C14	RM 207.91	5064	500-yr	3341.4	740.64	735.56	2.56	1.88	32.88	17.43	293.26	871.87	3.89	2.04	5.08	5.08
Rosebud County	C14	RM 207.72	4766	500-yr	3341.4	740.45	735.52	2.21	1.65	23.61	13.68	404.67	1324.93	3.2	1.84	4.93	4.93
Rosebud County	C14	RM 207.53	4450	500-yr	3341.4	740.38	735.35	1.56	1.15	12.75	7.36	469.61	1408.89	3.58	2.06	5.03	5.03
Rosebud County	C14	RM 207.33	4123	500-yr	3341.4	740.22	735.27	1.94	1.26	17.88	8.03	282.48	1375.71	4.33	1.93	4.95	4.95
Rosebud County	C14	RM 207.15	3851	500-yr	3341.4	740.16	735.14	1.65	1.07	13.21	6.2	313.39	1518.15	4.4	2.05	5.02	5.02
Rosebud County	C14	RM 206.99	3599	500-yr	3341.4	740.11	734.95	1.49	0.92	10.53	5.36	327.09	1695.44	4.22	2.14	5.16	5.16
Rosebud County	C14	RM 206.81	3315	500-yr	3341.4	740.05	734.49	1.55	0.91	11.05	5.33	257.4	1901.9	4.73	2.26	5.56	5.56
Rosebud County	C14	RM 206.61	2997	500-yr	3341.4	739.89	733.91	2.05	1.12	18.66	7.71	197.48	2541.71	5.24	2.14	5.98	5.98
Rosebud County	C14	RM 206.43	2701	500-yr	3341.4	739.84	733.52	1.7	0.96	13.59	7.13	244.31	2769.94	4.48	2.33	6.32	6.32
Rosebud County	C14	RM 206.21	2350	500-yr	3341.4	739.74	733.38	1.69	1.05	14.25	6.61	253.17	2736.22	4.71	2.16	6.36	6.36
Rosebud County	C14	RM 205.97	1963	500-yr	3341.4	739.56	732.73	2.02	1.25	17.31	6.81	223.85	2788.44	6.04	2.34	6.83	6.83
Rosebud County	C14	RM 205.72	1563	500-yr	3341.4	738.99	732.73	3.86	1.91	87.18	26.76	107.48	2685.34	5.28	1.56	6.26	6.26
Rosebud County	C14	RM 205.49	1198	500-yr	3341.4	738.76	732.63	2.81	1.69	46.96	17.06	192.62	2588.51	4.94	1.77	6.13	6.13
Rosebud County	C14	RM 205.3	907	500-yr	3341.4	738.48	732.76	2.84	1.8	39.34	19.3	246.92	2552.3	3.98	1.94	5.72	5.72
Rosebud County	C14	RM 205.11	594	500-yr	3341.4	738.21	732.8	2.91	1.79	38.23	14.96	192	2659.46	5.02	1.94	5.41	5.41
Rosebud County	C14	RM 204.9	243	500-yr	3341.4	737.9	732.63	2.93	1.99	40.46	17.14	224.67	2717.61	4.44	1.86	5.27	5.27

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	500-yr	3341.4	737.9	732.67	2.55	1.41	30.76	14.31	192.07	2519.97	4.37	2.01	5.23	5.23
Custer County	C14	RM 204.43	73135	500-yr	3341.4	737.74	732.44	2.25	1.31	23.87	12.61	266.74	2672.79	4.34	2.27	5.3	5.3
Custer County	C14	RM 204.22	72808	500-yr	3341.4	737.56	732.3	2.31	1.34	25.78	12.58	262.16	2749.28	4.07	1.98	5.26	5.26
Custer County	C14	RM 204	72454	500-yr	3341.4	737.41	731.9	2.08	1.22	19.37	8.65	261.19	2779.45	5.07	2.25	5.51	5.51
Custer County	C14	RM 203.82	72156	500-yr	3341.4	737.07	731.14	2.91	1.64	39.08	18.33	197.43	2473.93	4.73	2.19	5.93	5.93
Custer County	C14	RM 203.65	71895	500-yr	3341.4	736.91	730.95	2.94	1.5	39.58	20.32	162.5	2560.48	4.79	2.42	5.96	5.96
Custer County	C14	RM 203.5	71641	500-yr	3341.4	736.84	730.78	2.32	1.35	24.67	12.64	195.78	2545.32	4.76	2.4	6.06	6.06
Custer County	C14	RM 203.3	71324	500-yr	3341.4	736.8	730.79	1.82	1.07	14.79	7.91	161.79	2398.84	5.16	2.7	6.01	6.01
Custer County	C14	RM 203.1	71035	500-yr	3341.4	736.47	730.79	2.81	1.47	37.05	16.68	184.4	2087.14	4.49	1.99	5.68	5.68
Custer County	C14	RM 202.9	70718	500-yr	3341.4	736.34	730.67	2.33	1.52	27.54	16.62	249.34	1882.16	3.55	2.12	5.68	5.68
Custer County	C14	RM 202.71	70415	500-yr	3341.4	736.06	730.64	2.61	1.64	32.75	17.33	232.06	1883.44	4.15	2.17	5.42	5.42
Custer County	C14	RM 202.51	70088	500-yr	3341.4	735.69	730.68	3.08	1.67	44.17	17.44	152.2	1840.51	4.58	1.78	5.01	5.01
Custer County	C14	RM 202.34	69815	500-yr	3341.4	735.57	730.63	2.15	1.34	22.68	11.65	321.87	2009.87	3.89	1.98	4.94	4.94
Custer County	C14	RM 202.13	69483	500-yr	3341.4	735.42	730.54	2.04	1.2	19.56	10.23	282.19	1911.47	4.42	2.29	4.88	4.88
Custer County	C14	RM 201.97	69219	500-yr	3341.4	735.2	730.01	2.32	1.57	25.57	13.71	264.21	1258	4.31	2.3	5.19	5.19
Custer County	C14	RM 201.75	68884	500-yr	3341.4	735.12	729.45	1.81	1.29	14.52	6.08	306.87	1462.25	5.3	2.19	5.68	5.68
Custer County	C14	RM 201.57	68612	500-yr	3341.4	734.98	729.37	2.07	1.4	21.55	10.43	362.67	1487.34	3.63	1.74	5.61	5.61
Custer County	C14	RM 201.38	68299	500-yr	3341.4	734.72	729.23	2.34	1.57	28.73	13.1	356.22	1470.12	3.2	1.45	5.49	5.49
Custer County	C14	RM 201.23	68055	500-yr	3341.4	734.6	729.13	2.03	1.26	20.92	10.2	369.58	1569.45	3.49	1.69	5.47	5.47
Custer County	C14	RM 201.06	67778	500-yr	3341.4	734.59	729.03	1.33	0.99	8.51	5.02	262.3	1364.97	4.23	2.47	5.56	5.56
Custer County	C14	RM 200.85	67439	500-yr	3341.4	734.13	729.05	3.47	2	55.21	16.97	114.21	1150.98	4.86	1.45	5.08	5.08
Custer County	C14	RM 200.64	67103	500-yr	3341.4	734.04	728.97	2.25	1.53	23.03	11	216.76	939.14	4.92	2.32	5.07	5.07
Custer County	C14	RM 200.48	66842	500-yr	3341.4	733.98	728.8	1.8	1.47	15.39	10.01	307.41	822.9	4.28	2.76	5.18	5.18
Custer County	C14	RM 200.27	66515	500-yr	3341.4	733.81	728.63	1.92	1.5	17.25	11.2	359.69	776.51	4.43	2.86	5.18	5.18
Custer County	C14	RM 200.05	66162	500-yr	3341.4	733.62	728.3	2.06	1.73	21.1	15.89	389.11	657.94	3.91	2.93	5.32	5.32
Custer County	C14	RM 199.9	65916	500-yr	3341.4	733.53	727.78	1.84	1.68	15.71	10.71	381.62	627.64	4.66	3.16	5.75	5.75
Custer County	C14	RM 199.71	65614	500-yr	3341.4	733.13	727.34	2.84	2.42	35.74	19.03	260.79	603.98	4.35	2.29	5.79	5.79
Custer County	C14	RM 199.53	65326	500-yr	3341.4	733.05	727.34	2.3	1.96	23.45	11.5	259.62	658.44	5.32	2.59	5.71	5.71
Custer County	C14	RM 199.38	65076	500-yr	3341.4	732.96	727.34	2.1	1.74	21.64	12.14	364.29	955.7	3.98	2.22	5.63	5.63
Custer County	C14	RM 199.18	64754	500-yr	3341.4	732.81	727.64	1.9	1.5	20.06	11.48	456.73	1241.1	3.31	1.88	5.17	5.17
Custer County	C14	RM 199.04	64535	500-yr	3341.4	732.71	727.64	1.72	1.28	15.27	7.42	419.11	1377.16	3.91	1.9	5.07	5.07
Custer County	C14	RM 198.77	64102	500-yr	3341.4	732.48	727.28	2.02	1.44	18.73	7.22	294.95	1262.45	4.79	1.83	5.2	5.2
Custer County	C14	RM 198.57	63773	500-yr	3341.4	732.07	726.99	2.94	1.99	39.37	12.09	204.81	1142.32	4.85	1.47	5.08	5.08
Custer County	C14	RM 198.4	63505	500-yr	3341.4	731.87	726.86	2.88	1.73	38.14	12.54	199.72	1252.56	4.73	1.54	5.01	5.01
Custer County	C14	RM 198.22	63215	500-yr	3341.4	731.6	726.57	2.98	1.68	41.19	14.11	190.38	1272.61	4.6	1.56	5.04	5.04
Custer County	C14	RM 198.04	62923	500-yr	3341.4	731.48	726.32	2.42	1.5	27.02	9.52	227.09	1369.65	4.68	1.63	5.16	5.16
Custer County	C14	RM 197.84	62611	500-yr	3341.4	731.44	726.04	1.72	1.22	13.88	5.48	351.59	1599.33	4.37	1.71	5.4	5.4
Custer County	C14	RM 197.65	62306	500-yr	3341.4	731.36	725.69	1.77	1.08	13.58	5.62	317.28	1798.95	4.2	1.72	5.67	5.67
Custer County	C14	RM 197.47	62013	500-yr	3341.4	731.34	725.29	1.39	0.81	8.31	3.11	297.09	1911.03	5.82	2.15	6.05	6.05
Custer County	C14	RM 197.27	61686	500-yr	3341.4	731.28	724.81	1.7	0.84	12.83	5.6	212.46	1905.86	5.19	2.25	6.47	6.47
Custer County	C14	RM 197.07	61373	500-yr	3341.4	731.21	724.81	1.77	0.93	13.89	5.38	204.54	1770.28	5.36	2.04	6.4	6.4
Custer County	C14	RM 196.91	61115	500-yr	3341.4	731.2	724.81	1.38	0.71	8.4	4.46	223.16	1667.88	5.38	2.82	6.39	6.39
Custer County	C14	RM 196.73	60815	500-yr	3341.4	731.15	724.76	1.43	0.75	8.98	4.76	242.01	1536.28	5.53	2.91	6.39	6.39
Custer County	C14	RM 196.54	60518	500-yr	3341.4	731.09	724.67	1.54	0.85	10.75	5.51	270.26	2007.22	5.05	2.56	6.42	6.42
Custer County	C14	RM 196.33	60178	500-yr	3341.4	731.04	724.57	1.56	0.91	10.41	4.76	247.23	1735.85	5.79	2.63	6.47	6.47
Custer County	C14	RM 196.17	59915	500-yr	3341.4	730.99	724.51	1.62	1.06	11.2	5.56	191.57	1325.67	5.96	2.93	6.48	6.48
Custer County	C15	RM 195.98	59615	500-yr	3313.1	729.97	724.52	4.51	2.93	93.24	29.22	132.07	904.44	4.82	1.48	5.45	5.45
Custer County	C15	RM 195.81	59337	500-yr	3313.1	729.42	724.33	3.82	3.11	66.73	22.09	169.57	666.33	4.91	1.6	5.09	5.09
Custer County	C15	RM 195.61	59020	500-yr	3313.1	729.36	724.24	2.75	2.26	34.26	16.34	230.07	625.9	4.96	2.35	5.12	5.12
Custer County	C15	RM 195.43	58727	500-yr	3313.1	729.17	724.22	2.54	2.14	31.23	20.74	305.61	576.34	4.05	2.68	4.95	4.95
Custer County	C15	RM 195.23	58415	500-yr	3313.1	729.06	723.93	2.01	1.78	21.1	14.65	391.57	716.24	4.06	2.81	5.13	5.13
Custer County	C15	RM 195.04	58114	500-yr	3313.1	728.82	723.54	2.38	1.95	26.83	14.82	269.46	742.2	4.34	2.39	5.28	5.28
Custer County	C15	RM 194.86	57824	500-yr	3313.1	728.66	722.93	2.4	1.69	26.3	13.3	209.92	849.88	4.91	2.45	5.73	5.73
Custer County	C15	RM 194.67	57521	500-yr	3313.1	728.52	722.75	2.31	1.69	23.31	10.4	217.41	900.29	5.57	2.45	5.77	5.77
Custer County	C15	RM 194.49	57231	500-yr	3313.1	728.43	722.53	2.13	1.57	19.81	10.24	232.49	1114.47	5.51	2.82	5.9	5.9
Custer County	C15	RM 194.32	56946	500-yr	3313.1	728.23	722.5	2.42	1.86	26.12	16	259.82	995.6	4.58	2.79	5.73	5.73
Custer County	C15	RM 194.13	56643	500-yr	3313.1	727.94	722.5	2.68	2.29	33.33	23.14	251.77	834.23	4.6	3.18	5.44	5.44
Custer County	C15	RM 193.93	56331	500-yr	3313.1	727.76	722.31	2.5	2.2	28.07	18.13	247.7	922.41	5.1	3.28	5.45	5.45
Custer County	C15	RM 193.74	56024	500-yr	3313.1	727.6	722.23	2.53	2.02	28.56	14.11	229.42	934.38	5.2	2.54	5.37	5.37
Custer County	C15	RM 193.55	55708	500-yr	3313.1	727.4	722.13	2.62	1.9	30.94	12.39	217.02	979.78	5.1	2.01	5.27	5.27

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	500-yr	3313.1	727.22	722.13	2.65	1.83	31.88	13.28	219.51	1023.69	4.9	2.02	5.09	5.09
Custer County	C15	RM 193.2	55158	500-yr	3313.1	727.16	722.13	2.09	1.46	19.94	7.99	280.33	1171.55	4.88	1.94	5.03	5.03
Custer County	C15	RM 193	54825	500-yr	3313.1	727	721.84	2.15	1.5	20.99	8.64	281.95	1179.45	4.86	1.99	5.16	5.16
Custer County	C15	RM 192.81	54525	500-yr	3313.1	726.87	721.37	2.26	1.39	22.56	8.52	207.4	1195	5.34	1.99	5.5	5.5
Custer County	C15	RM 192.63	54247	500-yr	3313.1	726.67	721.01	2.46	1.56	26.69	9.09	217.39	1176.43	5.37	1.81	5.66	5.66
Custer County	C15	RM 192.44	53935	500-yr	3313.1	726.59	721.01	2.09	1.41	19.4	8.25	241	1060.92	5.24	2.21	5.58	5.58
Custer County	C16	RM 192.26	53653	500-yr	3313.1	726.32	721.01	2.58	1.94	29.83	12.12	229.37	830.14	5.13	2.06	5.31	5.31
Custer County	C16	RM 192.05	53309	500-yr	3313.1	725.44	721.11	4.08	3.37	79.98	32.91	186.81	582.55	4.15	1.69	4.33	4.33
Custer County	C16	RM 191.74	52809	500-yr	3313.1	725.3	721.1	2.07	1.96	19.9	18.11	560.47	661.55	2.8	2.55	4.2	4.2
Custer County	C16	RM 191.35	52181	500-yr	3313.1	724.91	721.02	1.73	1.67	13.91	13.1	875.24	970.58	2.17	2.05	3.89	3.89
Custer County	C16	RM 191.12	51812	500-yr	3313.1	724.73	720.51	1.49	1.49	10.33	10.3	990.5	994.66	2.24	2.23	4.22	4.22
Custer County	C16	RM 190.87	51406	500-yr	3313.1	724.58	719.89	1.33	1.27	9.64	7.58	906.61	1402.71	2.71	2.13	4.69	4.69
Custer County	C16	RM 190.54	50885	500-yr	3313.1	724.46	719.15	1.1	0.99	7.43	5.17	789.91	1450.97	3.63	2.52	5.31	5.31
Custer County	C16	RM 190.29	50477	500-yr	3313.1	723.91	718.45	3.12	1.84	44.19	12.62	179.8	1775.54	4.96	1.39	5.46	5.46
Custer County	C16	RM 190.1	50176	500-yr	3313.1	723.69	718.43	2.81	1.9	36.8	14.26	227.26	1870.57	4.5	1.74	5.26	5.26
Custer County	C16	RM 189.85	49765	500-yr	3313.1	723.51	718.13	2.15	1.84	21.97	12.5	334.92	2251.2	4.3	2.44	5.38	5.38
Custer County	C16	RM 189.65	49458	500-yr	3313.1	723.27	713.92	2.34	2.31	24.15	23.43	340.01	2228.6	4.16	4.04	9.35	9.35
Custer County	C16		49425	500-yr	Bridge												
Custer County	C16	RM 189.62	49416	500-yr	3313.1	723.18	713.92	2.4	2.38	25.12	24.2	339.42	2134.82	4.06	3.91	9.26	9.26
Custer County	C16	RM 189.43	49103	500-yr	3313.1	722.64	718.09	3.14	2.83	48.77	26.32	269.95	2001.69	3.83	2.05	4.55	4.55
Custer County	C16	RM 189.22	48763	500-yr	3313.1	722.72	717.93	1.61	1.49	12.11	9.04	452.46	1951.77	4.47	3.33	4.79	4.79
Custer County	C16	RM 188.91	48267	500-yr	3313.1	722.53	717.54	1.76	1.51	15.8	10.96	472.67	1821.52	3.79	2.62	4.99	4.99
Custer County	C16	RM 188.66	47869	500-yr	3313.1	722.04	716.75	2.94	1.93	38.72	15.36	195.28	1318.23	5.12	2	5.29	5.29
Custer County	C16	RM 188.51	47622	500-yr	3313.1	721.9	716.72	2.73	1.74	34.15	15.08	217.17	1116.03	4.76	2.08	5.18	5.18
Custer County	C16	RM 188.32	47314	500-yr	3313.1	721.85	716.79	2.01	1.49	19.76	10.08	152.37	965.46	4.6	2.3	5.06	5.06
Custer County	C16	RM 188.14	47024	500-yr	3313.1	721.69	716.93	1.3	1.41	10.81	10.92	474.59	1031.75	2.25	2.28	4.76	4.76
Custer County	C16	RM 187.98	46768	500-yr	3313.1	721.61	716.91	1.83	1.3	15.83	8.92	222.44	1042.04	4.37	2.44	4.7	4.7
Custer County	C16	RM 187.78	46440	500-yr	3313.1	721.53	716.69	1.54	1.15	12.54	6.8	251.06	1276.33	4.17	2.25	4.84	4.84
Custer County	C16	RM 187.55	46083	500-yr	3313.1	721.34	716.04	2.08	1.22	19.7	8.98	224.37	1233.78	4.88	2.21	5.3	5.3
Custer County	C16	RM 187.35	45750	500-yr	3313.1	720.99	715.34	2.84	1.57	36.53	14.21	182.36	1095.47	5.03	1.93	5.65	5.65
Custer County	C16	RM 187.14	45421	500-yr	3313.1	720.92	715.3	2.1	1.3	20.12	10.04	259.08	1157.49	4.89	2.42	5.62	5.62
Custer County	C16	RM 187.01	45211	500-yr	3313.1	720.87	715.3	1.86	1.28	15.56	8.98	300.38	1372.59	5.05	2.9	5.57	5.57
Custer County	C16	RM 186.84	44930	500-yr	3313.1	720.69	715.03	2.15	1.67	21.24	14.41	294.8	1311.72	4.75	3.21	5.66	5.66
Custer County	C16	RM 186.62	44553	500-yr	3313.1	720.26	712.45	2.8	2.79	32.82	31.79	188.38	706.22	6.27	6.11	7.81	7.81
Custer County	C16		44545	500-yr	Bridge												
Custer County	C16	RM 186.61	44538	500-yr	3313.1	720.23	712.45	2.82	2.81	33.23	32.2	188.38	748.15	6.24	6.08	7.78	7.78
Custer County	C16	RM 186.46	44311	500-yr	3313.1	719.69	714.53	3.69	3.24	63.16	45.82	186.34	988.71	4.68	3.36	5.16	5.16
Custer County	C16	RM 186.26	43996	500-yr	3313.1	719.35	714.27	3.4	3.12	53.48	40.69	205.3	616.23	4.66	3.54	5.08	5.08
Custer County	C16	RM 186.1	43730	500-yr	3313.1	719.29	713.9	2.54	2.46	30.23	21.48	294.06	644.83	4.42	3.13	5.39	5.39
Custer County	C16	RM 185.91	43424	500-yr	3058.2	719.15	713.84	2.15	1.94	21.82	13.99	388.65	691.89	3.57	2.28	5.31	5.31
Custer County	C16	RM 185.71	43110	500-yr	3058.2	718.67	713.84	2.91	2.55	40.43	30.5	325.31	564.69	3.08	2.31	4.83	4.83
Custer County	C16	RM 185.52	42808	500-yr	3058.2	718.64	713.71	1.86	1.58	16.35	10.29	366.12	766.8	4.31	2.71	4.93	4.93
Custer County	C16	RM 185.34	42508	500-yr	3058.2	718.49	713.28	1.9	1.81	17.09	14.61	511.74	634.85	3.11	2.66	5.21	5.21
Custer County	C16	RM 185.16	42219	500-yr	3058.2	718.41	712.93	1.63	1.53	12.42	10.73	419.95	853.06	4.42	3.82	5.48	5.48
Custer County	C17	RM 184.95	41881	500-yr	3058.2	718.22	712.72	2.05	1.66	20.61	14.63	289.94	543.74	4.8	3.39	5.5	5.5
Custer County	C17	RM 184.78	41621	500-yr	3058.2	717.93	712.51	2.65	2.11	31.73	21.56	215.1	427.92	5.02	3.39	5.42	5.42
Custer County	C17	RM 184.59	41311	500-yr	3058.2	717.63	711.96	2.9	2.59	37.42	30.51	194.94	277.55	5.23	4.26	5.67	5.67
Custer County	C17	RM 184.4	41010	500-yr	3058.2	717.57	711.62	2.29	2.26	22.98	21.7	242.39	260.96	5.49	5.19	5.95	5.95
Custer County	C17	RM 184.23	40728	500-yr	3058.2	717.34	711.31	2.6	2.54	30.74	28.76	238.33	262.35	4.91	4.59	6.03	6.03
Custer County	C17	RM 184.1	40517	500-yr	3058.2	717.15	710.39	2.75	2.53	33.26	27.46	203.14	271.34	5.36	4.45	6.76	6.76
Custer County	C17		40500	500-yr	Bridge												
Custer County	C17	RM 184.08	40496	500-yr	3058.2	717.12	710.39	2.78	2.55	33.96	28.01	203.14	271.14	5.32	4.42	6.73	6.73
Custer County	C17	RM 184.03	40407	500-yr	3058.2	717.08	711.49	2.62	2.54	30.7	28.06	222.9	253.93	5.19	4.74	5.59	5.59
Custer County	C17	RM 183.83	40098	500-yr	3058.2	716.92	711.42	2.49	2.43	27.65	25.69	234.84	259.91	5.21	4.83	5.5	5.5
Custer County	C17	RM 183.65	39806	500-yr	3058.2	716.71	711.39	2.64	2.63	31.1	30.34	224.55	231.12	5.16	5.04	5.32	5.32
Custer County	C17	RM 183.47	39513	500-yr	3058.2	716.38	711.39	2.99	2.99	41.05	41.05	211.57	211.57	4.83	4.83	4.99	4.99
Custer County	C17	RM 183.28	39210	500-yr	3058.2	716.29	711.31	2.36	2.34	25.37	24.58	265.45	277.45	4.87	4.72	4.98	4.98
Custer County	C17	RM 183.09	38909	500-yr	3058.2	716.01	711.04	2.7	2.7	33.77	33.77	240.82	240.82	4.7	4.7	4.97	4.97
Custer County	C17	RM 182.94	38660	500-yr	3058.2	715.89	710.66	2.46	2.46	27.28	27.26	248.38	248.5	5.01	5.01	5.23	5.23
Custer County	C17	RM 182.72	38316	500-yr	3058.2	715.67	710.1	2.51	2.41	28.92	26.87	250.1	283.07	4.81	4.48	5.57	5.57

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	500-yr	3058.2	715.06	710.12	3.61	3.14	60.03	46.14	173.67	269.87	4.7	3.6	4.94	4.94
Custer County	C17	RM 182.34	37706	500-yr	3058.2	714.92	710.27	2.76	2.37	36.24	24.6	240.92	449.09	4.25	2.88	4.65	4.65
Custer County	C17	RM 182.15	37402	500-yr	3058.2	714.69	710.26	2.64	2.26	33.14	18.65	252.37	563.12	4.28	2.4	4.43	4.43
Custer County	C17	RM 181.97	37127	500-yr	3058.2	714.52	710.26	2.42	2.07	28.14	12.47	292.15	877.49	4.1	1.81	4.26	4.26
Custer County	C17	RM 181.78	36815	500-yr	3058.2	714.31	710.09	2.31	1.91	23.61	12.91	407.22	977.97	3	1.63	4.22	4.22
Custer County	C17	RM 181.59	36505	500-yr	3058.2	713.98	709.76	2.51	2.12	28.96	16.1	392.06	877.27	2.97	1.64	4.22	4.22
Custer County	C17	RM 181.37	36155	500-yr	3058.2	713.7	709.37	2.49	1.98	30.15	16.4	277.29	716.78	3.98	2.16	4.33	4.33
Custer County	C17	RM 181.23	35925	500-yr	3058.2	713.43	709.36	2.8	2.38	38.77	21.38	247.28	610.84	3.82	2.1	4.07	4.07
Custer County	C17	RM 181.03	35607	500-yr	3058.2	713.28	709.02	2.14	1.99	22.28	15.17	354.1	638.92	3.93	2.67	4.26	4.26
Custer County	C17	RM 180.83	35292	500-yr	3058.2	713.18	708.68	1.83	1.59	16.47	12	362.09	968.51	3.89	2.83	4.5	4.5
Custer County	C17	RM 180.66	35006	500-yr	3058.2	712.96	708.22	2.13	1.92	21.81	14.27	342.47	593.98	4.11	2.69	4.74	4.74
Custer County	C18	RM 180.46	34700	500-yr	3058.2	712.76	708.05	2.29	2	24.38	18.08	281.53	451.55	4.57	3.39	4.71	4.71
Custer County	C18	RM 180.29	34421	500-yr	3058.2	712.53	707.79	2.6	2.09	32.03	17.7	243.73	739.4	4.28	2.36	4.74	4.74
Custer County	C18	RM 180.08	34086	500-yr	3058.2	712.35	707.53	2.33	1.86	25.1	12.27	254.84	729.32	4.65	2.26	4.82	4.82
Custer County	C18	RM 179.9	33807	500-yr	3058.2	712.21	707.32	2.24	1.83	23.34	11.34	266.42	775.45	4.51	2.18	4.89	4.89
Custer County	C18	RM 179.73	33525	500-yr	3058.2	711.89	706.89	2.68	2.29	34.23	17.91	256.8	599.28	4.27	2.23	5	5
Custer County	C18	RM 179.54	33218	500-yr	3058.2	711.66	706.7	2.52	2.28	32.54	20.6	312.1	554.94	3.83	2.42	4.96	4.96
Custer County	C18	RM 179.35	32914	500-yr	3058.2	711.51	706.45	2.22	1.95	22.98	16.57	292.41	479.59	4.53	3.27	5.06	5.06
Custer County	C18	RM 179.16	32611	500-yr	3058.2	711.21	706.29	2.65	2.44	32.88	21.75	237.48	396.27	4.8	3.17	4.92	4.92
Custer County	C18	RM 178.99	32337	500-yr	3058.2	711.06	706.07	2.47	2.28	27.93	18.28	254.29	427.53	4.8	3.13	4.99	4.99
Custer County	C18	RM 178.79	32025	500-yr	3058.2	710.85	705.9	2.55	2.36	29.94	17.73	251.59	467.92	4.69	2.77	4.95	4.95
Custer County	C18	RM 178.61	31730	500-yr	3058.2	710.78	705.59	2.12	1.79	20.5	11.31	259.81	645.69	4.82	2.65	5.19	5.19
Custer County	C18	RM 178.43	31434	500-yr	3058.2	710.51	705.25	2.48	2.34	27.89	14.24	249.19	522.59	4.92	2.5	5.26	5.26
Custer County	C18	RM 178.23	31114	500-yr	3058.2	710.32	704.7	2.49	2.4	28.2	19.71	249.24	373.14	4.89	3.41	5.62	5.62
Custer County	C18	RM 178.06	30848	500-yr	3058.2	710.13	704.57	2.62	2.41	30.83	22.6	219.45	336.79	5.15	3.77	5.56	5.56
Custer County	C18	RM 177.88	30549	500-yr	3058.2	709.91	704.57	2.7	2.45	33.33	22.43	229.01	386.09	4.84	3.24	5.34	5.34
Custer County	C18	RM 177.66	30211	500-yr	3114.9	709.29	704.57	3.54	3.26	59.07	36.88	194.19	345.71	4.46	2.76	4.72	4.72
Custer County	C18	RM 177.49	29932	500-yr	3114.9	709.12	704.47	2.91	2.83	39.65	29.06	236.92	334.38	4.51	3.29	4.65	4.65
Custer County	C19	RM 177.3	29625	500-yr	3114.9	708.97	704.46	2.43	2.37	28.3	21.95	302.6	403.23	4.22	3.26	4.51	4.51
Custer County	C19	RM 177.11	29314	500-yr	3114.9	708.66	704.46	2.62	2.51	30.72	27.32	372.18	441.04	3.16	2.81	4.2	4.2
Custer County	C19	RM 176.93	29040	500-yr	3114.9	708.53	704.42	2.1	1.98	20.05	17.4	436.64	545.2	3.33	2.89	4.11	4.11
Custer County	C19	RM 176.74	28720	500-yr	3114.9	708.38	704.21	1.98	1.81	19.16	14.96	342.3	693.52	3.85	3.01	4.17	4.17
Custer County	C19	RM 176.53	28384	500-yr	3114.9	708.14	703.63	2.16	1.99	24.03	21.03	344.95	529.94	3.36	2.95	4.51	4.51
Custer County	C19	RM 176.36	28109	500-yr	3114.9	707.9	703.08	2.29	2.19	25.25	21.89	324.02	397.63	4.13	3.58	4.82	4.82
Custer County	C19	RM 176.18	27824	500-yr	3114.9	707.13	702.71	3.79	3.34	69.83	42	199.69	393.66	3.99	2.39	4.42	4.42
Custer County	C19	RM 176	27527	500-yr	3114.9	706.99	702.51	2.78	2.59	37	30.84	259.98	370.61	4.16	3.46	4.48	4.48
Custer County	C19	RM 175.81	27227	500-yr	3114.9	706.76	702.24	2.59	2.48	32.66	28.77	297.33	378.64	3.97	3.5	4.52	4.52
Custer County	C19	RM 175.62	26928	500-yr	3114.9	706.47	701.81	2.79	2.48	36.93	28.32	234.72	439.87	4.27	3.27	4.66	4.66
Custer County	C19	RM 175.43	26622	500-yr	3114.9	706.09	701.81	3.08	2.33	46.41	37.07	214.93	465.08	3.94	3.13	4.28	4.28
Custer County	C19	RM 175.25	26325	500-yr	3114.9	705.75	701.72	2.96	2.6	43.06	30.06	212.23	450.44	3.88	2.7	4.03	4.03
Custer County	C19	RM 175.08	26048	500-yr	3114.9	705.56	701.63	2.38	2.34	28.27	25.51	357.35	412.88	3.65	3.3	3.93	3.93
Custer County	C19	RM 174.9	25768	500-yr	3114.9	705.26	701.31	2.58	2.58	33.65	32.35	338.13	352.22	3.57	3.43	3.95	3.95
Custer County	C19	RM 174.69	25444	500-yr	3114.9	704.96	700.82	2.52	2.4	32.2	25.09	351.06	504.29	3.5	2.72	4.14	4.14
Custer County	C19	RM 174.49	25112	500-yr	3114.9	704.6	700.04	2.71	2.49	35.62	20.2	279.46	546.87	4.04	2.29	4.56	4.56
Custer County	C19	RM 174.32	24844	500-yr	3114.9	704.19	699.39	3.16	2.83	47.29	24.36	222.49	494.12	4.34	2.23	4.8	4.8
Custer County	C19	RM 174.13	24549	500-yr	3114.9	704.08	698.84	2.51	2.3	28.52	14.92	244.91	523.67	4.98	2.59	5.24	5.24
Custer County	C19	RM 173.94	24238	500-yr	3114.9	703.82	698.14	2.73	2.4	34.5	17.7	239.67	548.9	4.62	2.36	5.68	5.68
Custer County	C19	RM 173.75	23939	500-yr	3114.9	703.47	697.92	3.15	2.39	44.17	16.7	172.39	670.93	5.16	1.94	5.55	5.55
Custer County	C19	RM 173.57	23651	500-yr	3114.9	703.3	697.83	2.79	2.44	34.66	14.95	208.71	571	5.2	2.24	5.47	5.47
Custer County	C19	RM 173.39	23352	500-yr	3114.9	702.89	697.83	3.24	2.92	48.68	24.75	203.52	500.73	4.65	2.35	5.06	5.06
Custer County	C19	RM 173.2	23054	500-yr	3114.9	702.66	697.72	2.96	2.64	40.95	30.2	226.21	507.67	4.48	3.3	4.94	4.94
Custer County	C19	RM 173.02	22756	500-yr	3114.9	702.44	697.29	2.75	2.46	35.29	21.62	244.03	630.04	4.53	2.76	5.15	5.15
Custer County	C19	RM 172.82	22437	500-yr	3114.9	702.33	696.82	2.05	1.99	21.16	17.97	414.44	596.89	3.63	3.08	5.51	5.51
Custer County	C19	RM 172.67	22200	500-yr	3114.9	702.17	696.52	2.12	2.09	22.82	20.04	421.93	560.45	3.47	3.04	5.65	5.65
Custer County	C19	RM 172.49	21903	500-yr	3114.9	701.99	696.23	2.1	2.05	21.43	16.75	365.62	587.91	4.03	3.15	5.76	5.76
Custer County	C19	RM 172.29	21585	500-yr	3114.9	701.71	695.79	2.53	2.2	28.53	15.83	226.44	801.08	5.24	2.89	5.92	5.92
Custer County	C19	RM 172.12	21325	500-yr	3114.9	701.04	695.81	3.59	3.52	62.66	54.59	216.64	367.21	3.99	3.47	5.23	5.23
Custer County	C19		21310	500-yr	Bridge												
Custer County	C19	RM 172.11	21300	500-yr	3114.9	700.87	695.81	3.76	3.71	69.79	64.63	216.64	269.82	3.81	3.53	5.06	5.06
Custer County	C19	RM 171.89	20942	500-yr	3114.9	700.62	695.57	2.8	2.66	35.87	28.13	228.36	321.19	4.81	3.77	5.05	5.05

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	500-yr	3114.9	700.3	695.49	2.99	2.84	42.1	34.87	231.98	299.81	4.42	3.66	4.81	4.81
Custer County	C19	RM 171.52	20341	500-yr	3114.9	700.11	695.3	2.68	2.58	33.31	27.31	249.92	319.94	4.6	3.77	4.81	4.81
Custer County	C19	RM 171.34	20043	500-yr	3114.9	699.83	695.11	2.81	2.67	37.01	25.02	244.86	386.46	4.47	3.02	4.72	4.72
Custer County	C19	RM 171.15	19745	500-yr	3114.9	699.61	694.86	2.72	2.67	34.31	26.6	249.21	328.87	4.59	3.55	4.75	4.75
Custer County	C19	RM 170.96	19437	500-yr	3114.9	699.41	694.67	2.59	2.52	31.27	23.84	261.96	356.35	4.56	3.47	4.74	4.74
Custer County	C19	RM 170.78	19143	500-yr	3114.9	699.17	694.2	2.68	2.56	33.08	26.57	245.9	324.53	4.66	3.74	4.97	4.97
Custer County	C19	RM 170.58	18838	500-yr	3114.9	698.88	693.91	2.83	2.73	37.62	33.13	245.35	293.23	4.42	3.89	4.97	4.97
Custer County	C19	RM 170.4	18543	500-yr	3114.9	698.73	693.9	2.48	2.46	28.47	27.32	269.24	282.9	4.65	4.47	4.83	4.83
Custer County	C19	RM 170.22	18257	500-yr	3114.9	698.56	693.7	2.42	2.39	26.94	24.87	272.95	300.92	4.7	4.34	4.86	4.86
Custer County	C19	RM 170.03	17941	500-yr	3114.9	698.26	693.31	2.76	2.74	34.82	33.24	237.46	249.8	4.76	4.54	4.95	4.95
Custer County	C19	RM 169.84	17641	500-yr	3114.9	697.98	692.78	2.89	2.89	37.77	37.02	214.88	219.28	5.01	4.92	5.2	5.2
Custer County	C19	RM 169.65	17341	500-yr	3114.9	697.68	692.47	3.06	3.04	42.31	37.99	204.48	229.62	4.98	4.47	5.21	5.21
Custer County	C19	RM 169.47	17041	500-yr	3114.9	697.37	692.17	3.17	2.97	45.88	35.91	199.81	279.1	4.81	3.76	5.2	5.2
Custer County	C19	RM 169.28	16732	500-yr	3114.9	697.15	692	2.92	2.73	38.81	30.31	214.83	301.97	4.85	3.78	5.15	5.15
Custer County	C19	RM 169.09	16441	500-yr	3114.9	696.9	691.96	2.92	2.81	39.19	32.62	225.9	283.28	4.69	3.91	4.94	4.94
Custer County	C19	RM 168.91	16152	500-yr	3114.9	696.61	691.93	2.98	2.9	41.32	33.78	230.07	290.46	4.53	3.7	4.68	4.68
Custer County	C19	RM 168.72	15846	500-yr	3114.9	696.47	691.82	2.47	2.46	28.62	26.79	280.43	301.22	4.49	4.2	4.65	4.65
Custer County	C19	RM 168.51	15500	500-yr	3114.9	696.26	691.6	2.41	2.35	27.6	25.65	296.39	331.01	4.3	4	4.65	4.65
Custer County	C19	RM 168.35	15241	500-yr	3114.9	695.98	691.48	2.71	2.53	35.04	30.3	269.3	343.39	4.2	3.63	4.5	4.5
Custer County	C19	RM 168.15	14931	500-yr	3114.9	695.62	691.2	2.95	2.69	41.46	29.9	241.07	395.81	4.22	3.03	4.42	4.42
Custer County	C19	RM 167.97	14639	500-yr	3114.9	695.4	690.59	2.73	2.65	34.5	25.89	247.71	341.19	4.59	3.44	4.81	4.81
Custer County	C19	RM 167.79	14340	500-yr	3114.9	695.22	690.5	2.59	2.33	31.19	23.18	249.29	390.35	4.62	3.43	4.71	4.71
Custer County	C19	RM 167.61	14054	500-yr	3114.9	694.84	690.42	2.99	2.94	42.65	37.82	244.91	281.75	4.24	3.76	4.42	4.42
Custer County	C19	RM 167.41	13735	500-yr	3114.9	694.64	690.14	2.61	2.3	32.22	23.92	264.94	424.41	4.29	3.19	4.5	4.5
Custer County	C19	RM 167.22	13433	500-yr	3114.9	694.45	689.79	2.46	2.27	28.32	18.3	276.96	472.78	4.49	2.9	4.66	4.66
Custer County	C19	RM 167.04	13143	500-yr	3114.9	694.27	689.14	2.46	2.25	27.64	18.21	256.62	435.86	4.83	3.18	5.13	5.13
Custer County	C19	RM 166.85	12847	500-yr	3114.9	693.93	688.98	2.89	2.63	39.71	29.29	240.01	373.31	4.31	3.18	4.95	4.95
Custer County	C19	RM 166.67	12552	500-yr	3114.9	693.72	688.84	2.67	2.49	33.1	20.97	252.35	432.55	4.58	2.89	4.88	4.88
Custer County	C19	RM 166.52	12319	500-yr	3114.9	693.64	688.64	2.3	2.22	24.08	17.31	278.87	404.36	4.84	3.47	5	5
Custer County	C19	RM 166.31	11978	500-yr	3114.9	693.38	688.02	2.58	2.34	29.84	20.12	249.27	413.2	4.78	3.22	5.36	5.36
Custer County	C20	RM 166.2	11806	500-yr	3143.2	693.22	687.4	2.71	2.44	33.21	21.88	229.93	396.71	4.96	3.25	5.82	5.82
Custer County	C20	RM 166.06	11569	500-yr	3143.2	693	687.38	2.85	2.58	37.98	24.14	239.53	426.81	4.51	2.85	5.62	5.62
Custer County	C20	RM 165.92	11350	500-yr	3143.2	692.75	687.38	3.01	2.65	42.52	23.2	230.2	493.41	4.44	2.4	5.37	5.37
Custer County	C20	RM 165.73	11039	500-yr	3143.2	692.58	687.26	2.56	2.42	30.29	21.66	264.5	395.22	4.61	3.29	5.32	5.32
Custer County	C20	RM 165.55	10750	500-yr	3143.2	692.39	687.11	2.51	2.39	29.4	20.42	274.77	420.9	4.52	3.13	5.28	5.28
Custer County	C20	RM 165.35	10440	500-yr	3143.2	692.2	686.75	2.45	2.33	28.09	20.88	279.36	404.18	4.5	3.33	5.45	5.45
Custer County	C20	RM 165.17	10140	500-yr	3143.2	692.03	686.41	2.47	2.22	27.65	18.64	247.1	429.9	4.91	3.29	5.62	5.62
Custer County	C20	RM 165.01	9883	500-yr	3143.2	691.86	686.16	2.47	2.33	27.99	22.73	262.27	423.08	4.76	3.86	5.7	5.7
Custer County	C20	RM 164.81	9577	500-yr	3143.2	691.72	686.04	2.3	2.02	24.6	14.6	284.5	568.94	4.63	2.73	5.68	5.68
Custer County	C20	RM 164.61	9252	500-yr	3143.2	691.62	685.8	1.91	1.66	16.85	12.93	374.23	588.36	4.2	3.21	5.82	5.82
Custer County	C20	RM 164.42	8945	500-yr	3143.2	691.48	685.78	1.92	1.9	16.83	15.5	416.56	468.48	3.92	3.61	5.7	5.7
Custer County	C20	RM 164.23	8641	500-yr	3143.2	691.37	685.85	1.73	1.73	17.45	17.18	452.11	477.12	4.01	3.95	5.52	5.52
Custer County	C20	RM 164.06	8372	500-yr	3143.2	691.23	685.64	1.93	1.73	16.43	13.04	294.56	476.24	5.37	4.26	5.59	5.59
Custer County	C20	RM 163.85	8031	500-yr	3143.2	691.06	685	2.15	2.14	20.56	20.1	277.99	284.57	5.25	5.15	6.06	6.06
Custer County	C20	RM 163.67	7743	500-yr	3143.2	690.77	684.45	2.7	2.68	31.08	29.88	191.84	200.75	6.05	5.83	6.32	6.32
Custer County	C20	RM 163.48	7449	500-yr	3143.2	690.4	684.13	3.26	3.22	45.46	41.97	162.29	178.53	5.92	5.47	6.27	6.27
Custer County	C20	RM 163.3	7150	500-yr	3143.2	690.32	684.13	2.67	2.58	30.95	26.3	204.93	252.72	5.69	4.83	6.19	6.19
Custer County	C20	RM 163.12	6859	500-yr	3143.2	690.28	683.91	2.15	2.02	21.19	17.69	267.05	350.2	5.32	4.44	6.37	6.37
Custer County	C20	RM 162.94	6583	500-yr	3143.2	690.04	683.78	2.58	2.29	28.9	20.24	204.74	343.74	5.73	3.99	6.26	6.26
Custer County	C20	RM 162.74	6254	500-yr	3143.2	689.61	683.77	3.26	2.85	47.39	28.26	177.33	362.3	5.23	3.08	5.83	5.83
Custer County	C20	RM 162.55	5957	500-yr	3143.2	689.38	683.96	2.92	2.85	43.34	34	231.24	315.39	4.63	3.63	5.42	5.42
Custer County	C20	RM 162.34	5620	500-yr	3143.2	689.3	683.92	2.17	2.08	21.69	17.7	304.55	395.58	4.69	3.82	5.38	5.38
Custer County	C20	RM 162.18	5352	500-yr	3143.2	689.18	683.41	1.94	1.91	27.99	23.49	354.23	430.68	4.55	3.82	5.77	5.77
Custer County	C20	RM 162.03	5111	500-yr	3143.2	689.08	683.26	1.88	1.88	16.2	15.85	322.26	351.52	5.17	5.07	5.82	5.82
Custer County	C20	RM 161.81	4770	500-yr	3143.2	688.51	682.63	3.28	3.12	47.4	36.75	174.77	239.69	5.43	4.2	5.88	5.88
Custer County	C20	RM 161.62	4470	500-yr	3143.2	688.24	682.53	3.3	2.87	48.85	37.78	174.2	384.88	5.16	3.98	5.71	5.71
Custer County	C20	RM 161.43	4159	500-yr	3143.2	688.01	682.63	3	2.79	40.63	29.13	206.33	315.65	5	3.57	5.38	5.38
Custer County	C20	RM 161.24	3859	500-yr	3143.2	687.71	682.51	3.13	2.81	44.57	31.31	199.39	328.61	4.86	3.4	5.2	5.2
Custer County	C20	RM 161.06	3559	500-yr	3143.2	687.51	682.38	2.87	2.6	37.44	26.81	218.97	346.33	4.9	3.49	5.13	5.13
Custer County	C20	RM 160.87	3258	500-yr	3143.2	687.09	682.24	3.25	3.08	49.07	37.43	204.8	289.84	4.64	3.52	4.85	4.85

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	500-yr	3143.2	686.95	682.11	2.65	2.6	32.4	28.55	252.16	293.63	4.68	4.12	4.84	4.84
Custer County	C20	RM 160.5	2662	500-yr	3143.2	686.78	681.85	2.46	2.42	28.97	25.77	303.61	348.67	4.19	3.72	4.93	4.93
Custer County	C20	RM 160.31	2364	500-yr	3143.2	686.61	681.58	2.29	2.18	25.01	19.05	321.4	451.09	4.2	3.2	5.03	5.03
Custer County	C20	RM 160.12	2063	500-yr	3143.2	686.42	681.02	2.35	2.2	25.33	18.15	277.19	422.9	4.72	3.38	5.4	5.4
Custer County	C20	RM 159.93	1758	500-yr	3143.2	686.16	680.9	2.58	2.43	32.15	22.17	292.2	460.34	4.09	2.81	5.26	5.26
Custer County	C20	RM 159.75	1459	500-yr	3143.2	685.91	680.88	2.64	2.5	32.29	21.14	251.96	413.5	4.66	3.04	5.03	5.03
Custer County	C20	RM 159.55	1151	500-yr	3143.2	685.72	680.74	2.53	2.45	29.37	22.82	261.92	350.91	4.72	3.66	4.98	4.98
Custer County	C20	RM 159.38	876	500-yr	3143.2	685.48	680.37	2.74	2.5	34.08	25.39	229.23	344.02	4.9	3.66	5.11	5.11
Custer County	C20	RM 159.19	566	500-yr	3143.2	685.28	679.77	2.64	2.63	32.1	30.87	236.5	247.1	5.02	4.84	5.51	5.51
Custer County	C20	RM 158.98	229	500-yr	3143.2	684.99	679.44	2.84	2.77	36.24	33.02	217.29	248.84	5.05	4.61	5.55	5.55

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	500-yr	3143.2	684.99	679.22	2.78	2.65	34.46	26.73	214.16	293.79	5.21	4.04	5.77	5.77
Prairie County	C21	RM 158.55	61087	500-yr	3143.2	684.87	678.98	2.47	2.41	26.58	21.3	226.29	291.03	5.6	4.48	5.89	5.89
Prairie County	C21	RM 158.36	60787	500-yr	3143.2	684.74	678.83	2.36	2.28	24.65	19.23	249.45	333.01	5.31	4.14	5.91	5.91
Prairie County	C21	RM 158.17	60481	500-yr	3143.2	684.58	678.35	2.39	2.21	28.01	16.57	253.18	472.99	5.1	3	6.23	6.23
Prairie County	C21	RM 157.98	60173	500-yr	3143.2	684.25	678.22	2.82	2.65	36.62	25.1	231.17	367.02	4.73	3.23	6.03	6.03
Prairie County	C21	RM 157.78	59862	500-yr	3143.2	684	678.23	2.88	2.57	37.14	24.63	201.99	358.64	5.17	3.41	5.77	5.77
Prairie County	C21	RM 157.6	59561	500-yr	3143.2	683.89	678.14	2.46	2.31	26.62	21.46	233.85	314.92	5.36	4.32	5.75	5.75
Prairie County	C21	RM 157.38	59209	500-yr	3143.2	683.77	677.81	2.19	1.98	22.07	16.95	288.08	463.18	4.7	3.6	5.95	5.95
Prairie County	C21	RM 157.18	58885	500-yr	3143.2	683.63	677.42	2.21	1.8	21.53	14.22	235.66	520.56	5.38	3.53	6.21	6.21
Prairie County	C21	RM 156.99	58595	500-yr	3143.2	683.37	677.32	2.76	2.08	33.56	20.48	173.83	456.95	5.47	3.31	6.05	6.05
Prairie County	C21	RM 156.8	58287	500-yr	3143.2	682.91	677.32	3.48	2.65	54.65	35.75	149.83	360.65	5.08	3.29	5.59	5.59
Prairie County	C21	RM 156.62	57990	500-yr	3143.2	682.83	677.29	2.61	2.4	30.52	22.69	207.6	344.17	5.14	3.81	5.54	5.54
Prairie County	C21	RM 156.42	57683	500-yr	3143.2	682.71	677.21	2.25	2.12	22.86	19.37	271.12	348.16	5.06	4.27	5.5	5.5
Prairie County	C21	RM 156.24	57378	500-yr	3143.2	682.41	676.91	2.69	2.47	33.42	24.31	245.34	375.15	4.68	3.39	5.5	5.5
Prairie County	C21	RM 156.04	57069	500-yr	3143.2	682.25	676.56	2.51	2.26	27.77	18.23	226.07	393.99	5.41	3.53	5.69	5.69
Prairie County	C21	RM 155.85	56762	500-yr	3143.2	681.97	676.11	2.85	2.51	36.2	23.69	204.32	368.26	5.23	3.4	5.86	5.86
Prairie County	C21	RM 155.66	56455	500-yr	3143.2	681.54	675.96	3.39	2.87	51.88	33.44	177.2	343.14	5	3.19	5.58	5.58
Prairie County	C21	RM 155.47	56151	500-yr	3143.2	681.45	675.89	2.54	2.29	29.98	22.03	257.44	404.69	4.64	3.4	5.56	5.56
Prairie County	C21	RM 155.27	55835	500-yr	3143.2	681.27	675.92	2.35	2.3	26.48	23.72	317.77	363.33	4.19	3.76	5.35	5.35
Prairie County	C21	RM 155.08	55530	500-yr	3143.2	681.04	675.95	2.45	2.38	28.34	24.02	296.49	361.55	4.32	3.66	5.09	5.09
Prairie County	C21	RM 154.88	55209	500-yr	3143.2	680.86	675.64	2.34	2.33	25.55	23.65	300.68	326.81	4.46	4.14	5.22	5.22
Prairie County	C21	RM 154.69	54901	500-yr	3143.2	680.54	675.39	2.71	2.65	34.7	31.87	264.93	341.89	4.35	3.99	5.15	5.15
Prairie County	C21	RM 154.5	54588	500-yr	3143.2	680.3	675.02	2.67	2.63	33.31	31.24	257.32	295.52	4.54	4.27	5.28	5.28
Prairie County	C21	RM 154.3	54273	500-yr	3143.2	680.11	674.8	2.49	2.45	28.87	24.59	277.5	332.19	4.53	3.87	5.31	5.31
Prairie County	C21	RM 154.1	53959	500-yr	3143.2	679.87	674.67	2.58	2.48	31.19	24.03	269.5	367.07	4.48	3.45	5.2	5.2
Prairie County	C21	RM 153.91	53650	500-yr	3143.2	679.7	674.51	2.44	2.38	26.9	23.39	260.55	313.68	4.92	4.28	5.19	5.19
Prairie County	C21	RM 153.72	53338	500-yr	3143.2	679.49	674.06	2.59	2.33	30.12	21.98	225.99	374.2	5.12	3.73	5.43	5.43
Prairie County	C21	RM 153.52	53023	500-yr	3143.2	679.13	673.78	3.04	2.69	42.83	32.34	206.24	355.29	4.63	3.49	5.35	5.35
Prairie County	C21	RM 153.32	52704	500-yr	3143.2	678.88	673.64	2.76	2.69	35.57	30.17	249.02	367.47	4.54	3.84	5.24	5.24
Prairie County	C21	RM 153.12	52380	500-yr	3143.2	678.75	673.43	2.35	2.25	25.01	19.86	270.43	507.62	4.89	3.89	5.32	5.32
Prairie County	C21	RM 152.92	52065	500-yr	3143.2	678.62	672.88	2.23	1.96	22.44	16.25	270.87	464.46	5	3.61	5.74	5.74
Prairie County	C21	RM 152.73	51762	500-yr	3143.2	678.44	672.27	2.31	2.21	24.24	21.41	271.58	418.33	4.95	4.37	6.17	6.17
Prairie County	C21	RM 152.54	51463	500-yr	3143.2	678.25	671.85	2.41	2.4	26.46	25.87	251.98	300.46	5.17	5.07	6.4	6.4
Prairie County	C21	RM 152.35	51157	500-yr	3143.2	678.12	671.41	2.36	2.34	24.2	22.4	229.76	251.95	5.77	5.34	6.71	6.71
Prairie County	C21	RM 152.16	50852	500-yr	3143.2	678.02	671.23	2.19	2.1	21.18	18.38	268.26	326.81	5.29	4.59	6.79	6.79
Prairie County	C21	RM 151.97	50546	500-yr	3143.2	677.93	670.99	2.02	1.84	17.37	14.38	284.09	403.52	5.12	4.23	6.94	6.94
Prairie County	C21	RM 151.77	50227	500-yr	3143.2	677.84	670.87	2.02	1.72	17.01	11.93	204.89	409.37	6.41	4.46	6.97	6.97
Prairie County	C21	RM 151.59	49936	500-yr	3143.2	677.56	670.75	2.8	2.32	33.37	21.47	152.18	346.96	6.14	3.9	6.81	6.81
Prairie County	C21	RM 151.38	49599	500-yr	3143.2	677.43	670.9	2.45	2.12	25.56	17.63	199.41	367.96	6.06	4.15	6.53	6.53
Prairie County	C21	RM 151.19	49287	500-yr	3143.2	677.33	670.96	2.25	2.07	21.55	12.14	226.6	446.38	6.06	3.4	6.37	6.37
Prairie County	C21	RM 151.01	49012	500-yr	3143.2	677.27	670.91	1.99	1.91	18.85	14.43	288.76	399.81	5.4	4.12	6.36	6.36
Prairie County	C21	RM 150.81	48683	500-yr	3143.2	677.23	670.79	1.56	1.53	10.97	10.12	428.92	473.56	4.68	4.32	6.44	6.44
Prairie County	C21	RM 150.63	48400	500-yr	4021	677.1	670.45	1.85	1.73	15.1	11.15	405.47	607.08	5.21	3.83	6.65	6.65
Prairie County	C21	RM 150.44	48094	500-yr	4021	676.88	669.86	2.38	2.12	25.28	16.03	273.64	516.9	5.83	3.69	7.02	7.02
Prairie County	C21	RM 150.25	47780	500-yr	4021	676.19	669.38	3.79	3.42	70.64	44.78	166.06	303.59	6.15	3.88	6.81	6.81
Prairie County	C21	RM 150.05	47474	500-yr	4021	676.09	669.21	3.07	3	39.47	35.32	204.16	234.44	6.37	5.71	6.88	6.88
Prairie County	C21	RM 149.87	47178	500-yr	4021	675.99	669.02	2.67	2.54	31.32	27.11	269.57	334.24	5.49	4.74	6.97	6.97
Prairie County	C21	RM 149.66	46846	500-yr	4021	675.89	668.97	2.26	2.14	22.78	19.84	331.18	409.42	5.29	4.6	6.92	6.92
Prairie County	C21	RM 149.48	46551	500-yr	4021	675.56	668.91	2.85	2.48	36.29	25.49	261.52	876.13	5.17	3.62	6.65	6.65
Prairie County	C21	RM 149.27	46219	500-yr	4021	675.43	668.94	2.62	2.04	30.24	19.84	208.49	668.1	5.63	3.66	6.49	6.49
Prairie County	D1	RM 149.08	45914	500-yr	4021	675.21	668.95	2.62	2.26	29.83	19.52	254.75	536.1	5.66	3.69	6.26	6.26
Prairie County	D1	RM 148.89	45608	500-yr	4021	675.12	668.96	2.25	2.23	21.98	21.39	314.73	426.98	5.66	5.52	6.16	6.16
Prairie County	D1	RM 148.7	45301	500-yr	4021	675	668.73	2.21	2.17	23.11	21.74	347.94	399.24	5.18	4.88	6.27	6.27
Prairie County	D1	RM 148.5	44987	500-yr	4021	674.72	668.42	2.71	2.38	31.43	25.29	235.13	374.37	5.9	4.75	6.3	6.3
Prairie County	D1	RM 148.3	44667	500-yr	4021	674.34	668.01	3.27	2.83	45.49	34.41	193.35	316.29	5.96	4.5	6.33	6.33
Prairie County	D1	RM 148.11	44353	500-yr	4021	674.19	667.73	2.88	2.69	35.33	30.58	230.09	310.61	5.9	5.12	6.46	6.46
Prairie County	D1	RM 147.93	44062	500-yr	4021	674.1	667.4	2.44	2.4	26.18	24.62	306.12	331.4	5.37	5.05	6.7	6.7
Prairie County	D1	RM 147.74	43761	500-yr	4021	674.01	667.21	2.3	2.11	23.95	19.69	251.8	406.58	5.71	4.68	6.8	6.8
Prairie County	D1	RM 147.55	43454	500-yr	4021	673.83	666.79	2.6	2.19	28.51	17.5	197.43	485.79	6.22	3.78	7.04	7.04
Prairie County	D1	RM 147.34	43128	500-yr	4021	673.64	666.46	2.79	2.3	32.6	19.16	173.86	469.22	6.44	3.72	7.18	7.18

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	500-yr	4021	673.45	666.42	2.87	2.5	34.94	24.96	178.57	369.64	6.15	4.36	7.03	7.03
Prairie County	D1	RM 146.96	42505	500-yr	4021	673.05	666.49	3.32	3.07	46.14	31.96	187.33	301.35	6.28	4.34	6.56	6.56
Prairie County	D1	RM 146.77	42199	500-yr	4021	672.93	666.48	2.9	2.87	35.59	31.85	225.21	254.94	6.14	5.5	6.45	6.45
Prairie County	D1	RM 146.58	41899	500-yr	4021	672.89	666.59	2.32	2.3	23.07	21.28	296.32	323.92	5.85	5.4	6.3	6.3
Prairie County	D1	RM 146.32	41487	500-yr	4021	672.67	666.62	2.4	2.33	26.68	23.54	325.06	384.36	5.09	4.49	6.05	6.05
Prairie County	D1	RM 146	40968	500-yr	4021	672.32	666.48	2.61	2.53	31.22	26.17	277.27	344.8	5.5	4.61	5.84	5.84
Prairie County	D1	RM 145.65	40420	500-yr	4021	671.94	665.52	2.79	2.67	35.47	28.93	247.14	321.18	5.75	4.69	6.42	6.42
Prairie County	D1	RM 145.36	39958	500-yr	4021	671.71	664.91	2.58	2.4	30.7	21.27	264.9	422.42	5.74	3.97	6.8	6.8
Prairie County	D1	RM 145.13	39579	500-yr	4021	671.54	664.58	2.46	2.31	27.24	19.32	266.31	409.27	6.02	4.26	6.96	6.96
Prairie County	D1	RM 144.92	39251	500-yr	4021	671.39	664.24	2.43	2.3	27.44	20.93	272.39	385.59	5.97	4.54	7.15	7.15
Prairie County	D1	RM 144.73	38942	500-yr	4021	671.22	663.99	2.52	2.35	29.28	22.83	264.25	375.94	5.86	4.56	7.23	7.23
Prairie County	D1	RM 144.56	38672	500-yr	4021	671.03	663.14	2.64	2.54	30.22	27.33	265.15	311.63	5.62	5.09	7.89	7.89
Prairie County	D1		38642.5	500-yr	Bridge												
Prairie County	D1	RM 144.52	38613	500-yr	4021	670.95	663.14	2.68	2.57	31.41	28.04	265.15	361.89	5.54	4.94	7.81	7.81
Prairie County	D1	RM 144.33	38305	500-yr	4021	670.76	664.19	2.74	2.49	31.87	23.91	232.15	356.88	6.04	4.52	6.57	6.57
Prairie County	D1	RM 144.13	37987	500-yr	4021	670.67	664.33	2.39	2.24	24.08	18.75	271.37	378.8	6.09	4.75	6.34	6.34
Prairie County	D1	RM 143.91	37637	500-yr	4021	670.6	663.96	2.08	1.83	18.46	13.8	299.48	492.75	5.97	4.45	6.64	6.64
Prairie County	D1	RM 143.71	37320	500-yr	4021	670.2	663.43	3.06	2.58	39.04	24.82	191.55	387.53	6.36	4.02	6.77	6.77
Prairie County	D1	RM 143.45	36908	500-yr	4021	669.72	663.01	3.53	3.19	52.95	38.49	179.26	285.83	6.08	4.41	6.71	6.71
Prairie County	D1	RM 143.21	36511	500-yr	4021	669.58	662.92	2.85	2.75	34.15	27.57	224.58	290.66	6.23	5.03	6.66	6.66
Prairie County	D1	RM 142.97	36139	500-yr	4021	669.41	662.7	2.71	2.64	30.64	26.5	232.06	277.76	6.35	5.49	6.71	6.71
Prairie County	D1	RM 142.71	35717	500-yr	4021	668.81	662.52	3.59	3.49	55.43	45.9	192.11	239.8	5.81	4.8	6.29	6.29
Prairie County	D1	RM 142.46	35322	500-yr	4021	668.75	662.36	2.63	2.48	29.62	24.34	254.79	334.28	5.9	4.85	6.39	6.39
Prairie County	D1	RM 142.23	34952	500-yr	4021	668.52	662.21	2.77	2.5	32.61	22.77	237.35	385.96	5.97	4.16	6.31	6.31
Prairie County	D1	RM 142.02	34614	500-yr	4021	668.38	662.21	2.53	2.31	28.37	23.37	269.68	396.75	5.33	4.38	6.17	6.17
Prairie County	D1	RM 141.8	34258	500-yr	4021	668.33	662.01	1.88	1.87	15.54	15.11	393.92	408.36	5.4	5.27	6.32	6.32
Prairie County	D1	RM 141.6	33942	500-yr	4021	668.17	661.72	2.07	2.06	16.58	16.34	496.43	505.37	3.9	3.85	6.45	6.45
Prairie County	D1	RM 141.42	33642	500-yr	4021	668.13	661.32	1.7	1.67	11.93	10.83	499.33	561.88	4.72	4.29	6.81	6.81
Prairie County	D1	RM 141.22	33325	500-yr	4021	667.98	660.91	2	1.92	16.95	12.92	326.47	449.52	6.11	4.66	7.07	7.07
Prairie County	D1	RM 141.02	33011	500-yr	4021	667.56	660.58	3.06	2.82	38.38	26.83	194.42	307.45	6.66	4.64	6.98	6.98
Prairie County	D1	RM 140.84	32709	500-yr	4021	667.49	660.35	2.6	2.54	28.31	25.09	241.98	282.19	6.35	5.62	7.14	7.14
Prairie County	D1	RM 140.64	32394	500-yr	4021	667.39	660.07	2.44	2.39	24.37	22.59	239.5	264.28	6.86	6.37	7.32	7.32
Prairie County	D1	RM 140.44	32074	500-yr	4021	667.16	659.63	2.74	2.67	31.56	28.4	225.88	259.43	6.44	5.81	7.53	7.53
Prairie County	D1	RM 140.23	31738	500-yr	4021	666.84	659.62	3.12	3.01	41.49	35.06	207.01	255.61	6.18	5.23	7.22	7.22
Prairie County	D1	RM 140.03	31420	500-yr	4021	666.79	659.59	2.51	2.42	26.49	22.07	253.77	318.12	6.27	5.24	7.2	7.2
Prairie County	D1	RM 139.84	31118	500-yr	4021	666.73	659.19	2.16	2.05	19.94	16.66	309.19	405.96	5.93	4.96	7.54	7.54
Prairie County	D1	RM 139.64	30801	500-yr	4021	666.58	658.96	2.4	2.05	23.15	15.97	222.13	404.31	7.03	4.84	7.62	7.62
Prairie County	D1	RM 139.44	30466	500-yr	4021	666.48	658.72	2.3	2.04	21.69	15.98	250.57	403.96	6.64	4.88	7.76	7.76
Prairie County	D1	RM 139.23	30138	500-yr	4021	666.27	658.34	2.54	2.47	30.01	23.84	219.78	287.05	7.15	5.68	7.93	7.93
Prairie County	D1	RM 139.02	29799	500-yr	4021	665.87	658.14	3.22	3.02	51.25	38.73	179.74	260.14	6.79	5.12	7.73	7.73
Prairie County	D1	RM 138.81	29470	500-yr	4021	665.85	658.11	2.44	2.34	27.29	23.48	219.94	270.25	7.4	6.35	7.74	7.74
Prairie County	D1	RM 138.62	29157	500-yr	4021	665.7	657.94	2.55	2.42	26.47	23.39	216.79	262.97	7.14	6.31	7.76	7.76
Prairie County	D1	RM 138.41	28823	500-yr	4021	665.46	657.82	2.85	2.72	36.49	32.48	202.45	242.11	6.84	6.1	7.64	7.64
Prairie County	D1	RM 138.22	28519	500-yr	4021	665.28	657.8	2.89	2.77	34.37	30.1	198.68	238.28	6.92	6.09	7.48	7.48
Prairie County	D1	RM 138.02	28200	500-yr	4021	665.28	657.74	2.21	2.16	21	19.17	246.99	278.33	7.31	6.68	7.54	7.54
Prairie County	D1	RM 137.82	27874	500-yr	4021	665.17	656.95	2.24	2.12	22.15	17.34	263.32	363.52	6.68	5.22	8.22	8.22
Prairie County	D1	RM 137.62	27552	500-yr	4021	664.97	656.75	2.52	2.27	28.74	18.15	234.81	502.21	6.62	4.17	8.22	8.22
Prairie County	D1	RM 137.42	27247	500-yr	4021	664.74	656.66	2.81	2.61	35.15	25.83	204.7	310.25	6.82	5	8.08	8.08
Prairie County	D1	RM 137.24	26944	500-yr	4021	664.58	656.66	2.79	2.66	35.8	28.16	205.46	365.67	6.9	5.42	7.92	7.92
Prairie County	D1	RM 137.04	26627	500-yr	4049.3	664.4	655.41	2.81	2.77	35.6	33.6	208.71	223.72	6.88	6.53	8.99	8.99
Prairie County	D1		26616.5	500-yr	Bridge												
Prairie County	D1	RM 137.02	26606	500-yr	4049.3	664.36	655.41	2.82	2.79	36.06	34.04	208.58	223.55	6.85	6.49	8.95	8.95
Prairie County	D2	RM 136.84	26475	500-yr	4049.3	664.31	656.46	2.68	2.65	30.89	27.3	207.19	237.82	7.27	6.42	7.85	7.85
Prairie County	D2		26471.5	500-yr	Bridge												
Prairie County	D2	RM 136.65	26468	500-yr	4049.3	664.28	656.45	2.68	2.63	31.31	27.38	207.2	241.56	7.27	6.37	7.83	7.83
Prairie County	D2	RM 136.44	26317	500-yr	4049.3	664.26	656.37	2.41	2.34	25.78	21.73	228.7	282.04	7.3	6.14	7.89	7.89
Prairie County	D2	RM 136.23	26001	500-yr	4049.3	664.11	656.19	2.49	2.36	27.52	22.73	246.47	319.16	6.52	5.38	7.92	7.92
Prairie County	D2	RM 136.04	25673	500-yr	4049.3	663.94	656.01	2.62	2.34	27.56	17.03	211.82	396.99	7.1	4.36	7.93	7.93
Prairie County	D2	RM 135.85	25337	500-yr	4049.3	663.63	655.93	3.08	2.83	38.54	19.63	186.08	406.24	6.97	3.52	7.7	7.7
Prairie County	D2	RM 135.66	25033	500-yr	4049.3	663.52	655.91	2.85	2.63	32.82	21.61	202.14	337.73	6.95	4.55	7.61	7.61

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	500-yr	4049.3	663.34	655.86	2.87	2.71	40.26	31.45	199.11	274.06	6.98	5.45	7.48	7.48
Prairie County	D2	RM 135.24	24417	500-yr	4049.3	663.28	655.68	2.42	2.37	28.02	25.19	229.44	261.78	7.25	6.52	7.6	7.6
Prairie County	D2	RM 135	24090	500-yr	4049.3	663.13	655.56	2.48	2.39	28.22	24.09	246.98	304.78	6.51	5.55	7.57	7.57
Prairie County	D2	RM 134.78	23742	500-yr	4049.3	662.97	655.36	2.52	2.33	29.06	20.55	223.84	352.05	7	4.93	7.61	7.61
Prairie County	D2	RM 134.58	23351	500-yr	4049.3	662.59	655.29	3.07	2.85	45.99	30.73	189.75	313.81	6.81	4.53	7.3	7.3
Prairie County	D2	RM 134.39	23000	500-yr	4049.3	662.38	655.24	2.89	2.77	40.74	36.43	216.99	256.17	6.37	5.7	7.14	7.14
Prairie County	D2	RM 134.19	22682	500-yr	4049.3	662.3	655.11	2.46	2.24	25.61	21.88	263.97	586.4	6	5.12	7.19	7.19
Prairie County	D2	RM 133.99	22372	500-yr	4049.3	662.16	654.97	2.44	2.31	25.35	20.8	264.94	346.59	6.18	5.06	7.19	7.19
Prairie County	D2	RM 133.79	22053	500-yr	4049.3	661.92	655	2.77	2.52	32.14	25.17	226.1	329.4	6.25	4.89	6.92	6.92
Prairie County	D2	RM 133.59	21733	500-yr	4049.3	661.78	654.96	2.64	2.5	29.29	23.61	247	326.83	6.15	4.95	6.82	6.82
Prairie County	D2	RM 133.41	21417	500-yr	4049.3	661.67	654.78	2.46	2.29	25.27	19.86	254.87	355.35	6.33	4.97	6.89	6.89
Prairie County	D2	RM 133.21	21104	500-yr	4049.3	661.47	654.64	2.68	2.37	29.91	19.6	229.84	412.42	6.36	4.15	6.83	6.83
Prairie County	D2	RM 133.02	20811	500-yr	4049.3	661.36	654.53	2.55	2.27	27.3	18.42	246.2	423.66	6.25	4.2	6.83	6.83
Prairie County	D2	RM 132.83	20491	500-yr	4049.3	661.24	654.29	2.45	2.23	25.42	19.42	262.67	396.53	6.01	4.59	6.95	6.95
Prairie County	D2	RM 132.63	20184	500-yr	4049.3	661.15	654.04	2.31	2.04	22.48	15.63	254.86	470.03	6.09	4.22	7.11	7.11
Prairie County	D2	RM 132.42	19875	500-yr	4049.3	660.94	653.98	2.59	2.27	27.79	18.4	221.68	416.27	6.5	4.29	6.96	6.96
Prairie County	D2	RM 132.23	19553	500-yr	4049.3	660.88	653.88	2.23	2.02	20.46	16.12	257.21	386.53	6.6	5.19	7	7
Prairie County	D2	RM 132.02	19225	500-yr	4049.3	660.63	653.63	2.62	2.41	28.94	22.58	246.63	351.53	6.14	4.78	7	7
Prairie County	D2	RM 131.81	18910	500-yr	4049.3	660.42	653.37	2.8	2.49	32.8	22.36	226.33	383.17	6.23	4.24	7.05	7.05
Prairie County	D2	RM 131.58	18573	500-yr	4049.3	660.34	653.02	2.43	2.19	24.13	17.08	238.03	426.32	6.82	4.83	7.32	7.32
Prairie County	D2	RM 131.38	18237	500-yr	4049.3	660.17	652.75	2.61	2.43	27.63	23.93	212.37	280.31	6.84	5.94	7.42	7.42
Prairie County	D2	RM 131.18	17875	500-yr	4049.3	659.88	652.49	2.94	2.74	35.91	26.11	209.79	315.6	6.46	4.68	7.39	7.39
Prairie County	D2	RM 130.98	17548	500-yr	4049.3	659.66	652.34	3.02	2.7	37.55	22.1	197.09	386.3	6.65	3.89	7.32	7.32
Prairie County	D2	RM 130.78	17227	500-yr	4049.3	659.57	652.27	2.69	2.34	29.64	18.49	216.24	417.32	6.69	4.15	7.3	7.3
Prairie County	D2	RM 130.59	16914	500-yr	4049.3	659.5	652.16	2.37	2.13	22.82	12.95	239.07	485.72	6.96	3.92	7.34	7.34
Prairie County	D2	RM 130.39	16588	500-yr	4049.3	659.25	651.95	2.76	2.57	31.17	17.21	212.42	419.97	6.83	3.75	7.3	7.3
Prairie County	D2	RM 130.19	16280	500-yr	4049.3	659.07	651.81	2.84	2.75	33.43	26.13	219.93	292.45	6.46	5.04	7.26	7.26
Prairie County	D2	RM 130	15965	500-yr	4049.3	658.99	651.57	2.51	2.41	26.1	19.52	244.4	344.33	6.54	4.88	7.42	7.42
Prairie County	D2	RM 129.81	15649	500-yr	4049.3	658.87	651.47	2.47	2.35	24.74	19.97	235.14	309.17	6.9	5.57	7.4	7.4
Prairie County	D2	RM 129.62	15337	500-yr	4049.3	658.69	651.34	2.68	2.38	29.49	22.04	216.64	348.1	6.66	4.96	7.35	7.35
Prairie County	D2	RM 129.43	15031	500-yr	4049.3	658.57	651.21	2.6	2.51	27.67	23.48	227.37	289.82	6.79	5.75	7.35	7.35
Prairie County	D2	RM 129.24	14724	500-yr	4162.6	658.33	651.06	2.89	2.68	34.68	21.87	222.31	433.5	6.41	4.03	7.27	7.27
Prairie County	D2	RM 129.04	14417	500-yr	4162.6	658.09	651.06	3.06	2.8	39.06	23.4	209.54	457.04	6.38	3.81	7.03	7.03
Prairie County	D2	RM 128.82	14112	500-yr	4162.6	657.89	651.05	3.09	2.83	39.77	24.26	209.12	487.66	6.35	3.86	6.84	6.84
Prairie County	D2	RM 128.62	13798	500-yr	4162.6	657.77	651.08	2.8	2.62	32.55	21.78	228.13	506.51	6.45	4.3	6.69	6.69
Prairie County	D2	RM 128.41	13446	500-yr	4162.6	657.63	651.07	2.59	2.43	28.24	21.11	255.09	370.34	6.19	4.62	6.56	6.56
Prairie County	D2	RM 128.21	13125	500-yr	4162.6	657.48	650.98	2.61	2.36	28.59	22.08	246.55	368.33	6.22	4.79	6.5	6.5
Prairie County	D2	RM 127.98	12790	500-yr	4162.6	657.33	650.84	2.57	2.3	27.59	17.42	250.67	458.88	6.27	3.94	6.49	6.49
Prairie County	D2	RM 127.75	12473	500-yr	4162.6	657.24	650.59	2.31	2.09	22.55	13.27	287.96	555.54	6.12	3.58	6.65	6.65
Prairie County	D2	RM 127.55	12112	500-yr	4162.6	657.11	650.35	2.29	2.11	22.17	15.14	287.38	470.61	6.15	4.18	6.76	6.76
Prairie County	D2	RM 127.27	11729	500-yr	4162.6	656.95	649.95	2.35	2.2	23.16	15.69	277.2	445.89	6.28	4.25	7	7
Prairie County	D2	RM 126.97	11415	500-yr	4162.6	656.68	649.68	2.8	2.53	32.72	19.16	226.77	443.03	6.39	3.72	7	7
Prairie County	D2	RM 126.71	10962	500-yr	4162.6	656.43	649.49	2.85	2.64	33.41	23.06	218.29	347.06	6.58	4.54	6.94	6.94
Prairie County	D2	RM 126.43	10478	500-yr	4162.6	656.32	649.32	2.3	2.25	21.98	19.29	275.96	324.16	6.5	5.72	7	7
Prairie County	D2	RM 126.42	10074	500-yr	4162.6	656.06	649.05	2.66	2.52	29.72	24.47	249.83	325.3	6.15	5.07	7.01	7.01
Prairie County	D2	RM 126.41	9625	500-yr	4162.6	655.78	648.27	2.82	2.62	32.86	26.27	220.07	305.9	6.49	5.2	7.5	7.5
Prairie County	D2		9598.5	500-yr	Bridge												
Prairie County	D2	RM 126.4	9572	500-yr	4162.6	655.72	648.27	2.85	2.65	33.71	26.91	220.07	305.58	6.43	5.14	7.44	7.44
Prairie County	D3	RM 126.38	9533	500-yr	4162.6	655.69	648.27	2.87	2.66	34.05	27.16	220.07	305.45	6.4	5.11	7.42	7.42
Prairie County	D3		9523	500-yr	Bridge												
Prairie County	D3	RM 126.36	9513	500-yr	4162.6	655.66	648.27	2.88	2.68	34.46	27.47	220.07	305.3	6.37	5.09	7.39	7.39
Prairie County	D3	RM 126.22	9286	500-yr	4162.6	655.58	648.8	2.62	2.49	28.51	21.05	246.62	356.12	6.38	4.7	6.78	6.78
Prairie County	D3	RM 126.03	8974	500-yr	4162.6	655.48	648.71	2.43	2.27	24.71	17.78	269.32	408.36	6.26	4.49	6.77	6.77
Prairie County	D3	RM 125.82	8648	500-yr	4162.6	655.34	648.36	2.41	2.29	24.76	19.09	282.4	392.59	6.02	4.63	6.98	6.98
Prairie County	D3	RM 125.63	8335	500-yr	4162.6	655.2	648.12	2.46	2.4	25.08	23.2	259.94	290.13	6.46	5.99	7.08	7.08
Prairie County	D3	RM 125.43	8020	500-yr	4162.6	655	647.8	2.73	2.42	30.55	22.16	217.06	354.29	6.73	4.86	7.2	7.2
Prairie County	D3	RM 125.24	7711	500-yr	4162.6	654.9	647.26	2.53	2.27	25.99	18.37	226.37	371.5	7.03	4.94	7.64	7.64
Prairie County	D3	RM 125.05	7403	500-yr	4162.6	654.71	647.23	2.74	2.43	30.36	21.01	209.96	355.03	6.99	4.82	7.48	7.48
Prairie County	D3	RM 124.83	7059	500-yr	4162.6	654.58	647.25	2.59	2.43	27.54	19.85	237.41	377.25	6.69	4.82	7.33	7.33
Prairie County	D3	RM 124.62	6712	500-yr	4162.6	654.44	647.25	2.53	2.36	26.79	15.7	257.84	479.68	6.31	3.68	7.19	7.19

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	500-yr	4162.6	654.29	647.27	2.65	1.99	29.4	14.21	221.62	956.07	6.29	3.01	7.02	7.02
Prairie County	D3	RM 124.15	5960	500-yr	4162.6	654.02	647.27	2.81	2.09	33.63	15.4	232.47	837.09	5.92	2.69	6.75	6.75
Prairie County	D3	RM 123.94	5627	500-yr	4162.6	653.72	647.27	3.15	2.21	42.36	19.2	199.91	712.34	5.93	2.66	6.45	6.45
Prairie County	D3	RM 123.74	5312	500-yr	4162.6	653.48	647.25	3.14	2.17	42.13	16.97	206.88	820.81	5.93	2.37	6.23	6.23
Prairie County	D3	RM 123.56	5014	500-yr	4162.6	653.54	647.24	2.03	1.52	17.3	9.01	311.23	1017.33	6.18	3.2	6.3	6.3
Prairie County	D3	RM 123.24	4500	500-yr	4162.6	653.47	647.19	1.12	1.12	13.88	13.75	934.44	944.45	3.96	3.93	6.27	6.27
Prairie County	D3	RM 122.99	4116	500-yr	4162.6	653.31	646.67	1.48	1.4	10.12	7.41	527.26	778.91	5.22	3.81	6.64	6.64
Prairie County	D3	RM 122.76	3746	500-yr	4162.6	653.15	646.22	1.91	1.83	15.54	9.27	362.48	641.91	5.97	3.55	6.93	6.93
Prairie County	D3	RM 122.55	3414	500-yr	4162.6	652.87	645.7	2.59	2.34	27.84	12.2	242.74	627.56	6.52	2.83	7.17	7.17
Prairie County	D3	RM 122.3	3012	500-yr	4162.6	652.58	645.57	2.92	2.37	35.63	16.73	214.39	592.82	6.36	2.96	7.01	7.01
Prairie County	D3	RM 122.08	2651	500-yr	4162.6	652.41	645.49	2.72	2.29	31.22	16.62	240.65	560.45	6.13	3.24	6.92	6.92
Prairie County	D3	RM 121.88	2338	500-yr	4162.6	652.27	645.42	2.63	2.25	29.08	17.29	244.44	498.32	6.27	3.71	6.85	6.85
Prairie County	D3	RM 121.66	1982	500-yr	4162.6	652.02	645.3	2.85	2.53	34.09	20.85	226.93	429.64	6.29	3.83	6.72	6.72
Prairie County	D3	RM 121.46	1651	500-yr	4162.6	651.85	645.06	2.76	2.59	32.32	22.63	243.93	377.23	6.09	4.25	6.79	6.79
Prairie County	D3	RM 121.24	1304	500-yr	4162.6	651.65	644.99	2.78	2.5	33.75	21.39	247.35	446.94	5.9	3.73	6.66	6.66
Prairie County	D3	RM 121.02	957	500-yr	4162.6	651.5	644.88	2.57	2.31	29.49	21.09	259.65	420.03	6.01	4.3	6.62	6.62
Prairie County	D3	RM 120.84	660	500-yr	4162.6	651.33	644.78	2.62	2.46	32.3	20.81	255.32	428.04	6.15	3.95	6.55	6.55
Prairie County	D3	RM 120.64	350	500-yr	4162.6	651.16	644.42	2.65	2.55	29.21	17.19	244.23	435.03	6.4	3.76	6.74	6.74

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	500-yr	4163.13	651.12	643.94	2.49	2.36	25.96	23.74	254.01	489.55	6.26	5.73	7.18	7.18
Dawson County	D3	RM 120.28	90838.07	500-yr	4163.13	651.07	643.78	2.49	2.24	25.69	17.98	233.12	410.53	6.48	4.53	7.28	7.28
Dawson County	D3	RM 120.18	90675.23	500-yr	4163.13	650.95	643.7	2.63	2.43	28.32	21.47	213.48	337.35	6.74	5.12	7.25	7.25
Dawson County	D3	RM 120.00	90388.96	500-yr	4163.13	650.82	643.56	2.62	2.43	27.96	21.14	226.64	330.18	6.87	5.19	7.25	7.25
Dawson County	D3	RM 119.84	90136.35	500-yr	4163.13	650.66	643.44	2.78	2.53	31.5	21.61	213.73	411.74	6.82	4.68	7.22	7.22
Dawson County	D3	RM 119.68	89873.82	500-yr	4163.13	650.4	643.31	3.14	2.93	40.31	30.48	189.21	382.71	6.78	5.12	7.09	7.09
Dawson County	D3	RM 119.53	89627.16	500-yr	4163.13	650.29	643.2	2.99	2.88	36.38	25.96	204.32	299.58	6.78	4.83	7.09	7.09
Dawson County	D3	RM 119.39	89404.11	500-yr	4163.13	650.24	643.09	2.68	2.48	29.38	20.5	231.36	362.04	6.64	4.64	7.15	7.15
Dawson County	D3	RM 119.26	89201.38	500-yr	4163.13	650.19	642.99	2.46	2.25	25.4	19.06	263.7	394.21	6.26	4.7	7.2	7.2
Dawson County	D3	RM 119.12	88969.13	500-yr	4163.13	649.93	642.87	3.01	2.42	37.3	16.62	193.4	709.21	6.69	2.95	7.06	7.06
Dawson County	D3	RM 119.00	88780.83	500-yr	4163.13	649.86	642.78	2.87	2.31	34	15.99	199.46	580.72	6.64	3.1	7.08	7.08
Dawson County	D3	RM 118.85	88537.07	500-yr	4163.13	649.8	642.66	2.53	2.26	26.75	14.9	241.51	629.09	6.36	3.53	7.13	7.13
Dawson County	D3	RM 118.72	88336.12	500-yr	4163.13	649.75	642.56	2.36	2	22.69	12.46	237.19	744.65	6.8	3.73	7.19	7.19
Dawson County	D3	RM 118.60	88130.39	500-yr	4163.13	649.59	642.46	2.66	2.27	29.11	15.36	220.72	603.53	6.61	3.48	7.12	7.12
Dawson County	D3	RM 118.47	87924.15	500-yr	4163.13	649.42	642.37	2.9	2.54	35.36	17.45	211.72	540.27	6.17	3.04	7.05	7.05
Dawson County	D3	RM 118.34	87719.85	500-yr	4163.13	649.18	642.27	3.2	2.83	44.67	25.88	214.06	458.54	5.56	3.21	6.92	6.92
Dawson County	D3	RM 118.21	87507.02	500-yr	4163.13	649.04	642.16	3.18	2.63	41.54	17.92	175.82	555.83	6.69	2.85	6.87	6.87
Dawson County	D3	RM 118.07	87276.02	500-yr	4219.77	649.01	642.05	2.5	2.32	27.1	15.93	297.49	555.63	5.61	3.28	6.96	6.96
Dawson County	D4	RM 117.90	87004.77	500-yr	4219.77	648.97	641.92	2.26	1.96	21.53	13.83	234.19	655.24	6.19	3.95	7.05	7.05
Dawson County	D4	RM 117.77	86795.88	500-yr	4219.77	648.92	641.81	2.13	1.79	19.12	14.44	217.15	650.55	6.13	4.59	7.11	7.11
Dawson County	D4	RM 117.62	86560.03	500-yr	4219.77	648.84	641.7	2.12	1.81	18.57	12.75	247.32	692.55	6.48	4.44	7.14	7.14
Dawson County	D4	RM 117.46	86294.2	500-yr	4219.77	648.61	641.57	2.79	2.07	32.4	14.27	183	729.83	6.44	2.8	7.04	7.04
Dawson County	D4	RM 117.33	86073.88	500-yr	4219.77	648.27	641.46	3.49	2.62	50.46	24.89	137.01	625.93	6.74	3.24	6.8	6.8
Dawson County	D4	RM 117.16	85808.16	500-yr	4219.77	648.2	641.33	2.82	2.3	32.83	15.56	182.25	615.42	6.65	3.12	6.87	6.87
Dawson County	D4	RM 117.03	85604.68	500-yr	4219.77	648.16	641.3	2.43	2.12	25.16	13.49	243.69	710.73	6.02	3.2	6.86	6.86
Dawson County	D4	RM 116.87	85336.88	500-yr	4219.77	648.12	641.29	2.12	1.67	18.91	10.56	238.63	777.41	6.16	3.43	6.83	6.83
Dawson County	D4	RM 116.69	85043.25	500-yr	4219.77	647.99	641.44	2.21	1.8	21.3	13.81	279.08	655.92	5.52	3.57	6.55	6.55
Dawson County	D4	RM 116.56	84823.15	500-yr	4219.77	647.84	641.34	2.47	1.84	26.72	14.34	234.35	780.11	5.52	2.94	6.5	6.5
Dawson County	D4	RM 116.39	84558.58	500-yr	4219.77	647.77	641.21	2.12	1.66	19.3	9.76	269.92	861.63	5.88	2.96	6.56	6.56
Dawson County	D4	RM 116.22	84287.19	500-yr	4219.77	647.63	641	2.29	1.64	22.05	9.54	259.34	955.81	6.23	2.69	6.63	6.63
Dawson County	D4	RM 116.05	84007.59	500-yr	4219.77	647.46	640.84	2.58	1.69	27.92	11.85	213.93	939.77	6.26	2.65	6.62	6.62
Dawson County	D4	RM 115.87	83722.29	500-yr	4219.77	647.33	640.8	2.61	1.69	29.06	12.96	214.27	940.11	5.99	2.65	6.53	6.53
Dawson County	D4	RM 115.73	83500.35	500-yr	4219.77	647.3	640.69	2.08	1.45	19.35	10.79	310.77	1009.2	5.2	2.89	6.61	6.61
Dawson County	D4	RM 115.61	83294.37	500-yr	4219.77	647.26	640.59	1.8	1.38	14.27	8.39	385.01	978.61	5.37	3.15	6.67	6.67
Dawson County	D4	RM 115.45	83034.82	500-yr	4219.77	647.21	640.37	1.7	1.4	12.94	9.35	407.6	819.76	5.09	3.67	6.84	6.84
Dawson County	D4	RM 115.29	82782.88	500-yr	4219.77	647.07	640.34	2.03	1.62	17.89	10.17	319.39	815.31	5.66	3.19	6.72	6.72
Dawson County	D4	RM 115.09	82480.02	500-yr	4219.77	647.01	640.2	1.81	1.4	13.77	7.76	324	850.95	6.28	3.54	6.82	6.82
Dawson County	D4	RM 114.96	82177.99	500-yr	4219.77	646.83	640	2.29	1.86	21.84	13.88	260.73	615.37	6.32	4	6.83	6.83
Dawson County	D4	RM 114.74	81836.48	500-yr	4219.77	646.37	639.98	3.34	2.38	46.79	23.68	179.76	568.03	6.21	3.12	6.39	6.39
Dawson County	D4	RM 114.58	81577.9	500-yr	4219.77	646.34	639.46	2.57	2.43	27.43	24.68	195.77	359.75	6.5	5.83	6.88	6.88
Dawson County	D4	RM 114.42	81309.47	500-yr	4219.77	646.2	639.33	2.59	2.49	28.43	24.09	257.79	328.12	6.1	5.17	6.87	6.87
Dawson County	D4	RM 114.28	81078.59	500-yr	4219.77	645.92	639.21	3.07	2.78	39.56	29.61	213.07	323.95	6.25	4.68	6.71	6.71
Dawson County	D4	RM 114.11	80813.63	500-yr	4219.77	645.7	639.2	3.19	2.83	43.12	28.99	210.21	383.79	6.09	4.08	6.5	6.5
Dawson County	D4	RM 113.97	80580.15	500-yr	4219.77	645.54	639.45	3.12	2.7	42.06	29.48	225.76	441.81	5.73	4.01	6.09	6.09
Dawson County	D4	RM 113.79	80292.13	500-yr	4219.77	645.5	639.45	2.59	2.26	28.93	22.24	201.08	424.94	5.72	4.4	6.05	6.05
Dawson County	D4	RM 113.60	79987.05	500-yr	4219.77	645.49	639.2	1.83	1.66	14.18	12.11	179.84	504.3	6.15	5.21	6.29	6.29
Dawson County	D4	RM 113.43	79712.89	500-yr	4219.77	645.37	638.73	2.18	1.79	19.71	13.36	173.8	537.54	6.51	4.37	6.64	6.64
Dawson County	D4	RM 113.24	79405.49	500-yr	4219.77	645.06	638.43	3.02	2.35	37.97	19.57	130.78	543.39	6.52	3.31	6.63	6.63
Dawson County	D4	RM 113.08	79152.39	500-yr	4219.77	644.89	638.37	2.95	2.47	36.29	21.37	138.2	459.27	6.41	3.73	6.52	6.52
Dawson County	D4	RM 112.94	78925.1	500-yr	4219.77	644.88	638.26	2.19	2.02	20.29	16.04	194.62	427.82	6.23	4.89	6.62	6.62
Dawson County	D4	RM 112.74	78585.88	500-yr	4219.77	644.73	638.09	2.35	2.02	23.6	14.65	237.95	574.6	5.89	3.64	6.64	6.64
Dawson County	D4	RM 112.59	78355.25	500-yr	4219.77	644.61	637.98	2.42	1.98	25.63	14.82	271.99	673.14	5.52	3.17	6.63	6.63
Dawson County	D4	RM 112.37	78008.78	500-yr	4219.77	644.6	637.88	1.74	1.49	12.75	7.99	206.92	825.05	6.25	3.87	6.72	6.72
Dawson County	D4	RM 112.19	77721.27	500-yr	4219.77	644.41	637.59	2.27	1.96	21.61	14.17	213.8	523.72	6.29	4.1	6.82	6.82
Dawson County	D4	RM 111.89	77240.22	500-yr	4219.77	644.05	637.16	2.75	2.45	31.46	20.02	235.68	429.25	6.32	4.01	6.89	6.89
Dawson County	D4	RM 111.42	76486.24	500-yr	4219.77	643.79	636.91	2.33	2.06	22.8	13.89	287.11	549.64	6.13	3.73	6.88	6.88
Dawson County	D4	RM 111.26	76213.83	500-yr	4219.77	643.73	636.66	2.08	1.81	18.55	11.83	329.26	641.32	5.92	3.76	7.07	7.07
Dawson County	D4	RM 111.09	75911.9	500-yr	4219.77	643.37	636.51	2.89	2.72	35.52	28.89	240.23	369.32	5.98	4.85	6.86	6.86
Dawson County	D4	RM 110.95	75678.54	500-yr	4219.77	643.05	636.4	3.35	3.14	46.89	33.79	194.97	306.39	6.34	4.56	6.65	6.65
Dawson County	D4	RM 110.78	75415.61	500-yr	4219.77	642.7	636.27	3.66	3.47	56.72	39.2	186.03	287.97	6.13	4.22	6.43	6.43
Dawson County	D4	RM 110.55	75040.65	500-yr	4219.77	642.6	636.09	2.89	2.7	35.42	25.03	240.69	402.64	5.99	4.24	6.51	6.51

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	500-yr	4219.77	642.56	635.96	2.38	2.14	24.22	14.2	293.1	571.31	5.89	3.44	6.6	6.6
Dawson County	D4	RM 110.17	74428.56	500-yr	4219.77	642.39	635.79	2.43	2.18	26.42	16.78	321.63	591.83	5.18	3.28	6.6	6.6
Dawson County	D4	RM 109.95	74074.87	500-yr	4219.77	642.25	635.62	2.29	1.93	22.44	11.88	297.98	706.65	5.88	3.1	6.63	6.63
Dawson County	D4	RM 109.75	73741.09	500-yr	4219.77	642.07	635.46	2.46	2.01	25.72	11.88	272.8	767.75	5.95	2.74	6.62	6.62
Dawson County	D4	RM 109.54	73418.83	500-yr	4219.77	641.98	635.3	2.26	1.73	21.75	12.68	287.56	706.18	5.94	3.45	6.68	6.68
Dawson County	D4	RM 109.37	73150.54	500-yr	4219.77	641.81	635.17	2.58	1.9	27.89	13.56	224.7	740.69	6.18	3	6.64	6.64
Dawson County	D4	RM 109.19	72864.56	500-yr	4219.77	641.62	635.03	2.66	2.15	29.68	15.43	238.65	614.56	6.15	3.19	6.59	6.59
Dawson County	D4	RM 109.04	72628	500-yr	4219.77	641.24	634.92	3.38	2.82	48.29	26.7	194.23	448.29	6.08	3.34	6.32	6.32
Dawson County	D4	RM 108.86	72339.73	500-yr	4219.77	641.26	634.77	2.38	2.25	24.49	18.11	287.17	449.99	5.63	4.16	6.48	6.48
Dawson County	D4	RM 108.70	72072.36	500-yr	4219.77	641.17	634.65	2.22	2.09	21.1	14.41	291.61	510.75	5.78	3.95	6.53	6.53
Dawson County	D4	RM 108.55	71827.97	500-yr	4219.77	641.08	634.53	2.18	2.12	20.74	12.63	343.64	585.05	5.6	3.41	6.55	6.55
Dawson County	D4	RM 108.40	71587.18	500-yr	4219.77	640.9	634.41	2.46	2.4	25.5	16.09	363.68	596.72	4.69	2.95	6.49	6.49
Dawson County	D4	RM 108.25	71345.86	500-yr	4219.77	640.79	634.29	2.34	2.17	24.14	13.72	361.89	702.53	4.9	2.77	6.5	6.5
Dawson County	D4	RM 108.12	71131.88	500-yr	4219.77	640.67	634.19	2.43	2.11	25.35	11.48	289.42	766.54	5.79	2.61	6.49	6.49
Dawson County	D4	RM 107.98	70905.01	500-yr	4219.77	640.42	634.08	2.87	2.47	35.53	14.78	245.46	711.5	5.82	2.4	6.34	6.34
Dawson County	D4	RM 107.82	70651.22	500-yr	4219.77	640.2	633.95	3.04	2.42	40.09	15.16	231.93	813.38	5.69	2.14	6.25	6.25
Dawson County	D4	RM 107.68	70418.24	500-yr	4219.77	639.94	633.84	3.26	2.77	46.15	19.67	219.72	632.48	5.66	2.41	6.1	6.1
Dawson County	D4	RM 107.50	70132.11	500-yr	4219.77	639.79	633.17	2.98	2.52	38.44	16.67	239.71	685.99	5.59	2.44	6.62	6.62
Dawson County	D4	RM 107.31	69834.56	500-yr	4219.77	639.55	633.23	3	2.65	40.25	21.93	264.38	567.3	5.13	2.81	6.32	6.32
Dawson County	D4	RM 107.13	69541.52	500-yr	4219.77	639.37	633.98	2.74	2.49	34.55	24.42	322.33	516.51	4.63	3.28	5.39	5.39
Dawson County	D5	RM 106.98	69305.02	500-yr	4248.09	639.31	634.16	2.21	2.11	22.9	20.46	421.85	507.25	4.42	3.97	5.15	5.15
Dawson County	D5	RM 106.85	69065.27	500-yr	4248.09	639.21	633.6	2.12	2.01	21.08	15.21	412.29	665.17	4.4	3.18	5.61	5.61
Dawson County	D5	RM 106.65	68764.02	500-yr	4248.09	638.94	632.98	2.5	2.41	28.9	24.92	360.27	576.14	4.21	3.65	5.96	5.96
Dawson County	D5	RM 106.47	68475.87	500-yr	4248.09	638.78	632.51	2.45	1.86	27.64	16.23	307.26	883.65	4.66	2.74	6.27	6.27
Dawson County	D5	RM 106.28	68173.97	500-yr	4248.09	638.28	631.71	3.38	2.47	50.95	22.46	204.05	752.26	5.18	2.29	6.57	6.57
Dawson County	D5	RM 106.10	67879.83	500-yr	4248.09	638.07	631.29	3.15	2.36	45.09	24.04	206.53	695.71	4.84	2.59	6.78	6.78
Dawson County	D5	RM 105.89	67550.49	500-yr	4248.09	637.88	631.76	2.76	2.14	35.01	17.16	226.74	854.66	4.72	2.32	6.12	6.12
Dawson County	D5	RM 105.74	67300.35	500-yr	4248.09	637.73	632.3	2.58	1.78	30.38	16.08	203.14	949.3	4.75	2.52	5.43	5.43
Dawson County	D5	RM 105.54	66973.54	500-yr	4248.09	637.46	632.17	2.83	2.12	36.98	20.77	147.79	777.38	4.6	2.59	5.29	5.29
Dawson County	D5	RM 105.30	66609.03	500-yr	4248.09	637.34	632.29	1.87	1.63	16.99	12.54	219.79	1024.86	3.95	2.92	5.22	5.22
Dawson County	D5	RM 105.06	66212.24	500-yr	4248.09	637.17	631.19	2.15	1.91	22.47	15.55	181.11	1199.85	3.94	2.73	5.98	5.98
Dawson County	D5	RM 104.89	65945.5	500-yr	4248.09	637	631.5	2.21	1.87	24.41	15.11	205.87	1299.59	3.69	2.29	5.58	5.58
Dawson County	D5	RM 104.77	65742.33	500-yr	4248.09	636.89	631.67	2.38	1.68	26.27	12.85	125.62	1384.93	4.56	2.23	6.18	6.18
Dawson County	D5	RM 104.64	65530.83	500-yr	4248.09	636.82	632.1	2	1.41	18.91	9.79	172.34	1557.88	4.33	2.22	5.86	5.86
Dawson County	D5	RM 104.43	65180.62	500-yr	4248.09	636.77	631.56	1.33	1.06	8.93	5.73	361.11	1753.74	3.54	2.28	5.98	5.98
Dawson County	D5	RM 104.26	64906.83	500-yr	4248.09	636.71	631.59	1.31	1	8.39	4.67	218.58	1910.2	3.98	2.22	6.06	6.06
Dawson County	D5	RM 104.10	64643.2	500-yr	4248.09	636.63	630.81	1.64	1.08	12.42	5.49	150.64	1933.76	4.6	2.04	6.19	6.19
Dawson County	D5	RM 103.95	64410.06	500-yr	4248.09	636.59	631.24	1.66	0.95	12.97	6.37	185.01	2066.9	4.39	2.16	6.77	6.77
Dawson County	D5	RM 103.68	63957.56	500-yr	4248.09	636.5	629.68	1.71	0.9	13.33	6.9	188.7	1894.28	4.8	2.49	7.06	7.06
Dawson County	D5	RM 103.48	63615.6	500-yr	4248.09	636.44	630.4	1.82	0.99	14.79	7.06	152.55	1743.14	5.2	2.47	6.93	6.93
Dawson County	D5	RM 103.26	63259.44	500-yr	4248.09	636.38	630.13	1.74	0.99	13.36	6.9	173.17	1580.85	5.27	2.71	6.97	6.97
Dawson County	D5	RM 102.58	62131.5	500-yr	4248.09	636.2	629.72	1.73	1.3	13.24	8.55	178.73	957.65	5.27	3.41	6.52	6.52
Dawson County	D5	RM 102.44	61920.83	500-yr	4248.09	636.05	629.74	2.21	1.6	21.71	12.28	255.44	897.84	5.22	2.96	6.32	6.32
Dawson County	D5	RM 102.31	61720.14	500-yr	4248.09	635.92	629.03	2.57	1.75	29.16	15.31	200.53	872.5	5.29	2.78	6.89	6.89
Dawson County	D5	RM 102.15	61456.58	500-yr	4248.09	635.8	629.39	2.51	1.81	27.39	13.47	201.3	867.17	5.48	2.7	6.41	6.41
Dawson County	D5	RM 102.00	61217.89	500-yr	4248.09	635.72	629.48	2.19	1.65	21.59	12.15	267.9	916.38	4.97	2.81	6.24	6.24
Dawson County	D5	RM 101.84	60967.97	500-yr	4248.09	635.68	629.23	1.85	1.28	15.23	10.54	155.67	928.61	5.16	3.58	6.45	6.45
Dawson County	D5	RM 101.60	60582.61	500-yr	4248.09	635.54	628.87	1.78	1.47	14.17	8.17	336.08	1046.54	5.06	2.92	6.67	6.67
Dawson County	D5	RM 101.45	60336.09	500-yr	4248.09	635.3	629.16	2.5	1.76	27.13	11.73	251.39	1005.94	5.53	2.4	6.14	6.14
Dawson County	D5	RM 101.25	60019.5	500-yr	4248.09	635.06	627.81	2.8	1.82	33.67	13.54	209.15	1010.94	5.72	2.3	7.25	7.25
Dawson County	D5	RM 101.09	59759.25	500-yr	4248.09	634.96	627.99	2.62	1.68	29.84	12.15	216.65	1107.57	5.6	2.28	6.97	6.97
Dawson County	D5	RM 100.88	59426.42	500-yr	4248.09	634.84	627.86	2.46	1.57	25.8	10.18	196.58	1178.12	5.81	2.29	6.98	6.98
Dawson County	D5	RM 100.67	59075.4	500-yr	4248.09	634.67	627.1	2.71	1.57	30.6	12.33	151.88	1172.74	6.32	2.55	7.57	7.57
Dawson County	D5	RM 100.46	58743.44	500-yr	4248.09	634.62	627.92	1.97	1.28	16.66	8.2	202.94	1160.84	5.84	2.88	6.7	6.7
Dawson County	D5	RM 100.25	58401.49	500-yr	4248.09	634.37	627.57	2.56	1.65	28.1	12.7	196.17	981.54	5.81	2.62	6.8	6.8
Dawson County	D5	RM 100.05	58077.55	500-yr	4248.09	634.22	626.86	2.58	1.89	28.57	13.65	176.97	806.2	5.86	2.79	7.36	7.36
Dawson County	D5	RM 99.87	57778.81	500-yr	4248.09	633.94	626.4	2.67	2.26	32.13	17.74	301.61	685.5	4.97	2.74	7.54	7.54
Dawson County	D5	RM 99.68	57474.16	500-yr	4248.09	633.73	626.29	2.78	2.26	33.21	17.18	246.92	632.03	5.74	2.98	7.44	7.44
Dawson County	D5	RM 99.49	57160.47	500-yr	4248.09	633.4	626.53	3.17	2.44	43.54	20.44	218.38	662.03	5.58	2.63	6.87	6.87
Dawson County	D5	RM 99.30	56863.46	500-yr	4248.09	633.25	627.26	2.79	2.08	34.46	14.88	267.93	902.84	5.23	2.27	5.99	5.99
Dawson County	D5	RM 99.13	56566.63	500-yr	4248.09	633.14	626.77	2.44	1.76	26.42	13.24	293.66	929.84	5.17	2.59	6.37	6.37

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	500-yr	4248.09	632.98	626.63	2.34	1.83	24.93	13.22	339.1	909.5	4.79	2.55	6.35	6.35
Dawson County	D5	RM 98.71	55911.87	500-yr	4248.09	632.81	626.34	2.34	1.64	25.23	12.93	322.21	1073.99	4.69	2.41	6.47	6.47
Dawson County	D5	RM 98.57	55680.2	500-yr	4248.09	632.72	626.1	2.21	1.39	22.19	12.02	297.01	1193.54	4.82	2.61	6.62	6.62
Dawson County	D5	RM 98.35	55325.95	500-yr	4248.09	632.42	625.91	2.67	1.54	30.91	13.12	216.82	1171.6	5.57	2.36	6.51	6.51
Dawson County	D5	RM 98.19	55066.09	500-yr	4248.09	632.22	624.42	2.87	1.59	34.9	13.04	184	1184.18	6.04	2.26	7.8	7.8
Dawson County	D5	RM 97.99	54752.97	500-yr	4248.09	631.89	625.04	3.1	2.05	42.75	14.73	236.53	1164.15	5.18	1.78	6.85	6.85
Dawson County	D5	RM 97.84	54493.48	500-yr	4248.09	631.74	625.39	2.77	2.1	34.68	15	292.51	950.19	4.91	2.12	6.35	6.35
Dawson County	D5	RM 97.68	54241.32	500-yr	4248.09	631.6	624.99	2.59	2.01	31.73	21.13	340.05	761.18	4.3	2.87	6.61	6.61
Dawson County	D5	RM 97.48	53918.21	500-yr	4248.09	631.49	624.81	1.96	1.62	17.62	13.53	387.03	1278.78	3.43	2.64	6.68	6.68
Dawson County	D5	RM 97.28	53585.68	500-yr	4248.09	631.3	625.86	2.09	1.47	20.81	12.3	328.8	1354.02	4.26	2.52	5.85	5.85
Dawson County	D5	RM 97.08	53263.89	500-yr	4248.09	631.02	625.27	2.69	1.83	32.78	13.72	209.17	1296.23	4.91	2.06	5.75	5.75
Dawson County	D5	RM 96.94	53030.11	500-yr	4248.09	630.86	623.97	2.75	1.76	34.57	15.1	199.17	1310.57	4.82	2.11	6.89	6.89
Dawson County	D5	RM 96.77	52762.2	500-yr	4248.09	630.7	623.51	2.66	1.76	32.24	13.47	202.34	1423.37	4.81	2.02	7.19	7.19
Dawson County	D5	RM 96.55	52403.59	500-yr	4248.09	630.55	624.57	2.49	1.39	27.37	11.73	160.42	1667.08	5.24	2.25	5.98	5.98
Dawson County	D5	RM 96.35	52079.12	500-yr	4248.09	630.54	625.39	1.25	1.13	7.63	5.12	290.07	1841.15	4	2.69	7.07	7.07
Dawson County	D5	RM 96.17	51777.74	500-yr	4248.09	630.35	624.71	2.29	1.58	23.98	8.93	130.42	1878.94	4.73	1.76	5.97	5.97
Dawson County	D5	RM 96.00	51500.38	500-yr	4248.09	630.24	624.3	2.09	1.37	19.86	8.21	122.42	1876.85	4.9	2.03	5.94	5.94
Dawson County	D5	RM 95.79	51156.87	500-yr	4248.09	630.17	624.35	1.52	1.02	11.16	5.82	284.94	1937.27	4.63	2.42	5.92	5.92
Dawson County	D5	RM 95.60	50859.75	500-yr	4248.09	630.09	622.97	1.56	0.96	11.17	6.17	251.15	1755.43	4.81	2.66	7.12	7.12
Dawson County	D5	RM 95.40	50547.92	500-yr	4248.09	630.02	623.13	1.47	0.98	9.57	5.43	377.96	1464.4	5.21	2.96	6.89	6.89
Dawson County	D5	RM 95.21	50245.97	500-yr	4248.09	629.95	622.21	1.77	0.92	13.26	6.63	217.6	1525.2	6.04	3.02	7.74	7.74
Dawson County	D5	RM 95.04	49971.19	500-yr	4248.09	629.89	621.68	1.97	1.01	16.63	9.05	174.46	1435.09	5.78	3.14	8.2	8.2
Dawson County	D5	RM 94.88	49717.07	500-yr	4248.09	629.84	621.44	1.87	0.95	14.67	8.74	152.89	1502.91	6.12	3.64	8.39	8.39
Dawson County	D5	RM 94.71	49446.9	500-yr	4248.09	629.79	621.69	1.42	1.16	8.61	6.57	234.28	1473.11	5.77	4.4	8.1	8.1
Dawson County	D5	RM 94.58	49286.95	500-yr	4248.09	629.76	618.6	1.24	1.24	6.1	6.1	456.42	1434.64	7.51	7.51	11.17	11.17
Dawson County	D5	RM 94.57	49255.56	500-yr	4248.09	629.68	618.63	1.63	1.61	10.53	10.24	360.59	968.13	7.23	7.04	11.06	11.06
Dawson County		RM 94.55	49216.94	500-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	500-yr	4248.09	629.18	620.63	2.71	2.51	31.3	25.55	256.42	1147.97	5.88	4.79	8.55	8.55
Dawson County	D5	RM 94.52	49157.18	500-yr	4248.09	629.19	620.89	2.53	2.49	27.36	26.05	287.23	1265.71	5.82	5.53	8.29	8.29
Dawson County	D6	RM 94.42	48998.19	500-yr	4248.09	629.06	621.76	2.85	2.23	34.72	21.49	219.93	1274.96	5.8	3.58	7.3	7.3
Dawson County	D6	RM 94.30	48806.79	500-yr	4276.41	629.02	621.22	2.44	1.91	26.83	17.64	295.07	1264.47	4.99	3.28	7.8	7.8
Dawson County	D6	RM 94.20	48653.06	500-yr	4276.41	628.97	621.41	2.33	1.68	24.06	13.86	261.89	1056.79	5.54	3.19	7.56	7.56
Dawson County	D6	RM 94.08	48445.46	500-yr	4276.41	628.93	622.37	1.96	1.54	16.5	10.34	338.75	860.91	5.76	3.61	6.56	6.56
Dawson County	D6	RM 93.96	48246.42	500-yr	4276.41	628.81	621.88	2.18	1.74	20.92	13.69	331.74	698.74	5.38	3.51	6.93	6.93
Dawson County	D6	RM 93.83	48030.25	500-yr	4276.41	628.61	620.28	2.68	2.05	30.46	18.27	237.8	604.16	5.93	3.56	8.33	8.33
Dawson County	D6	RM 93.68	47782.89	500-yr	4276.41	628.32	620.19	3.18	2.4	42.42	24.47	191.53	500.51	6.16	3.56	8.13	8.13
Dawson County	D6	RM 93.57	47606.95	500-yr	4276.41	627.92	620.08	3.77	2.9	61.2	37.31	184.03	421.2	5.74	3.5	7.84	7.84
Dawson County	D6	RM 93.53	47552.11	500-yr	4276.41	627.87	620.21	3.72	2.95	58.92	35.75	184.33	416.56	5.9	3.59	7.66	7.66
Dawson County			47536.14	500-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	500-yr	4276.41	627.76	620.33	3.76	2.98	60.11	36.79	180.48	394.44	5.95	3.64	7.44	7.44
Dawson County	D6	RM 93.47	47460.74	500-yr	4276.41	627.72	618.63	3.64	2.97	56.73	38.2	189.97	365.16	5.85	3.94	9.09	9.09
Dawson County	D6	RM 93.43	47382.46	500-yr	4276.41	627.67	619.44	3.52	2.91	52.42	35.26	191.32	361.32	6.05	4.07	8.23	8.23
Dawson County		RM 93.415	47357.71	500-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	500-yr	4276.41	627.6	620.19	3.41	2.95	49.23	35.53	200.23	381.69	6.03	4.34	7.41	7.41
Dawson County	D6	RM 93.36	47287.92	500-yr	4276.41	627.61	620.47	3.13	2.57	41.4	28.37	213.34	400.21	6.07	4.16	7.14	7.14
Dawson County	D6	RM 93.25	47111.44	500-yr	4276.41	627.53	621.12	2.95	2.32	43.37	24.95	228.84	617.94	5.44	3.13	6.41	6.41
Dawson County	D6	RM 93.05	46807.77	500-yr	4276.41	627.48	621.74	2.23	1.66	21.91	12.4	283.11	1038.5	5.41	3.06	5.74	5.74
Dawson County	D6	RM 92.93	46606.31	500-yr	4276.41	627.36	621.34	2.32	1.7	24.09	13.62	305.87	1171.94	5.05	2.85	6.02	6.02
Dawson County	D6	RM 92.83	46460.06	500-yr	4276.41	627.31	621.02	2.18	1.7	21.87	13.25	357.35	1326.46	4.55	2.75	6.29	6.29
Dawson County	D6	RM 92.71	46261.84	500-yr	4276.41	627.2	620.37	2.19	1.77	22.01	14.41	359.38	1366.99	4.69	3.07	6.83	6.83
Dawson County	D6	RM 92.59	46079.79	500-yr	4276.41	627.09	620.95	2.26	1.94	23.51	14.64	321.05	1359.6	5.35	3.32	6.14	6.14
Dawson County	D6	RM 92.50	45933.81	500-yr	4276.41	626.99	620.75	2.38	2.05	25.45	16.04	325.45	1413.73	5.08	3.2	6.24	6.24
Dawson County	D6	RM 92.39	45753.94	500-yr	4276.41	626.9	620.58	2.41	2.05	25.49	16.51	299.01	1478.82	5.36	3.47	6.32	6.32
Dawson County	D6	RM 92.29	45591.17	500-yr	4276.41	626.76	620.64	2.55	2.4	28.55	24.94	295.77	1423.93	5.36	4.69	6.12	6.12
Dawson County	D6	RM 92.18	45414.13	500-yr	4276.41	626.72	620.23	2.13	1.96	20.07	16.42	358.66	1574.34	5.29	4.33	6.49	6.49
Dawson County		RM 92.14	45354.08	500-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	500-yr	4276.41	626.44	620.04	2.16	1.93	20.72	16.23	367.04	1509.44	5.13	4.02	6.39	6.39
Dawson County	D6	RM 92.06	45238.47	500-yr	4276.41	626.36	620.12	2.33	2.05	24.68	17.18	354.46	1508	4.88	3.4	6.24	6.24
Dawson County	D6	RM 91.99	45117.89	500-yr	4276.41	626.36	619.81	1.93	1.86	17.14	15.35	390.42	1292.6	4.6	4.13	6.55	6.55
Dawson County	D6	RM 91.85	44886.16	500-yr	4276.41	626.32	619.7	1.81	1.51	16.57	12.4	238.98	1545.4	5.34	4.01	6.62	6.62
Dawson County	D6	RM 91.77	44752.88	500-yr	4276.41	626.27	619.28	1.8	1.49	18.96	14.84	224.91	1315.3	5.07	3.98	6.99	6.99

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	500-yr	4276.41	626.08	619	2.31	1.8	22.8	14.27	148.19	1547.95	5.91	3.7	7.08	7.08
Dawson County	D6	RM 91.45	44219.47	500-yr	4276.41	625.92	618.66	2.48	2.16	27.6	16.18	189.07	1455.13	5.72	3.36	7.26	7.26
Dawson County	D6	RM 91.31	43987.79	500-yr	4276.41	625.6	618.98	2.91	2.61	37.55	20.7	271.16	1267.9	5.25	2.89	6.62	6.62
Dawson County	D6	RM 91.11	43666.49	500-yr	4276.41	625.26	618.54	3.21	2.65	44.27	19.34	219.42	1069.02	5.77	2.53	6.72	6.72
Dawson County	D6	RM 90.97	43442.55	500-yr	4276.41	625.15	618.3	3.03	2.12	39.84	16.8	224.14	1135.41	5.54	2.34	6.85	6.85
Dawson County	D6	RM 90.76	43114.74	500-yr	4276.41	625.02	618.97	2.53	1.66	35.56	16.51	268.72	1563.58	5.14	2.38	6.05	6.05
Dawson County	D6	RM 90.59	42823.65	500-yr	4276.41	625	618.64	1.92	1.16	16.16	8.24	232.7	1466.11	5.33	2.72	6.36	6.36
Dawson County	D6	RM 90.43	42564.46	500-yr	4276.41	624.73	618.18	2.69	1.43	32.02	11.36	208.77	1613.06	5.22	1.86	6.55	6.55
Dawson County	D6	RM 90.29	42331.05	500-yr	4276.41	624.65	618.21	2.34	1.26	23.87	9.47	236.08	1572.94	5.46	2.16	6.44	6.44
Dawson County	D6	RM 90.16	42118.24	500-yr	4276.41	624.51	618.54	2.48	1.39	26.95	10.29	229.61	1539.86	5.45	2.08	5.97	5.97
Dawson County	D6	RM 89.96	41795.66	500-yr	4276.41	624.39	618.08	2.14	1.46	20.52	9.68	346.39	1363.74	5	2.36	6.31	6.31
Dawson County	D6	RM 89.83	41589.45	500-yr	4276.41	624.07	617.17	3.07	1.83	41.24	15.95	211.95	1104.9	5.46	2.12	6.9	6.9
Dawson County	D6	RM 89.65	41302.33	500-yr	4276.41	623.91	618.15	2.79	1.82	34.64	15.77	251.93	1000.66	5.14	2.35	5.76	5.76
Dawson County	D6	RM 89.46	41003.8	500-yr	4276.41	623.71	617.56	2.77	1.98	33.01	14.45	236.74	853.45	5.81	2.54	6.15	6.15
Dawson County	D6	RM 89.29	40732.3	500-yr	4276.41	623.71	617.42	2.05	1.76	18.21	14.34	253.25	713.49	5.62	4.42	6.29	6.29
Dawson County	D6	RM 89.13	40476.68	500-yr	4276.41	623.47	617.29	2.63	2.02	29.87	14.98	231.92	752.65	5.69	2.83	6.18	6.18
Dawson County	D6	RM 88.96	40193.97	500-yr	4333.05	623.31	617.14	2.68	2.09	30.51	13.44	186.73	806.62	6.11	2.66	6.17	6.17
Dawson County	D7	RM 88.77	39887.75	500-yr	4333.05	623.14	616.98	2.63	2.01	30.32	14.18	260.04	882.21	5.42	2.53	6.17	6.17
Dawson County	D7	RM 88.58	39581.56	500-yr	4333.05	622.84	616.82	3.13	2.13	41.81	16.41	185.88	932.03	5.95	2.29	6.02	6.02
Dawson County	D7	RM 88.44	39345.29	500-yr	4333.05	622.58	616.7	3.32	2.3	47.53	16.03	181.67	1043.95	5.88	1.94	5.88	5.88
Dawson County	D7	RM 88.25	39047.22	500-yr	4333.05	622.48	616.54	2.76	2.01	33.41	12	221.53	1164.97	5.46	1.94	5.94	5.94
Dawson County	D7	RM 88.06	38736.32	500-yr	4333.05	622.31	616.38	2.52	1.92	28.35	10.64	305.89	1268.57	5.19	1.94	5.93	5.93
Dawson County	D7	RM 87.87	38426.68	500-yr	4333.05	622.25	616.22	1.96	1.53	17.98	9.57	429.53	1411.99	4.53	2.4	6.03	6.03
Dawson County	D7	RM 87.70	38161.81	500-yr	4333.05	622.21	616.08	1.88	1.3	15.03	6.7	181.73	1548.36	6.12	2.66	6.13	6.13
Dawson County	D7	RM 87.52	37862.82	500-yr	4333.05	622.15	615.92	1.68	1.35	12.78	7.75	308.23	1300.87	5.03	3.02	6.23	6.23
Dawson County	D7	RM 87.34	37574.69	500-yr	4333.05	621.91	615.85	2.48	1.78	27.7	14.91	253.88	894.3	5.09	2.72	6.06	6.06
Dawson County	D7	RM 87.17	37307.08	500-yr	4333.05	621.64	615.82	3.04	2.14	40.03	17.87	162.99	801.03	5.73	2.53	5.82	5.82
Dawson County	D7	RM 87.00	37023.47	500-yr	4333.05	621.5	615.79	2.6	2.1	30.42	15.57	241.45	809.16	5.02	2.55	5.71	5.71
Dawson County	D7	RM 86.82	36748.51	500-yr	4333.05	621.31	615.76	2.69	2.23	32.54	17.1	210.89	729.06	5.13	2.67	5.55	5.55
Dawson County	D7	RM 86.67	36501.76	500-yr	4333.05	621.06	615.73	3.15	2.49	44.27	23.41	151.27	634.44	5.32	2.74	5.33	5.33
Dawson County	D7	RM 86.52	36253.46	500-yr	4333.05	620.97	615.7	2.38	2	25.52	18.16	250.55	604.94	5.02	3.57	5.27	5.27
Dawson County	D7	RM 86.39	36046.31	500-yr	4333.05	620.87	615.59	2.37	1.93	25.48	16.99	147.45	679.83	5.03	3.3	5.28	5.28
Dawson County	D7	RM 86.24	35796.38	500-yr	4333.05	620.82	615.46	1.77	1.57	13.95	9.47	166.41	784.13	5.29	3.53	5.36	5.36
Dawson County	D7	RM 86.08	35541.56	500-yr	4333.05	620.51	615.48	2.94	2.14	39.79	18.06	160.1	1027.22	4.78	2.13	5.03	5.03
Dawson County	D7	RM 85.91	35282.1	500-yr	4333.05	620.37	615.5	2.53	1.77	29.37	14.56	191.42	1039.41	4.78	2.36	4.87	4.87
Dawson County	D7	RM 85.78	35075.01	500-yr	4333.05	620.38	614.9	1.54	1.47	11.01	10.16	288.53	997.82	4.56	4.2	5.48	5.48
Dawson County	D7	RM 85.59	34774.5	500-yr	4333.05	620.32	614.32	1.79	1.29	13.6	7.1	184.84	1081.58	5.97	3.1	6	6
Dawson County	D7	RM 85.39	34449.3	500-yr	4333.05	620.07	614.15	2.52	1.87	27.77	11.97	219.47	980.79	5.52	2.36	5.93	5.93
Dawson County	D7	RM 85.23	34186.4	500-yr	4333.05	619.82	614.01	3.11	2.17	41.8	19.19	157.48	765.42	5.81	2.62	5.81	5.81
Dawson County	D7	RM 85.04	33863.7	500-yr	4333.05	619.76	613.84	2.3	1.86	23.88	13.89	265.03	796.71	5.05	2.92	5.92	5.92
Dawson County	D7	RM 84.89	33626.36	500-yr	4333.05	619.65	613.92	2.1	1.9	20.15	12.6	413.04	771	4.86	3.04	5.73	5.73
Dawson County	D7	RM 84.72	33349.5	500-yr	4333.05	619.44	613.77	2.41	2.26	26.28	16.11	353.9	625.48	5.02	3.07	5.66	5.66
Dawson County	D7	RM 84.57	33104.21	500-yr	4333.05	619.21	613.45	2.72	2.42	32.75	16.44	294.82	670.9	5.32	2.66	5.76	5.76
Dawson County	D7	RM 84.41	32856.7	500-yr	4333.05	619.09	613.32	2.59	2.18	29.84	11.58	312.69	1036.86	5.15	1.99	5.77	5.77
Dawson County	D7	RM 84.22	32552.24	500-yr	4333.05	619	613.16	2.3	1.77	23.63	10.77	261.68	1179.54	5.22	2.35	5.84	5.84
Dawson County	D7	RM 84.05	32270.74	500-yr	4333.05	618.82	613.14	2.54	1.76	28.25	10.41	206.16	1231.05	5.48	2	5.69	5.69
Dawson County	D7	RM 83.89	32017.88	500-yr	4333.05	618.54	613.11	3.01	1.98	39.88	13.25	191.2	1231.32	5.36	1.77	5.44	5.44
Dawson County	D7	RM 83.73	31759.16	500-yr	4333.05	618.45	613.07	2.48	1.81	27.82	13.02	240.43	1235.02	4.97	2.31	5.38	5.38
Dawson County	D7	RM 83.53	31426.04	500-yr	4333.05	618.37	613.01	1.92	1.48	16.69	8.29	304.34	1185.28	4.99	2.47	5.36	5.36
Dawson County	D7	RM 83.39	31213.34	500-yr	4333.05	618.29	612.95	2.14	1.56	20.57	10.01	189.12	1125.85	5.13	2.47	5.33	5.33
Dawson County	D7	RM 83.21	30910.79	500-yr	4333.05	618.19	612.91	1.98	1.5	17.42	8.91	170.07	1121.75	5.25	2.65	5.41	5.41
Dawson County	D7	RM 83.05	30660.14	500-yr	4333.05	618.11	612.78	1.86	1.38	15.4	7.37	229.1	1274.42	5.14	2.46	5.65	5.65
Dawson County	D7	RM 82.94	30491.79	500-yr	4333.05	618.04	612.69	1.94	1.4	16.82	7.54	219.21	1393.09	5.09	2.27	5.65	5.65
Dawson County	D7	RM 82.81	30280.45	500-yr	4333.05	617.93	612.58	2.11	1.43	20.23	8.31	178.49	1506.21	4.93	2.01	5.78	5.78
Dawson County	D7	RM 82.68	30058.39	500-yr	4333.05	617.83	612.34	2.26	1.41	22.52	8.86	152.77	1443.48	5.48	2.12	5.73	5.73
Dawson County	D7	RM 82.51	29786.14	500-yr	4333.05	617.8	612.1	1.67	1.14	12.36	5.68	229.35	1566.96	5.37	2.44	5.95	5.95
Dawson County	D7	RM 82.33	29497.12	500-yr	4333.05	617.72	611.87	1.75	1.03	13.51	6.52	246.87	1609.72	5.49	2.6	5.97	5.97
Dawson County	D7	RM 82.22	29323.27	500-yr	4333.05	617.65	611.66	2.02	1.02	17.75	7.57	193.52	1974.83	5.62	2.38	5.99	5.99
Dawson County	D7	RM 82.06	29049.94	500-yr	4333.05	617.6	611.37	1.79	0.93	13.76	5.31	202.97	2139.33	5.89	2.22	6.23	6.23
Dawson County	D7	RM 81.91	28820.21	500-yr	4333.05	617.57	611.21	1.79	0.9	13.48	4.9	191.58	2165.26	6.23	2.23	6.35	6.35
Dawson County	D7	RM 81.71	28446.75	500-yr	4333.05	617.51	611.02	1.51	0.87	9.52	3.36	220.81	2351.36	6.29	2.21	6.49	6.49

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	500-yr	4333.05	617.33	610.8	2.31	1.1	22.21	6.15	165.37	2374.54	6.52	1.76	6.53	6.53
Dawson County	D7	RM 81.31	27735.46	500-yr	4389.69	616.69	610.65	4.04	1.74	70.06	14.62	131.98	2487.17	5.97	1.21	6.05	6.05
Dawson County	D8	RM 81.10	27398.33	500-yr	4389.69	616.37	610.47	3.51	1.5	53.22	10.48	160.09	2626.99	5.8	1.12	5.9	5.9
Dawson County	D8	RM 80.94	27148.21	500-yr	4389.69	616.33	610.34	2.67	1.35	30.74	6.9	225.85	2641.49	5.73	1.28	5.99	5.99
Dawson County	D8	RM 80.76	26855.69	500-yr	4389.69	616.32	610.19	2.09	1.01	18.59	5.03	181.68	3009.44	6.12	1.61	6.13	6.13
Dawson County	D8	RM 80.64	26669.58	500-yr	4389.69	616.27	610.09	2.03	1	17.52	4.53	209.02	3165.27	5.95	1.52	6.18	6.18
Dawson County	D8	RM 80.45	26373.01	500-yr	4389.69	616.3	609.94	1.14	0.7	5.53	2.08	122.91	3212.37	6.22	2.26	6.36	6.36
Dawson County	D8	RM 80.17	25926.88	500-yr	4389.69	616.19	609.71	1.94	0.87	15.77	3.99	146.98	3437.36	6.48	1.58	6.49	6.49
Dawson County	D8	RM 79.91	25496.94	500-yr	4389.69	616.11	609.42	1.55	0.8	10.37	3.1	362.06	3216.85	5.79	1.71	6.69	6.69
Dawson County	D8	RM 79.43	24626.85	500-yr	4389.69	615.85	609.14	1.99	1.03	16.7	4.61	289.02	2641.2	6.22	1.7	6.71	6.71
Dawson County	D8	RM 79.23	24229.4	500-yr	4389.69	615.33	608.87	3.4	1.66	49.06	10.33	173.46	2293.63	6.26	1.27	6.46	6.46
Dawson County	D8	RM 78.27	22640.58	500-yr	4389.69	614.66	608.6	2.42	1.46	25.58	10.79	226.68	1317.78	5.53	2.3	6.05	6.05
Dawson County	D8	RM 78.12	22398.86	500-yr	4389.69	614.61	608.48	2.18	1.42	20.72	8.18	222.94	1413.22	5.59	2.18	6.13	6.13
Dawson County	D8	RM 77.97	22135.34	500-yr	4389.69	614.47	608.34	2.41	1.53	24.89	9.23	214.67	1323.45	5.91	2.17	6.13	6.13
Dawson County	D8	RM 77.79	21831.85	500-yr	4389.69	614.42	608.18	1.96	1.41	17.44	8.13	332.54	1372.62	4.87	2.26	6.23	6.23
Dawson County	D8	RM 77.57	21474.71	500-yr	4389.69	614.16	608	2.48	1.74	26.37	9.23	250.08	1252.98	5.78	2.01	6.17	6.17
Dawson County	D8	RM 77.38	21170.35	500-yr	4389.69	613.91	607.84	2.85	1.92	34.92	11.66	215.18	1264.18	5.8	1.92	6.07	6.07
Dawson County	D8	RM 77.13	20780.17	500-yr	4389.69	613.92	607.63	1.98	1.45	16.75	8.16	188.55	1438.16	5.91	2.84	6.28	6.28
Dawson County	D8	RM 77.00	20442.34	500-yr	4389.69	613.82	607.46	2.29	1.4	22.11	7.45	131.83	1538.14	6.35	2.05	6.36	6.36
Dawson County	D8	RM 76.90	20124.49	500-yr	4389.69	613.73	607.29	2.21	1.46	20.5	6.63	153.24	1501.06	6.42	2	6.44	6.44
Dawson County	D8	RM 76.76	19785.25	500-yr	4389.69	613.66	607.12	1.85	1.33	14.45	5.74	269.03	1404.76	6.1	2.4	6.55	6.55
Dawson County	D8	RM 76.63	19501.04	500-yr	4389.69	613.57	606.97	1.98	1.45	17.04	7.2	246.86	1289.77	5.63	2.34	6.6	6.6
Dawson County	D8	RM 76.37	19137.53	500-yr	4389.69	613.3	606.78	2.43	1.69	25.01	9.38	272.76	1151.22	6.03	2.25	6.52	6.52
Dawson County	D8	RM 76.22	18884.28	500-yr	4389.69	613.16	606.65	2.54	1.74	27.26	11.49	253.7	980.62	6.13	2.57	6.51	6.51
Dawson County	D8	RM 76.00	18519.22	500-yr	4389.69	612.91	606.61	2.84	1.69	34.47	11.55	225.2	1324.78	5.9	1.96	6.3	6.3
Dawson County	D8	RM 75.75	18119.45	500-yr	4389.69	612.56	606.58	3.13	1.85	42.45	11.51	209.51	1553.53	5.69	1.52	5.98	5.98
Dawson County	D8	RM 75.56	17818.36	500-yr	4389.69	612.5	606.75	2.42	1.5	26.34	8.87	303.99	1740.54	5.02	1.68	5.75	5.75
Dawson County	D8	RM 75.31	17411.3	500-yr	4389.69	612.32	606.34	2.38	1.46	24.69	7.76	263.12	1740.99	5.52	1.72	5.99	5.99
Dawson County	D8	RM 75.13	17092.44	500-yr	4389.69	612.2	606.17	2.26	1.37	22.62	7.8	306.22	1756.61	5.32	1.83	6.03	6.03
Dawson County	D8	RM 74.90	16719.46	500-yr	4389.69	611.79	605.98	3.08	1.65	42.02	11.25	224.87	1896.19	5.3	1.4	5.81	5.81
Dawson County	D8	RM 74.65	16308.2	500-yr	4389.69	611.68	605.91	2.37	1.38	24.87	7.72	267.86	1954.49	5.29	1.63	5.77	5.77
Dawson County	D8	RM 74.37	15846.14	500-yr	4389.69	611.45	605.85	2.54	1.49	29.21	7.95	221.55	2193.65	4.97	1.34	5.6	5.6
Dawson County	D8	RM 74.13	15464.97	500-yr	4389.69	611.26	605.82	2.33	1.41	24.45	6.73	235.57	2290.22	5.06	1.38	5.44	5.44
Dawson County	D8	RM 73.91	15098.01	500-yr	4389.69	611.12	605.99	2.01	1.27	18.67	6.1	283.69	2262.93	4.7	1.53	5.13	5.13
Dawson County	D8	RM 73.71	14783.86	500-yr	4389.69	611.02	605.87	1.88	1.16	16.2	5.05	292.2	2610.24	4.76	1.48	5.15	5.15
Dawson County	D8	RM 73.53	14496.67	500-yr	4389.69	610.93	605.72	1.85	1.11	15.43	5.9	249.62	2743.99	4.94	1.88	5.21	5.21
Dawson County	D8	RM 73.29	14096.19	500-yr	4389.69	610.49	605.51	3.06	1.75	42.5	11.8	198.62	2008.29	4.88	1.34	4.98	4.98
Dawson County	D8	RM 73.07	13729.79	500-yr	4389.69	610.07	605.52	3.32	1.94	51.54	13.38	196.15	2113.17	4.48	1.16	4.81	4.81
Dawson County	D8	RM 72.97	13573.93	500-yr	4389.69	609.75	605.5	3.66	2.18	64.02	17.7	199.11	2153.96	4.19	1.15	4.58	4.58
Dawson County	D8	RM 72.91	13479.91	500-yr	4389.69	609.56	605.45	3.7	2.43	66.47	19.43	221.07	1728.66	3.98	1.16	4.39	4.39
Dawson County		RM 72.905	13470.04	500-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	500-yr	4389.69	609.48	605.31	3.85	2.47	71.42	20.21	208.91	1602.9	4.05	1.14	4.31	4.31
Dawson County	D8	RM 72.83	13354.45	500-yr	4389.69	609.52	604.9	2.84	1.93	38.01	12.45	264.25	1771.93	4.38	1.43	4.62	4.62
Dawson County	D8	RM 72.62	13000.82	500-yr	4389.69	609.29	604.4	2.53	1.67	29.52	9.22	295.23	2014.17	4.66	1.45	4.89	4.89
Dawson County	D8	RM 72.37	12609.05	500-yr	4389.69	609.02	603.89	2.68	1.72	32.42	11.6	228.58	1501.91	4.93	1.76	5.13	5.13
Dawson County	D8	RM 72.16	12261.75	500-yr	4389.69	608.76	603.69	2.61	1.74	31.21	11.05	286.3	1578.53	4.79	1.69	5.08	5.08
Dawson County	D8	RM 71.92	11875.08	500-yr	4389.69	608.62	603.18	2.15	1.53	20.99	8.01	345.16	1602.9	4.91	1.87	5.44	5.44
Dawson County	D8	RM 71.69	11512.65	500-yr	4389.69	608.45	602.95	2.24	1.46	22.52	8.22	303.44	1638.3	5.11	1.86	5.51	5.51
Dawson County	D8	RM 71.49	11192.6	500-yr	4389.69	608.25	602.03	2.51	1.45	26.85	7.89	237.66	1782.35	5.89	1.72	6.22	6.22
Dawson County	D8	RM 71.31	10913.3	500-yr	4389.69	608.12	601.99	2.48	1.47	26.59	8.58	244.59	1646	5.75	1.85	6.14	6.14
Dawson County	D9	RM 71.10	10567.75	500-yr	4418.01	608.05	602.11	2	1.37	17.57	6.96	197.48	1540.38	5.43	2.13	5.95	5.95
Dawson County	D9	RM 70.91	10267.7	500-yr	4418.01	607.94	602.05	2.25	1.26	21.89	8.5	126.11	1627.44	5.82	2.22	5.89	5.89
Dawson County	D9	RM 70.72	9968.939	500-yr	4418.01	607.83	601.91	2.27	1.3	22.11	9.86	153.19	1563.72	5.91	2.55	5.92	5.92
Dawson County	D9	RM 70.50	9603.574	500-yr	4418.01	607.66	601.9	2.13	1.71	20	11.34	251.24	984.31	5.37	3.03	5.76	5.76
Dawson County	D9	RM 70.27	9238.535	500-yr	4418.01	607.36	601.31	2.72	1.79	31.97	11.98	236.79	1302.26	5.73	2.14	6.05	6.05
Dawson County	D9	RM 70.08	8928.013	500-yr	4418.01	607.24	600.85	2.51	1.51	26.99	10.2	234.44	1362.01	5.91	2.21	6.39	6.39
Dawson County	D9	RM 69.79	8464.726	500-yr	4418.01	607.14	600.61	2.12	1.16	19.03	7.2	248.41	1846.38	6.07	2.28	6.53	6.53
Dawson County	D9	RM 69.50	7983.226	500-yr	4418.01	607.05	600.56	1.96	1.04	16.33	6.63	237.14	1880.3	5.98	2.4	6.49	6.49
Dawson County	D9	RM 69.26	7575.04	500-yr	4418.01	606.94	600.35	2.01	1.06	17.07	7.2	245.78	2040.31	6.13	2.57	6.59	6.59
Dawson County	D9	RM 69.03	7206.967	500-yr	4418.01	606.85	599.95	1.97	1.18	16.01	6.58	236.36	2221.34	6.55	2.67	6.9	6.9
Dawson County	D9	RM 68.82	6851.789	500-yr	4418.01	606.64	599.77	2.41	1.45	24.36	10.73	217.59	1648.63	6.32	2.74	6.87	6.87

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

500-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	500-yr	4418.01	606.26	599.59	3.08	1.93	39.27	14.11	189.13	1519.36	6.55	2.31	6.67	6.67
Dawson County	D9	RM 68.39	6158.879	500-yr	4418.01	606.09	599.51	2.79	2	33.22	12.73	241.73	1381.46	5.96	2.27	6.58	6.58
Dawson County	D9	RM 68.11	5709.195	500-yr	4418.01	605.86	599.37	2.66	2.07	30.28	14.69	262.72	1232.3	5.85	2.84	6.49	6.49
Dawson County	D9	RM 67.86	5308.187	500-yr	4418.01	605.64	599.17	2.9	2.44	35.36	26.1	130.41	1266.29	6.3	4.56	6.47	6.47
Dawson County	D10	RM 67.57	4859.184	500-yr	4502.97	605.4	598.93	2.66	2.26	29.9	14.92	240.29	1244.93	6.12	3.05	6.47	6.47
Dawson County	D10	RM 67.37	4523.862	500-yr	4502.97	605.33	598.75	2.33	1.75	22.96	10.36	224.36	1564.31	6.16	2.76	6.57	6.57
Dawson County	D10	RM 67.15	4175.103	500-yr	4502.97	604.94	598.47	3.27	1.93	44.93	15.16	158.11	1565.95	6.26	2.08	6.47	6.47
Dawson County	D10	RM 66.95	3842.803	500-yr	4502.97	604.89	598.2	2.44	1.52	25.6	11.86	211.57	1531.48	5.83	2.68	6.69	6.69
Dawson County	D10	RM 66.74	3505.323	500-yr	4502.97	604.66	598.12	2.7	1.71	30.48	11.62	189.78	1795.56	6.41	2.4	6.54	6.54
Dawson County	D10	RM 66.52	3142.889	500-yr	4502.97	604.37	598.26	2.83	2.02	34.33	14.34	249	2008.37	5.79	2.41	6.12	6.12
Dawson County	D10	RM 66.28	2774.58	500-yr	4502.97	603.79	598.21	3.69	2.86	60.25	20.67	206.17	1469.6	5.33	1.82	5.58	5.58
Dawson County	D10	RM 66.11	2492.331	500-yr	4502.97	603.66	597.8	3.01	2.39	40.67	14.7	269.84	1586.02	5.13	1.84	5.87	5.87
Dawson County	D10	RM 65.90	2160.839	500-yr	4502.97	603.56	597.33	2.59	1.94	29.2	12.28	227.64	1683.78	5.64	2.34	6.24	6.24
Dawson County	D10	RM 65.75	1926.044	500-yr	4502.97	603.43	597.2	2.58	2.05	29.83	12.9	203.78	1907.96	5.17	2.21	6.23	6.23
Dawson County	D10	RM 65.60	1669.095	500-yr	4502.97	603.26	597.07	2.86	1.77	35.01	12.93	140.14	2030.05	5.95	2.16	6.19	6.19
Dawson County	D10	RM 65.42	1386.836	500-yr	4502.97	603.13	596.92	2.34	1.65	23.64	7.37	247.82	2151.4	5.76	1.77	6.21	6.21
Dawson County	D10	RM 65.23	1090.639	500-yr	4502.97	603.02	596.91	2.28	1.46	23.83	8.45	263.18	2547.37	4.75	1.66	6.12	6.12
Dawson County	D10	RM 64.96	634.963	500-yr	4502.97	602.88	597.09	1.97	1.14	17.27	6.3	270.22	2898.9	5.27	1.92	5.79	5.79

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	500-yr	4502.4	602.75	596.42	1.53	0.9	10.78	4.82	398.12	2354.2	4.79	2.13	6.33	6.33
Richland/McKenzie County	D10	RM 64.32	103200	500-yr	4502.4	602.68	596.33	1.81	0.88	14.34	5.8	232.97	2326.61	5.5	2.2	6.35	6.35
Richland/McKenzie County	D10	RM 64.12	102900	500-yr	4502.4	602.62	596.18	1.64	0.93	12.07	5.6	281.09	2064.65	5.09	2.34	6.44	6.44
Richland/McKenzie County	D10	RM 63.92	102601	500-yr	4502.4	602.58	596.08	1.55	0.83	10.85	5.6	273.38	2132.68	4.96	2.54	6.5	6.5
Richland/McKenzie County	D10	RM 63.74	102302	500-yr	4502.4	602.52	595.94	1.67	0.87	12.27	5.54	254.65	2152.28	5.36	2.4	6.58	6.58
Richland/McKenzie County	D10	RM 63.55	101998	500-yr	4502.4	602.46	595.79	1.77	0.87	13.23	5.46	210.56	2050.52	6.2	2.53	6.67	6.67
Richland/McKenzie County	D10	RM 63.34	101671	500-yr	4502.4	602.41	595.21	1.73	0.85	13.13	6.43	241.49	1997.18	5.46	2.65	7.2	7.2
Richland/McKenzie County	D10	RM 63.08	101293	500-yr	4502.4	602.08	595.12	3.01	1.22	38.99	15.64	159.68	1609.25	5.8	2.29	6.96	6.96
Richland/McKenzie County	D10	RM 62.96	101094	500-yr	4502.4	601.9	595.12	3.19	1.4	54.38	18.66	149.74	1553.52	6.16	2.07	6.78	6.78
Richland/McKenzie County	D10	RM 62.83	100882	500-yr	4502.4	601.76	595.12	3.11	1.41	45.7	15.78	161.51	1489.66	6.32	2.14	6.64	6.64
Richland/McKenzie County	D10	RM 62.64	100582	500-yr	4502.4	601.62	595.12	2.85	1.41	34.2	12.73	189.94	1403.6	6.22	2.28	6.5	6.5
Richland/McKenzie County	D10	RM 62.46	100282	500-yr	4502.4	601.03	595.1	4.01	2.14	70.18	21.32	161.13	1262.52	5.58	1.66	5.93	5.93
Richland/McKenzie County	D10	RM 62.27	99977	500-yr	4502.4	601.11	594.91	2.31	1.55	23.33	10.02	303.35	1233.85	5.56	2.35	6.2	6.2
Richland/McKenzie County	D10	RM 62.1	99691	500-yr	4502.4	601.04	594.75	2	1.4	17.79	9.76	274.06	1235.51	4.77	2.6	6.29	6.29
Richland/McKenzie County	D10	RM 61.91	99377	500-yr	4502.4	600.87	594.51	2.22	1.39	21.46	10.82	164.84	1264.57	5.16	2.56	6.36	6.36
Richland/McKenzie County	D10	RM 61.72	99082	500-yr	4502.4	600.72	594.36	2.33	1.49	23.45	10.06	127.17	1253.6	5.74	2.41	6.36	6.36
Richland/McKenzie County	D10	RM 61.54	98782	500-yr	4502.4	600.33	594.36	2.94	1.99	37.18	13.73	230.57	1135.07	5.45	1.99	5.97	5.97
Richland/McKenzie County	D10	RM 61.35	98482	500-yr	4502.4	600.12	594.26	2.95	2.03	38.19	14.64	215	1081.36	5.42	2.05	5.86	5.86
Richland/McKenzie County	D10	RM 61.16	98182	500-yr	4502.4	600.08	594.17	2.15	1.55	20.71	9.91	248.77	1202.84	5.07	2.41	5.91	5.91
Richland/McKenzie County	D10	RM 60.99	97906	500-yr	4502.4	599.92	594.02	2.38	1.5	24.88	10.44	216.72	1315.32	5.48	2.28	5.9	5.9
Richland/McKenzie County	D10	RM 60.79	97582	500-yr	4502.4	599.8	593.78	2.27	1.35	23.7	10.91	224.25	1537.38	4.76	2.17	6.02	6.02
Richland/McKenzie County	D10	RM 60.64	97339	500-yr	4502.4	599.78	593.58	1.52	1.03	10.76	6.06	266.31	1715.3	4.56	2.54	6.2	6.2
Richland/McKenzie County	D10	RM 60.42	96982	500-yr	4502.4	599.6	593.38	2.16	1.26	20.41	7.81	215.62	1825.72	5.29	2	6.22	6.22
Richland/McKenzie County	D10	RM 60.25	96700	500-yr	4502.4	599.44	593.24	2.59	1.37	31	12.57	192.38	1766.68	4.66	1.86	6.2	6.2
Richland/McKenzie County	D10	RM 60.04	96365	500-yr	4502.4	599.29	593.14	2.27	1.26	24.86	10.93	227.05	1997.53	4.12	1.79	6.15	6.15
Richland/McKenzie County	D10	RM 59.86	96088	500-yr	4502.4	599.2	592.99	2.12	1.02	19.49	6.94	171.89	2211.36	5.74	2	6.21	6.21
Richland/McKenzie County	D10	RM 59.65	95769	500-yr	4502.4	599.17	592.85	1.7	0.87	12.83	5.24	207.22	2451.27	5.27	2.11	6.32	6.32
Richland/McKenzie County	D10	RM 59.5	95530	500-yr	4502.4	599.09	592.75	1.83	0.98	15.23	5.82	206.9	2483.65	4.92	1.86	6.34	6.34
Richland/McKenzie County	D10	RM 59.29	95183	500-yr	4502.4	599.01	592.55	1.68	0.99	12.81	5.02	232.08	2333.41	5.02	1.94	6.46	6.46
Richland/McKenzie County	D10	RM 59.07	94797	500-yr	4502.4	598.94	592.36	1.52	0.98	11.55	5.06	408.43	2199.17	4.82	2.1	6.58	6.58
Richland/McKenzie County	D10	RM 58.93	94582	500-yr	4502.4	598.84	592.31	1.9	1.07	16.2	6.55	328.36	2063.38	5.1	2.04	6.53	6.53
Richland/McKenzie County	D10	RM 58.75	94282	500-yr	4502.4	598.73	592.28	2.08	1.13	18.55	6.6	264.72	1945.28	5.8	2.04	6.45	6.45
Richland/McKenzie County	D10	RM 58.56	93982	500-yr	4502.4	598.4	592.22	3.2	1.51	43.8	12.65	157.23	1787.73	5.9	1.67	6.18	6.18
Richland/McKenzie County	D10	RM 58.37	93682	500-yr	4502.4	598.24	592.22	2.96	1.57	37.96	11.56	186.39	1663.41	5.74	1.72	6.02	6.02
Richland/McKenzie County	D10	RM 58.19	93382	500-yr	4502.4	598.2	592.22	2.16	1.34	20.09	7.72	254.64	1523.21	5.81	2.21	5.98	5.98
Richland/McKenzie County	D10	RM 58.01	93086	500-yr	4502.4	597.87	592.14	2.88	1.93	36.42	11.96	236.71	1315.16	5.47	1.78	5.73	5.73
Richland/McKenzie County	D10	RM 57.82	92782	500-yr	4502.4	597.84	592.11	2.02	1.5	18.76	8.88	308.1	1325.3	4.8	2.26	5.73	5.73
Richland/McKenzie County	D10	RM 57.63	92482	500-yr	4502.4	597.71	592.11	2.44	1.46	26.5	9.8	160.84	1592.7	5.3	1.93	5.6	5.6
Richland/McKenzie County	D10	RM 57.46	92205	500-yr	4502.4	597.65	591.95	1.84	1.14	14.84	6.45	192.28	1692.78	5.41	2.33	5.7	5.7
Richland/McKenzie County	D10	RM 57.26	91882	500-yr	4502.4	597.46	591.9	2.24	1.4	22.98	9.11	136.34	1686.77	4.88	1.9	5.56	5.56
Richland/McKenzie County	D10	RM 57.07	91583	500-yr	4502.4	597.4	591.73	1.86	1.17	15.34	6.7	137.42	1651.55	5.42	2.32	5.67	5.67
Richland/McKenzie County	D10	RM 56.87	91253	500-yr	4502.4	597.27	591.49	1.71	1.2	13.22	6.48	186.15	1553.13	4.97	2.42	5.84	5.84
Richland/McKenzie County	D10	RM 56.68	90943	500-yr	4502.4	597.21	591.12	1.59	1.26	11.54	7.33	299.58	1403.81	4.76	3.02	6.09	6.09
Richland/McKenzie County	D10	RM 56.54	90682	500-yr	4559	596.99	590.76	2.12	2.02	25.13	15.63	216.66	1218.04	4.29	2.65	6.27	6.27
Richland/McKenzie County	D10	RM 56.35	90387	500-yr	4559	596.78	590.46	2.3	2.11	23.95	13.79	174.85	1086.83	4.98	2.84	6.32	6.32
Richland/McKenzie County	D11	RM 56.16	90086	500-yr	4559	596.13	590.11	3.62	3.19	57.41	28.63	221.5	660.21	5.58	2.74	6.02	6.02
Richland/McKenzie County	D11	RM 55.96	89768	500-yr	4559	595.9	589.96	3.37	2.7	49.09	21.45	222.74	722.06	5.69	2.47	5.94	5.94
Richland/McKenzie County	D11	RM 55.78	89479	500-yr	4559	595.86	589.96	2.77	1.8	33.45	11.79	216.81	1315.13	5.58	1.95	5.9	5.9
Richland/McKenzie County	D11	RM 55.61	89193	500-yr	4559	595.7	589.98	2.72	1.59	32.38	9.42	222.22	1861.26	5.49	1.58	5.72	5.72
Richland/McKenzie County	D11	RM 55.41	88882	500-yr	4559	595.55	589.76	2.54	1.43	28.64	9.11	203.81	1925.99	5.26	1.66	5.79	5.79
Richland/McKenzie County	D11	RM 55.23	88582	500-yr	4559	595.37	589.53	2.54	1.45	28.05	8.07	238.9	1961.96	5.63	1.6	5.84	5.84
Richland/McKenzie County	D11	RM 55.04	88282	500-yr	4559	595.13	589.39	2.78	1.6	34.61	10.16	252.08	1928.67	5.08	1.48	5.74	5.74
Richland/McKenzie County	D11	RM 54.86	87996	500-yr	4559	594.74	589.33	3.36	2.08	52.88	15.68	224.03	1741.44	4.47	1.31	5.41	5.41
Richland/McKenzie County	D11	RM 54.69	87715	500-yr	4559	594.7	589.23	2.39	1.63	26.12	8.31	188.11	1839.01	4.83	1.52	5.47	5.47
Richland/McKenzie County	D11	RM 54.48	87382	500-yr	4559	594.61	589.15	1.94	1.07	17.01	5.56	179.29	2662.16	4.97	1.6	5.46	5.46
Richland/McKenzie County	D11	RM 54.32	87122	500-yr	4559	594.52	589	1.99	0.97	17.51	5.84	159.94	2681.41	5.37	1.75	5.52	5.52
Richland/McKenzie County	D11	RM 54.1	86783	500-yr	4559	594.4	588.83	1.83	1.05	14.73	4.94	202.24	2428.26	5.42	1.79	5.57	5.57
Richland/McKenzie County	D11	RM 53.92	86482	500-yr	4559	594.31	588.68	1.77	1.07	14.22	5.57	255.08	2584.44	4.92	1.9	5.63	5.63
Richland/McKenzie County	D11	RM 53.73	86182	500-yr	4559	594.19	588.51	2.08	1.12	18.94	6.76	196.75	2788.47	5.47	1.92	5.68	5.68
Richland/McKenzie County	D11	RM 53.55	85882	500-yr	4559	594.02	588.37	2.19	1.3	21.29	7.74	181.72	2027.14	5.31	1.91	5.65	5.65
Richland/McKenzie County	D11	RM 53.36	85582	500-yr	4559	593.88	588.01	2.31	1.27	24.38	8.69	166.55	2283.31	4.81	1.69	5.87	5.87

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 53.17	85290	500-yr	4559	593.26	587.56	3.59	1.76	57.38	12.87	206.2	2266.45	5.21	1.16	5.7	5.7
Richland/McKenzie County	D11	RM 52.98	84982	500-yr	4559	593.08	587.56	2.98	1.29	43.82	16.88	271.44	2833.36	3.81	1.45	5.52	5.52
Richland/McKenzie County	D11	RM 52.79	84682	500-yr	4559	592.86	587.56	2.41	1.25	29.41	12.96	387.04	2725.11	3.59	1.56	5.3	5.3
Richland/McKenzie County	D11	RM 52.61	84390	500-yr	4559	592.7	587.43	2.07	1.26	20.49	7.21	450.01	2960.42	4.2	1.47	5.27	5.27
Richland/McKenzie County	D11	RM 52.42	84082	500-yr	4559	592.64	587.28	1.72	1	14.56	5.58	409.99	3376.98	3.8	1.44	5.36	5.36
Richland/McKenzie County	D11	RM 52.24	83798	500-yr	4559	592.58	587.28	1.58	0.75	11.66	4.59	227.41	3615.59	4.5	1.75	5.3	5.3
Richland/McKenzie County	D11	RM 52.01	83423	500-yr	4559	592.43	587.23	2.08	0.9	19.66	5.83	124.91	3788.31	4.99	1.44	5.2	5.2
Richland/McKenzie County	D11	RM 51.87	83182	500-yr	4559	592.36	587.16	1.68	0.83	14.07	5.98	156.7	3501.4	3.8	1.59	5.2	5.2
Richland/McKenzie County	D11	RM 51.69	82882	500-yr	4559	592.27	587.16	1.5	0.75	10.93	4.31	151.24	3654.19	4.32	1.67	5.11	5.11
Richland/McKenzie County	D11	RM 51.51	82585	500-yr	4559	592.21	587.16	1.73	0.82	14.55	5.61	149.84	3653.64	4.04	1.53	5.05	5.05
Richland/McKenzie County	D11	RM 51.32	82274	500-yr	4559	592.17	587.16	1.42	0.73	9.83	4.27	173.83	3684.2	4	1.7	5.01	5.01
Richland/McKenzie County	D11	RM 51.13	81982	500-yr	4559	592.11	587.13	1.53	0.74	10.79	3.87	164.51	3638.97	4.8	1.69	5	5
Richland/McKenzie County	D11	RM 50.95	81682	500-yr	4559	592.04	587.08	1.41	0.65	9.18	3.63	144.96	3782.54	4.74	1.84	4.96	4.96
Richland/McKenzie County	D11	RM 50.76	81378	500-yr	4559	591.99	586.89	1.33	0.6	8.28	3.78	174.41	3693.95	4.6	2.05	5.1	5.1
Richland/McKenzie County	D11	RM 50.56	81065	500-yr	4559	591.86	586.37	1.66	0.74	12.17	4.25	171.61	3403.98	5.37	1.84	5.49	5.49
Richland/McKenzie County	D11	RM 50.39	80787	500-yr	4559	591.82	585.7	1.59	0.73	10.77	3.61	196.96	3167.24	6.02	1.98	6.12	6.12
Richland/McKenzie County	D11	RM 50.21	80482	500-yr	4559	591.74	585.55	1.61	0.86	11.31	4.32	234.94	2552.02	5.48	2.08	6.19	6.19
Richland/McKenzie County	D11	RM 50.02	80182	500-yr	4615.6	591.61	585.55	1.99	1.09	17.52	6.39	197.51	2200.28	5.41	1.93	6.06	6.06
Richland/McKenzie County	D12	RM 49.82	79860	500-yr	4615.6	591.27	585.55	2.91	1.49	37.27	10.52	212.06	2039.8	5.47	1.52	5.72	5.72
Richland/McKenzie County	D12	RM 49.65	79582	500-yr	4615.6	590.92	585.55	3.34	1.84	49.98	12.59	213.94	1960.31	5.12	1.28	5.37	5.37
Richland/McKenzie County	D12	RM 49.5	79348	500-yr	4615.6	591.04	585.49	1.76	1.11	13.6	4.69	356	2221.15	5.46	1.87	5.59	5.59
Richland/McKenzie County	D12	RM 49.26	78981	500-yr	4615.6	590.96	585.29	2.03	1.17	18.17	6.29	137.44	2122	5.44	1.85	5.67	5.67
Richland/McKenzie County	D12	RM 49.08	78682	500-yr	4615.6	590.82	585.11	2.18	1.21	20.84	7.03	156.64	2103.94	5.45	1.81	5.78	5.78
Richland/McKenzie County	D12	RM 48.87	78351	500-yr	4615.6	590.72	584.96	2.1	1.17	19.35	7.11	209.35	2058.09	5.49	2	5.76	5.76
Richland/McKenzie County	D12	RM 48.7	78082	500-yr	4615.6	590.64	584.86	2.04	1.23	19.11	8.75	252.25	1771.2	4.74	2.13	5.78	5.78
Richland/McKenzie County	D12	RM 48.52	77782	500-yr	4615.6	590.61	584.74	1.4	0.99	9.05	5.19	473.03	1754.01	4.66	2.66	5.87	5.87
Richland/McKenzie County	D12	RM 48.33	77482	500-yr	4615.6	590.56	584.51	1.41	1.01	11.39	7.14	517.65	1821.18	4.04	2.52	6.05	6.05
Richland/McKenzie County	D12	RM 48.15	77182	500-yr	4615.6	590.45	584.24	1.65	0.96	13.09	8.35	497.96	1890.99	4.16	2.64	6.21	6.21
Richland/McKenzie County	D12	RM 47.97	76887	500-yr	4615.6	590.43	584.09	1.24	0.9	7.64	5.67	601.73	2183.27	3.83	2.84	6.34	6.34
Richland/McKenzie County	D12	RM 47.76	76570	500-yr	4615.6	590.37	583.86	1.21	0.94	7.6	5.19	565.5	2104.34	4.16	2.83	6.51	6.51
Richland/McKenzie County	D12	RM 47.59	76293	500-yr	4615.6	590.31	583.71	1.37	0.98	9.17	5.1	391.27	2070.85	4.88	2.7	6.6	6.6
Richland/McKenzie County	D12	RM 47.4	75982	500-yr	4615.6	590.21	583.42	1.8	1.06	14.01	6.51	196.88	1965.98	5.72	2.63	6.79	6.79
Richland/McKenzie County	D12	RM 47.12	75521	500-yr	4615.6	589.96	583.04	2.29	1.26	21.62	7.81	234.72	1795.87	6.66	2.37	6.92	6.92
Richland/McKenzie County	D12	RM 47	75323	500-yr	4615.6	589.65	583.04	3.34	1.59	47.5	15.56	162.2	1701.93	6.04	1.95	6.61	6.61
Richland/McKenzie County	D12	RM 46.85	75082	500-yr	4615.6	589.52	583.04	3.12	1.59	41.35	13.76	184.53	1608.14	6.02	1.97	6.48	6.48
Richland/McKenzie County	D12	RM 46.67	74782	500-yr	4615.6	589.22	583.04	3.35	1.91	47.85	15.33	185.83	1346.67	6.02	1.9	6.18	6.18
Richland/McKenzie County	D12	RM 46.47	74459	500-yr	4615.6	589.19	583.04	2.36	1.71	24.33	10.95	312.11	1094.3	5.51	2.46	6.15	6.15
Richland/McKenzie County	D12	RM 46.3	74186	500-yr	4615.6	589.06	583.04	2.28	1.89	23.91	15.69	421.1	882.59	4.24	2.76	6.02	6.02
Richland/McKenzie County	D12	RM 46.14	73920	500-yr	4615.6	588.93	583.04	2.16	1.82	21.2	14.62	454.73	861.65	4.3	2.95	5.89	5.89
Richland/McKenzie County	D12	RM 45.9	73546	500-yr	4615.6	588.77	582.97	2.19	1.49	21.84	11.22	339.6	1288.99	4.93	2.52	5.8	5.8
Richland/McKenzie County	D12	RM 45.75	73307	500-yr	4615.6	588.61	582.88	2.36	1.56	27.38	13.91	351.5	1554.68	4.33	2.19	5.73	5.73
Richland/McKenzie County	D12	RM 45.54	72980	500-yr	4615.6	588.49	582.55	2.04	1.46	18.87	9.84	382.5	1870.55	4.93	2.55	5.94	5.94
Richland/McKenzie County	D12	RM 45.29	72680	500-yr	4615.6	588.34	582.25	2.2	1.5	22.1	11.11	347.33	1798.31	4.87	2.43	6.09	6.09
Richland/McKenzie County	D12	RM 45.09	72380	500-yr	4615.6	588.19	582.08	2.35	1.49	23.94	9.85	267.36	2028.38	5.71	2.34	6.11	6.11
Richland/McKenzie County	D12	RM 44.91	72080	500-yr	4615.6	588.07	582.01	2.31	1.48	23.41	9.93	283.48	2110.65	5.46	2.3	6.06	6.06
Richland/McKenzie County	D12	RM 44.72	71783	500-yr	4615.6	587.74	581.97	3.03	1.71	40.35	13.83	208.81	2348.22	5.46	1.85	5.77	5.77
Richland/McKenzie County	D12	RM 44.53	71483	500-yr	4615.6	587.52	581.82	3.18	1.59	44.98	12.7	177.29	2242.03	5.25	1.46	5.7	5.7
Richland/McKenzie County	D12	RM 44.34	71183	500-yr	4615.6	587.31	581.8	2.98	1.53	41.08	11.85	199.57	2428.24	4.7	1.33	5.51	5.51
Richland/McKenzie County	D12	RM 44.17	70899	500-yr	4615.6	587.28	581.79	1.95	1.19	16.65	4.75	301.73	2537.17	5.41	1.53	5.49	5.49
Richland/McKenzie County	D12	RM 43.97	70594	500-yr	4615.6	587.25	581.73	1.48	0.87	10.18	4.47	326.68	2623.43	4.66	2.02	5.52	5.52
Richland/McKenzie County	D12	RM 43.74	70230	500-yr	4615.6	587.14	581.66	1.78	1.08	14.86	5.51	164.51	2580.69	4.51	1.65	5.48	5.48
Richland/McKenzie County	D12	RM 43.59	69983	500-yr	4615.6	587.03	581.56	1.68	0.84	13.21	5.76	143.76	2782.81	4.6	1.97	5.47	5.47
Richland/McKenzie County	D12	RM 43.4	69684	500-yr	4615.6	586.94	581.49	1.72	0.85	13.84	5.36	150.64	2982.81	4.8	1.83	5.45	5.45
Richland/McKenzie County	D12	RM 43.03	69084	500-yr	4615.6	586.84	581.37	1.52	0.72	10.7	4.67	131.62	3247.04	4.59	1.97	5.47	5.47
Richland/McKenzie County	D12	RM 42.66	68489	500-yr	4615.6	586.78	581.18	1.68	0.72	12.9	5.05	115.82	3386.3	4.95	1.89	5.6	5.6
Richland/McKenzie County	D12	RM 42.29	67889	500-yr	4615.6	586.72	580.87	1.33	0.68	7.83	3.07	281.47	3611.17	5.25	2.04	5.85	5.85
Richland/McKenzie County	D12	RM 42.08	67558	500-yr	4615.6	586.68	580.61	1.5	0.68	9.67	3.48	180.64	3469.21	5.81	2.06	6.07	6.07
Richland/McKenzie County	D12	RM 41.89	67260	500-yr	4615.6	586.59	580.31	1.63	0.76	11.51	4.15	292.42	3064.79	5.7	2.04	6.28	6.28
Richland/McKenzie County	D12	RM 41.75	67037	500-yr	4615.6	586.52	579.99	1.72	0.85	13.36	5.43	337.38	2741.47	5.02	2.02	6.53	6.53
Richland/McKenzie County	D12	RM 41.54	66695	500-yr	4615.6	586.31	579.72	2.36	1	23.37	7.63	196.39	2278.17	6.28	2.02	6.59	6.59
Richland/McKenzie County	D12	RM 41.34	66361	500-yr	4615.6	586.16	579.43	2.43	1.16	26	9.71	218.95	2014.38	5.36	1.98	6.73	6.73

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 41.18	66116	500-yr	4615.6	585.98	579.08	2.63	1.24	29.79	9.96	195.81	1924.24	5.88	1.93	6.9	6.9
Richland/McKenzie County	D12	RM 40.99	65802	500-yr	4615.6	585.89	578.99	2.28	1.09	22.54	8.21	203.5	2059.65	5.76	2.06	6.9	6.9
Richland/McKenzie County	D12	RM 40.8	65502	500-yr	4615.6	585.71	578.97	2.35	1.24	24.75	7.92	273.63	2270.36	5.17	1.64	6.74	6.74
Richland/McKenzie County	D12	RM 40.62	65205	500-yr	4615.6	585.69	578.92	1.67	0.91	12.85	5.15	375.4	2984.88	4.72	1.87	6.77	6.77
Richland/McKenzie County	D12	RM 40.24	64602	500-yr	4615.6	585.54	578.6	1.46	0.81	10.57	4.46	507.11	3358.51	4.2	1.76	6.94	6.94
Richland/McKenzie County	D12	RM 40	64219	500-yr	4615.6	585.42	578.56	1.81	0.83	14.6	4.47	309.03	3611.35	5.26	1.59	6.86	6.86
Richland/McKenzie County	D12	RM 39.87	64002	500-yr	4615.6	585.31	578.55	2.21	0.9	20.87	5.5	222	3411.52	6	1.56	6.76	6.76
Richland/McKenzie County	D12	RM 39.68	63702	500-yr	4615.6	585.25	578.45	1.98	0.87	17.29	4.76	241.95	3587.62	5.46	1.48	6.8	6.8
Richland/McKenzie County	D12	RM 39.5	63402	500-yr	4615.6	585.2	578.35	1.85	0.81	15.14	4.85	226.39	3374.58	5.36	1.69	6.85	6.85
Richland/McKenzie County	D12	RM 39.31	63102	500-yr	4615.6	585.14	578.31	1.79	0.83	13.95	4.41	227.2	3156.36	5.66	1.77	6.83	6.83
Richland/McKenzie County	D12	RM 39.13	62802	500-yr	4615.6	585.07	578.2	1.78	0.82	13.97	4.99	286.13	2986.18	5.33	1.88	6.87	6.87
Richland/McKenzie County	D12	RM 38.94	62501	500-yr	4615.6	585.02	578.12	1.66	0.75	11.9	4.38	264.19	2972.67	5.68	2.07	6.9	6.9
Richland/McKenzie County	D12	RM 38.76	62201	500-yr	4615.6	584.96	578.03	1.68	0.75	11.77	4.05	245.72	2892.84	6.27	2.13	6.93	6.93
Richland/McKenzie County	D12	RM 38.57	61901	500-yr	4615.6	584.91	577.87	1.69	0.77	12.63	5.23	236.46	2715.62	5.43	2.22	7.04	7.04
Richland/McKenzie County	D12	RM 38.38	61601	500-yr	4615.6	584.9	577.84	1.05	0.6	5.21	2.91	268.55	2516.46	5.5	3.04	7.06	7.06
Richland/McKenzie County	D12	RM 38.2	61301	500-yr	4615.6	584.84	577.82	1.34	0.74	7.52	3.77	244.45	2365.04	6.32	3.13	7.02	7.02
Richland/McKenzie County	D12	RM 38.01	61008	500-yr	4615.6	584.8	577.81	1.38	0.9	8.48	5.15	307.49	1639.85	5.22	3.14	6.99	6.99
Richland/McKenzie County	D12	RM 37.84	60708	500-yr	4615.6	584.74	577.71	1.56	1.05	12.26	6.86	335.25	1687.16	5.25	2.91	7.03	7.03
Richland/McKenzie County	D12	RM 37.65	60408	500-yr	4615.6	584.73	577.66	1.13	0.87	5.71	3.65	565.75	2049.34	5.17	3.3	7.07	7.07
Richland/McKenzie County	D12	RM 37.5	60107	500-yr	4615.6	584.69	577.54	1.11	0.97	6.03	4.44	561.58	1677.82	4.71	3.46	7.15	7.15
Richland/McKenzie County	D12	RM 37.35	59808	500-yr	4615.6	584.59	577.37	1.34	1.02	9.97	7.01	427.63	1559.32	5.07	3.55	7.22	7.22
Richland/McKenzie County	D12	RM 37.16	59508	500-yr	4615.6	584.46	577.24	1.89	1.24	17.34	11.36	280.03	1730.55	5.23	3.4	7.22	7.22
Richland/McKenzie County	D12	RM 36.97	59208	500-yr	4615.6	584.35	576.96	2.12	1.39	20.74	14.41	222.26	1880.36	5.09	3.5	7.39	7.39
Richland/McKenzie County	D12	RM 36.78	58908	500-yr	4615.6	584.24	576.87	2.14	1.48	19.71	13.42	217.29	2112.54	5.93	4.02	7.37	7.37
Richland/McKenzie County	D12	RM 36.6	58608	500-yr	4615.6	584.14	576.66	2.21	1.48	20.02	9.72	182.19	2200.37	6.84	3.23	7.48	7.48
Richland/McKenzie County	D12	RM 36.38	58263	500-yr	4700.6	583.98	576.49	2.23	1.71	20.76	9.29	290.42	2116.19	6.42	2.84	7.49	7.49
Richland/McKenzie County	D13	RM 36.23	58011	500-yr	4700.6	583.79	576.43	2.74	1.71	30.49	10.68	199.11	2305.71	6.92	2.38	7.36	7.36
Richland/McKenzie County	D13	RM 36.04	57708	500-yr	4700.6	583.71	576.42	2.69	1.47	30.26	11.21	194.14	2425.35	6.3	2.29	7.29	7.29
Richland/McKenzie County	D13	RM 35.85	57408	500-yr	4700.6	583.67	576.41	2.14	1.24	19.41	8.46	278.61	2571.55	5.45	2.35	7.26	7.26
Richland/McKenzie County	D13	RM 35.66	57108	500-yr	4700.6	583.65	576.36	1.64	1.04	11.73	5.17	327.66	2623.68	6.12	2.68	7.29	7.29
Richland/McKenzie County	D13	RM 35.48	56810	500-yr	4700.6	583.52	576.3	2.21	1.14	20.32	7.5	189.87	2535.9	6.52	2.37	7.22	7.22
Richland/McKenzie County	D13	RM 35.29	56508	500-yr	4700.6	583.44	576.19	2.1	1.15	18.99	7.98	216.77	2491.57	5.83	2.41	7.25	7.25
Richland/McKenzie County	D13	RM 35.1	56208	500-yr	4700.6	583.3	576.07	2.16	1.26	19.21	7.8	244.46	2421.84	6.74	2.68	7.23	7.23
Richland/McKenzie County	D13	RM 34.92	55908	500-yr	4700.6	583.21	576.09	2.1	1.25	21.85	9.34	254.13	2346.22	6.26	2.65	7.12	7.12
Richland/McKenzie County	D13	RM 34.73	55605	500-yr	4700.6	583.14	575.89	1.76	1.28	13.12	7.02	414.63	1661.97	5.44	2.89	7.25	7.25
Richland/McKenzie County	D13	RM 34.54	55297	500-yr	4700.6	583.08	575.79	1.64	1.19	13.62	7.55	394.66	1785.34	4.92	2.71	7.28	7.28
Richland/McKenzie County	D13	RM 34.36	55008	500-yr	4700.6	583.04	575.75	1.56	0.99	9.88	4.5	323.48	1851.9	6.45	2.91	7.29	7.29
Richland/McKenzie County	D13	RM 34.17	54708	500-yr	4700.6	583.02	575.49	1.34	0.84	7.69	3.75	380.95	2051.57	5.96	2.89	7.53	7.53
Richland/McKenzie County	D13	RM 33.94	54408	500-yr	4700.6	582.99	575.34	1.26	0.84	6.72	3.24	374.48	1918.53	6.09	2.92	7.65	7.65
Richland/McKenzie County	D13	RM 33.76	54079	500-yr	4700.6	582.95	575.12	1.4	0.91	8.26	3.82	286.39	1817.26	6.26	2.84	7.83	7.83
Richland/McKenzie County	D13	RM 33.6	53799	500-yr	4700.6	582.91	574.88	1.36	0.91	8.59	4.54	376.74	1672.32	5.9	3.07	8.03	8.03
Richland/McKenzie County	D13	RM 33.42	53508	500-yr	4700.6	582.85	574.61	1.6	1.01	10.17	4.91	262.09	1637.71	7.06	3.35	8.24	8.24
Richland/McKenzie County	D13	RM 33.23	53208	500-yr	4700.6	582.82	574.45	1.52	0.98	9.11	4.33	209.05	1786.73	7.58	3.55	8.37	8.37
Richland/McKenzie County	D13	RM 33.04	52908	500-yr	4700.6	582.74	574.3	1.81	1.01	12.57	4.9	193.34	1782.4	8.11	3.1	8.44	8.44
Richland/McKenzie County	D13	RM 32.86	52608	500-yr	4700.6	582.64	574.18	2.06	1	16.69	6.15	209.27	1785.26	7.64	2.76	8.46	8.46
Richland/McKenzie County	D13	RM 32.67	52308	500-yr	4700.6	582.61	574.18	1.93	0.88	14.71	5.76	188.53	1854.35	7.47	2.87	8.43	8.43
Richland/McKenzie County	D13	RM 32.48	52008	500-yr	4700.6	582.52	574.04	2.06	0.92	17.04	6.34	196.91	1949.93	7.19	2.61	8.48	8.48
Richland/McKenzie County	D13	RM 32.29	51709	500-yr	4700.6	582.47	574.04	1.83	0.9	13.31	4.77	224.23	2002.2	7.43	2.62	8.43	8.43
Richland/McKenzie County	D13	RM 32.11	51423	500-yr	4700.6	582.42	573.94	1.8	1.01	12.63	4.6	220.08	1679.58	7.73	2.78	8.48	8.48
Richland/McKenzie County	D13	RM 31.92	51108	500-yr	4700.6	582.4	573.85	1.5	0.93	9.15	4.32	211.85	1552.13	7.01	3.26	8.55	8.55
Richland/McKenzie County	D13	RM 31.73	50809	500-yr	4700.6	582.36	573.72	1.43	0.88	8.76	4.16	261.37	1454.29	7.81	3.67	8.65	8.65
Richland/McKenzie County	D13	RM 31.51	50462	500-yr	4700.6	582.23	573.24	2.13	1.23	17.13	8.28	162.22	1022.76	7.88	3.73	8.99	8.99
Richland/McKenzie County	D13	RM 31.35	50208	500-yr	4700.6	582.13	573.24	2.3	1.57	21.37	12.68	169.04	721.62	7.13	4.15	8.89	8.89
Richland/McKenzie County	D13	RM 31.22	50009	500-yr	4700.6	581.92	573.24	2.88	1.91	32.73	19.08	149.68	644.2	7.61	4.35	8.68	8.68
Richland/McKenzie County	D13	RM 31.12	49859	500-yr	4700.6	581.63	570.86	3.02	2.95	49.17	45.15	196.27	220.53	7.84	7.22	10.77	10.77
Richland/McKenzie County	D13	Highway 23	49844	500-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	500-yr	4700.6	581.56	570.86	3.07	3	49.41	45	192.51	219.09	7.85	7.15	10.7	10.7
Richland/McKenzie County	D13	RM 30.97	49608	500-yr	4700.6	581.53	573.24	2.58	2.3	25.94	18.95	225.84	1523.67	7.87	5.72	8.29	8.29
Richland/McKenzie County	D13	RM 30.79	49308	500-yr	4700.6	581.29	573.24	3.06	2.29	37.85	22.61	199.27	1556.35	7.09	4.19	8.05	8.05
Richland/McKenzie County	D13	RM 30.6	49009	500-yr	4700.6	581.13	573.24	3.13	2.02	39.87	22.66	187.26	1570.36	6.85	3.84	7.89	7.89
Richland/McKenzie County	D13	RM 30.41	48706	500-yr	4700.6	581.11	573.15	2.5	1.71	27.17	15.05	212.3	1575.43	6.83	3.74	7.96	7.96

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 30.22	48403	500-yr	4700.6	581	573.15	2.5	1.48	24.79	11.5	199.03	1840.57	7.38	3.37	7.85	7.85
Richland/McKenzie County	D13	RM 30.03	48102	500-yr	4700.6	581.02	573.15	1.69	1.07	11.57	6.11	315.48	1887.65	7.17	3.68	7.87	7.87
Richland/McKenzie County	D13	RM 29.85	47809	500-yr	4700.6	580.99	573.15	1.55	0.96	9.95	5.14	376.84	2100.13	6.63	3.38	7.84	7.84
Richland/McKenzie County	D13	RM 29.66	47508	500-yr	4700.6	580.93	573.11	1.59	0.95	10.92	5.75	393.01	2097.83	5.64	2.92	7.82	7.82
Richland/McKenzie County	D13	RM 29.48	47209	500-yr	4700.6	580.88	573.11	1.58	0.98	10.38	5.02	346.87	1548.51	6.51	3.1	7.77	7.77
Richland/McKenzie County	D13	RM 29.28	46894	500-yr	4700.6	580.84	572.98	1.47	1.07	9.12	4.82	401.07	1626.16	6.11	3.22	7.86	7.86
Richland/McKenzie County	D13	RM 29.1	46608	500-yr	4700.6	580.78	572.94	1.89	1.05	14.54	6.26	169.86	1772.53	6.87	2.91	7.84	7.84
Richland/McKenzie County	D13	RM 28.92	46308	500-yr	4700.6	580.71	572.85	1.94	1.08	15.04	5.87	146.69	1826.6	7.39	2.82	7.86	7.86
Richland/McKenzie County	D13	RM 28.73	46008	500-yr	4700.6	580.68	572.67	1.69	0.98	11.53	5.46	152.03	1926.88	7.13	3.32	8.01	8.01
Richland/McKenzie County	D13	RM 28.54	45708	500-yr	4700.6	580.65	572.67	1.52	0.92	9.22	4.69	201.29	2251.76	6.72	3.37	7.98	7.98
Richland/McKenzie County	D13	RM 28.36	45419	500-yr	4700.6	580.6	572.48	1.5	0.9	9.08	4.5	233.95	2108.89	7.14	3.5	8.12	8.12
Richland/McKenzie County	D13	RM 28.15	45071	500-yr	4700.6	580.53	572.25	1.45	1.12	8.54	4.97	429.8	1468.04	6.74	3.89	8.28	8.28
Richland/McKenzie County	D13	RM 27.98	44808	500-yr	4700.6	580.38	572.04	2.15	1.28	18.16	6.81	236.34	2239.44	7.58	2.8	8.34	8.34
Richland/McKenzie County	D13	RM 27.8	44508	500-yr	4700.6	580.28	571.87	2.21	1.31	18.77	6.55	226.85	2185.82	8.16	2.8	8.41	8.41
Richland/McKenzie County	D14	RM 27.61	44208	500-yr	4700.6	580.24	571.87	2.05	1.28	16.58	6.85	246.37	2180.15	7.63	3.11	8.37	8.37
Richland/McKenzie County	D14	RM 27.43	43916	500-yr	4700.6	580.22	571.87	1.79	1.07	12.47	4.86	261.74	2646.56	7.98	3.07	8.35	8.35
Richland/McKenzie County	D14	RM 27.23	43608	500-yr	4700.6	580.21	571.87	1.46	0.86	8.13	3.24	310.87	2666.87	8.23	3.23	8.34	8.34
Richland/McKenzie County	D14	RM 27.04	43305	500-yr	4700.6	580.16	571.87	1.63	0.85	10.39	3.99	277.5	2725.32	7.69	2.88	8.29	8.29
Richland/McKenzie County	D14	RM 26.86	43008	500-yr	4700.6	580.1	571.87	1.82	0.88	12.92	4.69	229.41	2669.78	7.95	2.83	8.23	8.23
Richland/McKenzie County	D14	RM 26.67	42708	500-yr	4700.6	580.07	571.87	1.72	0.85	11.43	4.14	252.42	2702.19	7.93	2.83	8.2	8.2
Richland/McKenzie County	D14	RM 26.48	42408	500-yr	4700.6	579.97	571.87	2.06	0.97	16.65	5.72	209.83	2522.22	7.79	2.63	8.1	8.1
Richland/McKenzie County	D14	RM 26.29	42108	500-yr	4700.6	579.91	571.87	2.03	1.07	16.15	5.71	205.84	2441.07	7.74	2.69	8.04	8.04
Richland/McKenzie County	D14	RM 26.11	41808	500-yr	4700.6	579.87	571.87	1.81	1.1	12.89	5.05	249.58	2415.19	7.7	2.98	8	8
Richland/McKenzie County	D14	RM 25.92	41508	500-yr	4700.6	579.82	571.87	1.72	1.11	11.58	4.72	305.76	2410	7.65	3.09	7.95	7.95
Richland/McKenzie County	D14	RM 25.73	41208	500-yr	4700.6	579.75	571.74	1.78	1.28	12.3	4.17	309.7	2377.71	7.79	2.62	8.01	8.01
Richland/McKenzie County	D14	RM 25.55	40918	500-yr	4700.6	579.7	571.74	1.8	1.28	13.17	4.52	346.01	2452.7	6.74	2.29	7.96	7.96
Richland/McKenzie County	D14	RM 25.37	40619	500-yr	4700.6	579.63	571.74	1.8	1.26	13.59	5.11	353.9	2454.68	6.55	2.45	7.89	7.89
Richland/McKenzie County	D14	RM 25.17	40310	500-yr	4700.6	579.56	571.74	1.85	1.23	15.75	6.35	361.09	2152.42	6.08	2.44	7.82	7.82
Richland/McKenzie County	D14	RM 24.99	40008	500-yr	4700.6	579.52	571.74	1.59	1.07	10.8	4.9	384.4	1924.42	6.82	3.08	7.78	7.78
Richland/McKenzie County	D14	RM 24.8	39703	500-yr	4700.6	579.48	571.71	1.5	1.21	9.84	5	401.45	2054.82	7.46	3.77	7.77	7.77
Richland/McKenzie County	D14	RM 24.62	39408	500-yr	4700.6	579.34	571.64	2.05	1.63	16.91	10.85	278.78	1777.42	7.04	4.49	7.7	7.7
Richland/McKenzie County	D14	RM 24.45	39139	500-yr	4700.6	579.08	571.64	2.64	2.28	27.86	17.57	239.98	1698.6	7.21	4.53	7.44	7.44
Richland/McKenzie County	D14	RM 24.24	38801	500-yr	4700.6	578.96	571.58	2.61	2.18	27.34	18.53	237.24	1829.91	7.17	4.84	7.38	7.38
Richland/McKenzie County	D14	RM 24.05	38506	500-yr	4700.6	578.88	571.48	2.43	2.14	23.63	15.73	264.93	1858.31	7.14	4.73	7.4	7.4
Richland/McKenzie County	D14	RM 23.87	38210	500-yr	4700.6	578.89	571.28	1.86	1.65	13.69	8.97	334.4	2025	7.41	4.83	7.61	7.61
Richland/McKenzie County	D14	RM 23.66	37912	500-yr	4700.6	578.88	571.21	1.49	1.33	8.92	5.98	442.5	2164.32	6.95	4.64	7.67	7.67
Richland/McKenzie County	D14	RM 23.48	37610	500-yr	4700.6	578.85	571.12	1.49	1.26	9.67	5.97	347.97	2307.69	6.13	3.78	7.73	7.73
Richland/McKenzie County	D14	RM 23.29	37312	500-yr	4700.6	578.8	570.86	1.57	1.2	11.01	6.09	313.75	2352.99	6.04	3.32	7.94	7.94
Richland/McKenzie County	D14	RM 23.1	37006	500-yr	4700.6	578.76	570.82	1.59	1.07	11.17	5	254.67	2457.81	6.82	3.02	7.94	7.94
Richland/McKenzie County	D14	RM 22.92	36721	500-yr	4700.6	578.72	570.8	1.58	0.99	10.46	4.47	214.08	2529.92	6.76	2.84	7.92	7.92
Richland/McKenzie County	D14	RM 22.72	36402	500-yr	4700.6	578.64	570.81	1.92	1.08	14.54	5.6	178.19	2265.57	7.45	2.82	7.83	7.83
Richland/McKenzie County	D14	RM 22.54	36108	500-yr	4700.6	578.56	570.76	1.81	1.08	13.48	5.41	276.8	1984.86	7.24	2.88	7.8	7.8
Richland/McKenzie County	D14	RM 22.35	35808	500-yr	4700.6	578.52	570.74	1.7	1.06	11.71	4.52	308.52	1882.56	7.04	2.69	7.78	7.78
Richland/McKenzie County	D14	RM 22.17	35508	500-yr	4700.6	578.46	570.68	1.74	1.08	11.9	4.34	303.06	1595	7.58	2.73	7.78	7.78
Richland/McKenzie County	D14	RM 22.02	35264	500-yr	4700.6	578.43	570.68	1.59	1.13	9.92	3.97	354.21	1367.88	7.64	3.03	7.75	7.75
Richland/McKenzie County	D14	RM 21.8	34901	500-yr	4700.6	578.35	570.69	1.71	1.32	12.13	6.03	401.53	3511.66	6.37	3.14	7.66	7.66
Richland/McKenzie County	D14	RM 21.61	34626	500-yr	4700.6	578.3	570.67	1.66	1.37	11.89	7.05	468.94	3429.86	5.79	3.41	7.63	7.63
Richland/McKenzie County	D14	RM 21.34	34140	500-yr	4700.6	578.28	570.67	1.4	1.05	7.93	3.82	289.68	3773.15	6.94	3.31	7.61	7.61
Richland/McKenzie County	D14	RM 21.25	33973	500-yr	4700.6	578.25	570.67	1.61	1.1	10.93	5.08	204.54	3890.97	6.43	2.94	7.58	7.58
Richland/McKenzie County	D14	RM 21.06	33672	500-yr	4700.6	578.23	570.6	1.39	0.98	8	4.23	267.5	3794.77	6.54	3.43	7.63	7.63
Richland/McKenzie County	D14	RM 20.9	33400	500-yr	4700.6	578.2	570.58	1.44	1.05	8.76	5.03	251.38	3756.53	6.06	3.44	7.62	7.62
Richland/McKenzie County	D14	RM 20.71	33101	500-yr	4700.6	578.13	570.53	1.77	1.11	13.27	6.62	247.47	3797.78	6.28	3.11	7.6	7.6
Richland/McKenzie County	D14	RM 20.52	32800	500-yr	4700.6	578.09	570.52	1.65	1.03	11.12	5.25	280.27	3918.61	6.68	3.13	7.57	7.57
Richland/McKenzie County	D14	RM 20.34	32500	500-yr	4700.6	578.04	570.52	1.69	1.06	11.67	5.42	256.92	3939.53	6.77	3.12	7.52	7.52
Richland/McKenzie County	D14	RM 20.15	32200	500-yr	4700.6	577.97	570.52	1.84	1.12	16.03	7.17	231.21	3930.26	6.91	3.06	7.45	7.45
Richland/McKenzie County	D14	RM 19.96	31900	500-yr	4700.6	577.71	570.52	2.7	1.39	29.66	10.84	189.46	3942.74	6.89	2.47	7.19	7.19
Richland/McKenzie County	D14	RM 19.77	31600	500-yr	4700.6	577.75	570.5	1.71	1.05	12.02	5.11	332.93	4169.04	6.72	2.84	7.25	7.25
Richland/McKenzie County	D14	RM 19.59	31297	500-yr	4700.6	577.72	570.45	1.58	0.93	10.66	4.83	334.34	4380.82	6.43	2.89	7.27	7.27
Richland/McKenzie County	D14	RM 19.4	30995	500-yr	4700.6	577.66	570.45	1.71	0.91	12.34	5.82	284.81	4341.58	6.22	2.9	7.21	7.21
Richland/McKenzie County	D14	RM 19.21	30710	500-yr	4700.6	577.65	570.38	1.31	0.78	6.94	3.47	380.6	4238.25	6.83	3.4	7.27	7.27
Richland/McKenzie County	D14	RM 19.03	30402	500-yr	4700.6	577.62	570.38	1.28	0.78	6.74	3.3	428.38	4377.87	6.19	3	7.24	7.24

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 18.83	30086	500-yr	4700.6	577.59	570.38	1.17	0.69	5.79	2.98	505.09	4711.36	5.28	2.69	7.21	7.21
Richland/McKenzie County	D14	RM 18.66	29802	500-yr	4700.6	577.57	570.38	1.13	0.63	5.8	2.75	455.27	5070.93	5.29	2.47	7.19	7.19
Richland/McKenzie County	D14	RM 18.47	29499	500-yr	4700.6	577.55	570.36	1.28	0.64	7.01	2.61	299.05	5178.79	5.85	2.14	7.19	7.19
Richland/McKenzie County	D14	RM 18.28	29197	500-yr	4700.6	577.5	570.36	1.39	0.67	8.23	2.35	299.23	5113.31	6.58	1.86	7.14	7.14
Richland/McKenzie County	D14	RM 17.89	28624	500-yr	4700.6	577.48	570.33	1.01	0.57	4.13	1.11	468.41	4769.89	7.02	1.88	7.15	7.15
Richland/McKenzie County	D14	RM 17.56	27975	500-yr	4700.6	577.41	570.29	1.25	0.68	6.84	1.9	460.6	4349.29	5.77	1.59	7.12	7.12
Richland/McKenzie County	D14	RM 17.36	27539	500-yr	4700.6	577.28	570.31	1.9	0.89	14.74	2.91	254.84	4051.11	6.68	1.3	6.97	6.97
Richland/McKenzie County	D14	RM 17.1	27113	500-yr	4700.6	577.24	570.28	1.65	0.81	11.15	2.35	298.39	4165.54	6.73	1.41	6.96	6.96
Richland/McKenzie County	D14	RM 16.74	26537	500-yr	4700.6	577.21	570.14	1.27	0.69	6.57	1.63	406.85	4093.97	6.72	1.66	7.07	7.07
Richland/McKenzie County	D14	RM 16.35	25925	500-yr	4700.6	577.16	569.46	1.27	0.65	6.4	1.62	346.21	3889.86	7.49	1.87	7.7	7.7
Richland/McKenzie County	D14	RM 16.17	25629	500-yr	4700.6	577.14	569.2	1.23	0.64	6.18	1.68	377.41	3648.88	7.47	2.01	7.94	7.94
Richland/McKenzie County	D14	RM 15.95	25324	500-yr	4700.6	577.13	568.99	1.06	0.63	4.32	1.24	457.34	3276.47	7.94	2.27	8.14	8.14
Richland/McKenzie County	D14	RM 15.75	25032	500-yr	4700.6	577.11	568.85	1.13	0.72	5.03	1.48	462.46	3039.65	7.38	2.15	8.26	8.26
Richland/McKenzie County	D14	RM 15.56	24777	500-yr	4700.6	577.01	568.85	1.71	0.97	11.48	2.73	291.53	2753.22	7.53	1.76	8.16	8.16
Richland/McKenzie County	D14	RM 15.34	24438	500-yr	4700.6	576.96	568.79	1.79	0.97	12.36	2.92	261.89	2625.07	7.92	1.85	8.16	8.16
Richland/McKenzie County	D14	RM 15.16	24144	500-yr	4700.6	576.91	568.75	1.77	0.98	12.2	2.99	267.44	2515.65	7.92	1.91	8.16	8.16
Richland/McKenzie County	D14	RM 14.98	23841	500-yr	4700.6	576.87	568.76	1.81	1	14.15	3.51	254.68	4199.9	7.86	1.92	8.11	8.11
Richland/McKenzie County	D14	RM 14.79	23543	500-yr	4700.6	576.83	568.72	1.72	1.01	11.97	3.41	286.41	4295.05	7.31	2.05	8.11	8.11
Richland/McKenzie County	D14	RM 14.61	23241	500-yr	4700.6	576.76	568.7	1.81	1.12	12.79	3.44	274.36	4364.23	7.78	2.07	8.06	8.06
Richland/McKenzie County	D14	RM 14.42	22940	500-yr	4700.6	576.73	568.69	1.59	1.09	9.81	2.98	328.42	4203.28	7.84	2.36	8.04	8.04
Richland/McKenzie County	D14	RM 14.23	22647	500-yr	4700.6	576.73	568.67	1.24	0.94	6.03	2.45	444.61	4080.25	7.69	3.1	8.06	8.06
Richland/McKenzie County	D14	RM 14.05	22341	500-yr	4700.6	576.71	568.68	1.09	0.91	6.59	3.52	601.92	3736.12	6.86	3.65	8.03	8.03
Richland/McKenzie County	D14	RM 13.88	22040	500-yr	4700.6	576.67	568.67	1.14	1.02	6.64	4.95	682.22	2819.38	5.85	4.35	8	8
Richland/McKenzie County	D14	RM 13.7	21728	500-yr	4700.6	576.58	568.65	1.5	1.44	10.06	8.12	502.19	2788.35	6.18	4.99	7.93	7.93
Richland/McKenzie County	D14	RM 13.51	21429	500-yr	4700.6	576.51	568.63	1.6	1.52	10.3	7.94	409.72	3068.55	7.1	5.46	7.88	7.88
Richland/McKenzie County	D15	RM 13.31	21145	500-yr	4700.6	576.49	568.51	1.43	1.38	8.39	6.08	457.14	3428.07	7.12	5.16	7.98	7.98
Richland/McKenzie County	D15	RM 13.12	20858	500-yr	4700.6	576.39	568.39	1.76	1.66	12.06	6.98	344.8	3458.45	7.69	4.44	8	8
Richland/McKenzie County	D15	RM 12.9	20507	500-yr	4700.6	576.28	568.39	2.02	1.87	16.01	9.07	303.98	3212.45	7.56	4.26	7.89	7.89
Richland/McKenzie County	D15	RM 12.73	20241	500-yr	4700.6	576.22	568.35	2.02	1.84	16.05	7.88	297.97	3267.45	7.65	3.73	7.87	7.87
Richland/McKenzie County	D15	RM 12.56	19961	500-yr	4700.6	576.2	568.34	1.78	1.6	12.37	6.24	337.44	3029.32	7.69	3.85	7.86	7.86
Richland/McKenzie County	D15	RM 12.38	19686	500-yr	4700.6	576.2	568.23	1.44	1.3	8.12	4.98	425.75	1899.51	7.55	4.6	7.97	7.97
Richland/McKenzie County	D15	RM 12.21	19384	500-yr	4700.6	576.17	568.17	1.39	1.24	8.45	6.81	513.36	1500.71	6.32	5.09	8	8
Richland/McKenzie County	D15	RM 11.99	19084	500-yr	4700.6	576.14	568.16	1.28	1.12	7.56	5.85	592.13	1256.8	5.96	4.59	7.98	7.98
Richland/McKenzie County	D15	RM 11.53	18484	500-yr	4700.6	576.07	568.11	1.2	1.01	5.87	4.77	693.79	1171.64	4.92	3.98	7.96	7.96
Richland/McKenzie County	D15	RM 11.34	18216	500-yr	4700.6	576.03	568.06	1.09	1.02	18.28	14.34	710.89	1185.41	4.97	3.89	7.97	7.97
Richland/McKenzie County	D15	RM 11.17	17885	500-yr	4700.6	575.85	567.88	1.26	1.18	24.95	19.31	777.3	1154.68	4.45	3.44	7.97	7.97
Richland/McKenzie County	D15	RM 10.97	17584	500-yr	4700.6	575.78	567.8	1.22	1.16	6.39	5.29	780.34	1113.76	4.72	3.9	7.98	7.98
Richland/McKenzie County	D15	RM 10.75	17284	500-yr	4700.6	575.75	567.79	1.18	1.09	5.78	5.29	717.39	863.46	5.43	4.97	7.96	7.96
Richland/McKenzie County	D15	RM 10.53	16964	500-yr	4700.6	575.69	567.73	1.33	1.21	7.48	6.46	641.5	853.91	5.29	4.57	7.96	7.96
Richland/McKenzie County	D15	RM 10.35	16670	500-yr	4700.6	575.63	567.73	1.44	1.17	9.18	6.46	517.24	985.72	5.83	4.08	7.9	7.9
Richland/McKenzie County	D15	RM 10.15	16384	500-yr	4700.6	575.6	567.73	1.52	1.02	9.08	5.01	251.85	1112.09	7.56	4.14	7.87	7.87
Richland/McKenzie County	D15	RM 9.94	16084	500-yr	4700.6	575.59	567.73	1.18	0.91	5.47	3.2	272.39	1209.43	7.38	4.29	7.86	7.86
Richland/McKenzie County	D15	RM 9.76	15797	500-yr	4700.6	575.54	567.65	1.35	0.95	7.13	4.17	352.04	1335.9	6.99	4.08	7.89	7.89
Richland/McKenzie County	D15	RM 9.57	15487	500-yr	4700.6	575.47	567.58	1.6	1.09	10.02	5.95	245.67	1027.23	7.68	4.53	7.89	7.89
Richland/McKenzie County	D15	RM 9.37	15187	500-yr	4700.6	575.37	567.58	1.93	1.39	14.69	10.21	203.96	643.26	7.59	5.25	7.79	7.79
Richland/McKenzie County	D15	RM 9.24	14963	500-yr	4700.6	575.07	564.5	2.56	2.42	25.63	21.28	234.33	303.29	7.73	6.41	10.57	10.57
Richland/McKenzie County	D15	RR/Walkway	14952	500-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	500-yr	4700.6	575	564.5	2.57	2.42	26.08	20.91	234.33	330.14	7.66	6.12	10.5	10.5
Richland/McKenzie County	D15	RM 9.1	14741	500-yr	4700.6	574.83	567.39	2.85	2.46	33.75	22.2	231.83	453.77	6.9	4.52	7.44	7.44
Richland/McKenzie County	D15	RM 9.03	14639	500-yr	4700.6	574.82	565.46	2.58	2.31	26.57	18.84	248.61	422.25	7.14	5.07	9.36	9.36
Richland/McKenzie County	D15	Highway 68	14629	500-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	500-yr	4700.6	574.77	565.46	2.6	2.33	27.06	19.14	248.61	401.49	7.09	5.02	9.31	9.31
Richland/McKenzie County	D15	RM 8.82	14300	500-yr	4700.6	574.78	567.41	1.7	1.51	11.64	8.63	381.12	1014.63	6.9	5.1	7.37	7.37
Richland/McKenzie County	D15	RM 8.61	13963	500-yr	4700.6	574.72	567.39	1.78	1.36	12.84	8.28	313.8	1012.78	6.82	4.38	7.33	7.33
Richland/McKenzie County	D15	RM 8.44	13687	500-yr	4700.6	574.66	567.32	1.91	1.32	14.64	8.77	258.5	1035.39	7.09	4.22	7.34	7.34
Richland/McKenzie County	D15	RM 8.24	13387	500-yr	4700.6	574.58	567.32	2.01	1.29	16.31	9.74	229.73	867.31	7.1	4.19	7.26	7.26
Richland/McKenzie County	D15	RM 8.05	13080	500-yr	4700.6	574.5	567.05	1.98	1.36	15.61	8.01	266.23	942.67	7.2	3.67	7.45	7.45
Richland/McKenzie County	D15	RM 7.87	12786	500-yr	4700.6	574.4	567.05	2.15	1.41	18.53	10.14	229.92	859.05	7.1	3.87	7.35	7.35
Richland/McKenzie County	D15	RM 7.69	12506	500-yr	4700.6	574.33	567.05	2.07	1.62	17.21	12.57	266.56	565.2	7.05	5.15	7.28	7.28
Richland/McKenzie County	D15	RM 7.48	12179	500-yr	4700.6	574.27	566.95	1.81	1.8	13.06	12.67	361.54	374.49	7.17	6.98	7.32	7.32
Richland/McKenzie County	D16	RM 7.3	11891	500-yr	4700.6	574.17	566.76	2.02	2.02	16.46	16.22	337.01	366.31	6.9	6.82	7.41	7.41

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 7.14	11639	500-yr	4700.6	574.11	566.76	2.01	1.92	16.71	14.91	324.06	422.07	6.53	5.84	7.35	7.35
Richland/McKenzie County	D16	RM 6.94	11319	500-yr	4700.6	574.05	566.76	1.96	1.64	15.39	11.46	297.15	582.92	7.09	5.28	7.29	7.29
Richland/McKenzie County	D16	RM 6.77	11043	500-yr	4700.6	574.03	566.76	1.67	1.37	11.35	8.37	349.25	724.39	6.8	5	7.27	7.27
Richland/McKenzie County	D16	RM 6.58	10733	500-yr	4700.6	574	566.59	1.55	1.19	9.66	6.39	342.3	893.46	7.03	4.62	7.41	7.41
Richland/McKenzie County	D16	RM 6.38	10417	500-yr	4700.6	573.91	566.59	1.99	1.18	15.92	7.03	182.43	1432.92	7.09	3.08	7.32	7.32
Richland/McKenzie County	D16	RM 6.21	10138	500-yr	4700.6	573.86	566.44	1.84	0.99	13.64	5.57	217.11	1905.73	7.16	2.88	7.42	7.42
Richland/McKenzie County	D16	RM 6.01	9825	500-yr	4700.6	573.85	566.17	1.35	0.86	7.34	3.1	412.46	3572.54	6.88	2.88	7.68	7.68
Richland/McKenzie County	D16	RM 5.83	9551	500-yr	4700.6	573.84	565.96	1.14	0.76	5.17	2.2	480.72	3649.16	7.17	3.03	7.88	7.88
Richland/McKenzie County	D16	RM 5.67	9297	500-yr	4700.6	573.81	565.96	1.32	0.79	7	2.86	342.29	4063.12	7.06	2.84	7.85	7.85
Richland/McKenzie County	D16	RM 5.43	8926	500-yr	4700.6	573.74	565.96	1.59	0.91	10.55	3.78	269.78	3794.4	6.46	2.28	7.78	7.78
Richland/McKenzie County	D16	RM 5.25	8623	500-yr	4700.6	573.5	565.96	2.43	1.22	23.51	6.19	206.77	3164.1	7.27	1.88	7.54	7.54
Richland/McKenzie County	D16	RM 5.06	8331	500-yr	4700.6	573.48	565.82	1.9	1.14	14.4	4.01	289.25	3669.91	7.22	1.99	7.66	7.66
Richland/McKenzie County	D16	RM 4.87	8029	500-yr	4700.6	573.48	565.67	1.5	1.04	9.15	3.01	335.83	3083.36	6.93	2.25	7.81	7.81
Richland/McKenzie County	D16	RM 4.71	7757	500-yr	4700.6	573.41	565.54	1.76	1.16	12.33	4.33	253.72	1764.32	7.45	2.58	7.87	7.87
Richland/McKenzie County	D16	RM 4.53	7456	500-yr	4700.6	573.27	565.54	2.24	1.41	19.92	7.21	199	1356.06	7.49	2.66	7.73	7.73
Richland/McKenzie County	D16	RM 4.34	7156	500-yr	4700.6	573.21	565.54	2.05	1.42	20.16	7.45	218.8	1417.87	7.27	2.64	7.67	7.67
Richland/McKenzie County	D16	RM 4.17	6884	500-yr	4700.6	573.12	565.54	2.11	1.39	17.7	7.83	226.72	1791.98	7.3	3.18	7.58	7.58
Richland/McKenzie County	D16	RM 3.96	6550	500-yr	4700.6	573.1	565.54	1.73	1.26	11.89	7.57	216.6	1257.78	7.29	4.61	7.56	7.56
Richland/McKenzie County	D16	RM 3.78	6249	500-yr	4700.6	573.05	565.54	1.82	1.23	13.6	8.16	196.52	1697.13	6.72	3.99	7.51	7.51
Richland/McKenzie County	D16	RM 3.55	5904	500-yr	4700.6	572.97	565.54	1.83	1.33	13.38	8.64	206.04	1719.38	7.24	4.64	7.43	7.43
Richland/McKenzie County	D16	RM 3.38	5657	500-yr	4700.6	572.86	565.53	2.24	1.54	20.3	11.22	171.27	1382.99	7.07	3.86	7.33	7.33
Richland/McKenzie County	D16	RM 3.2	5363	500-yr	4700.6	572.76	565.54	2.34	1.62	22.99	10.67	168.06	1485.08	6.35	2.9	7.22	7.22
Richland/McKenzie County	D16	RM 3.01	5062	500-yr	4700.6	572.69	565.54	2.02	1.44	16.95	8.37	310	1255.54	6.53	3.17	7.15	7.15
Richland/McKenzie County	D16	RM 2.82	4763	500-yr	4700.6	572.64	565.46	1.78	1.35	13.75	7.16	423.69	1667.7	5.68	2.94	7.18	7.18

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	0.5% - 200yr	1279.92	1282.15	1278.12	3	2.4	46	25.41	110.15	450.78	3.47	1.89	4.03	4.03
Sweet Grass County	A1	RM 478.10	225378	0.5% - 200yr	1279.92	1281.63	1277.66	3.7	3.24	77.27	48.01	115.1	470.04	2.55	1.58	3.96	3.96
Sweet Grass County	A1	RM 478.00	224862	0.5% - 200yr	1279.92	1281.13	1277.97	3.55	3.29	74.02	60.57	137.18	411.68	2.27	1.86	3.17	3.17
Sweet Grass County	A1	RM 477.91	224362	0.5% - 200yr	1279.92	1280.55	1277.65	4.02	3.27	84.96	54.85	87.79	436.02	2.49	1.6	2.89	2.89
Sweet Grass County	A1	RM 477.81	223862	0.5% - 200yr	1279.92	1280.14	1276.96	3.5	2.97	55.48	40.82	127.42	364.92	2.09	1.54	3.18	3.18
Sweet Grass County	A1	RM 477.72	223354	0.5% - 200yr	1279.92	1279.82	1276.32	2.73	2.37	46.64	32.38	185.23	499.19	1.87	1.29	3.5	3.5
Sweet Grass County	A1	RM 477.63	222892	0.5% - 200yr	1279.92	1279.74	1275.76	1.72	1.55	17.63	11.78	265.2	750.05	2.18	1.45	3.97	3.97
Sweet Grass County	A1	RM 477.49	222220	0.5% - 200yr	1279.92	1279.56	1276.07	1.78	1.49	17.3	11.98	256.97	801.01	2.05	1.41	3.49	3.49
Sweet Grass County	A1	RM 477.40	221702	0.5% - 200yr	1279.92	1279.5	1275.47	1.41	1.03	10.93	7.21	242.4	870.99	2.78	1.83	4.04	4.04
Sweet Grass County	A1	RM 477.31	221259	0.5% - 200yr	1279.92	1279.02	1275.74	3.17	1.75	55.49	22.18	122.85	870.86	2.75	1.09	3.28	3.28
Sweet Grass County	A1	RM 477.21	220767	0.5% - 200yr	1279.92	1278.8	1275.28	2.95	1.73	46.69	17.68	126.43	870.18	2.99	1.13	3.51	3.51
Sweet Grass County	A1	RM 477.11	220252	0.5% - 200yr	1279.92	1278.49	1274.86	3.06	1.78	54.5	26.79	147.45	842.95	2.34	1.15	3.63	3.63
Sweet Grass County	A1	RM 477.04	219860	0.5% - 200yr	1279.92	1278.19	1275.13	3.19	1.79	57.88	28.2	131.95	852.73	2.47	1.2	3.06	3.06
Sweet Grass County	A1	RM 476.95	219422	0.5% - 200yr	1279.92	1277.68	1274.55	3.47	2.17	73.32	36.75	155.66	823.33	2.04	1.02	3.13	3.13
Sweet Grass County	A1	RM 476.84	218828	0.5% - 200yr	1279.92	1277.37	1273.95	2.87	2	47.29	24.21	134.66	787.09	2.43	1.23	3.42	3.42
Sweet Grass County	A1	RM 476.75	218345	0.5% - 200yr	1279.92	1277.07	1273.54	2.79	2.03	41.58	21.43	172.58	807.81	2.35	1.2	3.53	3.53
Sweet Grass County	A1	RM 476.66	217855	0.5% - 200yr	1279.92	1276.75	1273.45	2.94	1.91	46.45	23.21	160.17	890.45	2.33	1.16	3.3	3.3
Sweet Grass County	A1	RM 476.57	217396	0.5% - 200yr	1279.92	1276.37	1273.09	3.41	1.96	63.48	28.17	98.93	870.71	2.81	1.24	3.28	3.28
Sweet Grass County	A1	RM 476.47	216861	0.5% - 200yr	1279.92	1275.99	1273.04	3.26	2.18	60.92	27.57	126.17	836.76	2.43	1.1	2.95	2.95
Sweet Grass County	A1	RM 476.38	216362	0.5% - 200yr	1279.92	1275.82	1272.1	2.76	1.76	40.61	19.9	105.41	888.92	3	1.47	3.72	3.72
Sweet Grass County	A1	RM 476.28	215816	0.5% - 200yr	1279.92	1275.07	1271.85	3.96	3.33	88.04	41.38	100.31	630.69	2.58	1.21	3.21	3.21
Sweet Grass County	A1	RM 476.15	215126	0.5% - 200yr	1279.92	1274.6	1271.76	3.26	2.61	62.27	38.76	133.16	634.29	2.28	1.42	2.84	2.84
Sweet Grass County	A1	RM 476.01	214437	0.5% - 200yr	1279.92	1274.31	1270.96	2.63	2.37	38.04	24.76	142.38	467.43	2.75	1.78	3.35	3.35
Sweet Grass County	A1	RM 475.91	213787	0.5% - 200yr	1279.92	1273.8	1270.35	3.05	2.77	51.58	40.97	150.4	223.02	2.7	2.14	3.46	3.46
Sweet Grass County	A1	RM 475.76	213072	0.5% - 200yr	1279.92	1273.32	1270.22	3.18	2.56	56.81	37.48	146.41	326.76	2.56	1.69	3.1	3.1
Sweet Grass County	A1	RM 475.63	212347	0.5% - 200yr	1279.92	1273.12	1269.34	2.41	2	31.59	24.13	173.18	291.15	2.88	2.2	3.78	3.78
Sweet Grass County	A1	RM 475.47	211539	0.5% - 200yr	1279.92	1272.57	1268.97	3.11	2.8	51.02	39.36	128.96	195.87	3.09	2.39	3.6	3.6
Sweet Grass County	A1	RM 475.35	210875	0.5% - 200yr	1279.92	1271.89	1268.88	3.74	3.37	76.83	46.14	120.05	246.6	2.79	1.67	3.01	3.01
Sweet Grass County	A1	RM 475.24	210333	0.5% - 200yr	1279.92	1271.91	1267.53	2.6	2.25	32.99	22.29	118.16	338.27	3.98	2.67	4.38	4.38
Sweet Grass County	A2	RM 475.12	209673	0.5% - 200yr	1279.92	1270.87	1267.9	4.44	3.82	114	75.4	116.67	257.43	2.36	1.56	2.97	2.97
Sweet Grass County	A2	RM 475.00	209034	0.5% - 200yr	1279.92	1270.16	1266.93	3.44	3.43	69.95	67.54	167.97	188.52	2.22	2.14	3.23	3.23
Sweet Grass County	A2	RM 474.87	208359	0.5% - 200yr	1279.92	1269.99	1266.75	2.61	2.36	36.35	27.36	80.83	323.6	3.1	2.29	3.24	3.24
Sweet Grass County	A2	RM 474.76	207797	0.5% - 200yr	1279.92	1269.45	1266.42	3.58	2.78	70.34	36.24	77.58	347.09	2.84	1.43	3.03	3.03
Sweet Grass County	A2	RM 474.67	207305	0.5% - 200yr	1279.92	1268.97	1266.29	3.68	3.05	76.66	48.18	66.54	308.72	2.62	1.6	2.68	2.68
Sweet Grass County	A2	RM 474.54	206635	0.5% - 200yr	1279.92	1268.68	1264.92	2.77	2.44	41.43	29.32	128.46	321.78	2.95	2.08	3.76	3.76
Sweet Grass County	A2	RM 474.43	205945	0.5% - 200yr	1279.92	1268.36	1265.16	2.96	2.12	47.09	19.57	89.64	491.69	3.01	1.23	3.19	3.19
Sweet Grass County	A2	RM 474.30	205321	0.5% - 200yr	1279.92	1268.12	1264.46	2.65	1.73	37.53	18.03	133.9	618.64	3.04	1.45	3.66	3.66
Sweet Grass County	A2	RM 474.21	204877	0.5% - 200yr	1279.92	1267.64	1264.22	3.49	2.18	65.01	25.09	103.41	597.82	3.05	1.17	3.42	3.42
Sweet Grass County	A2	RM 474.12	204378	0.5% - 200yr	1279.92	1267.53	1263.24	2.7	1.7	39.51	19.31	140.42	815.52	2.89	1.4	4.29	4.29
Sweet Grass County	A2	RM 474.01	203787	0.5% - 200yr	1279.92	1266.91	1263.55	3.51	2.42	71.03	34.29	138.78	626.68	2.39	1.15	3.37	3.37
Sweet Grass County	A2	RM 473.87	203072	0.5% - 200yr	1279.92	1266.47	1263.52	3.25	2.2	57.46	20.04	100.52	820	2.61	0.9	2.95	2.95
Sweet Grass County	A2	RM 473.74	202395	0.5% - 200yr	1279.92	1266.15	1263.06	2.77	1.96	42.88	18.77	121.34	758.48	2.63	1.15	3.09	3.09
Sweet Grass County	A2	RM 473.62	201781	0.5% - 200yr	1279.92	1265.84	1262.63	2.74	1.81	43.31	19.54	150.66	795.03	2.39	1.07	3.22	3.22
Sweet Grass County	A2	RM 473.50	201110	0.5% - 200yr	1279.92	1265.53	1261.83	2.5	1.88	35.48	17.56	179.13	756.96	2.52	1.23	3.7	3.7
Sweet Grass County	A2	RM 473.36	200362	0.5% - 200yr	1279.92	1265.28	1261.08	2.49	1.89	31.67	13.89	133.21	661.01	3.47	1.51	4.2	4.2
Sweet Grass County	A2	RM 473.27	199862	0.5% - 200yr	1279.92	1265.01	1260.81	2.89	2.25	43.56	22.18	117.77	506.71	3.26	1.65	4.21	4.21
Sweet Grass County	A2	RM 473.17	199362	0.5% - 200yr	1279.92	1264.75	1260.56	3.03	2.39	45.22	16.36	102.94	389.14	3.85	1.38	4.19	4.19
Sweet Grass County	A2	RM 473.08	198879	0.5% - 200yr	1279.92	1264.24	1260.56	3.72	3.19	72.86	39.2	105	321.08	3.14	1.68	3.68	3.68
Sweet Grass County	A2	RM 472.98	198340	0.5% - 200yr	1279.92	1264.09	1260.21	3.06	2.47	48.72	21.3	120.55	421.7	3.27	1.42	3.88	3.88
Sweet Grass County	A2	RM 472.89	197862	0.5% - 200yr	1279.92	1263.46	1260.5	4	2.79	89.84	38.58	108.06	437.89	2.61	1.12	2.96	2.96
Sweet Grass County	A2	RM 472.79	197362	0.5% - 200yr	1279.92	1263.23	1259.98	3.18	2.32	56.44	22.9	136.27	537.15	2.62	1.06	3.24	3.24
Sweet Grass County	A2	RM 472.70	196862	0.5% - 200yr	1279.92	1262.6	1259.35	3.78	2.68	82.88	37.23	125.74	450.64	2.37	1.06	3.25	3.25
Sweet Grass County	A2	RM 472.60	196360	0.5% - 200yr	1279.92	1262.52	1259.01	2.48	1.98	35.73	22.29	181.89	450.67	2.32	1.45	3.5	3.5
Sweet Grass County	A2	RM 472.50	195816	0.5% - 200yr	1279.92	1262.2	1258.53	2.63	2.08	40.32	26.66	177.8	414.63	2.32	1.52	3.67	3.67
Sweet Grass County	A2	RM 472.41	195349	0.5% - 200yr	1279.92	1261.93	1258.52	2.6	2.13	40.05	28	198.55	413.95	2.23	1.56	3.41	3.41
Sweet Grass County	A2	RM 472.31	194860	0.5% - 200yr	1279.92	1261.7	1258.34	2.61	1.98	36.72	20.09	149.41	444.46	2.93	1.6	3.37	3.37
Sweet Grass County	A2	RM 472.22	194356	0.5% - 200yr	1279.92	1261.55	1257.3	2.64	1.83	33.72	15.62	115.58	450.46	3.43	1.56	4.25	4.25
Sweet Grass County	A2	RM 472.09	193660	0.5% - 200yr	1279.92	1260.77	1257.45	3.99	2.64	87.04	33.55	93.59	448.22	2.89	1.08	3.32	3.32
Sweet Grass County	A2	RM 471.95	192935	0.5% - 200yr	1279.92	1260.75	1256.05	2.55	1.65	32.05	14.9	103.53	429.75	3.95	1.8	4.7	4.7
Sweet Grass County	A2	RM 471.86	192442	0.5% - 200yr	1279.92	1260.12	1256.23	3.98	2.51	81.7	37.07	76.65	336	3.42	1.52	3.88	3.88
Sweet Grass County	A2	RM 471.75	191870	0.5% - 200yr	1279.92	1259.99	1256.47	2.85	2	43.48	22.98	134.52	406.77	2.98	1.57	3.52	3.52

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	0.5% - 200yr	1279.92	1259.26	1256.54	3.93	2.72	89.27	36.42	124.48	486.73	2.38	0.97	2.72	2.72
Sweet Grass County	A2	RM 471.52	190686	0.5% - 200yr	1279.92	1259	1255.75	2.81	1.87	43	19.19	127.76	537.02	2.88	1.27	3.25	3.25
Sweet Grass County	A2	RM 471.38	189910	0.5% - 200yr	1279.92	1258.23	1255.44	3.52	2.6	78.6	40.9	150.55	530.18	1.79	0.93	2.79	2.79
Sweet Grass County	A2	RM 471.28	189362	0.5% - 200yr	1279.92	1257.66	1254.65	2.68	2.26	48.14	35.77	228.65	542.4	1.53	1.14	3.01	3.01
Sweet Grass County	A2	RM 471.18	188875	0.5% - 200yr	1279.92	1257.29	1254.2	2.74	2.12	40.27	23.54	155.58	552.43	1.92	1.12	3.09	3.09
Sweet Grass County	A2	RM 471.06	188150	0.5% - 200yr	1279.92	1256.96	1253.95	2.38	1.6	34.46	20.62	140.6	654.16	2.05	1.22	3.01	3.01
Sweet Grass County	A2	RM 470.94	187526	0.5% - 200yr	1279.92	1256.55	1253.58	2.82	1.95	43.45	22.05	108.67	575.93	2.42	1.22	2.98	2.98
Sweet Grass County	A2	RM 470.84	186938	0.5% - 200yr	1279.92	1256.31	1252.88	2.42	1.73	34.56	20.41	157.2	642.59	2.24	1.32	3.43	3.43
Sweet Grass County	A2	RM 470.73	186362	0.5% - 200yr	1279.92	1256.17	1253.49	1.85	1.58	20.87	14.89	189.13	609.26	2.04	1.45	3.1	3.1
Sweet Grass County	A2	RM 470.65	185977	0.5% - 200yr	1279.92	1255.92	1252.18	2.29	1.78	29.78	16.14	202.91	666.15	2.53	1.36	3.74	3.74
Sweet Grass County	A2	RM 470.56	185491	0.5% - 200yr	1279.92	1255.8	1252.52	2.11	1.62	24.64	14.4	189.32	674.26	2.69	1.56	3.28	3.28
Sweet Grass County	A2	RM 470.44	184875	0.5% - 200yr	1279.92	1255.67	1251.39	1.97	1.47	19.72	11.2	158.35	434.83	3.56	2	4.29	4.29
Sweet Grass County	A2	RM 470.35	184363	0.5% - 200yr	1279.92	1254.69	1251.52	4.31	3.55	105.69	62.27	113.84	247.5	2.48	1.46	3.16	3.16
Sweet Grass County	A2	RM 470.23	183828	0.5% - 200yr	1279.92	1254.39	1251.51	2.98	2.47	52.37	35.21	180.8	346.1	2.21	1.5	2.88	2.88
Sweet Grass County	A2	RM 470.13	183304	0.5% - 200yr	1279.92	1254.16	1249.86	2.61	2.29	39.26	30.87	162.28	294.92	2.42	1.89	4.3	4.3
Sweet Grass County	A2	RM 470.05	182914	0.5% - 200yr	1279.92	1254.05	1250.59	2.19	1.98	27.23	21.98	175.23	320.16	2.5	2.02	3.46	3.46
Sweet Grass County	A2	RM 469.93	182267	0.5% - 200yr	1279.92	1253.31	1249.62	3.65	3	72.6	36.16	105.63	300.72	2.86	1.42	3.69	3.69
Sweet Grass County	A2	RM 469.85	181860	0.5% - 200yr	1279.92	1253.16	1249.59	3.25	2.3	55.45	27.49	96.24	381.85	3.19	1.57	3.57	3.57
Sweet Grass County	A2	RM 469.75	181348	0.5% - 200yr	1279.92	1253.14	1248.77	2.28	1.62	26.33	13.94	116.21	421.99	3.58	1.87	4.37	4.37
Sweet Grass County	A2	RM 469.68	180952	0.5% - 200yr	1279.92	1252.98	1249.31	2.43	1.66	30.56	17.32	135.73	461.8	3.26	1.84	3.67	3.67
Sweet Grass County	A2	RM 469.58	180427	0.5% - 200yr	1279.92	1252.92	1247.94	2.05	1.56	20.07	12.91	130.56	401.56	4.22	2.7	4.98	4.98
Sweet Grass County	A2	RM 469.47	179860	0.5% - 200yr	1279.92	1252.32	1247.85	3.38	3	54.22	47.64	90.31	356.17	3.91	3.44	4.47	4.47
Sweet Grass County			179808	0.5% - 200yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	0.5% - 200yr	1279.92	1252.27	1247.84	3.05	3.02	46.37	44.49	112.89	350.63	3.71	3.57	4.43	4.43
Sweet Grass County	A2	RM 469.39	179400	0.5% - 200yr	1279.92	1251.74	1248.45	3.87	3.54	83.17	66.96	118.53	305.85	2.7	2.17	3.29	3.29
Sweet Grass County	A2	RM 469.30	178975	0.5% - 200yr	1279.92	1251.74	1247.55	2.91	2.36	42.5	26.62	106.16	395.24	3.74	2.31	4.2	4.2
Sweet Grass County	A2	RM 469.21	178467	0.5% - 200yr	1279.92	1251.11	1248.31	4	3.07	90.36	49.33	107.26	379.12	2.52	1.37	2.8	2.8
Sweet Grass County	A2	RM 469.09	177862	0.5% - 200yr	1279.92	1250.82	1247.12	2.42	1.83	32.72	20.51	118.23	498.54	2.62	1.64	3.7	3.7
Sweet Grass County	A2	RM 469.00	177350	0.5% - 200yr	1279.92	1250.13	1247.58	3.94	2.61	92.31	41.26	89.39	530.42	2.19	0.97	2.55	2.55
Sweet Grass County	A2	RM 468.90	176865	0.5% - 200yr	1279.92	1249.83	1246.48	2.55	1.94	33.54	18.99	157.69	525.89	2.35	1.32	3.35	3.35
Sweet Grass County	A2	RM 468.80	176341	0.5% - 200yr	1279.92	1249.52	1246.11	2.8	2.07	44.8	22.56	136.31	574.4	2.5	1.25	3.4	3.4
Sweet Grass County	A2	RM 468.71	175823	0.5% - 200yr	1279.92	1249.2	1246.41	2.81	2.24	48.08	28.58	147.29	545.06	2.04	1.21	2.79	2.79
Sweet Grass County	A2	RM 468.57	175192	0.5% - 200yr	1279.92	1249.03	1245.17	2.01	1.58	22.81	13.98	178.26	722.58	2.59	1.57	3.86	3.86
Sweet Grass County	A2	RM 468.42	174099	0.5% - 200yr	1279.92	1248.32	1244.97	3	2.37	52.32	31.8	168.48	531.78	2.32	1.41	3.35	3.35
Sweet Grass County	A3	RM 468.25	173324	0.5% - 200yr	1279.92	1248.13	1242.97	2.37	1.65	28.22	13.53	129.09	584.85	3.7	1.75	5.15	5.15
Sweet Grass County	A3	RM 468.16	172855	0.5% - 200yr	1279.92	1247.92	1243.58	2.76	1.89	40.14	21.14	119.05	586.9	3.13	1.64	4.34	4.34
Sweet Grass County	A3	RM 468.07	172364	0.5% - 200yr	1279.92	1247.88	1243.89	2.11	1.56	23.43	13.42	136.65	662.29	3.14	1.79	3.99	3.99
Sweet Grass County	A3	RM 467.97	171839	0.5% - 200yr	1279.92	1247.19	1244.32	3.99	2.82	92.54	50.77	92.44	548.17	2.37	1.28	2.87	2.87
Sweet Grass County	A3	RM 467.87	171312	0.5% - 200yr	1279.92	1246.95	1243.46	2.59	2.26	37.48	25.32	159.56	551.94	2.65	1.79	3.48	3.48
Sweet Grass County	A3	RM 467.78	170840	0.5% - 200yr	1279.92	1246.4	1243.74	3.64	2.87	77.26	44.1	100.58	359.19	2.3	1.31	2.66	2.66
Sweet Grass County	A3	RM 467.69	170376	0.5% - 200yr	1279.92	1246.11	1242.96	3.07	2.43	53.75	32.37	115.51	465.75	2.49	1.48	3.15	3.15
Sweet Grass County	A3	RM 467.55	169614	0.5% - 200yr	1279.92	1245.73	1242.1	2.49	2.11	36.68	25.35	133.88	548.2	2.21	1.52	3.63	3.63
Sweet Grass County	A3	RM 467.41	168870	0.5% - 200yr	1279.92	1245.53	1241.15	2.18	1.44	24.73	11.72	133.26	801.82	3.31	1.55	4.39	4.39
Sweet Grass County	A3	RM 467.30	168362	0.5% - 200yr	1279.92	1244.93	1242.15	3.86	2.17	83.48	30.41	90.65	800.93	2.63	0.95	2.78	2.78
Sweet Grass County	A3	RM 467.16	167641	0.5% - 200yr	1279.92	1244.57	1240.78	2.29	1.42	29.06	12.36	159.04	862.18	2.73	1.15	3.79	3.79
Sweet Grass County	A3	RM 467.00	166780	0.5% - 200yr	1279.92	1244.13	1240.48	2.8	1.65	44.91	19.57	141.03	854.58	2.45	1.05	3.65	3.65
Sweet Grass County	A3	RM 466.83	165902	0.5% - 200yr	1279.92	1243.68	1239.84	2.86	1.63	43.43	17.92	111.13	777.57	3.06	1.25	3.84	3.84
Sweet Grass County	A3	RM 466.73	165364	0.5% - 200yr	1279.92	1243.36	1239.81	3.01	1.84	48.55	19.48	115.43	616.51	2.98	1.19	3.55	3.55
Sweet Grass County	A3	RM 466.64	164858	0.5% - 200yr	1279.92	1242.83	1239.36	3.75	2.35	70.76	25.05	100.5	643.75	2.66	0.93	3.46	3.46
Sweet Grass County	A3	RM 466.49	164108	0.5% - 200yr	1279.92	1242.48	1239.67	2.95	1.8	48.94	25.2	107.44	662.16	2.57	1.32	2.81	2.81
Sweet Grass County	A3	RM 466.25	162845	0.5% - 200yr	1279.92	1241.19	1238.71	3.96	2.64	91.13	32.7	79.36	578.09	2.43	0.84	2.48	2.48
Sweet Grass County	A3	RM 465.79	160351	0.5% - 200yr	1279.92	1240.21	1236.48	2.29	1.17	28.43	12.44	110.96	869.66	2.97	1.26	3.72	3.72
Sweet Grass County	A3	RM 465.01	155919	0.5% - 200yr	1279.92	1237.97	1234.44	3.44	2.6	65.6	26.6	129.45	504.34	2.68	1.08	3.53	3.53
Sweet Grass County	A3	RM 464.68	154254	0.5% - 200yr	1279.92	1236.97	1233.35	2.83	2.2	46.06	24.04	171.81	582.65	2.41	1.25	3.62	3.62
Sweet Grass County	A3	RM 464.48	153160	0.5% - 200yr	1279.92	1236.43	1232.71	2.53	1.84	37.18	19.66	183.52	599.95	2.33	1.23	3.72	3.72
Sweet Grass County	A3	RM 464.33	152378	0.5% - 200yr	1279.92	1236.03	1232.61	2.55	1.8	37.42	19.8	183.37	580.27	2.38	1.25	3.41	3.41
Sweet Grass County	A3	RM 464.16	151621	0.5% - 200yr	1279.92	1235.68	1232.45	2.49	1.7	35.66	18.84	167.98	811.39	2.39	1.26	3.23	3.23
Sweet Grass County	A3	RM 464.04	150961	0.5% - 200yr	1279.92	1235.44	1231.48	2.53	1.59	32.86	16.26	118.42	795.43	3.46	1.69	3.95	3.95
Sweet Grass County	A3	RM 463.88	150174	0.5% - 200yr	1279.92	1234.77	1231.85	3.45	2.53	69.36	40.94	136.95	580.82	2.33	1.37	2.92	2.92
Sweet Grass County	A3	RM 463.78	149616	0.5% - 200yr	1279.92	1234.43	1230.54	2.97	2.33	49.77	33.59	149.53	484.92	2.58	1.74	3.9	3.9
Sweet Grass County	A3	RM 463.67	149069	0.5% - 200yr	1279.92	1234.15	1230.86	2.91	2.04	47.6	31.93	136.34	633.2	2.59	1.74	3.29	3.29

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	0.5% - 200yr	1279.92	1233.95	1230.39	2.78	1.88	41.45	26.14	135.08	1219.27	2.93	1.85	3.56	3.56
Sweet Grass County	A3	RM 463.49	148111	0.5% - 200yr	1279.92	1233.12	1229.73	4.05	2.97	94.77	48.44	122.69	1156.15	2.38	1.21	3.39	3.39
Sweet Grass County	A3	RM 463.34	147326	0.5% - 200yr	1279.92	1232.67	1229.72	2.69	1.91	43.43	25.92	179.41	1364.31	2.13	1.27	2.95	2.95
Sweet Grass County	A3	RM 463.20	146616	0.5% - 200yr	1279.92	1232.35	1228.95	2.37	1.55	33.56	19.94	124.46	1518.19	2.17	1.27	3.4	3.4
Sweet Grass County	A3	RM 463.06	145881	0.5% - 200yr	1279.92	1232.17	1228.89	1.76	1	18.13	11.78	147.76	1517.01	2.3	1.49	3.28	3.28
Sweet Grass County	A4	RM 462.79	144435	0.5% - 200yr	1279.92	1232.05	1228.25	1.24	0.67	8.11	5.36	133.61	1469.09	3.09	2.01	3.8	3.8
Sweet Grass County	A4	RM 462.16	141146	0.5% - 200yr	1279.92	1229.52	1226.15	3.53	2.28	72.05	32.43	109.18	834.79	2.42	1.07	3.37	3.37
Sweet Grass County		RM 461.97	140135	0.5% - 200yr	1279.92	1229	1226.06	2.62	1.58	40.64	24.01	120.82	740.04	2.19	1.29	2.94	2.94
Sweet Grass County	A4	RM 461.71	138705	0.5% - 200yr	1279.92	1227.49	1224.75	3.88	3.08	93.68	48.83	101.47	472.87	1.93	1	2.74	2.74
Sweet Grass County	A4	RM 461.52	137683	0.5% - 200yr	1279.92	1227.07	1222.31	2.51	1.81	31.31	13.07	85.64	695.5	3.9	1.56	4.76	4.76
Sweet Grass County	A4	RM 461.33	136718	0.5% - 200yr	1279.92	1226.84	1223.38	2.15	1.62	25.94	15.99	125.5	812.68	2.62	1.61	3.47	3.47
Sweet Grass County	A4	RM 461.14	135736	0.5% - 200yr	1279.92	1226.13	1222.44	3.22	2.16	56.28	25.09	117.29	577.12	2.92	1.29	3.69	3.69
Sweet Grass County	A4	RM 460.99	134951	0.5% - 200yr	1279.92	1225.72	1221.98	3.06	2.14	49.9	22.24	121.6	491.52	3.03	1.34	3.74	3.74
Sweet Grass County	A4	RM 460.85	134214	0.5% - 200yr	1279.92	1225.51	1222.07	2.51	1.84	32.84	19.78	147.93	473.31	2.93	1.76	3.44	3.44
Sweet Grass County	A4	RM 460.74	133616	0.5% - 200yr	1279.92	1225.4	1220.27	2.2	1.75	23.02	14.64	125.57	476.83	4.32	2.72	5.13	5.13
Sweet Grass County	A4	RM 460.63	133067	0.5% - 200yr	1279.92	1225.39	1218.9	1.77	1.29	13.33	5.28	106.45	606.67	6.07	2.33	6.49	6.49
Sweet Grass County			132957	0.5% - 200yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	0.5% - 200yr	1279.92	1224.55	1221.09	3.55	2.77	68.34	33.32	112.67	526.18	2.88	1.4	3.46	3.46
Sweet Grass County	A4	RM 460.50	132281	0.5% - 200yr	1279.92	1223.7	1221.12	3.99	3.72	96.49	65.58	151.99	486.26	2.06	1.4	2.58	2.58
Sweet Grass County	A4	RM 460.38	131785	0.5% - 200yr	1279.92	1223.48	1220.5	2.74	2.32	41.72	26.59	139.17	561.79	2.25	1.43	2.98	2.98
Sweet Grass County	A4	RM 460.29	131287	0.5% - 200yr	1279.92	1223.2	1219.97	2.73	2.28	42.7	23.75	135.07	482.63	2.42	1.34	3.23	3.23
Sweet Grass County	A4	RM 460.19	130793	0.5% - 200yr	1279.92	1223.02	1219.38	2.48	2.06	33.23	22.46	118.6	352.58	2.92	1.97	3.64	3.64
Sweet Grass County	A4	RM 460.08	130210	0.5% - 200yr	1279.92	1222.64	1218.23	2.84	2.41	41.86	22.41	132.3	366.71	3.29	1.75	4.42	4.42
Sweet Grass County	A4	RM 459.99	129763	0.5% - 200yr	1279.92	1222.3	1218.01	3.27	2.89	54.66	34.26	110.76	313.12	3.44	2.14	4.29	4.29
Sweet Grass County	A4	RM 459.90	129246	0.5% - 200yr	1279.92	1222.13	1217.62	3.03	2.73	45.21	32.06	106.75	253.86	3.85	2.72	4.51	4.51
Sweet Grass County	A4	RM 459.81	128792	0.5% - 200yr	1279.92	1221.18	1218.15	4.57	4.4	114.22	91.47	99.73	244.4	2.79	2.23	3.03	3.03
Sweet Grass County	A4	RM 459.72	128310	0.5% - 200yr	1393.19	1221.2	1217.31	3.21	2.62	54.04	32.03	127.21	363.11	3.17	1.87	3.89	3.89
Sweet Grass County	A4	RM 459.62	127798	0.5% - 200yr	1393.19	1221.03	1217.46	2.89	2.37	45	26	128.42	408.51	2.94	1.7	3.57	3.57
Sweet Grass County	A5	RM 459.53	127324	0.5% - 200yr	1393.19	1220.27	1217.26	3.84	3.73	86.21	63.04	156.91	228.48	2.3	1.68	3.01	3.01
Sweet Grass County	A5	RM 459.44	126881	0.5% - 200yr	1393.19	1220.11	1216.93	2.96	2.83	49.57	40.52	185.47	465.01	2.51	2.05	3.18	3.18
Sweet Grass County	A5	RM 459.31	126192	0.5% - 200yr	1393.19	1219.68	1215.66	3.05	2.8	50.41	37.04	153.23	516.19	2.93	2.15	4.01	4.01
Sweet Grass County	A5	RM 459.24	125848	0.5% - 200yr	1393.19	1219.34	1215.69	3.39	3.1	63.02	46.42	145.56	586.78	2.78	2.04	3.65	3.65
Sweet Grass County	A5	RM 459.16	125420	0.5% - 200yr	1393.19	1218.7	1215.82	3.94	3.91	91.46	80.28	158.87	320.52	2.23	1.95	2.88	2.88
Sweet Grass County	A5	RM 459.02	124624	0.5% - 200yr	1393.19	1218.47	1214.8	2.55	2.39	36.2	26.45	200.81	583.08	2.68	1.95	3.67	3.67
Sweet Grass County	A5	RM 458.79	123371	0.5% - 200yr	1393.19	1217.54	1214.02	3.34	3.09	61.55	32.45	152.03	336.87	2.71	1.42	3.52	3.52
Sweet Grass County	A5	RM 458.48	121727	0.5% - 200yr	1393.19	1216.42	1213.35	2.86	2.72	49.88	45.87	165.37	307.78	2	1.84	3.07	3.07
Sweet Grass County	A5	RM 458.36	121100	0.5% - 200yr	1393.19	1215.37	1212.73	4.13	3.68	100.59	72.18	117.71	251.43	2.1	1.5	2.64	2.64
Sweet Grass County	A5	RM 458.25	120543	0.5% - 200yr	1393.19	1215.36	1211.35	2.54	2.19	33.64	24.51	122.03	270.04	3.24	2.36	4.01	4.01
Sweet Grass County	A5	RM 458.13	119849	0.5% - 200yr	1393.19	1215.09	1211.21	2.6	2.35	35.82	29.1	131.08	237.83	3.08	2.49	3.87	3.87
Sweet Grass County	A5	RM 458.03	119256	0.5% - 200yr	1393.19	1214.92	1210.09	2.49	2.21	30.02	20.76	122.91	226.89	4.04	2.78	4.83	4.83
Sweet Grass County	A5	RM 457.87	118444	0.5% - 200yr	1393.19	1214.57	1209.57	2.88	2.74	38.67	26.57	104.9	190.14	4.58	3.13	5	5
Sweet Grass County	A5	RM 457.76	117858	0.5% - 200yr	1393.19	1214.34	1210.24	2.99	2.9	45.85	39.78	137.04	174.31	3.39	2.94	4.1	4.1
Sweet Grass County	A5	RM 457.66	117350	0.5% - 200yr	1393.19	1214.03	1210.03	3.2	3.07	53.24	43.5	132.62	260.75	3.26	2.66	4	4
Sweet Grass County	A5	RM 457.54	116694	0.5% - 200yr	1393.19	1213.62	1209.93	3.34	3.1	59.04	45.3	131.05	238.51	3.11	2.39	3.69	3.69
Sweet Grass County	A5	RM 457.35	115703	0.5% - 200yr	1393.19	1212.22	1209.69	4.37	4.37	115.99	115.99	156.23	156.23	2.04	2.04	2.53	2.53
Sweet Grass County	A5	RM 457.20	114921	0.5% - 200yr	1393.19	1212.07	1208.7	2.57	2.57	36.52	36.49	197.6	197.75	2.74	2.74	3.37	3.37
Sweet Grass County	A5	RM 457.02	113974	0.5% - 200yr	1393.19	1211.56	1208.04	3.14	2.37	52.29	26.39	103.04	377.46	3.1	1.56	3.52	3.52
Sweet Grass County	A5	RM 456.84	113009	0.5% - 200yr	1393.19	1211.05	1206.55	3.03	2.78	45.7	28.43	120.66	215.49	3.75	2.33	4.5	4.5
Sweet Grass County	A5	RM 456.68	112164	0.5% - 200yr	1393.19	1210.26	1206.59	3.9	3.79	80.43	65.28	113.81	144.93	3.12	2.54	3.67	3.67
Sweet Grass County	A5	RM 456.55	111455	0.5% - 200yr	1393.19	1210.03	1206.19	3.05	2.99	49.13	41.73	146.88	176.66	3.1	2.64	3.84	3.84
Sweet Grass County	A5	RM 456.43	110857	0.5% - 200yr	1393.19	1209.69	1205.33	3.22	3.03	51.33	36.86	110.87	215.97	3.85	2.75	4.36	4.36
Sweet Grass County	A6	RM 456.29	110121	0.5% - 200yr	1393.19	1209.17	1205.45	3.61	3.4	64.54	49.94	118.64	271.13	3.21	2.48	3.72	3.72
Sweet Grass County	A6	RM 456.18	109508	0.5% - 200yr	1393.19	1208.71	1205.45	3.64	3.59	73.17	67.19	139.71	338.78	2.73	2.52	3.26	3.26
Sweet Grass County	A6	RM 456.03	108721	0.5% - 200yr	1393.19	1208.27	1204.59	3.08	2.94	53.54	44.08	176.21	392.13	2.54	2.09	3.67	3.67
Sweet Grass County	A6	RM 455.84	107742	0.5% - 200yr	1393.19	1207.88	1204.05	2.61	2.45	35.33	24.33	183.51	390.52	2.88	1.98	3.83	3.83
Sweet Grass County	A6	RM 455.70	106976	0.5% - 200yr	1393.19	1207.56	1203.14	2.75	2.71	36.84	33.43	143.46	343.72	3.52	3.2	4.42	4.42
Sweet Grass County	A6	RM 455.56	106256	0.5% - 200yr	1393.19	1207.04	1203.35	3.43	3.12	59.22	34.25	119.56	387.85	3.31	1.91	3.69	3.69
Sweet Grass County	A6	RM 455.39	105360	0.5% - 200yr	1393.19	1206.83	1202.74	2.64	2.42	35.79	27.22	151.06	317.63	3.36	2.55	4.09	4.09
Sweet Grass County	A6	RM 455.26	104667	0.5% - 200yr	1393.19	1205.76	1202.83	4.36	3.72	108.64	66.94	125.73	291.42	2.43	1.49	2.93	2.93
Sweet Grass County	A6	RM 455.09	103771	0.5% - 200yr	1393.19	1205.48	1201.58	2.55	2.15	33.79	20.84	159.87	321.69	3.28	2.01	3.89	3.89
Sweet Grass County	A6	RM 454.95	103072	0.5% - 200yr	1393.19	1204.79	1201.94	3.51	3.21	74.7	57.71	179.76	273.81	2.05	1.59	2.85	2.85

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	0.5% - 200yr	1393.19	1204.49	1200.61	2.55	2.41	37.2	32.99	179.15	254.73	2.57	2.27	3.89	3.89
Sweet Grass County	A6	RM 454.72	101863	0.5% - 200yr	1393.19	1204.03	1200.47	3.05	3.05	49.59	49.15	193.59	195.19	2.36	2.34	3.56	3.56
Sweet Grass County	A6	RM 454.64	101419	0.5% - 200yr	1393.19	1203.92	1199.69	2.53	2.52	33.44	32.9	195.79	220.73	2.82	2.77	4.23	4.23
Sweet Grass County	A6	RM 454.53	100846	0.5% - 200yr	1393.19	1203.38	1199.59	3.4	3.34	58.35	47.81	120.59	231.65	3.38	2.77	3.79	3.79
Sweet Grass County	A6	RM 454.43	100338	0.5% - 200yr	1393.19	1203.08	1199	3.45	3.39	61.1	46.21	115.82	242.71	3.48	2.63	4.08	4.08
Sweet Grass County	A6	RM 454.29	99597	0.5% - 200yr	1393.19	1202.63	1198.71	3.52	3.48	63.23	53.91	114.12	213.17	3.47	2.96	3.92	3.92
Sweet Grass County	A6	RM 454.15	98861	0.5% - 200yr	1393.19	1202.33	1198.68	3.17	3.01	50.75	38.17	136.69	195.01	3.17	2.38	3.65	3.65
Sweet Grass County	A6	RM 454.00	98105	0.5% - 200yr	1393.19	1201.94	1198.53	3.01	3	45.47	44.9	195.3	197.74	2.37	2.35	3.41	3.41
Sweet Grass County	A6	RM 453.89	97523	0.5% - 200yr	1393.19	1201.59	1198.31	3.01	2.92	48.67	45.21	181.46	206.68	2.48	2.31	3.29	3.29
Sweet Grass County	A6	RM 453.78	96929	0.5% - 200yr	1393.19	1201.43	1197.07	2.57	2.41	33.48	20.11	153.06	275.68	3.5	2.1	4.36	4.36
Sweet Grass County	A6	RM 453.67	96361	0.5% - 200yr	1393.19	1201.11	1197.77	2.99	2.58	47.83	33.11	151.58	278.66	2.8	1.94	3.34	3.34
Sweet Grass County	A6	RM 453.58	95863	0.5% - 200yr	1393.19	1201.02	1196.37	2.44	2.42	28.74	27.69	182.6	191.24	3.67	3.54	4.65	4.65
Sweet Grass County	A6	RM 453.48	95355	0.5% - 200yr	1393.19	1200.29	1196.86	3.9	3.79	79.17	58.76	118.04	164.5	3.02	2.24	3.43	3.43
Sweet Grass County	A6	RM 453.35	94633	0.5% - 200yr	1393.19	1199.7	1196.43	3.82	3.69	77.48	65.14	133.91	215.82	2.7	2.28	3.26	3.26
Sweet Grass County	A7	RM 453.23	93994	0.5% - 200yr	1393.19	1199.33	1196.41	3.32	3.12	59.76	54.1	113	253.24	2.43	2.2	2.92	2.92
Sweet Grass County	A7	RM 453.11	93361	0.5% - 200yr	1393.19	1199.14	1195.68	2.48	2.45	25.78	25.43	275.44	293.65	1.96	1.94	3.46	3.46
Sweet Grass County	A7	RM 453.01	92863	0.5% - 200yr	1393.19	1198.69	1195.38	3.15	3.04	36.94	36.16	237.6	272.22	1.72	1.68	3.31	3.31
Sweet Grass County	A7	RM 452.91	92363	0.5% - 200yr	1393.19	1198.56	1194.85	2.8	2.26	38.86	24.26	117.27	333.28	3.01	1.87	3.71	3.71
Sweet Grass County	A7	RM 452.82	91863	0.5% - 200yr	1393.19	1198.3	1194.65	2.8	2.66	41.25	37.54	111.14	183.08	3.13	2.86	3.65	3.65
Sweet Grass County	A7	RM 452.72	91363	0.5% - 200yr	1393.19	1198.22	1193.29	2.34	2.22	26.37	21.12	144.32	191.32	4.09	3.27	4.93	4.93
Sweet Grass County	A7	RM 452.64	90932	0.5% - 200yr	1393.19	1197.99	1194.02	2.85	2.31	41.67	30.65	133.5	287.12	3.36	2.47	3.97	3.97
Sweet Grass County	A7	RM 452.53	90362	0.5% - 200yr	1393.19	1197.49	1193.87	3.51	3.13	62.58	45.29	116.37	197.73	3.11	2.25	3.63	3.63
Sweet Grass County	A7	RM 452.43	89864	0.5% - 200yr	1393.19	1197.16	1193.52	3.57	3.15	64.63	44.29	111.78	203.65	3.18	2.17	3.64	3.64
Sweet Grass County	A7	RM 452.33	89331	0.5% - 200yr	1393.19	1196.88	1193.16	3.34	3.11	56.05	43.63	134.45	255.28	3	2.33	3.71	3.71
Sweet Grass County	A7	RM 452.25	88863	0.5% - 200yr	1393.19	1196.59	1192.91	3.34	3.08	56.77	41.77	138.6	222.96	2.97	2.19	3.68	3.68
Sweet Grass County	A7	RM 452.16	88399	0.5% - 200yr	1393.19	1196.3	1192.68	3.46	2.77	61.19	37.4	119.78	335.79	3.15	1.93	3.62	3.62
Sweet Grass County	A7	RM 452.06	87882	0.5% - 200yr	1393.19	1196.06	1192.4	3.24	2.67	54.06	31.37	120.32	392.35	3.34	1.93	3.66	3.66
Sweet Grass County	A7	RM 451.96	87394	0.5% - 200yr	1393.19	1195.84	1191.9	3.17	2.5	52.87	30.57	125.87	307.39	3.14	1.81	3.94	3.94
Sweet Grass County	A7	RM 451.86	86835	0.5% - 200yr	1393.19	1195.64	1191.79	2.95	2.31	42.87	27.85	122.39	274.13	3.39	2.2	3.85	3.85
Sweet Grass County	A7	RM 451.75	86230	0.5% - 200yr	1393.19	1195.27	1191.43	3.11	3.11	48.93	48.64	134.08	134.86	3.34	3.32	3.84	3.84
Sweet Grass County	A7	RM 451.61	85483	0.5% - 200yr	1393.19	1194.99	1190.7	2.87	2.85	43.18	39.26	152.65	233.59	3.18	2.89	4.29	4.29
Sweet Grass County	A7	RM 451.49	84861	0.5% - 200yr	1393.19	1194.41	1191.07	3.6	3.33	65.76	48.16	126.46	190.92	2.99	2.19	3.34	3.34
Sweet Grass County	A7	RM 451.34	84113	0.5% - 200yr	1393.19	1194.38	1190.06	2.39	2.3	28.19	19.72	150.96	439.35	3.83	2.67	4.32	4.32
Sweet Grass County	A7	RM 451.20	83363	0.5% - 200yr	1393.19	1193.61	1189.8	3.81	3.59	73.99	42.51	103.86	206.55	3.48	1.99	3.82	3.82
Sweet Grass County	A7	RM 451.10	82863	0.5% - 200yr	1393.19	1193.49	1189.79	3.15	3.06	51.19	39.84	133.83	207.32	3.28	2.56	3.7	3.7
Sweet Grass County	A7	RM 451.00	82325	0.5% - 200yr	1393.19	1193.37	1189.55	2.76	2.52	39.47	27.65	118.3	281.33	3.32	2.32	3.82	3.82
Sweet Grass County	A7	RM 450.86	81602	0.5% - 200yr	1393.19	1193.21	1188.29	2.28	2	49.32	23.18	90.13	318.18	4.82	2.19	4.92	4.92
Sweet Grass County	A7	RM 450.73	80923	0.5% - 200yr	1393.19	1192.09	1188.46	4.31	3.83	100.05	63.82	101.7	192.7	2.99	1.89	3.63	3.63
Sweet Grass County	A7	RM 450.63	80374	0.5% - 200yr	1393.19	1191.79	1188.16	3.54	3.38	67.8	46.6	135.95	209.1	2.87	1.97	3.64	3.64
Sweet Grass County	A7	RM 450.53	79863	0.5% - 200yr	1393.19	1191.55	1187.88	3.18	3.06	51.5	38.59	151.61	212.24	2.87	2.15	3.68	3.68
Sweet Grass County	A7	RM 450.43	79300	0.5% - 200yr	1393.19	1191.32	1187.72	2.99	2.74	44.95	30.83	133.66	268.78	2.76	1.89	3.6	3.6
Sweet Grass County	A7	RM 450.34	78849	0.5% - 200yr	1466.81	1191.04	1188.05	3.07	2.79	51.41	40.48	125.83	256.5	2.6	2.05	2.99	2.99
Sweet Grass County	A7	RM 450.23	78298	0.5% - 200yr	1466.81	1190.93	1186.92	2.31	2.13	27.53	20.74	195.92	475.88	3.19	2.4	4.01	4.01
Sweet Grass County	A7	RM 450.14	77822	0.5% - 200yr	1466.81	1190.69	1186.4	2.72	2.19	38.62	19.63	152.44	463.29	3.27	1.64	4.28	4.28
Sweet Grass County	A7	RM 450.05	77362	0.5% - 200yr	1466.81	1189.97	1187.2	3.89	3.6	84.2	56.39	139.97	330.49	2.66	1.77	2.78	2.78
Sweet Grass County	A7	RM 449.96	76841	0.5% - 200yr	1466.81	1189.76	1186.28	3.29	2.78	56.33	36.6	128.44	359.35	3.3	2.13	3.48	3.48
Sweet Grass County	A7	RM 449.86	76356	0.5% - 200yr	1466.81	1189.39	1185.58	3.58	2.75	65.17	30.97	110.58	505.37	3.5	1.65	3.81	3.81
Sweet Grass County	A7	RM 449.77	75860	0.5% - 200yr	1466.81	1189.04	1185.68	3.55	3.08	63.44	49.73	168.44	380.75	2.32	1.82	3.36	3.36
Sweet Grass County	A7	RM 449.68	75373	0.5% - 200yr	1466.81	1188.74	1185.9	3.04	2.76	55.08	46.42	220.37	475.12	2.13	1.8	2.84	2.84
Sweet Grass County	A7	RM 449.59	74904	0.5% - 200yr	1466.81	1188.62	1184.15	2.72	2.25	36.27	20.54	112.42	427.38	4.03	2.24	4.47	4.47
Sweet Grass County	A7	RM 449.48	74351	0.5% - 200yr	1466.81	1188.2	1184.86	3.44	2.83	67.46	43.25	121.9	362.19	2.46	1.58	3.35	3.35
Sweet Grass County	A7	RM 449.37	73741	0.5% - 200yr	1466.81	1188.09	1184.73	2.21	1.85	27.69	17.46	210.35	617.96	2.53	1.59	3.35	3.35
Sweet Grass County	A7	RM 449.26	73165	0.5% - 200yr	1466.81	1188	1184.33	1.96	1.22	19.1	11.56	128.66	854.48	3.11	1.86	3.67	3.67
Sweet Grass County	A7	RM 449.10	72364	0.5% - 200yr	1466.81	1187.17	1183.97	4.09	2.07	89.62	37.42	87.4	839.59	3.07	1.25	3.21	3.21
Sweet Grass County	A7	RM 449.00	71858	0.5% - 200yr	1466.81	1186.52	1183.97	3.8	2.37	85.69	45.52	113.75	650.14	2.24	1.17	2.55	2.55
Sweet Grass County	A7	RM 448.88	71223	0.5% - 200yr	1466.81	1186.44	1183.11	1.91	1.66	20.87	14.52	232.14	693.48	2.44	1.7	3.33	3.33
Sweet Grass County	A7	RM 448.76	70537	0.5% - 200yr	1466.81	1186.41	1182.01	1.18	1.14	7.74	7.2	312.73	635.21	2.69	2.5	4.4	4.4
Sweet Grass County	A7	RM 448.55	69424	0.5% - 200yr	1466.81	1186.21	1181.8	1.83	1.54	16.34	10.57	154.14	740.84	3.94	2.54	4.41	4.41
Sweet Grass County	A7	RM 448.41	68815	0.5% - 200yr	1466.81	1185.63	1181.16	3.41	3.01	52.6	38.21	108.05	209.22	3.73	2.66	4.47	4.47
Sweet Grass County	A7	RM 448.32	68353	0.5% - 200yr	1466.81	1185.76	1179.91	2.14	2.09	20.44	18.44	126.03	489.41	5.4	4.88	5.85	5.85
Sweet Grass County	A7	RM 448.23	67851	0.5% - 200yr	1466.81	1185.52	1179.82	2.67	2.6	32.1	28.93	105.4	377.88	5.18	4.66	5.7	5.7

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions
0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	0.5% - 200yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	0.5% - 200yr	1466.81	1184.59	1180.89	4.31	4.26	97.67	91.11	107.64	274.51	3.16	2.95	3.7	3.7
Sweet Grass County	A7	RM 448.07	67043	0.5% - 200yr	1466.81	1184.29	1180.7	3.23	2.9	55.88	41.29	149.15	429.34	2.98	2.2	3.59	3.59
Sweet Grass County	A7	RM 447.94	66348	0.5% - 200yr	1466.81	1183.89	1180.22	3.32	2.58	56.77	23.72	125.42	540.83	3.36	1.39	3.67	3.67
Sweet Grass County	A7	RM 447.85	65863	0.5% - 200yr	1466.81	1183.55	1180.39	3.49	2.35	67.08	27.71	136.95	569.07	2.76	1.14	3.16	3.16
Sweet Grass County	A7	RM 447.75	65363	0.5% - 200yr	1466.81	1183.45	1179.55	2.77	2	36.77	17.06	143.24	458.4	3.46	1.6	3.9	3.9
Sweet Grass County	A7	RM 447.66	64865	0.5% - 200yr	1466.81	1183.09	1179.59	3.29	2.12	56.09	21.65	121.32	542.87	3.33	1.28	3.5	3.5
Sweet Grass County	A7	RM 447.56	64365	0.5% - 200yr	1466.81	1182.52	1179.67	3.9	2.48	87.37	39.94	136.94	534.77	2.43	1.11	2.85	2.85
Sweet Grass County	A7	RM 447.49	64001	0.5% - 200yr	1466.81	1182.37	1179.82	3	2.23	51.65	29.82	193.72	495.23	2.3	1.33	2.55	2.55
Sweet Grass County	A7	RM 447.39	63473	0.5% - 200yr	1466.81	1181.81	1178.85	3.9	2.46	81.52	34.08	93.9	555.52	2.6	1.08	2.96	2.96
Sweet Grass County	A7	RM 447.27	62880	0.5% - 200yr	1466.81	1181.46	1178.26	3.28	2.25	61.14	28.24	108.82	570.15	2.51	1.14	3.2	3.2
Sweet Grass County	A7	RM 447.17	62358	0.5% - 200yr	1466.81	1181.14	1177.92	3.1	1.94	54.71	28.16	112.86	588.64	2.51	1.28	3.22	3.22
Sweet Grass County	A7	RM 447.08	61863	0.5% - 200yr	1466.81	1180.74	1177.91	3.19	1.95	61.5	35.85	102.85	621.17	2.09	1.21	2.82	2.82
Sweet Grass County	A7	RM 446.98	61358	0.5% - 200yr	1466.81	1180.22	1177.28	3.42	2.05	63.05	27.17	95.69	657.78	2.61	1.12	2.94	2.94
Sweet Grass County	A7	RM 446.89	60841	0.5% - 200yr	1466.81	1179.87	1176.94	3.49	2.03	68.36	30.43	80.72	722.86	2.63	1.16	2.93	2.93
Sweet Grass County	A7	RM 446.80	60396	0.5% - 200yr	1466.81	1179.68	1175.92	2.85	1.89	44.03	23.57	96.31	767.63	2.95	1.56	3.76	3.76
Sweet Grass County	A7	RM 446.70	59903	0.5% - 200yr	1466.81	1179.42	1176.22	3.28	2.11	57.66	24.94	65.99	757.57	3.15	1.3	3.2	3.2
Sweet Grass County	A7	RM 446.60	59371	0.5% - 200yr	1466.81	1179.17	1175.91	3.05	2	48.47	23.43	77.2	656.78	2.99	1.41	3.26	3.26
Sweet Grass County	A7	RM 446.51	58868	0.5% - 200yr	1466.81	1179	1175.24	2.69	2.04	38.82	21.1	117.15	568.87	3.02	1.63	3.75	3.75
Sweet Grass County	A7	RM 446.41	58363	0.5% - 200yr	1466.81	1178.81	1174.39	2.47	1.89	30.86	15.43	148.64	549.02	3.16	1.58	4.42	4.42
Sweet Grass County	A7	RM 446.30	57762	0.5% - 200yr	1466.81	1178.57	1174.85	2.66	1.95	35.77	15.89	123.97	531.07	3.19	1.42	3.73	3.73
Sweet Grass County	A7	RM 446.22	57365	0.5% - 200yr	1466.81	1177.89	1174.39	3.82	3.55	77.18	41.16	129.35	266.42	2.92	1.55	3.5	3.5
Sweet Grass County	A7	RM 446.12	56852	0.5% - 200yr	1466.81	1177.69	1174.04	3.28	2.73	55.1	22.34	140.19	435.96	3.05	1.23	3.65	3.65
Sweet Grass County	A7	RM 446.02	56303	0.5% - 200yr	1466.81	1177.6	1173.3	2.83	2	38.84	17.22	98.42	405.97	4.21	1.81	4.3	4.3
Sweet Grass County	A7	RM 445.94	55871	0.5% - 200yr	1466.81	1176.82	1173.6	4.38	3.46	104.39	45.47	95.04	345.23	2.91	1.25	3.22	3.22
Sweet Grass County	A7	RM 445.82	55236	0.5% - 200yr	1466.81	1176.73	1173.05	2.53	2.31	35.59	28.25	209.11	349.99	2.65	2.1	3.68	3.68
Sweet Grass County	A7	RM 445.71	54753	0.5% - 200yr	1466.81	1176.57	1172.38	2.39	2.29	28.15	24.1	210.48	330.77	2.86	2.45	4.19	4.19
Sweet Grass County	A7	RM 445.60	54202	0.5% - 200yr	1466.81	1176.35	1172.32	2.54	2.43	32.73	29.39	190.57	304.12	2.97	2.67	4.03	4.03
Sweet Grass County	A7	RM 445.46	53453	0.5% - 200yr	1466.81	1175.82	1171.04	3.29	2.87	53.44	36.89	132.44	242.35	3.1	2.14	4.78	4.78
Sweet Grass County	A7	RM 445.36	52888	0.5% - 200yr	1466.81	1175.63	1170.25	3.08	2.45	47.66	30.65	105.4	348.47	3.67	2.34	5.38	5.38
Sweet Grass County	A7	RM 445.26	52344	0.5% - 200yr	1466.81	1174.81	1171.35	4.28	3.63	98.62	53.82	105.9	290.19	2.96	1.61	3.46	3.46
Sweet Grass County	A7	RM 445.17	51873	0.5% - 200yr	1466.81	1174.34	1171.83	4.07	3.69	95.63	59.45	137.29	318.32	2.4	1.49	2.5	2.5
Sweet Grass County	A7	RM 445.07	51376	0.5% - 200yr	1466.81	1174.41	1170.28	2.43	2.16	31.45	20.45	181.57	454.69	3.09	2	4.13	4.13
Sweet Grass County	A7	RM 444.97	50844	0.5% - 200yr	1466.81	1173.87	1170.19	3.37	3	58.91	30.86	148.01	382.26	2.85	1.48	3.68	3.68
Sweet Grass County	A7	RM 444.88	50352	0.5% - 200yr	1466.81	1173.63	1170.05	3.18	2.6	52.44	25.21	144.09	393.12	3.03	1.45	3.58	3.58
Sweet Grass County	A7	RM 444.79	49860	0.5% - 200yr	1466.81	1173.35	1169.94	3.27	2.45	57.01	28.34	132.48	416.79	3.05	1.51	3.41	3.41
Sweet Grass County	A7	RM 444.69	49316	0.5% - 200yr	1466.81	1173.06	1169.55	3.22	2.35	54.63	28.69	131.61	472.95	3.11	1.63	3.51	3.51
Sweet Grass County	A7	RM 444.60	48863	0.5% - 200yr	1466.81	1173.01	1167.23	2.77	1.93	34.37	15.18	88.72	596.09	5.38	2.28	5.77	5.77
Sweet Grass County	A7	RM 444.50	48367	0.5% - 200yr	1466.81	1172.8	1168.66	3.13	2.34	49.93	31.02	103.9	660.72	3.49	2.16	4.14	4.14
Sweet Grass County	A7	RM 444.41	47863	0.5% - 200yr	1466.81	1172.71	1168.6	2.57	2.3	32.35	21.64	129.86	718.91	3.55	2.37	4.11	4.11
Sweet Grass County	A7	RM 444.30	47336	0.5% - 200yr	1466.81	1172.63	1168.26	2.18	1.81	23.03	15.74	167.8	729.31	3.72	2.53	4.37	4.37
Sweet Grass County	A7	RM 444.20	46789	0.5% - 200yr	1466.81	1171.65	1167.97	4.34	3.57	100.79	54.74	107.59	552.76	3.04	1.63	3.69	3.69
Sweet Grass County	A7	RM 444.12	46346	0.5% - 200yr	1466.81	1171.2	1167.62	4.32	3.53	98.03	48.47	100.69	283.38	3.26	1.58	3.58	3.58
Sweet Grass County	A7	RM 444.02	45829	0.5% - 200yr	1466.81	1171.03	1167.57	3.46	2.92	58.8	28.52	143.97	642.5	2.86	1.38	3.46	3.46
Sweet Grass County	A7	RM 443.91	45243	0.5% - 200yr	1466.81	1170.74	1167.08	3.15	2.5	54.71	23.54	153.92	802.16	2.74	1.17	3.66	3.66
Sweet Grass County	A7	RM 443.84	44853	0.5% - 200yr	1466.81	1170.25	1167.23	3.59	3.06	76.3	36.72	173.99	621.73	2.21	1.06	3.02	3.02
Sweet Grass County	A7	RM 443.75	44415	0.5% - 200yr	1466.81	1170.06	1166.67	2.92	2.57	47.51	20.92	183.8	759.02	2.66	1.17	3.39	3.39
Sweet Grass County	A7	RM 443.64	43870	0.5% - 200yr	1466.81	1170.02	1166.09	2.29	1.64	27.42	14.44	110.6	890.65	3.26	1.7	3.93	3.93
Sweet Grass County	A7	RM 443.53	43290	0.5% - 200yr	1466.81	1169.86	1165.72	2.42	1.81	29.04	14.93	87.59	835.79	3.85	1.95	4.14	4.14
Sweet Grass County	A8	RM 443.45	42860	0.5% - 200yr	1466.81	1169.35	1165.25	3.31	2.82	56.3	27.86	139.17	739.29	3.08	1.52	4.1	4.1
Sweet Grass County	A8	RM 443.35	42363	0.5% - 200yr	1466.81	1168.39	1164.95	4.64	4.17	116.94	75.86	101.62	564.74	2.9	1.87	3.45	3.45
Sweet Grass County	A8	RM 443.25	41863	0.5% - 200yr	1466.81	1168.27	1165.05	3.35	2.71	61.16	32.32	127.8	676.59	2.82	1.49	3.22	3.22
Sweet Grass County	A8	RM 443.16	41342	0.5% - 200yr	1466.81	1168.02	1165.43	2.95	2.14	51.53	29.79	152.93	872.18	2.22	1.28	2.59	2.59
Sweet Grass County	A8	RM 443.07	40863	0.5% - 200yr	1466.81	1167.64	1164.49	3.1	2	55.6	27.94	139	916.16	2.36	1.18	3.15	3.15
Sweet Grass County	A8	RM 442.97	40345	0.5% - 200yr	1466.81	1167.34	1164.28	2.74	1.89	40.67	25.56	162.29	712.84	2.27	1.43	3.07	3.07
Sweet Grass County	A8	RM 442.88	39863	0.5% - 200yr	1466.81	1167.13	1164.06	2.39	1.84	32.66	21.05	177.36	805.39	2.21	1.42	3.08	3.08
Sweet Grass County	A8	RM 442.78	39363	0.5% - 200yr	1466.81	1166.35	1164.18	3.76	3.18	92.47	58.62	146.08	610.99	1.62	1.03	2.49	2.49
Sweet Grass County	A8	RM 442.68	38840	0.5% - 200yr	1466.81	1166.13	1162.8	2.62	1.99	34.26	19.91	117.57	627.67	2.51	1.45	3.33	3.33
Sweet Grass County	A8	RM 442.60	38390	0.5% - 200yr	1466.81	1166.06	1162.57	1.96	1.61	21.45	13.06	157.4	574.84	2.67	1.62	3.49	3.49
Sweet Grass County	A8	RM 442.50	37863	0.5% - 200yr	1466.81	1165.58	1162.29	3.42	2.32	56.63	25.03	102.55	572.48	2.55	1.12	3.29	3.29
Sweet Grass County	A8	RM 442.42	37461	0.5% - 200yr	1466.81	1165.38	1162.07	3.06	2.23	44.66	23.42	121.06	553.36	2.33	1.21	3.32	3.32

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	0.5% - 200yr	1466.81	1165.14	1161.85	2.86	2.15	45.34	21.75	107.71	568.25	2.71	1.29	3.29	3.29
Sweet Grass County	A8	RM 442.24	36451	0.5% - 200yr	1466.81	1164.85	1161.75	2.97	2.28	45.36	24.15	130.05	582.71	2.31	1.23	3.1	3.1
Sweet Grass County	A8	RM 442.12	35820	0.5% - 200yr	1466.81	1164.55	1161.12	2.86	2.12	40.59	18.9	123.17	714.13	2.61	1.21	3.43	3.43
Sweet Grass County	A8	RM 442.03	35367	0.5% - 200yr	1466.81	1164.22	1161.18	3.11	2.37	55.38	29.46	123.16	636.67	2.42	1.29	3.05	3.05
Sweet Grass County	A8	RM 441.95	34945	0.5% - 200yr	1466.81	1164.18	1160.28	2.23	1.63	26.65	12.72	133.86	849.66	3.01	1.41	3.89	3.89
Sweet Grass County	A8	RM 441.84	34360	0.5% - 200yr	1466.81	1163.7	1160.33	3	2.12	46.38	23.38	186.27	606.09	2.27	1.14	3.37	3.37
Sweet Grass County	A8	RM 441.74	33863	0.5% - 200yr	1466.81	1163.36	1160.06	3.07	2.1	49.59	21.9	171.23	701.53	2.41	1.07	3.3	3.3
Sweet Grass County	A8	RM 441.65	33357	0.5% - 200yr	1466.81	1163.26	1159.78	2.4	1.53	30.43	14.33	173.66	946.69	2.89	1.35	3.47	3.47
Sweet Grass County	A8	RM 441.53	32732	0.5% - 200yr	1466.81	1162.78	1159.44	3.12	1.91	54.39	20.99	152.04	928.45	2.66	1.02	3.34	3.34
Sweet Grass County	A8	RM 441.47	32366	0.5% - 200yr	1466.81	1162.63	1158.95	2.91	1.72	45.15	15.9	138.98	930.39	3.04	1.06	3.67	3.67
Sweet Grass County	A8	RM 441.38	31928	0.5% - 200yr	1466.81	1162.68	1158.24	1.86	1.18	17.77	9.72	153.74	1065.07	3.36	1.83	4.44	4.44
Sweet Grass County	A8	RM 441.27	31350	0.5% - 200yr	1466.81	1162.15	1158.76	3.51	2.13	66.99	23.66	97.16	1114.59	2.86	1	3.4	3.4
Sweet Grass County	A8	RM 441.18	30882	0.5% - 200yr	1466.81	1161.92	1158.5	2.61	1.59	35.46	14.23	126.18	1032.86	2.79	1.11	3.41	3.41
Sweet Grass County	A8	RM 441.07	30295	0.5% - 200yr	1466.81	1161.77	1158.19	2.33	1.48	29.46	12.45	149.54	1002.29	2.88	1.21	3.58	3.58
Sweet Grass County	A8	RM 441.00	29913	0.5% - 200yr	1466.81	1161.68	1157.63	2.21	1.4	26.35	12.01	146.59	951.47	2.9	1.31	4.05	4.05
Sweet Grass County	A8	RM 440.80	28852	0.5% - 200yr	1466.81	1160.93	1157.49	3.63	2.36	67.78	23.08	103.86	650.21	2.98	1.01	3.43	3.43
Sweet Grass County	A8	RM 440.60	27841	0.5% - 200yr	1466.81	1160.06	1157.2	3.07	2.25	53.7	26.49	121.05	553.4	2.48	1.22	2.85	2.85
Sweet Grass County	A8	RM 440.51	27361	0.5% - 200yr	1466.81	1159.35	1156.41	3.88	2.89	87.28	44.47	109.89	469.68	2.38	1.2	2.94	2.94
Sweet Grass County	A8	RM 440.42	26862	0.5% - 200yr	1466.81	1159	1156.26	3.36	2.55	64.89	34.6	89.34	488.44	2.4	1.28	2.74	2.74
Sweet Grass County	A8	RM 440.30	26223	0.5% - 200yr	1466.81	1158.97	1155.63	1.76	1.45	17.17	12.32	97.18	619.52	2.69	1.92	3.34	3.34
Sweet Grass County	A8	RM 440.17	25466	0.5% - 200yr	1466.81	1158.8	1154.7	2.23	1.69	25.51	15.75	64.56	457.17	3.55	2.12	4.1	4.1
Sweet Grass County	A8	RM 440.06	24863	0.5% - 200yr	1466.81	1158.55	1153.97	2.46	1.96	30.46	17.45	131.05	394.74	3.6	2.05	4.57	4.57
Sweet Grass County	A8	RM 439.96	24366	0.5% - 200yr	1466.81	1158.29	1154.18	2.96	2.17	43.46	23.27	95.94	471.73	3.77	2.01	4.11	4.11
Sweet Grass County	A8	RM 439.87	23863	0.5% - 200yr	1466.81	1157.84	1153.59	3.45	2.54	56.65	19.07	103.39	483.91	3.87	1.3	4.25	4.25
Sweet Grass County	A8	RM 439.77	23365	0.5% - 200yr	1466.81	1157.61	1153.6	3.35	2.61	55.19	19.88	124.68	510.86	3.31	1.19	4.02	4.02
Sweet Grass County	A8	RM 439.68	22863	0.5% - 200yr	1466.81	1157.36	1153.45	3.32	2.55	53.68	21.86	135.36	505.21	3.02	1.22	3.91	3.91
Sweet Grass County	A8	RM 439.58	22363	0.5% - 200yr	1466.81	1157.31	1153.39	2.57	1.81	33.24	15.46	150.28	570.32	3.25	1.51	3.91	3.91
Sweet Grass County	A8	RM 439.49	21863	0.5% - 200yr	1466.81	1157.15	1152.86	2.65	1.79	34.23	13.45	116.13	560.97	4.01	1.56	4.28	4.28
Sweet Grass County	A8	RM 439.39	21363	0.5% - 200yr	1466.81	1157.03	1153.06	2.56	1.79	33.02	14.43	131.98	579.08	3.53	1.52	3.97	3.97
Sweet Grass County	A8	RM 439.30	20863	0.5% - 200yr	1466.81	1156.79	1152.92	2.93	1.93	42.99	17.92	110.38	574.26	3.5	1.45	3.87	3.87
Sweet Grass County	A8	RM 439.20	20353	0.5% - 200yr	1466.81	1156.03	1152.64	4.05	3.14	83.89	29.4	111.19	481.93	3	1.05	3.4	3.4
Sweet Grass County	A8	RM 439.11	19864	0.5% - 200yr	1466.81	1155.74	1152.34	3.11	2.35	50.88	21.85	98.01	597.76	3.12	1.34	3.4	3.4
Sweet Grass County	A8	RM 439.01	19360	0.5% - 200yr	1466.81	1155.22	1152.4	3.6	2.79	69.64	30.97	129.57	554.29	2.29	1.01	2.82	2.82
Sweet Grass County	A8	RM 438.91	18848	0.5% - 200yr	1466.81	1155.05	1151.92	2.77	2.03	40.29	17.61	121.85	628.53	2.69	1.18	3.14	3.14
Sweet Grass County	A8	RM 438.82	18363	0.5% - 200yr	1466.81	1154.72	1151.23	2.99	2.34	49.37	22.85	120.42	560.33	2.75	1.27	3.49	3.49
Sweet Grass County	A8	RM 438.73	17853	0.5% - 200yr	1466.81	1154.49	1151.37	2.77	2.18	40.18	25.19	124.01	463.73	2.44	1.53	3.12	3.12
Sweet Grass County	A8	RM 438.63	17363	0.5% - 200yr	1466.81	1154.38	1150.74	2.27	1.88	27.01	19.1	100.37	378.56	3.19	2.26	3.64	3.64
Sweet Grass County	A8	RM 438.54	16863	0.5% - 200yr	1466.81	1154.23	1150.59	2.31	2.02	27.56	18.81	105.71	315.92	3.41	2.29	3.65	3.65
Sweet Grass County	A8	RM 438.43	16307	0.5% - 200yr	1466.81	1153.98	1149.52	2.53	2.38	32.74	23.05	165.05	295.78	3.45	2.42	4.46	4.46
Sweet Grass County	A9	RM 438.36	15889	0.5% - 200yr	1466.81	1153.84	1149.4	2.55	2.46	29.6	25.67	187.56	267.6	3.03	2.63	4.44	4.44
Sweet Grass County	A9	RM 438.26	15363	0.5% - 200yr	1466.81	1153.15	1149.84	3.95	3.15	81.77	38.1	115.65	369.85	2.89	1.34	3.32	3.32
Sweet Grass County	A9	RM 438.16	14863	0.5% - 200yr	1466.81	1152.9	1149.31	3.5	2.45	61.23	25.77	123.27	489.81	3.05	1.28	3.58	3.58
Sweet Grass County	A9	RM 438.07	14394	0.5% - 200yr	1466.81	1152.57	1149.19	3.57	2.37	70.11	29.74	128.95	560.85	2.76	1.16	3.37	3.37
Sweet Grass County	A9	RM 437.96	13827	0.5% - 200yr	1466.81	1152.39	1149.19	2.94	1.87	48.31	22.34	121.11	677.18	2.63	1.21	3.2	3.2
Sweet Grass County	A9	RM 437.88	13363	0.5% - 200yr	1466.81	1152.19	1148.94	2.91	1.79	43.42	20.48	109.09	706.29	2.62	1.23	3.25	3.25
Sweet Grass County	A9	RM 437.78	12844	0.5% - 200yr	1466.81	1151.82	1148.72	3.33	2.01	58.56	24.78	99.77	707.07	2.67	1.12	3.1	3.1
Sweet Grass County	A9	RM 437.69	12354	0.5% - 200yr	1466.81	1151.64	1148.45	2.56	1.77	37.64	19.5	147.13	687.82	2.4	1.24	3.19	3.19
Sweet Grass County	A9	RM 437.59	11863	0.5% - 200yr	1466.81	1151.36	1148.76	2.67	1.89	43.93	23.26	151.34	746.19	1.96	1.04	2.95	2.95
Sweet Grass County	A9	RM 437.50	11362	0.5% - 200yr	1466.81	1151.12	1148.29	2.39	1.77	34.15	17.64	189.39	756.04	2.12	1.1	2.83	2.83
Sweet Grass County	A9	RM 437.41	10902	0.5% - 200yr	1466.81	1150.84	1148.26	2.62	1.9	42.05	22.44	175.96	727.72	1.99	1.06	2.58	2.58
Sweet Grass County	A9	RM 437.31	10361	0.5% - 200yr	1466.81	1150.43	1147.37	2.93	1.99	50.33	24.64	148.16	669.14	2.25	1.1	3.06	3.06
Sweet Grass County	A9	RM 437.20	9764	0.5% - 200yr	1466.81	1150.12	1147.02	2.84	1.87	41.76	19.22	110.89	692.11	2.47	1.13	3.1	3.1
Sweet Grass County	A9	RM 437.08	9128	0.5% - 200yr	1466.81	1149.69	1146.9	2.79	2.1	44.16	22.8	196.32	677.95	2	1.03	2.79	2.79
Sweet Grass County	A9	RM 436.95	8363	0.5% - 200yr	1466.81	1149.45	1145.32	2.54	1.62	26.2	13.23	106.12	673.75	2.73	1.34	4.13	4.13
Sweet Grass County	A9	RM 436.83	7805	0.5% - 200yr	1466.81	1149.31	1145.93	1.95	1.5	23.52	15.31	154.6	766.53	1.96	1.28	3.38	3.38
Sweet Grass County	A9	RM 436.75	6857	0.5% - 200yr	1466.81	1148.77	1145.61	3.36	1.8	63.53	23.45	67.61	865.79	2.59	0.94	3.16	3.16
Sweet Grass County	A9	RM 436.66	6193	0.5% - 200yr	1466.81	1148.3	1145.68	3.09	1.89	55.62	21.7	97.51	881.86	2.26	0.88	2.61	2.61
Sweet Grass County	A9	RM 436.56	5280	0.5% - 200yr	1466.81	1147.88	1144.44	3.14	1.82	43.29	18.61	68.28	770.58	2.6	1.06	3.44	3.44
Sweet Grass County	A9	RM 436.40	4576	0.5% - 200yr	1466.81	1147.68	1144.05	2.58	1.56	35.29	13.79	57.78	826.19	3.22	1.19	3.64	3.64
Sweet Grass County	A9	RM 436.29	3787	0.5% - 200yr	1466.81	1147.23	1144.44	2.97	2.11	51.3	26.84	99.03	801.31	2.35	1.22	2.8	2.8
Sweet Grass County	A9	RM 436.16	3087	0.5% - 200yr	1466.81	1146.48	1143.57	3.47	2.67	70.33	34.05	107.65	845.23	2.3	1.11	2.91	2.91

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	0.5% - 200yr	1466.81	1146.24	1143.09	3.03	2.33	48.98	27.65	102.06	944.81	2.31	1.29	3.15	3.15
Sweet Grass County	A9	RM 435.98	2200	0.5% - 200yr	1466.81	1145.9	1142.85	3.12	2.31	57.4	27.01	79.63	950.14	2.3	1.06	3.06	3.06
Sweet Grass County	A9	RM 435.88	1580	0.5% - 200yr	1466.81	1145.59	1142.56	2.33	1.9	34.29	20.82	85.7	895.63	1.85	1.11	3.02	3.02
Sweet Grass County	A9	RM 435.73	890	0.5% - 200yr	1466.81	1145.26	1141.99	2.39	1.97	32.32	20.37	80.13	888.71	2.57	1.58	3.27	3.27
Sweet Grass County	A9	RM 435.62	104	0.5% - 200yr	1466.81	1144.85	1141.54	2.73	2.11	43.02	23.64	130.4	827.48	2.4	1.31	3.31	3.31

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	0.5% - 200yr	1467	1144.73	1140.73	1.63	1.35	14.69	8.19	151.59	909.24	2.73	1.53	4.04	4.04
Stillwater County	A9	RM 435.38	231282.1	0.5% - 200yr	1467	1144.52	1139.61	1.84	1.35	17.48	8.72	197.46	818.59	3.29	1.64	4.91	4.91
Stillwater County	A9	RM 435.25	230611.3	0.5% - 200yr	1467	1143.96	1138.48	3.3	2.17	56.16	19.62	118.64	580.79	3.36	1.17	5.48	5.48
Stillwater County	A9	RM 435.16	230122.9	0.5% - 200yr	1467	1143.8	1138.39	3.02	1.87	46.44	17.86	118.38	586.92	3.5	1.34	5.41	5.41
Stillwater County	A9	RM 435.07	229649	0.5% - 200yr	1467	1143.74	1137.85	2.66	1.62	34.45	13.84	103.72	580.64	4.03	1.61	5.89	5.89
Stillwater County	A9	RM 434.97	229153	0.5% - 200yr	1467	1143.4	1137.87	3.15	2	48.88	19.45	105.26	491.89	3.82	1.51	5.53	5.53
Stillwater County	A9	RM 434.84	228443.5	0.5% - 200yr	1467	1143.14	1137	3.11	2.23	47.04	20.49	103.65	461.79	3.99	1.73	6.14	6.14
Stillwater County	A9	RM 434.73	227855.5	0.5% - 200yr	1467	1142.75	1135.61	3.52	2.75	57.07	23.56	82.85	444.04	4.73	1.92	7.14	7.14
Stillwater County	A9	RM 434.63	227328.2	0.5% - 200yr	1467	1142.41	1135.42	3.69	3.64	64.87	48.88	91.85	376.67	4.31	3.24	6.99	6.99
Stillwater County	A9	RM 434.57	227011.2	0.5% - 200yr	1467	1142.28	1136.35	3.61	3.5	63.85	39.14	104.18	516.79	3.89	2.37	5.93	5.93
Stillwater County	A9	RM 434.53	226817.6	0.5% - 200yr	1467	1142.18	1136.73	3.56	3.49	64.75	52.72	118.94	566.02	3.45	2.81	5.45	5.45
Stillwater County	A10	RM 434.49	226573.3	0.5% - 200yr	1467	1142.11	1137.23	3.26	3.23	53.7	49.85	126.91	651.3	3.54	3.29	4.88	4.88
Stillwater County			226533.4	0.5% - 200yr	Bridge												
Stillwater County	A10	RM 434.47	226483	0.5% - 200yr	1467	1141.93	1137.49	3.26	3.25	54.84	53.56	135.7	704.41	3.32	3.25	4.44	4.44
Stillwater County	A10	RM 434.42	226233.2	0.5% - 200yr	1467	1141.81	1137.1	3.21	3.07	53.54	38.51	138.92	699.65	3.25	2.34	4.71	4.71
Stillwater County	A10	RM 434.37	225940.2	0.5% - 200yr	1467	1141.49	1136.51	3.6	3.5	67.6	55.99	124.51	547.06	3.24	2.68	4.98	4.98
Stillwater County	A10	RM 434.24	225278.2	0.5% - 200yr	1467	1141.15	1136.56	3.42	3.16	60.68	38.48	117.53	352.93	3.28	2.08	4.59	4.59
Stillwater County	A10	RM 434.15	224819.6	0.5% - 200yr	1467	1140.97	1137.06	3.06	2.56	50.93	29.73	157.63	404.87	2.82	1.64	3.91	3.91
Stillwater County	A10	RM 434.07	224366.5	0.5% - 200yr	1467	1140.62	1136.55	3.36	2.77	62.69	33.4	116.1	388.27	2.67	1.43	4.22	4.22
Stillwater County	A10	RM 433.98	223883.5	0.5% - 200yr	1467	1140.53	1136.28	2.49	2.3	33.74	23.8	137.26	620.14	2.83	2.01	4.25	4.25
Stillwater County	A10	RM 433.87	223309.3	0.5% - 200yr	1467	1140.28	1135.82	2.74	2.48	38.84	27.14	107.67	563.81	3.31	2.31	4.46	4.46
Stillwater County	A10	RM 433.78	222850	0.5% - 200yr	1467	1140.04	1135.54	2.77	2.58	41.39	28.09	177.68	619.69	2.94	1.99	4.5	4.5
Stillwater County	A10	RM 433.66	222201.9	0.5% - 200yr	1467	1139.63	1135.16	3.11	2.81	50.6	28.51	146	542.19	3.17	1.78	4.47	4.47
Stillwater County	A10	RM 433.54	221596.6	0.5% - 200yr	1467	1139.24	1135.33	3.3	2.87	57.76	25.93	139.88	566.91	3.07	1.37	3.91	3.91
Stillwater County	A10	RM 433.42	220956.2	0.5% - 200yr	1467	1138.67	1134.88	3.65	3.28	71.83	38.51	133.8	480.88	2.93	1.57	3.79	3.79
Stillwater County	A10	RM 433.31	220362.5	0.5% - 200yr	1467	1138.52	1134.67	2.69	2.34	40.83	21.68	205.31	767.25	2.53	1.35	3.85	3.85
Stillwater County	A10	RM 433.20	219758.6	0.5% - 200yr	1467	1138.47	1134.17	1.97	1.48	20.98	14.51	148.63	979.46	2.86	1.98	4.3	4.3
Stillwater County	A10	RM 433.09	219185.2	0.5% - 200yr	1467	1138.16	1133.45	2.44	2.19	31.16	20.06	180.45	754.08	3.19	2.05	4.71	4.71
Stillwater County	A10	RM 432.97	218599.7	0.5% - 200yr	1467	1137.79	1133.57	2.94	2.71	45.45	31.52	153.1	739.97	3.15	2.19	4.22	4.22
Stillwater County	A10	RM 432.84	217905.9	0.5% - 200yr	1467	1137.58	1132.7	2.73	2.1	37.49	17.73	136.55	827.79	3.57	1.69	4.88	4.88
Stillwater County	A10	RM 432.69	217146.9	0.5% - 200yr	1467	1136.98	1131.51	3.63	2.85	63.54	26.85	90.53	479.94	4.14	1.74	5.47	5.47
Stillwater County	A10	RM 432.60	216656.8	0.5% - 200yr	1467	1136.74	1132.1	3.54	2.94	61.6	32.34	102.29	520.92	3.9	2.02	4.64	4.64
Stillwater County	A10	RM 432.45	215889.7	0.5% - 200yr	1467	1136.42	1132.07	3.21	2.58	53.85	22.23	138.19	811.83	3.21	1.32	4.35	4.35
Stillwater County	A10	RM 432.35	215361.3	0.5% - 200yr	1467	1136.31	1132.33	2.67	1.85	37.41	15.71	159.19	886.93	3.18	1.33	3.98	3.98
Stillwater County	A10	RM 432.20	214585.3	0.5% - 200yr	1506.7	1135.57	1131.29	3.68	2.81	70.84	21.53	125.07	696.09	3.17	0.96	4.28	4.28
Stillwater County	A10	RM 432.10	214039.1	0.5% - 200yr	1506.7	1135.33	1130.7	3.37	2.37	58.75	22.73	124.1	750.26	3.26	1.26	4.63	4.63
Stillwater County	A10	RM 432.02	213606.1	0.5% - 200yr	1506.7	1135.28	1130.52	2.65	1.99	36.96	14.27	161.07	903.59	3.11	1.2	4.75	4.75
Stillwater County	A10	RM 431.87	212811.5	0.5% - 200yr	1506.7	1135	1129.24	2.47	1.9	34.42	16.39	210.92	935.22	2.56	1.22	5.76	5.76
Stillwater County	A10	RM 431.74	212127.4	0.5% - 200yr	1506.7	1134.87	1129.66	2.16	1.31	23.93	11.61	161.11	967.41	3.37	1.63	5.21	5.21
Stillwater County	A10	RM 431.60	211373.6	0.5% - 200yr	1506.7	1134.24	1129.96	3.32	2.7	57.39	19.07	134.23	661.65	3.25	1.07	4.28	4.28
Stillwater County	A10	RM 431.49	210820.2	0.5% - 200yr	1506.7	1134	1129.62	3.15	2.39	51.23	15	134.24	761.82	3.31	0.96	4.38	4.38
Stillwater County	A10	RM 431.41	210365.9	0.5% - 200yr	1506.7	1133.57	1129.57	3.58	2.99	67.72	23.64	130.45	532.07	3.11	1.08	4	4
Stillwater County	A10	RM 431.28	209716.5	0.5% - 200yr	1506.7	1133.27	1129.79	3.11	2.5	53.15	20.71	165.04	560.55	2.77	1.08	3.47	3.47
Stillwater County	A10	RM 431.14	208918.5	0.5% - 200yr	1506.7	1132.92	1129.82	2.59	2.42	38.46	18.09	132.66	540.7	2.45	1.15	4.17	4.17
Stillwater County	A10	RM 431.03	208358.8	0.5% - 200yr	1506.7	1132.53	1128.56	2.91	2.92	49.74	40.14	128.58	371.39	2.28	1.84	3.97	3.97
Stillwater County	A10	RM 430.93	207821.9	0.5% - 200yr	1506.7	1132.41	1128.76	2.43	2.11	32.77	24.47	126.38	560.71	2.63	1.98	3.65	3.65
Stillwater County	A10	RM 430.83	207325.6	0.5% - 200yr	1506.7	1132.17	1127.66	2.57	2.23	35.64	23.57	160.64	467.43	2.9	1.92	4.51	4.51
Stillwater County	A10	RM 430.70	206629.1	0.5% - 200yr	1506.7	1132.06	1126.9	2.08	1.76	22.3	11.27	150.14	582.75	3.59	1.82	5.16	5.16
Stillwater County	A10	RM 430.59	206064.9	0.5% - 200yr	1506.7	1131.94	1127.2	2.26	1.68	25.05	10.97	134.54	630.32	3.83	1.68	4.74	4.74
Stillwater County	A10	RM 430.51	205629.5	0.5% - 200yr	1506.7	1131.51	1126.28	3.27	2.45	53.35	18.74	107.05	588.56	3.75	1.31	5.23	5.23
Stillwater County	A10	RM 430.43	205204.2	0.5% - 200yr	1506.7	1131.25	1126.08	3.45	2.49	58.43	19.34	98.33	540.96	3.88	1.28	5.17	5.17
Stillwater County	A10	RM 430.34	204728.4	0.5% - 200yr	1506.7	1130.78	1126.07	3.89	3.06	77.24	26.86	103.36	526.09	3.46	1.2	4.71	4.71
Stillwater County	A11	RM 430.23	204119.7	0.5% - 200yr	1506.7	1130.73	1126.63	2.7	2.16	38.47	20.1	169.33	702.73	3.09	1.61	4.1	4.1
Stillwater County	A11	RM 430.12	203479.6	0.5% - 200yr	1506.7	1130.52	1126.96	2.83	2.18	43	20.84	112.27	800.77	2.97	1.43	3.99	3.99
Stillwater County	A11	RM 430.04	202968.2	0.5% - 200yr	1506.7	1130.25	1127.24	2.98	2.35	48.91	22.12	112.83	820.46	2.76	1.24	3.61	3.61
Stillwater County	A11	RM 429.95	202589.5	0.5% - 200yr	1506.7	1130.09	1126.33	2.64	2.05	39.17	19.91	142.06	801.49	2.59	1.31	3.76	3.76
Stillwater County	A11	RM 429.88	202224.7	0.5% - 200yr	1506.7	1129.93	1125.62	2.65	1.89	38.27	18.87	127.52	792.7	2.84	1.39	4.31	4.31
Stillwater County	A11	RM 429.78	201933.6	0.5% - 200yr	1506.7	1129.63	1123.72	3.13	2.05	50.23	20.2	92.39	659.22	3.35	1.33	5.91	5.91
Stillwater County	A11	RM 429.69	201539.9	0.5% - 200yr	1506.7	1129.02	1123.39	4.02	2.91	87.1	33.83	91.42	485.44	2.95	1.13	5.63	5.63
Stillwater County	A11	RM 429.58	200961.9	0.5% - 200yr	1506.7	1128.81	1124.69	3.02	1.98	50.74	25.12	116.91	581.91	2.64	1.31	4.12	4.12

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	0.5% - 200yr	1506.7	1128.41	1125.15	2.37	1.82	32.34	19.29	184.86	583.81	2.38	1.42	3.98	3.98
Stillwater County	A11	RM 429.28	199644.1	0.5% - 200yr	1506.7	1128.13	1123.59	2.55	1.89	36.41	19.11	148.58	586.16	2.6	1.36	4.54	4.54
Stillwater County	A11	RM 429.18	199152	0.5% - 200yr	1506.7	1127.95	1124.66	2.21	1.73	28.35	16.83	144.34	627.26	2.34	1.39	4.03	4.03
Stillwater County	A11	RM 429.10	198708.6	0.5% - 200yr	1506.7	1127.59	1124.26	2.85	2.09	46.38	23.69	87.69	578.38	2.45	1.25	4.01	4.01
Stillwater County	A11	RM 429.00	198203.8	0.5% - 200yr	1506.7	1127.41	1123.47	2.36	1.94	32.64	21.75	124.54	512.57	2.27	1.52	3.94	3.94
Stillwater County	A11	RM 428.89	197650.5	0.5% - 200yr	1506.7	1127.19	1121.26	2.58	1.94	34.89	18.63	150.77	458.53	3.18	1.7	5.93	5.93
Stillwater County	A11	RM 428.81	197194.1	0.5% - 200yr	1506.7	1127.01	1121.47	2.82	2.02	40	20.29	98.54	412.87	3.64	1.84	5.54	5.54
Stillwater County	A11	RM 428.66	196404.4	0.5% - 200yr	1506.7	1126.85	1122.31	2.18	1.81	26	17.03	204.39	672.85	2.82	1.84	4.54	4.54
Stillwater County	A11	RM 428.52	195702.6	0.5% - 200yr	1506.7	1126.58	1122.1	2.36	2.02	30.33	19.64	206.65	661.17	2.81	1.82	4.48	4.48
Stillwater County	A11	RM 428.44	195293.8	0.5% - 200yr	1506.7	1126.33	1121.18	2.78	2.29	39.72	21.54	146.38	649.8	3.37	1.83	5.15	5.15
Stillwater County	A11	RM 428.39	195075.5	0.5% - 200yr	1506.7	1126.14	1120.72	3.14	2.52	49.95	24.95	122.37	650.24	3.52	1.76	5.42	5.42
Stillwater County	A11	RM 428.33	194724.6	0.5% - 200yr	1506.7	1126.05	1121.22	2.91	2.44	42.99	25.37	135.66	704.45	3.47	2.04	4.83	4.83
Stillwater County	A11	RM 428.28	194450.8	0.5% - 200yr	1506.7	1125.95	1121.2	2.85	2.51	41.72	28.13	147.26	667.62	3.35	2.26	4.75	4.75
Stillwater County	A11	RM 428.23	194235.2	0.5% - 200yr	1506.7	1125.83	1120.74	2.92	2.75	43.43	35.6	143.06	613.31	3.47	2.85	5.09	5.09
Stillwater County	A11	RM 428.20	194033.4	0.5% - 200yr	1506.7	1125.77	1120.37	2.89	2.71	41.07	34.53	121.13	569.46	3.87	3.25	5.4	5.4
Stillwater County			193969.6	0.5% - 200yr	Bridge												
Stillwater County	A11	RM 428.17	193915	0.5% - 200yr	1506.7	1125.51	1120.32	3.04	2.84	45.58	38.47	115.85	562.91	3.81	3.22	5.19	5.19
Stillwater County			193871.1	0.5% - 200yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	0.5% - 200yr	1506.7	1125.31	1120.23	3.06	2.83	46.95	38.46	114.51	576.68	3.68	3.01	5.08	5.08
Stillwater County	A11	RM 428.11	193602.7	0.5% - 200yr	1506.7	1125.28	1119.42	2.77	2.51	39.26	30.02	131.19	573.03	3.47	2.64	5.86	5.86
Stillwater County	A11	RM 428.09	193436.6	0.5% - 200yr	1506.7	1125.15	1119.9	3.01	2.65	46.65	31.77	120.2	566.12	3.38	2.29	5.25	5.25
Stillwater County	A11	RM 428.05	193246.1	0.5% - 200yr	1506.7	1125.11	1120.1	2.81	2.42	40.99	25.98	126.82	591.88	3.31	2.09	5.01	5.01
Stillwater County	A11	RM 428.00	192989.8	0.5% - 200yr	1506.7	1125.05	1120.28	2.65	2.21	35.78	21.79	128.45	630.71	3.45	2.09	4.77	4.77
Stillwater County	A11	RM 427.95	192728.8	0.5% - 200yr	1506.7	1125	1119.57	2.48	1.95	30.99	17.75	134.33	637.41	3.57	2.03	5.43	5.43
Stillwater County	A11	RM 427.88	192333.2	0.5% - 200yr	1506.7	1124.76	1119.27	2.99	2.21	44.08	22.75	105.31	695.51	3.83	1.96	5.48	5.48
Stillwater County	A11	RM 427.83	192088.8	0.5% - 200yr	1506.7	1124.61	1119.18	3.12	2.48	48.28	28.59	105.38	663.01	3.81	2.24	5.43	5.43
Stillwater County	A11	RM 427.76	191724.1	0.5% - 200yr	1506.7	1124.48	1119.07	3.05	2.77	45.01	35.88	101.84	542.07	4.05	3.21	5.41	5.41
Stillwater County			191581.1	0.5% - 200yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	0.5% - 200yr	1506.7	1124.03	1118.71	3.46	3.31	60.28	51.02	114.36	194.71	3.65	3.09	5.32	5.32
Stillwater County	A11	RM 427.65	191155.9	0.5% - 200yr	1506.7	1124.01	1118.58	2.73	2.54	36.57	29.1	139.89	703.93	3.86	3.08	5.43	5.43
Stillwater County	A11	RM 427.53	190509.6	0.5% - 200yr	1506.7	1123.39	1117.37	3.74	3.46	67.64	43.24	96.4	567.79	4.12	2.62	6.02	6.02
Stillwater County	A11	RM 427.41	189886.1	0.5% - 200yr	1506.7	1123.13	1118.73	3.48	3.34	60.3	42.95	115.97	549.6	3.71	2.64	4.4	4.4
Stillwater County	A11	RM 427.29	189253.3	0.5% - 200yr	1506.7	1122.84	1119.12	3.18	3.05	56.22	43.17	176.94	518.81	2.66	2.04	3.72	3.72
Stillwater County	A11	RM 427.17	188639.5	0.5% - 200yr	1506.7	1122.65	1118.44	2.61	2.2	37.35	26.12	197.68	543.25	2.74	1.92	4.21	4.21
Stillwater County	A11	RM 427.09	188179.7	0.5% - 200yr	1506.7	1122.25	1118.34	3.27	2.34	55.91	24.8	127.59	498.79	3.24	1.43	3.9	3.9
Stillwater County	A11	RM 427.00	187745.4	0.5% - 200yr	1506.7	1122.13	1117.71	2.85	2.15	42.81	27.02	143.34	502.65	3.1	1.96	4.42	4.42
Stillwater County	A11	RM 426.92	187309.3	0.5% - 200yr	1506.7	1121.98	1117.32	2.57	2.17	36.69	26.77	205.73	451.37	2.65	1.94	4.66	4.66
Stillwater County	A11	RM 426.86	186960.4	0.5% - 200yr	1506.7	1121.86	1116.77	2.43	2.12	32.46	23.98	210.76	456.03	2.8	2.07	5.09	5.09
Stillwater County	A11	RM 426.75	186401.3	0.5% - 200yr	1506.7	1121.64	1116.11	2.53	2.15	34.25	25.97	182.86	461.71	3.03	2.3	5.53	5.53
Stillwater County	A11	RM 426.67	185983.5	0.5% - 200yr	1506.7	1121.36	1115.84	2.91	2.72	42.13	28.44	138.91	362.04	3.69	2.49	5.52	5.52
Stillwater County	A11	RM 426.59	185580.4	0.5% - 200yr	1506.7	1120.93	1115.47	3.64	3.32	65.27	37.64	106	210.62	3.85	2.22	5.45	5.45
Stillwater County	A11	RM 426.52	185166.5	0.5% - 200yr	1506.7	1120.71	1115.54	3.6	3.55	63.94	46.85	108.17	150.33	3.86	2.82	5.17	5.17
Stillwater County	A11	RM 426.43	184738.3	0.5% - 200yr	1506.7	1120.49	1115.89	3.57	3.49	64.29	53.78	117.17	144.18	3.58	3	4.6	4.6
Stillwater County	A11	RM 426.32	184158.4	0.5% - 200yr	1506.7	1120.19	1116.39	3.43	3.42	60.92	56	133.45	145.47	3.29	3.03	3.8	3.8
Stillwater County	A11	RM 426.20	183517.2	0.5% - 200yr	1506.7	1119.92	1116.07	2.9	2.86	48.45	44.75	216.15	237.53	2.39	2.22	3.85	3.85
Stillwater County	A11	RM 426.11	183030.7	0.5% - 200yr	1506.7	1119.77	1115.37	2.38	2.34	31.54	30.71	270.07	307.33	2.32	2.26	4.4	4.4
Stillwater County	A11	RM 426.00	182442.5	0.5% - 200yr	1506.7	1119.57	1115.74	2.28	2.07	29.26	25.43	243.38	455.96	2.56	2.23	3.83	3.83
Stillwater County	A11	RM 425.89	181895	0.5% - 200yr	1506.7	1119.3	1115.1	2.55	2.3	34.55	21.41	187.02	498.77	3.07	1.9	4.2	4.2
Stillwater County	A11	RM 425.72	181043.5	0.5% - 200yr	1506.7	1118.92	1113.77	2.81	2.39	40.44	23.12	151.05	454.91	3.39	1.93	5.15	5.15
Stillwater County	A11	RM 425.58	180310.5	0.5% - 200yr	1506.7	1118.3	1112.19	3.66	3.05	64.85	25.45	98.64	409.04	4.03	1.58	6.11	6.11
Stillwater County	A11	RM 425.46	179669.9	0.5% - 200yr	1506.7	1117.71	1112.78	4.15	3.45	86.91	34.61	96.07	349.03	3.58	1.42	4.93	4.93
Stillwater County	A11	RM 425.34	179022.4	0.5% - 200yr	1506.7	1117.68	1113.64	2.87	2.47	43.03	28.41	137.83	289.75	3.19	2.1	4.04	4.04
Stillwater County	A11	RM 425.24	178485.9	0.5% - 200yr	1506.7	1117.43	1114.19	2.78	2.46	42.9	34.06	126.45	383.07	2.66	2.12	3.29	3.29
Stillwater County	A11	RM 425.18	178205.8	0.5% - 200yr	1506.7	1117.15	1113.81	3.1	2.85	54.31	44.27	128.32	254.53	2.54	2.08	3.84	3.84
Stillwater County	A11	RM 425.11	177826.8	0.5% - 200yr	1506.7	1116.88	1113.29	3.06	2.89	52.69	38.62	120.72	273.41	2.59	1.9	4.59	4.59
Stillwater County	A11	RM 425.04	177454.7	0.5% - 200yr	1506.7	1116.67	1112.86	3.1	2.62	51.64	35.99	106.76	279.83	2.94	2.05	4.2	4.2
Stillwater County	A11	RM 424.97	177098.9	0.5% - 200yr	1506.7	1116.31	1113.11	3.38	3	63.43	39.94	106.81	300.58	2.69	1.7	3.3	3.3
Stillwater County	A11	RM 424.89	176675.9	0.5% - 200yr	1506.7	1116.18	1112.27	2.57	2.36	37.1	30.76	136.62	404	2.55	2.13	5.38	5.38
Stillwater County	A11	RM 424.81	176242.8	0.5% - 200yr	1506.7	1115.74	1112.25	3.02	2.93	55.9	50.81	139.22	461.98	1.99	1.82	3.74	3.74
Stillwater County	A11	RM 424.70	175789.3	0.5% - 200yr	1506.7	1115.59	1111.91	2.52	2.33	35.06	28.98	161.26	526.17	2.69	2.22	3.68	3.68

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	0.5% - 200yr	1506.7	1115.24	1111.34	2.89	2.48	47.36	34.97	132.39	439.98	2.52	1.86	3.9	3.9
Stillwater County	A11	RM 424.51	174723.2	0.5% - 200yr	1506.7	1115.03	1110.93	2.6	2.32	40.23	31.38	140.84	505.12	2.17	1.7	4.1	4.1
Stillwater County	A11	RM 424.38	174051	0.5% - 200yr	1506.7	1114.62	1110.98	2.8	2.31	46.67	25.11	135.76	676.65	2.19	1.18	3.64	3.64
Stillwater County	A11	RM 424.30	173607.9	0.5% - 200yr	1506.7	1114.38	1110.75	2.7	2.09	45.33	25.89	158.99	748.48	1.92	1.09	3.63	3.63
Stillwater County	A11	RM 424.21	173153.7	0.5% - 200yr	1506.7	1114.13	1110.74	2.37	1.79	34.14	17.71	188.24	860.92	2.05	1.06	3.39	3.39
Stillwater County	A11	RM 424.13	172713.5	0.5% - 200yr	1506.7	1113.93	1110.43	2.36	1.48	33.65	17.96	103.4	910.15	2.1	1.12	3.58	3.58
Stillwater County	A11	RM 424.05	172309.3	0.5% - 200yr	1506.7	1113.79	1110.18	1.84	1.34	20.35	12.68	155.55	865.99	2.08	1.3	3.61	3.61
Stillwater County	A11	RM 423.98	171892.1	0.5% - 200yr	1506.7	1113.71	1110.15	1.66	1.22	15.54	9.19	252.66	835.71	2.51	1.48	3.56	3.56
Stillwater County	A11	RM 423.90	171454.2	0.5% - 200yr	1506.7	1113.54	1109.55	2.19	1.43	26.32	12.78	156.66	783.96	2.79	1.35	3.99	3.99
Stillwater County	A11	RM 423.84	171147.5	0.5% - 200yr	1506.7	1113.46	1109.08	2.17	1.36	24.62	11.41	126.81	739.38	3.25	1.5	4.38	4.38
Stillwater County	A11	RM 423.74	170686.3	0.5% - 200yr	1506.7	1113.43	1108.91	1.73	1.12	15.27	8.71	124.33	689.57	3.43	1.95	4.52	4.52
Stillwater County	A11	RM 423.69	170436.3	0.5% - 200yr	1506.7	1113.28	1108.49	2.32	1.5	27.19	13.56	88.65	605.83	3.56	1.76	4.79	4.79
Stillwater County	A11	RM 423.57	169782.9	0.5% - 200yr	1506.7	1112.98	1108.2	2.5	1.98	31.8	18.2	159.21	676.6	3.47	1.98	4.78	4.78
Stillwater County	A11	RM 423.47	169296.5	0.5% - 200yr	1506.7	1112.5	1107.67	3.39	2.66	58.18	22.68	120.55	589.31	3.54	1.38	4.83	4.83
Stillwater County	A11	RM 423.39	168860.7	0.5% - 200yr	1506.7	1112.15	1107.7	3.71	2.81	69.75	24.48	107.8	534.18	3.53	1.23	4.45	4.45
Stillwater County	A11	RM 423.27	168178	0.5% - 200yr	1506.7	1111.55	1107.36	3.94	3.24	82.1	30.21	118.28	409.09	3.1	1.14	4.19	4.19
Stillwater County	A12	RM 423.17	167687.7	0.5% - 200yr	1506.7	1111.4	1107.46	3.17	2.62	54.34	27.23	153.74	475.66	2.9	1.45	3.94	3.94
Stillwater County	A12	RM 423.08	167239.6	0.5% - 200yr	1506.7	1111.18	1107.21	3.14	2.52	53.42	27.14	129.63	513.52	2.89	1.46	3.97	3.97
Stillwater County	A12	RM 423.01	166844.5	0.5% - 200yr	1506.7	1110.99	1106.84	2.91	2.39	47.84	28.63	144.56	551.52	2.53	1.51	4.15	4.15
Stillwater County	A12	RM 422.91	166338	0.5% - 200yr	1506.7	1110.61	1106.54	3.26	2.51	56.51	27.33	112.6	539.2	3.05	1.47	4.07	4.07
Stillwater County	A12	RM 422.80	165757.6	0.5% - 200yr	1506.7	1110.3	1106.83	3.07	2.49	51.77	24.87	148.94	565.21	2.75	1.32	3.46	3.46
Stillwater County	A12	RM 422.70	165279.2	0.5% - 200yr	1506.7	1110.22	1105.79	2.32	1.82	29.95	17.99	203.12	605.09	2.66	1.6	4.43	4.43
Stillwater County	A12	RM 422.63	164895.4	0.5% - 200yr	1506.7	1110.14	1105.43	2.12	1.58	24.87	14.9	179.41	673.04	2.7	1.62	4.71	4.71
Stillwater County	A12	RM 422.53	164348.1	0.5% - 200yr	1506.7	1109.97	1104.76	2.17	1.68	25.42	14.76	167.27	672.86	2.95	1.7	5.21	5.21
Stillwater County	A12	RM 422.39	163609.2	0.5% - 200yr	1506.7	1109.68	1104.22	2.59	1.96	33.49	16	132.53	520.79	3.7	1.76	5.46	5.46
Stillwater County	A12	RM 422.30	163120.4	0.5% - 200yr	1506.7	1109.13	1104.18	3.55	3.02	62.71	23.28	109.03	369.84	3.75	1.39	4.95	4.95
Stillwater County	A12	RM 422.19	162534.3	0.5% - 200yr	1506.7	1108.96	1103.72	3.14	2.75	48.99	25.61	122.19	278.29	3.78	1.97	5.24	5.24
Stillwater County	A12	RM 422.08	161934.5	0.5% - 200yr	1506.7	1108.35	1104.18	3.88	3.53	77.49	41.31	113.23	240.25	3.35	1.78	4.17	4.17
Stillwater County	A12	RM 421.98	161402.1	0.5% - 200yr	1506.7	1108.24	1103.86	3.09	2.95	48.82	37.11	142.02	197.73	3.39	2.58	4.38	4.38
Stillwater County	A12	RM 421.90	161037.7	0.5% - 200yr	1506.7	1108.08	1103.14	3	2.98	48.07	41.64	168.63	196	2.98	2.58	4.94	4.94
Stillwater County	A12	RM 421.86	160799.3	0.5% - 200yr	1506.7	1107.98	1102.54	2.89	2.82	46.47	37.59	193.24	304.98	2.68	2.16	5.44	5.44
Stillwater County	A12	RM 421.81	160535.9	0.5% - 200yr	1506.7	1107.86	1102.38	2.75	2.68	43.21	32.84	222.31	334.26	2.45	1.86	5.48	5.48
Stillwater County	A12	RM 421.77	160279.4	0.5% - 200yr	1506.7	1107.68	1102.41	2.95	2.62	48.83	29.25	182.53	372.2	2.58	1.55	5.27	5.27
Stillwater County	A12	RM 421.69	159875.5	0.5% - 200yr	1506.7	1107.53	1102.56	2.83	2.19	40.03	17.51	130.2	429.75	3.69	1.6	4.97	4.97
Stillwater County	A12	RM 421.60	159411.4	0.5% - 200yr	1506.7	1107.13	1103.26	3.44	2.69	63.32	26.66	131.13	445.26	2.98	1.26	3.87	3.87
Stillwater County	A12	RM 421.53	159038	0.5% - 200yr	1506.7	1106.7	1102.81	3.82	3.24	81.43	35.1	133.17	412.88	2.62	1.13	3.89	3.89
Stillwater County	A12	RM 421.45	158590.5	0.5% - 200yr	1506.7	1106.57	1103.26	2.98	2.55	49.68	26.36	155.02	482.67	2.61	1.38	3.31	3.31
Stillwater County	A12	RM 421.32	157930.2	0.5% - 200yr	1506.7	1106.18	1102.82	2.91	2.61	50.81	31.65	99.02	471.44	2.11	1.32	3.36	3.36
Stillwater County	A12	RM 421.24	157513	0.5% - 200yr	1506.7	1105.93	1103.05	2.68	2.35	44.82	32.48	126.93	465.45	1.9	1.38	3.45	3.45
Stillwater County	A12	RM 421.13	156951.5	0.5% - 200yr	1506.7	1105.76	1100.38	2.26	1.97	29.44	21.8	118.8	468.15	2.39	1.76	5.38	5.38
Stillwater County	A12	RM 421.05	156536.5	0.5% - 200yr	1506.7	1105.68	1102.11	1.92	1.75	21.45	17.53	103.99	547.39	2.36	1.92	3.57	3.57
Stillwater County	A12	RM 420.94	155960.1	0.5% - 200yr	1506.7	1105.39	1101.68	2.24	2.06	26.6	15.46	213.29	540.73	3.06	1.78	3.71	3.71
Stillwater County	A12	RM 420.85	155473.6	0.5% - 200yr	1506.7	1104.71	1100.98	3.82	2.73	82.07	41.64	135.54	449.6	2.57	1.31	3.73	3.73
Stillwater County	A12	RM 420.75	154957.2	0.5% - 200yr	1506.7	1104.62	1099.95	2.72	1.97	39.89	20.12	157.51	526.35	2.91	1.47	4.67	4.67
Stillwater County	A12	RM 420.66	154483	0.5% - 200yr	1506.7	1104.47	1099.89	2.54	1.81	33.93	20.02	165.17	659.47	3.14	1.85	4.58	4.58
Stillwater County	A12	RM 420.58	154037.5	0.5% - 200yr	1506.7	1104.08	1100.13	3.27	2.2	55.57	22.47	122.25	577.08	3.27	1.32	3.94	3.94
Stillwater County	A12	RM 420.52	153691.5	0.5% - 200yr	1506.7	1103.93	1099.7	3.14	2.09	51.84	19.65	131.23	610.22	3.13	1.18	4.23	4.23
Stillwater County	A12	RM 420.46	153398	0.5% - 200yr	1506.7	1103.64	1099.36	3.4	2.47	62.82	23.34	139.41	572.76	2.87	1.06	4.28	4.28
Stillwater County	A12	RM 420.38	152998.3	0.5% - 200yr	1506.7	1103.57	1099.19	2.67	1.88	39.29	18.66	177.26	624.73	2.72	1.29	4.38	4.38
Stillwater County	A12	RM 420.30	152566.4	0.5% - 200yr	1506.7	1103.52	1099.43	2.03	1.47	22.91	13.99	230.5	636.08	2.68	1.64	4.09	4.09
Stillwater County	A12	RM 420.21	152106.2	0.5% - 200yr	1506.7	1103.37	1098.69	2.11	1.61	25.49	17.42	238.7	564.03	2.46	1.68	4.68	4.68
Stillwater County	A12	RM 420.15	151738.6	0.5% - 200yr	1506.7	1103.26	1098.38	2.04	1.75	21.01	14.2	260.73	487.54	2.64	1.78	4.88	4.88
Stillwater County	A12	RM 420.08	151399.3	0.5% - 200yr	1506.7	1103.11	1097.97	2.31	1.97	28.03	16.05	196.82	426.04	3.14	1.79	5.13	5.13
Stillwater County	A12	RM 420.03	151123.2	0.5% - 200yr	1506.7	1102.94	1097.96	2.67	2.03	35.84	17.88	142.7	411.91	3.62	1.8	4.98	4.98
Stillwater County	A12	RM 419.96	150779.4	0.5% - 200yr	1506.7	1102.75	1098.1	2.97	2.09	44.72	21.19	128.1	435.9	3.49	1.65	4.65	4.65
Stillwater County	A12	RM 419.91	150511.3	0.5% - 200yr	1506.7	1102.39	1097.83	3.59	2.54	63.8	22.76	102.77	443.54	3.78	1.34	4.56	4.56
Stillwater County	A12	RM 419.85	150192.4	0.5% - 200yr	1506.7	1102.01	1097.85	4.02	2.87	84.21	31.06	106.79	437.09	3.27	1.2	4.16	4.16
Stillwater County	A12	RM 419.78	149807.6	0.5% - 200yr	1506.7	1101.88	1097.13	3.57	2.4	64.01	25.5	104.97	433.37	3.66	1.45	4.75	4.75
Stillwater County	A12	RM 419.70	149371.5	0.5% - 200yr	1506.7	1101.58	1097.73	3.56	2.77	68.49	31.43	138.38	406.9	2.91	1.34	3.85	3.85
Stillwater County	A12	RM 419.63	149047.6	0.5% - 200yr	1506.7	1101.45	1097.92	3.13	2.58	53.79	27.98	168.37	405.32	2.77	1.44	3.53	3.53

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	0.5% - 200yr	1506.7	1101.13	1097.22	3.19	2.48	58.16	34.21	136.75	424.79	2.43	1.43	3.91	3.91
Stillwater County	A12	RM 419.46	148117.9	0.5% - 200yr	1506.7	1100.95	1097.34	2.79	2.15	44.17	25.97	133.46	475.27	2.51	1.48	3.87	3.87
Stillwater County	A12	RM 419.38	147728.5	0.5% - 200yr	1506.7	1100.8	1097.36	2.33	1.95	31.45	24.15	149.23	426.3	2.35	1.81	3.44	3.44
Stillwater County	A12	RM 419.31	147342.9	0.5% - 200yr	1506.7	1100.71	1096.9	2.03	1.81	22	17.57	114.45	357.3	2.96	2.37	3.81	3.81
Stillwater County	A12	RM 419.19	146720.3	0.5% - 200yr	1506.7	1100.56	1096.42	1.86	1.96	18.54	15.41	106.51	380.07	3.02	2.51	6.16	6.16
Stillwater County	A12	RM 419.10	146243.9	0.5% - 200yr	1506.7	1100.4	1095.09	2.34	2.03	26.58	13.59	156.37	488.38	3.98	2.03	5.31	5.31
Stillwater County	A12	RM 419.03	145859.8	0.5% - 200yr	1506.7	1100.04	1095.88	3.12	2.8	53.54	28.66	172.66	438.68	2.73	1.46	4.16	4.16
Stillwater County	A12	RM 418.95	145435.3	0.5% - 200yr	1506.7	1099.83	1095.15	2.9	2.52	48.22	26.01	207.31	541.92	2.41	1.3	4.68	4.68
Stillwater County	A12	RM 418.84	144864	0.5% - 200yr	1506.7	1099.47	1094.92	2.86	2.34	48.19	24.24	222.59	632.26	2.23	1.12	4.55	4.55
Stillwater County	A12	RM 418.69	144066	0.5% - 200yr	1506.7	1098.91	1095.29	3.07	2.33	54.44	24.76	169.49	692.33	2.36	1.07	3.62	3.62
Stillwater County	A12	RM 418.57	143452.8	0.5% - 200yr	1506.7	1098.44	1095.1	3.25	2.38	60.63	22.91	135.5	711.11	2.4	0.91	3.34	3.34
Stillwater County	A12	RM 418.49	143008.1	0.5% - 200yr	1506.7	1098.38	1094.94	2.24	1.54	28.07	14.3	169.36	848.46	2.62	1.34	3.44	3.44
Stillwater County	A12	RM 418.35	142310.9	0.5% - 200yr	1506.7	1097.93	1093.15	3	1.89	50.93	21.39	129.02	774.09	2.47	1.03	4.77	4.77
Stillwater County	A12	RM 418.25	141740.8	0.5% - 200yr	1506.7	1097.71	1093.71	2.27	1.65	30.48	20.33	178.18	687.33	2.22	1.48	4	4
Stillwater County	A12	RM 418.08	140894.8	0.5% - 200yr	1506.7	1097.43	1092.65	2.25	1.82	27.67	15.02	139.46	614.75	2.78	1.5	4.78	4.78
Stillwater County	A12	RM 417.89	139893.7	0.5% - 200yr	1506.7	1096.68	1092.75	3.43	2.68	62.89	24.75	128.08	601.07	3	1.18	3.93	3.93
Stillwater County	A12	RM 417.79	139376.4	0.5% - 200yr	1506.7	1096.49	1091.64	3.04	2.28	49.97	23.81	128.51	630.23	2.9	1.38	4.85	4.85
Stillwater County	A12	RM 417.65	138633.4	0.5% - 200yr	1506.7	1096.04	1091.57	3.35	2.62	57.37	26.81	97.66	527.53	3.43	1.59	4.46	4.46
Stillwater County	A12	RM 417.54	138089.5	0.5% - 200yr	1506.7	1095.34	1091.15	4.2	3.43	93.14	48.14	92.41	284.6	3.11	1.6	4.19	4.19
Stillwater County	A12	RM 417.40	137321.3	0.5% - 200yr	1710.6	1095.12	1091.71	2.92	2.44	47.45	31.83	128.55	481.62	2.66	1.78	3.41	3.41
Stillwater County	A12	RM 417.30	136818.2	0.5% - 200yr	1710.6	1094.8	1091.51	2.85	2.53	46.54	30.86	209.14	463.21	2.44	1.61	3.28	3.28
Stillwater County	A12	RM 417.20	136304	0.5% - 200yr	1710.6	1094.73	1091.27	1.99	1.9	21.92	19	205.84	552.3	2.67	2.32	3.46	3.46
Stillwater County	A13	RM 417.09	135706	0.5% - 200yr	1710.6	1094.07	1090.35	3.4	2.84	65.03	40.45	189.98	431.88	2.54	1.59	3.72	3.72
Stillwater County	A13	RM 417.01	135303.6	0.5% - 200yr	1710.6	1093.98	1090	2.62	2.36	38.8	27.94	255.03	517.78	2.5	1.8	3.98	3.98
Stillwater County	A13	RM 416.94	134899.8	0.5% - 200yr	1710.6	1093.53	1089.69	3.25	2.92	53.62	35.57	229.69	444.01	2.24	1.48	3.84	3.84
Stillwater County	A13	RM 416.85	134457.6	0.5% - 200yr	1710.6	1093.33	1089.62	2.97	2.42	47.3	24.45	187.54	467.44	2.95	1.52	3.71	3.71
Stillwater County	A13	RM 416.73	133843.5	0.5% - 200yr	1710.6	1092.85	1089.6	3.26	2.71	61.62	34.4	214.87	481.3	2.35	1.31	3.25	3.25
Stillwater County	A13	RM 416.63	133286.1	0.5% - 200yr	1710.6	1092.45	1089.3	3.22	2.77	61.74	39.05	134.05	452.15	2.15	1.36	3.15	3.15
Stillwater County	A13	RM 416.52	132717.9	0.5% - 200yr	1710.6	1092.21	1089.09	2.68	2.03	42.82	26.88	104.23	621.85	2.15	1.35	3.12	3.12
Stillwater County	A13	RM 416.43	132250.3	0.5% - 200yr	1710.6	1091.92	1088.74	2.5	2.01	37.76	25.54	115.63	679.38	2.07	1.4	3.18	3.18
Stillwater County	A13	RM 416.33	131707.5	0.5% - 200yr	1710.6	1091.71	1088.02	2.3	1.89	31.03	21.82	132.56	721.54	2.23	1.58	3.69	3.69
Stillwater County	A13	RM 416.22	131140.9	0.5% - 200yr	1710.6	1091.31	1087.56	3.19	2.26	54.71	27.49	84.28	707.66	2.95	1.48	3.75	3.75
Stillwater County	A13	RM 416.13	130626.3	0.5% - 200yr	1710.6	1090.96	1086.65	3.07	2.33	51.32	26.63	148.11	738.57	2.85	1.48	4.31	4.31
Stillwater County	A13	RM 416.04	130164.9	0.5% - 200yr	1710.6	1090.68	1085.03	3.24	2.06	55.63	25.12	125.7	806.93	3.07	1.38	5.64	5.64
Stillwater County	A13	RM 415.96	129734.7	0.5% - 200yr	1710.6	1090.63	1085.48	2.42	1.48	30.41	13.33	133.05	992.29	3.29	1.43	5.15	5.15
Stillwater County	A13	RM 415.90	129423.4	0.5% - 200yr	1710.6	1090.56	1085.77	2.03	1.3	21.94	12.31	159.69	935.61	3.06	1.72	4.79	4.79
Stillwater County	A13	RM 415.83	129071.6	0.5% - 200yr	1710.6	1090.48	1085.89	1.96	1.32	19.76	12.17	152.97	820.71	3.32	2.05	5.15	5.15
Stillwater County	A13	RM 415.74	128639.5	0.5% - 200yr	1710.6	1090.27	1084.72	2.5	1.56	30.8	16.08	154.02	841.96	3.79	1.97	5.55	5.55
Stillwater County	A13	RM 415.72	128521.2	0.5% - 200yr	1710.6	1090.15	1084.8	2.84	1.76	39.64	20.07	132.67	806.56	3.86	1.94	5.35	5.35
Stillwater County	A13	RM 415.65	128106.2	0.5% - 200yr	1710.6	1090.03	1083.7	2.71	1.91	38.3	25.33	170.19	844.45	3.22	2.13	6.33	6.33
Stillwater County	A13	RM 415.59	127828.3	0.5% - 200yr	1710.6	1089.7	1083.61	3.3	2.71	54.88	38.21	136.01	802.04	3.6	2.5	6.09	6.09
Stillwater County	A13	RM 415.55	127620.5	0.5% - 200yr	1710.6	1089.68	1082.84	2.72	2.7	34.12	31.18	132.97	474.34	4.72	4.32	6.83	6.83
Stillwater County			127503	0.5% - 200yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	0.5% - 200yr	1710.6	1089.22	1082.96	2.85	2.84	37.09	36.09	122.78	246.79	4.88	4.77	6.25	6.25
Stillwater County	A13	RM 415.50	127340.9	0.5% - 200yr	1710.6	1089.04	1083.14	3.15	3.14	50.05	44.03	152.45	500.86	3.56	3.13	5.9	5.9
Stillwater County	A13	RM 415.45	127087.4	0.5% - 200yr	1710.6	1088.64	1083.18	3.78	3.77	78.04	72.58	160.08	586.05	2.83	2.63	5.46	5.46
Stillwater County	A13	RM 415.39	126788	0.5% - 200yr	1710.6	1088.51	1084.07	3.43	3.35	62.39	52.75	162.04	693.98	3.07	2.59	4.44	4.44
Stillwater County	A13	RM 415.34	126499.1	0.5% - 200yr	1710.6	1088.42	1084.45	3.28	3.03	57.08	44.02	129.56	725.12	3.04	2.34	3.97	3.97
Stillwater County	A13	RM 415.25	126040.7	0.5% - 200yr	1710.6	1088.13	1082.42	3.4	2.96	60.23	35.39	123.59	606.3	3.24	1.9	5.71	5.71
Stillwater County	A13	RM 415.18	125663.1	0.5% - 200yr	1710.6	1088	1083.81	3.11	2.67	50.18	26.74	135.23	623.95	3.31	1.76	4.19	4.19
Stillwater County	A13	RM 415.10	125251.2	0.5% - 200yr	1710.6	1087.5	1083.01	3.83	3.41	77.08	49.26	111.67	451.01	3.18	2.03	4.49	4.49
Stillwater County	A13	RM 414.97	124585.1	0.5% - 200yr	1710.6	1087.14	1082.64	3.46	2.88	63.55	41.82	121.02	494.73	3.06	2.02	4.5	4.5
Stillwater County	A13	RM 414.88	124110.1	0.5% - 200yr	1710.6	1086.88	1083.02	3.3	2.84	57.48	37.37	124.65	473.01	3.11	2.02	3.86	3.86
Stillwater County	A13	RM 414.71	123222	0.5% - 200yr	1710.6	1086.31	1080.88	3.23	3.18	54.51	45.65	165.46	454.98	3.2	2.68	5.43	5.43
Stillwater County	A13	RM 414.57	122473.6	0.5% - 200yr	1710.6	1085.68	1081.21	3.7	3.17	72.67	37.45	146.86	465.7	3.07	1.58	4.47	4.47
Stillwater County	A13	RM 414.43	121696.6	0.5% - 200yr	1710.6	1085.17	1080.49	3.47	2.9	65.99	35.69	170.98	740.19	2.75	1.49	4.68	4.68
Stillwater County	A13	RM 414.21	120527.7	0.5% - 200yr	1710.6	1084.46	1080.81	2.95	2.56	51.22	34.67	222.21	727.49	2.22	1.51	3.65	3.65
Stillwater County	A13	RM 413.90	118914.7	0.5% - 200yr	1710.6	1083.11	1079.28	3.51	2.45	67.39	26.42	156.93	644.22	2.77	1.08	3.83	3.83
Stillwater County	A13	RM 413.65	117570.4	0.5% - 200yr	1710.6	1082.37	1078.15	3.16	1.79	53.22	24.65	142.79	684.51	3.01	1.39	4.22	4.22
Stillwater County	A14	RM 413.44	116446.3	0.5% - 200yr	1710.6	1081.62	1076.4	3.4	1.87	62.39	21.51	147.72	916.05	2.91	1	5.22	5.22

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	0.5% - 200yr	1710.6	1081.09	1077.8	3.17	1.82	58.18	26.06	176.76	906.78	2.34	1.05	3.29	3.29
Stillwater County	A14	RM 413.11	114697.4	0.5% - 200yr	1710.6	1080.57	1077.12	2.84	1.77	46.21	20.63	197.3	999.6	2.45	1.09	3.45	3.45
Stillwater County	A14	RM 412.99	114113.2	0.5% - 200yr	1710.6	1080.23	1076.41	2.89	1.82	48.13	22.89	190.79	1000.78	2.39	1.13	3.82	3.82
Stillwater County	A14	RM 412.88	113533.6	0.5% - 200yr	1710.6	1079.87	1076.03	3.02	2.11	48.91	21.38	145.23	795.64	2.94	1.29	3.84	3.84
Stillwater County	A14	RM 412.73	112742.6	0.5% - 200yr	1710.6	1079.41	1074.72	3.06	2.07	52.62	29.8	174.97	736.89	2.59	1.47	4.69	4.69
Stillwater County	A14	RM 412.59	112005.5	0.5% - 200yr	1710.6	1079	1074.72	2.89	2.01	46.67	27.1	198.19	834.84	2.63	1.52	4.27	4.27
Stillwater County	A14	RM 412.49	111442.5	0.5% - 200yr	1710.6	1078.95	1074.54	2.1	1.56	23.41	12.01	189.08	936.23	3.06	1.57	4.41	4.41
Stillwater County	A14	RM 412.31	110522	0.5% - 200yr	1710.6	1078.61	1072.96	2.55	1.83	31.22	13.98	144.87	770.22	4.17	1.85	5.65	5.65
Stillwater County	A14	RM 412.19	109955.3	0.5% - 200yr	1710.6	1077.74	1071.57	4.3	3.27	93.31	36.63	103.6	386.46	3.62	1.4	6.17	6.17
Stillwater County	A14	RM 412.05	109175.2	0.5% - 200yr	1710.6	1077.45	1072.08	3.55	2.57	62.46	24.09	117.17	512.11	3.76	1.44	5.37	5.37
Stillwater County	A14	RM 411.92	108510.2	0.5% - 200yr	1710.6	1077.16	1072.88	3.26	2.98	53.68	23.7	146.42	369.66	3.53	1.55	4.28	4.28
Stillwater County	A14	RM 411.81	107950.5	0.5% - 200yr	1710.6	1076.59	1070.62	3.84	3.84	76.74	76.02	135.94	245.08	3.27	3.24	5.97	5.97
Stillwater County	A14	RM 411.71	107391.9	0.5% - 200yr	1710.6	1076.28	1070.83	3.7	3.67	67.24	60.04	119.39	221.66	3.87	3.45	5.45	5.45
Stillwater County	A14	RM 411.58	106721	0.5% - 200yr	1710.6	1075.99	1071.65	3.34	3.2	58.8	41.1	161.95	447.65	3.14	2.19	4.34	4.34
Stillwater County	A14	RM 411.47	106133.7	0.5% - 200yr	1710.6	1075.72	1071.87	3.18	2.55	53.92	28.71	161.29	446.78	3.04	1.62	3.85	3.85
Stillwater County	A14	RM 411.32	105338.4	0.5% - 200yr	1710.6	1075.2	1069.29	3.31	2.75	58.44	36.08	163.29	443.28	3.02	1.86	5.91	5.91
Stillwater County	A14	RM 411.14	104374.6	0.5% - 200yr	1710.6	1074.15	1067.92	4.22	2.96	92.3	36.14	115.23	450.7	3.29	1.28	6.23	6.23
Stillwater County	A14	RM 411.00	103638.4	0.5% - 200yr	1710.6	1073.65	1069.6	3.76	2.72	78.68	42.72	143.15	434.44	2.67	1.45	4.05	4.05
Stillwater County	A14	RM 410.85	102835.8	0.5% - 200yr	1710.6	1073.27	1069.92	2.84	2.15	47.84	27.1	83.64	985.12	2.19	1.24	3.35	3.35
Stillwater County	A14	RM 410.74	102286.3	0.5% - 200yr	1710.6	1072.84	1068.99	3.09	2.11	55.04	28.67	75.92	1026.65	2.41	1.24	3.85	3.85
Stillwater County	A14	RM 410.63	101668.3	0.5% - 200yr	1710.6	1072.6	1068.37	2.54	1.81	35	20.75	83.69	1133.36	2.87	1.69	4.23	4.23
Stillwater County	A14	RM 410.52	101115.7	0.5% - 200yr	1710.6	1072.24	1067.81	2.85	2.24	43.27	26.83	123.09	1245.46	3.02	1.87	4.43	4.43
Stillwater County	A14	RM 410.42	100568.4	0.5% - 200yr	1710.6	1071.78	1066.66	3.11	2.92	55.83	37.69	149.68	802.57	2.37	1.6	5.12	5.12
Stillwater County	A14	RM 410.33	100099.2	0.5% - 200yr	1710.6	1071.55	1066.6	2.8	2.41	42.15	29.14	198.78	1068.97	2.92	2.02	4.95	4.95
Stillwater County	A14	RM 410.22	99589.26	0.5% - 200yr	1710.6	1071.02	1066.94	3.56	2.77	68.27	34.29	153.26	1075.81	2.92	1.46	4.07	4.07
Stillwater County	A14	RM 410.12	99057.4	0.5% - 200yr	1710.6	1070.6	1065.8	3.54	2.83	71.27	43.23	177.78	1131.37	2.48	1.5	4.8	4.8
Stillwater County	A14	RM 410.03	98630.66	0.5% - 200yr	1710.6	1070.3	1065.33	3.24	2.69	60.91	39.58	207.31	1021.88	2.32	1.51	4.97	4.97
Stillwater County	A14	RM 409.99	98385.41	0.5% - 200yr	1710.6	1070.07	1065.38	3.31	2.64	64.39	39.35	207.12	1037.89	2.27	1.39	4.69	4.69
Stillwater County	A14	RM 409.94	98072.09	0.5% - 200yr	1710.6	1069.95	1065.51	2.85	2.11	45.78	24.66	206.82	1376.46	2.55	1.37	4.44	4.44
Stillwater County	A14	RM 409.87	97717.24	0.5% - 200yr	1710.6	1069.9	1065.52	2.44	1.58	30.34	13.82	166.7	1406.18	3.49	1.59	4.37	4.37
Stillwater County	A14	RM 409.76	97130.84	0.5% - 200yr	1710.6	1069.48	1065.37	3.2	2.03	54.05	20.77	146.97	1247.48	3.09	1.19	4.11	4.11
Stillwater County	A14	RM 409.60	96278.7	0.5% - 200yr	1710.6	1068.53	1064.65	3.99	2.83	93.59	40.21	166.1	648.3	2.26	0.97	3.88	3.88
Stillwater County	A14	RM 409.43	95381.62	0.5% - 200yr	1710.6	1067.83	1063.55	3.42	2.26	64.24	29.27	135.5	901.71	2.76	1.26	4.29	4.29
Stillwater County	A14	RM 409.24	94405.29	0.5% - 200yr	1710.6	1067.16	1064.55	2.44	1.89	39.52	27.83	159.47	992.83	1.54	1.09	2.95	2.95
Stillwater County	A14	RM 409.15	93912.54	0.5% - 200yr	1710.6	1066.77	1064.27	2.25	1.88	32.63	23.7	168.43	731.7	1.71	1.24	4.7	4.7
Stillwater County	A14	RM 408.99	93008.08	0.5% - 200yr	1710.6	1066.07	1063.94	2.61	2.4	44.99	27.91	164.27	721.38	1.58	0.99	3.53	3.53
Stillwater County	A14	RM 408.84	92229.27	0.5% - 200yr	1710.6	1065.56	1062.1	2.59	2.39	44	29.6	189.57	652.7	1.62	1.1	3.46	3.46
Stillwater County	A14	RM 408.63	91072.98	0.5% - 200yr	1710.6	1065.09	1061.85	2.11	1.88	26.23	22.32	211.69	497.54	2.21	1.88	3.51	3.51
Stillwater County	A14	RM 408.41	89726.16	0.5% - 200yr	1710.6	1064.64	1059.04	2.58	1.99	32.03	17.08	105.48	390.95	4.14	2.19	5.6	5.6
Stillwater County	A14	RM 408.26	88966.66	0.5% - 200yr	1710.6	1064.37	1058.13	2.74	2.16	35.79	19.69	130.93	351.55	4.23	2.32	6.24	6.24
Stillwater County	A14	RM 408.10	88091.52	0.5% - 200yr	1710.6	1063.3	1057.78	4.42	3.85	96.16	37.49	98.48	295.91	3.86	1.5	5.52	5.52
Stillwater County	A14	RM 408.02	87720.33	0.5% - 200yr	1710.6	1063.25	1058.61	3.71	3.1	69.6	35.39	127.15	340.44	3.53	1.79	4.64	4.64
Stillwater County	A14	RM 407.83	86708.48	0.5% - 200yr	1710.6	1062.69	1058.65	3.19	2.75	59.84	37.91	160.45	436.51	2.24	1.42	4.04	4.04
Stillwater County	A14	RM 407.71	86078.99	0.5% - 200yr	1710.6	1062.24	1057.9	3.45	2.69	64.49	29.1	121.34	490.44	2.87	1.3	4.34	4.34
Stillwater County	A14	RM 407.61	85508.29	0.5% - 200yr	1710.6	1062	1058.36	2.84	2.41	46.98	28.71	170.8	503.68	2.31	1.41	3.64	3.64
Stillwater County	A14	RM 407.50	84909.3	0.5% - 200yr	1710.6	1061.74	1058.55	2.65	2.26	41.63	27.78	179.43	520.94	2.17	1.45	3.68	3.68
Stillwater County	A14	RM 407.41	84433.26	0.5% - 200yr	1710.6	1061.6	1057.85	2.49	1.92	34.82	20.78	122.26	572.57	2.6	1.55	3.94	3.94
Stillwater County	A14	RM 407.36	84180.66	0.5% - 200yr	1710.6	1061.45	1057.59	2.87	1.94	44.54	23.19	101.75	579.51	2.93	1.52	3.86	3.86
Stillwater County	A14	RM 407.29	83775.88	0.5% - 200yr	1710.6	1061.14	1057.08	2.55	2.42	37.73	26.89	155.75	417.64	2.37	1.69	4.32	4.32
Stillwater County	A14	RM 407.13	82954.84	0.5% - 200yr	1710.6	1060.85	1056.27	2.27	2.14	28.64	21.51	281.65	402.97	2.65	1.99	4.58	4.58
Stillwater County	A14	RM 406.98	82156.72	0.5% - 200yr	1710.6	1060.63	1056.37	2.28	2.08	26.2	16.83	200.47	409.24	3.62	2.32	4.26	4.26
Stillwater County	A14	RM 406.86	81532.92	0.5% - 200yr	1710.6	1059.66	1055.69	4.27	3.98	93.93	67.04	115.89	178.76	3.38	2.41	3.97	3.97
Stillwater County	A14	RM 406.77	81053.3	0.5% - 200yr	1710.6	1059.4	1053.84	3.97	3.4	79.36	44.61	112.47	250.95	3.57	2.01	5.56	5.56
Stillwater County	A14	RM 406.64	80405.13	0.5% - 200yr	1710.6	1059.08	1054.89	3.53	3.2	64.3	40.27	139.94	490.31	3.31	2.07	4.19	4.19
Stillwater County	A14	RM 406.48	79524.79	0.5% - 200yr	1710.6	1058.63	1054.8	3.07	2.41	51.75	32.46	211.08	597.59	2.26	1.41	3.83	3.83
Stillwater County	A14	RM 406.25	78337.26	0.5% - 200yr	1710.6	1057.95	1054.03	3.08	2.24	50.26	20.47	146.6	734.81	3.12	1.26	3.92	3.92
Stillwater County	A14	RM 406.08	77409.13	0.5% - 200yr	1710.6	1057.67	1052.87	2.69	1.7	37.25	16.39	131.8	733.65	3.41	1.48	4.8	4.8
Stillwater County	A14	RM 405.93	76624.91	0.5% - 200yr	1710.6	1056.8	1052.64	3.92	3.23	77.29	31.81	114.34	381.99	3.61	1.48	4.15	4.15
Stillwater County	A14	RM 405.81	75994.44	0.5% - 200yr	1710.6	1056.41	1051.93	3.72	3.56	71.44	65.64	133.87	265.05	3.32	3.07	4.48	4.48
Stillwater County	A15	RM 405.77	75764.36	0.5% - 200yr	1710.6	1056.1	1052.63	4.06	3.71	90.62	68.21	142.49	227.12	2.76	2.08	3.47	3.47

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	0.5% - 200yr	1710.6	1055.8	1052.06	3.43	2.96	63.97	43.47	82.19	332.11	2.86	1.95	3.74	3.74
Stillwater County	A15	RM 405.61	74883.52	0.5% - 200yr	1710.6	1055.65	1051.81	3.54	2.69	65.12	35.62	69.55	507.08	3.26	1.79	3.84	3.84
Stillwater County	A15	RM 405.52	74415.92	0.5% - 200yr	1710.6	1055.2	1051.43	4.08	2.82	86.27	45.44	52.24	565.36	3.31	1.74	3.78	3.78
Stillwater County	A15	RM 405.45	74031.34	0.5% - 200yr	1710.6	1055.18	1051.1	3.14	2.02	49.17	30.12	57.4	795.03	3.66	2.25	4.08	4.08
Stillwater County	A15	RM 405.34	73437.72	0.5% - 200yr	1710.6	1054.68	1050.67	3.4	2.72	58.89	32.89	116.05	804.33	3.43	1.92	4.01	4.01
Stillwater County	A15	RM 405.18	72616.33	0.5% - 200yr	1710.6	1054.3	1049.45	3.44	2.75	57.66	28.65	94.83	816.23	3.99	1.97	4.85	4.85
Stillwater County	A15	RM 405.09	72171.48	0.5% - 200yr	1710.6	1054.16	1049.09	3.04	2.62	45.37	26.77	115.98	879.93	3.88	2.29	5.08	5.08
Stillwater County	A15	RM 405.02	71774.52	0.5% - 200yr	1710.6	1053.69	1048.59	3.97	3.27	76.92	32.19	88.03	512.43	3.95	1.64	5.1	5.1
Stillwater County	A15	RM 404.97	71526.86	0.5% - 200yr	1710.6	1053.65	1048.35	3.43	3.05	57.91	36.8	105.86	880.73	3.82	2.43	5.31	5.31
Stillwater County	A15	RM 404.90	71150.58	0.5% - 200yr	1710.6	1053.51	1048.99	3.35	2.86	55.52	28.18	104.62	964.27	3.78	1.92	4.52	4.52
Stillwater County	A15	RM 404.84	70801.47	0.5% - 200yr	1710.6	1053.49	1049.19	2.84	2.31	39.99	21.27	118.04	1166.59	3.78	2	4.3	4.3
Stillwater County	A15	RM 404.77	70415.17	0.5% - 200yr	1710.6	1053.37	1048.51	3.07	2.19	45.44	18.81	86.33	1124.15	4.16	1.69	4.86	4.86
Stillwater County	A15	RM 404.71	70152.7	0.5% - 200yr	1710.6	1053.31	1048.14	2.78	2.27	37.01	20.13	86.12	1077.96	4.24	2.27	5.17	5.17
Stillwater County	A15	RM 404.59	69477.61	0.5% - 200yr	1710.6	1052.53	1047.56	4.01	3.2	80.76	23.4	110.64	532.43	3.66	1.04	4.97	4.97
Stillwater County	A15	RM 404.54	69214.33	0.5% - 200yr	1710.6	1052.46	1047.65	3.56	2.78	65.54	22.22	133.38	581.06	3.35	1.12	4.81	4.81
Stillwater County	A15	RM 404.35	68254.38	0.5% - 200yr	1710.6	1052.03	1048.18	3.06	2.56	50.87	25.11	147.66	476.24	2.83	1.4	4.26	4.26
Stillwater County	A15	RM 404.23	67606.98	0.5% - 200yr	1710.6	1051.55	1047.77	3.29	3.2	58.46	50.07	132.49	340.52	2.92	2.52	3.78	3.78
Stillwater County	A15	RM 404.10	66934.17	0.5% - 200yr	1710.6	1051.21	1047.61	3.09	2.88	50.4	38.33	123.69	511.89	3.07	2.33	3.6	3.6
Stillwater County	A15	RM 403.94	66110.59	0.5% - 200yr	1710.6	1050.93	1045.27	2.92	2.33	43.8	26.5	113.06	546.83	3.41	2.05	5.66	5.66
Stillwater County	A15	RM 403.85	65604.39	0.5% - 200yr	1710.6	1050.44	1044.79	3.79	3.12	70.53	45.64	79.41	523.51	3.95	2.53	5.65	5.65
Stillwater County	A15	RM 403.75	65058.55	0.5% - 200yr	1710.6	1049.64	1046.13	4.59	3.99	114.48	82.71	101.02	303.4	2.88	2.07	3.51	3.51
Stillwater County	A15	RM 403.69	64721.22	0.5% - 200yr	1710.6	1049.62	1046.02	3.25	3.1	59.02	53.59	135.45	457.98	2.64	2.4	3.6	3.6
Stillwater County	A15	RM 403.62	64341.29	0.5% - 200yr	1710.6	1049.36	1045.75	3.37	3.1	66.2	51.11	93.52	493.07	2.31	1.8	3.61	3.61
Stillwater County	A15	RM 403.55	63997.04	0.5% - 200yr	1710.6	1049.27	1045.95	2.78	2.33	43.87	32.72	118.23	512.82	2.48	1.86	3.32	3.32
Stillwater County	A15	RM 403.38	62985.06	0.5% - 200yr	1710.6	1049.01	1043.43	2.21	2.01	25.6	20.68	194.68	504.4	3.16	2.55	5.58	5.58
Stillwater County	A15	RM 403.24	62260	0.5% - 200yr	1710.6	1048.62	1043.43	2.77	2.55	38.46	25.43	167.56	510.03	3.64	2.4	5.19	5.19
Stillwater County	A15	RM 403.15	61770.95	0.5% - 200yr	1710.6	1048.02	1042.51	3.81	3.34	74.76	38.07	130.41	470.86	3.38	1.72	5.51	5.51
Stillwater County	A15	RM 403.05	61263.44	0.5% - 200yr	1710.6	1047.7	1043.23	3.68	3.34	71.3	41.59	146.94	374.98	3.13	1.82	4.47	4.47
Stillwater County	A15	RM 402.97	60777.65	0.5% - 200yr	1710.6	1047.46	1043.89	3.27	3.11	58.9	47.86	190.96	361.47	2.72	2.21	3.57	3.57
Stillwater County	A15	RM 402.83	60113.9	0.5% - 200yr	1710.6	1046.89	1043.49	3.33	3.3	67.01	60.68	246.5	452.65	2.08	1.88	3.4	3.4
Stillwater County	A15	RM 402.68	59309.8	0.5% - 200yr	1710.6	1046.41	1042.55	2.84	2.4	45.91	27.45	233.75	841.84	2.48	1.48	3.86	3.86
Stillwater County	A15	RM 402.53	58529.61	0.5% - 200yr	1710.6	1045.98	1040.51	3.18	1.91	49.36	15.26	121.12	954.75	3.93	1.21	5.46	5.46
Stillwater County	A15	RM 402.37	57665.93	0.5% - 200yr	1710.6	1045.44	1041.09	3.36	2.32	67.74	30.72	213.78	879.16	2.11	0.96	4.35	4.35
Stillwater County	A15	RM 402.24	56987.42	0.5% - 200yr	1710.6	1045.34	1040.75	2.12	1.47	25.15	13.42	251.22	959.3	2.64	1.41	4.58	4.58
Stillwater County	A15	RM 402.07	56034.67	0.5% - 200yr	1710.6	1044.76	1041.1	2.92	2.01	48.7	25	204.99	668.29	2.48	1.27	3.66	3.66
Stillwater County	A15	RM 401.87	54972.92	0.5% - 200yr	1710.6	1044.25	1040.1	2.92	1.79	44.98	20.08	150.47	687.84	3.12	1.39	4.15	4.15
Stillwater County	A15	RM 401.69	54002.29	0.5% - 200yr	1710.6	1044.14	1038.43	1.89	1.49	18.77	11.78	248.14	589.25	3.1	1.94	5.71	5.71
Stillwater County	A15	RM 401.55	53267.48	0.5% - 200yr	1710.6	1043.19	1036.56	4.26	3.17	83.15	24.84	74.7	381.06	4.81	1.42	6.63	6.63
Stillwater County	A15	RM 401.41	52506.25	0.5% - 200yr	1710.6	1043.15	1037.91	2.94	2.42	43.58	28.98	136.71	370.96	3.59	2.39	5.24	5.24
Stillwater County	A15	RM 401.31	51997.63	0.5% - 200yr	1710.6	1042.77	1038.08	3.42	2.82	59.33	34.15	119.22	330.31	3.53	2.03	4.69	4.69
Stillwater County	A15	RM 401.17	51259.17	0.5% - 200yr	1710.6	1042.27	1037.38	3.49	2.93	63.29	28.64	146.36	461.69	3.26	1.47	4.88	4.88
Stillwater County	A15	RM 401.03	50507.04	0.5% - 200yr	1710.6	1041.86	1036.56	3.49	2.63	60.42	22.69	125.18	463.46	3.74	1.4	5.29	5.29
Stillwater County	A15	RM 400.90	49826.69	0.5% - 200yr	1710.6	1041.15	1036.25	4.01	3.54	88.26	58.08	150.93	351.37	2.76	1.82	4.9	4.9
Stillwater County	A15	RM 400.74	49002.09	0.5% - 200yr	1710.6	1040.74	1037.21	3.43	2.48	62.36	35.34	111.86	397.13	3.09	1.74	3.53	3.53
Stillwater County	A15	RM 400.61	48243.95	0.5% - 200yr	1710.6	1040.52	1035.99	2.52	2.17	34.24	25.7	144.82	358.45	2.94	2.2	4.53	4.53
Stillwater County	A15	RM 400.50	47710.55	0.5% - 200yr	1710.6	1040.2	1035.67	2.84	2.55	43.42	29.09	149.16	336.09	2.99	2	4.52	4.52
Stillwater County	A15	RM 400.42	47243.72	0.5% - 200yr	1710.6	1039.82	1034.87	3.4	2.9	59.08	33.67	103.89	300.52	3.47	1.97	4.95	4.95
Stillwater County	A15	RM 400.34	46832.6	0.5% - 200yr	1710.6	1039.65	1034.91	3.31	2.68	54.58	26.63	95.8	350.66	3.73	1.82	4.74	4.74
Stillwater County	A15	RM 400.25	46335.82	0.5% - 200yr	1710.6	1039.5	1035.01	3.03	2.39	46.3	25.79	107.99	355.85	3.62	2.01	4.49	4.49
Stillwater County	A15	RM 400.18	45999.89	0.5% - 200yr	1710.6	1039.34	1034.98	3.08	2.48	48.66	28.77	115.05	342.84	3.42	2.01	4.36	4.36
Stillwater County	A15	RM 400.13	45714.33	0.5% - 200yr	1710.6	1039.22	1035.2	3.03	2.43	46.65	29.11	122.23	326	3.48	2.17	4.02	4.02
Stillwater County	A15	RM 400.11	45623.77	0.5% - 200yr	1710.6	1039.14	1035.11	3.1	2.47	50.16	33.44	129.57	625.1	3.24	2.15	4.03	4.03
Stillwater County	A15	RM 400.09	45529.19	0.5% - 200yr	1710.6	1039.01	1035.05	3.36	2.74	60.43	41.23	128.18	554.06	3	2.04	3.96	3.96
Stillwater County	A15	RM 400.03	45177.97	0.5% - 200yr	1710.6	1038.83	1034.82	3.16	2.81	53.22	43.42	137.4	475.59	3.01	2.46	4.01	4.01
Stillwater County	A15	RM 399.95	44761.86	0.5% - 200yr	1710.6	1038.55	1033.69	3.18	3.18	51	50.16	149.97	397.24	3.59	3.53	4.86	4.86
Stillwater County	A16	RM 399.85	44225.61	0.5% - 200yr	1710.6	1038.04	1033.63	3.71	3.71	72.29	71.68	144.73	215.23	3.19	3.17	4.41	4.41
Stillwater County	A16	RM 399.74	43664.16	0.5% - 200yr	1710.6	1037.84	1033.48	3.1	3.1	52	51.44	188.33	290.44	2.93	2.91	4.36	4.36
Stillwater County	A16	RM 399.62	43026.17	0.5% - 200yr	1710.6	1037.54	1033.67	2.87	2.87	45.5	44.55	219.02	502.6	2.72	2.67	3.87	3.87
Stillwater County	A16	RM 399.50	42404.94	0.5% - 200yr	1710.6	1037.22	1031.89	2.97	2.95	45	39.07	167.47	432.04	3.44	2.99	5.33	5.33
Stillwater County	A16	RM 399.39	41801.43	0.5% - 200yr	1710.6	1036.82	1031.8	3.31	3.3	56.79	53.08	156.53	311.49	3.3	3.09	5.02	5.02

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

0.5% - 200yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	0.5% - 200yr	1710.6	1036.49	1031.14	3.47	3.14	62.81	45.28	146.13	277.68	3.21	2.31	5.35	5.35
Stillwater County	A16	RM 399.19	40736.83	0.5% - 200yr	1710.6	1035.82	1031.46	4.08	3.5	89.18	49.51	134.81	313.75	2.99	1.66	4.36	4.36
Stillwater County	A16	RM 399.09	40202.15	0.5% - 200yr	1710.6	1035.5	1031.09	3.72	3.03	71.6	32.55	129.05	377.2	3.31	1.5	4.41	4.41
Stillwater County	A16	RM 399.00	39710.39	0.5% - 200yr	1710.6	1035.33	1031.41	3.24	2.5	56.41	36.24	144.92	364.41	2.93	1.88	3.92	3.92
Stillwater County	A16	RM 398.91	39231.58	0.5% - 200yr	1710.6	1035.05	1031.73	3.03	2.39	54.47	38.1	180.87	472.67	2.2	1.54	3.31	3.31
Stillwater County	A16	RM 398.80	38666.26	0.5% - 200yr	1710.6	1034.65	1031.55	2.94	2.26	50.29	32.81	191.32	511.02	2.29	1.49	3.1	3.1
Stillwater County	A16	RM 398.73	38275.64	0.5% - 200yr	1710.6	1034.41	1030.78	2.79	2.17	39.62	27.2	227.26	549.91	2.1	1.44	3.63	3.63
Stillwater County	A16	RM 398.62	37715.08	0.5% - 200yr	1710.6	1034.08	1030.19	2.71	2.25	38.02	27.72	211.66	481.63	2.17	1.58	3.89	3.89
Stillwater County	A16	RM 398.51	37115.9	0.5% - 200yr	1710.6	1033.75	1030.68	2.69	2.26	41.69	28.47	212.08	485.97	2.42	1.66	3.09	3.09
Stillwater County	A16	RM 398.40	36522.49	0.5% - 200yr	1710.6	1033.58	1028.27	2.29	1.92	24.98	19.24	225.87	489.75	2.37	1.82	5.31	5.31
Stillwater County	A16	RM 398.29	35952.65	0.5% - 200yr	1710.6	1033.21	1027.62	2.63	2.26	40.99	28.31	282.82	495.69	2.21	1.52	5.58	5.58
Stillwater County	A16	RM 398.17	35320.39	0.5% - 200yr	1710.6	1032.98	1028.88	2.39	2.15	30.48	18.98	233.17	423.53	3.02	1.88	4.1	4.1
Stillwater County	A16	RM 398.04	34597.07	0.5% - 200yr	1710.6	1032.68	1027.24	2.47	2.26	40.98	28.57	256.39	521.76	2.66	1.85	5.44	5.44
Stillwater County	A16	RM 397.95	34133.39	0.5% - 200yr	1710.6	1032.33	1027.15	2.82	2.64	45.45	31.26	240.56	386.36	2.49	1.71	5.18	5.18
Stillwater County	A16	RM 397.81	33366.95	0.5% - 200yr	1710.6	1032.08	1027.05	2.4	2.2	31	22.88	238.11	388.52	2.94	2.17	5.03	5.03
Stillwater County	A16	RM 397.68	32754.86	0.5% - 200yr	1710.6	1031.84	1026.97	2.55	2.28	33.36	22.8	195.63	395.91	3.36	2.3	4.87	4.87
Stillwater County	A16	RM 397.56	32104.4	0.5% - 200yr	1710.6	1031.08	1026.76	3.86	3.4	77.78	36.77	135	691.38	3.22	1.53	4.32	4.32
Stillwater County	A16	RM 397.40	31237.31	0.5% - 200yr	1710.6	1030.51	1026.27	3.5	3.05	67.89	48.92	176.35	705.93	2.68	1.93	4.24	4.24
Stillwater County	A16	RM 397.17	30082.69	0.5% - 200yr	1710.6	1029.93	1025.84	2.62	1.99	41.03	25.87	269.26	1089.06	2.16	1.36	4.08	4.08
Stillwater County	A16	RM 396.97	29050.44	0.5% - 200yr	1710.6	1029.54	1025.61	2.18	1.48	27.18	15.91	280.04	1188.8	2.45	1.43	3.93	3.93
Stillwater County	A16	RM 396.71	27639.86	0.5% - 200yr	1710.6	1028.96	1022.48	2.88	1.38	41.42	14.08	127.44	1149.25	3.72	1.24	6.48	6.48
Stillwater County	A16	RM 396.62	27103.31	0.5% - 200yr	1710.6	1028.45	1022.36	3.7	1.92	66.27	16.05	99.61	1074.26	4.09	0.98	6.09	6.09
Stillwater County	A16	RM 396.52	26616.35	0.5% - 200yr	1710.6	1028.21	1023.41	3.68	1.82	68.45	18.3	108.11	986.32	3.6	0.95	4.8	4.8
Stillwater County	A16	RM 396.29	25423.1	0.5% - 200yr	1710.6	1027.9	1023.53	2.49	1.49	33.82	15.15	188.51	933.12	2.83	1.27	4.37	4.37
Stillwater County	A16	RM 396.14	24635.78	0.5% - 200yr	1710.6	1026.92	1022.46	4.08	3.12	91.85	43.14	129.98	617.68	2.7	1.27	4.46	4.46
Stillwater County	A16	RM 396.03	24026.24	0.5% - 200yr	1710.6	1026.82	1024.1	2.58	1.98	38.47	23.06	186.55	849.71	2.35	1.41	2.72	2.72
Stillwater County	A16	RM 395.89	23301.08	0.5% - 200yr	1710.6	1026.35	1022.79	2.9	2.01	50.55	26.65	152.52	922.14	2.12	1.12	3.56	3.56
Stillwater County	A16	RM 395.73	22420.29	0.5% - 200yr	1710.6	1025.98	1022.66	1.76	1.39	18.59	11.8	186.62	1080.25	2.13	1.35	3.32	3.32
Stillwater County	A16	RM 395.64	21923.33	0.5% - 200yr	1710.6	1025.73	1022.13	2.32	1.51	31.27	14.59	144.53	1236.07	2.34	1.09	3.91	3.91
Stillwater County	A16	RM 395.57	21526.11	0.5% - 200yr	1710.6	1025.31	1021.61	3.19	1.85	55.89	18.66	78.2	1355.24	2.76	0.92	3.7	3.7
Stillwater County	A16	RM 395.48	21053.74	0.5% - 200yr	1710.6	1024.96	1021.89	2.8	2.06	48.06	22.23	116.15	1173.53	1.98	0.91	3.07	3.07
Stillwater County	A16	RM 395.36	20532.68	0.5% - 200yr	1710.6	1024.69	1021.53	2.46	1.82	35.05	15.51	131.95	1174.24	2.35	1.03	3.16	3.16
Stillwater County	A16	RM 394.98	18666.37	0.5% - 200yr	1710.6	1024.08	1020.31	2.97	2.06	50.58	20.83	111.01	958.89	2.44	1	3.77	3.77
Stillwater County	A16	RM 394.80	17678.79	0.5% - 200yr	1710.6	1023.73	1019.23	2.76	2.15	44.52	25.66	140.79	662.98	2.28	1.31	4.5	4.5
Stillwater County	A16	RM 394.71	17254.4	0.5% - 200yr	1710.6	1023.53	1019.74	2.47	2	34.66	17.3	146.7	753.24	2.52	1.25	3.79	3.79
Stillwater County	A16	RM 394.65	16921.48	0.5% - 200yr	1710.6	1023.28	1019.93	2.47	2.21	36.63	21.29	172.91	810.97	2.12	1.23	4.28	4.28
Stillwater County	A16	RM 394.59	16622.61	0.5% - 200yr	1710.6	1022.88	1019.92	2.55	2.51	42.34	32.99	177.81	714.23	1.67	1.3	3.31	3.31
Stillwater County	A16	RM 394.53	16295.21	0.5% - 200yr	1710.6	1022.64	1019.83	2.47	2.24	38.07	30.88	158.81	610.19	1.87	1.51	3.63	3.63
Stillwater County	A16	RM 394.45	15858.14	0.5% - 200yr	1710.6	1022.13	1019.03	3.18	2.79	58.97	37.66	113.58	453.29	2.28	1.46	3.25	3.25
Stillwater County	A16	RM 394.20	14503.23	0.5% - 200yr	1710.6	1021.47	1016.38	2.88	2.33	45.57	21.68	149.53	562.76	2.74	1.31	5.09	5.09
Stillwater County	A16	RM 394.12	14088.57	0.5% - 200yr	1710.6	1021.03	1016.74	3.42	2.71	66.26	29.28	152.43	563.91	2.53	1.12	4.28	4.28
Stillwater County	A16	RM 393.99	13393.6	0.5% - 200yr	1710.6	1020.67	1017.11	2.8	2.13	46.04	24.94	126.2	664.11	2.23	1.21	3.56	3.56
Stillwater County	A16	RM 393.85	12650.05	0.5% - 200yr	1710.6	1020.18	1016.49	2.6	2.17	41.49	27.32	179.1	607.77	1.96	1.29	3.69	3.69
Stillwater County	A16	RM 393.59	11240.84	0.5% - 200yr	1710.6	1019.65	1015.45	1.99	1.52	23.03	12.72	272.87	870.12	2.34	1.29	4.2	4.2
Stillwater County	A16	RM 393.27	9813.245	0.5% - 200yr	1710.6	1018.62	1013.32	3.08	2.74	62.84	39.43	265.64	635.37	1.56	0.98	5.3	5.3
Stillwater County	A16	RM 393.10	8870.543	0.5% - 200yr	1710.6	1018.03	1013.34	2.26	2.05	32.16	26.51	340.95	553.84	1.83	1.51	4.69	4.69
Stillwater County	A16	RM 392.95	8114.595	0.5% - 200yr	1710.6	1017.24	1014.13	2.88	2.79	55.62	51.09	356.46	439.24	1.52	1.4	3.11	3.11
Stillwater County	A16	RM 392.69	6912.838	0.5% - 200yr	1710.6	1016.73	1012.43	2.12	1.78	25.63	14.42	192.3	997.82	2.45	1.38	4.29	4.29
Stillwater County	A16	RM 392.44	5710.825	0.5% - 200yr	1710.6	1016.11	1011.68	2.8	1.92	42.24	17.78	135.35	1172.78	2.9	1.22	4.43	4.43
Stillwater County	A17	RM 392.20	4388.056	0.5% - 200yr	1710.6	1015.09	1010.8	3.37	2.34	66.81	31.91	201.47	951.08	2.24	1.07	4.29	4.29
Stillwater County	A17	RM 392.00	3345.174	0.5% - 200yr	1710.6	1014.44	1009.53	3.09	2.28	52.28	20.84	166.87	720.93	2.77	1.1	4.91	4.91
Stillwater County	A17	RM 391.84	2491.214	0.5% - 200yr	1710.6	1014.12	1010.51	2.52	1.88	37.08	18.96	154.94	805.11	2.32	1.18	3.7	3.7
Stillwater County	A17	RM 391.68	1656.536	0.5% - 200yr	1710.6	1013.78	1010.5	2.08	1.67	26.87	17.15	255.36	852.93	1.89	1.2	3.28	3.28
Stillwater County	A17	RM 391.58	1120.168	0.5% - 200yr	1710.6	1013.53	1009.55	2.11	1.6	27.55	17.07	363.9	907.09	1.9	1.18	3.98	3.98
Stillwater County	A17	RM 391.46	505.9	0.5% - 200yr	1710.6	1013.28	1009.4	2.13	1.46	26.61	14.34	297.18	989.52	2.24	1.21	3.88	3.88

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	200-yr	1710.34	1012.85	1008.74	2.59	1.62	37.68	16.6	210.97	924.82	2.6	1.14	4.11	4.11
Yellowstone County	A17	RM 391.14	149661.4	200-yr	1710.34	1012.39	1007.82	2.69	1.64	49.7	25.85	204.17	789.74	2.54	1.32	4.57	4.57
Yellowstone County	A17	RM 390.83	149168.3	200-yr	1710.34	1011.43	1007.89	2.53	1.94	41.18	23.08	270.59	824.17	2.03	1.14	3.54	3.54
Yellowstone County	A17	RM 390.51	148644.1	200-yr	1710.34	1010.66	1006	2.01	1.7	34.13	21.24	204.23	550.53	2.94	1.83	4.66	4.66
Yellowstone County	A17	RM 390.34	148387.5	200-yr	1710.34	1010.27	1005.26	2.5	1.84	50.1	21.95	156.67	959.36	3.03	1.32	5.01	5.01
Yellowstone County	A17	RM 390.13	148054.9	200-yr	1710.34	1009.62	1005.54	2.91	2.26	60.81	36.77	147.87	418.16	3	1.81	4.08	4.08
Yellowstone County	A17	RM 389.96	147776.4	200-yr	1710.34	1009.32	1004.81	2.22	1.72	31.33	15.95	175.73	1041.99	2.82	1.44	4.51	4.51
Yellowstone County	A17	RM 389.76	147468.2	200-yr	1710.34	1009.08	1004.52	1.71	1.52	24.31	16.87	307.38	745.06	2.98	2.06	4.56	4.56
Yellowstone County	A17	RM 389.55	147162.3	200-yr	1710.34	1008.5	1003.2	2.31	2.3	63.27	60.43	323.02	339.5	2.29	2.19	5.3	5.3
Yellowstone County	A17	RM 389.31	146731.1	200-yr	1710.34	1007.71	1003.49	2.36	2.17	33.52	27.34	256.17	349.13	2.76	2.25	4.22	4.22
Yellowstone County	A17	RM 389.08	146349	200-yr	1710.34	1007.21	1001.61	1.91	1.64	47.03	30.27	309.81	704.49	2.31	1.48	5.6	5.6
Yellowstone County	A17	RM 388.92	146095.5	200-yr	1710.34	1006.81	1002.49	2.1	1.65	25.13	12.89	267.44	754.57	2.68	1.37	4.32	4.32
Yellowstone County	A17	RM 388.79	145883.6	200-yr	1710.34	1006.6	1002.14	2.29	1.49	28.79	13.83	163.94	657.7	3.67	1.74	4.46	4.46
Yellowstone County	A17	RM 388.61	145594.9	200-yr	1710.34	1006.11	1000.48	2.89	2.01	64.49	33.73	147.75	531.08	3.08	1.6	5.63	5.63
Yellowstone County	A17	RM 388.58	145547	200-yr	1710.34	1005.95	1000.28	2.88	2.08	75.29	35.55	154.88	591.71	3.14	1.48	5.67	5.67
Yellowstone County	A17	RM 388.36	145196.7	200-yr	1710.34	1005.25	1001.21	2.94	2.15	54.22	29.3	163.29	509.46	2.88	1.56	4.04	4.04
Yellowstone County	A17	RM 388.22	144960.1	200-yr	1710.34	1004.69	1000.23	3.21	2.26	66.52	32.15	162.16	848.93	2.2	1.07	4.46	4.46
Yellowstone County	A17	RM 388.09	144745.8	200-yr	1710.34	1004.17	999.87	2.65	1.99	46.81	25.59	234.21	954.83	1.87	1.02	4.3	4.3
Yellowstone County	A17	RM 387.91	144452	200-yr	1710.34	1003.53	999.77	1.68	1.75	30.75	25.01	407.62	846.01	1.46	1.19	3.76	3.76
Yellowstone County	A17	RM 387.79	144255.2	200-yr	1710.34	1003.4	999.17	1.31	1.21	7.69	7.28	602.85	1013.38	1.51	1.43	4.22	4.22
Yellowstone County	A17	RM 387.59	143932.9	200-yr	1710.34	1003.1	998.1	1.19	1.18	37.51	35.71	996.59	1118.73	1.36	1.29	4.99	4.99
Yellowstone County	A17	RM 387.36	143562.1	200-yr	1710.34	1002.17	997.78	1.8	1.74	19.31	17.43	843.97	987.18	1.12	1.01	4.39	4.39
Yellowstone County	A17	RM 387.24	143353.9	200-yr	1710.34	1001.77	997.71	2.08	2.07	21.28	20.84	559.91	585.71	1.47	1.44	4.06	4.06
Yellowstone County	A17	RM 387.04	143026.2	200-yr	1710.34	1001.3	996.49	1.9	1.78	19.86	17.97	665.26	851.85	1.26	1.14	4.81	4.81
Yellowstone County	A17	RM 386.86	142750.4	200-yr	1710.34	1000.75	997.01	1.7	1.52	49.94	36.73	492.04	851	1.82	1.34	3.74	3.74
Yellowstone County	A17	RM 386.74	142538.5	200-yr	1710.34	1000.28	996.31	1.99	1.74	31.74	18.7	353.03	744.24	2.24	1.32	3.97	3.97
Yellowstone County	A17	RM 386.61	142318.4	200-yr	1710.34	999.68	995.9	2.92	2.39	55.09	21.88	188.36	674.13	2.68	1.06	3.78	3.78
Yellowstone County	A17	RM 386.47	142095.8	200-yr	1710.34	999.33	995.18	2.68	2.01	43.88	20.09	175	670.52	2.77	1.27	4.15	4.15
Yellowstone County	A17	RM 386.33	141875.1	200-yr	1710.34	998.9	994.36	2.95	1.97	44.31	20.93	169.75	691.65	2.66	1.26	4.54	4.54
Yellowstone County	A17	RM 386.17	141622.7	200-yr	1710.34	998.52	993.9	2.61	2	43.13	21.54	207.61	652.4	2.62	1.31	4.62	4.62
Yellowstone County	A17	RM 386.08	141479.6	200-yr	1710.34	998.31	994.12	2.48	1.88	47.03	23.72	179.92	586.36	3.09	1.55	4.19	4.19
Yellowstone County	A17	RM 386.03	141389.2	200-yr	1710.34	998.21	993.82	2.29	1.9	28.27	16.54	234.49	575.61	2.68	1.57	4.39	4.39
Yellowstone County	A17	RM 385.96	141289.2	200-yr	1710.34	998.17	993.01	1.93	1.67	18.84	12.19	244.54	565.64	3.25	2.1	5.16	5.16
Yellowstone County	A17	RM 385.91	141204.9	200-yr	1710.34	998.08	992.33	2.02	1.93	21.24	17.07	266.7	525.3	3.15	2.53	5.75	5.75
Yellowstone County	A17	RM 385.84	141096	200-yr	1710.34	997.76	990.57	2.75	2.75	38.54	38.54	345.12	452.67	4.21	4.21	7.19	7.19
Yellowstone County		RM 342.71	141053	200-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	200-yr	1710.34	997.44	992.45	3.13	3.13	80.86	80.86	144.52	144.52	3.78	3.78	4.99	4.99
Yellowstone County	A17	RM 385.79	141006	200-yr	1710.34	997.43	992.48	2.92	2.92	38.78	38.66	167.14	390.5	3.51	3.5	4.95	4.95
Yellowstone County	A18	RM 385.69	140846.5	200-yr	1710.34	997.21	992.9	2.74	2.46	71.74	53.77	213.35	531.66	2.87	2.15	4.31	4.31
Yellowstone County	A18	RM 385.60	140705.5	200-yr	1710.34	996.82	992.71	2.91	2.56	64.21	46.15	204.24	508.88	2.77	1.99	4.11	4.11
Yellowstone County	A18	RM 385.50	140538.8	200-yr	1710.34	996.46	990.71	3	2.38	64.7	25.96	151.58	505.93	3.56	1.42	5.75	5.75
Yellowstone County	A18	RM 385.39	140367.1	200-yr	1710.34	996.15	992.41	2.98	2.45	46	26.18	205.72	466.12	2.63	1.5	3.74	3.74
Yellowstone County	A18	RM 385.30	140231.3	200-yr	1710.34	995.86	992.53	2.96	2.51	68.38	43.4	239.85	476.73	2.25	1.43	3.32	3.32
Yellowstone County	A18	RM 385.23	140108.3	200-yr	1710.34	995.63	992.01	2.47	2.22	48.99	37.37	233.35	450.44	2.24	1.71	3.62	3.62
Yellowstone County	A18	RM 385.12	139921.2	200-yr	1710.34	994.82	991.37	3.25	2.98	75.64	60.31	256.25	431.17	1.67	1.33	3.45	3.45
Yellowstone County	A18	RM 384.93	139688.7	200-yr	1710.34	994.45	991.06	2.36	2.07	31.02	20.73	245.4	569.46	2.17	1.45	3.39	3.39
Yellowstone County	A18	RM 384.75	139352.1	200-yr	1710.34	993.32	989.77	3.94	3.1	113.09	55.16	119.37	500.54	2.33	1.14	3.55	3.55
Yellowstone County	A18	RM 384.63	139146.9	200-yr	1710.34	993.08	989.58	1.93	1.76	24.74	21.34	198.25	900.3	1.75	1.51	3.5	3.5
Yellowstone County	A18	RM 384.48	138904.5	200-yr	1710.34	992.75	989.55	1.62	1.79	25.01	15.34	185.61	737.37	2.16	1.32	3.4	3.4
Yellowstone County	A18	RM 384.34	138682.4	200-yr	1710.34	992.51	988.23	1.74	1.56	40.71	19.34	169.9	966.85	2.85	1.35	4.28	4.28
Yellowstone County	A18	RM 384.26	138551.1	200-yr	1710.34	992.27	987.34	2.45	1.68	64.99	26.97	94.18	986.97	3.27	1.35	4.93	4.93
Yellowstone County	A18	RM 384.15	138370.3	200-yr	1710.34	991.31	987.39	4.11	2.98	125.09	43.13	80.18	595.66	2.83	0.96	3.92	3.92
Yellowstone County	A18	RM 384.06	138235.3	200-yr	1710.34	991.08	987.31	3.02	2.04	54.78	27.94	86.93	808.46	2.68	1.36	3.77	3.77
Yellowstone County	A18	RM 383.96	138072.3	200-yr	1710.34	990.71	987.67	2.56	2.26	43.75	30.9	140.38	613.29	1.75	1.23	3.04	3.04
Yellowstone County	A18	RM 383.86	137914.6	200-yr	1710.34	990.51	987.24	2.07	1.85	25.15	16.12	156.98	623.77	2.32	1.48	3.27	3.27
Yellowstone County	A18	RM 383.75	137749.9	200-yr	1710.34	990.27	986.55	1.88	1.92	28.62	20.02	208.22	696.82	1.85	1.28	3.79	3.79
Yellowstone County	A18	RM 383.62	137544.5	200-yr	1710.34	990.05	986.32	1.81	1.55	20.53	13.87	177.97	762.96	2.15	1.45	4.43	4.43
Yellowstone County	A18	RM 383.54	137415.7	200-yr	1710.34	989.96	984.41	1.64	1.38	15.36	9.94	392.45	777.86	2.45	1.59	5.55	5.55
Yellowstone County	B1	RM 383.39	137175.7	200-yr	2191.72	989.54	984.98	2.4	2.27	23.4	19.1	618.39	806.99	1.47	1.2	4.56	4.56
Yellowstone County	B1	RM 383.31	137040.5	200-yr	2191.72	989.38	984.86	2.07	1.79	22.23	20.37	673.07	904.79	1.48	1.36	4.52	4.52
Yellowstone County	B1	RM 383.16	136817.2	200-yr	2191.72	989.17	984.9	1.62	1.41	14.86	14.53	784.27	998.75	1.59	1.55	4.27	4.27

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	200-yr	2191.72	988.77	983.64	1.66	1.47	17.38	15.93	628.96	850.19	1.91	1.75	5.13	5.13
Yellowstone County	B1	RM 382.61	135921.1	200-yr	2191.72	988.19	982.68	2.56	1.84	34.84	17.59	196.01	623.93	3.79	1.91	5.51	5.51
Yellowstone County	B1	RM 382.44	135657.8	200-yr	2191.72	987.77	981.56	3.2	2.1	51.4	23.37	132.77	553.41	4.16	1.89	6.21	6.21
Yellowstone County	B1	RM 382.28	135389.1	200-yr	2191.72	987.67	981.45	2.39	1.49	31.08	10.36	139.32	972.4	4.54	1.51	6.22	6.22
Yellowstone County	B1	RM 382.11	135122	200-yr	2191.72	987.08	980.52	3.4	2.35	65.17	27.46	133.99	536.73	4.15	1.74	6.56	6.56
Yellowstone County	B1	RM 381.93	134829.3	200-yr	2191.72	986.72	981.3	2.81	2.18	69.28	26.07	182.96	714.78	3.75	1.41	5.42	5.42
Yellowstone County	B1	RM 381.79	134602.8	200-yr	2191.72	986.27	981.63	3.07	2.29	52.12	20.04	167.83	664.3	3.77	1.44	4.64	4.64
Yellowstone County	B1	RM 381.69	134426.2	200-yr	2191.72	986.15	981.06	2.5	2.21	38.92	27.19	207.55	356.89	3.98	2.78	5.09	5.09
Yellowstone County	B1	RM 381.58	134232.5	200-yr	2191.72	986.01	981.02	2.26	1.91	29.98	19.35	271.39	763.11	3.28	2.11	4.99	4.99
Yellowstone County	B1	RM 381.47	134047.3	200-yr	2191.72	985.83	980.95	1.96	1.72	48.31	29.46	333.31	851.82	2.98	1.81	4.88	4.88
Yellowstone County	B1	RM 381.35	133871.9	200-yr	2191.72	985.52	980.79	1.92	1.68	53.1	28.61	366.2	858.44	2.82	1.52	4.73	4.73
Yellowstone County	B1	RM 381.22	133659.2	200-yr	2191.72	984.95	979.74	2.11	2.09	71.41	64.31	432.75	490.21	2.38	2.14	5.21	5.21
Yellowstone County	B1	RM 381.11	133491.4	200-yr	2191.72	984.49	979.61	2.07	1.99	61.72	42.07	287.45	619.61	2.61	1.78	4.88	4.88
Yellowstone County	B1	RM 381.00	133302.9	200-yr	2191.72	983.87	978.23	3.14	2.55	50.56	24.6	190.07	707.28	3.07	1.49	5.64	5.64
Yellowstone County	B1	RM 380.92	133180	200-yr	2191.72	983.76	976.97	2.84	2.21	50.48	22.11	152.78	581.21	3.92	1.71	6.79	6.79
Yellowstone County	B1	RM 380.81	132986.3	200-yr	2191.72	983.41	978.55	2.98	2.35	50.38	25	193.61	992.59	3.32	1.64	4.86	4.86
Yellowstone County	B1	RM 380.69	132800.2	200-yr	2191.72	983.26	978.53	2.44	1.93	32.11	18.1	264.93	1196.66	3.05	1.72	4.73	4.73
Yellowstone County	B1	RM 380.57	132628.6	200-yr	2191.72	983.07	978.7	2.36	1.98	43.27	23.8	229.16	1279.36	3.32	1.83	4.37	4.37
Yellowstone County	B1	RM 380.48	132470	200-yr	2191.72	982.85	978.24	2.47	2.03	42.27	22.74	201.91	1352.24	3.56	1.91	4.61	4.61
Yellowstone County	B1	RM 380.34	132222.4	200-yr	2191.72	982.46	977.37	2.81	2.22	43.38	27.17	205.99	1250.32	3.18	2	5.09	5.09
Yellowstone County	B1	RM 380.22	132032.4	200-yr	2191.72	981.75	977.02	3.77	3.44	76.95	51.76	172.71	1135.7	3.18	2.14	4.73	4.73
Yellowstone County	B1	RM 380.11	131847.7	200-yr	2191.72	981.56	976.29	3.09	2.62	58.5	34.79	181.17	558.54	3.02	1.8	5.27	5.27
Yellowstone County	B1	RM 380.01	131671.4	200-yr	2191.72	981.35	976.21	2.75	2.03	53.37	28.4	174.5	735.43	3.17	1.69	5.14	5.14
Yellowstone County	B1	RM 379.92	131538.8	200-yr	2191.72	981.08	976.69	2.93	2.13	45.84	23.77	194.37	701.76	2.82	1.46	4.39	4.39
Yellowstone County	B1	RM 379.84	131406.9	200-yr	2191.72	981.02	975.94	1.99	1.65	22.73	16.16	420.29	1026.96	2.44	1.73	5.08	5.08
Yellowstone County	B1	RM 379.75	131265.1	200-yr	2191.72	980.83	974.98	2.14	1.78	31.88	21.19	375.93	725.05	2.56	1.7	5.85	5.85
Yellowstone County	B1	RM 379.65	131104.3	200-yr	2191.72	980.64	975.6	2.14	1.92	26.56	23.63	379.84	511.7	2.51	2.23	5.04	5.04
Yellowstone County	B1	RM 379.56	130964.3	200-yr	2191.72	980.53	975.94	2.02	1.74	23.91	17.23	313.71	1657.89	2.74	1.97	4.59	4.59
Yellowstone County	B1	RM 379.46	130794	200-yr	2191.72	980.33	974.74	2.18	1.69	25.81	16.04	299.1	1279.1	2.62	1.63	5.59	5.59
Yellowstone County	B1	RM 379.36	130642.3	200-yr	2191.72	980.27	975.71	1.88	1.24	27	14.4	247.15	1085.61	3.51	1.87	4.56	4.56
Yellowstone County	B1	RM 379.27	130496.2	200-yr	2191.72	979.93	974.66	2.84	1.69	67.39	32.43	165.02	820.11	3.29	1.58	5.27	5.27
Yellowstone County	B1	RM 379.17	130345.7	200-yr	2191.72	979.35	973.93	3.56	2.07	80.98	30.2	154.92	860.3	3.31	1.23	5.42	5.42
Yellowstone County	B1	RM 379.04	130142	200-yr	2191.72	979.12	974.79	2.85	1.71	44.39	21.91	203.31	901.46	2.87	1.42	4.33	4.33
Yellowstone County	B1	RM 378.97	130026.7	200-yr	2191.72	978.86	974.64	2.99	1.89	50.36	23.9	231.05	920.94	2.65	1.26	4.22	4.22
Yellowstone County	B1	RM 378.86	129850.9	200-yr	2191.72	978.48	974.4	3.01	1.93	55.56	26.68	250.72	956.69	2.47	1.19	4.08	4.08
Yellowstone County	B1	RM 378.76	129682.3	200-yr	2191.72	978.17	974.17	2.83	1.86	46.34	22.03	272.82	994.42	2.49	1.18	4	4
Yellowstone County	B1	RM 378.67	129541.3	200-yr	2191.72	978.02	973.97	2.51	1.53	31.09	17.36	297.59	1122.91	2.28	1.27	4.05	4.05
Yellowstone County	B1	RM 378.61	129443.1	200-yr	2191.72	977.93	973.83	1.82	1.46	43.73	29.43	265.11	1357.37	2.23	1.5	4.1	4.1
Yellowstone County	B1	RM 378.52	129297.7	200-yr	2191.72	977.75	973.62	1.69	1.37	18	14.85	565.81	1406.29	2.01	1.66	4.13	4.13
Yellowstone County	B1	RM 378.46	129200.8	200-yr	2191.72	977.69	973.48	1.48	1.28	16.94	12.91	613.46	986.48	2.28	1.73	4.21	4.21
Yellowstone County	B1	RM 378.40	129112.2	200-yr	2191.72	977.61	973.41	1.43	1.28	31.59	24.44	605.91	1437.2	2.35	1.81	4.2	4.2
Yellowstone County	B1	RM 378.29	128929.4	200-yr	2191.72	977.52	972.93	1.23	1.05	10.21	6.92	567.41	1559.73	2.98	2.02	4.59	4.59
Yellowstone County	B1	RM 378.13	128673.7	200-yr	2191.72	977.3	971.4	1.81	1.64	16.23	12.47	438.15	1039.37	2.67	2.05	5.9	5.9
Yellowstone County	B1	RM 378.07	128569	200-yr	2191.72	977.2	970.46	1.99	1.87	18.27	15.2	347.76	1657.78	3.12	2.59	6.74	6.74
Yellowstone County	B1	RM 377.96	128380.3	200-yr	2191.72	976.46	968.85	3.51	3.51	91.34	91.34	112	112	5.57	5.57	7.61	7.61
Yellowstone County		RM 338.83	128364	200-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	200-yr	2191.72	976.38	967.19	3.33	3.33	92.01	92.01	110.81	110.81	5.94	5.94	9.19	9.19
Yellowstone County	B1	RM 377.87	128244.4	200-yr	2191.72	976.19	970.56	3.22	3.22	68.56	68.55	223.61	358.6	3.11	3.11	5.63	5.63
Yellowstone County	B1	RM 377.79	128118	200-yr	2191.72	976.03	970.94	2.78	2.78	40.5	40.48	345.01	732.19	2.29	2.29	5.09	5.09
Yellowstone County	B1	RM 377.69	127964.3	200-yr	2191.72	975.86	969.86	2.4	2.31	30.51	27.23	423.76	783.17	2.14	1.91	6	6
Yellowstone County	B1	RM 377.61	127824.8	200-yr	2191.72	975.4	970.53	3.06	2.92	38.09	30.38	431.91	715.72	1.65	1.32	4.87	4.87
Yellowstone County	B1	RM 377.55	127735.1	200-yr	2191.72	975.31	970.41	2.63	2.53	29.57	24.56	460.61	665.52	1.8	1.49	4.9	4.9
Yellowstone County	B1	RM 377.48	127618.1	200-yr	2191.72	975.14	970.26	2.46	2.4	30.85	25.91	470.43	863.04	1.89	1.59	4.88	4.88
Yellowstone County	B1	RM 377.39	127466.6	200-yr	2191.72	974.86	969.73	2.58	2.3	32.8	24.08	421.03	660.78	1.97	1.44	5.13	5.13
Yellowstone County	B1	RM 377.34	127391.5	200-yr	2191.72	974.56	969.95	2.81	2.59	134.77	93.68	407.09	658.87	1.85	1.29	4.61	4.61
Yellowstone County	B1	RM 377.25	127241.9	200-yr	2191.72	974.33	970.26	2.09	1.88	23.88	16.87	478.33	1211.92	2.1	1.48	4.07	4.07
Yellowstone County	B1	RM 377.16	127097.7	200-yr	2191.72	974.17	969.82	2.04	1.86	25.66	18.24	410.87	737.66	2.25	1.6	4.35	4.35
Yellowstone County	B1	RM 377.08	126969	200-yr	2191.72	974.13	969	1.64	1.39	15.04	10.17	417.58	810.01	2.88	1.95	5.13	5.13
Yellowstone County	B1	RM 377.04	126900.8	200-yr	2191.72	974.04	968.6	1.72	1.59	49.81	41.28	570.04	778.32	2.14	1.77	5.44	5.44
Yellowstone County	B1	RM 376.98	126797.5	200-yr	2191.72	973.84	969.02	1.91	1.71	21.59	17.26	531.66	763.03	2.1	1.68	4.82	4.82
Yellowstone County	B1	RM 376.92	126710.1	200-yr	2191.72	973.76	969.01	1.66	1.52	38.16	31.09	505.74	710.07	2.49	2.03	4.75	4.75

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	200-yr	2191.72	973.67	967.73	1.46	1.35	17.3	14.68	449.6	679.18	2.82	2.39	5.94	5.94
Yellowstone County	B1	RM 376.75	126442.1	200-yr	2191.72	973.54	967.82	1.57	1.54	25.53	22.71	406.87	532.07	3	2.67	5.72	5.72
Yellowstone County	B1	RM 376.67	126309	200-yr	2191.72	973.34	967.23	1.92	1.85	42.03	35.09	333.94	473.77	2.99	2.5	6.11	6.11
Yellowstone County	B1	RM 376.58	126174.1	200-yr	2191.72	973	966.82	2.34	2.3	57.69	51.82	308.13	377.9	2.8	2.52	6.18	6.18
Yellowstone County	B1	RM 376.51	126058.2	200-yr	2191.72	972.65	966.77	2.76	2.76	52.04	51.47	267.8	270.98	2.97	2.93	5.88	5.88
Yellowstone County	B1	RM 376.42	125918.5	200-yr	2191.72	972.5	967.68	2.54	2.53	35.39	32.99	257.43	277.86	3.35	3.12	4.82	4.82
Yellowstone County	B1	RM 376.35	125809.8	200-yr	2191.72	972.37	966.71	2.59	2.59	33.88	33.23	225.28	229.72	3.76	3.69	5.66	5.66
Yellowstone County	B1	RM 376.28	125697	200-yr	2191.72	971.94	966.28	3.4	3.4	64.56	63.78	223.17	225.94	2.89	2.86	5.66	5.66
Yellowstone County	B1	RM 376.20	125565.9	200-yr	2191.72	971.7	966.16	3.18	3.18	58.86	58.3	253.31	255.72	2.72	2.69	5.54	5.54
Yellowstone County	B1	RM 376.10	125404.8	200-yr	2191.72	971.37	966.61	3.09	2.93	53.09	47.26	272.23	344.02	2.44	2.17	4.76	4.76
Yellowstone County	B1	RM 376.00	125250.5	200-yr	2191.72	971.09	967.42	2.95	2.46	53.23	35.7	243.83	1369.12	2.69	1.8	3.67	3.67
Yellowstone County	B1	RM 375.88	125055.1	200-yr	2191.72	970.78	966.01	2.83	2.04	52.46	26.95	185.92	1045.14	3.14	1.61	4.77	4.77
Yellowstone County	B1	RM 375.78	124897.3	200-yr	2191.72	970.59	965.37	2.56	1.78	41.98	20.52	188.18	965	3.03	1.48	5.22	5.22
Yellowstone County	B1	RM 375.67	124708.2	200-yr	2191.72	970.4	965.8	2.4	1.79	36.33	18.26	228.11	878.73	2.78	1.4	4.6	4.6
Yellowstone County	B1	RM 375.58	124564.2	200-yr	2191.72	970.12	966.54	2.67	2.01	44.03	20.63	226.41	851.94	2.73	1.28	3.58	3.58
Yellowstone County	B1	RM 375.23	124013.6	200-yr	2191.72	969.47	965.23	2.37	1.61	36.88	14.28	230.84	1184.35	2.97	1.15	4.24	4.24
Yellowstone County	B1	RM 375.10	123799.5	200-yr	2191.72	968.83	963.88	3.56	2.16	85.07	23.97	126.53	1015.6	3.58	1	4.95	4.95
Yellowstone County	B1	RM 374.97	123580.4	200-yr	2191.72	968.61	963.97	2.66	1.69	54.01	17.19	136.63	1191.76	3.47	1.09	4.64	4.64
Yellowstone County	B1	RM 374.83	123365.5	200-yr	2191.72	968.38	963.52	2.32	1.51	32.47	11.82	132.95	1225.67	3.27	1.18	4.86	4.86
Yellowstone County	B1	RM 374.73	123195.7	200-yr	2191.72	968.3	963.36	1.81	1.23	17.47	7.09	144.01	1299.52	3.4	1.38	4.94	4.94
Yellowstone County	B1	RM 374.61	123010.3	200-yr	2191.72	968.09	963.49	2.2	1.52	37.03	12.85	163.89	1316.46	3.35	1.16	4.6	4.6
Yellowstone County	B1	RM 374.53	122875.3	200-yr	2265.35	967.84	963.14	2.56	1.85	41.03	15.49	186.43	1001.44	3.25	1.23	4.7	4.7
Yellowstone County	B1	RM 374.44	122726.7	200-yr	2265.35	967.55	963.04	2.99	1.91	64.79	19.78	128.47	1030.05	3.79	1.15	4.51	4.51
Yellowstone County	B1	RM 374.32	122535.1	200-yr	2265.35	967.36	962.82	2.13	1.81	43.8	19.71	207.54	993.08	2.8	1.26	4.54	4.54
Yellowstone County	B1	RM 374.22	122379	200-yr	2265.35	967.16	960.92	2.44	1.5	33.67	12.62	134.27	1048.06	3.83	1.44	6.24	6.24
Yellowstone County	B1	RM 374.13	122231.1	200-yr	2265.35	967.06	960.11	2.47	1.5	31.48	13.85	137.18	985	3.5	1.53	6.95	6.95
Yellowstone County	B1	RM 373.97	121972.4	200-yr	2265.35	966.89	958.8	1.96	1.44	26.44	12.32	235.01	1007.83	3.38	1.56	8.09	8.09
Yellowstone County	B1	RM 373.88	121829.3	200-yr	2265.35	966.73	962.21	2.17	1.49	32.76	14.35	194.77	1100.81	3.52	1.54	4.52	4.52
Yellowstone County	B1	RM 373.79	121688.7	200-yr	2265.35	966.63	961.66	1.99	1.36	31.12	15.27	192.66	1128.78	3.53	1.73	4.97	4.97
Yellowstone County	B1	RM 373.69	121523.5	200-yr	2265.35	966.48	961.11	2.04	1.41	24.67	14.55	202.68	1045.75	3.44	2.02	5.37	5.37
Yellowstone County	B1	RM 373.56	121314.3	200-yr	2265.35	965.85	959.37	3.25	2.75	65.45	41.65	204.57	414.11	3.14	1.99	6.48	6.48
Yellowstone County	B1	RM 373.39	121015.9	200-yr	2265.35	965.27	958.78	3.2	2.98	66	42.92	187.1	321.02	3.66	2.37	6.49	6.49
Yellowstone County	B1	RM 373.26	120802.3	200-yr	2265.35	965.21	960.81	2.06	1.88	26.48	20.08	355.66	1643.1	2.97	2.26	4.4	4.4
Yellowstone County	B1	RM 373.09	120539.5	200-yr	2265.35	964.8	959.94	2.55	2.35	37.69	30.97	304.46	1473.91	2.82	2.31	4.86	4.86
Yellowstone County	B1	RM 372.99	120365.2	200-yr	2265.35	964.58	959.69	2.32	2.05	45.05	32.72	329.9	1477.54	2.76	2.01	4.89	4.89
Yellowstone County	B1	RM 372.82	120107.7	200-yr	2265.35	964.35	959.03	1.84	1.78	20.25	18.74	469.06	1561.42	2.59	2.39	5.32	5.32
Yellowstone County	B1	RM 372.72	119922.5	200-yr	2265.35	964.11	958.92	2.04	2	37.05	34.64	442.03	1510.55	2.5	2.34	5.19	5.19
Yellowstone County	B1	RM 372.65	119797.7	200-yr	2265.35	963.94	957.32	2.11	2.02	28.96	27.55	397.67	1546.82	2.65	2.53	6.62	6.62
Yellowstone County	B1	RM 372.58	119676.6	200-yr	2265.35	963.86	958.2	1.86	1.8	21.2	19.16	441.67	1546.98	2.72	2.46	5.66	5.66
Yellowstone County	B1	RM 372.41	119395.9	200-yr	2265.35	963.69	958.82	1.67	1.6	15.44	14.13	485.58	1581.84	2.73	2.5	4.87	4.87
Yellowstone County	B1	RM 372.32	119268.8	200-yr	2265.35	963.58	957.24	1.65	1.59	39.92	34.36	534.21	669.95	2.48	2.14	6.34	6.34
Yellowstone County	B1	RM 372.20	119079.1	200-yr	2265.35	963.26	956.93	1.64	1.52	44.72	32.97	512.44	1366.64	2.4	1.76	6.33	6.33
Yellowstone County	B1	RM 372.08	118886.4	200-yr	2265.35	962.8	956.2	1.9	1.83	56.76	47.83	471.76	1105.97	2.38	2.01	6.6	6.6
Yellowstone County	B1	RM 371.94	118669.8	200-yr	2265.35	962.13	957.58	2.24	2.24	63.94	62.68	446.92	804.03	2.26	2.21	4.55	4.55
Yellowstone County	B1	RM 371.83	118490.4	200-yr	2265.35	961.79	957.52	2.13	2.02	37.59	28.78	393.72	799.77	2.57	1.97	4.27	4.27
Yellowstone County	B1	RM 371.74	118350.7	200-yr	2265.35	961.6	957.48	2.17	1.94	29.89	20.57	386.04	818.6	2.52	1.73	4.12	4.12
Yellowstone County	B1	RM 371.62	118155.6	200-yr	2265.35	961.39	956.41	2.29	1.6	34.93	16.75	220.59	819.07	3.6	1.73	4.98	4.98
Yellowstone County	B1	RM 371.53	118001.4	200-yr	2265.35	961.13	955.99	2.62	1.91	39.76	21.68	235.31	1177.8	3.13	1.7	5.14	5.14
Yellowstone County	B1	RM 371.43	117839.2	200-yr	2265.35	960.84	955.47	2.61	1.94	71.67	32.9	253.33	1172.57	2.84	1.3	5.37	5.37
Yellowstone County	B1	RM 371.37	117745.1	200-yr	2265.35	960.69	955.72	2.49	1.78	32.35	15.89	292.28	1060.91	2.81	1.38	4.97	4.97
Yellowstone County	B1	RM 371.32	117662.6	200-yr	2265.35	960.68	956.41	2	1.43	31.69	16.95	299.65	955.96	3.09	1.65	4.27	4.27
Yellowstone County	B1	RM 371.25	117560.3	200-yr	2265.35	960.6	955.99	1.85	1.43	19.7	13.76	377.88	930.55	2.88	2.01	4.61	4.61
Yellowstone County	B1	RM 371.21	117499	200-yr	2265.35	960.58	955.72	1.72	1.43	17.28	13.15	357.71	686.01	3.03	2.31	4.86	4.86
Yellowstone County	B1	RM 371.12	117353.9	200-yr	2265.35	960.42	955.54	1.93	1.89	21.83	20.23	391.91	860.97	2.99	2.77	4.88	4.88
Yellowstone County	B1	RM 371.04	117225.1	200-yr	2265.35	959.88	954.84	3.12	3.12	56.03	56.03	235.49	550.07	3.09	3.09	5.04	5.04
Yellowstone County		RM 335.51	117205	200-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	200-yr	2265.35	959.77	954.9	3.08	3.08	56.37	56.37	231.45	441.61	3.18	3.18	4.87	4.87
Yellowstone County	B1	RM 370.94	117054.9	200-yr	2265.35	959.6	955.57	2.84	2.65	53.89	39.99	242.96	1014.3	3.24	2.41	4.03	4.03
Yellowstone County	B1	RM 370.85	116910.9	200-yr	2265.35	959.24	954.47	3.13	2.68	63.67	36.1	219.84	1051.95	3.2	1.81	4.77	4.77
Yellowstone County	B1	RM 370.77	116793.6	200-yr	2265.35	959.02	953.84	3.17	2.44	52.56	28.11	224.11	1259.55	3.02	1.61	5.18	5.18
Yellowstone County	B1	RM 370.72	116711.6	200-yr	2265.35	958.76	953.13	3.54	2.41	74.32	31.33	165.01	1100.64	3.42	1.44	5.63	5.63

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

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Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	200-yr	2265.35	958.82	953.05	2.99	2.04	45.31	24.19	201.49	1153.02	3.06	1.63	5.77	5.77
Yellowstone County	B1	RM 370.63	116558.9	200-yr	2265.35	958.64	953.42	2.87	1.99	66.78	26.79	183.19	1176.79	3.66	1.47	5.22	5.22
Yellowstone County	B1	RM 370.56	116440.6	200-yr	2265.35	958.54	953.34	2.63	1.63	31.96	12.42	178.41	1201.13	4.07	1.58	5.2	5.2
Yellowstone County	B1	RM 370.44	116241.1	200-yr	2265.35	958.19	952.03	3.23	1.81	64.07	20.37	134.38	919.25	4.32	1.36	6.16	6.16
Yellowstone County	B1	RM 370.34	116071.6	200-yr	2265.35	958.02	949.79	3.07	1.66	59.73	15.5	118.14	1096.1	4.87	1.25	8.23	8.23
Yellowstone County	B1	RM 370.24	115908.6	200-yr	2265.35	957.87	950.22	2.89	1.62	48.46	13.38	117.55	1015.72	5.05	1.38	7.65	7.65
Yellowstone County	B1	RM 370.11	115705	200-yr	2265.35	957.57	952.12	2.99	1.94	57.26	22.13	161	781.66	3.87	1.49	5.45	5.45
Yellowstone County	B1	RM 370.00	115535.2	200-yr	2265.35	957.28	952.2	2.61	2.19	76.52	44.44	262.41	686.16	2.6	1.51	5.08	5.08
Yellowstone County	B1	RM 369.89	115356.1	200-yr	2265.35	956.93	953.15	2.4	2.13	30.64	22.6	419.05	688.21	2.09	1.54	3.78	3.78
Yellowstone County	B1	RM 369.77	115164.3	200-yr	2265.35	956.66	952.34	2.25	2.14	28.47	24.28	497.76	821.19	2	1.71	4.32	4.32
Yellowstone County	B1	RM 369.64	114965.6	200-yr	2265.35	956.39	951.9	2.11	1.92	31.04	25.22	503.19	814.23	2	1.63	4.49	4.49
Yellowstone County	B1	RM 369.54	114789.5	200-yr	2265.35	956.2	952.38	1.91	1.61	21.39	16.39	506.38	998.87	2.11	1.62	3.82	3.82
Yellowstone County	B1	RM 369.45	114650.1	200-yr	2265.35	956.09	951	1.8	1.59	20.81	16.46	466.31	755.82	2.39	1.88	5.09	5.09
Yellowstone County	B1	RM 369.32	114431.1	200-yr	2265.35	955.87	951.1	1.85	1.57	29.96	20.8	377.04	704.69	2.95	2.05	4.77	4.77
Yellowstone County	B1	RM 369.17	114210.5	200-yr	2265.35	955.53	949.85	2.29	2.14	45.72	24.74	199.28	587.85	3.34	1.8	5.68	5.68
Yellowstone County	B1	RM 369.06	114022.4	200-yr	2265.35	954.89	949.89	3.5	2.7	74.82	40.85	152.97	442.63	3.49	1.9	5	5
Yellowstone County	B1	RM 368.96	113871.2	200-yr	2265.35	954.73	949.68	2.95	2.22	54.53	29.74	170.82	532.17	3.52	1.92	5.05	5.05
Yellowstone County	B1	RM 368.88	113745.9	200-yr	2265.35	954.58	948.77	2.67	2.02	42.39	25.34	215.54	676.54	3.11	1.85	5.81	5.81
Yellowstone County	B1	RM 368.82	113641	200-yr	2265.35	954.44	948.47	2.41	1.96	43.97	31.81	297.81	629	2.55	1.84	5.97	5.97
Yellowstone County	B1	RM 368.72	113477.3	200-yr	2265.35	954.3	948.45	1.9	1.59	29.52	22.89	350.46	670.27	2.75	2.13	5.85	5.85
Yellowstone County	B1	RM 368.63	113328.9	200-yr	2265.35	954.18	947.82	1.77	1.45	25.8	18.06	315.25	753.44	2.96	2.07	6.36	6.36
Yellowstone County	B1	RM 368.54	113195.6	200-yr	2265.35	954.02	947.51	2.01	1.46	25.14	13.31	271.4	852.59	3.44	1.82	6.51	6.51
Yellowstone County	B1	RM 368.44	113035.8	200-yr	2265.35	953.85	947.4	2.1	1.62	47.33	26.97	259.39	739.78	3.33	1.9	6.45	6.45
Yellowstone County	B1	RM 368.35	112878.7	200-yr	2265.35	953.78	946.64	1.7	1.5	15.76	11.55	283.07	451.64	4.57	3.35	7.14	7.14
Yellowstone County	B1	RM 368.26	112737.6	200-yr	2265.35	953.47	946.23	2.55	2.54	91.36	90.16	227.9	230.76	3.9	3.86	7.24	7.24
Yellowstone County	B1	RM 368.18	112604.7	200-yr	2265.35	953.04	947.11	3.15	3.15	57.37	56.83	163.48	1444.51	4.39	4.36	5.93	5.93
Yellowstone County	B2	RM 368.09	112456.7	200-yr	2265.35	952.71	947.7	3.36	3.36	88.22	87.83	165.15	165.88	4.08	4.06	5.01	5.01
Yellowstone County	B2	RM 368.00	112314.4	200-yr	2265.35	952.68	947.56	2.62	2.61	36.79	36.03	198.48	2271.88	4.35	4.28	5.12	5.12
Yellowstone County	B2	RM 367.86	112104.7	200-yr	2265.35	952.22	946.1	3.17	3.17	86.04	86.04	192.11	192.11	3.73	3.73	6.12	6.12
Yellowstone County	B2	RM 367.79	111989.2	200-yr	2265.35	951.89	945.04	3.31	3.31	97.32	96.66	170.32	171.1	4.02	4	6.85	6.85
Yellowstone County	B2	RM 367.72	111876.5	200-yr	2265.35	951.73	945.45	3.22	2.88	54.36	35.94	149.5	456.02	4.47	2.96	6.28	6.28
Yellowstone County	B2	RM 367.64	111739.2	200-yr	2265.35	951.5	945.68	3.36	2.76	75.04	34.99	140.83	455.7	4.34	2.01	5.82	5.82
Yellowstone County	B2	RM 367.50	111519.9	200-yr	2265.35	951.1	945.21	3.4	2.57	81.4	34.84	137.57	484.25	4.29	1.82	5.89	5.89
Yellowstone County	B2	RM 367.40	111357.1	200-yr	2265.35	950.85	944.36	3.44	2.46	64.85	24.77	113.68	507.51	4.82	1.82	6.49	6.49
Yellowstone County	B2	RM 367.31	111214.8	200-yr	2265.35	950.68	945.36	3.25	2.35	52.09	23.8	144.65	504	4.2	1.91	5.32	5.32
Yellowstone County	B2	RM 367.19	110992.7	200-yr	2265.35	950.56	945.91	2.53	2.02	34.81	21.95	245.23	561.63	3.3	2.07	4.65	4.65
Yellowstone County	B2	RM 367.11	110813.5	200-yr	2265.35	950.41	945.17	2.31	1.81	30.02	20.28	295.2	615.25	3.02	2.03	5.24	5.24
Yellowstone County	B2	RM 367.03	110669.4	200-yr	2265.35	950.36	945.89	1.81	1.58	17.57	15.54	418.55	570.83	2.83	2.51	4.47	4.47
Yellowstone County	B2	RM 366.95	110543	200-yr	2265.35	950.33	945.34	1.32	1.25	20	19.04	560.16	650.02	2.92	2.78	4.99	4.99
Yellowstone County	B2	RM 366.84	110376	200-yr	2265.35	950.26	944.61	1.06	0.75	12.94	5.51	603.9	2290.54	3.12	1.32	5.65	5.65
Yellowstone County	B2	RM 366.78	110300.8	200-yr	2265.35	950.2	943.84	1.22	1.09	17.64	13.97	562.74	994.87	3.14	2.48	6.36	6.36
Yellowstone County	B2	RM 366.73	110074.8	200-yr	2265.35	949.98	943.42	1.59	1.58	27.25	25.82	436.64	767.47	3.25	3.07	6.56	6.56
Yellowstone County	B2	RM 366.68	109931.6	200-yr	2265.35	949.75	942.77	1.99	1.92	44.09	38.12	318.76	384.59	3.56	3.07	6.98	6.98
Yellowstone County	B2	RM 366.53	109747.6	200-yr	2265.35	949.24	940.86	3.05	3.05	43.86	43.86	167.97	167.97	4.42	4.42	8.38	8.38
Yellowstone County	B2	RM 366.38	109510.8	200-yr	2265.35	948.65	941.55	3.75	3.75	96.08	95.64	116.23	116.63	5.2	5.18	7.1	7.1
Yellowstone County	B2	RM 366.27	109345.5	200-yr	2265.35	948.71	942.72	2.38	2.38	43.67	43.56	226.64	491.85	4.2	4.19	5.99	5.99
Yellowstone County	B2	RM 366.15	109158.9	200-yr	2265.35	948.46	941.59	2.31	2.31	66.85	66.85	293.96	510	3.34	3.34	6.87	6.87
Yellowstone County	B2	RM 366.04	108972.6	200-yr	2265.35	948.17	941.41	2.44	2.42	26.32	23.39	314.13	357.79	2.95	2.62	6.76	6.76
Yellowstone County	B2	RM 365.94	108818.8	200-yr	2265.35	948.09	940.93	2.16	2.16	21.61	21.61	364.23	364.23	2.88	2.88	7.16	7.16
Yellowstone County	B2	RM 365.83	108647.5	200-yr	2265.35	947.88	939.93	2.14	2.08	71.47	66.99	332.29	371.2	3.14	2.94	7.95	7.95
Yellowstone County	B2	RM 365.75	108521.3	200-yr	2265.35	947.64	941.33	2.11	2.06	60.88	51.92	265.03	379.7	3.41	2.9	6.31	6.31
Yellowstone County	B2	RM 365.71	108446.5	200-yr	2265.35	947.46	941.83	2.34	2.04	59.81	43.54	235.15	397.02	3.84	2.79	5.63	5.63
Yellowstone County	B2	RM 365.64	108343.5	200-yr	2265.35	947.33	942.19	2.13	1.83	49.2	36.98	306.44	500.71	3.29	2.47	5.14	5.14
Yellowstone County	B2	RM 365.57	108220.5	200-yr	2265.35	947.11	942.08	2.32	1.97	49.69	32.99	252.77	481.26	3.62	2.39	5.03	5.03
Yellowstone County	B2	RM 365.51	108118.9	200-yr	2265.35	946.98	941.87	2.22	1.87	52.38	34.27	265.35	517.54	3.58	2.34	5.11	5.11
Yellowstone County	B2	RM 365.46	108042.9	200-yr	2265.35	946.94	941.73	1.87	1.65	28.05	19.39	317.69	545.66	3.64	2.52	5.21	5.21
Yellowstone County	B2	RM 365.41	107956.5	200-yr	2265.35	946.89	941.46	1.78	1.64	25.26	18.7	326.34	492.71	3.79	2.8	5.43	5.43
Yellowstone County	B2	RM 365.37	107905.7	200-yr	2265.35	946.84	940.74	1.84	1.78	18.34	14.73	309.36	403.76	3.93	3.15	6.1	6.1
Yellowstone County	B2	RM 365.31	107792.4	200-yr	2265.35	946.74	939.27	2.09	1.94	22.18	16.69	257.08	377.13	4.11	3.09	7.47	7.47
Yellowstone County	B2	RM 365.27	107727.9	200-yr	2265.35	946.67	939.34	2.2	2.04	27.38	20.64	251.44	370.04	3.98	2.99	7.33	7.33
Yellowstone County	B2	RM 365.23	107674.2	200-yr	2265.35	946.59	939.52	2.38	2.21	27.01	19.65	230.94	478.67	4.02	2.92	7.07	7.07

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	200-yr	2265.35	946.56	939.93	2.22	2.14	30.82	24.81	240.86	316.07	4.18	3.36	6.63	6.63
Yellowstone County	B2	RM 365.15	107534.7	200-yr	2265.35	946.5	939.68	2.28	2.12	26.59	18.23	214.56	345.03	4.54	3.1	6.82	6.82
Yellowstone County	B2	RM 365.10	107466	200-yr	2265.35	946.41	938.61	2.46	2.2	30.39	16.82	186.92	388.67	4.8	2.65	7.8	7.8
Yellowstone County	B2	RM 365.06	107396.2	200-yr	2265.35	946.38	939.07	2.43	2.13	33.49	20.1	170.56	341.86	5.19	3.1	7.31	7.31
Yellowstone County	B2	RM 365.01	107325.8	200-yr	2265.35	946.35	939.22	2.24	2.05	46.47	31.33	175.43	299.06	5.5	3.7	7.13	7.13
Yellowstone County	B2	RM 364.99	107287.5	200-yr	2265.35	946.3	939.27	2.32	2.14	52.69	38.34	170.9	269.87	5.39	3.92	7.03	7.03
Yellowstone County	B2	RM 364.90	107128.3	200-yr	2265.35	945.99	937.97	2.81	2.55	35.24	28.69	150.29	207.51	5.26	4.29	8.02	8.02
Yellowstone County		RM 331.55	107100	200-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	200-yr	2265.35	945.87	938.58	2.79	2.58	34.64	28.74	153.19	212.04	5.24	4.36	7.29	7.29
Yellowstone County	B2	RM 364.81	106996.1	200-yr	2265.35	945.91	938.93	2.16	2.16	21.78	21.47	257.78	261.05	4.06	4.02	6.98	6.98
Yellowstone County	B2	RM 364.74	106893.3	200-yr	2265.35	945.72	938.94	2.62	2.49	43.61	39.97	164.71	265.41	5.18	4.8	6.78	6.78
Yellowstone County	B2	RM 364.64	106739.2	200-yr	2265.35	945.32	939.09	3.3	3.17	48.25	43.83	136.52	759.75	5.33	4.87	6.23	6.23
Yellowstone County		RM 331.32	106722	200-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	200-yr	2265.35	945.12	939.16	3.35	3.25	58.15	54.73	143.09	182.01	5.09	4.82	5.96	5.96
Yellowstone County	B2	RM 364.61	106686.8	200-yr	2265.35	945.15	939.21	3	3	41.26	40.96	158.49	536.76	4.76	4.73	5.94	5.94
Yellowstone County	B2	RM 364.60	106666.6	200-yr	2265.35	945.05	939.26	3.22	3.22	48.03	48.03	152.44	152.44	4.62	4.62	5.79	5.79
Yellowstone County		RM 331.14	106644	200-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	200-yr	2265.35	944.94	939.21	3.21	3.21	47.29	47.29	156.37	156.37	4.8	4.8	5.73	5.73
Yellowstone County	B2	RM 364.53	106558.4	200-yr	2265.35	944.91	939.11	2.98	2.92	40.41	33.56	166.71	204.93	4.56	3.79	5.8	5.8
Yellowstone County	B2	RM 364.49	106490.3	200-yr	2265.35	944.85	939.24	2.98	2.88	46.26	38.47	162.03	202.21	4.68	3.89	5.61	5.61
Yellowstone County	B2	RM 364.43	106394	200-yr	2265.35	944.75	939.13	2.97	2.78	47.83	32.53	160.5	253.83	4.73	3.21	5.62	5.62
Yellowstone County	B2	RM 364.37	106296.4	200-yr	2265.35	944.67	938.98	2.95	2.59	40.16	25.95	149.77	271.36	5.02	3.22	5.69	5.69
Yellowstone County	B2	RM 364.32	106215.1	200-yr	2265.35	944.6	938.52	2.9	2.55	65.19	43.28	154.59	276.28	4.88	3.22	6.08	6.08
Yellowstone County	B2	RM 364.29	106172.9	200-yr	2265.35	944.66	938.13	2.26	2.02	64.38	47.13	191	872.92	5.01	3.65	6.53	6.53
Yellowstone County	B2	RM 364.26	106126.6	200-yr	2265.35	944.38	937.7	3.02	2.57	76.8	51.48	147.86	278.26	4.74	3.17	6.68	6.68
Yellowstone County	B2	RM 364.22	106055.2	200-yr	2265.35	944.1	938.15	3.37	3.09	94.99	50.89	137.79	285.26	4.82	2.57	5.95	5.95
Yellowstone County	B2	RM 364.14	105927.3	200-yr	2265.35	943.64	938.12	3.84	3.23	115.91	70.78	126.2	258.28	4.47	2.71	5.52	5.52
Yellowstone County	B2	RM 364.06	105809.9	200-yr	2265.35	943.52	938.22	3.26	2.67	76.06	43.43	156.94	353.19	4.22	2.41	5.3	5.3
Yellowstone County	B2	RM 363.96	105648.3	200-yr	2265.35	943.41	938.28	2.53	2.39	45.31	40.29	248.38	387.72	3.54	3.14	5.13	5.13
Yellowstone County	B2	RM 363.85	105472.4	200-yr	2265.35	943.06	936.25	3.12	2.6	46.23	29.05	150.47	324.85	4.3	2.68	6.81	6.81
Yellowstone County	B2	RM 363.76	105316.8	200-yr	2265.35	942.91	937.03	2.96	2.54	59.6	35.34	148.3	342.49	4.4	2.61	5.88	5.88
Yellowstone County	B2	RM 363.63	105118.1	200-yr	2265.35	942.64	937.93	2.42	2.42	58.89	58.89	340.04	340.04	2.75	2.75	4.71	4.71
Yellowstone County	B2	RM 363.52	104943.9	200-yr	2265.35	942.3	937.54	2.24	2.1	54.56	45.67	372.43	485.94	2.65	2.22	4.76	4.76
Yellowstone County	B2	RM 363.46	104841.5	200-yr	2265.35	942.15	937.16	2.09	1.82	40.27	28.67	330.96	825.93	3.12	2.22	4.99	4.99
Yellowstone County	B2	RM 363.33	104622.9	200-yr	2265.35	941.85	936.36	2.03	1.58	50.61	31.59	302.82	877.5	2.95	1.84	5.49	5.49
Yellowstone County	B2	RM 363.20	104414.5	200-yr	2265.35	941.5	936.48	2.22	1.5	37.07	19.59	282.91	1059	3.02	1.59	5.02	5.02
Yellowstone County	B2	RM 363.10	104256.4	200-yr	2265.35	941.24	936.25	2.39	1.65	43.79	22.33	275.99	933.93	2.89	1.47	4.99	4.99
Yellowstone County	B2	RM 363.03	104144.8	200-yr	2265.35	941.09	936.22	2.32	1.54	35.16	17.61	285.45	1140.58	2.93	1.46	4.87	4.87
Yellowstone County	B2	RM 362.86	103869.6	200-yr	2265.35	940.97	934.32	1.65	1.2	15.59	9.88	405.06	1007.06	2.95	1.87	6.65	6.65
Yellowstone County	B2	RM 362.74	103671.4	200-yr	2265.35	940.77	934.52	2.03	1.47	23.94	13.75	371.33	1029.41	2.61	1.5	6.25	6.25
Yellowstone County	B2	RM 362.63	103493.2	200-yr	2265.35	940.59	934.5	1.88	1.41	37.34	21.77	388.17	1066.47	2.6	1.51	6.09	6.09
Yellowstone County	B2	RM 362.52	103330.7	200-yr	2265.35	940.39	934.5	1.7	1.36	33.03	21.23	435.44	971.36	2.68	1.72	5.89	5.89
Yellowstone County	B2	RM 362.43	103185.5	200-yr	2265.35	940.25	934.1	1.71	1.53	16.62	14.7	438.89	806.27	2.88	2.54	6.15	6.15
Yellowstone County	B2	RM 362.36	103070.8	200-yr	2265.35	940.15	932.98	1.85	1.77	17.56	16.61	405.26	510.49	2.98	2.82	7.17	7.17
Yellowstone County	B2	RM 362.27	102929.3	200-yr	2265.35	939.88	932.93	2.56	2.56	30.75	30.75	198.96	198.96	4.46	4.46	6.95	6.95
Yellowstone County	B2	RM 362.20	102813.3	200-yr	2265.35	939.04	933.37	4.38	4.38	96.82	96.82	112.5	112.5	4.6	4.6	5.67	5.67
Yellowstone County	B2	RM 362.13	102693.1	200-yr	2265.35	938.78	933.47	4.34	4.34	90.78	90.63	125.98	169.65	4.14	4.14	5.31	5.31
Yellowstone County	B3	RM 362.05	102570.9	200-yr	2265.35	938.77	933.85	3.51	3.44	61.63	53.77	183.81	216.11	3.5	3.05	4.92	4.92
Yellowstone County	B3	RM 362.00	102488.8	200-yr	2265.35	938.79	934.11	2.8	2.8	45.4	44.7	244.3	317.64	3.31	3.26	4.68	4.68
Yellowstone County	B3	RM 361.93	102368.8	200-yr	2265.35	938.72	934.31	2.4	2.4	31.35	31.18	367.9	371.03	2.92	2.91	4.41	4.41
Yellowstone County	B3	RM 361.86	102261.1	200-yr	2265.35	938.54	934.36	2.48	2.46	53.39	52.12	364.79	449.4	2.49	2.43	4.18	4.18
Yellowstone County	B3	RM 361.78	102138.9	200-yr	2265.35	938.45	933.72	2	1.96	23.24	22.06	408.55	525.23	2.76	2.62	4.73	4.73
Yellowstone County	B3	RM 361.68	101970.2	200-yr	2265.35	938.35	933.64	1.8	1.75	20.45	19.55	426.61	564.78	2.92	2.79	4.71	4.71
Yellowstone County	B3	RM 361.65	101918.4	200-yr	2265.35	938.33	933.71	1.69	1.65	19.05	17.9	403.7	631.29	3.3	3.1	4.62	4.62
Yellowstone County	B3	RM 361.61	101855.6	200-yr	2265.35	938.21	932.7	2.04	2.02	24.03	23.33	335.34	635.78	3.3	3.21	5.51	5.51
Yellowstone County	B3	RM 361.56	101767.4	200-yr	2265.35	938.1	930.29	2.25	2.21	26.56	25.28	267.33	638.28	3.76	3.59	7.81	7.81
Yellowstone County	B3	RM 361.48	101644.6	200-yr	2265.35	937.83	929.97	2.81	2.46	56.13	35.83	181.61	755.7	4.32	2.74	7.86	7.86
Yellowstone County	B3	RM 361.42	101546.2	200-yr	2265.35	937.61	932.36	3.12	2.6	46.39	30.28	186.79	1419.91	3.73	2.44	5.25	5.25
Yellowstone County	B3	RM 361.37	101468.9	200-yr	2265.35	937.59	932.21	2.88	2.27	39.87	24.01	171.32	1681.42	4.26	2.56	5.38	5.38
Yellowstone County	B3	RM 361.33	101409.4	200-yr	2265.35	937.47	932.02	3.09	2.33	47.92	26.8	163.06	1515.46	4.04	2.25	5.45	5.45
Yellowstone County	B3	RM 361.29	101346	200-yr	2265.35	937.25	930.51	3.49	2.63	60.53	30.66	140.23	1014.1	4.13	2.09	6.74	6.74

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	200-yr	2265.35	936.52	928.42	4.8	3.88	116.13	51.35	122.47	1210.97	3.62	1.59	8.1	8.1
Yellowstone County	B3	RM 361.21	101251.*	200-yr	2265.35	936.71	927.55	3.67	2.87	127.14	49.25	119.16	1572.48	4.66	1.79	9.16	9.16
Yellowstone County		RM 361.21	101217.5	200-yr	2265.35	936.74	926.68	3.27	2.48	51.95	21.48	114.36	1552.47	5.55	2.27	10.06	10.06
Yellowstone County	B3	RM 361.18	101167.2	200-yr	2265.35	936.74	928.03	3.03	2.35	55.34	19.69	137.56	1671.92	4.86	1.72	8.71	8.71
Yellowstone County	B3	RM 361.16	101134.2	200-yr	2265.35	936.78	928.92	2.54	2.15	42.84	21.45	210.71	1697.23	3.88	1.94	7.86	7.86
Yellowstone County	B3	RM 361.09	101028.7	200-yr	2265.35	936.67	931.28	2.39	2.35	31.51	28.07	360.27	1727.86	2.63	2.34	5.39	5.39
Yellowstone County	B3	RM 361.01	100891.3	200-yr	2265.35	936.48	931.55	2.43	2.42	34.7	33.3	369.41	1839.42	2.52	2.42	4.93	4.93
Yellowstone County	B3	RM 360.92	100756	200-yr	2265.35	936.34	931.05	1.98	1.96	41.97	40.16	460.67	2197.09	2.48	2.37	5.29	5.29
Yellowstone County	B3	RM 360.81	100570.1	200-yr	2265.35	936.03	929.52	1.93	1.89	40.4	37.88	479.5	1891.74	2.44	2.28	6.51	6.51
Yellowstone County	B3	RM 360.69	100383.5	200-yr	2265.35	935.81	930.6	1.89	1.68	28.62	22.41	340.51	2130.87	3.27	2.56	5.92	5.92
Yellowstone County	B3	RM 360.59	100227.2	200-yr	2265.35	935.62	930.53	2.24	1.69	28.43	18.3	269.12	2200.25	3.22	2.07	5.41	5.41
Yellowstone County	B3	RM 360.50	100081	200-yr	2265.35	935.31	930.55	2.74	2.26	46.29	31.16	214.5	2159.23	3.6	2.41	4.76	4.76
Yellowstone County	B3	RM 360.42	99970.7	200-yr	2265.35	935.09	929.97	2.98	2.38	50.61	33.52	194.88	2173.55	3.59	2.38	5.12	5.12
Yellowstone County	B3	RM 360.36	99862.66	200-yr	2265.35	935.02	929.68	2.62	2.18	36.85	27.6	242.5	2086.73	3.34	2.5	5.34	5.34
Yellowstone County	B3	RM 360.27	99717.18	200-yr	2265.35	934.71	929.52	3.16	2.45	52.74	35.65	149.73	1897.16	3.81	2.58	5.19	5.19
Yellowstone County	B3	RM 360.18	99578.06	200-yr	2265.35	934.18	929.32	3.82	2.97	90.83	46.27	135.43	1629.5	4.14	2.08	4.86	4.86
Yellowstone County	B3	RM 360.11	99458.59	200-yr	2265.35	934.31	929.38	2.64	2	35.4	23.67	148.51	1689.81	3.83	2.57	4.93	4.93
Yellowstone County	B3	RM 360.03	99328	200-yr	2282.34	934.23	929.58	2.36	1.8	39.39	24.94	168.97	1831.86	3.86	2.44	4.65	4.65
Yellowstone County	B3	RM 359.96	99226.54	200-yr	2282.34	934.1	929.2	2.54	1.74	38.2	21.22	163.81	1630.07	3.93	2.18	4.9	4.9
Yellowstone County	B3	RM 359.88	99098.18	200-yr	2282.34	933.89	927.78	2.88	1.95	43.41	22.16	144	1526.4	4.25	2.17	6.11	6.11
Yellowstone County	B3	RM 359.78	98940.52	200-yr	2282.34	933.76	928.1	2.75	1.82	50.55	24.9	150.37	1482.64	4.33	2.12	5.66	5.66
Yellowstone County	B3	RM 359.70	98813.18	200-yr	2282.34	932.73	928.32	4.71	3.55	152.29	48.88	124.75	1317.84	3.49	1.11	4.41	4.41
Yellowstone County	B3	RM 359.61	98663.44	200-yr	2282.34	932.86	928.8	2.42	1.94	39.23	21.81	311.63	1429.75	2.75	1.53	4.06	4.06
Yellowstone County	B3	RM 359.50	98492.66	200-yr	2282.34	932.61	928.22	2.48	1.98	34.89	18.74	322.18	1501.74	2.56	1.37	4.39	4.39
Yellowstone County	B3	RM 359.38	98291.15	200-yr	2282.34	932.3	927.09	2.25	1.96	55.37	35.14	380.94	1430.81	2.19	1.38	5.21	5.21
Yellowstone County	B3	RM 359.26	98107.42	200-yr	2282.34	931.94	927.71	2.27	1.78	32.89	19.5	416.86	1387.38	2.11	1.25	4.23	4.23
Yellowstone County	B3	RM 359.18	97966.53	200-yr	2282.34	931.8	927.28	2.16	1.5	26.99	13.27	299.78	1312.32	2.72	1.34	4.52	4.52
Yellowstone County	B3	RM 359.10	97841.82	200-yr	2282.34	931.64	926.69	2.16	1.64	27.92	18.25	374.84	1232.07	2.38	1.56	4.95	4.95
Yellowstone County	B3	RM 359.01	97692.75	200-yr	2282.34	931.48	925.91	2.06	1.45	36.39	24.94	329.94	1112.14	2.55	1.74	5.57	5.57
Yellowstone County	B3	RM 358.90	97524.59	200-yr	2282.34	930.98	926.77	2.91	1.88	57.17	28.25	227.3	876.43	2.81	1.39	4.21	4.21
Yellowstone County	B3	RM 358.81	97374.99	200-yr	2282.34	930.49	926.37	3.34	2.21	57.98	25.18	225.13	873.24	2.72	1.18	4.12	4.12
Yellowstone County	B3	RM 358.74	97267.71	200-yr	2282.34	930.35	925.53	3.11	1.74	74.76	33.6	167.2	1483.13	2.98	1.34	4.82	4.82
Yellowstone County	B3	RM 358.67	97155.8	200-yr	2282.34	930.27	925.59	2.32	1.59	30.28	16.35	278.31	1494.4	2.42	1.31	4.68	4.68
Yellowstone County	B3	RM 358.61	97062.24	200-yr	2282.34	930.2	925.74	1.81	1.41	25.78	15.19	389.39	1584.72	2.34	1.38	4.46	4.46
Yellowstone County	B3	RM 358.56	96985.92	200-yr	2282.34	930.14	926.2	1.63	1.31	19.25	12.18	457.52	1544.98	2.23	1.41	5.55	5.55
Yellowstone County	B3	RM 358.50	96888.4	200-yr	2282.34	930.07	925.64	1.49	1.21	14.18	10.37	550.02	1480.35	2.08	1.52	4.43	4.43
Yellowstone County	B3	RM 358.43	96788.43	200-yr	2282.34	930.04	925.27	1.1	0.98	11.6	9.52	650.58	1446.72	2.14	1.76	4.77	4.77
Yellowstone County	B3	RM 358.30	96638.82	200-yr	2282.34	929.99	924.7	1.03	0.88	8.59	6.62	686.1	1316.14	2.71	2.08	5.29	5.29
Yellowstone County	B3	RM 358.24	96561.93	200-yr	2282.34	929.97	923.57	1.1	0.94	9.05	7.4	644.55	1287.95	2.56	2.09	6.4	6.4
Yellowstone County	B3	RM 358.20	96500.79	200-yr	2282.34	929.89	922.99	1.41	1.26	13.58	8.96	618.16	1174.54	2.41	1.59	6.9	6.9
Yellowstone County	B3	RM 358.14	96404.93	200-yr	2282.34	929.83	922.57	1.46	1.22	12.83	8.49	543.4	1326	2.58	1.7	7.26	7.26
Yellowstone County	B3	RM 358.12	96368.05	200-yr	2282.34	929.81	922.78	1.56	1.14	14.6	7.98	349.09	1317.88	3.17	1.73	7.03	7.03
Yellowstone County	B3	RM 358.04	96244.75	200-yr	2282.34	929.68	923.22	2.16	1.33	37.65	13.21	162.23	1230.51	4.01	1.4	6.46	6.46
Yellowstone County	B3	RM 358.00	96168.44	200-yr	2282.34	929.59	923.39	2.54	1.3	41.71	14.24	101.88	1204.15	4.32	1.45	6.2	6.2
Yellowstone County	B3	RM 357.93	96065.49	200-yr	2282.34	929.44	923.1	2.8	1.41	35.87	12.34	106.83	1153.85	4.11	1.4	6.34	6.34
Yellowstone County	B3	RM 357.88	95975.44	200-yr	2282.34	929.47	923.91	1.96	1.18	22.82	9.62	153.56	1171.13	3.92	1.64	5.56	5.56
Yellowstone County	B3	RM 357.82	95884.99	200-yr	2282.34	929.38	924.01	2.03	1.41	24.35	10.04	193.1	1105.42	3.91	1.61	5.37	5.37
Yellowstone County	B3	RM 357.78	95821.69	200-yr	2282.34	929.34	924.08	1.8	1.52	24.63	11.78	257.61	925.64	3.39	1.62	5.26	5.26
Yellowstone County	B3	RM 357.69	95683.91	200-yr	2282.34	929.17	923.81	2.07	1.68	21.9	11.32	304.72	806.78	3.27	1.68	5.36	5.36
Yellowstone County	B4	RM 357.62	95571.15	200-yr	2282.34	928.97	921.84	2.48	1.99	37.2	15.89	253.84	829.61	3.26	1.38	7.13	7.13
Yellowstone County	B4	RM 357.56	95469.4	200-yr	2282.34	928.91	918.46	2.26	1.84	32.16	14.65	225.69	1203.41	4.11	1.86	10.45	10.45
Yellowstone County	B4	RM 357.48	95351.48	200-yr	2282.34	928.53	922.69	3.08	2.61	51.7	28.12	199.17	1122.62	3.56	1.92	5.84	5.84
Yellowstone County	B4	RM 357.44	95275.91	200-yr	2282.34	928.33	922.22	3.26	2.94	61.27	43.01	196.86	318.9	3.48	2.44	6.11	6.11
Yellowstone County	B4	RM 357.34	95127.12	200-yr	2282.34	928.07	923.1	3.28	2.89	59.61	38.98	182.53	325.87	3.72	2.43	4.97	4.97
Yellowstone County	B4	RM 357.23	94939.75	200-yr	2282.34	927.81	920.81	3.22	2.53	61.81	24.55	143.41	1087.37	4.51	1.77	7	7
Yellowstone County	B4	RM 357.13	94789.23	200-yr	2282.34	927.65	921.26	3.2	2.48	51.46	25.28	139.31	610.45	4.03	1.96	6.39	6.39
Yellowstone County	B4	RM 357.01	94595.53	200-yr	2282.34	927.51	921.72	2.67	1.91	34.64	17.74	185.55	578.59	4.04	2.07	5.79	5.79
Yellowstone County	B4	RM 356.90	94412.13	200-yr	2282.34	927.33	921.02	2.65	1.98	35.81	20.56	234.48	606.48	3.31	1.9	6.31	6.31
Yellowstone County	B4	RM 356.81	94272.48	200-yr	2282.34	927.2	919.95	2.53	1.81	35.82	19.63	233.74	820.64	3.19	1.74	7.25	7.25
Yellowstone County	B4	RM 356.73	94148.77	200-yr	2282.34	927.11	921.15	2.21	1.68	27.36	15.74	299.9	937.38	2.82	1.62	5.96	5.96
Yellowstone County	B4	RM 356.66	94030.68	200-yr	2282.34	927.02	921.75	2.11	1.53	23.76	12.4	300.18	1008.03	3	1.56	5.27	5.27

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	200-yr	2282.34	926.94	921.88	1.99	1.36	25.62	11.67	252.57	1069.05	3.54	1.61	5.06	5.06
Yellowstone County	B4	RM 356.50	93782.14	200-yr	2282.34	926.8	921.75	2.36	1.45	36.98	13.91	153.48	1051.64	4.13	1.54	5.05	5.05
Yellowstone County	B4	RM 356.44	93670.16	200-yr	2282.34	926.62	921.33	2.72	1.62	35.72	12.92	135.34	1007.5	4.06	1.46	5.29	5.29
Yellowstone County	B4	RM 356.35	93525.27	200-yr	2282.34	926.47	919.71	2.78	1.68	53.13	18.12	115.89	930.25	4.5	1.51	6.76	6.76
Yellowstone County	B4	RM 356.26	93386.36	200-yr	2282.34	926.29	919.77	2.86	1.71	35.11	13.03	125.06	891.18	4.64	1.72	6.52	6.52
Yellowstone County	B4	RM 356.18	93264.31	200-yr	2282.34	926.23	919.95	2.56	1.71	39.14	15.78	128.53	713	4.67	1.87	6.28	6.28
Yellowstone County	B4	RM 356.11	93150.71	200-yr	2282.34	926.17	920.24	2.19	1.53	39.14	17.55	179.82	768.17	4.37	1.94	5.93	5.93
Yellowstone County	B4	RM 356.04	93034.25	200-yr	2282.34	925.97	920.36	2.48	1.76	54.4	23.11	173.68	764.15	4.01	1.69	5.61	5.61
Yellowstone County	B4	RM 355.97	92927.46	200-yr	2282.34	925.78	920.09	2.7	1.82	50.79	20.93	154.13	778.65	3.94	1.61	5.69	5.69
Yellowstone County	B4	RM 355.91	92825.82	200-yr	2282.34	925.74	919.82	2.34	1.48	26.14	12.58	153.74	937.74	4.2	2.01	5.92	5.92
Yellowstone County	B4	RM 355.82	92688.73	200-yr	2282.34	925.67	919.51	2.14	1.4	26.43	13.68	155.48	910.27	4.32	2.22	6.16	6.16
Yellowstone County	B4	RM 355.69	92483.67	200-yr	2282.34	924.67	919.96	4.53	3.11	107.81	60.73	108.06	812.08	3.49	1.96	4.71	4.71
Yellowstone County	B4	RM 355.68	92480	200-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	200-yr	2282.34	924.67	919.92	3.83	2.69	72.3	42.27	123	832.26	3.82	2.23	4.75	4.75
Yellowstone County	B4	RM 355.66	92419.94	200-yr	2282.34	924.77	919.8	3.04	2.36	44.7	26.15	139.95	860.21	3.91	2.3	4.96	4.96
Yellowstone County	B4	RM 355.60	92333.48	200-yr	2282.34	924.67	919.42	2.97	2.23	46.34	23.84	148.04	907.22	3.9	2.01	5.25	5.25
Yellowstone County	B4	RM 355.49	92159.95	200-yr	2282.34	924.58	918.52	2.25	1.8	47.22	25.06	141.27	1001.38	3.96	2.1	6.06	6.06
Yellowstone County	B4	RM 355.43	92061.2	200-yr	2282.34	924.47	918.67	2.23	1.75	45.02	22.95	134.53	961.93	4.3	2.19	5.8	5.8
Yellowstone County	B4	RM 355.41	92020.68	200-yr	2282.34	924.47	919.02	1.78	1.55	38.01	22.34	159.91	1211.17	3.93	2.31	5.45	5.45
Yellowstone County	B4	RM 355.38	91976.12	200-yr	2282.34	924.4	919.25	2.09	1.54	32.77	17.38	125.74	1199.84	4.39	2.32	5.15	5.15
Yellowstone County	B4	RM 355.35	91933.98	200-yr	2282.34	924.38	919.21	2.14	1.45	23.97	12.46	109.82	1168.38	4.67	2.41	5.17	5.17
Yellowstone County	B4	RM 355.32	91885.87	200-yr	2282.34	924.36	919.16	2.12	1.42	23.63	12.35	107.08	1139.15	4.62	2.4	5.2	5.2
Yellowstone County	B4	RM 355.29	91828.99	200-yr	2282.34	924.32	918.93	2.21	1.45	24.95	13.09	104.17	1123.97	4.64	2.41	5.79	5.79
Yellowstone County	B4	RM 355.23	91732.97	200-yr	2282.34	924.22	918.68	2.32	1.68	31.55	17.05	101.56	1168.46	4.8	2.57	5.78	5.78
Yellowstone County	B4	RM 355.14	91596.1	200-yr	2282.34	924.09	918.52	2.4	1.91	29.3	20.41	118.49	1281.76	4.7	3.25	5.57	5.57
Yellowstone County	B4	RM 354.94	91268.08	200-yr	2282.34	923.64	917.25	2.69	2.22	71.03	53.13	167.19	1459.26	4.55	3.41	6.39	6.39
Yellowstone County	B4	RM 354.86	91153.59	200-yr	2282.34	923.28	917.03	3.25	2.48	82.47	48.56	125.07	1587.69	5.07	2.98	6.25	6.25
Yellowstone County	B4	RM 354.80	91056.05	200-yr	2282.34	923.07	915.66	3.43	2.43	89.68	46.56	117.98	1665.58	4.9	2.52	7.41	7.41
Yellowstone County	B4	RM 354.70	90880.27	200-yr	2282.34	922.76	915.38	3.17	2.75	87.35	60.76	153.63	1731.23	4.02	2.8	7.38	7.38
Yellowstone County	B4	RM 354.61	90744.35	200-yr	2282.34	922.63	917.13	2.74	2.52	36.5	32.58	215.25	1766.49	3.48	3.13	5.5	5.5
Yellowstone County	B4	RM 354.53	90609.24	200-yr	2282.34	922.59	916.52	2.23	2.13	27.9	23.64	238.32	1504.65	4.02	3.42	6.07	6.07
Yellowstone County	B4	RM 354.45	90486.63	200-yr	2282.34	922.39	915.87	2.62	2.42	44.85	33.86	205.43	1469.57	3.81	2.87	6.52	6.52
Yellowstone County	B4	RM 354.39	90385.43	200-yr	2282.34	922.15	915.24	3.04	2.66	54.54	34.34	165.51	1634.85	3.93	2.46	6.91	6.91
Yellowstone County	B4	RM 354.33	90291.31	200-yr	2282.34	922.15	915.37	2.58	2.18	31.9	21.17	150.94	1517.64	4.19	2.77	6.78	6.78
Yellowstone County	B4	RM 354.23	90133.96	200-yr	2282.34	921.65	915.46	3.59	2.68	86.65	42.05	118.76	1735.2	4.52	2.18	6.19	6.19
Yellowstone County	B4	RM 354.13	89983.48	200-yr	2282.34	921.32	914.94	3.5	2.7	97.47	44.82	134.11	1778.09	4.49	2.06	6.38	6.38
Yellowstone County	B4	RM 354.00	89778.46	200-yr	2282.34	921.14	916.2	2.86	2.05	60.22	30.64	158.7	1820.1	3.89	1.97	4.94	4.94
Yellowstone County	B5	RM 353.90	89604.28	200-yr	2282.34	920.79	917.06	2.91	2.25	55.94	29.22	232.79	1835.63	3.09	1.61	3.89	3.89
Yellowstone County	B5	RM 353.80	89446.75	200-yr	2418.26	920.54	916.36	2.65	2.21	60.87	38.53	301.86	1866.51	2.79	1.77	4.18	4.18
Yellowstone County	B5	RM 353.70	89288.94	200-yr	2418.26	920.3	915.92	2.14	1.79	49.14	33.51	392	1866.88	2.59	1.76	4.38	4.38
Yellowstone County	B5	RM 353.65	89204.58	200-yr	2418.26	920.13	915.49	2.05	1.69	51.89	34.65	403.8	1760.41	2.54	1.68	4.64	4.64
Yellowstone County	B5	RM 353.56	89077.56	200-yr	2418.26	919.91	914.2	2	1.56	47.11	27.99	364.55	1576.97	2.74	1.62	5.71	5.71
Yellowstone County	B5	RM 353.50	88982.39	200-yr	2418.26	919.82	914.58	1.81	1.32	34.26	17.72	310.19	1454.09	3.37	1.73	5.24	5.24
Yellowstone County	B5	RM 353.41	88846.15	200-yr	2418.26	919.6	914.41	2.08	1.41	40.4	17.88	231.42	1365.9	3.31	1.45	5.19	5.19
Yellowstone County	B5	RM 353.32	88709.14	200-yr	2418.26	919.43	913.6	2.25	1.33	36.39	15.69	194.16	1199.4	3.53	1.51	5.83	5.83
Yellowstone County	B5	RM 353.25	88587.13	200-yr	2418.26	919.23	912.76	2.62	1.44	42.01	17.12	160.68	1140.06	3.62	1.47	6.47	6.47
Yellowstone County	B5	RM 353.15	88438.48	200-yr	2418.26	919.11	912.71	2.43	1.45	34.32	17.21	215.51	1161.12	2.86	1.43	6.4	6.4
Yellowstone County	B5	RM 353.08	88321.13	200-yr	2418.26	919.06	912.99	2.05	1.29	23.75	11.76	197.65	1139.37	3.31	1.64	6.07	6.07
Yellowstone County	B5	RM 353.01	88210.34	200-yr	2418.26	919.01	913.13	1.72	1.25	19.65	11.67	249.61	1013.95	3.23	1.92	5.88	5.88
Yellowstone County	B5	RM 352.94	88090.6	200-yr	2418.26	918.97	912.5	1.63	1.23	17.17	9.67	175.48	859.64	4.07	2.28	6.47	6.47
Yellowstone County	B5	RM 352.86	87957.76	200-yr	2418.26	918.88	913.38	1.96	1.48	27.13	14.38	122.52	696.84	4.46	2.35	5.5	5.5
Yellowstone County	B5	RM 352.79	87857.09	200-yr	2418.26	918.78	913.06	1.99	1.74	35.23	21.05	107.5	552.5	4.25	2.52	5.72	5.72
Yellowstone County	B5	RM 352.72	87748.15	200-yr	2418.26	918.6	911.97	2.65	2.06	51.37	28.33	92.09	432.63	4.99	2.72	6.63	6.63
Yellowstone County	B5	RM 352.68	87677.1	200-yr	2418.26	918.4	912.27	2.55	2.55	84.75	84.75	336.5	336.5	2.82	2.82	6.13	6.13
Yellowstone County	B5	RM 352.64	87605.18	200-yr	2418.26	917.82	911.68	3.37	3.37	123.02	122.94	230.55	234.75	3.11	3.11	6.14	6.14
Yellowstone County	B5	RM 352.63	87594	200-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	200-yr	2418.26	917.62	911.45	3.36	3.36	109.91	109.91	229.06	229.06	3.15	3.15	6.17	6.17
Yellowstone County	B5	RM 352.54	87461.4	200-yr	2418.26	917.47	912.57	2.69	2.41	44.35	31.61	267.69	627.17	3.18	2.26	4.9	4.9
Yellowstone County	B5	RM 352.47	87340.46	200-yr	2418.26	917.39	912.2	2.44	1.85	35.49	22.37	231.7	1182.88	2.93	1.84	5.19	5.19
Yellowstone County	B5	RM 352.39	87216.99	200-yr	2418.26	916.84	912.01	3.71	2.59	79.54	36.27	188.1	2208.41	2.41	1.1	5.65	5.65
Yellowstone County	B5	RM 352.31	87079.16	200-yr	2418.26	916.48	910.66	3.44	2.52	84.06	37.18	184.29	1657.65	2.37	1.05	5.82	5.82

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	200-yr	2418.26	916.24	911.35	2.58	2.36	44.81	27.23	258.13	1625.35	1.89	1.15	4.89	4.89
Yellowstone County	B5	RM 352.18	86873.5	200-yr	2418.26	916.35	911.21	1.16	1.24	8.1	6.54	236.01	1492.22	2.46	1.98	5.14	5.14
Yellowstone County	B5	RM 352.09	86723.6	200-yr	2418.26	916.11	912.18	2.52	1.94	40.66	18.71	175.66	1381.42	2.74	1.26	3.93	3.93
Yellowstone County	B5	RM 351.99	86568.41	200-yr	2418.26	915.62	912.6	3.55	2.52	70.2	29.28	148.58	1220.26	2.53	1.05	3.04	3.04
Yellowstone County	B5	RM 351.93	86466.74	200-yr	2418.26	915.51	911.69	2.85	2.03	49.4	29.61	175.37	1244.6	2.23	1.33	3.82	3.82
Yellowstone County	B5	RM 351.88	86386.8	200-yr	2418.26	915.46	911.38	1.96	1.56	31.01	24.49	191.85	1789.82	2.02	1.6	4.08	4.08
Yellowstone County	B5	RM 351.81	86277.68	200-yr	2418.26	915.36	910.99	1.73	1.37	21.36	18.76	243.35	1886.7	1.87	1.64	4.37	4.37
Yellowstone County	B5	RM 351.74	86159.62	200-yr	2418.26	915.07	911.37	1.65	1.59	20.19	19.46	340.06	1739.58	1.31	1.27	4.24	4.24
Yellowstone County	B5	RM 351.67	86034.59	200-yr	2418.26	914.81	911.31	2.01	1.62	29.96	16.83	208.62	1375.42	2	1.12	4.43	4.43
Yellowstone County	B5	RM 351.58	85891.33	200-yr	2418.26	914.62	911.47	1.79	1.63	24.19	15.15	238.78	1326.54	2	1.25	4.53	4.53
Yellowstone County	B5	RM 351.52	85811.35	200-yr	2418.26	914.47	911.37	2.11	1.79	26.66	18.63	253.88	1033.3	1.95	1.36	3.75	3.75
Yellowstone County	B5	RM 351.47	85728.2	200-yr	2418.26	914.36	911.17	2.14	1.79	25.14	14.85	199.05	1181.46	2.28	1.35	3.82	3.82
Yellowstone County	B5	RM 351.40	85601.48	200-yr	2418.26	914.22	910.26	2.17	1.68	27.21	17.58	161.29	1615.66	2.21	1.43	4.31	4.31
Yellowstone County	B5	RM 351.34	85482.66	200-yr	2418.26	914.13	909.98	1.54	1.5	30.2	16.75	146.46	1607.58	2.62	1.46	4.16	4.16
Yellowstone County	B5	RM 351.25	85342.53	200-yr	2418.26	914.02	909.91	1.58	1.31	18.53	13.46	262.05	1584.97	2.06	1.5	4.14	4.14
Yellowstone County	B5	RM 351.21	85257.19	200-yr	2418.26	913.95	909.48	1.74	1.28	20.62	14.2	212.79	1562.04	2.11	1.45	4.47	4.47
Yellowstone County	B5	RM 351.12	85127.55	200-yr	2418.26	913.87	909.49	1.79	1.31	20.5	12.9	176.17	1537.27	2.36	1.48	4.38	4.38
Yellowstone County	B5	RM 351.04	84988.05	200-yr	2418.26	913.74	908.79	2.15	1.38	27.82	12.71	126.78	1393.92	3.12	1.4	4.95	4.95
Yellowstone County	B5	RM 350.90	84769.91	200-yr	2418.26	913.69	909.27	1.51	1.18	16.89	8.46	104.13	1517.71	3.41	1.68	4.42	4.42
Yellowstone County	B5	RM 350.75	84536.19	200-yr	2418.26	913.53	909.72	1.37	1.53	28.93	19.44	272.27	1149.21	2.32	1.56	4.15	4.15
Yellowstone County	B5	RM 350.66	84383.33	200-yr	2418.26	913.34	909.32	1.8	1.67	38.07	21.14	175.92	994.99	2.68	1.48	4.02	4.02
Yellowstone County	B5	RM 350.57	84244.69	200-yr	2418.26	913.04	908.48	2.22	1.78	51.77	24.52	152.25	949.37	3.04	1.43	4.56	4.56
Yellowstone County	B5	RM 350.50	84128.62	200-yr	2418.26	912.78	908.49	2.39	1.93	58.2	28.75	161.33	915.39	2.79	1.37	4.29	4.29
Yellowstone County	B5	RM 350.40	83974.24	200-yr	2418.26	912.57	908.73	1.86	1.7	29.91	22.03	318.69	899.08	2.15	1.58	3.84	3.84
Yellowstone County	B5	RM 350.33	83868.06	200-yr	2418.26	912.44	908.17	1.89	1.65	24.33	18.73	326.5	885.9	2.18	1.68	4.27	4.27
Yellowstone County	B5	RM 350.23	83712.91	200-yr	2418.26	912.21	907.61	2.11	1.71	32.78	22.77	300.73	985.42	2.17	1.51	4.6	4.6
Yellowstone County	B5	RM 350.14	83563.43	200-yr	2418.26	912.03	907.94	1.9	1.54	28.47	19.25	302.77	1121.82	2.24	1.51	4.09	4.09
Yellowstone County	B5	RM 350.06	83419.86	200-yr	2418.26	911.82	907.84	1.75	1.46	28.61	18.65	344.59	1164.98	2.19	1.43	3.98	3.98
Yellowstone County	B5	RM 349.94	83229.4	200-yr	2418.26	911.6	906.93	1.84	1.43	26.95	15.59	275.98	1369.34	2.45	1.41	4.67	4.67
Yellowstone County	B5	RM 349.83	83071.99	200-yr	2418.26	911.46	907.36	1.8	1.22	17.19	8.39	370.02	1435.16	3.08	1.5	4.1	4.1
Yellowstone County	B5	RM 349.68	82904.73	200-yr	2418.26	911.27	906.92	2.15	1.46	34.72	17.02	348.15	1585.74	2.59	1.26	4.35	4.35
Yellowstone County	B5	RM 349.54	82632.78	200-yr	2418.26	910.89	906.29	2.14	1.67	29.37	15.9	449.31	1172.95	2.29	1.24	4.6	4.6
Yellowstone County	B5	RM 349.33	82276.28	200-yr	2418.26	910.63	906.45	1.42	1.26	17.55	12.74	351.95	1096.26	2.41	1.75	4.18	4.18
Yellowstone County	B5	RM 349.19	82046.53	200-yr	2418.26	910.34	905.16	2.13	1.38	26.64	14.35	282.11	1281.03	2.53	1.36	5.18	5.18
Yellowstone County	B5	RM 349.04	81800.47	200-yr	2542.85	910.17	904.5	1.71	1.27	17.76	10.3	345.54	1259.29	2.74	1.59	5.67	5.67
Yellowstone County	B5	RM 348.89	81574.02	200-yr	2542.85	910.06	904.75	1.34	1.13	18.69	11.32	550.23	2094.21	2.97	1.8	5.31	5.31
Yellowstone County	B5	RM 348.77	81370.46	200-yr	2542.85	909.93	905.09	1.4	1.15	22.31	13.16	461.78	1975.13	3.1	1.82	4.84	4.84
Yellowstone County	B5	RM 348.64	81138.52	200-yr	2542.85	909.78	903.35	1.72	1.16	16.63	7.72	292.71	1838.47	3.79	1.75	6.43	6.43
Yellowstone County	B5	RM 348.52	80960.09	200-yr	2542.85	909.67	902.88	1.95	1.3	29.66	12.47	208.36	1681.58	4.22	1.75	6.79	6.79
Yellowstone County	B5	RM 348.38	80737.31	200-yr	2542.85	909.26	902.85	2.8	1.95	54.34	24.94	187.35	1552.59	4.1	1.87	6.41	6.41
Yellowstone County	B5	RM 348.26	80551.51	200-yr	2542.85	909.07	902.73	2.62	1.9	55.11	26.12	168.51	1404.13	4.34	2.04	6.34	6.34
Yellowstone County	B5	RM 348.09	80276.34	200-yr	2542.85	908.36	901.64	3.4	2.73	74.95	28.44	171.66	1030.06	3.97	1.5	6.72	6.72
Yellowstone County	B5	RM 347.95	80055.79	200-yr	2542.85	908.22	902.96	2.84	2.08	38.19	13.3	165.09	1180.81	4.27	1.49	5.26	5.26
Yellowstone County	B5	RM 347.82	79844.2	200-yr	2542.85	908.09	902.93	2.38	1.73	45.92	17.54	180.88	1221.89	3.97	1.51	5.16	5.16
Yellowstone County	B5	RM 347.77	79751.93	200-yr	2542.85	908.01	902.38	2.29	1.5	43.46	15.74	178.59	1162.05	4.02	1.45	5.63	5.63
Yellowstone County	B5	RM 347.70	79643.98	200-yr	2542.85	907.91	901.91	2.17	1.39	38.52	16.16	182.31	1206.1	3.96	1.66	6	6
Yellowstone County	B5	RM 347.61	79501.64	200-yr	2542.85	907.83	902.2	1.99	1.23	19.57	11	192.93	1257.15	4.27	2.4	5.63	5.63
Yellowstone County	B5	RM 347.51	79347.38	200-yr	2542.85	907.36	900.54	3.48	2.12	54.96	24.25	112.36	557.89	4.92	2.15	6.82	6.82
Yellowstone County	B5	RM 347.42	79196.21	200-yr	2542.85	907.28	900.73	2.86	2.13	75.22	40.47	148.41	519.84	4.29	2.3	6.55	6.55
Yellowstone County	B5	RM 347.35	79079.87	200-yr	2542.85	907.35	900.77	1.48	1.46	10.73	8.95	499.14	610.29	3.42	2.85	6.58	6.58
Yellowstone County	B5	RM 347.23	78895.71	200-yr	2542.85	907.26	900.89	1.58	1.57	14.85	14.24	510.25	539.76	3.14	3.01	6.37	6.37
Yellowstone County	B5	RM 347.13	78732.21	200-yr	2542.85	907.13	900.98	1.7	1.59	31.68	22.36	441.51	1541.96	3.28	2.31	6.15	6.15
Yellowstone County	B5	RM 346.93	78400.21	200-yr	2542.85	906.56	900.98	1.99	1.87	74.34	62.53	465.4	1600.01	2.64	2.22	5.58	5.58
Yellowstone County	B5	RM 346.80	78193.27	200-yr	2542.85	906.02	900.02	2.05	1.73	57	42.73	454.87	798.19	2.46	1.84	6	6
Yellowstone County	B5	RM 346.64	77938.83	200-yr	2542.85	905.73	900.47	2.17	1.48	24.41	12.27	247.54	919.36	3.73	1.87	5.26	5.26
Yellowstone County	B5	RM 346.49	77706.6	200-yr	2542.85	905.48	900.21	2.6	1.54	39.96	14.77	176.88	1191.08	3.91	1.43	5.27	5.27
Yellowstone County	B6	RM 346.35	77480.6	200-yr	2542.85	905.29	900.33	2.32	1.44	36.97	16.31	214.87	1086.96	3.81	1.67	4.96	4.96
Yellowstone County	B6	RM 346.23	77285.9	200-yr	2542.85	905.03	900.11	2.67	1.57	36.48	14.64	177.69	1001.69	4.08	1.62	4.92	4.92
Yellowstone County	B6	RM 346.11	77095.33	200-yr	2542.85	904.8	899.75	2.73	1.85	51.47	25.98	182.61	980.3	4.01	2.02	5.05	5.05
Yellowstone County	B6	RM 346.00	76926.16	200-yr	2542.85	904.62	899.8	2.68	1.78	41.6	18.79	178.16	1033.04	4.17	1.87	4.82	4.82
Yellowstone County	B6	RM 345.90	76766.95	200-yr	2542.85	904.32	899.51	3	1.98	58.22	26.87	179.39	978.53	3.93	1.81	4.81	4.81

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	200-yr	2542.85	904.16	899.04	2.7	1.86	42.97	20.92	200.74	1124	3.93	1.91	5.26	5.26
Yellowstone County	B6	RM 345.73	76484.99	200-yr	2542.85	904.01	899.01	2.78	1.83	44.53	20.57	198.24	1068.49	3.65	1.68	5.11	5.11
Yellowstone County	B6	RM 345.67	76386.71	200-yr	2542.85	903.95	899.1	2.45	1.64	33.98	16.92	212.63	812.78	3.95	1.96	5.05	5.05
Yellowstone County	B6	RM 345.60	76268.76	200-yr	2542.85	903.84	899.22	2.4	1.68	37.26	20.15	235.37	808.95	3.59	1.94	4.94	4.94
Yellowstone County	B6	RM 345.50	76118.1	200-yr	2542.85	903.7	899.07	2.06	1.7	44.96	30.49	280.8	784.68	3.22	2.18	4.8	4.8
Yellowstone County	B6	RM 345.37	75909.53	200-yr	2542.85	903.24	897.51	2.5	2.04	49.1	25.71	316.61	1009.1	3.02	1.57	5.73	5.73
Yellowstone County	B6	RM 345.27	75751.01	200-yr	2542.85	903	898.15	2.61	1.82	41.04	18.45	252.45	1158.46	3.41	1.52	4.85	4.85
Yellowstone County	B6	RM 345.07	75427.56	200-yr	2542.85	902.8	897.07	2.16	1.51	24.63	11.05	241.2	1198.6	3.96	1.76	5.73	5.73
Yellowstone County	B6	RM 344.90	75166.64	200-yr	2542.85	902.69	897.3	1.83	1.31	18.58	8.18	294.53	1150.56	3.83	1.69	5.39	5.39
Yellowstone County	B6	RM 344.75	74927.69	200-yr	2542.85	902.51	896.02	2.09	1.49	34.04	14.22	236.09	1028.51	4.01	1.66	6.49	6.49
Yellowstone County	B6	RM 344.64	74743.45	200-yr	2542.85	902.16	895.93	2.88	1.81	42.98	13.93	158.71	951.04	4.58	1.48	6.23	6.23
Yellowstone County	B6	RM 344.53	74576.12	200-yr	2542.85	902.06	895.39	2.48	1.58	50.18	17.51	162.09	1061.37	4.36	1.51	6.67	6.67
Yellowstone County	B6	RM 344.43	74405.67	200-yr	2542.85	901.96	896.11	2.2	1.3	23.44	9.26	179.43	1193.79	4.22	1.66	5.85	5.85
Yellowstone County	B6	RM 344.29	74192.79	200-yr	2542.85	901.78	895.87	2.34	1.64	31.29	14.3	179.75	1117.07	4.4	2.01	5.91	5.91
Yellowstone County	B6	RM 344.13	73931.76	200-yr	2542.85	901.52	895.4	2.62	1.89	38.18	18.98	157.02	1199.69	4.75	2.36	6.12	6.12
Yellowstone County	B6	RM 343.87	73520.95	200-yr	2542.85	901.27	895.23	2.17	1.77	23.59	17.26	287.43	1385.46	3.77	2.76	6.04	6.04
Yellowstone County	B6	RM 343.80	73403.19	200-yr	2542.85	901.22	894.69	1.81	1.62	34.97	29.77	356.81	1332.36	3.58	3.05	6.53	6.53
Yellowstone County	B6	RM 343.66	73173.16	200-yr	2542.85	900.9	894.63	1.92	1.86	53.66	48.72	396.16	1298.2	3.26	2.96	6.27	6.27
Yellowstone County	B6	RM 343.55	72997.33	200-yr	2542.85	900.61	894.63	1.96	1.88	49.76	43.03	370.7	1044.11	3.42	2.96	5.98	5.98
Yellowstone County	B6	RM 343.45	72840.49	200-yr	2542.85	900.36	894.78	2.02	2.01	44.14	43.04	401.94	987.55	3.12	3.05	5.58	5.58
Yellowstone County	B6	RM 343.37	72718.86	200-yr	2542.85	900.03	894.5	2.46	2.46	70.24	70.23	343.29	982.58	3.02	3.02	5.53	5.53
Yellowstone County	B6	RM 343.29	72586.22	200-yr	2542.85	899.75	894.28	2.51	2.3	59.9	48.99	280.54	983.38	3.47	2.84	5.47	5.47
Yellowstone County	B6	RM 343.21	72458.03	200-yr	2542.85	899.54	893.99	2.23	2.02	69.35	56.36	357.23	996.25	3.02	2.44	5.55	5.55
Yellowstone County	B6	RM 343.14	72328.78	200-yr	2542.85	899.23	893.94	2.09	1.87	69.66	56.65	432.98	990.26	2.6	2.11	5.29	5.29
Yellowstone County	B6	RM 343.04	72174.44	200-yr	2542.85	899.06	894.12	1.78	1.49	20.74	16.4	485.75	1077.34	2.72	2.15	4.94	4.94
Yellowstone County	B6	RM 342.96	72046.7	200-yr	2542.85	898.94	894.17	1.65	1.43	39.91	30.34	507	1156.3	2.59	1.97	4.77	4.77
Yellowstone County	B6	RM 342.87	71890.42	200-yr	2542.85	898.67	893.92	1.61	1.42	44.65	31.35	541.66	1251.62	2.41	1.69	4.75	4.75
Yellowstone County	B6	RM 342.78	71759.64	200-yr	2542.85	898.54	893.85	1.59	1.31	15.03	11.06	525.44	1529.72	2.43	1.79	4.69	4.69
Yellowstone County	B6	RM 342.71	71649.64	200-yr	2542.85	898.47	893.88	1.52	1.3	13.87	10.62	525.75	2335.15	2.36	1.81	4.59	4.59
Yellowstone County	B6	RM 342.64	71534.72	200-yr	2542.85	898.35	893.45	1.48	1.4	33.59	29.87	689.75	1062.39	2.35	2.09	4.9	4.9
Yellowstone County	B6	RM 342.59	71441.82	200-yr	2542.85	898.18	893.13	1.57	1.57	39.86	39.81	690.06	2605.44	2.34	2.34	5.05	5.05
Yellowstone County	B6	RM 342.49	71299.94	200-yr	2542.85	898.02	892.73	1.39	1.39	25.33	25.3	660.09	2832.14	2.77	2.77	5.29	5.29
Yellowstone County	B6	RM 342.40	71182.23	200-yr	2542.85	897.95	892.4	1.27	1.27	20.93	20.88	593.14	2876.37	3.37	3.37	5.54	5.54
Yellowstone County	B6	RM 342.29	70973.95	200-yr	2542.85	897.71	891.26	1.69	1.69	31.6	31.48	479.32	2723.37	3.14	3.13	6.45	6.45
Yellowstone County	B6	RM 342.17	70788.09	200-yr	2542.85	897.24	891.21	2.45	2.45	71.86	71.86	380.74	2291.82	2.73	2.73	6.03	6.03
Yellowstone County	B6	RM 342.09	70668.79	200-yr	2542.85	897.04	892.22	2.13	2.05	50.08	40.94	378.68	2053.81	3.08	2.52	4.82	4.82
Yellowstone County	B6	RM 341.96	70472.35	200-yr	2542.85	896.87	891.5	1.87	1.81	20.42	17.82	503.93	1824.32	2.67	2.33	5.37	5.37
Yellowstone County	B6	RM 341.82	70207.79	200-yr	2542.85	896.72	890.89	1.46	1.39	20.14	16.41	582.05	1205.65	2.86	2.33	5.83	5.83
Yellowstone County	B6	RM 341.68	69974.03	200-yr	2542.85	896.49	890.38	1.67	1.59	28.44	23.72	481.57	632.55	3.04	2.54	6.11	6.11
Yellowstone County	B6	RM 341.57	69788.71	200-yr	2542.85	896.22	889.58	2.16	1.93	23.76	14.57	434.49	821.17	2.62	1.6	6.64	6.64
Yellowstone County	B6	RM 341.47	69629.19	200-yr	2542.85	896.03	889.76	1.98	1.85	56.95	41.38	395.38	815.35	3	2.18	6.27	6.27
Yellowstone County	B6	RM 341.32	69391.37	200-yr	2542.85	895.55	890.36	2.05	1.89	55.53	41.45	401.51	623.97	2.89	2.15	5.19	5.19
Yellowstone County	B6	RM 341.24	69252.71	200-yr	2542.85	895.44	890.28	1.85	1.61	19.4	13.41	396.74	914.24	3.11	2.15	5.16	5.16
Yellowstone County	B6	RM 341.11	69044.61	200-yr	2542.85	895.14	890	2.34	1.8	41.34	25.21	324.68	774.9	3	1.82	5.14	5.14
Yellowstone County	B6	RM 340.94	68773.18	200-yr	2542.85	894.84	889.22	2.23	1.51	35.42	18.55	280.24	1006.3	3.32	1.74	5.62	5.62
Yellowstone County	B6	RM 340.81	68556.42	200-yr	2542.85	894.74	889.05	1.64	1.12	22.09	12.03	315.44	1190.79	3.51	1.91	5.69	5.69
Yellowstone County	B6	RM 340.65	68325.7	200-yr	2542.85	894.52	888.87	2.27	1.3	24.65	10.99	204.11	1070.64	4.11	1.83	5.65	5.65
Yellowstone County	B6	RM 340.52	68126.27	200-yr	2542.85	894.32	887.3	2.65	1.45	45.84	16.07	130.27	974.09	5.17	1.8	7.02	7.02
Yellowstone County	B6	RM 340.40	67936.51	200-yr	2542.85	894.19	886.73	2.3	1.43	42.64	18.55	170.6	877.69	4.68	2.02	7.46	7.46
Yellowstone County	B7	RM 340.26	67715.84	200-yr	2542.85	893.91	887.99	2.26	1.69	57.17	31.97	252.4	725.5	3.73	2.08	5.92	5.92
Yellowstone County	B7	RM 340.16	67550.99	200-yr	2542.85	893.63	888.43	2.14	1.72	65.63	41.19	313.83	732.34	3.22	2.01	5.2	5.2
Yellowstone County	B7	RM 340.06	67387.35	200-yr	2542.85	893.33	888.74	2.14	1.83	48.38	29.73	315.76	681.18	3.32	2.04	4.59	4.59
Yellowstone County	B7	RM 339.96	67234.59	200-yr	2542.85	893.06	888.85	2.36	2.14	31.48	21.77	360.92	604.02	2.85	1.97	4.21	4.21
Yellowstone County	B7	RM 339.88	67094.07	200-yr	2542.85	892.91	888.78	2.07	1.94	45.04	36.01	445.51	618.8	2.65	2.12	4.13	4.13
Yellowstone County	B7	RM 339.79	66960.51	200-yr	2542.85	892.61	888.98	2.29	2.28	37.1	35.27	511.6	540.63	2.17	2.06	3.63	3.63
Yellowstone County	B7	RM 339.72	66843.76	200-yr	2542.85	892.49	888.72	2.03	1.94	27.05	24.32	513.65	612.88	2.39	2.14	3.77	3.77
Yellowstone County	B7	RM 339.66	66753.41	200-yr	2542.85	892.44	887.9	1.78	1.68	19.53	17.11	525.42	714.39	2.64	2.31	4.54	4.54
Yellowstone County	B7	RM 339.52	66527.74	200-yr	2542.85	892.25	887.31	2.03	1.57	21.69	14.43	312.36	961.95	3.49	2.32	4.94	4.94
Yellowstone County	B7	RM 339.37	66324.85	200-yr	2542.85	892.07	887.17	2.19	1.6	44.82	25.19	232.31	755.84	3.74	2.1	4.9	4.9
Yellowstone County	B7	RM 339.24	66108.49	200-yr	2542.85	891.58	886.45	2.97	2.15	46.37	25.33	218.09	716.44	3.18	1.74	5.13	5.13
Yellowstone County	B7	RM 339.13	65940.41	200-yr	2542.85	891.36	885.31	3.03	1.98	55.15	26.77	143.34	705.91	3.78	1.82	6.05	6.05

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	200-yr	2542.85	891	886.09	3.09	2.17	50.13	22.91	187.64	764.66	3.35	1.53	4.91	4.91
Yellowstone County	B7	RM 338.94	65621.59	200-yr	2542.85	890.94	886.36	2.54	1.8	34.06	20.78	223.57	725.04	3.19	1.95	4.58	4.58
Yellowstone County	B7	RM 338.83	65433.26	200-yr	2542.85	890.77	886.37	2.25	1.65	36.07	20.33	225.04	867.61	3.23	1.82	4.75	4.75
Yellowstone County	B7	RM 338.72	65256.88	200-yr	2542.85	890.51	886.18	2.38	1.97	43.66	28.41	205.92	628.52	3.45	2.25	4.71	4.71
Yellowstone County	B7	RM 338.62	65095.08	200-yr	2542.85	890.14	886.28	3.03	2.31	49.07	29.32	179.43	757.09	3.25	1.94	4.52	4.52
Yellowstone County	B7	RM 338.49	64891.36	200-yr	2542.85	889.96	885.05	2.64	2.01	36.88	22.16	174.43	885.33	3.38	2.03	4.91	4.91
Yellowstone County	B7	RM 338.40	64742.15	200-yr	2542.85	889.95	884.28	1.82	1.52	16.87	11.56	166.04	943.62	3.54	2.41	5.67	5.67
Yellowstone County	B7	RM 338.29	64577.05	200-yr	2542.85	889.83	884.18	2.21	1.56	25.11	12.21	123.01	994.83	3.92	1.9	5.65	5.65
Yellowstone County	B7	RM 338.19	64384.71	200-yr	2542.85	889.78	885.23	1.54	1.24	14.16	10.4	393.33	1126.07	2.95	2.16	4.55	4.55
Yellowstone County	B7	RM 338.06	64164.59	200-yr	2542.85	889.69	884.64	1.58	1.09	15.03	9.1	284.25	1194.65	3.47	2.1	5.05	5.05
Yellowstone County	B7	RM 337.91	63921.69	200-yr	2542.85	889.53	884.16	2.03	1.24	20	10.63	205.66	1221.04	3.76	2	5.37	5.37
Yellowstone County	B7	RM 337.83	63789.53	200-yr	2542.85	889.21	882.72	2.93	1.72	49.13	21.28	178.45	915.78	3.75	1.61	6.49	6.49
Yellowstone County	B7	RM 337.75	63667.96	200-yr	2542.85	888.85	881.69	3.53	2.02	64.92	24.2	143.41	860.37	3.95	1.46	7.16	7.16
Yellowstone County	B7	RM 337.68	63550.4	200-yr	2542.85	888.65	882.49	3.38	2.18	68.03	23.42	161.63	849.85	4	1.37	6.16	6.16
Yellowstone County	B7	RM 337.58	63396.62	200-yr	2542.85	888.43	883.62	3.23	2.11	53.76	22	189.36	861.2	3.41	1.4	4.81	4.81
Yellowstone County	B7	RM 337.47	63212.44	200-yr	2542.85	888.29	883.31	2.71	1.79	44.23	19.17	178.55	916.23	3.59	1.55	4.98	4.98
Yellowstone County	B7	RM 337.38	63064.58	200-yr	2542.85	888.09	883.29	2.82	1.7	40.19	16.88	177.51	1032.04	3.46	1.45	4.8	4.8
Yellowstone County	B7	RM 337.27	62894.98	200-yr	2542.85	888.09	883.15	1.9	1.21	17.83	8.92	210.44	1191.28	3.53	1.76	4.94	4.94
Yellowstone County	B7	RM 337.16	62717.85	200-yr	2542.85	888.04	882.57	1.46	1.11	11.2	7.41	398.06	1359.15	3.14	2.08	5.47	5.47
Yellowstone County	B7	RM 337.04	62524.52	200-yr	2542.85	887.97	879.61	1.72	1.13	14.79	6.8	154.85	1425.63	5	2.29	8.36	8.36
Yellowstone County	B7	RM 336.96	62390.64	200-yr	2542.85	887.9	880.21	1.84	1.3	24.16	11.84	186.12	1429.76	4.44	2.16	7.69	7.69
Yellowstone County	B7	RM 336.87	62246.97	200-yr	2542.85	887.76	881.41	2.22	1.45	26.67	12.45	156.32	822.57	4.59	2.13	6.35	6.35
Yellowstone County	B7	RM 336.80	62131.42	200-yr	2542.85	887.7	881.33	2.08	1.43	33.83	16.9	162.29	1143.36	4.24	2.11	6.37	6.37
Yellowstone County	B7	RM 336.72	62005.73	200-yr	2542.85	887.46	881.38	2.69	1.69	53.94	19.22	136.15	1168.27	4.44	1.57	6.08	6.08
Yellowstone County	B7	RM 336.66	61902.64	200-yr	2542.85	886.95	881.45	3.79	2.44	97.9	28.74	117.37	872.15	4.11	1.2	5.5	5.5
Yellowstone County	B7	RM 336.59	61800.43	200-yr	2542.85	886.86	880.66	3.15	2.09	71.18	21.68	135.93	896.97	4.48	1.36	6.2	6.2
Yellowstone County	B7	RM 336.52	61689.55	200-yr	2542.85	886.7	881.76	3.05	1.98	57.37	21.31	145.49	898.34	3.84	1.43	4.94	4.94
Yellowstone County	B7	RM 336.46	61580.5	200-yr	2542.85	886.58	882.13	2.74	1.89	56.82	22.63	162.48	957.75	3.55	1.41	4.45	4.45
Yellowstone County	B7	RM 336.40	61491.01	200-yr	2542.85	886.42	882.03	2.84	1.85	58.26	23.8	162.53	930.17	3.62	1.47	4.39	4.39
Yellowstone County	B7	RM 336.34	61394.22	200-yr	2542.85	886.26	881.93	2.89	1.8	53.37	24.36	163.69	903.17	3.45	1.57	4.33	4.33
Yellowstone County	B7	RM 336.27	61278.9	200-yr	2542.85	886.1	881.67	2.79	1.69	49.54	22.88	169.95	951.15	3.42	1.58	4.43	4.43
Yellowstone County	B7	RM 336.19	61159.07	200-yr	2542.85	885.93	882.11	2.69	1.79	38.95	20.23	211.78	1017.71	2.7	1.4	3.82	3.82
Yellowstone County	B7	RM 336.09	60993.57	200-yr	2542.85	885.78	882.16	2.1	1.44	27.48	17.26	319.78	1089.79	2.57	1.62	3.62	3.62
Yellowstone County	B7	RM 335.98	60812.26	200-yr	2542.85	885.62	881.93	1.53	1.39	29.26	23.62	442.1	1056.72	2.14	1.73	3.89	3.89
Yellowstone County	B7	RM 335.89	60669.74	200-yr	2542.85	885.43	880.16	1.75	1.58	18.24	16.18	737.52	1016.3	1.78	1.58	5.27	5.27
Yellowstone County	B7	RM 335.77	60465.85	200-yr	2542.85	885.11	880.49	1.67	1.63	48.27	43.22	881.3	1106.68	1.58	1.41	4.62	4.62
Yellowstone County	B7	RM 335.68	60324.8	200-yr	2542.85	884.8	880.65	1.89	1.76	18.89	16.5	884.27	1669.82	1.45	1.27	4.15	4.15
Yellowstone County	B7	RM 335.59	60183.7	200-yr	2542.85	884.61	880.3	1.86	1.72	19.86	16.64	920.36	1729.44	1.42	1.19	4.31	4.31
Yellowstone County	B7	RM 335.51	60046.12	200-yr	2542.85	884.43	880.03	1.82	1.65	17.67	14	944.99	1697.93	1.41	1.12	4.4	4.4
Yellowstone County	B7	RM 335.41	59899.97	200-yr	2542.85	884.33	879.45	1.42	1.23	13.85	10.47	911.11	1623.92	1.79	1.35	4.88	4.88
Yellowstone County	B7	RM 335.36	59814.82	200-yr	2542.85	884.32	878.65	1.1	0.92	6.98	5.15	896.25	1889.43	2.36	1.74	5.67	5.67
Yellowstone County	B7	RM 335.12	59393.71	200-yr	2542.85	884.08	878.54	1.84	1.03	18.7	7.84	331.92	2008.05	2.93	1.23	5.54	5.54
Yellowstone County	B7	RM 335.03	59228.59	200-yr	2542.85	883.8	876.8	2.87	1.31	54.68	15.61	149.84	1972.51	3.45	0.98	7	7
Yellowstone County	B7	RM 334.91	59041.32	200-yr	2542.85	883.61	878.31	2.26	1.15	35.62	13.57	229.84	1982.43	2.92	1.11	5.3	5.3
Yellowstone County	B7	RM 334.85	58937.73	200-yr	2542.85	883.48	878.66	2.22	1.12	36.01	13.81	224.38	1986.88	2.99	1.15	4.82	4.82
Yellowstone County	B7	RM 334.73	58737.5	200-yr	2542.85	883.11	879.52	2.81	1.35	46.43	15.28	192.81	1885.72	3.05	1	3.73	3.73
Yellowstone County	B7	RM 334.63	58573.32	200-yr	2542.85	883.03	878.31	2.18	1.17	24.97	10.13	187.59	1710.91	3.12	1.27	4.72	4.72
Yellowstone County	B7	RM 334.54	58424.99	200-yr	2542.85	883.01	877.09	1.15	1.01	13.18	5.97	154.81	1660.47	3.36	1.52	5.92	5.92
Yellowstone County	B7	RM 334.22	57821.07	200-yr	2542.85	882.65	875.76	2.26	1.51	23.03	12.18	197.47	1907.34	4.26	2.25	6.89	6.89
Yellowstone County	B7	RM 334.09	57621.62	200-yr	2542.85	882.48	875.55	2.73	1.68	58.41	25.15	119.41	846.55	4.16	1.78	6.93	6.93
Yellowstone County	B7	RM 333.98	57440.64	200-yr	2542.85	882.29	875.46	2.63	1.7	34.25	12.96	140.01	801.19	4.96	1.87	6.83	6.83
Yellowstone County	B7	RM 333.83	57207.78	200-yr	2542.85	882.08	875.4	2.63	2.03	49.1	28.12	163.34	537.81	4.08	2.32	6.68	6.68
Yellowstone County	B7	RM 333.69	56989.22	200-yr	2542.85	881.82	873.45	2.14	1.93	46.68	29.12	337.33	955.96	3.43	2.14	8.37	8.37
Yellowstone County	B7	RM 333.54	56738.21	200-yr	2542.85	881.68	874.22	1.46	1.28	23.85	15.41	409.8	1128.27	3.86	2.49	7.46	7.46
Yellowstone County	B7	RM 333.42	56552.03	200-yr	2542.85	881.51	873.42	1.61	1.45	32.21	17.64	426.38	976.05	3.3	1.8	8.09	8.09
Yellowstone County	B7	RM 333.30	56351.75	200-yr	2542.85	881.19	875.65	1.81	1.67	53.57	31.48	449.89	911.56	2.85	1.67	5.54	5.54
Yellowstone County	B7	RM 333.19	56177.76	200-yr	2542.85	880.78	875.72	2.15	2.04	48.71	39.71	399.11	551.19	2.78	2.26	5.06	5.06
Yellowstone County	B7	RM 333.09	56027.56	200-yr	2542.85	880.64	875.59	1.95	1.73	21.27	17.64	429.53	612.02	2.89	2.4	5.05	5.05
Yellowstone County	B7	RM 332.99	55855.76	200-yr	2542.85	880.46	873.86	1.96	1.65	47.77	35.28	387.31	710.73	2.94	2.16	6.6	6.6
Yellowstone County	B7	RM 332.88	55687.68	200-yr	2542.85	880.35	874.43	1.65	1.45	17.47	12.68	409.26	1936.53	3.17	2.3	5.92	5.92
Yellowstone County	B7	RM 332.77	55504.73	200-yr	2542.85	880.29	875.49	1.47	1.21	11.79	8.02	376.01	830.96	3.71	2.52	4.8	4.8

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	200-yr	2542.85	880.21	874.96	1.59	1.26	17.31	11.51	334.72	815.59	3.73	2.48	5.25	5.25
Yellowstone County	B7	RM 332.56	55182.74	200-yr	2542.85	880.11	874.54	1.7	1.22	18.76	10.06	312.37	2213.85	4.06	2.17	5.57	5.57
Yellowstone County	B7	RM 332.47	55059.84	200-yr	2542.85	880.09	873.95	1.5	1.07	15.61	7.94	281.38	2290.65	4.34	2.2	6.14	6.14
Yellowstone County	B7	RM 332.38	54913.1	200-yr	2542.85	879.95	873.16	2.1	1.24	28.67	9.64	159.71	2096.55	5.09	1.68	6.79	6.79
Yellowstone County	B7	RM 332.33	54822.67	200-yr	2542.85	879.99	872.5	1.27	0.71	15.88	5.45	188.81	2230.29	4.68	1.6	7.49	7.49
Yellowstone County	B7	RM 332.21	54626.48	200-yr	2542.85	879.79	873.4	2	1.32	32.89	11.07	177.38	1473.03	4.97	1.66	6.39	6.39
Yellowstone County	B7	RM 332.20	54613	200-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	200-yr	2542.85	879.48	873.19	2.26	1.56	46.84	14.96	193.37	1308.82	4.4	1.4	6.29	6.29
Yellowstone County	B7	RM 332.17	54575.38	200-yr	2542.85	879.44	872.76	2.21	1.38	35.28	10.73	145.13	1440.64	5.17	1.54	6.68	6.68
Yellowstone County	B7	RM 332.16	54558	200-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	200-yr	2542.85	879.29	872.47	2.5	1.45	32.67	9.09	130.77	1442.24	5.31	1.45	6.82	6.82
Yellowstone County	B7	RM 332.08	54422.01	200-yr	2542.85	879.19	873.77	2.42	1.49	38.04	11.14	155.85	1428.29	4.58	1.33	5.42	5.42
Yellowstone County	B7	RM 331.96	54224.76	200-yr	2542.85	879.04	873.18	2.08	1.46	40.55	14.62	205.19	1222.74	3.98	1.42	5.86	5.86
Yellowstone County	B7	RM 331.85	54057.19	200-yr	2542.85	878.86	873.16	1.97	1.44	49.38	19.25	250.3	1180.89	3.86	1.5	5.7	5.7
Yellowstone County	B7	RM 331.74	53882.8	200-yr	2542.85	878.21	872.62	3.39	2.17	73.21	17.79	150.11	1118.56	4.36	1.05	5.59	5.59
Yellowstone County	B8	RM 331.66	53744.64	200-yr	2542.85	878.15	871.68	2.57	1.86	49.13	16.67	219.63	1026.9	3.95	1.33	6.47	6.47
Yellowstone County	B8	RM 331.55	53575.67	200-yr	2542.85	878.01	872.61	2.38	1.68	41.53	15.99	204.4	1066.89	3.71	1.42	5.4	5.4
Yellowstone County	B8	RM 331.41	53354.89	200-yr	2542.85	877.72	872.56	2.57	1.77	44.45	16.98	218.29	1065.28	3.56	1.35	5.16	5.16
Yellowstone County	B8	RM 331.32	53209.79	200-yr	2542.85	877.55	871.92	2.29	1.6	36.39	19.7	275.52	984.73	2.99	1.61	5.63	5.63
Yellowstone County	B8	RM 331.23	53053.99	200-yr	2542.85	877.41	871.53	1.9	1.49	25.85	17.38	376.59	932.43	2.74	1.83	5.88	5.88
Yellowstone County	B8	RM 331.14	52919.44	200-yr	2542.85	877.34	871.72	1.63	1.33	19.51	12.14	309.55	1156.19	3.2	1.98	5.62	5.62
Yellowstone County	B8	RM 331.08	52820.06	200-yr	2542.85	877.25	871.29	1.77	1.33	21.95	11.5	305.99	1037.48	3.54	1.85	5.96	5.96
Yellowstone County	B8	RM 331.01	52700.37	200-yr	2542.85	877.16	871.8	1.81	1.39	23.87	14.89	299.81	839.51	3.5	2.18	5.36	5.36
Yellowstone County	B8	RM 330.93	52576.5	200-yr	2542.85	877.04	871.67	1.92	1.62	27.07	17.21	250.76	625.15	3.96	2.51	5.37	5.37
Yellowstone County	B8	RM 330.83	52418.21	200-yr	2542.85	876.74	870.75	2.78	2.12	41.29	20.47	141.59	516.79	4.73	2.32	5.99	5.99
Yellowstone County	B8	RM 330.77	52321.13	200-yr	2542.85	876.61	870.68	2.79	2.33	48.7	29.83	174.99	1501.04	4.01	2.46	5.93	5.93
Yellowstone County	B8	RM 330.68	52174.9	200-yr	2542.85	876.3	870.33	3.31	2.51	56.53	27.27	129.85	1687.6	4.41	2.12	5.97	5.97
Yellowstone County	B8	RM 330.58	52000.46	200-yr	2542.85	876.14	869.72	3.07	2.33	66.63	30.22	118.03	1611.23	4.68	2.1	6.42	6.42
Yellowstone County	B8	RM 330.48	51852.83	200-yr	2542.85	875.91	868.81	3.21	2.29	68.14	30.09	106.07	549.5	4.98	2.16	7.1	7.1
Yellowstone County	B8	RM 330.39	51701.57	200-yr	2542.85	875.77	869.32	3	2.07	45.69	19.34	134.45	687.76	4.24	1.79	6.45	6.45
Yellowstone County	B8	RM 330.32	51592.04	200-yr	2542.85	875.66	869.57	2.99	1.88	42.65	14.46	135.54	1015.66	4.4	1.48	6.09	6.09
Yellowstone County	B8	RM 330.25	51473.55	200-yr	2542.85	875.58	868.38	2.77	1.78	40.5	15.8	145.23	951.36	4.1	1.58	7.2	7.2
Yellowstone County	B8	RM 330.17	51344.77	200-yr	2542.85	875.43	869.9	2.79	1.83	42.06	16.4	152.21	911.66	3.94	1.53	5.53	5.53
Yellowstone County	B8	RM 330.10	51243.99	200-yr	2542.85	875.23	870.02	2.91	1.92	49.77	20.83	186.51	900.45	3.53	1.47	5.21	5.21
Yellowstone County	B8	RM 330.05	51150.67	200-yr	2542.85	875.23	869.94	2.11	1.54	27.3	15.86	299.05	975.6	2.92	1.69	5.29	5.29
Yellowstone County	B8	RM 329.95	50995.78	200-yr	2542.85	875.06	869.67	2.04	1.6	28.69	17.19	399.3	956	2.78	1.66	5.39	5.39
Yellowstone County	B8	RM 329.86	50853.11	200-yr	2542.85	874.95	869.99	1.77	1.46	27.51	18.16	443.98	996.34	2.66	1.75	4.96	4.96
Yellowstone County	B8	RM 329.75	50682.47	200-yr	2542.85	874.76	869.45	1.48	1.32	34.84	26.61	611.75	1092.58	2.31	1.76	5.31	5.31
Yellowstone County	B8	RM 329.66	50540.7	200-yr	2542.85	874.48	869.45	1.65	1.51	42.45	33.44	665.43	1133.42	1.89	1.48	5.03	5.03
Yellowstone County	B8	RM 329.57	50390.78	200-yr	2542.85	874.25	869.17	1.81	1.53	18.41	15.08	609.62	1017.85	2	1.64	5.08	5.08
Yellowstone County	B8	RM 329.49	50267.58	200-yr	2542.85	874.12	869.52	1.88	1.55	20.5	16.21	538.88	977.67	2.13	1.68	4.6	4.6
Yellowstone County	B8	RM 329.43	50165.22	200-yr	2542.85	874.07	869.82	1.58	1.34	14.61	10.41	543.15	963.11	2.77	1.98	4.25	4.25
Yellowstone County	B8	RM 329.37	50053.96	200-yr	2542.85	874.03	869.58	1.53	1.25	13.41	9.69	447.42	966.94	2.92	2.11	4.45	4.45
Yellowstone County	B8	RM 329.31	49969.13	200-yr	2542.85	873.97	869.66	1.63	1.27	19.29	13.45	378.18	1005.97	2.86	2	4.31	4.31
Yellowstone County	B8	RM 329.26	49883.05	200-yr	2542.85	873.9	868.74	1.71	1.3	16.5	10.9	376.88	1032.19	2.86	1.89	5.16	5.16
Yellowstone County	B8	RM 329.20	49785.51	200-yr	2542.85	873.83	868.71	1.72	1.3	17.4	11.85	397.53	1055.44	2.73	1.85	5.12	5.12
Yellowstone County	B8	RM 329.15	49699.71	200-yr	2777.88	873.78	868.64	1.62	1.27	21.82	15.16	463.75	1075.79	2.91	2.03	5.14	5.14
Yellowstone County	B8	RM 329.08	49597.49	200-yr	2777.88	873.71	869.34	1.49	1.18	20.57	14.91	472.04	1110.32	2.92	2.11	4.37	4.37
Yellowstone County	B8	RM 328.96	49388.08	200-yr	2777.88	873.6	868.99	1.63	1.13	17.74	11.31	306.25	1183.74	3.27	2.08	4.61	4.61
Yellowstone County	B8	RM 328.85	49197.37	200-yr	2777.88	873.47	866.79	1.74	1.34	16.25	12.37	473.09	1094.82	2.49	1.9	6.68	6.68
Yellowstone County	B8	RM 328.75	49036.09	200-yr	2777.88	873.4	866.93	1.56	1.25	16.31	12.58	424.64	1062.79	2.71	2.09	6.47	6.47
Yellowstone County	B8	RM 328.68	48920.76	200-yr	2777.88	873.26	867.09	1.98	1.38	24.08	14.34	303.39	1058.99	3.2	1.9	6.17	6.17
Yellowstone County	B8	RM 328.60	48788.86	200-yr	2777.88	873.03	866.36	2.64	1.62	33.89	14.91	196.28	1009.73	3.92	1.7	6.67	6.67
Yellowstone County	B8	RM 328.52	48664.7	200-yr	2777.88	873.09	867.75	1.74	1.26	16.04	9.73	167.5	992.75	3.68	2.21	5.34	5.34
Yellowstone County	B8	RM 328.44	48539.46	200-yr	2777.88	872.78	867.34	2.92	1.77	54.49	20.26	137.89	932.46	4.61	1.68	5.44	5.44
Yellowstone County	B8	RM 328.36	48405.85	200-yr	2777.88	872.49	867.12	3.41	1.98	54.69	21.36	131.93	852.16	4.3	1.65	5.37	5.37
Yellowstone County	B8	RM 328.28	48276.93	200-yr	2777.88	872.46	867.73	2.51	1.83	50.25	23.4	191.8	835.12	3.91	1.82	5.35	5.35
Yellowstone County	B8	RM 328.16	48097.58	200-yr	2777.88	872.27	866.7	2.27	1.73	43.12	23.39	224.09	882.02	3.37	1.82	5.57	5.57
Yellowstone County	B8	RM 328.05	47914.16	200-yr	2777.88	872.09	866.62	2.07	1.56	31.91	17.85	264.18	942.34	3.36	1.88	5.47	5.47
Yellowstone County	B8	RM 327.93	47729.4	200-yr	2777.88	871.87	865.67	2.33	1.68	27.9	15.3	305.74	959.77	3.14	1.72	6.2	6.2
Yellowstone County	B8	RM 327.88	47641.03	200-yr	2777.88	871.75	866	2.54	1.66	37.76	18.85	246.29	997.97	3.37	1.68	5.75	5.75

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	200-yr	2777.88	871.61	866.29	2.73	1.68	34.97	15.16	183.38	939.2	4.08	1.76	5.32	5.32
Yellowstone County	B8	RM 327.75	47432.57	200-yr	2777.88	871.32	865.09	3.45	1.96	52.68	18.24	136.65	904.15	4.56	1.57	6.23	6.23
Yellowstone County	B8	RM 327.69	47341.24	200-yr	2777.88	870.83	864.48	4.54	2.6	86.12	27.12	108.37	817.02	4.21	1.31	6.35	6.35
Yellowstone County	B8	RM 327.62	47227.31	200-yr	2777.88	871.03	863.86	2.96	1.85	42.04	18.14	129.57	834.31	4.21	1.8	7.17	7.17
Yellowstone County	B8	RM 327.56	47124.87	200-yr	2777.88	871.04	864.46	2.36	1.59	26.75	14.2	158.59	866.86	3.8	2.02	6.58	6.58
Yellowstone County	B8	RM 327.51	47053.82	200-yr	2777.88	870.98	865.84	2.18	1.65	26.29	19.32	311.44	876.12	2.6	1.92	5.14	5.14
Yellowstone County	B8	RM 327.44	46933.28	200-yr	2777.88	870.97	866.93	1.36	1.34	12.42	11.07	391.26	883.59	2.65	2.35	4.35	4.35
Yellowstone County	B8	RM 327.37	46817.72	200-yr	2777.88	870.84	866.26	1.94	1.52	24.89	16.36	342.21	958.3	2.91	1.91	4.58	4.58
Yellowstone County	B8	RM 327.29	46687.12	200-yr	2777.88	870.77	866.04	1.91	1.41	21.76	13.42	304.88	1048.99	3.05	1.88	4.73	4.73
Yellowstone County	B8	RM 327.23	46600.07	200-yr	2777.88	870.69	866.25	2.01	1.43	23.39	14.24	287.86	1052.46	3.03	1.85	4.84	4.84
Yellowstone County	B8	RM 327.16	46485.25	200-yr	2777.88	870.57	865.67	2.18	1.44	30.73	16.99	271.45	1118.71	3.11	1.72	4.9	4.9
Yellowstone County	B8	RM 327.08	46360.36	200-yr	2777.88	870.52	864.94	1.82	1.23	19.77	11.06	266.92	1139.27	3.54	1.98	5.58	5.58
Yellowstone County	B8	RM 327.00	46240.1	200-yr	2777.88	870.4	864.56	2.02	1.48	30.08	13.5	227.91	978.84	4.28	1.92	5.84	5.84
Yellowstone County	B8	RM 326.94	46091.8	200-yr	2777.88	870.29	864.04	2.17	1.53	22.41	10.49	223.67	909.4	4.27	2	6.25	6.25
Yellowstone County	B8	RM 326.88	46003.77	200-yr	2777.88	870.19	864.08	2.44	1.7	37.98	17.09	170.66	898.44	4.05	1.82	6.11	6.11
Yellowstone County	B8	RM 326.82	45901.15	200-yr	2777.88	870.11	864.18	2.34	1.67	33.19	17.93	201.73	950.71	3.24	1.75	5.93	5.93
Yellowstone County	B8	RM 326.78	45830.7	200-yr	2777.88	870.05	864.46	2.42	1.68	29.78	17.61	163.64	814.76	3.43	2.03	5.59	5.59
Yellowstone County	B8	RM 326.70	45707.6	200-yr	2777.88	869.99	864.66	2.08	1.52	20.95	12.48	264.54	1044.34	2.96	1.75	5.33	5.33
Yellowstone County	B8	RM 326.64	45589.72	200-yr	2777.88	869.9	864.92	1.74	1.59	48.49	35.94	431.01	925.31	2.55	1.89	4.98	4.98
Yellowstone County	B8	RM 326.55	45430.24	200-yr	2777.88	869.66	864.83	2.14	1.74	25.32	15.28	350.63	853.37	3.1	1.87	4.83	4.83
Yellowstone County	B8	RM 326.45	45281.78	200-yr	2777.88	869.55	864.12	2.16	1.81	27.36	17.71	340.76	765.34	3.11	2.01	5.43	5.43
Yellowstone County	B8	RM 326.41	45207.36	200-yr	2777.88	869.54	864.32	1.78	1.56	17.9	13.4	432.08	902.18	3.02	2.26	5.22	5.22
Yellowstone County	B8	RM 326.35	45106.57	200-yr	2777.88	869.5	864.43	1.58	1.31	13.82	9.92	483.02	1084.23	3.32	2.38	5.07	5.07
Yellowstone County	B8	RM 326.28	45022.31	200-yr	2777.88	869.52	864.61	1.15	0.99	6.66	4.81	548.28	1315.07	3.98	2.87	4.91	4.91
Yellowstone County	B8	RM 326.07	44588.61	200-yr	2777.88	869.31	862.39	1.71	1.43	14.09	10.06	711.56	1301.16	2.09	1.49	6.92	6.92
Yellowstone County	B8	RM 326.00	44481.07	200-yr	2777.88	869.25	861.24	1.65	1.41	13.16	9.7	749.88	1285.3	2.08	1.53	8.01	8.01
Yellowstone County	B8	RM 325.94	44379.11	200-yr	2777.88	869.19	861.85	1.31	1.2	28.71	23.15	828.57	1292.93	2.22	1.79	7.34	7.34
Yellowstone County	B8	RM 325.89	44304.17	200-yr	2777.88	869.09	863	1.27	1.19	27.83	23.72	845.37	1298.31	2.3	1.96	6.09	6.09
Yellowstone County	B8	RM 325.86	44262.16	200-yr	2777.88	869.05	863.76	1.35	1.21	10.04	8.53	823.72	1142.15	2.37	2.01	5.29	5.29
Yellowstone County	B8	RM 325.81	44176.46	200-yr	2777.88	869.01	863.1	1.33	1.17	10.1	8.91	846.47	1174.7	2.29	2.02	5.91	5.91
Yellowstone County	B8	RM 325.76	44089.5	200-yr	2777.88	868.97	862.66	1.19	1.09	23.46	19.62	851.37	1304.18	2.42	2.02	6.31	6.31
Yellowstone County	B8	RM 325.69	43989.97	200-yr	2777.88	868.89	862.55	1.35	1.04	9.88	6.69	625.32	1418.68	2.92	1.96	6.34	6.34
Yellowstone County	B8	RM 325.58	43809.68	200-yr	2777.88	868.81	862.61	1.32	1.03	25.81	15.87	476.8	1284.59	3.42	2.09	6.2	6.2
Yellowstone County	B8	RM 325.50	43680.96	200-yr	2777.88	868.67	862.6	1.5	1.18	30.91	17.46	434.18	1232.37	3.41	1.9	6.07	6.07
Yellowstone County	B8	RM 325.43	43556.76	200-yr	2777.88	868.55	860.89	1.52	1.2	33.31	18.55	387.09	1146.3	3.65	2.02	7.66	7.66
Yellowstone County	B8	RM 325.37	43461.41	200-yr	2777.88	868.49	861.36	1.42	1.16	28.65	15.73	345.34	1131.93	3.87	2.12	7.13	7.13
Yellowstone County	B8	RM 325.30	43343.13	200-yr	2777.88	868.37	861.56	1.76	1.27	26.99	12.82	267.1	1089.78	4.24	2	6.81	6.81
Yellowstone County	B8	RM 325.21	43210.67	200-yr	2777.88	868.21	861.34	2.19	1.48	29.6	11.81	204.76	994.69	4.77	1.88	6.87	6.87
Yellowstone County	B8	RM 325.13	43078.9	200-yr	2777.88	868.05	861.36	2.55	1.62	41.43	14.9	149.6	888.69	5.44	1.93	6.69	6.69
Yellowstone County	B8	RM 325.06	42966.54	200-yr	2777.88	867.67	860.78	3.46	2.14	74.63	23.64	123.24	800.49	5.19	1.62	6.89	6.89
Yellowstone County	B8	RM 324.99	42864.51	200-yr	2777.88	867.6	861.24	3.05	1.87	61.93	23.09	135.57	825.24	4.88	1.8	6.36	6.36
Yellowstone County	B8	RM 324.91	42729.7	200-yr	2777.88	867.37	860.76	3.16	1.94	68.05	24.26	133.36	799.12	5.08	1.8	6.61	6.61
Yellowstone County	B8	RM 324.81	42573.19	200-yr	2777.88	867.11	860.39	3.22	2.14	74.21	27.1	140.39	721.25	4.94	1.8	6.72	6.72
Yellowstone County	B8	RM 324.73	42451.12	200-yr	2777.88	867.01	861.59	2.88	2.02	53.16	23.54	179.41	725.15	4.31	1.9	5.42	5.42
Yellowstone County	B8	RM 324.65	42323.44	200-yr	2777.88	866.95	861.99	2.09	1.72	46.37	30.14	300.92	719.52	3.45	2.24	4.96	4.96
Yellowstone County	B8	RM 324.56	42178.25	200-yr	2777.88	866.8	861.76	2.08	1.66	21.45	17.26	404.18	786.67	2.64	2.12	5.04	5.04
Yellowstone County	B8	RM 324.48	42039.74	200-yr	2777.88	866.66	861.58	1.85	1.58	47.81	35.84	477.36	891.32	2.63	1.97	5.08	5.08
Yellowstone County	B8	RM 324.42	41946.09	200-yr	2777.88	866.55	861.04	1.62	1.36	33.5	23.33	478.13	950.88	3.09	2.15	5.51	5.51
Yellowstone County	B8	RM 324.34	41812.99	200-yr	2777.88	866.33	861.07	1.89	1.45	51.48	31.97	378.78	1022.75	3.02	1.87	5.26	5.26
Yellowstone County	B8	RM 324.28	41712.42	200-yr	2777.88	866.17	859.64	1.82	1.46	49.52	30.53	364.85	1062.37	2.91	1.79	6.53	6.53
Yellowstone County	B8	RM 324.20	41597.64	200-yr	2777.88	866.1	860.59	1.18	1.11	19.96	15.89	675.53	1074.49	2.94	2.34	5.51	5.51
Yellowstone County	B8	RM 324.16	41526.97	200-yr	2777.88	865.99	861.07	1.55	1.38	14.58	10.64	664.72	1158.2	2.45	1.78	4.92	4.92
Yellowstone County	B8	RM 324.10	41434.55	200-yr	2777.88	865.94	860.81	1.36	1.25	24.51	17.27	691.25	1169.1	2.71	1.9	5.13	5.13
Yellowstone County	B8	RM 324.04	41346.42	200-yr	2777.88	865.89	860.39	1.25	1.15	16.67	11.8	637.89	1191.14	2.88	2.03	5.5	5.5
Yellowstone County	B8	RM 323.97	41219.29	200-yr	2777.88	865.82	860.64	1.18	1.11	14.74	10.87	573.41	1142.21	2.99	2.2	5.18	5.18
Yellowstone County	B8	RM 323.83	40977.08	200-yr	2777.88	865.71	860.31	1.35	1.03	12.74	7.93	454.15	1231.9	3.51	2.18	5.4	5.4
Yellowstone County	B8	RM 323.71	40786.71	200-yr	2777.88	865.51	858.49	2.15	1.31	27.53	11.65	221.5	1185.02	4.25	1.79	7.02	7.02
Yellowstone County	B8	RM 323.60	40615.85	200-yr	2777.88	865.51	858.06	1.72	1.16	17.73	7.39	122.21	1136.94	5.14	2.11	7.45	7.45
Yellowstone County	B8	RM 323.55	40536.83	200-yr	2777.88	865.1	857.58	3.39	1.76	71.64	21.82	115.17	1127.28	4.64	1.4	7.52	7.52
Yellowstone County	B8	RM 323.49	40429.96	200-yr	2777.88	864.92	858.37	3.41	1.77	67.69	20.19	119.27	1122.25	4.72	1.4	6.55	6.55
Yellowstone County	B8	RM 323.41	40309.21	200-yr	2777.88	864.8	859.41	3.06	1.76	67.21	23.36	135.74	1066.4	4.28	1.48	5.39	5.39

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	200-yr	2777.88	864.71	859.58	2.56	1.54	35.53	15.91	175.88	1022.15	3.97	1.77	5.13	5.13
Yellowstone County	B8	RM 323.27	40082.34	200-yr	2777.88	864.58	859.66	2.61	1.57	42.12	19.54	188.89	997.21	3.83	1.77	4.92	4.92
Yellowstone County	B8	RM 323.21	39985.33	200-yr	2777.88	864.47	859.54	2.57	1.56	42.28	21.85	211.17	987	3.49	1.8	4.93	4.93
Yellowstone County	B8	RM 323.16	39899.29	200-yr	2777.88	864.43	859.55	1.94	1.37	35.86	22.18	276.01	1019.47	3.22	1.99	4.88	4.88
Yellowstone County	B8	RM 323.06	39735.77	200-yr	2777.88	864.19	858.56	1.8	1.48	39.93	21.96	311.52	1400.61	2.93	1.61	5.63	5.63
Yellowstone County	B8	RM 322.93	39531.81	200-yr	2777.88	863.99	859.35	1.69	1.25	26.72	13.99	322.23	1482.99	3.22	1.67	4.64	4.64
Yellowstone County	B8	RM 322.79	39301.41	200-yr	2777.88	863.75	858.62	2.1	1.33	28.19	13.43	220.82	1422.17	3.78	1.8	5.13	5.13
Yellowstone County	B8	RM 322.69	39142.64	200-yr	2777.88	863.63	857.47	2.27	1.41	24.99	11.99	200.75	1325.86	3.93	1.88	6.16	6.16
Yellowstone County	B8	RM 322.58	38982.22	200-yr	2777.88	863.05	856.56	3.93	2.52	93.04	35.78	116.27	734.37	3.93	1.5	6.49	6.49
Yellowstone County	B9	RM 322.51	38859.49	200-yr	2777.88	862.98	858.28	3.07	2.12	57.85	25.97	163.52	781.28	3.75	1.68	4.7	4.7
Yellowstone County	B9	RM 322.41	38696.02	200-yr	2777.88	862.9	857.62	1.78	1.65	37.43	25.49	457.6	970.92	2.63	1.78	5.28	5.28
Yellowstone County	B9	RM 322.34	38586.33	200-yr	2777.88	862.8	857.65	1.46	1.4	23.89	18.11	590.05	1064.61	2.53	1.91	5.16	5.16
Yellowstone County	B9	RM 322.23	38396.25	200-yr	2777.88	862.67	857.13	1.13	1.13	18.89	15.88	754.5	1142.32	2.57	2.15	5.55	5.55
Yellowstone County	B9	RM 322.13	38239.27	200-yr	2777.88	862.56	857.1	1.01	1.07	20.12	18.28	880.36	1170.65	2.44	2.21	5.46	5.46
Yellowstone County	B9	RM 322.03	38090.48	200-yr	2777.88	862.34	856.15	1.16	1.25	36.74	35.7	970.71	1136.43	2.01	1.95	6.19	6.19
Yellowstone County	B9	RM 321.91	37898.13	200-yr	2777.88	862.1	856.85	1.54	1.54	13.13	12.99	912.76	923.39	1.97	1.95	5.25	5.25
Yellowstone County	B9	RM 321.82	37758.36	200-yr	2777.88	862.05	856.34	1.37	1.36	8.34	8.07	832.71	864.38	2.44	2.36	5.72	5.72
Yellowstone County	B9	RM 321.70	37567.01	200-yr	2777.88	861.97	855.27	1.25	1.23	22.28	20.99	809.33	884.47	2.71	2.55	6.7	6.7
Yellowstone County	B9	RM 321.60	37414.63	200-yr	2777.88	861.9	854.48	1.07	1.05	11.11	9.87	755.63	877.85	3.39	3	7.43	7.43
Yellowstone County	B9	RM 321.48	37188.51	200-yr	2777.88	861.74	855.03	1.48	1.38	23.51	18.19	546.18	805.48	3.24	2.5	6.71	6.71
Yellowstone County	B9	RM 321.38	37016.94	200-yr	2777.88	861.59	854.75	1.64	1.42	23.96	15.51	471.9	934.87	3.24	2.09	6.84	6.84
Yellowstone County	B9	RM 321.28	36857.57	200-yr	2777.88	861.53	855.3	1.4	1.15	12.68	8.75	459.37	905.52	3.88	2.67	6.24	6.24
Yellowstone County	B9	RM 321.13	36652.19	200-yr	2777.88	861.42	854.69	1.65	1.25	25.82	17.89	274.03	1014.61	4.67	3.21	6.73	6.73
Yellowstone County	B9	RM 321.05	36531.25	200-yr	2777.88	861.19	855.36	2.38	1.71	44.1	22.72	190.29	972.56	5.17	2.63	5.83	5.83
Yellowstone County	B9	RM 321.00	36446.98	200-yr	2777.88	861.08	855.12	2.79	1.58	49.05	17.61	130.21	966.43	5.2	1.82	5.96	5.96
Yellowstone County	B9	RM 320.71	36404.1	200-yr	2777.88	860.68	855.12	3.71	2.43	63.19	27.52	133.15	999.83	4.72	2.02	5.57	5.57
Yellowstone County	B9	RM 320.62	36361.3	200-yr	2777.88	860.59	855.12	3.79	2.5	66.17	29.25	136.1	565.31	4.54	1.97	5.48	5.48
Yellowstone County	B9	RM 320.92	36318.56	200-yr	2777.88	860.5	855.12	3.84	2.58	109.78	49.55	139.04	558.35	4.35	1.93	5.38	5.38
Yellowstone County	B9	RM 320.44	36258.3	200-yr	2777.88	860.25	855.19	4.03	2.77	73.38	32.17	145.02	548.65	4.23	1.83	5.07	5.07
Yellowstone County	B9	RM 320.38	36198.1	200-yr	2777.88	860.18	855.26	3.87	2.73	68.49	32.36	151.01	513.28	4.26	1.98	4.92	4.92
Yellowstone County	B9	RM 320.80	36137.92	200-yr	2777.88	860.14	855.33	3.6	2.52	90.03	41.57	156.98	1427.23	4.3	1.95	4.81	4.81
Yellowstone County	B9	RM 320.71	35990.21	200-yr	2777.88	860.18	854.38	2.19	1.79	40.06	21.77	275.47	1492.12	4.23	2.28	5.8	5.8
Yellowstone County	B9	RM 320.54	35839.45	200-yr	2777.88	860.05	853.99	2.14	1.7	32.27	17.83	324.02	1532	3.64	1.99	6.06	6.06
Yellowstone County	B9	RM 320.44	35717.45	200-yr	2777.88	859.98	854.32	2.03	1.52	23.81	13.55	334.82	1350.27	3.48	1.96	5.65	5.65
Yellowstone County	B9	RM 320.62	35556.9	200-yr	2777.88	859.88	854.17	1.87	1.38	37.21	19.06	262.83	1561.02	3.66	1.85	5.71	5.71
Yellowstone County	B9	RM 320.38	35461.42	200-yr	2777.88	859.77	854.17	2.13	1.34	30.46	12.35	199.21	1547.53	4.47	1.78	5.6	5.6
Yellowstone County	B9	RM 320.32	35359.13	200-yr	2777.88	859.63	854.57	2.57	1.54	49.9	16.16	140.58	1544.18	4.76	1.5	5.06	5.06
Yellowstone County	B9	RM 320.25	35241.01	200-yr	2777.88	859.21	854.29	3.64	2.06	82.26	25.34	110.85	1519.97	4.49	1.34	4.91	4.91
Yellowstone County	B9	RM 320.20	35163.52	200-yr	2777.88	859.12	854.2	3.23	2.05	80.65	30.36	134.69	1421.02	3.98	1.46	4.91	4.91
Yellowstone County	B9	RM 320.14	35071.29	200-yr	2777.88	858.93	854.32	3.13	2.06	64.45	28.02	161.3	1443.77	3.75	1.6	4.61	4.61
Yellowstone County	B9	RM 320.01	34865.89	200-yr	2777.88	858.39	854.42	3.17	2.93	50.79	37.65	122.19	962.17	2.96	2.19	4.03	4.03
Yellowstone County		RM 319.44	34790	200-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	200-yr	2777.88	858.38	854.66	1.79	1.98	20.92	17.61	143.74	790.27	3.1	2.59	4.8	4.8
Yellowstone County	B9	RM 319.86	34625.68	200-yr	2777.88	858.33	854.6	1.7	1.9	23.85	18.85	153.74	1018.89	2.99	2.34	4.77	4.77
Yellowstone County	B9	RM 319.78	34508.06	200-yr	2777.88	858.21	854.51	2.49	2.07	41.48	26.35	111.07	1090.48	3.41	2.13	4.69	4.69
Yellowstone County	B9	RM 319.73	34426.63	200-yr	2777.88	857.84	854.69	3.63	2.09	69.01	48.24	156.77	970.55	2.85	1.98	4.37	4.37
Yellowstone County	B9	RM 319.66	34314.84	200-yr	2777.88	857.85	854.51	2.37	1.89	28.33	20.69	158.66	930.18	2.83	2.06	4.42	4.42
Yellowstone County	B9	RM 319.57	34163.05	200-yr	2777.88	857.71	853.93	2.31	1.89	25.67	18.31	198.21	736.04	2.91	2.07	4.37	4.37
Yellowstone County	B9	RM 319.44	33955.96	200-yr	2777.88	857.62	853.14	2.11	1.81	28.46	17.96	153.57	777.04	3.21	2	4.49	4.49
Yellowstone County	B9	RM 319.39	33872.4	200-yr	2777.88	857.57	852.65	2.23	1.7	24.63	14.81	137.96	863.3	3.36	1.98	4.92	4.92
Yellowstone County	B9	RM 319.34	33786.83	200-yr	2777.88	857.54	852.83	2.11	1.57	21.21	13.47	178.14	839.97	3.35	2.11	4.7	4.7
Yellowstone County	B9	RM 319.22	33580.15	200-yr	2777.88	857.49	851.79	2.15	1.37	20.08	10.38	80.63	890.61	4.56	2.28	5.7	5.7
Yellowstone County	B9	RM 319.17	33497.33	200-yr	2777.88	857.48	851.64	1.7	1.31	14.98	9	121.71	1045.11	3.77	2.22	5.84	5.84
Yellowstone County	B9	RM 319.09	33368.53	200-yr	2777.88	857.24	851.25	2.63	1.93	55.38	22.55	135.98	880.14	4.17	1.66	6	6
Yellowstone County	B9	RM 319.04	33287.21	200-yr	2777.88	857.02	851.49	3.15	2.07	77.8	26.84	113.26	950.8	4.55	1.52	5.53	5.53
Yellowstone County	B9	RM 318.96	33153.16	200-yr	2777.88	856.81	851.64	2.99	2.07	64.78	24.23	157.3	960.4	4.12	1.52	5.17	5.17
Yellowstone County	B9	RM 318.91	33065.54	200-yr	2777.88	856.73	851.86	2.6	1.98	61.13	25.71	189.76	962.88	3.8	1.58	4.87	4.87
Yellowstone County	B9	RM 318.82	32939.33	200-yr	2777.88	856.41	851.86	3.16	2.13	46.83	17.34	160.72	895.07	4.03	1.47	4.56	4.56
Yellowstone County	B9	RM 318.74	32833.24	200-yr	2777.88	856.49	851.86	2.02	1.52	26.28	12.67	185.42	953.51	4.03	1.92	4.63	4.63
Yellowstone County	B9	RM 318.62	32649.76	200-yr	2777.88	856.33	850.67	1.87	1.63	32.64	19.69	316.37	897.28	3.21	1.92	5.67	5.67
Yellowstone County	B9	RM 318.42	32315.28	200-yr	2777.88	855.93	850.15	2.24	1.93	27.68	15.09	347.98	1128.47	3.39	1.84	5.78	5.78

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	200-yr	2777.88	855.58	849.17	2.36	1.45	34.89	12.39	211.8	1384.77	4.43	1.55	6.41	6.41
Yellowstone County	B9	RM 317.97	31551.39	200-yr	2777.88	855.24	848.35	2.63	1.89	30.43	12.98	238.16	1036.54	4.05	1.71	6.89	6.89
Yellowstone County	B10	RM 317.87	31388.76	200-yr	2777.88	855.06	848.78	2.97	1.83	45.33	15.99	164.12	1085.2	4.48	1.55	6.28	6.28
Yellowstone County	B10	RM 317.78	31248.07	200-yr	2777.88	855.06	848.75	2.38	1.43	28.48	10.01	143.48	1340.92	5.18	1.78	6.31	6.31
Yellowstone County	B10	RM 317.70	31120.75	200-yr	2777.88	855.09	848.56	1.58	1.13	13.15	6.64	172.93	1507.2	4.58	2.27	6.53	6.53
Yellowstone County	B10	RM 317.61	30982.56	200-yr	2777.88	855	848.29	1.91	1.27	17.56	8.39	195.11	1504.4	4.34	2.04	6.71	6.71
Yellowstone County	B10	RM 317.53	30849.94	200-yr	2777.88	854.97	848.5	1.61	1.22	14.11	7.7	345.3	1490.14	3.79	2.05	6.47	6.47
Yellowstone County	B10	RM 317.45	30723.4	200-yr	2777.88	854.91	848.47	1.64	1.26	16.1	10.21	370.03	1487.27	3.36	2.12	6.44	6.44
Yellowstone County	B10	RM 317.37	30601.88	200-yr	2777.88	854.87	848.17	1.44	1.18	15.96	11.41	371.54	1443.17	3.34	2.37	6.7	6.7
Yellowstone County	B10	RM 317.30	30483.81	200-yr	2777.88	854.79	848.41	1.7	1.25	14.69	9.2	274.05	1387.61	4.05	2.5	6.38	6.38
Yellowstone County	B10	RM 317.19	30302.33	200-yr	2777.88	854.74	848.84	1.82	1.11	16.2	7.23	162.31	1297.65	5.39	2.36	5.9	5.9
Yellowstone County	B10	RM 317.05	30079.26	200-yr	2777.88	854.42	848.38	2.68	1.92	31.66	12.63	159.02	1023.03	5.47	2.15	6.04	6.04
Yellowstone County	B10	RM 316.93	29889.26	200-yr	2777.88	854.04	847.25	3.28	2.55	59.37	32.7	150.51	772.33	5.24	2.84	6.79	6.79
Yellowstone County	B10	RM 316.79	29668.4	200-yr	2777.88	853.88	847.89	3.01	2.14	51.08	19.93	146.89	615.22	5.51	2.11	5.99	5.99
Yellowstone County	B10	RM 316.66	29466.39	200-yr	2777.88	853.64	847.86	3.03	2.32	48.48	23.56	163.35	478.98	5.22	2.5	5.78	5.78
Yellowstone County	B10	RM 316.58	29329.04	200-yr	2777.88	853.54	847.74	2.86	2.01	57.64	29.25	174.67	625.92	4.86	2.44	5.8	5.8
Yellowstone County	B10	RM 316.51	29227.18	200-yr	2777.88	853.37	847.41	2.98	2.05	54.22	28.26	183.91	594.08	4.43	2.28	5.96	5.96
Yellowstone County	B10	RM 316.43	29091.4	200-yr	2777.88	853.23	847.41	2.67	1.97	56.92	35.85	240.25	604.1	3.74	2.33	5.82	5.82
Yellowstone County	B10	RM 316.33	28935.99	200-yr	2777.88	852.95	847.74	2.59	2.04	62.33	42.4	286.77	611.2	3.29	2.23	5.21	5.21
Yellowstone County	B10	RM 316.24	28786.65	200-yr	2777.88	852.75	847.5	2.12	1.88	51.42	37.21	356.21	650.51	3.14	2.27	5.26	5.26
Yellowstone County	B10	RM 316.14	28628.02	200-yr	2777.88	852.52	846.92	2.13	1.76	39.78	25.95	330.46	673.14	3.61	2.35	5.6	5.6
Yellowstone County	B10	RM 316.05	28475.44	200-yr	2777.88	852.25	846.73	2.42	1.93	52.08	28.47	295.19	747.08	3.55	1.93	5.52	5.52
Yellowstone County	B10	RM 315.97	28355.68	200-yr	2777.88	852.12	846.43	2.4	1.89	27.2	16.84	303.6	688.14	3.46	2.13	5.69	5.69
Yellowstone County	B10	RM 315.84	28140.65	200-yr	2777.88	851.76	846.58	2.93	2.16	71.39	31.18	180.3	765.43	3.89	1.68	5.18	5.18
Yellowstone County	B10	RM 315.71	27926.69	200-yr	2777.88	851.46	846.34	2.9	1.92	36.85	16.48	208.53	1027.38	3.49	1.54	5.13	5.13
Yellowstone County	B10	RM 315.58	27720.72	200-yr	2777.88	851.49	846.16	1.7	1.29	23.55	11.57	155.81	1119.88	4.01	1.92	5.33	5.33
Yellowstone County	B10	RM 315.44	27505.06	200-yr	2777.88	851.24	846.09	2.43	1.34	32.59	11.28	152.39	1309.85	4.66	1.58	5.15	5.15
Yellowstone County	B10	RM 315.30	27283.58	200-yr	2777.88	851.17	844.45	1.61	1.08	17.18	9.44	317.48	1462.23	3.24	1.76	6.72	6.72
Yellowstone County	B10	RM 315.18	27097.16	200-yr	2777.88	851.13	844.72	1.3	0.99	9.24	6.04	454.19	1547.78	2.81	1.82	6.41	6.41
Yellowstone County	B10	RM 315.01	26818.99	200-yr	2777.88	851	844.66	1.55	1.11	17.7	9.35	477.22	1613.14	2.96	1.55	6.34	6.34
Yellowstone County	B10	RM 314.85	26559.67	200-yr	2777.88	850.73	844.84	2.39	1.34	36.93	10.43	167.58	1553.58	4.85	1.33	5.88	5.88
Yellowstone County	B10	RM 314.69	26324.37	200-yr	2777.88	850.48	844.24	2.66	1.51	41.64	11.48	173.87	1480.95	4.61	1.24	6.24	6.24
Yellowstone County	B10	RM 314.57	26132.54	200-yr	2777.88	850.2	844.63	3	1.69	55	13.49	147.42	1368.3	5	1.2	5.57	5.57
Yellowstone County	B10	RM 314.46	25963.96	200-yr	2777.88	850.12	844.48	2.46	1.51	40.68	12.85	201.66	1342.64	4.4	1.37	5.64	5.64
Yellowstone County	B10	RM 314.35	25782.69	200-yr	2777.88	849.89	844.51	2.4	1.83	58.86	19.55	269.19	1220.72	3.79	1.24	5.38	5.38
Yellowstone County	B10	RM 314.24	25607.48	200-yr	2777.88	849.71	844.14	2.41	1.81	23.56	9.25	289.52	1097.13	3.64	1.4	5.56	5.56
Yellowstone County	B10	RM 314.15	25461.23	200-yr	2777.88	849.58	844.05	2.26	1.85	55.99	24.17	306.39	999.15	3.52	1.5	5.53	5.53
Yellowstone County	B10	RM 314.06	25326.45	200-yr	2777.88	849.54	843.63	1.7	1.37	14.19	8.1	455.22	1093.75	3.37	1.91	5.92	5.92
Yellowstone County	B10	RM 313.98	25189.4	200-yr	2777.88	849.5	843.05	1.43	1.2	22.6	15.83	559.69	1091.26	3.04	2.12	6.45	6.45
Yellowstone County	B10	RM 313.83	24942.42	200-yr	2777.88	849.34	843.2	1.47	1.27	15.88	8.56	476.74	1103.68	3.7	1.98	6.14	6.14
Yellowstone County	B10	RM 313.72	24768.08	200-yr	2777.88	849.24	842.35	1.69	1.25	16.76	7.93	330.48	1121.2	4.24	1.98	6.9	6.9
Yellowstone County	B10	RM 313.66	24671.51	200-yr	2777.88	849.17	843.14	1.89	1.32	18.81	8.91	286.85	1036.07	4.32	2.02	6.03	6.03
Yellowstone County	B10	RM 313.57	24513.04	200-yr	2777.88	849.1	842.47	1.87	1.36	19.4	10.36	303.74	928.05	4.16	2.2	6.63	6.63
Yellowstone County	B10	RM 313.47	24364.02	200-yr	2777.88	849	841.55	1.95	1.48	20.55	10.59	283.74	811.21	4.55	2.31	7.45	7.45
Yellowstone County	B10	RM 313.33	24143.26	200-yr	2777.88	848.7	842.65	2.64	1.87	54.67	22.29	187.53	751.51	4.93	1.98	6.05	6.05
Yellowstone County	B10	RM 313.18	23899.74	200-yr	2777.88	847.97	842.19	3.6	2.64	111.89	45.27	166.14	629.47	4.21	1.67	5.78	5.78
Yellowstone County	B10	RM 313.07	23728.15	200-yr	2777.88	847.53	842.62	3.69	2.94	73.51	27.64	164.01	576.39	4.41	1.64	4.91	4.91
Yellowstone County	B10	RM 312.98	23590.93	200-yr	2777.88	847.57	842.5	2.85	2.26	36.58	17.62	201.2	611.77	4.21	2.01	5.07	5.07
Yellowstone County	B10	RM 312.90	23455.11	200-yr	2777.88	847.49	842.38	2.54	2.1	48.33	24.57	204.15	774.88	4.33	2.19	5.11	5.11
Yellowstone County	B10	RM 312.75	23227.05	200-yr	2777.88	847.27	841.71	2.52	1.85	35.99	18.06	224.95	772.92	3.92	1.95	5.57	5.57
Yellowstone County	B10	RM 312.65	23058.61	200-yr	2777.88	847.17	841.61	2.21	1.7	29.6	17.97	273.98	772.04	3.51	2.12	5.56	5.56
Yellowstone County	B10	RM 312.53	22873.59	200-yr	2777.88	847.09	841.37	2.02	1.47	22.63	12.57	239.34	760.75	4.5	2.48	5.72	5.72
Yellowstone County	B10	RM 312.49	22797.96	200-yr	2777.88	846.98	841.34	2.37	1.64	30.54	15.79	205.66	745.22	4.45	2.28	5.64	5.64
Yellowstone County	B10	RM 312.39	22646.67	200-yr	2777.88	846.84	840.85	2.69	1.76	45.19	22.73	152.43	756.09	4.22	2.09	5.99	5.99
Yellowstone County	B10	RM 312.33	22536.68	200-yr	2777.88	846.64	840.82	3.02	1.89	53.56	23.94	139.06	758.17	4.42	1.94	5.82	5.82
Yellowstone County	B10	RM 312.22	22360.55	200-yr	2777.88	846.59	840.91	2.42	1.71	37.82	16.02	128.68	807.96	4.83	2.01	5.68	5.68
Yellowstone County	B10	RM 312.13	22230.65	200-yr	2777.88	846.54	840.94	1.87	1.51	23.03	13.71	350.72	824.43	3.77	2.23	5.6	5.6
Yellowstone County	B10	RM 312.04	22082.88	200-yr	2777.88	846.4	840.82	2.03	1.63	28.48	17.25	346.94	804.48	3.52	2.12	5.58	5.58
Yellowstone County	B10	RM 311.95	21934.61	200-yr	2777.88	846.25	840.79	2.11	1.69	29.36	17.88	350.23	1013.41	3.51	2.13	5.46	5.46
Yellowstone County	B10	RM 311.89	21840.24	200-yr	2777.88	846.18	840.76	2.07	1.7	33.25	21.27	325.27	936.89	3.85	2.45	5.42	5.42
Yellowstone County	B10	RM 311.77	21651.91	200-yr	2777.88	846.02	840.18	2.19	1.62	30.95	13.23	226.3	939.58	4.94	2.09	5.84	5.84

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	200-yr	2777.88	845.85	839.85	2.68	1.66	43.86	14.99	150.88	1127.34	5.37	1.78	6	6
Yellowstone County	B10	RM 311.58	21350.77	200-yr	2777.88	845.74	839.63	2.49	1.52	38.42	14.28	171.57	1308.51	4.77	1.74	6.1	6.1
Yellowstone County	B10	RM 311.48	21191.11	200-yr	2777.88	845.65	839.42	2.18	1.36	26.45	10.73	228.87	1223.22	4.16	1.67	6.23	6.23
Yellowstone County	B10	RM 311.37	21010.53	200-yr	2777.88	845.56	839.18	1.88	1.32	22.45	13.11	336.85	1302.06	3.58	2.08	6.39	6.39
Yellowstone County	B10	RM 311.27	20852.82	200-yr	2777.88	845.47	838.96	1.84	1.25	22.02	12.23	322.7	1235.79	3.69	2.03	6.51	6.51
Yellowstone County	B10	RM 311.19	20716.8	200-yr	2777.88	845.41	838.84	1.87	1.18	21.64	10.05	247.96	1200.07	4.61	2.11	6.57	6.57
Yellowstone County	B10	RM 311.09	20559.11	200-yr	2777.88	845.09	839.14	2.96	1.62	48.14	16.78	144.57	1086.33	5.02	1.72	5.94	5.94
Yellowstone County	B10	RM 310.97	20364.78	200-yr	2777.88	844.96	839.45	2.62	1.53	40.94	15.05	173.47	1039.24	4.83	1.75	5.51	5.51
Yellowstone County	B10	RM 310.87	20211.96	200-yr	2777.88	844.83	839.02	2.57	1.56	38.35	14	190.23	1066.91	4.65	1.67	5.81	5.81
Yellowstone County	B10	RM 310.76	20019.23	200-yr	2777.88	844.35	839.18	3.49	2.1	65	18.87	144.44	989.68	4.73	1.34	5.18	5.18
Yellowstone County	B11	RM 310.67	19877.9	200-yr	2777.88	844.29	839.11	2.84	1.75	62.03	20.56	174.84	1099.04	4.42	1.44	5.18	5.18
Yellowstone County	B11	RM 310.57	19727.96	200-yr	2777.88	844.11	839.08	2.67	1.63	57.63	20.07	195.83	1158.49	4.26	1.47	5.03	5.03
Yellowstone County	B11	RM 310.48	19578.86	200-yr	2777.88	843.95	838.96	2.53	1.51	44.77	16.09	210.72	1238.7	4.16	1.48	4.99	4.99
Yellowstone County	B11	RM 310.39	19437.53	200-yr	2777.88	843.89	838.54	2.21	1.38	22.28	9.48	264.94	1242.06	3.85	1.62	5.35	5.35
Yellowstone County	B11	RM 310.31	19317.45	200-yr	2777.88	843.82	838.23	2.12	1.47	20.72	10.9	357.08	1135.74	3.18	1.66	5.58	5.58
Yellowstone County	B11	RM 310.24	19187.47	200-yr	2777.88	843.76	838.23	1.61	1.31	37.35	22.93	461.89	1150.38	3.02	1.84	5.53	5.53
Yellowstone County	B11	RM 310.16	19069.04	200-yr	2777.88	843.62	837.93	1.51	1.34	35.37	23.26	569.09	1109.36	2.85	1.87	5.7	5.7
Yellowstone County	B11	RM 310.09	18955.28	200-yr	2777.88	843.53	837.93	1.58	1.26	12.74	9.48	554.98	1060.31	2.8	2.07	5.61	5.61
Yellowstone County	B11	RM 309.97	18765.62	200-yr	2777.88	843.47	837.59	1.22	1.05	16.24	10.95	601.54	1130.11	3.49	2.35	5.88	5.88
Yellowstone County	B11	RM 309.90	18643.48	200-yr	2777.88	843.4	837.5	1.4	1.16	9.71	6.59	625.52	1199.73	2.95	1.99	5.9	5.9
Yellowstone County	B11	RM 309.82	18525.48	200-yr	2777.88	843.35	837.5	1.26	1.18	24.57	20.46	698.08	1027	2.77	2.3	5.85	5.85
Yellowstone County	B11	RM 309.73	18379.74	200-yr	2777.88	843.24	837.35	1.13	1.08	18.67	15.83	803.09	1047.76	2.91	2.46	5.9	5.9
Yellowstone County	B11	RM 309.65	18253.83	200-yr	2777.88	843.19	837.38	0.98	0.95	12.6	11.09	876.43	1055.79	3.17	2.78	5.81	5.81
Yellowstone County	B11	RM 309.52	18029.98	200-yr	2777.88	843.05	836.68	1.15	1.12	18.25	15.55	816.46	1000.3	2.91	2.47	6.38	6.38
Yellowstone County	B11	RM 309.39	17824.11	200-yr	2777.88	842.98	836.74	1.01	1	11.05	9.38	766.99	911.57	3.59	3.05	6.24	6.24
Yellowstone County	B11	RM 309.22	17557.23	200-yr	2777.88	842.79	836.07	1.7	1.46	16.52	9.52	335.2	718.75	4.64	2.65	6.72	6.72
Yellowstone County	B11	RM 309.06	17331.95	200-yr	2777.88	842.53	835.79	2.37	1.74	59.75	26.01	191.59	709.71	5.27	2.24	6.74	6.74
Yellowstone County	B11	RM 308.94	17142.36	200-yr	2777.88	841.7	835.4	4.06	2.88	101.14	41.09	121.56	503.97	4.85	1.91	6.3	6.3
Yellowstone County	B11	RM 308.83	16971.41	200-yr	2777.88	841.69	836.04	2.89	2.19	56.9	27.93	159.52	519.72	5.05	2.45	5.65	5.65
Yellowstone County	B11	RM 308.71	16778.65	200-yr	2777.88	841.63	835.91	2.27	1.78	23.28	13.64	251.14	622.56	4.31	2.51	5.72	5.72
Yellowstone County	B11	RM 308.62	16631.4	200-yr	2777.88	841.55	835.85	2.01	1.6	51.86	32.41	300.08	746.97	3.74	2.32	5.69	5.69
Yellowstone County	B11	RM 308.55	16518.64	200-yr	2777.88	841.39	835.85	1.93	1.58	47.42	30.41	368.88	846.85	3.24	2.07	5.53	5.53
Yellowstone County	B11	RM 308.43	16328.3	200-yr	2777.88	841.15	834.51	1.67	1.41	40.23	26.79	420.94	928.23	3.2	2.12	6.64	6.64
Yellowstone County	B11	RM 308.35	16192.95	200-yr	2777.88	841.02	834.88	1.62	1.29	25.89	16.47	402.97	974.59	3.5	2.21	6.14	6.14
Yellowstone County	B11	RM 308.24	16015.46	200-yr	2777.88	840.92	834.63	1.58	1.17	15.58	9.85	363.15	959.01	3.93	2.47	6.29	6.29
Yellowstone County	B11	RM 308.12	15826.82	200-yr	2777.88	840.86	834.63	1.5	1.16	13.61	8.85	382.83	916.49	4.04	2.61	6.22	6.22
Yellowstone County	B11	RM 308.02	15675.58	200-yr	2777.88	840.77	834.76	1.69	1.24	13.44	7.24	304.17	869.58	4.81	2.57	6.02	6.02
Yellowstone County	B11	RM 307.88	15434.86	200-yr	2777.88	840.42	834.45	3.15	1.89	59.57	22.91	113.52	781.31	5.04	1.88	5.97	5.97
Yellowstone County	B11	RM 307.77	15261.75	200-yr	2777.88	839.97	834.45	3.61	2.42	89.84	35.46	128.77	677.56	4.4	1.69	5.52	5.52
Yellowstone County	B11	RM 307.68	15125.28	200-yr	2777.88	839.8	834.85	3.06	2.15	61.72	28.94	158.94	630.71	4.43	2.05	4.95	4.95
Yellowstone County	B11	RM 307.60	14980.1	200-yr	2777.88	839.76	834.36	2.24	1.87	27.74	15.77	274.35	618.73	4.27	2.4	5.4	5.4
Yellowstone County	B11	RM 307.52	14873.7	200-yr	2777.88	839.56	834.12	2.65	2.15	41.62	24.02	254.04	590.8	3.83	2.19	5.45	5.45
Yellowstone County	B11	RM 307.46	14779.11	200-yr	2777.88	839.44	833.6	2.52	2.13	72.38	47.61	313.52	620.91	3.21	2.1	5.84	5.84
Yellowstone County	B11	RM 307.39	14664.34	200-yr	2777.88	839.28	833.63	2.47	2.05	25.52	18.31	365.52	664.62	2.86	2.04	5.65	5.65
Yellowstone County	B11	RM 307.30	14517.89	200-yr	2777.88	839.12	833.81	2.24	2	59.49	44.95	407.44	696.32	2.65	1.99	5.31	5.31
Yellowstone County	B11	RM 307.22	14385.45	200-yr	2777.88	838.86	833.87	2.18	1.93	46.5	34.26	396.39	698.7	2.81	2.06	4.99	4.99
Yellowstone County	B11	RM 307.14	14262.57	200-yr	2777.88	838.72	833.51	2.09	1.77	34.15	21.8	334.95	731.84	3.38	2.15	5.21	5.21
Yellowstone County	B11	RM 307.08	14166.72	200-yr	2777.88	838.66	833.11	1.95	1.63	21.16	13.61	348.63	754.17	3.54	2.26	5.55	5.55
Yellowstone County	B11	RM 307.01	14050.92	200-yr	2777.88	838.57	832.65	2.01	1.68	19.18	12.93	376.22	785.83	3.14	2.11	5.92	5.92
Yellowstone County	B11	RM 306.95	13949.23	200-yr	2777.88	838.46	832.35	2.19	1.7	28.19	19.43	324.62	759.25	3.15	2.16	6.12	6.12
Yellowstone County	B11	RM 306.90	13869.87	200-yr	2777.88	838.35	832.56	2.29	1.77	34.36	22.76	350.3	776.94	3.08	2.02	5.79	5.79
Yellowstone County	B11	RM 306.82	13726.64	200-yr	2777.88	838.23	832.62	2.1	1.65	28.24	18.22	361.85	817.89	3.21	2.06	5.61	5.61
Yellowstone County	B11	RM 306.72	13574.53	200-yr	2777.88	838.09	831.8	2.33	1.61	31.92	16.48	222.2	879.22	3.86	1.96	6.29	6.29
Yellowstone County	B11	RM 306.62	13414.11	200-yr	2777.88	837.93	832.77	2.42	1.76	43.96	21.42	215.2	870.1	3.75	1.81	5.16	5.16
Yellowstone County	B11	RM 306.52	13251.36	200-yr	2777.88	837.52	832.87	3.25	2.06	57.6	20.83	152.64	899.26	4.22	1.5	4.66	4.66
Yellowstone County	B11	RM 306.42	13099.73	200-yr	2777.88	837.18	832.74	3.68	2.4	69.98	23.52	135.71	894.37	3.95	1.29	4.43	4.43
Yellowstone County	B11	RM 306.34	12958.96	200-yr	2777.88	837.16	832.84	2.52	1.79	39.7	17.57	236.52	1069.66	3.52	1.54	4.32	4.32
Yellowstone County	B11	RM 306.25	12825.95	200-yr	2777.88	837	832.35	2.44	1.77	37.31	17.9	312.85	1207.56	2.9	1.38	4.66	4.66
Yellowstone County	B11	RM 306.16	12673.7	200-yr	2777.88	836.81	832.41	2.3	1.73	37.26	19.66	362.17	1185.65	2.58	1.35	4.4	4.4
Yellowstone County	B11	RM 306.11	12592.39	200-yr	2777.88	836.67	832.17	2.39	1.81	48	25.63	318.91	1050.94	2.76	1.46	4.51	4.51
Yellowstone County	B11	RM 306.03	12457.47	200-yr	2777.88	836.52	831.25	2.17	1.66	29.88	18.08	370.2	1049.22	2.66	1.59	5.27	5.27

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	200-yr	2777.88	836.33	831.25	2.28	1.82	37.02	20.25	359.22	1106.53	2.54	1.38	5.08	5.08
Yellowstone County	B11	RM 305.84	12159.82	200-yr	2777.88	836.1	831.1	2.44	1.93	38.5	17.82	268.22	1035.7	3.04	1.39	5	5
Yellowstone County	B11	RM 305.74	11989.73	200-yr	2777.88	835.82	830.64	2.69	1.93	51.42	17.18	197.57	1131.1	3.87	1.27	5.18	5.18
Yellowstone County	B11	RM 305.67	11883.31	200-yr	2777.88	835.65	830.43	2.91	1.89	50.22	15.22	162.93	1241.17	4	1.19	5.23	5.23
Yellowstone County	B11	RM 305.60	11764.11	200-yr	2777.88	835.7	830.18	1.71	1.39	16.23	7.98	168.35	1367.82	3.33	1.61	5.52	5.52
Yellowstone County	B11	RM 305.52	11651.48	200-yr	2777.88	835.56	830.18	2.27	1.51	28.4	10.97	151.74	1384.8	3.51	1.33	5.38	5.38
Yellowstone County	B11	RM 305.44	11514.64	200-yr	2777.88	835.5	830.43	1.9	1.27	16.91	6.96	158.15	1473.14	3.65	1.48	5.07	5.07
Yellowstone County	B11	RM 305.40	11441.77	200-yr	2777.88	835.38	830.61	1.98	1.49	17.11	7.74	239	1738.47	2.96	1.33	4.77	4.77
Yellowstone County	B11	RM 305.32	11312.15	200-yr	2777.88	835.34	830.61	1.88	1.26	21.49	9.55	167.71	1693.03	3.43	1.51	4.73	4.73
Yellowstone County	B11	RM 305.24	11186.22	200-yr	2777.88	835.32	830.43	1.23	0.95	10.09	6.14	156.67	1621.19	3.41	2.04	4.9	4.9
Yellowstone County	B11	RM 305.06	10905.09	200-yr	2777.88	835.26	830.15	1.18	0.92	6.88	5.14	302.98	1526.32	3.06	2.27	5.11	5.11
Yellowstone County	B11	RM 304.71	10460.6	200-yr	2777.88	835.14	828.96	1.35	1.18	11.56	9.07	398.02	1207.25	3.25	2.54	6.18	6.18
Yellowstone County	B11	RM 304.62	10332.33	200-yr	2777.88	835.12	829.09	1.3	1.11	9.46	6.09	207.07	1273.45	4.61	2.92	6.03	6.03
Yellowstone County	B11	RM 304.50	10132.63	200-yr	2777.88	834.85	829.09	2.52	2.03	51.56	23.42	123.05	1071.29	5.03	2.22	5.76	5.76
Yellowstone County	B11	RM 304.42	10011.11	200-yr	2777.88	834.77	829.18	2.18	1.82	38.01	17.64	152.53	1050.89	4.76	2.17	5.59	5.59
Yellowstone County	B11	RM 304.34	9873.393	200-yr	2777.88	834.61	828.78	2.25	1.87	25.36	14.52	263.04	1021.16	4.4	2.5	5.83	5.83
Yellowstone County	B11	RM 304.25	9735.197	200-yr	2777.88	834.42	828.39	2.65	2.03	45.84	21.78	200.18	717.93	4.76	2.23	6.03	6.03
Yellowstone County	B11	RM 304.18	9615.178	200-yr	2777.88	834.3	828.54	2.66	2.08	32.19	17.06	216.57	957.7	4.51	2.36	5.76	5.76
Yellowstone County	B11	RM 304.09	9478.266	200-yr	2777.88	834.12	828.6	2.87	2.23	49.97	22.91	183.1	1031.23	4.89	2.21	5.52	5.52
Yellowstone County	B11	RM 304.00	9326.206	200-yr	2777.88	834.03	828.39	2.61	1.87	44.23	18.74	190.99	1102.32	4.99	2.09	5.64	5.64
Yellowstone County	B11	RM 303.91	9177.479	200-yr	2777.88	833.99	828.14	2.17	1.47	33.82	15.94	215.99	1309.85	4.79	2.23	5.84	5.84
Yellowstone County	B11	RM 303.78	8973.508	200-yr	2777.88	833.73	827.93	2.64	1.65	43.22	14.69	164.36	1092.11	5.13	1.7	5.8	5.8
Yellowstone County	B11	RM 303.65	8773.522	200-yr	2777.88	833.55	827.9	2.6	1.68	49.27	16.95	170.84	1007.99	4.87	1.64	5.65	5.65
Yellowstone County	B11	RM 303.55	8608.195	200-yr	2777.88	833.44	827.65	2.35	1.63	25.22	10.44	248.46	1056.77	4.05	1.65	5.79	5.79
Yellowstone County	B11	RM 303.43	8422.329	200-yr	2777.88	833.39	827.87	1.72	1.38	31.62	15.16	330.22	1163.47	3.64	1.73	5.52	5.52
Yellowstone County	B11	RM 303.34	8276.308	200-yr	2777.88	833.33	826.92	1.58	1.19	13.56	6.24	325.32	1191.83	4.31	1.96	6.41	6.41
Yellowstone County	B11	RM 303.26	8138.725	200-yr	2777.88	833.18	826.98	1.99	1.59	42.55	17.63	305.41	1105.7	3.85	1.58	6.2	6.2
Yellowstone County	B11	RM 303.18	8018.762	200-yr	2777.88	833.04	826.22	1.97	1.64	44.83	22.44	308.83	899.07	3.81	1.88	6.82	6.82
Yellowstone County	B11	RM 303.09	7876.674	200-yr	2777.88	832.89	825.43	1.87	1.58	39.08	21.27	338.06	890.5	3.66	1.97	7.46	7.46
Yellowstone County	B11	RM 302.99	7711.603	200-yr	2777.88	832.77	826.22	1.62	1.39	26.3	16.68	336.71	812.61	3.91	2.46	6.55	6.55
Yellowstone County	B11	RM 302.89	7556.419	200-yr	2777.88	832.6	825.73	1.92	1.64	34.11	21.14	290.36	656.28	4.23	2.59	6.87	6.87
Yellowstone County	B11	RM 302.81	7423.411	200-yr	2777.88	832.42	825.86	2.26	1.86	41.57	22.6	221.32	581.9	4.79	2.57	6.56	6.56
Yellowstone County	B11	RM 302.70	7257.14	200-yr	2777.88	832.28	826.01	2.35	1.83	29.04	14.56	184.02	541.51	5.66	2.81	6.28	6.28
Yellowstone County	B12	RM 302.56	7050.708	200-yr	2777.88	831.52	825.25	3.71	3.71	74.99	74.99	168.34	486.73	4.54	4.54	6.27	6.27
Yellowstone County		RM 300.55	7034	200-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	200-yr	2777.88	831.4	825.95	3.67	3.66	71.28	68.57	169.96	329.2	4.78	4.6	5.45	5.45
Yellowstone County	B12	RM 302.49	6918.549	200-yr	2777.88	831.3	825.92	3.46	3.23	67.04	49.77	170.36	579.51	4.64	3.42	5.38	5.38
Yellowstone County	B12	RM 302.41	6794.522	200-yr	2777.88	831.25	825.64	3.18	2.71	44.08	27.07	161.6	764.56	4.57	2.78	5.61	5.61
Yellowstone County	B12	RM 302.34	6674.634	200-yr	2777.88	831.15	825.76	2.9	2.39	58.87	36.7	214.69	911.19	3.9	2.42	5.39	5.39
Yellowstone County	B12	RM 302.22	6485.378	200-yr	2777.88	831.07	825.76	2.17	1.75	29.47	19.85	235.89	841.75	3.71	2.48	5.31	5.31
Yellowstone County	B12	RM 302.14	6360.047	200-yr	2777.88	830.84	825.76	2.75	1.93	46.77	22.05	178.16	817.1	4.03	1.88	5.08	5.08
Yellowstone County	B12	RM 302.08	6267.13	200-yr	2777.88	830.76	825.79	2.51	1.94	28.77	15.18	265.5	791.52	3.44	1.81	4.97	4.97
Yellowstone County	B12	RM 301.98	6100.949	200-yr	2777.88	830.7	825.34	2.08	1.65	28.66	14.92	257.2	797	4.09	2.11	5.36	5.36
Yellowstone County	B12	RM 301.88	5944.005	200-yr	2777.88	830.6	824.7	2.01	1.58	24.11	14.62	307.5	805.52	3.69	2.22	5.9	5.9
Yellowstone County	B12	RM 301.79	5801.18	200-yr	2777.88	830.53	824.36	1.87	1.57	16.73	11.74	369.92	736.33	3.45	2.41	6.17	6.17
Yellowstone County	B12	RM 301.72	5685.105	200-yr	2777.88	830.46	824.85	1.95	1.61	23.32	15.73	328.47	713.38	3.6	2.42	5.61	5.61
Yellowstone County	B12	RM 301.65	5569.191	200-yr	2777.88	830.33	824.61	2.15	1.75	30.96	20.26	311.48	715.2	3.41	2.22	5.73	5.73
Yellowstone County	B12	RM 301.59	5465.51	200-yr	2777.88	830.22	824.42	2.19	1.84	34.17	21.84	318.53	719.84	3.3	2.1	5.8	5.8
Yellowstone County	B12	RM 301.53	5366.723	200-yr	2777.88	830.14	824.12	1.96	1.74	38.09	25.86	364.63	741.25	3.19	2.15	6.02	6.02
Yellowstone County	B12	RM 301.47	5270.902	200-yr	2777.88	830.03	824.12	1.97	1.73	37.17	24.16	353.58	754.89	3.29	2.12	5.91	5.91
Yellowstone County	B12	RM 301.39	5140.04	200-yr	2777.88	829.97	824.36	1.61	1.39	21.88	15.74	345.85	792.64	3.79	2.71	5.61	5.61
Yellowstone County	B12	RM 301.33	5044.575	200-yr	2777.88	829.88	824.12	1.83	1.51	21.22	12.65	331.22	837.24	3.93	2.33	5.76	5.76
Yellowstone County	B12	RM 301.24	4906.408	200-yr	2777.88	829.77	823.87	2.01	1.64	23.09	13.83	313.82	856.51	3.79	2.26	5.89	5.89
Yellowstone County	B12	RM 301.18	4802.631	200-yr	2777.88	829.66	823.17	2.17	1.76	27.77	17.79	313.86	891.45	3.38	2.15	6.49	6.49
Yellowstone County	B12	RM 301.12	4698.913	200-yr	2777.88	829.51	823.81	2.36	2	32.08	20.84	309.14	819.27	3.56	2.3	5.7	5.7
Yellowstone County	B12	RM 301.07	4611.142	200-yr	2777.88	829.45	824	2.25	1.86	28.16	16.81	286.06	766.28	3.96	2.35	5.46	5.46
Yellowstone County	B12	RM 301.02	4531.484	200-yr	2777.88	829.36	823.81	2.4	1.97	25.48	15.03	261	676.65	4.08	2.39	5.55	5.55
Yellowstone County	B12	RM 300.97	4453.011	200-yr	2777.88	829.15	823.9	3	2.44	38.62	20.82	196.12	501.72	4.25	2.27	5.24	5.24
Yellowstone County	B12	RM 300.89	4332.618	200-yr	2777.88	828.99	823.66	3.07	2.59	60.3	31.5	198.89	517.87	3.98	2.07	5.32	5.32
Yellowstone County	B12	RM 300.83	4232.362	200-yr	2777.88	828.8	823.78	3.22	2.65	63.43	34.06	175.01	502.57	3.91	2.08	5.02	5.02
Yellowstone County	B12	RM 300.77	4151.049	200-yr	2777.88	828.68	823.75	3.07	2.63	66.22	42.22	176.41	413.78	4.05	2.55	4.93	4.93

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	200-yr	2777.88	828.59	823.63	2.61	2.06	32.09	19.07	206.18	637	4.22	2.49	4.96	4.96
Yellowstone County	B12	RM 300.55	3793.957	200-yr	2777.88	828.47	822.93	2.16	1.73	32.54	20.7	263.47	767.63	3.63	2.29	5.54	5.54
Yellowstone County	B12	RM 300.45	3633.035	200-yr	2777.88	828.32	822.53	1.75	1.65	36.76	26.94	335.99	732.72	3.15	2.3	5.79	5.79
Yellowstone County	B12	RM 300.35	3461.833	200-yr	2777.88	828.04	822.66	2.26	1.71	23.64	16.63	389.33	826.18	2.8	1.97	5.38	5.38
Yellowstone County	B12	RM 300.24	3286.175	200-yr	2777.88	827.82	822.47	2.14	1.81	54.27	40.11	421.27	782.71	2.67	1.96	5.35	5.35
Yellowstone County	B12	RM 300.15	3141.724	200-yr	2777.88	827.53	822.47	2.05	1.83	49.58	39.2	481.67	740.31	2.6	2.05	5.06	5.06
Yellowstone County	B12	RM 300.10	3054.752	200-yr	2777.88	827.42	822.35	2.13	1.81	19.36	16.2	462.66	743.7	2.48	2.07	5.07	5.07
Yellowstone County	B12	RM 300.00	2887.728	200-yr	2777.88	827.23	821.22	2.01	1.85	51.09	36.8	467.25	1099.77	2.59	1.86	6	6
Yellowstone County	B12	RM 299.91	2736.431	200-yr	2777.88	827.06	821.5	2	1.73	25.06	14.15	350.2	1215.87	3.01	1.69	5.56	5.56
Yellowstone County	B12	RM 299.83	2614.069	200-yr	2777.88	826.91	821.41	1.99	1.85	36.69	21.35	388.69	1192.11	2.58	1.49	5.5	5.5
Yellowstone County	B12	RM 299.72	2484.158	200-yr	2777.88	826.72	820.89	2.07	1.73	36.55	18.53	423.11	1120.45	3	1.51	5.83	5.83
Yellowstone County	B12	RM 299.59	2312.328	200-yr	2777.88	826.44	821.13	2.65	1.87	37.07	16.7	221.2	1134.15	3.58	1.59	5.31	5.31
Yellowstone County	B12	RM 299.48	2160.343	200-yr	2777.88	826.19	821.13	3.18	1.96	45.27	16.64	138.95	1094.39	4.16	1.5	5.06	5.06
Yellowstone County	B12	RM 299.38	1995.229	200-yr	2777.88	826.11	821.13	2.48	1.67	58.79	23.1	139.84	1286.8	3.98	1.54	4.98	4.98
Yellowstone County	B12	RM 299.31	1874.433	200-yr	2777.88	825.76	821.22	3.18	2	45.11	16.41	150.46	1234.1	3.71	1.33	4.54	4.54
Yellowstone County	B12	RM 299.22	1738.666	200-yr	2777.88	825.6	821.16	3.13	1.8	53.57	18.44	129.2	1258.14	4.07	1.37	4.44	4.44
Yellowstone County	B12	RM 299.15	1613.992	200-yr	2777.88	825.57	820.95	2.4	1.31	31.04	13.81	154.73	1362.98	3.92	1.72	4.62	4.62
Yellowstone County	B12	RM 299.06	1473.748	200-yr	2777.88	825.53	820.64	2.07	1.18	27.73	11.4	116.53	1346.9	4.36	1.74	4.89	4.89
Yellowstone County	B12	RM 298.99	1360.532	200-yr	2777.88	825.47	820.46	1.94	1.25	30.61	12.33	103.4	1357.27	4.28	1.66	5.01	5.01
Yellowstone County	B12	RM 298.93	1269.876	200-yr	2777.88	825.41	820.46	1.89	1.24	31.1	13	109.37	1344.93	4.11	1.66	4.95	4.95
Yellowstone County	B12	RM 298.88	1195.725	200-yr	2777.88	825.33	820.43	2.01	1.25	32.17	13.97	119.73	1322.41	4.01	1.68	4.9	4.9
Yellowstone County	B12	RM 298.82	1096.849	200-yr	2777.88	825.13	820.58	2.68	1.42	37.05	16.61	155.99	1294.79	3.42	1.51	4.55	4.55
Yellowstone County	B12	RM 298.77	1018.392	200-yr	2777.88	825.07	820.4	2.35	1.36	33.27	15.75	185.54	1287	3.4	1.58	4.67	4.67
Yellowstone County	B12	RM 298.67	854.844	200-yr	2777.88	824.99	819.39	2.12	1.34	19.95	11.45	244.95	1300.32	2.81	1.59	5.59	5.59
Yellowstone County	B12	RM 298.59	724.135	200-yr	2777.88	824.92	819.55	1.74	1.37	21.26	13.09	275.61	1246.55	2.69	1.63	5.37	5.37
Yellowstone County	B12	RM 298.49	579.164	200-yr	2777.88	824.81	819.27	1.95	1.26	17.98	9.42	214.03	1268.74	3.37	1.74	5.54	5.54
Yellowstone County	B12	RM 298.42	469.573	200-yr	2777.88	824.74	819.27	2.02	1.26	28.17	13.19	176.57	1267.89	3.79	1.74	5.46	5.46
Yellowstone County	B12	RM 298.35	368.049	200-yr	2777.88	824.6	819.97	2.39	1.36	30.77	12.24	147.33	1215.75	4.3	1.68	4.63	4.63
Yellowstone County	B12	RM 298.30	290.003	200-yr	2777.88	824.58	819.82	2.07	1.22	20.11	10.53	197.73	1162.92	3.77	1.95	4.76	4.76
Yellowstone County	B12	RM 298.26	211.35	200-yr	2777.88	824.51	819.82	2.08	1.36	25.38	14.13	221.45	1089.96	3.4	1.87	4.69	4.69
Yellowstone County	B12	RM 298.19	83.499	200-yr	2777.88	824.38	819.49	2.34	1.58	25.38	14.66	191.88	925.95	3.32	1.89	4.89	4.89

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	200-yr	3029.9	824.23	820.43	1.93	1.36	19.03	9.82	197.15	1752.78	3.51	1.79	3.8	3.8
Treasure County	C1	RM 297.89	61639	200-yr	3029.9	824.05	820.07	1.89	1.51	19.16	11.88	362.24	1233.1	2.89	1.78	3.99	3.99
Treasure County	C1	RM 297.76	61392	200-yr	3029.9	823.87	819.93	2	1.66	24.56	13.47	331	1153.62	2.95	1.61	3.94	3.94
Treasure County	C1	RM 297.62	61179	200-yr	3029.9	823.81	819.69	1.6	1.24	13	7.98	290.46	1384.11	3.19	1.95	4.12	4.12
Treasure County	C1	RM 297.5	60985	200-yr	3029.9	823.64	819.39	2.29	1.41	25.68	11.57	159.01	1319.51	3.96	1.76	4.25	4.25
Treasure County	C1	RM 297.36	60767	200-yr	3029.9	823.51	819.14	2.2	1.43	24.01	11.83	169.82	1144.28	3.83	1.87	4.37	4.37
Treasure County	C1	RM 297.22	60535	200-yr	3029.9	823.4	819	2.04	1.43	20.55	10.1	149.14	1161.97	3.9	1.89	4.4	4.4
Treasure County	C1	RM 297.08	60314	200-yr	3029.9	823.27	818.76	2.08	1.36	21.05	10.62	194.31	1346	4.03	2.01	4.51	4.51
Treasure County	C1	RM 296.94	60093	200-yr	3029.9	823.14	818.42	2.17	1.43	22.98	11.84	177.08	1503.93	4.02	2.05	4.72	4.72
Treasure County	C1	RM 296.79	59847	200-yr	3029.9	823.06	817.97	1.69	1.32	13.98	8.67	246.81	1270.74	3.91	2.41	5.09	5.09
Treasure County	C1	RM 296.64	59608	200-yr	3029.9	822.99	817.9	1.75	1.25	14.86	8.33	177.49	1098.09	4.14	2.29	5.09	5.09
Treasure County	C1	RM 296.51	59386	200-yr	3029.9	822.94	817.8	1.4	1.13	9.49	5.99	477.13	1060.29	4.01	2.52	5.14	5.14
Treasure County	C1	RM 296.33	59113	200-yr	3029.9	822.84	817.52	1.64	1.22	12.28	6.86	335.57	1047.94	4.75	2.64	5.32	5.32
Treasure County	C1	RM 296.16	58839	200-yr	3029.9	821.88	817.46	4.43	2.85	94.56	35.17	137.37	708.1	4.18	1.53	4.43	4.43
Treasure County	C1	RM 296.01	58583	200-yr	3029.9	821.59	817.45	2.83	2.27	40.8	23.48	259.72	648.77	3.67	2.1	4.14	4.14
Treasure County	C1	RM 295.83	58296	200-yr	3029.9	821.44	817.4	1.94	1.92	19.78	18.09	627.05	725.24	2.48	2.27	4.05	4.05
Treasure County	C1	RM 295.66	58032	200-yr	3029.9	821.12	817.27	2.25	2.25	25.92	25.86	561.89	563.15	2.4	2.39	3.85	3.85
Treasure County	C1	RM 295.52	57800	200-yr	3029.9	821.02	816.19	1.67	1.67	15.17	15.17	660.44	665.18	2.75	2.75	4.83	4.83
Treasure County	C1	RM 295.31	57474	200-yr	3029.9	820.89	815.61	1.54	1.46	11.93	10.55	554.61	704.24	3.34	2.95	5.28	5.28
Treasure County	C1	RM 295.13	57174	200-yr	3029.9	820.72	815.57	1.87	1.45	18.72	10.4	360.88	985.55	3.83	2.12	5.15	5.15
Treasure County	C1	RM 294.94	56877	200-yr	3029.9	820.2	815.46	3.18	2.16	48.26	16.75	189.73	1026.97	4.11	1.41	4.74	4.74
Treasure County	C1	RM 294.76	56587	200-yr	3029.9	819.95	815.45	2.75	1.98	36.35	14.84	257.05	1024.19	3.69	1.5	4.49	4.49
Treasure County	C1	RM 294.55	56261	200-yr	3029.9	819.7	815.36	2.63	1.87	34.01	14.53	194.71	982.95	3.89	1.65	4.34	4.34
Treasure County	C1	RM 294.38	55980	200-yr	3029.9	819.51	815.07	2.35	1.73	28.33	12.38	227.09	1195.82	3.38	1.47	4.44	4.44
Treasure County	C1	RM 294.21	55714	200-yr	3029.9	819.22	814.88	2.67	1.6	35.28	10.9	201.2	1611.91	3.84	1.17	4.34	4.34
Treasure County	C1	RM 294.02	55401	200-yr	3029.9	819	814.59	2.4	1.52	27.68	10.19	231.94	1648.42	3.31	1.21	4.41	4.41
Treasure County	C1	RM 293.83	55100	200-yr	3029.9	818.84	814.3	2.05	1.31	20.32	8.09	274.8	1838.02	3.18	1.26	4.54	4.54
Treasure County	C1	RM 293.63	54777	200-yr	3029.9	818.67	813.55	1.92	1.2	16.58	5.36	332.83	1929.14	4.08	1.31	5.12	5.12
Treasure County	C1	RM 293.43	54432	200-yr	3029.9	818.38	813.29	2.61	1.27	32.04	8.92	202.13	1967.88	4.4	1.21	5.09	5.09
Treasure County	C1	RM 293.26	54152	200-yr	3029.9	818.25	813.24	2.34	1.12	25.63	10.07	247.33	1981.18	3.53	1.37	5.02	5.02
Treasure County	C1	RM 293.07	53839	200-yr	3029.9	818.09	813.24	2.18	0.96	23.99	9.67	241.79	2228.45	3.57	1.42	4.85	4.85
Treasure County	C1	RM 292.83	53458	200-yr	3029.9	818.02	813.1	1.4	0.78	10.21	4.82	380.97	2417.45	3.61	1.7	4.92	4.92
Treasure County	C1	RM 292.6	53082	200-yr	3029.9	817.82	812.6	2.07	1.12	19.83	5.48	238.91	2317.79	4.55	1.25	5.22	5.22
Treasure County	C2	RM 292.32	52612	200-yr	3029.9	817.66	811.76	2.08	1.07	19.31	6.42	207.17	1852.71	4.67	1.53	5.9	5.9
Treasure County	C2	RM 292.09	52256	200-yr	3029.9	817.54	811.6	2.14	1.24	20.07	6.89	174.28	1482.54	4.91	1.65	5.94	5.94
Treasure County	C2	RM 291.9	51956	200-yr	3029.9	817.43	811.55	1.96	1.23	18.38	8.13	240.72	1344.01	4.24	1.85	5.88	5.88
Treasure County	C2	RM 291.71	51639	200-yr	3029.9	816.83	811.5	3.17	2.21	72.14	29.61	244.86	1030.97	3.29	1.33	5.33	5.33
Treasure County	C2	RM 291.52	51333	200-yr	3029.9	816.61	811.46	2.5	1.56	29.19	11.72	214.15	1065.64	4.59	1.82	5.14	5.14
Treasure County	C2	RM 291.33	51042	200-yr	3029.9	816.36	811.46	2.61	1.81	33.01	14.27	232.04	957.92	4.08	1.74	4.9	4.9
Treasure County	C2	RM 291.15	50747	200-yr	3029.9	816.31	811.4	1.81	1.41	15.35	7.73	297.47	948.67	4.53	2.26	4.91	4.91
Treasure County	C2	RM 290.94	50437	200-yr	3029.9	816.16	811.31	2.05	1.36	20.54	11.72	259.99	986.65	3.98	2.25	4.84	4.84
Treasure County	C2	RM 290.78	50179	200-yr	3029.9	816.04	810.97	1.74	1.29	15.35	10.67	393.13	1043	3.49	2.42	5.07	5.07
Treasure County	C2	RM 290.6	49891	200-yr	3029.9	815.95	810.54	1.53	1.35	11.32	8.14	473.72	1413.44	4.04	2.9	5.41	5.41
Treasure County	C2	RM 290.43	49607	200-yr	3029.9	815.75	810.13	2.14	1.56	22.13	10.07	273.61	1511.22	4.12	1.86	5.62	5.62
Treasure County	C2	RM 290.23	49287	200-yr	3029.9	815.02	810.07	3.66	2.5	62.13	18.5	154.05	1055.02	4.65	1.36	4.96	4.96
Treasure County	C2	RM 290.04	48976	200-yr	3029.9	814.92	810.04	2.58	1.81	30.71	10.32	209.93	1391.1	4.7	1.56	4.87	4.87
Treasure County	C2	RM 289.85	48667	200-yr	3029.9	814.81	809.87	1.91	1.44	18.49	8.12	359.02	1587.57	3.63	1.58	4.94	4.94
Treasure County	C2	RM 289.67	48372	200-yr	3029.9	814.66	809.87	1.82	1.32	17.15	7.48	397.84	1503.55	3.54	1.53	4.79	4.79
Treasure County	C2	RM 289.46	48067	200-yr	3029.9	814.56	809.56	1.6	1.21	11.65	6.36	411.53	1213.22	3.81	2.06	5	5
Treasure County	C2	RM 289.27	47769	200-yr	3029.9	814.34	809.32	2.11	1.5	22.17	10.52	320.68	1139.74	3.75	1.77	5.02	5.02
Treasure County	C2	RM 289.11	47515	200-yr	3029.9	814.15	809	2.33	1.57	24.86	9.91	228.59	1024.48	4.78	1.89	5.14	5.14
Treasure County	C2	RM 288.94	47232	200-yr	3029.9	813.88	808.59	2.74	1.7	34.14	12.07	186.94	1030	4.97	1.73	5.29	5.29
Treasure County	C2	RM 288.76	46939	200-yr	3029.9	813.74	808.33	2.41	1.41	27.12	11.3	217.33	1145.94	4.58	1.88	5.41	5.41
Treasure County	C2	RM 288.55	46613	200-yr	3029.9	813.35	808.24	2.91	1.91	41.61	16.35	224.04	1053.49	3.89	1.51	5.1	5.1
Treasure County	C2	RM 288.36	46302	200-yr	3029.9	813.22	807.91	2.31	1.5	23.88	7.29	219.5	1315.87	5.14	1.54	5.31	5.31
Treasure County	C2	RM 288.18	46008	200-yr	3029.9	813.11	807.77	2.18	1.34	22.36	7.45	246.5	1618.63	4.26	1.4	5.34	5.34
Treasure County	C2	RM 287.99	45713	200-yr	3029.9	813.03	807.58	1.79	1.05	14.66	5.42	241.63	1806.4	4.35	1.59	5.45	5.45
Treasure County	C2	RM 287.81	45421	200-yr	3029.9	812.88	807.25	2	1.38	18.63	6.21	229.88	1467.92	4.55	1.5	5.63	5.63
Treasure County	C2	RM 287.62	45112	200-yr	3029.9	812.51	807.19	3.02	1.8	41.55	11.52	138.6	1260.87	4.92	1.33	5.33	5.33
Treasure County	C2	RM 287.42	44789	200-yr	3029.9	812.18	807.15	3.12	1.88	45.44	12.08	159.89	1343.9	4.6	1.2	5.03	5.03

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	200-yr	3029.9	812.12	806.81	1.88	1.45	18	5.98	420.05	1932	3.47	1.14	5.31	5.31
Treasure County	C2	RM 287.06	44222	200-yr	3029.9	812.02	806.77	1.59	1.27	13.62	5.62	515.12	1908.17	3.34	1.37	5.25	5.25
Treasure County	C2	RM 286.9	43958	200-yr	3029.9	811.84	806.52	2.04	1.37	19.38	5.54	277.39	1919.85	4.57	1.29	5.32	5.32
Treasure County	C2	RM 286.72	43671	200-yr	3029.9	811.44	802.22	3.13	1.68	40.84	7.74	122.22	1780.11	6.57	1.2	9.22	9.22
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	200-yr	3029.9	811.33	802.22	3.34	1.96	46.77	8.71	122.4	1589.34	6.4	1.15	9.11	9.11
Treasure County	C3	RM 286.58	43448	200-yr	3029.9	811.27	806.32	2.93	1.76	39.9	13.45	177.5	1805.31	4.64	1.54	4.95	4.95
Treasure County	C3	RM 286.51	43344	200-yr	3029.9	811.17	806.32	2.84	2.03	38.06	15.2	208.56	1757.7	4.43	1.75	4.85	4.85
Treasure County	C3	RM 286.46	43257	200-yr	3029.9	811.09	804.36	2.86	2.11	37.77	16.08	196.52	1605.4	4.71	1.98	6.73	6.73
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	200-yr	3029.9	810.82	804.36	3.28	2.45	50.69	21.06	203.28	1361.49	4.4	1.81	6.46	6.46
Treasure County	C3	RM 286.37	43117	200-yr	3029.9	810.77	806.17	2.86	2.16	40.69	17.5	311.55	1616.82	3.74	1.6	4.61	4.61
Treasure County	C3	RM 286.26	42931	200-yr	3029.9	810.53	806.17	2.86	1.87	73.7	24.81	219.45	1914.57	3.46	1.15	4.37	4.37
Treasure County	C3	RM 286.06	42624	200-yr	3029.9	810.3	806.08	2.04	1.22	20.97	7.55	354.48	2322.23	3.37	1.2	4.22	4.22
Treasure County	C3	RM 285.81	42213	200-yr	3029.9	810.07	805.78	1.94	1.05	17.64	7.23	222.11	3307.34	2.76	1.11	4.29	4.29
Treasure County	C3	RM 285.56	41812	200-yr	3029.9	809.86	805.34	1.89	0.96	16.97	4.5	237.24	3531.24	4.26	1.12	4.53	4.53
Treasure County	C3	RM 285.23	41280	200-yr	3029.9	809.64	805.17	2.09	0.92	22.15	6.51	152.4	3793.62	3.55	1.02	4.47	4.47
Treasure County	C3	RM 284.69	40395	200-yr	3029.9	809.2	804.85	2.55	1.28	34.73	9.31	159.53	2957.85	3.05	0.8	4.35	4.35
Treasure County	C3	RM 284.26	39705	200-yr	3029.9	808.8	804.6	2.02	1.33	21.68	5.99	348.37	2578.03	3.23	0.89	4.2	4.2
Treasure County	C3	RM 283.96	39199	200-yr	3029.9	808.5	804.3	2.18	1.29	24.35	6.73	244.91	3091.93	3.41	0.93	4.2	4.2
Treasure County	C3	RM 283.69	38766	200-yr	3029.9	808.29	803.9	2.08	1.09	21.01	5.18	190.61	3204.41	3.99	0.97	4.39	4.39
Treasure County	C3	RM 283.35	38229	200-yr	3029.9	808.1	803.42	1.75	1.01	15.5	5.73	289.41	2621.75	3.46	1.26	4.68	4.68
Treasure County	C3	RM 283.05	37749	200-yr	3029.9	807.78	803.32	2.41	1.21	29.15	7.38	194.22	2905.77	3.67	0.91	4.46	4.46
Treasure County	C3	RM 282.78	37306	200-yr	3029.9	807.53	803.11	2.05	1.06	20.21	6.4	258.98	3029.1	3.24	1.01	4.42	4.42
Treasure County	C3	RM 282.56	36942	200-yr	3029.9	807.42	802.83	1.54	0.84	12.26	4.5	281.89	3256.16	3.21	1.16	4.59	4.59
Treasure County	C3	RM 282.31	36546	200-yr	3029.9	807.28	802.74	1.74	0.79	14.73	4.72	187.32	3103.71	4.12	1.29	4.55	4.55
Treasure County	C3	RM 282.09	36195	200-yr	3029.9	807.08	802.56	2.35	1.1	28.27	9.96	181.69	2835.84	3.47	1.21	4.51	4.51
Treasure County	C4	RM 281.73	35619	200-yr	3029.9	806.78	801.74	1.92	1.24	17.55	7.03	426.96	2659.28	2.91	1.16	5.04	5.04
Treasure County	C4	RM 281.35	35005	200-yr	3029.9	806.6	801.53	1.64	0.97	12.52	3.93	316.27	2632.8	4.55	1.42	5.07	5.07
Treasure County	C4	RM 281.03	34521	200-yr	3029.9	806.4	801.19	2.07	1.04	20.4	6.03	228.85	2622.85	4.33	1.26	5.21	5.21
Treasure County	C4	RM 280.73	34051	200-yr	3029.9	806.29	800.82	1.35	0.92	9.41	5.62	693.36	2442.86	2.45	1.46	5.48	5.48
Treasure County	C4	RM 280.5	33687	200-yr	3029.9	806.19	800.66	1.2	0.87	8.28	5.17	756.46	2340.47	2.53	1.57	5.53	5.53
Treasure County	C4	RM 280.27	33304	200-yr	3029.9	806.11	800.31	1.07	0.78	6.97	4.35	759.73	2218.53	2.82	1.76	5.79	5.79
Treasure County	C4	RM 279.95	32800	200-yr	3029.9	806.02	800.08	1.12	0.7	7.22	3.6	503.81	2349.95	3.72	1.84	5.93	5.93
Treasure County	C4	RM 279.6	32231	200-yr	3029.9	805.69	799.98	2.22	1.25	23.5	11.85	304.47	1415.77	3.42	1.71	5.71	5.71
Treasure County	C4	RM 279.33	31805	200-yr	3029.9	805.07	799.98	3.04	1.92	45.54	16.09	244.79	1281.43	3.54	1.24	5.09	5.09
Treasure County	C4	RM 279.14	31495	200-yr	3029.9	804.91	799.96	2.42	1.45	27.01	8.06	239.08	1723.01	4.13	1.22	4.95	4.95
Treasure County	C4	RM 278.96	31209	200-yr	3029.9	804.85	799.87	1.74	1.16	15.36	4.83	367.55	2099.2	4.05	1.26	4.98	4.98
Treasure County	C4	RM 278.76	30894	200-yr	3029.9	804.71	799.6	1.79	1.18	15.76	4.96	423.69	2518.51	3.35	1.05	5.11	5.11
Treasure County	C4	RM 278.56	30571	200-yr	3029.9	804.53	799.53	1.96	1.11	19.36	5.44	336.63	2790.34	3.61	1	5	5
Treasure County	C4	RM 278.37	30259	200-yr	3029.9	804.43	799.26	1.63	1.03	12.59	3.67	369.33	2386.97	4.31	1.24	5.17	5.17
Treasure County	C5	RM 278.16	29915	200-yr	3029.9	804.14	798.81	2.53	1.35	30.5	7.3	207.39	2055.56	4.61	1.09	5.32	5.32
Treasure County	C5	RM 277.99	29648	200-yr	3029.9	803.8	798.77	2.97	1.71	42.18	9.74	189.71	1723.62	4.52	1.03	5.03	5.03
Treasure County	C5	RM 277.8	29336	200-yr	3029.9	803.56	798.74	2.76	1.76	35.67	8.98	212.34	1533.56	4.5	1.12	4.82	4.82
Treasure County	C5	RM 277.61	29041	200-yr	3029.9	803.35	798.72	2.69	1.68	34.08	9.11	216.71	1533.47	4.45	1.18	4.63	4.63
Treasure County	C5	RM 277.43	28747	200-yr	3029.9	803.22	798.48	2.17	1.5	23.05	8.23	306.39	1449.64	3.96	1.4	4.74	4.74
Treasure County	C5	RM 277.22	28415	200-yr	3029.9	802.97	798.47	2.2	1.74	23.52	10.98	424.41	1262.01	2.98	1.38	4.5	4.5
Treasure County	C5	RM 277.04	28123	200-yr	3029.9	802.76	798.4	2.09	1.73	19.75	11.55	459.83	1026.33	2.98	1.73	4.36	4.36
Treasure County	C5	RM 276.81	27791	200-yr	3029.9	802.66	797.8	1.71	1.32	13.91	6.82	376.57	1134.17	4.19	2.05	4.86	4.86
Treasure County	C5	RM 276.63	27499	200-yr	3029.9	802.43	797.4	2.37	1.52	26.81	10.08	234.28	1269.5	4.27	1.59	5.02	5.02
Treasure County	C5	RM 276.4	27133	200-yr	3029.9	802.21	797.1	2.33	1.5	25.72	10.08	239.33	1211.54	4.35	1.69	5.11	5.11
Treasure County	C5	RM 276.19	26801	200-yr	3029.9	802.02	796.87	2.4	1.61	27.25	11.01	189.04	1083.23	4.42	1.76	5.15	5.15
Treasure County	C5	RM 276.01	26502	200-yr	3029.9	801.83	796.74	2.51	1.58	29.19	9.92	158.92	1228.42	4.75	1.58	5.1	5.1
Treasure County	C5	RM 275.81	26193	200-yr	3029.9	801.74	796.61	2.1	1.31	20.45	6.93	179.56	1540.06	4.58	1.53	5.12	5.12
Treasure County	C5	RM 275.63	25896	200-yr	3029.9	801.6	796.49	2.28	1.28	23.83	8.02	134.65	1493.71	4.85	1.6	5.11	5.11
Treasure County	C5	RM 275.45	25606	200-yr	3029.9	801.53	796.37	1.8	1.24	15.21	6.21	153.92	1630.84	4.45	1.79	5.16	5.16
Treasure County	C5	RM 275.26	25299	200-yr	3029.9	801.29	796.16	2.16	1.62	21.26	8.95	251.91	1416.77	4.89	2.04	5.12	5.12
Treasure County	C5	RM 275.09	25033	200-yr	3029.9	800.95	796.13	2.86	2.18	37.93	16.76	199.32	1139.9	4.68	2.05	4.82	4.82
Treasure County	C6	RM 274.89	24716	200-yr	3029.9	800.79	796.04	2.44	1.57	28.31	13.22	229.11	2553.51	4.34	2.01	4.75	4.75
Treasure County	C6	RM 274.72	24440	200-yr	3029.9	799.93	796.04	3.94	2.94	80.85	33.28	214.5	1516.96	3.24	1.32	3.9	3.9

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	200-yr	3029.9	799.89	795.79	2.18	1.46	27	11.74	294.37	2774.63	2.97	1.28	4.1	4.1
Treasure County	C6	RM 274.38	23892	200-yr	3029.9	799.71	795.55	2.06	1.26	21.7	7.3	229.3	3035.63	3.47	1.15	4.16	4.16
Treasure County	C6	RM 274.13	23491	200-yr	3029.9	799.51	795.16	2.17	1.29	25.06	8.64	224.37	3111.05	3.07	1.05	4.35	4.35
Treasure County	C6	RM 273.83	22999	200-yr	3029.9	799.31	794.46	1.98	1.07	18.98	5.09	184.4	3603.8	4.04	1.07	4.84	4.84
Treasure County	C6	RM 273.58	22595	200-yr	3029.9	799.03	794.04	2.45	1.15	27.46	6.75	179.12	3643.39	3.74	0.9	4.99	4.99
Treasure County	C6	RM 273.35	22238	200-yr	3029.9	798.82	794.04	2.09	1.01	21.25	7.6	230.93	3743.3	3.02	1.07	4.79	4.79
Treasure County	C6	RM 273.15	21916	200-yr	3029.9	798.69	793.92	1.76	0.92	15.65	6.12	266.7	3866.05	3.04	1.18	4.77	4.77
Treasure County	C6	RM 272.83	21397	200-yr	3029.9	798.55	793.79	1.63	0.84	12.28	4.23	263.82	4202.66	3.48	1.18	4.76	4.76
Treasure County	C6	RM 272.5	20872	200-yr	3029.9	798.34	793.46	2.09	0.96	23.13	7.96	229.86	4139	3.15	1.07	4.88	4.88
Treasure County	C6	RM 272.19	20368	200-yr	3029.9	798.03	793.34	2.25	1.07	24.24	7.7	247.4	3568.12	3.7	1.16	4.7	4.7
Treasure County	C6	RM 271.91	19902	200-yr	3029.9	797.82	793.18	2.21	1.11	23.52	6.38	227.32	3932.75	4.08	1.09	4.64	4.64
Treasure County	C6	RM 271.68	19534	200-yr	3029.9	797.47	792.81	2.81	1.52	39	9.81	192.12	3284.53	3.82	0.95	4.66	4.66
Treasure County	C6	RM 271.41	19102	200-yr	3029.9	797.42	792.54	1.52	0.96	11.71	5.43	302.07	3109.2	3.56	1.64	4.89	4.89
Treasure County	C6	RM 271.06	18548	200-yr	3029.9	796.92	792.18	3.03	1.78	46.24	11.27	172.42	2730.06	3.66	0.88	4.74	4.74
Treasure County	C6	RM 270.64	17870	200-yr	3029.9	796.72	792.05	1.72	0.99	15.2	5.43	234.57	3207.39	3.39	1.2	4.67	4.67
Treasure County	C6	RM 270.05	16897	200-yr	3029.9	796.45	791.48	2.04	0.94	18.87	6.63	174.33	2896.88	3.84	1.33	4.98	4.98
Treasure County	C6	RM 269.75	16413	200-yr	3029.9	796.13	791.35	2.41	1.2	28.66	8.71	224.7	3119.53	3.87	1.16	4.78	4.78
Treasure County	C6	RM 269.47	15967	200-yr	3029.9	795.72	791.23	2.78	1.68	37.42	7.64	209.73	3088.62	4.04	0.81	4.49	4.49
Treasure County	C7	RM 269.27	15645	200-yr	3029.9	795.6	791.23	2.12	1.36	22	6.19	279.64	2800.2	3.77	1.05	4.36	4.36
Treasure County	C7	RM 269.06	15308	200-yr	3029.9	795.49	791.01	1.64	1.03	13.77	4.55	197.37	3009.24	3.49	1.13	4.48	4.48
Treasure County	C7	RM 268.83	14957	200-yr	3029.9	795.42	790.6	1.13	0.77	6.7	2.88	267.05	3099.62	3.23	1.37	4.82	4.82
Treasure County	C7	RM 268.55	14516	200-yr	3029.9	795.3	790.17	1.5	0.81	10.73	3.6	224.66	3045.49	4.19	1.38	5.13	5.13
Treasure County	C7	RM 268.2	13976	200-yr	3029.9	795.07	789.62	2.07	0.91	20.43	6.1	234.34	3387.74	4.25	1.25	5.44	5.44
Treasure County	C7	RM 267.87	13439	200-yr	3029.9	794.71	789.53	2.5	1.06	28.13	8.81	227.32	2683.2	3.97	1.22	5.18	5.18
Treasure County	C7	RM 267.53	12884	200-yr	3029.9	794.01	789.5	3.17	1.5	50.45	14.74	242.41	2295.5	3.18	0.92	4.51	4.51
Treasure County	C7	RM 267.14	12253	200-yr	3029.9	793.8	789.26	1.99	1.09	19.37	6.28	227.28	2420.33	3.62	1.16	4.54	4.54
Treasure County	C7	RM 266.8	11700	200-yr	3029.9	793.66	789.2	1.8	0.96	16.22	5.53	214.75	2561.99	3.71	1.25	4.46	4.46
Treasure County	C7	RM 266.41	11078	200-yr	3029.9	793.46	789.14	2.19	1.06	24.84	8.18	159.5	2609.13	3.39	1.09	4.32	4.32
Treasure County	C7	RM 266.11	10593	200-yr	3029.9	793.24	788.83	2.02	1.1	21.21	7.03	259.43	2630.91	3.29	1.08	4.42	4.42
Treasure County	C7	RM 265.92	10283	200-yr	3029.9	793.14	788.65	1.69	1.05	14.05	5.59	341.48	2665.62	2.76	1.09	4.49	4.49
Treasure County	C7	RM 265.68	9915	200-yr	3029.9	792.84	788.21	2.52	1.49	29.9	6.85	180	2043.54	4.43	1	4.63	4.63
Treasure County	C7	RM 265.52	9650	200-yr	3029.9	792.71	788.07	2.39	1.35	28.66	8.69	162.02	2028.68	3.71	1.1	4.64	4.64
Treasure County	C7	RM 265.34	9362	200-yr	3029.9	792.48	788.07	2.33	1.36	28.17	9.73	179.19	1996.63	3.28	1.12	4.41	4.41
Treasure County	C7	RM 265.16	9071	200-yr	3029.9	792.29	787.95	1.91	1.34	21.45	8.18	297.09	2058.44	2.91	1.1	4.34	4.34
Treasure County	C7	RM 264.98	8775	200-yr	3029.9	792.11	787.59	1.87	1.35	17.29	9.26	461.31	2113.78	2	1.06	4.52	4.52
Treasure County	C7	RM 264.81	8508	200-yr	3029.9	792.01	787.35	1.23	1.03	12.27	6.86	661.63	2282.22	2.31	1.29	4.66	4.66
Treasure County	C7	RM 264.64	8216	200-yr	3029.9	791.89	787.22	1.29	1.06	11.98	6.75	652.13	2184.47	2.34	1.31	4.67	4.67
Treasure County	C7	RM 264.39	7803	200-yr	3029.9	791.67	786.86	1.8	1.25	19.2	7.19	343.32	2138.56	3.06	1.14	4.81	4.81
Treasure County	C7	RM 264.15	7406	200-yr	3029.9	791.57	786.6	1.47	1.03	11.36	5.23	202.21	2013.96	3.22	1.46	4.97	4.97
Treasure County	C7	RM 263.97	7116	200-yr	3029.9	791.45	786.49	1.8	1.18	15.19	4.6	179.44	1896.97	4.57	1.36	4.96	4.96
Treasure County	C7	RM 263.79	6834	200-yr	3029.9	791.28	786.49	2.21	1.28	23.68	9.09	204.2	2305.36	3.62	1.37	4.79	4.79
Treasure County	C7	RM 263.6	6534	200-yr	3029.9	791.09	786.37	2.11	1.26	21.85	8.42	207.01	1884.29	3.95	1.5	4.72	4.72
Treasure County	C7	RM 263.39	6194	200-yr	3029.9	790.93	786.25	1.7	1.25	14.4	6.16	459.15	2009.71	3.37	1.44	4.68	4.68
Treasure County	C7	RM 263.19	5862	200-yr	3029.9	790.73	786	1.98	1.1	20.55	8.87	333.53	2102.04	3.15	1.35	4.73	4.73
Treasure County	C7	RM 262.95	5479	200-yr	3029.9	790.45	785.85	2.01	1.27	18.23	7.19	417.03	2063.55	2.95	1.16	4.6	4.6
Treasure County	C7	RM 262.78	5206	200-yr	3029.9	790.37	785.76	1.58	0.97	13.99	6.86	440.96	2246.42	2.85	1.39	4.61	4.61
Treasure County	C7	RM 262.58	4883	200-yr	3029.9	790.27	785.64	1.2	0.78	9.05	5.33	621.05	2298.82	2.92	1.72	4.63	4.63
Treasure County	C7	RM 262.42	4613	200-yr	3029.9	790.21	785.54	1.09	0.72	6.99	4.16	655.56	2328.53	3.02	1.8	4.67	4.67
Treasure County	C7	RM 262.24	4323	200-yr	3029.9	790.15	785.43	1.03	0.8	5.87	3.22	839.62	2419.77	3.17	1.73	4.73	4.73
Treasure County	C7	RM 261.95	3917	200-yr	3029.9	790.03	785.28	1.3	0.98	9.82	5.24	654.59	1783.96	3.24	1.73	4.75	4.75
Treasure County	C7	RM 261.7	3519	200-yr	3029.9	789.81	784.87	1.44	1.28	29.23	14.12	605.89	1506	3.27	1.57	4.94	4.94
Treasure County	C7	RM 261.53	3256	200-yr	3029.9	789.53	784.51	1.54	1.36	32.58	19.6	623.93	1285.01	2.9	1.74	5.02	5.02
Treasure County	C7	RM 261.35	2959	200-yr	3029.9	789.41	784.33	1.31	1.15	8.64	5.23	580.98	1149.73	3.79	2.29	5.08	5.08
Treasure County	C7	RM 261.2	2720	200-yr	3029.9	789.31	784.14	1.41	1.26	25.99	15.52	545.92	1136.87	3.56	2.12	5.17	5.17
Treasure County	C7	RM 261.03	2441	200-yr	3029.9	789.18	783.66	1.52	1.19	11.18	5.1	401.64	1224.83	4.61	2.08	5.52	5.52
Treasure County	C7	RM 260.84	2142	200-yr	3029.9	789.05	783.41	1.76	1.25	14.64	5.85	341.22	1330.49	4.61	1.83	5.64	5.64
Treasure County	C7	RM 260.66	1863	200-yr	3029.9	788.98	783.29	1.67	1.13	13.22	6.04	351.21	1364.3	4.35	1.97	5.69	5.69
Treasure County	C8	RM 259.9	634	200-yr	3029.9	787.83	782.46	3.58	2.36	58.33	22.26	151.91	698.58	4.88	1.84	5.37	5.37
Treasure County	C8	RM 259.72	347	200-yr	3029.9	787.6	782.45	3.16	2.15	45.96	22.04	179.3	741.58	4.74	2.25	5.14	5.14
Treasure County	C8	RM 259.55	68	200-yr	3029.9	787.53	782.2	2.15	2.12	21.92	17.02	399.72	523.23	3.52	2.73	5.33	5.33

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	200-yr	3029.9	787.53	782.19	2.66	2.29	31.8	17.31	221.77	501.23	4.88	2.64	5.34	5.34
Rosebud County	C8	RM 259.41	87598	200-yr	3029.9	787.24	781.96	2.84	2.65	39.93	24.8	209.53	438.32	5.02	3.11	5.28	5.28
Rosebud County	C8	RM 259.22	87292	200-yr	3029.9	787.11	781.55	2.47	2.1	27.79	19.3	233.09	418.11	4.99	3.45	5.56	5.56
Rosebud County	C8	RM 259.04	87004	200-yr	3029.9	786.91	781	2.59	2.09	34.82	16.46	211.55	624.3	4.99	2.32	5.91	5.91
Rosebud County	C8	RM 258.85	86696	200-yr	3029.9	786.73	780.9	2.38	1.84	25.42	11.94	288.74	890.04	3.98	1.85	5.83	5.83
Rosebud County	C8	RM 258.66	86399	200-yr	3029.9	786.5	780.78	2.63	1.87	30.55	10.61	183.46	870.96	5.46	1.86	5.72	5.72
Rosebud County	C8	RM 258.47	86098	200-yr	3029.9	786.31	780.65	2.64	1.78	31.86	10.72	202.57	1112.95	4.6	1.53	5.66	5.66
Rosebud County	C8	RM 258.28	85798	200-yr	3029.9	786.14	780.53	2.45	1.68	27.45	12.19	222.43	955.61	4.29	1.89	5.61	5.61
Rosebud County	C8	RM 258.1	85498	200-yr	3029.9	785.88	780.14	2.67	1.77	31.75	12.98	180.25	815.66	5.24	2.11	5.74	5.74
Rosebud County	C8	RM 257.91	85200	200-yr	3029.9	785.74	780.14	2.44	1.56	28.59	10.06	224.43	1406.97	4.19	1.45	5.6	5.6
Rosebud County	C8	RM 257.71	84875	200-yr	3029.9	785.51	780.14	2.49	1.59	30.77	11.15	219.86	1454.88	3.78	1.35	5.37	5.37
Rosebud County	C8	RM 257.54	84597	200-yr	3029.9	785.36	780.17	2.28	1.32	23.78	8.29	209	1543.45	4.33	1.49	5.19	5.19
Rosebud County	C8	RM 257.36	84298	200-yr	3029.9	785.22	780.05	2.2	1.26	22.79	8.85	188.65	1464.9	4.24	1.64	5.17	5.17
Rosebud County	C8	RM 257.16	83984	200-yr	3029.9	785.18	780	1.49	0.99	10.01	3.97	305.45	1564.97	4.92	1.95	5.18	5.18
Rosebud County	C8	RM 256.87	83608	200-yr	3029.9	784.79	779.89	2.83	1.68	36.93	12.99	181.39	1136.4	4.55	1.58	4.9	4.9
Rosebud County	C8	RM 256.65	83257	200-yr	3029.9	784.78	779.82	1.82	1.23	15.62	6.92	171.34	1214.24	4.62	2.02	4.96	4.96
Rosebud County	C8	RM 256.45	82941	200-yr	3029.9	784.58	779.67	2.1	1.45	20.31	7.5	222.18	1203.33	4.75	1.74	4.91	4.91
Rosebud County	C8	RM 256.26	82630	200-yr	3029.9	784.4	779.58	1.93	1.43	32.11	18.6	369.93	1075.94	3.41	1.97	4.82	4.82
Rosebud County	C8	RM 256.1	82375	200-yr	3029.9	784.26	779.42	1.64	1.55	12.57	8.56	594.72	940.95	3.06	2.08	4.84	4.84
Rosebud County	C8	RM 255.91	82077	200-yr	3029.9	784.19	779.09	1.38	1.24	8.85	5.68	591.1	1065.19	3.58	2.3	5.1	5.1
Rosebud County	C8	RM 255.7	81747	200-yr	3029.9	783.98	778.73	2.02	1.53	18.93	8.8	306.33	984.66	4.36	2.01	5.25	5.25
Rosebud County	C8	RM 255.51	81446	200-yr	3029.9	783.81	778.49	2.19	1.6	22.79	11.59	269.19	863.15	4.36	2.2	5.32	5.32
Rosebud County	C8	RM 255.31	81125	200-yr	3029.9	783.65	778.36	2.11	1.52	25.68	11.65	242.95	918.14	4.83	2.17	5.29	5.29
Rosebud County	C8	RM 255.14	80856	200-yr	3029.9	783.4	778.24	2.5	1.76	28.26	11.53	210.87	862.97	4.95	2	5.16	5.16
Rosebud County	C8	RM 254.95	80554	200-yr	3029.9	783.17	778.12	2.65	1.87	31.96	12.71	205.86	846.74	4.86	1.91	5.05	5.05
Rosebud County	C8	RM 254.76	80251	200-yr	3029.9	783	778	2.51	1.76	28.74	11.95	218.15	861.51	4.84	1.99	5	5
Rosebud County	C8	RM 254.58	79960	200-yr	3029.9	782.81	777.88	2.52	1.82	29	10.45	229.98	979.15	4.8	1.71	4.93	4.93
Rosebud County	C8	RM 254.39	79658	200-yr	3029.9	782.75	777.41	1.97	1.44	17.97	7.32	296.93	1179.31	4.66	1.89	5.34	5.34
Rosebud County	C8	RM 254.2	79359	200-yr	3029.9	782.46	777.39	2.51	1.94	30.22	13.82	269.75	826.94	4.15	1.89	5.07	5.07
Rosebud County	C8	RM 254.01	79052	200-yr	3029.9	782.2	776.82	2.67	1.94	31.66	11.27	209.61	881.57	5.06	1.79	5.38	5.38
Rosebud County	C9	RM 253.82	78779	200-yr	3029.9	782.01	776.24	2.6	1.81	35.73	14.11	246.84	1064.41	4.14	1.61	5.77	5.77
Rosebud County	C9	RM 253.63	78478	200-yr	3029.9	781.64	776.12	2.74	1.71	72.23	22.88	180.25	1430.48	4.35	1.36	5.52	5.52
Rosebud County	C9	RM 253.45	78178	200-yr	3029.9	781.36	775.97	2.53	1.41	29.8	10.96	172.93	1411.96	4.24	1.53	5.39	5.39
Rosebud County	C9	RM 253.26	77879	200-yr	3029.9	781.23	775.72	2.04	1.14	17.06	7.05	240.93	1498.99	4.4	1.79	5.51	5.51
Rosebud County	C9	RM 253.07	77578	200-yr	3029.9	780.92	775.57	2.8	1.49	34.77	11.98	189.99	1504.72	4.03	1.36	5.35	5.35
Rosebud County	C9	RM 252.88	77278	200-yr	3029.9	780.78	775.45	2.24	1.36	24.74	8.03	221.89	1801.73	3.87	1.24	5.33	5.33
Rosebud County	C9	RM 252.69	76962	200-yr	3029.9	780.7	775.33	1.7	0.94	13.97	5.16	260.67	2446.42	4.07	1.48	5.37	5.37
Rosebud County	C9	RM 252.49	76646	200-yr	3029.9	780.32	775.36	2.93	1.34	38.57	9.33	161.39	2907.27	4.01	0.95	4.96	4.96
Rosebud County	C9	RM 252.24	76252	200-yr	3029.9	780.13	775.4	2.3	1.11	27.11	7.63	167.1	3244.16	3.7	1.02	4.73	4.73
Rosebud County	C9	RM 252.01	75885	200-yr	3029.9	779.97	775.39	1.83	0.97	24.12	7.15	252.1	3581.36	3.46	1.01	4.58	4.58
Rosebud County	C9	RM 251.7	75438	200-yr	3029.9	779.82	775.01	1.41	0.9	8.95	3.89	603.69	3473.39	2.51	1.09	4.81	4.81
Rosebud County	C9	RM 251.49	75098	200-yr	3029.9	779.72	775.02	1.25	0.83	10.22	5.99	716.44	3242.44	1.99	1.16	4.7	4.7
Rosebud County	C9	RM 251.23	74691	200-yr	3029.9	779.53	775.05	1.37	0.87	9.95	5.09	754.16	3538.26	2.03	1.04	4.48	4.48
Rosebud County	C9	RM 251.01	74322	200-yr	3029.9	779.38	774.84	1.42	0.82	8.66	3.94	595.57	3700.71	2.4	1.09	4.54	4.54
Rosebud County	C9	RM 250.79	73973	200-yr	3029.9	779.27	774.42	1.51	0.84	10.91	4.18	417.99	3423.36	3.11	1.19	4.85	4.85
Rosebud County	C9	RM 250.6	73678	200-yr	3029.9	779.14	774.17	1.57	0.94	20.67	8.16	376.03	3196.05	2.9	1.14	4.97	4.97
Rosebud County	C9	RM 250.37	73306	200-yr	3029.9	778.83	774.05	2.3	1.09	23.88	6.71	233.23	2603.89	3.91	1.09	4.78	4.78
Rosebud County	C9	RM 250.17	72982	200-yr	3029.9	778.66	773.93	2.38	1.04	28.52	10.43	214.36	2455.59	3.28	1.19	4.73	4.73
Rosebud County	C9	RM 249.95	72617	200-yr	3029.9	778.37	773.83	2.42	1.22	28.65	7.75	226.06	2425.06	3.82	1.02	4.54	4.54
Rosebud County	C9	RM 249.73	72253	200-yr	3029.9	778.17	773.71	2.19	1.1	23.82	7.62	273.96	2516.4	3.42	1.09	4.46	4.46
Rosebud County	C9	RM 249.53	71936	200-yr	3029.9	778.07	773.38	1.67	0.91	13.34	4.53	362.14	2669.55	3.7	1.25	4.69	4.69
Rosebud County	C9	RM 249.31	71579	200-yr	3029.9	777.82	773.14	2.1	1.23	25.07	8.39	363.92	3336.18	2.86	0.95	4.68	4.68
Rosebud County	C9	RM 249.13	71274	200-yr	3029.9	777.63	772.84	1.99	1.03	19.87	5.68	301.37	3463.67	3.74	1.06	4.79	4.79
Rosebud County	C9	RM 248.94	70978	200-yr	3029.9	777.39	772.56	2.42	1.06	28.39	7.09	201.69	3461.28	3.8	0.94	4.83	4.83
Rosebud County	C9	RM 248.76	70681	200-yr	3029.9	777.33	772.32	1.46	0.88	11.16	3.81	424.32	3007.25	3.61	1.23	5.01	5.01
Rosebud County	C9	RM 248.53	70312	200-yr	3029.9	777.28	772.17	1.39	0.65	8.75	3.06	164.13	3169.71	4.22	1.46	5.11	5.11
Rosebud County	C9	RM 248.31	69962	200-yr	3029.9	777.12	772.04	1.85	0.93	17.17	6.02	277.15	2644.91	3.54	1.23	5.08	5.08
Rosebud County	C9	RM 248.08	69603	200-yr	3029.9	776.93	771.92	2.16	0.92	20.34	5.53	211.49	3022.74	4.06	1.1	5.01	5.01
Rosebud County	C9	RM 247.88	69253	200-yr	3029.9	776.81	771.92	1.72	0.95	23.62	9.31	348.22	2964.24	2.74	1.07	4.89	4.89
Rosebud County	C9	RM 247.64	68836	200-yr	3029.9	776.55	771.95	1.82	1.04	18.01	6.6	416.51	2772.15	2.9	1.05	4.6	4.6

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	200-yr	3029.9	776.41	771.87	1.64	0.84	12.7	3.63	282.85	3238.24	4.11	1.17	4.54	4.54
Rosebud County	C9	RM 247.11	67963	200-yr	3029.9	776.14	771.45	2.57	1.22	32.91	8.55	199.91	2826.51	3.55	0.91	4.69	4.69
Rosebud County	C9	RM 246.83	67502	200-yr	3029.9	775.98	770.97	2.05	1.01	21.77	5.73	194.9	2710.47	4.42	1.15	5.01	5.01
Rosebud County	C9	RM 246.52	67019	200-yr	3029.9	775.83	770.61	1.87	1.01	16.26	4.52	225.63	2825.7	4.6	1.27	5.22	5.22
Rosebud County	C9	RM 246.22	66538	200-yr	3029.9	775.13	770.53	3.41	1.67	59.33	16.03	217.05	2656.55	3.04	0.81	4.6	4.6
Rosebud County	C9	RM 245.94	66068	200-yr	3029.9	774.58	770.29	2.3	1.62	27.96	9.13	297.16	1984.14	3.04	0.98	4.29	4.29
Rosebud County	C9	RM 245.66	65624	200-yr	3029.9	774.45	769.81	1.64	0.95	14.1	5.02	198.01	2104.86	4.39	1.54	5.21	5.21
Rosebud County	C9	RM 245.4	65205	200-yr	3029.9	774.26	769.59	1.9	1.27	16.3	7.68	375.44	1995.2	2.57	1.2	5.1	5.1
Rosebud County	C9	RM 245.15	64804	200-yr	3029.9	773.99	769.41	1.63	1.32	37.2	16.23	328.83	2240.66	2.37	1.02	4.83	4.83
Rosebud County	C9	RM 244.89	64387	200-yr	3029.9	773.3	769.41	2.95	1.82	43.99	11.32	189.43	1840.26	3.57	0.9	4.27	4.27
Rosebud County	C9	RM 244.7	64085	200-yr	3029.9	773.31	769.37	1.5	1.08	11.43	4.13	221.5	2299.36	3.37	1.21	4.4	4.4
Rosebud County	C9	RM 244.51	63776	200-yr	3029.9	773.24	769.35	1.3	0.93	9.71	3.88	264.21	2423.03	3.38	1.35	4.33	4.33
Rosebud County	C9	RM 244.33	63499	200-yr	3029.9	773.23	769.16	0.85	0.72	3.84	2.15	274.46	2367.67	3.19	1.79	4.8	4.8
Rosebud County	C9	RM 244.14	63224	200-yr	3029.9	773.19	768.52	1.08	0.74	5.73	2.62	208.4	2329.86	3.9	1.77	4.76	4.76
Rosebud County	C9	RM 243.96	62927	200-yr	3029.9	773.12	768.13	1.44	0.85	9.91	4.03	176.71	2150.65	4.11	1.67	4.99	4.99
Rosebud County	C9	RM 243.77	62617	200-yr	3029.9	773.09	767.57	0.99	0.68	4.4	2.2	160.76	1799.45	5.03	2.48	5.52	5.52
Rosebud County	C9	RM 243.59	62327	200-yr	3029.9	773	766.98	1.62	0.9	13.57	4.35	122.45	2318.52	5.61	1.75	6.02	6.02
Rosebud County	C9	RM 243.39	62012	200-yr	3029.9	772.77	766.86	2.3	1.12	23.99	6.03	156.08	2424.75	5.03	1.24	5.91	5.91
Rosebud County	C9	RM 243.21	61718	200-yr	3029.9	772.63	766.74	2.2	1.14	21.41	5.29	203.35	2372.49	5.38	1.31	5.89	5.89
Rosebud County	C10	RM 243.03	61422	200-yr	3029.9	772.42	766.73	2.69	1.26	33.94	10.12	174.23	1969.79	4.51	1.31	5.69	5.69
Rosebud County	C10	RM 242.84	61125	200-yr	3029.9	771.93	766.76	3.33	1.71	52.87	13.74	172.04	1608.5	4.32	1.1	5.17	5.17
Rosebud County	C10	RM 242.65	60825	200-yr	3029.9	771.78	766.76	2.65	1.49	33.58	9.46	204.7	1609.53	4.54	1.26	5.02	5.02
Rosebud County	C10	RM 242.47	60527	200-yr	3029.9	771.65	766.77	2.27	1.36	24.22	7.55	241.01	1649.77	4.62	1.44	4.88	4.88
Rosebud County	C10	RM 242.29	60239	200-yr	3029.9	771.53	766.64	2.08	1.37	21.17	7.78	282.31	1365.77	4.44	1.62	4.89	4.89
Rosebud County	C10	RM 242.1	59939	200-yr	3029.9	771.36	766.29	2.18	1.29	23.97	9.15	280	1636.45	4.04	1.53	5.07	5.07
Rosebud County	C10	RM 241.9	59618	200-yr	3029.9	771.22	765.95	2.03	1.08	18.76	6.17	249.51	1914.28	4.65	1.52	5.27	5.27
Rosebud County	C10	RM 241.72	59324	200-yr	3029.9	771.14	765.5	1.73	1.02	13.65	5.15	289.97	1670.49	4.76	1.78	5.64	5.64
Rosebud County	C10	RM 241.53	59025	200-yr	3029.9	770.92	765.17	2.43	1.2	29.84	7.97	160	1800.46	5.36	1.41	5.75	5.75
Rosebud County	C10	RM 241.34	58725	200-yr	3029.9	770.83	765.02	2.11	1.02	20.02	6.51	177.78	1783.18	5.22	1.67	5.81	5.81
Rosebud County	C10	RM 241.16	58424	200-yr	3029.9	770.78	764.97	1.69	0.91	12.81	5.25	171.92	1652.62	5.01	2.03	5.81	5.81
Rosebud County	C10	RM 240.97	58132	200-yr	3029.9	770.71	764.83	1.64	0.89	11.98	4.99	189.7	1571	5.27	2.17	5.88	5.88
Rosebud County	C10	RM 240.78	57818	200-yr	3029.9	770.68	764.56	1.32	0.72	7.48	3.3	159.68	1661.38	5.79	2.52	6.12	6.12
Rosebud County	C10	RM 240.56	57467	200-yr	3029.9	770.62	764.28	1.39	0.81	12.07	5.88	212.38	1603.93	5.44	2.62	6.34	6.34
Rosebud County	C10	RM 240.41	57228	200-yr	3029.9	770.55	763.91	1.46	0.93	11.21	5.7	216.4	1396.98	5.97	3.01	6.64	6.64
Rosebud County	C10	RM 240.22	56944	200-yr	3029.9	770.33	763.51	2.32	1.39	23.17	11.41	157.35	1098.6	6.5	3.1	6.82	6.82
Rosebud County	C10	RM 240.09	56741	200-yr	3029.9	769.88	763.47	3.5	2.13	41.89	21.19	120.86	950.29	6	2.96	6.41	6.41
Rosebud County	C10	RM 239.97	56546	200-yr	3029.9	769.75	763.47	3.15	2.58	55.4	37.24	155.75	734.58	5.77	3.84	6.28	6.28
Rosebud County	C10	RM 239.86	56371	200-yr	3029.9	769.71	760.88	2.51	2.49	28.57	27.65	205.85	463.5	5.85	5.67	8.83	8.83
Rosebud County			56353	200-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	200-yr	3029.9	769.66	760.88	2.5	2.48	21.33	20.53	202.33	345.78	5.98	5.76	8.78	8.78
Rosebud County	C10	RM 239.68	56093	200-yr	3029.9	769.18	763.02	3.43	3.12	42.77	32.27	172.44	258.98	5.01	3.75	6.16	6.16
Rosebud County	C10	RM 239.56	55888	200-yr	3029.9	768.91	757.33	3.68	3.13	44.62	26.28	119.6	250.13	6.73	3.86	11.58	11.58
Rosebud County			55879	200-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	200-yr	3029.9	768.83	757.33	3.81	3.24	47.46	25.93	112.19	254.37	6.94	3.68	11.5	11.5
Rosebud County	C10	RM 239.41	55655	200-yr	3029.9	768.42	763.17	4.19	3.54	64.09	36.31	144.11	313.24	4.89	2.73	5.25	5.25
Rosebud County	C10	RM 239.25	55398	200-yr	3029.9	768.16	763.17	3.89	3.34	56.19	36.58	164.41	304.78	4.61	2.97	4.99	4.99
Rosebud County	C10	RM 239.07	55108	200-yr	3029.9	768.2	763.2	2.71	2.41	27.08	21.42	219.55	341.16	4.68	3.69	5	5
Rosebud County	C10	RM 238.89	54826	200-yr	3029.9	767.95	763.23	3.01	2.32	33.69	22.06	191.74	439.69	4.57	2.97	4.72	4.72
Rosebud County	C10	RM 238.73	54570	200-yr	3029.9	767.76	763.38	2.85	2.31	30.95	19.94	242.11	487.58	4.2	2.69	4.38	4.38
Rosebud County	C10	RM 238.51	54223	200-yr	3029.9	767.68	762.88	1.95	1.92	19.5	18.16	435.56	478.64	3.55	3.3	4.8	4.8
Rosebud County	C10	RM 238.33	53926	200-yr	3029.9	767.48	762.37	2.16	1.86	22.58	14.48	306.34	580.85	4.4	2.81	5.11	5.11
Rosebud County	C10	RM 238.14	53626	200-yr	3029.9	767.17	762.25	2.73	1.88	34.74	17.8	214.01	727.85	4.55	2.33	4.92	4.92
Rosebud County	C10	RM 237.95	53321	200-yr	3029.9	766.94	762.09	2.82	1.84	36.78	16.38	189.37	972.65	4.61	2.04	4.85	4.85
Rosebud County	C10	RM 237.77	53027	200-yr	3029.9	766.91	761.85	1.91	1.34	16.96	8.68	294.75	1028.91	4.56	2.33	5.06	5.06
Rosebud County	C10	RM 237.56	52703	200-yr	3029.9	766.83	761.46	1.61	1.1	12.94	7.41	410.69	1233.23	3.91	2.23	5.37	5.37
Rosebud County	C10	RM 237.36	52386	200-yr	3029.9	766.77	761.22	1.37	0.9	9.13	5.34	443.16	1432.46	4.06	2.36	5.55	5.55
Rosebud County	C10	RM 237.15	52029	200-yr	3029.9	766.7	760.88	1.4	0.9	9.2	4.98	385.86	1386.18	4.51	2.43	5.82	5.82
Rosebud County	C10	RM 236.99	51756	200-yr	3029.9	766.45	760.22	2.42	1.34	20.04	7.58	177.1	1189.16	5.91	2.2	6.23	6.23
Rosebud County	C10	RM 236.83	51500	200-yr	3029.9	766.14	760.07	3.07	1.83	33.65	13.98	167.82	1210.31	5.18	2.12	6.07	6.07
Rosebud County	C10	RM 236.66	51221	200-yr	3029.9	766.05	760.07	2.64	2	24.36	12.74	188.48	909.92	5.52	2.85	5.98	5.98

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	200-yr	3029.9	765.91	759.94	2.63	2.06	24.08	10.68	193.41	599.41	5.62	2.46	5.97	5.97
Rosebud County	C11	RM 236.29	50623	200-yr	3029.9	765.8	760	2.51	1.95	22.24	9.38	211.22	700.41	5.35	2.23	5.8	5.8
Rosebud County	C11	RM 236.1	50327	200-yr	3029.9	765.55	760	2.85	2.29	29.56	12.19	206.87	691.22	4.86	1.98	5.55	5.55
Rosebud County	C11	RM 235.91	50024	200-yr	3029.9	765.2	760	3.27	2.39	48.86	20.05	170.49	637.77	4.9	1.98	5.2	5.2
Rosebud County	C11	RM 235.73	49726	200-yr	3029.9	765.14	760.15	2.35	2.07	25.93	19.09	243.8	479.7	4.46	3.28	4.99	4.99
Rosebud County	C11	RM 235.57	49480	200-yr	3029.9	765.03	760.02	2.07	1.85	20.15	10.78	318.23	935.63	4.45	2.37	5.01	5.01
Rosebud County	C11	RM 235.36	49133	200-yr	3029.9	764.87	759.74	2.02	1.79	18.26	10.66	428.22	1146	3.36	1.95	5.13	5.13
Rosebud County	C11	RM 235.17	48830	200-yr	3029.9	764.7	759.55	1.96	1.75	18.77	11.01	455.8	1197.23	3.27	1.91	5.15	5.15
Rosebud County	C11	RM 235	48571	200-yr	3029.9	764.58	759.29	1.97	1.56	18.1	8.59	320.92	1387.11	4.48	2.11	5.29	5.29
Rosebud County	C11	RM 234.82	48271	200-yr	3029.9	763.97	759.21	3.46	2.5	57.46	21.41	190.08	1068.7	4.15	1.53	4.76	4.76
Rosebud County	C11	RM 234.63	47978	200-yr	3029.9	763.84	759.21	2.59	1.88	31.92	13.89	238.2	918.03	4.13	1.79	4.63	4.63
Rosebud County	C11	RM 234.45	47692	200-yr	3029.9	763.67	759.12	2.32	1.75	26.17	11.9	283.79	1117.35	3.96	1.8	4.55	4.55
Rosebud County	C11	RM 234.2	47305	200-yr	3029.9	763.56	758.6	1.66	1.4	11.76	8.59	528.71	1096.59	2.95	2.15	4.96	4.96
Rosebud County	C11	RM 234.01	47006	200-yr	3029.9	763.5	758.27	1.21	1.08	7.41	6.66	818.93	1373.62	2.9	2.61	5.23	5.23
Rosebud County	C11	RM 233.84	46737	200-yr	3029.9	763.4	758.12	1.39	1.17	10.41	6.73	583.98	1221.86	3.43	2.22	5.28	5.28
Rosebud County	C11	RM 233.61	46365	200-yr	3029.9	763.24	757.67	1.72	1.25	13.15	4.84	302.81	1298.43	5.25	1.93	5.57	5.57
Rosebud County	C11	RM 233.35	45943	200-yr	3029.9	763.06	757.03	2.16	1.26	21.25	7.46	214.65	1446.1	4.82	1.68	6.03	6.03
Rosebud County	C11	RM 233.13	45584	200-yr	3029.9	762.84	756.45	2.32	1.44	23.68	6.25	206.27	1506.99	5.49	1.43	6.39	6.39
Rosebud County	C11	RM 232.94	45281	200-yr	3029.9	762.54	756.15	2.87	1.78	36.13	8.4	169.36	1574.75	5.54	1.26	6.39	6.39
Rosebud County	C11	RM 232.75	44978	200-yr	3029.9	762.46	756.03	2.36	1.57	24.25	6.28	204.86	1712.6	5.64	1.43	6.43	6.43
Rosebud County	C11	RM 232.56	44674	200-yr	3029.9	762.33	755.79	2.3	1.59	24.01	7.28	241.61	1640.32	4.92	1.47	6.54	6.54
Rosebud County	C11	RM 232.37	44366	200-yr	3029.9	762.11	755.72	2.6	1.56	31.24	10.86	206.42	1315.87	4.72	1.61	6.39	6.39
Rosebud County	C11	RM 232.19	44074	200-yr	3029.9	761.91	755.67	2.58	1.68	29.98	10.4	204.11	1105.8	5.06	1.73	6.24	6.24
Rosebud County	C11	RM 232.01	43791	200-yr	3029.9	761.74	755.65	2.51	1.74	29.56	11.96	232.27	1288.94	4.53	1.81	6.09	6.09
Rosebud County	C11	RM 231.81	43473	200-yr	3029.9	761.46	755.6	2.77	1.63	35.63	15.79	201.55	1053.39	4.36	1.9	5.86	5.86
Rosebud County	C11	RM 231.62	43160	200-yr	3029.9	761.21	755.57	2.73	1.84	31.56	12.82	230.66	1558.46	4.01	1.61	5.64	5.64
Rosebud County	C11	RM 231.42	42835	200-yr	3029.9	761.17	755.45	1.97	1.28	17.18	7.32	229.33	1512.7	5.33	2.24	5.72	5.72
Rosebud County	C11	RM 231.22	42522	200-yr	3029.9	761.01	755.45	2.27	1.36	22.72	10.12	204	1597.28	4.75	2.09	5.56	5.56
Rosebud County	C11	RM 230.99	42160	200-yr	3029.9	760.47	755.45	3.43	1.83	55.68	20.07	154.03	1419.4	4.39	1.55	5.02	5.02
Rosebud County	C11	RM 230.79	41841	200-yr	3029.9	760.26	755.43	2.77	1.68	35.8	13.34	202.2	1280.58	4.55	1.67	4.83	4.83
Rosebud County	C11	RM 230.53	41415	200-yr	3029.9	760.15	755.17	1.88	1.45	17.58	8.42	299.8	1448.7	3.57	1.7	4.98	4.98
Rosebud County	C11	RM 230.29	41045	200-yr	3029.9	759.9	755.15	2.28	1.53	24.43	9.57	234.88	1426.8	3.93	1.52	4.75	4.75
Rosebud County	C11	RM 230.06	40676	200-yr	3029.9	759.64	754.81	2.24	1.62	25.82	9.34	287.47	1609.68	3.38	1.21	4.83	4.83
Rosebud County	C11	RM 229.81	40276	200-yr	3029.9	759.5	754.74	1.8	1.03	15.93	6.37	320.68	1885.39	3.93	1.56	4.76	4.76
Rosebud County	C11	RM 229.6	39937	200-yr	3029.9	759.34	754.58	1.88	1.06	16.15	8.74	412.79	1938.46	2.76	1.48	4.76	4.76
Rosebud County	C11	RM 229.4	39596	200-yr	3029.9	759.19	754.34	1.89	1.09	17.34	5.89	283.63	1971.1	4.2	1.42	4.85	4.85
Rosebud County	C11	RM 229.2	39273	200-yr	3029.9	758.85	754.15	2.78	1.57	38.58	12.3	214.46	1641.2	3.73	1.18	4.7	4.7
Rosebud County	C11	RM 229.02	38994	200-yr	3029.9	758.65	754.12	2.65	1.42	34.59	10.14	211.31	1916.6	3.83	1.11	4.53	4.53
Rosebud County	C11	RM 228.82	38676	200-yr	3029.9	758.47	753.8	2.26	1.35	25.22	7.77	271.56	1933.31	3.8	1.16	4.67	4.67
Rosebud County	C11	RM 228.64	38383	200-yr	3029.9	758.33	753.73	2.17	1.22	23.24	7.78	224.38	1934.46	3.87	1.28	4.64	4.64
Rosebud County	C11	RM 228.46	38093	200-yr	3029.9	758.26	753.53	1.66	0.98	13.53	5.25	301.72	2039.49	3.94	1.52	4.73	4.73
Rosebud County	C11	RM 228.26	37771	200-yr	3029.9	758.2	753.35	1.49	0.81	10.69	4.71	273.91	2086.53	4.09	1.78	4.85	4.85
Rosebud County	C11	RM 228.03	37408	200-yr	3029.9	758.08	753.16	1.76	0.85	14.87	6.08	233.4	2084.57	4.23	1.71	4.92	4.92
Rosebud County	C11	RM 227.74	36949	200-yr	3029.9	757.92	752.95	1.99	1.08	18.64	6.05	167.04	1966.41	4.49	1.43	4.97	4.97
Rosebud County	C11	RM 227.49	36537	200-yr	3029.9	757.82	752.83	1.91	1.02	17.05	5.62	175.55	2042.83	4.48	1.46	4.99	4.99
Rosebud County	C11	RM 227.2	36062	200-yr	3029.9	757.71	752.41	1.84	1.03	15.97	5.39	180.83	2529.93	4.43	1.47	5.3	5.3
Rosebud County	C11	RM 226.98	35709	200-yr	3029.9	757.39	752.31	2.53	1.39	31.06	11.93	211.99	1674.02	4.06	1.54	5.08	5.08
Rosebud County	C11	RM 226.79	35400	200-yr	3029.9	757.25	752.25	2.01	1.34	22.1	10.74	268.83	1131.18	4.19	2.02	5	5
Rosebud County	C11	RM 226.56	35065	200-yr	3029.9	757.12	751.83	1.75	1.29	17.41	11.49	338.41	848.7	4.22	2.77	5.29	5.29
Rosebud County	C11	RM 226.36	34743	200-yr	3029.9	756.85	751.68	2.21	1.68	26	13.13	303.18	891.66	4.07	2.04	5.17	5.17
Rosebud County	C11	RM 226.2	34476	200-yr	3029.9	756.81	751.25	1.61	1.25	13.14	7.87	424.72	1105.5	3.86	2.31	5.56	5.56
Rosebud County	C11	RM 226.01	34177	200-yr	3029.9	756.7	750.81	1.67	1.15	21.48	9.64	284.2	1480.12	4.87	2.16	5.89	5.89
Rosebud County	C11	RM 225.83	33884	200-yr	3029.9	756.42	750.59	2.58	1.37	29.67	12.07	159.74	1333.15	5.25	2.09	5.83	5.83
Rosebud County	C11	RM 225.64	33580	200-yr	3029.9	756.32	750.56	1.99	1.38	18.59	10.35	293.96	1438.31	4.48	2.48	5.76	5.76
Rosebud County	C11	RM 225.45	33275	200-yr	3029.9	756.23	750.31	1.8	1.44	14.84	8.58	332.17	1449.08	4.78	2.74	5.92	5.92
Rosebud County	C11	RM 225.26	32969	200-yr	3029.9	756.07	750.25	2.05	1.66	19.17	11.24	291.78	1531.26	4.82	2.81	5.82	5.82
Rosebud County	C11	RM 225.16	32805	200-yr	3029.9	755.86	750.19	2.55	2.18	29.41	18.36	224.54	1163.47	5.11	3.16	5.67	5.67
Rosebud County	C11	RM 225.06	32646	200-yr	3029.9	755.45	747.9	3.3	3.13	46.43	36.44	169.61	1022.42	5.38	4.2	7.55	7.55
Rosebud County			32620	200-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	200-yr	3029.9	755.3	747.9	3.37	3.29	50.57	41.07	169.8	1130.08	5.27	4.26	7.4	7.4

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	200-yr	3029.9	755.26	750.09	2.48	2.29	28.31	18.32	249.97	1079.04	4.75	3.06	5.17	5.17
Rosebud County	C12	RM 224.71	32083	200-yr	3029.9	755.12	750.04	2.23	2.07	22.9	17.31	393.26	589.58	3.35	2.53	5.08	5.08
Rosebud County	C12	RM 224.53	31796	200-yr	3029.9	754.89	749.96	2.29	2.2	22.51	17.91	412.38	733.89	3.17	2.52	4.93	4.93
Rosebud County	C12	RM 224.34	31486	200-yr	3029.9	754.73	750.03	1.89	1.71	20.9	16.74	480.32	878.25	2.87	2.3	4.7	4.7
Rosebud County	C12	RM 224.16	31195	200-yr	3029.9	754.54	749.78	2.06	1.58	19.62	9.91	263.29	1523.79	4.19	2.1	4.86	4.86
Rosebud County	C12	RM 223.96	30878	200-yr	3029.9	754.37	749.48	2.31	1.56	24.99	10.38	179.51	1458.57	4.53	1.86	4.99	4.99
Rosebud County	C12	RM 223.76	30567	200-yr	3029.9	754.22	749.18	2.41	1.58	28.12	11.7	162.95	1484.23	4.12	1.69	5.04	5.04
Rosebud County	C12	RM 223.55	30235	200-yr	3029.9	754.07	748.87	2.15	1.4	20.97	7.28	229.9	1602.44	4.91	1.69	5.2	5.2
Rosebud County	C12	RM 223.37	29952	200-yr	3029.9	753.83	748.72	2.52	1.52	29.06	9.59	208.3	1475.69	4.86	1.59	5.11	5.11
Rosebud County	C12	RM 223.2	29681	200-yr	3029.9	753.68	748.51	2.46	1.47	27.49	8.96	209.66	1705.72	4.98	1.6	5.17	5.17
Rosebud County	C12	RM 223.02	29391	200-yr	3029.9	753.59	748.51	2.08	1.3	20.26	7.95	265.78	1969.91	4.54	1.76	5.08	5.08
Rosebud County	C12	RM 222.82	29071	200-yr	3029.9	753.47	748.5	1.97	1.19	18.12	7.34	268.13	2184.84	4.57	1.84	4.97	4.97
Rosebud County	C12	RM 222.64	28787	200-yr	3029.9	753.32	748.46	2.18	1.28	22.1	10.04	236.97	2042.06	4.61	2.08	4.86	4.86
Rosebud County	C12	RM 222.45	28479	200-yr	3029.9	753.2	748.44	1.98	1.18	18.72	9.75	281.49	1888.46	4.18	2.16	4.76	4.76
Rosebud County	C12	RM 222.22	28128	200-yr	3029.9	753.07	748.15	1.91	1.16	16.8	8	261.1	2354.81	4.64	2.19	4.92	4.92
Rosebud County	C12	RM 222.01	27784	200-yr	3029.9	753	747.57	1.51	1.01	11.19	5.85	372.22	2736.85	4.36	2.27	5.43	5.43
Rosebud County	C12	RM 221.77	27401	200-yr	3029.9	752.95	747.18	1.02	0.85	6.63	4.95	725.95	2781.88	3.51	2.61	5.77	5.77
Rosebud County	C12	RM 221.55	27042	200-yr	3029.9	752.88	747.07	0.97	0.83	6.94	5.46	807.88	2781.07	3.45	2.71	5.81	5.81
Rosebud County	C12	RM 221.34	26708	200-yr	3029.9	752.83	746.94	0.96	0.77	5.27	3.74	648.68	2717.79	3.74	2.64	5.89	5.89
Rosebud County	C12	RM 221.15	26406	200-yr	3029.9	752.7	746.7	1.63	1.1	11.64	5.34	265.14	2104.85	5.57	2.52	6	6
Rosebud County	C12	RM 220.96	26081	200-yr	3029.9	752.32	746.66	3.1	1.85	43.67	17.91	138.93	1297.5	5.01	2.01	5.66	5.66
Rosebud County	C12	RM 220.77	25779	200-yr	3029.9	751.64	746.73	3.78	2.89	66.53	24.2	163.4	931.7	4.57	1.64	4.91	4.91
Rosebud County	C12	RM 220.6	25513	200-yr	3029.9	751.72	746.72	2.29	1.84	24.13	12.49	256.78	1060.22	4.72	2.43	5	5
Rosebud County	C12	RM 220.4	25183	200-yr	3029.9	751.58	746.88	2	1.64	19.26	11.93	395.04	1225.19	3.36	2.07	4.7	4.7
Rosebud County	C12	RM 220.23	24914	200-yr	3029.9	751.53	746.8	1.41	1.22	9.2	6.97	642.64	1926.08	2.96	2.24	4.73	4.73
Rosebud County	C12	RM 220.02	24578	200-yr	3029.9	751.43	746.54	1.3	1.18	9.13	7.69	792.77	1649.34	2.71	2.28	4.89	4.89
Rosebud County	C12	RM 219.83	24268	200-yr	3029.9	751.35	746.18	1.17	1.05	7.39	6.26	775.68	1083.18	3.15	2.67	5.17	5.17
Rosebud County	C12	RM 219.63	23947	200-yr	3029.9	751.2	745.79	1.51	1.37	13.06	11.04	587.54	982.63	3.22	2.72	5.41	5.41
Rosebud County	C12	RM 219.47	23683	200-yr	3029.9	751.08	745.56	1.69	1.36	14.26	8.97	380.14	1038.47	4.3	2.69	5.52	5.52
Rosebud County	C12	RM 219.29	23386	200-yr	3029.9	750.78	745.27	2.59	1.72	31	13.74	208.04	889.13	4.64	2.03	5.51	5.51
Rosebud County	C12	RM 219.11	23085	200-yr	3029.9	750.61	745.15	2.54	1.61	29.82	12.59	176.7	971.29	4.66	1.94	5.46	5.46
Rosebud County	C12	RM 218.92	22783	200-yr	3029.9	750.48	745.15	2.16	1.39	22.41	10.79	229.91	1108.24	4.14	1.97	5.33	5.33
Rosebud County	C12	RM 218.73	22473	200-yr	3029.9	750.29	745.06	2.21	1.36	22.25	9.65	226.8	1057.19	4.9	2.11	5.23	5.23
Rosebud County	C12	RM 218.54	22180	200-yr	3029.9	750.15	744.99	2.14	1.51	21.37	12.18	274.48	777.84	4.52	2.58	5.16	5.16
Rosebud County	C12	RM 218.38	21902	200-yr	3029.9	750.04	744.43	2.16	1.47	21.01	10.21	234.82	843.46	5.07	2.45	5.61	5.61
Rosebud County	C12	RM 218.18	21580	200-yr	3029.9	749.76	743.9	2.71	1.56	33.38	14.41	182.74	933.04	4.93	2.1	5.86	5.86
Rosebud County	C12	RM 217.99	21276	200-yr	3029.9	749.59	743.66	2.56	1.5	30.65	11.75	211.96	1195.86	4.49	1.7	5.93	5.93
Rosebud County	C12	RM 217.81	20981	200-yr	3029.9	749.53	743.51	1.88	1.29	15.49	5.39	293.45	1423.01	5.02	1.73	6.02	6.02
Rosebud County	C12	RM 217.64	20702	200-yr	3029.9	749.15	743.41	3	1.71	41.21	10.84	176.29	1416.3	4.86	1.25	5.74	5.74
Rosebud County	C12	RM 217.45	20392	200-yr	3029.9	748.95	743.29	2.8	1.48	36.66	11.01	184.69	1520.35	4.57	1.35	5.66	5.66
Rosebud County	C12	RM 217.25	20070	200-yr	3029.9	748.89	743.29	2.17	1.15	20.98	6.05	191.77	1776.65	5.22	1.48	5.6	5.6
Rosebud County	C12	RM 217	19662	200-yr	3029.9	748.61	743.25	2.53	1.33	29.41	8.07	192.47	1764.92	4.77	1.29	5.36	5.36
Rosebud County	C12	RM 216.77	19300	200-yr	3029.9	748.42	743.25	2.42	1.31	28.17	9.63	217.02	1639.18	4.17	1.41	5.17	5.17
Rosebud County	C12	RM 216.53	18912	200-yr	3029.9	748.29	743.3	1.93	1.01	17.9	7.69	274.18	1710.18	4.1	1.75	4.99	4.99
Rosebud County	C12	RM 216.27	18500	200-yr	3029.9	748.18	743.24	1.66	0.99	13.47	6.99	358.3	1531.38	3.89	2.01	4.94	4.94
Rosebud County	C12	RM 215.98	18038	200-yr	3029.9	748.08	743.12	1.53	0.87	11.19	5.13	273.73	1812.11	4.18	1.91	4.96	4.96
Rosebud County	C12	RM 215.68	17550	200-yr	3029.9	747.93	742.31	1.7	0.98	12.66	4.53	269.37	1783.29	5.33	1.9	5.62	5.62
Rosebud County	C12	RM 215.41	17101	200-yr	3029.9	747.7	741.82	2.22	1.38	22.23	7.63	218.66	1487.88	5.02	1.7	5.88	5.88
Rosebud County	C12	RM 215.21	16781	200-yr	3029.9	747.36	741.65	3.01	1.75	41.27	13.27	159.7	1488.34	4.89	1.55	5.71	5.71
Rosebud County	C12	RM 215.02	16479	200-yr	3029.9	746.94	741.68	3.44	2.13	54.04	19.26	146.57	848.46	4.9	1.71	5.26	5.26
Rosebud County	C13	RM 214.86	16220	200-yr	3029.9	746.96	741.64	2.2	1.69	21.67	11.8	252.91	947.61	5.11	2.76	5.32	5.32
Rosebud County	C13	RM 214.65	15883	200-yr	3029.9	746.8	741.6	2.09	1.83	20.71	12.75	399.8	810.84	3.52	2.16	5.2	5.2
Rosebud County	C13	RM 214.46	15577	200-yr	3029.9	746.66	741.6	1.89	1.49	15.34	9.99	460.55	1200.51	3.17	2.05	5.06	5.06
Rosebud County	C13	RM 214.27	15282	200-yr	3029.9	746.57	741.59	1.63	1.29	12.09	7.26	505.93	1237.47	3.16	1.89	4.98	4.98
Rosebud County	C13	RM 214.07	14957	200-yr	3029.9	746.45	741.54	1.53	1.09	14.85	7.29	425.03	1501.98	3.93	1.91	4.91	4.91
Rosebud County	C13	RM 213.9	14672	200-yr	3029.9	746.25	741.37	1.93	1.49	18.25	6.43	363.41	1484.62	3.97	1.39	4.88	4.88
Rosebud County	C13	RM 213.7	14343	200-yr	3029.9	745.86	740.88	2.68	2.06	33.34	9.57	232.58	1653.55	4.63	1.31	4.98	4.98
Rosebud County	C13	RM 213.54	14083	200-yr	3029.9	745.51	740.59	3.17	2.04	47.19	11.62	191.86	2010.7	4.5	1.09	4.92	4.92
Rosebud County	C13	RM 213.36	13792	200-yr	3029.9	745.4	740.39	2.48	1.57	29.61	9.1	246.24	2013.57	4.11	1.25	5.01	5.01
Rosebud County	C13	RM 213.16	13475	200-yr	3029.9	745.22	740.27	2.38	1.41	26.98	8.13	214.1	2190.3	3.93	1.17	4.95	4.95

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	200-yr	3029.9	745.1	740.31	2.18	1.24	21.44	7.37	212.05	2161.32	3.8	1.29	4.79	4.79
Rosebud County	C13	RM 212.79	12880	200-yr	3029.9	744.9	740.19	2.32	1.19	25.22	7.39	178.07	2112.56	4.5	1.3	4.71	4.71
Rosebud County	C13	RM 212.6	12572	200-yr	3029.9	744.72	739.79	2.18	1.13	22.09	6.55	240.96	2153.17	4.61	1.35	4.93	4.93
Rosebud County	C13	RM 212.42	12284	200-yr	3029.9	744.58	739.58	2.27	1.14	24.71	7.34	211.31	2095.48	4.34	1.27	5	5
Rosebud County	C13	RM 212.23	11983	200-yr	3029.9	744.52	739.17	1.76	0.94	14.73	5.25	257.92	2113.59	4.3	1.52	5.35	5.35
Rosebud County	C13	RM 212.05	11688	200-yr	3029.9	744.36	738.83	2.08	1.12	19.7	5.49	227.41	2031.49	4.84	1.33	5.53	5.53
Rosebud County	C13	RM 211.85	11386	200-yr	3029.9	744.18	738.79	2.27	1.34	24.53	8.06	251.66	1645.49	4.23	1.38	5.39	5.39
Rosebud County	C13	RM 211.65	11066	200-yr	3029.9	744.01	738.58	2.27	1.3	24.28	7.77	248.86	1750.83	4.33	1.37	5.43	5.43
Rosebud County	C13	RM 211.44	10724	200-yr	3029.9	743.88	738.38	2.21	1.1	22.63	7.31	199.53	1980.47	4.61	1.47	5.5	5.5
Rosebud County	C13	RM 211.21	10353	200-yr	3029.9	743.77	737.87	2.02	1.1	17.57	6.75	207.36	1562.43	4.62	1.76	5.9	5.9
Rosebud County	C13	RM 210.96	9946	200-yr	3029.9	743.46	737.72	2.69	1.46	33.75	11.92	169.56	1303.46	4.59	1.59	5.74	5.74
Rosebud County	C13	RM 210.75	9612	200-yr	3029.9	743.38	737.48	2.16	1.26	21.13	7.15	191.27	1448.17	4.97	1.66	5.9	5.9
Rosebud County	C13	RM 210.57	9317	200-yr	3029.9	743.3	737.5	1.91	1.17	16.59	5.49	244	1601.7	4.94	1.62	5.8	5.8
Rosebud County	C13	RM 210.36	8986	200-yr	3029.9	742.96	737.54	2.73	1.52	34.74	10.55	194.77	1495.37	4.54	1.36	5.42	5.42
Rosebud County	C13	RM 210.16	8674	200-yr	3029.9	742.73	737.53	2.49	1.7	30.74	12.98	288.57	1113.69	3.81	1.6	5.2	5.2
Rosebud County	C13	RM 209.98	8382	200-yr	3029.9	742.73	737.25	1.64	1.14	12.26	5	307.03	1543.85	4.81	1.94	5.48	5.48
Rosebud County	C13	RM 209.8	8091	200-yr	3029.9	742.62	736.96	1.87	1.11	15.3	5.1	218.68	1863.31	5.52	1.82	5.66	5.66
Rosebud County	C13	RM 209.6	7774	200-yr	3029.9	742.48	736.72	2.19	1.04	21.22	6.21	179.37	2196.67	5.36	1.54	5.76	5.76
Rosebud County	C13	RM 209.41	7482	200-yr	3029.9	742.41	736.53	1.83	0.98	15.28	4.98	238.7	2087.63	4.87	1.57	5.88	5.88
Rosebud County	C13	RM 209.21	7161	200-yr	3029.9	742.22	736.29	2.28	1.29	23.58	7.17	197.21	1689.71	4.98	1.49	5.93	5.93
Rosebud County	C13	RM 209.03	6871	200-yr	3029.9	742.08	736.14	2.35	1.31	24.96	7.91	186.26	1556.84	5.07	1.58	5.94	5.94
Rosebud County	C13	RM 208.85	6571	200-yr	3029.9	742	736.03	1.99	1.18	17.74	5.8	229.12	1631.61	5.1	1.65	5.97	5.97
Rosebud County	C13	RM 208.65	6257	200-yr	3029.9	741.92	735.74	1.93	1.17	16.98	5.95	218.32	1535.12	4.87	1.68	6.18	6.18
Rosebud County	C13	RM 208.46	5945	200-yr	3029.9	741.69	735.69	2.37	1.61	26.56	10.92	204.54	1114.4	4.34	1.76	6	6
Rosebud County	C13	RM 208.29	5682	200-yr	3029.9	740.8	735.63	4.27	3.19	84.76	26.56	116.29	664.87	4.7	1.43	5.17	5.17
Rosebud County	C14	RM 208.1	5374	200-yr	3029.9	740.65	735.61	2.97	2.36	40.35	14.46	201.37	866.02	4.83	1.71	5.04	5.04
Rosebud County	C14	RM 207.91	5064	200-yr	3029.9	740.5	735.56	2.45	1.83	30.11	16.76	293.26	803.39	3.74	2.06	4.94	4.94
Rosebud County	C14	RM 207.72	4766	200-yr	3029.9	740.3	735.52	2.15	1.63	22.21	12.49	404.67	1315.22	3.05	1.7	4.78	4.78
Rosebud County	C14	RM 207.53	4450	200-yr	3029.9	740.23	735.35	1.52	1.13	12.18	6.81	469.61	1406.09	3.43	1.91	4.88	4.88
Rosebud County	C14	RM 207.33	4123	200-yr	3029.9	740.07	735.27	1.88	1.23	16.99	7.92	282.48	1269.27	4.17	1.93	4.8	4.8
Rosebud County	C14	RM 207.15	3851	200-yr	3029.9	740.01	735.14	1.61	1.05	12.62	5.7	313.39	1513.45	4.25	1.91	4.87	4.87
Rosebud County	C14	RM 206.99	3599	200-yr	3029.9	739.96	734.95	1.45	0.9	10.1	4.97	327.09	1691.23	4.06	1.99	5.01	5.01
Rosebud County	C14	RM 206.81	3315	200-yr	3029.9	739.9	734.49	1.5	0.88	10.5	4.89	257.4	1627.38	4.58	2.11	5.41	5.41
Rosebud County	C14	RM 206.61	2997	200-yr	3029.9	739.75	733.91	1.96	1.08	17.28	7.02	197.48	1366.95	5.1	2.05	5.84	5.84
Rosebud County	C14	RM 206.43	2701	200-yr	3029.9	739.7	733.52	1.64	0.92	12.75	6.5	244.31	1621.48	4.34	2.19	6.18	6.18
Rosebud County	C14	RM 206.21	2350	200-yr	3029.9	739.6	733.38	1.63	1.02	13.29	5.96	253.17	1738.57	4.57	2.03	6.22	6.22
Rosebud County	C14	RM 205.97	1963	200-yr	3029.9	739.44	732.73	1.91	1.2	15.54	5.92	223.85	1495.68	5.92	2.22	6.71	6.71
Rosebud County	C14	RM 205.72	1563	200-yr	3029.9	738.81	732.73	3.9	1.97	90.05	25.26	107.48	1522.39	5.1	1.38	6.08	6.08
Rosebud County	C14	RM 205.49	1198	200-yr	3029.9	738.58	732.63	2.77	1.71	45.92	15.53	192.62	1546.79	4.75	1.59	5.95	5.95
Rosebud County	C14	RM 205.3	907	200-yr	3029.9	738.29	732.76	2.79	1.81	38.6	17.93	246.92	1411.85	3.79	1.74	5.53	5.53
Rosebud County	C14	RM 205.11	594	200-yr	3029.9	738.03	732.8	2.8	1.79	35.93	13.22	192	1388.52	4.84	1.76	5.23	5.23
Rosebud County	C14	RM 204.9	243	200-yr	3029.9	737.72	732.63	2.84	2	38.45	15.42	224.67	1363.81	4.26	1.69	5.09	5.09

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	200-yr	3029.9	737.72	732.67	2.5	1.4	29.93	13.33	192.07	1170	4.2	1.85	5.05	5.05
Custer County	C14	RM 204.43	73135	200-yr	3029.9	737.57	732.44	2.18	1.29	22.7	11.55	266.74	1117.74	4.16	2.1	5.13	5.13
Custer County	C14	RM 204.22	72808	200-yr	3029.9	737.37	732.3	2.27	1.34	25.34	11.84	262.16	1252	3.88	1.81	5.07	5.07
Custer County	C14	RM 204	72454	200-yr	3029.9	737.24	731.9	2	1.2	18.13	7.74	261.19	1216.4	4.89	2.07	5.34	5.34
Custer County	C14	RM 203.82	72156	200-yr	3029.9	736.91	731.14	2.8	1.6	36.57	16.46	197.43	932.39	4.56	2.03	5.77	5.77
Custer County	C14	RM 203.65	71895	200-yr	3029.9	736.74	730.95	2.84	1.46	37.42	18.55	162.5	917.1	4.63	2.26	5.79	5.79
Custer County	C14	RM 203.5	71641	200-yr	3029.9	736.68	730.78	2.24	1.32	23.33	11.61	195.78	1020.52	4.59	2.25	5.9	5.9
Custer County	C14	RM 203.3	71324	200-yr	3029.9	736.64	730.79	1.75	1.03	13.82	7.17	161.79	1155.29	5	2.54	5.85	5.85
Custer County	C14	RM 203.1	71035	200-yr	3029.9	736.31	730.79	2.73	1.45	35.39	15.2	184.4	1322.03	4.33	1.83	5.52	5.52
Custer County	C14	RM 202.9	70718	200-yr	3029.9	736.18	730.67	2.28	1.5	26.68	15.57	249.34	1133.09	3.38	1.95	5.51	5.51
Custer County	C14	RM 202.71	70415	200-yr	3029.9	735.89	730.64	2.52	1.61	31.05	15.82	231.83	939.32	3.99	2.01	5.25	5.25
Custer County	C14	RM 202.51	70088	200-yr	3029.9	735.52	730.68	3.01	1.67	42.92	15.93	152.2	1127.04	4.41	1.61	4.84	4.84
Custer County	C14	RM 202.34	69815	200-yr	3029.9	735.4	730.63	2.09	1.32	21.71	10.67	321.87	1260.32	3.72	1.82	4.77	4.77
Custer County	C14	RM 202.13	69483	200-yr	3029.9	735.25	730.54	1.97	1.17	18.46	9.31	282.19	1217.65	4.25	2.13	4.71	4.71
Custer County	C14	RM 201.97	69219	200-yr	3029.9	735.05	730.01	2.24	1.53	24.01	12.45	264.21	1256.58	4.15	2.14	5.04	5.04
Custer County	C14	RM 201.75	68884	200-yr	3029.9	734.97	729.45	1.72	1.26	13.32	5.36	306.87	1387.5	5.14	2.05	5.52	5.52
Custer County	C14	RM 201.57	68612	200-yr	3029.9	734.83	729.37	2.02	1.4	20.74	9.57	362.67	1410.02	3.47	1.59	5.46	5.46
Custer County	C14	RM 201.38	68299	200-yr	3029.9	734.54	729.23	2.35	1.63	29.38	12.46	356.22	1463.33	3.02	1.27	5.31	5.31
Custer County	C14	RM 201.23	68055	200-yr	3029.9	734.4	729.13	2.02	1.29	21.25	9.75	369.58	1561.63	3.29	1.5	5.27	5.27
Custer County	C14	RM 201.06	67778	200-yr	3029.9	734.39	729.03	1.31	0.98	8.28	4.72	262.3	1362.08	4.03	2.27	5.36	5.36
Custer County	C14	RM 200.85	67439	200-yr	3029.9	733.91	729.05	3.45	2.13	55.61	16.01	114.21	1097.5	4.65	1.3	4.86	4.86
Custer County	C14	RM 200.64	67103	200-yr	3029.9	733.83	728.97	2.19	1.53	22.07	10.15	216.76	926.86	4.71	2.14	4.86	4.86
Custer County	C14	RM 200.48	66842	200-yr	3029.9	733.77	728.8	1.73	1.44	14.46	9.72	307.41	774.53	4.08	2.72	4.97	4.97
Custer County	C14	RM 200.27	66515	200-yr	3029.9	733.61	728.63	1.84	1.46	16.15	10.56	359.69	752	4.22	2.75	4.98	4.98
Custer County	C14	RM 200.05	66162	200-yr	3029.9	733.42	728.3	1.98	1.69	19.76	14.65	388.89	655.9	3.71	2.74	5.12	5.12
Custer County	C14	RM 199.9	65916	200-yr	3029.9	733.34	727.78	1.75	1.63	14.43	9.72	381.62	622.77	4.47	2.99	5.56	5.56
Custer County	C14	RM 199.71	65614	200-yr	3029.9	732.96	727.34	2.7	2.36	32.24	16.83	260.79	594.12	4.18	2.16	5.63	5.63
Custer County	C14	RM 199.53	65326	200-yr	3029.9	732.89	727.34	2.18	1.9	21.28	10.14	259.62	654.67	5.16	2.44	5.55	5.55
Custer County	C14	RM 199.38	65076	200-yr	3029.9	732.8	727.34	2.03	1.71	20.13	10.92	364.29	946.52	3.81	2.05	5.46	5.46
Custer County	C14	RM 199.18	64754	200-yr	3029.9	732.64	727.64	1.87	1.5	19.05	10.51	456.73	1225.96	3.14	1.72	5	5
Custer County	C14	RM 199.04	64535	200-yr	3029.9	732.54	727.64	1.68	1.27	14.48	6.76	419.11	1366.14	3.75	1.74	4.9	4.9
Custer County	C14	RM 198.77	64102	200-yr	3029.9	732.32	727.28	1.95	1.43	17.6	6.55	294.95	1237.33	4.63	1.71	5.04	5.04
Custer County	C14	RM 198.57	63773	200-yr	3029.9	731.94	726.99	2.81	1.97	36.32	11.74	204.81	1018.03	4.71	1.51	4.95	4.95
Custer County	C14	RM 198.4	63505	200-yr	3029.9	731.75	726.86	2.74	1.71	34.9	11.03	199.72	1232.43	4.61	1.44	4.89	4.89
Custer County	C14	RM 198.22	63215	200-yr	3029.9	731.52	726.57	2.79	1.62	36.51	12.12	190.38	1264.31	4.51	1.48	4.95	4.95
Custer County	C14	RM 198.04	62923	200-yr	3029.9	731.41	726.32	2.27	1.42	23.88	8.17	227.09	1366.03	4.61	1.56	5.09	5.09
Custer County	C14	RM 197.84	62611	200-yr	3029.9	731.37	726.04	1.61	1.15	12.23	4.7	351.59	1598.15	4.3	1.64	5.33	5.33
Custer County	C14	RM 197.65	62306	200-yr	3029.9	731.29	725.69	1.66	1.02	11.84	4.79	317.28	1798.47	4.14	1.66	5.6	5.6
Custer County	C14	RM 197.47	62013	200-yr	3029.9	731.28	725.29	1.29	0.76	7.16	2.64	297.01	1901.48	5.77	2.1	5.99	5.99
Custer County	C14	RM 197.27	61686	200-yr	3029.9	731.22	724.81	1.57	0.78	11.07	4.82	212.46	1883.72	5.14	2.22	6.41	6.41
Custer County	C14	RM 197.07	61373	200-yr	3029.9	731.16	724.81	1.64	0.86	11.87	4.54	204.54	1770.01	5.32	2	6.35	6.35
Custer County	C14	RM 196.91	61115	200-yr	3029.9	731.15	724.81	1.27	0.65	7.12	3.76	223.13	1667.6	5.34	2.77	6.34	6.34
Custer County	C14	RM 196.73	60815	200-yr	3029.9	731.12	724.76	1.32	0.69	7.56	3.99	241.98	1536.09	5.5	2.88	6.36	6.36
Custer County	C14	RM 196.54	60518	200-yr	3029.9	731.07	724.67	1.41	0.77	9.01	4.6	270.26	2006.99	5.02	2.53	6.4	6.4
Custer County	C14	RM 196.33	60178	200-yr	3029.9	731.02	724.57	1.42	0.83	8.65	3.95	247.23	1735.71	5.78	2.61	6.45	6.45
Custer County	C14	RM 196.17	59915	200-yr	3029.9	730.98	724.51	1.47	0.96	9.25	4.59	191.57	1325.62	5.95	2.92	6.47	6.47
Custer County	C15	RM 195.98	59615	200-yr	3029.9	729.22	724.52	5.57	4.95	150.52	46.55	132.07	518.7	4.07	1.24	4.7	4.7
Custer County	C15	RM 195.81	59337	200-yr	3029.9	729.23	724.33	3.71	3.24	63.49	24.56	169.57	549.64	4.72	1.8	4.9	4.9
Custer County	C15	RM 195.61	59020	200-yr	3029.9	729.17	724.24	2.65	2.25	32.35	15.02	230.07	614.55	4.77	2.2	4.93	4.93
Custer County	C15	RM 195.43	58727	200-yr	3029.9	728.98	724.22	2.46	2.11	29.86	19.39	305.61	574.78	3.86	2.5	4.76	4.76
Custer County	C15	RM 195.23	58415	200-yr	3029.9	728.86	723.93	1.95	1.75	19.91	13.55	391.57	660.25	3.86	2.62	4.93	4.93
Custer County	C15	RM 195.04	58114	200-yr	3029.9	728.63	723.54	2.32	1.94	25.91	13.78	269.46	720.2	4.14	2.19	5.09	5.09
Custer County	C15	RM 194.86	57824	200-yr	3029.9	728.46	722.93	2.36	1.69	25.71	12.46	209.92	796.05	4.7	2.25	5.53	5.53
Custer County	C15	RM 194.67	57521	200-yr	3029.9	728.31	722.75	2.27	1.69	22.69	9.66	217.41	843.66	5.36	2.25	5.56	5.56
Custer County	C15	RM 194.49	57231	200-yr	3029.9	728.22	722.53	2.08	1.55	19.13	9.54	232.49	861.93	5.31	2.62	5.69	5.69
Custer County	C15	RM 194.32	56946	200-yr	3029.9	728.02	722.5	2.36	1.84	25.1	14.92	259.82	800.76	4.38	2.58	5.52	5.52
Custer County	C15	RM 194.13	56643	200-yr	3029.9	727.75	722.5	2.58	2.23	31.36	21.42	251.77	593.95	4.42	3	5.25	5.25
Custer County	C15	RM 193.93	56331	200-yr	3029.9	727.58	722.31	2.38	2.12	25.82	17.25	247.7	675.81	4.92	3.27	5.28	5.28
Custer County	C15	RM 193.74	56024	200-yr	3029.9	727.41	722.23	2.44	1.99	26.87	12.92	229.42	903.82	5.02	2.39	5.18	5.18
Custer County	C15	RM 193.55	55708	200-yr	3029.9	727.21	722.13	2.55	1.91	29.61	11.5	216.84	941.52	4.91	1.88	5.08	5.08

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	200-yr	3029.9	727.02	722.13	2.6	1.86	31.2	12.43	219.51	994.63	4.71	1.86	4.89	4.89
Custer County	C15	RM 193.2	55158	200-yr	3029.9	726.96	722.13	2.05	1.48	19.35	8.08	280.33	1053.28	4.68	1.94	4.83	4.83
Custer County	C15	RM 193	54825	200-yr	3029.9	726.8	721.84	2.09	1.52	20.15	8.36	281.95	1083.39	4.66	1.92	4.96	4.96
Custer County	C15	RM 192.81	54525	200-yr	3029.9	726.67	721.37	2.24	1.42	22.4	7.95	207.4	1186.57	5.13	1.8	5.3	5.3
Custer County	C15	RM 192.63	54247	200-yr	3029.9	726.46	721.01	2.41	1.61	26.03	8.35	217.39	1152.97	5.17	1.64	5.45	5.45
Custer County	C15	RM 192.44	53935	200-yr	3029.9	726.39	721.01	2.05	1.43	18.91	7.6	241	1058.81	5.04	2.01	5.38	5.38
Custer County	C16	RM 192.26	53653	200-yr	3029.9	726.12	721.01	2.51	1.96	28.53	11.42	229.02	792.54	4.94	1.95	5.11	5.11
Custer County	C16	RM 192.05	53309	200-yr	3029.9	725.3	721.11	3.9	3.34	74.19	34.29	186.81	494.78	4	1.83	4.19	4.19
Custer County	C16	RM 191.74	52809	200-yr	3029.9	725.13	721.1	2.02	1.92	18.49	16.81	560.47	658.33	2.64	2.4	4.03	4.03
Custer County	C16	RM 191.35	52181	200-yr	3029.9	724.74	721.02	1.72	1.67	13.46	12.63	856.51	948.71	2.04	1.91	3.72	3.72
Custer County	C16	RM 191.12	51812	200-yr	3029.9	724.56	720.51	1.48	1.48	10.51	10.47	894.06	897.62	2.29	2.29	4.05	4.05
Custer County	C16	RM 190.87	51406	200-yr	3029.9	724.4	719.89	1.31	1.27	9.08	7.57	906.61	1311.89	2.54	2.11	4.51	4.51
Custer County	C16	RM 190.54	50885	200-yr	3029.9	724.28	719.15	1.07	0.97	7.05	4.84	789.91	1417.07	3.45	2.36	5.13	5.13
Custer County	C16	RM 190.29	50477	200-yr	3029.9	723.71	718.45	3.12	1.97	44.75	12.33	179.8	1359.86	4.75	1.29	5.26	5.26
Custer County	C16	RM 190.1	50176	200-yr	3029.9	723.47	718.43	2.82	1.99	37.68	13.44	227.26	1814.19	4.28	1.52	5.04	5.04
Custer County	C16	RM 189.85	49765	200-yr	3029.9	723.29	718.13	2.11	1.85	21.44	11.78	334.92	2227.2	4.08	2.23	5.16	5.16
Custer County	C16	RM 189.65	49458	200-yr	3029.9	723.07	713.92	2.25	2.23	22.37	21.67	340.01	2213.04	3.96	3.84	9.15	9.15
Custer County	C16		49425	200-yr	Bridge												
Custer County	C16	RM 189.62	49416	200-yr	3029.9	722.99	713.92	2.31	2.29	23.18	22.29	339.42	2111.41	3.86	3.72	9.07	9.07
Custer County	C16	RM 189.43	49103	200-yr	3029.9	722.46	718.09	3.05	2.84	46.52	25.94	269.95	1877.15	3.64	2.02	4.37	4.37
Custer County	C16	RM 189.22	48763	200-yr	3029.9	722.53	717.93	1.54	1.44	11.32	8.33	452.46	1936.01	4.28	3.14	4.6	4.6
Custer County	C16	RM 188.91	48267	200-yr	3029.9	722.33	717.54	1.71	1.49	14.88	10.08	472.67	1712.75	3.6	2.43	4.79	4.79
Custer County	C16	RM 188.66	47869	200-yr	3029.9	721.85	716.75	2.86	1.95	37.22	13.9	195.28	1315.98	4.93	1.81	5.1	5.1
Custer County	C16	RM 188.51	47622	200-yr	3029.9	721.71	716.72	2.68	1.75	33.36	13.93	217.17	1113.19	4.56	1.89	4.99	4.99
Custer County	C16	RM 188.32	47314	200-yr	3029.9	721.65	716.79	1.98	1.49	19.38	9.44	152.2	964.18	4.41	2.1	4.86	4.86
Custer County	C16	RM 188.14	47024	200-yr	3029.9	721.49	716.93	1.3	1.41	10.11	10.24	474.59	1030.22	2.05	2.08	4.56	4.56
Custer County	C16	RM 187.98	46768	200-yr	3029.9	721.4	716.91	1.79	1.3	15.31	8.68	222.44	996.09	4.17	2.35	4.49	4.49
Custer County	C16	RM 187.78	46440	200-yr	3029.9	721.33	716.69	1.51	1.16	12.11	6.76	251.06	1189.69	3.96	2.2	4.64	4.64
Custer County	C16	RM 187.55	46083	200-yr	3029.9	721.12	716.04	2.08	1.23	19.99	8.6	224.37	1232.62	4.66	1.99	5.08	5.08
Custer County	C16	RM 187.35	45750	200-yr	3029.9	720.74	715.34	2.88	1.65	38.16	13.63	182.36	1091.12	4.77	1.68	5.39	5.39
Custer County	C16	RM 187.14	45421	200-yr	3029.9	720.66	715.3	2.1	1.33	20.49	9.66	259.08	1154.81	4.63	2.17	5.36	5.36
Custer County	C16	RM 187.01	45211	200-yr	3029.9	720.61	715.3	1.84	1.29	15.41	8.55	300.38	1369.96	4.79	2.65	5.31	5.31
Custer County	C16	RM 186.84	44930	200-yr	3029.9	720.44	715.03	2.11	1.66	20.75	13.71	294.8	1305.19	4.5	2.95	5.41	5.41
Custer County	C16	RM 186.62	44553	200-yr	3029.9	720.06	712.45	2.65	2.64	29.67	28.81	188.38	672.08	6.07	5.93	7.61	7.61
Custer County	C16		44545	200-yr	Bridge												
Custer County	C16	RM 186.61	44538	200-yr	3029.9	720.03	712.45	2.66	2.65	30.01	29.16	188.38	715.55	6.04	5.9	7.58	7.58
Custer County	C16	RM 186.46	44311	200-yr	3029.9	719.52	714.53	3.52	3.12	58.08	41.5	186.23	898.36	4.51	3.2	4.99	4.99
Custer County	C16	RM 186.26	43996	200-yr	3029.9	719.21	714.27	3.22	2.98	48.44	37.76	205.3	536.6	4.51	3.51	4.94	4.94
Custer County	C16	RM 186.1	43730	200-yr	3029.9	719.14	713.9	2.41	2.36	27.55	20.89	294.06	604.68	4.27	3.23	5.24	5.24
Custer County	C16	RM 185.91	43424	200-yr	2860	718.99	713.84	2.13	1.95	21.16	13.87	388.65	658.6	3.4	2.22	5.15	5.15
Custer County	C16	RM 185.71	43110	200-yr	2860	718.48	713.84	2.94	2.6	40.01	29.64	325.31	536.91	2.88	2.13	4.64	4.64
Custer County	C16	RM 185.52	42808	200-yr	2860	718.45	713.71	1.83	1.59	16.13	10.22	366.12	723.28	4.12	2.6	4.74	4.74
Custer County	C16	RM 185.34	42508	200-yr	2860	718.29	713.28	1.91	1.83	16.92	14.43	511.74	628.92	2.91	2.48	5.01	5.01
Custer County	C16	RM 185.16	42219	200-yr	2860	718.21	712.93	1.6	1.51	12.17	10.46	419.95	790.59	4.22	3.62	5.28	5.28
Custer County	C17	RM 184.95	41881	200-yr	2860	718.01	712.72	2.02	1.65	20.24	14.12	289.84	542.89	4.6	3.19	5.29	5.29
Custer County	C17	RM 184.78	41621	200-yr	2860	717.73	712.51	2.6	2.1	31.07	20.73	215.1	426.98	4.82	3.19	5.22	5.22
Custer County	C17	RM 184.59	41311	200-yr	2860	717.44	711.96	2.83	2.53	35.99	29.18	194.94	276.8	5.03	4.08	5.48	5.48
Custer County	C17	RM 184.4	41010	200-yr	2860	717.37	711.62	2.22	2.19	21.9	20.74	242.39	259.74	5.3	5.02	5.75	5.75
Custer County	C17	RM 184.23	40728	200-yr	2860	717.14	711.31	2.53	2.48	29.56	27.65	238.06	261.36	4.72	4.41	5.83	5.83
Custer County	C17	RM 184.1	40517	200-yr	2860	716.97	710.39	2.67	2.47	31.78	26.15	203.14	270.37	5.17	4.28	6.58	6.58
Custer County	C17		40500	200-yr	Bridge												
Custer County	C17	RM 184.08	40496	200-yr	2860	716.93	710.39	2.7	2.49	32.42	26.66	203.14	270.17	5.13	4.24	6.54	6.54
Custer County	C17	RM 184.03	40407	200-yr	2860	716.89	711.49	2.55	2.47	29.31	26.78	222.9	253.2	5.01	4.57	5.4	5.4
Custer County	C17	RM 183.83	40098	200-yr	2860	716.74	711.42	2.42	2.37	26.35	24.49	234.56	258.81	5.03	4.67	5.31	5.31
Custer County	C17	RM 183.65	39806	200-yr	2860	716.53	711.39	2.56	2.55	29.56	28.92	224.55	230.35	4.98	4.88	5.14	5.14
Custer County	C17	RM 183.47	39513	200-yr	2860	716.21	711.39	2.9	2.9	39	39	211.15	211.15	4.67	4.67	4.82	4.82
Custer County	C17	RM 183.28	39210	200-yr	2860	716.12	711.31	2.29	2.27	24.18	23.42	265.17	276.79	4.7	4.55	4.81	4.81
Custer County	C17	RM 183.09	38909	200-yr	2860	715.84	711.04	2.62	2.62	32.08	32.08	240.32	240.32	4.54	4.54	4.8	4.8
Custer County	C17	RM 182.94	38660	200-yr	2860	715.73	710.66	2.38	2.38	25.76	25.76	247.94	247.95	4.86	4.86	5.07	5.07
Custer County	C17	RM 182.72	38316	200-yr	2860	715.52	710.1	2.43	2.34	27.4	25.46	250.1	282.44	4.65	4.33	5.41	5.41

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	200-yr	2860	714.94	710.12	3.47	3.05	56.26	42.97	173.67	269.4	4.58	3.48	4.82	4.82
Custer County	C17	RM 182.34	37706	200-yr	2860	714.79	710.27	2.68	2.32	34.52	23.26	240.92	445.68	4.12	2.76	4.52	4.52
Custer County	C17	RM 182.15	37402	200-yr	2860	714.56	710.26	2.57	2.24	31.62	17.87	252.37	547.27	4.15	2.34	4.3	4.3
Custer County	C17	RM 181.97	37127	200-yr	2860	714.39	710.26	2.36	2.08	27.02	12.66	292.15	758.28	3.97	1.85	4.13	4.13
Custer County	C17	RM 181.78	36815	200-yr	2860	714.16	710.09	2.3	1.95	23	13.07	406.96	903.5	2.86	1.62	4.07	4.07
Custer County	C17	RM 181.59	36505	200-yr	2860	713.83	709.76	2.49	2.16	28.07	17.3	392.06	763.03	2.82	1.73	4.07	4.07
Custer County	C17	RM 181.37	36155	200-yr	2860	713.55	709.37	2.44	1.98	29.39	16.79	277.14	661.01	3.84	2.18	4.18	4.18
Custer County	C17	RM 181.23	35925	200-yr	2860	713.27	709.36	2.76	2.4	38.14	22.5	247.28	553.2	3.66	2.16	3.91	3.91
Custer County	C17	RM 181.03	35607	200-yr	2860	713.12	709.02	2.09	1.98	21.58	16.04	354.1	579.37	3.77	2.8	4.11	4.11
Custer County	C17	RM 180.83	35292	200-yr	2860	713.01	708.68	1.8	1.58	16.14	11.72	362.09	959.52	3.73	2.7	4.33	4.33
Custer County	C17	RM 180.66	35006	200-yr	2860	712.8	708.22	2.08	1.9	21.09	14.75	342.47	544.88	3.95	2.76	4.58	4.58
Custer County	C18	RM 180.46	34700	200-yr	2860	712.6	708.05	2.23	1.96	23.32	17.42	281.53	442.84	4.42	3.3	4.55	4.55
Custer County	C18	RM 180.29	34421	200-yr	2860	712.36	707.79	2.56	2.1	31.67	17.79	243.73	700.87	4.11	2.3	4.57	4.57
Custer County	C18	RM 180.08	34086	200-yr	2860	712.17	707.53	2.29	1.88	24.65	12.2	254.84	692.52	4.47	2.2	4.64	4.64
Custer County	C18	RM 179.9	33807	200-yr	2860	712.03	707.32	2.21	1.86	23.11	11.42	266.42	727.17	4.33	2.13	4.71	4.71
Custer County	C18	RM 179.73	33525	200-yr	2860	711.72	706.89	2.63	2.32	33.45	18.55	256.8	544.65	4.09	2.26	4.83	4.83
Custer County	C18	RM 179.54	33218	200-yr	2860	711.47	706.7	2.48	2.3	32.03	21.27	312.1	514.7	3.64	2.41	4.78	4.78
Custer County	C18	RM 179.35	32914	200-yr	2860	711.32	706.45	2.18	1.94	22.5	16	292.41	478.19	4.34	3.08	4.87	4.87
Custer County	C18	RM 179.16	32611	200-yr	2860	711.03	706.29	2.58	2.42	31.69	21.98	237.48	370.72	4.61	3.19	4.74	4.74
Custer County	C18	RM 178.99	32337	200-yr	2860	710.88	706.07	2.41	2.27	26.96	19.06	254.29	387.93	4.61	3.25	4.81	4.81
Custer County	C18	RM 178.79	32025	200-yr	2860	710.66	705.9	2.49	2.36	29.07	19.67	251.59	399.48	4.5	3.04	4.76	4.76
Custer County	C18	RM 178.61	31730	200-yr	2860	710.58	705.59	2.09	1.8	20.17	12.82	259.81	543.36	4.62	2.93	4.99	4.99
Custer County	C18	RM 178.43	31434	200-yr	2860	710.32	705.25	2.42	2.35	26.91	17.34	249.19	401.09	4.73	3.04	5.07	5.07
Custer County	C18	RM 178.23	31114	200-yr	2860	710.13	704.7	2.43	2.37	27.16	21.58	249.24	322.97	4.7	3.73	5.43	5.43
Custer County	C18	RM 178.06	30848	200-yr	2860	709.94	704.57	2.56	2.37	29.77	21.58	219.45	335.96	4.96	3.59	5.37	5.37
Custer County	C18	RM 177.88	30549	200-yr	2860	709.72	704.57	2.64	2.43	32.32	22.54	229.01	365.21	4.64	3.23	5.15	5.15
Custer County	C18	RM 177.66	30211	200-yr	2888.3	709.13	704.57	3.42	3.2	55.72	36.71	194.19	320.5	4.3	2.81	4.56	4.56
Custer County	C18	RM 177.49	29932	200-yr	2888.3	708.96	704.47	2.8	2.75	37.17	29.91	236.92	300.78	4.35	3.49	4.49	4.49
Custer County	C19	RM 177.3	29625	200-yr	2888.3	708.81	704.46	2.35	2.3	26.71	22.98	302.6	359.92	4.05	3.48	4.35	4.35
Custer County	C19	RM 177.11	29314	200-yr	2888.3	708.49	704.46	2.58	2.48	29.31	25.93	372.18	440.24	2.99	2.64	4.03	4.03
Custer County	C19	RM 176.93	29040	200-yr	2888.3	708.36	704.42	2.06	1.95	19.21	16.86	436.64	534.66	3.16	2.77	3.94	3.94
Custer County	C19	RM 176.74	28720	200-yr	2888.3	708.2	704.21	1.93	1.79	18.6	14.5	342.3	663.79	3.67	2.87	3.99	3.99
Custer County	C19	RM 176.53	28384	200-yr	2888.3	707.96	703.63	2.12	1.97	23.65	20.59	344.95	528.49	3.17	2.77	4.33	4.33
Custer County	C19	RM 176.36	28109	200-yr	2888.3	707.73	703.08	2.23	2.13	24.19	20.94	324.02	395.52	3.95	3.42	4.65	4.65
Custer County	C19	RM 176.18	27824	200-yr	2888.3	706.98	702.71	3.68	3.31	66.9	40.37	199.69	378.51	3.83	2.3	4.27	4.27
Custer County	C19	RM 176	27527	200-yr	2888.3	706.83	702.51	2.69	2.52	35.22	29.33	259.98	367.32	3.99	3.32	4.32	4.32
Custer County	C19	RM 175.81	27227	200-yr	2888.3	706.6	702.24	2.51	2.42	31.14	27.38	297.33	375.9	3.81	3.35	4.36	4.36
Custer County	C19	RM 175.62	26928	200-yr	2888.3	706.31	701.81	2.71	2.42	35.34	26.94	234.72	432.16	4.11	3.12	4.5	4.5
Custer County	C19	RM 175.43	26622	200-yr	2888.3	705.93	701.81	3	2.28	44.7	35.53	214.93	455.63	3.77	2.98	4.12	4.12
Custer County	C19	RM 175.25	26325	200-yr	2888.3	705.59	701.72	2.89	2.56	41.69	30.3	212.23	418.46	3.71	2.69	3.87	3.87
Custer County	C19	RM 175.08	26048	200-yr	2888.3	705.39	701.63	2.31	2.29	27.23	25.03	357.35	402.33	3.48	3.2	3.76	3.76
Custer County	C19	RM 174.9	25768	200-yr	2888.3	705.09	701.31	2.51	2.51	32.43	32	337.86	342.4	3.4	3.36	3.78	3.78
Custer County	C19	RM 174.69	25444	200-yr	2888.3	704.78	700.82	2.47	2.38	31.5	25.06	351.06	472.12	3.32	2.63	3.96	3.96
Custer County	C19	RM 174.49	25112	200-yr	2888.3	704.41	700.04	2.65	2.5	34.62	21.6	279.46	480.99	3.85	2.4	4.37	4.37
Custer County	C19	RM 174.32	24844	200-yr	2888.3	704.01	699.39	3.08	2.85	45.58	24.13	222.49	461.82	4.16	2.19	4.62	4.62
Custer County	C19	RM 174.13	24549	200-yr	2888.3	703.9	698.84	2.43	2.28	27.05	16.15	244.91	445.18	4.79	2.85	5.06	5.06
Custer County	C19	RM 173.94	24238	200-yr	2888.3	703.63	698.14	2.66	2.4	33.17	18.57	239.67	486.26	4.44	2.47	5.49	5.49
Custer County	C19	RM 173.75	23939	200-yr	2888.3	703.27	697.92	3.11	2.46	43.65	17.05	172.39	609.26	4.96	1.93	5.35	5.35
Custer County	C19	RM 173.57	23651	200-yr	2888.3	703.11	697.83	2.71	2.46	33.17	16.36	208.71	477.44	5.01	2.46	5.28	5.28
Custer County	C19	RM 173.39	23352	200-yr	2888.3	702.71	697.83	3.15	2.92	46.46	24.95	203.52	435.08	4.47	2.38	4.88	4.88
Custer County	C19	RM 173.2	23054	200-yr	2888.3	702.48	697.72	2.87	2.59	39.1	28.99	226.21	408.36	4.3	3.19	4.76	4.76
Custer County	C19	RM 173.02	22756	200-yr	2888.3	702.25	697.29	2.67	2.43	33.81	22.74	244.03	510.67	4.34	2.91	4.96	4.96
Custer County	C19	RM 172.82	22437	200-yr	2888.3	702.13	696.82	2.02	1.97	20.84	17.98	414.44	548.4	3.44	2.96	5.31	5.31
Custer County	C19	RM 172.67	22200	200-yr	2888.3	701.96	696.52	2.09	2.07	22.7	21.9	421.93	486.7	3.26	3.15	5.44	5.44
Custer County	C19	RM 172.49	21903	200-yr	2888.3	701.78	696.23	2.06	2.03	21	18.16	365.62	489.73	3.82	3.3	5.55	5.55
Custer County	C19	RM 172.29	21585	200-yr	2888.3	701.5	695.79	2.48	2.21	27.66	14.88	226.44	729.44	5.02	2.69	5.71	5.71
Custer County	C19	RM 172.12	21325	200-yr	2888.3	700.85	695.81	3.51	3.45	60.69	53.41	216.64	308.91	3.79	3.34	5.04	5.04
Custer County	C19		21310	200-yr	Bridge												
Custer County	C19	RM 172.11	21300	200-yr	2888.3	700.68	695.81	3.67	3.64	67.67	63.36	216.64	261.38	3.62	3.39	4.87	4.87
Custer County	C19	RM 171.89	20942	200-yr	2888.3	700.43	695.57	2.72	2.61	34.22	26.99	228.36	305.22	4.61	3.63	4.86	4.86

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	200-yr	2888.3	700.1	695.49	2.91	2.78	40.48	33.65	231.98	295.91	4.23	3.51	4.61	4.61
Custer County	C19	RM 171.52	20341	200-yr	2888.3	699.91	695.3	2.6	2.52	31.88	27.59	249.92	300.54	4.4	3.81	4.61	4.61
Custer County	C19	RM 171.34	20043	200-yr	2888.3	699.63	695.11	2.75	2.65	35.79	25.94	244.86	353.15	4.27	3.09	4.52	4.52
Custer County	C19	RM 171.15	19745	200-yr	2888.3	699.4	694.86	2.64	2.62	32.9	27.73	249.21	298.84	4.38	3.69	4.55	4.55
Custer County	C19	RM 170.96	19437	200-yr	2888.3	699.2	694.67	2.53	2.48	30.14	23.84	261.96	338.85	4.35	3.44	4.53	4.53
Custer County	C19	RM 170.78	19143	200-yr	2888.3	698.96	694.2	2.61	2.51	31.87	26.36	245.9	311.94	4.46	3.68	4.76	4.76
Custer County	C19	RM 170.58	18838	200-yr	2888.3	698.67	693.91	2.76	2.68	36.44	32.25	245.35	289.86	4.21	3.72	4.76	4.76
Custer County	C19	RM 170.4	18543	200-yr	2888.3	698.51	693.9	2.41	2.4	27.35	26.39	269.24	280.86	4.44	4.29	4.61	4.61
Custer County	C19	RM 170.22	18257	200-yr	2888.3	698.35	693.7	2.35	2.33	25.92	24.11	272.95	297.5	4.48	4.17	4.65	4.65
Custer County	C19	RM 170.03	17941	200-yr	2888.3	698.05	693.31	2.67	2.67	33.28	32.38	237.46	244.65	4.55	4.43	4.74	4.74
Custer County	C19	RM 169.84	17641	200-yr	2888.3	697.78	692.78	2.79	2.79	35.76	35.22	214.88	218.14	4.81	4.74	5	5
Custer County	C19	RM 169.65	17341	200-yr	2888.3	697.49	692.47	2.95	2.94	39.86	38.56	204.28	212.09	4.79	4.64	5.02	5.02
Custer County	C19	RM 169.47	17041	200-yr	2888.3	697.18	692.17	3.07	2.9	43.65	34.49	199.81	273.28	4.61	3.64	5.01	5.01
Custer County	C19	RM 169.28	16732	200-yr	2888.3	696.95	692	2.83	2.67	37.06	28.95	214.83	298.34	4.65	3.63	4.95	4.95
Custer County	C19	RM 169.09	16441	200-yr	2888.3	696.71	691.96	2.82	2.74	37.14	32.26	225.9	269.48	4.5	3.92	4.75	4.75
Custer County	C19	RM 168.91	16152	200-yr	2888.3	696.43	691.93	2.88	2.83	39.26	32.57	230.07	283.58	4.35	3.6	4.5	4.5
Custer County	C19	RM 168.72	15846	200-yr	2888.3	696.28	691.82	2.39	2.39	27.2	26.04	280.43	293.83	4.3	4.12	4.46	4.46
Custer County	C19	RM 168.51	15500	200-yr	2888.3	696.07	691.6	2.34	2.29	26.46	24.59	296.39	329.8	4.11	3.82	4.46	4.46
Custer County	C19	RM 168.35	15241	200-yr	2888.3	695.79	691.48	2.63	2.47	33.67	29.04	269.3	338.2	4.01	3.46	4.31	4.31
Custer County	C19	RM 168.15	14931	200-yr	2888.3	695.43	691.2	2.88	2.66	40.32	29.47	240.79	380.9	4.03	2.94	4.23	4.23
Custer County	C19	RM 167.97	14639	200-yr	2888.3	695.21	690.59	2.64	2.6	32.92	25.17	247.71	330.28	4.4	3.36	4.62	4.62
Custer County	C19	RM 167.79	14340	200-yr	2888.3	695.02	690.5	2.52	2.29	29.92	23.67	249.29	361.49	4.42	3.5	4.52	4.52
Custer County	C19	RM 167.61	14054	200-yr	2888.3	694.65	690.42	2.9	2.86	40.66	37.79	244.91	267.47	4.06	3.77	4.23	4.23
Custer County	C19	RM 167.41	13735	200-yr	2888.3	694.44	690.14	2.55	2.27	31.4	22.98	264.94	423.56	4.09	3	4.3	4.3
Custer County	C19	RM 167.22	13433	200-yr	2888.3	694.25	689.79	2.4	2.26	27.35	17.9	276.96	455.07	4.29	2.81	4.46	4.46
Custer County	C19	RM 167.04	13143	200-yr	2888.3	694.07	689.14	2.39	2.21	26.39	19.29	256.62	385.96	4.63	3.39	4.93	4.93
Custer County	C19	RM 166.85	12847	200-yr	2888.3	693.73	688.98	2.82	2.59	38.43	29.1	240.01	357.61	4.12	3.11	4.75	4.75
Custer County	C19	RM 166.67	12552	200-yr	2888.3	693.52	688.84	2.6	2.48	31.86	20.72	252.35	410.77	4.38	2.84	4.68	4.68
Custer County	C19	RM 166.52	12319	200-yr	2888.3	693.44	688.64	2.23	2.17	22.91	18.66	278.87	351.73	4.64	3.78	4.8	4.8
Custer County	C19	RM 166.31	11978	200-yr	2888.3	693.18	688.02	2.5	2.31	28.44	18.93	249.27	410.19	4.58	3.04	5.16	5.16
Custer County	C20	RM 166.2	11806	200-yr	2916.6	693.03	687.4	2.63	2.4	31.7	20.61	229.93	393.58	4.76	3.08	5.63	5.63
Custer County	C20	RM 166.06	11569	200-yr	2916.6	692.8	687.38	2.79	2.58	36.86	23.05	239.53	422.25	4.31	2.68	5.42	5.42
Custer County	C20	RM 165.92	11350	200-yr	2916.6	692.55	687.38	2.94	2.68	41.32	23.37	230.04	457.49	4.24	2.38	5.17	5.17
Custer County	C20	RM 165.73	11039	200-yr	2916.6	692.37	687.26	2.49	2.39	29.23	22.22	264.5	365.71	4.4	3.34	5.11	5.11
Custer County	C20	RM 165.55	10750	200-yr	2916.6	692.18	687.11	2.45	2.36	28.46	21.82	274.42	373.86	4.32	3.3	5.07	5.07
Custer County	C20	RM 165.35	10440	200-yr	2916.6	691.99	686.75	2.4	2.31	27.37	21.74	279.36	372.44	4.28	3.39	5.24	5.24
Custer County	C20	RM 165.17	10140	200-yr	2916.6	691.8	686.41	2.41	2.21	26.9	17.84	247.1	426.85	4.68	3.09	5.39	5.39
Custer County	C20	RM 165.01	9883	200-yr	2916.6	691.64	686.16	2.41	2.29	27.17	21.92	262.27	386.3	4.54	3.65	5.48	5.48
Custer County	C20	RM 164.81	9577	200-yr	2916.6	691.48	686.04	2.27	2.05	24.38	14.3	284.5	554.53	4.39	2.56	5.44	5.44
Custer County	C20	RM 164.61	9252	200-yr	2916.6	691.38	685.8	1.89	1.67	16.39	12.38	374.23	586.34	3.96	2.98	5.58	5.58
Custer County	C20	RM 164.42	8945	200-yr	2916.6	691.24	685.78	1.9	1.89	16.3	15.48	416.56	451.07	3.68	3.5	5.46	5.46
Custer County	C20	RM 164.23	8641	200-yr	2916.6	691.12	685.85	1.72	1.71	17.06	16.83	452.11	474.14	3.76	3.71	5.27	5.27
Custer County	C20	RM 164.06	8372	200-yr	2916.6	690.99	685.64	1.89	1.71	15.92	12.51	294.56	466.94	5.12	4.02	5.35	5.35
Custer County	C20	RM 163.85	8031	200-yr	2916.6	690.81	685	2.09	2.09	19.77	19.38	277.99	283.68	5.01	4.93	5.81	5.81
Custer County	C20	RM 163.67	7743	200-yr	2916.6	690.55	684.45	2.61	2.59	29.27	28.26	191.84	199.77	5.82	5.63	6.1	6.1
Custer County	C20	RM 163.48	7449	200-yr	2916.6	690.19	684.13	3.14	3.1	42.57	39.5	162.29	177.21	5.71	5.31	6.06	6.06
Custer County	C20	RM 163.3	7150	200-yr	2916.6	690.11	684.13	2.58	2.5	29.23	25.03	204.93	249.08	5.47	4.68	5.98	5.98
Custer County	C20	RM 163.12	6859	200-yr	2916.6	690.06	683.91	2.09	1.97	20.13	17.03	267.05	342.8	5.1	4.31	6.15	6.15
Custer County	C20	RM 162.94	6583	200-yr	2916.6	689.83	683.78	2.51	2.25	27.52	19.11	204.74	341.16	5.51	3.8	6.05	6.05
Custer County	C20	RM 162.74	6254	200-yr	2916.6	689.39	683.77	3.18	2.84	45.89	27.03	177.33	351.61	5.02	2.92	5.62	5.62
Custer County	C20	RM 162.55	5957	200-yr	2916.6	689.17	683.96	2.84	2.79	41.31	36.55	231.24	266.61	4.42	3.92	5.21	5.21
Custer County	C20	RM 162.34	5620	200-yr	2916.6	689.08	683.92	2.12	2.05	21.07	17.16	304.55	391.99	4.47	3.64	5.16	5.16
Custer County	C20	RM 162.18	5352	200-yr	2916.6	688.96	683.41	1.9	1.88	27.25	24.55	354.23	397.4	4.32	3.9	5.55	5.55
Custer County	C20	RM 162.03	5111	200-yr	2916.6	688.86	683.26	1.83	1.82	15.43	15.12	322.26	349.08	4.95	4.86	5.6	5.6
Custer County	C20	RM 161.81	4770	200-yr	2916.6	688.32	682.63	3.17	3.04	44.64	34.77	174.77	236.13	5.23	4.07	5.69	5.69
Custer County	C20	RM 161.62	4470	200-yr	2916.6	688.05	682.53	3.2	2.8	46.54	35.73	174.2	379.18	4.96	3.8	5.52	5.52
Custer County	C20	RM 161.43	4159	200-yr	2916.6	687.82	682.63	2.9	2.74	38.61	28.31	206.33	303.82	4.8	3.51	5.19	5.19
Custer County	C20	RM 161.24	3859	200-yr	2916.6	687.52	682.51	3.04	2.77	42.78	29.84	199.39	325.15	4.67	3.24	5.01	5.01
Custer County	C20	RM 161.06	3559	200-yr	2916.6	687.31	682.38	2.78	2.55	35.75	25.93	218.97	336.46	4.7	3.4	4.93	4.93
Custer County	C20	RM 160.87	3258	200-yr	2916.6	686.9	682.24	3.16	3.02	47	36.1	204.8	284.04	4.45	3.4	4.66	4.66

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	200-yr	2916.6	686.76	682.11	2.57	2.53	30.89	27.63	252.16	287.74	4.49	4.01	4.65	4.65
Custer County	C20	RM 160.5	2662	200-yr	2916.6	686.58	681.85	2.4	2.37	28.01	25.43	303.39	339.58	4	3.62	4.73	4.73
Custer County	C20	RM 160.31	2364	200-yr	2916.6	686.41	681.58	2.24	2.15	24.34	19.92	321.4	414.19	4	3.27	4.83	4.83
Custer County	C20	RM 160.12	2063	200-yr	2916.6	686.22	681.02	2.28	2.17	24.28	18.56	277.19	389.64	4.52	3.45	5.2	5.2
Custer County	C20	RM 159.93	1758	200-yr	2916.6	685.94	680.9	2.54	2.43	31.63	23.34	292.2	421.07	3.88	2.86	5.04	5.04
Custer County	C20	RM 159.75	1459	200-yr	2916.6	685.7	680.88	2.58	2.49	31.26	21.74	251.96	380.08	4.45	3.09	4.82	4.82
Custer County	C20	RM 159.55	1151	200-yr	2916.6	685.51	680.74	2.46	2.41	28.32	23.55	261.92	324.12	4.5	3.74	4.77	4.77
Custer County	C20	RM 159.38	876	200-yr	2916.6	685.26	680.37	2.67	2.47	32.9	24.24	229.23	342.53	4.69	3.45	4.89	4.89
Custer County	C20	RM 159.19	566	200-yr	2916.6	685.07	679.77	2.56	2.55	30.61	29.62	236.5	245.27	4.81	4.66	5.3	5.3
Custer County	C20	RM 158.98	229	200-yr	2916.6	684.78	679.44	2.75	2.69	34.55	31.62	217.29	244.24	4.84	4.43	5.34	5.34

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	200-yr	2916.6	684.78	679.22	2.69	2.59	32.73	27.49	214.16	268.46	5.01	4.2	5.56	5.56
Prairie County	C21	RM 158.55	61087	200-yr	2916.6	684.66	678.98	2.38	2.34	25.03	20.68	226.29	279.81	5.39	4.45	5.68	5.68
Prairie County	C21	RM 158.36	60787	200-yr	2916.6	684.54	678.83	2.28	2.22	23.3	20	249.45	299.89	5.11	4.38	5.71	5.71
Prairie County	C21	RM 158.17	60481	200-yr	2916.6	684.37	678.35	2.32	2.2	26.8	17.28	253.18	422.17	4.9	3.14	6.02	6.02
Prairie County	C21	RM 157.98	60173	200-yr	2916.6	684.05	678.22	2.74	2.61	35.12	25.99	231.17	334.12	4.53	3.34	5.83	5.83
Prairie County	C21	RM 157.78	59862	200-yr	2916.6	683.8	678.23	2.81	2.53	35.66	23.76	201.99	349.64	4.97	3.29	5.57	5.57
Prairie County	C21	RM 157.6	59561	200-yr	2916.6	683.69	678.14	2.38	2.25	25.23	20.3	233.85	312.77	5.16	4.15	5.55	5.55
Prairie County	C21	RM 157.38	59209	200-yr	2916.6	683.56	677.81	2.13	1.95	21.33	16.39	288.08	449.83	4.49	3.44	5.75	5.75
Prairie County	C21	RM 157.18	58885	200-yr	2916.6	683.42	677.42	2.15	1.77	20.78	13.44	235.66	517.7	5.17	3.32	6	6
Prairie County	C21	RM 156.99	58595	200-yr	2916.6	683.16	677.32	2.7	2.06	32.47	19.37	173.83	455.54	5.27	3.11	5.84	5.84
Prairie County	C21	RM 156.8	58287	200-yr	2916.6	682.71	677.32	3.41	2.62	53.03	34.05	149.83	359.22	4.88	3.09	5.39	5.39
Prairie County	C21	RM 156.62	57990	200-yr	2916.6	682.62	677.29	2.54	2.35	29.21	21.56	207.6	341.72	4.94	3.63	5.33	5.33
Prairie County	C21	RM 156.42	57683	200-yr	2916.6	682.5	677.21	2.18	2.06	21.83	18.4	271.12	347.17	4.85	4.07	5.29	5.29
Prairie County	C21	RM 156.24	57378	200-yr	2916.6	682.21	676.91	2.62	2.44	32.14	23.92	245.34	360.62	4.47	3.32	5.3	5.3
Prairie County	C21	RM 156.04	57069	200-yr	2916.6	682.05	676.56	2.43	2.22	26.43	17.05	226.07	392.93	5.2	3.34	5.49	5.49
Prairie County	C21	RM 155.85	56762	200-yr	2916.6	681.77	676.11	2.77	2.47	34.54	22.2	204.32	367.24	5.03	3.22	5.67	5.67
Prairie County	C21	RM 155.66	56455	200-yr	2916.6	681.35	675.96	3.29	2.83	49.73	31.47	177.2	341.75	4.81	3.01	5.38	5.38
Prairie County	C21	RM 155.47	56151	200-yr	2916.6	681.25	675.89	2.48	2.26	29.02	21.03	257.44	403.63	4.43	3.2	5.36	5.36
Prairie County	C21	RM 155.27	55835	200-yr	2916.6	681.06	675.92	2.3	2.26	25.68	22.93	317.77	362.37	3.99	3.56	5.14	5.14
Prairie County	C21	RM 155.08	55530	200-yr	2916.6	680.83	675.95	2.39	2.34	27.41	23.23	296.49	358.3	4.11	3.48	4.88	4.88
Prairie County	C21	RM 154.88	55209	200-yr	2916.6	680.65	675.64	2.28	2.27	24.5	23.35	300.68	316.3	4.26	4.06	5.01	5.01
Prairie County	C21	RM 154.69	54901	200-yr	2916.6	680.33	675.39	2.64	2.6	33.62	30.91	264.93	328.67	4.14	3.81	4.94	4.94
Prairie County	C21	RM 154.5	54588	200-yr	2916.6	680.09	675.02	2.6	2.57	32.11	30.21	257.32	290.93	4.33	4.08	5.07	5.07
Prairie County	C21	RM 154.3	54273	200-yr	2916.6	679.9	674.8	2.43	2.4	27.95	24.93	277.5	314.92	4.32	3.86	5.1	5.1
Prairie County	C21	RM 154.1	53959	200-yr	2916.6	679.65	674.67	2.52	2.45	30.28	25.63	269.5	329.7	4.26	3.6	4.98	4.98
Prairie County	C21	RM 153.91	53650	200-yr	2916.6	679.48	674.51	2.37	2.33	25.89	23.13	260.55	300.72	4.7	4.2	4.97	4.97
Prairie County	C21	RM 153.72	53338	200-yr	2916.6	679.26	674.06	2.54	2.3	29.37	21.13	225.99	371.84	4.89	3.51	5.2	5.2
Prairie County	C21	RM 153.52	53023	200-yr	2916.6	678.89	673.78	3	2.68	42.51	31.82	206.24	332.58	4.39	3.28	5.11	5.11
Prairie County	C21	RM 153.32	52704	200-yr	2916.6	678.63	673.64	2.72	2.66	35.15	30.36	249.02	349	4.29	3.7	4.99	4.99
Prairie County	C21	RM 153.12	52380	200-yr	2916.6	678.48	673.43	2.31	2.24	24.71	19.87	270.43	468.24	4.63	3.72	5.05	5.05
Prairie County	C21	RM 152.92	52065	200-yr	2916.6	678.34	672.88	2.2	1.97	22.16	15.8	270.87	440.9	4.73	3.36	5.46	5.46
Prairie County	C21	RM 152.73	51762	200-yr	2916.6	678.16	672.27	2.28	2.19	23.92	21.04	271.58	395.39	4.67	4.11	5.89	5.89
Prairie County	C21	RM 152.54	51463	200-yr	2916.6	677.98	671.85	2.36	2.36	25.81	25.3	251.98	297.33	4.89	4.81	6.13	6.13
Prairie County	C21	RM 152.35	51157	200-yr	2916.6	677.84	671.41	2.31	2.29	23.44	21.95	229.76	248.06	5.49	5.14	6.43	6.43
Prairie County	C21	RM 152.16	50852	200-yr	2916.6	677.73	671.23	2.15	2.07	20.9	18.25	268.26	321.96	5	4.37	6.5	6.5
Prairie County	C21	RM 151.97	50546	200-yr	2916.6	677.63	670.99	2.01	1.84	17.04	14.25	284.09	394.59	4.83	4.03	6.64	6.64
Prairie County	C21	RM 151.77	50227	200-yr	2916.6	677.54	670.87	2	1.71	16.93	11.7	204.89	406.75	6.11	4.19	6.67	6.67
Prairie County	C21	RM 151.59	49936	200-yr	2916.6	677.24	670.75	2.8	2.34	33.8	21.27	152.18	344.05	5.83	3.62	6.49	6.49
Prairie County	C21	RM 151.38	49599	200-yr	2916.6	677.11	670.9	2.43	2.13	25.48	17.27	199.41	357.1	5.74	3.87	6.21	6.21
Prairie County	C21	RM 151.19	49287	200-yr	2916.6	677.01	670.96	2.22	2.11	21.31	14.22	226.6	363.54	5.73	3.81	6.05	6.05
Prairie County	C21	RM 151.01	49012	200-yr	2916.6	676.94	670.91	1.98	1.91	18.82	15.6	288.76	363.13	5.07	4.19	6.03	6.03
Prairie County	C21	RM 150.81	48683	200-yr	2916.6	676.89	670.79	1.56	1.55	11.01	10.16	428.92	470.56	4.34	4.01	6.1	6.1
Prairie County	C21	RM 150.63	48400	200-yr	3652.9	676.76	670.45	1.82	1.72	14.61	10.56	405.47	605.46	4.87	3.5	6.31	6.31
Prairie County	C21	RM 150.44	48094	200-yr	3652.9	676.54	669.86	2.32	2.12	24.35	14.98	273.64	510.72	5.49	3.37	6.68	6.68
Prairie County	C21	RM 150.25	47780	200-yr	3652.9	675.9	669.38	3.63	3.35	65.61	43.31	166.06	283.47	5.86	3.85	6.52	6.52
Prairie County	C21	RM 150.05	47474	200-yr	3652.9	675.8	669.21	2.93	2.87	36.37	32.68	204.16	232.35	6.08	5.47	6.59	6.59
Prairie County	C21	RM 149.87	47178	200-yr	3652.9	675.69	669.02	2.57	2.46	29.63	25.58	269.57	332.16	5.2	4.48	6.67	6.67
Prairie County	C21	RM 149.66	46846	200-yr	3652.9	675.59	668.97	2.18	2.08	21.26	18.41	331.18	408.26	4.99	4.31	6.62	6.62
Prairie County	C21	RM 149.48	46551	200-yr	3652.9	675.26	668.91	2.78	2.46	35.18	24.21	261.52	779.47	4.87	3.34	6.35	6.35
Prairie County	C21	RM 149.27	46219	200-yr	3652.9	675.12	668.94	2.58	2.03	29.72	19.01	208.49	662.32	5.31	3.37	6.18	6.18
Prairie County	D1	RM 149.08	45914	200-yr	3652.9	674.89	668.95	2.56	2.25	29.03	18.41	254.75	533.85	5.34	3.37	5.94	5.94
Prairie County	D1	RM 148.89	45608	200-yr	3652.9	674.81	668.96	2.17	2.15	20.75	20.19	314.73	425.57	5.34	5.21	5.85	5.85
Prairie County	D1	RM 148.7	45301	200-yr	3652.9	674.68	668.73	2.14	2.1	21.96	20.66	347.94	388.37	4.86	4.58	5.95	5.95
Prairie County	D1	RM 148.5	44987	200-yr	3652.9	674.41	668.42	2.62	2.32	29.9	23.81	235.13	360.59	5.58	4.45	5.99	5.99
Prairie County	D1	RM 148.3	44667	200-yr	3652.9	674.04	668.01	3.15	2.75	43.17	32.2	193.35	315.41	5.66	4.21	6.03	6.03
Prairie County	D1	RM 148.11	44353	200-yr	3652.9	673.89	667.73	2.76	2.6	33.19	28.61	230.09	307.87	5.6	4.83	6.16	6.16
Prairie County	D1	RM 147.93	44062	200-yr	3652.9	673.8	667.4	2.35	2.32	24.83	23.51	306.12	327.91	5.06	4.8	6.4	6.4
Prairie County	D1	RM 147.74	43761	200-yr	3652.9	673.7	667.21	2.24	2.06	23.17	18.89	251.8	404.82	5.4	4.38	6.49	6.49
Prairie County	D1	RM 147.55	43454	200-yr	3652.9	673.5	666.79	2.55	2.17	27.89	16.55	197.43	484.62	5.9	3.47	6.71	6.71
Prairie County	D1	RM 147.34	43128	200-yr	3652.9	673.31	666.46	2.75	2.3	32.09	18.16	173.86	468.29	6.1	3.4	6.85	6.85

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	200-yr	3652.9	673.12	666.42	2.81	2.45	34.02	24.15	178.57	363.43	5.82	4.1	6.7	6.7
Prairie County	D1	RM 146.96	42505	200-yr	3652.9	672.75	666.49	3.18	3	43.23	32.01	187.33	275.88	5.98	4.42	6.26	6.26
Prairie County	D1	RM 146.77	42199	200-yr	3652.9	672.62	666.48	2.78	2.75	33.13	29.85	225.21	251.83	5.84	5.27	6.14	6.14
Prairie County	D1	RM 146.58	41899	200-yr	3652.9	672.58	666.59	2.22	2.21	21.64	20.93	296.32	307.76	5.54	5.37	5.99	5.99
Prairie County	D1	RM 146.32	41487	200-yr	3652.9	672.35	666.62	2.33	2.28	25.45	22.39	325.06	382.26	4.77	4.2	5.73	5.73
Prairie County	D1	RM 146	40968	200-yr	3652.9	672.01	666.48	2.53	2.47	29.82	25.22	277.27	338.03	5.18	4.38	5.53	5.53
Prairie County	D1	RM 145.65	40420	200-yr	3652.9	671.63	665.52	2.69	2.6	33.69	27.54	247.14	316.41	5.44	4.44	6.11	6.11
Prairie County	D1	RM 145.36	39958	200-yr	3652.9	671.38	664.91	2.51	2.37	29.51	20.32	264.9	414.07	5.42	3.72	6.47	6.47
Prairie County	D1	RM 145.13	39579	200-yr	3652.9	671.21	664.58	2.38	2.27	25.99	18.19	266.31	405.07	5.69	3.97	6.63	6.63
Prairie County	D1	RM 144.92	39251	200-yr	3652.9	671.06	664.24	2.35	2.25	26.19	20.03	272.39	377.72	5.64	4.3	6.82	6.82
Prairie County	D1	RM 144.73	38942	200-yr	3652.9	670.88	663.99	2.44	2.3	28.1	21.88	264.25	370.29	5.52	4.29	6.89	6.89
Prairie County	D1	RM 144.56	38672	200-yr	3652.9	670.7	663.14	2.55	2.46	28.96	26.13	265.15	310.39	5.29	4.78	7.56	7.56
Prairie County	D1		38642.5	200-yr	Bridge												
Prairie County	D1	RM 144.52	38613	200-yr	3652.9	670.61	663.14	2.6	2.51	30.18	26.78	265.15	355.8	5.2	4.62	7.47	7.47
Prairie County	D1	RM 144.33	38305	200-yr	3652.9	670.43	664.19	2.65	2.44	30.43	23.34	232.15	342.63	5.71	4.37	6.24	6.24
Prairie County	D1	RM 144.13	37987	200-yr	3652.9	670.33	664.33	2.3	2.18	22.84	18.26	271.37	363.18	5.75	4.61	6	6
Prairie County	D1	RM 143.91	37637	200-yr	3652.9	670.25	663.96	2.03	1.81	17.85	13.3	299.48	484.49	5.62	4.18	6.29	6.29
Prairie County	D1	RM 143.71	37320	200-yr	3652.9	669.86	663.43	2.99	2.57	38.04	23.46	191.55	386.32	6.01	3.68	6.43	6.43
Prairie County	D1	RM 143.45	36908	200-yr	3652.9	669.38	663.01	3.43	3.14	50.96	36.57	179.26	283.31	5.74	4.11	6.37	6.37
Prairie County	D1	RM 143.21	36511	200-yr	3652.9	669.24	662.92	2.74	2.67	32.14	28.25	224.58	264.24	5.9	5.18	6.32	6.32
Prairie County	D1	RM 142.97	36139	200-yr	3652.9	669.07	662.7	2.61	2.55	28.84	25.8	232.06	266.52	6.01	5.38	6.37	6.37
Prairie County	D1	RM 142.71	35717	200-yr	3652.9	668.5	662.52	3.46	3.4	52.42	43.33	192.11	237.45	5.49	4.53	5.98	5.98
Prairie County	D1	RM 142.46	35322	200-yr	3652.9	668.41	662.36	2.55	2.42	28.3	23.04	254.79	333.24	5.56	4.52	6.05	6.05
Prairie County	D1	RM 142.23	34952	200-yr	3652.9	668.17	662.21	2.69	2.48	31.41	21.43	237.35	384.62	5.63	3.83	5.96	5.96
Prairie County	D1	RM 142.02	34614	200-yr	3652.9	668.02	662.21	2.49	2.29	28	22.87	269.68	394.11	4.97	4.05	5.81	5.81
Prairie County	D1	RM 141.8	34258	200-yr	3652.9	667.96	662.01	1.84	1.82	15.09	14.7	393.92	407.11	5.04	4.92	5.95	5.95
Prairie County	D1	RM 141.6	33942	200-yr	3652.9	667.79	661.72	2.09	2.08	15.98	15.78	496.43	503.84	3.52	3.48	6.07	6.07
Prairie County	D1	RM 141.42	33642	200-yr	3652.9	667.74	661.32	1.68	1.66	11.49	10.43	499.33	557.1	4.34	3.94	6.42	6.42
Prairie County	D1	RM 141.22	33325	200-yr	3652.9	667.6	660.91	1.95	1.9	16.35	13.06	326.47	420.34	5.73	4.58	6.69	6.69
Prairie County	D1	RM 141.02	33011	200-yr	3652.9	667.19	660.58	2.96	2.78	36.58	25.15	194.42	305	6.3	4.31	6.61	6.61
Prairie County	D1	RM 140.84	32709	200-yr	3652.9	667.12	660.35	2.52	2.46	26.98	23.99	241.98	279.11	5.98	5.31	6.77	6.77
Prairie County	D1	RM 140.64	32394	200-yr	3652.9	667.02	660.07	2.34	2.3	22.88	21.25	239.5	262.96	6.49	6.03	6.95	6.95
Prairie County	D1	RM 140.44	32074	200-yr	3652.9	666.8	659.63	2.65	2.58	29.88	26.9	225.88	257.96	6.08	5.48	7.17	7.17
Prairie County	D1	RM 140.23	31738	200-yr	3652.9	666.48	659.62	3.02	2.94	39.51	33.34	207.01	253.26	5.81	4.91	6.86	6.86
Prairie County	D1	RM 140.03	31420	200-yr	3652.9	666.42	659.59	2.43	2.37	25.31	21.05	253.77	313.78	5.9	4.92	6.83	6.83
Prairie County	D1	RM 139.84	31118	200-yr	3652.9	666.35	659.19	2.11	2.01	19.37	16.18	309.19	399.46	5.55	4.64	7.16	7.16
Prairie County	D1	RM 139.64	30801	200-yr	3652.9	666.19	658.96	2.34	2.03	22.42	15.16	222.13	402.01	6.65	4.48	7.23	7.23
Prairie County	D1	RM 139.44	30466	200-yr	3652.9	666.09	658.72	2.24	2.01	21.07	15.24	250.57	402.56	6.25	4.51	7.37	7.37
Prairie County	D1	RM 139.23	30138	200-yr	3652.9	665.9	658.34	2.45	2.4	28.27	22.88	219.78	278.09	6.77	5.48	7.56	7.56
Prairie County	D1	RM 139.02	29799	200-yr	3652.9	665.5	658.14	3.11	2.96	48.88	37.09	179.74	254.42	6.43	4.86	7.36	7.36
Prairie County	D1	RM 138.81	29470	200-yr	3652.9	665.47	658.11	2.34	2.26	25.57	22.01	219.94	267.86	7.02	6.04	7.36	7.36
Prairie County	D1	RM 138.62	29157	200-yr	3652.9	665.33	657.94	2.45	2.34	24.81	21.88	216.79	261.71	6.77	5.97	7.39	7.39
Prairie County	D1	RM 138.41	28823	200-yr	3652.9	665.09	657.82	2.74	2.63	34.37	30.63	202.45	240.34	6.48	5.78	7.27	7.27
Prairie County	D1	RM 138.22	28519	200-yr	3652.9	664.92	657.8	2.78	2.67	32.19	28.18	198.68	236.83	6.56	5.77	7.12	7.12
Prairie County	D1	RM 138.02	28200	200-yr	3652.9	664.91	657.74	2.12	2.08	19.58	18.04	246.99	274.65	6.94	6.4	7.17	7.17
Prairie County	D1	RM 137.82	27874	200-yr	3652.9	664.8	656.95	2.17	2.07	21.09	17.04	263.32	347.11	6.31	5.09	7.85	7.85
Prairie County	D1	RM 137.62	27552	200-yr	3652.9	664.6	656.75	2.45	2.27	27.58	16.83	234.81	497.57	6.25	3.8	7.85	7.85
Prairie County	D1	RM 137.42	27247	200-yr	3652.9	664.38	656.66	2.71	2.56	33.49	24.64	204.7	301.28	6.46	4.74	7.72	7.72
Prairie County	D1	RM 137.24	26944	200-yr	3652.9	664.22	656.66	2.69	2.59	33.79	27.41	205.46	346.25	6.54	5.29	7.56	7.56
Prairie County	D1	RM 137.04	26627	200-yr	3681.2	664.04	655.41	2.69	2.67	33.35	31.64	208.71	222.12	6.53	6.22	8.63	8.63
Prairie County	D1		26616.5	200-yr	Bridge												
Prairie County	D1	RM 137.02	26606	200-yr	3681.2	664	655.41	2.71	2.68	33.8	32.07	208.58	221.94	6.5	6.18	8.59	8.59
Prairie County	D2	RM 136.84	26475	200-yr	3681.2	663.96	656.46	2.57	2.55	28.75	26.21	207.19	229.09	6.91	6.3	7.5	7.5
Prairie County	D2		26471.5	200-yr	Bridge												
Prairie County	D2	RM 136.65	26468	200-yr	3681.2	663.93	656.45	2.56	2.53	29.1	26.76	207.2	228.35	6.91	6.37	7.48	7.48
Prairie County	D2	RM 136.44	26317	200-yr	3681.2	663.9	656.37	2.31	2.25	24.04	20.55	228.7	275.44	6.94	5.93	7.53	7.53
Prairie County	D2	RM 136.23	26001	200-yr	3681.2	663.76	656.19	2.4	2.3	25.86	21.32	246.47	315.98	6.16	5.07	7.57	7.57
Prairie County	D2	RM 136.04	25673	200-yr	3681.2	663.58	656.01	2.53	2.32	26.12	15.68	211.82	395.21	6.74	4.02	7.57	7.57
Prairie County	D2	RM 135.85	25337	200-yr	3681.2	663.29	655.93	2.97	2.84	36.47	19.27	186.08	373.45	6.62	3.47	7.36	7.36
Prairie County	D2	RM 135.66	25033	200-yr	3681.2	663.17	655.91	2.74	2.58	30.88	21.22	202.14	315.57	6.6	4.52	7.26	7.26

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	200-yr	3681.2	663	655.86	2.76	2.63	37.72	29.3	199.11	271.79	6.64	5.15	7.14	7.14
Prairie County	D2	RM 135.24	24417	200-yr	3681.2	662.94	655.68	2.32	2.27	26	23.47	229.44	259.44	6.9	6.24	7.26	7.26
Prairie County	D2	RM 135	24090	200-yr	3681.2	662.78	655.56	2.39	2.32	26.67	22.78	246.98	301.68	6.17	5.26	7.22	7.22
Prairie County	D2	RM 134.78	23742	200-yr	3681.2	662.62	655.36	2.43	2.28	27.51	19.19	223.84	349.01	6.65	4.62	7.26	7.26
Prairie County	D2	RM 134.58	23351	200-yr	3681.2	662.25	655.29	2.95	2.79	43.34	29.69	189.75	298.42	6.48	4.42	6.96	6.96
Prairie County	D2	RM 134.39	23000	200-yr	3681.2	662.05	655.24	2.78	2.68	38.3	34.24	216.99	254.74	6.04	5.4	6.81	6.81
Prairie County	D2	RM 134.19	22682	200-yr	3681.2	661.96	655.11	2.38	2.18	24.51	20.76	263.97	585.48	5.66	4.79	6.85	6.85
Prairie County	D2	RM 133.99	22372	200-yr	3681.2	661.82	654.97	2.35	2.24	23.77	20.45	264.94	327.06	5.85	5.02	6.85	6.85
Prairie County	D2	RM 133.79	22053	200-yr	3681.2	661.59	655	2.68	2.45	30.58	23.82	226.1	326.15	5.92	4.6	6.59	6.59
Prairie County	D2	RM 133.59	21733	200-yr	3681.2	661.44	654.96	2.54	2.44	27.79	22.54	247	320.39	5.81	4.71	6.48	6.48
Prairie County	D2	RM 133.41	21417	200-yr	3681.2	661.33	654.78	2.38	2.24	23.99	18.7	254.87	352.95	5.99	4.66	6.55	6.55
Prairie County	D2	RM 133.21	21104	200-yr	3681.2	661.13	654.64	2.6	2.34	28.71	18.33	229.84	410.51	6.01	3.83	6.49	6.49
Prairie County	D2	RM 133.02	20811	200-yr	3681.2	661.01	654.53	2.48	2.25	26.28	17.31	246.2	421.87	5.9	3.87	6.48	6.48
Prairie County	D2	RM 132.83	20491	200-yr	3681.2	660.89	654.29	2.38	2.19	24.59	18.67	262.67	391.68	5.66	4.29	6.6	6.6
Prairie County	D2	RM 132.63	20184	200-yr	3681.2	660.79	654.04	2.26	2.02	21.99	17.03	254.86	434.01	5.73	4.42	6.75	6.75
Prairie County	D2	RM 132.42	19875	200-yr	3681.2	660.58	653.98	2.52	2.25	26.86	17.64	221.68	407.21	6.14	4.02	6.6	6.6
Prairie County	D2	RM 132.23	19553	200-yr	3681.2	660.52	653.88	2.16	1.97	19.61	15.33	257.21	383.57	6.24	4.87	6.64	6.64
Prairie County	D2	RM 132.02	19225	200-yr	3681.2	660.28	653.63	2.54	2.37	27.7	22.43	246.63	332.99	5.79	4.67	6.65	6.65
Prairie County	D2	RM 131.81	18910	200-yr	3681.2	660.07	653.37	2.72	2.48	31.58	21.31	226.33	376.37	5.87	3.95	6.7	6.7
Prairie County	D2	RM 131.58	18573	200-yr	3681.2	659.98	653.02	2.35	2.15	22.93	16.16	238.03	411.21	6.46	4.55	6.96	6.96
Prairie County	D2	RM 131.38	18237	200-yr	3681.2	659.81	652.75	2.51	2.35	26.07	22.64	212.37	277.34	6.49	5.64	7.06	7.06
Prairie County	D2	RM 131.18	17875	200-yr	3681.2	659.53	652.49	2.84	2.69	34.16	24.96	209.79	307.61	6.11	4.45	7.04	7.04
Prairie County	D2	RM 130.98	17548	200-yr	3681.2	659.31	652.34	2.92	2.68	35.75	22.44	197.09	349.14	6.29	3.93	6.97	6.97
Prairie County	D2	RM 130.78	17227	200-yr	3681.2	659.21	652.27	2.6	2.32	28.34	19.21	216.24	372	6.33	4.27	6.94	6.94
Prairie County	D2	RM 130.59	16914	200-yr	3681.2	659.14	652.16	2.29	2.12	21.69	13.19	239.07	435.67	6.59	3.99	6.98	6.98
Prairie County	D2	RM 130.39	16588	200-yr	3681.2	658.9	651.95	2.66	2.57	29.47	17.49	212.42	374.57	6.48	3.83	6.95	6.95
Prairie County	D2	RM 130.19	16280	200-yr	3681.2	658.73	651.81	2.73	2.67	31.52	26.6	219.93	267.03	6.11	5.16	6.92	6.92
Prairie County	D2	RM 130	15965	200-yr	3681.2	658.64	651.57	2.42	2.35	24.67	19.31	244.4	323.49	6.19	4.84	7.07	7.07
Prairie County	D2	RM 129.81	15649	200-yr	3681.2	658.52	651.47	2.37	2.28	23.2	19.01	235.14	301.07	6.55	5.37	7.05	7.05
Prairie County	D2	RM 129.62	15337	200-yr	3681.2	658.34	651.34	2.59	2.33	28.15	20.77	216.64	340.16	6.31	4.64	7	7
Prairie County	D2	RM 129.43	15031	200-yr	3681.2	658.22	651.21	2.5	2.43	25.93	22.63	227.37	275.57	6.44	5.61	7.01	7.01
Prairie County	D2	RM 129.24	14724	200-yr	3766.1	657.99	651.06	2.77	2.63	32.47	23.06	222.31	377.37	6.07	4.3	6.93	6.93
Prairie County	D2	RM 129.04	14417	200-yr	3766.1	657.76	651.06	2.94	2.77	36.76	22.73	209.54	428.33	6.05	3.73	6.7	6.7
Prairie County	D2	RM 128.82	14112	200-yr	3766.1	657.56	651.05	2.97	2.8	37.4	23.88	209.12	430.18	6.02	3.83	6.51	6.51
Prairie County	D2	RM 128.62	13798	200-yr	3766.1	657.43	651.08	2.68	2.56	30.31	23.3	228.13	424.39	6.11	4.69	6.35	6.35
Prairie County	D2	RM 128.41	13446	200-yr	3766.1	657.3	651.07	2.49	2.37	26.63	20.08	255.09	360.22	5.85	4.41	6.23	6.23
Prairie County	D2	RM 128.21	13125	200-yr	3766.1	657.14	650.98	2.52	2.3	27.06	20.84	246.55	363.35	5.88	4.51	6.16	6.16
Prairie County	D2	RM 127.98	12790	200-yr	3766.1	656.99	650.84	2.49	2.28	26.36	16.24	250.67	454.26	5.93	3.64	6.15	6.15
Prairie County	D2	RM 127.75	12473	200-yr	3766.1	656.9	650.59	2.24	2.09	21.61	12.77	287.96	530.56	5.77	3.39	6.31	6.31
Prairie County	D2	RM 127.55	12112	200-yr	3766.1	656.76	650.35	2.22	2.08	21.16	14.69	287.38	450.27	5.8	4.01	6.41	6.41
Prairie County	D2	RM 127.27	11729	200-yr	3766.1	656.6	649.95	2.27	2.16	21.91	15.22	277.2	423.04	5.93	4.11	6.65	6.65
Prairie County	D2	RM 126.97	11415	200-yr	3766.1	656.34	649.68	2.71	2.52	31.23	17.65	226.77	440.46	6.04	3.39	6.66	6.66
Prairie County	D2	RM 126.71	10962	200-yr	3766.1	656.09	649.49	2.73	2.58	31.37	21.25	218.29	345.54	6.24	4.22	6.6	6.6
Prairie County	D2	RM 126.43	10478	200-yr	3766.1	655.98	649.32	2.2	2.16	20.47	18.12	275.96	319.38	6.16	5.46	6.66	6.66
Prairie County	D2	RM 126.42	10074	200-yr	3766.1	655.73	649.05	2.55	2.44	27.96	22.98	249.83	322	5.82	4.79	6.68	6.68
Prairie County	D2	RM 126.41	9625	200-yr	3766.1	655.46	648.27	2.7	2.53	30.68	24.34	220.07	304.23	6.17	4.9	7.18	7.18
Prairie County	D2		9598.5	200-yr	Bridge												
Prairie County	D2	RM 126.4	9572	200-yr	3766.1	655.39	648.27	2.73	2.56	31.49	24.95	220.07	303.88	6.11	4.84	7.12	7.12
Prairie County	D3	RM 126.38	9533	200-yr	3766.1	655.37	648.27	2.75	2.57	31.82	25.2	220.07	303.75	6.08	4.82	7.09	7.09
Prairie County	D3		9523	200-yr	Bridge												
Prairie County	D3	RM 126.36	9513	200-yr	3766.1	655.34	648.27	2.76	2.59	32.21	25.49	220.07	303.59	6.05	4.79	7.07	7.07
Prairie County	D3	RM 126.22	9286	200-yr	3766.1	655.26	648.8	2.5	2.41	26.59	19.46	246.62	352.57	6.06	4.42	6.46	6.46
Prairie County	D3	RM 126.03	8974	200-yr	3766.1	655.15	648.71	2.33	2.21	23.18	16.46	269.32	405.13	5.94	4.2	6.44	6.44
Prairie County	D3	RM 125.82	8648	200-yr	3766.1	655.02	648.36	2.32	2.23	23.28	17.8	282.4	389.16	5.7	4.35	6.66	6.66
Prairie County	D3	RM 125.63	8335	200-yr	3766.1	654.89	648.12	2.34	2.29	23.1	21.41	259.94	288.55	6.15	5.71	6.77	6.77
Prairie County	D3	RM 125.43	8020	200-yr	3766.1	654.69	647.8	2.61	2.33	28.3	20.23	217.06	353.05	6.43	4.57	6.89	6.89
Prairie County	D3	RM 125.24	7711	200-yr	3766.1	654.6	647.26	2.41	2.18	23.84	16.65	226.37	368.76	6.73	4.68	7.34	7.34
Prairie County	D3	RM 125.05	7403	200-yr	3766.1	654.42	647.23	2.6	2.34	27.83	19.02	209.96	352.5	6.7	4.56	7.19	7.19
Prairie County	D3	RM 124.83	7059	200-yr	3766.1	654.3	647.25	2.45	2.33	24.97	18.7	237.41	356.29	6.41	4.79	7.05	7.05
Prairie County	D3	RM 124.62	6712	200-yr	3766.1	654.17	647.25	2.4	2.3	24.52	16.85	257.84	395.6	6.03	4.13	6.92	6.92

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	200-yr	3766.1	653.99	647.27	2.59	2	28.57	13.07	221.62	951.47	5.98	2.72	6.72	6.72
Prairie County	D3	RM 124.15	5960	200-yr	3766.1	653.72	647.27	2.74	2.13	32.66	13.99	232.47	832.87	5.62	2.39	6.45	6.45
Prairie County	D3	RM 123.94	5627	200-yr	3766.1	653.4	647.27	3.11	2.28	42.09	17.79	199.91	704.41	5.6	2.34	6.13	6.13
Prairie County	D3	RM 123.74	5312	200-yr	3766.1	653.14	647.25	3.1	2.3	41.88	15.39	206.88	813.84	5.59	2.03	5.89	5.89
Prairie County	D3	RM 123.56	5014	200-yr	3766.1	653.2	647.24	1.98	1.54	16.74	8.28	311.23	852.69	5.84	2.87	5.96	5.96
Prairie County	D3	RM 123.24	4500	200-yr	3766.1	653.11	647.19	1.12	1.12	14.15	14.06	934.44	941.08	3.6	3.59	5.92	5.92
Prairie County	D3	RM 122.99	4116	200-yr	3766.1	652.96	646.67	1.45	1.39	9.69	8.16	527.26	662.85	4.86	4.09	6.29	6.29
Prairie County	D3	RM 122.76	3746	200-yr	3766.1	652.8	646.22	1.84	1.81	14.73	11.58	362.48	471.78	5.62	4.42	6.58	6.58
Prairie County	D3	RM 122.55	3414	200-yr	3766.1	652.53	645.7	2.49	2.37	26.23	14.02	242.74	484.64	6.18	3.28	6.83	6.83
Prairie County	D3	RM 122.3	3012	200-yr	3766.1	652.23	645.57	2.85	2.43	34.42	15.54	214.39	575.87	6.01	2.69	6.66	6.66
Prairie County	D3	RM 122.08	2651	200-yr	3766.1	652.06	645.49	2.65	2.33	30.18	15.33	240.65	555.64	5.77	2.91	6.57	6.57
Prairie County	D3	RM 121.88	2338	200-yr	3766.1	651.92	645.42	2.55	2.25	27.82	15.96	244.44	495.16	5.92	3.37	6.5	6.5
Prairie County	D3	RM 121.66	1982	200-yr	3766.1	651.67	645.3	2.76	2.52	32.34	19.45	226.93	420.94	5.94	3.56	6.37	6.37
Prairie County	D3	RM 121.46	1651	200-yr	3766.1	651.5	645.06	2.67	2.55	30.65	24.24	243.93	326.46	5.74	4.53	6.44	6.44
Prairie County	D3	RM 121.24	1304	200-yr	3766.1	651.29	644.99	2.7	2.48	32.41	22.38	247.35	397.53	5.54	3.82	6.3	6.3
Prairie County	D3	RM 121.02	957	200-yr	3766.1	651.14	644.88	2.49	2.28	28.19	21.24	259.65	389.45	5.65	4.25	6.26	6.26
Prairie County	D3	RM 120.84	660	200-yr	3766.1	650.96	644.78	2.53	2.44	30.79	21.83	255.32	376.86	5.78	4.1	6.18	6.18
Prairie County	D3	RM 120.64	350	200-yr	3766.1	650.8	644.42	2.55	2.52	27.54	20.92	244.23	326.09	6.04	4.59	6.38	6.38

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	200-yr	3766.64	650.78	643.94	2.39	2.27	24.41	22.32	254.01	390.49	5.92	5.41	6.83	6.83
Dawson County	D3	RM 120.28	90838.07	200-yr	3766.64	650.72	643.78	2.41	2.19	24.48	17.2	233.12	399.28	6.14	4.3	6.94	6.94
Dawson County	D3	RM 120.18	90675.23	200-yr	3766.64	650.62	643.7	2.53	2.36	26.57	20	213.48	331.1	6.4	4.83	6.91	6.91
Dawson County	D3	RM 120.00	90388.96	200-yr	3766.64	650.49	643.56	2.5	2.34	25.82	20.01	226.64	317.24	6.55	5.07	6.92	6.92
Dawson County	D3	RM 119.84	90136.35	200-yr	3766.64	650.33	643.44	2.67	2.52	29.4	23.49	213.73	386.59	6.5	5.19	6.89	6.89
Dawson County	D3	RM 119.68	89873.82	200-yr	3766.64	650.1	643.31	2.99	2.82	37.22	27.79	189.21	380.16	6.47	4.83	6.78	6.78
Dawson County	D3	RM 119.53	89627.16	200-yr	3766.64	649.98	643.2	2.84	2.77	33.33	25.07	204.32	279.21	6.47	4.87	6.79	6.79
Dawson County	D3	RM 119.39	89404.11	200-yr	3766.64	649.93	643.09	2.55	2.48	27.18	24.81	231.36	359.49	6.33	5.81	6.84	6.84
Dawson County	D3	RM 119.26	89201.38	200-yr	3766.64	649.88	642.99	2.36	2.18	23.63	17.62	263.7	390.13	5.95	4.44	6.89	6.89
Dawson County	D3	RM 119.12	88969.13	200-yr	3766.64	649.63	642.87	2.89	2.43	34.87	16.44	193.4	642.72	6.39	2.99	6.76	6.76
Dawson County	D3	RM 119.00	88780.83	200-yr	3766.64	649.55	642.78	2.78	2.34	32.24	16.13	199.46	566.06	6.33	3.15	6.77	6.77
Dawson County	D3	RM 118.85	88537.07	200-yr	3766.64	649.49	642.66	2.43	2.22	24.96	16.68	241.51	509.93	6.06	4.04	6.83	6.83
Dawson County	D3	RM 118.72	88336.12	200-yr	3766.64	649.45	642.56	2.26	1.97	21.13	12.09	237.19	677.34	6.49	3.71	6.88	6.88
Dawson County	D3	RM 118.60	88130.39	200-yr	3766.64	649.29	642.46	2.55	2.22	27.18	15.84	220.72	533.35	6.31	3.68	6.83	6.83
Dawson County	D3	RM 118.47	87924.15	200-yr	3766.64	649.13	642.37	2.79	2.51	33.24	19.86	211.72	427.95	5.88	3.51	6.76	6.76
Dawson County	D3	RM 118.34	87719.85	200-yr	3766.64	648.9	642.27	3.08	2.8	42.08	26.86	214.06	400.84	5.27	3.36	6.63	6.63
Dawson County	D3	RM 118.21	87507.02	200-yr	3766.64	648.75	642.16	3.05	2.62	38.71	18.06	175.82	485.75	6.41	2.96	6.59	6.59
Dawson County	D3	RM 118.07	87276.02	200-yr	3823.28	648.73	642.05	2.39	2.29	25.34	16.76	297.49	476.36	5.33	3.51	6.68	6.68
Dawson County	D4	RM 117.90	87004.77	200-yr	3823.28	648.68	641.92	2.17	1.91	20.2	13.33	234.19	589.41	5.9	3.87	6.76	6.76
Dawson County	D4	RM 117.77	86795.88	200-yr	3823.28	648.63	641.81	2.05	1.73	18.13	13.52	217.15	589.95	5.84	4.32	6.81	6.81
Dawson County	D4	RM 117.62	86560.03	200-yr	3823.28	648.55	641.7	2.04	1.75	17.53	11.81	247.32	639.68	6.19	4.16	6.85	6.85
Dawson County	D4	RM 117.46	86294.2	200-yr	3823.28	648.31	641.57	2.72	2.08	31.19	13.83	183	681.22	6.15	2.69	6.74	6.74
Dawson County	D4	RM 117.33	86073.88	200-yr	3823.28	647.99	641.46	3.37	2.6	47.66	22.73	137.01	592.19	6.46	3	6.53	6.53
Dawson County	D4	RM 117.16	85808.16	200-yr	3823.28	647.93	641.33	2.7	2.27	30.47	16.66	182.25	506.45	6.37	3.46	6.6	6.6
Dawson County	D4	RM 117.03	85604.68	200-yr	3823.28	647.88	641.3	2.33	2.1	23.4	13.04	243.69	615.49	5.74	3.18	6.58	6.58
Dawson County	D4	RM 116.87	85336.88	200-yr	3823.28	647.84	641.29	2.04	1.64	17.86	10.62	238.63	693.82	5.88	3.49	6.55	6.55
Dawson County	D4	RM 116.69	85043.25	200-yr	3823.28	647.71	641.44	2.14	1.77	20.35	12.98	279.08	647.87	5.24	3.33	6.27	6.27
Dawson County	D4	RM 116.56	84823.15	200-yr	3823.28	647.55	641.34	2.42	1.85	26.18	13.41	234.35	778.11	5.24	2.66	6.22	6.22
Dawson County	D4	RM 116.39	84558.58	200-yr	3823.28	647.48	641.21	2.07	1.66	18.71	9.06	269.92	854.58	5.59	2.69	6.27	6.27
Dawson County	D4	RM 116.22	84287.19	200-yr	3823.28	647.34	641	2.24	1.67	21.35	8.82	259.34	936.38	5.94	2.45	6.34	6.34
Dawson County	D4	RM 116.05	84007.59	200-yr	3823.28	647.16	640.84	2.56	1.73	27.84	11.02	213.93	938.16	5.96	2.35	6.32	6.32
Dawson County	D4	RM 115.87	83722.29	200-yr	3823.28	647.02	640.8	2.6	1.74	29.31	12.18	214.27	938.57	5.68	2.34	6.22	6.22
Dawson County	D4	RM 115.73	83500.35	200-yr	3823.28	646.99	640.69	2.07	1.47	19.57	10.36	310.77	1008.06	4.88	2.57	6.29	6.29
Dawson County	D4	RM 115.61	83294.37	200-yr	3823.28	646.94	640.59	1.77	1.39	14.11	7.94	385.01	976.13	5.05	2.84	6.35	6.35
Dawson County	D4	RM 115.45	83034.82	200-yr	3823.28	646.88	640.37	1.67	1.39	12.83	9.06	407.6	817.76	4.77	3.36	6.52	6.52
Dawson County	D4	RM 115.29	82782.88	200-yr	3823.28	646.74	640.34	2	1.64	17.66	9.68	319.39	806.34	5.33	2.9	6.4	6.4
Dawson County	D4	RM 115.09	82480.02	200-yr	3823.28	646.69	640.2	1.77	1.4	13.38	7.24	324	849.33	5.95	3.22	6.49	6.49
Dawson County	D4	RM 114.96	82177.99	200-yr	3823.28	646.51	640	2.22	1.83	20.89	12.96	260.73	609.99	6	3.71	6.51	6.51
Dawson County	D4	RM 114.74	81836.48	200-yr	3823.28	646.04	639.98	3.27	2.41	45.83	22.03	179.76	565.06	5.88	2.8	6.06	6.06
Dawson County	D4	RM 114.58	81577.9	200-yr	3823.28	646.03	639.46	2.47	2.33	25.66	23.01	195.77	358.3	6.18	5.52	6.57	6.57
Dawson County	D4	RM 114.42	81309.47	200-yr	3823.28	645.88	639.33	2.49	2.4	26.73	22.58	257.79	326.08	5.79	4.89	6.55	6.55
Dawson County	D4	RM 114.28	81078.59	200-yr	3823.28	645.62	639.21	2.94	2.69	36.88	27.3	213.07	322.16	5.95	4.4	6.4	6.4
Dawson County	D4	RM 114.11	80813.63	200-yr	3823.28	645.4	639.2	3.07	2.76	40.45	27.41	210.21	357.46	5.79	3.91	6.2	6.2
Dawson County	D4	RM 113.97	80580.15	200-yr	3823.28	645.24	639.45	3.02	2.64	39.97	27.47	225.76	439.26	5.42	3.72	5.79	5.79
Dawson County	D4	RM 113.79	80292.13	200-yr	3823.28	645.18	639.45	2.53	2.2	28.22	21.38	201.08	423.68	5.4	4.09	5.73	5.73
Dawson County	D4	RM 113.60	79987.05	200-yr	3823.28	645.17	639.2	1.78	1.6	13.55	11.45	179.84	502.99	5.82	4.89	5.97	5.97
Dawson County	D4	RM 113.43	79712.89	200-yr	3823.28	645.05	638.73	2.12	1.76	19	12.58	173.8	536.55	6.19	4.06	6.32	6.32
Dawson County	D4	RM 113.24	79405.49	200-yr	3823.28	644.73	638.43	2.96	2.35	36.93	19.58	130.78	502.74	6.19	3.23	6.3	6.3
Dawson County	D4	RM 113.08	79152.39	200-yr	3823.28	644.57	638.37	2.86	2.44	34.89	20.72	138.2	438.57	6.09	3.57	6.2	6.2
Dawson County	D4	RM 112.94	78925.1	200-yr	3823.28	644.56	638.26	2.12	1.96	19.25	15.34	194.62	418.14	5.91	4.67	6.3	6.3
Dawson County	D4	RM 112.74	78585.88	200-yr	3823.28	644.39	638.09	2.3	2.01	22.99	13.78	237.95	573.15	5.56	3.31	6.3	6.3
Dawson County	D4	RM 112.59	78355.25	200-yr	3823.28	644.27	637.98	2.37	2.01	25.2	14.52	271.99	643.26	5.18	2.96	6.29	6.29
Dawson County	D4	RM 112.37	78008.78	200-yr	3823.28	644.26	637.88	1.7	1.48	12.35	7.57	206.92	810.35	5.9	3.58	6.38	6.38
Dawson County	D4	RM 112.19	77721.27	200-yr	3823.28	644.07	637.59	2.2	1.94	20.68	13.26	213.8	519.2	5.95	3.8	6.48	6.48
Dawson County	D4	RM 111.89	77240.22	200-yr	3823.28	643.72	637.16	2.64	2.41	29.71	19.53	235.68	403.29	5.99	3.93	6.56	6.56
Dawson County	D4	RM 111.42	76486.24	200-yr	3823.28	643.45	636.91	2.25	2.04	21.69	14.72	287.11	476.38	5.8	3.93	6.54	6.54
Dawson County	D4	RM 111.26	76213.83	200-yr	3823.28	643.39	636.66	2.03	1.8	17.86	11.02	329.26	635.21	5.58	3.43	6.73	6.73
Dawson County	D4	RM 111.09	75911.9	200-yr	3823.28	643.06	636.51	2.77	2.63	33.36	26.96	240.23	366.07	5.67	4.57	6.54	6.54
Dawson County	D4	RM 110.95	75678.54	200-yr	3823.28	642.76	636.4	3.19	3.03	43.26	32.2	194.97	290.99	6.05	4.49	6.36	6.36
Dawson County	D4	RM 110.78	75415.61	200-yr	3823.28	642.43	636.27	3.48	3.35	52.01	37.78	186.03	268.86	5.87	4.25	6.16	6.16
Dawson County	D4	RM 110.55	75040.65	200-yr	3823.28	642.32	636.09	2.75	2.62	32.77	23.57	240.69	379.02	5.72	4.12	6.23	6.23

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	200-yr	3823.28	642.28	635.96	2.29	2.12	22.83	13.06	293.1	564.8	5.6	3.19	6.31	6.31
Dawson County	D4	RM 110.17	74428.56	200-yr	3823.28	642.1	635.79	2.36	2.16	25.34	16.31	321.63	564.81	4.89	3.14	6.31	6.31
Dawson County	D4	RM 109.95	74074.87	200-yr	3823.28	641.96	635.62	2.22	1.93	21.45	10.89	297.98	702.55	5.58	2.82	6.34	6.34
Dawson County	D4	RM 109.75	73741.09	200-yr	3823.28	641.77	635.46	2.39	2.04	24.75	10.79	272.8	763.16	5.65	2.46	6.32	6.32
Dawson County	D4	RM 109.54	73418.83	200-yr	3823.28	641.68	635.3	2.19	1.72	20.79	11.96	287.56	689.45	5.64	3.23	6.38	6.38
Dawson County	D4	RM 109.37	73150.54	200-yr	3823.28	641.5	635.17	2.52	1.92	27.2	12.67	224.7	730.38	5.87	2.73	6.33	6.33
Dawson County	D4	RM 109.19	72864.56	200-yr	3823.28	641.32	635.03	2.58	2.16	28.58	14.24	238.65	610.72	5.85	2.9	6.29	6.29
Dawson County	D4	RM 109.04	72628	200-yr	3823.28	640.95	634.92	3.26	2.79	45.63	24.48	194.23	443.71	5.79	3.09	6.04	6.04
Dawson County	D4	RM 108.86	72339.73	200-yr	3823.28	640.97	634.77	2.28	2.18	22.9	19.04	287.17	393.81	5.34	4.44	6.2	6.2
Dawson County	D4	RM 108.70	72072.36	200-yr	3823.28	640.89	634.65	2.12	2.03	19.71	15.28	291.61	440.87	5.5	4.26	6.24	6.24
Dawson County	D4	RM 108.55	71827.97	200-yr	3823.28	640.79	634.53	2.09	2.07	19.31	15.67	343.64	427.59	5.32	4.32	6.27	6.27
Dawson County	D4	RM 108.40	71587.18	200-yr	3823.28	640.61	634.41	2.38	2.35	23.54	21.65	363.68	401.54	4.41	4.06	6.21	6.21
Dawson County	D4	RM 108.25	71345.86	200-yr	3823.28	640.51	634.29	2.26	2.16	22.61	16.27	361.89	535.47	4.61	3.31	6.21	6.21
Dawson County	D4	RM 108.12	71131.88	200-yr	3823.28	640.39	634.19	2.34	2.12	23.84	12.4	289.42	630.57	5.51	2.86	6.21	6.21
Dawson County	D4	RM 107.98	70905.01	200-yr	3823.28	640.15	634.08	2.76	2.5	33.35	14.95	245.46	618.66	5.55	2.47	6.07	6.07
Dawson County	D4	RM 107.82	70651.22	200-yr	3823.28	639.93	633.95	2.94	2.49	38.09	15.84	231.93	684.36	5.42	2.24	5.98	5.98
Dawson County	D4	RM 107.68	70418.24	200-yr	3823.28	639.7	633.84	3.1	2.76	42.3	21.02	219.72	514.14	5.42	2.69	5.86	5.86
Dawson County	D4	RM 107.50	70132.11	200-yr	3823.28	639.55	633.17	2.84	2.51	35.52	18.55	239.71	541.81	5.35	2.81	6.38	6.38
Dawson County	D4	RM 107.31	69834.56	200-yr	3823.28	639.3	633.23	2.89	2.62	37.94	21.18	264.38	532.3	4.88	2.74	6.08	6.08
Dawson County	D4	RM 107.13	69541.52	200-yr	3823.28	639.13	633.98	2.63	2.43	32.6	23.4	322.33	497.77	4.38	3.16	5.15	5.15
Dawson County	D5	RM 106.98	69305.02	200-yr	3823.28	639.06	634.16	2.12	2.02	21.39	19.1	421.85	504.26	4.17	3.75	4.9	4.9
Dawson County	D5	RM 106.85	69065.27	200-yr	3823.28	638.96	633.6	2.03	1.96	19.65	15.98	412.29	577.1	4.15	3.39	5.36	5.36
Dawson County	D5	RM 106.65	68764.02	200-yr	3823.28	638.7	632.98	2.39	2.31	26.54	23.51	360.27	535.29	3.97	3.53	5.72	5.72
Dawson County	D5	RM 106.47	68475.87	200-yr	3823.28	638.53	632.51	2.38	1.87	26.5	17.24	307.26	823.59	4.41	2.87	6.02	6.02
Dawson County	D5	RM 106.28	68173.97	200-yr	3823.28	638.07	631.71	3.23	2.45	47.2	21.88	204.05	676.99	4.96	2.3	6.36	6.36
Dawson County	D5	RM 106.10	67879.83	200-yr	3823.28	637.86	631.29	3.02	2.3	42.04	24.07	206.53	624.78	4.63	2.66	6.57	6.57
Dawson County	D5	RM 105.89	67550.49	200-yr	3823.28	637.66	631.76	2.65	2.12	32.84	16.85	226.74	778.67	4.5	2.32	5.9	5.9
Dawson County	D5	RM 105.74	67300.35	200-yr	3823.28	637.52	632.3	2.49	1.75	28.79	15.79	203.14	879.26	4.53	2.49	5.22	5.22
Dawson County	D5	RM 105.54	66973.54	200-yr	3823.28	637.24	632.17	2.75	2.08	35.61	20.46	147.79	726.16	4.39	2.53	5.07	5.07
Dawson County	D5	RM 105.30	66609.03	200-yr	3823.28	637.11	632.29	1.81	1.59	16.17	12.09	219.79	929.99	3.73	2.79	4.99	4.99
Dawson County	D5	RM 105.06	66212.24	200-yr	3823.28	636.95	631.19	2.07	1.87	21.24	14.94	181.11	1153.9	3.72	2.62	5.76	5.76
Dawson County	D5	RM 104.89	65945.5	200-yr	3823.28	636.77	631.5	2.16	1.86	23.67	15.34	205.87	1189.6	3.46	2.25	5.35	5.35
Dawson County	D5	RM 104.77	65742.33	200-yr	3823.28	636.65	631.67	2.32	1.68	25.36	12.71	125.62	1221.97	4.33	2.17	5.94	5.94
Dawson County	D5	RM 104.64	65530.83	200-yr	3823.28	636.58	632.1	1.95	1.42	18.3	9.27	172.34	1512.05	4.1	2.06	5.62	5.62
Dawson County	D5	RM 104.43	65180.62	200-yr	3823.28	636.53	631.56	1.3	1.06	8.71	6.02	361.11	1568.6	3.3	2.29	5.74	5.74
Dawson County	D5	RM 104.26	64906.83	200-yr	3823.28	636.46	631.59	1.28	1.01	8.15	4.62	218.58	1782.66	3.74	2.12	5.82	5.82
Dawson County	D5	RM 104.10	64643.2	200-yr	3823.28	636.38	630.81	1.61	1.1	12.17	5.21	150.64	1855.61	4.35	1.87	5.94	5.94
Dawson County	D5	RM 103.95	64410.06	200-yr	3823.28	636.34	631.24	1.63	0.97	12.79	5.92	185.01	2058.81	4.14	1.91	6.52	6.52
Dawson County	D5	RM 103.68	63957.56	200-yr	3823.28	636.24	629.68	1.69	0.9	13.29	6.52	188.7	1893.56	4.54	2.23	6.8	6.8
Dawson County	D5	RM 103.48	63615.6	200-yr	3823.28	636.18	630.4	1.81	0.99	14.78	6.65	152.55	1742.69	4.94	2.21	6.67	6.67
Dawson County	D5	RM 103.26	63259.44	200-yr	3823.28	636.12	630.13	1.71	0.99	13.12	6.45	173.17	1579.92	5.01	2.45	6.71	6.71
Dawson County	D5	RM 102.58	62131.5	200-yr	3823.28	635.94	629.72	1.67	1.27	12.51	8.03	178.73	937.07	5.01	3.22	6.26	6.26
Dawson County	D5	RM 102.44	61920.83	200-yr	3823.28	635.8	629.74	2.14	1.58	20.65	11.51	255.44	875.99	4.96	2.77	6.06	6.06
Dawson County	D5	RM 102.31	61720.14	200-yr	3823.28	635.66	629.03	2.49	1.73	27.82	14.86	200.53	820.06	5.03	2.7	6.63	6.63
Dawson County	D5	RM 102.15	61456.58	200-yr	3823.28	635.54	629.39	2.42	1.8	25.93	14.14	201.3	744.69	5.22	2.86	6.15	6.15
Dawson County	D5	RM 102.00	61217.89	200-yr	3823.28	635.46	629.48	2.11	1.63	20.43	11.91	267.9	850.59	4.71	2.76	5.98	5.98
Dawson County	D5	RM 101.84	60967.97	200-yr	3823.28	635.42	629.23	1.79	1.24	14.59	9.88	155.67	926.97	4.9	3.32	6.19	6.19
Dawson County	D5	RM 101.60	60582.61	200-yr	3823.28	635.28	628.87	1.71	1.45	13.4	7.51	336.08	1020.98	4.8	2.69	6.41	6.41
Dawson County	D5	RM 101.45	60336.09	200-yr	3823.28	635.04	629.16	2.41	1.77	25.7	10.45	251.39	1002.61	5.28	2.15	5.88	5.88
Dawson County	D5	RM 101.25	60019.5	200-yr	3823.28	634.81	627.81	2.71	1.84	32.14	12.05	209.15	1010.13	5.47	2.05	7	7
Dawson County	D5	RM 101.09	59759.25	200-yr	3823.28	634.7	627.99	2.55	1.7	28.63	11.57	216.65	1040.38	5.34	2.16	6.71	6.71
Dawson County	D5	RM 100.88	59426.42	200-yr	3823.28	634.58	627.86	2.41	1.62	25.14	10.12	196.58	1176.52	5.55	2.24	6.72	6.72
Dawson County	D5	RM 100.67	59075.4	200-yr	3823.28	634.4	627.1	2.64	1.58	29.53	11.66	151.88	1118.11	6.05	2.39	7.3	7.3
Dawson County	D5	RM 100.46	58743.44	200-yr	3823.28	634.36	627.92	1.93	1.28	16.13	8.39	202.94	1135.48	5.57	2.9	6.44	6.44
Dawson County	D5	RM 100.25	58401.49	200-yr	3823.28	634.11	627.57	2.49	1.65	27	11.54	196.17	978.57	5.55	2.37	6.54	6.54
Dawson County	D5	RM 100.05	58077.55	200-yr	3823.28	633.96	626.86	2.49	1.87	26.88	12.72	176.97	774.31	5.6	2.64	7.1	7.1
Dawson County	D5	RM 99.87	57778.81	200-yr	3823.28	633.69	626.4	2.58	2.24	30.49	16.16	301.61	683.06	4.72	2.5	7.29	7.29
Dawson County	D5	RM 99.68	57474.16	200-yr	3823.28	633.49	626.29	2.66	2.21	30.86	15.37	246.92	629.9	5.5	2.75	7.2	7.2
Dawson County	D5	RM 99.49	57160.47	200-yr	3823.28	633.17	626.53	3.04	2.41	40.59	18.24	218.38	658.53	5.35	2.41	6.64	6.64
Dawson County	D5	RM 99.30	56863.46	200-yr	3823.28	633.02	627.26	2.68	2.13	32.24	17.34	267.93	833.94	5.01	2.7	5.76	5.76
Dawson County	D5	RM 99.13	56566.63	200-yr	3823.28	632.91	626.77	2.35	1.74	24.94	11.94	293.66	927.78	4.94	2.37	6.14	6.14

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	200-yr	3823.28	632.75	626.63	2.26	1.83	23.62	13.2	339.1	891.85	4.56	2.56	6.12	6.12
Dawson County	D5	RM 98.71	55911.87	200-yr	3823.28	632.57	626.34	2.28	1.64	24.4	11.9	322.21	1072.76	4.46	2.17	6.23	6.23
Dawson County	D5	RM 98.57	55680.2	200-yr	3823.28	632.48	626.1	2.16	1.37	21.53	11.18	297.01	1174.73	4.58	2.37	6.38	6.38
Dawson County	D5	RM 98.35	55325.95	200-yr	3823.28	632.18	625.91	2.61	1.54	29.99	11.95	216.82	1170.89	5.33	2.12	6.27	6.27
Dawson County	D5	RM 98.19	55066.09	200-yr	3823.28	631.98	624.42	2.82	1.6	33.97	11.8	184	1183.37	5.79	2.01	7.56	7.56
Dawson County	D5	RM 97.99	54752.97	200-yr	3823.28	631.68	625.04	2.97	2.13	39.69	15.12	236.53	1118.83	4.97	1.89	6.64	6.64
Dawson County	D5	RM 97.84	54493.48	200-yr	3823.28	631.54	625.39	2.62	2.09	31.49	15.72	292.51	860.02	4.71	2.35	6.15	6.15
Dawson County	D5	RM 97.68	54241.32	200-yr	3823.28	631.4	624.99	2.48	1.95	29.64	19.34	340.05	754.81	4.09	2.67	6.41	6.41
Dawson County	D5	RM 97.48	53918.21	200-yr	3823.28	631.27	624.81	1.93	1.59	16.86	12.69	387.03	1226.92	3.21	2.42	6.46	6.46
Dawson County	D5	RM 97.28	53585.68	200-yr	3823.28	631.08	625.86	2.03	1.45	20	11.38	328.8	1349.44	4.04	2.3	5.63	5.63
Dawson County	D5	RM 97.08	53263.89	200-yr	3823.28	630.79	625.27	2.63	1.89	31.83	14.28	209.17	1247.59	4.68	2.1	5.52	5.52
Dawson County	D5	RM 96.94	53030.11	200-yr	3823.28	630.63	623.97	2.7	1.78	33.87	13.95	199.17	1297.51	4.59	1.89	6.66	6.66
Dawson County	D5	RM 96.77	52762.2	200-yr	3823.28	630.43	623.51	2.69	1.93	33.7	14.72	202.34	1399.85	4.55	1.99	6.92	6.92
Dawson County	D5	RM 96.55	52403.59	200-yr	3823.28	630.27	624.57	2.51	1.43	28.43	11.28	160.42	1662.32	4.96	1.97	5.7	5.7
Dawson County	D5	RM 96.35	52079.12	200-yr	3823.28	630.26	625.39	1.22	1.14	7.42	4.92	290.07	1749.81	3.72	2.47	6.79	6.79
Dawson County	D5	RM 96.17	51777.74	200-yr	3823.28	630.05	624.71	2.28	1.7	24.44	8.63	130.42	1778.28	4.43	1.56	5.67	5.67
Dawson County	D5	RM 96.00	51500.38	200-yr	3823.28	629.93	624.3	2.11	1.46	20.68	7.82	122.42	1851.31	4.59	1.74	5.63	5.63
Dawson County	D5	RM 95.79	51156.87	200-yr	3823.28	629.85	624.35	1.52	1.06	11.4	5.56	284.94	1890.26	4.31	2.11	5.6	5.6
Dawson County	D5	RM 95.60	50859.75	200-yr	3823.28	629.77	622.97	1.56	0.99	11.33	5.9	251.15	1720.19	4.49	2.34	6.8	6.8
Dawson County	D5	RM 95.40	50547.92	200-yr	3823.28	629.7	623.13	1.45	0.99	9.47	5.36	377.96	1398.4	4.88	2.77	6.57	6.57
Dawson County	D5	RM 95.21	50245.97	200-yr	3823.28	629.62	622.21	1.76	0.93	13.31	6.31	217.6	1517.27	5.72	2.71	7.41	7.41
Dawson County	D5	RM 95.04	49971.19	200-yr	3823.28	629.55	621.68	1.97	1.02	16.92	8.73	174.46	1427.29	5.45	2.81	7.87	7.87
Dawson County	D5	RM 94.88	49717.07	200-yr	3823.28	629.5	621.44	1.85	0.94	14.65	8.39	152.89	1486.34	5.78	3.3	8.06	8.06
Dawson County	D5	RM 94.71	49446.9	200-yr	3823.28	629.46	621.69	1.39	1.13	8.44	6.32	234.28	1417.16	5.43	4.07	7.77	7.77
Dawson County	D5	RM 94.58	49286.95	200-yr	3823.28	629.43	618.6	1.17	1.17	5.49	5.49	456.42	1432.33	7.18	7.18	10.83	10.83
Dawson County	D5	RM 94.57	49255.56	200-yr	3823.28	629.36	618.63	1.53	1.52	9.5	9.23	360.59	958.33	6.91	6.72	10.73	10.73
Dawson County		RM 94.55	49216.94	200-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	200-yr	3823.28	628.9	620.63	2.58	2.4	28.73	23.18	256.42	1093.44	5.6	4.51	8.27	8.27
Dawson County	D5	RM 94.52	49157.18	200-yr	3823.28	628.91	620.89	2.39	2.36	24.93	23.68	287.23	1254.41	5.54	5.25	8.01	8.01
Dawson County	D6	RM 94.42	48998.19	200-yr	3823.28	628.76	621.76	2.77	2.2	33.44	19.99	219.93	1253.34	5.5	3.28	7	7
Dawson County	D6	RM 94.30	48806.79	200-yr	3851.6	628.7	621.22	2.41	1.91	26.71	16.94	295.07	1208.82	4.68	2.96	7.48	7.48
Dawson County	D6	RM 94.20	48653.06	200-yr	3851.6	628.65	621.41	2.31	1.68	24.05	13.24	261.89	996.81	5.22	2.87	7.24	7.24
Dawson County	D6	RM 94.08	48445.46	200-yr	3851.6	628.61	622.37	1.91	1.52	15.91	9.64	338.75	814.18	5.44	3.29	6.24	6.24
Dawson County	D6	RM 93.96	48246.42	200-yr	3851.6	628.49	621.88	2.13	1.72	20.28	12.88	331.74	696.66	5.06	3.21	6.61	6.61
Dawson County	D6	RM 93.83	48030.25	200-yr	3851.6	628.29	620.28	2.6	2.03	29.37	17	237.8	601.42	5.61	3.25	8.01	8.01
Dawson County	D6	RM 93.68	47782.89	200-yr	3851.6	628	620.19	3.08	2.37	40.66	22.61	191.53	499.05	5.85	3.25	7.81	7.81
Dawson County	D6	RM 93.57	47606.95	200-yr	3851.6	627.65	620.08	3.61	2.83	56.88	34.27	184.03	412.9	5.47	3.29	7.56	7.56
Dawson County	D6	RM 93.53	47552.11	200-yr	3851.6	627.59	620.21	3.55	2.88	54.5	32.27	184.33	400.73	5.63	3.34	7.38	7.38
Dawson County			47536.14	200-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	200-yr	3851.6	627.5	620.33	3.58	2.89	55.18	32.91	180.48	393.3	5.69	3.39	7.18	7.18
Dawson County	D6	RM 93.47	47460.74	200-yr	3851.6	627.46	618.63	3.46	2.86	51.91	34.29	189.97	364.28	5.59	3.7	8.84	8.84
Dawson County	D6	RM 93.43	47382.46	200-yr	3851.6	627.41	619.44	3.33	2.8	47.68	31.53	191.32	359.85	5.8	3.83	7.97	7.97
Dawson County		RM 93.415	47357.71	200-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	200-yr	3851.6	627.35	620.19	3.22	2.81	44.52	31.85	200.23	378.19	5.78	4.13	7.16	7.16
Dawson County	D6	RM 93.36	47287.92	200-yr	3851.6	627.36	620.47	2.96	2.46	37.58	25.39	213.34	397.97	5.82	3.93	6.89	6.89
Dawson County	D6	RM 93.25	47111.44	200-yr	3851.6	627.26	621.12	2.85	2.29	41.32	22.92	228.84	615.95	5.17	2.87	6.14	6.14
Dawson County	D6	RM 93.05	46807.77	200-yr	3851.6	627.2	621.74	2.18	1.65	21.31	11.58	283.11	1032.96	5.14	2.79	5.46	5.46
Dawson County	D6	RM 92.93	46606.31	200-yr	3851.6	627.07	621.34	2.28	1.7	23.89	12.9	305.87	1159.84	4.77	2.57	5.73	5.73
Dawson County	D6	RM 92.83	46460.06	200-yr	3851.6	627.01	621.02	2.17	1.72	21.83	12.64	357.35	1306.2	4.26	2.46	5.99	5.99
Dawson County	D6	RM 92.71	46261.84	200-yr	3851.6	626.91	620.37	2.15	1.76	21.35	13.5	359.38	1346.4	4.4	2.78	6.54	6.54
Dawson County	D6	RM 92.59	46079.79	200-yr	3851.6	626.8	620.95	2.2	1.91	22.63	13.61	321.05	1334.44	5.07	3.04	5.85	5.85
Dawson County	D6	RM 92.50	45933.81	200-yr	3851.6	626.7	620.75	2.33	2.03	24.69	15.02	325.45	1381.83	4.79	2.91	5.95	5.95
Dawson County	D6	RM 92.39	45753.94	200-yr	3851.6	626.61	620.58	2.34	2.01	24.53	15.41	299.01	1465.72	5.07	3.19	6.03	6.03
Dawson County	D6	RM 92.29	45591.17	200-yr	3851.6	626.49	620.64	2.43	2.29	26.4	22.96	295.77	1406.92	5.09	4.43	5.85	5.85
Dawson County	D6	RM 92.18	45414.13	200-yr	3851.6	626.44	620.23	2.04	1.88	18.68	15.17	358.66	1548.72	5.02	4.08	6.21	6.21
Dawson County		RM 92.14	45354.08	200-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	200-yr	3851.6	626.17	620.04	2.06	1.86	19.3	14.93	367.04	1443	4.87	3.77	6.13	6.13
Dawson County	D6	RM 92.06	45238.47	200-yr	3851.6	626.1	620.12	2.24	1.99	23.16	15.9	354.46	1422.6	4.62	3.18	5.98	5.98
Dawson County	D6	RM 91.99	45117.89	200-yr	3851.6	626.1	619.81	1.85	1.79	16.09	14.39	390.42	1194.74	4.34	3.89	6.29	6.29
Dawson County	D6	RM 91.85	44886.16	200-yr	3851.6	626.05	619.7	1.74	1.45	15.48	11.39	238.98	1411.28	5.08	3.74	6.35	6.35
Dawson County	D6	RM 91.77	44752.88	200-yr	3851.6	626.01	619.28	1.73	1.44	17.78	13.72	224.91	1143.21	4.8	3.71	6.73	6.73

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	200-yr	3851.6	625.83	619	2.22	1.74	21.3	12.97	148.19	1543.26	5.65	3.45	6.83	6.83
Dawson County	D6	RM 91.45	44219.47	200-yr	3851.6	625.66	618.66	2.37	2.1	25.74	14.6	189.07	1440.62	5.47	3.11	7	7
Dawson County	D6	RM 91.31	43987.79	200-yr	3851.6	625.36	618.98	2.78	2.56	34.79	18.46	271.16	1266.51	5.01	2.66	6.38	6.38
Dawson County	D6	RM 91.11	43666.49	200-yr	3851.6	625.05	618.54	3.05	2.6	40.39	17.38	219.42	1046.62	5.56	2.4	6.51	6.51
Dawson County	D6	RM 90.97	43442.55	200-yr	3851.6	624.93	618.3	2.92	2.11	37.69	14.99	224.14	1130.12	5.32	2.12	6.63	6.63
Dawson County	D6	RM 90.76	43114.74	200-yr	3851.6	624.79	618.97	2.47	1.66	34.43	15.23	268.72	1467.66	4.9	2.17	5.82	5.82
Dawson County	D6	RM 90.59	42823.65	200-yr	3851.6	624.76	618.64	1.87	1.15	15.6	7.61	232.7	1451.31	5.1	2.49	6.12	6.12
Dawson County	D6	RM 90.43	42564.46	200-yr	3851.6	624.47	618.18	2.69	1.49	32.75	10.67	208.77	1592.68	4.96	1.62	6.29	6.29
Dawson County	D6	RM 90.29	42331.05	200-yr	3851.6	624.39	618.21	2.32	1.29	24	8.81	236.08	1570.61	5.2	1.91	6.18	6.18
Dawson County	D6	RM 90.16	42118.24	200-yr	3851.6	624.26	618.54	2.43	1.42	26.18	9.73	229.61	1440.43	5.2	1.93	5.72	5.72
Dawson County	D6	RM 89.96	41795.66	200-yr	3851.6	624.14	618.08	2.07	1.47	19.69	9.14	346.39	1300.51	4.75	2.21	6.06	6.06
Dawson County	D6	RM 89.83	41589.45	200-yr	3851.6	623.81	617.17	3	1.87	39.95	14.7	211.95	1072.85	5.2	1.92	6.64	6.64
Dawson County	D6	RM 89.65	41302.33	200-yr	3851.6	623.65	618.15	2.73	1.85	33.88	14.55	251.93	992.81	4.87	2.1	5.5	5.5
Dawson County	D6	RM 89.46	41003.8	200-yr	3851.6	623.46	617.56	2.67	1.97	31.01	13.02	236.74	838.44	5.56	2.33	5.9	5.9
Dawson County	D6	RM 89.29	40732.3	200-yr	3851.6	623.46	617.42	1.96	1.68	16.86	13.1	253.25	684.96	5.37	4.17	6.04	6.04
Dawson County	D6	RM 89.13	40476.68	200-yr	3851.6	623.23	617.29	2.53	1.99	28.02	13.45	231.92	749.31	5.44	2.59	5.94	5.94
Dawson County	D6	RM 88.96	40193.97	200-yr	3908.24	623.07	617.14	2.57	2.06	28.43	12.98	186.73	735.95	5.87	2.65	5.93	5.93
Dawson County	D7	RM 88.77	39887.75	200-yr	3908.24	622.91	616.98	2.53	1.99	28.54	14.61	260.04	765.66	5.18	2.65	5.93	5.93
Dawson County	D7	RM 88.58	39581.56	200-yr	3908.24	622.6	616.82	3.04	2.14	40.19	16.76	185.88	807.02	5.71	2.34	5.78	5.78
Dawson County	D7	RM 88.44	39345.29	200-yr	3908.24	622.34	616.7	3.24	2.35	45.73	15.47	181.67	951.03	5.63	1.86	5.64	5.64
Dawson County	D7	RM 88.25	39047.22	200-yr	3908.24	622.23	616.54	2.7	2.07	32.47	11.94	221.53	1035.42	5.21	1.9	5.69	5.69
Dawson County	D7	RM 88.06	38736.32	200-yr	3908.24	622.06	616.38	2.44	1.98	26.96	10.21	305.89	1156.36	4.94	1.86	5.69	5.69
Dawson County	D7	RM 87.87	38426.68	200-yr	3908.24	622	616.22	1.91	1.54	17.37	9	429.53	1314.36	4.28	2.21	5.78	5.78
Dawson County	D7	RM 87.70	38161.81	200-yr	3908.24	621.95	616.08	1.85	1.3	14.72	6.18	181.73	1447.16	5.86	2.4	5.87	5.87
Dawson County	D7	RM 87.52	37862.82	200-yr	3908.24	621.89	615.92	1.63	1.34	12.16	7.12	308.23	1213	4.77	2.77	5.97	5.97
Dawson County	D7	RM 87.34	37574.69	200-yr	3908.24	621.65	615.85	2.4	1.77	26.43	13.72	253.88	885.27	4.84	2.49	5.81	5.81
Dawson County	D7	RM 87.17	37307.08	200-yr	3908.24	621.39	615.82	2.91	2.13	37.27	16.96	162.99	744.23	5.49	2.47	5.58	5.58
Dawson County	D7	RM 87.00	37023.47	200-yr	3908.24	621.26	615.79	2.5	2.09	28.63	14.29	241.45	789.38	4.78	2.37	5.47	5.47
Dawson County	D7	RM 86.82	36748.51	200-yr	3908.24	621.07	615.76	2.59	2.2	30.64	16.04	210.89	699.81	4.89	2.53	5.31	5.31
Dawson County	D7	RM 86.67	36501.76	200-yr	3908.24	620.82	615.73	3.05	2.46	42.26	21.73	151.27	623.79	5.08	2.55	5.09	5.09
Dawson County	D7	RM 86.52	36253.46	200-yr	3908.24	620.73	615.7	2.3	1.94	24.19	16.89	250.55	603.91	4.78	3.34	5.04	5.04
Dawson County	D7	RM 86.39	36046.31	200-yr	3908.24	620.63	615.59	2.32	1.88	24.86	16.62	147.45	660.82	4.78	3.15	5.04	5.04
Dawson County	D7	RM 86.24	35796.38	200-yr	3908.24	620.58	615.46	1.7	1.52	12.99	8.62	166.41	778.29	5.05	3.3	5.12	5.12
Dawson County	D7	RM 86.08	35541.56	200-yr	3908.24	620.26	615.48	2.87	2.18	38.62	16.83	160.1	931.52	4.53	1.94	4.78	4.78
Dawson County	D7	RM 85.91	35282.1	200-yr	3908.24	620.12	615.5	2.47	1.79	28.37	13.38	191.42	1029.66	4.53	2.13	4.62	4.62
Dawson County	D7	RM 85.78	35075.01	200-yr	3908.24	620.13	614.9	1.48	1.41	10.32	9.5	288.53	996.59	4.31	3.96	5.23	5.23
Dawson County	D7	RM 85.59	34774.5	200-yr	3908.24	620.07	614.32	1.73	1.27	12.92	6.59	184.84	1062.06	5.72	2.9	5.75	5.75
Dawson County	D7	RM 85.39	34449.3	200-yr	3908.24	619.83	614.15	2.42	1.86	26.02	13.01	219.47	802.14	5.28	2.62	5.69	5.69
Dawson County	D7	RM 85.23	34186.4	200-yr	3908.24	619.58	614.01	3.01	2.15	39.74	17.76	157.48	745.03	5.57	2.45	5.57	5.57
Dawson County	D7	RM 85.04	33863.7	200-yr	3908.24	619.52	613.84	2.21	1.81	22.3	15.35	265.03	654.53	4.82	3.3	5.68	5.68
Dawson County	D7	RM 84.89	33626.36	200-yr	3908.24	619.42	613.92	2	1.85	18.51	12.53	413.04	692.62	4.63	3.14	5.5	5.5
Dawson County	D7	RM 84.72	33349.5	200-yr	3908.24	619.22	613.77	2.28	2.18	23.82	14.97	353.9	593.73	4.81	3.01	5.45	5.45
Dawson County	D7	RM 84.57	33104.21	200-yr	3908.24	619.02	613.45	2.56	2.35	29.25	15.63	294.82	608.1	5.13	2.74	5.57	5.57
Dawson County	D7	RM 84.41	32856.7	200-yr	3908.24	618.9	613.32	2.45	2.16	27.19	10.87	312.69	927.8	4.96	1.98	5.58	5.58
Dawson County	D7	RM 84.22	32552.24	200-yr	3908.24	618.8	613.16	2.2	1.74	21.79	9.7	261.68	1144.62	5.03	2.21	5.65	5.65
Dawson County	D7	RM 84.05	32270.74	200-yr	3908.24	618.64	613.14	2.43	1.74	26.15	9.53	206.16	1171.15	5.29	1.91	5.5	5.5
Dawson County	D7	RM 83.89	32017.88	200-yr	3908.24	618.39	613.11	2.83	1.96	35.64	12.07	191.2	1137.65	5.2	1.75	5.28	5.28
Dawson County	D7	RM 83.73	31759.16	200-yr	3908.24	618.3	613.07	2.33	1.74	24.91	11.91	240.43	1163.29	4.82	2.29	5.23	5.23
Dawson County	D7	RM 83.53	31426.04	200-yr	3908.24	618.23	613.01	1.8	1.42	14.84	7.35	304.34	1152.17	4.85	2.39	5.22	5.22
Dawson County	D7	RM 83.39	31213.34	200-yr	3908.24	618.15	612.95	2.01	1.49	18.32	8.72	189.12	1117.79	4.99	2.35	5.2	5.2
Dawson County	D7	RM 83.21	30910.79	200-yr	3908.24	618.06	612.91	1.85	1.42	15.35	7.9	170.07	1084.28	5.12	2.6	5.28	5.28
Dawson County	D7	RM 83.05	30660.14	200-yr	3908.24	617.99	612.78	1.73	1.31	13.49	6.35	229.1	1262.64	5.02	2.37	5.53	5.53
Dawson County	D7	RM 82.94	30491.79	200-yr	3908.24	617.93	612.69	1.8	1.33	14.68	6.45	219.21	1369.44	4.98	2.17	5.54	5.54
Dawson County	D7	RM 82.81	30280.45	200-yr	3908.24	617.83	612.58	1.96	1.36	17.58	7.09	178.49	1489.66	4.83	1.93	5.68	5.68
Dawson County	D7	RM 82.68	30058.39	200-yr	3908.24	617.74	612.34	2.1	1.33	19.4	7.58	152.77	1418.36	5.4	2.08	5.64	5.64
Dawson County	D7	RM 82.51	29786.14	200-yr	3908.24	617.72	612.1	1.54	1.06	10.57	4.8	229.35	1557.34	5.29	2.37	5.87	5.87
Dawson County	D7	RM 82.33	29497.12	200-yr	3908.24	617.65	611.87	1.61	0.96	11.48	5.47	246.87	1608.65	5.43	2.54	5.9	5.9
Dawson County	D7	RM 82.22	29323.27	200-yr	3908.24	617.59	611.66	1.86	0.94	15.06	6.33	193.52	1968.85	5.56	2.32	5.93	5.93
Dawson County	D7	RM 82.06	29049.94	200-yr	3908.24	617.55	611.37	1.65	0.86	11.66	4.44	202.97	2133.1	5.84	2.17	6.18	6.18
Dawson County	D7	RM 81.91	28820.21	200-yr	3908.24	617.52	611.21	1.64	0.83	11.38	4.09	191.58	2164.52	6.18	2.18	6.31	6.31
Dawson County	D7	RM 81.71	28446.75	200-yr	3908.24	617.47	611.02	1.38	0.8	7.98	2.79	220.81	2350.63	6.25	2.17	6.45	6.45

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	200-yr	3908.24	617.32	610.8	2.09	0.99	18.16	5.02	165.37	2374.5	6.52	1.76	6.52	6.52
Dawson County	D7	RM 81.31	27735.46	200-yr	3936.56	616.28	610.65	4.64	2.37	94.51	14.37	131.98	2269.01	5.56	0.82	5.63	5.63
Dawson County	D8	RM 81.10	27398.33	200-yr	3936.56	616.15	610.47	3.57	1.66	55.71	9.39	160.09	2558.47	5.58	0.92	5.68	5.68
Dawson County	D8	RM 80.94	27148.21	200-yr	3936.56	616.13	610.34	2.66	1.43	30.91	6.12	225.85	2536.29	5.53	1.08	5.79	5.79
Dawson County	D8	RM 80.76	26855.69	200-yr	3936.56	616.13	610.19	2.05	1.03	18	4.43	181.68	2983.57	5.93	1.42	5.93	5.93
Dawson County	D8	RM 80.64	26669.58	200-yr	3936.56	616.07	610.09	2.02	1.04	17.54	4.07	209.02	3161.21	5.75	1.32	5.98	5.98
Dawson County	D8	RM 80.45	26373.01	200-yr	3936.56	616.11	609.94	1.1	0.69	5.2	1.85	122.91	3209.89	6.03	2.06	6.17	6.17
Dawson County	D8	RM 80.17	25926.88	200-yr	3936.56	615.99	609.71	1.93	0.89	15.73	3.62	146.98	3402.79	6.28	1.39	6.29	6.29
Dawson County	D8	RM 79.91	25496.94	200-yr	3936.56	615.91	609.42	1.52	0.81	10.11	2.78	362.06	3195.41	5.59	1.52	6.49	6.49
Dawson County	D8	RM 79.43	24626.85	200-yr	3936.56	615.65	609.14	1.93	1.05	15.82	4.01	289.02	2625.66	6.02	1.51	6.51	6.51
Dawson County	D8	RM 79.23	24229.4	200-yr	3936.56	615.11	608.87	3.35	1.8	48.18	9.18	173.46	2089.36	6.04	1.11	6.24	6.24
Dawson County	D8	RM 78.27	22640.58	200-yr	3936.56	614.42	608.6	2.34	1.47	24.36	9.81	226.68	1289.62	5.29	2.1	5.81	5.81
Dawson County	D8	RM 78.12	22398.86	200-yr	3936.56	614.37	608.48	2.12	1.44	19.81	7.46	222.94	1377.51	5.34	1.99	5.89	5.89
Dawson County	D8	RM 77.97	22135.34	200-yr	3936.56	614.23	608.34	2.33	1.54	23.56	8.31	214.67	1291.05	5.67	1.98	5.89	5.89
Dawson County	D8	RM 77.79	21831.85	200-yr	3936.56	614.17	608.18	1.9	1.42	16.78	7.38	332.54	1365.5	4.63	2.03	5.99	5.99
Dawson County	D8	RM 77.57	21474.71	200-yr	3936.56	613.92	608	2.39	1.77	24.91	8.35	250.08	1204.59	5.54	1.85	5.93	5.93
Dawson County	D8	RM 77.38	21170.35	200-yr	3936.56	613.68	607.84	2.74	1.95	32.67	10.53	215.18	1166.27	5.57	1.78	5.84	5.84
Dawson County	D8	RM 77.13	20780.17	200-yr	3936.56	613.68	607.63	1.89	1.41	15.59	7.28	188.55	1394.26	5.68	2.62	6.05	6.05
Dawson County	D8	RM 77.00	20442.34	200-yr	3936.56	613.58	607.46	2.23	1.42	21.27	6.73	131.83	1504.44	6.11	1.85	6.12	6.12
Dawson County	D8	RM 76.90	20124.49	200-yr	3936.56	613.49	607.29	2.14	1.49	19.45	5.77	153.24	1498.14	6.18	1.76	6.2	6.2
Dawson County	D8	RM 76.76	19785.25	200-yr	3936.56	613.43	607.12	1.77	1.32	13.38	5.07	269.03	1380.39	5.87	2.21	6.31	6.31
Dawson County	D8	RM 76.63	19501.04	200-yr	3936.56	613.34	606.97	1.89	1.44	15.84	6.86	246.86	1190.6	5.4	2.3	6.37	6.37
Dawson County	D8	RM 76.37	19137.53	200-yr	3936.56	613.09	606.78	2.3	1.67	22.7	8.57	272.76	1078.48	5.82	2.19	6.31	6.31
Dawson County	D8	RM 76.22	18884.28	200-yr	3936.56	612.96	606.65	2.4	1.69	24.61	9.9	253.7	979.04	5.93	2.38	6.32	6.32
Dawson County	D8	RM 76.00	18519.22	200-yr	3936.56	612.71	606.61	2.72	1.69	31.96	9.99	225.2	1321.83	5.71	1.77	6.1	6.1
Dawson County	D8	RM 75.75	18119.45	200-yr	3936.56	612.36	606.58	3.03	1.91	40.24	9.96	209.51	1533.58	5.49	1.34	5.78	5.78
Dawson County	D8	RM 75.56	17818.36	200-yr	3936.56	612.3	606.75	2.35	1.52	25.13	8.05	303.99	1680.02	4.82	1.54	5.55	5.55
Dawson County	D8	RM 75.31	17411.3	200-yr	3936.56	612.13	606.34	2.27	1.48	22.85	6.82	263.12	1687.14	5.32	1.58	5.79	5.79
Dawson County	D8	RM 75.13	17092.44	200-yr	3936.56	612	606.17	2.17	1.37	21.14	6.87	306.22	1729.56	5.13	1.66	5.83	5.83
Dawson County	D8	RM 74.90	16719.46	200-yr	3936.56	611.61	605.98	2.96	1.69	39.33	10.26	224.87	1763.22	5.12	1.32	5.63	5.63
Dawson County	D8	RM 74.65	16308.2	200-yr	3936.56	611.5	605.91	2.27	1.38	23.17	7.28	267.86	1783.98	5.11	1.6	5.58	5.58
Dawson County	D8	RM 74.37	15846.14	200-yr	3936.56	611.26	605.85	2.47	1.53	27.88	8.03	221.55	1878.14	4.78	1.37	5.41	5.41
Dawson County	D8	RM 74.13	15464.97	200-yr	3936.56	611.08	605.82	2.24	1.45	22.89	6.24	235.57	2087.21	4.88	1.32	5.26	5.26
Dawson County	D8	RM 73.91	15098.01	200-yr	3936.56	610.95	605.99	1.92	1.28	17.26	5.84	283.69	2024.19	4.53	1.53	4.96	4.96
Dawson County	D8	RM 73.71	14783.86	200-yr	3936.56	610.84	605.87	1.81	1.17	15.25	4.6	292.2	2482.71	4.59	1.38	4.98	4.98
Dawson County	D8	RM 73.53	14496.67	200-yr	3936.56	610.76	605.72	1.78	1.09	14.49	5.24	249.62	2666.89	4.77	1.71	5.04	5.04
Dawson County	D8	RM 73.29	14096.19	200-yr	3936.56	610.32	605.51	3	1.8	41.38	10.68	198.62	1936.26	4.71	1.2	4.8	4.8
Dawson County	D8	RM 73.07	13729.79	200-yr	3936.56	609.87	605.52	3.28	2.08	51.18	12.75	196.15	1937.72	4.29	1.06	4.62	4.62
Dawson County	D8	RM 72.97	13573.93	200-yr	3936.56	609.52	605.5	3.68	2.46	66.02	19.44	199.11	1795.14	3.95	1.16	4.35	4.35
Dawson County	D8	RM 72.91	13479.91	200-yr	3936.56	609.36	605.45	3.6	2.57	64.21	21.64	221.07	1364.35	3.78	1.27	4.19	4.19
Dawson County		RM 72.905	13470.04	200-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	200-yr	3936.56	609.26	605.31	3.75	2.67	69.36	22.65	208.91	1227.82	3.83	1.25	4.09	4.09
Dawson County	D8	RM 72.83	13354.45	200-yr	3936.56	609.3	604.9	2.74	2.02	36	12.63	264.25	1481.99	4.16	1.46	4.4	4.4
Dawson County	D8	RM 72.62	13000.82	200-yr	3936.56	609.06	604.4	2.48	1.76	28.86	8.81	295.23	1853.31	4.43	1.35	4.66	4.66
Dawson County	D8	RM 72.37	12609.05	200-yr	3936.56	608.78	603.89	2.63	1.77	31.81	11.5	228.58	1340.36	4.7	1.69	4.89	4.89
Dawson County	D8	RM 72.16	12261.75	200-yr	3936.56	608.52	603.69	2.56	1.8	30.54	10.72	286.3	1448.63	4.55	1.6	4.84	4.84
Dawson County	D8	RM 71.92	11875.08	200-yr	3936.56	608.37	603.18	2.11	1.59	20.5	7.44	345.16	1536.17	4.66	1.69	5.19	5.19
Dawson County	D8	RM 71.69	11512.65	200-yr	3936.56	608.19	602.95	2.21	1.52	22.24	7.69	303.44	1570.87	4.85	1.67	5.25	5.25
Dawson County	D8	RM 71.49	11192.6	200-yr	3936.56	607.99	602.03	2.45	1.53	26.12	7.47	237.66	1637.44	5.63	1.6	5.96	5.96
Dawson County	D8	RM 71.31	10913.3	200-yr	3936.56	607.85	601.99	2.44	1.54	26.01	7.74	244.59	1605.92	5.48	1.62	5.87	5.87
Dawson County	D9	RM 71.10	10567.75	200-yr	3964.88	607.78	602.11	1.97	1.41	17.43	6.37	197.48	1532.82	5.16	1.87	5.68	5.68
Dawson County	D9	RM 70.91	10267.7	200-yr	3964.88	607.66	602.05	2.22	1.29	21.66	7.78	126.11	1615.36	5.54	1.95	5.62	5.62
Dawson County	D9	RM 70.72	9968.939	200-yr	3964.88	607.55	601.91	2.22	1.31	21.52	8.98	153.19	1548.73	5.63	2.28	5.64	5.64
Dawson County	D9	RM 70.50	9603.574	200-yr	3964.88	607.4	601.9	2.04	1.67	18.69	11.66	251.24	844.78	5.11	3.18	5.5	5.5
Dawson County	D9	RM 70.27	9238.535	200-yr	3964.88	607.09	601.31	2.66	1.83	30.86	11.03	236.79	1163.82	5.46	1.95	5.78	5.78
Dawson County	D9	RM 70.08	8928.013	200-yr	3964.88	606.97	600.85	2.46	1.54	26.28	9.17	234.44	1351.74	5.63	1.94	6.12	6.12
Dawson County	D9	RM 69.79	8464.726	200-yr	3964.88	606.85	600.61	2.09	1.19	18.75	6.55	248.41	1655.54	5.78	2.01	6.25	6.25
Dawson County	D9	RM 69.50	7983.226	200-yr	3964.88	606.76	600.56	1.94	1.07	16.22	6.1	237.14	1788.66	5.69	2.12	6.2	6.2
Dawson County	D9	RM 69.26	7575.04	200-yr	3964.88	606.64	600.35	1.98	1.08	16.77	6.63	245.78	1670.25	5.84	2.29	6.3	6.3
Dawson County	D9	RM 69.03	7206.967	200-yr	3964.88	606.56	599.95	1.91	1.19	15.31	6.13	236.36	1736.02	6.25	2.48	6.61	6.61
Dawson County	D9	RM 68.82	6851.789	200-yr	3964.88	606.35	599.77	2.35	1.46	23.41	9.7	217.59	1503.69	6.02	2.46	6.58	6.58

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

200-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	200-yr	3964.88	605.97	599.59	3	1.99	37.89	12.47	189.13	1284.84	6.26	2.02	6.38	6.38
Dawson County	D9	RM 68.39	6158.879	200-yr	3964.88	605.8	599.51	2.7	2.06	31.61	11.2	241.73	1327.43	5.68	1.99	6.3	6.3
Dawson County	D9	RM 68.11	5709.195	200-yr	3964.88	605.58	599.37	2.55	2.07	28.38	13.3	262.72	1093.81	5.57	2.61	6.21	6.21
Dawson County	D9	RM 67.86	5308.187	200-yr	3964.88	605.37	599.17	2.75	2.33	32.34	23.56	130.41	758.49	6.03	4.31	6.2	6.2
Dawson County	D10	RM 67.57	4859.184	200-yr	4049.84	605.14	598.93	2.53	2.21	27.42	15.45	240.29	934.37	5.86	3.3	6.21	6.21
Dawson County	D10	RM 67.37	4523.862	200-yr	4049.84	605.05	598.75	2.27	1.74	21.98	9.38	224.36	1469.76	5.88	2.49	6.3	6.3
Dawson County	D10	RM 67.15	4175.103	200-yr	4049.84	604.66	598.47	3.2	2	43.79	13.77	158.11	1483.55	5.98	1.85	6.19	6.19
Dawson County	D10	RM 66.95	3842.803	200-yr	4049.84	604.61	598.2	2.38	1.53	24.79	11.27	211.57	1475.5	5.55	2.5	6.41	6.41
Dawson County	D10	RM 66.74	3505.323	200-yr	4049.84	604.39	598.12	2.61	1.74	28.82	10.46	189.78	1577.62	6.13	2.19	6.26	6.26
Dawson County	D10	RM 66.52	3142.889	200-yr	4049.84	604.12	598.26	2.7	2.01	31.72	13.62	249	1734.34	5.54	2.37	5.86	5.86
Dawson County	D10	RM 66.28	2774.58	200-yr	4049.84	603.58	598.21	3.5	2.85	54.75	24.04	206.17	979.35	5.12	2.24	5.37	5.37
Dawson County	D10	RM 66.11	2492.331	200-yr	4049.84	603.46	597.8	2.86	2.39	37.1	16.68	269.84	1133.38	4.92	2.2	5.66	5.66
Dawson County	D10	RM 65.90	2160.839	200-yr	4049.84	603.35	597.33	2.48	1.92	27.05	11.52	227.64	1096.5	5.43	2.28	6.02	6.02
Dawson County	D10	RM 65.75	1926.044	200-yr	4049.84	603.22	597.2	2.46	2.02	27.57	12.6	203.78	1433.23	4.96	2.24	6.02	6.02
Dawson County	D10	RM 65.60	1669.095	200-yr	4049.84	603.05	597.07	2.76	1.76	33	11.73	140.14	1757.1	5.74	2	5.98	5.98
Dawson County	D10	RM 65.42	1386.836	200-yr	4049.84	602.93	596.92	2.23	1.66	21.79	6.9	247.82	1777.2	5.56	1.73	6.01	6.01
Dawson County	D10	RM 65.23	1090.639	200-yr	4049.84	602.82	596.91	2.22	1.49	22.91	8.21	263.18	2164.13	4.54	1.61	5.91	5.91
Dawson County	D10	RM 64.96	634.963	200-yr	4049.84	602.68	597.09	1.92	1.14	16.49	5.87	270.22	2672.94	5.06	1.8	5.59	5.59

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	200-yr	4049.3	602.54	596.42	1.5	0.9	10.38	4.38	398.12	2351.23	4.58	1.92	6.12	6.12
Richland/McKenzie County	D10	RM 64.32	103200	200-yr	4049.3	602.46	596.33	1.78	0.87	14.12	5.37	232.97	2325.84	5.28	1.99	6.13	6.13
Richland/McKenzie County	D10	RM 64.12	102900	200-yr	4049.3	602.41	596.18	1.59	0.92	11.5	5.08	281.09	2058.86	4.87	2.13	6.23	6.23
Richland/McKenzie County	D10	RM 63.92	102601	200-yr	4049.3	602.37	596.08	1.5	0.82	10.35	5.12	273.38	2131.76	4.75	2.32	6.29	6.29
Richland/McKenzie County	D10	RM 63.74	102302	200-yr	4049.3	602.31	595.94	1.62	0.86	11.67	5	254.65	2151.17	5.15	2.18	6.37	6.37
Richland/McKenzie County	D10	RM 63.55	101998	200-yr	4049.3	602.24	595.79	1.71	0.85	12.51	4.89	210.56	2049.75	5.99	2.32	6.45	6.45
Richland/McKenzie County	D10	RM 63.34	101671	200-yr	4049.3	602.19	595.21	1.68	0.83	12.46	5.84	241.49	1996.2	5.24	2.44	6.98	6.98
Richland/McKenzie County	D10	RM 63.08	101293	200-yr	4049.3	601.86	595.12	2.95	1.22	38.1	14.37	159.68	1607.47	5.58	2.07	6.74	6.74
Richland/McKenzie County	D10	RM 62.96	101094	200-yr	4049.3	601.67	595.12	3.13	1.42	53.27	17.08	149.74	1535.98	5.93	1.86	6.55	6.55
Richland/McKenzie County	D10	RM 62.83	100882	200-yr	4049.3	601.53	595.12	3.04	1.42	44.2	14.15	161.51	1488.67	6.09	1.91	6.41	6.41
Richland/McKenzie County	D10	RM 62.64	100582	200-yr	4049.3	601.4	595.12	2.76	1.41	32.53	11.32	189.94	1402.67	5.99	2.05	6.28	6.28
Richland/McKenzie County	D10	RM 62.46	100282	200-yr	4049.3	600.81	595.1	3.88	2.21	66.77	20.21	161.13	1151.9	5.37	1.59	5.71	5.71
Richland/McKenzie County	D10	RM 62.27	99977	200-yr	4049.3	600.9	594.91	2.2	1.53	21.53	8.94	303.35	1207.01	5.35	2.19	5.99	5.99
Richland/McKenzie County	D10	RM 62.1	99691	200-yr	4049.3	600.82	594.75	1.92	1.38	16.57	8.74	274.06	1234.57	4.55	2.38	6.07	6.07
Richland/McKenzie County	D10	RM 61.91	99377	200-yr	4049.3	600.66	594.51	2.14	1.36	20.09	10.3	164.84	1193.18	4.95	2.5	6.15	6.15
Richland/McKenzie County	D10	RM 61.72	99082	200-yr	4049.3	600.51	594.36	2.25	1.47	22.28	9.07	127.17	1252.4	5.53	2.2	6.15	6.15
Richland/McKenzie County	D10	RM 61.54	98782	200-yr	4049.3	600.13	594.36	2.83	1.98	34.77	12.03	230.57	1134.6	5.26	1.8	5.77	5.77
Richland/McKenzie County	D10	RM 61.35	98482	200-yr	4049.3	599.93	594.26	2.84	2	35.81	13.01	215	1075.12	5.23	1.88	5.67	5.67
Richland/McKenzie County	D10	RM 61.16	98182	200-yr	4049.3	599.89	594.17	2.06	1.51	19.32	9.67	248.77	1103.71	4.89	2.43	5.72	5.72
Richland/McKenzie County	D10	RM 60.99	97906	200-yr	4049.3	599.74	594.02	2.28	1.47	23.03	9.3	216.72	1302.99	5.3	2.12	5.72	5.72
Richland/McKenzie County	D10	RM 60.79	97582	200-yr	4049.3	599.62	593.78	2.2	1.32	22.41	9.9	224.25	1527.27	4.58	2.01	5.84	5.84
Richland/McKenzie County	D10	RM 60.64	97339	200-yr	4049.3	599.61	593.58	1.45	1	9.96	5.45	266.31	1709.56	4.38	2.37	6.03	6.03
Richland/McKenzie County	D10	RM 60.42	96982	200-yr	4049.3	599.43	593.38	2.06	1.24	18.82	6.83	215.62	1817.19	5.12	1.83	6.05	6.05
Richland/McKenzie County	D10	RM 60.25	96700	200-yr	4049.3	599.27	593.24	2.5	1.36	29.3	11.28	192.38	1755.32	4.49	1.7	6.03	6.03
Richland/McKenzie County	D10	RM 60.04	96365	200-yr	4049.3	599.12	593.14	2.23	1.25	24.22	10.05	227.05	1997.1	3.95	1.62	5.98	5.98
Richland/McKenzie County	D10	RM 59.86	96088	200-yr	4049.3	599.03	592.99	2.07	1	18.71	6.29	171.89	2209.11	5.57	1.83	6.04	6.04
Richland/McKenzie County	D10	RM 59.65	95769	200-yr	4049.3	599	592.85	1.65	0.85	12.2	4.74	207.22	2450.59	5.1	1.94	6.15	6.15
Richland/McKenzie County	D10	RM 59.5	95530	200-yr	4049.3	598.91	592.75	1.79	0.97	14.79	5.32	206.9	2482.9	4.75	1.69	6.16	6.16
Richland/McKenzie County	D10	RM 59.29	95183	200-yr	4049.3	598.84	592.55	1.64	0.98	12.34	4.57	232.08	2332.77	4.85	1.77	6.29	6.29
Richland/McKenzie County	D10	RM 59.07	94797	200-yr	4049.3	598.77	592.36	1.48	0.96	11	4.6	408.43	2195.39	4.64	1.93	6.41	6.41
Richland/McKenzie County	D10	RM 58.93	94582	200-yr	4049.3	598.66	592.31	1.85	1.05	15.49	5.93	328.36	2062.68	4.92	1.87	6.35	6.35
Richland/McKenzie County	D10	RM 58.75	94282	200-yr	4049.3	598.55	592.28	2.02	1.11	17.58	5.9	264.72	1944.62	5.63	1.87	6.27	6.27
Richland/McKenzie County	D10	RM 58.56	93982	200-yr	4049.3	598.18	592.22	3.23	1.56	45.35	11.85	157.23	1782.31	5.68	1.46	5.96	5.96
Richland/McKenzie County	D10	RM 58.37	93682	200-yr	4049.3	597.99	592.22	3.02	1.65	40.1	10.94	186.39	1662.11	5.49	1.47	5.77	5.77
Richland/McKenzie County	D10	RM 58.19	93382	200-yr	4049.3	597.97	592.22	2.13	1.34	19.84	7.11	254.64	1521.88	5.58	1.98	5.75	5.75
Richland/McKenzie County	D10	RM 58.01	93086	200-yr	4049.3	597.62	592.14	2.86	2.02	36.55	11.1	236.71	1281.49	5.22	1.57	5.48	5.48
Richland/McKenzie County	D10	RM 57.82	92782	200-yr	4049.3	597.59	592.11	2	1.52	18.55	8.27	308.1	1320.21	4.55	2.02	5.48	5.48
Richland/McKenzie County	D10	RM 57.63	92482	200-yr	4049.3	597.45	592.11	2.43	1.51	26.72	10.31	160.84	1399.66	5.04	1.92	5.34	5.34
Richland/McKenzie County	D10	RM 57.46	92205	200-yr	4049.3	597.38	591.95	1.82	1.17	14.84	6.5	192.28	1683.48	5.15	2.23	5.43	5.43
Richland/McKenzie County	D10	RM 57.26	91882	200-yr	4049.3	597.16	591.9	2.29	1.49	24.35	8.84	136.34	1659.33	4.59	1.64	5.26	5.26
Richland/McKenzie County	D10	RM 57.07	91583	200-yr	4049.3	597.1	591.73	1.87	1.21	15.71	6.34	137.42	1650.45	5.13	2.03	5.37	5.37
Richland/McKenzie County	D10	RM 56.87	91253	200-yr	4049.3	596.97	591.49	1.7	1.23	13.4	6.14	186.15	1548.05	4.67	2.12	5.54	5.54
Richland/McKenzie County	D10	RM 56.68	90943	200-yr	4049.3	596.9	591.12	1.54	1.26	11.15	6.81	299.58	1396.91	4.46	2.71	5.78	5.78
Richland/McKenzie County	D10	RM 56.54	90682	200-yr	4077.6	596.69	590.76	2.03	2.02	23.31	16.44	216.66	1010.58	3.99	2.8	5.97	5.97
Richland/McKenzie County	D10	RM 56.35	90387	200-yr	4077.6	596.5	590.46	2.18	2.07	21.91	15.6	174.85	840.17	4.7	3.31	6.04	6.04
Richland/McKenzie County	D11	RM 56.16	90086	200-yr	4077.6	595.93	590.11	3.38	3.05	50.64	29.04	221.5	527.44	5.37	3.05	5.82	5.82
Richland/McKenzie County	D11	RM 55.96	89768	200-yr	4077.6	595.71	589.96	3.15	2.61	43.38	20.49	222.74	642.43	5.5	2.58	5.75	5.75
Richland/McKenzie County	D11	RM 55.78	89479	200-yr	4077.6	595.65	589.96	2.64	1.79	30.71	11.34	216.81	1172.3	5.38	1.97	5.69	5.69
Richland/McKenzie County	D11	RM 55.61	89193	200-yr	4077.6	595.49	589.98	2.62	1.62	30.36	9.07	222.22	1650.33	5.28	1.56	5.51	5.51
Richland/McKenzie County	D11	RM 55.41	88882	200-yr	4077.6	595.34	589.76	2.46	1.45	27.16	8.4	203.81	1812.78	5.06	1.55	5.58	5.58
Richland/McKenzie County	D11	RM 55.23	88582	200-yr	4077.6	595.17	589.53	2.44	1.47	26.22	7.8	238.9	1736.27	5.43	1.59	5.64	5.64
Richland/McKenzie County	D11	RM 55.04	88282	200-yr	4077.6	594.94	589.39	2.66	1.63	32.18	9.19	252.08	1805.57	4.89	1.39	5.55	5.55
Richland/McKenzie County	D11	RM 54.86	87996	200-yr	4077.6	594.55	589.33	3.26	2.16	50.59	15.4	223.79	1490.29	4.29	1.29	5.22	5.22
Richland/McKenzie County	D11	RM 54.69	87715	200-yr	4077.6	594.51	589.23	2.3	1.7	24.56	8.96	188.11	1612.79	4.64	1.67	5.28	5.28
Richland/McKenzie County	D11	RM 54.48	87382	200-yr	4077.6	594.41	589.15	1.91	1.11	16.76	5.27	179.29	2584.11	4.77	1.48	5.26	5.26
Richland/McKenzie County	D11	RM 54.32	87122	200-yr	4077.6	594.32	589	1.94	0.98	16.94	5.22	159.94	2671.67	5.17	1.56	5.32	5.32
Richland/McKenzie County	D11	RM 54.1	86783	200-yr	4077.6	594.21	588.83	1.76	1.05	13.76	4.58	202.24	2269	5.22	1.71	5.38	5.38
Richland/McKenzie County	D11	RM 53.92	86482	200-yr	4077.6	594.12	588.68	1.7	1.06	13.35	4.99	255.08	2531.36	4.73	1.74	5.44	5.44
Richland/McKenzie County	D11	RM 53.73	86182	200-yr	4077.6	594.01	588.51	1.99	1.11	17.68	5.99	196.75	2749.34	5.29	1.76	5.5	5.5
Richland/McKenzie County	D11	RM 53.55	85882	200-yr	4077.6	593.85	588.37	2.09	1.28	19.59	6.77	181.72	2005.05	5.13	1.75	5.48	5.48
Richland/McKenzie County	D11	RM 53.36	85582	200-yr	4077.6	593.69	588.01	2.23	1.27	23.05	7.65	166.55	2258.37	4.63	1.52	5.68	5.68

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 53.17	85290	200-yr	4077.6	593.11	587.56	3.44	1.8	53.16	11.42	206.06	2113.64	5.06	1.08	5.55	5.55
Richland/McKenzie County	D11	RM 52.98	84982	200-yr	4077.6	592.91	587.56	2.93	1.31	43.11	15.51	271.44	2803.3	3.64	1.29	5.35	5.35
Richland/McKenzie County	D11	RM 52.79	84682	200-yr	4077.6	592.69	587.56	2.34	1.25	28.11	12.18	387.04	2569.9	3.42	1.46	5.13	5.13
Richland/McKenzie County	D11	RM 52.61	84390	200-yr	4077.6	592.54	587.43	1.98	1.27	18.96	6.44	450.01	2857.42	4.04	1.36	5.11	5.11
Richland/McKenzie County	D11	RM 52.42	84082	200-yr	4077.6	592.47	587.28	1.67	1.01	13.92	5.41	409.99	3113.77	3.63	1.4	5.19	5.19
Richland/McKenzie County	D11	RM 52.24	83798	200-yr	4077.6	592.41	587.28	1.55	0.74	11.38	4.22	227.41	3603.04	4.33	1.59	5.13	5.13
Richland/McKenzie County	D11	RM 52.01	83423	200-yr	4077.6	592.25	587.23	2.08	0.92	19.87	5.36	124.91	3778.08	4.81	1.26	5.02	5.02
Richland/McKenzie County	D11	RM 51.87	83182	200-yr	4077.6	592.17	587.16	1.66	0.84	13.95	5.57	156.7	3446.15	3.62	1.42	5.01	5.01
Richland/McKenzie County	D11	RM 51.69	82882	200-yr	4077.6	592.09	587.16	1.49	0.76	10.8	3.99	151.24	3584.95	4.13	1.5	4.93	4.93
Richland/McKenzie County	D11	RM 51.51	82585	200-yr	4077.6	592.02	587.16	1.71	0.83	14.5	5.14	149.84	3651.22	3.85	1.34	4.86	4.86
Richland/McKenzie County	D11	RM 51.32	82274	200-yr	4077.6	591.98	587.16	1.4	0.73	9.73	4.03	173.83	3603.93	3.81	1.55	4.82	4.82
Richland/McKenzie County	D11	RM 51.13	81982	200-yr	4077.6	591.92	587.13	1.51	0.75	10.66	3.54	164.51	3635.02	4.61	1.5	4.81	4.81
Richland/McKenzie County	D11	RM 50.95	81682	200-yr	4077.6	591.85	587.08	1.39	0.65	8.99	3.33	144.96	3771.82	4.55	1.66	4.77	4.77
Richland/McKenzie County	D11	RM 50.76	81378	200-yr	4077.6	591.8	586.89	1.31	0.59	8.06	3.48	174.41	3689.05	4.41	1.86	4.91	4.91
Richland/McKenzie County	D11	RM 50.56	81065	200-yr	4077.6	591.66	586.37	1.65	0.75	12.14	3.92	171.61	3401.92	5.17	1.64	5.29	5.29
Richland/McKenzie County	D11	RM 50.39	80787	200-yr	4077.6	591.62	585.7	1.56	0.72	10.54	3.3	196.96	3156.43	5.82	1.79	5.92	5.92
Richland/McKenzie County	D11	RM 50.21	80482	200-yr	4077.6	591.54	585.55	1.57	0.85	10.87	3.91	234.94	2545.02	5.28	1.88	5.99	5.99
Richland/McKenzie County	D11	RM 50.02	80182	200-yr	4105.9	591.41	585.55	1.93	1.08	16.72	5.71	197.51	2185.52	5.21	1.74	5.86	5.86
Richland/McKenzie County	D12	RM 49.82	79860	200-yr	4105.9	591.05	585.55	2.88	1.54	36.86	9.41	212.06	2012.39	5.26	1.32	5.5	5.5
Richland/McKenzie County	D12	RM 49.65	79582	200-yr	4105.9	590.68	585.55	3.3	1.98	49.67	12.48	213.94	1700.75	4.89	1.22	5.13	5.13
Richland/McKenzie County	D12	RM 49.5	79348	200-yr	4105.9	590.82	585.49	1.69	1.12	12.66	4.22	356	2118.71	5.23	1.73	5.37	5.37
Richland/McKenzie County	D12	RM 49.26	78981	200-yr	4105.9	590.73	585.29	1.96	1.19	17.19	5.67	137.44	2047.22	5.22	1.69	5.44	5.44
Richland/McKenzie County	D12	RM 49.08	78682	200-yr	4105.9	590.6	585.11	2.11	1.23	19.94	6.21	156.64	2080.85	5.22	1.6	5.56	5.56
Richland/McKenzie County	D12	RM 48.87	78351	200-yr	4105.9	590.49	584.96	2.04	1.17	18.43	6.27	209.35	2047.33	5.26	1.77	5.53	5.53
Richland/McKenzie County	D12	RM 48.7	78082	200-yr	4105.9	590.41	584.86	1.96	1.22	17.95	7.81	252.25	1745.08	4.51	1.93	5.55	5.55
Richland/McKenzie County	D12	RM 48.52	77782	200-yr	4105.9	590.39	584.74	1.33	0.96	8.27	4.58	473.03	1749.84	4.44	2.45	5.65	5.65
Richland/McKenzie County	D12	RM 48.33	77482	200-yr	4105.9	590.33	584.51	1.36	0.98	10.41	6.3	517.65	1818.92	3.82	2.3	5.82	5.82
Richland/McKenzie County	D12	RM 48.15	77182	200-yr	4105.9	590.23	584.24	1.59	0.93	12.11	7.48	497.96	1822.99	3.94	2.42	5.99	5.99
Richland/McKenzie County	D12	RM 47.97	76887	200-yr	4105.9	590.2	584.09	1.2	0.87	6.86	4.99	601.73	2182.16	3.61	2.61	6.11	6.11
Richland/McKenzie County	D12	RM 47.76	76570	200-yr	4105.9	590.15	583.86	1.16	0.91	6.86	4.56	565.5	2102.78	3.93	2.61	6.29	6.29
Richland/McKenzie County	D12	RM 47.59	76293	200-yr	4105.9	590.09	583.71	1.31	0.95	8.38	4.48	391.27	2070.04	4.66	2.48	6.38	6.38
Richland/McKenzie County	D12	RM 47.4	75982	200-yr	4105.9	589.99	583.42	1.73	1.02	13.03	5.77	196.88	1965.09	5.5	2.41	6.57	6.57
Richland/McKenzie County	D12	RM 47.12	75521	200-yr	4105.9	589.76	583.04	2.18	1.23	19.78	6.75	234.72	1793.87	6.45	2.17	6.72	6.72
Richland/McKenzie County	D12	RM 47	75323	200-yr	4105.9	589.43	583.04	3.28	1.59	46.17	13.92	162.2	1700.34	5.82	1.73	6.39	6.39
Richland/McKenzie County	D12	RM 46.85	75082	200-yr	4105.9	589.3	583.04	3.04	1.6	39.68	12.17	184.53	1607.51	5.8	1.75	6.26	6.26
Richland/McKenzie County	D12	RM 46.67	74782	200-yr	4105.9	589.01	583.04	3.24	1.92	45.1	13.31	185.83	1345.97	5.81	1.69	5.97	5.97
Richland/McKenzie County	D12	RM 46.47	74459	200-yr	4105.9	588.99	583.04	2.24	1.66	22.13	9.5	312.11	1093.46	5.31	2.26	5.95	5.95
Richland/McKenzie County	D12	RM 46.3	74186	200-yr	4105.9	588.87	583.04	2.17	1.81	21.41	13.71	421.1	881.05	4.05	2.57	5.83	5.83
Richland/McKenzie County	D12	RM 46.14	73920	200-yr	4105.9	588.75	583.04	2.03	1.72	18.67	12.64	454.73	859.75	4.12	2.77	5.71	5.71
Richland/McKenzie County	D12	RM 45.9	73546	200-yr	4105.9	588.6	582.97	2.06	1.43	19.48	9.66	339.6	1286.07	4.76	2.35	5.63	5.63
Richland/McKenzie County	D12	RM 45.75	73307	200-yr	4105.9	588.45	582.88	2.24	1.5	24.53	11.98	351.5	1552.74	4.16	2.03	5.57	5.57
Richland/McKenzie County	D12	RM 45.54	72980	200-yr	4105.9	588.34	582.55	1.9	1.38	16.57	8.41	382.5	1863.56	4.78	2.41	5.79	5.79
Richland/McKenzie County	D12	RM 45.29	72680	200-yr	4105.9	588.21	582.25	2.05	1.42	19.3	9.44	347.33	1791.41	4.73	2.3	5.96	5.96
Richland/McKenzie County	D12	RM 45.09	72380	200-yr	4105.9	588.08	582.08	2.17	1.39	20.5	8.23	267.36	2020.67	5.6	2.23	6	6
Richland/McKenzie County	D12	RM 44.91	72080	200-yr	4105.9	587.98	582.01	2.12	1.37	19.78	8.19	283.48	2108.31	5.36	2.2	5.97	5.97
Richland/McKenzie County	D12	RM 44.72	71783	200-yr	4105.9	587.71	581.97	2.72	1.54	32.61	11.09	208.81	2344.54	5.43	1.82	5.74	5.74
Richland/McKenzie County	D12	RM 44.53	71483	200-yr	4105.9	587.42	581.82	3.14	1.84	44.31	16.34	177.29	2214.12	5.15	1.87	5.6	5.6
Richland/McKenzie County	D12	RM 44.34	71183	200-yr	4105.9	587.18	581.8	3.03	1.8	42.85	15.49	199.57	2380.24	4.57	1.63	5.38	5.38
Richland/McKenzie County	D12	RM 44.17	70899	200-yr	4105.9	587.18	581.79	1.88	1.29	15.61	5.72	301.73	2477.98	5.31	1.93	5.39	5.39
Richland/McKenzie County	D12	RM 43.97	70594	200-yr	4105.9	587.11	581.73	1.73	1.15	13.91	5.81	326.68	2620.64	4.52	1.87	5.38	5.38
Richland/McKenzie County	D12	RM 43.74	70230	200-yr	4105.9	586.95	581.66	2.01	1.38	19.25	6.27	164.51	2525.04	4.32	1.39	5.29	5.29
Richland/McKenzie County	D12	RM 43.59	69983	200-yr	4105.9	586.85	581.56	1.69	0.88	13.55	5.62	143.76	2770.18	4.42	1.8	5.29	5.29
Richland/McKenzie County	D12	RM 43.4	69684	200-yr	4105.9	586.76	581.49	1.69	0.89	13.6	5.11	150.64	2968.21	4.62	1.71	5.27	5.27
Richland/McKenzie County	D12	RM 43.03	69084	200-yr	4105.9	586.65	581.37	1.55	0.79	11.4	4.89	131.62	3246.5	4.4	1.85	5.28	5.28
Richland/McKenzie County	D12	RM 42.66	68489	200-yr	4105.9	586.58	581.18	1.74	0.8	14.02	5.41	115.82	3366.64	4.75	1.79	5.4	5.4
Richland/McKenzie County	D12	RM 42.29	67889	200-yr	4105.9	586.51	580.87	1.33	0.73	7.95	3.16	281.47	3598.44	5.05	1.98	5.64	5.64
Richland/McKenzie County	D12	RM 42.08	67558	200-yr	4105.9	586.47	580.61	1.51	0.73	9.88	3.66	180.64	3406.97	5.6	2.04	5.86	5.86
Richland/McKenzie County	D12	RM 41.89	67260	200-yr	4105.9	586.37	580.31	1.65	0.83	11.87	4.42	292.42	3023.17	5.48	2.02	6.06	6.06
Richland/McKenzie County	D12	RM 41.75	67037	200-yr	4105.9	586.3	579.99	1.74	0.92	13.83	5.39	337.38	2727.21	4.8	1.85	6.31	6.31
Richland/McKenzie County	D12	RM 41.54	66695	200-yr	4105.9	586.1	579.72	2.28	1	22.05	6.91	196.39	2202.06	6.07	1.87	6.38	6.38
Richland/McKenzie County	D12	RM 41.34	66361	200-yr	4105.9	585.95	579.43	2.35	1.15	24.74	8.62	218.95	2010.33	5.15	1.77	6.52	6.52

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 41.18	66116	200-yr	4105.9	585.78	579.08	2.53	1.23	27.78	8.78	195.81	1891.88	5.68	1.76	6.7	6.7
Richland/McKenzie County	D12	RM 40.99	65802	200-yr	4105.9	585.69	578.99	2.22	1.07	21.49	7.36	203.5	2049.88	5.55	1.87	6.7	6.7
Richland/McKenzie County	D12	RM 40.8	65502	200-yr	4105.9	585.52	578.97	2.27	1.25	23.35	6.96	273.63	2231.72	4.98	1.47	6.55	6.55
Richland/McKenzie County	D12	RM 40.62	65205	200-yr	4105.9	585.49	578.92	1.62	0.9	12.31	4.6	375.4	2981.92	4.52	1.67	6.57	6.57
Richland/McKenzie County	D12	RM 40.24	64602	200-yr	4105.9	585.34	578.6	1.45	0.81	10.34	4.14	507.11	3287.44	3.99	1.59	6.74	6.74
Richland/McKenzie County	D12	RM 40	64219	200-yr	4105.9	585.2	578.56	1.81	0.85	14.69	4.21	309.03	3471.04	5.04	1.43	6.64	6.64
Richland/McKenzie County	D12	RM 39.87	64002	200-yr	4105.9	585.08	578.55	2.23	0.94	21.45	5.11	222	3346.69	5.77	1.35	6.53	6.53
Richland/McKenzie County	D12	RM 39.68	63702	200-yr	4105.9	585.01	578.45	2.05	0.93	18.64	4.75	241.95	3401.31	5.22	1.31	6.56	6.56
Richland/McKenzie County	D12	RM 39.5	63402	200-yr	4105.9	584.95	578.35	1.93	0.85	16.81	4.8	226.39	3367.73	5.1	1.44	6.6	6.6
Richland/McKenzie County	D12	RM 39.31	63102	200-yr	4105.9	584.87	578.31	1.85	0.87	15.07	4.27	227.2	3146.51	5.4	1.51	6.56	6.56
Richland/McKenzie County	D12	RM 39.13	62802	200-yr	4105.9	584.79	578.2	1.82	0.86	14.97	4.81	286.13	2981.59	5.05	1.6	6.59	6.59
Richland/McKenzie County	D12	RM 38.94	62501	200-yr	4105.9	584.74	578.12	1.69	0.77	12.57	4.21	264.19	2966.42	5.4	1.79	6.62	6.62
Richland/McKenzie County	D12	RM 38.76	62201	200-yr	4105.9	584.67	578.03	1.7	0.77	12.26	3.83	245.72	2889.26	5.98	1.84	6.64	6.64
Richland/McKenzie County	D12	RM 38.57	61901	200-yr	4105.9	584.62	577.87	1.73	0.79	13.36	5.1	236.46	2702.99	5.13	1.93	6.75	6.75
Richland/McKenzie County	D12	RM 38.38	61601	200-yr	4105.9	584.61	577.84	1.04	0.59	5.08	2.74	268.55	2491.02	5.2	2.78	6.77	6.77
Richland/McKenzie County	D12	RM 38.2	61301	200-yr	4105.9	584.55	577.82	1.32	0.72	7.34	3.5	244.45	2361.51	6.03	2.84	6.73	6.73
Richland/McKenzie County	D12	RM 38.01	61008	200-yr	4105.9	584.51	577.81	1.36	0.88	8.35	4.88	307.49	1635.45	4.92	2.86	6.7	6.7
Richland/McKenzie County	D12	RM 37.84	60708	200-yr	4105.9	584.44	577.71	1.54	1.04	12.1	6.46	335.25	1557.66	4.95	2.62	6.73	6.73
Richland/McKenzie County	D12	RM 37.65	60408	200-yr	4105.9	584.43	577.66	1.1	0.84	5.46	3.55	565.75	1763.85	4.87	3.15	6.77	6.77
Richland/McKenzie County	D12	RM 37.5	60107	200-yr	4105.9	584.39	577.54	1.08	0.94	5.71	4.11	561.58	1528.58	4.41	3.17	6.85	6.85
Richland/McKenzie County	D12	RM 37.35	59808	200-yr	4105.9	584.3	577.37	1.28	0.99	9.21	6.32	427.63	1427.68	4.77	3.26	6.93	6.93
Richland/McKenzie County	D12	RM 37.16	59508	200-yr	4105.9	584.17	577.24	1.82	1.21	16.02	10.24	280.03	1323.78	4.93	3.13	6.93	6.93
Richland/McKenzie County	D12	RM 36.97	59208	200-yr	4105.9	584.07	576.96	2.03	1.35	19.01	12.88	222.26	1700.79	4.81	3.22	7.11	7.11
Richland/McKenzie County	D12	RM 36.78	58908	200-yr	4105.9	583.96	576.87	2.02	1.41	17.72	11.81	217.29	2104.51	5.65	3.74	7.09	7.09
Richland/McKenzie County	D12	RM 36.6	58608	200-yr	4105.9	583.86	576.66	2.1	1.44	18.43	8.62	182.19	2180.16	6.56	2.99	7.2	7.2
Richland/McKenzie County	D12	RM 36.38	58263	200-yr	4162.6	583.71	576.49	2.13	1.68	19.18	8.13	290.42	2103.47	6.14	2.57	7.22	7.22
Richland/McKenzie County	D13	RM 36.23	58011	200-yr	4162.6	583.51	576.43	2.67	1.72	29.35	9.45	199.11	2229.61	6.63	2.1	7.08	7.08
Richland/McKenzie County	D13	RM 36.04	57708	200-yr	4162.6	583.4	576.42	2.69	1.5	30.76	10.46	194.14	2312.1	5.99	2	6.98	6.98
Richland/McKenzie County	D13	RM 35.85	57408	200-yr	4162.6	583.35	576.41	2.17	1.27	19.96	7.99	278.61	2444.23	5.14	2.03	6.94	6.94
Richland/McKenzie County	D13	RM 35.66	57108	200-yr	4162.6	583.34	576.36	1.62	1.04	11.47	4.71	327.66	2502.83	5.81	2.37	6.98	6.98
Richland/McKenzie County	D13	RM 35.48	56810	200-yr	4162.6	583.19	576.3	2.19	1.16	20.27	7.01	189.87	2439.7	6.19	2.11	6.89	6.89
Richland/McKenzie County	D13	RM 35.29	56508	200-yr	4162.6	583.11	576.19	2.1	1.18	19.25	7.41	216.77	2455.68	5.5	2.08	6.92	6.92
Richland/McKenzie County	D13	RM 35.1	56208	200-yr	4162.6	582.97	576.07	2.1	1.27	18.5	7.11	244.46	2368.83	6.42	2.41	6.9	6.9
Richland/McKenzie County	D13	RM 34.92	55908	200-yr	4162.6	582.88	576.09	2.08	1.26	21.61	8.53	254.13	2340.06	5.93	2.31	6.79	6.79
Richland/McKenzie County	D13	RM 34.73	55605	200-yr	4162.6	582.81	575.89	1.71	1.27	12.57	6.4	414.63	1627.15	5.11	2.59	6.92	6.92
Richland/McKenzie County	D13	RM 34.54	55297	200-yr	4162.6	582.74	575.79	1.62	1.2	13.25	6.92	394.66	1741.67	4.59	2.38	6.95	6.95
Richland/McKenzie County	D13	RM 34.36	55008	200-yr	4162.6	582.7	575.75	1.52	0.99	9.46	4.02	323.48	1794.98	6.11	2.57	6.95	6.95
Richland/McKenzie County	D13	RM 34.17	54708	200-yr	4162.6	582.68	575.49	1.31	0.84	7.49	3.42	380.95	1971.57	5.62	2.55	7.19	7.19
Richland/McKenzie County	D13	RM 33.94	54408	200-yr	4162.6	582.65	575.34	1.23	0.84	6.46	3.07	374.48	1825.99	5.75	2.72	7.31	7.31
Richland/McKenzie County	D13	RM 33.76	54079	200-yr	4162.6	582.61	575.12	1.38	0.94	8.21	3.99	286.39	1800.72	5.92	2.83	7.49	7.49
Richland/McKenzie County	D13	RM 33.6	53799	200-yr	4162.6	582.57	574.88	1.34	0.95	8.45	4.65	376.74	1667.98	5.55	3.02	7.69	7.69
Richland/McKenzie County	D13	RM 33.42	53508	200-yr	4162.6	582.51	574.61	1.56	1.03	9.71	4.81	262.09	1619.67	6.72	3.27	7.9	7.9
Richland/McKenzie County	D13	RM 33.23	53208	200-yr	4162.6	582.47	574.45	1.52	1.11	9.3	5.52	209.05	1774.22	7.24	4.25	8.02	8.02
Richland/McKenzie County	D13	RM 33.04	52908	200-yr	4162.6	582.38	574.3	1.85	1.22	13.4	6.3	193.34	1777.83	7.74	3.59	8.08	8.08
Richland/McKenzie County	D13	RM 32.86	52608	200-yr	4162.6	582.25	574.18	2.16	1.22	18.73	8.51	209.27	1667.33	7.25	3.23	8.07	8.07
Richland/McKenzie County	D13	RM 32.67	52308	200-yr	4162.6	582.21	574.18	2.05	1.05	16.93	7.62	188.53	1763.53	7.07	3.12	8.03	8.03
Richland/McKenzie County	D13	RM 32.48	52008	200-yr	4162.6	582.11	574.04	2.15	1.05	18.89	7.33	196.91	1813.99	6.79	2.57	8.07	8.07
Richland/McKenzie County	D13	RM 32.29	51709	200-yr	4162.6	582.06	574.04	1.88	1.03	14.31	7.56	224.23	1915.31	7.02	3.66	8.02	8.02
Richland/McKenzie County	D13	RM 32.11	51423	200-yr	4162.6	582.01	573.94	1.8	1.07	12.89	5.38	220.08	1547.55	7.32	3.03	8.07	8.07
Richland/McKenzie County	D13	RM 31.92	51108	200-yr	4162.6	581.99	573.85	1.53	0.97	9.68	4.78	211.85	1549.89	6.6	3.21	8.14	8.14
Richland/McKenzie County	D13	RM 31.73	50809	200-yr	4162.6	581.95	573.72	1.42	0.89	8.77	4.06	261.37	1451.39	7.39	3.39	8.23	8.23
Richland/McKenzie County	D13	RM 31.51	50462	200-yr	4162.6	581.81	573.24	2.13	1.23	17.28	7.85	162.22	1020.36	7.45	3.32	8.57	8.57
Richland/McKenzie County	D13	RM 31.35	50208	200-yr	4162.6	581.71	573.24	2.28	1.55	21.37	12.14	169.04	720.13	6.71	3.74	8.47	8.47
Richland/McKenzie County	D13	RM 31.22	50009	200-yr	4162.6	581.5	573.24	2.8	1.87	31.46	17.87	149.68	619.84	7.2	4.01	8.26	8.26
Richland/McKenzie County	D13	RM 31.12	49859	200-yr	4162.6	581.29	570.86	2.8	2.74	42.9	39.51	196.27	219.25	7.5	6.92	10.43	10.43
Richland/McKenzie County	D13	Highway 23	49844	200-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	200-yr	4162.6	581.24	570.86	2.84	2.78	42.97	39.3	192.51	217.37	7.52	6.88	10.38	10.38
Richland/McKenzie County	D13	RM 30.97	49608	200-yr	4162.6	581.2	573.24	2.4	2.16	22.7	16.35	225.84	644.48	7.54	5.4	7.96	7.96
Richland/McKenzie County	D13	RM 30.79	49308	200-yr	4162.6	580.97	573.24	2.88	2.19	33.92	19.65	199.27	804.56	6.77	3.88	7.73	7.73
Richland/McKenzie County	D13	RM 30.6	49009	200-yr	4162.6	580.81	573.24	2.96	1.95	36.39	19.91	187.26	948.63	6.54	3.52	7.57	7.57
Richland/McKenzie County	D13	RM 30.41	48706	200-yr	4162.6	580.77	573.15	2.41	1.66	25.38	13.48	212.3	1296.62	6.5	3.41	7.62	7.62

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 30.22	48403	200-yr	4162.6	580.67	573.15	2.4	1.45	23.33	10.22	199.03	1710.01	7.05	3.04	7.52	7.52
Richland/McKenzie County	D13	RM 30.03	48102	200-yr	4162.6	580.69	573.15	1.62	1.05	10.71	5.39	315.48	1749.41	6.83	3.35	7.54	7.54
Richland/McKenzie County	D13	RM 29.85	47809	200-yr	4162.6	580.65	573.15	1.49	0.95	9.25	4.73	376.84	1711.9	6.3	3.18	7.5	7.5
Richland/McKenzie County	D13	RM 29.66	47508	200-yr	4162.6	580.59	573.11	1.58	0.95	10.57	5.23	393.01	2083.83	5.3	2.58	7.48	7.48
Richland/McKenzie County	D13	RM 29.48	47209	200-yr	4162.6	580.54	573.11	1.53	0.97	9.86	4.54	346.87	1531.56	6.17	2.79	7.43	7.43
Richland/McKenzie County	D13	RM 29.28	46894	200-yr	4162.6	580.5	572.98	1.42	1.06	8.61	4.33	401.07	1488.5	5.78	2.89	7.52	7.52
Richland/McKenzie County	D13	RM 29.1	46608	200-yr	4162.6	580.44	572.94	1.83	1.05	13.82	5.56	169.86	1638.36	6.53	2.59	7.5	7.5
Richland/McKenzie County	D13	RM 28.92	46308	200-yr	4162.6	580.36	572.85	1.9	1.09	14.55	5.27	146.69	1712.48	7.05	2.49	7.51	7.51
Richland/McKenzie County	D13	RM 28.73	46008	200-yr	4162.6	580.34	572.67	1.64	0.96	11	4.92	152.03	1794.54	6.79	2.98	7.67	7.67
Richland/McKenzie County	D13	RM 28.54	45708	200-yr	4162.6	580.31	572.67	1.48	0.9	8.89	4.29	201.29	2030.71	6.38	3.03	7.64	7.64
Richland/McKenzie County	D13	RM 28.36	45419	200-yr	4162.6	580.26	572.48	1.45	0.88	8.58	4.04	233.95	1926.21	6.8	3.16	7.78	7.78
Richland/McKenzie County	D13	RM 28.15	45071	200-yr	4162.6	580.2	572.25	1.38	1.09	7.86	4.46	429.8	1404.94	6.4	3.61	7.95	7.95
Richland/McKenzie County	D13	RM 27.98	44808	200-yr	4162.6	580.04	572.04	2.08	1.29	17.26	6.02	236.34	2148.02	7.24	2.49	8	8
Richland/McKenzie County	D13	RM 27.8	44508	200-yr	4162.6	579.96	571.87	2.11	1.32	17.29	5.66	226.85	2121.18	7.84	2.52	8.09	8.09
Richland/McKenzie County	D14	RM 27.61	44208	200-yr	4162.6	579.91	571.87	1.97	1.27	15.5	6.03	246.37	2133.33	7.3	2.81	8.04	8.04
Richland/McKenzie County	D14	RM 27.43	43916	200-yr	4162.6	579.89	571.87	1.73	1.06	11.73	4.26	261.74	2607.76	7.65	2.74	8.02	8.02
Richland/McKenzie County	D14	RM 27.23	43608	200-yr	4162.6	579.88	571.87	1.4	0.85	7.59	2.84	310.87	2584.04	7.9	2.91	8.01	8.01
Richland/McKenzie County	D14	RM 27.04	43305	200-yr	4162.6	579.83	571.87	1.58	0.85	9.98	3.66	277.5	2649.06	7.36	2.63	7.96	7.96
Richland/McKenzie County	D14	RM 26.86	43008	200-yr	4162.6	579.76	571.87	1.79	0.88	12.57	4.19	229.41	2664.91	7.61	2.49	7.89	7.89
Richland/McKenzie County	D14	RM 26.67	42708	200-yr	4162.6	579.73	571.87	1.67	0.85	10.94	3.67	252.42	2686.24	7.59	2.51	7.86	7.86
Richland/McKenzie County	D14	RM 26.48	42408	200-yr	4162.6	579.62	571.87	2.03	0.98	16.37	5.12	209.83	2503.73	7.45	2.28	7.75	7.75
Richland/McKenzie County	D14	RM 26.29	42108	200-yr	4162.6	579.56	571.87	2.01	1.09	16.01	5.18	205.84	2015.91	7.39	2.35	7.69	7.69
Richland/McKenzie County	D14	RM 26.11	41808	200-yr	4162.6	579.52	571.87	1.78	1.1	12.55	4.56	249.58	1435.11	7.35	2.64	7.65	7.65
Richland/McKenzie County	D14	RM 25.92	41508	200-yr	4162.6	579.48	571.87	1.65	1.1	10.84	4.12	305.76	1371.65	7.31	2.75	7.61	7.61
Richland/McKenzie County	D14	RM 25.73	41208	200-yr	4162.6	579.42	571.74	1.69	1.31	11.3	3.74	309.7	2333.56	7.46	2.44	7.68	7.68
Richland/McKenzie County	D14	RM 25.55	40918	200-yr	4162.6	579.36	571.74	1.74	1.38	12.59	4.47	346.01	2390.25	6.4	2.25	7.62	7.62
Richland/McKenzie County	D14	RM 25.37	40619	200-yr	4162.6	579.29	571.74	1.76	1.4	13.2	5.53	353.9	2365.59	6.21	2.59	7.55	7.55
Richland/McKenzie County	D14	RM 25.17	40310	200-yr	4162.6	579.2	571.74	1.85	1.43	15.74	7.53	361.09	2012.96	5.72	2.73	7.46	7.46
Richland/McKenzie County	D14	RM 24.99	40008	200-yr	4162.6	579.17	571.74	1.56	1.19	10.46	5.88	384.4	1734.68	6.47	3.62	7.43	7.43
Richland/McKenzie County	D14	RM 24.8	39703	200-yr	4162.6	579.13	571.71	1.41	1.19	8.84	5.52	401.45	1744.09	7.11	4.42	7.42	7.42
Richland/McKenzie County	D14	RM 24.62	39408	200-yr	4162.6	579.01	571.64	1.92	1.56	15.18	9.5	278.78	1658.79	6.7	4.17	7.37	7.37
Richland/McKenzie County	D14	RM 24.45	39139	200-yr	4162.6	578.78	571.64	2.45	2.16	24.43	15.32	239.98	1592.78	6.91	4.31	7.14	7.14
Richland/McKenzie County	D14	RM 24.24	38801	200-yr	4162.6	578.67	571.58	2.43	2.06	23.96	16	237.24	1658.55	6.89	4.58	7.09	7.09
Richland/McKenzie County	D14	RM 24.05	38506	200-yr	4162.6	578.59	571.48	2.25	2.01	20.58	13.47	264.93	1713.77	6.86	4.47	7.11	7.11
Richland/McKenzie County	D14	RM 23.87	38210	200-yr	4162.6	578.6	571.28	1.72	1.55	11.89	7.65	334.4	1968.31	7.12	4.56	7.32	7.32
Richland/McKenzie County	D14	RM 23.66	37912	200-yr	4162.6	578.59	571.21	1.38	1.25	7.84	5.18	442.5	2127.25	6.66	4.39	7.38	7.38
Richland/McKenzie County	D14	RM 23.48	37610	200-yr	4162.6	578.56	571.12	1.41	1.22	8.72	5.54	347.97	2278.22	5.84	3.7	7.44	7.44
Richland/McKenzie County	D14	RM 23.29	37312	200-yr	4162.6	578.51	570.86	1.51	1.18	10.24	5.67	313.75	2299.92	5.75	3.16	7.65	7.65
Richland/McKenzie County	D14	RM 23.1	37006	200-yr	4162.6	578.47	570.82	1.52	1.06	10.31	4.54	254.67	2405.88	6.53	2.84	7.65	7.65
Richland/McKenzie County	D14	RM 22.92	36721	200-yr	4162.6	578.43	570.8	1.55	0.99	10.12	4.15	214.08	2474.8	6.46	2.61	7.63	7.63
Richland/McKenzie County	D14	RM 22.72	36402	200-yr	4162.6	578.34	570.81	1.88	1.08	14.27	5.24	178.19	2215.87	7.15	2.58	7.53	7.53
Richland/McKenzie County	D14	RM 22.54	36108	200-yr	4162.6	578.27	570.76	1.75	1.08	12.8	4.95	276.8	1964.49	6.95	2.66	7.51	7.51
Richland/McKenzie County	D14	RM 22.35	35808	200-yr	4162.6	578.23	570.74	1.66	1.07	11.2	4.12	308.52	1876.48	6.75	2.45	7.49	7.49
Richland/McKenzie County	D14	RM 22.17	35508	200-yr	4162.6	578.17	570.68	1.66	1.07	10.94	3.81	303.06	1573.28	7.29	2.51	7.49	7.49
Richland/McKenzie County	D14	RM 22.02	35264	200-yr	4162.6	578.15	570.68	1.49	1.11	8.87	3.4	354.21	1347.7	7.35	2.79	7.47	7.47
Richland/McKenzie County	D14	RM 21.8	34901	200-yr	4162.6	578.08	570.69	1.6	1.28	10.87	5.57	401.53	1053.48	6.1	3.1	7.39	7.39
Richland/McKenzie County	D14	RM 21.61	34626	200-yr	4162.6	578.03	570.67	1.56	1.31	10.63	6.21	468.94	988.07	5.51	3.21	7.36	7.36
Richland/McKenzie County	D14	RM 21.34	34140	200-yr	4162.6	578	570.67	1.32	1	7.13	3.73	289.68	1199.42	6.66	3.46	7.33	7.33
Richland/McKenzie County	D14	RM 21.25	33973	200-yr	4162.6	577.97	570.67	1.54	1.07	10.09	5.08	204.54	1395.43	6.15	3.05	7.3	7.3
Richland/McKenzie County	D14	RM 21.06	33672	200-yr	4162.6	577.96	570.6	1.32	0.95	7.31	3.79	267.5	1363.12	6.27	3.23	7.36	7.36
Richland/McKenzie County	D14	RM 20.9	33400	200-yr	4162.6	577.93	570.58	1.37	1.01	8.09	4.49	251.38	1302.46	5.78	3.17	7.35	7.35
Richland/McKenzie County	D14	RM 20.71	33101	200-yr	4162.6	577.86	570.53	1.68	1.07	12.1	6.19	247.47	1269.74	6.01	3.05	7.33	7.33
Richland/McKenzie County	D14	RM 20.52	32800	200-yr	4162.6	577.82	570.52	1.55	0.99	10	4.79	280.27	1379.4	6.42	3.05	7.3	7.3
Richland/McKenzie County	D14	RM 20.34	32500	200-yr	4162.6	577.78	570.52	1.59	1.03	10.52	4.67	256.92	1417.31	6.51	2.86	7.26	7.26
Richland/McKenzie County	D14	RM 20.15	32200	200-yr	4162.6	577.71	570.52	1.73	1.09	14.49	6.17	231.21	1365.54	6.65	2.8	7.19	7.19
Richland/McKenzie County	D14	RM 19.96	31900	200-yr	4162.6	577.46	570.52	2.6	1.37	27.78	9.51	189.46	1362.84	6.64	2.23	6.94	6.94
Richland/McKenzie County	D14	RM 19.77	31600	200-yr	4162.6	577.5	570.5	1.62	1.02	10.91	4.44	332.93	1563.64	6.47	2.62	7	7
Richland/McKenzie County	D14	RM 19.59	31297	200-yr	4162.6	577.46	570.45	1.51	0.91	9.74	4.2	334.34	1737.63	6.17	2.64	7.01	7.01
Richland/McKenzie County	D14	RM 19.4	30995	200-yr	4162.6	577.41	570.45	1.64	0.88	11.41	5.13	284.81	1773.71	5.97	2.66	6.95	6.95
Richland/McKenzie County	D14	RM 19.21	30710	200-yr	4162.6	577.4	570.38	1.23	0.74	6.24	3.01	380.6	1774.97	6.58	3.15	7.02	7.02
Richland/McKenzie County	D14	RM 19.03	30402	200-yr	4162.6	577.37	570.38	1.22	0.75	6.12	2.88	428.38	2005.17	5.94	2.77	6.99	6.99

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 18.83	30086	200-yr	4162.6	577.34	570.38	1.12	0.68	5.41	2.66	505.09	2509.41	5.03	2.44	6.96	6.96
Richland/McKenzie County	D14	RM 18.66	29802	200-yr	4162.6	577.32	570.38	1.1	0.63	5.55	2.5	455.27	2973.34	5.03	2.24	6.94	6.94
Richland/McKenzie County	D14	RM 18.47	29499	200-yr	4162.6	577.29	570.36	1.28	0.65	7.2	2.48	299.05	5156.57	5.59	1.89	6.93	6.93
Richland/McKenzie County	D14	RM 18.28	29197	200-yr	4162.6	577.24	570.36	1.42	0.7	8.64	2.22	299.23	5074.71	6.31	1.6	6.88	6.88
Richland/McKenzie County	D14	RM 17.89	28624	200-yr	4162.6	577.21	570.33	1.01	0.58	4.11	0.99	468.41	4755.32	6.75	1.62	6.88	6.88
Richland/McKenzie County	D14	RM 17.56	27975	200-yr	4162.6	577.13	570.29	1.29	0.73	7.24	1.74	460.6	4334.84	5.48	1.31	6.84	6.84
Richland/McKenzie County	D14	RM 17.36	27539	200-yr	4162.6	576.95	570.31	2.05	1.06	17.52	2.77	254.84	3951.13	6.34	0.99	6.64	6.64
Richland/McKenzie County	D14	RM 17.1	27113	200-yr	4162.6	576.89	570.28	1.77	0.96	13	2.21	298.39	4092.6	6.38	1.08	6.61	6.61
Richland/McKenzie County	D14	RM 16.74	26537	200-yr	4162.6	576.85	570.14	1.32	0.78	7.19	1.51	406.85	4027.01	6.37	1.33	6.71	6.71
Richland/McKenzie County	D14	RM 16.35	25925	200-yr	4162.6	576.8	569.46	1.31	0.71	6.84	1.52	346.21	3757	7.12	1.56	7.34	7.34
Richland/McKenzie County	D14	RM 16.17	25629	200-yr	4162.6	576.78	569.2	1.25	0.69	6.48	1.53	377.41	3619.17	7.1	1.66	7.58	7.58
Richland/McKenzie County	D14	RM 15.95	25324	200-yr	4162.6	576.77	568.99	1.04	0.67	4.28	1.1	457.34	3233.76	7.58	1.93	7.78	7.78
Richland/McKenzie County	D14	RM 15.75	25032	200-yr	4162.6	576.74	568.85	1.12	0.77	5.06	1.33	462.46	2961.42	7.01	1.83	7.89	7.89
Richland/McKenzie County	D14	RM 15.56	24777	200-yr	4162.6	576.62	568.85	1.77	1.1	12.47	2.45	291.53	2733.26	7.14	1.38	7.77	7.77
Richland/McKenzie County	D14	RM 15.34	24438	200-yr	4162.6	576.55	568.79	1.84	1.1	13.39	2.64	261.89	2594.86	7.52	1.46	7.76	7.76
Richland/McKenzie County	D14	RM 15.16	24144	200-yr	4162.6	576.5	568.75	1.82	1.1	13.15	2.68	267.44	2510.18	7.51	1.5	7.75	7.75
Richland/McKenzie County	D14	RM 14.98	23841	200-yr	4162.6	576.44	568.76	1.88	1.13	15.6	3.36	254.68	2328.59	7.44	1.58	7.68	7.68
Richland/McKenzie County	D14	RM 14.79	23543	200-yr	4162.6	576.39	568.72	1.79	1.13	13.12	3.4	286.41	2105.36	6.88	1.75	7.67	7.67
Richland/McKenzie County	D14	RM 14.61	23241	200-yr	4162.6	576.33	568.7	1.83	1.24	13.32	3.25	274.36	1893.15	7.35	1.77	7.63	7.63
Richland/McKenzie County	D14	RM 14.42	22940	200-yr	4162.6	576.3	568.69	1.58	1.17	9.86	2.91	328.42	1638.68	7.41	2.17	7.61	7.61
Richland/McKenzie County	D14	RM 14.23	22647	200-yr	4162.6	576.31	568.67	1.2	0.96	5.77	2.27	444.61	1536.7	7.27	2.83	7.64	7.64
Richland/McKenzie County	D14	RM 14.05	22341	200-yr	4162.6	576.29	568.68	1.04	0.9	6.14	3.59	601.92	1233.22	6.43	3.75	7.61	7.61
Richland/McKenzie County	D14	RM 13.88	22040	200-yr	4162.6	576.25	568.67	1.1	1.01	6.15	5.16	682.22	1043.56	5.43	4.54	7.58	7.58
Richland/McKenzie County	D14	RM 13.7	21728	200-yr	4162.6	576.16	568.65	1.44	1.43	9.21	8.92	502.19	649.64	5.76	5.6	7.51	7.51
Richland/McKenzie County	D14	RM 13.51	21429	200-yr	4162.6	576.1	568.63	1.5	1.45	9.29	7.84	409.72	508.41	6.68	5.63	7.47	7.47
Richland/McKenzie County	D15	RM 13.31	21145	200-yr	4162.6	576.08	568.51	1.35	1.34	7.6	7.17	457.14	595.43	6.71	6.34	7.57	7.57
Richland/McKenzie County	D15	RM 13.12	20858	200-yr	4162.6	575.99	568.39	1.66	1.64	10.9	10.15	344.8	526.65	7.28	6.79	7.6	7.6
Richland/McKenzie County	D15	RM 12.9	20507	200-yr	4162.6	575.88	568.39	1.9	1.86	14.53	12.45	303.98	507.45	7.16	6.14	7.49	7.49
Richland/McKenzie County	D15	RM 12.73	20241	200-yr	4162.6	575.82	568.35	1.91	1.84	14.6	11.15	297.97	604.61	7.25	5.52	7.47	7.47
Richland/McKenzie County	D15	RM 12.56	19961	200-yr	4162.6	575.8	568.34	1.67	1.56	11.14	6.83	337.44	601.28	7.3	4.45	7.46	7.46
Richland/McKenzie County	D15	RM 12.38	19686	200-yr	4162.6	575.8	568.23	1.35	1.25	7.3	5.57	425.75	1463.8	7.16	5.44	7.57	7.57
Richland/McKenzie County	D15	RM 12.21	19384	200-yr	4162.6	575.77	568.17	1.32	1.18	7.62	6.34	513.36	1228.35	5.92	4.92	7.6	7.6
Richland/McKenzie County	D15	RM 11.99	19084	200-yr	4162.6	575.74	568.16	1.22	1.08	6.86	5.48	592.13	936.58	5.56	4.43	7.58	7.58
Richland/McKenzie County	D15	RM 11.53	18484	200-yr	4162.6	575.67	568.11	1.17	0.99	5.41	4.31	693.79	1169.07	4.52	3.59	7.56	7.56
Richland/McKenzie County	D15	RM 11.34	18216	200-yr	4162.6	575.63	568.06	1.07	1.01	18.11	14.75	710.89	1128.11	4.57	3.71	7.57	7.57
Richland/McKenzie County	D15	RM 11.17	17885	200-yr	4162.6	575.43	567.88	1.26	1.21	25.54	24.47	777.3	1080.1	4.03	3.86	7.55	7.55
Richland/McKenzie County	D15	RM 10.97	17584	200-yr	4162.6	575.36	567.8	1.19	1.15	5.85	5.6	780.34	1027.37	4.3	4.11	7.56	7.56
Richland/McKenzie County	D15	RM 10.75	17284	200-yr	4162.6	575.33	567.79	1.13	1.06	5.22	4.75	717.39	861.32	5.01	4.56	7.54	7.54
Richland/McKenzie County	D15	RM 10.53	16964	200-yr	4162.6	575.27	567.73	1.29	1.17	6.84	5.85	641.5	851.69	4.88	4.16	7.54	7.54
Richland/McKenzie County	D15	RM 10.35	16670	200-yr	4162.6	575.21	567.73	1.39	1.15	8.6	6.12	517.24	946.93	5.41	3.83	7.48	7.48
Richland/McKenzie County	D15	RM 10.15	16384	200-yr	4162.6	575.18	567.73	1.47	1	8.65	4.63	251.85	1093.45	7.14	3.79	7.45	7.45
Richland/McKenzie County	D15	RM 9.94	16084	200-yr	4162.6	575.17	567.73	1.14	0.89	5.29	2.99	272.39	1198.59	6.96	3.91	7.44	7.44
Richland/McKenzie County	D15	RM 9.76	15797	200-yr	4162.6	575.12	567.65	1.31	0.94	6.8	4.02	352.04	1205.95	6.57	3.87	7.47	7.47
Richland/McKenzie County	D15	RM 9.57	15487	200-yr	4162.6	575.05	567.58	1.54	1.06	9.42	5.54	245.67	998.57	7.26	4.24	7.47	7.47
Richland/McKenzie County	D15	RM 9.37	15187	200-yr	4162.6	574.96	567.58	1.84	1.34	13.52	9.21	203.96	640.55	7.18	4.86	7.38	7.38
Richland/McKenzie County	D15	RM 9.24	14963	200-yr	4162.6	574.7	564.5	2.38	2.27	22.62	19.68	234.33	286.71	7.36	6.41	10.2	10.2
Richland/McKenzie County	D15	RR/Walkway	14952	200-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	200-yr	4162.6	574.64	564.5	2.4	2.28	23	19.88	234.33	312.52	7.3	6.3	10.14	10.14
Richland/McKenzie County	D15	RM 9.1	14741	200-yr	4162.6	574.47	567.39	2.68	2.37	30.37	19.43	231.83	448.17	6.54	4.17	7.08	7.08
Richland/McKenzie County	D15	RM 9.03	14639	200-yr	4162.6	574.46	565.46	2.42	2.2	23.78	16.57	248.61	409.03	6.79	4.73	9	9
Richland/McKenzie County	D15	Highway 68	14629	200-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	200-yr	4162.6	574.42	565.46	2.44	2.22	24.19	16.81	248.61	400.08	6.74	4.69	8.96	8.96
Richland/McKenzie County	D15	RM 8.82	14300	200-yr	4162.6	574.43	567.41	1.6	1.44	10.55	7.68	381.12	1008.89	6.54	4.75	7.02	7.02
Richland/McKenzie County	D15	RM 8.61	13963	200-yr	4162.6	574.37	567.39	1.69	1.31	11.89	7.45	313.8	1009.17	6.46	4.03	6.98	6.98
Richland/McKenzie County	D15	RM 8.44	13687	200-yr	4162.6	574.3	567.32	1.83	1.27	13.62	7.87	258.5	1034.21	6.73	3.87	6.98	6.98
Richland/McKenzie County	D15	RM 8.24	13387	200-yr	4162.6	574.22	567.32	1.92	1.25	15.17	9.04	229.73	839.18	6.75	3.97	6.9	6.9
Richland/McKenzie County	D15	RM 8.05	13080	200-yr	4162.6	574.15	567.05	1.86	1.31	14.02	8.47	266.23	769.6	6.85	4.12	7.1	7.1
Richland/McKenzie County	D15	RM 7.87	12786	200-yr	4162.6	574.04	567.05	2.09	1.46	17.81	10.61	229.92	832.56	6.75	4	6.99	6.99
Richland/McKenzie County	D15	RM 7.69	12506	200-yr	4162.6	573.98	567.05	1.95	1.53	15.5	11.14	266.56	563.93	6.71	4.81	6.93	6.93
Richland/McKenzie County	D15	RM 7.48	12179	200-yr	4162.6	573.93	566.95	1.68	1.67	11.48	11.16	361.54	373.35	6.83	6.67	6.98	6.98
Richland/McKenzie County	D16	RM 7.3	11891	200-yr	4162.6	573.84	566.76	1.88	1.88	14.43	14.25	337.01	341.05	6.57	6.5	7.08	7.08

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 7.14	11639	200-yr	4162.6	573.78	566.76	1.89	1.8	14.95	13.3	324.06	418.31	6.2	5.53	7.02	7.02
Richland/McKenzie County	D16	RM 6.94	11319	200-yr	4162.6	573.72	566.76	1.83	1.55	13.72	10.08	297.15	541.88	6.77	4.97	6.96	6.96
Richland/McKenzie County	D16	RM 6.77	11043	200-yr	4162.6	573.7	566.76	1.57	1.3	10.22	7.41	349.25	695.54	6.47	4.68	6.94	6.94
Richland/McKenzie County	D16	RM 6.58	10733	200-yr	4162.6	573.67	566.59	1.46	1.14	8.79	5.69	342.3	860.14	6.7	4.31	7.08	7.08
Richland/McKenzie County	D16	RM 6.38	10417	200-yr	4162.6	573.58	566.59	1.95	1.17	15.63	7.22	182.43	1367.48	6.76	3.07	6.99	6.99
Richland/McKenzie County	D16	RM 6.21	10138	200-yr	4162.6	573.52	566.44	1.81	1	13.38	5.93	217.11	1717.13	6.82	2.98	7.08	7.08
Richland/McKenzie County	D16	RM 6.01	9825	200-yr	4162.6	573.51	566.17	1.3	0.87	6.92	3.56	412.46	1653.68	6.55	3.35	7.34	7.34
Richland/McKenzie County	D16	RM 5.83	9551	200-yr	4162.6	573.5	565.96	1.1	0.77	4.88	2.53	480.72	1885.65	6.84	3.52	7.54	7.54
Richland/McKenzie County	D16	RM 5.67	9297	200-yr	4162.6	573.47	565.96	1.27	0.82	6.65	3.67	342.29	1821.97	6.72	3.65	7.51	7.51
Richland/McKenzie County	D16	RM 5.43	8926	200-yr	4162.6	573.4	565.96	1.57	0.98	10.46	4.78	269.78	2057.54	6.11	2.76	7.44	7.44
Richland/McKenzie County	D16	RM 5.25	8623	200-yr	4162.6	573.14	565.96	2.43	1.4	23.98	8.61	206.77	1812.9	6.91	2.45	7.18	7.18
Richland/McKenzie County	D16	RM 5.06	8331	200-yr	4162.6	573.14	565.82	1.83	1.2	13.57	4.74	289.25	1725.87	6.87	2.38	7.32	7.32
Richland/McKenzie County	D16	RM 4.87	8029	200-yr	4162.6	573.13	565.67	1.45	1.08	8.7	3.39	335.83	1648.56	6.58	2.54	7.46	7.46
Richland/McKenzie County	D16	RM 4.71	7757	200-yr	4162.6	573.07	565.54	1.69	1.18	11.51	4.07	253.72	1441.33	7.1	2.48	7.53	7.53
Richland/McKenzie County	D16	RM 4.53	7456	200-yr	4162.6	572.93	565.54	2.16	1.41	18.71	6.97	199	1135.84	7.14	2.61	7.39	7.39
Richland/McKenzie County	D16	RM 4.34	7156	200-yr	4162.6	572.87	565.54	1.97	1.43	18.73	8.69	218.19	916.99	6.96	3.18	7.33	7.33
Richland/McKenzie County	D16	RM 4.17	6884	200-yr	4162.6	572.79	565.54	2.02	1.37	16.52	7.07	226.72	1441.95	6.96	2.93	7.25	7.25
Richland/McKenzie County	D16	RM 3.96	6550	200-yr	4162.6	572.77	565.54	1.63	1.2	10.78	6.81	216.6	1214.22	6.96	4.36	7.23	7.23
Richland/McKenzie County	D16	RM 3.78	6249	200-yr	4162.6	572.72	565.54	1.74	1.19	12.59	7.37	196.52	1282.21	6.39	3.7	7.18	7.18
Richland/McKenzie County	D16	RM 3.55	5904	200-yr	4162.6	572.65	565.54	1.73	1.27	12.1	7.63	206.04	1339.74	6.92	4.33	7.11	7.11
Richland/McKenzie County	D16	RM 3.38	5657	200-yr	4162.6	572.54	565.53	2.12	1.48	18.41	10.61	171.27	1066.96	6.76	3.84	7.01	7.01
Richland/McKenzie County	D16	RM 3.2	5363	200-yr	4162.6	572.44	565.54	2.23	1.6	21.13	10.12	168.06	1236.7	6.03	2.84	6.9	6.9
Richland/McKenzie County	D16	RM 3.01	5062	200-yr	4162.6	572.38	565.54	1.93	1.44	15.7	8.54	310	1145.6	6.21	3.33	6.84	6.84
Richland/McKenzie County	D16	RM 2.82	4763	200-yr	4162.6	572.32	565.46	1.71	1.38	12.98	7.57	423.69	1234.38	5.36	3.11	6.86	6.86

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	1% - 100yr	1203.47	1282.06	1278.12	2.92	2.37	44.09	23.86	110.15	446.4	3.38	1.81	3.94	3.94
Sweet Grass County	A1	RM 478.10	225378	1% - 100yr	1203.47	1281.55	1277.66	3.62	3.2	74.75	48.02	115.1	448.1	2.47	1.59	3.88	3.88
Sweet Grass County	A1	RM 478.00	224862	1% - 100yr	1203.47	1281.05	1277.97	3.49	3.24	72.47	59.52	137.18	402.45	2.18	1.79	3.08	3.08
Sweet Grass County	A1	RM 477.91	224362	1% - 100yr	1203.47	1280.48	1277.65	3.91	3.21	80.92	54.17	87.36	401.71	2.43	1.62	2.82	2.82
Sweet Grass County	A1	RM 477.81	223862	1% - 100yr	1203.47	1280.08	1276.96	3.4	2.89	52.08	39.4	127.3	341.91	2.04	1.54	3.12	3.12
Sweet Grass County	A1	RM 477.72	223354	1% - 100yr	1203.47	1279.75	1276.32	2.71	2.35	46.61	32.41	185	475.87	1.8	1.25	3.43	3.43
Sweet Grass County	A1	RM 477.63	222892	1% - 100yr	1203.47	1279.67	1275.76	1.68	1.53	17.01	11.68	265.11	719.9	2.11	1.45	3.9	3.9
Sweet Grass County	A1	RM 477.49	222220	1% - 100yr	1203.47	1279.48	1276.07	1.76	1.48	16.91	11.58	256.97	797.23	1.97	1.35	3.42	3.42
Sweet Grass County	A1	RM 477.40	221702	1% - 100yr	1203.47	1279.43	1275.47	1.38	1.01	10.48	6.82	242.4	868.15	2.71	1.76	3.96	3.96
Sweet Grass County	A1	RM 477.31	221259	1% - 100yr	1203.47	1278.95	1275.74	3.12	1.75	53.99	20.79	122.7	861.79	2.69	1.03	3.21	3.21
Sweet Grass County	A1	RM 477.21	220767	1% - 100yr	1203.47	1278.74	1275.28	2.87	1.72	44.41	16.38	126.43	850.15	2.93	1.08	3.45	3.45
Sweet Grass County	A1	RM 477.11	220252	1% - 100yr	1203.47	1278.43	1274.86	3.01	1.78	53.13	25.43	147.45	817.51	2.28	1.09	3.56	3.56
Sweet Grass County	A1	RM 477.04	219860	1% - 100yr	1203.47	1278.13	1275.13	3.11	1.77	55.54	26.42	131.95	840.4	2.41	1.15	3	3
Sweet Grass County	A1	RM 476.95	219422	1% - 100yr	1203.47	1277.61	1274.55	3.43	2.18	72.07	35.19	155.66	788.18	1.97	0.96	3.06	3.06
Sweet Grass County	A1	RM 476.84	218828	1% - 100yr	1203.47	1277.3	1273.95	2.82	1.99	46.09	23	134.66	768.04	2.36	1.17	3.35	3.35
Sweet Grass County	A1	RM 476.75	218345	1% - 100yr	1203.47	1277.01	1273.54	2.73	2.01	40.04	20.4	172.58	787.45	2.28	1.16	3.47	3.47
Sweet Grass County	A1	RM 476.66	217855	1% - 100yr	1203.47	1276.69	1273.45	2.88	1.9	44.91	21.99	160.17	884.13	2.27	1.11	3.23	3.23
Sweet Grass County	A1	RM 476.57	217396	1% - 100yr	1203.47	1276.31	1273.09	3.35	1.95	61.78	26.95	98.93	863.17	2.75	1.19	3.22	3.22
Sweet Grass County	A1	RM 476.47	216861	1% - 100yr	1203.47	1275.9	1273.04	3.25	2.22	61.33	26.86	126.17	792.77	2.35	1.03	2.86	2.86
Sweet Grass County	A1	RM 476.38	216362	1% - 100yr	1203.47	1275.73	1272.1	2.73	1.76	40.12	19.04	105.41	887.97	2.91	1.38	3.63	3.63
Sweet Grass County	A1	RM 476.28	215816	1% - 100yr	1203.47	1275	1271.85	3.87	3.31	84.9	43.28	100.31	475.43	2.51	1.27	3.14	3.14
Sweet Grass County	A1	RM 476.15	215126	1% - 100yr	1203.47	1274.51	1271.76	3.23	2.63	61.77	37.66	133.16	578.56	2.19	1.34	2.74	2.74
Sweet Grass County	A1	RM 476.01	214437	1% - 100yr	1203.47	1274.2	1270.96	2.59	2.36	37.45	25.36	142.38	427.5	2.65	1.78	3.25	3.25
Sweet Grass County	A1	RM 475.91	213787	1% - 100yr	1203.47	1273.72	1270.35	2.96	2.7	49.21	39.98	150.4	213.08	2.61	2.13	3.38	3.38
Sweet Grass County	A1	RM 475.76	213072	1% - 100yr	1203.47	1273.22	1270.22	3.14	2.56	56.39	36.83	146.41	322.71	2.45	1.6	3	3
Sweet Grass County	A1	RM 475.63	212347	1% - 100yr	1203.47	1273.01	1269.34	2.38	1.99	31.09	23.5	173.18	290.39	2.76	2.09	3.66	3.66
Sweet Grass County	A1	RM 475.47	211539	1% - 100yr	1203.47	1272.47	1268.97	3.03	2.75	48.94	40.34	128.96	176.81	2.99	2.48	3.49	3.49
Sweet Grass County	A1	RM 475.35	210875	1% - 100yr	1203.47	1271.78	1268.88	3.68	3.37	75.06	47.11	120.05	220.21	2.69	1.68	2.9	2.9
Sweet Grass County	A1	RM 475.24	210333	1% - 100yr	1203.47	1271.81	1267.53	2.52	2.2	31.35	20.9	118.16	335.3	3.88	2.57	4.28	4.28
Sweet Grass County	A2	RM 475.12	209673	1% - 100yr	1203.47	1270.79	1267.9	4.35	3.79	110.85	74.03	116.67	250.2	2.28	1.52	2.88	2.88
Sweet Grass County	A2	RM 475.00	209034	1% - 100yr	1203.47	1270.09	1266.93	3.34	3.34	66.83	66.63	166.66	170.14	2.16	2.15	3.16	3.16
Sweet Grass County	A2	RM 474.87	208359	1% - 100yr	1203.47	1269.91	1266.75	2.53	2.29	34.55	25.87	80.83	303.03	3.02	2.22	3.16	3.16
Sweet Grass County	A2	RM 474.76	207797	1% - 100yr	1203.47	1269.37	1266.42	3.52	2.76	68.52	34.73	77.58	334.88	2.77	1.37	2.95	2.95
Sweet Grass County	A2	RM 474.67	207305	1% - 100yr	1203.47	1268.9	1266.29	3.62	3.01	75.1	46.94	66.54	291.04	2.54	1.55	2.61	2.61
Sweet Grass County	A2	RM 474.54	206635	1% - 100yr	1203.47	1268.61	1264.92	2.7	2.37	39.59	27.82	128.46	301.35	2.88	2.02	3.69	3.69
Sweet Grass County	A2	RM 474.43	205945	1% - 100yr	1203.47	1268.28	1265.16	2.91	2.12	46	18.65	89.64	484.65	2.93	1.17	3.11	3.11
Sweet Grass County	A2	RM 474.30	205321	1% - 100yr	1203.47	1268.04	1264.46	2.6	1.72	36.45	17.04	133.69	570.6	2.97	1.37	3.58	3.58
Sweet Grass County	A2	RM 474.21	204877	1% - 100yr	1203.47	1267.56	1264.22	3.44	2.2	63.63	23.58	103.41	559.86	2.97	1.09	3.34	3.34
Sweet Grass County	A2	RM 474.12	204378	1% - 100yr	1203.47	1267.45	1263.24	2.65	1.7	38.41	18.24	140.42	806.09	2.81	1.33	4.21	4.21
Sweet Grass County	A2	RM 474.01	203787	1% - 100yr	1203.47	1266.86	1263.55	3.4	2.38	67.26	32.07	138.78	548.56	2.34	1.11	3.31	3.31
Sweet Grass County	A2	RM 473.87	203072	1% - 100yr	1203.47	1266.41	1263.52	3.2	2.21	55.96	18.94	100.52	809.57	2.55	0.86	2.89	2.89
Sweet Grass County	A2	RM 473.74	202395	1% - 100yr	1203.47	1266.1	1263.06	2.7	1.93	41.16	17.58	121.34	750.92	2.57	1.1	3.04	3.04
Sweet Grass County	A2	RM 473.62	201781	1% - 100yr	1203.47	1265.75	1262.63	2.77	1.86	44.77	19.6	150.66	745.71	2.3	1	3.13	3.13
Sweet Grass County	A2	RM 473.50	201110	1% - 100yr	1203.47	1265.43	1261.83	2.48	1.91	35.53	17.88	179.13	697.02	2.42	1.21	3.6	3.6
Sweet Grass County	A2	RM 473.36	200362	1% - 100yr	1203.47	1265.17	1261.08	2.47	1.91	31.44	13.35	133.21	653.13	3.36	1.42	4.1	4.1
Sweet Grass County	A2	RM 473.27	199862	1% - 100yr	1203.47	1264.89	1260.81	2.9	2.28	44.29	21.69	117.77	505.88	3.13	1.53	4.08	4.08
Sweet Grass County	A2	RM 473.17	199362	1% - 100yr	1203.47	1264.64	1260.56	2.98	2.44	44.23	15.77	102.94	373.76	3.74	1.32	4.07	4.07
Sweet Grass County	A2	RM 473.08	198879	1% - 100yr	1203.47	1264.16	1260.56	3.62	3.15	69.55	37.75	105	268.02	3.06	1.65	3.6	3.6
Sweet Grass County	A2	RM 472.98	198340	1% - 100yr	1203.47	1264	1260.21	2.99	2.47	46.88	20.33	120.55	388.65	3.18	1.37	3.79	3.79
Sweet Grass County	A2	RM 472.89	197862	1% - 100yr	1203.47	1263.39	1260.5	3.9	2.8	86.12	36.43	108.06	417.76	2.54	1.07	2.89	2.89
Sweet Grass County	A2	RM 472.79	197362	1% - 100yr	1203.47	1263.15	1259.98	3.11	2.35	54.44	21.82	136.27	507.04	2.55	1.02	3.17	3.17
Sweet Grass County	A2	RM 472.70	196862	1% - 100yr	1203.47	1262.54	1259.35	3.69	2.66	79.39	37.08	125.74	420.32	2.31	1.07	3.19	3.19
Sweet Grass County	A2	RM 472.60	196360	1% - 100yr	1203.47	1262.45	1259.01	2.43	1.95	34.81	21.33	181.89	447.79	2.25	1.37	3.43	3.43
Sweet Grass County	A2	RM 472.50	195816	1% - 100yr	1203.47	1262.13	1258.53	2.56	2.04	38.78	25.27	177.8	413.72	2.25	1.46	3.6	3.6
Sweet Grass County	A2	RM 472.41	195349	1% - 100yr	1203.47	1261.87	1258.52	2.53	2.08	38.06	26.34	198.55	398.17	2.18	1.5	3.35	3.35
Sweet Grass County	A2	RM 472.31	194860	1% - 100yr	1203.47	1261.67	1258.34	2.49	1.91	33.4	18.14	149.41	443.28	2.9	1.57	3.33	3.33
Sweet Grass County	A2	RM 472.22	194356	1% - 100yr	1203.47	1261.52	1257.3	2.51	1.74	30.6	14.07	115.58	449.93	3.41	1.53	4.22	4.22
Sweet Grass County	A2	RM 472.09	193660	1% - 100yr	1203.47	1260.63	1257.45	4.13	2.86	94.83	33.74	93.59	444.16	2.75	0.95	3.18	3.18
Sweet Grass County	A2	RM 471.95	192935	1% - 100yr	1203.47	1260.65	1256.05	2.51	1.64	31.22	14.11	103.53	428.62	3.86	1.71	4.6	4.6
Sweet Grass County	A2	RM 471.86	192442	1% - 100yr	1203.47	1260.04	1256.23	3.89	2.49	78.51	34.64	76.65	335.58	3.34	1.44	3.81	3.81
Sweet Grass County	A2	RM 471.75	191870	1% - 100yr	1203.47	1259.92	1256.47	2.77	1.97	41.38	21.47	134.52	405.08	2.91	1.51	3.45	3.45

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	1% - 100yr	1203.47	1259.18	1256.54	3.88	2.78	87.82	35.58	124.48	465.17	2.3	0.93	2.64	2.64
Sweet Grass County	A2	RM 471.52	190686	1% - 100yr	1203.47	1258.93	1255.75	2.75	1.86	41.4	17.93	127.76	536.8	2.81	1.21	3.18	3.18
Sweet Grass County	A2	RM 471.38	189910	1% - 100yr	1203.47	1258.19	1255.44	3.41	2.53	74.23	38.55	150.55	522.18	1.75	0.91	2.75	2.75
Sweet Grass County	A2	RM 471.28	189362	1% - 100yr	1203.47	1257.6	1254.65	2.63	2.22	46.8	34.56	228.65	536.3	1.48	1.09	2.96	2.96
Sweet Grass County	A2	RM 471.18	188875	1% - 100yr	1203.47	1257.23	1254.2	2.7	2.1	39.09	23.32	155.58	528.22	1.86	1.11	3.03	3.03
Sweet Grass County	A2	RM 471.06	188150	1% - 100yr	1203.47	1256.89	1253.95	2.35	1.59	33.98	19.9	140.6	653.87	1.99	1.16	2.94	2.94
Sweet Grass County	A2	RM 470.94	187526	1% - 100yr	1203.47	1256.48	1253.58	2.79	1.95	42.94	21.17	108.67	573.41	2.34	1.15	2.9	2.9
Sweet Grass County	A2	RM 470.84	186938	1% - 100yr	1203.47	1256.23	1252.88	2.42	1.74	34.96	20.33	157.2	634.18	2.15	1.25	3.35	3.35
Sweet Grass County	A2	RM 470.73	186362	1% - 100yr	1203.47	1256.08	1253.49	1.82	1.59	20.57	14.65	189.13	599.37	1.95	1.38	3.01	3.01
Sweet Grass County	A2	RM 470.65	185977	1% - 100yr	1203.47	1255.82	1252.18	2.27	1.8	29.58	15.89	202.91	652.95	2.43	1.3	3.64	3.64
Sweet Grass County	A2	RM 470.56	185491	1% - 100yr	1203.47	1255.69	1252.52	2.1	1.63	24.9	14.13	189.32	674	2.58	1.45	3.17	3.17
Sweet Grass County	A2	RM 470.44	184875	1% - 100yr	1203.47	1255.57	1251.39	1.94	1.46	19.2	10.78	158.35	429.64	3.45	1.92	4.18	4.18
Sweet Grass County	A2	RM 470.35	184363	1% - 100yr	1203.47	1254.6	1251.52	4.23	3.55	103.17	59.41	113.84	247.07	2.39	1.37	3.08	3.08
Sweet Grass County	A2	RM 470.23	183828	1% - 100yr	1203.47	1254.31	1251.51	2.93	2.45	51.24	33.87	180.8	345.66	2.13	1.42	2.8	2.8
Sweet Grass County	A2	RM 470.13	183304	1% - 100yr	1203.47	1254.07	1249.86	2.57	2.26	38.46	30.15	162.28	292.79	2.34	1.82	4.21	4.21
Sweet Grass County	A2	RM 470.05	182914	1% - 100yr	1203.47	1253.96	1250.59	2.16	1.95	26.86	21.56	175.23	319	2.41	1.94	3.37	3.37
Sweet Grass County	A2	RM 469.93	182267	1% - 100yr	1203.47	1253.21	1249.62	3.62	3.04	72.02	35.15	105.63	295.46	2.76	1.34	3.59	3.59
Sweet Grass County	A2	RM 469.85	181860	1% - 100yr	1203.47	1253.02	1249.59	3.28	2.36	57.2	27.12	96.24	371.83	3.06	1.44	3.43	3.43
Sweet Grass County	A2	RM 469.75	181348	1% - 100yr	1203.47	1253	1248.77	2.27	1.63	26.4	13.53	116.21	421.04	3.45	1.75	4.24	4.24
Sweet Grass County	A2	RM 469.68	180952	1% - 100yr	1203.47	1252.84	1249.31	2.43	1.69	31.23	17.11	135.73	461.02	3.12	1.7	3.53	3.53
Sweet Grass County	A2	RM 469.58	180427	1% - 100yr	1203.47	1252.79	1247.94	2.01	1.54	19.55	12.35	130.56	401.02	4.09	2.56	4.84	4.84
Sweet Grass County	A2	RM 469.47	179860	1% - 100yr	1203.47	1252.23	1247.85	3.26	2.9	50.83	44.93	90.31	353.56	3.82	3.37	4.38	4.38
Sweet Grass County			179808	1% - 100yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	1% - 100yr	1203.47	1252.18	1247.84	2.94	2.92	43.47	41.72	112.89	349.79	3.62	3.48	4.34	4.34
Sweet Grass County	A2	RM 469.39	179400	1% - 100yr	1203.47	1251.67	1248.45	3.74	3.42	77.97	62.44	118.53	305.59	2.64	2.11	3.23	3.23
Sweet Grass County	A2	RM 469.30	178975	1% - 100yr	1203.47	1251.67	1247.55	2.81	2.28	39.78	24.63	106.16	370.58	3.67	2.24	4.13	4.13
Sweet Grass County	A2	RM 469.21	178467	1% - 100yr	1203.47	1251.04	1248.31	3.92	3.04	87.91	47	107.26	371.49	2.45	1.31	2.73	2.73
Sweet Grass County	A2	RM 469.09	177862	1% - 100yr	1203.47	1250.75	1247.12	2.38	1.81	31.98	19.7	118.23	498.16	2.55	1.57	3.63	3.63
Sweet Grass County	A2	RM 469.00	177350	1% - 100yr	1203.47	1250.11	1247.58	3.76	2.51	84.39	37.55	89.39	523.14	2.17	0.96	2.53	2.53
Sweet Grass County	A2	RM 468.90	176865	1% - 100yr	1203.47	1249.76	1246.48	2.51	1.93	32.58	18.05	157.69	503.6	2.28	1.25	3.28	3.28
Sweet Grass County	A2	RM 468.80	176341	1% - 100yr	1203.47	1249.45	1246.11	2.75	2.06	43.55	21.55	136.31	554.96	2.43	1.19	3.33	3.33
Sweet Grass County	A2	RM 468.71	175823	1% - 100yr	1203.47	1249.12	1246.41	2.79	2.26	47.87	27.94	147.29	537.56	1.96	1.14	2.71	2.71
Sweet Grass County	A2	RM 468.57	175192	1% - 100yr	1203.47	1248.95	1245.17	1.97	1.57	22.17	13.3	178.26	721.57	2.5	1.49	3.78	3.78
Sweet Grass County	A2	RM 468.42	174099	1% - 100yr	1203.47	1248.24	1244.97	2.95	2.36	51.24	30.79	168.48	526.85	2.24	1.34	3.27	3.27
Sweet Grass County	A3	RM 468.25	173324	1% - 100yr	1203.47	1248.05	1242.97	2.3	1.62	26.74	12.53	129.09	577.13	3.62	1.68	5.08	5.08
Sweet Grass County	A3	RM 468.16	172855	1% - 100yr	1203.47	1247.85	1243.58	2.69	1.85	38.45	19.86	119.05	583.52	3.06	1.57	4.26	4.26
Sweet Grass County	A3	RM 468.07	172364	1% - 100yr	1203.47	1247.81	1243.89	2.06	1.53	22.62	12.72	136.65	660.88	3.07	1.71	3.92	3.92
Sweet Grass County	A3	RM 467.97	171839	1% - 100yr	1203.47	1247.15	1244.32	3.86	2.72	86.85	47.1	92.44	545.84	2.34	1.25	2.84	2.84
Sweet Grass County	A3	RM 467.87	171312	1% - 100yr	1203.47	1246.89	1243.46	2.5	2.2	35	23.42	159.56	540.64	2.59	1.73	3.43	3.43
Sweet Grass County	A3	RM 467.78	170840	1% - 100yr	1203.47	1246.34	1243.74	3.58	2.83	75.49	42.47	100.58	340.1	2.24	1.26	2.6	2.6
Sweet Grass County	A3	RM 467.69	170376	1% - 100yr	1203.47	1246.04	1242.96	3.02	2.39	52.68	31.14	115.51	448	2.42	1.42	3.08	3.08
Sweet Grass County	A3	RM 467.55	169614	1% - 100yr	1203.47	1245.66	1242.1	2.44	2.08	35.66	24.52	133.88	482.22	2.14	1.46	3.56	3.56
Sweet Grass County	A3	RM 467.41	168870	1% - 100yr	1203.47	1245.47	1241.15	2.12	1.42	23.51	10.92	133.26	732.08	3.25	1.49	4.32	4.32
Sweet Grass County	A3	RM 467.30	168362	1% - 100yr	1203.47	1244.87	1242.15	3.79	2.18	81.04	28.6	90.65	741.36	2.57	0.9	2.72	2.72
Sweet Grass County	A3	RM 467.16	167641	1% - 100yr	1203.47	1244.51	1240.78	2.24	1.41	28.01	11.56	159.04	852.89	2.66	1.09	3.73	3.73
Sweet Grass County	A3	RM 467.00	166780	1% - 100yr	1203.47	1244.05	1240.48	2.78	1.67	44.85	18.72	141.03	848.23	2.38	0.98	3.58	3.58
Sweet Grass County	A3	RM 466.83	165902	1% - 100yr	1203.47	1243.6	1239.84	2.81	1.63	42.41	17.07	111.13	750.67	2.98	1.19	3.76	3.76
Sweet Grass County	A3	RM 466.73	165364	1% - 100yr	1203.47	1243.3	1239.81	2.93	1.83	46.48	18.09	115.43	611.8	2.92	1.13	3.49	3.49
Sweet Grass County	A3	RM 466.64	164858	1% - 100yr	1203.47	1242.76	1239.36	3.69	2.38	68.82	23.48	100.5	636.02	2.59	0.88	3.4	3.4
Sweet Grass County	A3	RM 466.49	164108	1% - 100yr	1203.47	1242.41	1239.67	2.92	1.79	48.21	24.17	107.44	656.75	2.5	1.25	2.74	2.74
Sweet Grass County	A3	RM 466.25	162845	1% - 100yr	1203.47	1241.15	1238.71	3.84	2.62	86.41	30.99	79.36	558.2	2.39	0.82	2.44	2.44
Sweet Grass County	A3	RM 465.79	160351	1% - 100yr	1203.47	1240.13	1236.48	2.27	1.17	28.11	11.89	110.96	866.43	2.89	1.19	3.65	3.65
Sweet Grass County	A3	RM 465.01	155919	1% - 100yr	1203.47	1237.89	1234.44	3.36	2.62	63.15	25.32	129.45	487.67	2.61	1.04	3.45	3.45
Sweet Grass County	A3	RM 464.68	154254	1% - 100yr	1203.47	1236.9	1233.35	2.76	2.18	44.38	23.04	171.81	540.4	2.34	1.21	3.56	3.56
Sweet Grass County	A3	RM 464.48	153160	1% - 100yr	1203.47	1236.36	1232.71	2.49	1.83	36.35	18.89	183.52	593.66	2.26	1.17	3.65	3.65
Sweet Grass County	A3	RM 464.33	152378	1% - 100yr	1203.47	1235.95	1232.61	2.5	1.79	36.47	18.94	183.37	568.86	2.31	1.19	3.34	3.34
Sweet Grass County	A3	RM 464.16	151621	1% - 100yr	1203.47	1235.59	1232.45	2.49	1.72	36.28	18.5	167.98	729.1	2.3	1.17	3.14	3.14
Sweet Grass County	A3	RM 464.04	150961	1% - 100yr	1203.47	1235.36	1231.48	2.47	1.57	31.58	15.26	118.42	729.9	3.38	1.61	3.87	3.87
Sweet Grass County	A3	RM 463.88	150174	1% - 100yr	1203.47	1234.69	1231.85	3.41	2.53	68.42	39.41	136.95	481.24	2.25	1.29	2.84	2.84
Sweet Grass County	A3	RM 463.78	149616	1% - 100yr	1203.47	1234.36	1230.54	2.91	2.29	48.1	32.07	149.53	463.71	2.5	1.66	3.82	3.82
Sweet Grass County	A3	RM 463.67	149069	1% - 100yr	1203.47	1234.07	1230.86	2.87	2.02	46.68	30.79	136.34	528.18	2.51	1.65	3.2	3.2

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	1% - 100yr	1203.47	1233.86	1230.39	2.71	1.86	39.9	24.93	135.08	1095.36	2.85	1.78	3.47	3.47
Sweet Grass County	A3	RM 463.49	148111	1% - 100yr	1203.47	1233.05	1229.73	3.97	2.97	92	45.9	122.57	1048.99	2.31	1.15	3.32	3.32
Sweet Grass County	A3	RM 463.34	147326	1% - 100yr	1203.47	1232.61	1229.72	2.64	1.88	42.02	24.68	179.41	1297.12	2.08	1.22	2.89	2.89
Sweet Grass County	A3	RM 463.20	146616	1% - 100yr	1203.47	1232.27	1228.95	2.39	1.56	34.65	20.01	124.15	1513.69	2.1	1.19	3.32	3.32
Sweet Grass County	A3	RM 463.06	145881	1% - 100yr	1203.47	1232.07	1228.89	1.77	1	18.68	11.84	147.76	1515.83	2.2	1.39	3.18	3.18
Sweet Grass County	A4	RM 462.79	144435	1% - 100yr	1203.47	1231.95	1228.25	1.23	0.67	8.11	5.3	133.61	1461.1	2.98	1.92	3.69	3.69
Sweet Grass County	A4	RM 462.16	141146	1% - 100yr	1203.47	1229.46	1226.15	3.46	2.26	69.78	30.75	108.99	786.32	2.36	1.03	3.31	3.31
Sweet Grass County		RM 461.97	140135	1% - 100yr	1203.47	1228.96	1226.06	2.54	1.54	38.53	22.51	120.82	738.4	2.15	1.26	2.9	2.9
Sweet Grass County	A4	RM 461.71	138705	1% - 100yr	1203.47	1227.39	1224.75	3.92	3.21	97.22	54.52	101.12	422.48	1.83	1.02	2.64	2.64
Sweet Grass County	A4	RM 461.52	137683	1% - 100yr	1203.47	1227	1222.31	2.45	1.78	30.11	12.22	85.63	682.16	3.82	1.49	4.69	4.69
Sweet Grass County	A4	RM 461.33	136718	1% - 100yr	1203.47	1226.77	1223.38	2.12	1.6	25.44	15.39	125.5	773.67	2.55	1.54	3.39	3.39
Sweet Grass County	A4	RM 461.14	135736	1% - 100yr	1203.47	1226.05	1222.44	3.19	2.18	55.53	23.8	117.21	517.62	2.84	1.2	3.61	3.61
Sweet Grass County	A4	RM 460.99	134951	1% - 100yr	1203.47	1225.62	1221.98	3.04	2.17	49.79	21.25	121.6	453.43	2.93	1.24	3.64	3.64
Sweet Grass County	A4	RM 460.85	134214	1% - 100yr	1203.47	1225.4	1222.07	2.5	1.85	32.76	19.24	147.93	465.82	2.82	1.65	3.33	3.33
Sweet Grass County	A4	RM 460.74	133616	1% - 100yr	1203.47	1225.3	1220.27	2.13	1.71	21.72	13.65	125.57	474.93	4.22	2.63	5.03	5.03
Sweet Grass County	A4	RM 460.63	133067	1% - 100yr	1203.47	1225.29	1218.9	1.71	1.27	12.56	4.84	106.45	598.56	5.97	2.23	6.39	6.39
Sweet Grass County			132957	1% - 100yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	1% - 100yr	1203.47	1224.47	1221.09	3.47	2.75	65.91	31.93	112.67	517.16	2.81	1.35	3.38	3.38
Sweet Grass County	A4	RM 460.50	132281	1% - 100yr	1203.47	1223.62	1221.12	3.94	3.71	95.16	64.1	151.99	470.53	1.98	1.33	2.5	2.5
Sweet Grass County	A4	RM 460.38	131785	1% - 100yr	1203.47	1223.38	1220.5	2.74	2.33	42.08	26.22	139.17	545.93	2.16	1.34	2.88	2.88
Sweet Grass County	A4	RM 460.29	131287	1% - 100yr	1203.47	1223.08	1219.97	2.74	2.36	44.06	24.4	135.07	462.64	2.3	1.27	3.11	3.11
Sweet Grass County	A4	RM 460.19	130793	1% - 100yr	1203.47	1222.89	1219.38	2.48	2.08	33.59	22.33	118.6	349.49	2.79	1.85	3.51	3.51
Sweet Grass County	A4	RM 460.08	130210	1% - 100yr	1203.47	1222.51	1218.23	2.82	2.46	41.71	21.5	132.3	346.96	3.15	1.62	4.28	4.28
Sweet Grass County	A4	RM 459.99	129763	1% - 100yr	1203.47	1222.17	1218.01	3.22	2.89	53.65	32.89	110.76	277.69	3.31	2.02	4.16	4.16
Sweet Grass County	A4	RM 459.90	129246	1% - 100yr	1203.47	1222	1217.62	2.96	2.69	43.72	30.67	106.75	251.93	3.72	2.6	4.38	4.38
Sweet Grass County	A4	RM 459.81	128792	1% - 100yr	1203.47	1221.13	1218.15	4.38	4.23	105.87	84.76	99.73	227.28	2.74	2.19	2.98	2.98
Sweet Grass County	A4	RM 459.72	128310	1% - 100yr	1311.07	1221.11	1217.31	3.13	2.59	52.08	31.03	127.21	341.58	3.08	1.83	3.8	3.8
Sweet Grass County	A4	RM 459.62	127798	1% - 100yr	1311.07	1220.92	1217.46	2.89	2.39	45.64	25.87	128.42	366.55	2.83	1.6	3.46	3.46
Sweet Grass County	A5	RM 459.53	127324	1% - 100yr	1311.07	1220.18	1217.26	3.76	3.68	83.54	68.41	156.91	200.77	2.22	1.81	2.92	2.92
Sweet Grass County	A5	RM 459.44	126881	1% - 100yr	1311.07	1220.01	1216.93	2.9	2.8	48.51	40.68	185.47	412.42	2.41	2.02	3.08	3.08
Sweet Grass County	A5	RM 459.31	126192	1% - 100yr	1311.07	1219.58	1215.66	2.98	2.76	48.78	35.69	153.23	475.92	2.83	2.06	3.91	3.91
Sweet Grass County	A5	RM 459.24	125848	1% - 100yr	1311.07	1219.25	1215.69	3.31	3.05	60.71	44.35	145.56	556.4	2.69	1.96	3.56	3.56
Sweet Grass County	A5	RM 459.16	125420	1% - 100yr	1311.07	1218.62	1215.82	3.83	3.82	87.75	80.04	158.87	286.36	2.15	1.96	2.8	2.8
Sweet Grass County	A5	RM 459.02	124624	1% - 100yr	1311.07	1218.38	1214.8	2.5	2.36	35.12	25.59	200.81	570.52	2.58	1.88	3.58	3.58
Sweet Grass County	A5	RM 458.79	123371	1% - 100yr	1311.07	1217.47	1214.02	3.24	3.06	58.64	31.61	151.62	321.01	2.64	1.42	3.45	3.45
Sweet Grass County	A5	RM 458.48	121727	1% - 100yr	1311.07	1216.35	1213.35	2.8	2.66	48.34	44.38	165.37	305.44	1.93	1.77	3	3
Sweet Grass County	A5	RM 458.36	121100	1% - 100yr	1311.07	1215.3	1212.73	4.07	3.64	98.7	72.38	117.71	242.78	2.03	1.48	2.57	2.57
Sweet Grass County	A5	RM 458.25	120543	1% - 100yr	1311.07	1215.24	1211.35	2.52	2.17	33.7	24.23	122.03	269.89	3.12	2.24	3.89	3.89
Sweet Grass County	A5	RM 458.13	119849	1% - 100yr	1311.07	1214.95	1211.21	2.58	2.34	36.02	29.06	131.08	237.07	2.95	2.37	3.74	3.74
Sweet Grass County	A5	RM 458.03	119256	1% - 100yr	1311.07	1214.79	1210.09	2.45	2.18	29.49	20.27	122.91	224.72	3.9	2.67	4.7	4.7
Sweet Grass County	A5	RM 457.87	118444	1% - 100yr	1311.07	1214.46	1209.57	2.78	2.67	36.34	25.08	104.9	172.35	4.47	3.07	4.89	4.89
Sweet Grass County	A5	RM 457.76	117858	1% - 100yr	1311.07	1214.23	1210.24	2.91	2.84	43.88	38.05	137.04	167.8	3.28	2.84	3.99	3.99
Sweet Grass County	A5	RM 457.66	117350	1% - 100yr	1311.07	1213.93	1210.03	3.11	3	50.88	41.77	132.62	229.38	3.16	2.59	3.9	3.9
Sweet Grass County	A5	RM 457.54	116694	1% - 100yr	1311.07	1213.53	1209.93	3.26	3.04	56.69	43.29	131.05	229.5	3.01	2.3	3.59	3.59
Sweet Grass County	A5	RM 457.35	115703	1% - 100yr	1311.07	1212.14	1209.69	4.28	4.28	112.74	112.74	155.89	155.89	1.97	1.97	2.45	2.45
Sweet Grass County	A5	RM 457.20	114921	1% - 100yr	1311.07	1211.98	1208.7	2.51	2.51	35.15	35.15	197.29	197.29	2.65	2.65	3.27	3.27
Sweet Grass County	A5	RM 457.02	113974	1% - 100yr	1311.07	1211.41	1208.04	3.17	2.46	54.05	26.15	103.04	374.62	2.95	1.42	3.37	3.37
Sweet Grass County	A5	RM 456.84	113009	1% - 100yr	1311.07	1210.92	1206.55	2.97	2.77	44.28	27.47	120.66	211.47	3.62	2.24	4.37	4.37
Sweet Grass County	A5	RM 456.68	112164	1% - 100yr	1311.07	1210.15	1206.59	3.81	3.72	77.35	62.69	113.81	144.02	3.02	2.44	3.56	3.56
Sweet Grass County	A5	RM 456.55	111455	1% - 100yr	1311.07	1209.9	1206.19	2.99	2.95	47.77	42.12	146.88	169.12	2.98	2.63	3.72	3.72
Sweet Grass County	A5	RM 456.43	110857	1% - 100yr	1311.07	1209.59	1205.33	3.13	2.97	48.86	34.99	110.87	191.52	3.75	2.67	4.25	4.25
Sweet Grass County	A6	RM 456.29	110121	1% - 100yr	1311.07	1209.08	1205.45	3.51	3.33	61.37	47.22	118.64	243.97	3.11	2.39	3.63	3.63
Sweet Grass County	A6	RM 456.18	109508	1% - 100yr	1311.07	1208.63	1205.45	3.54	3.5	69.82	64.49	139.71	316.48	2.65	2.45	3.17	3.17
Sweet Grass County	A6	RM 456.03	108721	1% - 100yr	1311.07	1208.16	1204.59	3.03	2.91	52.55	43	176.21	379.54	2.44	1.99	3.57	3.57
Sweet Grass County	A6	RM 455.84	107742	1% - 100yr	1311.07	1207.76	1204.05	2.57	2.46	34.73	23.62	183.51	384.66	2.76	1.87	3.71	3.71
Sweet Grass County	A6	RM 455.70	106976	1% - 100yr	1311.07	1207.45	1203.14	2.67	2.64	34.97	31.71	143.46	341.88	3.42	3.1	4.32	4.32
Sweet Grass County	A6	RM 455.56	106256	1% - 100yr	1311.07	1206.94	1203.35	3.35	3.09	56.82	32.78	119.56	383	3.21	1.85	3.59	3.59
Sweet Grass County	A6	RM 455.39	105360	1% - 100yr	1311.07	1206.73	1202.74	2.57	2.37	34.36	25.91	151.06	316.6	3.26	2.46	3.99	3.99
Sweet Grass County	A6	RM 455.26	104667	1% - 100yr	1311.07	1205.68	1202.83	4.27	3.69	105.3	64.25	125.73	288.52	2.35	1.43	2.85	2.85
Sweet Grass County	A6	RM 455.09	103771	1% - 100yr	1311.07	1205.36	1201.58	2.51	2.15	33.12	20.05	159.87	319.81	3.16	1.9	3.77	3.77
Sweet Grass County	A6	RM 454.95	103072	1% - 100yr	1311.07	1204.71	1201.94	3.36	3.17	69.44	53.17	179.76	273.18	1.98	1.51	2.77	2.77

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	1% - 100yr	1311.07	1204.38	1200.61	2.53	2.39	37.14	32.75	179.04	254.44	2.45	2.16	3.77	3.77
Sweet Grass County	A6	RM 454.72	101863	1% - 100yr	1311.07	1203.91	1200.47	3.04	3.04	49.43	49.13	193.46	194.53	2.23	2.22	3.44	3.44
Sweet Grass County	A6	RM 454.64	101419	1% - 100yr	1311.07	1203.79	1199.69	2.5	2.5	33.04	32.77	195.79	217.34	2.68	2.66	4.09	4.09
Sweet Grass County	A6	RM 454.53	100846	1% - 100yr	1311.07	1203.26	1199.59	3.32	3.28	56.24	47.55	120.59	215.93	3.27	2.76	3.67	3.67
Sweet Grass County	A6	RM 454.43	100338	1% - 100yr	1311.07	1202.97	1199	3.36	3.33	58.56	45.86	115.82	220.92	3.36	2.63	3.97	3.97
Sweet Grass County	A6	RM 454.29	99597	1% - 100yr	1311.07	1202.54	1198.71	3.4	3.38	59.79	52.37	114.12	207.8	3.37	2.96	3.83	3.83
Sweet Grass County	A6	RM 454.15	98861	1% - 100yr	1311.07	1202.23	1198.68	3.08	2.94	48.37	37.22	136.69	188.87	3.07	2.36	3.56	3.56
Sweet Grass County	A6	RM 454.00	98105	1% - 100yr	1311.07	1201.84	1198.53	2.95	2.95	43.93	43.52	195.3	197.11	2.27	2.25	3.31	3.31
Sweet Grass County	A6	RM 453.89	97523	1% - 100yr	1311.07	1201.49	1198.31	2.97	2.88	47.59	44.3	181.46	205.63	2.38	2.21	3.18	3.18
Sweet Grass County	A6	RM 453.78	96929	1% - 100yr	1311.07	1201.33	1197.07	2.5	2.39	32.15	19.74	153.06	264.4	3.39	2.08	4.25	4.25
Sweet Grass County	A6	RM 453.67	96361	1% - 100yr	1311.07	1200.98	1197.77	3	2.6	48.73	33.18	151.58	277.12	2.67	1.82	3.21	3.21
Sweet Grass County	A6	RM 453.58	95863	1% - 100yr	1311.07	1200.9	1196.37	2.37	2.36	27.5	26.56	182.6	190.63	3.55	3.43	4.53	4.53
Sweet Grass County	A6	RM 453.48	95355	1% - 100yr	1311.07	1200.2	1196.86	3.79	3.71	75.34	57.62	118.04	158.12	2.93	2.24	3.34	3.34
Sweet Grass County	A6	RM 453.35	94633	1% - 100yr	1311.07	1199.62	1196.43	3.7	3.59	73.25	61.45	133.91	211.72	2.63	2.21	3.19	3.19
Sweet Grass County	A7	RM 453.23	93994	1% - 100yr	1311.07	1199.25	1196.41	3.26	3.06	57.84	52.3	113	236.05	2.35	2.12	2.83	2.83
Sweet Grass County	A7	RM 453.11	93361	1% - 100yr	1311.07	1199.04	1195.68	2.46	2.43	24.82	24.49	275.39	293.33	1.86	1.84	3.36	3.36
Sweet Grass County	A7	RM 453.01	92863	1% - 100yr	1311.07	1198.57	1195.38	3.18	3.06	43.65	41.59	195.81	230.12	1.95	1.86	3.19	3.19
Sweet Grass County	A7	RM 452.91	92363	1% - 100yr	1311.07	1198.45	1194.85	2.74	2.26	37.63	23.1	117.27	330.56	2.9	1.77	3.6	3.6
Sweet Grass County	A7	RM 452.82	91863	1% - 100yr	1311.07	1198.19	1194.65	2.73	2.6	39.89	36.26	111.14	182.71	3.03	2.76	3.54	3.54
Sweet Grass County	A7	RM 452.72	91363	1% - 100yr	1311.07	1198.12	1193.29	2.26	2.16	24.83	19.85	144.32	190.57	3.99	3.18	4.83	4.83
Sweet Grass County	A7	RM 452.64	90932	1% - 100yr	1311.07	1197.89	1194.02	2.78	2.26	40.05	29.16	133.5	285.56	3.26	2.37	3.87	3.87
Sweet Grass County	A7	RM 452.53	90362	1% - 100yr	1311.07	1197.4	1193.87	3.44	3.08	60.6	43.45	116.37	197.16	3.01	2.16	3.53	3.53
Sweet Grass County	A7	RM 452.43	89864	1% - 100yr	1311.07	1197.06	1193.52	3.51	3.11	63.12	42.71	111.78	203.1	3.08	2.08	3.54	3.54
Sweet Grass County	A7	RM 452.33	89331	1% - 100yr	1311.07	1196.77	1193.16	3.27	3.06	54.24	41.94	134.45	236.44	2.89	2.24	3.61	3.61
Sweet Grass County	A7	RM 452.25	88863	1% - 100yr	1311.07	1196.5	1192.91	3.25	3.03	54.31	39.63	138.6	209.16	2.88	2.1	3.58	3.58
Sweet Grass County	A7	RM 452.16	88399	1% - 100yr	1311.07	1196.19	1192.68	3.4	2.76	59.74	35.96	119.78	325.24	3.04	1.83	3.51	3.51
Sweet Grass County	A7	RM 452.06	87882	1% - 100yr	1311.07	1195.95	1192.4	3.17	2.65	52.47	32.61	120.32	354.86	3.23	2	3.55	3.55
Sweet Grass County	A7	RM 451.96	87394	1% - 100yr	1311.07	1195.71	1191.9	3.15	2.53	53.03	30.33	125.87	301.47	3.01	1.72	3.81	3.81
Sweet Grass County	A7	RM 451.86	86835	1% - 100yr	1311.07	1195.51	1191.79	2.93	2.32	42.71	27.73	122.39	268.34	3.25	2.11	3.71	3.71
Sweet Grass County	A7	RM 451.75	86230	1% - 100yr	1311.07	1195.15	1191.43	3.04	3.04	46.95	46.77	133.79	134.27	3.23	3.22	3.72	3.72
Sweet Grass County	A7	RM 451.61	85483	1% - 100yr	1311.07	1194.87	1190.7	2.81	2.8	41.84	38.99	152.65	187.31	3.06	2.85	4.17	4.17
Sweet Grass County	A7	RM 451.49	84861	1% - 100yr	1311.07	1194.29	1191.07	3.53	3.3	63.71	48.58	126.46	180.84	2.87	2.2	3.23	3.23
Sweet Grass County	A7	RM 451.34	84113	1% - 100yr	1311.07	1194.26	1190.06	2.33	2.26	27.03	21.5	150.96	327.95	3.71	2.94	4.2	4.2
Sweet Grass County	A7	RM 451.20	83363	1% - 100yr	1311.07	1193.51	1189.8	3.73	3.67	71.47	57.12	103.86	186.52	3.38	2.7	3.71	3.71
Sweet Grass County	A7	RM 451.10	82863	1% - 100yr	1311.07	1193.39	1189.79	3.07	3	48.99	38.99	133.83	172.73	3.18	2.53	3.6	3.6
Sweet Grass County	A7	RM 451.00	82325	1% - 100yr	1311.07	1193.26	1189.55	2.72	2.49	38.67	26.7	118.3	257.18	3.21	2.21	3.71	3.71
Sweet Grass County	A7	RM 450.86	81602	1% - 100yr	1311.07	1193.08	1188.29	2.27	2	49.1	23.47	90.13	302.83	4.7	2.17	4.79	4.79
Sweet Grass County	A7	RM 450.73	80923	1% - 100yr	1311.07	1192	1188.46	4.21	3.78	96.28	63.38	101.7	183.49	2.9	1.89	3.55	3.55
Sweet Grass County	A7	RM 450.63	80374	1% - 100yr	1311.07	1191.7	1188.16	3.45	3.33	65.27	47.91	135.95	193.29	2.78	2.04	3.54	3.54
Sweet Grass County	A7	RM 450.53	79863	1% - 100yr	1311.07	1191.46	1187.88	3.1	3.01	49.41	37.27	151.47	208.35	2.78	2.09	3.58	3.58
Sweet Grass County	A7	RM 450.43	79300	1% - 100yr	1311.07	1191.21	1187.72	2.94	2.73	43.86	30.61	133.66	259.66	2.66	1.85	3.49	3.49
Sweet Grass County	A7	RM 450.34	78849	1% - 100yr	1376.2	1190.93	1188.05	3.02	2.77	50.46	39.53	125.83	254.76	2.49	1.95	2.88	2.88
Sweet Grass County	A7	RM 450.23	78298	1% - 100yr	1376.2	1190.82	1186.92	2.25	2.1	26.4	19.77	195.88	449.66	3.09	2.31	3.9	3.9
Sweet Grass County	A7	RM 450.14	77822	1% - 100yr	1376.2	1190.56	1186.4	2.7	2.22	38.5	19.25	152.44	442.51	3.14	1.55	4.16	4.16
Sweet Grass County	A7	RM 450.05	77362	1% - 100yr	1376.2	1189.87	1187.2	3.8	3.57	81.55	55.96	139.86	298.43	2.56	1.75	2.68	2.68
Sweet Grass County	A7	RM 449.96	76841	1% - 100yr	1376.2	1189.66	1186.28	3.21	2.74	54.09	34.65	128.22	356.02	3.2	2.04	3.38	3.38
Sweet Grass County	A7	RM 449.86	76356	1% - 100yr	1376.2	1189.3	1185.58	3.47	2.73	61.77	28.64	110.14	468.59	3.43	1.58	3.72	3.72
Sweet Grass County	A7	RM 449.77	75860	1% - 100yr	1376.2	1188.97	1185.68	3.44	3	59.47	48.31	168.44	356.54	2.25	1.83	3.29	3.29
Sweet Grass County	A7	RM 449.68	75373	1% - 100yr	1376.2	1188.67	1185.9	2.96	2.71	53.09	44.53	220.37	466.2	2.06	1.73	2.77	2.77
Sweet Grass County	A7	RM 449.59	74904	1% - 100yr	1376.2	1188.55	1184.15	2.63	2.18	34.12	19.08	112.34	409.6	3.96	2.17	4.4	4.4
Sweet Grass County	A7	RM 449.48	74351	1% - 100yr	1376.2	1188.13	1184.86	3.38	2.78	66.14	41.77	121.9	346.02	2.39	1.51	3.27	3.27
Sweet Grass County	A7	RM 449.37	73741	1% - 100yr	1376.2	1188.01	1184.73	2.16	1.82	26.76	16.65	210.35	615.19	2.45	1.53	3.28	3.28
Sweet Grass County	A7	RM 449.26	73165	1% - 100yr	1376.2	1187.93	1184.33	1.92	1.2	18.39	10.94	128.66	854	3.03	1.78	3.59	3.59
Sweet Grass County	A7	RM 449.10	72364	1% - 100yr	1376.2	1187.11	1183.97	4	2.05	86.24	34.91	87.4	836.19	3.01	1.18	3.14	3.14
Sweet Grass County	A7	RM 449.00	71858	1% - 100yr	1376.2	1186.39	1183.97	3.92	2.5	92.87	47.45	113.75	560.8	2.12	1.06	2.42	2.42
Sweet Grass County	A7	RM 448.88	71223	1% - 100yr	1376.2	1186.28	1183.11	1.96	1.71	22.56	15.84	231.84	600.71	2.28	1.6	3.17	3.17
Sweet Grass County	A7	RM 448.76	70537	1% - 100yr	1376.2	1186.25	1182.01	1.19	1.15	7.98	7.38	312.73	609.17	2.52	2.33	4.23	4.23
Sweet Grass County	A7	RM 448.55	69424	1% - 100yr	1376.2	1186.05	1181.8	1.8	1.54	16.1	11.45	154.14	668.37	3.77	2.68	4.24	4.24
Sweet Grass County	A7	RM 448.41	68815	1% - 100yr	1376.2	1185.46	1181.16	3.39	3.02	52.17	37.3	108.05	183.97	3.56	2.5	4.3	4.3
Sweet Grass County	A7	RM 448.32	68353	1% - 100yr	1376.2	1185.6	1179.91	2.08	2.03	19.38	17.45	126.03	394.68	5.24	4.71	5.68	5.68
Sweet Grass County	A7	RM 448.23	67851	1% - 100yr	1376.2	1185.36	1179.82	2.59	2.52	30.34	27.29	105.4	350.09	5.03	4.51	5.54	5.54

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	1% - 100yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	1% - 100yr	1376.2	1184.51	1180.89	4.15	4.1	91.35	85.13	107.64	273.83	3.08	2.87	3.62	3.62
Sweet Grass County	A7	RM 448.07	67043	1% - 100yr	1376.2	1184.21	1180.7	3.12	2.82	52.71	38.74	149.15	415.73	2.9	2.13	3.51	3.51
Sweet Grass County	A7	RM 447.94	66348	1% - 100yr	1376.2	1183.82	1180.22	3.2	2.54	53.06	21.63	125.42	534.34	3.29	1.33	3.61	3.61
Sweet Grass County	A7	RM 447.85	65863	1% - 100yr	1376.2	1183.46	1180.39	3.46	2.4	66.47	26.65	136.29	541.85	2.68	1.07	3.07	3.07
Sweet Grass County	A7	RM 447.75	65363	1% - 100yr	1376.2	1183.37	1179.55	2.68	1.97	34.5	15.8	143.24	452.62	3.38	1.54	3.83	3.83
Sweet Grass County	A7	RM 447.66	64865	1% - 100yr	1376.2	1183.04	1179.59	3.17	2.07	52.11	19.64	121.32	542.19	3.28	1.23	3.45	3.45
Sweet Grass County	A7	RM 447.56	64365	1% - 100yr	1376.2	1182.41	1179.67	3.91	2.56	88.83	38.8	136.94	530.52	2.32	1.01	2.74	2.74
Sweet Grass County	A7	RM 447.49	64001	1% - 100yr	1376.2	1182.31	1179.82	2.9	2.18	48.42	28.32	193.72	480.7	2.24	1.31	2.49	2.49
Sweet Grass County	A7	RM 447.39	63473	1% - 100yr	1376.2	1181.74	1178.85	3.84	2.45	79.59	32.83	93.37	539.38	2.55	1.04	2.89	2.89
Sweet Grass County	A7	RM 447.27	62880	1% - 100yr	1376.2	1181.39	1178.26	3.22	2.23	59.47	27.42	108.82	553.84	2.45	1.11	3.14	3.14
Sweet Grass County	A7	RM 447.17	62358	1% - 100yr	1376.2	1181.08	1177.92	3.05	1.92	53.17	27.01	112.86	582	2.45	1.23	3.16	3.16
Sweet Grass County	A7	RM 447.08	61863	1% - 100yr	1376.2	1180.67	1177.91	3.14	1.93	60.08	35.01	102.55	605.66	2.03	1.17	2.76	2.76
Sweet Grass County	A7	RM 446.98	61358	1% - 100yr	1376.2	1180.16	1177.28	3.36	2.05	61.5	25.92	95.58	630.89	2.55	1.07	2.88	2.88
Sweet Grass County	A7	RM 446.89	60841	1% - 100yr	1376.2	1179.79	1176.94	3.49	2.04	68.56	29.41	80.26	692.51	2.56	1.09	2.85	2.85
Sweet Grass County	A7	RM 446.80	60396	1% - 100yr	1376.2	1179.6	1175.92	2.79	1.86	42.48	22.29	96.31	755.81	2.87	1.49	3.69	3.69
Sweet Grass County	A7	RM 446.70	59903	1% - 100yr	1376.2	1179.34	1176.22	3.25	2.11	57.09	24.59	65.99	719.97	3.07	1.26	3.12	3.12
Sweet Grass County	A7	RM 446.60	59371	1% - 100yr	1376.2	1179.06	1175.91	3.08	2.03	49.69	23.08	77.2	627.2	2.89	1.31	3.16	3.16
Sweet Grass County	A7	RM 446.51	58868	1% - 100yr	1376.2	1178.89	1175.24	2.68	2.05	38.94	20.62	117.15	550.59	2.91	1.53	3.65	3.65
Sweet Grass County	A7	RM 446.41	58363	1% - 100yr	1376.2	1178.71	1174.39	2.44	1.9	30.19	14.59	148.64	535.24	3.05	1.47	4.31	4.31
Sweet Grass County	A7	RM 446.30	57762	1% - 100yr	1376.2	1178.44	1174.85	2.69	2.02	37.02	15.58	123.97	529.79	3.06	1.29	3.6	3.6
Sweet Grass County	A7	RM 446.22	57365	1% - 100yr	1376.2	1177.81	1174.39	3.71	3.5	73.05	42.34	129.27	239.34	2.84	1.64	3.42	3.42
Sweet Grass County	A7	RM 446.12	56852	1% - 100yr	1376.2	1177.59	1174.04	3.22	2.78	53.65	21.46	140.19	420.71	2.95	1.18	3.55	3.55
Sweet Grass County	A7	RM 446.02	56303	1% - 100yr	1376.2	1177.5	1173.3	2.78	1.99	37.75	16.19	98.34	405.66	4.11	1.71	4.2	4.2
Sweet Grass County	A7	RM 445.94	55871	1% - 100yr	1376.2	1176.72	1173.6	4.32	3.51	102.42	44.25	94.94	330.72	2.82	1.2	3.12	3.12
Sweet Grass County	A7	RM 445.82	55236	1% - 100yr	1376.2	1176.61	1173.05	2.49	2.3	35.19	27.81	208.98	332.28	2.53	2	3.57	3.57
Sweet Grass County	A7	RM 445.71	54753	1% - 100yr	1376.2	1176.46	1172.38	2.35	2.26	27.23	23.21	210.48	317.09	2.75	2.34	4.07	4.07
Sweet Grass County	A7	RM 445.60	54202	1% - 100yr	1376.2	1176.24	1172.32	2.48	2.38	31.45	28.2	190.57	301.72	2.86	2.57	3.92	3.92
Sweet Grass County	A7	RM 445.46	53453	1% - 100yr	1376.2	1175.71	1171.04	3.23	2.84	51.99	35.39	132.44	238.29	2.99	2.03	4.67	4.67
Sweet Grass County	A7	RM 445.36	52888	1% - 100yr	1376.2	1175.51	1170.25	3.03	2.42	46.56	29.57	105.4	331.04	3.55	2.24	5.26	5.26
Sweet Grass County	A7	RM 445.26	52344	1% - 100yr	1376.2	1174.74	1171.35	4.14	3.56	92.67	49.97	105.82	274.39	2.9	1.56	3.39	3.39
Sweet Grass County	A7	RM 445.17	51873	1% - 100yr	1376.2	1174.23	1171.83	4.04	3.7	95.56	67.08	137.12	270.81	2.3	1.61	2.4	2.4
Sweet Grass County	A7	RM 445.07	51376	1% - 100yr	1376.2	1174.3	1170.28	2.39	2.14	30.61	19.91	181.57	428.45	2.98	1.93	4.02	4.02
Sweet Grass County	A7	RM 444.97	50844	1% - 100yr	1376.2	1173.78	1170.19	3.29	3	56.66	30.4	148.01	360.47	2.75	1.47	3.59	3.59
Sweet Grass County	A7	RM 444.88	50352	1% - 100yr	1376.2	1173.53	1170.05	3.13	2.62	51.13	24.51	144.09	378.96	2.93	1.4	3.48	3.48
Sweet Grass County	A7	RM 444.79	49860	1% - 100yr	1376.2	1173.24	1169.94	3.22	2.47	55.77	27.76	132.48	399.34	2.95	1.46	3.3	3.3
Sweet Grass County	A7	RM 444.69	49316	1% - 100yr	1376.2	1172.94	1169.55	3.2	2.39	54.67	28.13	131.04	453.86	3	1.54	3.38	3.38
Sweet Grass County	A7	RM 444.60	48863	1% - 100yr	1376.2	1172.9	1167.23	2.68	1.9	32.54	14.18	88.72	576.28	5.27	2.2	5.66	5.66
Sweet Grass County	A7	RM 444.50	48367	1% - 100yr	1376.2	1172.68	1168.66	3.1	2.33	49.69	30.43	103.9	651.09	3.37	2.05	4.01	4.01
Sweet Grass County	A7	RM 444.41	47863	1% - 100yr	1376.2	1172.58	1168.6	2.52	2.28	31.56	20.97	129.86	712.76	3.42	2.27	3.98	3.98
Sweet Grass County	A7	RM 444.30	47336	1% - 100yr	1376.2	1172.5	1168.26	2.13	1.79	22.41	15.07	167.8	713.6	3.59	2.41	4.24	4.24
Sweet Grass County	A7	RM 444.20	46789	1% - 100yr	1376.2	1171.55	1167.97	4.26	3.59	98.13	51.64	107.59	511.51	2.93	1.52	3.58	3.58
Sweet Grass County	A7	RM 444.12	46346	1% - 100yr	1376.2	1171.15	1167.62	4.14	3.44	90.25	44.12	100.5	267.16	3.21	1.54	3.52	3.52
Sweet Grass County	A7	RM 444.02	45829	1% - 100yr	1376.2	1170.97	1167.57	3.34	2.87	54.84	26.35	143.97	576.29	2.8	1.34	3.4	3.4
Sweet Grass County	A7	RM 443.91	45243	1% - 100yr	1376.2	1170.68	1167.08	3.07	2.47	52.18	22.04	153.66	760.08	2.68	1.13	3.6	3.6
Sweet Grass County	A7	RM 443.84	44853	1% - 100yr	1376.2	1170.15	1167.23	3.6	3.16	78	38.6	173.99	546.21	2.1	1.04	2.92	2.92
Sweet Grass County	A7	RM 443.75	44415	1% - 100yr	1376.2	1169.95	1166.67	2.89	2.65	47.24	20.08	183.8	744.34	2.55	1.08	3.28	3.28
Sweet Grass County	A7	RM 443.64	43870	1% - 100yr	1376.2	1169.89	1166.09	2.32	1.66	28.4	14.41	110.6	889.58	3.13	1.58	3.8	3.8
Sweet Grass County	A7	RM 443.53	43290	1% - 100yr	1376.2	1169.74	1165.72	2.41	1.82	29	14.48	87.59	833.04	3.73	1.83	4.02	4.02
Sweet Grass County	A8	RM 443.45	42860	1% - 100yr	1376.2	1169.23	1165.25	3.24	2.84	54.77	28.71	139.17	705.43	2.97	1.56	3.98	3.98
Sweet Grass County	A8	RM 443.35	42363	1% - 100yr	1376.2	1168.29	1164.95	4.56	4.13	114.08	75.1	101.62	545.05	2.8	1.83	3.35	3.35
Sweet Grass County	A8	RM 443.25	41863	1% - 100yr	1376.2	1168.2	1165.05	3.25	2.66	58	30.17	127.8	609.11	2.76	1.43	3.16	3.16
Sweet Grass County	A8	RM 443.16	41342	1% - 100yr	1376.2	1167.96	1165.43	2.87	2.1	49.16	28.1	152.93	849.77	2.16	1.23	2.53	2.53
Sweet Grass County	A8	RM 443.07	40863	1% - 100yr	1376.2	1167.56	1164.49	3.06	2	54.79	26.86	139	860.36	2.29	1.12	3.08	3.08
Sweet Grass County	A8	RM 442.97	40345	1% - 100yr	1376.2	1167.27	1164.28	2.69	1.86	39.42	24.63	162.04	679.8	2.2	1.37	2.99	2.99
Sweet Grass County	A8	RM 442.88	39863	1% - 100yr	1376.2	1167.06	1164.06	2.34	1.82	31.56	20.42	177.36	777.04	2.13	1.38	3.01	3.01
Sweet Grass County	A8	RM 442.78	39363	1% - 100yr	1376.2	1166.31	1164.18	3.62	3.09	86.46	55.49	145.6	587.9	1.59	1.02	2.46	2.46
Sweet Grass County	A8	RM 442.68	38840	1% - 100yr	1376.2	1166.06	1162.8	2.58	1.97	33.26	19.4	117.57	607.02	2.43	1.41	3.26	3.26
Sweet Grass County	A8	RM 442.60	38390	1% - 100yr	1376.2	1165.98	1162.57	1.92	1.58	20.72	12.58	157.4	565.36	2.6	1.58	3.41	3.41
Sweet Grass County	A8	RM 442.50	37863	1% - 100yr	1376.2	1165.51	1162.29	3.36	2.32	54.72	24.05	102.55	555.33	2.48	1.09	3.22	3.22
Sweet Grass County	A8	RM 442.42	37461	1% - 100yr	1376.2	1165.29	1162.07	3.11	2.27	45.92	24.02	121.06	532.95	2.24	1.16	3.22	3.22

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	1% - 100yr	1376.2	1165.03	1161.85	2.87	2.2	46.38	23.16	107.71	519.17	2.6	1.29	3.18	3.18
Sweet Grass County	A8	RM 442.24	36451	1% - 100yr	1376.2	1164.78	1161.75	2.79	2.26	40.17	21.27	130.05	569.54	2.24	1.18	3.03	3.03
Sweet Grass County	A8	RM 442.12	35820	1% - 100yr	1376.2	1164.47	1161.12	2.84	2.13	40.25	19.19	123.17	658.52	2.52	1.2	3.35	3.35
Sweet Grass County	A8	RM 442.03	35367	1% - 100yr	1376.2	1164.14	1161.18	3.07	2.36	54.56	29.41	123.16	583.92	2.34	1.27	2.97	2.97
Sweet Grass County	A8	RM 441.95	34945	1% - 100yr	1376.2	1164.09	1160.28	2.18	1.62	25.82	12.08	133.86	817.63	2.93	1.35	3.81	3.81
Sweet Grass County	A8	RM 441.84	34360	1% - 100yr	1376.2	1163.62	1160.33	2.96	2.14	45.3	23.46	186.27	568.61	2.18	1.13	3.29	3.29
Sweet Grass County	A8	RM 441.74	33863	1% - 100yr	1376.2	1163.29	1160.06	3	2.11	47.61	21.26	171.23	642.61	2.34	1.05	3.23	3.23
Sweet Grass County	A8	RM 441.65	33357	1% - 100yr	1376.2	1163.18	1159.78	2.35	1.52	29.38	13.42	173.66	917.09	2.82	1.28	3.4	3.4
Sweet Grass County	A8	RM 441.53	32732	1% - 100yr	1376.2	1162.71	1159.44	3.05	1.91	52.27	19.88	152.04	860.35	2.59	0.98	3.27	3.27
Sweet Grass County	A8	RM 441.47	32366	1% - 100yr	1376.2	1162.58	1158.95	2.81	1.69	42.2	15.02	138.98	892.06	2.99	1.06	3.62	3.62
Sweet Grass County	A8	RM 441.38	31928	1% - 100yr	1376.2	1162.62	1158.24	1.8	1.14	16.73	9.02	153.74	1034.97	3.3	1.78	4.38	4.38
Sweet Grass County	A8	RM 441.27	31350	1% - 100yr	1376.2	1162.11	1158.76	3.44	2.09	64.52	22.14	97.16	1080.21	2.81	0.96	3.35	3.35
Sweet Grass County	A8	RM 441.18	30882	1% - 100yr	1376.2	1161.86	1158.5	2.59	1.58	34.86	13.53	126.18	1016.91	2.73	1.05	3.36	3.36
Sweet Grass County	A8	RM 441.07	30295	1% - 100yr	1376.2	1161.71	1158.19	2.3	1.46	28.79	11.81	149.54	999.06	2.82	1.15	3.52	3.52
Sweet Grass County	A8	RM 441.00	29913	1% - 100yr	1376.2	1161.62	1157.63	2.17	1.38	25.67	11.4	146.59	949.69	2.84	1.25	3.99	3.99
Sweet Grass County	A8	RM 440.80	28852	1% - 100yr	1376.2	1160.86	1157.49	3.57	2.36	65.94	21.77	103.86	615.63	2.92	0.96	3.37	3.37
Sweet Grass County	A8	RM 440.60	27841	1% - 100yr	1376.2	1159.95	1157.2	3.08	2.31	54.72	27.16	121.05	505.6	2.37	1.18	2.74	2.74
Sweet Grass County	A8	RM 440.51	27361	1% - 100yr	1376.2	1159.3	1156.41	3.71	2.83	80.02	40.84	109.89	437.74	2.33	1.18	2.89	2.89
Sweet Grass County	A8	RM 440.42	26862	1% - 100yr	1376.2	1158.89	1156.26	3.41	2.6	67.85	35.62	89.28	443.2	2.3	1.2	2.63	2.63
Sweet Grass County	A8	RM 440.30	26223	1% - 100yr	1376.2	1158.86	1155.63	1.76	1.44	17.47	12.32	97.18	613.1	2.59	1.81	3.23	3.23
Sweet Grass County	A8	RM 440.17	25466	1% - 100yr	1376.2	1158.68	1154.7	2.24	1.68	25.87	15.65	64.56	426.42	3.44	2.01	3.98	3.98
Sweet Grass County	A8	RM 440.06	24863	1% - 100yr	1376.2	1158.43	1153.97	2.41	1.95	29.71	17.9	131.05	349.13	3.49	2.09	4.46	4.46
Sweet Grass County	A8	RM 439.96	24366	1% - 100yr	1376.2	1158.18	1154.18	2.9	2.15	42.13	22.01	95.94	443.32	3.66	1.9	4	4
Sweet Grass County	A8	RM 439.87	23863	1% - 100yr	1376.2	1157.76	1153.59	3.33	2.54	53.25	17.56	103.39	471.21	3.79	1.24	4.17	4.17
Sweet Grass County	A8	RM 439.77	23365	1% - 100yr	1376.2	1157.53	1153.6	3.27	2.62	52.9	18.56	124.68	497.24	3.23	1.13	3.93	3.93
Sweet Grass County	A8	RM 439.68	22863	1% - 100yr	1376.2	1157.27	1153.45	3.27	2.57	52.28	20.55	135.36	499.35	2.93	1.14	3.82	3.82
Sweet Grass County	A8	RM 439.58	22363	1% - 100yr	1376.2	1157.22	1153.39	2.53	1.8	32.49	14.65	150.28	563.07	3.16	1.42	3.82	3.82
Sweet Grass County	A8	RM 439.49	21863	1% - 100yr	1376.2	1157.06	1152.86	2.59	1.77	32.96	12.6	116.13	556.24	3.92	1.49	4.2	4.2
Sweet Grass County	A8	RM 439.39	21363	1% - 100yr	1376.2	1156.94	1153.06	2.53	1.79	32.42	13.68	131.98	577.07	3.44	1.43	3.88	3.88
Sweet Grass County	A8	RM 439.30	20863	1% - 100yr	1376.2	1156.67	1152.92	2.95	1.96	43.8	17.43	110.38	572.63	3.38	1.34	3.76	3.76
Sweet Grass County	A8	RM 439.20	20353	1% - 100yr	1376.2	1155.99	1152.64	3.9	3.07	77.93	27.13	111.19	471.14	2.95	1.02	3.35	3.35
Sweet Grass County	A8	RM 439.11	19864	1% - 100yr	1376.2	1155.68	1152.34	3.01	2.31	48.1	20.46	98.01	589.6	3.07	1.3	3.34	3.34
Sweet Grass County	A8	RM 439.01	19360	1% - 100yr	1376.2	1155.15	1152.4	3.54	2.8	67.59	29.54	128.96	534.88	2.24	0.97	2.75	2.75
Sweet Grass County	A8	RM 438.91	18848	1% - 100yr	1376.2	1154.96	1151.92	2.75	2.06	40.13	17.64	121.85	595.14	2.6	1.15	3.05	3.05
Sweet Grass County	A8	RM 438.82	18363	1% - 100yr	1376.2	1154.63	1151.23	2.95	2.36	48.55	22.53	120.25	536.34	2.66	1.23	3.4	3.4
Sweet Grass County	A8	RM 438.73	17853	1% - 100yr	1376.2	1154.38	1151.37	2.81	2.21	41.61	25.58	124.01	448.42	2.33	1.43	3	3
Sweet Grass County	A8	RM 438.63	17363	1% - 100yr	1376.2	1154.27	1150.74	2.26	1.86	27	18.83	100.37	371.99	3.08	2.15	3.52	3.52
Sweet Grass County	A8	RM 438.54	16863	1% - 100yr	1376.2	1154.12	1150.59	2.27	1.99	26.93	20.73	105.53	275.52	3.31	2.51	3.53	3.53
Sweet Grass County	A8	RM 438.43	16307	1% - 100yr	1376.2	1153.88	1149.52	2.45	2.33	31.06	22.15	165.05	288.9	3.35	2.38	4.36	4.36
Sweet Grass County	A9	RM 438.36	15889	1% - 100yr	1376.2	1153.75	1149.4	2.47	2.4	27.87	24.67	187.56	248.28	2.93	2.6	4.35	4.35
Sweet Grass County	A9	RM 438.26	15363	1% - 100yr	1376.2	1153.08	1149.84	3.83	3.12	77.59	35.68	115.65	358.53	2.82	1.29	3.25	3.25
Sweet Grass County	A9	RM 438.16	14863	1% - 100yr	1376.2	1152.83	1149.31	3.39	2.42	57.94	23.92	123.27	481.11	2.99	1.23	3.52	3.52
Sweet Grass County	A9	RM 438.07	14394	1% - 100yr	1376.2	1152.51	1149.19	3.47	2.33	66.6	27.69	128.88	554.19	2.7	1.12	3.32	3.32
Sweet Grass County	A9	RM 437.96	13827	1% - 100yr	1376.2	1152.32	1149.19	2.9	1.86	47.26	21.19	120.98	674.59	2.57	1.15	3.13	3.13
Sweet Grass County	A9	RM 437.88	13363	1% - 100yr	1376.2	1152.12	1148.94	2.89	1.79	42.89	19.59	109.09	704.02	2.55	1.16	3.18	3.18
Sweet Grass County	A9	RM 437.78	12844	1% - 100yr	1376.2	1151.75	1148.72	3.25	1.99	56.16	23.3	99.77	694.92	2.6	1.07	3.04	3.04
Sweet Grass County	A9	RM 437.69	12354	1% - 100yr	1376.2	1151.59	1148.45	2.48	1.74	35.68	18.38	147.13	676.4	2.34	1.2	3.13	3.13
Sweet Grass County	A9	RM 437.59	11863	1% - 100yr	1376.2	1151.3	1148.76	2.62	1.88	42.72	22.17	151.34	740.87	1.91	0.99	2.89	2.89
Sweet Grass County	A9	RM 437.50	11362	1% - 100yr	1376.2	1151.07	1148.29	2.33	1.74	32.82	16.96	189.39	736.9	2.07	1.07	2.77	2.77
Sweet Grass County	A9	RM 437.41	10902	1% - 100yr	1376.2	1150.78	1148.26	2.57	1.88	40.88	21.48	175.96	720.59	1.93	1.02	2.53	2.53
Sweet Grass County	A9	RM 437.31	10361	1% - 100yr	1376.2	1150.38	1147.37	2.87	1.96	48.88	23.45	148.16	665.18	2.19	1.05	3	3
Sweet Grass County	A9	RM 437.20	9764	1% - 100yr	1376.2	1150.06	1147.02	2.81	1.85	40.87	18.48	110.89	684.53	2.41	1.09	3.04	3.04
Sweet Grass County	A9	RM 437.08	9128	1% - 100yr	1376.2	1149.63	1146.9	2.76	2.09	43.31	22.04	196.32	667.66	1.93	0.98	2.73	2.73
Sweet Grass County	A9	RM 436.95	8363	1% - 100yr	1376.2	1149.4	1145.32	2.48	1.58	24.86	12.41	106.12	667.02	2.67	1.3	4.08	4.08
Sweet Grass County	A9	RM 436.83	7805	1% - 100yr	1376.2	1149.26	1145.93	1.89	1.47	22.3	14.32	154.6	765.91	1.91	1.23	3.33	3.33
Sweet Grass County	A9	RM 436.75	6857	1% - 100yr	1376.2	1148.72	1145.61	3.31	1.78	62.18	22.2	67.61	865.67	2.54	0.89	3.11	3.11
Sweet Grass County	A9	RM 436.66	6193	1% - 100yr	1376.2	1148.25	1145.68	3.05	1.88	54.74	20.81	97.51	873.07	2.21	0.84	2.56	2.56
Sweet Grass County	A9	RM 436.56	5280	1% - 100yr	1376.2	1147.82	1144.44	3.14	1.82	43.11	17.94	68.28	761.37	2.54	1	3.37	3.37
Sweet Grass County	A9	RM 436.40	4576	1% - 100yr	1376.2	1147.62	1144.05	2.56	1.55	35.02	13.32	57.78	810.3	3.15	1.14	3.57	3.57
Sweet Grass County	A9	RM 436.29	3787	1% - 100yr	1376.2	1147.17	1144.44	2.91	2.08	49.76	26.8	99.03	744.11	2.29	1.23	2.73	2.73
Sweet Grass County	A9	RM 436.16	3087	1% - 100yr	1376.2	1146.41	1143.57	3.43	2.67	69.54	33.22	107.65	785.52	2.23	1.06	2.84	2.84

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	1% - 100yr	1376.2	1146.18	1143.09	2.95	2.29	46.62	26.73	102.06	915.02	2.25	1.28	3.09	3.09
Sweet Grass County	A9	RM 435.98	2200	1% - 100yr	1376.2	1145.84	1142.85	3.08	2.3	56.06	26.36	79.11	920.85	2.25	1.04	2.99	2.99
Sweet Grass County	A9	RM 435.88	1580	1% - 100yr	1376.2	1145.51	1142.56	2.33	1.92	34.59	20.67	85.54	834.36	1.78	1.05	2.95	2.95
Sweet Grass County	A9	RM 435.73	890	1% - 100yr	1376.2	1145.19	1141.99	2.33	1.93	31.09	19.95	80.13	824.26	2.5	1.56	3.19	3.19
Sweet Grass County	A9	RM 435.62	104	1% - 100yr	1376.2	1144.75	1141.54	2.74	2.2	44.06	31.69	129.92	752.49	2.3	1.65	3.21	3.21

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	1% - 100yr	1376.2	1144.63	1140.73	1.6	1.35	14.29	8.18	151.59	842.19	2.63	1.51	3.94	3.94
Stillwater County	A9	RM 435.38	231282.1	1% - 100yr	1376.2	1144.42	1139.61	1.8	1.35	16.95	8.22	197.46	750.74	3.19	1.54	4.81	4.81
Stillwater County	A9	RM 435.25	230611.3	1% - 100yr	1376.2	1143.84	1138.48	3.3	2.27	56.95	18.54	118.64	579.21	3.24	1.05	5.35	5.35
Stillwater County	A9	RM 435.16	230122.9	1% - 100yr	1376.2	1143.66	1138.39	3.06	1.96	48.11	17.32	118.38	581.9	3.36	1.2	5.27	5.27
Stillwater County	A9	RM 435.07	229649	1% - 100yr	1376.2	1143.58	1137.85	2.7	1.67	35.89	13.6	103.72	570.8	3.87	1.46	5.73	5.73
Stillwater County	A9	RM 434.97	229153	1% - 100yr	1376.2	1143.24	1137.87	3.15	2.09	49.84	18.73	105.26	484.23	3.66	1.37	5.37	5.37
Stillwater County	A9	RM 434.84	228443.5	1% - 100yr	1376.2	1142.97	1137	3.09	2.31	47.25	20.4	103.65	371.27	3.82	1.64	5.97	5.97
Stillwater County	A9	RM 434.73	227855.5	1% - 100yr	1376.2	1142.59	1135.61	3.45	2.8	55.72	27.39	82.85	343.13	4.57	2.22	6.98	6.98
Stillwater County	A9	RM 434.63	227328.2	1% - 100yr	1376.2	1142.29	1135.42	3.57	3.54	61.11	51.44	91.85	322.19	4.19	3.52	6.87	6.87
Stillwater County	A9	RM 434.57	227011.2	1% - 100yr	1376.2	1142.16	1136.35	3.5	3.45	60.86	45.19	104.18	445.82	3.76	2.79	5.81	5.81
Stillwater County	A9	RM 434.53	226817.6	1% - 100yr	1376.2	1142.06	1136.73	3.47	3.43	62.33	52.95	118.94	531.79	3.32	2.82	5.33	5.33
Stillwater County	A10	RM 434.49	226573.3	1% - 100yr	1376.2	1141.98	1137.23	3.17	3.15	51.54	48.06	126.91	588.11	3.41	3.18	4.75	4.75
Stillwater County			226533.4	1% - 100yr	Bridge												
Stillwater County	A10	RM 434.47	226483	1% - 100yr	1376.2	1141.81	1137.49	3.17	3.16	52.49	51.46	135.7	684.1	3.2	3.14	4.32	4.32
Stillwater County	A10	RM 434.42	226233.2	1% - 100yr	1376.2	1141.69	1137.1	3.14	3.03	51.87	41.63	138.92	618.47	3.13	2.51	4.59	4.59
Stillwater County	A10	RM 434.37	225940.2	1% - 100yr	1376.2	1141.39	1136.51	3.5	3.41	64.58	53.58	124.51	491.69	3.13	2.6	4.88	4.88
Stillwater County	A10	RM 434.24	225278.2	1% - 100yr	1376.2	1141.06	1136.56	3.29	3.09	56.83	42.27	117.53	260.94	3.19	2.37	4.5	4.5
Stillwater County	A10	RM 434.15	224819.6	1% - 100yr	1376.2	1140.87	1137.06	2.97	2.55	48.63	28.46	157.63	382.82	2.72	1.59	3.81	3.81
Stillwater County	A10	RM 434.07	224366.5	1% - 100yr	1376.2	1140.52	1136.55	3.3	2.8	61.33	35.33	116.1	345.57	2.57	1.49	4.12	4.12
Stillwater County	A10	RM 433.98	223883.5	1% - 100yr	1376.2	1140.41	1136.28	2.45	2.29	33.04	24.3	137.26	578.97	2.72	2.01	4.13	4.13
Stillwater County	A10	RM 433.87	223309.3	1% - 100yr	1376.2	1140.17	1135.82	2.68	2.44	37.69	26.11	107.67	539.77	3.2	2.21	4.35	4.35
Stillwater County	A10	RM 433.78	222850	1% - 100yr	1376.2	1139.92	1135.54	2.72	2.56	40.24	27.14	177.68	544.93	2.82	1.9	4.38	4.38
Stillwater County	A10	RM 433.66	222201.9	1% - 100yr	1376.2	1139.53	1135.16	3.02	2.79	48.39	28.66	146	473.98	3.07	1.81	4.37	4.37
Stillwater County	A10	RM 433.54	221596.6	1% - 100yr	1376.2	1139.13	1135.33	3.24	2.9	56.17	28.56	139.77	468.32	2.96	1.5	3.8	3.8
Stillwater County	A10	RM 433.42	220956.2	1% - 100yr	1376.2	1138.58	1134.88	3.55	3.26	68.58	38.71	133.07	415.77	2.86	1.61	3.7	3.7
Stillwater County	A10	RM 433.31	220362.5	1% - 100yr	1376.2	1138.41	1134.67	2.66	2.39	40.68	23.69	205.31	655.47	2.42	1.41	3.74	3.74
Stillwater County	A10	RM 433.20	219758.6	1% - 100yr	1376.2	1138.34	1134.17	1.96	1.48	21.07	14.29	148.63	906.9	2.73	1.86	4.17	4.17
Stillwater County	A10	RM 433.09	219185.2	1% - 100yr	1376.2	1138.03	1133.45	2.41	2.19	30.84	19.44	180.45	688.38	3.06	1.92	4.58	4.58
Stillwater County	A10	RM 432.97	218599.7	1% - 100yr	1376.2	1137.68	1133.57	2.86	2.67	43.38	30.96	153.1	642.63	3.04	2.17	4.11	4.11
Stillwater County	A10	RM 432.84	217905.9	1% - 100yr	1376.2	1137.46	1132.7	2.69	2.12	36.89	17.37	136.55	685.5	3.45	1.62	4.76	4.76
Stillwater County	A10	RM 432.69	217146.9	1% - 100yr	1376.2	1136.86	1131.51	3.56	2.86	61.58	25.07	90.53	416.91	4.03	1.63	5.35	5.35
Stillwater County	A10	RM 432.60	216656.8	1% - 100yr	1376.2	1136.65	1132.1	3.42	2.89	58.12	30.39	102.29	476.62	3.81	1.97	4.55	4.55
Stillwater County	A10	RM 432.45	215889.7	1% - 100yr	1376.2	1136.33	1132.07	3.13	2.6	51.64	20.74	138.19	704.41	3.11	1.25	4.26	4.26
Stillwater County	A10	RM 432.35	215361.3	1% - 100yr	1376.2	1136.21	1132.33	2.63	1.89	36.76	14.99	159.19	871.23	3.07	1.25	3.88	3.88
Stillwater County	A10	RM 432.20	214585.3	1% - 100yr	1415.84	1135.49	1131.29	3.58	2.88	67.8	20.89	125.07	627.39	3.09	0.95	4.2	4.2
Stillwater County	A10	RM 432.10	214039.1	1% - 100yr	1415.84	1135.25	1130.7	3.28	2.37	56.14	21.82	124.1	721.44	3.18	1.24	4.55	4.55
Stillwater County	A10	RM 432.02	213606.1	1% - 100yr	1415.84	1135.19	1130.52	2.59	2.02	35.8	13.52	161.07	878.37	3.02	1.14	4.67	4.67
Stillwater County	A10	RM 431.87	212811.5	1% - 100yr	1415.84	1134.9	1129.24	2.45	1.94	34.26	15.78	210.92	911.02	2.46	1.13	5.66	5.66
Stillwater County	A10	RM 431.74	212127.4	1% - 100yr	1415.84	1134.76	1129.66	2.13	1.32	23.63	11.15	161.11	943.29	3.27	1.54	5.1	5.1
Stillwater County	A10	RM 431.60	211373.6	1% - 100yr	1415.84	1134.15	1129.96	3.24	2.76	55.35	19.35	134.23	592.49	3.16	1.1	4.19	4.19
Stillwater County	A10	RM 431.49	210820.2	1% - 100yr	1415.84	1133.89	1129.62	3.12	2.49	50.88	16.13	134.24	626.42	3.21	1.01	4.27	4.27
Stillwater County	A10	RM 431.41	210365.9	1% - 100yr	1415.84	1133.49	1129.57	3.48	3.02	64.61	22.99	130.45	462.43	3.03	1.07	3.92	3.92
Stillwater County	A10	RM 431.28	209716.5	1% - 100yr	1415.84	1133.18	1129.79	3.06	2.55	52	19.91	165.04	541.28	2.69	1.02	3.39	3.39
Stillwater County	A10	RM 431.14	208918.5	1% - 100yr	1415.84	1132.82	1129.82	2.55	2.47	37.65	19.18	132.52	476.88	2.35	1.2	4.07	4.07
Stillwater County	A10	RM 431.03	208358.8	1% - 100yr	1415.84	1132.44	1128.56	2.85	2.89	48.29	39.88	128.58	334.59	2.18	1.8	3.88	3.88
Stillwater County	A10	RM 430.93	207821.9	1% - 100yr	1415.84	1132.31	1128.76	2.39	2.09	32.37	23.87	126.38	489.23	2.53	1.88	3.54	3.54
Stillwater County	A10	RM 430.83	207325.6	1% - 100yr	1415.84	1132.07	1127.66	2.53	2.22	34.91	22.87	160.64	434.42	2.79	1.83	4.41	4.41
Stillwater County	A10	RM 430.70	206629.1	1% - 100yr	1415.84	1131.96	1126.9	2.03	1.75	21.47	11.16	150.14	556.04	3.49	1.82	5.06	5.06
Stillwater County	A10	RM 430.59	206064.9	1% - 100yr	1415.84	1131.83	1127.2	2.22	1.69	24.47	10.32	134.54	629.22	3.72	1.57	4.63	4.63
Stillwater County	A10	RM 430.51	205629.5	1% - 100yr	1415.84	1131.41	1126.28	3.22	2.5	51.92	18.12	107.05	565.51	3.64	1.26	5.12	5.12
Stillwater County	A10	RM 430.43	205204.2	1% - 100yr	1415.84	1131.14	1126.08	3.41	2.57	57.67	18.53	98.33	519.75	3.77	1.2	5.06	5.06
Stillwater County	A10	RM 430.34	204728.4	1% - 100yr	1415.84	1130.71	1126.07	3.77	3.05	72.9	25.23	103.36	507.39	3.38	1.17	4.64	4.64
Stillwater County	A11	RM 430.23	204119.7	1% - 100yr	1415.84	1130.65	1126.63	2.63	2.14	36.88	18.82	169.33	699.94	3.01	1.53	4.02	4.02
Stillwater County	A11	RM 430.12	203479.6	1% - 100yr	1415.84	1130.43	1126.96	2.78	2.18	41.9	19.89	112.27	793.75	2.88	1.36	3.9	3.9
Stillwater County	A11	RM 430.04	202968.2	1% - 100yr	1415.84	1130.16	1127.24	2.92	2.38	47.56	21.58	112.83	788.24	2.67	1.2	3.52	3.52
Stillwater County	A11	RM 429.95	202589.5	1% - 100yr	1415.84	1130	1126.33	2.59	2.07	38.25	18.86	142.06	793.15	2.5	1.22	3.67	3.67
Stillwater County	A11	RM 429.88	202224.7	1% - 100yr	1415.84	1129.83	1125.62	2.6	1.9	37.28	17.84	127.52	781.89	2.75	1.31	4.21	4.21
Stillwater County	A11	RM 429.78	201933.6	1% - 100yr	1415.84	1129.54	1123.72	3.09	2.07	49.17	18.91	92.39	658.05	3.25	1.24	5.82	5.82
Stillwater County	A11	RM 429.69	201539.9	1% - 100yr	1415.84	1128.96	1123.39	3.9	2.89	82.48	33.39	91.42	451.62	2.88	1.16	5.57	5.57
Stillwater County	A11	RM 429.58	200961.9	1% - 100yr	1415.84	1128.74	1124.69	2.97	1.97	49.35	24.02	116.91	574.72	2.57	1.25	4.05	4.05

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	1% - 100yr	1415.84	1128.33	1125.15	2.32	1.81	31.54	18.63	184.76	575.56	2.3	1.36	3.9	3.9
Stillwater County	A11	RM 429.28	199644.1	1% - 100yr	1415.84	1128.04	1123.59	2.51	1.89	35.75	18.33	148.58	582.02	2.52	1.29	4.45	4.45
Stillwater County	A11	RM 429.18	199152	1% - 100yr	1415.84	1127.85	1124.66	2.18	1.74	28	16.29	144.34	622.3	2.24	1.31	3.94	3.94
Stillwater County	A11	RM 429.10	198708.6	1% - 100yr	1415.84	1127.5	1124.26	2.79	2.12	45.02	22.39	87.69	572.26	2.36	1.17	3.92	3.92
Stillwater County	A11	RM 429.00	198203.8	1% - 100yr	1415.84	1127.32	1123.47	2.33	1.95	32.22	21.7	124.54	496.26	2.17	1.47	3.85	3.85
Stillwater County	A11	RM 428.89	197650.5	1% - 100yr	1415.84	1127.1	1121.26	2.53	1.93	33.96	17.9	150.77	452.14	3.09	1.62	5.84	5.84
Stillwater County	A11	RM 428.81	197194.1	1% - 100yr	1415.84	1126.92	1121.47	2.78	2	39.09	19.32	98.54	409.9	3.54	1.75	5.45	5.45
Stillwater County	A11	RM 428.66	196404.4	1% - 100yr	1415.84	1126.75	1122.31	2.15	1.8	25.55	16.42	204.39	654.1	2.71	1.74	4.44	4.44
Stillwater County	A11	RM 428.52	195702.6	1% - 100yr	1415.84	1126.47	1122.1	2.34	2.02	30.39	19.24	206.65	658.62	2.7	1.7	4.37	4.37
Stillwater County	A11	RM 428.44	195293.8	1% - 100yr	1415.84	1126.22	1121.18	2.76	2.3	39.49	20.77	146.38	645.16	3.25	1.71	5.04	5.04
Stillwater County	A11	RM 428.39	195075.5	1% - 100yr	1415.84	1126.01	1120.72	3.13	2.55	50.38	24.21	122.37	603.27	3.39	1.63	5.29	5.29
Stillwater County	A11	RM 428.33	194724.6	1% - 100yr	1415.84	1125.91	1121.22	2.89	2.45	43.08	24.74	135.66	700.7	3.33	1.91	4.69	4.69
Stillwater County	A11	RM 428.28	194450.8	1% - 100yr	1415.84	1125.81	1121.2	2.82	2.51	41.63	27.51	147.26	665.84	3.21	2.12	4.61	4.61
Stillwater County	A11	RM 428.23	194235.2	1% - 100yr	1415.84	1125.71	1120.74	2.86	2.7	42.15	34.3	143.06	611.77	3.35	2.73	4.96	4.96
Stillwater County	A11	RM 428.20	194033.4	1% - 100yr	1415.84	1125.65	1120.37	2.82	2.65	39.5	33.09	121.13	567.75	3.75	3.14	5.28	5.28
Stillwater County			193969.6	1% - 100yr	Bridge												
Stillwater County	A11	RM 428.17	193915	1% - 100yr	1415.84	1125.39	1120.32	2.97	2.78	43.96	36.92	115.85	561.53	3.69	3.1	5.07	5.07
Stillwater County			193871.1	1% - 100yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	1% - 100yr	1415.84	1125.2	1120.23	2.99	2.76	45.12	36.77	114.51	570.35	3.57	2.9	4.97	4.97
Stillwater County	A11	RM 428.11	193602.7	1% - 100yr	1415.84	1125.17	1119.42	2.71	2.47	37.98	28.89	131.19	571.7	3.36	2.54	5.75	5.75
Stillwater County	A11	RM 428.09	193436.6	1% - 100yr	1415.84	1125.04	1119.9	2.95	2.62	45.38	30.43	120.2	563.54	3.27	2.18	5.14	5.14
Stillwater County	A11	RM 428.05	193246.1	1% - 100yr	1415.84	1124.99	1120.1	2.78	2.41	40.59	25.18	126.82	588.76	3.19	1.97	4.89	4.89
Stillwater County	A11	RM 428.00	192989.8	1% - 100yr	1415.84	1124.92	1120.28	2.63	2.21	35.81	22.17	128.45	616.58	3.33	2.05	4.64	4.64
Stillwater County	A11	RM 427.95	192728.8	1% - 100yr	1415.84	1124.87	1119.57	2.47	1.96	31.05	17.29	134.13	632.05	3.45	1.91	5.3	5.3
Stillwater County	A11	RM 427.88	192333.2	1% - 100yr	1415.84	1124.61	1119.27	3	2.25	45.18	22.47	105.31	688.69	3.68	1.82	5.34	5.34
Stillwater County	A11	RM 427.83	192088.8	1% - 100yr	1415.84	1124.48	1119.18	3.08	2.48	47.57	27.48	105.19	661.6	3.69	2.11	5.3	5.3
Stillwater County	A11	RM 427.76	191724.1	1% - 100yr	1415.84	1124.35	1119.07	2.99	2.71	43.74	34.56	101.84	520.54	3.92	3.08	5.28	5.28
Stillwater County			191581.1	1% - 100yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	1% - 100yr	1415.84	1123.9	1118.71	3.39	3.25	58.45	49.38	114.36	192.33	3.52	2.97	5.19	5.19
Stillwater County	A11	RM 427.65	191155.9	1% - 100yr	1415.84	1123.87	1118.58	2.67	2.49	35.36	27.92	139.89	701.07	3.73	2.95	5.29	5.29
Stillwater County	A11	RM 427.53	190509.6	1% - 100yr	1415.84	1123.3	1117.37	3.61	3.38	63.32	40.47	96.4	559.39	4.03	2.56	5.93	5.93
Stillwater County	A11	RM 427.41	189886.1	1% - 100yr	1415.84	1123.05	1118.73	3.35	3.25	56.45	39.85	115.97	509.18	3.63	2.56	4.32	4.32
Stillwater County	A11	RM 427.29	189253.3	1% - 100yr	1415.84	1122.75	1119.12	3.09	2.99	53.82	41.65	176.94	434.61	2.57	1.99	3.63	3.63
Stillwater County	A11	RM 427.17	188639.5	1% - 100yr	1415.84	1122.55	1118.44	2.56	2.18	36.52	25.29	197.68	476.32	2.64	1.83	4.11	4.11
Stillwater County	A11	RM 427.09	188179.7	1% - 100yr	1415.84	1122.13	1118.34	3.24	2.38	55.53	24.22	127.59	483.66	3.12	1.36	3.79	3.79
Stillwater County	A11	RM 427.00	187745.4	1% - 100yr	1415.84	1122.01	1117.71	2.82	2.15	42.58	26.29	143.34	501.06	2.98	1.85	4.3	4.3
Stillwater County	A11	RM 426.92	187309.3	1% - 100yr	1415.84	1121.84	1117.32	2.57	2.2	37.38	26.86	205.73	417.75	2.51	1.81	4.52	4.52
Stillwater County	A11	RM 426.86	186960.4	1% - 100yr	1415.84	1121.71	1116.77	2.43	2.14	32.99	23.92	210.76	442.39	2.65	1.93	4.94	4.94
Stillwater County	A11	RM 426.75	186401.3	1% - 100yr	1415.84	1121.5	1116.11	2.5	2.15	33.96	25.59	182.86	427.71	2.88	2.18	5.39	5.39
Stillwater County	A11	RM 426.67	185983.5	1% - 100yr	1415.84	1121.23	1115.84	2.84	2.7	40.83	28.59	138.91	346.98	3.55	2.49	5.39	5.39
Stillwater County	A11	RM 426.59	185580.4	1% - 100yr	1415.84	1120.81	1115.47	3.52	3.27	61.76	38.21	106	192.28	3.74	2.32	5.34	5.34
Stillwater County	A11	RM 426.52	185166.5	1% - 100yr	1415.84	1120.61	1115.54	3.48	3.46	60.24	48.71	108.17	135.06	3.76	3.03	5.07	5.07
Stillwater County	A11	RM 426.43	184738.3	1% - 100yr	1415.84	1120.39	1115.89	3.45	3.38	60.55	52.14	116.9	139.04	3.49	3.01	4.5	4.5
Stillwater County	A11	RM 426.32	184158.4	1% - 100yr	1415.84	1120.11	1116.39	3.31	3.3	57.15	55.18	133.45	138.26	3.21	3.1	3.72	3.72
Stillwater County	A11	RM 426.20	183517.2	1% - 100yr	1415.84	1119.83	1116.07	2.84	2.81	47.19	44.59	216.15	231.6	2.29	2.17	3.76	3.76
Stillwater County	A11	RM 426.11	183030.7	1% - 100yr	1415.84	1119.66	1115.37	2.35	2.31	30.74	29.92	270.07	303.69	2.21	2.16	4.29	4.29
Stillwater County	A11	RM 426.00	182442.5	1% - 100yr	1415.84	1119.45	1115.74	2.25	2.06	28.96	25.13	243.38	419.66	2.44	2.12	3.71	3.71
Stillwater County	A11	RM 425.89	181895	1% - 100yr	1415.84	1119.18	1115.1	2.51	2.3	33.93	20.86	187.02	468.56	2.95	1.82	4.08	4.08
Stillwater County	A11	RM 425.72	181043.5	1% - 100yr	1415.84	1118.79	1113.77	2.78	2.41	40.17	22.28	151.05	442.74	3.26	1.8	5.02	5.02
Stillwater County	A11	RM 425.58	180310.5	1% - 100yr	1415.84	1118.18	1112.19	3.58	3.1	62.8	23.93	98.64	378.92	3.91	1.48	5.99	5.99
Stillwater County	A11	RM 425.46	179669.9	1% - 100yr	1415.84	1117.64	1112.78	4.01	3.42	81.64	36.1	96.07	309.72	3.51	1.54	4.86	4.86
Stillwater County	A11	RM 425.34	179022.4	1% - 100yr	1415.84	1117.59	1113.64	2.78	2.43	40.86	26.83	137.83	287.16	3.1	2.03	3.95	3.95
Stillwater County	A11	RM 425.24	178485.9	1% - 100yr	1415.84	1117.34	1114.19	2.74	2.42	42.13	33.15	126.45	382.55	2.57	2.03	3.2	3.2
Stillwater County	A11	RM 425.18	178205.8	1% - 100yr	1415.84	1117.06	1113.81	3.04	2.8	52.8	43.29	128.32	251.08	2.45	2.02	3.75	3.75
Stillwater County	A11	RM 425.11	177826.8	1% - 100yr	1415.84	1116.78	1113.29	2.98	2.86	50.55	36.61	120.72	273.11	2.5	1.81	4.49	4.49
Stillwater County	A11	RM 425.04	177454.7	1% - 100yr	1415.84	1116.58	1112.86	3.01	2.57	49.11	33.99	106.76	278.26	2.86	1.98	4.11	4.11
Stillwater County	A11	RM 424.97	177098.9	1% - 100yr	1415.84	1116.23	1113.11	3.3	2.96	61.03	39.69	106.81	284.48	2.61	1.7	3.21	3.21
Stillwater County	A11	RM 424.89	176675.9	1% - 100yr	1415.84	1116.1	1112.27	2.5	2.3	35.5	29.29	136.62	381.4	2.47	2.05	5.3	5.3
Stillwater County	A11	RM 424.81	176242.8	1% - 100yr	1415.84	1115.66	1112.25	2.94	2.87	53.55	49.52	139.22	410.33	1.92	1.78	3.66	3.66
Stillwater County	A11	RM 424.70	175789.3	1% - 100yr	1415.84	1115.52	1111.91	2.44	2.26	33.39	27.65	161.26	502.07	2.61	2.16	3.61	3.61

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	1% - 100yr	1415.84	1115.18	1111.34	2.81	2.41	45.15	33.34	132.39	410.25	2.45	1.81	3.84	3.84
Stillwater County	A11	RM 424.51	174723.2	1% - 100yr	1415.84	1114.97	1110.93	2.53	2.27	38.43	29.78	140.84	492.89	2.1	1.64	4.04	4.04
Stillwater County	A11	RM 424.38	174051	1% - 100yr	1415.84	1114.56	1110.98	2.73	2.28	44.47	24.52	135.76	636.57	2.14	1.18	3.58	3.58
Stillwater County	A11	RM 424.30	173607.9	1% - 100yr	1415.84	1114.32	1110.75	2.68	2.09	45.08	25.7	158.99	721.65	1.85	1.06	3.57	3.57
Stillwater County	A11	RM 424.21	173153.7	1% - 100yr	1415.84	1114.06	1110.74	2.33	1.8	33.33	17	188.24	846.52	1.98	1.01	3.32	3.32
Stillwater County	A11	RM 424.13	172713.5	1% - 100yr	1415.84	1113.85	1110.43	2.36	1.5	34.02	17.94	103.4	888.51	2.01	1.06	3.5	3.5
Stillwater County	A11	RM 424.05	172309.3	1% - 100yr	1415.84	1113.7	1110.18	1.83	1.35	20.55	12.58	155.55	856.75	1.99	1.22	3.52	3.52
Stillwater County	A11	RM 423.98	171892.1	1% - 100yr	1415.84	1113.62	1110.15	1.65	1.22	15.61	8.98	252.66	835.36	2.41	1.39	3.46	3.46
Stillwater County	A11	RM 423.90	171454.2	1% - 100yr	1415.84	1113.44	1109.55	2.2	1.46	26.99	12.55	156.66	783.11	2.69	1.24	3.88	3.88
Stillwater County	A11	RM 423.84	171147.5	1% - 100yr	1415.84	1113.35	1109.08	2.19	1.38	25.22	11.2	126.81	738.91	3.14	1.39	4.27	4.27
Stillwater County	A11	RM 423.74	170686.3	1% - 100yr	1415.84	1113.31	1108.91	1.71	1.12	15.21	8.46	124.33	689.19	3.32	1.84	4.4	4.4
Stillwater County	A11	RM 423.69	170436.3	1% - 100yr	1415.84	1113.17	1108.49	2.31	1.51	27.21	13.34	88.65	561.27	3.45	1.67	4.67	4.67
Stillwater County	A11	RM 423.57	169782.9	1% - 100yr	1415.84	1112.87	1108.2	2.44	1.96	30.74	17.3	159.21	655.7	3.36	1.89	4.67	4.67
Stillwater County	A11	RM 423.47	169296.5	1% - 100yr	1415.84	1112.41	1107.67	3.3	2.67	55.58	21.2	120.55	570.92	3.45	1.31	4.74	4.74
Stillwater County	A11	RM 423.39	168860.7	1% - 100yr	1415.84	1112.06	1107.7	3.63	2.85	67.35	23	107.8	520.26	3.44	1.17	4.36	4.36
Stillwater County	A11	RM 423.27	168178	1% - 100yr	1415.84	1111.47	1107.36	3.85	3.27	78.94	28.07	118.28	404.71	3.02	1.07	4.11	4.11
Stillwater County	A12	RM 423.17	167687.7	1% - 100yr	1415.84	1111.32	1107.46	3.1	2.61	52.6	26.12	153.74	446.78	2.81	1.39	3.86	3.86
Stillwater County	A12	RM 423.08	167239.6	1% - 100yr	1415.84	1111.08	1107.21	3.11	2.53	52.84	26.73	129.63	500.09	2.79	1.41	3.87	3.87
Stillwater County	A12	RM 423.01	166844.5	1% - 100yr	1415.84	1110.88	1106.84	2.9	2.41	48.18	28.78	144.56	505.98	2.43	1.45	4.04	4.04
Stillwater County	A12	RM 422.91	166338	1% - 100yr	1415.84	1110.51	1106.54	3.18	2.52	54.34	26.44	112.6	470.71	2.95	1.44	3.97	3.97
Stillwater County	A12	RM 422.80	165757.6	1% - 100yr	1415.84	1110.2	1106.83	3.02	2.52	50.54	23.82	147.37	511.13	2.68	1.26	3.37	3.37
Stillwater County	A12	RM 422.70	165279.2	1% - 100yr	1415.84	1110.12	1105.79	2.28	1.82	29.24	17.65	203.12	578.94	2.56	1.55	4.33	4.33
Stillwater County	A12	RM 422.63	164895.4	1% - 100yr	1415.84	1110.03	1105.43	2.12	1.6	25.1	14.85	179.41	642.2	2.59	1.53	4.6	4.6
Stillwater County	A12	RM 422.53	164348.1	1% - 100yr	1415.84	1109.85	1104.76	2.18	1.7	25.88	14.56	167.27	651.52	2.83	1.58	5.09	5.09
Stillwater County	A12	RM 422.39	163609.2	1% - 100yr	1415.84	1109.54	1104.22	2.6	2.01	34.2	15.63	132.53	491.77	3.56	1.62	5.32	5.32
Stillwater County	A12	RM 422.30	163120.4	1% - 100yr	1415.84	1109.02	1104.18	3.47	3.07	60.53	23.65	109.03	328.23	3.64	1.42	4.84	4.84
Stillwater County	A12	RM 422.19	162534.3	1% - 100yr	1415.84	1108.84	1103.72	3.08	2.75	47.48	24.46	122.19	274.21	3.67	1.88	5.12	5.12
Stillwater County	A12	RM 422.08	161934.5	1% - 100yr	1415.84	1108.26	1104.18	3.77	3.49	74.03	41.69	113.23	222.06	3.25	1.83	4.08	4.08
Stillwater County	A12	RM 421.98	161402.1	1% - 100yr	1415.84	1108.15	1103.86	2.99	2.87	46.11	35.32	142.02	194.62	3.3	2.53	4.29	4.29
Stillwater County	A12	RM 421.90	161037.7	1% - 100yr	1415.84	1108	1103.14	2.9	2.89	45.4	41.52	168.6	184.89	2.9	2.65	4.86	4.86
Stillwater County	A12	RM 421.86	160799.3	1% - 100yr	1415.84	1107.89	1102.54	2.82	2.77	44.51	35.77	193.24	283.62	2.59	2.08	5.35	5.35
Stillwater County	A12	RM 421.81	160535.9	1% - 100yr	1415.84	1107.77	1102.38	2.69	2.65	41.8	32.65	222.06	320.02	2.37	1.85	5.39	5.39
Stillwater County	A12	RM 421.77	160279.4	1% - 100yr	1415.84	1107.58	1102.41	2.89	2.62	47.66	27.98	182.53	370.19	2.49	1.46	5.17	5.17
Stillwater County	A12	RM 421.69	159875.5	1% - 100yr	1415.84	1107.44	1102.56	2.76	2.18	38.39	16.38	130.2	425.84	3.59	1.53	4.88	4.88
Stillwater County	A12	RM 421.60	159411.4	1% - 100yr	1415.84	1107.06	1103.26	3.35	2.7	60.48	26.11	131.13	418.65	2.9	1.25	3.79	3.79
Stillwater County	A12	RM 421.53	159038	1% - 100yr	1415.84	1106.64	1102.81	3.71	3.22	77.62	35.71	133.17	374.57	2.55	1.17	3.83	3.83
Stillwater County	A12	RM 421.45	158590.5	1% - 100yr	1415.84	1106.5	1103.26	2.9	2.53	47.67	26.65	155.02	445.41	2.54	1.42	3.24	3.24
Stillwater County	A12	RM 421.32	157930.2	1% - 100yr	1415.84	1106.1	1102.82	2.86	2.59	49.61	34.46	98.6	388.55	2.04	1.42	3.28	3.28
Stillwater County	A12	RM 421.24	157513	1% - 100yr	1415.84	1105.84	1103.05	2.64	2.34	43.99	34.86	126.79	418.68	1.81	1.44	3.36	3.36
Stillwater County	A12	RM 421.13	156951.5	1% - 100yr	1415.84	1105.67	1100.38	2.24	1.96	29.2	21.35	118.8	444.62	2.29	1.67	5.29	5.29
Stillwater County	A12	RM 421.05	156536.5	1% - 100yr	1415.84	1105.58	1102.11	1.9	1.73	21.11	17.11	103.99	545.15	2.26	1.83	3.47	3.47
Stillwater County	A12	RM 420.94	155960.1	1% - 100yr	1415.84	1105.31	1101.68	2.17	2.02	25.19	16.64	213.29	480.93	2.97	1.97	3.63	3.63
Stillwater County	A12	RM 420.85	155473.6	1% - 100yr	1415.84	1104.63	1100.98	3.76	2.74	80.42	40.17	135.54	439.63	2.49	1.24	3.65	3.65
Stillwater County	A12	RM 420.75	154957.2	1% - 100yr	1415.84	1104.53	1099.95	2.69	1.98	39.49	19.78	157.51	509.75	2.81	1.41	4.58	4.58
Stillwater County	A12	RM 420.66	154483	1% - 100yr	1415.84	1104.37	1099.89	2.49	1.8	32.84	19.01	165.17	591.47	3.05	1.76	4.48	4.48
Stillwater County	A12	RM 420.58	154037.5	1% - 100yr	1415.84	1103.99	1100.13	3.21	2.21	53.96	22.43	122.25	516.52	3.18	1.32	3.85	3.85
Stillwater County	A12	RM 420.52	153691.5	1% - 100yr	1415.84	1103.82	1099.7	3.12	2.14	51.85	19.62	131.23	577.97	3.03	1.14	4.12	4.12
Stillwater County	A12	RM 420.46	153398	1% - 100yr	1415.84	1103.56	1099.36	3.32	2.5	60.14	23	138.59	528.73	2.81	1.07	4.2	4.2
Stillwater County	A12	RM 420.38	152998.3	1% - 100yr	1415.84	1103.47	1099.19	2.66	1.91	39.38	18.17	177.26	615.55	2.63	1.21	4.28	4.28
Stillwater County	A12	RM 420.30	152566.4	1% - 100yr	1415.84	1103.42	1099.43	2.01	1.47	22.78	13.69	230.5	627.34	2.58	1.55	3.99	3.99
Stillwater County	A12	RM 420.21	152106.2	1% - 100yr	1415.84	1103.26	1098.69	2.1	1.61	25.55	17.27	238.7	555.75	2.35	1.59	4.57	4.57
Stillwater County	A12	RM 420.15	151738.6	1% - 100yr	1415.84	1103.15	1098.38	2.02	1.75	20.39	13.87	260.73	473.39	2.54	1.72	4.77	4.77
Stillwater County	A12	RM 420.08	151399.3	1% - 100yr	1415.84	1103	1097.97	2.26	1.96	27.3	15.3	196.82	424.17	3.04	1.7	5.03	5.03
Stillwater County	A12	RM 420.03	151123.2	1% - 100yr	1415.84	1102.84	1097.96	2.61	2.02	34.59	16.81	142.7	411.25	3.52	1.7	4.88	4.88
Stillwater County	A12	RM 419.96	150779.4	1% - 100yr	1415.84	1102.64	1098.1	2.93	2.1	43.92	20.12	128.1	435.45	3.39	1.55	4.54	4.54
Stillwater County	A12	RM 419.91	150511.3	1% - 100yr	1415.84	1102.31	1097.83	3.5	2.55	61.21	21.16	102.77	438.36	3.69	1.27	4.48	4.48
Stillwater County	A12	RM 419.85	150192.4	1% - 100yr	1415.84	1101.91	1097.85	3.96	2.94	82.51	29.15	106.79	432.61	3.17	1.11	4.06	4.06
Stillwater County	A12	RM 419.78	149807.6	1% - 100yr	1415.84	1101.79	1097.13	3.48	2.4	61.3	24.15	104.97	422.11	3.57	1.4	4.66	4.66
Stillwater County	A12	RM 419.70	149371.5	1% - 100yr	1415.84	1101.5	1097.73	3.47	2.76	65.34	29.72	138.38	398	2.84	1.29	3.77	3.77
Stillwater County	A12	RM 419.63	149047.6	1% - 100yr	1415.84	1101.38	1097.92	3.04	2.56	51.05	25.95	168.37	404.57	2.7	1.37	3.46	3.46

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	1% - 100yr	1415.84	1101.04	1097.22	3.16	2.48	57.92	33.25	136.75	423.97	2.34	1.35	3.82	3.82
Stillwater County	A12	RM 419.46	148117.9	1% - 100yr	1415.84	1100.86	1097.34	2.74	2.15	43.24	25.22	133.46	466.79	2.42	1.41	3.78	3.78
Stillwater County	A12	RM 419.38	147728.5	1% - 100yr	1415.84	1100.7	1097.36	2.31	1.95	31.39	23.82	149.23	425.71	2.25	1.71	3.34	3.34
Stillwater County	A12	RM 419.31	147342.9	1% - 100yr	1415.84	1100.61	1096.9	1.98	1.78	21.23	16.85	114.45	349.67	2.86	2.28	3.71	3.71
Stillwater County	A12	RM 419.19	146720.3	1% - 100yr	1415.84	1100.46	1096.42	1.8	1.91	17.45	14.52	106.51	360.82	2.92	2.44	6.06	6.06
Stillwater County	A12	RM 419.10	146243.9	1% - 100yr	1415.84	1100.32	1095.09	2.25	1.99	24.74	12.53	156.37	479.36	3.9	1.97	5.23	5.23
Stillwater County	A12	RM 419.03	145859.8	1% - 100yr	1415.84	1099.97	1095.88	3.02	2.75	50.73	27.46	172.66	399.36	2.66	1.44	4.09	4.09
Stillwater County	A12	RM 418.95	145435.3	1% - 100yr	1415.84	1099.76	1095.15	2.82	2.49	46.18	25.12	207.31	512.07	2.34	1.27	4.61	4.61
Stillwater County	A12	RM 418.84	144864	1% - 100yr	1415.84	1099.41	1094.92	2.79	2.34	46.44	23.77	222.59	570.32	2.17	1.11	4.49	4.49
Stillwater County	A12	RM 418.69	144066	1% - 100yr	1415.84	1098.84	1095.29	3.01	2.33	52.76	24.68	169.31	652.19	2.3	1.07	3.55	3.55
Stillwater County	A12	RM 418.57	143452.8	1% - 100yr	1415.84	1098.37	1095.1	3.17	2.41	58.4	22.83	135.5	650.92	2.33	0.91	3.27	3.27
Stillwater County	A12	RM 418.49	143008.1	1% - 100yr	1415.84	1098.31	1094.94	2.2	1.53	27.32	13.55	169.36	848.17	2.55	1.27	3.37	3.37
Stillwater County	A12	RM 418.35	142310.9	1% - 100yr	1415.84	1097.85	1093.15	2.97	1.92	50.46	20.93	129.02	746.49	2.39	0.99	4.7	4.7
Stillwater County	A12	RM 418.25	141740.8	1% - 100yr	1415.84	1097.63	1093.71	2.24	1.64	29.9	19.63	178.18	682.45	2.14	1.41	3.92	3.92
Stillwater County	A12	RM 418.08	140894.8	1% - 100yr	1415.84	1097.34	1092.65	2.22	1.81	27.31	14.43	139.46	580.27	2.69	1.42	4.69	4.69
Stillwater County	A12	RM 417.89	139893.7	1% - 100yr	1415.84	1096.59	1092.75	3.38	2.73	61.73	24.43	128.08	563.95	2.91	1.15	3.84	3.84
Stillwater County	A12	RM 417.79	139376.4	1% - 100yr	1415.84	1096.38	1091.64	3.02	2.31	49.87	23.47	128.51	591.05	2.8	1.31	4.74	4.74
Stillwater County	A12	RM 417.65	138633.4	1% - 100yr	1415.84	1095.93	1091.57	3.3	2.63	56.13	27.85	97.66	405.72	3.32	1.64	4.36	4.36
Stillwater County	A12	RM 417.54	138089.5	1% - 100yr	1415.84	1095.25	1091.15	4.14	3.41	89.97	46.76	88.36	254.05	3.15	1.64	4.09	4.09
Stillwater County	A12	RM 417.40	137321.3	1% - 100yr	1605.57	1095.03	1091.71	2.87	2.42	46.47	31.33	128.55	442	2.56	1.73	3.32	3.32
Stillwater County	A12	RM 417.30	136818.2	1% - 100yr	1605.57	1094.7	1091.51	2.81	2.53	45.99	30.77	209.14	447.58	2.34	1.56	3.18	3.18
Stillwater County	A12	RM 417.20	136304	1% - 100yr	1605.57	1094.63	1091.27	1.95	1.87	21.34	18.45	205.7	533.59	2.57	2.22	3.36	3.36
Stillwater County	A13	RM 417.09	135706	1% - 100yr	1605.57	1093.98	1090.35	3.32	2.83	63.01	39.74	189.98	390.34	2.45	1.55	3.63	3.63
Stillwater County	A13	RM 417.01	135303.6	1% - 100yr	1605.57	1093.88	1090	2.56	2.34	37.69	28.16	254.49	484.46	2.41	1.8	3.88	3.88
Stillwater County	A13	RM 416.94	134899.8	1% - 100yr	1605.57	1093.45	1089.69	3.17	2.89	51.45	38.26	226.76	388	2.18	1.62	3.76	3.76
Stillwater County	A13	RM 416.85	134457.6	1% - 100yr	1605.57	1093.25	1089.62	2.88	2.39	44.96	24.33	187.15	434.04	2.87	1.55	3.63	3.63
Stillwater County	A13	RM 416.73	133843.5	1% - 100yr	1605.57	1092.78	1089.6	3.17	2.68	58.84	33.54	214.87	460.64	2.28	1.3	3.18	3.18
Stillwater County	A13	RM 416.63	133286.1	1% - 100yr	1605.57	1092.38	1089.3	3.12	2.73	58.67	39.55	134.05	417.39	2.09	1.41	3.08	3.08
Stillwater County	A13	RM 416.52	132717.9	1% - 100yr	1605.57	1092.13	1089.09	2.64	2.02	42.18	26.69	104.23	603.78	2.07	1.32	3.04	3.04
Stillwater County	A13	RM 416.43	132250.3	1% - 100yr	1605.57	1091.83	1088.74	2.47	2.01	37.42	25.81	115.58	623.23	1.98	1.37	3.09	3.09
Stillwater County	A13	RM 416.33	131707.5	1% - 100yr	1605.57	1091.61	1088.02	2.26	1.88	30.37	22.02	132.56	683.14	2.14	1.56	3.59	3.59
Stillwater County	A13	RM 416.22	131140.9	1% - 100yr	1605.57	1091.2	1087.56	3.17	2.28	54.8	28.43	84.28	636.19	2.84	1.47	3.64	3.64
Stillwater County	A13	RM 416.13	130626.3	1% - 100yr	1605.57	1090.86	1086.65	3	2.33	49.37	27.1	148.11	600.12	2.75	1.51	4.21	4.21
Stillwater County	A13	RM 416.04	130164.9	1% - 100yr	1605.57	1090.55	1085.03	3.23	2.12	56.07	24.71	125.49	759.72	2.95	1.3	5.52	5.52
Stillwater County	A13	RM 415.96	129734.7	1% - 100yr	1605.57	1090.51	1085.48	2.42	1.58	30.67	14.43	133.05	920.99	3.16	1.48	5.02	5.02
Stillwater County	A13	RM 415.90	129423.4	1% - 100yr	1605.57	1090.43	1085.77	2.04	1.32	22.33	12.3	159.69	918.64	2.93	1.61	4.66	4.66
Stillwater County	A13	RM 415.83	129071.6	1% - 100yr	1605.57	1090.35	1085.89	1.94	1.32	19.68	11.93	152.97	771.14	3.19	1.93	5.02	5.02
Stillwater County	A13	RM 415.74	128639.5	1% - 100yr	1605.57	1090.14	1084.72	2.47	1.57	30.57	15.42	154.02	800.87	3.65	1.83	5.42	5.42
Stillwater County	A13	RM 415.72	128521.2	1% - 100yr	1605.57	1090.01	1084.8	2.81	1.78	39.31	19.19	132.67	792.06	3.73	1.81	5.21	5.21
Stillwater County	A13	RM 415.65	128106.2	1% - 100yr	1605.57	1089.89	1083.7	2.69	1.92	38.43	24.81	170.19	841.29	3.08	1.99	6.19	6.19
Stillwater County	A13	RM 415.59	127828.3	1% - 100yr	1605.57	1089.58	1083.61	3.23	2.67	53.07	36.47	136.01	766.79	3.48	2.39	5.97	5.97
Stillwater County	A13	RM 415.55	127620.5	1% - 100yr	1605.57	1089.56	1082.84	2.62	2.6	31.94	29.26	132.97	443.45	4.6	4.22	6.71	6.71
Stillwater County			127503	1% - 100yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	1% - 100yr	1605.57	1089.11	1082.96	2.74	2.73	34.45	33.6	122.78	207.9	4.77	4.67	6.15	6.15
Stillwater County	A13	RM 415.50	127340.9	1% - 100yr	1605.57	1088.93	1083.14	3.05	3.05	47.41	44.53	152.45	379.28	3.45	3.24	5.79	5.79
Stillwater County	A13	RM 415.45	127087.4	1% - 100yr	1605.57	1088.54	1083.18	3.67	3.67	74.52	72.28	160.08	485.15	2.73	2.65	5.36	5.36
Stillwater County	A13	RM 415.39	126788	1% - 100yr	1605.57	1088.41	1084.07	3.33	3.26	59.32	49.94	162.04	582.22	2.97	2.5	4.34	4.34
Stillwater County	A13	RM 415.34	126499.1	1% - 100yr	1605.57	1088.31	1084.45	3.21	2.98	55.25	42.64	129.56	636	2.93	2.26	3.86	3.86
Stillwater County	A13	RM 415.25	126040.7	1% - 100yr	1605.57	1088.02	1082.42	3.33	2.94	58.25	33.74	123.59	545.36	3.13	1.81	5.6	5.6
Stillwater County	A13	RM 415.18	125663.1	1% - 100yr	1605.57	1087.88	1083.81	3.04	2.67	48.41	25.69	135.23	513.24	3.2	1.7	4.07	4.07
Stillwater County	A13	RM 415.10	125251.2	1% - 100yr	1605.57	1087.4	1083.01	3.73	3.35	74.02	47.65	111.67	409.5	3.08	1.98	4.39	4.39
Stillwater County	A13	RM 414.97	124585.1	1% - 100yr	1605.57	1087.03	1082.64	3.42	2.86	62.73	40.56	121.02	486.49	2.95	1.91	4.38	4.38
Stillwater County	A13	RM 414.88	124110.1	1% - 100yr	1605.57	1086.75	1083.02	3.28	2.85	57.67	37.68	124.65	446.43	2.98	1.95	3.73	3.73
Stillwater County	A13	RM 414.71	123222	1% - 100yr	1605.57	1086.21	1080.88	3.13	3.1	51.8	43.7	165.46	418.57	3.1	2.61	5.33	5.33
Stillwater County	A13	RM 414.57	122473.6	1% - 100yr	1605.57	1085.59	1081.21	3.59	3.15	69.08	35.77	146.86	407.52	2.98	1.54	4.38	4.38
Stillwater County	A13	RM 414.43	121696.6	1% - 100yr	1605.57	1085.1	1080.49	3.36	2.86	62.75	34.76	170.98	708.05	2.67	1.48	4.61	4.61
Stillwater County	A13	RM 414.21	120527.7	1% - 100yr	1605.57	1084.39	1080.81	2.87	2.53	49.22	33.42	221.72	707.45	2.15	1.47	3.58	3.58
Stillwater County	A13	RM 413.90	118914.7	1% - 100yr	1605.57	1083.03	1079.28	3.45	2.48	65.87	26.36	156.6	600.86	2.69	1.08	3.75	3.75
Stillwater County	A13	RM 413.65	117570.4	1% - 100yr	1605.57	1082.3	1078.15	3.08	1.78	51.13	24.06	142.35	652.39	2.94	1.38	4.15	4.15
Stillwater County	A14	RM 413.44	116446.3	1% - 100yr	1605.57	1081.56	1076.4	3.32	1.87	59.9	20.03	147.72	904	2.84	0.95	5.16	5.16

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	1% - 100yr	1605.57	1081.02	1077.8	3.11	1.82	56.78	25.13	176.76	880.93	2.27	1.01	3.22	3.22
Stillwater County	A14	RM 413.11	114697.4	1% - 100yr	1605.57	1080.5	1077.12	2.78	1.77	44.7	19.68	197.3	941.38	2.38	1.04	3.38	3.38
Stillwater County	A14	RM 412.99	114113.2	1% - 100yr	1605.57	1080.15	1076.41	2.86	1.83	47.63	22.9	190.79	925.19	2.31	1.11	3.74	3.74
Stillwater County	A14	RM 412.88	113533.6	1% - 100yr	1605.57	1079.78	1076.03	2.99	2.12	48.47	21.39	144.99	745.37	2.86	1.26	3.75	3.75
Stillwater County	A14	RM 412.73	112742.6	1% - 100yr	1605.57	1079.3	1074.72	3.05	2.09	52.65	29.58	174.16	699.36	2.5	1.4	4.58	4.58
Stillwater County	A14	RM 412.59	112005.5	1% - 100yr	1605.57	1078.89	1074.72	2.83	2.02	45.4	26.41	198.19	800.88	2.52	1.46	4.17	4.17
Stillwater County	A14	RM 412.49	111442.5	1% - 100yr	1605.57	1078.83	1074.54	2.1	1.59	23.73	11.74	189.08	926.57	2.94	1.45	4.29	4.29
Stillwater County	A14	RM 412.31	110522	1% - 100yr	1605.57	1078.48	1072.96	2.51	1.84	30.46	13.21	144.87	766.68	4.04	1.74	5.52	5.52
Stillwater County	A14	RM 412.19	109955.3	1% - 100yr	1605.57	1077.61	1071.57	4.25	3.36	92.15	34.73	103.6	367.39	3.49	1.3	6.04	6.04
Stillwater County	A14	RM 412.05	109175.2	1% - 100yr	1605.57	1077.31	1072.08	3.52	2.67	62.05	23.19	116.13	490.01	3.66	1.36	5.23	5.23
Stillwater County	A14	RM 411.92	108510.2	1% - 100yr	1605.57	1077.02	1072.88	3.22	3.06	53.06	25.48	146.42	323.15	3.39	1.62	4.14	4.14
Stillwater County	A14	RM 411.81	107950.5	1% - 100yr	1605.57	1076.48	1070.62	3.74	3.74	73.46	73.21	135.94	177.1	3.16	3.15	5.86	5.86
Stillwater County	A14	RM 411.71	107391.9	1% - 100yr	1605.57	1076.18	1070.83	3.56	3.54	62.98	59.69	119.39	190.14	3.77	3.57	5.35	5.35
Stillwater County	A14	RM 411.58	106721	1% - 100yr	1605.57	1075.89	1071.65	3.25	3.15	56.24	39.4	161.95	405.67	3.04	2.13	4.24	4.24
Stillwater County	A14	RM 411.47	106133.7	1% - 100yr	1605.57	1075.6	1071.87	3.14	2.57	52.85	31.27	160.35	386.59	2.94	1.74	3.73	3.73
Stillwater County	A14	RM 411.32	105338.4	1% - 100yr	1605.57	1075.08	1069.29	3.25	2.75	57.01	35.4	163.29	410.32	2.91	1.8	5.79	5.79
Stillwater County	A14	RM 411.14	104374.6	1% - 100yr	1605.57	1074.08	1067.92	4.08	2.96	87.13	34.42	115.23	430.33	3.21	1.26	6.16	6.16
Stillwater County	A14	RM 411.00	103638.4	1% - 100yr	1605.57	1073.59	1069.6	3.64	2.67	74.19	40.39	142.57	422.9	2.62	1.42	3.99	3.99
Stillwater County	A14	RM 410.85	102835.8	1% - 100yr	1605.57	1073.2	1069.92	2.79	2.15	46.65	26.7	83.64	902.96	2.11	1.21	3.28	3.28
Stillwater County	A14	RM 410.74	102286.3	1% - 100yr	1605.57	1072.75	1068.99	3.05	2.13	54.33	28.68	75.92	913.46	2.32	1.21	3.76	3.76
Stillwater County	A14	RM 410.63	101668.3	1% - 100yr	1605.57	1072.5	1068.37	2.54	1.81	35.41	20.51	83.69	1020.68	2.77	1.6	4.13	4.13
Stillwater County	A14	RM 410.52	101115.7	1% - 100yr	1605.57	1072.15	1067.81	2.78	2.21	41.59	26.82	123.09	1028.51	2.93	1.88	4.33	4.33
Stillwater County	A14	RM 410.42	100568.4	1% - 100yr	1605.57	1071.67	1066.66	3.06	2.93	55.03	38.21	149.68	599.33	2.27	1.57	5.01	5.01
Stillwater County	A14	RM 410.33	100099.2	1% - 100yr	1605.57	1071.45	1066.6	2.74	2.38	40.98	27.93	198.78	1027.96	2.82	1.92	4.85	4.85
Stillwater County	A14	RM 410.22	99589.26	1% - 100yr	1605.57	1070.93	1066.94	3.47	2.77	65.63	32.31	153.26	999.44	2.83	1.39	3.99	3.99
Stillwater County	A14	RM 410.12	99057.4	1% - 100yr	1605.57	1070.53	1065.8	3.41	2.78	66.59	41.05	177.15	1055.58	2.42	1.49	4.73	4.73
Stillwater County	A14	RM 410.03	98630.66	1% - 100yr	1605.57	1070.23	1065.33	3.15	2.65	58.19	38.74	207.23	923.86	2.25	1.5	4.9	4.9
Stillwater County	A14	RM 409.99	98385.41	1% - 100yr	1605.57	1069.99	1065.38	3.25	2.62	62.44	38.17	206.55	950.46	2.2	1.34	4.61	4.61
Stillwater County	A14	RM 409.94	98072.09	1% - 100yr	1605.57	1069.87	1065.51	2.8	2.1	44.59	24.65	206.82	1273.96	2.47	1.36	4.36	4.36
Stillwater County	A14	RM 409.87	97717.24	1% - 100yr	1605.57	1069.82	1065.52	2.35	1.56	28.2	12.64	166.7	1399.19	3.42	1.53	4.3	4.3
Stillwater County	A14	RM 409.76	97130.84	1% - 100yr	1605.57	1069.39	1065.37	3.16	2.05	53.17	19.91	146.97	1171.37	3.01	1.13	4.03	4.03
Stillwater County	A14	RM 409.60	96278.7	1% - 100yr	1605.57	1068.46	1064.65	3.92	2.87	91.15	42.93	166.1	568.77	2.18	1.03	3.81	3.81
Stillwater County	A14	RM 409.43	95381.62	1% - 100yr	1605.57	1067.78	1063.55	3.31	2.22	60.72	27.72	135.5	882.05	2.71	1.23	4.23	4.23
Stillwater County	A14	RM 409.24	94405.29	1% - 100yr	1605.57	1067.1	1064.55	2.39	1.89	38.74	27.22	159.47	979.34	1.48	1.04	2.88	2.88
Stillwater County	A14	RM 409.15	93912.54	1% - 100yr	1605.57	1066.71	1064.27	2.17	1.86	30.64	22.1	168.43	726.77	1.65	1.19	4.64	4.64
Stillwater County	A14	RM 408.99	93008.08	1% - 100yr	1605.57	1065.99	1063.94	2.55	2.44	43.58	27.71	163.8	681.73	1.51	0.97	3.45	3.45
Stillwater County	A14	RM 408.84	92229.27	1% - 100yr	1605.57	1065.46	1062.1	2.58	2.45	44.33	31.6	187.92	594.62	1.54	1.1	3.36	3.36
Stillwater County	A14	RM 408.63	91072.98	1% - 100yr	1605.57	1064.95	1061.85	2.11	1.9	26.91	22.71	211.69	495.69	2.07	1.75	3.37	3.37
Stillwater County	A14	RM 408.41	89726.16	1% - 100yr	1605.57	1064.5	1059.04	2.54	2	31.51	16.66	105.48	381.73	3.99	2.1	5.46	5.46
Stillwater County	A14	RM 408.26	88966.66	1% - 100yr	1605.57	1064.22	1058.13	2.71	2.17	35.52	18.94	130.93	342.23	4.07	2.16	6.09	6.09
Stillwater County	A14	RM 408.10	88091.52	1% - 100yr	1605.57	1063.24	1057.78	4.23	3.77	88.53	35.84	98.48	277.53	3.79	1.53	5.46	5.46
Stillwater County	A14	RM 408.02	87720.33	1% - 100yr	1605.57	1063.18	1058.61	3.57	3.04	65.05	32.92	127.15	334.42	3.45	1.74	4.57	4.57
Stillwater County	A14	RM 407.83	86708.48	1% - 100yr	1605.57	1062.6	1058.65	3.14	2.75	58.51	37.13	159.13	422.47	2.17	1.38	3.95	3.95
Stillwater County	A14	RM 407.71	86078.99	1% - 100yr	1605.57	1062.16	1057.9	3.37	2.69	62.1	27.86	120.79	474.21	2.8	1.26	4.25	4.25
Stillwater County	A14	RM 407.61	85508.29	1% - 100yr	1605.57	1061.91	1058.36	2.77	2.4	45.42	29.02	170.8	471.24	2.22	1.42	3.55	3.55
Stillwater County	A14	RM 407.50	84909.3	1% - 100yr	1605.57	1061.65	1058.55	2.61	2.26	41.19	29.64	179.43	474.03	2.08	1.5	3.59	3.59
Stillwater County	A14	RM 407.41	84433.26	1% - 100yr	1605.57	1061.5	1057.85	2.48	1.93	34.98	21.58	122.26	539.45	2.49	1.54	3.84	3.84
Stillwater County	A14	RM 407.36	84180.66	1% - 100yr	1605.57	1061.34	1057.59	2.87	1.97	45.06	23.56	101.75	556.51	2.81	1.47	3.75	3.75
Stillwater County	A14	RM 407.29	83775.88	1% - 100yr	1605.57	1061.02	1057.08	2.52	2.45	37.44	27.58	155.75	395.39	2.25	1.66	4.2	4.2
Stillwater County	A14	RM 407.13	82954.84	1% - 100yr	1605.57	1060.71	1056.27	2.26	2.16	28.92	21.82	280.92	392.85	2.51	1.89	4.44	4.44
Stillwater County	A14	RM 406.98	82156.72	1% - 100yr	1605.57	1060.48	1056.37	2.25	2.08	25.78	17.54	200.47	377.58	3.47	2.36	4.11	4.11
Stillwater County	A14	RM 406.86	81532.92	1% - 100yr	1605.57	1059.58	1055.69	4.11	3.86	87.84	64.23	115.89	172.73	3.29	2.41	3.89	3.89
Stillwater County	A14	RM 406.77	81053.3	1% - 100yr	1605.57	1059.31	1053.84	3.84	3.33	75.16	44.4	112.47	234.48	3.49	2.06	5.47	5.47
Stillwater County	A14	RM 406.64	80405.13	1% - 100yr	1605.57	1059.01	1054.89	3.39	3.11	59.85	39.67	139.62	441.8	3.25	2.15	4.12	4.12
Stillwater County	A14	RM 406.48	79524.79	1% - 100yr	1605.57	1058.55	1054.8	3.04	2.41	50.99	31.43	209.69	579.95	2.19	1.35	3.75	3.75
Stillwater County	A14	RM 406.25	78337.26	1% - 100yr	1605.57	1057.85	1054.03	3.06	2.29	49.9	20.24	146.38	639.81	3.02	1.21	3.82	3.82
Stillwater County	A14	RM 406.08	77409.13	1% - 100yr	1605.57	1057.53	1052.87	2.74	1.76	39.08	16.44	131.8	718.48	3.27	1.36	4.66	4.66
Stillwater County	A14	RM 405.93	76624.91	1% - 100yr	1605.57	1056.69	1052.64	3.82	3.25	74.17	31.56	114.34	335.81	3.5	1.49	4.05	4.05
Stillwater County	A14	RM 405.81	75994.44	1% - 100yr	1605.57	1056.33	1051.93	3.59	3.44	66.97	61.46	133.87	242.79	3.24	2.99	4.4	4.4
Stillwater County	A15	RM 405.77	75764.36	1% - 100yr	1605.57	1056.02	1052.63	3.93	3.61	85.47	65.9	142.49	217.08	2.69	2.08	3.39	3.39

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	1% - 100yr	1605.57	1055.72	1052.06	3.36	2.89	61.73	46.37	82.19	299.64	2.77	2.09	3.65	3.65
Stillwater County	A15	RM 405.61	74883.52	1% - 100yr	1605.57	1055.55	1051.81	3.51	2.67	64.5	34.79	69.55	471.28	3.16	1.71	3.74	3.74
Stillwater County	A15	RM 405.52	74415.92	1% - 100yr	1605.57	1055.1	1051.43	4.04	2.82	85.61	46.89	52.24	498.85	3.2	1.75	3.67	3.67
Stillwater County	A15	RM 405.45	74031.34	1% - 100yr	1605.57	1055.07	1051.1	3.1	2	48.45	29.22	57.4	746.14	3.55	2.15	3.97	3.97
Stillwater County	A15	RM 405.34	73437.72	1% - 100yr	1605.57	1054.58	1050.67	3.33	2.7	57.1	32.2	116.05	675.15	3.33	1.88	3.91	3.91
Stillwater County	A15	RM 405.18	72616.33	1% - 100yr	1605.57	1054.18	1049.45	3.41	2.74	57.05	27.86	94.83	685.29	3.87	1.88	4.73	4.73
Stillwater County	A15	RM 405.09	72171.48	1% - 100yr	1605.57	1054.05	1049.09	2.98	2.58	43.86	25.71	115.98	797.7	3.77	2.21	4.96	4.96
Stillwater County	A15	RM 405.02	71774.52	1% - 100yr	1605.57	1053.59	1048.59	3.87	3.26	73.69	31.81	88.03	446.01	3.85	1.65	5	5
Stillwater County	A15	RM 404.97	71526.86	1% - 100yr	1605.57	1053.56	1048.35	3.32	2.98	54.93	34.88	105.86	809.51	3.73	2.37	5.21	5.21
Stillwater County	A15	RM 404.90	71150.58	1% - 100yr	1605.57	1053.42	1048.99	3.25	2.82	52.84	28.95	104.62	841.7	3.69	2.02	4.43	4.43
Stillwater County	A15	RM 404.84	70801.47	1% - 100yr	1605.57	1053.39	1049.19	2.77	2.28	38.47	19.98	118.04	1087.81	3.68	1.9	4.2	4.2
Stillwater County	A15	RM 404.77	70415.17	1% - 100yr	1605.57	1053.26	1048.51	3.03	2.2	44.67	17.8	86.33	1097.06	4.05	1.59	4.75	4.75
Stillwater County	A15	RM 404.71	70152.7	1% - 100yr	1605.57	1053.21	1048.14	2.71	2.23	35.57	18.93	86.12	1056.59	4.14	2.17	5.07	5.07
Stillwater County	A15	RM 404.59	69477.61	1% - 100yr	1605.57	1052.42	1047.56	3.94	3.32	78.84	23.25	110.64	488.2	3.56	1.03	4.86	4.86
Stillwater County	A15	RM 404.54	69214.33	1% - 100yr	1605.57	1052.36	1047.65	3.49	2.85	63.48	21.74	132.01	536.86	3.29	1.11	4.71	4.71
Stillwater County	A15	RM 404.35	68254.38	1% - 100yr	1605.57	1051.9	1048.18	3.06	2.64	51.59	25.53	147.56	452.34	2.7	1.34	4.13	4.13
Stillwater County	A15	RM 404.23	67606.98	1% - 100yr	1605.57	1051.45	1047.77	3.21	3.13	56.14	50.48	132.49	274.53	2.81	2.55	3.68	3.68
Stillwater County	A15	RM 404.10	66934.17	1% - 100yr	1605.57	1051.1	1047.61	3.02	2.84	48.85	37.05	123.69	501.45	2.96	2.24	3.49	3.49
Stillwater County	A15	RM 403.94	66110.59	1% - 100yr	1605.57	1050.8	1045.27	2.9	2.33	43.73	25.83	113.06	546.11	3.28	1.93	5.53	5.53
Stillwater County	A15	RM 403.85	65604.39	1% - 100yr	1605.57	1050.32	1044.79	3.72	3.07	68.58	44.45	79.41	510.2	3.83	2.46	5.53	5.53
Stillwater County	A15	RM 403.75	65058.55	1% - 100yr	1605.57	1049.58	1046.13	4.43	3.87	107.58	77.7	101.02	276.83	2.81	2.03	3.44	3.44
Stillwater County	A15	RM 403.69	64721.22	1% - 100yr	1605.57	1049.54	1046.02	3.16	3.01	56.07	51.06	135.18	427.77	2.57	2.34	3.52	3.52
Stillwater County	A15	RM 403.62	64341.29	1% - 100yr	1605.57	1049.26	1045.75	3.33	3.09	65.66	51.15	93.29	451.51	2.21	1.73	3.51	3.51
Stillwater County	A15	RM 403.55	63997.04	1% - 100yr	1605.57	1049.15	1045.95	2.76	2.33	44.18	32.6	117.97	500.71	2.37	1.75	3.2	3.2
Stillwater County	A15	RM 403.38	62985.06	1% - 100yr	1605.57	1048.87	1043.43	2.19	1.99	25.58	20.66	194.68	471.75	3.02	2.44	5.44	5.44
Stillwater County	A15	RM 403.24	62260	1% - 100yr	1605.57	1048.5	1043.43	2.7	2.52	36.9	24.37	167.56	476.79	3.52	2.32	5.07	5.07
Stillwater County	A15	RM 403.15	61770.95	1% - 100yr	1605.57	1047.93	1042.51	3.69	3.31	70.67	36.2	130.41	421.5	3.29	1.68	5.42	5.42
Stillwater County	A15	RM 403.05	61263.44	1% - 100yr	1605.57	1047.62	1043.23	3.56	3.28	67.21	39.1	146.94	357.45	3.05	1.77	4.39	4.39
Stillwater County	A15	RM 402.97	60777.65	1% - 100yr	1605.57	1047.38	1043.89	3.16	3.03	55.72	45.11	190.96	341.93	2.64	2.14	3.49	3.49
Stillwater County	A15	RM 402.83	60113.9	1% - 100yr	1605.57	1046.82	1043.49	3.25	3.23	64.42	59.86	246.5	441.63	2	1.86	3.33	3.33
Stillwater County	A15	RM 402.68	59309.8	1% - 100yr	1605.57	1046.32	1042.55	2.78	2.39	44.51	26.32	233.75	834.41	2.39	1.41	3.77	3.77
Stillwater County	A15	RM 402.53	58529.61	1% - 100yr	1605.57	1045.91	1040.51	3.07	1.89	46.29	14.07	121.12	938.19	3.86	1.17	5.4	5.4
Stillwater County	A15	RM 402.37	57665.93	1% - 100yr	1605.57	1045.36	1041.09	3.3	2.35	66.38	31.91	213.78	800.3	2.03	0.98	4.27	4.27
Stillwater County	A15	RM 402.24	56987.42	1% - 100yr	1605.57	1045.25	1040.75	2.1	1.47	24.83	12.85	251.22	958.96	2.55	1.32	4.5	4.5
Stillwater County	A15	RM 402.07	56034.67	1% - 100yr	1605.57	1044.67	1041.1	2.88	2.03	47.77	25.27	204.98	626.28	2.39	1.26	3.57	3.57
Stillwater County	A15	RM 401.87	54972.92	1% - 100yr	1605.57	1044.12	1040.1	2.93	1.85	46.04	19.82	150.47	675.08	2.99	1.28	4.02	4.02
Stillwater County	A15	RM 401.69	54002.29	1% - 100yr	1605.57	1044	1038.43	1.88	1.51	19.04	11.62	248.14	588.87	2.95	1.8	5.57	5.57
Stillwater County	A15	RM 401.55	53267.48	1% - 100yr	1605.57	1043.08	1036.56	4.13	3.2	79.01	24.38	74.7	350.24	4.7	1.43	6.52	6.52
Stillwater County	A15	RM 401.41	52506.25	1% - 100yr	1605.57	1043.03	1037.91	2.89	2.39	42.66	27.91	136.71	370.52	3.47	2.27	5.12	5.12
Stillwater County	A15	RM 401.31	51997.63	1% - 100yr	1605.57	1042.65	1038.08	3.37	2.82	58.31	33.7	119.22	303.42	3.4	1.97	4.57	4.57
Stillwater County	A15	RM 401.17	51259.17	1% - 100yr	1605.57	1042.15	1037.38	3.42	2.98	61.46	30.11	146.36	400.97	3.15	1.54	4.77	4.77
Stillwater County	A15	RM 401.03	50507.04	1% - 100yr	1605.57	1041.73	1036.56	3.42	2.69	58.63	23.45	125.18	412.6	3.62	1.45	5.17	5.17
Stillwater County	A15	RM 400.90	49826.69	1% - 100yr	1605.57	1041.09	1036.25	3.85	3.44	81.91	56.76	150.51	305.32	2.7	1.88	4.84	4.84
Stillwater County	A15	RM 400.74	49002.09	1% - 100yr	1605.57	1040.63	1037.21	3.42	2.48	62.97	35.1	111.86	392.28	2.98	1.65	3.42	3.42
Stillwater County	A15	RM 400.61	48243.95	1% - 100yr	1605.57	1040.4	1035.99	2.51	2.16	34.33	25.46	144.82	357.59	2.82	2.08	4.41	4.41
Stillwater County	A15	RM 400.50	47710.55	1% - 100yr	1605.57	1040.08	1035.67	2.78	2.54	42.11	29.4	149.16	316.4	2.87	2	4.4	4.4
Stillwater County	A15	RM 400.42	47243.72	1% - 100yr	1605.57	1039.71	1034.87	3.32	2.88	56.91	33.46	103.89	284.11	3.36	1.96	4.84	4.84
Stillwater County	A15	RM 400.34	46832.6	1% - 100yr	1605.57	1039.53	1034.91	3.24	2.69	52.71	25.33	95.8	344.11	3.62	1.74	4.62	4.62
Stillwater County	A15	RM 400.25	46335.82	1% - 100yr	1605.57	1039.38	1035.01	2.97	2.38	44.94	24.41	107.99	355.18	3.51	1.9	4.37	4.37
Stillwater County	A15	RM 400.18	45999.89	1% - 100yr	1605.57	1039.22	1034.98	3.03	2.48	47.68	27.54	115.05	342.06	3.3	1.89	4.24	4.24
Stillwater County	A15	RM 400.13	45714.33	1% - 100yr	1605.57	1039.1	1035.2	2.99	2.42	45.95	28.09	122.23	325.13	3.36	2.04	3.9	3.9
Stillwater County	A15	RM 400.11	45623.77	1% - 100yr	1605.57	1039.01	1035.11	3.07	2.47	49.91	32.64	129.57	452	3.11	2.02	3.9	3.9
Stillwater County	A15	RM 400.09	45529.19	1% - 100yr	1605.57	1038.87	1035.05	3.35	2.76	61.08	40.84	128.18	431.67	2.86	1.91	3.82	3.82
Stillwater County	A15	RM 400.03	45177.97	1% - 100yr	1605.57	1038.69	1034.82	3.14	2.8	53.53	43.32	137.4	435.76	2.87	2.32	3.87	3.87
Stillwater County	A15	RM 399.95	44761.86	1% - 100yr	1605.57	1038.43	1033.69	3.09	3.09	48.66	47.98	149.97	365.37	3.47	3.42	4.74	4.74
Stillwater County	A16	RM 399.85	44225.61	1% - 100yr	1605.57	1037.94	1033.63	3.6	3.6	68.71	68.27	144.73	173.45	3.08	3.07	4.31	4.31
Stillwater County	A16	RM 399.74	43664.16	1% - 100yr	1605.57	1037.72	1033.48	3.03	3.03	50.23	49.75	188.33	255.9	2.81	2.8	4.24	4.24
Stillwater County	A16	RM 399.62	43026.17	1% - 100yr	1605.57	1037.41	1033.67	2.82	2.82	44.79	44.43	219.02	389.47	2.6	2.58	3.74	3.74
Stillwater County	A16	RM 399.50	42404.94	1% - 100yr	1605.57	1037.11	1031.89	2.88	2.88	42.94	40.79	167.47	311.44	3.33	3.16	5.22	5.22
Stillwater County	A16	RM 399.39	41801.43	1% - 100yr	1605.57	1036.72	1031.8	3.2	3.2	53.73	51.87	156.53	274.02	3.2	3.09	4.92	4.92

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

1% - 100yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	1% - 100yr	1605.57	1036.39	1031.14	3.38	3.08	60.39	44.45	146.13	245.61	3.11	2.28	5.25	5.25
Stillwater County	A16	RM 399.19	40736.83	1% - 100yr	1605.57	1035.73	1031.46	3.97	3.46	85.18	48.16	134.81	294.84	2.91	1.64	4.27	4.27
Stillwater County	A16	RM 399.09	40202.15	1% - 100yr	1605.57	1035.43	1031.09	3.59	2.98	67.25	31.1	129.05	361.28	3.24	1.49	4.34	4.34
Stillwater County	A16	RM 399.00	39710.39	1% - 100yr	1605.57	1035.26	1031.41	3.14	2.43	53.42	34.13	144.92	361.47	2.86	1.82	3.85	3.85
Stillwater County	A16	RM 398.91	39231.58	1% - 100yr	1605.57	1034.97	1031.73	2.97	2.36	52.87	36.46	180.87	471.89	2.12	1.47	3.24	3.24
Stillwater County	A16	RM 398.80	38666.26	1% - 100yr	1605.57	1034.57	1031.55	2.89	2.24	49.18	32.54	190.97	493.54	2.21	1.47	3.02	3.02
Stillwater County	A16	RM 398.73	38275.64	1% - 100yr	1605.57	1034.32	1030.78	2.77	2.17	38.76	26.19	227.26	547.61	2.01	1.35	3.54	3.54
Stillwater County	A16	RM 398.62	37715.08	1% - 100yr	1605.57	1033.99	1030.19	2.66	2.23	36.82	27.3	210.26	463.5	2.1	1.55	3.8	3.8
Stillwater County	A16	RM 398.51	37115.9	1% - 100yr	1605.57	1033.65	1030.68	2.66	2.25	41.04	27.51	212.08	484.68	2.33	1.56	2.99	2.99
Stillwater County	A16	RM 398.40	36522.49	1% - 100yr	1605.57	1033.48	1028.27	2.26	1.9	24.02	18.55	225.87	482.31	2.27	1.75	5.21	5.21
Stillwater County	A16	RM 398.29	35952.65	1% - 100yr	1605.57	1033.1	1027.62	2.61	2.28	40.96	29.55	282.82	464.91	2.11	1.52	5.48	5.48
Stillwater County	A16	RM 398.17	35320.39	1% - 100yr	1605.57	1032.87	1028.88	2.33	2.13	29.34	18.84	233.17	402.63	2.92	1.87	3.99	3.99
Stillwater County	A16	RM 398.04	34597.07	1% - 100yr	1605.57	1032.57	1027.24	2.43	2.25	40	28.23	256.39	492.29	2.55	1.8	5.33	5.33
Stillwater County	A16	RM 397.95	34133.39	1% - 100yr	1605.57	1032.21	1027.15	2.79	2.65	45.01	33.88	240.56	345.79	2.37	1.78	5.06	5.06
Stillwater County	A16	RM 397.81	33366.95	1% - 100yr	1605.57	1031.95	1027.05	2.36	2.19	30.47	23.27	238.11	369.33	2.81	2.15	4.9	4.9
Stillwater County	A16	RM 397.68	32754.86	1% - 100yr	1605.57	1031.72	1026.97	2.49	2.26	32.4	22.34	195.63	386.77	3.23	2.23	4.75	4.75
Stillwater County	A16	RM 397.56	32104.4	1% - 100yr	1605.57	1030.99	1026.76	3.73	3.36	73.15	36.71	135	640.65	3.14	1.58	4.23	4.23
Stillwater County	A16	RM 397.40	31237.31	1% - 100yr	1605.57	1030.44	1026.27	3.37	2.97	63.63	46.04	176.35	688.3	2.61	1.89	4.17	4.17
Stillwater County	A16	RM 397.17	30082.69	1% - 100yr	1605.57	1029.85	1025.84	2.57	1.97	39.77	24.96	269.26	1023.49	2.09	1.31	4.01	4.01
Stillwater County	A16	RM 396.97	29050.44	1% - 100yr	1605.57	1029.46	1025.61	2.14	1.46	26.33	15.1	280.04	1136.7	2.38	1.36	3.85	3.85
Stillwater County	A16	RM 396.71	27639.86	1% - 100yr	1605.57	1028.87	1022.48	2.85	1.41	41.06	13.22	127.44	1130.17	3.62	1.15	6.39	6.39
Stillwater County	A16	RM 396.62	27103.31	1% - 100yr	1605.57	1028.37	1022.36	3.62	1.97	63.99	14.65	99.61	1036.55	4.01	0.9	6.01	6.01
Stillwater County	A16	RM 396.52	26616.35	1% - 100yr	1605.57	1028.13	1023.41	3.61	1.86	66.22	16.98	108.11	965.02	3.52	0.89	4.72	4.72
Stillwater County	A16	RM 396.29	25423.1	1% - 100yr	1605.57	1027.8	1023.53	2.49	1.53	34.13	14.69	188.51	913.5	2.72	1.17	4.27	4.27
Stillwater County	A16	RM 396.14	24635.78	1% - 100yr	1605.57	1026.87	1022.46	3.92	3.04	85.54	41.25	129.87	580.46	2.66	1.28	4.41	4.41
Stillwater County	A16	RM 396.03	24026.24	1% - 100yr	1605.57	1026.76	1024.1	2.5	1.94	36.59	21.61	186.55	800.64	2.29	1.35	2.66	2.66
Stillwater County	A16	RM 395.89	23301.08	1% - 100yr	1605.57	1026.28	1022.79	2.87	2.01	49.83	25.87	152.52	893.54	2.05	1.07	3.49	3.49
Stillwater County	A16	RM 395.73	22420.29	1% - 100yr	1605.57	1025.92	1022.66	1.71	1.37	17.78	11.25	186.62	1060.19	2.07	1.3	3.26	3.26
Stillwater County	A16	RM 395.64	21923.33	1% - 100yr	1605.57	1025.67	1022.13	2.28	1.51	30.38	13.95	144.53	1204.83	2.28	1.04	3.84	3.84
Stillwater County	A16	RM 395.57	21526.11	1% - 100yr	1605.57	1025.24	1021.61	3.12	1.86	53.99	18.04	78.2	1301.62	2.7	0.9	3.63	3.63
Stillwater County	A16	RM 395.48	21053.74	1% - 100yr	1605.57	1024.89	1021.89	2.76	2.09	47.09	22.58	115.65	1091.07	1.92	0.92	3	3
Stillwater County	A16	RM 395.36	20532.68	1% - 100yr	1605.57	1024.63	1021.53	2.38	1.81	33.18	14.79	131.95	1125.13	2.29	1.01	3.1	3.1
Stillwater County	A16	RM 394.98	18666.37	1% - 100yr	1605.57	1024.02	1020.31	2.94	2.07	49.82	20.31	111.01	926.36	2.37	0.97	3.71	3.71
Stillwater County	A16	RM 394.80	17678.79	1% - 100yr	1605.57	1023.66	1019.23	2.72	2.14	43.82	25.09	140.79	650.12	2.2	1.26	4.43	4.43
Stillwater County	A16	RM 394.71	17254.4	1% - 100yr	1605.57	1023.46	1019.74	2.42	2	33.49	16.94	146.7	708.87	2.44	1.23	3.72	3.72
Stillwater County	A16	RM 394.65	16921.48	1% - 100yr	1605.57	1023.21	1019.93	2.42	2.2	35.55	21.86	172.31	735.38	2.05	1.26	4.21	4.21
Stillwater County	A16	RM 394.59	16622.61	1% - 100yr	1605.57	1022.81	1019.92	2.53	2.5	41.68	32.9	172.46	671.68	1.65	1.3	3.24	3.24
Stillwater County	A16	RM 394.53	16295.21	1% - 100yr	1605.57	1022.56	1019.83	2.43	2.22	37.47	30.21	158.81	595.9	1.79	1.44	3.55	3.55
Stillwater County	A16	RM 394.45	15858.14	1% - 100yr	1605.57	1022.05	1019.03	3.1	2.75	56.76	38.03	113.58	408.56	2.21	1.48	3.17	3.17
Stillwater County	A16	RM 394.20	14503.23	1% - 100yr	1605.57	1021.39	1016.38	2.82	2.32	44.1	22.72	149.53	504.43	2.67	1.38	5.01	5.01
Stillwater County	A16	RM 394.12	14088.57	1% - 100yr	1605.57	1020.97	1016.74	3.32	2.68	62.9	29.11	152.43	524.03	2.47	1.14	4.23	4.23
Stillwater County	A16	RM 393.99	13393.6	1% - 100yr	1605.57	1020.6	1017.11	2.75	2.1	44.9	25.08	126.2	629.43	2.17	1.21	3.49	3.49
Stillwater County	A16	RM 393.85	12650.05	1% - 100yr	1605.57	1020.11	1016.49	2.56	2.15	40.82	27.46	179.1	584.5	1.9	1.28	3.62	3.62
Stillwater County	A16	RM 393.59	11240.84	1% - 100yr	1605.57	1019.59	1015.45	1.94	1.5	22.03	12.25	272.87	844.74	2.28	1.27	4.14	4.14
Stillwater County	A16	RM 393.27	9813.245	1% - 100yr	1605.57	1018.55	1013.32	3.03	2.75	61.71	40.49	265.08	592.42	1.5	0.99	5.23	5.23
Stillwater County	A16	RM 393.10	8870.543	1% - 100yr	1605.57	1017.95	1013.34	2.21	2.02	31.21	25.99	340.95	543.48	1.75	1.46	4.61	4.61
Stillwater County	A16	RM 392.95	8114.595	1% - 100yr	1605.57	1017.15	1014.13	2.88	2.78	55.37	50.64	336.08	414	1.53	1.4	3.02	3.02
Stillwater County	A16	RM 392.69	6912.838	1% - 100yr	1605.57	1016.65	1012.43	2.07	1.77	24.8	14.53	192.3	941.67	2.37	1.39	4.22	4.22
Stillwater County	A16	RM 392.44	5710.825	1% - 100yr	1605.57	1016.03	1011.68	2.74	1.92	40.89	16.7	135.35	1157.79	2.83	1.15	4.35	4.35
Stillwater County	A17	RM 392.20	4388.056	1% - 100yr	1605.57	1015.01	1010.8	3.32	2.36	65.47	31.87	201.47	823.4	2.17	1.06	4.21	4.21
Stillwater County	A17	RM 392.00	3345.174	1% - 100yr	1605.57	1014.37	1009.53	3	2.28	49.89	20.59	166.87	662.86	2.7	1.11	4.84	4.84
Stillwater County	A17	RM 391.84	2491.214	1% - 100yr	1605.57	1014.04	1010.51	2.46	1.88	35.56	18.18	154.94	763.04	2.25	1.15	3.63	3.63
Stillwater County	A17	RM 391.68	1656.536	1% - 100yr	1605.57	1013.71	1010.5	2.03	1.65	25.86	17.19	255.36	802.93	1.82	1.21	3.21	3.21
Stillwater County	A17	RM 391.58	1120.168	1% - 100yr	1605.57	1013.46	1009.55	2.07	1.6	27.04	16.89	363.9	878.47	1.83	1.14	3.91	3.91
Stillwater County	A17	RM 391.46	505.9	1% - 100yr	1605.57	1013.2	1009.4	2.1	1.46	26.17	14.32	297.18	945.24	2.16	1.18	3.8	3.8

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	100-yr	1605.57	1012.77	1008.74	2.54	1.62	36.39	15.76	210.46	904.07	2.53	1.1	4.03	4.03
Yellowstone County	A17	RM 391.14	149661.4	100-yr	1605.57	1012.32	1007.82	2.62	1.63	47.86	24.41	204.17	784.52	2.47	1.26	4.5	4.5
Yellowstone County	A17	RM 390.83	149168.3	100-yr	1605.57	1011.35	1007.89	2.5	1.95	40.27	23.47	270.01	770.93	1.96	1.14	3.46	3.46
Yellowstone County	A17	RM 390.51	148644.1	100-yr	1605.57	1010.63	1006	1.91	1.63	31.1	19.22	204.1	550.02	2.91	1.79	4.63	4.63
Yellowstone County	A17	RM 390.34	148387.5	100-yr	1605.57	1010.17	1005.26	2.6	2.13	54.58	35.28	156.33	399.05	2.93	1.89	4.91	4.91
Yellowstone County	A17	RM 390.13	148054.9	100-yr	1605.57	1009.55	1005.54	2.83	2.21	57.19	34.11	147.29	415.56	2.94	1.75	4	4
Yellowstone County	A17	RM 389.96	147776.4	100-yr	1605.57	1009.21	1004.81	2.26	1.96	32.57	20.5	175.73	482.15	2.7	1.7	4.4	4.4
Yellowstone County	A17	RM 389.76	147468.2	100-yr	1605.57	1008.97	1004.52	1.68	1.5	23.6	16.49	303.44	725.62	2.91	2.03	4.45	4.45
Yellowstone County	A17	RM 389.55	147162.3	100-yr	1605.57	1008.4	1003.2	2.26	2.26	61.52	59.09	323.02	337.05	2.19	2.11	5.2	5.2
Yellowstone County	A17	RM 389.31	146731.1	100-yr	1605.57	1007.63	1003.49	2.29	2.12	31.72	25.77	256.17	348.28	2.68	2.18	4.14	4.14
Yellowstone County	A17	RM 389.08	146349	100-yr	1605.57	1007.12	1001.61	1.88	1.63	46.38	30.5	309.81	675.38	2.22	1.46	5.51	5.51
Yellowstone County	A17	RM 388.92	146095.5	100-yr	1605.57	1006.72	1002.49	2.06	1.66	24.51	12.71	267.27	722.06	2.6	1.34	4.23	4.23
Yellowstone County	A17	RM 388.79	145883.6	100-yr	1605.57	1006.51	1002.14	2.25	1.48	27.88	13.04	163.94	656.65	3.58	1.65	4.37	4.37
Yellowstone County	A17	RM 388.61	145594.9	100-yr	1605.57	1006.02	1000.48	2.86	2	62.91	32.8	147.24	516.46	3	1.55	5.54	5.54
Yellowstone County	A17	RM 388.58	145547	100-yr	1605.57	1005.87	1000.28	2.83	2.06	73.25	34.57	154.88	574.3	3.06	1.44	5.59	5.59
Yellowstone County	A17	RM 388.36	145196.7	100-yr	1605.57	1005.19	1001.21	2.84	2.1	50.91	27.36	162.7	501.77	2.83	1.52	3.98	3.98
Yellowstone County	A17	RM 388.22	144960.1	100-yr	1605.57	1004.64	1000.23	3.15	2.24	64.82	30.79	162.16	839.86	2.14	1.02	4.41	4.41
Yellowstone County	A17	RM 388.09	144745.8	100-yr	1605.57	1004.09	999.87	2.66	2.03	47.73	27.39	231.97	876.87	1.81	1.04	4.22	4.22
Yellowstone County	A17	RM 387.91	144452	100-yr	1605.57	1003.46	999.77	1.7	1.74	28.54	22.67	390.61	817.7	1.46	1.16	3.69	3.69
Yellowstone County	A17	RM 387.79	144255.2	100-yr	1605.57	1003.33	999.17	1.28	1.19	7.43	6.91	578.28	987.34	1.51	1.41	4.16	4.16
Yellowstone County	A17	RM 387.59	143932.9	100-yr	1605.57	1003.04	998.1	1.17	1.16	36.5	34.7	995.01	1116.38	1.3	1.24	4.94	4.94
Yellowstone County	A17	RM 387.36	143562.1	100-yr	1605.57	1002.09	997.78	1.83	1.78	18.94	17.4	817.42	932.53	1.07	0.98	4.31	4.31
Yellowstone County	A17	RM 387.24	143353.9	100-yr	1605.57	1001.7	997.71	2.05	2.05	21.09	20.73	528.25	550.11	1.48	1.46	3.99	3.99
Yellowstone County	A17	RM 387.04	143026.2	100-yr	1605.57	1001.22	996.49	1.9	1.79	19.35	17.38	646.97	829.19	1.22	1.1	4.73	4.73
Yellowstone County	A17	RM 386.86	142750.4	100-yr	1605.57	1000.67	997.01	1.68	1.52	49.96	36.42	491.8	843.28	1.74	1.27	3.66	3.66
Yellowstone County	A17	RM 386.74	142538.5	100-yr	1605.57	1000.18	996.31	1.96	1.76	31.26	18.43	352.31	720.54	2.16	1.27	3.87	3.87
Yellowstone County	A17	RM 386.61	142318.4	100-yr	1605.57	999.59	995.9	2.87	2.44	53.53	22.79	188.08	596	2.59	1.1	3.69	3.69
Yellowstone County	A17	RM 386.47	142095.8	100-yr	1605.57	999.24	995.18	2.64	2.04	42.62	20.47	172.67	605.44	2.71	1.3	4.06	4.06
Yellowstone County	A17	RM 386.33	141875.1	100-yr	1605.57	998.8	994.36	2.92	2.01	43.98	20.48	168.12	664.88	2.58	1.2	4.44	4.44
Yellowstone County	A17	RM 386.17	141622.7	100-yr	1605.57	998.39	993.9	2.62	2.08	43.7	21.62	207.61	625.41	2.49	1.23	4.49	4.49
Yellowstone County	A17	RM 386.08	141479.6	100-yr	1605.57	998.17	994.12	2.49	1.94	48.14	23.91	179.91	567.75	2.95	1.46	4.05	4.05
Yellowstone County	A17	RM 386.03	141389.2	100-yr	1605.57	998.06	993.82	2.31	1.96	28.96	17.06	233.84	546.98	2.54	1.49	4.24	4.24
Yellowstone County	A17	RM 385.96	141289.2	100-yr	1605.57	998.03	993.01	1.92	1.69	18.59	12.41	244.54	533.66	3.1	2.07	5.02	5.02
Yellowstone County	A17	RM 385.91	141204.9	100-yr	1605.57	997.94	992.33	1.99	1.92	20.84	16.54	265.95	518.45	3.01	2.39	5.61	5.61
Yellowstone County	A17	RM 385.84	141096	100-yr	1605.57	997.64	990.57	2.66	2.66	36.31	36.31	344.79	441.94	4.09	4.09	7.07	7.07
Yellowstone County		RM 342.71	141053	100-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	100-yr	1605.57	997.35	992.45	3.01	3.01	74.24	74.24	143.53	143.53	3.71	3.71	4.9	4.9
Yellowstone County	A17	RM 385.79	141006	100-yr	1605.57	997.34	992.48	2.81	2.81	36.02	35.91	167.14	379.96	3.41	3.4	4.86	4.86
Yellowstone County	A18	RM 385.69	140846.5	100-yr	1605.57	997.12	992.9	2.67	2.42	68.59	50.79	212.9	530.06	2.78	2.06	4.22	4.22
Yellowstone County	A18	RM 385.60	140705.5	100-yr	1605.57	996.73	992.71	2.84	2.51	61.67	43.71	204.02	506.37	2.68	1.9	4.02	4.02
Yellowstone County	A18	RM 385.50	140538.8	100-yr	1605.57	996.38	990.71	2.91	2.37	61.28	24.43	151.23	490.68	3.49	1.38	5.67	5.67
Yellowstone County	A18	RM 385.39	140367.1	100-yr	1605.57	996.08	992.41	2.9	2.42	43.75	25.18	205.6	450.93	2.56	1.47	3.67	3.67
Yellowstone County	A18	RM 385.30	140231.3	100-yr	1605.57	995.77	992.53	2.91	2.5	66.9	41.65	239.85	475.76	2.17	1.35	3.24	3.24
Yellowstone County	A18	RM 385.23	140108.3	100-yr	1605.57	995.54	992.01	2.46	2.21	48.98	36.96	233.27	448.91	2.15	1.62	3.53	3.53
Yellowstone County	A18	RM 385.12	139921.2	100-yr	1605.57	994.75	991.37	3.08	2.96	69.25	56.43	255.15	415.44	1.6	1.31	3.38	3.38
Yellowstone County	A18	RM 384.93	139688.7	100-yr	1605.57	994.38	991.06	2.3	2.04	29.66	19.96	243.64	553.02	2.12	1.42	3.32	3.32
Yellowstone County	A18	RM 384.75	139352.1	100-yr	1605.57	993.25	989.77	3.9	3.1	111.74	56.8	118.48	462.79	2.28	1.16	3.48	3.48
Yellowstone County	A18	RM 384.63	139146.9	100-yr	1605.57	993	989.58	1.89	1.74	24.25	21.24	197.76	871.65	1.68	1.48	3.42	3.42
Yellowstone County	A18	RM 384.48	138904.5	100-yr	1605.57	992.67	989.55	1.58	1.79	24.15	16.96	185.5	631.5	2.08	1.46	3.32	3.32
Yellowstone County	A18	RM 384.34	138682.4	100-yr	1605.57	992.42	988.23	1.72	1.57	39.86	18.28	169.7	947.58	2.77	1.27	4.19	4.19
Yellowstone County	A18	RM 384.26	138551.1	100-yr	1605.57	992.18	987.34	2.45	1.69	64.26	25.96	93.16	962.06	3.21	1.29	4.84	4.84
Yellowstone County	A18	RM 384.15	138370.3	100-yr	1605.57	991.16	987.39	4.13	3.25	126.99	51.14	79.31	458.27	2.7	1.08	3.77	3.77
Yellowstone County	A18	RM 384.06	138235.3	100-yr	1605.57	991.01	987.31	2.98	2.02	53.3	27.34	86.17	764.05	2.63	1.34	3.7	3.7
Yellowstone County	A18	RM 383.96	138072.3	100-yr	1605.57	990.63	987.67	2.54	2.26	43.74	32.11	139.82	576.91	1.68	1.23	2.96	2.96
Yellowstone County	A18	RM 383.86	137914.6	100-yr	1605.57	990.43	987.24	2.03	1.83	24.29	16.21	155.78	583.46	2.26	1.51	3.19	3.19
Yellowstone County	A18	RM 383.75	137749.9	100-yr	1605.57	990.19	986.55	1.84	1.92	27.74	20.07	207.41	657.76	1.77	1.27	3.71	3.71
Yellowstone County	A18	RM 383.62	137544.5	100-yr	1605.57	989.96	986.32	1.78	1.55	20.09	13.32	177.45	759.08	2.06	1.37	4.34	4.34
Yellowstone County	A18	RM 383.54	137415.7	100-yr	1605.57	989.87	984.41	1.61	1.37	14.95	9.5	392.45	776.65	2.37	1.5	5.46	5.46
Yellowstone County	B1	RM 383.39	137175.7	100-yr	2052.97	989.44	984.98	2.41	2.31	22.29	18.79	608.26	757.84	1.39	1.18	4.46	4.46
Yellowstone County	B1	RM 383.31	137040.5	100-yr	2052.97	989.28	984.86	2.08	1.8	21.54	19.53	656.72	886.36	1.42	1.29	4.42	4.42
Yellowstone County	B1	RM 383.16	136817.2	100-yr	2052.97	989.07	984.9	1.63	1.41	14.17	13.85	784.12	998.38	1.49	1.45	4.17	4.17

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	100-yr	2052.97	988.66	983.64	1.65	1.47	16.75	15.27	628.7	849.55	1.81	1.65	5.02	5.02
Yellowstone County	B1	RM 382.61	135921.1	100-yr	2052.97	988.1	982.68	2.48	1.8	33	16.41	196.01	618.64	3.7	1.84	5.42	5.42
Yellowstone County	B1	RM 382.44	135657.8	100-yr	2052.97	987.7	981.56	3.08	2.04	47.98	21.45	132.77	551.99	4.09	1.83	6.14	6.14
Yellowstone County	B1	RM 382.28	135389.1	100-yr	2052.97	987.55	981.45	2.5	1.77	34.41	16.96	139.32	533.86	4.42	2.17	6.1	6.1
Yellowstone County	B1	RM 382.11	135122	100-yr	2052.97	987.02	980.52	3.28	2.28	60.69	24.99	133.83	536.58	4.09	1.68	6.5	6.5
Yellowstone County	B1	RM 381.93	134829.3	100-yr	2052.97	986.59	981.3	2.87	2.48	73.31	37.67	182.96	445.37	3.62	1.86	5.29	5.29
Yellowstone County	B1	RM 381.79	134602.8	100-yr	2052.97	986.17	981.63	3.03	2.32	51.26	18.81	167.68	663.13	3.66	1.34	4.54	4.54
Yellowstone County	B1	RM 381.69	134426.2	100-yr	2052.97	986.06	981.06	2.4	2.14	36.4	25.23	207.55	356.21	3.89	2.69	5	5
Yellowstone County	B1	RM 381.58	134232.5	100-yr	2052.97	985.92	981.02	2.2	1.87	28.59	18.18	271.39	558.09	3.19	2.03	4.9	4.9
Yellowstone County	B1	RM 381.47	134047.3	100-yr	2052.97	985.74	980.95	1.92	1.7	46.87	28.01	333.31	743.19	2.89	1.72	4.79	4.79
Yellowstone County	B1	RM 381.35	133871.9	100-yr	2052.97	985.42	980.79	1.89	1.68	51.86	28.51	366.2	817.8	2.73	1.5	4.63	4.63
Yellowstone County	B1	RM 381.22	133659.2	100-yr	2052.97	984.86	979.74	2.06	2.04	68.62	63.11	432.42	477.8	2.29	2.11	5.12	5.12
Yellowstone County	B1	RM 381.11	133491.4	100-yr	2052.97	984.38	979.61	2.05	1.98	61.51	41.9	287.45	607.89	2.51	1.71	4.77	4.77
Yellowstone County	B1	RM 381.00	133302.9	100-yr	2052.97	983.76	978.23	3.09	2.59	49.25	24.35	190.07	542.8	2.96	1.46	5.53	5.53
Yellowstone County	B1	RM 380.92	133180	100-yr	2052.97	983.64	976.97	2.8	2.21	49.27	20.99	152.78	573.71	3.81	1.62	6.67	6.67
Yellowstone County	B1	RM 380.81	132986.3	100-yr	2052.97	983.3	978.55	2.93	2.36	49	23.67	193.61	563.07	3.21	1.54	4.75	4.75
Yellowstone County	B1	RM 380.69	132800.2	100-yr	2052.97	983.15	978.53	2.39	1.93	31.19	17.15	264.93	1179.76	2.94	1.61	4.62	4.62
Yellowstone County	B1	RM 380.57	132628.6	100-yr	2052.97	982.96	978.7	2.32	1.98	42.21	22.57	229.16	1277.76	3.2	1.71	4.26	4.26
Yellowstone County	B1	RM 380.48	132470	100-yr	2052.97	982.74	978.24	2.42	2.02	40.9	21.68	201.91	1342.86	3.44	1.82	4.5	4.5
Yellowstone County	B1	RM 380.34	132222.4	100-yr	2052.97	982.35	977.37	2.76	2.2	42.17	25.92	205.99	1247.45	3.07	1.89	4.98	4.98
Yellowstone County	B1	RM 380.22	132032.4	100-yr	2052.97	981.68	977.02	3.63	3.34	71.93	48	172.65	296.61	3.11	2.07	4.66	4.66
Yellowstone County	B1	RM 380.11	131847.7	100-yr	2052.97	981.48	976.29	3.01	2.56	55.92	32.79	181.17	543.13	2.94	1.73	5.19	5.19
Yellowstone County	B1	RM 380.01	131671.4	100-yr	2052.97	981.27	976.21	2.7	2.01	51.84	26.93	174.5	725.98	3.08	1.6	5.06	5.06
Yellowstone County	B1	RM 379.92	131538.8	100-yr	2052.97	980.99	976.69	2.89	2.13	44.89	22.54	193.82	700.58	2.74	1.38	4.3	4.3
Yellowstone County	B1	RM 379.84	131406.9	100-yr	2052.97	980.93	975.94	1.94	1.63	21.94	15.46	420.29	762	2.35	1.66	4.99	4.99
Yellowstone County	B1	RM 379.75	131265.1	100-yr	2052.97	980.74	974.98	2.09	1.76	30.8	20.16	375.8	722.64	2.47	1.62	5.76	5.76
Yellowstone County	B1	RM 379.65	131104.3	100-yr	2052.97	980.56	975.6	2.08	1.87	25.37	22.53	379.81	510.35	2.43	2.16	4.96	4.96
Yellowstone County	B1	RM 379.56	130964.3	100-yr	2052.97	980.45	975.94	1.96	1.7	22.83	16.24	313.71	1654.54	2.66	1.89	4.51	4.51
Yellowstone County	B1	RM 379.46	130794	100-yr	2052.97	980.25	974.74	2.13	1.67	24.74	15.09	299.1	1276.95	2.54	1.54	5.51	5.51
Yellowstone County	B1	RM 379.36	130642.3	100-yr	2052.97	980.18	975.71	1.83	1.22	25.92	13.53	247.15	1077.55	3.43	1.78	4.47	4.47
Yellowstone County	B1	RM 379.27	130496.2	100-yr	2052.97	979.84	974.66	2.79	1.68	65.78	31.16	164.87	808.57	3.21	1.51	5.18	5.18
Yellowstone County	B1	RM 379.17	130345.7	100-yr	2052.97	979.27	973.93	3.48	2.06	77.95	28.07	154.92	856.61	3.23	1.16	5.34	5.34
Yellowstone County	B1	RM 379.04	130142	100-yr	2052.97	979.04	974.79	2.8	1.69	42.94	20.62	203.31	900.88	2.8	1.35	4.25	4.25
Yellowstone County	B1	RM 378.97	130026.7	100-yr	2052.97	978.78	974.64	2.93	1.88	48.6	22.39	231.05	919.4	2.57	1.19	4.14	4.14
Yellowstone County	B1	RM 378.86	129850.9	100-yr	2052.97	978.4	974.4	2.96	1.94	54.27	25.21	250.72	953.69	2.4	1.11	4	4
Yellowstone County	B1	RM 378.76	129682.3	100-yr	2052.97	978.08	974.17	2.8	1.89	45.92	21.16	272.82	983.33	2.4	1.11	3.91	3.91
Yellowstone County	B1	RM 378.67	129541.3	100-yr	2052.97	977.91	973.97	2.54	1.57	32.21	17.05	291.36	1112.71	2.22	1.17	3.94	3.94
Yellowstone County	B1	RM 378.61	129443.1	100-yr	2052.97	977.81	973.83	1.85	1.49	46.22	30.34	265.11	996.64	2.1	1.38	3.98	3.98
Yellowstone County	B1	RM 378.52	129297.7	100-yr	2052.97	977.61	973.62	1.72	1.4	18.42	14.96	565.81	966.03	1.87	1.52	3.99	3.99
Yellowstone County	B1	RM 378.46	129200.8	100-yr	2052.97	977.54	973.48	1.5	1.31	17.17	12.86	613.46	982.06	2.13	1.59	4.06	4.06
Yellowstone County	B1	RM 378.40	129112.2	100-yr	2052.97	977.45	973.41	1.45	1.31	33.46	25.91	605.91	924.05	2.19	1.69	4.04	4.04
Yellowstone County	B1	RM 378.29	128929.4	100-yr	2052.97	977.35	972.93	1.23	1.08	10.48	7.5	567.41	943.41	2.81	2.01	4.42	4.42
Yellowstone County	B1	RM 378.13	128673.7	100-yr	2052.97	977.12	971.4	1.84	1.68	16.27	12.22	438.15	985.35	2.48	1.86	5.72	5.72
Yellowstone County	B1	RM 378.07	128569	100-yr	2052.97	977.02	970.46	1.99	1.88	17.77	14.6	347.76	874.45	2.94	2.41	6.56	6.56
Yellowstone County	B1	RM 377.96	128380.3	100-yr	2052.97	976.36	968.85	3.35	3.35	82.78	82.78	111.51	111.51	5.49	5.49	7.51	7.51
Yellowstone County		RM 338.83	128364	100-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	100-yr	2052.97	976.29	967.19	3.17	3.17	82.36	82.36	110.31	110.31	5.87	5.87	9.1	9.1
Yellowstone County	B1	RM 377.87	128244.4	100-yr	2052.97	976.11	970.56	3.1	3.1	64.23	64.21	223.61	355.12	3.02	3.02	5.55	5.55
Yellowstone County	B1	RM 377.79	128118	100-yr	2052.97	975.94	970.94	2.71	2.71	38.1	38.07	345.01	730	2.2	2.2	5	5
Yellowstone County	B1	RM 377.69	127964.3	100-yr	2052.97	975.76	969.86	2.35	2.27	28.51	25.32	423.76	782.57	2.05	1.82	5.9	5.9
Yellowstone County	B1	RM 377.61	127824.8	100-yr	2052.97	975.3	970.53	3.05	2.95	35.92	30.1	429.36	676.24	1.56	1.31	4.77	4.77
Yellowstone County	B1	RM 377.55	127735.1	100-yr	2052.97	975.21	970.41	2.61	2.53	27.81	23.6	457.45	643.27	1.72	1.45	4.8	4.8
Yellowstone County	B1	RM 377.48	127618.1	100-yr	2052.97	975.05	970.26	2.42	2.38	29.03	24.54	470.13	725.56	1.8	1.52	4.79	4.79
Yellowstone County	B1	RM 377.39	127466.6	100-yr	2052.97	974.77	969.73	2.55	2.29	31.06	22.42	420.58	659.68	1.88	1.36	5.04	5.04
Yellowstone County	B1	RM 377.34	127391.5	100-yr	2052.97	974.46	969.95	2.79	2.6	131.57	94.46	399.37	612.71	1.8	1.29	4.51	4.51
Yellowstone County	B1	RM 377.25	127241.9	100-yr	2052.97	974.23	970.26	2.07	1.88	24.23	16.93	457.55	1143.47	2.1	1.46	3.97	3.97
Yellowstone County	B1	RM 377.16	127097.7	100-yr	2052.97	974.07	969.82	2.02	1.86	25.48	18.05	410.87	725.85	2.14	1.52	4.25	4.25
Yellowstone County	B1	RM 377.08	126969	100-yr	2052.97	974.02	969	1.6	1.38	14.47	9.65	417.58	805.52	2.77	1.85	5.02	5.02
Yellowstone County	B1	RM 377.04	126900.8	100-yr	2052.97	973.93	968.6	1.71	1.59	49.94	41.22	570.04	772.96	2.03	1.67	5.33	5.33
Yellowstone County	B1	RM 376.98	126797.5	100-yr	2052.97	973.72	969.02	1.91	1.73	20.98	16.52	531.66	761.99	1.98	1.56	4.7	4.7
Yellowstone County	B1	RM 376.92	126710.1	100-yr	2052.97	973.64	969.01	1.65	1.51	38.05	30.83	505.55	705.86	2.37	1.92	4.63	4.63

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	100-yr	2052.97	973.55	967.73	1.43	1.33	16.89	14.3	449.34	674.93	2.7	2.29	5.82	5.82
Yellowstone County	B1	RM 376.75	126442.1	100-yr	2052.97	973.42	967.82	1.54	1.51	24.78	22	406.87	530.1	2.88	2.56	5.6	5.6
Yellowstone County	B1	RM 376.67	126309	100-yr	2052.97	973.21	967.23	1.89	1.82	41	33.99	333.94	473.14	2.87	2.38	5.98	5.98
Yellowstone County	B1	RM 376.58	126174.1	100-yr	2052.97	972.88	966.82	2.3	2.27	56.53	51.17	307.9	372.99	2.67	2.42	6.06	6.06
Yellowstone County	B1	RM 376.51	126058.2	100-yr	2052.97	972.53	966.77	2.69	2.69	50.19	49.71	267.75	270.43	2.85	2.82	5.76	5.76
Yellowstone County	B1	RM 376.42	125918.5	100-yr	2052.97	972.38	967.68	2.47	2.46	33.78	32.07	257.43	272.2	3.23	3.07	4.7	4.7
Yellowstone County	B1	RM 376.35	125809.8	100-yr	2052.97	972.26	966.71	2.5	2.5	31.87	31.38	225.28	228.71	3.65	3.6	5.55	5.55
Yellowstone County	B1	RM 376.28	125697	100-yr	2052.97	971.86	966.28	3.29	3.28	60.77	60.37	222.78	224.27	2.81	2.79	5.58	5.58
Yellowstone County	B1	RM 376.20	125565.9	100-yr	2052.97	971.62	966.16	3.08	3.08	55.54	55.38	253.15	253.82	2.64	2.63	5.46	5.46
Yellowstone County	B1	RM 376.10	125404.8	100-yr	2052.97	971.29	966.61	3.01	2.86	51.02	45.62	271.78	340.47	2.36	2.11	4.68	4.68
Yellowstone County	B1	RM 376.00	125250.5	100-yr	2052.97	971	967.42	2.88	2.42	50.81	33.68	242.79	602.01	2.62	1.74	3.58	3.58
Yellowstone County	B1	RM 375.88	125055.1	100-yr	2052.97	970.69	966.01	2.77	2.01	50.46	25.44	185.92	1039.89	3.06	1.54	4.68	4.68
Yellowstone County	B1	RM 375.78	124897.3	100-yr	2052.97	970.51	965.37	2.5	1.76	40.4	19.52	187.89	944.08	2.95	1.42	5.14	5.14
Yellowstone County	B1	RM 375.67	124708.2	100-yr	2052.97	970.31	965.8	2.36	1.78	35.19	17.16	226.51	870.98	2.71	1.32	4.51	4.51
Yellowstone County	B1	RM 375.58	124564.2	100-yr	2052.97	970.05	966.54	2.61	2	42.11	19.9	226.01	816.86	2.66	1.25	3.51	3.51
Yellowstone County	B1	RM 375.23	124013.6	100-yr	2052.97	969.39	965.23	2.33	1.63	36.17	14.1	230.73	1124.09	2.88	1.12	4.16	4.16
Yellowstone County	B1	RM 375.10	123799.5	100-yr	2052.97	968.75	963.88	3.5	2.19	82.69	24.34	126.44	916.43	3.5	1.02	4.87	4.87
Yellowstone County	B1	RM 374.97	123580.4	100-yr	2052.97	968.53	963.97	2.62	1.72	52.75	17.18	136.62	1102.45	3.39	1.09	4.56	4.56
Yellowstone County	B1	RM 374.83	123365.5	100-yr	2052.97	968.28	963.52	2.31	1.53	32.27	11.67	132.83	1172.25	3.18	1.14	4.76	4.76
Yellowstone County	B1	RM 374.73	123195.7	100-yr	2052.97	968.21	963.36	1.78	1.23	17.05	6.88	143.86	1255.55	3.31	1.33	4.85	4.85
Yellowstone County	B1	RM 374.61	123010.3	100-yr	2052.97	967.99	963.49	2.18	1.54	36.45	12.65	163.52	1246.6	3.27	1.13	4.5	4.5
Yellowstone County	B1	RM 374.53	122875.3	100-yr	2120.93	967.75	963.14	2.51	1.86	39.79	14.85	186.43	968.43	3.16	1.18	4.61	4.61
Yellowstone County	B1	RM 374.44	122726.7	100-yr	2120.93	967.46	963.04	2.95	1.95	63.64	18.92	128.47	997.4	3.69	1.09	4.42	4.42
Yellowstone County	B1	RM 374.32	122535.1	100-yr	2120.93	967.26	962.82	2.11	1.84	43.12	19.05	206.7	962.6	2.72	1.2	4.44	4.44
Yellowstone County	B1	RM 374.22	122379	100-yr	2120.93	967.06	960.92	2.42	1.52	33.5	12.11	134.27	1036.55	3.72	1.35	6.14	6.14
Yellowstone County	B1	RM 374.13	122231.1	100-yr	2120.93	966.95	960.11	2.45	1.51	31.52	13.34	137.18	981.87	3.39	1.43	6.84	6.84
Yellowstone County	B1	RM 373.97	121972.4	100-yr	2120.93	966.77	958.8	1.94	1.45	26.18	11.73	235.01	1006.37	3.27	1.45	7.97	7.97
Yellowstone County	B1	RM 373.88	121829.3	100-yr	2120.93	966.61	962.21	2.16	1.51	32.83	13.82	194.77	985.18	3.4	1.43	4.4	4.4
Yellowstone County	B1	RM 373.79	121688.7	100-yr	2120.93	966.5	961.66	1.99	1.38	31.3	14.84	192.66	1123.71	3.4	1.61	4.84	4.84
Yellowstone County	B1	RM 373.69	121523.5	100-yr	2120.93	966.35	961.11	2.02	1.41	24.41	14.02	202.68	1044.92	3.31	1.9	5.24	5.24
Yellowstone County	B1	RM 373.56	121314.3	100-yr	2120.93	965.73	959.37	3.19	2.73	63.6	40.87	204.44	400.81	3.02	1.94	6.37	6.37
Yellowstone County	B1	RM 373.39	121015.9	100-yr	2120.93	965.18	958.78	3.09	2.9	61.72	40.23	186.95	315.45	3.56	2.32	6.4	6.4
Yellowstone County	B1	RM 373.26	120802.3	100-yr	2120.93	965.11	960.81	2.01	1.85	25.39	19.16	355.66	777.36	2.87	2.17	4.3	4.3
Yellowstone County	B1	RM 373.09	120539.5	100-yr	2120.93	964.7	959.94	2.48	2.3	35.93	29.3	304.46	1470.16	2.72	2.22	4.76	4.76
Yellowstone County	B1	RM 372.99	120365.2	100-yr	2120.93	964.48	959.69	2.27	2.02	43.63	31.27	329.9	1476.33	2.67	1.91	4.79	4.79
Yellowstone County	B1	RM 372.82	120107.7	100-yr	2120.93	964.26	959.03	1.8	1.74	19.26	17.77	469.06	1553.12	2.49	2.3	5.23	5.23
Yellowstone County	B1	RM 372.72	119922.5	100-yr	2120.93	964.02	958.92	1.98	1.95	35.57	33.18	442.03	1506.87	2.41	2.25	5.1	5.1
Yellowstone County	B1	RM 372.65	119797.7	100-yr	2120.93	963.85	957.32	2.05	1.96	27.43	26.06	397.5	1542.44	2.56	2.44	6.53	6.53
Yellowstone County	B1	RM 372.58	119676.6	100-yr	2120.93	963.77	958.2	1.8	1.75	20.01	18.03	441.67	1545.76	2.63	2.37	5.57	5.57
Yellowstone County	B1	RM 372.41	119395.9	100-yr	2120.93	963.61	958.82	1.62	1.55	14.42	13.17	485.58	566.91	2.64	2.41	4.79	4.79
Yellowstone County	B1	RM 372.32	119268.8	100-yr	2120.93	963.5	957.24	1.6	1.55	38.22	32.72	534.11	669.85	2.4	2.05	6.26	6.26
Yellowstone County	B1	RM 372.20	119079.1	100-yr	2120.93	963.17	956.93	1.62	1.5	43.95	31.97	512.44	1366.3	2.31	1.68	6.24	6.24
Yellowstone County	B1	RM 372.08	118886.4	100-yr	2120.93	962.7	956.2	1.87	1.79	55.34	46.3	471.48	1104.93	2.29	1.92	6.5	6.5
Yellowstone County	B1	RM 371.94	118669.8	100-yr	2120.93	962.04	957.58	2.19	2.19	61.75	60.85	446.92	794.86	2.17	2.14	4.46	4.46
Yellowstone County	B1	RM 371.83	118490.4	100-yr	2120.93	961.7	957.52	2.08	1.99	36.08	28.41	393.72	773.97	2.48	1.95	4.18	4.18
Yellowstone County	B1	RM 371.74	118350.7	100-yr	2120.93	961.51	957.48	2.12	1.92	29.04	19.68	386.04	810.42	2.42	1.64	4.03	4.03
Yellowstone County	B1	RM 371.62	118155.6	100-yr	2120.93	961.29	956.41	2.24	1.59	33.95	15.85	220.59	815.07	3.5	1.64	4.88	4.88
Yellowstone County	B1	RM 371.53	118001.4	100-yr	2120.93	961.03	955.99	2.56	1.9	38.59	20.52	235.3	694.94	3.03	1.61	5.04	5.04
Yellowstone County	B1	RM 371.43	117839.2	100-yr	2120.93	960.71	955.47	2.64	2.02	74.69	35.34	253.33	1085.7	2.71	1.28	5.24	5.24
Yellowstone County	B1	RM 371.37	117745.1	100-yr	2120.93	960.56	955.72	2.49	1.84	32.01	15.36	292.28	1035.04	2.67	1.28	4.84	4.84
Yellowstone County	B1	RM 371.32	117662.6	100-yr	2120.93	960.54	956.41	2	1.46	32.12	16.89	299.65	934.55	2.95	1.55	4.13	4.13
Yellowstone County	B1	RM 371.25	117560.3	100-yr	2120.93	960.46	955.99	1.84	1.43	19.85	13.55	377.7	904.26	2.75	1.87	4.47	4.47
Yellowstone County	B1	RM 371.21	117499	100-yr	2120.93	960.44	955.72	1.71	1.42	17.23	12.92	357.71	685.66	2.89	2.17	4.72	4.72
Yellowstone County	B1	RM 371.12	117353.9	100-yr	2120.93	960.28	955.54	1.89	1.86	21.27	19.64	391.6	858.65	2.85	2.63	4.74	4.74
Yellowstone County	B1	RM 371.04	117225.1	100-yr	2120.93	959.77	954.84	3.02	3.02	53.02	53.02	234.46	539.42	2.99	2.99	4.93	4.93
Yellowstone County		RM 335.51	117205	100-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	100-yr	2120.93	959.67	954.9	2.98	2.98	52.89	52.89	230.61	429.05	3.09	3.09	4.77	4.77
Yellowstone County	B1	RM 370.94	117054.9	100-yr	2120.93	959.5	955.57	2.75	2.59	51.12	37.58	242.96	1003.34	3.14	2.31	3.93	3.93
Yellowstone County	B1	RM 370.85	116910.9	100-yr	2120.93	959.15	954.47	3.03	2.64	59.79	33.54	219.54	1042.17	3.12	1.74	4.68	4.68
Yellowstone County	B1	RM 370.77	116793.6	100-yr	2120.93	958.93	953.84	3.08	2.42	50.08	26.18	224.11	1254.85	2.93	1.53	5.09	5.09
Yellowstone County	B1	RM 370.72	116711.6	100-yr	2120.93	958.67	953.13	3.46	2.41	71.53	29.83	165.01	1078.08	3.33	1.38	5.54	5.54

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	100-yr	2120.93	958.72	953.05	2.93	2.03	43.46	22.66	201.49	1147.73	2.96	1.54	5.67	5.67
Yellowstone County	B1	RM 370.63	116558.9	100-yr	2120.93	958.54	953.42	2.82	1.99	63.86	24.64	182.28	1165.14	3.58	1.38	5.12	5.12
Yellowstone County	B1	RM 370.56	116440.6	100-yr	2120.93	958.46	953.34	2.56	1.61	30.29	11.37	178.41	1200.11	3.98	1.49	5.12	5.12
Yellowstone County	B1	RM 370.44	116241.1	100-yr	2120.93	958.1	952.03	3.16	1.81	61.81	18.77	134.29	917.64	4.23	1.27	6.07	6.07
Yellowstone County	B1	RM 370.34	116071.6	100-yr	2120.93	957.9	949.79	3.09	1.79	60.94	16.76	118.14	917.93	4.75	1.29	8.11	8.11
Yellowstone County	B1	RM 370.24	115908.6	100-yr	2120.93	957.76	950.22	2.87	1.69	47.96	15.51	117.55	795.04	4.94	1.58	7.54	7.54
Yellowstone County	B1	RM 370.11	115705	100-yr	2120.93	957.48	952.12	2.91	1.93	54.89	20.99	161	761.1	3.79	1.44	5.36	5.36
Yellowstone County	B1	RM 370.00	115535.2	100-yr	2120.93	957.19	952.2	2.56	2.18	74.83	43.86	262.2	662.31	2.52	1.47	4.99	4.99
Yellowstone County	B1	RM 369.89	115356.1	100-yr	2120.93	956.84	953.15	2.36	2.12	29.17	22.12	418.78	658.88	2	1.52	3.69	3.69
Yellowstone County	B1	RM 369.77	115164.3	100-yr	2120.93	956.57	952.34	2.21	2.12	27.05	23.53	497.47	790.48	1.91	1.66	4.23	4.23
Yellowstone County	B1	RM 369.64	114965.6	100-yr	2120.93	956.3	951.9	2.09	1.91	30.63	24.63	503.19	812.87	1.91	1.53	4.4	4.4
Yellowstone County	B1	RM 369.54	114789.5	100-yr	2120.93	956.1	952.38	1.9	1.61	21.33	16.2	506.38	907.14	2	1.52	3.72	3.72
Yellowstone County	B1	RM 369.45	114650.1	100-yr	2120.93	955.98	951	1.77	1.58	20.48	16.68	466.31	725.17	2.28	1.85	4.98	4.98
Yellowstone County	B1	RM 369.32	114431.1	100-yr	2120.93	955.75	951.1	1.82	1.56	29.41	20.24	377.04	697.99	2.83	1.95	4.65	4.65
Yellowstone County	B1	RM 369.17	114210.5	100-yr	2120.93	955.41	949.85	2.25	2.14	44.62	25.99	199.28	530.32	3.21	1.87	5.56	5.56
Yellowstone County	B1	RM 369.06	114022.4	100-yr	2120.93	954.78	949.89	3.42	2.68	72.4	38.62	152.59	439.54	3.38	1.8	4.89	4.89
Yellowstone County	B1	RM 368.96	113871.2	100-yr	2120.93	954.61	949.68	2.9	2.21	52.75	27.97	170.34	530.72	3.42	1.81	4.93	4.93
Yellowstone County	B1	RM 368.88	113745.9	100-yr	2120.93	954.46	948.77	2.64	2.02	41.6	24.19	215.27	666.8	3	1.74	5.69	5.69
Yellowstone County	B1	RM 368.82	113641	100-yr	2120.93	954.31	948.47	2.41	1.97	44.4	31.46	297.4	628.06	2.42	1.71	5.84	5.84
Yellowstone County	B1	RM 368.72	113477.3	100-yr	2120.93	954.16	948.45	1.9	1.59	29.8	22.87	350.19	666.08	2.61	2	5.71	5.71
Yellowstone County	B1	RM 368.63	113328.9	100-yr	2120.93	954.03	947.82	1.77	1.47	26.4	18.28	315.25	744.23	2.81	1.94	6.21	6.21
Yellowstone County	B1	RM 368.54	113195.6	100-yr	2120.93	953.86	947.51	2.02	1.5	25.91	14.61	271.4	767.31	3.27	1.84	6.35	6.35
Yellowstone County	B1	RM 368.44	113035.8	100-yr	2120.93	953.66	947.4	2.14	1.68	50.27	28.33	259.39	715.19	3.14	1.77	6.26	6.26
Yellowstone County	B1	RM 368.35	112878.7	100-yr	2120.93	953.6	946.64	1.66	1.48	15.37	11.11	283.07	450.73	4.39	3.17	6.96	6.96
Yellowstone County	B1	RM 368.26	112737.6	100-yr	2120.93	953.29	946.23	2.5	2.5	89.3	88.34	227.9	230.23	3.72	3.69	7.06	7.06
Yellowstone County	B1	RM 368.18	112604.7	100-yr	2120.93	952.88	947.11	3.07	3.07	54.81	54.64	163.29	1331.48	4.24	4.23	5.77	5.77
Yellowstone County	B2	RM 368.09	112456.7	100-yr	2120.93	952.56	947.7	3.27	3.27	82.05	82.05	163.38	163.38	3.97	3.97	4.86	4.86
Yellowstone County	B2	RM 368.00	112314.4	100-yr	2120.93	952.53	947.56	2.54	2.53	35.1	34.4	198.48	517.16	4.2	4.13	4.97	4.97
Yellowstone County	B2	RM 367.86	112104.7	100-yr	2120.93	952.08	946.1	3.08	3.08	80.77	80.77	190.34	190.34	3.62	3.62	5.98	5.98
Yellowstone County	B2	RM 367.79	111989.2	100-yr	2120.93	951.77	945.04	3.19	3.19	89.59	89.05	169.65	170.34	3.92	3.9	6.73	6.73
Yellowstone County	B2	RM 367.72	111876.5	100-yr	2120.93	951.62	945.45	3.1	2.8	50.94	33.31	149.5	442.04	4.36	2.86	6.17	6.17
Yellowstone County	B2	RM 367.64	111739.2	100-yr	2120.93	951.39	945.68	3.25	2.73	70.85	32.87	140.83	443.22	4.24	1.95	5.71	5.71
Yellowstone County	B2	RM 367.50	111519.9	100-yr	2120.93	950.97	945.21	3.35	2.59	79.87	33.61	137.41	471.52	4.16	1.73	5.76	5.76
Yellowstone County	B2	RM 367.40	111357.1	100-yr	2120.93	950.72	944.36	3.36	2.47	62.64	23.52	113.58	493.48	4.7	1.74	6.36	6.36
Yellowstone County	B2	RM 367.31	111214.8	100-yr	2120.93	950.56	945.36	3.19	2.36	50.39	22.63	144.65	494.04	4.08	1.82	5.2	5.2
Yellowstone County	B2	RM 367.19	110992.7	100-yr	2120.93	950.42	945.91	2.51	2.03	34.54	21.29	245.16	546.64	3.16	1.94	4.51	4.51
Yellowstone County	B2	RM 367.11	110813.5	100-yr	2120.93	950.26	945.17	2.3	1.83	30.3	20.35	295.2	603.98	2.87	1.92	5.09	5.09
Yellowstone County	B2	RM 367.03	110669.4	100-yr	2120.93	950.21	945.89	1.8	1.58	17.29	15.3	418.55	566.74	2.68	2.37	4.32	4.32
Yellowstone County	B2	RM 366.95	110543	100-yr	2120.93	950.17	945.34	1.31	1.24	20.02	19.07	560.16	648.03	2.76	2.63	4.83	4.83
Yellowstone County	B2	RM 366.84	110376	100-yr	2120.93	950.08	944.61	1.15	1.1	15.52	12.72	603.9	802.8	2.93	2.4	5.47	5.47
Yellowstone County	B2	RM 366.78	110300.8	100-yr	2120.93	950.02	943.84	1.22	1.1	17.95	13.99	562.74	972.88	2.97	2.31	6.18	6.18
Yellowstone County	B2	RM 366.73	110074.8	100-yr	2120.93	949.8	943.42	1.58	1.57	27.37	25.85	436.49	767.01	3.06	2.89	6.38	6.38
Yellowstone County	B2	RM 366.68	109931.6	100-yr	2120.93	949.56	942.77	1.97	1.92	44.07	37.98	318.54	382.19	3.37	2.9	6.79	6.79
Yellowstone County	B2	RM 366.53	109747.6	100-yr	2120.93	949.07	940.86	2.97	2.97	42	42	166.53	166.53	4.29	4.29	8.21	8.21
Yellowstone County	B2	RM 366.38	109510.8	100-yr	2120.93	948.52	941.55	3.6	3.59	87.98	87.7	116.01	116.28	5.09	5.07	6.97	6.97
Yellowstone County	B2	RM 366.27	109345.5	100-yr	2120.93	948.57	942.72	2.31	2.31	41.41	41.3	226.44	489.52	4.06	4.05	5.85	5.85
Yellowstone County	B2	RM 366.15	109158.9	100-yr	2120.93	948.31	941.59	2.26	2.26	64.54	64.54	293.45	468.17	3.2	3.2	6.72	6.72
Yellowstone County	B2	RM 366.04	108972.6	100-yr	2120.93	948.03	941.41	2.41	2.39	24.83	22.86	313.68	342.8	2.81	2.59	6.62	6.62
Yellowstone County	B2	RM 365.94	108818.8	100-yr	2120.93	947.95	940.93	2.13	2.13	20.36	20.36	363.26	363.26	2.74	2.74	7.01	7.01
Yellowstone County	B2	RM 365.83	108647.5	100-yr	2120.93	947.74	939.93	2.1	2.05	70.35	65.81	332.02	370.44	2.99	2.8	7.81	7.81
Yellowstone County	B2	RM 365.75	108521.3	100-yr	2120.93	947.48	941.33	2.08	2.03	60.24	51.01	264.77	378.77	3.26	2.75	6.15	6.15
Yellowstone County	B2	RM 365.71	108446.5	100-yr	2120.93	947.3	941.83	2.31	2.03	58.63	42.03	234.81	396.06	3.69	2.64	5.47	5.47
Yellowstone County	B2	RM 365.64	108343.5	100-yr	2120.93	947.16	942.19	2.11	1.84	49.55	36.89	306.44	496.55	3.12	2.32	4.97	4.97
Yellowstone County	B2	RM 365.57	108220.5	100-yr	2120.93	946.92	942.08	2.31	2	50.42	32.8	252.77	477.63	3.43	2.23	4.84	4.84
Yellowstone County	B2	RM 365.51	108118.9	100-yr	2120.93	946.78	941.87	2.22	1.91	53.32	36.72	265.35	478.22	3.38	2.33	4.91	4.91
Yellowstone County	B2	RM 365.46	108042.9	100-yr	2120.93	946.74	941.73	1.88	1.68	28.76	19.43	317.69	543.58	3.44	2.32	5.01	5.01
Yellowstone County	B2	RM 365.41	107956.5	100-yr	2120.93	946.68	941.46	1.77	1.66	25.6	19.5	326.34	469.59	3.58	2.73	5.22	5.22
Yellowstone County	B2	RM 365.37	107905.7	100-yr	2120.93	946.64	940.74	1.83	1.78	18.35	15.17	309.36	387.65	3.73	3.08	5.9	5.9
Yellowstone County	B2	RM 365.31	107792.4	100-yr	2120.93	946.53	939.27	2.07	1.95	22.31	16.65	257.08	373.65	3.9	2.91	7.26	7.26
Yellowstone County	B2	RM 365.27	107727.9	100-yr	2120.93	946.46	939.34	2.19	2.06	27.61	21.44	251.44	352.99	3.76	2.92	7.12	7.12
Yellowstone County	B2	RM 365.23	107674.2	100-yr	2120.93	946.37	939.52	2.37	2.22	26.87	20.38	230.94	442.91	3.81	2.88	6.85	6.85

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	100-yr	2120.93	946.34	939.93	2.2	2.13	30.76	26.15	240.81	296.04	3.96	3.36	6.41	6.41
Yellowstone County	B2	RM 365.15	107534.7	100-yr	2120.93	946.29	939.68	2.23	2.12	25.91	20.31	214.38	295.35	4.33	3.38	6.61	6.61
Yellowstone County	B2	RM 365.10	107466	100-yr	2120.93	946.19	938.61	2.44	2.25	30.32	17.01	186.92	369.03	4.58	2.56	7.58	7.58
Yellowstone County	B2	RM 365.06	107396.2	100-yr	2120.93	946.15	939.07	2.41	2.15	33.45	19.62	170.56	339.36	4.96	2.9	7.08	7.08
Yellowstone County	B2	RM 365.01	107325.8	100-yr	2120.93	946.13	939.22	2.21	2.04	45.95	30.54	175.43	297.22	5.27	3.49	6.91	6.91
Yellowstone County	B2	RM 364.99	107287.5	100-yr	2120.93	946.07	939.27	2.29	2.13	52.12	37.49	170.9	268.71	5.16	3.71	6.8	6.8
Yellowstone County	B2	RM 364.90	107128.3	100-yr	2120.93	945.78	937.97	2.75	2.51	34.13	27.73	150.01	205.02	5.06	4.11	7.81	7.81
Yellowstone County		RM 331.55	107100	100-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	100-yr	2120.93	945.66	938.58	2.72	2.54	33.52	27.67	153.19	210.49	5.03	4.16	7.08	7.08
Yellowstone County	B2	RM 364.81	106996.1	100-yr	2120.93	945.7	938.93	2.14	2.14	21.21	20.98	257.78	260.39	3.84	3.81	6.77	6.77
Yellowstone County	B2	RM 364.74	106893.3	100-yr	2120.93	945.52	938.94	2.56	2.44	42.09	38.6	164.71	264.1	4.97	4.6	6.58	6.58
Yellowstone County	B2	RM 364.64	106739.2	100-yr	2120.93	945.13	939.09	3.21	3.09	46.01	41.65	136.52	753.24	5.15	4.68	6.04	6.04
Yellowstone County		RM 331.32	106722	100-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	100-yr	2120.93	944.95	939.16	3.25	3.15	55.33	51.97	142.02	175.35	4.92	4.64	5.79	5.79
Yellowstone County	B2	RM 364.61	106686.8	100-yr	2120.93	944.98	939.21	2.92	2.92	39.53	39.23	158.49	522.12	4.59	4.55	5.77	5.77
Yellowstone County	B2	RM 364.60	106666.6	100-yr	2120.93	944.87	939.26	3.13	3.13	45.92	45.92	151.69	151.69	4.47	4.47	5.61	5.61
Yellowstone County		RM 331.14	106644	100-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	100-yr	2120.93	944.77	939.21	3.12	3.12	45	45	154.77	154.77	4.64	4.64	5.56	5.56
Yellowstone County	B2	RM 364.53	106558.4	100-yr	2120.93	944.74	939.11	2.9	2.86	38.63	32.05	166.35	203.2	4.4	3.65	5.63	5.63
Yellowstone County	B2	RM 364.49	106490.3	100-yr	2120.93	944.68	939.24	2.9	2.82	44.27	36.75	162.03	201.07	4.51	3.74	5.44	5.44
Yellowstone County	B2	RM 364.43	106394	100-yr	2120.93	944.58	939.13	2.89	2.75	45.43	31.4	160.34	245.31	4.56	3.14	5.45	5.45
Yellowstone County	B2	RM 364.37	106296.4	100-yr	2120.93	944.5	938.98	2.87	2.56	38.38	25.24	149.77	261.51	4.85	3.17	5.52	5.52
Yellowstone County	B2	RM 364.32	106215.1	100-yr	2120.93	944.43	938.52	2.83	2.51	62.12	42.09	154.37	265.43	4.72	3.18	5.91	5.91
Yellowstone County	B2	RM 364.29	106172.9	100-yr	2120.93	944.48	938.13	2.2	1.99	62.12	44.87	191	837.4	4.83	3.48	6.35	6.35
Yellowstone County	B2	RM 364.26	106126.6	100-yr	2120.93	944.21	937.7	2.95	2.54	72.43	52.04	147.07	253.85	4.59	3.3	6.51	6.51
Yellowstone County	B2	RM 364.22	106055.2	100-yr	2120.93	943.95	938.15	3.27	3.06	89.18	51.1	137.45	259.2	4.68	2.67	5.8	5.8
Yellowstone County	B2	RM 364.14	105927.3	100-yr	2120.93	943.52	938.12	3.71	3.17	107.42	66.29	125.65	249.94	4.37	2.68	5.4	5.4
Yellowstone County	B2	RM 364.06	105809.9	100-yr	2120.93	943.4	938.22	3.17	2.63	71.39	40.38	156.23	347.06	4.12	2.32	5.18	5.18
Yellowstone County	B2	RM 363.96	105648.3	100-yr	2120.93	943.29	938.28	2.46	2.33	43.22	38.26	248.25	385.16	3.42	3.02	5.01	5.01
Yellowstone County	B2	RM 363.85	105472.4	100-yr	2120.93	942.95	936.25	3.01	2.54	43.61	27.22	150.41	321.84	4.19	2.6	6.7	6.7
Yellowstone County	B2	RM 363.76	105316.8	100-yr	2120.93	942.8	937.03	2.86	2.47	55.85	32.69	147.98	340.47	4.31	2.52	5.77	5.77
Yellowstone County	B2	RM 363.63	105118.1	100-yr	2120.93	942.54	937.93	2.35	2.35	55.79	55.79	339.55	339.55	2.66	2.66	4.61	4.61
Yellowstone County	B2	RM 363.52	104943.9	100-yr	2120.93	942.2	937.54	2.18	2.06	52.4	43.8	372.43	483.23	2.55	2.13	4.66	4.66
Yellowstone County	B2	RM 363.46	104841.5	100-yr	2120.93	942.06	937.16	2.03	1.78	38.35	26.96	330.96	807.64	3.03	2.12	4.9	4.9
Yellowstone County	B2	RM 363.33	104622.9	100-yr	2120.93	941.75	936.36	2	1.56	49.36	30.26	301.81	865.73	2.86	1.75	5.39	5.39
Yellowstone County	B2	RM 363.20	104414.5	100-yr	2120.93	941.4	936.48	2.19	1.5	36.54	18.7	282.91	1046.2	2.92	1.49	4.92	4.92
Yellowstone County	B2	RM 363.10	104256.4	100-yr	2120.93	941.13	936.25	2.36	1.66	43.29	22.02	275.99	902.69	2.78	1.41	4.88	4.88
Yellowstone County	B2	RM 363.03	104144.8	100-yr	2120.93	940.98	936.22	2.3	1.56	34.91	17.02	285.28	1105.07	2.82	1.37	4.76	4.76
Yellowstone County	B2	RM 362.86	103869.6	100-yr	2120.93	940.85	934.32	1.63	1.2	15.38	9.6	405.06	996.8	2.83	1.77	6.53	6.53
Yellowstone County	B2	RM 362.74	103671.4	100-yr	2120.93	940.64	934.52	2.03	1.5	24.34	15.32	371.23	907.85	2.48	1.56	6.12	6.12
Yellowstone County	B2	RM 362.63	103493.2	100-yr	2120.93	940.43	934.5	1.91	1.46	39.59	24.22	388.17	972.86	2.44	1.49	5.93	5.93
Yellowstone County	B2	RM 362.52	103330.7	100-yr	2120.93	940.2	934.5	1.74	1.41	35.65	25.19	435.44	854.17	2.49	1.76	5.7	5.7
Yellowstone County	B2	RM 362.43	103185.5	100-yr	2120.93	940.06	934.1	1.73	1.55	16.64	14.57	438.71	783.25	2.69	2.35	5.96	5.96
Yellowstone County	B2	RM 362.36	103070.8	100-yr	2120.93	939.95	932.98	1.86	1.79	17.28	16.27	405.05	508.74	2.79	2.62	6.97	6.97
Yellowstone County	B2	RM 362.27	102929.3	100-yr	2120.93	939.7	932.93	2.49	2.49	29.38	29.38	198.11	198.11	4.29	4.29	6.77	6.77
Yellowstone County	B2	RM 362.20	102813.3	100-yr	2120.93	938.93	933.37	4.19	4.19	89.27	89.27	112.26	112.26	4.51	4.51	5.56	5.56
Yellowstone County	B2	RM 362.13	102693.1	100-yr	2120.93	938.69	933.47	4.15	4.15	83.67	83.6	125.89	168.8	4.06	4.06	5.22	5.22
Yellowstone County	B3	RM 362.05	102570.9	100-yr	2120.93	938.66	933.85	3.39	3.33	57.97	51.03	183.12	212.46	3.41	3	4.81	4.81
Yellowstone County	B3	RM 362.00	102488.8	100-yr	2120.93	938.68	934.11	2.72	2.72	43.21	42.55	244.3	317.15	3.19	3.15	4.57	4.57
Yellowstone County	B3	RM 361.93	102368.8	100-yr	2120.93	938.6	934.31	2.35	2.35	30.33	30.18	367.9	370.51	2.8	2.79	4.29	4.29
Yellowstone County	B3	RM 361.86	102261.1	100-yr	2120.93	938.4	934.36	2.46	2.44	53.29	51.95	364.53	444.04	2.36	2.3	4.04	4.04
Yellowstone County	B3	RM 361.78	102138.9	100-yr	2120.93	938.31	933.72	1.97	1.94	22.57	21.36	408.17	519.82	2.62	2.48	4.59	4.59
Yellowstone County	B3	RM 361.68	101970.2	100-yr	2120.93	938.2	933.64	1.77	1.73	20.28	19.35	426.61	563.86	2.78	2.65	4.56	4.56
Yellowstone County	B3	RM 361.65	101918.4	100-yr	2120.93	938.18	933.71	1.66	1.62	18.64	17.48	403.7	630.07	3.15	2.96	4.47	4.47
Yellowstone County	B3	RM 361.61	101855.6	100-yr	2120.93	938.07	932.7	2	1.98	23.36	22.67	335.34	634.88	3.16	3.07	5.37	5.37
Yellowstone County	B3	RM 361.56	101767.4	100-yr	2120.93	937.96	930.29	2.18	2.15	25.36	24.12	267.33	636.9	3.63	3.45	7.67	7.67
Yellowstone County	B3	RM 361.48	101644.6	100-yr	2120.93	937.71	929.97	2.72	2.42	53.29	33.69	181.61	738.61	4.19	2.64	7.74	7.74
Yellowstone County	B3	RM 361.42	101546.2	100-yr	2120.93	937.49	932.36	3.04	2.56	44.22	28.33	186.79	1383.38	3.61	2.31	5.13	5.13
Yellowstone County	B3	RM 361.37	101468.9	100-yr	2120.93	937.46	932.21	2.8	2.24	38.21	22.54	171.32	1644.56	4.13	2.44	5.25	5.25
Yellowstone County	B3	RM 361.33	101409.4	100-yr	2120.93	937.34	932.02	3.03	2.32	46.74	25.43	163.06	1473.04	3.91	2.12	5.32	5.32
Yellowstone County	B3	RM 361.29	101346	100-yr	2120.93	937.11	930.51	3.44	2.64	59.57	29.14	140.23	971.1	3.99	1.95	6.6	6.6

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	100-yr	2120.93	936.33	928.42	4.83	4.07	118.59	57.7	119.59	920.58	3.52	1.7	7.91	7.91
Yellowstone County	B3	RM 361.21	101251.*	100-yr	2120.93	936.61	927.55	3.56	2.84	120.2	46.89	119.16	1505.02	4.56	1.76	9.06	9.06
Yellowstone County		RM 361.21	101217.5	100-yr	2120.93	936.64	926.68	3.15	2.42	48.62	19.63	114.36	1498.16	5.45	2.18	9.96	9.96
Yellowstone County	B3	RM 361.18	101167.2	100-yr	2120.93	936.63	928.03	2.95	2.35	52.81	18.02	137.56	1620.08	4.75	1.61	8.6	8.6
Yellowstone County	B3	RM 361.16	101134.2	100-yr	2120.93	936.68	928.92	2.47	2.13	40.18	19.54	210.13	1643.83	3.78	1.84	7.76	7.76
Yellowstone County	B3	RM 361.09	101028.7	100-yr	2120.93	936.57	931.28	2.33	2.3	30.26	26.83	360.27	1688.77	2.52	2.23	5.29	5.29
Yellowstone County	B3	RM 361.01	100891.3	100-yr	2120.93	936.37	931.55	2.37	2.37	33.46	33.07	369.05	1768.45	2.42	2.39	4.82	4.82
Yellowstone County	B3	RM 360.92	100756	100-yr	2120.93	936.22	931.05	1.94	1.93	40.96	39.1	460.18	1885.59	2.37	2.26	5.17	5.17
Yellowstone County	B3	RM 360.81	100570.1	100-yr	2120.93	935.9	929.52	1.91	1.88	40.2	37.62	479.5	1856.33	2.31	2.16	6.38	6.38
Yellowstone County	B3	RM 360.69	100383.5	100-yr	2120.93	935.68	930.6	1.85	1.66	27.94	21.63	340.51	2112.18	3.14	2.43	5.79	5.79
Yellowstone County	B3	RM 360.59	100227.2	100-yr	2120.93	935.47	930.53	2.23	1.7	28.32	17.78	269.12	2189.56	3.08	1.93	5.26	5.26
Yellowstone County	B3	RM 360.50	100081	100-yr	2120.93	935.18	930.55	2.69	2.25	45.14	29.79	214.5	2156.81	3.47	2.28	4.62	4.62
Yellowstone County	B3	RM 360.42	99970.7	100-yr	2120.93	934.95	929.97	2.93	2.37	49.54	32.13	194.88	2151.14	3.45	2.24	4.98	4.98
Yellowstone County	B3	RM 360.36	99862.66	100-yr	2120.93	934.87	929.68	2.58	2.16	35.88	26.47	242.5	2072.87	3.19	2.35	5.19	5.19
Yellowstone County	B3	RM 360.27	99717.18	100-yr	2120.93	934.57	929.52	3.1	2.42	51.52	34.22	149.73	1866.26	3.67	2.44	5.05	5.05
Yellowstone County	B3	RM 360.18	99578.06	100-yr	2120.93	934.05	929.32	3.72	2.96	87.09	43.09	135.36	1561.46	4.02	1.96	4.73	4.73
Yellowstone County	B3	RM 360.11	99458.59	100-yr	2120.93	934.17	929.38	2.61	1.98	34.93	22.93	148.51	1634.8	3.69	2.43	4.79	4.79
Yellowstone County	B3	RM 360.03	99328	100-yr	2140.75	934.08	929.58	2.33	1.8	39.18	24.23	168.97	1788.81	3.71	2.29	4.5	4.5
Yellowstone County	B3	RM 359.96	99226.54	100-yr	2140.75	933.94	929.2	2.53	1.76	38.56	20.71	163.81	1581.8	3.77	2.03	4.74	4.74
Yellowstone County	B3	RM 359.88	99098.18	100-yr	2140.75	933.72	927.78	2.88	1.98	43.81	21.52	144	1474.19	4.08	2	5.94	5.94
Yellowstone County	B3	RM 359.78	98940.52	100-yr	2140.75	933.57	928.1	2.78	1.88	52.55	24.68	150.37	1467.96	4.14	1.94	5.47	5.47
Yellowstone County	B3	RM 359.70	98813.18	100-yr	2140.75	932.89	928.32	4.06	2.91	119.7	39.92	127.55	1388.23	3.56	1.18	4.57	4.57
Yellowstone County	B3	RM 359.61	98663.44	100-yr	2140.75	932.79	928.8	2.36	1.91	37.35	20.35	311.56	1399.6	2.69	1.46	3.99	3.99
Yellowstone County	B3	RM 359.50	98492.66	100-yr	2140.75	932.54	928.22	2.42	1.95	33.53	17.59	322.09	1501.35	2.49	1.3	4.32	4.32
Yellowstone County	B3	RM 359.38	98291.15	100-yr	2140.75	932.23	927.09	2.21	1.93	53.9	33.56	380.94	1427.46	2.12	1.31	5.14	5.14
Yellowstone County	B3	RM 359.26	98107.42	100-yr	2140.75	931.86	927.71	2.24	1.79	32.46	18.69	416.05	1381.66	2.03	1.17	4.15	4.15
Yellowstone County	B3	RM 359.18	97966.53	100-yr	2140.75	931.71	927.28	2.13	1.51	26.68	12.76	299.78	1302.77	2.64	1.26	4.43	4.43
Yellowstone County	B3	RM 359.10	97841.82	100-yr	2140.75	931.56	926.69	2.11	1.62	27.05	17.37	374.84	1231.29	2.3	1.48	4.87	4.87
Yellowstone County	B3	RM 359.01	97692.75	100-yr	2140.75	931.39	925.91	2.02	1.43	35.45	23.93	329.94	1111.14	2.47	1.66	5.48	5.48
Yellowstone County	B3	RM 358.90	97524.59	100-yr	2140.75	930.89	926.77	2.87	1.88	55.98	26.85	227.3	873.96	2.73	1.3	4.12	4.12
Yellowstone County	B3	RM 358.81	97374.99	100-yr	2140.75	930.42	926.37	3.26	2.2	55.43	23.33	225.13	869.46	2.65	1.12	4.05	4.05
Yellowstone County	B3	RM 358.74	97267.71	100-yr	2140.75	930.26	925.53	3.08	1.74	74.18	32.34	167.2	1458.92	2.9	1.26	4.73	4.73
Yellowstone County	B3	RM 358.67	97155.8	100-yr	2140.75	930.18	925.59	2.26	1.59	29.23	15.59	278.31	1469.54	2.34	1.25	4.59	4.59
Yellowstone County	B3	RM 358.61	97062.24	100-yr	2140.75	930.12	925.74	1.77	1.41	25.06	14.4	389.39	1569	2.26	1.29	4.38	4.38
Yellowstone County	B3	RM 358.56	96985.92	100-yr	2140.75	930.05	926.2	1.6	1.31	18.85	11.64	457.52	1534.78	2.14	1.33	5.46	5.46
Yellowstone County	B3	RM 358.50	96888.4	100-yr	2140.75	929.98	925.64	1.47	1.2	13.96	10.09	550.02	1464.14	1.99	1.44	4.34	4.34
Yellowstone County	B3	RM 358.43	96788.43	100-yr	2140.75	929.95	925.27	1.09	0.97	11.42	9.29	650.58	1429.2	2.05	1.67	4.68	4.68
Yellowstone County	B3	RM 358.30	96638.82	100-yr	2140.75	929.9	924.7	1.01	0.86	8.33	6.35	686.1	1287.32	2.62	1.99	5.2	5.2
Yellowstone County	B3	RM 358.24	96561.93	100-yr	2140.75	929.87	923.57	1.08	0.92	8.8	7.13	644.55	1256.04	2.47	2	6.3	6.3
Yellowstone County	B3	RM 358.20	96500.79	100-yr	2140.75	929.8	922.99	1.38	1.25	13.22	9.38	618.03	1042.96	2.32	1.64	6.81	6.81
Yellowstone County	B3	RM 358.14	96404.93	100-yr	2140.75	929.74	922.57	1.44	1.21	12.53	8.15	543.4	1309.97	2.49	1.61	7.17	7.17
Yellowstone County	B3	RM 358.12	96368.05	100-yr	2140.75	929.72	922.78	1.53	1.13	14.18	7.73	349.09	1288.22	3.08	1.68	6.94	6.94
Yellowstone County	B3	RM 358.04	96244.75	100-yr	2140.75	929.59	923.22	2.15	1.34	37.51	12.8	162.23	1206.63	3.91	1.33	6.37	6.37
Yellowstone County	B3	RM 358.00	96168.44	100-yr	2140.75	929.48	923.39	2.57	1.33	42.95	13.93	101.88	1201.23	4.21	1.34	6.09	6.09
Yellowstone County	B3	RM 357.93	96065.49	100-yr	2140.75	929.32	923.1	2.84	1.45	37.06	12.02	106.83	1149.65	3.98	1.28	6.22	6.22
Yellowstone County	B3	RM 357.88	95975.44	100-yr	2140.75	929.35	923.91	1.96	1.2	23.12	9.37	153.56	1164.89	3.8	1.53	5.44	5.44
Yellowstone County	B3	RM 357.82	95884.99	100-yr	2140.75	929.26	924.01	2.01	1.42	24.03	9.69	193.1	1081.89	3.79	1.52	5.25	5.25
Yellowstone County	B3	RM 357.78	95821.69	100-yr	2140.75	929.22	924.08	1.79	1.54	24.58	12.06	257.61	868.92	3.27	1.6	5.14	5.14
Yellowstone County	B3	RM 357.69	95683.91	100-yr	2140.75	929.05	923.81	2.06	1.7	21.91	11.03	304.63	797.89	3.15	1.58	5.24	5.24
Yellowstone County	B4	RM 357.62	95571.15	100-yr	2140.75	928.83	921.84	2.51	2.07	38.5	16.94	253.74	759.53	3.12	1.36	6.99	6.99
Yellowstone County	B4	RM 357.56	95469.4	100-yr	2140.75	928.77	918.46	2.24	1.86	32.03	13.98	225.69	1085.86	3.97	1.72	10.31	10.31
Yellowstone County	B4	RM 357.48	95351.48	100-yr	2140.75	928.4	922.69	3.04	2.62	50.88	26.79	199.14	969.18	3.43	1.79	5.71	5.71
Yellowstone County	B4	RM 357.44	95275.91	100-yr	2140.75	928.22	922.22	3.17	2.88	58.33	40.43	196.64	318.19	3.38	2.34	6	6
Yellowstone County	B4	RM 357.34	95127.12	100-yr	2140.75	927.97	923.1	3.16	2.81	55.88	36.63	182.41	320.45	3.63	2.37	4.87	4.87
Yellowstone County	B4	RM 357.23	94939.75	100-yr	2140.75	927.71	920.81	3.16	2.65	59.99	32.97	143.3	336.56	4.4	2.4	6.9	6.9
Yellowstone County	B4	RM 357.13	94789.23	100-yr	2140.75	927.55	921.26	3.14	2.45	49.6	23.67	139.16	577.57	3.93	1.86	6.29	6.29
Yellowstone County	B4	RM 357.01	94595.53	100-yr	2140.75	927.42	921.72	2.59	1.87	32.65	17.12	185.55	552.94	3.95	2.07	5.7	5.7
Yellowstone County	B4	RM 356.90	94412.13	100-yr	2140.75	927.24	921.02	2.57	1.95	34.18	19.81	234.48	588.54	3.22	1.86	6.22	6.22
Yellowstone County	B4	RM 356.81	94272.48	100-yr	2140.75	927.11	919.95	2.48	1.8	34.73	18.59	233.74	818.67	3.1	1.65	7.16	7.16
Yellowstone County	B4	RM 356.73	94148.77	100-yr	2140.75	927.01	921.15	2.18	1.67	26.88	15.07	299.9	922.1	2.72	1.53	5.86	5.86
Yellowstone County	B4	RM 356.66	94030.68	100-yr	2140.75	926.92	921.75	2.09	1.53	23.42	11.88	300.18	996.45	2.9	1.47	5.17	5.17

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	100-yr	2140.75	926.84	921.88	1.96	1.36	25.22	11.1	252.57	1062.06	3.44	1.51	4.96	4.96
Yellowstone County	B4	RM 356.50	93782.14	100-yr	2140.75	926.69	921.75	2.34	1.46	36.45	13.17	153.48	1042.81	4.02	1.44	4.94	4.94
Yellowstone County	B4	RM 356.44	93670.16	100-yr	2140.75	926.52	921.33	2.7	1.64	35.25	12.15	135.34	994.15	3.95	1.35	5.19	5.19
Yellowstone County	B4	RM 356.35	93525.27	100-yr	2140.75	926.35	919.71	2.79	1.71	53.6	17.29	115.76	920.99	4.39	1.4	6.64	6.64
Yellowstone County	B4	RM 356.26	93386.36	100-yr	2140.75	926.18	919.77	2.81	1.71	34.02	12.15	125.06	878.67	4.54	1.61	6.41	6.41
Yellowstone County	B4	RM 356.18	93264.31	100-yr	2140.75	926.13	919.95	2.52	1.7	38.18	14.98	128.53	707.38	4.57	1.78	6.18	6.18
Yellowstone County	B4	RM 356.11	93150.71	100-yr	2140.75	926.06	920.24	2.15	1.52	38.25	16.8	179.73	759.62	4.26	1.86	5.82	5.82
Yellowstone County	B4	RM 356.04	93034.25	100-yr	2140.75	925.86	920.36	2.45	1.77	53.88	22.53	173.65	747.17	3.9	1.62	5.5	5.5
Yellowstone County	B4	RM 355.97	92927.46	100-yr	2140.75	925.67	920.09	2.69	1.84	51	20.99	154.01	745.29	3.83	1.56	5.58	5.58
Yellowstone County	B4	RM 355.91	92825.82	100-yr	2140.75	925.62	919.82	2.33	1.48	25.91	12.08	153.74	932.11	4.08	1.89	5.8	5.8
Yellowstone County	B4	RM 355.82	92688.73	100-yr	2140.75	925.55	919.51	2.12	1.38	26.16	13.18	155.48	892.43	4.2	2.1	6.04	6.04
Yellowstone County	B4	RM 355.69	92483.67	100-yr	2140.75	924.54	919.96	4.51	3.12	107.86	59.87	108.06	805.6	3.36	1.86	4.58	4.58
Yellowstone County	B4	RM 355.68	92480	100-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	100-yr	2140.75	924.54	919.92	3.78	2.67	71.26	40.79	123	829.92	3.7	2.11	4.62	4.62
Yellowstone County	B4	RM 355.66	92419.94	100-yr	2140.75	924.64	919.8	2.99	2.34	43.5	24.92	139.95	857.9	3.78	2.17	4.84	4.84
Yellowstone County	B4	RM 355.60	92333.48	100-yr	2140.75	924.54	919.42	2.94	2.24	45.36	22.58	148.04	902.77	3.76	1.88	5.12	5.12
Yellowstone County	B4	RM 355.49	92159.95	100-yr	2140.75	924.44	918.52	2.25	1.81	47.85	24.57	141.27	990.38	3.82	1.96	5.92	5.92
Yellowstone County	B4	RM 355.43	92061.2	100-yr	2140.75	924.32	918.67	2.23	1.76	45.58	22.44	134.53	956.71	4.15	2.04	5.65	5.65
Yellowstone County	B4	RM 355.41	92020.68	100-yr	2140.75	924.32	919.02	1.78	1.55	38.55	22.04	159.91	1201.94	3.78	2.16	5.3	5.3
Yellowstone County	B4	RM 355.38	91976.12	100-yr	2140.75	924.25	919.25	2.1	1.55	33.24	17.07	125.74	1198.75	4.23	2.17	5	5
Yellowstone County	B4	RM 355.35	91933.98	100-yr	2140.75	924.23	919.21	2.13	1.45	24.16	12.16	109.82	1167.26	4.52	2.26	5.02	5.02
Yellowstone County	B4	RM 355.32	91885.87	100-yr	2140.75	924.2	919.16	2.11	1.43	23.77	12.03	107.08	1136.77	4.47	2.24	5.04	5.04
Yellowstone County	B4	RM 355.29	91828.99	100-yr	2140.75	924.16	918.93	2.19	1.45	24.93	12.68	104.17	1119.03	4.49	2.26	5.63	5.63
Yellowstone County	B4	RM 355.23	91732.97	100-yr	2140.75	924.07	918.68	2.3	1.68	31.15	16.38	101.56	1162.1	4.65	2.42	5.63	5.63
Yellowstone County	B4	RM 355.14	91596.1	100-yr	2140.75	923.94	918.52	2.35	1.88	28.31	19.45	118.49	1277.19	4.55	3.1	5.42	5.42
Yellowstone County	B4	RM 354.94	91268.08	100-yr	2140.75	923.5	917.25	2.62	2.17	67.87	50.4	167.19	1445.03	4.42	3.28	6.25	6.25
Yellowstone County	B4	RM 354.86	91153.59	100-yr	2140.75	923.16	917.03	3.15	2.42	78.13	45.24	125.07	1572.15	4.94	2.86	6.13	6.13
Yellowstone County	B4	RM 354.80	91056.05	100-yr	2140.75	922.94	915.66	3.35	2.4	86.18	43.67	117.98	1661.46	4.77	2.4	7.28	7.28
Yellowstone County	B4	RM 354.70	90880.27	100-yr	2140.75	922.64	915.38	3.09	2.69	83.61	57.45	153.63	1729.35	3.9	2.69	7.26	7.26
Yellowstone County	B4	RM 354.61	90744.35	100-yr	2140.75	922.51	917.13	2.66	2.46	34.48	30.69	215.25	1756.76	3.36	3.01	5.38	5.38
Yellowstone County	B4	RM 354.53	90609.24	100-yr	2140.75	922.47	916.52	2.16	2.07	26.53	22.4	238.32	1382.08	3.9	3.31	5.95	5.95
Yellowstone County	B4	RM 354.45	90486.63	100-yr	2140.75	922.27	915.87	2.56	2.37	43.27	32.39	205.43	1376.9	3.69	2.76	6.4	6.4
Yellowstone County	B4	RM 354.39	90385.43	100-yr	2140.75	922.03	915.24	2.99	2.62	53.31	33.04	165.51	1568.6	3.81	2.35	6.79	6.79
Yellowstone County	B4	RM 354.33	90291.31	100-yr	2140.75	922.03	915.37	2.53	2.13	31.02	20.38	150.94	1491.31	4.07	2.67	6.66	6.66
Yellowstone County	B4	RM 354.23	90133.96	100-yr	2140.75	921.54	915.46	3.5	2.65	82.8	39.18	118.76	1732.75	4.41	2.08	6.08	6.08
Yellowstone County	B4	RM 354.13	89983.48	100-yr	2140.75	921.24	914.94	3.37	2.64	91.11	41.01	134.11	1777.69	4.41	1.98	6.3	6.3
Yellowstone County	B4	RM 354.00	89778.46	100-yr	2140.75	921.05	916.2	2.79	2.01	57.84	28.77	158.7	1817.59	3.8	1.88	4.85	4.85
Yellowstone County	B5	RM 353.90	89604.28	100-yr	2140.75	920.71	917.06	2.84	2.22	53.48	27.23	232.69	1834.1	3.01	1.52	3.81	3.81
Yellowstone County	B5	RM 353.80	89446.75	100-yr	2265.35	920.46	916.36	2.58	2.17	58.23	36.23	301.86	1865.55	2.71	1.69	4.1	4.1
Yellowstone County	B5	RM 353.70	89288.94	100-yr	2265.35	920.22	915.92	2.09	1.77	47.52	31.88	391.91	1864.9	2.51	1.68	4.3	4.3
Yellowstone County	B5	RM 353.65	89204.58	100-yr	2265.35	920.04	915.49	2.02	1.67	50.56	33.17	403.76	1759.79	2.45	1.6	4.55	4.55
Yellowstone County	B5	RM 353.56	89077.56	100-yr	2265.35	919.82	914.2	1.97	1.54	46.28	26.84	364.38	1576.61	2.65	1.53	5.62	5.62
Yellowstone County	B5	RM 353.50	88982.39	100-yr	2265.35	919.72	914.58	1.78	1.3	33.13	16.65	308.44	1449.36	3.3	1.65	5.14	5.14
Yellowstone County	B5	RM 353.41	88846.15	100-yr	2265.35	919.51	914.41	2.06	1.41	40.17	17.16	231.19	1361.87	3.22	1.37	5.1	5.1
Yellowstone County	B5	RM 353.32	88709.14	100-yr	2265.35	919.33	913.6	2.25	1.34	36.47	15.12	194.16	1198.59	3.43	1.41	5.73	5.73
Yellowstone County	B5	RM 353.25	88587.13	100-yr	2265.35	919.12	912.76	2.63	1.46	42.93	16.7	160.68	1137.94	3.51	1.36	6.36	6.36
Yellowstone County	B5	RM 353.15	88438.48	100-yr	2265.35	918.98	912.71	2.47	1.5	36.09	17.43	215.51	1149.6	2.73	1.32	6.27	6.27
Yellowstone County	B5	RM 353.08	88321.13	100-yr	2265.35	918.93	912.99	2.08	1.32	24.88	11.8	197.65	1138.76	3.18	1.5	5.94	5.94
Yellowstone County	B5	RM 353.01	88210.34	100-yr	2265.35	918.87	913.13	1.74	1.26	20.34	11.73	249.61	1012.34	3.1	1.78	5.74	5.74
Yellowstone County	B5	RM 352.94	88090.6	100-yr	2265.35	918.83	912.5	1.63	1.23	17.31	9.49	175.48	858.53	3.92	2.15	6.33	6.33
Yellowstone County	B5	RM 352.86	87957.76	100-yr	2265.35	918.74	913.38	1.96	1.48	27.34	14.08	122.52	696.11	4.31	2.21	5.36	5.36
Yellowstone County	B5	RM 352.79	87857.09	100-yr	2265.35	918.63	913.06	1.98	1.73	35.01	20.34	106.92	551.43	4.13	2.38	5.57	5.57
Yellowstone County	B5	RM 352.72	87748.15	100-yr	2265.35	918.46	911.97	2.63	2.03	50.69	27.24	91.91	432.33	4.86	2.58	6.49	6.49
Yellowstone County	B5	RM 352.68	87677.1	100-yr	2265.35	918.26	912.27	2.51	2.51	83.43	83.43	336.15	336.15	2.68	2.68	5.99	5.99
Yellowstone County	B5	RM 352.64	87605.18	100-yr	2265.35	917.71	911.68	3.27	3.27	116.65	116.65	230.28	233.18	3.01	3.01	6.03	6.03
Yellowstone County	B5	RM 352.63	87594	100-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	100-yr	2265.35	917.53	911.45	3.23	3.23	102.51	102.51	228.77	228.77	3.06	3.06	6.08	6.08
Yellowstone County	B5	RM 352.54	87461.4	100-yr	2265.35	917.38	912.57	2.61	2.35	42.32	29.78	267.6	627.07	3.09	2.16	4.81	4.81
Yellowstone County	B5	RM 352.47	87340.46	100-yr	2265.35	917.28	912.2	2.41	1.84	35.1	21.85	231.7	1176	2.82	1.76	5.08	5.08
Yellowstone County	B5	RM 352.39	87216.99	100-yr	2265.35	916.78	912.01	3.53	2.55	72.27	33.71	187.93	2075.75	2.36	1.1	5.59	5.59
Yellowstone County	B5	RM 352.31	87079.16	100-yr	2265.35	916.41	910.66	3.39	2.53	82.54	37.39	184.09	1391.94	2.31	1.04	5.75	5.75

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	100-yr	2265.35	916.16	911.35	2.55	2.37	44.53	27.98	254.02	1437.43	1.84	1.16	4.81	4.81
Yellowstone County	B5	RM 352.18	86873.5	100-yr	2265.35	916.27	911.21	1.13	1.21	7.58	6.12	235.17	1474.53	2.39	1.93	5.06	5.06
Yellowstone County	B5	RM 352.09	86723.6	100-yr	2265.35	916.04	912.18	2.47	1.93	39.31	17.66	175.38	1370.72	2.67	1.2	3.86	3.86
Yellowstone County	B5	RM 351.99	86568.41	100-yr	2265.35	915.55	912.6	3.49	2.52	68.12	28.47	147.73	1169.45	2.48	1.03	2.97	2.97
Yellowstone County	B5	RM 351.93	86466.74	100-yr	2265.35	915.44	911.69	2.8	2	48.12	28.32	174.42	1223.43	2.17	1.28	3.75	3.75
Yellowstone County	B5	RM 351.88	86386.8	100-yr	2265.35	915.39	911.38	1.92	1.52	29.95	23.57	191.3	1736.1	1.96	1.54	4.01	4.01
Yellowstone County	B5	RM 351.81	86277.68	100-yr	2265.35	915.29	910.99	1.7	1.34	20.6	18.03	242.96	1827.81	1.8	1.58	4.3	4.3
Yellowstone County	B5	RM 351.74	86159.62	100-yr	2265.35	914.99	911.37	1.63	1.58	20.01	19.15	332.36	1658.04	1.26	1.21	4.16	4.16
Yellowstone County	B5	RM 351.67	86034.59	100-yr	2265.35	914.73	911.31	1.97	1.63	29.32	17.65	207.63	1237.89	1.93	1.16	4.35	4.35
Yellowstone County	B5	RM 351.58	85891.33	100-yr	2265.35	914.53	911.47	1.74	1.63	23.24	15.63	237.92	1133.25	1.92	1.29	4.44	4.44
Yellowstone County	B5	RM 351.52	85811.35	100-yr	2265.35	914.38	911.37	2.06	1.78	25.77	18.46	252.89	982.13	1.87	1.34	3.66	3.66
Yellowstone County	B5	RM 351.47	85728.2	100-yr	2265.35	914.28	911.17	2.05	1.77	23.49	15.52	197.25	1005.04	2.22	1.47	3.74	3.74
Yellowstone County	B5	RM 351.40	85601.48	100-yr	2265.35	914.14	910.26	2.13	1.66	26.52	16.92	160.1	1454.76	2.15	1.37	4.23	4.23
Yellowstone County	B5	RM 351.34	85482.66	100-yr	2265.35	914.05	909.98	1.51	1.48	29.79	16.32	146.46	1564.61	2.54	1.39	4.08	4.08
Yellowstone County	B5	RM 351.25	85342.53	100-yr	2265.35	913.93	909.91	1.56	1.3	18.07	12.95	261.36	1528.73	1.99	1.42	4.05	4.05
Yellowstone County	B5	RM 351.21	85257.19	100-yr	2265.35	913.86	909.48	1.72	1.28	20.32	13.77	212.42	1402.06	2.03	1.37	4.38	4.38
Yellowstone County	B5	RM 351.12	85127.55	100-yr	2265.35	913.78	909.49	1.78	1.31	19.99	12.29	174.9	1415.56	2.29	1.4	4.29	4.29
Yellowstone County	B5	RM 351.04	84988.05	100-yr	2265.35	913.65	908.79	2.13	1.38	27.25	12.21	126.48	1289.69	3.04	1.34	4.86	4.86
Yellowstone County	B5	RM 350.90	84769.91	100-yr	2265.35	913.61	909.27	1.48	1.16	16.31	8.04	104.05	1378.77	3.32	1.61	4.34	4.34
Yellowstone County	B5	RM 350.75	84536.19	100-yr	2265.35	913.44	909.72	1.35	1.52	28.05	19.64	270.43	977.85	2.25	1.57	4.06	4.06
Yellowstone County	B5	RM 350.66	84383.33	100-yr	2265.35	913.26	909.32	1.76	1.66	37.03	20.18	175.79	969.3	2.59	1.41	3.94	3.94
Yellowstone County	B5	RM 350.57	84244.69	100-yr	2265.35	912.96	908.48	2.17	1.77	49.98	23.04	152.25	944.56	2.96	1.35	4.48	4.48
Yellowstone County	B5	RM 350.50	84128.62	100-yr	2265.35	912.7	908.49	2.34	1.92	56.1	27.08	161.33	908	2.7	1.3	4.21	4.21
Yellowstone County	B5	RM 350.40	83974.24	100-yr	2265.35	912.49	908.73	1.81	1.68	28.63	20.79	318.49	898.43	2.07	1.5	3.76	3.76
Yellowstone County	B5	RM 350.33	83868.06	100-yr	2265.35	912.36	908.17	1.84	1.62	23.26	17.74	326.5	878.53	2.1	1.6	4.19	4.19
Yellowstone County	B5	RM 350.23	83712.91	100-yr	2265.35	912.13	907.61	2.06	1.69	31.57	21.68	300.73	969.97	2.1	1.44	4.52	4.52
Yellowstone County	B5	RM 350.14	83563.43	100-yr	2265.35	911.95	907.94	1.86	1.52	27.33	18.17	302.63	1108.34	2.17	1.44	4.01	4.01
Yellowstone County	B5	RM 350.06	83419.86	100-yr	2265.35	911.74	907.84	1.71	1.44	27.77	17.85	344.58	1157.87	2.11	1.36	3.9	3.9
Yellowstone County	B5	RM 349.94	83229.4	100-yr	2265.35	911.52	906.93	1.81	1.42	26.34	14.9	275.98	1365.45	2.37	1.33	4.59	4.59
Yellowstone County	B5	RM 349.83	83071.99	100-yr	2265.35	911.39	907.36	1.76	1.21	16.45	7.82	370.02	1417.41	3.01	1.43	4.03	4.03
Yellowstone County	B5	RM 349.68	82904.73	100-yr	2265.35	911.19	906.92	2.12	1.46	34.2	16.22	348.1	1581.58	2.51	1.19	4.27	4.27
Yellowstone County	B5	RM 349.54	82632.78	100-yr	2265.35	910.81	906.29	2.1	1.67	28.71	15.44	449.31	1142.89	2.2	1.18	4.52	4.52
Yellowstone County	B5	RM 349.33	82276.28	100-yr	2265.35	910.55	906.45	1.38	1.24	16.76	12.43	351.95	1059.53	2.33	1.72	4.1	4.1
Yellowstone County	B5	RM 349.19	82046.53	100-yr	2265.35	910.25	905.16	2.1	1.39	26.16	13.76	282.11	1271.63	2.45	1.29	5.09	5.09
Yellowstone County	B5	RM 349.04	81800.47	100-yr	2387.11	910.08	904.5	1.69	1.27	17.4	10.03	345.54	1235.24	2.65	1.52	5.58	5.58
Yellowstone County	B5	RM 348.89	81574.02	100-yr	2387.11	909.97	904.75	1.32	1.12	18.27	10.9	550.23	2057.85	2.88	1.71	5.22	5.22
Yellowstone County	B5	RM 348.77	81370.46	100-yr	2387.11	909.84	905.09	1.39	1.14	22.18	12.78	461.7	1939.28	3	1.72	4.74	4.74
Yellowstone County	B5	RM 348.64	81138.52	100-yr	2387.11	909.68	903.35	1.71	1.16	16.51	7.41	292.71	1255.35	3.69	1.64	6.33	6.33
Yellowstone County	B5	RM 348.52	80960.09	100-yr	2387.11	909.56	902.88	1.95	1.3	29.89	12.09	208.25	1661.4	4.11	1.64	6.68	6.68
Yellowstone County	B5	RM 348.38	80737.31	100-yr	2387.11	909.16	902.85	2.75	1.95	53.04	23.55	187.26	1481.18	4	1.76	6.31	6.31
Yellowstone County	B5	RM 348.26	80551.51	100-yr	2387.11	908.95	902.73	2.59	1.89	54.3	24.97	168.51	1362.05	4.23	1.93	6.22	6.22
Yellowstone County	B5	RM 348.09	80276.34	100-yr	2387.11	908.27	901.64	3.31	2.73	71.61	28.19	171.66	982.32	3.88	1.52	6.63	6.63
Yellowstone County	B5	RM 347.95	80055.79	100-yr	2387.11	908.13	902.96	2.77	2.08	36.66	12.93	165.09	1126.19	4.18	1.48	5.17	5.17
Yellowstone County	B5	RM 347.82	79844.2	100-yr	2387.11	907.99	902.93	2.34	1.74	44.78	16.49	180.88	1212.15	3.87	1.42	5.06	5.06
Yellowstone County	B5	RM 347.77	79751.93	100-yr	2387.11	907.88	902.38	2.39	1.64	47.7	17.43	178.59	1129.45	3.89	1.42	5.5	5.5
Yellowstone County	B5	RM 347.70	79643.98	100-yr	2387.11	907.79	901.91	2.18	1.4	39.29	15.76	182.31	1200.83	3.84	1.54	5.88	5.88
Yellowstone County	B5	RM 347.61	79501.64	100-yr	2387.11	907.71	902.2	1.96	1.21	19.02	10.48	192.93	859.84	4.15	2.29	5.51	5.51
Yellowstone County	B5	RM 347.51	79347.38	100-yr	2387.11	907.26	900.54	3.38	2.08	52.07	22.47	112.36	556.04	4.82	2.07	6.72	6.72
Yellowstone County	B5	RM 347.42	79196.21	100-yr	2387.11	907.18	900.73	2.78	2.08	71.74	37.89	148.41	519.01	4.19	2.21	6.45	6.45
Yellowstone County	B5	RM 347.35	79079.87	100-yr	2387.11	907.25	900.77	1.44	1.42	9.98	8.83	498.99	572.54	3.32	2.93	6.48	6.48
Yellowstone County	B5	RM 347.23	78895.71	100-yr	2387.11	907.16	900.89	1.53	1.52	14.06	13.47	509.95	539.02	3.04	2.91	6.27	6.27
Yellowstone County	B5	RM 347.13	78732.21	100-yr	2387.11	907.04	900.98	1.66	1.56	30.3	21.13	441.51	1529.38	3.18	2.21	6.06	6.06
Yellowstone County	B5	RM 346.93	78400.21	100-yr	2387.11	906.47	900.98	1.94	1.82	71.27	59.81	465.4	611.99	2.56	2.14	5.49	5.49
Yellowstone County	B5	RM 346.80	78193.27	100-yr	2387.11	905.92	900.02	2.02	1.71	56.12	41.86	454.75	791.24	2.36	1.76	5.9	5.9
Yellowstone County	B5	RM 346.64	77938.83	100-yr	2387.11	905.64	900.47	2.12	1.47	23.46	11.5	247.42	918.13	3.63	1.77	5.17	5.17
Yellowstone County	B5	RM 346.49	77706.6	100-yr	2387.11	905.38	900.21	2.57	1.55	39.35	14.6	176.82	1121.09	3.81	1.4	5.17	5.17
Yellowstone County	B6	RM 346.35	77480.6	100-yr	2387.11	905.19	900.33	2.29	1.44	36.48	15.51	214.8	1084.59	3.71	1.57	4.86	4.86
Yellowstone County	B6	RM 346.23	77285.9	100-yr	2387.11	904.92	900.11	2.65	1.58	36.18	13.96	177.58	996.73	3.97	1.52	4.81	4.81
Yellowstone County	B6	RM 346.11	77095.33	100-yr	2387.11	904.7	899.75	2.68	1.83	49.86	24.53	182.61	976.93	3.91	1.92	4.95	4.95
Yellowstone County	B6	RM 346.00	76926.16	100-yr	2387.11	904.52	899.8	2.63	1.76	40.22	17.6	178.09	1026.97	4.07	1.77	4.72	4.72
Yellowstone County	B6	RM 345.90	76766.95	100-yr	2387.11	904.23	899.51	2.93	1.97	56.16	25.16	179.39	924.49	3.83	1.71	4.72	4.72

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	100-yr	2387.11	904.08	899.04	2.63	1.83	40.85	19.39	200.43	1116.18	3.85	1.82	5.18	5.18
Yellowstone County	B6	RM 345.73	76484.99	100-yr	2387.11	903.91	899.01	2.73	1.82	43.17	19.34	198.24	1066.51	3.56	1.59	5.01	5.01
Yellowstone County	B6	RM 345.67	76386.71	100-yr	2387.11	903.86	899.1	2.38	1.62	32.35	15.75	212.54	787.17	3.86	1.88	4.96	4.96
Yellowstone County	B6	RM 345.60	76268.76	100-yr	2387.11	903.75	899.22	2.33	1.65	35.4	19.31	235.37	770.06	3.5	1.91	4.85	4.85
Yellowstone County	B6	RM 345.50	76118.1	100-yr	2387.11	903.61	899.07	1.99	1.66	42.65	28.68	280.8	734.78	3.14	2.1	4.71	4.71
Yellowstone County	B6	RM 345.37	75909.53	100-yr	2387.11	903.18	897.51	2.41	2	46.08	23.73	316.61	976.88	2.95	1.51	5.67	5.67
Yellowstone County	B6	RM 345.27	75751.01	100-yr	2387.11	902.89	898.15	2.64	2.04	42.3	24.21	252.45	624.26	3.3	1.88	4.74	4.74
Yellowstone County	B6	RM 345.07	75427.56	100-yr	2387.11	902.7	897.07	2.13	1.51	24.1	10.47	241.2	1182.51	3.86	1.67	5.63	5.63
Yellowstone County	B6	RM 344.90	75166.64	100-yr	2387.11	902.59	897.3	1.8	1.31	18.19	8.19	294.53	1089.34	3.73	1.68	5.29	5.29
Yellowstone County	B6	RM 344.75	74927.69	100-yr	2387.11	902.4	896.02	2.08	1.49	33.98	13.84	235.98	1013.1	3.91	1.58	6.38	6.38
Yellowstone County	B6	RM 344.64	74743.45	100-yr	2387.11	902.04	895.93	2.86	1.84	42.76	13.4	158.71	931.64	4.47	1.39	6.11	6.11
Yellowstone County	B6	RM 344.53	74576.12	100-yr	2387.11	901.94	895.39	2.49	1.61	51.17	17.67	162.09	1015.74	4.23	1.46	6.55	6.55
Yellowstone County	B6	RM 344.43	74405.67	100-yr	2387.11	901.83	896.11	2.22	1.32	23.71	8.96	179.43	1181.13	4.1	1.54	5.72	5.72
Yellowstone County	B6	RM 344.29	74192.79	100-yr	2387.11	901.66	895.87	2.31	1.64	30.99	14.08	179.75	1076.44	4.27	1.94	5.79	5.79
Yellowstone County	B6	RM 344.13	73931.76	100-yr	2387.11	901.4	895.4	2.58	1.87	37.13	17.97	157.02	1199.03	4.63	2.24	6	6
Yellowstone County	B6	RM 343.87	73520.95	100-yr	2387.11	901.15	895.23	2.11	1.74	22.62	16.36	287.43	1257.55	3.65	2.64	5.92	5.92
Yellowstone County	B6	RM 343.80	73403.19	100-yr	2387.11	901.1	894.69	1.77	1.58	33.62	28.46	356.81	1297.6	3.47	2.93	6.41	6.41
Yellowstone County	B6	RM 343.66	73173.16	100-yr	2387.11	900.78	894.63	1.88	1.81	51.66	46.74	396.01	1249.56	3.14	2.84	6.15	6.15
Yellowstone County	B6	RM 343.55	72997.33	100-yr	2387.11	900.5	894.63	1.91	1.83	47.72	41.06	370.68	991.51	3.31	2.84	5.87	5.87
Yellowstone County	B6	RM 343.45	72840.49	100-yr	2387.11	900.25	894.78	1.97	1.96	42.29	41.19	401.86	983.13	3.01	2.94	5.47	5.47
Yellowstone County	B6	RM 343.37	72718.86	100-yr	2387.11	899.93	894.5	2.38	2.38	66.91	66.9	343.23	343.45	2.92	2.92	5.43	5.43
Yellowstone County	B6	RM 343.29	72586.22	100-yr	2387.11	899.66	894.28	2.43	2.24	56.48	46.02	280.35	387.95	3.38	2.75	5.38	5.38
Yellowstone County	B6	RM 343.21	72458.03	100-yr	2387.11	899.45	893.99	2.16	1.97	66.09	53.32	357.12	937.89	2.93	2.36	5.46	5.46
Yellowstone County	B6	RM 343.14	72328.78	100-yr	2387.11	899.14	893.94	2.04	1.83	67.25	54.24	432.86	928.4	2.52	2.02	5.2	5.2
Yellowstone County	B6	RM 343.04	72174.44	100-yr	2387.11	898.97	894.12	1.74	1.45	19.91	15.6	485.75	1052.88	2.63	2.06	4.85	4.85
Yellowstone County	B6	RM 342.96	72046.7	100-yr	2387.11	898.85	894.17	1.62	1.41	39.02	29.32	506.88	1145.54	2.5	1.88	4.68	4.68
Yellowstone County	B6	RM 342.87	71890.42	100-yr	2387.11	898.57	893.92	1.6	1.41	44.73	32.18	541.54	1199.59	2.31	1.66	4.65	4.65
Yellowstone County	B6	RM 342.78	71759.64	100-yr	2387.11	898.43	893.85	1.58	1.31	14.69	10.64	525.34	1447.64	2.33	1.68	4.58	4.58
Yellowstone County	B6	RM 342.71	71649.64	100-yr	2387.11	898.37	893.88	1.51	1.29	13.55	10.24	525.67	1996.36	2.25	1.7	4.49	4.49
Yellowstone County	B6	RM 342.64	71534.72	100-yr	2387.11	898.25	893.45	1.46	1.38	33.29	29.44	689.67	1061.37	2.24	1.98	4.8	4.8
Yellowstone County	B6	RM 342.59	71441.82	100-yr	2387.11	898.07	893.13	1.55	1.55	39.26	39.21	689.94	2468.12	2.23	2.23	4.94	4.94
Yellowstone County	B6	RM 342.49	71299.94	100-yr	2387.11	897.91	892.73	1.36	1.36	24.58	24.55	659.97	2683.32	2.66	2.66	5.18	5.18
Yellowstone County	B6	RM 342.40	71182.23	100-yr	2387.11	897.83	892.4	1.23	1.23	19.95	19.91	592.92	2783.16	3.26	3.26	5.43	5.43
Yellowstone County	B6	RM 342.29	70973.95	100-yr	2387.11	897.6	891.26	1.64	1.64	30.16	30.04	479.14	2632.06	3.04	3.03	6.34	6.34
Yellowstone County	B6	RM 342.17	70788.09	100-yr	2387.11	897.15	891.21	2.38	2.38	68.52	68.52	380.4	2181.41	2.64	2.64	5.94	5.94
Yellowstone County	B6	RM 342.09	70668.79	100-yr	2387.11	896.95	892.22	2.07	2	47.71	38.74	378.53	1924.68	2.99	2.43	4.73	4.73
Yellowstone County	B6	RM 341.96	70472.35	100-yr	2387.11	896.78	891.5	1.82	1.77	19.11	16.6	503.83	1673.78	2.58	2.24	5.28	5.28
Yellowstone County	B6	RM 341.82	70207.79	100-yr	2387.11	896.63	890.89	1.42	1.35	19.24	15.65	582.05	1153.79	2.78	2.26	5.74	5.74
Yellowstone County	B6	RM 341.68	69974.03	100-yr	2387.11	896.42	890.38	1.61	1.54	26.86	22.3	481.57	632.09	2.96	2.46	6.03	6.03
Yellowstone County	B6	RM 341.57	69788.71	100-yr	2387.11	896.11	889.58	2.19	2.18	23.91	21.81	434.09	478.7	2.51	2.29	6.53	6.53
Yellowstone County	B6	RM 341.47	69629.19	100-yr	2387.11	895.93	889.76	1.94	1.82	55.29	39.7	395.38	770.77	2.91	2.09	6.17	6.17
Yellowstone County	B6	RM 341.32	69391.37	100-yr	2387.11	895.45	890.36	2.01	1.86	53.93	39.79	401.39	623.66	2.79	2.06	5.09	5.09
Yellowstone County	B6	RM 341.24	69252.71	100-yr	2387.11	895.34	890.28	1.81	1.58	18.69	12.74	396.74	882.89	3.01	2.05	5.06	5.06
Yellowstone County	B6	RM 341.11	69044.61	100-yr	2387.11	895.05	890	2.29	1.78	39.95	23.95	324.65	772.25	2.91	1.74	5.05	5.05
Yellowstone County	B6	RM 340.94	68773.18	100-yr	2387.11	894.74	889.22	2.2	1.5	34.74	17.69	280.24	1004.39	3.22	1.64	5.52	5.52
Yellowstone County	B6	RM 340.81	68556.42	100-yr	2387.11	894.64	889.05	1.62	1.11	21.77	11.65	315.44	1180.93	3.41	1.82	5.59	5.59
Yellowstone County	B6	RM 340.65	68325.7	100-yr	2387.11	894.42	888.87	2.23	1.29	24	10.37	204.11	1069.46	4	1.72	5.55	5.55
Yellowstone County	B6	RM 340.52	68126.27	100-yr	2387.11	894.21	887.3	2.63	1.45	45.25	15.25	130.27	972.57	5.06	1.69	6.91	6.91
Yellowstone County	B6	RM 340.40	67936.51	100-yr	2387.11	894.08	886.73	2.26	1.42	41.65	17.93	170.6	860.12	4.58	1.96	7.35	7.35
Yellowstone County	B7	RM 340.26	67715.84	100-yr	2387.11	893.81	887.99	2.21	1.67	55.42	30.89	252.4	711.57	3.62	2.01	5.82	5.82
Yellowstone County	B7	RM 340.16	67550.99	100-yr	2387.11	893.52	888.43	2.1	1.7	63.87	41.9	313.83	687.6	3.12	2.04	5.09	5.09
Yellowstone County	B7	RM 340.06	67387.35	100-yr	2387.11	893.23	888.74	2.08	1.8	46.19	30.33	315.76	626.32	3.23	2.12	4.49	4.49
Yellowstone County	B7	RM 339.96	67234.59	100-yr	2387.11	892.96	888.85	2.31	2.11	30.54	20.82	360.72	602.77	2.76	1.88	4.11	4.11
Yellowstone County	B7	RM 339.88	67094.07	100-yr	2387.11	892.81	888.78	2.03	1.91	43.85	35.16	445.51	611.21	2.55	2.04	4.03	4.03
Yellowstone County	B7	RM 339.79	66960.51	100-yr	2387.11	892.51	888.98	2.26	2.25	35.97	34.15	511	539.36	2.07	1.96	3.53	3.53
Yellowstone County	B7	RM 339.72	66843.76	100-yr	2387.11	892.38	888.72	2	1.91	26.3	23.58	513.05	610.67	2.28	2.05	3.66	3.66
Yellowstone County	B7	RM 339.66	66753.41	100-yr	2387.11	892.33	887.9	1.75	1.66	18.93	16.48	525.1	713.26	2.54	2.21	4.43	4.43
Yellowstone County	B7	RM 339.52	66527.74	100-yr	2387.11	892.15	887.31	1.98	1.54	20.8	13.64	312.36	959.56	3.39	2.22	4.84	4.84
Yellowstone County	B7	RM 339.37	66324.85	100-yr	2387.11	891.96	887.17	2.15	1.59	43.63	24.01	232.31	754.44	3.63	1.99	4.79	4.79
Yellowstone County	B7	RM 339.24	66108.49	100-yr	2387.11	891.48	886.45	2.92	2.14	44.73	24.08	218.09	702.4	3.08	1.66	5.03	5.03
Yellowstone County	B7	RM 339.13	65940.41	100-yr	2387.11	891.26	885.31	2.97	1.96	53.59	25.43	143.34	700.58	3.68	1.73	5.95	5.95

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	100-yr	2387.11	890.9	886.09	3.04	2.18	48.57	22.27	187.64	733.56	3.25	1.49	4.81	4.81
Yellowstone County	B7	RM 338.94	65621.59	100-yr	2387.11	890.84	886.36	2.49	1.79	32.9	19.78	223.57	720.06	3.09	1.86	4.48	4.48
Yellowstone County	B7	RM 338.83	65433.26	100-yr	2387.11	890.66	886.37	2.21	1.65	35.35	19.39	225.04	865.66	3.12	1.71	4.64	4.64
Yellowstone County	B7	RM 338.72	65256.88	100-yr	2387.11	890.41	886.18	2.32	1.94	41.9	27.02	205.92	621.75	3.35	2.16	4.61	4.61
Yellowstone County	B7	RM 338.62	65095.08	100-yr	2387.11	890.05	886.28	2.95	2.27	46.86	28.18	179.43	680.09	3.16	1.9	4.43	4.43
Yellowstone County	B7	RM 338.49	64891.36	100-yr	2387.11	889.87	885.05	2.58	1.98	35.55	21.17	174.43	854.94	3.29	1.96	4.82	4.82
Yellowstone County	B7	RM 338.40	64742.15	100-yr	2387.11	889.86	884.28	1.78	1.48	16.3	11.07	165.95	939.72	3.44	2.33	5.58	5.58
Yellowstone County	B7	RM 338.29	64577.05	100-yr	2387.11	889.73	884.18	2.17	1.54	24.46	11.7	123.01	981.44	3.82	1.82	5.55	5.55
Yellowstone County	B7	RM 338.19	64384.71	100-yr	2387.11	889.68	885.23	1.5	1.22	13.71	9.98	393.33	1043.95	2.85	2.07	4.45	4.45
Yellowstone County	B7	RM 338.06	64164.59	100-yr	2387.11	889.6	884.64	1.55	1.08	14.6	8.68	284.25	1185.53	3.38	2.01	4.96	4.96
Yellowstone County	B7	RM 337.91	63921.69	100-yr	2387.11	889.43	884.16	1.99	1.22	19.41	10.08	205.66	1215.39	3.66	1.9	5.27	5.27
Yellowstone County	B7	RM 337.83	63789.53	100-yr	2387.11	889.12	882.72	2.89	1.72	48.19	20.31	178.33	907.2	3.65	1.53	6.4	6.4
Yellowstone County	B7	RM 337.75	63667.96	100-yr	2387.11	888.75	881.69	3.48	2.03	63.27	23.08	143.3	842.03	3.86	1.4	7.06	7.06
Yellowstone County	B7	RM 337.68	63550.4	100-yr	2387.11	888.56	882.49	3.29	2.18	64.92	22.07	161.63	825.85	3.92	1.33	6.07	6.07
Yellowstone County	B7	RM 337.58	63396.62	100-yr	2387.11	888.35	883.62	3.17	2.11	52.02	20.69	189.36	853.25	3.33	1.32	4.73	4.73
Yellowstone County	B7	RM 337.47	63212.44	100-yr	2387.11	888.2	883.31	2.67	1.78	43.07	18.64	178.55	887.7	3.51	1.51	4.89	4.89
Yellowstone County	B7	RM 337.38	63064.58	100-yr	2387.11	888	883.29	2.8	1.71	39.59	16.94	177.51	975.07	3.37	1.43	4.71	4.71
Yellowstone County	B7	RM 337.27	62894.98	100-yr	2387.11	887.99	883.15	1.87	1.2	17.39	8.94	210.44	1129	3.43	1.76	4.84	4.84
Yellowstone County	B7	RM 337.16	62717.85	100-yr	2387.11	887.94	882.57	1.43	1.09	10.94	7.11	397.68	1296.03	3.05	1.98	5.37	5.37
Yellowstone County	B7	RM 337.04	62524.52	100-yr	2387.11	887.87	879.61	1.68	1.1	14.2	6.37	154.62	1249.46	4.91	2.2	8.26	8.26
Yellowstone County	B7	RM 336.96	62390.64	100-yr	2387.11	887.8	880.21	1.81	1.28	23.49	11.29	186	1206.53	4.34	2.07	7.59	7.59
Yellowstone County	B7	RM 336.87	62246.97	100-yr	2387.11	887.67	881.41	2.17	1.43	25.76	11.76	156.32	821.32	4.5	2.04	6.26	6.26
Yellowstone County	B7	RM 336.80	62131.42	100-yr	2387.11	887.61	881.33	2.05	1.41	32.83	16.06	162.29	1135.34	4.15	2.02	6.28	6.28
Yellowstone County	B7	RM 336.72	62005.73	100-yr	2387.11	887.36	881.38	2.65	1.69	52.65	18.09	136.15	1090.39	4.35	1.48	5.98	5.98
Yellowstone County	B7	RM 336.66	61902.64	100-yr	2387.11	886.85	881.45	3.75	2.49	96.76	28.05	117.37	831.92	4.01	1.15	5.4	5.4
Yellowstone County	B7	RM 336.59	61800.43	100-yr	2387.11	886.77	880.66	3.08	2.09	68.31	20.12	135.93	885.51	4.39	1.29	6.11	6.11
Yellowstone County	B7	RM 336.52	61689.55	100-yr	2387.11	886.62	881.76	2.97	1.97	55.13	20.08	145.49	882.46	3.76	1.37	4.86	4.86
Yellowstone County	B7	RM 336.46	61580.5	100-yr	2387.11	886.5	882.13	2.68	1.88	54.79	21.35	162.48	944.04	3.46	1.35	4.37	4.37
Yellowstone County	B7	RM 336.40	61491.01	100-yr	2387.11	886.34	882.03	2.77	1.84	55.94	22.19	162.53	927.53	3.54	1.4	4.31	4.31
Yellowstone County	B7	RM 336.34	61394.22	100-yr	2387.11	886.19	881.93	2.81	1.77	51.1	23.03	163.69	890.5	3.37	1.52	4.26	4.26
Yellowstone County	B7	RM 336.27	61278.9	100-yr	2387.11	886.03	881.67	2.71	1.66	47.19	21.37	169.95	946.77	3.35	1.52	4.36	4.36
Yellowstone County	B7	RM 336.19	61159.07	100-yr	2387.11	885.86	882.11	2.64	1.77	37.75	19.13	211.78	1016.93	2.63	1.33	3.75	3.75
Yellowstone County	B7	RM 336.09	60993.57	100-yr	2387.11	885.71	882.16	2.05	1.41	26.33	16.28	319.78	1089.19	2.51	1.55	3.55	3.55
Yellowstone County	B7	RM 335.98	60812.26	100-yr	2387.11	885.55	881.93	1.5	1.36	28.18	22.58	442.1	1055.87	2.08	1.66	3.82	3.82
Yellowstone County	B7	RM 335.89	60669.74	100-yr	2387.11	885.37	880.16	1.71	1.55	17.21	15.28	737.52	1010.22	1.72	1.52	5.21	5.21
Yellowstone County	B7	RM 335.77	60465.85	100-yr	2387.11	885.04	880.49	1.64	1.6	47.22	42.24	881.3	1102.63	1.52	1.36	4.55	4.55
Yellowstone County	B7	RM 335.68	60324.8	100-yr	2387.11	884.73	880.65	1.86	1.74	17.96	15.59	880.36	1645.48	1.4	1.21	4.08	4.08
Yellowstone County	B7	RM 335.59	60183.7	100-yr	2387.11	884.54	880.3	1.84	1.7	18.83	15.66	917.67	1687.2	1.36	1.13	4.24	4.24
Yellowstone County	B7	RM 335.51	60046.12	100-yr	2387.11	884.37	880.03	1.8	1.64	16.67	13.06	942.99	1692.58	1.35	1.06	4.34	4.34
Yellowstone County	B7	RM 335.41	59899.97	100-yr	2387.11	884.27	879.45	1.39	1.21	13.28	10	911.11	1603.64	1.73	1.3	4.82	4.82
Yellowstone County	B7	RM 335.36	59814.82	100-yr	2387.11	884.26	878.65	1.06	0.89	6.57	4.81	896.25	1887.98	2.3	1.68	5.61	5.61
Yellowstone County	B7	RM 335.12	59393.71	100-yr	2387.11	884.03	878.54	1.79	1.01	17.76	7.35	331.92	1984.27	2.88	1.19	5.49	5.49
Yellowstone County	B7	RM 335.03	59228.59	100-yr	2387.11	883.74	876.8	2.84	1.31	54.06	14.86	149.84	1956.11	3.39	0.93	6.94	6.94
Yellowstone County	B7	RM 334.91	59041.32	100-yr	2387.11	883.55	878.31	2.24	1.15	35.18	12.96	229.84	1979.35	2.86	1.05	5.24	5.24
Yellowstone County	B7	RM 334.85	58937.73	100-yr	2387.11	883.42	878.66	2.2	1.11	35.62	13.22	224.38	1982.55	2.92	1.09	4.76	4.76
Yellowstone County	B7	RM 334.73	58737.5	100-yr	2387.11	883	879.52	2.89	1.42	49.55	15.36	192.81	1849.61	2.94	0.91	3.62	3.62
Yellowstone County	B7	RM 334.63	58573.32	100-yr	2387.11	882.92	878.31	2.22	1.21	26.25	10.38	187.59	1658.58	3.01	1.19	4.61	4.61
Yellowstone County	B7	RM 334.54	58424.99	100-yr	2387.11	882.9	877.09	1.15	1.02	13.34	6.05	154.81	1589.52	3.24	1.47	5.81	5.81
Yellowstone County	B7	RM 334.22	57821.07	100-yr	2387.11	882.53	875.76	2.21	1.5	22.01	11.35	197.11	1079.32	4.15	2.14	6.77	6.77
Yellowstone County	B7	RM 334.09	57621.62	100-yr	2387.11	882.35	875.55	2.73	1.7	58.91	24.46	119.41	841.81	4.03	1.67	6.8	6.8
Yellowstone County	B7	RM 333.98	57440.64	100-yr	2387.11	882.18	875.46	2.56	1.69	32.72	13.12	140.01	729.23	4.85	1.94	6.72	6.72
Yellowstone County	B7	RM 333.83	57207.78	100-yr	2387.11	881.98	875.4	2.56	2	46.85	26.31	163.18	537.2	3.98	2.22	6.58	6.58
Yellowstone County	B7	RM 333.69	56989.22	100-yr	2387.11	881.72	873.45	2.08	1.9	44.41	28.2	337.33	849.78	3.33	2.11	8.27	8.27
Yellowstone County	B7	RM 333.54	56738.21	100-yr	2387.11	881.58	874.22	1.42	1.25	22.77	14.5	409.8	1064.82	3.76	2.39	7.36	7.36
Yellowstone County	B7	RM 333.42	56552.03	100-yr	2387.11	881.41	873.42	1.58	1.44	31.3	17.96	426.38	909.26	3.21	1.83	7.99	7.99
Yellowstone County	B7	RM 333.30	56351.75	100-yr	2387.11	881.09	875.65	1.79	1.67	52.86	31.25	449.89	883.23	2.75	1.62	5.44	5.44
Yellowstone County	B7	RM 333.19	56177.76	100-yr	2387.11	880.69	875.72	2.1	2	47.26	38.57	399.11	546.09	2.69	2.19	4.97	4.97
Yellowstone County	B7	RM 333.09	56027.56	100-yr	2387.11	880.55	875.59	1.9	1.7	20.29	16.73	429	610.49	2.8	2.31	4.96	4.96
Yellowstone County	B7	RM 332.99	55855.76	100-yr	2387.11	880.37	873.86	1.92	1.62	45.88	33.47	385.09	707.01	2.86	2.08	6.51	6.51
Yellowstone County	B7	RM 332.88	55687.68	100-yr	2387.11	880.25	874.43	1.61	1.42	16.68	12.09	409.12	754.37	3.08	2.23	5.82	5.82
Yellowstone County	B7	RM 332.77	55504.73	100-yr	2387.11	880.2	875.49	1.43	1.18	11.25	7.56	376.01	830.53	3.61	2.43	4.71	4.71

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	100-yr	2387.11	880.12	874.96	1.55	1.23	16.51	10.84	334.72	815.15	3.64	2.39	5.16	5.16
Yellowstone County	B7	RM 332.56	55182.74	100-yr	2387.11	880.03	874.54	1.64	1.19	17.65	9.28	312.27	2175.69	3.98	2.08	5.49	5.49
Yellowstone County	B7	RM 332.47	55059.84	100-yr	2387.11	880	873.95	1.46	1.05	14.9	7.43	281.38	2243.62	4.26	2.11	6.05	6.05
Yellowstone County	B7	RM 332.38	54913.1	100-yr	2387.11	879.86	873.16	2.08	1.22	28.1	9.12	159.71	2085.17	5	1.6	6.7	6.7
Yellowstone County	B7	RM 332.33	54822.67	100-yr	2387.11	879.85	872.5	1.7	1.12	28.68	10.92	188.81	1240.59	4.54	1.72	7.35	7.35
Yellowstone County	B7	RM 332.21	54626.48	100-yr	2387.11	879.68	873.4	1.99	1.32	32.57	10.53	177.38	1460.17	4.86	1.56	6.28	6.28
Yellowstone County	B7	RM 332.20	54613	100-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	100-yr	2387.11	879.4	873.19	2.23	1.56	45.16	13.83	192.82	1299.15	4.33	1.32	6.21	6.21
Yellowstone County	B7	RM 332.17	54575.38	100-yr	2387.11	879.36	872.76	2.18	1.37	34.53	10.11	145.13	1437.6	5.09	1.46	6.6	6.6
Yellowstone County	B7	RM 332.16	54558	100-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	100-yr	2387.11	879.2	872.47	2.48	1.45	32.17	8.55	130.77	1441.01	5.22	1.37	6.73	6.73
Yellowstone County	B7	RM 332.08	54422.01	100-yr	2387.11	879.1	873.77	2.41	1.5	37.88	10.6	155.85	1421.16	4.49	1.24	5.33	5.33
Yellowstone County	B7	RM 331.96	54224.76	100-yr	2387.11	878.94	873.18	2.07	1.47	40.51	14.1	205.19	1212.55	3.89	1.34	5.76	5.76
Yellowstone County	B7	RM 331.85	54057.19	100-yr	2387.11	878.76	873.16	1.97	1.45	49.98	18.69	250.19	1178.81	3.76	1.4	5.6	5.6
Yellowstone County	B7	RM 331.74	53882.8	100-yr	2387.11	878.12	872.62	3.32	2.22	70.58	16.33	149.92	1097.65	4.28	0.98	5.5	5.5
Yellowstone County	B8	RM 331.66	53744.64	100-yr	2387.11	878.06	871.68	2.54	1.87	48.05	15.67	219.63	1019.22	3.86	1.25	6.38	6.38
Yellowstone County	B8	RM 331.55	53575.67	100-yr	2387.11	877.91	872.61	2.37	1.69	41.46	15.31	204.4	1064.79	3.61	1.33	5.3	5.3
Yellowstone County	B8	RM 331.41	53354.89	100-yr	2387.11	877.62	872.56	2.55	1.8	44.12	16.29	218.29	1048.14	3.45	1.27	5.06	5.06
Yellowstone County	B8	RM 331.32	53209.79	100-yr	2387.11	877.44	871.92	2.27	1.61	36.39	19.2	275.52	978.28	2.89	1.52	5.52	5.52
Yellowstone County	B8	RM 331.23	53053.99	100-yr	2387.11	877.3	871.53	1.89	1.49	25.83	17.18	376.48	922.67	2.63	1.74	5.77	5.77
Yellowstone County	B8	RM 331.14	52919.44	100-yr	2387.11	877.22	871.72	1.61	1.32	19.33	11.75	309.55	1150.5	3.08	1.86	5.5	5.5
Yellowstone County	B8	RM 331.08	52820.06	100-yr	2387.11	877.13	871.29	1.75	1.33	21.58	10.97	305.99	1035.95	3.43	1.73	5.84	5.84
Yellowstone County	B8	RM 331.01	52700.37	100-yr	2387.11	877.04	871.8	1.78	1.38	23.3	14.25	299.81	838.22	3.39	2.06	5.24	5.24
Yellowstone County	B8	RM 330.93	52576.5	100-yr	2387.11	876.93	871.67	1.87	1.59	26.01	16.3	250.76	623.65	3.85	2.4	5.26	5.26
Yellowstone County	B8	RM 330.83	52418.21	100-yr	2387.11	876.65	870.75	2.68	2.07	38.75	19.23	141.59	505.4	4.63	2.28	5.9	5.9
Yellowstone County	B8	RM 330.77	52321.13	100-yr	2387.11	876.52	870.68	2.7	2.27	46.03	27.78	174.99	978.94	3.92	2.37	5.84	5.84
Yellowstone County	B8	RM 330.68	52174.9	100-yr	2387.11	876.21	870.33	3.25	2.47	54.77	25.75	129.73	1666.44	4.32	2.02	5.88	5.88
Yellowstone County	B8	RM 330.58	52000.46	100-yr	2387.11	876.04	869.72	3	2.29	63.87	28.43	117.94	514.9	4.59	2.02	6.32	6.32
Yellowstone County	B8	RM 330.48	51852.83	100-yr	2387.11	875.83	868.81	3.12	2.24	64.76	27.96	105.96	543.79	4.9	2.08	7.02	7.02
Yellowstone County	B8	RM 330.39	51701.57	100-yr	2387.11	875.68	869.32	2.93	2.04	43.96	18.21	134.45	682.01	4.15	1.71	6.36	6.36
Yellowstone County	B8	RM 330.32	51592.04	100-yr	2387.11	875.57	869.57	2.94	1.88	41.33	13.49	135.54	1009.27	4.31	1.4	6	6
Yellowstone County	B8	RM 330.25	51473.55	100-yr	2387.11	875.49	868.38	2.72	1.77	39.27	14.8	145.13	950.09	4.02	1.5	7.11	7.11
Yellowstone County	B8	RM 330.17	51344.77	100-yr	2387.11	875.34	869.9	2.75	1.82	40.87	15.39	152.09	910.1	3.85	1.44	5.44	5.44
Yellowstone County	B8	RM 330.10	51243.99	100-yr	2387.11	875.15	870.02	2.85	1.9	48.06	19.56	186.37	895.59	3.46	1.4	5.13	5.13
Yellowstone County	B8	RM 330.05	51150.67	100-yr	2387.11	875.15	869.94	2.07	1.52	26.31	15.05	298.94	970.39	2.85	1.62	5.21	5.21
Yellowstone County	B8	RM 329.95	50995.78	100-yr	2387.11	874.99	869.67	1.99	1.58	27.51	16.29	399.24	949.2	2.7	1.6	5.32	5.32
Yellowstone County	B8	RM 329.86	50853.11	100-yr	2387.11	874.87	869.99	1.73	1.43	26.66	17.34	443.98	995.73	2.58	1.67	4.88	4.88
Yellowstone County	B8	RM 329.75	50682.47	100-yr	2387.11	874.68	869.45	1.46	1.3	34.16	25.82	611.62	1091.27	2.23	1.68	5.23	5.23
Yellowstone County	B8	RM 329.66	50540.7	100-yr	2387.11	874.39	869.45	1.66	1.51	42.58	32.93	655	1121.15	1.82	1.41	4.94	4.94
Yellowstone County	B8	RM 329.57	50390.78	100-yr	2387.11	874.15	869.17	1.79	1.52	18.62	14.95	587.69	990.05	1.98	1.58	4.98	4.98
Yellowstone County	B8	RM 329.49	50267.58	100-yr	2387.11	874.02	869.52	1.87	1.54	20.28	15.79	532.3	968.46	2.06	1.6	4.5	4.5
Yellowstone County	B8	RM 329.43	50165.22	100-yr	2387.11	873.97	869.82	1.55	1.32	14.14	9.95	543.15	961.33	2.68	1.88	4.15	4.15
Yellowstone County	B8	RM 329.37	50053.96	100-yr	2387.11	873.93	869.58	1.49	1.23	12.94	9.25	447.42	964.36	2.83	2.02	4.35	4.35
Yellowstone County	B8	RM 329.31	49969.13	100-yr	2387.11	873.87	869.66	1.6	1.25	18.78	12.91	378.18	1005.06	2.77	1.9	4.21	4.21
Yellowstone County	B8	RM 329.26	49883.05	100-yr	2387.11	873.8	868.74	1.67	1.29	15.98	10.41	376.88	1028.77	2.77	1.8	5.06	5.06
Yellowstone County	B8	RM 329.20	49785.51	100-yr	2387.11	873.73	868.71	1.69	1.29	16.96	11.44	397.53	1046.39	2.63	1.77	5.02	5.02
Yellowstone County	B8	RM 329.15	49699.71	100-yr	2610.81	873.68	868.64	1.59	1.26	21.23	14.63	463.75	1068.69	2.81	1.94	5.04	5.04
Yellowstone County	B8	RM 329.08	49597.49	100-yr	2610.81	873.61	869.34	1.46	1.17	20.05	14.35	471.93	1108.67	2.82	2.02	4.27	4.27
Yellowstone County	B8	RM 328.96	49388.08	100-yr	2610.81	873.5	868.99	1.6	1.11	17.38	10.88	306.11	1182.31	3.17	1.98	4.51	4.51
Yellowstone County	B8	RM 328.85	49197.37	100-yr	2610.81	873.37	866.79	1.72	1.33	15.65	11.77	472.97	1092.93	2.39	1.79	6.58	6.58
Yellowstone County	B8	RM 328.75	49036.09	100-yr	2610.81	873.29	866.93	1.54	1.24	15.68	11.96	424.64	1061.56	2.61	1.99	6.36	6.36
Yellowstone County	B8	RM 328.68	48920.76	100-yr	2610.81	873.16	867.09	1.95	1.37	23.66	13.79	303.39	1057.36	3.09	1.8	6.07	6.07
Yellowstone County	B8	RM 328.60	48788.86	100-yr	2610.81	872.93	866.36	2.6	1.63	33.16	14.13	196.26	1004.07	3.82	1.6	6.57	6.57
Yellowstone County	B8	RM 328.52	48664.7	100-yr	2610.81	872.98	867.75	1.71	1.25	15.52	9.26	167.5	990.47	3.57	2.11	5.23	5.23
Yellowstone County	B8	RM 328.44	48539.46	100-yr	2610.81	872.68	867.34	2.89	1.78	53.44	19.15	137.85	926.64	4.5	1.58	5.34	5.34
Yellowstone County	B8	RM 328.36	48405.85	100-yr	2610.81	872.39	867.12	3.34	1.98	52.68	19.98	131.91	844.3	4.2	1.56	5.27	5.27
Yellowstone County	B8	RM 328.28	48276.93	100-yr	2610.81	872.36	867.73	2.45	1.82	48.41	22.08	191.8	827.75	3.81	1.74	5.25	5.25
Yellowstone County	B8	RM 328.16	48097.58	100-yr	2610.81	872.17	866.7	2.23	1.72	42.12	22.38	224.09	877.25	3.26	1.73	5.47	5.47
Yellowstone County	B8	RM 328.05	47914.16	100-yr	2610.81	871.99	866.62	2.03	1.55	31.17	17.16	264.18	934.27	3.26	1.8	5.37	5.37
Yellowstone County	B8	RM 327.93	47729.4	100-yr	2610.81	871.76	865.67	2.3	1.68	27.32	14.63	305.74	954.71	3.04	1.63	6.09	6.09
Yellowstone County	B8	RM 327.88	47641.03	100-yr	2610.81	871.64	866	2.52	1.67	37.59	18.2	246.29	994.19	3.26	1.58	5.64	5.64

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	100-yr	2610.81	871.51	866.29	2.68	1.68	33.9	14.24	183.16	934.41	3.98	1.67	5.22	5.22
Yellowstone County	B8	RM 327.75	47432.57	100-yr	2610.81	871.21	865.09	3.4	1.98	51.39	17	136.49	901.44	4.46	1.47	6.12	6.12
Yellowstone County	B8	RM 327.69	47341.24	100-yr	2610.81	870.76	864.48	4.41	2.59	81.13	26.1	108.28	768.37	4.14	1.31	6.28	6.28
Yellowstone County	B8	RM 327.62	47227.31	100-yr	2610.81	870.93	863.86	2.92	1.84	41.19	17.51	129.36	819.02	4.12	1.74	7.07	7.07
Yellowstone County	B8	RM 327.56	47124.87	100-yr	2610.81	870.94	864.46	2.31	1.57	25.88	13.64	158.59	853.58	3.71	1.95	6.48	6.48
Yellowstone County	B8	RM 327.51	47053.82	100-yr	2610.81	870.88	865.84	2.14	1.64	25.69	18.72	311.44	871.26	2.51	1.83	5.04	5.04
Yellowstone County	B8	RM 327.44	46933.28	100-yr	2610.81	870.88	866.93	1.32	1.31	11.89	10.54	390.86	883.03	2.55	2.26	4.26	4.26
Yellowstone County	B8	RM 327.37	46817.72	100-yr	2610.81	870.75	866.26	1.9	1.5	24.16	15.61	342.21	957.41	2.81	1.82	4.49	4.49
Yellowstone County	B8	RM 327.29	46687.12	100-yr	2610.81	870.67	866.04	1.87	1.4	21.11	12.76	304.88	1048.52	2.96	1.78	4.63	4.63
Yellowstone County	B8	RM 327.23	46600.07	100-yr	2610.81	870.6	866.25	1.98	1.42	22.72	13.55	287.86	1052.01	2.94	1.75	4.75	4.75
Yellowstone County	B8	RM 327.16	46485.25	100-yr	2610.81	870.47	865.67	2.14	1.44	30.17	16.25	271.45	1118.28	3.02	1.62	4.8	4.8
Yellowstone County	B8	RM 327.08	46360.36	100-yr	2610.81	870.42	864.94	1.79	1.22	19.24	10.52	266.92	1138.82	3.44	1.88	5.48	5.48
Yellowstone County	B8	RM 327.00	46240.1	100-yr	2610.81	870.3	864.56	1.97	1.46	28.78	12.75	227.91	964.44	4.18	1.86	5.74	5.74
Yellowstone County	B8	RM 326.94	46091.8	100-yr	2610.81	870.2	864.04	2.11	1.5	21.24	10.07	223.67	875.66	4.18	1.98	6.16	6.16
Yellowstone County	B8	RM 326.88	46003.77	100-yr	2610.81	870.1	864.08	2.39	1.68	36.73	16.55	170.66	871.83	3.95	1.78	6.02	6.02
Yellowstone County	B8	RM 326.82	45901.15	100-yr	2610.81	870.02	864.18	2.31	1.65	32.41	17.63	201.73	921.13	3.14	1.71	5.84	5.84
Yellowstone County	B8	RM 326.78	45830.7	100-yr	2610.81	869.96	864.46	2.37	1.65	29.04	16.91	163.64	811.53	3.34	1.95	5.5	5.5
Yellowstone County	B8	RM 326.70	45707.6	100-yr	2610.81	869.89	864.66	2.05	1.53	20.38	13.87	264.44	880.86	2.86	1.94	5.23	5.23
Yellowstone County	B8	RM 326.64	45589.72	100-yr	2610.81	869.8	864.92	1.71	1.57	47.84	35.12	430.89	920.85	2.46	1.8	4.88	4.88
Yellowstone County	B8	RM 326.55	45430.24	100-yr	2610.81	869.57	864.83	2.09	1.73	24.39	14.92	350.63	824.99	3	1.83	4.74	4.74
Yellowstone County	B8	RM 326.45	45281.78	100-yr	2610.81	869.46	864.12	2.11	1.78	26.24	17.86	340.76	716.33	3.02	2.05	5.34	5.34
Yellowstone County	B8	RM 326.41	45207.36	100-yr	2610.81	869.44	864.32	1.74	1.53	17.19	12.73	432.08	884.71	2.93	2.17	5.12	5.12
Yellowstone County	B8	RM 326.35	45106.57	100-yr	2610.81	869.41	864.43	1.54	1.28	13.21	9.37	483.02	1083.22	3.23	2.29	4.98	4.98
Yellowstone County	B8	RM 326.28	45022.31	100-yr	2610.81	869.43	864.61	1.11	0.97	6.29	4.5	548.28	1027.64	3.89	2.78	4.82	4.82
Yellowstone County	B8	RM 326.07	44588.61	100-yr	2610.81	869.22	862.39	1.7	1.44	13.4	9.4	711.51	1297.78	2	1.4	6.83	6.83
Yellowstone County	B8	RM 326.00	44481.07	100-yr	2610.81	869.15	861.24	1.64	1.42	12.49	9.04	749.88	1284.58	1.98	1.43	7.91	7.91
Yellowstone County	B8	RM 325.94	44379.11	100-yr	2610.81	869.09	861.85	1.3	1.19	28.81	22.96	828.41	1292.61	2.13	1.69	7.24	7.24
Yellowstone County	B8	RM 325.89	44304.17	100-yr	2610.81	868.99	863	1.26	1.18	27.8	23.5	845.22	1297.96	2.2	1.86	5.99	5.99
Yellowstone County	B8	RM 325.86	44262.16	100-yr	2610.81	868.95	863.76	1.34	1.2	9.49	8.01	823.63	1141.4	2.27	1.91	5.19	5.19
Yellowstone County	B8	RM 325.81	44176.46	100-yr	2610.81	868.91	863.1	1.31	1.16	9.56	8.39	846.47	1174.24	2.19	1.92	5.81	5.81
Yellowstone County	B8	RM 325.76	44089.5	100-yr	2610.81	868.87	862.66	1.18	1.08	23.24	19.27	851.32	1303.73	2.32	1.92	6.21	6.21
Yellowstone County	B8	RM 325.69	43989.97	100-yr	2610.81	868.79	862.55	1.32	1.03	9.5	6.32	625.32	1418.33	2.82	1.87	6.24	6.24
Yellowstone County	B8	RM 325.58	43809.68	100-yr	2610.81	868.71	862.61	1.3	1.02	25.34	15.29	476.8	1284.12	3.32	1.99	6.1	6.1
Yellowstone County	B8	RM 325.50	43680.96	100-yr	2610.81	868.57	862.6	1.49	1.18	30.48	17.24	434.18	1201.92	3.31	1.85	5.97	5.97
Yellowstone County	B8	RM 325.43	43556.76	100-yr	2610.81	868.45	860.89	1.5	1.19	32.76	17.97	386.99	1136.26	3.55	1.93	7.56	7.56
Yellowstone County	B8	RM 325.37	43461.41	100-yr	2610.81	868.38	861.36	1.41	1.14	28.27	15.34	345.3	1119.63	3.77	2.04	7.02	7.02
Yellowstone County	B8	RM 325.30	43343.13	100-yr	2610.81	868.26	861.56	1.74	1.27	26.63	12.36	266.98	1082.92	4.13	1.91	6.7	6.7
Yellowstone County	B8	RM 325.21	43210.67	100-yr	2610.81	868.1	861.34	2.15	1.47	28.72	11.61	204.6	947.96	4.67	1.87	6.76	6.76
Yellowstone County	B8	RM 325.13	43078.9	100-yr	2610.81	867.95	861.36	2.5	1.61	40.18	14.28	149.57	868.15	5.33	1.87	6.59	6.59
Yellowstone County	B8	RM 325.06	42966.54	100-yr	2610.81	867.56	860.78	3.42	2.15	73.11	22.81	123.11	775.32	5.09	1.57	6.78	6.78
Yellowstone County	B8	RM 324.99	42864.51	100-yr	2610.81	867.49	861.24	3.02	1.87	60.81	22.24	135.44	808.35	4.78	1.73	6.25	6.25
Yellowstone County	B8	RM 324.91	42729.7	100-yr	2610.81	867.27	860.76	3.1	1.93	66.1	23.08	133.2	784.7	4.98	1.73	6.51	6.51
Yellowstone County	B8	RM 324.81	42573.19	100-yr	2610.81	867.02	860.39	3.15	2.12	71.41	25.76	140.39	706.36	4.85	1.74	6.63	6.63
Yellowstone County	B8	RM 324.73	42451.12	100-yr	2610.81	866.92	861.59	2.82	1.99	51.05	22.83	179.41	699.12	4.22	1.88	5.33	5.33
Yellowstone County	B8	RM 324.65	42323.44	100-yr	2610.81	866.86	861.99	2.05	1.69	44.76	28.71	300.92	718.65	3.36	2.15	4.87	4.87
Yellowstone County	B8	RM 324.56	42178.25	100-yr	2610.81	866.71	861.76	2.04	1.63	20.27	16.18	404.18	786.37	2.55	2.03	4.95	4.95
Yellowstone County	B8	RM 324.48	42039.74	100-yr	2610.81	866.57	861.58	1.82	1.56	46.76	34.66	477.36	890.86	2.54	1.88	4.99	4.99
Yellowstone County	B8	RM 324.42	41946.09	100-yr	2610.81	866.46	861.04	1.58	1.33	32.29	22.21	478.13	950.45	3.01	2.07	5.42	5.42
Yellowstone County	B8	RM 324.34	41812.99	100-yr	2610.81	866.24	861.07	1.86	1.43	50.45	30.76	378.78	1022.21	2.93	1.78	5.17	5.17
Yellowstone County	B8	RM 324.28	41712.42	100-yr	2610.81	866.08	859.64	1.81	1.45	49.22	29.81	364.85	1058.65	2.82	1.71	6.44	6.44
Yellowstone County	B8	RM 324.20	41597.64	100-yr	2610.81	866	860.59	1.16	1.08	19.4	15.43	675.53	1066.83	2.84	2.26	5.41	5.41
Yellowstone County	B8	RM 324.16	41526.97	100-yr	2610.81	865.9	861.07	1.53	1.37	14.05	10.17	664.68	1137.5	2.35	1.7	4.83	4.83
Yellowstone County	B8	RM 324.10	41434.55	100-yr	2610.81	865.85	860.81	1.34	1.24	24.04	16.82	691.11	1159.07	2.61	1.82	5.04	5.04
Yellowstone County	B8	RM 324.04	41346.42	100-yr	2610.81	865.79	860.39	1.23	1.13	16.32	11.39	637.89	1190.58	2.78	1.94	5.4	5.4
Yellowstone County	B8	RM 323.97	41219.29	100-yr	2610.81	865.72	860.64	1.17	1.09	14.42	10.54	573.41	1138.93	2.89	2.1	5.08	5.08
Yellowstone County	B8	RM 323.83	40977.08	100-yr	2610.81	865.61	860.31	1.32	1.02	12.3	7.56	454.02	1224.86	3.42	2.09	5.3	5.3
Yellowstone County	B8	RM 323.71	40786.71	100-yr	2610.81	865.42	858.49	2.11	1.3	26.69	11.02	221.5	1176.06	4.15	1.7	6.93	6.93
Yellowstone County	B8	RM 323.60	40615.85	100-yr	2610.81	865.41	858.06	1.68	1.14	16.94	6.94	122.1	1124.31	5.05	2.04	7.35	7.35
Yellowstone County	B8	RM 323.55	40536.83	100-yr	2610.81	865.01	857.58	3.35	1.78	70.35	20.79	115	1102.8	4.55	1.33	7.43	7.43
Yellowstone County	B8	RM 323.49	40429.96	100-yr	2610.81	864.82	858.37	3.35	1.79	66	19.11	119.27	1100.14	4.62	1.33	6.45	6.45
Yellowstone County	B8	RM 323.41	40309.21	100-yr	2610.81	864.7	859.41	3.02	1.77	65.87	22.32	135.74	1046.86	4.19	1.41	5.29	5.29

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	100-yr	2610.81	864.62	859.58	2.51	1.53	34.43	14.97	175.88	1021.16	3.88	1.67	5.04	5.04
Yellowstone County	B8	RM 323.27	40082.34	100-yr	2610.81	864.49	859.66	2.56	1.56	40.65	18.39	188.89	994.12	3.74	1.69	4.83	4.83
Yellowstone County	B8	RM 323.21	39985.33	100-yr	2610.81	864.38	859.54	2.52	1.55	40.91	20.74	211.17	981.46	3.4	1.72	4.84	4.84
Yellowstone County	B8	RM 323.16	39899.29	100-yr	2610.81	864.34	859.55	1.9	1.35	34.81	21.21	276.01	1016.78	3.13	1.9	4.79	4.79
Yellowstone County	B8	RM 323.06	39735.77	100-yr	2610.81	864.09	858.56	1.78	1.48	39.6	21.26	311.52	1394.89	2.84	1.52	5.53	5.53
Yellowstone County	B8	RM 322.93	39531.81	100-yr	2610.81	863.89	859.35	1.67	1.25	26.53	13.49	322.23	1436.02	3.11	1.57	4.54	4.54
Yellowstone County	B8	RM 322.79	39301.41	100-yr	2610.81	863.65	858.62	2.06	1.32	27.47	12.83	220.82	1329.35	3.68	1.72	5.03	5.03
Yellowstone County	B8	RM 322.69	39142.64	100-yr	2610.81	863.53	857.47	2.23	1.4	24.18	11.36	200.75	1243.77	3.83	1.8	6.06	6.06
Yellowstone County	B8	RM 322.58	38982.22	100-yr	2610.81	862.96	856.56	3.85	2.52	89.81	33.36	116.27	732.78	3.84	1.42	6.4	6.4
Yellowstone County	B9	RM 322.51	38859.49	100-yr	2610.81	862.89	858.28	3	2.1	55.61	24.23	163.38	780.83	3.67	1.59	4.61	4.61
Yellowstone County	B9	RM 322.41	38696.02	100-yr	2610.81	862.81	857.62	1.74	1.64	36.49	24.43	457.54	970.61	2.54	1.69	5.19	5.19
Yellowstone County	B9	RM 322.34	38586.33	100-yr	2610.81	862.71	857.65	1.43	1.38	23.26	17.42	589.93	1063.44	2.43	1.82	5.06	5.06
Yellowstone County	B9	RM 322.23	38396.25	100-yr	2610.81	862.58	857.13	1.11	1.11	18.38	15.33	754.42	1141.99	2.47	2.06	5.45	5.45
Yellowstone County	B9	RM 322.13	38239.27	100-yr	2610.81	862.46	857.1	0.99	1.05	19.57	17.7	880.36	1170.21	2.34	2.12	5.36	5.36
Yellowstone County	B9	RM 322.03	38090.48	100-yr	2610.81	862.24	856.15	1.15	1.25	36.6	35.53	970.71	1135.92	1.9	1.84	6.08	6.08
Yellowstone County	B9	RM 321.91	37898.13	100-yr	2610.81	862	856.85	1.53	1.53	12.22	12.22	912.68	913.05	1.87	1.87	5.14	5.14
Yellowstone County	B9	RM 321.82	37758.36	100-yr	2610.81	861.95	856.34	1.34	1.34	7.78	7.58	832.71	856.97	2.34	2.28	5.62	5.62
Yellowstone County	B9	RM 321.70	37567.01	100-yr	2610.81	861.87	855.27	1.22	1.2	21.57	20.29	809.33	883.68	2.61	2.45	6.6	6.6
Yellowstone County	B9	RM 321.60	37414.63	100-yr	2610.81	861.8	854.48	1.04	1.02	10.54	9.65	755.56	848.6	3.29	3	7.33	7.33
Yellowstone County	B9	RM 321.48	37188.51	100-yr	2610.81	861.64	855.03	1.44	1.35	22.48	17.54	546.18	791.88	3.15	2.45	6.62	6.62
Yellowstone County	B9	RM 321.38	37016.94	100-yr	2610.81	861.49	854.75	1.6	1.4	23.08	15.24	471.9	901.73	3.15	2.07	6.74	6.74
Yellowstone County	B9	RM 321.28	36857.57	100-yr	2610.81	861.44	855.3	1.36	1.12	12.02	8.21	459.37	905.09	3.79	2.58	6.14	6.14
Yellowstone County	B9	RM 321.13	36652.19	100-yr	2610.81	861.34	854.69	1.6	1.21	24.2	16.63	274.03	998.35	4.59	3.12	6.65	6.65
Yellowstone County	B9	RM 321.05	36531.25	100-yr	2610.81	861.12	855.36	2.28	1.65	40.99	20.83	190.29	970.1	5.1	2.56	5.76	5.76
Yellowstone County	B9	RM 321.00	36446.98	100-yr	2610.81	860.67	855.12	3.54	2.32	81.13	33.06	129.89	586.06	4.81	1.92	5.56	5.56
Yellowstone County	B9	RM 320.71	36404.1	100-yr	2610.81	860.57	855.12	3.64	2.42	61.35	25.84	133.02	566.16	4.61	1.9	5.45	5.45
Yellowstone County	B9	RM 320.62	36361.3	100-yr	2610.81	860.48	855.12	3.73	2.5	64.43	27.53	136.1	564.41	4.42	1.85	5.36	5.36
Yellowstone County	B9	RM 320.92	36318.56	100-yr	2610.81	860.38	855.12	3.8	2.59	108.39	47.19	139.04	557.8	4.23	1.81	5.26	5.26
Yellowstone County	B9	RM 320.44	36258.3	100-yr	2610.81	860.17	855.19	3.9	2.72	69.01	29.63	144.96	546.01	4.16	1.76	4.99	4.99
Yellowstone County	B9	RM 320.38	36198.1	100-yr	2610.81	860.11	855.26	3.74	2.67	64.02	29.82	150.93	509.71	4.19	1.92	4.85	4.85
Yellowstone County	B9	RM 320.80	36137.92	100-yr	2610.81	860.07	855.33	3.49	2.46	84.95	38.37	156.91	1422.17	4.23	1.87	4.74	4.74
Yellowstone County	B9	RM 320.71	35990.21	100-yr	2610.81	860.1	854.38	2.12	1.75	37.65	20.13	275.47	1489.82	4.15	2.2	5.72	5.72
Yellowstone County	B9	RM 320.54	35839.45	100-yr	2610.81	859.97	853.99	2.07	1.66	30.5	16.58	324.02	1530.16	3.57	1.92	5.98	5.98
Yellowstone County	B9	RM 320.44	35717.45	100-yr	2610.81	859.9	854.32	1.97	1.49	22.68	12.69	334.82	1348.53	3.4	1.89	5.58	5.58
Yellowstone County	B9	RM 320.62	35556.9	100-yr	2610.81	859.81	854.17	1.84	1.35	35.97	18.03	262.72	1558.02	3.59	1.77	5.63	5.63
Yellowstone County	B9	RM 320.38	35461.42	100-yr	2610.81	859.7	854.17	2.08	1.32	28.96	11.44	199.04	1545.81	4.4	1.7	5.52	5.52
Yellowstone County	B9	RM 320.32	35359.13	100-yr	2610.81	859.55	854.57	2.53	1.52	48.78	15.25	140.58	1543.55	4.68	1.43	4.98	4.98
Yellowstone County	B9	RM 320.25	35241.01	100-yr	2610.81	859.09	854.29	3.69	2.12	84.99	24.72	110.85	1219.62	4.38	1.24	4.8	4.8
Yellowstone County	B9	RM 320.20	35163.52	100-yr	2610.81	859	854.2	3.27	2.09	83.51	29.96	134.69	1324.8	3.86	1.35	4.8	4.8
Yellowstone County	B9	RM 320.14	35071.29	100-yr	2610.81	858.81	854.32	3.15	2.1	66	27.36	161.1	1412.66	3.63	1.48	4.49	4.49
Yellowstone County	B9	RM 320.01	34865.89	100-yr	2610.81	858.29	854.42	3.09	2.88	48.19	35.62	122.19	839.29	2.87	2.11	3.94	3.94
Yellowstone County		RM 319.44	34790	100-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	100-yr	2610.81	858.29	854.66	1.72	1.93	19.6	16.4	143.74	787.95	3.01	2.5	4.71	4.71
Yellowstone County	B9	RM 319.86	34625.68	100-yr	2610.81	858.24	854.6	1.64	1.86	22.49	17.62	153.74	996.78	2.89	2.25	4.68	4.68
Yellowstone County	B9	RM 319.78	34508.06	100-yr	2610.81	858.12	854.51	2.42	2.04	39.72	24.81	111.07	1064.11	3.31	2.04	4.6	4.6
Yellowstone County	B9	RM 319.73	34426.63	100-yr	2610.81	857.75	854.69	3.59	2.06	67.82	46.72	156.77	969	2.75	1.89	4.28	4.28
Yellowstone County	B9	RM 319.66	34314.84	100-yr	2610.81	857.75	854.51	2.33	1.87	27.59	19.89	158.66	929.16	2.73	1.96	4.32	4.32
Yellowstone County	B9	RM 319.57	34163.05	100-yr	2610.81	857.62	853.93	2.26	1.87	24.71	17.4	198.21	734.5	2.82	1.98	4.28	4.28
Yellowstone County	B9	RM 319.44	33955.96	100-yr	2610.81	857.52	853.14	2.08	1.78	27.72	17.6	153.57	758.42	3.11	1.95	4.39	4.39
Yellowstone County	B9	RM 319.39	33872.4	100-yr	2610.81	857.47	852.65	2.2	1.68	24.03	14.15	137.96	860.79	3.26	1.88	4.82	4.82
Yellowstone County	B9	RM 319.34	33786.83	100-yr	2610.81	857.44	852.83	2.07	1.55	20.54	12.96	178.14	830.66	3.25	2.03	4.61	4.61
Yellowstone County	B9	RM 319.22	33580.15	100-yr	2610.81	857.39	851.79	2.11	1.35	19.41	9.82	80.63	890.06	4.46	2.18	5.6	5.6
Yellowstone County	B9	RM 319.17	33497.33	100-yr	2610.81	857.38	851.64	1.66	1.29	14.46	8.53	121.71	1044.54	3.67	2.12	5.74	5.74
Yellowstone County	B9	RM 319.09	33368.53	100-yr	2610.81	857.14	851.25	2.58	1.93	53.56	20.96	135.73	879.27	4.08	1.56	5.9	5.9
Yellowstone County	B9	RM 319.04	33287.21	100-yr	2610.81	856.91	851.49	3.13	2.09	76.78	25.19	113.14	949.65	4.45	1.41	5.43	5.43
Yellowstone County	B9	RM 318.96	33153.16	100-yr	2610.81	856.7	851.64	2.96	2.09	63.92	22.77	157.04	956.04	4.01	1.41	5.06	5.06
Yellowstone County	B9	RM 318.91	33065.54	100-yr	2610.81	856.61	851.86	2.58	2	60.81	24.53	189.76	960.43	3.69	1.47	4.76	4.76
Yellowstone County	B9	RM 318.82	32939.33	100-yr	2610.81	856.3	851.86	3.12	2.16	45.8	16.33	160.72	883.17	3.92	1.38	4.45	4.45
Yellowstone County	B9	RM 318.74	32833.24	100-yr	2610.81	856.38	851.86	1.99	1.51	25.64	12.17	185.37	938.2	3.92	1.84	4.52	4.52
Yellowstone County	B9	RM 318.62	32649.76	100-yr	2610.81	856.22	850.67	1.85	1.63	32.21	19.63	316.37	866.29	3.1	1.88	5.55	5.55
Yellowstone County	B9	RM 318.42	32315.28	100-yr	2610.81	855.81	850.15	2.19	1.92	26.85	15.08	347.98	1033.3	3.28	1.83	5.67	5.67

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	100-yr	2610.81	855.46	849.17	2.34	1.48	34.42	12.04	211.8	1295.85	4.31	1.48	6.29	6.29
Yellowstone County	B9	RM 317.97	31551.39	100-yr	2610.81	855.13	848.35	2.58	1.89	29.09	12.47	238.16	930.96	3.94	1.67	6.78	6.78
Yellowstone County	B10	RM 317.87	31388.76	100-yr	2610.81	854.92	848.78	2.98	1.88	45.96	16.19	164	986.72	4.35	1.5	6.14	6.14
Yellowstone County	B10	RM 317.78	31248.07	100-yr	2610.81	854.92	848.75	2.38	1.45	28.78	10.1	143.48	1254.97	5.04	1.74	6.17	6.17
Yellowstone County	B10	RM 317.70	31120.75	100-yr	2610.81	854.96	848.56	1.58	1.13	13.23	6.55	172.73	1473.15	4.45	2.16	6.39	6.39
Yellowstone County	B10	RM 317.61	30982.56	100-yr	2610.81	854.86	848.29	1.91	1.28	17.7	8.18	195.11	1497.98	4.2	1.91	6.57	6.57
Yellowstone County	B10	RM 317.53	30849.94	100-yr	2610.81	854.83	848.5	1.59	1.23	14.03	7.47	345.3	1472.42	3.65	1.93	6.32	6.32
Yellowstone County	B10	RM 317.45	30723.4	100-yr	2610.81	854.77	848.47	1.63	1.27	16.15	9.98	369.88	1485.64	3.22	1.98	6.29	6.29
Yellowstone County	B10	RM 317.37	30601.88	100-yr	2610.81	854.72	848.17	1.43	1.18	16.03	11.34	371.4	1433.9	3.2	2.24	6.56	6.56
Yellowstone County	B10	RM 317.30	30483.81	100-yr	2610.81	854.64	848.41	1.68	1.25	14.6	8.96	273.94	1380.27	3.91	2.36	6.23	6.23
Yellowstone County	B10	RM 317.19	30302.33	100-yr	2610.81	854.58	848.84	1.82	1.12	16.32	7	162.11	1278.76	5.24	2.21	5.74	5.74
Yellowstone County	B10	RM 317.05	30079.26	100-yr	2610.81	854.27	848.38	2.63	1.94	30.86	11.78	159.02	945.79	5.32	2	5.89	5.89
Yellowstone County	B10	RM 316.93	29889.26	100-yr	2610.81	853.92	847.25	3.18	2.5	56.33	30.4	150.51	738.35	5.12	2.71	6.67	6.67
Yellowstone County	B10	RM 316.79	29668.4	100-yr	2610.81	853.75	847.89	2.94	2.14	49.24	19.12	146.89	594.83	5.38	2.05	5.86	5.86
Yellowstone County	B10	RM 316.66	29466.39	100-yr	2610.81	853.53	847.86	2.93	2.28	45.65	22.12	163.35	469.56	5.11	2.44	5.67	5.67
Yellowstone County	B10	RM 316.58	29329.04	100-yr	2610.81	853.43	847.74	2.78	1.98	54.95	27.66	174.67	613.76	4.75	2.37	5.69	5.69
Yellowstone County	B10	RM 316.51	29227.18	100-yr	2610.81	853.26	847.41	2.9	2.02	51.82	26.42	183.91	593.44	4.32	2.18	5.86	5.86
Yellowstone County	B10	RM 316.43	29091.4	100-yr	2610.81	853.12	847.41	2.61	1.94	54.86	33.95	240.1	603.75	3.64	2.23	5.72	5.72
Yellowstone County	B10	RM 316.33	28935.99	100-yr	2610.81	852.85	847.74	2.53	2.01	60.14	40.47	286.64	608.11	3.19	2.14	5.11	5.11
Yellowstone County	B10	RM 316.24	28786.65	100-yr	2610.81	852.65	847.5	2.07	1.86	49.97	35.7	356.21	650.16	3.04	2.16	5.15	5.15
Yellowstone County	B10	RM 316.14	28628.02	100-yr	2610.81	852.42	846.92	2.08	1.73	38.23	24.64	330.46	670.73	3.51	2.25	5.5	5.5
Yellowstone County	B10	RM 316.05	28475.44	100-yr	2610.81	852.15	846.73	2.37	1.91	50.6	26.99	295.19	746.34	3.45	1.83	5.41	5.41
Yellowstone County	B10	RM 315.97	28355.68	100-yr	2610.81	852.02	846.43	2.34	1.86	25.82	15.7	303.35	687.34	3.37	2.04	5.59	5.59
Yellowstone County	B10	RM 315.84	28140.65	100-yr	2610.81	851.67	846.58	2.89	2.16	67.69	28.78	177.52	747.93	3.85	1.62	5.08	5.08
Yellowstone County	B10	RM 315.71	27926.69	100-yr	2610.81	851.38	846.34	2.85	1.92	35.46	15.37	208.19	1024	3.4	1.46	5.04	5.04
Yellowstone County	B10	RM 315.58	27720.72	100-yr	2610.81	851.4	846.16	1.68	1.27	22.97	11.17	155.76	1102.6	3.92	1.86	5.24	5.24
Yellowstone County	B10	RM 315.44	27505.06	100-yr	2610.81	851.16	846.09	2.37	1.33	31.42	10.56	152.39	1299.39	4.57	1.51	5.06	5.06
Yellowstone County	B10	RM 315.30	27283.58	100-yr	2610.81	851.09	844.45	1.58	1.07	16.66	9.01	317.48	1451.57	3.16	1.69	6.64	6.64
Yellowstone County	B10	RM 315.18	27097.16	100-yr	2610.81	851.04	844.72	1.27	0.97	8.95	5.84	454.19	1526.18	2.72	1.76	6.32	6.32
Yellowstone County	B10	RM 315.01	26818.99	100-yr	2610.81	850.91	844.66	1.52	1.11	17.33	8.96	477.22	1602.79	2.87	1.47	6.25	6.25
Yellowstone County	B10	RM 314.85	26559.67	100-yr	2610.81	850.63	844.84	2.37	1.36	36.39	9.8	167.53	1542.84	4.76	1.24	5.79	5.79
Yellowstone County	B10	RM 314.69	26324.37	100-yr	2610.81	850.38	844.24	2.64	1.55	41.25	10.87	173.74	1453.7	4.52	1.16	6.14	6.14
Yellowstone County	B10	RM 314.57	26132.54	100-yr	2610.81	850.1	844.63	2.97	1.74	54.21	12.7	147.42	1336.24	4.89	1.12	5.46	5.46
Yellowstone County	B10	RM 314.46	25963.96	100-yr	2610.81	850.01	844.48	2.44	1.54	40.32	12.25	201.58	1317.9	4.29	1.28	5.53	5.53
Yellowstone County	B10	RM 314.35	25782.69	100-yr	2610.81	849.76	844.51	2.42	1.92	60.58	19.24	269.19	1185.36	3.66	1.15	5.25	5.25
Yellowstone County	B10	RM 314.24	25607.48	100-yr	2610.81	849.58	844.14	2.39	1.86	22.88	9.04	289.52	1031.04	3.51	1.36	5.44	5.44
Yellowstone County	B10	RM 314.15	25461.23	100-yr	2610.81	849.45	844.05	2.26	1.9	56.92	24.79	306.3	941.19	3.39	1.46	5.4	5.4
Yellowstone County	B10	RM 314.06	25326.45	100-yr	2610.81	849.42	843.63	1.68	1.38	13.76	7.63	455.22	1092.1	3.24	1.79	5.79	5.79
Yellowstone County	B10	RM 313.98	25189.4	100-yr	2610.81	849.37	843.05	1.43	1.2	22.67	15.72	559.69	1081.95	2.91	2.01	6.32	6.32
Yellowstone County	B10	RM 313.83	24942.42	100-yr	2610.81	849.21	843.2	1.45	1.28	15.6	8.87	476.74	1014.93	3.57	2.01	6.01	6.01
Yellowstone County	B10	RM 313.72	24768.08	100-yr	2610.81	849.11	842.35	1.68	1.26	16.67	7.74	330.48	1100.29	4.11	1.89	6.76	6.76
Yellowstone County	B10	RM 313.66	24671.51	100-yr	2610.81	849.04	843.14	1.87	1.33	18.55	8.85	286.85	992.85	4.19	1.98	5.9	5.9
Yellowstone County	B10	RM 313.57	24513.04	100-yr	2610.81	848.96	842.47	1.85	1.36	19.1	10.19	303.74	902.48	4.03	2.13	6.5	6.5
Yellowstone County	B10	RM 313.47	24364.02	100-yr	2610.81	848.87	841.55	1.91	1.47	19.92	10.14	283.74	798.38	4.42	2.22	7.32	7.32
Yellowstone County	B10	RM 313.33	24143.26	100-yr	2610.81	848.57	842.65	2.6	1.87	53.34	21.91	187.5	716.57	4.8	1.94	5.92	5.92
Yellowstone County	B10	RM 313.18	23899.74	100-yr	2610.81	847.82	842.19	3.58	2.73	112.16	44.65	165.94	603.63	4.06	1.59	5.63	5.63
Yellowstone County	B10	RM 313.07	23728.15	100-yr	2610.81	847.43	842.62	3.57	2.94	69.25	26.84	163.79	537.33	4.32	1.65	4.81	4.81
Yellowstone County	B10	RM 312.98	23590.93	100-yr	2610.81	847.46	842.5	2.77	2.24	34.9	17.73	200.17	561	4.12	2.08	4.96	4.96
Yellowstone County	B10	RM 312.90	23455.11	100-yr	2610.81	847.38	842.38	2.47	2.08	46.11	23.19	204.15	756.5	4.23	2.11	5.01	5.01
Yellowstone County	B10	RM 312.75	23227.05	100-yr	2610.81	847.16	841.71	2.46	1.84	34.8	17.11	224.95	766.15	3.81	1.85	5.46	5.46
Yellowstone County	B10	RM 312.65	23058.61	100-yr	2610.81	847.06	841.61	2.16	1.68	28.71	17.09	273.98	770.75	3.4	2.01	5.45	5.45
Yellowstone County	B10	RM 312.53	22873.59	100-yr	2610.81	846.98	841.37	1.96	1.45	21.56	11.73	239.17	760.44	4.4	2.37	5.61	5.61
Yellowstone County	B10	RM 312.49	22797.96	100-yr	2610.81	846.87	841.34	2.32	1.61	29.15	14.7	205.23	744.64	4.35	2.18	5.53	5.53
Yellowstone County	B10	RM 312.39	22646.67	100-yr	2610.81	846.73	840.85	2.64	1.74	43.5	21.41	151.77	748.84	4.13	2	5.88	5.88
Yellowstone County	B10	RM 312.33	22536.68	100-yr	2610.81	846.54	840.82	2.97	1.88	52.04	22.87	139.06	747.23	4.32	1.86	5.71	5.71
Yellowstone County	B10	RM 312.22	22360.55	100-yr	2610.81	846.49	840.91	2.37	1.7	36.53	15.16	128.68	798.71	4.73	1.92	5.57	5.57
Yellowstone County	B10	RM 312.13	22230.65	100-yr	2610.81	846.44	840.94	1.82	1.49	22.05	13.28	350.72	799.68	3.67	2.2	5.49	5.49
Yellowstone County	B10	RM 312.04	22082.88	100-yr	2610.81	846.3	840.82	1.98	1.61	27.41	16.55	346.94	790.92	3.42	2.05	5.48	5.48
Yellowstone County	B10	RM 311.95	21934.61	100-yr	2610.81	846.16	840.79	2.06	1.67	28.09	17	350.23	988.06	3.41	2.06	5.36	5.36
Yellowstone County	B10	RM 311.89	21840.24	100-yr	2610.81	846.08	840.76	2	1.66	31.58	19.93	325.27	919.82	3.75	2.36	5.32	5.32
Yellowstone County	B10	RM 311.77	21651.91	100-yr	2610.81	845.93	840.18	2.13	1.6	29.45	12.25	226.3	923.99	4.85	2	5.74	5.74

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	100-yr	2610.81	845.75	839.85	2.64	1.65	42.6	14	150.85	1045.33	5.27	1.69	5.9	5.9
Yellowstone County	B10	RM 311.58	21350.77	100-yr	2610.81	845.63	839.63	2.46	1.51	37.82	13.54	171.57	1294.42	4.67	1.64	6	6
Yellowstone County	B10	RM 311.48	21191.11	100-yr	2610.81	845.55	839.42	2.15	1.36	26.03	10.21	228.87	1217.79	4.06	1.57	6.13	6.13
Yellowstone County	B10	RM 311.37	21010.53	100-yr	2610.81	845.46	839.18	1.84	1.3	21.79	12.48	336.85	1282.32	3.48	1.98	6.29	6.29
Yellowstone County	B10	RM 311.27	20852.82	100-yr	2610.81	845.37	838.96	1.8	1.24	21.45	11.64	322.58	1229.59	3.59	1.93	6.41	6.41
Yellowstone County	B10	RM 311.19	20716.8	100-yr	2610.81	845.31	838.84	1.83	1.16	20.88	9.45	247.96	1190.17	4.51	2.01	6.47	6.47
Yellowstone County	B10	RM 311.09	20559.11	100-yr	2610.81	844.99	839.14	2.91	1.61	46.79	15.68	144.57	1068.67	4.92	1.62	5.84	5.84
Yellowstone County	B10	RM 310.97	20364.78	100-yr	2610.81	844.86	839.45	2.58	1.55	39.97	15.33	173.24	1030.53	4.73	1.79	5.41	5.41
Yellowstone County	B10	RM 310.87	20211.96	100-yr	2610.81	844.73	839.02	2.54	1.59	37.68	14.47	190.23	1049.34	4.55	1.72	5.71	5.71
Yellowstone County	B10	RM 310.76	20019.23	100-yr	2610.81	844.25	839.18	3.42	2.13	63.11	17.64	144.39	974.06	4.64	1.26	5.08	5.08
Yellowstone County	B11	RM 310.67	19877.9	100-yr	2610.81	844.19	839.11	2.82	1.77	61.33	19.64	174.84	1081.64	4.32	1.36	5.07	5.07
Yellowstone County	B11	RM 310.57	19727.96	100-yr	2610.81	844	839.08	2.65	1.66	57.47	19.24	195.83	1144.57	4.15	1.38	4.92	4.92
Yellowstone County	B11	RM 310.48	19578.86	100-yr	2610.81	843.84	838.96	2.51	1.54	44.33	15.57	210.55	1203.68	4.05	1.41	4.88	4.88
Yellowstone County	B11	RM 310.39	19437.53	100-yr	2610.81	843.78	838.54	2.17	1.39	21.46	9.03	264.94	1206.13	3.74	1.56	5.24	5.24
Yellowstone County	B11	RM 310.31	19317.45	100-yr	2610.81	843.71	838.23	2.09	1.48	20.01	10.74	357.04	1079.07	3.07	1.64	5.48	5.48
Yellowstone County	B11	RM 310.24	19187.47	100-yr	2610.81	843.65	838.23	1.6	1.31	37.21	22.95	461.89	1117.3	2.91	1.78	5.42	5.42
Yellowstone County	B11	RM 310.16	19069.04	100-yr	2610.81	843.5	837.93	1.5	1.35	35.3	23.96	568.76	1050.78	2.73	1.85	5.58	5.58
Yellowstone County	B11	RM 310.09	18955.28	100-yr	2610.81	843.41	837.93	1.57	1.26	12.23	9.08	554.88	1045.92	2.67	1.98	5.48	5.48
Yellowstone County	B11	RM 309.97	18765.62	100-yr	2610.81	843.35	837.59	1.19	1.04	15.85	10.86	601.54	1093.99	3.37	2.3	5.76	5.76
Yellowstone County	B11	RM 309.90	18643.48	100-yr	2610.81	843.28	837.5	1.38	1.16	9.28	6.41	625.39	1155.74	2.83	1.95	5.78	5.78
Yellowstone County	B11	RM 309.82	18525.48	100-yr	2610.81	843.22	837.5	1.25	1.17	24.55	20.31	697.83	1023.53	2.65	2.18	5.73	5.73
Yellowstone County	B11	RM 309.73	18379.74	100-yr	2610.81	843.11	837.35	1.12	1.07	18.55	15.62	802.7	1045.86	2.78	2.34	5.77	5.77
Yellowstone County	B11	RM 309.65	18253.83	100-yr	2610.81	843.06	837.38	0.96	0.93	12.34	11.09	876.43	1028.66	3.04	2.73	5.68	5.68
Yellowstone County	B11	RM 309.52	18029.98	100-yr	2610.81	842.92	836.68	1.14	1.11	18.06	16.33	816.46	935.6	2.77	2.51	6.25	6.25
Yellowstone County	B11	RM 309.39	17824.11	100-yr	2610.81	842.84	836.74	0.98	0.98	10.66	9.54	766.1	859.26	3.46	3.1	6.11	6.11
Yellowstone County	B11	RM 309.22	17557.23	100-yr	2610.81	842.66	836.07	1.65	1.44	15.74	9.29	335	686.9	4.52	2.64	6.59	6.59
Yellowstone County	B11	RM 309.06	17331.95	100-yr	2610.81	842.4	835.79	2.32	1.74	57.9	24.84	191.59	696.7	5.14	2.16	6.61	6.61
Yellowstone County	B11	RM 308.94	17142.36	100-yr	2610.81	841.6	835.4	3.96	2.86	97.13	38.56	121.56	498.76	4.75	1.83	6.2	6.2
Yellowstone County	B11	RM 308.83	16971.41	100-yr	2610.81	841.58	836.04	2.82	2.14	54.44	26.13	159.34	519.09	4.96	2.34	5.55	5.55
Yellowstone County	B11	RM 308.71	16778.65	100-yr	2610.81	841.53	835.91	2.21	1.74	22.04	12.72	251.14	621.41	4.21	2.41	5.61	5.61
Yellowstone County	B11	RM 308.62	16631.4	100-yr	2610.81	841.44	835.85	1.98	1.57	50.32	30.95	300.08	746.07	3.64	2.23	5.59	5.59
Yellowstone County	B11	RM 308.55	16518.64	100-yr	2610.81	841.28	835.85	1.91	1.57	46.78	29.46	368.88	846.17	3.14	1.97	5.43	5.43
Yellowstone County	B11	RM 308.43	16328.3	100-yr	2610.81	841.04	834.51	1.66	1.4	40.02	26.3	420.94	923.02	3.09	2.01	6.52	6.52
Yellowstone County	B11	RM 308.35	16192.95	100-yr	2610.81	840.9	834.88	1.6	1.28	25.55	15.95	402.97	973.03	3.39	2.1	6.02	6.02
Yellowstone County	B11	RM 308.24	16015.46	100-yr	2610.81	840.81	834.63	1.55	1.16	15.14	9.41	363.15	958.6	3.82	2.36	6.17	6.17
Yellowstone County	B11	RM 308.12	15826.82	100-yr	2610.81	840.74	834.63	1.47	1.14	13.15	8.43	382.83	915.96	3.92	2.5	6.11	6.11
Yellowstone County	B11	RM 308.02	15675.58	100-yr	2610.81	840.66	834.76	1.64	1.22	12.81	6.77	304.09	868.64	4.7	2.46	5.91	5.91
Yellowstone County	B11	RM 307.88	15434.86	100-yr	2610.81	840.31	834.45	3.11	1.89	58.6	21.81	113.52	775.49	4.93	1.78	5.86	5.86
Yellowstone County	B11	RM 307.77	15261.75	100-yr	2610.81	839.86	834.45	3.56	2.44	87.81	33.26	128.64	675.5	4.3	1.58	5.41	5.41
Yellowstone County	B11	RM 307.68	15125.28	100-yr	2610.81	839.7	834.85	2.99	2.13	59.44	27.07	158.81	630.22	4.33	1.94	4.85	4.85
Yellowstone County	B11	RM 307.60	14980.1	100-yr	2610.81	839.65	834.36	2.17	1.83	26.29	15.03	274.26	603.28	4.17	2.36	5.3	5.3
Yellowstone County	B11	RM 307.52	14873.7	100-yr	2610.81	839.47	834.12	2.57	2.11	39.64	22.46	253.98	590.35	3.73	2.1	5.35	5.35
Yellowstone County	B11	RM 307.46	14779.11	100-yr	2610.81	839.34	833.6	2.46	2.1	69.97	45.52	313.3	617.03	3.12	2.01	5.74	5.74
Yellowstone County	B11	RM 307.39	14664.34	100-yr	2610.81	839.19	833.63	2.41	2.01	23.98	17.05	365.52	661.86	2.77	1.96	5.56	5.56
Yellowstone County	B11	RM 307.30	14517.89	100-yr	2610.81	839.02	833.81	2.21	1.98	58.36	43.61	407.44	695.54	2.55	1.9	5.21	5.21
Yellowstone County	B11	RM 307.22	14385.45	100-yr	2610.81	838.76	833.87	2.14	1.9	45.45	33.13	396.39	697.09	2.71	1.97	4.89	4.89
Yellowstone County	B11	RM 307.14	14262.57	100-yr	2610.81	838.62	833.51	2.05	1.74	33.1	20.78	334.95	731.49	3.28	2.05	5.11	5.11
Yellowstone County	B11	RM 307.08	14166.72	100-yr	2610.81	838.56	833.11	1.9	1.6	20.31	12.87	348.63	753.46	3.44	2.17	5.45	5.45
Yellowstone County	B11	RM 307.01	14050.92	100-yr	2610.81	838.48	832.65	1.96	1.65	18.23	12.25	376.22	776.85	3.04	2.04	5.82	5.82
Yellowstone County	B11	RM 306.95	13949.23	100-yr	2610.81	838.37	832.35	2.14	1.67	27.15	18.46	324.62	758.67	3.06	2.06	6.02	6.02
Yellowstone County	B11	RM 306.90	13869.87	100-yr	2610.81	838.26	832.56	2.24	1.74	33.09	21.88	350.3	765.87	2.98	1.96	5.7	5.7
Yellowstone County	B11	RM 306.82	13726.64	100-yr	2610.81	838.14	832.62	2.05	1.62	27.13	17.39	361.85	809.87	3.12	1.99	5.52	5.52
Yellowstone County	B11	RM 306.72	13574.53	100-yr	2610.81	838	831.8	2.28	1.59	30.91	15.59	222.2	878.68	3.76	1.87	6.2	6.2
Yellowstone County	B11	RM 306.62	13414.11	100-yr	2610.81	837.84	832.77	2.39	1.75	42.98	20.39	215.2	868.63	3.66	1.72	5.06	5.06
Yellowstone County	B11	RM 306.52	13251.36	100-yr	2610.81	837.43	832.87	3.19	2.06	55.85	19.46	152.64	896.48	4.13	1.41	4.56	4.56
Yellowstone County	B11	RM 306.42	13099.73	100-yr	2610.81	837.09	832.74	3.62	2.42	68.17	22.94	135.65	850.5	3.86	1.27	4.34	4.34
Yellowstone County	B11	RM 306.34	12958.96	100-yr	2610.81	837.07	832.84	2.46	1.79	38.37	16.62	236.52	1054.54	3.43	1.47	4.23	4.23
Yellowstone County	B11	RM 306.25	12825.95	100-yr	2610.81	836.91	832.35	2.41	1.78	36.45	17.19	312.55	1168.7	2.81	1.32	4.57	4.57
Yellowstone County	B11	RM 306.16	12673.7	100-yr	2610.81	836.72	832.41	2.28	1.75	36.43	18.6	353.67	1155.62	2.55	1.29	4.31	4.31
Yellowstone County	B11	RM 306.11	12592.39	100-yr	2610.81	836.58	832.17	2.36	1.81	47.13	24.58	316.78	1036.38	2.69	1.39	4.41	4.41
Yellowstone County	B11	RM 306.03	12457.47	100-yr	2610.81	836.43	831.25	2.14	1.66	29.33	17.39	370.09	1044.51	2.56	1.51	5.18	5.18

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	100-yr	2610.81	836.23	831.25	2.26	1.85	36.77	20	358.63	1072.74	2.44	1.32	4.98	4.98
Yellowstone County	B11	RM 305.84	12159.82	100-yr	2610.81	836	831.1	2.4	1.96	37.66	18.41	267.46	939.32	2.94	1.42	4.9	4.9
Yellowstone County	B11	RM 305.74	11989.73	100-yr	2610.81	835.71	830.64	2.65	1.97	49.92	17.41	196.98	1021.97	3.78	1.29	5.07	5.07
Yellowstone County	B11	RM 305.67	11883.31	100-yr	2610.81	835.54	830.43	2.89	1.95	49.8	15.61	162.89	1122.58	3.89	1.19	5.11	5.11
Yellowstone County	B11	RM 305.60	11764.11	100-yr	2610.81	835.59	830.18	1.68	1.4	15.77	7.69	168.35	1298.8	3.22	1.54	5.41	5.41
Yellowstone County	B11	RM 305.52	11651.48	100-yr	2610.81	835.44	830.18	2.29	1.56	29.3	11.32	151.74	1305.53	3.39	1.28	5.25	5.25
Yellowstone County	B11	RM 305.44	11514.64	100-yr	2610.81	835.38	830.43	1.87	1.3	16.44	6.93	158.15	1369.43	3.53	1.47	4.95	4.95
Yellowstone County	B11	RM 305.40	11441.77	100-yr	2610.81	835.26	830.61	1.98	1.55	16.88	7.69	239	1640.42	2.84	1.28	4.65	4.65
Yellowstone County	B11	RM 305.32	11312.15	100-yr	2610.81	835.21	830.61	1.9	1.3	22.15	9.38	167.71	1683.74	3.3	1.38	4.6	4.6
Yellowstone County	B11	RM 305.24	11186.22	100-yr	2610.81	835.19	830.43	1.22	0.95	10.1	6.03	156.67	1606.93	3.28	1.92	4.77	4.77
Yellowstone County	B11	RM 305.06	10905.09	100-yr	2610.81	835.13	830.15	1.17	0.92	6.86	5.16	302.98	1413.93	2.93	2.19	4.97	4.97
Yellowstone County	B11	RM 304.71	10460.6	100-yr	2610.81	835.01	828.96	1.33	1.17	11.35	8.88	397.23	1116.9	3.12	2.43	6.05	6.05
Yellowstone County	B11	RM 304.62	10332.33	100-yr	2610.81	834.98	829.09	1.27	1.09	9.08	5.94	206.92	1166.71	4.48	2.89	5.9	5.9
Yellowstone County	B11	RM 304.50	10132.63	100-yr	2610.81	834.72	829.09	2.48	2.02	50.29	23.18	122.93	993.96	4.9	2.2	5.63	5.63
Yellowstone County	B11	RM 304.42	10011.11	100-yr	2610.81	834.64	829.18	2.15	1.82	37.15	17	152.37	944.78	4.63	2.08	5.46	5.46
Yellowstone County	B11	RM 304.34	9873.393	100-yr	2610.81	834.49	828.78	2.2	1.85	24.16	13.57	263.04	956.24	4.27	2.39	5.71	5.71
Yellowstone County	B11	RM 304.25	9735.197	100-yr	2610.81	834.3	828.39	2.58	2.01	43.91	21.54	200.08	592.78	4.65	2.25	5.91	5.91
Yellowstone County	B11	RM 304.18	9615.178	100-yr	2610.81	834.19	828.54	2.59	2.05	30.37	15.82	216.42	779.57	4.4	2.27	5.65	5.65
Yellowstone County	B11	RM 304.09	9478.266	100-yr	2610.81	834.02	828.6	2.78	2.2	47.23	21.11	182.99	988.34	4.79	2.11	5.42	5.42
Yellowstone County	B11	RM 304.00	9326.206	100-yr	2610.81	833.92	828.39	2.54	1.85	42.18	17.39	190.99	1062.47	4.89	1.99	5.54	5.54
Yellowstone County	B11	RM 303.91	9177.479	100-yr	2610.81	833.88	828.14	2.12	1.45	32.55	14.99	215.99	1273.76	4.68	2.14	5.74	5.74
Yellowstone County	B11	RM 303.78	8973.508	100-yr	2610.81	833.61	827.93	2.61	1.66	42.42	13.83	164.32	1007.92	5.01	1.59	5.69	5.69
Yellowstone County	B11	RM 303.65	8773.522	100-yr	2610.81	833.44	827.9	2.58	1.69	48.78	16.71	170.72	964.22	4.76	1.6	5.54	5.54
Yellowstone County	B11	RM 303.55	8608.195	100-yr	2610.81	833.33	827.65	2.32	1.64	24.55	10.63	248.4	970.4	3.94	1.68	5.67	5.67
Yellowstone County	B11	RM 303.43	8422.329	100-yr	2610.81	833.27	827.87	1.72	1.39	31.92	15.41	330.08	1112.69	3.52	1.69	5.4	5.4
Yellowstone County	B11	RM 303.34	8276.308	100-yr	2610.81	833.21	826.92	1.56	1.19	13.33	6.26	325.32	1129.79	4.19	1.95	6.29	6.29
Yellowstone County	B11	RM 303.26	8138.725	100-yr	2610.81	833.05	826.98	1.99	1.63	43.03	18.25	305.12	1027.51	3.73	1.56	6.07	6.07
Yellowstone County	B11	RM 303.18	8018.762	100-yr	2610.81	832.9	826.22	1.98	1.66	46.16	22.31	308.83	895.63	3.67	1.75	6.68	6.68
Yellowstone County	B11	RM 303.09	7876.674	100-yr	2610.81	832.74	825.43	1.89	1.61	40.82	21.51	337.88	884.61	3.51	1.83	7.31	7.31
Yellowstone County	B11	RM 302.99	7711.603	100-yr	2610.81	832.61	826.22	1.63	1.39	27.06	16.84	336.71	807.8	3.75	2.32	6.39	6.39
Yellowstone County	B11	RM 302.89	7556.419	100-yr	2610.81	832.43	825.73	1.92	1.64	34.57	21.24	290.36	644.79	4.06	2.46	6.7	6.7
Yellowstone County	B11	RM 302.81	7423.411	100-yr	2610.81	832.24	825.86	2.26	1.88	42.07	22.38	221.32	575.02	4.61	2.42	6.39	6.39
Yellowstone County	B11	RM 302.70	7257.14	100-yr	2610.81	832.11	826.01	2.33	1.83	28.69	13.95	184.02	540.24	5.48	2.64	6.1	6.1
Yellowstone County	B12	RM 302.56	7050.708	100-yr	2610.81	831.41	825.25	3.58	3.58	69.85	69.85	168.13	485.54	4.43	4.43	6.16	6.16
Yellowstone County		RM 300.55	7034	100-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	100-yr	2610.81	831.3	825.95	3.53	3.51	66.15	63.59	169.54	307	4.68	4.5	5.35	5.35
Yellowstone County	B12	RM 302.49	6918.549	100-yr	2610.81	831.2	825.92	3.33	3.13	62.53	46.06	170.36	557.82	4.54	3.33	5.28	5.28
Yellowstone County	B12	RM 302.41	6794.522	100-yr	2610.81	831.14	825.64	3.08	2.65	41.63	25.18	161.6	721.37	4.47	2.67	5.5	5.5
Yellowstone County	B12	RM 302.34	6674.634	100-yr	2610.81	831.04	825.76	2.83	2.35	56.39	34.55	214.69	907.3	3.8	2.31	5.28	5.28
Yellowstone County	B12	RM 302.22	6485.378	100-yr	2610.81	830.96	825.76	2.11	1.72	28.31	18.81	235.89	837.29	3.6	2.37	5.2	5.2
Yellowstone County	B12	RM 302.14	6360.047	100-yr	2610.81	830.73	825.76	2.71	1.94	46.04	21.05	178.16	783.02	3.92	1.77	4.96	4.96
Yellowstone County	B12	RM 302.08	6267.13	100-yr	2610.81	830.65	825.79	2.47	1.95	27.78	14.55	265.5	773.29	3.33	1.73	4.85	4.85
Yellowstone County	B12	RM 301.98	6100.949	100-yr	2610.81	830.58	825.34	2.04	1.64	27.85	14.12	257.2	796.34	3.98	2	5.24	5.24
Yellowstone County	B12	RM 301.88	5944.005	100-yr	2610.81	830.48	824.7	1.98	1.57	23.47	13.96	307.5	800.72	3.57	2.11	5.78	5.78
Yellowstone County	B12	RM 301.79	5801.18	100-yr	2610.81	830.42	824.36	1.83	1.55	16.05	11.12	369.92	734.07	3.34	2.3	6.05	6.05
Yellowstone County	B12	RM 301.72	5685.105	100-yr	2610.81	830.34	824.85	1.91	1.59	22.55	14.98	328.47	712.81	3.48	2.31	5.49	5.49
Yellowstone County	B12	RM 301.65	5569.191	100-yr	2610.81	830.22	824.61	2.11	1.73	30.12	19.4	311.48	713.44	3.3	2.12	5.61	5.61
Yellowstone County	B12	RM 301.59	5465.51	100-yr	2610.81	830.11	824.42	2.15	1.83	33.38	20.99	318.53	716.62	3.19	1.99	5.68	5.68
Yellowstone County	B12	RM 301.53	5366.723	100-yr	2610.81	830.02	824.12	1.93	1.73	37.34	25.13	364.63	734.05	3.07	2.06	5.9	5.9
Yellowstone County	B12	RM 301.47	5270.902	100-yr	2610.81	829.9	824.12	1.95	1.73	36.68	23.66	353.58	744.48	3.17	2.03	5.79	5.79
Yellowstone County	B12	RM 301.39	5140.04	100-yr	2610.81	829.85	824.36	1.58	1.37	21.29	15.11	345.85	768.64	3.66	2.58	5.48	5.48
Yellowstone County	B12	RM 301.33	5044.575	100-yr	2610.81	829.75	824.12	1.8	1.5	20.59	12	331.13	815.41	3.81	2.2	5.64	5.64
Yellowstone County	B12	RM 301.24	4906.408	100-yr	2610.81	829.64	823.87	1.97	1.63	22.46	13.18	313.63	822.41	3.67	2.14	5.77	5.77
Yellowstone County	B12	RM 301.18	4802.631	100-yr	2610.81	829.54	823.17	2.14	1.76	27.43	17.17	313.71	852.27	3.26	2.02	6.36	6.36
Yellowstone County	B12	RM 301.12	4698.913	100-yr	2610.81	829.39	823.81	2.31	1.98	31.18	19.96	309.01	773.6	3.44	2.19	5.57	5.57
Yellowstone County	B12	RM 301.07	4611.142	100-yr	2610.81	829.33	824	2.2	1.84	27.2	15.93	285.84	725.66	3.84	2.23	5.34	5.34
Yellowstone County	B12	RM 301.02	4531.484	100-yr	2610.81	829.25	823.81	2.34	1.95	24.27	14.01	261	639.81	3.96	2.27	5.43	5.43
Yellowstone County	B12	RM 300.97	4453.011	100-yr	2610.81	829.04	823.9	2.92	2.41	36.69	19.47	196.12	498.19	4.14	2.18	5.13	5.13
Yellowstone County	B12	RM 300.89	4332.618	100-yr	2610.81	828.88	823.66	2.99	2.56	57.56	31.83	198.89	477.57	3.88	2.14	5.22	5.22
Yellowstone County	B12	RM 300.83	4232.362	100-yr	2610.81	828.7	823.78	3.15	2.63	61.04	33	175.01	487.4	3.81	2.04	4.91	4.91
Yellowstone County	B12	RM 300.77	4151.049	100-yr	2610.81	828.58	823.75	2.98	2.57	62.91	39.55	176.26	412.99	3.95	2.46	4.83	4.83

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	100-yr	2610.81	828.49	823.63	2.53	2.02	30.36	17.75	206.14	629.44	4.13	2.39	4.86	4.86
Yellowstone County	B12	RM 300.55	3793.957	100-yr	2610.81	828.37	822.93	2.11	1.7	31.3	19.6	263.47	758.19	3.54	2.2	5.45	5.45
Yellowstone County	B12	RM 300.45	3633.035	100-yr	2610.81	828.23	822.53	1.71	1.62	35.38	25.67	335.99	731.52	3.05	2.2	5.69	5.69
Yellowstone County	B12	RM 300.35	3461.833	100-yr	2610.81	827.94	822.66	2.21	1.69	22.27	15.46	389.33	824.86	2.71	1.87	5.29	5.29
Yellowstone County	B12	RM 300.24	3286.175	100-yr	2610.81	827.73	822.47	2.1	1.78	52.91	38.68	421.27	781.48	2.57	1.87	5.26	5.26
Yellowstone County	B12	RM 300.15	3141.724	100-yr	2610.81	827.44	822.47	2.01	1.8	48.25	38.09	481.67	734.14	2.51	1.98	4.97	4.97
Yellowstone County	B12	RM 300.10	3054.752	100-yr	2610.81	827.32	822.35	2.09	1.79	18.23	15.17	462.66	738.69	2.39	1.98	4.97	4.97
Yellowstone County	B12	RM 300.00	2887.728	100-yr	2610.81	827.14	821.22	1.97	1.83	49.52	35.56	467.25	991.1	2.5	1.79	5.91	5.91
Yellowstone County	B12	RM 299.91	2736.431	100-yr	2610.81	826.97	821.5	1.95	1.72	24.18	13.42	350.2	1178.54	2.92	1.61	5.47	5.47
Yellowstone County	B12	RM 299.83	2614.069	100-yr	2610.81	826.81	821.41	1.96	1.86	35.98	20.47	388.69	1147.63	2.49	1.41	5.41	5.41
Yellowstone County	B12	RM 299.72	2484.158	100-yr	2610.81	826.63	820.89	2.03	1.73	35.36	17.71	421.67	1083.97	2.92	1.45	5.74	5.74
Yellowstone County	B12	RM 299.59	2312.328	100-yr	2610.81	826.35	821.13	2.6	1.86	35.93	15.93	221.2	1102.27	3.49	1.53	5.22	5.22
Yellowstone County	B12	RM 299.48	2160.343	100-yr	2610.81	826.1	821.13	3.13	1.96	43.94	16.15	138.95	1034.82	4.07	1.47	4.97	4.97
Yellowstone County	B12	RM 299.38	1995.229	100-yr	2610.81	826.01	821.13	2.48	1.68	58.46	22.37	139.09	1256.12	3.9	1.47	4.88	4.88
Yellowstone County	B12	RM 299.31	1874.433	100-yr	2610.81	825.67	821.22	3.13	2.01	43.98	15.61	149.18	1194.97	3.65	1.28	4.44	4.44
Yellowstone County	B12	RM 299.22	1738.666	100-yr	2610.81	825.51	821.16	3.11	1.82	53.46	17.51	129.2	1189.2	3.97	1.27	4.34	4.34
Yellowstone County	B12	RM 299.15	1613.992	100-yr	2610.81	825.48	820.95	2.37	1.31	30.6	13.18	154.73	1360.78	3.82	1.62	4.53	4.53
Yellowstone County	B12	RM 299.06	1473.748	100-yr	2610.81	825.43	820.64	2.05	1.18	27.46	10.92	116.53	1344.18	4.26	1.65	4.79	4.79
Yellowstone County	B12	RM 298.99	1360.532	100-yr	2610.81	825.37	820.46	1.94	1.26	30.7	11.91	103.4	1355.07	4.18	1.56	4.91	4.91
Yellowstone County	B12	RM 298.93	1269.876	100-yr	2610.81	825.3	820.46	1.89	1.24	31.11	12.5	109.22	1344.07	4.02	1.56	4.84	4.84
Yellowstone County	B12	RM 298.88	1195.725	100-yr	2610.81	825.23	820.43	2	1.25	31.84	13.3	119.54	1322.05	3.91	1.58	4.8	4.8
Yellowstone County	B12	RM 298.82	1096.849	100-yr	2610.81	825.03	820.58	2.64	1.43	36.1	15.66	155.73	1285.67	3.33	1.42	4.45	4.45
Yellowstone County	B12	RM 298.77	1018.392	100-yr	2610.81	824.96	820.4	2.34	1.37	33.06	15.07	185.37	1286.59	3.3	1.48	4.56	4.56
Yellowstone County	B12	RM 298.67	854.844	100-yr	2610.81	824.88	819.39	2.11	1.35	19.66	11.06	244.95	1285.69	2.71	1.5	5.49	5.49
Yellowstone County	B12	RM 298.59	724.135	100-yr	2610.81	824.81	819.55	1.74	1.37	21.25	13	275.02	1218.71	2.58	1.56	5.26	5.26
Yellowstone County	B12	RM 298.49	579.164	100-yr	2610.81	824.7	819.27	1.93	1.27	17.68	9.02	214.03	1260.89	3.26	1.64	5.43	5.43
Yellowstone County	B12	RM 298.42	469.573	100-yr	2610.81	824.62	819.27	2	1.27	27.97	12.65	176.57	1264.46	3.68	1.63	5.35	5.35
Yellowstone County	B12	RM 298.35	368.049	100-yr	2610.81	824.48	819.97	2.38	1.37	30.71	11.74	147.33	1210.08	4.19	1.57	4.51	4.51
Yellowstone County	B12	RM 298.30	290.003	100-yr	2610.81	824.46	819.82	2.05	1.22	19.8	10.11	197.73	1157.8	3.65	1.84	4.64	4.64
Yellowstone County	B12	RM 298.26	211.35	100-yr	2610.81	824.4	819.82	2.06	1.36	25.18	13.7	221.13	1081.52	3.29	1.77	4.58	4.58
Yellowstone County	B12	RM 298.19	83.499	100-yr	2610.81	824.26	819.49	2.33	1.59	25.02	13.99	190.94	924.86	3.21	1.78	4.77	4.77

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	100-yr	2803.4	824.11	820.43	1.89	1.35	18.3	9.14	197.15	1684.59	3.4	1.68	3.68	3.68
Treasure County	C1	RM 297.89	61639	100-yr	2803.4	823.94	820.07	1.84	1.49	18.28	11.27	362.24	1137.79	2.78	1.7	3.87	3.87
Treasure County	C1	RM 297.76	61392	100-yr	2803.4	823.76	819.93	1.94	1.65	23.46	12.72	331	1126.79	2.84	1.53	3.83	3.83
Treasure County	C1	RM 297.62	61179	100-yr	2803.4	823.7	819.69	1.56	1.22	12.46	7.51	290.46	1376.09	3.07	1.84	4.01	4.01
Treasure County	C1	RM 297.5	60985	100-yr	2803.4	823.53	819.39	2.25	1.4	25.08	10.89	159.01	1318.22	3.84	1.65	4.14	4.14
Treasure County	C1	RM 297.36	60767	100-yr	2803.4	823.39	819.14	2.16	1.41	23.38	11.15	169.82	1142.08	3.71	1.75	4.25	4.25
Treasure County	C1	RM 297.22	60535	100-yr	2803.4	823.28	819	2	1.4	19.86	9.47	149.14	1150.73	3.78	1.78	4.29	4.29
Treasure County	C1	RM 297.08	60314	100-yr	2803.4	823.16	818.76	2.03	1.33	20.13	9.87	194.31	1340.41	3.92	1.9	4.4	4.4
Treasure County	C1	RM 296.94	60093	100-yr	2803.4	823.03	818.42	2.11	1.39	21.92	11.05	177.08	1496.4	3.91	1.95	4.61	4.61
Treasure County	C1	RM 296.79	59847	100-yr	2803.4	822.96	817.97	1.62	1.28	13.01	7.95	246.81	1264.43	3.81	2.31	4.99	4.99
Treasure County	C1	RM 296.64	59608	100-yr	2803.4	822.88	817.9	1.73	1.3	14.52	8.85	177.49	1096.12	4.02	2.43	4.98	4.98
Treasure County	C1	RM 296.51	59386	100-yr	2803.4	822.83	817.8	1.38	1.18	9.3	6.52	477.13	1058.06	3.9	2.73	5.03	5.03
Treasure County	C1	RM 296.33	59113	100-yr	2803.4	822.73	817.52	1.58	1.22	11.58	6.72	335.57	1045.46	4.65	2.68	5.21	5.21
Treasure County	C1	RM 296.16	58839	100-yr	2803.4	821.74	817.46	4.43	3	95.68	33.39	137.37	704.06	4.03	1.38	4.28	4.28
Treasure County	C1	RM 296.01	58583	100-yr	2803.4	821.46	817.45	2.77	2.24	39.41	22.2	259.72	642.31	3.53	1.98	4.01	4.01
Treasure County	C1	RM 295.83	58296	100-yr	2803.4	821.3	817.4	1.91	1.89	18.74	17.38	627.05	709.85	2.34	2.17	3.91	3.91
Treasure County	C1	RM 295.66	58032	100-yr	2803.4	820.98	817.27	2.21	2.21	24.36	24.33	558.62	559.29	2.27	2.27	3.72	3.72
Treasure County	C1	RM 295.52	57800	100-yr	2803.4	820.89	816.19	1.62	1.62	13.95	13.95	660.04	660.09	2.62	2.62	4.7	4.7
Treasure County	C1	RM 295.31	57474	100-yr	2803.4	820.77	815.61	1.48	1.41	10.93	9.68	554.61	699.27	3.22	2.85	5.15	5.15
Treasure County	C1	RM 295.13	57174	100-yr	2803.4	820.6	815.57	1.81	1.42	17.69	9.71	360.88	971.88	3.71	2.03	5.03	5.03
Treasure County	C1	RM 294.94	56877	100-yr	2803.4	820.1	815.46	3.08	2.16	45.48	15.33	189.73	988.64	4.01	1.33	4.64	4.64
Treasure County	C1	RM 294.76	56587	100-yr	2803.4	819.85	815.45	2.67	1.99	34.64	13.84	257.05	1004.55	3.59	1.42	4.39	4.39
Treasure County	C1	RM 294.55	56261	100-yr	2803.4	819.6	815.36	2.55	1.86	32.31	13.38	194.71	981.52	3.8	1.56	4.24	4.24
Treasure County	C1	RM 294.38	55980	100-yr	2803.4	819.42	815.07	2.28	1.73	27.04	11.45	227.09	1188.28	3.29	1.38	4.35	4.35
Treasure County	C1	RM 294.21	55714	100-yr	2803.4	819.12	814.88	2.64	1.64	34.57	10.1	201.2	1603.28	3.74	1.08	4.24	4.24
Treasure County	C1	RM 294.02	55401	100-yr	2803.4	818.9	814.59	2.36	1.56	26.91	9.5	231.94	1634.58	3.21	1.12	4.31	4.31
Treasure County	C1	RM 293.83	55100	100-yr	2803.4	818.74	814.3	2.03	1.33	19.7	7.6	274.8	1810.48	3.08	1.18	4.44	4.44
Treasure County	C1	RM 293.63	54777	100-yr	2803.4	818.58	813.55	1.87	1.21	15.71	4.9	332.83	1906.46	3.98	1.23	5.03	5.03
Treasure County	C1	RM 293.43	54432	100-yr	2803.4	818.28	813.29	2.56	1.29	31.14	8.21	202.13	1958.54	4.3	1.12	5	5
Treasure County	C1	RM 293.26	54152	100-yr	2803.4	818.15	813.24	2.32	1.12	25.16	9.64	247.33	1934.1	3.43	1.3	4.92	4.92
Treasure County	C1	RM 293.07	53839	100-yr	2803.4	817.98	813.24	2.17	0.98	24	9.98	241.79	2209.82	3.46	1.42	4.75	4.75
Treasure County	C1	RM 292.83	53458	100-yr	2803.4	817.91	813.1	1.42	0.82	10.54	4.74	380.97	2398.82	3.5	1.57	4.81	4.81
Treasure County	C1	RM 292.6	53082	100-yr	2803.4	817.7	812.6	2.04	1.16	19.52	5.21	238.91	2267.47	4.43	1.18	5.1	5.1
Treasure County	C2	RM 292.32	52612	100-yr	2803.4	817.53	811.76	2.06	1.08	18.94	5.96	207.17	1837.25	4.54	1.41	5.77	5.77
Treasure County	C2	RM 292.09	52256	100-yr	2803.4	817.41	811.6	2.11	1.24	19.56	6.4	174.28	1466.75	4.78	1.54	5.81	5.81
Treasure County	C2	RM 291.9	51956	100-yr	2803.4	817.3	811.55	1.93	1.22	18.01	7.69	240.72	1323.04	4.11	1.73	5.75	5.75
Treasure County	C2	RM 291.71	51639	100-yr	2803.4	816.68	811.5	3.16	2.28	72.38	32.14	244.86	891.97	3.15	1.38	5.18	5.18
Treasure County	C2	RM 291.52	51333	100-yr	2803.4	816.46	811.46	2.46	1.59	28.54	11.46	214.15	1049.32	4.44	1.76	5	5
Treasure County	C2	RM 291.33	51042	100-yr	2803.4	816.22	811.46	2.55	1.82	31.85	13.13	232.04	957.13	3.94	1.61	4.76	4.76
Treasure County	C2	RM 291.15	50747	100-yr	2803.4	816.17	811.4	1.75	1.4	14.53	7.78	297.47	903.89	4.39	2.34	4.77	4.77
Treasure County	C2	RM 290.94	50437	100-yr	2803.4	816.02	811.31	2	1.34	19.64	10.95	259.99	982.06	3.85	2.13	4.71	4.71
Treasure County	C2	RM 290.78	50179	100-yr	2803.4	815.91	810.97	1.69	1.26	14.53	9.93	393.13	971.72	3.36	2.28	4.94	4.94
Treasure County	C2	RM 290.6	49891	100-yr	2803.4	815.82	810.54	1.46	1.3	10.5	8.41	473.72	688.77	3.91	3.13	5.29	5.29
Treasure County	C2	RM 290.43	49607	100-yr	2803.4	815.59	810.13	2.2	1.77	23.46	15.06	273.61	680.05	3.96	2.52	5.46	5.46
Treasure County	C2	RM 290.23	49287	100-yr	2803.4	814.92	810.07	3.52	2.5	57.92	24.08	154.05	677.63	4.54	1.86	4.85	4.85
Treasure County	C2	RM 290.04	48976	100-yr	2803.4	814.8	810.04	2.51	1.91	29.43	13.16	209.93	998.23	4.58	2.03	4.76	4.76
Treasure County	C2	RM 289.85	48667	100-yr	2803.4	814.69	809.87	1.89	1.5	18.21	9.57	359.02	1440.91	3.51	1.83	4.82	4.82
Treasure County	C2	RM 289.67	48372	100-yr	2803.4	814.53	809.87	1.85	1.45	17.71	8.49	397.84	1493.62	3.4	1.62	4.66	4.66
Treasure County	C2	RM 289.46	48067	100-yr	2803.4	814.44	809.56	1.56	1.19	11.18	5.96	411.53	1207.68	3.68	1.95	4.87	4.87
Treasure County	C2	RM 289.27	47769	100-yr	2803.4	814.21	809.32	2.1	1.55	22.22	10.32	320.68	1086.32	3.62	1.67	4.89	4.89
Treasure County	C2	RM 289.11	47515	100-yr	2803.4	814.03	809	2.26	1.55	23.63	9.11	228.59	1017.5	4.66	1.78	5.02	5.02
Treasure County	C2	RM 288.94	47232	100-yr	2803.4	813.77	808.59	2.65	1.68	32.1	10.88	186.78	1029.16	4.86	1.62	5.18	5.18
Treasure County	C2	RM 288.76	46939	100-yr	2803.4	813.64	808.33	2.33	1.39	25.61	10.64	217.33	1117.16	4.48	1.83	5.31	5.31
Treasure County	C2	RM 288.55	46613	100-yr	2803.4	813.26	808.24	2.82	1.88	39.32	14.89	224.04	1052.32	3.8	1.42	5.01	5.01
Treasure County	C2	RM 288.36	46302	100-yr	2803.4	813.15	807.91	2.2	1.46	21.75	6.61	219.5	1275.26	5.06	1.51	5.24	5.24
Treasure County	C2	RM 288.18	46008	100-yr	2803.4	813.01	807.77	2.21	1.5	23.18	8.84	246.4	1608.92	4.16	1.56	5.24	5.24
Treasure County	C2	RM 287.99	45713	100-yr	2803.4	812.88	807.58	2.05	1.41	19.36	8.14	241.63	1805.39	4.19	1.75	5.3	5.3
Treasure County	C2	RM 287.81	45421	100-yr	2803.4	812.76	807.25	1.97	1.46	18.32	8.23	229.88	1403.42	4.43	1.97	5.51	5.51
Treasure County	C2	RM 287.62	45112	100-yr	2803.4	812.4	807.19	2.95	1.81	40.02	13.99	138.36	1050.87	4.82	1.65	5.21	5.21
Treasure County	C2	RM 287.42	44789	100-yr	2803.4	812.07	807.15	3.05	1.91	43.56	16.23	159.89	1049.79	4.49	1.65	4.92	4.92

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	100-yr	2803.4	812.01	806.81	1.84	1.57	17.54	10.13	420.05	1680.07	3.35	1.93	5.19	5.19
Treasure County	C2	RM 287.06	44222	100-yr	2803.4	811.91	806.77	1.57	1.34	13.38	6.72	515.12	1850.68	3.22	1.61	5.14	5.14
Treasure County	C2	RM 286.9	43958	100-yr	2803.4	811.72	806.52	2.01	1.43	18.92	5.46	277.39	1886.56	4.46	1.27	5.2	5.2
Treasure County	C2	RM 286.72	43671	100-yr	2803.4	811.34	802.22	3.03	1.74	38.39	7.66	122.22	1607.95	6.47	1.25	9.12	9.12
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	100-yr	2803.4	811.21	802.22	3.28	2.06	45.47	8.85	122.4	1401.97	6.27	1.18	8.99	8.99
Treasure County	C3	RM 286.58	43448	100-yr	2803.4	811.13	806.32	2.93	1.87	40.14	14.49	176.44	1622.2	4.53	1.61	4.81	4.81
Treasure County	C3	RM 286.51	43344	100-yr	2803.4	811.04	806.32	2.8	2.14	37.33	17.23	207.43	1598.61	4.32	1.98	4.72	4.72
Treasure County	C3	RM 286.46	43257	100-yr	2803.4	810.95	804.36	2.83	2.25	37.39	19.14	196.27	1281.99	4.58	2.33	6.59	6.59
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	100-yr	2803.4	810.75	804.36	3.09	2.48	45.41	22.76	202.92	1331.02	4.33	2.16	6.39	6.39
Treasure County	C3	RM 286.37	43117	100-yr	2803.4	810.7	806.17	2.74	2.14	37.58	17.94	311.55	1526.83	3.66	1.74	4.53	4.53
Treasure County	C3	RM 286.26	42931	100-yr	2803.4	810.45	806.17	2.81	1.9	72.1	24.5	219.45	1857.45	3.37	1.13	4.28	4.28
Treasure County	C3	RM 286.06	42624	100-yr	2803.4	810.23	806.08	1.98	1.21	19.91	6.92	354.48	2064.08	3.29	1.13	4.14	4.14
Treasure County	C3	RM 285.81	42213	100-yr	2803.4	810	805.78	1.93	1.06	17.32	7.08	221.97	2939.39	2.68	1.08	4.22	4.22
Treasure County	C3	RM 285.56	41812	100-yr	2803.4	809.8	805.34	1.84	0.96	16.13	4.18	237.24	3124.61	4.2	1.08	4.46	4.46
Treasure County	C3	RM 285.23	41280	100-yr	2803.4	809.57	805.17	2.05	0.92	21.51	6.18	152.4	3391.67	3.48	0.98	4.4	4.4
Treasure County	C3	RM 284.69	40395	100-yr	2803.4	809.11	804.85	2.54	1.33	34.73	9.3	159.53	2720.57	2.96	0.78	4.26	4.26
Treasure County	C3	RM 284.26	39705	100-yr	2803.4	808.72	804.6	1.96	1.37	20.56	6.1	348.37	2240.4	3.14	0.93	4.12	4.12
Treasure County	C3	RM 283.96	39199	100-yr	2803.4	808.41	804.3	2.13	1.3	23.44	6.77	244.91	2824.8	3.32	0.95	4.11	4.11
Treasure County	C3	RM 283.69	38766	100-yr	2803.4	808.21	803.9	2.02	1.1	19.99	4.99	189.98	2982.51	3.92	0.96	4.31	4.31
Treasure County	C3	RM 283.35	38229	100-yr	2803.4	808.03	803.42	1.71	0.99	14.76	5.43	287.66	2526.33	3.41	1.24	4.61	4.61
Treasure County	C3	RM 283.05	37749	100-yr	2803.4	807.7	803.32	2.36	1.22	28.22	7.07	194.22	2762.14	3.59	0.89	4.38	4.38
Treasure County	C3	RM 282.78	37306	100-yr	2803.4	807.46	803.11	2	1.06	19.11	5.88	258	2958.78	3.18	0.97	4.35	4.35
Treasure County	C3	RM 282.56	36942	100-yr	2803.4	807.35	802.83	1.49	0.82	11.61	4.13	281.71	3238.49	3.14	1.1	4.52	4.52
Treasure County	C3	RM 282.31	36546	100-yr	2803.4	807.22	802.74	1.69	0.77	13.88	4.3	187.32	3098.44	4.06	1.23	4.48	4.48
Treasure County	C3	RM 282.09	36195	100-yr	2803.4	807.03	802.56	2.24	1.06	25.83	8.88	181.69	2829.45	3.42	1.16	4.46	4.46
Treasure County	C4	RM 281.73	35619	100-yr	2803.4	806.77	801.74	1.79	1.16	15.3	6.12	426.96	2641.74	2.9	1.15	5.03	5.03
Treasure County	C4	RM 281.35	35005	100-yr	2803.4	806.59	801.53	1.57	0.96	11.55	3.61	316.27	2630.55	4.54	1.41	5.06	5.06
Treasure County	C4	RM 281.03	34521	100-yr	2803.4	806.37	801.19	2.12	1.11	21.45	6.23	228.85	2588.61	4.29	1.23	5.17	5.17
Treasure County	C4	RM 280.73	34051	100-yr	2803.4	806.25	800.82	1.36	0.97	9.42	5.86	693.36	2440.43	2.41	1.49	5.43	5.43
Treasure County	C4	RM 280.5	33687	100-yr	2803.4	806.14	800.66	1.21	0.9	8.28	5.46	756.46	2338.52	2.48	1.63	5.48	5.48
Treasure County	C4	RM 280.27	33304	100-yr	2803.4	806.05	800.31	1.09	0.84	7.16	4.9	759.73	2216.71	2.77	1.89	5.74	5.74
Treasure County	C4	RM 279.95	32800	100-yr	2803.4	805.94	800.08	1.18	0.79	8.02	4.47	503.81	2345.92	3.64	2.02	5.85	5.85
Treasure County	C4	RM 279.6	32231	100-yr	2803.4	805.6	799.98	2.18	1.24	22.49	11.77	304.47	1331.21	3.33	1.73	5.62	5.62
Treasure County	C4	RM 279.33	31805	100-yr	2803.4	805.01	799.98	2.95	1.97	43.01	17.84	244.79	1227.1	3.48	1.43	5.03	5.03
Treasure County	C4	RM 279.14	31495	100-yr	2803.4	804.86	799.96	2.34	1.54	25.43	11.07	238.86	1636.13	4.08	1.76	4.9	4.9
Treasure County	C4	RM 278.96	31209	100-yr	2803.4	804.79	799.87	1.71	1.32	14.92	7.02	367.55	1966.49	4	1.87	4.92	4.92
Treasure County	C4	RM 278.76	30894	100-yr	2803.4	804.66	799.6	1.76	1.36	15.22	7.66	423.69	2302.22	3.3	1.65	5.06	5.06
Treasure County	C4	RM 278.56	30571	100-yr	2803.4	804.46	799.53	1.97	1.32	19.66	7.75	336.63	2627.11	3.54	1.38	4.94	4.94
Treasure County	C4	RM 278.37	30259	100-yr	2803.4	804.37	799.26	1.6	1.15	12.19	4.46	369.33	2292.99	4.25	1.54	5.11	5.11
Treasure County	C5	RM 278.16	29915	100-yr	2803.4	804.04	798.81	2.59	1.58	32.02	7.87	207.39	1998.9	4.51	1.09	5.22	5.22
Treasure County	C5	RM 277.99	29648	100-yr	2803.4	803.68	798.77	3.01	1.94	43.56	9.81	189.71	1655.69	4.4	0.97	4.91	4.91
Treasure County	C5	RM 277.8	29336	100-yr	2803.4	803.45	798.74	2.72	1.86	34.85	8.73	212.34	1443.26	4.4	1.09	4.71	4.71
Treasure County	C5	RM 277.61	29041	100-yr	2803.4	803.22	798.72	2.7	1.85	34.69	9.28	216.71	1492	4.32	1.14	4.5	4.5
Treasure County	C5	RM 277.43	28747	100-yr	2803.4	803.1	798.48	2.16	1.58	22.97	8.71	306.39	1399.65	3.83	1.44	4.61	4.61
Treasure County	C5	RM 277.22	28415	100-yr	2803.4	802.83	798.47	2.21	1.84	23.27	11.39	424.41	1232.65	2.84	1.38	4.37	4.37
Treasure County	C5	RM 277.04	28123	100-yr	2803.4	802.63	798.4	2.04	1.72	18.63	11.45	459.83	947.75	2.85	1.74	4.23	4.23
Treasure County	C5	RM 276.81	27791	100-yr	2803.4	802.54	797.8	1.66	1.3	13.27	6.34	376.57	1125.84	4.06	1.93	4.74	4.74
Treasure County	C5	RM 276.63	27499	100-yr	2803.4	802.29	797.4	2.33	1.53	26.19	9.56	234.28	1239.44	4.13	1.5	4.89	4.89
Treasure County	C5	RM 276.4	27133	100-yr	2803.4	802.07	797.1	2.29	1.5	25.04	9.54	239.33	1185.21	4.22	1.59	4.97	4.97
Treasure County	C5	RM 276.19	26801	100-yr	2803.4	801.89	796.87	2.35	1.6	26.22	10.34	189.04	1059.14	4.29	1.67	5.02	5.02
Treasure County	C5	RM 276.01	26502	100-yr	2803.4	801.7	796.74	2.48	1.6	28.55	9.2	158.76	1216.53	4.62	1.46	4.96	4.96
Treasure County	C5	RM 275.81	26193	100-yr	2803.4	801.6	796.61	2.07	1.34	20.26	6.45	179.56	1534.29	4.43	1.39	4.98	4.98
Treasure County	C5	RM 275.63	25896	100-yr	2803.4	801.45	796.49	2.28	1.31	24.09	7.59	134.65	1490.95	4.7	1.45	4.95	4.95
Treasure County	C5	RM 275.45	25606	100-yr	2803.4	801.38	796.37	1.79	1.26	15.19	5.87	153.92	1527.4	4.3	1.63	5.01	5.01
Treasure County	C5	RM 275.26	25299	100-yr	2803.4	801.14	796.16	2.11	1.61	20.44	8.38	251.91	1104.89	4.74	1.93	4.98	4.98
Treasure County	C5	RM 275.09	25033	100-yr	2803.4	800.82	796.13	2.77	2.15	35.7	15.57	199.32	952.45	4.55	1.96	4.69	4.69
Treasure County	C6	RM 274.89	24716	100-yr	2803.4	800.66	796.04	2.39	1.56	27.34	12.34	228.81	2206.25	4.21	1.88	4.62	4.62
Treasure County	C6	RM 274.72	24440	100-yr	2803.4	799.88	796.04	3.74	2.83	73.44	31.71	214.5	1442.29	3.19	1.36	3.84	3.84

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	100-yr	2803.4	799.81	795.79	2.13	1.44	25.89	10.91	294.37	2695.25	2.89	1.21	4.02	4.02
Treasure County	C6	RM 274.38	23892	100-yr	2803.4	799.64	795.55	2.01	1.25	20.73	6.78	229.3	2986.53	3.39	1.1	4.09	4.09
Treasure County	C6	RM 274.13	23491	100-yr	2803.4	799.43	795.16	2.12	1.3	24.13	8.55	224.37	3025.96	2.99	1.05	4.27	4.27
Treasure County	C6	RM 273.83	22999	100-yr	2803.4	799.23	794.46	1.92	1.07	18	4.65	184.4	3546.63	3.97	1.01	4.77	4.77
Treasure County	C6	RM 273.58	22595	100-yr	2803.4	798.95	794.04	2.42	1.16	26.85	6.19	179.01	3610.33	3.66	0.83	4.92	4.92
Treasure County	C6	RM 273.35	22238	100-yr	2803.4	798.74	794.04	2.07	1	20.79	7.13	230.93	3718.34	2.94	1	4.71	4.71
Treasure County	C6	RM 273.15	21916	100-yr	2803.4	798.61	793.92	1.73	0.91	15.17	5.73	266.7	3837.62	2.96	1.11	4.69	4.69
Treasure County	C6	RM 272.83	21397	100-yr	2803.4	798.48	793.79	1.59	0.83	11.73	4.01	263.82	4087.57	3.4	1.15	4.68	4.68
Treasure County	C6	RM 272.5	20872	100-yr	2803.4	798.26	793.46	2.07	0.97	22.78	7.59	229.86	4063.67	3.07	1.01	4.8	4.8
Treasure County	C6	RM 272.19	20368	100-yr	2803.4	797.94	793.34	2.22	1.07	23.73	7.19	247.4	3544.02	3.6	1.08	4.6	4.6
Treasure County	C6	RM 271.91	19902	100-yr	2803.4	797.72	793.18	2.18	1.15	23.24	6.37	227.32	3900.6	3.98	1.08	4.54	4.54
Treasure County	C6	RM 271.68	19534	100-yr	2803.4	797.37	792.81	2.75	1.56	37.73	9.23	192.12	3156.41	3.72	0.9	4.56	4.56
Treasure County	C6	RM 271.41	19102	100-yr	2803.4	797.33	792.54	1.47	0.95	11.09	5.09	302.07	3030.2	3.46	1.58	4.79	4.79
Treasure County	C6	RM 271.06	18548	100-yr	2803.4	796.83	792.18	2.94	1.81	43.84	11.87	172.42	2357.27	3.57	0.95	4.66	4.66
Treasure County	C6	RM 270.64	17870	100-yr	2803.4	796.64	792.05	1.66	0.98	14.35	5.04	234.57	3018.31	3.31	1.15	4.59	4.59
Treasure County	C6	RM 270.05	16897	100-yr	2803.4	796.36	791.48	2.02	0.95	18.43	6.35	174.33	2798.8	3.75	1.27	4.89	4.89
Treasure County	C6	RM 269.75	16413	100-yr	2803.4	796.03	791.35	2.39	1.24	28.31	8.68	224.46	2753.49	3.77	1.14	4.68	4.68
Treasure County	C6	RM 269.47	15967	100-yr	2803.4	795.64	791.23	2.68	1.74	35.02	7.78	209.73	2836.94	3.96	0.87	4.41	4.41
Treasure County	C7	RM 269.27	15645	100-yr	2803.4	795.52	791.23	2.05	1.4	20.7	6.74	279.64	2653.18	3.7	1.19	4.29	4.29
Treasure County	C7	RM 269.06	15308	100-yr	2803.4	795.42	791.01	1.6	1.05	13.16	4.46	197.37	2929.4	3.41	1.14	4.41	4.41
Treasure County	C7	RM 268.83	14957	100-yr	2803.4	795.34	790.6	1.1	0.77	6.34	2.77	267.05	3059.17	3.16	1.36	4.74	4.74
Treasure County	C7	RM 268.55	14516	100-yr	2803.4	795.22	790.17	1.47	0.83	10.47	3.59	224.66	2897.13	4.11	1.39	5.05	5.05
Treasure County	C7	RM 268.2	13976	100-yr	2803.4	794.98	789.62	2.07	0.96	20.67	6.13	234.34	3207.81	4.16	1.22	5.35	5.35
Treasure County	C7	RM 267.87	13439	100-yr	2803.4	794.6	789.53	2.5	1.11	28.35	8.63	227.32	2642.96	3.85	1.16	5.07	5.07
Treasure County	C7	RM 267.53	12884	100-yr	2803.4	793.95	789.5	3	1.48	45.44	13.28	242.41	2165.41	3.12	0.9	4.45	4.45
Treasure County	C7	RM 267.14	12253	100-yr	2803.4	793.76	789.26	1.88	1.05	17.4	5.71	227.28	2319.64	3.57	1.16	4.5	4.5
Treasure County	C7	RM 266.8	11700	100-yr	2803.4	793.58	789.2	1.94	1.09	19.01	5.76	214.75	2397.44	3.62	1.08	4.38	4.38
Treasure County	C7	RM 266.41	11078	100-yr	2803.4	793.36	789.14	2.17	1.08	24.49	7.76	159.5	2546.16	3.29	1.02	4.22	4.22
Treasure County	C7	RM 266.11	10593	100-yr	2803.4	793.14	788.83	1.99	1.12	20.78	6.95	259.43	2402.68	3.19	1.05	4.31	4.31
Treasure County	C7	RM 265.92	10283	100-yr	2803.4	793.04	788.65	1.67	1.07	13.56	5.49	341.48	2452.49	2.65	1.06	4.39	4.39
Treasure County	C7	RM 265.68	9915	100-yr	2803.4	792.74	788.21	2.44	1.52	28.32	6.7	180	1833.1	4.33	1.01	4.53	4.53
Treasure County	C7	RM 265.52	9650	100-yr	2803.4	792.61	788.07	2.35	1.38	28	8.51	162.02	1935.26	3.6	1.08	4.54	4.54
Treasure County	C7	RM 265.34	9362	100-yr	2803.4	792.38	788.07	2.28	1.39	27.35	9.62	179.19	1904.4	3.17	1.1	4.31	4.31
Treasure County	C7	RM 265.16	9071	100-yr	2803.4	792.18	787.95	1.86	1.37	20.55	8.66	297.09	1943.47	2.8	1.17	4.24	4.24
Treasure County	C7	RM 264.98	8775	100-yr	2803.4	792	787.59	1.87	1.39	16.42	9.75	460.25	1910.64	1.89	1.12	4.41	4.41
Treasure County	C7	RM 264.81	8508	100-yr	2803.4	791.9	787.35	1.21	1.05	11.79	7.56	661.46	2161.79	2.2	1.41	4.55	4.55
Treasure County	C7	RM 264.64	8216	100-yr	2803.4	791.78	787.22	1.27	1.07	11.45	7.16	652.13	2049.17	2.23	1.39	4.56	4.56
Treasure County	C7	RM 264.39	7803	100-yr	2803.4	791.55	786.86	1.78	1.28	18.66	6.98	343.32	2066.98	2.95	1.09	4.7	4.7
Treasure County	C7	RM 264.15	7406	100-yr	2803.4	791.45	786.6	1.44	1.03	11	5.4	202.21	1855.85	3.11	1.5	4.85	4.85
Treasure County	C7	RM 263.97	7116	100-yr	2803.4	791.33	786.49	1.76	1.2	14.58	4.56	179.44	1799.41	4.45	1.37	4.84	4.84
Treasure County	C7	RM 263.79	6834	100-yr	2803.4	791.16	786.49	2.18	1.3	23.12	8.71	204.2	1990.53	3.5	1.3	4.67	4.67
Treasure County	C7	RM 263.6	6534	100-yr	2803.4	790.98	786.37	2.06	1.26	21.02	9.1	207.01	1748.07	3.84	1.64	4.61	4.61
Treasure County	C7	RM 263.39	6194	100-yr	2803.4	790.83	786.25	1.64	1.25	13.51	5.76	459.15	1856.96	3.27	1.39	4.58	4.58
Treasure County	C7	RM 263.19	5862	100-yr	2803.4	790.62	786	1.96	1.11	20.38	8.46	333.53	2012.39	3.04	1.25	4.61	4.61
Treasure County	C7	RM 262.95	5479	100-yr	2803.4	790.34	785.85	1.98	1.3	17.28	6.59	416.1	2000.71	2.85	1.08	4.49	4.49
Treasure County	C7	RM 262.78	5206	100-yr	2803.4	790.25	785.76	1.57	0.98	13.69	6.45	440.96	2231.93	2.73	1.28	4.49	4.49
Treasure County	C7	RM 262.58	4883	100-yr	2803.4	790.15	785.64	1.22	0.83	9.45	5.5	621.05	2283.41	2.8	1.62	4.51	4.51
Treasure County	C7	RM 262.42	4613	100-yr	2803.4	790.08	785.54	1.09	0.74	6.9	4.13	655.56	2255.43	2.89	1.73	4.54	4.54
Treasure County	C7	RM 262.24	4323	100-yr	2803.4	790.02	785.43	1	0.79	5.65	3.49	839.62	2134.64	3.04	1.88	4.6	4.6
Treasure County	C7	RM 261.95	3917	100-yr	2803.4	789.9	785.28	1.28	1.01	9.41	5.54	654.59	1783.43	3.12	1.83	4.62	4.62
Treasure County	C7	RM 261.7	3519	100-yr	2803.4	789.67	784.87	1.43	1.32	29.53	14.62	605.89	1491.35	3.13	1.54	4.8	4.8
Treasure County	C7	RM 261.53	3256	100-yr	2803.4	789.37	784.51	1.54	1.39	33.21	20.04	623.93	1268.4	2.74	1.65	4.86	4.86
Treasure County	C7	RM 261.35	2959	100-yr	2803.4	789.26	784.33	1.28	1.16	8.27	5.12	580.98	1147.39	3.64	2.25	4.93	4.93
Treasure County	C7	RM 261.2	2720	100-yr	2803.4	789.14	784.14	1.44	1.34	27.34	17.86	545.92	1131.57	3.39	2.21	5	5
Treasure County	C7	RM 261.03	2441	100-yr	2803.4	789.01	783.66	1.5	1.23	10.82	4.93	401.64	1218.65	4.44	2.01	5.36	5.36
Treasure County	C7	RM 260.84	2142	100-yr	2803.4	788.89	783.41	1.73	1.29	14.28	5.63	341.22	1326.72	4.44	1.74	5.48	5.48
Treasure County	C7	RM 260.66	1863	100-yr	2803.4	788.82	783.29	1.65	1.16	12.99	5.79	351.21	1355.48	4.18	1.85	5.52	5.52
Treasure County	C8	RM 259.9	634	100-yr	2803.4	787.65	782.46	3.51	2.44	56.84	26.15	151.91	622.34	4.71	2.14	5.2	5.2
Treasure County	C8	RM 259.72	347	100-yr	2803.4	787.42	782.45	3.09	2.15	44.57	20.55	179.3	654.2	4.57	2.09	4.97	4.97
Treasure County	C8	RM 259.55	68	100-yr	2803.4	787.36	782.2	2.09	2.08	20.35	17.65	399.72	462.88	3.35	2.91	5.16	5.16

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	100-yr	2800.5	787.36	782.19	2.57	2.24	29.7	18.36	221.77	430.2	4.71	2.9	5.17	5.17
Rosebud County	C8	RM 259.41	87598	100-yr	2800.5	787.09	781.96	2.72	2.57	37.03	23.61	209.53	361.15	4.87	3.09	5.13	5.13
Rosebud County	C8	RM 259.22	87292	100-yr	2800.5	786.97	781.55	2.36	2.02	25.55	19.35	233.09	379.12	4.84	3.65	5.42	5.42
Rosebud County	C8	RM 259.04	87004	100-yr	2800.5	786.77	781	2.49	2.08	32.59	16.64	211.46	579.12	4.85	2.44	5.77	5.77
Rosebud County	C8	RM 258.85	86696	100-yr	2800.5	786.58	780.9	2.33	1.87	24.25	11.71	288.74	877.39	3.83	1.83	5.68	5.68
Rosebud County	C8	RM 258.66	86399	100-yr	2800.5	786.36	780.78	2.56	1.87	29.03	9.7	183.46	859.59	5.32	1.75	5.58	5.58
Rosebud County	C8	RM 258.47	86098	100-yr	2800.5	786.17	780.65	2.6	1.88	31.21	12.82	202.57	1059.01	4.46	1.81	5.52	5.52
Rosebud County	C8	RM 258.28	85798	100-yr	2800.5	786	780.53	2.38	1.67	26.04	12.23	222.43	868.46	4.16	1.94	5.47	5.47
Rosebud County	C8	RM 258.1	85498	100-yr	2800.5	785.76	780.14	2.56	1.73	29.5	11.77	180.25	802.79	5.12	2.01	5.62	5.62
Rosebud County	C8	RM 257.91	85200	100-yr	2800.5	785.61	780.14	2.37	1.57	27.27	9.62	224.43	1258.14	4.07	1.41	5.47	5.47
Rosebud County	C8	RM 257.71	84875	100-yr	2800.5	785.38	780.14	2.46	1.66	30.4	14.07	219.86	1363.97	3.65	1.67	5.24	5.24
Rosebud County	C8	RM 257.54	84597	100-yr	2800.5	785.21	780.17	2.3	1.46	24.43	10.41	209	1491.87	4.19	1.76	5.04	5.04
Rosebud County	C8	RM 257.36	84298	100-yr	2800.5	785.08	780.05	2.17	1.27	22.28	8.83	188.65	1359.86	4.1	1.62	5.03	5.03
Rosebud County	C8	RM 257.16	83984	100-yr	2800.5	785.04	780	1.45	0.99	9.57	3.65	305.45	1554.59	4.78	1.82	5.04	5.04
Rosebud County	C8	RM 256.87	83608	100-yr	2800.5	784.64	779.89	2.8	1.72	36.54	12.08	181.39	1132.23	4.4	1.44	4.75	4.75
Rosebud County	C8	RM 256.65	83257	100-yr	2800.5	784.63	779.82	1.79	1.23	15.26	6.47	171.34	1212.34	4.47	1.88	4.81	4.81
Rosebud County	C8	RM 256.45	82941	100-yr	2800.5	784.43	779.67	2.07	1.46	19.86	7.42	222.18	1124.65	4.6	1.7	4.76	4.76
Rosebud County	C8	RM 256.26	82630	100-yr	2800.5	784.25	779.58	1.9	1.43	31.63	18.87	369.93	1010.38	3.26	1.93	4.67	4.67
Rosebud County	C8	RM 256.1	82375	100-yr	2800.5	784.1	779.42	1.61	1.54	11.96	8.1	594.72	923.67	2.91	1.96	4.68	4.68
Rosebud County	C8	RM 255.91	82077	100-yr	2800.5	784.04	779.09	1.35	1.23	8.37	5.25	591.1	1063.45	3.43	2.15	4.95	4.95
Rosebud County	C8	RM 255.7	81747	100-yr	2800.5	783.83	778.73	1.98	1.53	18.39	8.2	306.33	982.99	4.21	1.86	5.1	5.1
Rosebud County	C8	RM 255.51	81446	100-yr	2800.5	783.65	778.49	2.15	1.59	22.05	10.92	269.19	855.32	4.2	2.06	5.16	5.16
Rosebud County	C8	RM 255.31	81125	100-yr	2800.5	783.49	778.36	2.07	1.51	24.92	11.1	242.95	897.96	4.67	2.07	5.13	5.13
Rosebud County	C8	RM 255.14	80856	100-yr	2800.5	783.25	778.24	2.44	1.76	27.22	10.79	210.87	847.04	4.8	1.88	5.01	5.01
Rosebud County	C8	RM 254.95	80554	100-yr	2800.5	783.03	778.12	2.58	1.87	30.66	11.68	205.86	841.56	4.71	1.78	4.91	4.91
Rosebud County	C8	RM 254.76	80251	100-yr	2800.5	782.86	778	2.44	1.76	27.58	11.03	218.15	856.03	4.69	1.86	4.86	4.86
Rosebud County	C8	RM 254.58	79960	100-yr	2800.5	782.67	777.88	2.45	1.84	27.72	9.55	229.98	964.3	4.65	1.59	4.79	4.79
Rosebud County	C8	RM 254.39	79658	100-yr	2800.5	782.6	777.41	1.92	1.44	17.11	6.72	296.93	1151.5	4.52	1.77	5.19	5.19
Rosebud County	C8	RM 254.2	79359	100-yr	2800.5	782.32	777.39	2.44	1.92	28.76	13.04	269.75	801.88	4.01	1.82	4.93	4.93
Rosebud County	C8	RM 254.01	79052	100-yr	2800.5	782.08	776.82	2.56	1.91	29.26	10.19	209.61	859.46	4.94	1.71	5.26	5.26
Rosebud County	C9	RM 253.82	78779	100-yr	2800.5	781.9	776.24	2.52	1.8	33.75	12.9	246.84	1050.44	4.03	1.52	5.66	5.66
Rosebud County	C9	RM 253.63	78478	100-yr	2800.5	781.53	776.12	2.69	1.72	70.59	20.75	180.25	1353.4	4.24	1.23	5.41	5.41
Rosebud County	C9	RM 253.45	78178	100-yr	2800.5	781.25	775.97	2.48	1.4	28.54	10.15	172.93	1393.2	4.14	1.45	5.28	5.28
Rosebud County	C9	RM 253.26	77879	100-yr	2800.5	781.13	775.72	1.97	1.11	15.85	6.37	240.93	1488.21	4.3	1.71	5.41	5.41
Rosebud County	C9	RM 253.07	77578	100-yr	2800.5	780.83	775.57	2.7	1.46	32.26	10.85	189.87	1478.79	3.95	1.3	5.26	5.26
Rosebud County	C9	RM 252.88	77278	100-yr	2800.5	780.7	775.45	2.17	1.35	23.37	7.42	221.89	1761.2	3.79	1.19	5.25	5.25
Rosebud County	C9	RM 252.69	76962	100-yr	2800.5	780.62	775.33	1.64	0.92	13.05	4.7	260.67	2367.96	3.99	1.42	5.29	5.29
Rosebud County	C9	RM 252.49	76646	100-yr	2800.5	780.25	775.36	2.87	1.34	37.23	8.49	161.39	2897.12	3.94	0.88	4.89	4.89
Rosebud County	C9	RM 252.24	76252	100-yr	2800.5	780.06	775.4	2.26	1.1	26.3	7.09	167.1	3218.46	3.63	0.96	4.66	4.66
Rosebud County	C9	RM 252.01	75885	100-yr	2800.5	779.89	775.39	1.81	0.97	23.91	6.83	252.1	3553.47	3.38	0.96	4.5	4.5
Rosebud County	C9	RM 251.7	75438	100-yr	2800.5	779.75	775.01	1.38	0.9	8.44	3.67	603.69	3385.39	2.43	1.05	4.74	4.74
Rosebud County	C9	RM 251.49	75098	100-yr	2800.5	779.64	775.02	1.25	0.82	9.9	5.65	716.44	3231.36	1.91	1.09	4.62	4.62
Rosebud County	C9	RM 251.23	74691	100-yr	2800.5	779.44	775.05	1.37	0.88	9.65	4.75	754.16	3352.73	1.95	0.95	4.39	4.39
Rosebud County	C9	RM 251.01	74322	100-yr	2800.5	779.3	774.84	1.41	0.82	8.31	3.62	595.57	3387.43	2.31	1	4.46	4.46
Rosebud County	C9	RM 250.79	73973	100-yr	2800.5	779.18	774.42	1.48	0.83	10.39	3.82	417.99	3103.79	3.03	1.11	4.76	4.76
Rosebud County	C9	RM 250.6	73678	100-yr	2800.5	779.06	774.17	1.55	0.94	20.42	7.93	376.03	2757.92	2.81	1.09	4.89	4.89
Rosebud County	C9	RM 250.37	73306	100-yr	2800.5	778.75	774.05	2.24	1.08	22.56	6.19	233.23	2482.55	3.83	1.05	4.7	4.7
Rosebud County	C9	RM 250.17	72982	100-yr	2800.5	778.56	773.93	2.39	1.07	28.85	10.13	214.36	2435.39	3.19	1.11	4.63	4.63
Rosebud County	C9	RM 249.95	72617	100-yr	2800.5	778.29	773.83	2.35	1.22	27.06	7.51	226.06	2290.91	3.74	1.03	4.46	4.46
Rosebud County	C9	RM 249.73	72253	100-yr	2800.5	778.1	773.71	2.12	1.09	22.45	7	273.96	2471.08	3.35	1.04	4.39	4.39
Rosebud County	C9	RM 249.53	71936	100-yr	2800.5	778.01	773.38	1.6	0.88	12.28	4.08	362.14	2642.09	3.64	1.21	4.63	4.63
Rosebud County	C9	RM 249.31	71579	100-yr	2800.5	777.77	773.14	2.02	1.23	23.34	8.14	363.92	3134.48	2.81	0.97	4.63	4.63
Rosebud County	C9	RM 249.13	71274	100-yr	2800.5	777.59	772.84	1.91	1.03	18.41	5.47	301.37	3190.63	3.7	1.09	4.75	4.75
Rosebud County	C9	RM 248.94	70978	100-yr	2800.5	777.3	772.56	2.53	1.19	31.04	7.76	201.69	3171.52	3.7	0.92	4.74	4.74
Rosebud County	C9	RM 248.76	70681	100-yr	2800.5	777.27	772.32	1.39	0.86	10.26	3.58	424.32	2966.82	3.55	1.23	4.95	4.95
Rosebud County	C9	RM 248.53	70312	100-yr	2800.5	777.2	772.17	1.44	0.69	9.33	3.27	164.13	3154.98	4.15	1.44	5.03	5.03
Rosebud County	C9	RM 248.31	69962	100-yr	2800.5	777.05	772.04	1.79	0.9	16.12	5.48	277.15	2636.66	3.48	1.17	5.01	5.01
Rosebud County	C9	RM 248.08	69603	100-yr	2800.5	776.87	771.92	2.1	0.9	19.11	5.02	211.49	3004.29	4	1.04	4.95	4.95
Rosebud County	C9	RM 247.88	69253	100-yr	2800.5	776.75	771.92	1.68	0.93	22.61	8.7	348.22	2936.37	2.68	1.03	4.83	4.83
Rosebud County	C9	RM 247.64	68836	100-yr	2800.5	776.51	771.95	1.74	1	16.48	5.9	416.51	2763.82	2.85	1.01	4.56	4.56

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	100-yr	2800.5	776.37	771.87	1.58	0.82	11.8	3.32	282.85	3224.29	4.07	1.14	4.5	4.5
Rosebud County	C9	RM 247.11	67963	100-yr	2800.5	776.11	771.45	2.49	1.21	30.91	7.93	199.91	2800.56	3.52	0.9	4.66	4.66
Rosebud County	C9	RM 246.83	67502	100-yr	2800.5	775.94	770.97	2.03	1.07	21.39	5.97	194.9	2701.79	4.38	1.21	4.97	4.97
Rosebud County	C9	RM 246.52	67019	100-yr	2800.5	775.79	770.61	1.85	1.07	15.95	4.66	225.63	2824.05	4.56	1.32	5.18	5.18
Rosebud County	C9	RM 246.22	66538	100-yr	2800.5	775.03	770.53	3.49	1.86	62.58	17.32	217.05	2503.82	2.95	0.8	4.5	4.5
Rosebud County	C9	RM 245.94	66068	100-yr	2800.5	774.49	770.29	2.23	1.64	26.43	9.98	297.16	1644.04	2.94	1.1	4.2	4.2
Rosebud County	C9	RM 245.66	65624	100-yr	2800.5	774.35	769.81	1.6	0.93	13.37	4.7	198.01	2041.52	4.29	1.48	5.11	5.11
Rosebud County	C9	RM 245.4	65205	100-yr	2800.5	774.17	769.59	1.85	1.27	15.43	7.13	372.82	1968.8	2.5	1.14	5.01	5.01
Rosebud County	C9	RM 245.15	64804	100-yr	2800.5	773.88	769.41	1.63	1.4	37.86	16.81	328.39	2187.35	2.27	1	4.72	4.72
Rosebud County	C9	RM 244.89	64387	100-yr	2800.5	773.18	769.41	2.9	1.94	43.06	11.34	189.43	1667	3.45	0.9	4.15	4.15
Rosebud County	C9	RM 244.7	64085	100-yr	2800.5	773.2	769.37	1.46	1.12	10.91	4.51	221.5	2041.51	3.25	1.34	4.29	4.29
Rosebud County	C9	RM 244.51	63776	100-yr	2800.5	773.13	769.35	1.26	0.97	9.36	4.36	264.21	2321.78	3.26	1.52	4.22	4.22
Rosebud County	C9	RM 244.33	63499	100-yr	2800.5	773.11	769.16	0.83	0.74	3.7	2.28	274.46	2348.92	3.08	1.89	4.68	4.68
Rosebud County	C9	RM 244.14	63224	100-yr	2800.5	773.08	768.52	1.07	0.75	5.62	2.64	208.4	2316.92	3.79	1.76	4.65	4.65
Rosebud County	C9	RM 243.96	62927	100-yr	2800.5	773.01	768.13	1.4	0.85	9.57	4.01	176.71	2098.87	4	1.67	4.88	4.88
Rosebud County	C9	RM 243.77	62617	100-yr	2800.5	772.98	767.57	0.95	0.66	4.13	2.02	160.76	1790.58	4.92	2.38	5.41	5.41
Rosebud County	C9	RM 243.59	62327	100-yr	2800.5	772.89	766.98	1.57	0.89	12.9	3.99	122.45	2302.59	5.51	1.65	5.91	5.91
Rosebud County	C9	RM 243.39	62012	100-yr	2800.5	772.66	766.86	2.28	1.17	23.72	5.95	156.08	2369.58	4.91	1.21	5.8	5.8
Rosebud County	C9	RM 243.21	61718	100-yr	2800.5	772.53	766.74	2.14	1.14	20.38	4.89	203.35	2282.54	5.27	1.24	5.79	5.79
Rosebud County	C10	RM 243.03	61422	100-yr	2800.5	772.3	766.73	2.67	1.28	33.66	9.89	174.23	1792.91	4.39	1.26	5.57	5.57
Rosebud County	C10	RM 242.84	61125	100-yr	2800.5	771.81	766.76	3.28	1.78	51.83	12.69	172	1559	4.2	1.01	5.05	5.05
Rosebud County	C10	RM 242.65	60825	100-yr	2800.5	771.64	766.76	2.64	1.54	33.45	8.92	204.7	1567.96	4.41	1.16	4.88	4.88
Rosebud County	C10	RM 242.47	60527	100-yr	2800.5	771.52	766.77	2.23	1.38	23.53	7.26	241.01	1505.3	4.48	1.38	4.75	4.75
Rosebud County	C10	RM 242.29	60239	100-yr	2800.5	771.4	766.64	2.03	1.37	20.11	7.6	282.31	1264.58	4.31	1.62	4.76	4.76
Rosebud County	C10	RM 242.1	59939	100-yr	2800.5	771.21	766.29	2.19	1.37	24.4	9.01	280	1623.9	3.89	1.42	4.92	4.92
Rosebud County	C10	RM 241.9	59618	100-yr	2800.5	771.05	765.95	2.07	1.17	19.67	6.21	249.51	1909.91	4.49	1.4	5.1	5.1
Rosebud County	C10	RM 241.72	59324	100-yr	2800.5	770.98	765.5	1.71	1.03	13.52	4.98	289.97	1614.3	4.6	1.68	5.48	5.48
Rosebud County	C10	RM 241.53	59025	100-yr	2800.5	770.72	765.17	2.54	1.3	33.17	7.88	160	1792.85	5.15	1.2	5.55	5.55
Rosebud County	C10	RM 241.34	58725	100-yr	2800.5	770.6	765.02	2.21	1.08	22.16	6.53	177.78	1780.78	5	1.45	5.58	5.58
Rosebud County	C10	RM 241.16	58424	100-yr	2800.5	770.55	764.97	1.74	0.95	13.8	5.38	171.92	1607.39	4.78	1.84	5.58	5.58
Rosebud County	C10	RM 240.97	58132	100-yr	2800.5	770.47	764.83	1.68	0.92	12.72	5	189.7	1555.16	5.04	1.96	5.64	5.64
Rosebud County	C10	RM 240.78	57818	100-yr	2800.5	770.45	764.56	1.34	0.74	7.81	3.26	159.68	1659.51	5.55	2.28	5.89	5.89
Rosebud County	C10	RM 240.56	57467	100-yr	2800.5	770.38	764.28	1.42	0.83	12.71	5.88	212.38	1601.97	5.19	2.37	6.1	6.1
Rosebud County	C10	RM 240.41	57228	100-yr	2800.5	770.31	763.91	1.45	0.94	11.31	5.52	216.4	1395.32	5.72	2.76	6.4	6.4
Rosebud County	C10	RM 240.22	56944	100-yr	2800.5	770.08	763.51	2.3	1.39	23	10.84	157.35	1097.49	6.25	2.85	6.57	6.57
Rosebud County	C10	RM 240.09	56741	100-yr	2800.5	769.63	763.47	3.46	2.15	41.49	20.07	120.86	948.88	5.75	2.71	6.16	6.16
Rosebud County	C10	RM 239.97	56546	100-yr	2800.5	769.52	763.47	3.07	2.54	53.25	35.08	155.75	732.67	5.53	3.6	6.05	6.05
Rosebud County	C10	RM 239.86	56371	100-yr	2800.5	769.47	760.88	2.42	2.4	26.89	26.06	205.85	461.13	5.61	5.44	8.59	8.59
Rosebud County			56353	100-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	100-yr	2800.5	769.43	760.88	2.41	2.39	19.91	19.18	202.33	337.16	5.75	5.54	8.55	8.55
Rosebud County	C10	RM 239.68	56093	100-yr	2800.5	768.97	763.02	3.33	3.06	40.25	30.27	172.44	256	4.8	3.58	5.95	5.95
Rosebud County	C10	RM 239.56	55888	100-yr	2800.5	768.73	757.33	3.51	3.04	40.93	23.68	119.53	249.41	6.56	3.7	11.4	11.4
Rosebud County			55879	100-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	100-yr	2800.5	768.66	757.33	3.62	3.13	43.27	23.23	112.13	253.09	6.77	3.53	11.33	11.33
Rosebud County	C10	RM 239.41	55655	100-yr	2800.5	768.26	763.17	4.03	3.48	59.86	33.08	144.11	312.63	4.73	2.58	5.09	5.09
Rosebud County	C10	RM 239.25	55398	100-yr	2800.5	768.01	763.17	3.74	3.26	52.44	33.57	164.41	304.14	4.46	2.83	4.84	4.84
Rosebud County	C10	RM 239.07	55108	100-yr	2800.5	768.03	763.2	2.61	2.33	25.39	19.96	219.55	340.04	4.51	3.53	4.83	4.83
Rosebud County	C10	RM 238.89	54826	100-yr	2800.5	767.78	763.23	2.91	2.27	31.93	20.53	191.74	438.72	4.41	2.81	4.55	4.55
Rosebud County	C10	RM 238.73	54570	100-yr	2800.5	767.6	763.38	2.76	2.27	29.38	18.57	242.11	485.97	4.04	2.54	4.22	4.22
Rosebud County	C10	RM 238.51	54223	100-yr	2800.5	767.51	762.88	1.9	1.87	18.4	17.11	435.56	477.62	3.38	3.14	4.63	4.63
Rosebud County	C10	RM 238.33	53926	100-yr	2800.5	767.32	762.37	2.09	1.82	21.27	13.41	306.34	578	4.23	2.66	4.95	4.95
Rosebud County	C10	RM 238.14	53626	100-yr	2800.5	767.01	762.25	2.66	1.87	33.39	16.54	214.01	714.76	4.39	2.17	4.76	4.76
Rosebud County	C10	RM 237.95	53321	100-yr	2800.5	766.77	762.09	2.76	1.85	35.82	15.8	189.37	924.06	4.44	1.95	4.68	4.68
Rosebud County	C10	RM 237.77	53027	100-yr	2800.5	766.74	761.85	1.87	1.34	16.44	8.11	294.75	1026.87	4.39	2.16	4.89	4.89
Rosebud County	C10	RM 237.56	52703	100-yr	2800.5	766.65	761.46	1.59	1.11	12.69	7.02	410.69	1230.28	3.74	2.05	5.19	5.19
Rosebud County	C10	RM 237.36	52386	100-yr	2800.5	766.59	761.22	1.36	0.9	9	5.09	443.16	1431.01	3.88	2.18	5.37	5.37
Rosebud County	C10	RM 237.15	52029	100-yr	2800.5	766.52	760.88	1.38	0.9	9.06	4.74	385.86	1384.55	4.33	2.25	5.64	5.64
Rosebud County	C10	RM 236.99	51756	100-yr	2800.5	766.27	760.22	2.37	1.35	19.39	6.94	177.1	1188.07	5.73	2.02	6.05	6.05
Rosebud County	C10	RM 236.83	51500	100-yr	2800.5	765.96	760.07	2.99	1.84	32.37	12.79	167.82	1209.26	5.01	1.95	5.89	5.89
Rosebud County	C10	RM 236.66	51221	100-yr	2800.5	765.89	760.07	2.55	1.96	22.9	11.72	188.48	904.69	5.35	2.7	5.82	5.82

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	100-yr	2800.5	765.75	759.94	2.53	2.03	22.41	9.8	193.41	586.31	5.47	2.36	5.81	5.81
Rosebud County	C11	RM 236.29	50623	100-yr	2800.5	765.65	760	2.42	1.94	20.85	8.69	211.22	675.91	5.19	2.14	5.65	5.65
Rosebud County	C11	RM 236.1	50327	100-yr	2800.5	765.41	760	2.74	2.28	27.58	11.18	206.87	666.2	4.72	1.89	5.41	5.41
Rosebud County	C11	RM 235.91	50024	100-yr	2800.5	765.04	760	3.21	2.46	47.5	22.41	170.49	580.44	4.74	2.21	5.04	5.04
Rosebud County	C11	RM 235.73	49726	100-yr	2800.5	764.99	760.15	2.27	2.03	24.49	18.94	243.8	430.34	4.31	3.32	4.84	4.84
Rosebud County	C11	RM 235.57	49480	100-yr	2800.5	764.88	760.02	2.01	1.88	19.22	11.16	318.23	781.19	4.31	2.49	4.86	4.86
Rosebud County	C11	RM 235.36	49133	100-yr	2800.5	764.71	759.74	2	1.85	17.53	11.18	428.22	834.81	3.2	2.04	4.97	4.97
Rosebud County	C11	RM 235.17	48830	100-yr	2800.5	764.55	759.55	1.93	1.79	17.92	11.88	455.8	830.47	3.12	2.06	5	5
Rosebud County	C11	RM 235	48571	100-yr	2800.5	764.42	759.29	1.93	1.6	17.43	8.21	320.92	917.78	4.33	2.02	5.13	5.13
Rosebud County	C11	RM 234.82	48271	100-yr	2800.5	763.83	759.21	3.37	2.53	55.17	21.5	190.08	739.08	4.01	1.55	4.62	4.62
Rosebud County	C11	RM 234.63	47978	100-yr	2800.5	763.7	759.21	2.53	1.88	30.73	13.45	238.2	869.03	3.99	1.74	4.49	4.49
Rosebud County	C11	RM 234.45	47692	100-yr	2800.5	763.52	759.12	2.27	1.75	25.21	11.15	283.79	946.2	3.82	1.69	4.4	4.4
Rosebud County	C11	RM 234.2	47305	100-yr	2800.5	763.41	758.6	1.64	1.38	11.27	8.29	521.08	969.89	2.84	2.09	4.81	4.81
Rosebud County	C11	RM 234.01	47006	100-yr	2800.5	763.35	758.27	1.18	1.06	6.84	6.12	818.93	1071.35	2.75	2.46	5.08	5.08
Rosebud County	C11	RM 233.84	46737	100-yr	2800.5	763.26	758.12	1.36	1.16	9.82	6.23	583.51	1157.58	3.29	2.09	5.14	5.14
Rosebud County	C11	RM 233.61	46365	100-yr	2800.5	763.11	757.67	1.67	1.24	12.41	4.37	302.81	1255.95	5.12	1.8	5.44	5.44
Rosebud County	C11	RM 233.35	45943	100-yr	2800.5	762.91	757.03	2.14	1.27	21.07	6.98	214.65	1432.11	4.68	1.53	5.88	5.88
Rosebud County	C11	RM 233.13	45584	100-yr	2800.5	762.69	756.45	2.29	1.49	23.15	5.67	206.27	1460.28	5.34	1.29	6.24	6.24
Rosebud County	C11	RM 232.94	45281	100-yr	2800.5	762.39	756.15	2.81	1.85	34.89	7.85	169.36	1275.36	5.39	1.19	6.24	6.24
Rosebud County	C11	RM 232.75	44978	100-yr	2800.5	762.32	756.03	2.3	1.61	23.14	5.77	204.68	1296.82	5.5	1.34	6.29	6.29
Rosebud County	C11	RM 232.56	44674	100-yr	2800.5	762.19	755.79	2.25	1.63	23.32	6.63	241.61	1285.14	4.78	1.33	6.4	6.4
Rosebud County	C11	RM 232.37	44366	100-yr	2800.5	761.96	755.72	2.55	1.58	30.23	10.01	206.42	1273.42	4.58	1.49	6.24	6.24
Rosebud County	C11	RM 232.19	44074	100-yr	2800.5	761.77	755.67	2.5	1.68	28.55	9.42	204.11	1040.83	4.93	1.6	6.1	6.1
Rosebud County	C11	RM 232.01	43791	100-yr	2800.5	761.61	755.65	2.45	1.73	28.34	11.06	232.27	954.72	4.4	1.69	5.96	5.96
Rosebud County	C11	RM 231.81	43473	100-yr	2800.5	761.34	755.6	2.69	1.61	33.85	14.56	201.55	970.94	4.23	1.79	5.74	5.74
Rosebud County	C11	RM 231.62	43160	100-yr	2800.5	761.08	755.57	2.66	1.85	29.93	11.91	230.25	993.07	3.9	1.53	5.51	5.51
Rosebud County	C11	RM 231.42	42835	100-yr	2800.5	761.04	755.45	1.9	1.25	16.18	6.68	229.33	1057.08	5.2	2.12	5.59	5.59
Rosebud County	C11	RM 231.22	42522	100-yr	2800.5	760.89	755.45	2.21	1.34	21.55	9.32	204	1062.76	4.63	1.97	5.44	5.44
Rosebud County	C11	RM 230.99	42160	100-yr	2800.5	760.34	755.45	3.38	1.84	54.65	18.63	154.03	1068.89	4.26	1.42	4.89	4.89
Rosebud County	C11	RM 230.79	41841	100-yr	2800.5	760.14	755.43	2.68	1.67	33.88	12.12	202.2	1073.72	4.43	1.57	4.71	4.71
Rosebud County	C11	RM 230.53	41415	100-yr	2800.5	760.04	755.17	1.81	1.43	16.45	8.42	299.8	1117.76	3.45	1.75	4.87	4.87
Rosebud County	C11	RM 230.29	41045	100-yr	2800.5	759.79	755.15	2.21	1.52	23.14	9.09	234.88	1241.92	3.82	1.49	4.64	4.64
Rosebud County	C11	RM 230.06	40676	100-yr	2800.5	759.53	754.81	2.19	1.67	24.9	10.25	287.47	1262.18	3.27	1.33	4.72	4.72
Rosebud County	C11	RM 229.81	40276	100-yr	2800.5	759.39	754.74	1.75	1.02	15.18	5.84	320.68	1874.68	3.82	1.46	4.65	4.65
Rosebud County	C11	RM 229.6	39937	100-yr	2800.5	759.23	754.58	1.86	1.06	15.55	8.15	412.79	1925.93	2.64	1.38	4.65	4.65
Rosebud County	C11	RM 229.4	39596	100-yr	2800.5	759.08	754.34	1.84	1.09	16.59	5.39	283.63	1951.16	4.09	1.32	4.74	4.74
Rosebud County	C11	RM 229.2	39273	100-yr	2800.5	758.74	754.15	2.73	1.6	37.5	11.81	214.46	1555.09	3.61	1.13	4.59	4.59
Rosebud County	C11	RM 229.02	38994	100-yr	2800.5	758.53	754.12	2.6	1.46	33.61	10.86	211.31	1617.57	3.71	1.19	4.41	4.41
Rosebud County	C11	RM 228.82	38676	100-yr	2800.5	758.35	753.8	2.2	1.38	24.23	7.53	271.56	1787.22	3.68	1.14	4.55	4.55
Rosebud County	C11	RM 228.64	38383	100-yr	2800.5	758.22	753.73	2.12	1.24	22.28	7.28	224.38	1859.67	3.76	1.22	4.53	4.53
Rosebud County	C11	RM 228.46	38093	100-yr	2800.5	758.14	753.53	1.62	0.98	12.94	5.02	301.72	1943.11	3.82	1.47	4.61	4.61
Rosebud County	C11	RM 228.26	37771	100-yr	2800.5	758.08	753.35	1.45	0.8	10.24	4.47	273.91	2027.35	3.97	1.72	4.73	4.73
Rosebud County	C11	RM 228.03	37408	100-yr	2800.5	757.96	753.16	1.74	0.85	14.66	5.76	233.4	2075.95	4.11	1.6	4.8	4.8
Rosebud County	C11	RM 227.74	36949	100-yr	2800.5	757.79	752.95	1.98	1.1	18.61	6.29	167.04	1950.85	4.36	1.45	4.84	4.84
Rosebud County	C11	RM 227.49	36537	100-yr	2800.5	757.68	752.83	1.9	1.04	17.07	6.64	175.55	1792.97	4.35	1.67	4.85	4.85
Rosebud County	C11	RM 227.2	36062	100-yr	2800.5	757.56	752.41	1.84	1.11	16.17	6.95	180.83	2467.09	4.29	1.82	5.15	5.15
Rosebud County	C11	RM 226.98	35709	100-yr	2800.5	757.24	752.31	2.53	1.44	31.4	14.44	211.99	1631.21	3.9	1.78	4.93	4.93
Rosebud County	C11	RM 226.79	35400	100-yr	2800.5	757.09	752.25	1.98	1.35	21.61	12.16	268.83	986.83	4.03	2.25	4.84	4.84
Rosebud County	C11	RM 226.56	35065	100-yr	2800.5	756.97	751.83	1.7	1.26	16.52	10.81	338.41	835.49	4.07	2.65	5.14	5.14
Rosebud County	C11	RM 226.36	34743	100-yr	2800.5	756.7	751.68	2.16	1.68	25.16	12.4	303.18	873.24	3.92	1.91	5.02	5.02
Rosebud County	C11	RM 226.2	34476	100-yr	2800.5	756.64	751.25	1.6	1.29	13.07	7.89	424.72	1050.1	3.7	2.23	5.39	5.39
Rosebud County	C11	RM 226.01	34177	100-yr	2800.5	756.5	750.81	1.75	1.26	24.13	10.73	284.2	1449.82	4.67	2.06	5.69	5.69
Rosebud County	C11	RM 225.83	33884	100-yr	2800.5	756.21	750.59	2.6	1.4	30.56	11.66	159.74	1327.12	5.04	1.89	5.62	5.62
Rosebud County	C11	RM 225.64	33580	100-yr	2800.5	756.12	750.56	1.97	1.39	18.51	9.91	293.96	1429.39	4.27	2.27	5.56	5.56
Rosebud County	C11	RM 225.45	33275	100-yr	2797.7	756.02	750.31	1.76	1.44	14.39	8.04	332.17	1435.44	4.57	2.54	5.71	5.71
Rosebud County	C11	RM 225.26	32969	100-yr	2797.7	755.87	750.25	2	1.66	18.5	10.51	291.78	1529.71	4.62	2.61	5.62	5.62
Rosebud County	C11	RM 225.16	32805	100-yr	2797.7	755.67	750.19	2.47	2.15	27.85	16.97	224.54	1135.98	4.91	2.97	5.48	5.48
Rosebud County	C11	RM 225.06	32646	100-yr	2797.7	755.3	747.9	3.14	3	42.21	32.93	169.61	959.59	5.23	4.06	7.4	7.4
Rosebud County			32620	100-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	100-yr	2797.7	755.17	747.9	3.2	3.13	45.86	37.08	169.8	1103.84	5.14	4.14	7.27	7.27

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	100-yr	2797.7	755.12	750.09	2.37	2.22	26.14	16.83	249.97	1073.36	4.62	2.96	5.03	5.03
Rosebud County	C12	RM 224.71	32083	100-yr	2797.7	754.98	750.04	2.16	2.02	21.36	15.95	392.93	582.06	3.22	2.39	4.94	4.94
Rosebud County	C12	RM 224.53	31796	100-yr	2797.7	754.76	749.96	2.21	2.13	20.51	16.19	412.38	730.94	3.05	2.4	4.8	4.8
Rosebud County	C12	RM 224.34	31486	100-yr	2797.7	754.59	750.03	1.9	1.77	21.01	16.72	480.32	874.51	2.73	2.17	4.55	4.55
Rosebud County	C12	RM 224.16	31195	100-yr	2797.7	754.41	749.78	1.99	1.56	18.56	9.08	263.29	1518.38	4.05	1.97	4.73	4.73
Rosebud County	C12	RM 223.96	30878	100-yr	2797.7	754.24	749.48	2.26	1.55	24.06	9.59	179.51	1398.34	4.4	1.74	4.86	4.86
Rosebud County	C12	RM 223.76	30567	100-yr	2797.7	754.07	749.18	2.39	1.6	27.78	10.98	162.95	1443.62	3.98	1.55	4.89	4.89
Rosebud County	C12	RM 223.55	30235	100-yr	2797.7	753.92	748.87	2.11	1.41	20.4	6.7	229.9	1561.73	4.76	1.55	5.05	5.05
Rosebud County	C12	RM 223.37	29952	100-yr	2797.7	753.69	748.72	2.47	1.54	28.15	8.82	208.3	1316.26	4.72	1.46	4.97	4.97
Rosebud County	C12	RM 223.2	29681	100-yr	2797.7	753.54	748.51	2.42	1.49	26.72	8.17	209.66	1482.16	4.84	1.46	5.03	5.03
Rosebud County	C12	RM 223.02	29391	100-yr	2797.7	753.44	748.51	2.05	1.31	19.77	7.36	265.78	1628.31	4.39	1.62	4.93	4.93
Rosebud County	C12	RM 222.82	29071	100-yr	2797.7	753.32	748.5	1.95	1.2	17.82	6.86	268.13	1824.06	4.42	1.69	4.82	4.82
Rosebud County	C12	RM 222.64	28787	100-yr	2797.7	753.17	748.46	2.14	1.27	21.4	9.34	236.97	1276.51	4.46	1.93	4.71	4.71
Rosebud County	C12	RM 222.45	28479	100-yr	2797.7	753.05	748.44	1.94	1.17	18.26	9.19	281.49	1181.55	4.03	2.02	4.61	4.61
Rosebud County	C12	RM 222.22	28128	100-yr	2797.7	752.92	748.15	1.87	1.15	16.35	7.52	261.1	1189.6	4.48	2.05	4.77	4.77
Rosebud County	C12	RM 222.01	27784	100-yr	2797.7	752.85	747.57	1.48	1	10.79	5.46	372.22	1431.08	4.21	2.11	5.28	5.28
Rosebud County	C12	RM 221.77	27401	100-yr	2797.7	752.79	747.18	0.99	0.83	6.3	4.63	725.95	1369.25	3.36	2.47	5.61	5.61
Rosebud County	C12	RM 221.55	27042	100-yr	2797.7	752.73	747.07	0.95	0.81	6.54	5.09	807.88	1339.82	3.3	2.57	5.66	5.66
Rosebud County	C12	RM 221.34	26708	100-yr	2797.7	752.67	746.94	0.98	0.8	5.46	3.98	648.68	1489.19	3.58	2.6	5.73	5.73
Rosebud County	C12	RM 221.15	26406	100-yr	2797.7	752.55	746.7	1.6	1.11	11.2	5.27	265.14	1178.08	5.41	2.51	5.85	5.85
Rosebud County	C12	RM 220.96	26081	100-yr	2797.7	752.15	746.66	3.1	1.87	44.13	17.21	138.93	819.25	4.84	1.84	5.49	5.49
Rosebud County	C12	RM 220.77	25779	100-yr	2797.7	751.52	746.73	3.63	2.87	62.11	21.93	163.4	628.53	4.45	1.55	4.79	4.79
Rosebud County	C12	RM 220.6	25513	100-yr	2797.7	751.59	746.72	2.2	1.79	22.53	11.39	256.78	677.03	4.59	2.31	4.87	4.87
Rosebud County	C12	RM 220.4	25183	100-yr	2797.7	751.45	746.88	1.97	1.63	18.44	11.38	395.04	867.91	3.23	1.98	4.57	4.57
Rosebud County	C12	RM 220.23	24914	100-yr	2797.7	751.38	746.8	1.46	1.35	9.71	8.12	642.56	883.91	2.81	2.35	4.58	4.58
Rosebud County	C12	RM 220.02	24578	100-yr	2797.7	751.27	746.54	1.34	1.27	9.49	8.72	792.77	935.92	2.56	2.35	4.73	4.73
Rosebud County	C12	RM 219.83	24268	100-yr	2797.7	751.19	746.18	1.18	1.1	7.36	6.51	775.68	958.02	2.99	2.64	5.01	5.01
Rosebud County	C12	RM 219.63	23947	100-yr	2797.7	751.05	745.79	1.48	1.34	12.21	10.24	587.54	809.63	3.07	2.57	5.26	5.26
Rosebud County	C12	RM 219.47	23683	100-yr	2797.7	750.93	745.56	1.64	1.33	13.37	8.25	380.14	829.53	4.15	2.54	5.37	5.37
Rosebud County	C12	RM 219.29	23386	100-yr	2797.7	750.63	745.27	2.52	1.7	29.8	13.91	208.04	802.53	4.49	2.08	5.36	5.36
Rosebud County	C12	RM 219.11	23085	100-yr	2797.7	750.46	745.15	2.49	1.62	28.96	12.55	176.7	940.29	4.51	1.93	5.31	5.31
Rosebud County	C12	RM 218.92	22783	100-yr	2797.7	750.33	745.15	2.12	1.38	21.72	10.36	229.91	1073.29	3.99	1.89	5.18	5.18
Rosebud County	C12	RM 218.73	22473	100-yr	2797.7	750.15	745.06	2.15	1.35	21.19	9.02	226.8	1035.55	4.76	2.01	5.09	5.09
Rosebud County	C12	RM 218.54	22180	100-yr	2797.7	750.02	744.99	2.06	1.47	20.04	11.48	274.48	756.25	4.39	2.51	5.03	5.03
Rosebud County	C12	RM 218.38	21902	100-yr	2797.7	749.9	744.43	2.08	1.43	19.61	9.73	234.82	802.72	4.94	2.44	5.47	5.47
Rosebud County	C12	RM 218.18	21580	100-yr	2797.7	749.64	743.9	2.62	1.53	31.38	13.16	182.74	925.62	4.8	1.99	5.74	5.74
Rosebud County	C12	RM 217.99	21276	100-yr	2797.7	749.46	743.66	2.49	1.5	29.28	10.72	211.96	1193.08	4.37	1.58	5.8	5.8
Rosebud County	C12	RM 217.81	20981	100-yr	2797.7	749.41	743.51	1.81	1.28	14.46	4.79	293.45	1420.02	4.9	1.61	5.9	5.9
Rosebud County	C12	RM 217.64	20702	100-yr	2797.7	749.03	743.41	2.92	1.73	39.2	9.81	176.29	1387.22	4.75	1.16	5.62	5.62
Rosebud County	C12	RM 217.45	20392	100-yr	2797.7	748.83	743.29	2.75	1.5	35.71	10.1	184.69	1507.47	4.44	1.24	5.54	5.54
Rosebud County	C12	RM 217.25	20070	100-yr	2797.7	748.77	743.29	2.12	1.16	20.14	5.49	191.77	1768.07	5.1	1.37	5.48	5.48
Rosebud County	C12	RM 217	19662	100-yr	2797.7	748.49	743.25	2.49	1.36	28.76	7.57	192.47	1710.37	4.65	1.2	5.24	5.24
Rosebud County	C12	RM 216.77	19300	100-yr	2797.7	748.29	743.25	2.41	1.34	28.08	9.09	217.02	1617.79	4.04	1.29	5.04	5.04
Rosebud County	C12	RM 216.53	18912	100-yr	2797.7	748.15	743.3	1.92	1.04	17.97	7.66	274.18	1693.1	3.96	1.67	4.85	4.85
Rosebud County	C12	RM 216.27	18500	100-yr	2797.7	748.03	743.24	1.63	0.98	13.22	6.69	358.3	1514.44	3.74	1.88	4.79	4.79
Rosebud County	C12	RM 215.98	18038	100-yr	2797.7	747.93	743.12	1.5	0.87	10.91	5.53	273.73	1700.85	4.03	2.04	4.81	4.81
Rosebud County	C12	RM 215.68	17550	100-yr	2797.7	747.78	742.31	1.65	0.99	12.12	4.54	269.37	1708.78	5.18	1.94	5.47	5.47
Rosebud County	C12	RM 215.41	17101	100-yr	2797.7	747.55	741.82	2.18	1.43	21.67	8	218.66	1349.47	4.87	1.78	5.73	5.73
Rosebud County	C12	RM 215.21	16781	100-yr	2797.7	747.2	741.65	2.96	1.79	40.47	14.19	159.7	1336.43	4.73	1.63	5.55	5.55
Rosebud County	C12	RM 215.02	16479	100-yr	2797.7	746.8	741.68	3.34	2.14	51.42	18.52	146.57	786.24	4.77	1.68	5.12	5.12
Rosebud County	C13	RM 214.86	16220	100-yr	2797.7	746.83	741.64	2.1	1.64	19.97	10.67	252.91	871.29	4.98	2.64	5.19	5.19
Rosebud County	C13	RM 214.65	15883	100-yr	2797.7	746.67	741.6	2.02	1.8	19.1	11.58	399.8	778.77	3.4	2.05	5.07	5.07
Rosebud County	C13	RM 214.46	15577	100-yr	2797.7	746.54	741.6	1.84	1.46	14.22	9.18	460.4	1185.36	3.04	1.95	4.94	4.94
Rosebud County	C13	RM 214.27	15282	100-yr	2797.7	746.44	741.59	1.6	1.28	11.44	6.72	505.93	1231.28	3.04	1.78	4.85	4.85
Rosebud County	C13	RM 214.07	14957	100-yr	2797.7	746.33	741.54	1.49	1.1	14.34	7.18	425.03	1499.96	3.8	1.89	4.79	4.79
Rosebud County	C13	RM 213.9	14672	100-yr	2797.7	746.14	741.37	1.86	1.49	16.92	6.8	363.41	1287.06	3.86	1.54	4.77	4.77
Rosebud County	C13	RM 213.7	14343	100-yr	2797.7	745.79	740.88	2.54	2.01	29.97	8.78	232.58	1586.37	4.56	1.32	4.91	4.91
Rosebud County	C13	RM 213.54	14083	100-yr	2797.7	745.41	740.59	3.1	2.23	45.46	12.04	191.86	1918.58	4.41	1.15	4.82	4.82
Rosebud County	C13	RM 213.36	13792	100-yr	2797.7	745.31	740.39	2.41	1.63	28.24	9.04	245.91	1983.32	4.02	1.27	4.92	4.92
Rosebud County	C13	RM 213.16	13475	100-yr	2797.7	745.13	740.27	2.34	1.49	26.15	8.2	214.1	2086.7	3.84	1.19	4.86	4.86

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	100-yr	2797.7	744.99	740.31	2.22	1.35	22.19	7.33	212.05	2117.99	3.69	1.2	4.68	4.68
Rosebud County	C13	RM 212.79	12880	100-yr	2797.7	744.8	740.19	2.29	1.22	24.77	6.97	178.07	2111.37	4.4	1.22	4.61	4.61
Rosebud County	C13	RM 212.6	12572	100-yr	2797.7	744.63	739.79	2.11	1.12	20.81	5.93	240.96	2146.95	4.52	1.28	4.84	4.84
Rosebud County	C13	RM 212.42	12284	100-yr	2797.7	744.47	739.58	2.31	1.2	25.74	7.25	211.31	2082.45	4.22	1.17	4.89	4.89
Rosebud County	C13	RM 212.23	11983	100-yr	2797.7	744.41	739.17	1.74	0.94	14.48	4.92	257.92	2112.52	4.19	1.41	5.24	5.24
Rosebud County	C13	RM 212.05	11688	100-yr	2797.7	744.25	738.83	2.05	1.13	19.29	5.05	227.41	2028.85	4.73	1.22	5.42	5.42
Rosebud County	C13	RM 211.85	11386	100-yr	2797.7	744.07	738.79	2.23	1.34	23.86	7.58	251.66	1607.08	4.12	1.3	5.28	5.28
Rosebud County	C13	RM 211.65	11066	100-yr	2797.7	743.9	738.58	2.22	1.3	23.37	7.3	248.86	1652.22	4.22	1.3	5.32	5.32
Rosebud County	C13	RM 211.44	10724	100-yr	2797.7	743.75	738.38	2.21	1.18	22.95	8.61	199.53	1880.99	4.49	1.67	5.37	5.37
Rosebud County	C13	RM 211.21	10353	100-yr	2797.7	743.64	737.87	2.01	1.18	17.46	8.34	207.36	1522.51	4.49	2.13	5.77	5.77
Rosebud County	C13	RM 210.96	9946	100-yr	2797.7	743.33	737.72	2.65	1.52	33.12	15.74	169.56	1277.83	4.46	2.09	5.61	5.61
Rosebud County	C13	RM 210.75	9612	100-yr	2797.7	743.25	737.48	2.11	1.29	20.37	8.95	191.27	1407.3	4.84	2.1	5.77	5.77
Rosebud County	C13	RM 210.57	9317	100-yr	2797.7	743.17	737.5	1.86	1.19	15.85	6.6	244	1510.05	4.81	1.98	5.67	5.67
Rosebud County	C13	RM 210.36	8986	100-yr	2797.7	742.82	737.54	2.69	1.61	34.07	12.31	194.77	1469.11	4.4	1.57	5.28	5.28
Rosebud County	C13	RM 210.16	8674	100-yr	2797.7	742.59	737.53	2.45	1.76	29.99	14.49	288.57	1007.67	3.68	1.76	5.06	5.06
Rosebud County	C13	RM 209.98	8382	100-yr	2797.7	742.59	737.25	1.6	1.18	11.78	6.17	307.03	1348.01	4.67	2.43	5.34	5.34
Rosebud County	C13	RM 209.8	8091	100-yr	2797.7	742.49	736.96	1.81	1.13	14.51	5.33	218.68	1698.24	5.39	1.96	5.53	5.53
Rosebud County	C13	RM 209.6	7774	100-yr	2797.7	742.33	736.72	2.17	1.08	21.09	7.27	179.37	1958.94	5.21	1.77	5.61	5.61
Rosebud County	C13	RM 209.41	7482	100-yr	2797.7	742.26	736.53	1.83	1.05	15.49	6.18	238.7	1943.67	4.72	1.86	5.73	5.73
Rosebud County	C13	RM 209.21	7161	100-yr	2797.7	742.05	736.29	2.3	1.39	24.18	8.18	197.21	1592.8	4.82	1.61	5.76	5.76
Rosebud County	C13	RM 209.03	6871	100-yr	2797.7	741.91	736.14	2.34	1.34	24.91	8.89	186.26	1298.61	4.91	1.72	5.77	5.77
Rosebud County	C13	RM 208.85	6571	100-yr	2797.7	741.83	736.03	1.97	1.23	17.64	7.67	229.12	1274.79	4.93	2.12	5.8	5.8
Rosebud County	C13	RM 208.65	6257	100-yr	2797.7	741.74	735.74	1.92	1.26	17.03	8.86	218.32	1343.52	4.7	2.41	6	6
Rosebud County	C13	RM 208.46	5945	100-yr	2797.7	741.51	735.69	2.34	1.64	25.98	12	204.54	897.7	4.17	1.9	5.82	5.82
Rosebud County	C13	RM 208.29	5682	100-yr	2797.7	740.67	735.63	4.12	3.21	79.53	26.45	116.29	589.04	4.57	1.48	5.04	5.04
Rosebud County	C14	RM 208.1	5374	100-yr	2797.7	740.54	735.61	2.83	2.33	36.96	13.87	201.37	797.57	4.72	1.75	4.93	4.93
Rosebud County	C14	RM 207.91	5064	100-yr	2797.7	740.38	735.56	2.36	1.79	28.07	15.5	293.26	789.97	3.63	1.98	4.82	4.82
Rosebud County	C14	RM 207.72	4766	100-yr	2797.7	740.19	735.52	2.09	1.61	21.05	11.86	404.67	1297.1	2.94	1.64	4.67	4.67
Rosebud County	C14	RM 207.53	4450	100-yr	2797.7	740.11	735.35	1.49	1.15	11.93	7.04	469.61	1403.9	3.31	1.95	4.76	4.76
Rosebud County	C14	RM 207.33	4123	100-yr	2797.7	739.96	735.27	1.83	1.21	16.22	7.9	282.48	1208.82	4.06	1.97	4.69	4.69
Rosebud County	C14	RM 207.15	3851	100-yr	2797.7	739.89	735.14	1.59	1.07	12.43	5.68	313.39	1510.32	4.13	1.88	4.75	4.75
Rosebud County	C14	RM 206.99	3599	100-yr	2797.7	739.84	734.95	1.43	0.9	9.99	4.85	327.09	1686.77	3.95	1.91	4.89	4.89
Rosebud County	C14	RM 206.81	3315	100-yr	2797.7	739.78	734.49	1.46	0.86	10.06	4.54	257.4	1626.16	4.46	1.99	5.29	5.29
Rosebud County	C14	RM 206.61	2997	100-yr	2797.7	739.64	733.91	1.89	1.06	16.21	7.02	197.48	1315.68	4.99	2.14	5.73	5.73
Rosebud County	C14	RM 206.43	2701	100-yr	2797.7	739.59	733.52	1.59	0.9	12.08	6.01	244.31	1615.56	4.23	2.09	6.07	6.07
Rosebud County	C14	RM 206.21	2350	100-yr	2797.7	739.5	733.38	1.58	0.99	12.52	5.45	253.17	1735.94	4.46	1.92	6.12	6.12
Rosebud County	C14	RM 205.97	1963	100-yr	2797.7	739.34	732.73	1.82	1.16	14.18	5.27	223.85	1494.45	5.83	2.13	6.61	6.61
Rosebud County	C14	RM 205.72	1563	100-yr	2797.7	738.66	732.73	3.93	2.03	92.35	23.84	107.48	1509.16	4.95	1.23	5.93	5.93
Rosebud County	C14	RM 205.49	1198	100-yr	2797.7	738.43	732.63	2.71	1.74	44.69	14.2	192.62	1518.23	4.61	1.45	5.8	5.8
Rosebud County	C14	RM 205.3	907	100-yr	2797.7	738.14	732.76	2.75	1.83	37.89	16.77	246.92	1374.56	3.64	1.6	5.38	5.38
Rosebud County	C14	RM 205.11	594	100-yr	2797.7	737.89	732.8	2.72	1.8	34.08	12	192	1277.48	4.7	1.63	5.09	5.09
Rosebud County	C14	RM 204.9	243	100-yr	2797.7	737.58	732.63	2.76	2.01	36.75	14.23	224.67	1268.23	4.12	1.58	4.95	4.95

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	100-yr	2792	737.58	732.67	2.45	1.4	29.17	12.48	192.07	1164.2	4.06	1.72	4.91	4.91
Custer County	C14	RM 204.43	73135	100-yr	2792	737.43	732.44	2.12	1.27	21.74	10.7	266.74	1117	4.03	1.97	4.99	4.99
Custer County	C14	RM 204.22	72808	100-yr	2792	737.23	732.3	2.24	1.34	24.95	11.24	262.16	1240.69	3.74	1.68	4.93	4.93
Custer County	C14	RM 204	72454	100-yr	2792	737.1	731.9	1.93	1.19	17.11	7.03	261.19	1213.67	4.75	1.94	5.19	5.19
Custer County	C14	RM 203.82	72156	100-yr	2792	736.78	731.14	2.71	1.58	34.5	14.97	197.43	931.48	4.43	1.9	5.64	5.64
Custer County	C14	RM 203.65	71895	100-yr	2792	736.61	730.95	2.75	1.43	35.59	17.13	162.5	916.32	4.5	2.13	5.66	5.66
Custer County	C14	RM 203.5	71641	100-yr	2792	736.54	730.78	2.18	1.29	22.31	10.9	195.78	1007.9	4.46	2.15	5.76	5.76
Custer County	C14	RM 203.3	71324	100-yr	2792	736.51	730.79	1.69	1	13.01	6.59	161.79	1154.14	4.87	2.41	5.72	5.72
Custer County	C14	RM 203.1	71035	100-yr	2792	736.18	730.79	2.66	1.43	33.83	14.18	184.4	1303.82	4.2	1.73	5.39	5.39
Custer County	C14	RM 202.9	70718	100-yr	2792	736.05	730.67	2.23	1.48	25.84	14.64	249.23	1132.21	3.26	1.82	5.38	5.38
Custer County	C14	RM 202.71	70415	100-yr	2792	735.77	730.64	2.44	1.57	29.4	14.52	231.65	938.42	3.87	1.89	5.13	5.13
Custer County	C14	RM 202.51	70088	100-yr	2792	735.4	730.68	2.93	1.66	40.84	14.47	152.2	1126.15	4.29	1.5	4.72	4.72
Custer County	C14	RM 202.34	69815	100-yr	2792	735.29	730.63	2.01	1.3	20.37	9.7	321.87	1259.59	3.61	1.71	4.66	4.66
Custer County	C14	RM 202.13	69483	100-yr	2792	735.11	730.54	2.03	1.27	19.86	10.18	282.19	1216.11	4.11	2.09	4.57	4.57
Custer County	C14	RM 201.97	69219	100-yr	2792	734.92	730.01	2.22	1.63	23.97	13.52	264.21	760.01	4.02	2.26	4.91	4.91
Custer County	C14	RM 201.75	68884	100-yr	2792	734.85	729.45	1.68	1.35	12.74	6.24	306.87	849.2	5.02	2.44	5.4	5.4
Custer County	C14	RM 201.57	68612	100-yr	2792	734.7	729.37	1.99	1.49	20.42	12.49	362.67	917.75	3.34	2.04	5.33	5.33
Custer County	C14	RM 201.38	68299	100-yr	2792	734.39	729.23	2.36	1.77	30.16	16.99	356.22	984.65	2.87	1.61	5.16	5.16
Custer County	C14	RM 201.23	68055	100-yr	2792	734.23	729.13	2.03	1.36	21.66	11.84	369.58	1208.88	3.13	1.7	5.1	5.1
Custer County	C14	RM 201.06	67778	100-yr	2792	734.23	729.03	1.3	1.02	8.33	5.2	262.3	1359.67	3.86	2.39	5.2	5.2
Custer County	C14	RM 200.85	67439	100-yr	2792	733.73	729.05	3.42	2.27	55.28	20.64	114.21	844.42	4.47	1.62	4.68	4.68
Custer County	C14	RM 200.64	67103	100-yr	2792	733.66	728.97	2.15	1.59	21.64	12.43	216.64	923.03	4.53	2.58	4.69	4.69
Custer County	C14	RM 200.48	66842	100-yr	2792	733.6	728.8	1.68	1.41	13.81	9.44	307.41	746.26	3.9	2.65	4.8	4.8
Custer County	C14	RM 200.27	66515	100-yr	2792	733.44	728.63	1.78	1.44	15.35	10.17	359.69	726.08	4.05	2.68	4.81	4.81
Custer County	C14	RM 200.05	66162	100-yr	2792	733.25	728.3	1.93	1.65	18.83	13.86	388.71	649.3	3.55	2.6	4.95	4.95
Custer County	C14	RM 199.9	65916	100-yr	2792	733.17	727.78	1.69	1.59	13.51	8.97	381.62	619.53	4.3	2.84	5.39	5.39
Custer County	C14	RM 199.71	65614	100-yr	2792	732.82	727.34	2.6	2.34	29.68	15.23	260.79	584.33	4.04	2.05	5.48	5.48
Custer County	C14	RM 199.53	65326	100-yr	2792	732.75	727.34	2.09	1.86	19.69	9.38	259.62	634.85	5.02	2.37	5.41	5.41
Custer County	C14	RM 199.38	65076	100-yr	2792	732.65	727.34	1.98	1.69	19.1	10.03	364.29	923.42	3.67	1.91	5.31	5.31
Custer County	C14	RM 199.18	64754	100-yr	2792	732.48	727.64	1.86	1.52	18.47	9.81	456.73	1213.43	2.98	1.57	4.84	4.84
Custer County	C14	RM 199.04	64535	100-yr	2792	732.39	727.64	1.66	1.29	14.02	6.29	419.11	1351.94	3.59	1.61	4.75	4.75
Custer County	C14	RM 198.77	64102	100-yr	2792	732.17	727.28	1.91	1.46	17.04	6.57	294.95	1212.61	4.48	1.71	4.89	4.89
Custer County	C14	RM 198.57	63773	100-yr	2792	731.79	726.99	2.74	2.01	34.9	11.08	204.81	968.37	4.57	1.43	4.8	4.8
Custer County	C14	RM 198.4	63505	100-yr	2792	731.58	726.86	2.75	1.99	35.56	15.78	199.72	1190.22	4.44	1.95	4.72	4.72
Custer County	C14	RM 198.22	63215	100-yr	2792	731.34	726.57	2.79	1.78	36.82	16.21	190.38	1184.62	4.33	1.89	4.77	4.77
Custer County	C14	RM 198.04	62923	100-yr	2792	731.22	726.32	2.27	1.53	24.3	9.53	227.09	1316.23	4.42	1.72	4.9	4.9
Custer County	C14	RM 197.84	62611	100-yr	2792	731.18	726.04	1.61	1.23	12.5	5.29	351.59	1579.36	4.11	1.73	5.14	5.14
Custer County	C14	RM 197.65	62306	100-yr	2792	731.09	725.69	1.68	1.07	12.13	5.11	317.28	1742.91	3.94	1.64	5.4	5.4
Custer County	C14	RM 197.47	62013	100-yr	2792	731.08	725.29	1.28	0.77	7.11	2.64	296.75	1826.16	5.57	2.04	5.79	5.79
Custer County	C14	RM 197.27	61686	100-yr	2792	731.02	724.81	1.59	0.8	11.43	4.87	212.44	1851.74	4.93	2.08	6.21	6.21
Custer County	C14	RM 197.07	61373	100-yr	2792	730.95	724.81	1.65	0.88	12.25	4.63	204.54	1701.97	5.1	1.89	6.14	6.14
Custer County	C14	RM 196.91	61115	100-yr	2792	730.94	724.81	1.26	0.65	7.13	3.62	222.98	1666.17	5.13	2.57	6.13	6.13
Custer County	C14	RM 196.73	60815	100-yr	2792	730.9	724.76	1.3	0.68	7.48	3.8	241.8	1534.91	5.29	2.67	6.14	6.14
Custer County	C14	RM 196.54	60518	100-yr	2792	730.85	724.67	1.41	0.79	9.12	4.61	270.26	2004.9	4.81	2.4	6.18	6.18
Custer County	C14	RM 196.33	60178	100-yr	2792	730.79	724.57	1.49	0.93	9.63	4.71	247.23	1731.93	5.54	2.69	6.22	6.22
Custer County	C14	RM 196.17	59915	100-yr	2792	730.72	724.51	1.62	1.22	11.36	7.29	191.57	1323.83	5.69	3.62	6.21	6.21
Custer County	C15	RM 195.98	59615	100-yr	2792	729.11	724.52	5.3	4.92	137.8	85.27	132.07	285.07	3.96	2.43	4.59	4.59
Custer County	C15	RM 195.81	59337	100-yr	2792	729.07	724.33	3.56	3.24	59.37	26.27	169.49	467.42	4.57	1.99	4.74	4.74
Custer County	C15	RM 195.61	59020	100-yr	2792	729	724.24	2.57	2.24	30.62	13.9	230.07	602.04	4.6	2.07	4.76	4.76
Custer County	C15	RM 195.43	58727	100-yr	2792	728.81	724.22	2.4	2.09	28.71	18.22	305.61	573.2	3.68	2.33	4.59	4.59
Custer County	C15	RM 195.23	58415	100-yr	2792	728.68	723.93	1.9	1.73	18.87	12.67	391.57	654.13	3.69	2.46	4.75	4.75
Custer County	C15	RM 195.04	58114	100-yr	2792	728.45	723.54	2.27	1.94	25.07	12.83	269.46	711.12	3.96	2.02	4.91	4.91
Custer County	C15	RM 194.86	57824	100-yr	2792	728.28	722.93	2.32	1.69	25.23	11.71	209.92	794.8	4.52	2.07	5.35	5.35
Custer County	C15	RM 194.67	57521	100-yr	2792	728.12	722.75	2.23	1.69	22.15	8.98	217.41	807.47	5.17	2.07	5.37	5.37
Custer County	C15	RM 194.49	57231	100-yr	2792	728.04	722.53	2.03	1.54	18.55	8.94	232.49	797.58	5.12	2.44	5.51	5.51
Custer County	C15	RM 194.32	56946	100-yr	2792	727.84	722.5	2.32	1.83	24.25	14	259.82	675.13	4.19	2.4	5.34	5.34
Custer County	C15	RM 194.13	56643	100-yr	2792	727.58	722.5	2.5	2.18	29.74	19.95	251.64	467.94	4.25	2.83	5.08	5.08
Custer County	C15	RM 193.93	56331	100-yr	2792	727.42	722.31	2.29	2.06	24	17.6	247.7	548.56	4.75	3.47	5.11	5.11
Custer County	C15	RM 193.74	56024	100-yr	2792	727.25	722.23	2.36	1.97	25.44	12.2	229.42	844.18	4.85	2.3	5.02	5.02
Custer County	C15	RM 193.55	55708	100-yr	2792	727.04	722.13	2.49	1.93	28.58	10.97	216.68	840.27	4.74	1.8	4.91	4.91

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	100-yr	2792	726.84	722.13	2.55	1.89	30.38	11.77	219.51	934.14	4.53	1.74	4.71	4.71
Custer County	C15	RM 193.2	55158	100-yr	2792	726.78	722.13	2.01	1.52	18.91	8.51	280.33	990.85	4.5	2.01	4.65	4.65
Custer County	C15	RM 193	54825	100-yr	2792	726.62	721.84	2.04	1.58	19.55	11.27	281.95	924.85	4.48	2.57	4.78	4.78
Custer County	C15	RM 192.81	54525	100-yr	2792	726.47	721.37	2.23	1.48	22.48	9.1	207.4	1146.33	4.93	1.98	5.1	5.1
Custer County	C15	RM 192.63	54247	100-yr	2792	726.27	721.01	2.37	1.69	25.38	9.45	217.39	1043.56	4.98	1.83	5.26	5.26
Custer County	C15	RM 192.44	53935	100-yr	2789.2	726.19	721.01	2	1.45	18.28	7.55	241	972.8	4.84	1.98	5.19	5.19
Custer County	C16	RM 192.26	53653	100-yr	2789.2	725.94	721.01	2.44	1.98	27.31	11.11	228.7	734.54	4.76	1.92	4.93	4.93
Custer County	C16	RM 192.05	53309	100-yr	2789.2	725.17	721.11	3.73	3.28	68.59	35.65	186.81	424.76	3.88	2	4.06	4.06
Custer County	C16	RM 191.74	52809	100-yr	2789.2	724.98	721.1	1.98	1.88	17.28	15.69	560.47	655.4	2.49	2.26	3.88	3.88
Custer County	C16	RM 191.35	52181	100-yr	2789.2	724.57	721.02	1.72	1.68	13.06	12.27	842.76	926.88	1.91	1.79	3.55	3.55
Custer County	C16	RM 191.12	51812	100-yr	2789.2	724.39	720.51	1.46	1.46	10.37	10.34	832.88	835.9	2.29	2.29	3.88	3.88
Custer County	C16	RM 190.87	51406	100-yr	2789.2	724.24	719.89	1.29	1.26	8.61	8.12	904.03	1117.05	2.38	2.24	4.35	4.35
Custer County	C16	RM 190.54	50885	100-yr	2789.2	724.12	719.15	1.05	0.96	6.73	4.76	789.91	1309.08	3.28	2.32	4.97	4.97
Custer County	C16	RM 190.29	50477	100-yr	2789.2	723.54	718.45	3.08	2.06	44.07	12.93	179.8	1156.61	4.58	1.32	5.08	5.08
Custer County	C16	RM 190.1	50176	100-yr	2789.2	723.29	718.43	2.8	2.08	37.71	12.74	227.17	1674.18	4.1	1.38	4.86	4.86
Custer County	C16	RM 189.85	49765	100-yr	2789.2	723.11	718.13	2.05	1.85	20.67	10.98	334.92	2176.14	3.9	2.06	4.98	4.98
Custer County	C16	RM 189.65	49458	100-yr	2789.2	722.91	713.92	2.16	2.14	20.66	19.98	340.01	2307.45	3.8	3.68	8.99	8.99
Custer County	C16		49425	100-yr	Bridge												
Custer County	C16	RM 189.62	49416	100-yr	2789.2	722.83	713.92	2.21	2.2	21.32	20.47	339.42	2154.07	3.71	3.56	8.91	8.91
Custer County	C16	RM 189.43	49103	100-yr	2789.2	722.33	718.09	2.93	2.86	43.51	34.77	269.95	1570.85	3.51	2.8	4.24	4.24
Custer County	C16	RM 189.22	48763	100-yr	2789.2	722.38	717.93	1.48	1.44	10.56	8.91	452.46	1889.52	4.14	3.49	4.45	4.45
Custer County	C16	RM 188.91	48267	100-yr	2789.2	722.19	717.54	1.68	1.54	14.15	10.47	472.67	1698.38	3.45	2.55	4.65	4.65
Custer County	C16	RM 188.66	47869	100-yr	2789.2	721.69	716.75	2.85	2.16	37.25	14.04	195.28	1313.99	4.76	1.77	4.94	4.94
Custer County	C16	RM 188.51	47622	100-yr	2789.2	721.53	716.72	2.7	1.94	34.4	14.32	217.17	1110.51	4.38	1.81	4.81	4.81
Custer County	C16	RM 188.32	47314	100-yr	2789.2	721.48	716.79	1.95	1.5	18.93	8.91	152.06	952.17	4.24	1.95	4.69	4.69
Custer County	C16	RM 188.14	47024	100-yr	2789.2	721.31	716.93	1.3	1.42	9.44	9.62	474.59	1025.74	1.87	1.91	4.38	4.38
Custer County	C16	RM 187.98	46768	100-yr	2789.2	721.23	716.91	1.74	1.29	14.78	8.91	222.44	918.48	3.99	2.39	4.32	4.32
Custer County	C16	RM 187.78	46440	100-yr	2789.2	721.15	716.69	1.48	1.16	11.69	6.54	251.06	1162.62	3.79	2.11	4.46	4.46
Custer County	C16	RM 187.55	46083	100-yr	2789.2	720.93	716.04	2.08	1.26	20.2	8.38	224.37	1205.57	4.47	1.84	4.89	4.89
Custer County	C16	RM 187.35	45750	100-yr	2789.2	720.51	715.34	2.91	1.76	39.55	12.89	182.36	1087.29	4.55	1.46	5.17	5.17
Custer County	C16	RM 187.14	45421	100-yr	2789.2	720.44	715.3	2.1	1.37	20.85	9.28	259.08	1151.64	4.4	1.94	5.14	5.14
Custer County	C16	RM 187.01	45211	100-yr	2789.2	720.38	715.3	1.81	1.3	15.3	8.16	300.38	1352.28	4.57	2.42	5.08	5.08
Custer County	C16	RM 186.84	44930	100-yr	2789.2	720.21	715.03	2.07	1.66	20.35	13.08	294.8	1299.16	4.27	2.73	5.18	5.18
Custer County	C16	RM 186.62	44553	100-yr	2789.2	719.87	712.45	2.52	2.51	27.04	26.33	188.38	584.99	5.88	5.75	7.42	7.42
Custer County	C16		44545	100-yr	Bridge												
Custer County	C16	RM 186.61	44538	100-yr	2789.2	719.85	712.45	2.53	2.52	27.33	26.62	188.38	610.47	5.86	5.73	7.4	7.4
Custer County	C16	RM 186.46	44311	100-yr	2789.2	719.36	714.53	3.37	3.02	53.92	37.94	186.12	854.1	4.36	3.04	4.83	4.83
Custer County	C16	RM 186.26	43996	100-yr	2789.2	719.07	714.27	3.07	2.86	44.42	34.42	205.3	490.76	4.37	3.38	4.79	4.79
Custer County	C16	RM 186.1	43730	100-yr	2789.2	718.99	713.9	2.3	2.27	25.35	20.4	293.95	569.25	4.13	3.31	5.09	5.09
Custer County	C16	RM 185.91	43424	100-yr	2673.1	718.82	713.84	2.12	2.1	20.92	19.69	388.65	594.09	3.24	3.05	4.98	4.98
Custer County	C16	RM 185.71	43110	100-yr	2673.1	718.29	713.84	2.96	2.67	39.49	28.65	325.31	523.15	2.7	1.95	4.45	4.45
Custer County	C16	RM 185.52	42808	100-yr	2673.1	718.27	713.71	1.81	1.6	15.91	10.5	366.12	673.2	3.94	2.59	4.56	4.56
Custer County	C16	RM 185.34	42508	100-yr	2673.1	718.09	713.28	1.91	1.86	16.72	14.55	511.74	715.06	2.72	2.36	4.81	4.81
Custer County	C16	RM 185.16	42219	100-yr	2673.1	718.01	712.93	1.57	1.5	11.94	10.19	419.95	1414.57	4.02	3.43	5.08	5.08
Custer County	C17	RM 184.95	41881	100-yr	2673.1	717.81	712.72	1.99	1.65	19.89	13.6	289.56	1205.85	4.4	3	5.09	5.09
Custer County	C17	RM 184.78	41621	100-yr	2673.1	717.53	712.51	2.56	2.09	30.44	19.89	214.93	426.06	4.62	3	5.02	5.02
Custer County	C17	RM 184.59	41311	100-yr	2673.1	717.24	711.96	2.76	2.48	34.63	27.91	194.94	276.06	4.84	3.9	5.28	5.28
Custer County	C17	RM 184.4	41010	100-yr	2673.1	717.18	711.62	2.16	2.13	20.87	19.82	242.39	258.54	5.1	4.85	5.56	5.56
Custer County	C17	RM 184.23	40728	100-yr	2673.1	716.95	711.31	2.47	2.42	28.44	26.6	237.8	260.37	4.54	4.24	5.64	5.64
Custer County	C17	RM 184.1	40517	100-yr	2673.1	716.78	710.39	2.6	2.41	30.36	24.89	203.14	269.41	4.99	4.11	6.39	6.39
Custer County	C17		40500	100-yr	Bridge												
Custer County	C17	RM 184.08	40496	100-yr	2673.1	716.74	710.39	2.62	2.44	30.96	25.36	203.14	269.23	4.95	4.08	6.35	6.35
Custer County	C17	RM 184.03	40407	100-yr	2673.1	716.71	711.49	2.47	2.41	27.99	25.56	222.9	252.49	4.82	4.4	5.22	5.22
Custer County	C17	RM 183.83	40098	100-yr	2673.1	716.55	711.42	2.35	2.3	25.11	23.32	234.15	257.88	4.85	4.5	5.13	5.13
Custer County	C17	RM 183.65	39806	100-yr	2673.1	716.35	711.39	2.48	2.47	28.1	27.57	224.47	229.48	4.81	4.72	4.96	4.96
Custer County	C17	RM 183.47	39513	100-yr	2673.1	716.04	711.39	2.81	2.81	37.05	37.05	210.74	210.74	4.51	4.51	4.65	4.65
Custer County	C17	RM 183.28	39210	100-yr	2673.1	715.95	711.31	2.22	2.2	23.04	22.33	264.91	276.15	4.53	4.39	4.64	4.64
Custer County	C17	RM 183.09	38909	100-yr	2673.1	715.68	711.04	2.54	2.54	30.49	30.49	239.83	239.83	4.39	4.39	4.64	4.64
Custer County	C17	RM 182.94	38660	100-yr	2673.1	715.57	710.66	2.3	2.3	24.32	24.32	247.32	247.32	4.71	4.71	4.91	4.91
Custer County	C17	RM 182.72	38316	100-yr	2673.1	715.36	710.1	2.36	2.27	25.97	24.13	250.1	281.81	4.49	4.18	5.26	5.26

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	100-yr	2673.1	714.81	710.12	3.35	2.95	52.8	40.05	173.67	268.84	4.45	3.36	4.69	4.69
Custer County	C17	RM 182.34	37706	100-yr	2673.1	714.65	710.27	2.6	2.28	32.95	22	240.92	442.3	3.98	2.65	4.38	4.38
Custer County	C17	RM 182.15	37402	100-yr	2673.1	714.42	710.26	2.49	2.21	30.2	17.23	252.37	528.53	4.02	2.28	4.16	4.16
Custer County	C17	RM 181.97	37127	100-yr	2673.1	714.25	710.26	2.29	2.08	25.88	14.17	292.15	614.38	3.84	2.09	3.99	3.99
Custer County	C17	RM 181.78	36815	100-yr	2673.1	714.02	710.09	2.28	2	22.28	13.23	406.68	832.27	2.72	1.61	3.93	3.93
Custer County	C17	RM 181.59	36505	100-yr	2673.1	713.68	709.76	2.47	2.2	27.05	17.73	392.06	695.34	2.67	1.75	3.92	3.92
Custer County	C17	RM 181.37	36155	100-yr	2673.1	713.4	709.37	2.39	1.98	28.52	17.72	276.99	591.25	3.69	2.29	4.03	4.03
Custer County	C17	RM 181.23	35925	100-yr	2673.1	713.12	709.36	2.72	2.4	37.54	25.1	247.28	475.13	3.51	2.35	3.76	3.76
Custer County	C17	RM 181.03	35607	100-yr	2673.1	712.97	709.02	2.04	1.95	20.91	16.11	354.1	546.82	3.61	2.79	3.95	3.95
Custer County	C17	RM 180.83	35292	100-yr	2673.1	712.85	708.68	1.77	1.57	15.81	11.69	362.09	932.01	3.56	2.63	4.17	4.17
Custer County	C17	RM 180.66	35006	100-yr	2673.1	712.64	708.22	2.03	1.88	20.31	14.68	342.47	518.31	3.79	2.74	4.42	4.42
Custer County	C18	RM 180.46	34700	100-yr	2673.1	712.45	708.05	2.17	1.92	22.33	16.55	281.53	440.8	4.26	3.16	4.4	4.4
Custer County	C18	RM 180.29	34421	100-yr	2673.1	712.2	707.79	2.5	2	30.49	15.04	243.73	689.04	3.96	1.94	4.41	4.41
Custer County	C18	RM 180.08	34086	100-yr	2673.1	712.01	707.53	2.25	1.89	23.97	11.91	254.52	663.76	4.32	2.13	4.48	4.48
Custer County	C18	RM 179.9	33807	100-yr	2673.1	711.87	707.32	2.17	1.88	22.48	12.54	266.42	643.35	4.17	2.32	4.55	4.55
Custer County	C18	RM 179.73	33525	100-yr	2673.1	711.56	706.89	2.58	2.34	32.42	22.47	256.8	460.18	3.94	2.73	4.67	4.67
Custer County	C18	RM 179.54	33218	100-yr	2673.1	711.32	706.7	2.43	2.3	30.94	22.37	312.1	462.98	3.48	2.51	4.62	4.62
Custer County	C18	RM 179.35	32914	100-yr	2673.1	711.16	706.45	2.13	1.91	21.7	15.24	292.41	476.66	4.18	2.93	4.71	4.71
Custer County	C18	RM 179.16	32611	100-yr	2673.1	710.88	706.29	2.5	2.37	30.04	21.17	237.48	359.56	4.46	3.14	4.59	4.59
Custer County	C18	RM 178.99	32337	100-yr	2673.1	710.73	706.07	2.33	2.23	25.53	21.24	254.29	349.15	4.47	3.71	4.66	4.66
Custer County	C18	RM 178.79	32025	100-yr	2673.1	710.52	705.9	2.41	2.31	27.48	24.75	251.59	339.67	4.36	3.93	4.62	4.62
Custer County	C18	RM 178.61	31730	100-yr	2673.1	710.35	705.59	2.34	2.3	25.7	23.94	259.81	471.78	4.39	4.09	4.75	4.75
Custer County	C18	RM 178.43	31434	100-yr	2673.1	710.17	705.25	2.35	2.34	25.59	24.86	249.19	340.97	4.57	4.45	4.92	4.92
Custer County	C18	RM 178.23	31114	100-yr	2673.1	709.98	704.7	2.36	2.35	25.87	25.2	249.24	302.4	4.55	4.43	5.28	5.28
Custer County	C18	RM 178.06	30848	100-yr	2673.1	709.79	704.57	2.48	2.31	28.14	20.2	219.45	335.3	4.81	3.44	5.22	5.22
Custer County	C18	RM 177.88	30549	100-yr	2673.1	709.58	704.57	2.55	2.37	30.51	21.8	229.01	351.86	4.5	3.21	5.01	5.01
Custer County	C18	RM 177.66	30211	100-yr	2721.2	709.01	704.57	3.32	3.15	53.04	36.91	193.95	298.63	4.18	2.89	4.44	4.44
Custer County	C18	RM 177.49	29932	100-yr	2721.2	708.84	704.47	2.72	2.68	35.27	30.53	236.92	279.64	4.22	3.65	4.37	4.37
Custer County	C19	RM 177.3	29625	100-yr	2721.2	708.68	704.46	2.29	2.28	25.6	24.69	302.6	353.45	3.93	3.79	4.22	4.22
Custer County	C19	RM 177.11	29314	100-yr	2721.2	708.36	704.46	2.54	2.46	28.19	24.83	372.18	439.65	2.87	2.52	3.9	3.9
Custer County	C19	RM 176.93	29040	100-yr	2721.2	708.23	704.42	2.03	1.93	18.53	16.67	436.64	519.22	3.03	2.72	3.81	3.81
Custer County	C19	RM 176.74	28720	100-yr	2721.2	708.07	704.21	1.89	1.76	18.13	14.11	342.3	643.37	3.54	2.76	3.86	3.86
Custer County	C19	RM 176.53	28384	100-yr	2721.2	707.82	703.63	2.09	1.95	23.33	20.22	344.95	527.53	3.04	2.64	4.19	4.19
Custer County	C19	RM 176.36	28109	100-yr	2721.2	707.59	703.08	2.18	2.09	23.33	20.16	324.02	394.17	3.82	3.3	4.51	4.51
Custer County	C19	RM 176.18	27824	100-yr	2721.2	706.85	702.71	3.61	3.37	65.08	45.86	199.69	356.16	3.71	2.61	4.14	4.14
Custer County	C19	RM 176	27527	100-yr	2721.2	706.7	702.51	2.63	2.47	33.87	28.21	259.98	364.39	3.87	3.22	4.19	4.19
Custer County	C19	RM 175.81	27227	100-yr	2721.2	706.47	702.24	2.45	2.36	29.99	26.34	297.33	373.68	3.68	3.23	4.23	4.23
Custer County	C19	RM 175.62	26928	100-yr	2721.2	706.18	701.81	2.65	2.37	34.12	25.88	234.72	427.04	3.99	3.01	4.37	4.37
Custer County	C19	RM 175.43	26622	100-yr	2721.2	705.8	701.81	2.94	2.24	43.38	34.38	214.93	443.05	3.65	2.88	3.99	3.99
Custer County	C19	RM 175.25	26325	100-yr	2721.2	705.46	701.72	2.85	2.57	40.83	31.44	212.23	410.67	3.59	2.75	3.74	3.74
Custer County	C19	RM 175.08	26048	100-yr	2721.2	705.26	701.63	2.27	2.26	26.5	25.71	357.35	396.36	3.35	3.25	3.63	3.63
Custer County	C19	RM 174.9	25768	100-yr	2721.2	704.96	701.31	2.47	2.47	31.59	31.48	337.65	338.82	3.27	3.26	3.65	3.65
Custer County	C19	RM 174.69	25444	100-yr	2721.2	704.64	700.82	2.43	2.37	31.11	25.13	351.06	458.45	3.17	2.56	3.82	3.82
Custer County	C19	RM 174.49	25112	100-yr	2721.2	704.27	700.04	2.61	2.51	33.89	22.8	279.46	436.29	3.7	2.49	4.23	4.23
Custer County	C19	RM 174.32	24844	100-yr	2721.2	703.86	699.39	3.02	2.87	44.33	25.89	222.49	406.31	4.01	2.34	4.47	4.47
Custer County	C19	RM 174.13	24549	100-yr	2721.2	703.75	698.84	2.37	2.26	26.01	16.62	244.91	407.55	4.65	2.96	4.91	4.91
Custer County	C19	RM 173.94	24238	100-yr	2721.2	703.48	698.14	2.61	2.4	32.3	18.53	239.67	462.07	4.29	2.45	5.34	5.34
Custer County	C19	RM 173.75	23939	100-yr	2721.2	703.12	697.92	3.05	2.5	42.52	18.3	172.39	528.64	4.81	2.06	5.2	5.2
Custer County	C19	RM 173.57	23651	100-yr	2721.2	702.96	697.83	2.65	2.45	31.92	16.83	208.71	433.79	4.86	2.56	5.13	5.13
Custer County	C19	RM 173.39	23352	100-yr	2721.2	702.57	697.83	3.07	2.91	44.61	25.44	203.51	380.13	4.34	2.46	4.74	4.74
Custer County	C19	RM 173.2	23054	100-yr	2721.2	702.34	697.72	2.8	2.55	37.63	28.07	226.21	373.54	4.16	3.1	4.62	4.62
Custer County	C19	RM 173.02	22756	100-yr	2721.2	702.11	697.29	2.61	2.4	32.63	21.94	244.03	458.17	4.2	2.82	4.82	4.82
Custer County	C19	RM 172.82	22437	100-yr	2721.2	701.99	696.82	1.99	1.95	20.53	17.93	414.44	522.89	3.29	2.87	5.17	5.17
Custer County	C19	RM 172.67	22200	100-yr	2721.2	701.8	696.52	2.07	2.05	22.61	21.94	421.93	476.97	3.1	3.01	5.28	5.28
Custer County	C19	RM 172.49	21903	100-yr	2721.2	701.62	696.23	2.03	2.01	20.6	19.19	365.62	429.93	3.66	3.41	5.39	5.39
Custer County	C19	RM 172.29	21585	100-yr	2721.2	701.33	695.79	2.44	2.29	27.12	17.54	226.44	643.02	4.86	3.13	5.54	5.54
Custer County	C19	RM 172.12	21325	100-yr	2721.2	700.7	695.81	3.44	3.4	59.11	53.42	216.64	279.2	3.65	3.29	4.89	4.89
Custer County	C19		21310	100-yr	Bridge												
Custer County	C19	RM 172.11	21300	100-yr	2721.2	700.54	695.81	3.61	3.58	66.07	62.41	216.64	255.82	3.48	3.29	4.73	4.73
Custer County	C19	RM 171.89	20942	100-yr	2721.2	700.28	695.57	2.65	2.56	32.89	27.16	228.36	289.04	4.46	3.68	4.71	4.71

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	100-yr	2721.2	699.96	695.49	2.85	2.74	39.2	32.67	231.98	293.09	4.08	3.39	4.47	4.47
Custer County	C19	RM 171.52	20341	100-yr	2721.2	699.76	695.3	2.54	2.48	30.77	26.87	249.92	296.34	4.25	3.71	4.46	4.46
Custer County	C19	RM 171.34	20043	100-yr	2721.2	699.47	695.11	2.7	2.66	34.93	31.7	244.86	338.72	4.11	3.73	4.36	4.36
Custer County	C19	RM 171.15	19745	100-yr	2721.2	699.25	694.86	2.58	2.57	31.76	29.91	249.21	273.8	4.23	3.98	4.39	4.39
Custer County	C19	RM 170.96	19437	100-yr	2721.2	699.04	694.67	2.47	2.45	29.19	26.66	261.96	313.68	4.2	3.83	4.37	4.37
Custer County	C19	RM 170.78	19143	100-yr	2721.2	698.81	694.2	2.55	2.47	30.89	25.73	245.9	307.58	4.3	3.58	4.61	4.61
Custer County	C19	RM 170.58	18838	100-yr	2721.2	698.51	693.91	2.71	2.63	35.49	31.6	245.35	286.77	4.05	3.61	4.6	4.6
Custer County	C19	RM 170.4	18543	100-yr	2721.2	698.35	693.9	2.36	2.35	26.48	25.64	269.24	279.55	4.28	4.14	4.45	4.45
Custer County	C19	RM 170.22	18257	100-yr	2721.2	698.19	693.7	2.3	2.28	25.11	23.53	272.95	294.54	4.32	4.05	4.48	4.48
Custer County	C19	RM 170.03	17941	100-yr	2721.2	697.89	693.31	2.61	2.6	32.07	31.43	237.46	242.73	4.39	4.31	4.58	4.58
Custer County	C19	RM 169.84	17641	100-yr	2721.2	697.63	692.78	2.72	2.72	34.19	33.8	214.88	217.3	4.66	4.61	4.85	4.85
Custer County	C19	RM 169.65	17341	100-yr	2721.2	697.34	692.47	2.86	2.86	37.97	36.88	204.14	210.91	4.65	4.52	4.87	4.87
Custer County	C19	RM 169.47	17041	100-yr	2721.2	697.04	692.17	2.99	2.84	41.89	33.49	199.81	267.95	4.47	3.57	4.87	4.87
Custer County	C19	RM 169.28	16732	100-yr	2721.2	696.81	692	2.76	2.62	35.6	27.86	214.83	295.12	4.51	3.52	4.81	4.81
Custer County	C19	RM 169.09	16441	100-yr	2721.2	696.56	691.96	2.77	2.75	36.16	34.72	225.9	260.31	4.35	4.18	4.6	4.6
Custer County	C19	RM 168.91	16152	100-yr	2721.2	696.29	691.93	2.81	2.77	37.66	32.14	230.07	273.96	4.21	3.59	4.36	4.36
Custer County	C19	RM 168.72	15846	100-yr	2721.2	696.14	691.82	2.33	2.33	26.11	25.41	280.43	288.65	4.16	4.05	4.32	4.32
Custer County	C19	RM 168.51	15500	100-yr	2721.2	695.92	691.6	2.29	2.24	25.56	23.76	296.39	328.91	3.97	3.69	4.32	4.32
Custer County	C19	RM 168.35	15241	100-yr	2721.2	695.65	691.48	2.58	2.42	32.59	28.03	269.3	337.3	3.87	3.33	4.17	4.17
Custer County	C19	RM 168.15	14931	100-yr	2721.2	695.29	691.2	2.83	2.64	39.27	29.32	240.59	360.3	3.89	2.9	4.09	4.09
Custer County	C19	RM 167.97	14639	100-yr	2721.2	695.07	690.59	2.58	2.56	31.58	25.69	247.71	307.46	4.26	3.46	4.48	4.48
Custer County	C19	RM 167.79	14340	100-yr	2721.2	694.84	690.5	2.57	2.56	31.57	30.05	249.29	356.37	4.24	4.04	4.34	4.34
Custer County	C19	RM 167.61	14054	100-yr	2721.2	694.51	690.42	2.83	2.8	39.28	37.35	244.91	260.85	3.92	3.72	4.09	4.09
Custer County	C19	RM 167.41	13735	100-yr	2721.2	694.29	690.14	2.52	2.26	30.9	22.33	264.94	422.89	3.93	2.85	4.15	4.15
Custer County	C19	RM 167.22	13433	100-yr	2721.2	694.09	689.79	2.36	2.25	26.63	19.12	276.96	407.91	4.14	2.97	4.3	4.3
Custer County	C19	RM 167.04	13143	100-yr	2721.2	693.91	689.14	2.34	2.2	25.6	20.77	256.62	375.67	4.48	3.64	4.77	4.77
Custer County	C19	RM 166.85	12847	100-yr	2721.2	693.57	688.98	2.79	2.6	37.99	30.57	240.01	351.22	3.95	3.18	4.59	4.59
Custer County	C19	RM 166.67	12552	100-yr	2721.2	693.35	688.84	2.55	2.48	31.16	22.06	252.35	369.95	4.21	2.97	4.51	4.51
Custer County	C19	RM 166.52	12319	100-yr	2721.2	693.27	688.64	2.18	2.14	22.23	19.03	278.87	332.03	4.47	3.82	4.63	4.63
Custer County	C19	RM 166.31	11978	100-yr	2721.2	693	688.02	2.46	2.31	27.7	18.19	249.27	407.63	4.41	2.89	4.98	4.98
Custer County	C20	RM 166.2	11806	100-yr	2729.7	692.86	687.4	2.56	2.38	30.39	19.52	229.93	390.7	4.6	2.94	5.46	5.46
Custer County	C20	RM 166.06	11569	100-yr	2729.7	692.63	687.38	2.73	2.57	35.75	23.45	239.53	393.05	4.14	2.7	5.25	5.25
Custer County	C20	RM 165.92	11350	100-yr	2729.7	692.37	687.38	2.89	2.69	40.34	24.46	229.9	413.71	4.07	2.45	4.99	4.99
Custer County	C20	RM 165.73	11039	100-yr	2729.7	692.2	687.26	2.43	2.36	28.31	21.63	264.5	359.25	4.22	3.22	4.94	4.94
Custer County	C20	RM 165.55	10750	100-yr	2729.7	692.01	687.11	2.39	2.33	27.55	22.1	273.5	351.77	4.15	3.33	4.9	4.9
Custer County	C20	RM 165.35	10440	100-yr	2729.7	691.8	686.75	2.36	2.28	26.76	22.09	279.36	354.48	4.09	3.38	5.05	5.05
Custer County	C20	RM 165.17	10140	100-yr	2729.7	691.62	686.41	2.37	2.2	26.2	17.37	247.1	418.14	4.5	2.97	5.21	5.21
Custer County	C20	RM 165.01	9883	100-yr	2729.7	691.45	686.16	2.37	2.26	26.47	21.21	262.27	361.42	4.35	3.48	5.29	5.29
Custer County	C20	RM 164.81	9577	100-yr	2729.7	691.29	686.04	2.24	2.07	24.03	15.98	284.5	475.57	4.2	2.78	5.25	5.25
Custer County	C20	RM 164.61	9252	100-yr	2729.7	691.18	685.8	1.88	1.68	15.98	11.9	374.23	584.51	3.75	2.78	5.37	5.37
Custer County	C20	RM 164.42	8945	100-yr	2729.7	691.03	685.78	1.89	1.88	15.84	15.39	416.56	439.07	3.47	3.38	5.25	5.25
Custer County	C20	RM 164.23	8641	100-yr	2729.7	690.91	685.85	1.7	1.7	16.76	16.55	452.11	471.76	3.55	3.51	5.06	5.06
Custer County	C20	RM 164.06	8372	100-yr	2729.7	690.78	685.64	1.85	1.69	15.5	12.06	294.56	443.89	4.91	3.82	5.14	5.14
Custer County	C20	RM 163.85	8031	100-yr	2729.7	690.61	685	2.04	2.04	19.12	18.79	277.99	282.91	4.8	4.73	5.61	5.61
Custer County	C20	RM 163.67	7743	100-yr	2729.7	690.35	684.45	2.53	2.51	27.78	26.89	191.84	199.09	5.63	5.46	5.9	5.9
Custer County	C20	RM 163.48	7449	100-yr	2729.7	690.01	684.13	3.03	3	40.21	37.47	162.29	176.07	5.53	5.16	5.88	5.88
Custer County	C20	RM 163.3	7150	100-yr	2729.7	689.93	684.13	2.5	2.43	27.8	24.26	204.93	243.12	5.29	4.61	5.8	5.8
Custer County	C20	RM 163.12	6859	100-yr	2729.7	689.87	683.91	2.04	1.93	19.29	16.31	267.05	340.62	4.91	4.15	5.96	5.96
Custer County	C20	RM 162.94	6583	100-yr	2729.7	689.65	683.78	2.44	2.21	26.37	18.15	204.74	338.94	5.33	3.64	5.86	5.86
Custer County	C20	RM 162.74	6254	100-yr	2729.7	689.21	683.77	3.11	2.83	44.42	26.53	177.33	337.82	4.84	2.86	5.44	5.44
Custer County	C20	RM 162.55	5957	100-yr	2729.7	688.99	683.96	2.77	2.74	39.58	36.14	231.24	257.13	4.25	3.88	5.03	5.03
Custer County	C20	RM 162.34	5620	100-yr	2729.7	688.89	683.92	2.08	2.02	20.52	17	304.55	381.65	4.28	3.54	4.97	4.97
Custer County	C20	RM 162.18	5352	100-yr	2729.7	688.77	683.41	1.86	1.85	26.59	25.12	354.23	377.45	4.13	3.9	5.35	5.35
Custer County	C20	RM 162.03	5111	100-yr	2729.7	688.67	683.26	1.78	1.78	14.78	14.51	322.26	347.53	4.76	4.68	5.41	5.41
Custer County	C20	RM 161.81	4770	100-yr	2729.7	688.15	682.63	3.07	2.96	42.32	33.2	174.77	232.25	5.07	3.97	5.52	5.52
Custer County	C20	RM 161.62	4470	100-yr	2729.7	687.88	682.53	3.12	2.74	44.58	33.99	174.2	366.71	4.8	3.64	5.35	5.35
Custer County	C20	RM 161.43	4159	100-yr	2729.7	687.65	682.63	2.82	2.69	36.97	27.91	206.33	291.41	4.64	3.49	5.02	5.02
Custer County	C20	RM 161.24	3859	100-yr	2729.7	687.35	682.51	2.97	2.73	41.19	29.09	199.39	315.91	4.5	3.17	4.84	4.84
Custer County	C20	RM 161.06	3559	100-yr	2729.7	687.14	682.38	2.71	2.51	34.33	24.76	218.97	333.61	4.53	3.26	4.76	4.76
Custer County	C20	RM 160.87	3258	100-yr	2729.7	686.75	682.24	3.08	2.96	45.09	35.18	204.8	276.59	4.29	3.33	4.5	4.5

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	100-yr	2729.7	686.59	682.11	2.5	2.46	29.54	26.65	252.16	284.11	4.32	3.9	4.48	4.48
Custer County	C20	RM 160.5	2662	100-yr	2729.7	686.41	681.85	2.34	2.32	27.14	24.66	303.22	337.56	3.83	3.48	4.56	4.56
Custer County	C20	RM 160.31	2364	100-yr	2729.7	686.23	681.58	2.19	2.12	23.73	20.76	321.4	392.31	3.83	3.35	4.65	4.65
Custer County	C20	RM 160.12	2063	100-yr	2729.7	686.05	681.02	2.22	2.13	23.3	20.23	277.19	343.91	4.35	3.78	5.03	5.03
Custer County	C20	RM 159.93	1758	100-yr	2729.7	685.77	680.9	2.5	2.42	31.08	26.63	292.2	386.27	3.7	3.17	4.87	4.87
Custer County	C20	RM 159.75	1459	100-yr	2729.7	685.53	680.88	2.52	2.47	30.19	25.45	251.96	329.26	4.28	3.6	4.65	4.65
Custer County	C20	RM 159.55	1151	100-yr	2729.7	685.33	680.74	2.4	2.37	27.27	25.3	261.92	309.67	4.33	4.01	4.59	4.59
Custer County	C20	RM 159.38	876	100-yr	2729.7	685.09	680.37	2.61	2.43	31.64	23.29	229.23	338.22	4.51	3.33	4.72	4.72
Custer County	C20	RM 159.19	566	100-yr	2729.7	684.9	679.77	2.48	2.48	29.14	28.33	236.5	243.89	4.64	4.52	5.13	5.13
Custer County	C20	RM 158.98	229	100-yr	2729.7	684.62	679.44	2.67	2.62	32.81	30.12	217.29	242.8	4.68	4.3	5.18	5.18

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	100-yr	2741.1	684.62	679.22	2.62	2.53	31.37	26.69	214.16	263.37	4.84	4.12	5.4	5.4
Prairie County	C21	RM 158.55	61087	100-yr	2741.1	684.5	678.98	2.31	2.3	23.83	23.11	226.29	274.17	5.23	5.08	5.52	5.52
Prairie County	C21	RM 158.36	60787	100-yr	2741.1	684.37	678.83	2.22	2.21	22.37	21.07	249.45	296.07	4.94	4.65	5.54	5.54
Prairie County	C21	RM 158.17	60481	100-yr	2741.1	684.21	678.35	2.27	2.2	25.86	20.9	253.18	395.11	4.73	3.82	5.86	5.86
Prairie County	C21	RM 157.98	60173	100-yr	2741.1	683.89	678.22	2.68	2.57	33.95	26.2	231.17	316.5	4.37	3.37	5.67	5.67
Prairie County	C21	RM 157.78	59862	100-yr	2741.1	683.64	678.23	2.74	2.5	34.45	22.7	201.99	347.67	4.8	3.15	5.41	5.41
Prairie County	C21	RM 157.6	59561	100-yr	2741.1	683.53	678.14	2.31	2.2	24.12	19.36	233.85	311.06	5	4.01	5.39	5.39
Prairie County	C21	RM 157.38	59209	100-yr	2741.1	683.39	677.81	2.09	1.93	20.72	15.95	288.08	436.76	4.32	3.32	5.58	5.58
Prairie County	C21	RM 157.18	58885	100-yr	2741.1	683.25	677.42	2.11	1.76	20.16	12.82	235.66	515.42	5	3.16	5.83	5.83
Prairie County	C21	RM 156.99	58595	100-yr	2741.1	682.99	677.32	2.65	2.04	31.6	18.47	173.83	454.4	5.1	2.95	5.67	5.67
Prairie County	C21	RM 156.8	58287	100-yr	2741.1	682.54	677.32	3.35	2.6	51.75	32.68	149.83	358.06	4.71	2.94	5.22	5.22
Prairie County	C21	RM 156.62	57990	100-yr	2741.1	682.46	677.29	2.47	2.31	28.13	21.77	207.6	322.05	4.77	3.68	5.17	5.17
Prairie County	C21	RM 156.42	57683	100-yr	2741.1	682.34	677.21	2.13	2.02	21.01	17.63	271.12	346.37	4.68	3.92	5.13	5.13
Prairie County	C21	RM 156.24	57378	100-yr	2741.1	682.05	676.91	2.56	2.41	31.09	23.83	245.34	345.85	4.31	3.29	5.14	5.14
Prairie County	C21	RM 156.04	57069	100-yr	2741.1	681.89	676.56	2.37	2.19	25.34	16.1	226.07	391.93	5.04	3.19	5.33	5.33
Prairie County	C21	RM 155.85	56762	100-yr	2741.1	681.62	676.11	2.7	2.44	33.18	20.99	204.32	366.43	4.88	3.07	5.51	5.51
Prairie County	C21	RM 155.66	56455	100-yr	2741.1	681.19	675.96	3.22	2.8	47.93	29.89	177.2	340.04	4.66	2.88	5.23	5.23
Prairie County	C21	RM 155.47	56151	100-yr	2741.1	681.09	675.89	2.43	2.23	28.19	20.2	257.44	402.5	4.28	3.05	5.2	5.2
Prairie County	C21	RM 155.27	55835	100-yr	2741.1	680.9	675.92	2.25	2.23	25.02	22.32	317.77	360.91	3.83	3.41	4.98	4.98
Prairie County	C21	RM 155.08	55530	100-yr	2741.1	680.67	675.95	2.34	2.3	26.64	23.55	296.49	341.25	3.95	3.49	4.72	4.72
Prairie County	C21	RM 154.88	55209	100-yr	2741.1	680.48	675.64	2.23	2.22	23.64	23.06	300.68	308.52	4.09	4	4.84	4.84
Prairie County	C21	RM 154.69	54901	100-yr	2741.1	680.17	675.39	2.59	2.55	32.71	30.1	264.93	321.49	3.97	3.66	4.78	4.78
Prairie County	C21	RM 154.5	54588	100-yr	2741.1	679.92	675.02	2.55	2.51	31.11	29.35	257.32	286.36	4.17	3.94	4.9	4.9
Prairie County	C21	RM 154.3	54273	100-yr	2741.1	679.73	674.8	2.38	2.36	27.12	24.94	277.5	304.1	4.15	3.82	4.93	4.93
Prairie County	C21	RM 154.1	53959	100-yr	2741.1	679.48	674.67	2.48	2.42	29.6	25.87	269.5	317.24	4.08	3.57	4.81	4.81
Prairie County	C21	RM 153.91	53650	100-yr	2741.1	679.3	674.51	2.32	2.28	25.04	22.46	260.55	295.85	4.52	4.06	4.79	4.79
Prairie County	C21	RM 153.72	53338	100-yr	2741.1	679.08	674.06	2.5	2.28	28.7	20.4	225.99	370.01	4.71	3.34	5.02	5.02
Prairie County	C21	RM 153.52	53023	100-yr	2741.1	678.7	673.78	2.96	2.67	41.98	31.48	206.24	327.08	4.2	3.14	4.92	4.92
Prairie County	C21	RM 153.32	52704	100-yr	2741.1	678.43	673.64	2.68	2.64	34.65	30.84	249.02	323.16	4.09	3.64	4.79	4.79
Prairie County	C21	RM 153.12	52380	100-yr	2741.1	678.28	673.43	2.28	2.22	24.36	20.42	270.43	403.61	4.43	3.71	4.85	4.85
Prairie County	C21	RM 152.92	52065	100-yr	2741.1	678.11	672.88	2.24	2.19	23.37	19.29	270.87	426.49	4.5	3.7	5.23	5.23
Prairie County	C21	RM 152.73	51762	100-yr	2741.1	677.95	672.27	2.25	2.18	23.71	20.69	271.58	364.55	4.46	3.89	5.68	5.68
Prairie County	C21	RM 152.54	51463	100-yr	2741.1	677.76	671.85	2.33	2.32	25.26	24.82	251.98	294.52	4.68	4.6	5.91	5.91
Prairie County	C21	RM 152.35	51157	100-yr	2741.1	677.62	671.41	2.26	2.25	22.79	21.55	229.76	245.12	5.27	4.98	6.21	6.21
Prairie County	C21	RM 152.16	50852	100-yr	2741.1	677.5	671.23	2.12	2.05	20.64	18.12	268.26	318.26	4.78	4.19	6.27	6.27
Prairie County	C21	RM 151.97	50546	100-yr	2741.1	677.4	670.99	1.99	1.83	16.73	14.02	284.09	390.15	4.59	3.84	6.41	6.41
Prairie County	C21	RM 151.77	50227	100-yr	2741.1	677.31	670.87	1.98	1.7	16.85	11.52	204.89	403.67	5.87	3.98	6.44	6.44
Prairie County	C21	RM 151.59	49936	100-yr	2741.1	677	670.75	2.79	2.36	34.13	21.05	152.18	341.76	5.58	3.4	6.25	6.25
Prairie County	C21	RM 151.38	49599	100-yr	2741.1	676.86	670.9	2.41	2.14	25.38	17.06	199.41	349.02	5.49	3.67	5.96	5.96
Prairie County	C21	RM 151.19	49287	100-yr	2741.1	676.76	670.96	2.19	2.11	21.06	15.96	226.6	313.61	5.48	4.15	5.8	5.8
Prairie County	C21	RM 151.01	49012	100-yr	2741.1	676.68	670.91	1.96	1.92	18.8	16.33	288.76	342.81	4.81	4.17	5.77	5.77
Prairie County	C21	RM 150.81	48683	100-yr	2741.1	676.62	670.79	1.57	1.56	11.04	10.35	428.92	460.83	4.07	3.82	5.83	5.83
Prairie County	C21	RM 150.63	48400	100-yr	3366.9	676.49	670.45	1.78	1.73	14.15	10.9	405.47	597.4	4.6	3.53	6.04	6.04
Prairie County	C21	RM 150.44	48094	100-yr	3366.9	676.28	669.86	2.27	2.13	23.39	16.37	273.64	465.42	5.23	3.66	6.42	6.42
Prairie County	C21	RM 150.25	47780	100-yr	3366.9	675.67	669.38	3.51	3.29	62.16	47.8	166.06	254.56	5.63	4.32	6.29	6.29
Prairie County	C21	RM 150.05	47474	100-yr	3366.9	675.57	669.21	2.81	2.76	33.89	30.49	204.16	231.15	5.85	5.27	6.36	6.36
Prairie County	C21	RM 149.87	47178	100-yr	3366.9	675.45	669.02	2.49	2.39	28.23	24.28	269.57	330.94	4.96	4.25	6.43	6.43
Prairie County	C21	RM 149.66	46846	100-yr	3366.9	675.34	668.97	2.12	2.03	20.01	17.22	331.18	407.36	4.75	4.07	6.37	6.37
Prairie County	C21	RM 149.48	46551	100-yr	3366.9	675.02	668.91	2.71	2.44	34.13	23.09	261.52	688.47	4.63	3.12	6.11	6.11
Prairie County	C21	RM 149.27	46219	100-yr	3366.9	674.86	668.94	2.54	2.02	29.23	18.17	208.49	660.3	5.06	3.12	5.92	5.92
Prairie County	D1	RM 149.08	45914	100-yr	3366.9	674.64	668.95	2.52	2.28	28.42	19.09	254.75	532.06	5.09	3.41	5.69	5.69
Prairie County	D1	RM 148.89	45608	100-yr	3369.7	674.56	668.96	2.1	2.09	19.77	19.23	314.73	424.22	5.09	4.96	5.6	5.6
Prairie County	D1	RM 148.7	45301	100-yr	3369.7	674.42	668.73	2.09	2.05	21.04	19.78	347.94	378.48	4.61	4.33	5.69	5.69
Prairie County	D1	RM 148.5	44987	100-yr	3369.7	674.16	668.42	2.55	2.27	28.67	22.62	235.13	353.74	5.34	4.21	5.74	5.74
Prairie County	D1	RM 148.3	44667	100-yr	3369.7	673.8	668.01	3.06	2.69	41.3	30.42	193.35	314.66	5.41	3.98	5.79	5.79
Prairie County	D1	RM 148.11	44353	100-yr	3369.7	673.65	667.73	2.67	2.52	31.49	27.04	230.09	305.53	5.36	4.61	5.92	5.92
Prairie County	D1	RM 147.93	44062	100-yr	3369.7	673.55	667.4	2.28	2.26	23.75	22.65	306.12	324.97	4.82	4.6	6.15	6.15
Prairie County	D1	RM 147.74	43761	100-yr	3369.7	673.44	667.21	2.19	2.01	22.56	18.25	251.8	403.32	5.14	4.15	6.23	6.23
Prairie County	D1	RM 147.55	43454	100-yr	3369.7	673.24	666.79	2.51	2.17	27.34	15.73	197.43	483.68	5.64	3.21	6.45	6.45
Prairie County	D1	RM 147.34	43128	100-yr	3369.7	673.04	666.46	2.7	2.29	31.5	17.88	173.86	450.55	5.84	3.26	6.58	6.58

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	100-yr	3369.7	672.85	666.42	2.75	2.42	33.16	24.53	178.57	342.16	5.55	4.08	6.43	6.43
Prairie County	D1	RM 146.96	42505	100-yr	3369.7	672.5	666.49	3.08	2.94	40.96	35.15	187.33	256.61	5.73	4.92	6.01	6.01
Prairie County	D1	RM 146.77	42199	100-yr	3369.7	672.38	666.48	2.67	2.66	31.18	28.34	225.21	248.62	5.59	5.09	5.9	5.9
Prairie County	D1	RM 146.58	41899	100-yr	3369.7	672.32	666.59	2.15	2.14	20.52	19.94	296.32	305.99	5.29	5.14	5.73	5.73
Prairie County	D1	RM 146.32	41487	100-yr	3369.7	672.1	666.62	2.28	2.24	24.46	21.52	325.06	379.42	4.52	3.97	5.48	5.48
Prairie County	D1	RM 146	40968	100-yr	3369.7	671.75	666.48	2.46	2.41	28.68	24.61	277.27	330.06	4.93	4.23	5.27	5.27
Prairie County	D1	RM 145.65	40420	100-yr	3369.7	671.37	665.52	2.61	2.54	32.26	26.61	247.14	310.33	5.18	4.27	5.85	5.85
Prairie County	D1	RM 145.36	39958	100-yr	3369.7	671.12	664.91	2.44	2.36	28.38	24.87	264.9	392.01	5.16	4.52	6.21	6.21
Prairie County	D1	RM 145.13	39579	100-yr	3369.7	670.95	664.58	2.32	2.24	24.92	18.01	266.31	384.43	5.43	3.91	6.37	6.37
Prairie County	D1	RM 144.92	39251	100-yr	3369.7	670.8	664.24	2.28	2.21	25.15	19.22	272.39	372.32	5.38	4.1	6.56	6.56
Prairie County	D1	RM 144.73	38942	100-yr	3369.7	670.62	663.99	2.38	2.26	27.09	21.12	264.25	364.58	5.26	4.09	6.63	6.63
Prairie County	D1	RM 144.56	38672	100-yr	3369.7	670.43	663.14	2.49	2.41	27.94	25.17	265.15	309.4	5.02	4.53	7.29	7.29
Prairie County	D1		38642.5	100-yr	Bridge												
Prairie County	D1	RM 144.52	38613	100-yr	3369.7	670.35	663.14	2.54	2.45	29.2	25.77	265.15	340.86	4.94	4.36	7.21	7.21
Prairie County	D1	RM 144.33	38305	100-yr	3369.7	670.16	664.19	2.59	2.4	29.4	22.37	232.15	340.32	5.44	4.13	5.97	5.97
Prairie County	D1	RM 144.13	37987	100-yr	3369.7	670.06	664.33	2.24	2.14	21.9	17.8	271.37	353.32	5.48	4.46	5.73	5.73
Prairie County	D1	RM 143.91	37637	100-yr	3369.7	669.98	663.96	1.99	1.78	17.43	12.96	299.48	476.68	5.34	3.96	6.02	6.02
Prairie County	D1	RM 143.71	37320	100-yr	3369.7	669.59	663.43	2.92	2.56	36.81	22.8	191.55	373.58	5.74	3.53	6.16	6.16
Prairie County	D1	RM 143.45	36908	100-yr	3369.7	669.11	663.01	3.35	3.1	49.24	35.16	179.26	279.37	5.47	3.89	6.1	6.1
Prairie County	D1	RM 143.21	36511	100-yr	3369.7	668.97	662.92	2.65	2.6	30.61	27.14	224.58	260.38	5.63	4.99	6.05	6.05
Prairie County	D1	RM 142.97	36139	100-yr	3369.7	668.8	662.7	2.52	2.47	27.4	24.64	232.06	263.85	5.74	5.16	6.1	6.1
Prairie County	D1	RM 142.71	35717	100-yr	3369.7	668.24	662.52	3.35	3.32	49.91	42.02	192.11	230.8	5.24	4.4	5.72	5.72
Prairie County	D1	RM 142.46	35322	100-yr	3369.7	668.15	662.36	2.48	2.38	27.22	21.97	254.79	332.3	5.29	4.27	5.79	5.79
Prairie County	D1	RM 142.23	34952	100-yr	3369.7	667.9	662.21	2.62	2.46	30.3	21.46	237.35	361.93	5.36	3.78	5.69	5.69
Prairie County	D1	RM 142.02	34614	100-yr	3369.7	667.74	662.21	2.45	2.27	27.71	22.79	269.68	386.33	4.68	3.85	5.53	5.53
Prairie County	D1	RM 141.8	34258	100-yr	3369.7	667.67	662.01	1.8	1.79	14.74	14.38	393.92	405.94	4.75	4.64	5.66	5.66
Prairie County	D1	RM 141.6	33942	100-yr	3369.7	667.48	661.72	2.11	2.11	16.34	16.16	467.92	474.17	3.4	3.37	5.76	5.76
Prairie County	D1	RM 141.42	33642	100-yr	3369.7	667.43	661.32	1.67	1.66	11.13	10.48	499.33	533.64	4.03	3.8	6.11	6.11
Prairie County	D1	RM 141.22	33325	100-yr	3369.7	667.29	660.91	1.9	1.89	15.9	14.88	326.47	396.4	5.42	5.09	6.38	6.38
Prairie County	D1	RM 141.02	33011	100-yr	3369.7	666.9	660.58	2.87	2.75	35.08	24.07	194.42	298.84	6	4.1	6.32	6.32
Prairie County	D1	RM 140.84	32709	100-yr	3369.7	666.82	660.35	2.45	2.41	25.94	23.19	241.98	275.89	5.68	5.07	6.47	6.47
Prairie County	D1	RM 140.64	32394	100-yr	3369.7	666.72	660.07	2.27	2.23	21.71	20.2	239.5	261.65	6.19	5.76	6.65	6.65
Prairie County	D1	RM 140.44	32074	100-yr	3369.7	666.5	659.63	2.57	2.52	28.57	25.75	225.88	256.38	5.78	5.22	6.87	6.87
Prairie County	D1	RM 140.23	31738	100-yr	3369.7	666.19	659.62	2.94	2.88	37.93	32.21	207.01	249.43	5.52	4.69	6.57	6.57
Prairie County	D1	RM 140.03	31420	100-yr	3369.7	666.12	659.59	2.37	2.33	24.38	20.27	253.77	310.75	5.6	4.66	6.53	6.53
Prairie County	D1	RM 139.84	31118	100-yr	3369.7	666.04	659.19	2.06	1.99	18.95	15.92	309.19	391.69	5.24	4.41	6.85	6.85
Prairie County	D1	RM 139.64	30801	100-yr	3369.7	665.88	658.96	2.29	2.01	21.82	14.47	222.13	400.28	6.34	4.19	6.92	6.92
Prairie County	D1	RM 139.44	30466	100-yr	3369.7	665.77	658.72	2.2	2	20.59	14.64	250.57	401.31	5.93	4.21	7.05	7.05
Prairie County	D1	RM 139.23	30138	100-yr	3369.7	665.59	658.34	2.37	2.34	26.83	23.65	219.78	252.74	6.47	5.7	7.25	7.25
Prairie County	D1	RM 139.02	29799	100-yr	3369.7	665.21	658.14	3.02	2.9	46.75	36.88	179.74	241.25	6.13	4.82	7.07	7.07
Prairie County	D1	RM 138.81	29470	100-yr	3369.7	665.17	658.11	2.26	2.19	24.19	20.89	219.94	265.25	6.72	5.79	7.06	7.06
Prairie County	D1	RM 138.62	29157	100-yr	3369.7	665.03	657.94	2.37	2.27	23.5	20.7	216.79	260.61	6.47	5.7	7.09	7.09
Prairie County	D1	RM 138.41	28823	100-yr	3369.7	664.8	657.82	2.66	2.55	32.7	29.17	202.45	238.89	6.19	5.52	6.98	6.98
Prairie County	D1	RM 138.22	28519	100-yr	3369.7	664.63	657.8	2.68	2.6	30.47	26.66	198.68	235.66	6.27	5.51	6.83	6.83
Prairie County	D1	RM 138.02	28200	100-yr	3369.7	664.62	657.74	2.04	2.01	18.47	17.09	246.99	272.58	6.65	6.16	6.88	6.88
Prairie County	D1	RM 137.82	27874	100-yr	3369.7	664.5	656.95	2.11	2.03	20.25	16.46	263.32	341.09	6.01	4.88	7.55	7.55
Prairie County	D1	RM 137.62	27552	100-yr	3369.7	664.31	656.75	2.38	2.31	26.55	23.23	234.81	493.5	5.96	5.21	7.56	7.56
Prairie County	D1	RM 137.42	27247	100-yr	3369.7	664.07	656.66	2.67	2.62	32.86	27.94	204.7	295.15	6.15	5.24	7.41	7.41
Prairie County	D1	RM 137.24	26944	100-yr	3369.7	663.92	656.66	2.61	2.53	32.31	26.45	205.46	337.09	6.24	5.1	7.26	7.26
Prairie County	D1	RM 137.04	26627	100-yr	3392.4	663.75	655.41	2.6	2.58	31.58	30.09	208.71	220.8	6.23	5.96	8.34	8.34
Prairie County	D1		26616.5	100-yr	Bridge												
Prairie County	D1	RM 137.02	26606	100-yr	3392.4	663.71	655.41	2.62	2.59	32.02	30.51	208.58	220.61	6.2	5.93	8.3	8.3
Prairie County	D2	RM 136.84	26475	100-yr	3392.4	663.67	656.46	2.47	2.46	27.03	25.59	207.19	219.86	6.62	6.27	7.21	7.21
Prairie County	D2		26471.5	100-yr	Bridge												
Prairie County	D2	RM 136.65	26468	100-yr	3392.4	663.64	656.45	2.47	2.44	27.35	25.51	207.2	224.41	6.62	6.19	7.19	7.19
Prairie County	D2	RM 136.44	26317	100-yr	3392.4	663.61	656.37	2.22	2.18	22.63	19.68	228.7	268.9	6.65	5.78	7.24	7.24
Prairie County	D2	RM 136.23	26001	100-yr	3392.4	663.46	656.19	2.33	2.25	24.5	20.31	246.47	310.99	5.87	4.86	7.27	7.27
Prairie County	D2	RM 136.04	25673	100-yr	3392.4	663.29	656.01	2.47	2.37	24.98	18.03	211.82	377.69	6.45	4.63	7.28	7.28
Prairie County	D2	RM 135.85	25337	100-yr	3392.4	663.01	655.93	2.87	2.86	34.53	33.03	186.08	292.4	6.34	6.09	7.08	7.08
Prairie County	D2	RM 135.66	25033	100-yr	3392.4	662.89	655.91	2.65	2.62	29.45	26.86	202.14	300.45	6.32	5.76	6.98	6.98

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	100-yr	3392.4	662.72	655.86	2.66	2.56	35.62	27.54	199.11	269.77	6.36	4.91	6.86	6.86
Prairie County	D2	RM 135.24	24417	100-yr	3392.4	662.66	655.68	2.23	2.19	24.35	22.13	229.44	256.73	6.62	6.02	6.98	6.98
Prairie County	D2	RM 135	24090	100-yr	3392.4	662.5	655.56	2.31	2.26	25.37	21.78	246.98	298	5.89	5.05	6.94	6.94
Prairie County	D2	RM 134.78	23742	100-yr	3392.4	662.34	655.36	2.35	2.24	26.15	18.06	223.84	345.89	6.37	4.38	6.98	6.98
Prairie County	D2	RM 134.58	23351	100-yr	3392.4	661.99	655.29	2.85	2.74	40.99	28.74	189.75	285.91	6.22	4.34	6.7	6.7
Prairie County	D2	RM 134.39	23000	100-yr	3392.4	661.79	655.24	2.68	2.59	36.23	32.41	216.99	253.33	5.78	5.16	6.55	6.55
Prairie County	D2	RM 134.19	22682	100-yr	3392.4	661.68	655.11	2.34	2.21	24.12	21.35	263.97	584.72	5.38	4.76	6.57	6.57
Prairie County	D2	RM 133.99	22372	100-yr	3392.4	661.55	654.97	2.28	2.19	22.56	19.44	264.94	323.96	5.57	4.79	6.58	6.58
Prairie County	D2	RM 133.79	22053	100-yr	3392.4	661.32	655	2.6	2.4	29.3	22.69	226.1	323.56	5.65	4.36	6.32	6.32
Prairie County	D2	RM 133.59	21733	100-yr	3392.4	661.17	654.96	2.47	2.39	26.54	21.79	247	313	5.54	4.54	6.21	6.21
Prairie County	D2	RM 133.41	21417	100-yr	3392.4	661.06	654.78	2.3	2.19	22.93	17.76	254.87	350.37	5.72	4.42	6.28	6.28
Prairie County	D2	RM 133.21	21104	100-yr	3392.4	660.85	654.64	2.53	2.33	27.65	17.24	229.84	408.98	5.74	3.56	6.21	6.21
Prairie County	D2	RM 133.02	20811	100-yr	3392.4	660.73	654.53	2.42	2.24	25.38	16.35	246.2	420.04	5.62	3.61	6.2	6.2
Prairie County	D2	RM 132.83	20491	100-yr	3392.4	660.6	654.29	2.33	2.16	23.89	18.04	262.67	387.45	5.38	4.05	6.31	6.31
Prairie County	D2	RM 132.63	20184	100-yr	3392.4	660.5	654.04	2.22	2	21.56	16.54	254.86	410.95	5.44	4.16	6.46	6.46
Prairie County	D2	RM 132.42	19875	100-yr	3392.4	660.29	653.98	2.47	2.23	26.06	17.27	221.68	393.58	5.85	3.86	6.31	6.31
Prairie County	D2	RM 132.23	19553	100-yr	3392.4	660.22	653.88	2.11	1.93	18.9	14.66	257.21	381.4	5.95	4.61	6.34	6.34
Prairie County	D2	RM 132.02	19225	100-yr	3392.4	659.99	653.63	2.47	2.32	26.64	22.02	246.63	322.58	5.5	4.53	6.36	6.36
Prairie County	D2	RM 131.81	18910	100-yr	3392.4	659.78	653.37	2.64	2.46	30.44	21.9	226.33	344.74	5.58	4.01	6.41	6.41
Prairie County	D2	RM 131.58	18573	100-yr	3392.4	659.68	653.02	2.29	2.18	22.1	18.59	238.03	391.08	6.17	5.19	6.66	6.66
Prairie County	D2	RM 131.38	18237	100-yr	3392.4	659.53	652.75	2.43	2.28	24.78	21.57	212.37	274.91	6.2	5.4	6.78	6.78
Prairie County	D2	RM 131.18	17875	100-yr	3392.4	659.24	652.49	2.76	2.64	32.64	24.19	209.79	297.97	5.83	4.3	6.75	6.75
Prairie County	D2	RM 130.98	17548	100-yr	3392.4	659.04	652.34	2.82	2.66	33.9	21.94	197.09	329.41	6.02	3.87	6.7	6.7
Prairie County	D2	RM 130.78	17227	100-yr	3392.4	658.93	652.27	2.53	2.31	27.23	19.73	216.24	353.67	6.05	4.36	6.66	6.66
Prairie County	D2	RM 130.59	16914	100-yr	3392.4	658.86	652.16	2.22	2.1	20.55	16	239.07	358.33	6.31	4.9	6.69	6.69
Prairie County	D2	RM 130.39	16588	100-yr	3392.4	658.63	651.95	2.57	2.56	27.83	26.27	212.42	293.75	6.21	5.88	6.68	6.68
Prairie County	D2	RM 130.19	16280	100-yr	3392.4	658.46	651.81	2.64	2.63	29.93	28.89	219.93	254.52	5.84	5.65	6.65	6.65
Prairie County	D2	RM 130	15965	100-yr	3392.4	658.36	651.57	2.34	2.33	23.47	20.18	244.4	313.52	5.92	5.08	6.79	6.79
Prairie County	D2	RM 129.81	15649	100-yr	3392.4	658.25	651.47	2.29	2.24	21.92	19.78	235.14	293.04	6.28	5.67	6.78	6.78
Prairie County	D2	RM 129.62	15337	100-yr	3392.4	658.07	651.34	2.52	2.28	26.87	19.6	216.64	338.55	6.04	4.39	6.73	6.73
Prairie County	D2	RM 129.43	15031	100-yr	3392.4	657.95	651.21	2.41	2.35	24.37	21.56	227.37	264.8	6.17	5.46	6.74	6.74
Prairie County	D2	RM 129.24	14724	100-yr	3471.6	657.73	651.06	2.68	2.61	30.84	26.22	222.31	347.64	5.8	4.93	6.67	6.67
Prairie County	D2	RM 129.04	14417	100-yr	3471.6	657.5	651.06	2.85	2.77	34.88	29.83	209.54	391.59	5.79	4.96	6.44	6.44
Prairie County	D2	RM 128.82	14112	100-yr	3471.6	657.3	651.05	2.87	2.82	35.64	31.74	209.12	399.44	5.76	5.14	6.25	6.25
Prairie County	D2	RM 128.62	13798	100-yr	3471.6	657.17	651.08	2.6	2.58	29.01	27.61	228.13	406.33	5.85	5.58	6.09	6.09
Prairie County	D2	RM 128.41	13446	100-yr	3471.6	657.03	651.07	2.42	2.33	25.39	19.69	255.09	345.01	5.59	4.33	5.96	5.96
Prairie County	D2	RM 128.21	13125	100-yr	3471.6	656.88	650.98	2.44	2.25	25.93	20.18	246.55	354.66	5.61	4.35	5.9	5.9
Prairie County	D2	RM 127.98	12790	100-yr	3471.6	656.72	650.84	2.42	2.27	25.33	16.03	250.67	429.32	5.66	3.57	5.88	5.88
Prairie County	D2	RM 127.75	12473	100-yr	3471.6	656.62	650.59	2.18	2.09	20.77	13.92	287.96	452.83	5.5	3.67	6.03	6.03
Prairie County	D2	RM 127.55	12112	100-yr	3471.6	656.49	650.35	2.16	2.06	20.32	14.96	287.38	416.16	5.53	4.06	6.14	6.14
Prairie County	D2	RM 127.27	11729	100-yr	3471.6	656.33	649.95	2.2	2.12	20.87	16.41	277.2	367.69	5.66	4.45	6.38	6.38
Prairie County	D2	RM 126.97	11415	100-yr	3471.6	656.07	649.68	2.63	2.51	29.79	18.83	226.77	380.58	5.78	3.63	6.39	6.39
Prairie County	D2	RM 126.71	10962	100-yr	3471.6	655.83	649.49	2.64	2.54	29.76	19.84	218.29	343.78	5.98	3.98	6.34	6.34
Prairie County	D2	RM 126.43	10478	100-yr	3471.6	655.72	649.32	2.13	2.09	19.34	17.1	275.96	317.89	5.89	5.22	6.4	6.4
Prairie County	D2	RM 126.42	10074	100-yr	3471.6	655.47	649.05	2.47	2.38	26.59	22.01	249.83	316.76	5.56	4.6	6.42	6.42
Prairie County	D2	RM 126.41	9625	100-yr	3471.6	655.2	648.27	2.61	2.46	29.01	22.88	220.07	302.84	5.92	4.67	6.93	6.93
Prairie County	D2		9598.5	100-yr	Bridge												
Prairie County	D2	RM 126.4	9572	100-yr	3471.6	655.14	648.27	2.64	2.49	29.79	23.46	220.07	302.51	5.86	4.61	6.87	6.87
Prairie County	D3	RM 126.38	9533	100-yr	3471.6	655.12	648.27	2.65	2.5	30.11	23.69	220.07	302.38	5.83	4.59	6.84	6.84
Prairie County	D3		9523	100-yr	Bridge												
Prairie County	D3	RM 126.36	9513	100-yr	3471.6	655.09	648.27	2.67	2.52	30.48	23.96	220.07	302.22	5.8	4.57	6.82	6.82
Prairie County	D3	RM 126.22	9286	100-yr	3471.6	655.01	648.8	2.42	2.36	25.07	18.52	246.62	343.98	5.81	4.28	6.21	6.21
Prairie County	D3	RM 126.03	8974	100-yr	3471.6	654.9	648.71	2.25	2.17	21.97	15.57	269.32	398.64	5.69	4.02	6.19	6.19
Prairie County	D3	RM 125.82	8648	100-yr	3471.6	654.77	648.36	2.24	2.17	22.1	17	282.4	381.64	5.45	4.18	6.41	6.41
Prairie County	D3	RM 125.63	8335	100-yr	3471.6	654.65	648.12	2.25	2.2	21.6	20.05	259.94	287.4	5.9	5.49	6.53	6.53
Prairie County	D3	RM 125.43	8020	100-yr	3471.6	654.45	647.8	2.51	2.27	26.57	18.76	217.06	351.99	6.19	4.35	6.65	6.65
Prairie County	D3	RM 125.24	7711	100-yr	3471.6	654.36	647.26	2.31	2.12	22.18	15.35	226.37	366.46	6.49	4.47	7.1	7.1
Prairie County	D3	RM 125.05	7403	100-yr	3471.6	654.2	647.23	2.5	2.27	25.88	17.55	209.96	349.6	6.48	4.37	6.97	6.97
Prairie County	D3	RM 124.83	7059	100-yr	3471.6	654.08	647.25	2.35	2.27	23.17	20.49	237.41	320.69	6.19	5.48	6.83	6.83
Prairie County	D3	RM 124.62	6712	100-yr	3471.6	653.95	647.25	2.3	2.23	22.74	19	257.84	321.15	5.82	4.86	6.7	6.7

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	100-yr	3471.6	653.74	647.27	2.59	2.21	28.87	16.03	221.62	929.96	5.73	3.16	6.47	6.47
Prairie County	D3	RM 124.15	5960	100-yr	3471.6	653.48	647.27	2.68	2.21	31.76	14.11	232.47	807.94	5.38	2.37	6.21	6.21
Prairie County	D3	RM 123.94	5627	100-yr	3471.6	653.14	647.27	3.07	2.36	41.65	16.82	199.91	688.41	5.35	2.14	5.87	5.87
Prairie County	D3	RM 123.74	5312	100-yr	3471.6	652.89	647.25	3.04	2.4	40.75	15.96	206.88	703.08	5.34	2.07	5.64	5.64
Prairie County	D3	RM 123.56	5014	100-yr	3471.6	652.94	647.24	1.93	1.56	16.23	7.73	311.23	842.73	5.58	2.65	5.7	5.7
Prairie County	D3	RM 123.24	4500	100-yr	3471.6	652.84	647.19	1.11	1.11	14.45	14.37	934.44	940.2	3.33	3.32	5.65	5.65
Prairie County	D3	RM 122.99	4116	100-yr	3471.6	652.68	646.67	1.42	1.37	9.33	8.67	527.26	622.96	4.59	4.26	6.01	6.01
Prairie County	D3	RM 122.76	3746	100-yr	3471.6	652.53	646.22	1.78	1.76	14.06	13.27	362.48	389.46	5.35	5.06	6.31	6.31
Prairie County	D3	RM 122.55	3414	100-yr	3471.6	652.27	645.7	2.41	2.4	24.84	23.89	242.74	405.34	5.92	5.71	6.57	6.57
Prairie County	D3	RM 122.3	3012	100-yr	3471.6	651.95	645.57	2.81	2.7	34.01	26.13	214.39	537.26	5.73	4.39	6.38	6.38
Prairie County	D3	RM 122.08	2651	100-yr	3471.6	651.78	645.49	2.61	2.5	29.57	22.78	240.65	507.08	5.49	4.22	6.29	6.29
Prairie County	D3	RM 121.88	2338	100-yr	3471.6	651.63	645.42	2.49	2.27	26.83	14.89	244.44	492.59	5.64	3.11	6.21	6.21
Prairie County	D3	RM 121.66	1982	100-yr	3471.6	651.39	645.3	2.69	2.62	31.23	27.29	226.93	418.22	5.66	4.94	6.09	6.09
Prairie County	D3	RM 121.46	1651	100-yr	3471.6	651.22	645.06	2.59	2.5	29.46	23.69	243.93	316.83	5.46	4.38	6.16	6.16
Prairie County	D3	RM 121.24	1304	100-yr	3471.6	651.01	644.99	2.63	2.48	31.32	25.23	247.35	374.86	5.26	4.23	6.02	6.02
Prairie County	D3	RM 121.02	957	100-yr	3471.6	650.84	644.88	2.44	2.25	27.28	21.96	259.65	367.51	5.36	4.31	5.96	5.96
Prairie County	D3	RM 120.84	660	100-yr	3471.6	650.67	644.78	2.47	2.43	29.73	27.62	255.32	320.83	5.49	5.11	5.89	5.89
Prairie County	D3	RM 120.64	350	100-yr	3471.6	650.51	644.42	2.47	2.45	26.25	24.9	244.23	259.01	5.75	5.47	6.09	6.09

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	100-yr	3472.1	650.5	643.94	2.32	2.2	23.34	21.33	254.01	352.56	5.64	5.15	6.56	6.56
Dawson County	D3	RM 120.28	90838.07	100-yr	3472.1	650.44	643.78	2.35	2.16	23.62	17.28	233.12	376.12	5.86	4.28	6.66	6.66
Dawson County	D3	RM 120.18	90675.23	100-yr	3472.1	650.34	643.7	2.45	2.3	25.28	19.55	213.48	317.59	6.13	4.75	6.64	6.64
Dawson County	D3	RM 120.00	90388.96	100-yr	3472.1	650.22	643.56	2.41	2.27	24.28	19.51	226.64	302.58	6.28	5.04	6.66	6.66
Dawson County	D3	RM 119.84	90136.35	100-yr	3472.1	650.07	643.44	2.57	2.45	27.71	21.94	213.73	368.26	6.23	4.94	6.63	6.63
Dawson County	D3	RM 119.68	89873.82	100-yr	3472.1	649.84	643.31	2.89	2.74	35.02	25.84	189.21	358.59	6.22	4.58	6.53	6.53
Dawson County	D3	RM 119.53	89627.16	100-yr	3472.1	649.73	643.2	2.72	2.68	31.08	26.91	204.32	239.72	6.22	5.4	6.54	6.54
Dawson County	D3	RM 119.39	89404.11	100-yr	3472.1	649.68	643.09	2.45	2.39	25.37	23.69	231.36	342.63	6.08	5.71	6.59	6.59
Dawson County	D3	RM 119.26	89201.38	100-yr	3472.1	649.63	642.99	2.28	2.13	22.37	16.69	263.7	384.08	5.7	4.25	6.64	6.64
Dawson County	D3	RM 119.12	88969.13	100-yr	3472.1	649.38	642.87	2.8	2.43	33.08	18.05	193.4	539.91	6.14	3.33	6.51	6.51
Dawson County	D3	RM 119.00	88780.83	100-yr	3472.1	649.3	642.78	2.69	2.34	30.75	15.23	199.46	528.06	6.08	3	6.52	6.52
Dawson County	D3	RM 118.85	88537.07	100-yr	3472.1	649.24	642.66	2.35	2.18	23.67	16.77	241.51	438.07	5.81	4.11	6.58	6.58
Dawson County	D3	RM 118.72	88336.12	100-yr	3472.1	649.2	642.56	2.18	1.94	19.9	11.85	237.19	594.17	6.24	3.71	6.64	6.64
Dawson County	D3	RM 118.60	88130.39	100-yr	3472.1	649.04	642.46	2.47	2.2	25.84	14.88	220.72	523.26	6.07	3.49	6.58	6.58
Dawson County	D3	RM 118.47	87924.15	100-yr	3472.1	648.88	642.37	2.7	2.48	31.69	19.46	211.72	404.81	5.64	3.46	6.52	6.52
Dawson County	D3	RM 118.34	87719.85	100-yr	3472.1	648.65	642.27	3	2.77	40.56	26.95	214.06	375.32	5.03	3.34	6.39	6.39
Dawson County	D3	RM 118.21	87507.02	100-yr	3472.1	648.51	642.16	2.95	2.6	36.74	21	175.82	381.13	6.17	3.5	6.35	6.35
Dawson County	D3	RM 118.07	87276.02	100-yr	3508.92	648.49	642.05	2.31	2.24	23.89	18.2	297.49	405.33	5.09	3.87	6.44	6.44
Dawson County	D4	RM 117.90	87004.77	100-yr	3508.92	648.43	641.92	2.1	1.87	19.09	14.17	234.19	487.8	5.66	4.18	6.51	6.51
Dawson County	D4	RM 117.77	86795.88	100-yr	3508.92	648.38	641.81	1.99	1.68	17.36	12.79	217.15	583.23	5.59	4.09	6.57	6.57
Dawson County	D4	RM 117.62	86560.03	100-yr	3508.92	648.3	641.7	1.98	1.71	16.7	11.05	247.32	600.8	5.95	3.93	6.6	6.6
Dawson County	D4	RM 117.46	86294.2	100-yr	3508.92	648.07	641.57	2.64	2.1	29.83	13.58	183	629.89	5.91	2.66	6.5	6.5
Dawson County	D4	RM 117.33	86073.88	100-yr	3508.92	647.76	641.46	3.27	2.58	45.23	20.95	137.01	514.9	6.23	2.81	6.3	6.3
Dawson County	D4	RM 117.16	85808.16	100-yr	3508.92	647.7	641.33	2.6	2.22	28.51	16.84	182.25	453.19	6.15	3.61	6.37	6.37
Dawson County	D4	RM 117.03	85604.68	100-yr	3508.92	647.65	641.3	2.24	2.06	21.93	13.71	243.69	517.89	5.51	3.44	6.35	6.35
Dawson County	D4	RM 116.87	85336.88	100-yr	3508.92	647.61	641.29	1.98	1.61	16.98	10.25	238.63	660.59	5.65	3.4	6.32	6.32
Dawson County	D4	RM 116.69	85043.25	100-yr	3508.92	647.48	641.44	2.08	1.74	19.5	12.82	279.08	612.52	5.01	3.28	6.04	6.04
Dawson County	D4	RM 116.56	84823.15	100-yr	3508.92	647.32	641.34	2.38	1.86	25.65	12.63	234.35	772.52	5	2.44	5.98	5.98
Dawson County	D4	RM 116.39	84558.58	100-yr	3508.92	647.25	641.21	2.02	1.67	18.04	8.66	269.92	822.19	5.35	2.56	6.04	6.04
Dawson County	D4	RM 116.22	84287.19	100-yr	3508.92	647.1	641	2.18	1.69	20.6	8.44	259.34	891.65	5.7	2.33	6.1	6.1
Dawson County	D4	RM 116.05	84007.59	100-yr	3508.92	646.92	640.84	2.52	1.77	27.41	10.32	213.93	921.09	5.72	2.15	6.07	6.07
Dawson County	D4	RM 115.87	83722.29	100-yr	3508.92	646.76	640.8	2.59	1.79	29.44	11.42	214.27	937.22	5.42	2.09	5.96	5.96
Dawson County	D4	RM 115.73	83500.35	100-yr	3508.92	646.72	640.69	2.07	1.51	19.79	9.95	310.77	1007.17	4.61	2.31	6.03	6.03
Dawson County	D4	RM 115.61	83294.37	100-yr	3508.92	646.68	640.59	1.74	1.41	13.93	7.73	385.01	948.14	4.79	2.65	6.09	6.09
Dawson County	D4	RM 115.45	83034.82	100-yr	3508.92	646.62	640.37	1.65	1.39	12.78	8.83	407.6	814.29	4.5	3.11	6.25	6.25
Dawson County	D4	RM 115.29	82782.88	100-yr	3508.92	646.47	640.34	1.97	1.65	17.45	9.29	319.39	793.43	5.06	2.67	6.13	6.13
Dawson County	D4	RM 115.09	82480.02	100-yr	3508.92	646.41	640.2	1.74	1.4	13.05	6.8	324	845.43	5.68	2.96	6.22	6.22
Dawson County	D4	RM 114.96	82177.99	100-yr	3508.92	646.24	640	2.16	1.81	20.1	12.19	260.73	604.68	5.73	3.46	6.24	6.24
Dawson County	D4	RM 114.74	81836.48	100-yr	3508.92	645.77	639.98	3.21	2.45	44.96	20.55	179.76	562.61	5.61	2.54	5.79	5.79
Dawson County	D4	RM 114.58	81577.9	100-yr	3508.92	645.76	639.46	2.38	2.25	24.24	21.66	195.77	356.62	5.92	5.27	6.3	6.3
Dawson County	D4	RM 114.42	81309.47	100-yr	3508.92	645.62	639.33	2.41	2.33	25.33	21.71	257.79	318.9	5.52	4.73	6.29	6.29
Dawson County	D4	RM 114.28	81078.59	100-yr	3508.92	645.37	639.21	2.83	2.62	34.69	25.47	213.07	319.81	5.7	4.18	6.15	6.15
Dawson County	D4	RM 114.11	80813.63	100-yr	3508.92	645.15	639.2	2.96	2.71	38.23	25.48	210.21	353.47	5.54	3.68	5.95	5.95
Dawson County	D4	RM 113.97	80580.15	100-yr	3508.92	644.99	639.45	2.93	2.6	38.22	25.75	225.76	437.58	5.17	3.48	5.54	5.54
Dawson County	D4	RM 113.79	80292.13	100-yr	3508.92	644.91	639.45	2.49	2.16	27.71	20.7	201.08	422.64	5.13	3.84	5.46	5.46
Dawson County	D4	RM 113.60	79987.05	100-yr	3508.92	644.9	639.2	1.73	1.56	13.04	10.93	179.84	501.9	5.55	4.62	5.7	5.7
Dawson County	D4	RM 113.43	79712.89	100-yr	3508.92	644.77	638.73	2.08	1.73	18.44	11.93	173.8	535.76	5.91	3.79	6.05	6.05
Dawson County	D4	RM 113.24	79405.49	100-yr	3508.92	644.46	638.43	2.9	2.36	36.13	18.96	130.78	486.72	5.92	3.06	6.02	6.02
Dawson County	D4	RM 113.08	79152.39	100-yr	3508.92	644.29	638.37	2.79	2.42	33.72	20.4	138.2	417.08	5.81	3.47	5.93	5.93
Dawson County	D4	RM 112.94	78925.1	100-yr	3508.92	644.28	638.26	2.06	1.91	18.44	14.75	194.62	411.67	5.64	4.47	6.03	6.03
Dawson County	D4	RM 112.74	78585.88	100-yr	3508.92	644.11	638.09	2.25	2.02	22.48	13.03	237.95	571.56	5.28	3.04	6.02	6.02
Dawson County	D4	RM 112.59	78355.25	100-yr	3508.92	643.98	637.98	2.33	2.02	24.78	15.83	271.99	557.99	4.9	3.11	6	6
Dawson County	D4	RM 112.37	78008.78	100-yr	3508.92	643.97	637.88	1.66	1.47	12	8.05	206.92	725.52	5.61	3.72	6.09	6.09
Dawson County	D4	RM 112.19	77721.27	100-yr	3508.92	643.79	637.59	2.14	1.92	19.9	12.61	213.8	510.99	5.66	3.57	6.19	6.19
Dawson County	D4	RM 111.89	77240.22	100-yr	3508.92	643.45	637.16	2.56	2.37	28.23	18.9	235.68	386.66	5.72	3.82	6.29	6.29
Dawson County	D4	RM 111.42	76486.24	100-yr	3508.92	643.18	636.91	2.18	2.01	20.73	14.77	287.11	443.86	5.52	3.93	6.27	6.27
Dawson County	D4	RM 111.26	76213.83	100-yr	3508.92	643.11	636.66	1.97	1.8	17.21	10.45	329.26	619.99	5.3	3.21	6.45	6.45
Dawson County	D4	RM 111.09	75911.9	100-yr	3508.92	642.79	636.51	2.68	2.57	31.65	25.4	240.23	363.74	5.4	4.32	6.28	6.28
Dawson County	D4	RM 110.95	75678.54	100-yr	3508.92	642.51	636.4	3.07	2.93	40.43	32.95	194.97	262.84	5.8	4.73	6.11	6.11
Dawson County	D4	RM 110.78	75415.61	100-yr	3508.92	642.2	636.27	3.33	3.24	48.27	37.97	186.03	244.8	5.64	4.43	5.93	5.93
Dawson County	D4	RM 110.55	75040.65	100-yr	3508.92	642.09	636.09	2.65	2.55	30.66	22.16	240.69	350.89	5.48	3.96	5.99	5.99

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	100-yr	3508.92	642.04	635.96	2.2	2.09	21.31	14.32	293.1	466.64	5.36	3.6	6.08	6.08
Dawson County	D4	RM 110.17	74428.56	100-yr	3508.92	641.85	635.79	2.29	2.14	24.37	16.61	321.63	518.88	4.64	3.15	6.06	6.06
Dawson County	D4	RM 109.95	74074.87	100-yr	3508.92	641.71	635.62	2.16	1.94	20.57	10.19	297.98	687.66	5.33	2.63	6.09	6.09
Dawson County	D4	RM 109.75	73741.09	100-yr	3508.92	641.53	635.46	2.32	2.08	23.74	10.64	272.8	699.89	5.41	2.42	6.07	6.07
Dawson County	D4	RM 109.54	73418.83	100-yr	3508.92	641.43	635.3	2.13	1.71	20.02	11.35	287.56	675.69	5.38	3.04	6.13	6.13
Dawson County	D4	RM 109.37	73150.54	100-yr	3508.92	641.24	635.17	2.47	1.94	26.51	11.89	224.7	719.55	5.61	2.51	6.07	6.07
Dawson County	D4	RM 109.19	72864.56	100-yr	3508.92	641.07	635.03	2.52	2.17	27.56	13.14	238.65	609.01	5.6	2.66	6.04	6.04
Dawson County	D4	RM 109.04	72628	100-yr	3508.92	640.72	634.92	3.15	2.76	43.29	22.56	194.23	440.22	5.56	2.88	5.8	5.8
Dawson County	D4	RM 108.86	72339.73	100-yr	3508.92	640.73	634.77	2.19	2.11	21.56	19.1	287.17	366.78	5.1	4.52	5.96	5.96
Dawson County	D4	RM 108.70	72072.36	100-yr	3508.92	640.65	634.65	2.04	1.97	18.55	15.37	291.61	407.8	5.26	4.36	6	6
Dawson County	D4	RM 108.55	71827.97	100-yr	3508.92	640.56	634.53	2.01	2	18.1	17.04	343.64	365.95	5.08	4.8	6.03	6.03
Dawson County	D4	RM 108.40	71587.18	100-yr	3508.92	640.38	634.41	2.31	2.28	21.93	20.5	363.68	393.35	4.17	3.91	5.97	5.97
Dawson County	D4	RM 108.25	71345.86	100-yr	3508.92	640.27	634.29	2.2	2.12	21.28	16.87	361.89	477.3	4.38	3.47	5.98	5.98
Dawson County	D4	RM 108.12	71131.88	100-yr	3508.92	640.16	634.19	2.25	2.1	22.43	13.72	289.42	518.24	5.28	3.23	5.98	5.98
Dawson County	D4	RM 107.98	70905.01	100-yr	3508.92	639.93	634.08	2.65	2.48	31.11	17.6	245.46	470.07	5.33	3.01	5.86	5.86
Dawson County	D4	RM 107.82	70651.22	100-yr	3508.92	639.72	633.95	2.84	2.5	35.87	17.19	231.93	563.46	5.2	2.49	5.77	5.77
Dawson County	D4	RM 107.68	70418.24	100-yr	3508.92	639.51	633.84	2.97	2.71	39.25	22.47	219.72	431.68	5.23	3	5.67	5.67
Dawson County	D4	RM 107.50	70132.11	100-yr	3508.92	639.35	633.17	2.72	2.45	33	20.85	239.71	436.23	5.16	3.28	6.18	6.18
Dawson County	D4	RM 107.31	69834.56	100-yr	3508.92	639.13	633.23	2.76	2.57	35.09	20.55	264.38	493.35	4.7	2.77	5.9	5.9
Dawson County	D4	RM 107.13	69541.52	100-yr	3508.92	638.95	633.98	2.53	2.36	30.51	22.57	322.33	475.71	4.2	3.12	4.97	4.97
Dawson County	D5	RM 106.98	69305.02	100-yr	3523.08	638.88	634.16	2.05	1.96	20.31	18.12	421.85	502	3.99	3.58	4.72	4.72
Dawson County	D5	RM 106.85	69065.27	100-yr	3523.08	638.77	633.6	1.96	1.9	18.6	16.67	412.29	519.36	3.96	3.57	5.17	5.17
Dawson County	D5	RM 106.65	68764.02	100-yr	3523.08	638.52	632.98	2.31	2.24	24.84	22.23	360.27	509.57	3.79	3.41	5.54	5.54
Dawson County	D5	RM 106.47	68475.87	100-yr	3523.08	638.35	632.51	2.31	1.84	25.3	16.35	307.26	783.6	4.24	2.74	5.84	5.84
Dawson County	D5	RM 106.28	68173.97	100-yr	3523.08	637.91	631.71	3.12	2.42	44.35	21.55	204.05	622.93	4.81	2.34	6.2	6.2
Dawson County	D5	RM 106.10	67879.83	100-yr	3523.08	637.7	631.29	2.91	2.25	39.57	23.43	206.53	589.6	4.47	2.66	6.41	6.41
Dawson County	D5	RM 105.89	67550.49	100-yr	3523.08	637.51	631.76	2.57	2.09	31.11	16.58	226.74	725.5	4.35	2.33	5.75	5.75
Dawson County	D5	RM 105.74	67300.35	100-yr	3523.08	637.36	632.3	2.42	1.71	27.51	15.3	203.14	843.28	4.38	2.44	5.06	5.06
Dawson County	D5	RM 105.54	66973.54	100-yr	3523.08	637.07	632.17	2.71	2.1	34.96	21.94	147.79	703.84	4.22	2.66	4.9	4.9
Dawson County	D5	RM 105.30	66609.03	100-yr	3523.08	636.95	632.29	1.76	1.55	15.57	11.82	219.79	860.1	3.57	2.71	4.83	4.83
Dawson County	D5	RM 105.06	66212.24	100-yr	3523.08	636.79	631.19	2.01	1.83	20.3	14.54	181.11	1102.17	3.56	2.55	5.6	5.6
Dawson County	D5	RM 104.89	65945.5	100-yr	3523.08	636.6	631.5	2.11	1.85	23.06	15.96	205.87	1099.1	3.29	2.29	5.18	5.18
Dawson County	D5	RM 104.77	65742.33	100-yr	3523.08	636.48	631.67	2.27	1.67	24.63	12.6	125.62	1159.62	4.15	2.13	5.77	5.77
Dawson County	D5	RM 104.64	65530.83	100-yr	3523.08	636.41	632.1	1.91	1.43	17.8	8.87	172.34	1474.78	3.92	1.94	5.45	5.45
Dawson County	D5	RM 104.43	65180.62	100-yr	3523.08	636.35	631.56	1.27	1.06	8.53	6.1	361.11	1483.17	3.12	2.24	5.56	5.56
Dawson County	D5	RM 104.26	64906.83	100-yr	3523.08	636.28	631.59	1.25	1.02	7.87	4.5	218.58	1702.43	3.55	2.04	5.64	5.64
Dawson County	D5	RM 104.10	64643.2	100-yr	3523.08	636.19	630.81	1.58	1.13	11.96	4.92	150.64	1819.24	4.17	1.72	5.75	5.75
Dawson County	D5	RM 103.95	64410.06	100-yr	3523.08	636.15	631.24	1.62	0.99	12.73	5.66	185.01	2026.59	3.95	1.76	6.33	6.33
Dawson County	D5	RM 103.68	63957.56	100-yr	3523.08	636.05	629.68	1.68	0.91	13.29	6.23	188.7	1893.02	4.35	2.04	6.61	6.61
Dawson County	D5	RM 103.48	63615.6	100-yr	3523.08	635.98	630.4	1.8	1	14.81	6.33	152.55	1742.35	4.75	2.02	6.47	6.47
Dawson County	D5	RM 103.26	63259.44	100-yr	3523.08	635.92	630.13	1.69	0.99	12.98	6.11	173.17	1579.22	4.81	2.26	6.51	6.51
Dawson County	D5	RM 102.58	62131.5	100-yr	3523.08	635.75	629.72	1.62	1.24	11.99	7.57	178.73	931.58	4.81	3.04	6.07	6.07
Dawson County	D5	RM 102.44	61920.83	100-yr	3523.08	635.6	629.74	2.09	1.56	19.88	10.96	255.44	857.95	4.77	2.63	5.86	5.86
Dawson County	D5	RM 102.31	61720.14	100-yr	3523.08	635.47	629.03	2.43	1.71	26.91	14.48	200.53	787.58	4.83	2.61	6.44	6.44
Dawson County	D5	RM 102.15	61456.58	100-yr	3523.08	635.35	629.39	2.35	1.77	24.83	14.36	201.3	682.72	5.03	2.92	5.96	5.96
Dawson County	D5	RM 102.00	61217.89	100-yr	3523.08	635.27	629.48	2.05	1.61	19.56	12.49	267.9	755.2	4.52	2.9	5.79	5.79
Dawson County	D5	RM 101.84	60967.97	100-yr	3523.08	635.23	629.23	1.76	1.21	14.18	9.42	155.67	925.73	4.7	3.13	6	6
Dawson County	D5	RM 101.60	60582.61	100-yr	3523.08	635.08	628.87	1.67	1.44	12.84	7.28	336.08	974.01	4.6	2.61	6.21	6.21
Dawson County	D5	RM 101.45	60336.09	100-yr	3523.08	634.85	629.16	2.35	1.79	24.6	9.61	251.39	987.39	5.09	1.99	5.69	5.69
Dawson County	D5	RM 101.25	60019.5	100-yr	3523.08	634.62	627.81	2.65	1.87	30.94	10.95	209.15	1005.99	5.28	1.87	6.81	6.81
Dawson County	D5	RM 101.09	59759.25	100-yr	3523.08	634.51	627.99	2.49	1.71	27.6	11.34	216.65	971.2	5.15	2.12	6.52	6.52
Dawson County	D5	RM 100.88	59426.42	100-yr	3523.08	634.38	627.86	2.34	1.63	24.16	9.54	196.58	1093.8	5.35	2.12	6.52	6.52
Dawson County	D5	RM 100.67	59075.4	100-yr	3523.08	634.21	627.1	2.59	1.58	28.74	10.77	151.88	1099.86	5.85	2.2	7.11	7.11
Dawson County	D5	RM 100.46	58743.44	100-yr	3523.08	634.16	627.92	1.89	1.27	15.64	7.91	202.94	1118.24	5.37	2.72	6.24	6.24
Dawson County	D5	RM 100.25	58401.49	100-yr	3523.08	633.9	627.57	2.46	1.73	26.64	12.61	196.17	939.63	5.34	2.53	6.33	6.33
Dawson County	D5	RM 100.05	58077.55	100-yr	3523.08	633.76	626.86	2.41	1.86	25.58	12.28	176.97	733.36	5.41	2.59	6.9	6.9
Dawson County	D5	RM 99.87	57778.81	100-yr	3523.08	633.5	626.4	2.51	2.23	29.31	15.27	301.61	669.19	4.53	2.36	7.1	7.1
Dawson County	D5	RM 99.68	57474.16	100-yr	3523.08	633.3	626.29	2.57	2.18	29.01	14.24	246.92	617.6	5.31	2.62	7.01	7.01
Dawson County	D5	RM 99.49	57160.47	100-yr	3523.08	633	626.53	2.93	2.39	38.2	16.78	218.38	646.53	5.18	2.28	6.47	6.47
Dawson County	D5	RM 99.30	56863.46	100-yr	3523.08	632.85	627.26	2.58	2.09	30.24	16.11	267.93	741.88	4.84	2.58	5.59	5.59
Dawson County	D5	RM 99.13	56566.63	100-yr	3523.08	632.74	626.77	2.28	1.73	23.8	10.97	293.66	926.25	4.77	2.2	5.97	5.97

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	100-yr	3523.08	632.58	626.63	2.18	1.8	22.36	12.64	339.1	845.17	4.39	2.49	5.95	5.95
Dawson County	D5	RM 98.71	55911.87	100-yr	3523.08	632.4	626.34	2.24	1.64	23.74	11.1	322.21	1071.85	4.28	2	6.06	6.06
Dawson County	D5	RM 98.57	55680.2	100-yr	3523.08	632.3	626.1	2.12	1.37	21.04	10.53	297.01	1172.51	4.4	2.2	6.2	6.2
Dawson County	D5	RM 98.35	55325.95	100-yr	3523.08	632.01	625.91	2.56	1.55	29.2	11.04	216.82	1170.38	5.16	1.95	6.1	6.1
Dawson County	D5	RM 98.19	55066.09	100-yr	3523.08	631.8	624.42	2.76	1.62	33.09	10.82	184	1182.79	5.61	1.84	7.38	7.38
Dawson County	D5	RM 97.99	54752.97	100-yr	3523.08	631.52	625.04	2.87	2.14	37.61	14.21	236.53	986.14	4.81	1.81	6.48	6.48
Dawson County	D5	RM 97.84	54493.48	100-yr	3523.08	631.39	625.39	2.52	2.06	29.49	14.66	292.51	773.35	4.55	2.27	6	6
Dawson County	D5	RM 97.68	54241.32	100-yr	3523.08	631.24	624.99	2.4	1.9	28.13	18.03	340.05	751.15	3.94	2.53	6.25	6.25
Dawson County	D5	RM 97.48	53918.21	100-yr	3523.08	631.11	624.81	1.91	1.57	16.33	12.08	387.03	1196.74	3.05	2.26	6.3	6.3
Dawson County	D5	RM 97.28	53585.68	100-yr	3523.08	630.92	625.86	1.99	1.44	19.43	10.7	328.8	1346.08	3.87	2.13	5.47	5.47
Dawson County	D5	RM 97.08	53263.89	100-yr	3523.08	630.63	625.27	2.56	1.88	30.48	13.15	209.17	1228.71	4.52	1.95	5.36	5.36
Dawson County	D5	RM 96.94	53030.11	100-yr	3523.08	630.45	623.97	2.7	1.88	34.18	15.03	199.17	1280.92	4.4	1.94	6.48	6.48
Dawson County	D5	RM 96.77	52762.2	100-yr	3523.08	630.25	623.51	2.64	1.95	32.71	14.1	202.34	1356.64	4.37	1.89	6.74	6.74
Dawson County	D5	RM 96.55	52403.59	100-yr	3523.08	630.07	624.57	2.55	1.51	29.76	12.21	160.42	1657	4.75	1.96	5.5	5.5
Dawson County	D5	RM 96.35	52079.12	100-yr	3523.08	630.05	625.39	1.22	1.22	7.54	6.62	290.07	1588.32	3.51	3.09	6.58	6.58
Dawson County	D5	RM 96.17	51777.74	100-yr	3523.08	629.84	624.71	2.26	1.8	24.36	9.54	130.42	1515.94	4.21	1.65	5.46	5.46
Dawson County	D5	RM 96.00	51500.38	100-yr	3523.08	629.7	624.3	2.12	1.54	21.15	7.57	122.42	1792.91	4.37	1.56	5.4	5.4
Dawson County	D5	RM 95.79	51156.87	100-yr	3523.08	629.62	624.35	1.52	1.09	11.54	5.31	284.94	1849.17	4.09	1.88	5.37	5.37
Dawson County	D5	RM 95.60	50859.75	100-yr	3523.08	629.54	622.97	1.55	1.01	11.43	5.66	251.15	1705.43	4.26	2.1	6.57	6.57
Dawson County	D5	RM 95.40	50547.92	100-yr	3523.08	629.46	623.13	1.43	0.99	9.4	5.2	377.96	1376.79	4.65	2.58	6.33	6.33
Dawson County	D5	RM 95.21	50245.97	100-yr	3523.08	629.38	622.21	1.75	0.94	13.32	6.11	217.6	1494.58	5.48	2.51	7.17	7.17
Dawson County	D5	RM 95.04	49971.19	100-yr	3523.08	629.31	621.68	1.97	1.03	17.18	8.49	174.46	1397.51	5.2	2.56	7.62	7.62
Dawson County	D5	RM 94.88	49717.07	100-yr	3523.08	629.25	621.44	1.83	0.93	14.67	8.13	152.89	1391.8	5.53	3.06	7.81	7.81
Dawson County	D5	RM 94.71	49446.9	100-yr	3523.08	629.21	621.69	1.37	1.11	8.32	6.14	234.28	1371.86	5.19	3.82	7.52	7.52
Dawson County	D5	RM 94.58	49286.95	100-yr	3523.08	629.19	618.6	1.11	1.11	5.05	5.05	456.42	1430.62	6.93	6.93	10.59	10.59
Dawson County	D5	RM 94.57	49255.56	100-yr	3523.08	629.12	618.63	1.46	1.45	8.76	8.5	360.59	952.66	6.67	6.48	10.49	10.49
Dawson County		RM 94.55	49216.94	100-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	100-yr	3523.08	628.69	620.63	2.48	2.32	26.88	21.48	256.42	1088.74	5.39	4.3	8.06	8.06
Dawson County	D5	RM 94.52	49157.18	100-yr	3523.08	628.7	620.89	2.29	2.26	23.2	21.99	287.23	1241.29	5.33	5.05	7.81	7.81
Dawson County	D6	RM 94.42	48998.19	100-yr	3523.08	628.54	621.76	2.71	2.17	32.47	18.86	219.93	1152.43	5.27	3.05	6.78	6.78
Dawson County	D6	RM 94.30	48806.79	100-yr	3548.57	628.47	621.22	2.38	1.91	26.63	16.37	295.07	1114.35	4.45	2.73	7.25	7.25
Dawson County	D6	RM 94.20	48653.06	100-yr	3548.57	628.41	621.41	2.29	1.69	24.04	12.74	261.89	943.91	4.99	2.64	7	7
Dawson County	D6	RM 94.08	48445.46	100-yr	3548.57	628.38	622.37	1.87	1.51	15.45	9.1	338.75	806.72	5.21	3.06	6.01	6.01
Dawson County	D6	RM 93.96	48246.42	100-yr	3548.57	628.26	621.88	2.08	1.72	19.79	12.24	331.74	694.65	4.82	2.98	6.38	6.38
Dawson County	D6	RM 93.83	48030.25	100-yr	3548.57	628.05	620.28	2.55	2.02	28.51	16.01	237.8	599.14	5.38	3.02	7.77	7.77
Dawson County	D6	RM 93.68	47782.89	100-yr	3548.57	627.77	620.19	3.01	2.35	39.22	21.17	191.53	497.54	5.62	3.03	7.58	7.58
Dawson County	D6	RM 93.57	47606.95	100-yr	3548.57	627.44	620.08	3.48	2.78	53.47	32.17	184.03	403.31	5.27	3.17	7.36	7.36
Dawson County	D6	RM 93.53	47552.11	100-yr	3548.57	627.4	620.21	3.41	2.82	50.91	30.33	184.33	388.69	5.43	3.24	7.18	7.18
Dawson County			47536.14	100-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	100-yr	3548.57	627.31	620.33	3.44	2.82	51.58	30.1	180.48	392.43	5.5	3.21	6.98	6.98
Dawson County	D6	RM 93.47	47460.74	100-yr	3548.57	627.27	618.63	3.32	2.78	48.45	31.49	189.97	363.6	5.4	3.51	8.64	8.64
Dawson County	D6	RM 93.43	47382.46	100-yr	3548.57	627.22	619.44	3.19	2.71	44.26	28.85	191.32	358.73	5.61	3.65	7.78	7.78
Dawson County		RM 93.415	47357.71	100-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	100-yr	3548.57	627.16	620.19	3.08	2.71	41.14	29.32	200.23	374.38	5.6	3.98	6.98	6.98
Dawson County	D6	RM 93.36	47287.92	100-yr	3548.57	627.17	620.47	2.84	2.38	34.83	23.23	213.34	396.61	5.64	3.75	6.7	6.7
Dawson County	D6	RM 93.25	47111.44	100-yr	3548.57	627.07	621.12	2.78	2.26	39.74	21.38	228.84	614.16	4.97	2.67	5.95	5.95
Dawson County	D6	RM 93.05	46807.77	100-yr	3548.57	626.99	621.74	2.14	1.64	20.8	10.96	283.11	1023.7	4.93	2.6	5.25	5.25
Dawson County	D6	RM 92.93	46606.31	100-yr	3548.57	626.86	621.34	2.26	1.71	23.73	12.32	305.87	1150.1	4.55	2.36	5.52	5.52
Dawson County	D6	RM 92.83	46460.06	100-yr	3548.57	626.79	621.02	2.17	1.74	21.8	12.12	357.35	1290.46	4.04	2.24	5.77	5.77
Dawson County	D6	RM 92.71	46261.84	100-yr	3548.57	626.69	620.37	2.13	1.76	20.85	12.79	359.38	1330.22	4.18	2.57	6.32	6.32
Dawson County	D6	RM 92.59	46079.79	100-yr	3548.57	626.59	620.95	2.15	1.9	21.91	12.87	321.05	1312.55	4.85	2.84	5.64	5.64
Dawson County	D6	RM 92.50	45933.81	100-yr	3548.57	626.48	620.75	2.28	2.02	24.12	14.23	325.45	1347.22	4.57	2.7	5.73	5.73
Dawson County	D6	RM 92.39	45753.94	100-yr	3548.57	626.39	620.58	2.29	1.99	23.83	14.58	299.01	1451.14	4.85	2.97	5.81	5.81
Dawson County	D6	RM 92.29	45591.17	100-yr	3548.57	626.29	620.64	2.34	2.21	24.88	21.55	295.77	1399.97	4.89	4.24	5.65	5.65
Dawson County	D6	RM 92.18	45414.13	100-yr	3548.57	626.24	620.23	1.97	1.82	17.69	14.28	358.66	1537.27	4.81	3.89	6.01	6.01
Dawson County		RM 92.14	45354.08	100-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	100-yr	3548.57	625.97	620.04	1.99	1.81	18.3	14	367.04	1369.54	4.67	3.58	5.93	5.93
Dawson County	D6	RM 92.06	45238.47	100-yr	3548.57	625.9	620.12	2.17	1.96	22.07	15.09	354.46	1348.55	4.42	3.02	5.78	5.78
Dawson County	D6	RM 91.99	45117.89	100-yr	3548.57	625.9	619.81	1.79	1.74	15.36	13.7	390.42	1177.88	4.14	3.7	6.09	6.09
Dawson County	D6	RM 91.85	44886.16	100-yr	3548.57	625.85	619.7	1.68	1.42	14.72	10.68	238.98	1245.24	4.87	3.54	6.15	6.15
Dawson County	D6	RM 91.77	44752.88	100-yr	3548.57	625.8	619.28	1.68	1.4	16.98	12.93	224.91	1070.66	4.6	3.51	6.52	6.52

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	100-yr	3548.57	625.63	619	2.15	1.71	20.22	12.04	148.19	1530.72	5.45	3.25	6.63	6.63
Dawson County	D6	RM 91.45	44219.47	100-yr	3548.57	625.47	618.66	2.3	2.07	24.39	13.44	189.07	1431.17	5.27	2.91	6.81	6.81
Dawson County	D6	RM 91.31	43987.79	100-yr	3548.57	625.19	618.98	2.68	2.52	32.71	16.8	271.16	1264.81	4.84	2.49	6.21	6.21
Dawson County	D6	RM 91.11	43666.49	100-yr	3548.57	624.89	618.54	2.92	2.57	37.48	15.97	219.42	1027.68	5.4	2.3	6.35	6.35
Dawson County	D6	RM 90.97	43442.55	100-yr	3548.57	624.76	618.3	2.84	2.11	36.01	13.62	224.14	1123.29	5.15	1.95	6.46	6.46
Dawson County	D6	RM 90.76	43114.74	100-yr	3548.57	624.61	618.97	2.42	1.66	33.62	14.18	268.72	1422.69	4.73	1.99	5.64	5.64
Dawson County	D6	RM 90.59	42823.65	100-yr	3548.57	624.58	618.64	1.83	1.14	15.23	7.14	232.7	1445.79	4.92	2.31	5.94	5.94
Dawson County	D6	RM 90.43	42564.46	100-yr	3548.57	624.28	618.18	2.69	1.56	33.19	10.27	208.77	1537.73	4.77	1.48	6.1	6.1
Dawson County	D6	RM 90.29	42331.05	100-yr	3548.57	624.19	618.21	2.32	1.32	24.19	8.28	236.08	1568.96	5	1.71	5.98	5.98
Dawson County	D6	RM 90.16	42118.24	100-yr	3548.57	624.06	618.54	2.4	1.45	25.98	9.57	229.61	1360.71	5	1.84	5.52	5.52
Dawson County	D6	RM 89.96	41795.66	100-yr	3548.57	623.94	618.08	2.03	1.48	19.17	8.92	346.39	1239.65	4.55	2.12	5.86	5.86
Dawson County	D6	RM 89.83	41589.45	100-yr	3548.57	623.61	617.17	2.96	1.92	39.33	14.08	211.95	1027.69	5	1.79	6.44	6.44
Dawson County	D6	RM 89.65	41302.33	100-yr	3548.57	623.43	618.15	2.7	1.89	33.62	13.91	251.93	968.88	4.66	1.94	5.28	5.28
Dawson County	D6	RM 89.46	41003.8	100-yr	3548.57	623.25	617.56	2.6	1.99	29.76	12.37	236.74	803.71	5.36	2.22	5.69	5.69
Dawson County	D6	RM 89.29	40732.3	100-yr	3548.57	623.25	617.42	1.9	1.63	16.08	12.35	253.25	654.54	5.16	3.96	5.83	5.83
Dawson County	D6	RM 89.13	40476.68	100-yr	3548.57	623.02	617.29	2.46	1.99	26.99	12.44	231.92	745.2	5.23	2.4	5.73	5.73
Dawson County	D6	RM 88.96	40193.97	100-yr	3585.39	622.87	617.14	2.49	2.05	26.98	12.32	186.73	698.01	5.67	2.56	5.73	5.73
Dawson County	D7	RM 88.77	39887.75	100-yr	3585.39	622.71	616.98	2.46	1.97	27.27	14.77	260.04	696.92	4.98	2.69	5.73	5.73
Dawson County	D7	RM 88.58	39581.56	100-yr	3585.39	622.39	616.82	2.98	2.15	38.93	16.51	185.88	741.81	5.5	2.29	5.57	5.57
Dawson County	D7	RM 88.44	39345.29	100-yr	3585.39	622.14	616.7	3.15	2.41	43.89	15.45	181.67	849.2	5.43	1.87	5.44	5.44
Dawson County	D7	RM 88.25	39047.22	100-yr	3585.39	622.02	616.54	2.63	2.12	31.24	11.82	221.53	935.57	5	1.88	5.48	5.48
Dawson County	D7	RM 88.06	38736.32	100-yr	3585.39	621.86	616.38	2.37	2.02	25.73	10.47	305.89	1012.41	4.74	1.92	5.48	5.48
Dawson County	D7	RM 87.87	38426.68	100-yr	3585.39	621.79	616.22	1.86	1.55	16.69	9.22	429.53	1131.41	4.07	2.24	5.57	5.57
Dawson County	D7	RM 87.70	38161.81	100-yr	3585.39	621.74	616.08	1.8	1.3	14.15	6.75	181.73	1135.15	5.65	2.63	5.66	5.66
Dawson County	D7	RM 87.52	37862.82	100-yr	3585.39	621.68	615.92	1.58	1.33	11.67	6.68	308.23	1159.76	4.56	2.59	5.76	5.76
Dawson County	D7	RM 87.34	37574.69	100-yr	3585.39	621.45	615.85	2.34	1.77	25.42	12.84	253.88	872.75	4.63	2.32	5.6	5.6
Dawson County	D7	RM 87.17	37307.08	100-yr	3585.39	621.2	615.82	2.82	2.12	35.3	16.46	162.99	694.71	5.3	2.44	5.38	5.38
Dawson County	D7	RM 87.00	37023.47	100-yr	3585.39	621.06	615.79	2.42	2.09	27.21	14.25	241.45	721.57	4.58	2.38	5.27	5.27
Dawson County	D7	RM 86.82	36748.51	100-yr	3585.39	620.87	615.76	2.51	2.19	29.15	15.04	210.89	682.75	4.69	2.4	5.12	5.12
Dawson County	D7	RM 86.67	36501.76	100-yr	3585.39	620.62	615.73	2.97	2.44	40.61	22	151.27	569.47	4.89	2.58	4.89	4.89
Dawson County	D7	RM 86.52	36253.46	100-yr	3585.39	620.53	615.7	2.24	1.89	23.25	15.96	250.55	603.06	4.58	3.15	4.84	4.84
Dawson County	D7	RM 86.39	36046.31	100-yr	3585.39	620.43	615.59	2.29	1.84	24.55	16.58	147.45	640.18	4.58	3.05	4.84	4.84
Dawson County	D7	RM 86.24	35796.38	100-yr	3585.39	620.38	615.46	1.64	1.49	12.26	8.11	166.41	763.55	4.85	3.15	4.92	4.92
Dawson County	D7	RM 86.08	35541.56	100-yr	3585.39	620.05	615.48	2.81	2.24	37.62	16	160.1	886.65	4.32	1.8	4.57	4.57
Dawson County	D7	RM 85.91	35282.1	100-yr	3585.39	619.91	615.5	2.41	1.81	27.53	13.44	191.42	943.01	4.32	2.1	4.41	4.41
Dawson County	D7	RM 85.78	35075.01	100-yr	3585.39	619.92	614.9	1.43	1.37	9.84	9.03	288.53	995.56	4.1	3.76	5.02	5.02
Dawson County	D7	RM 85.59	34774.5	100-yr	3585.39	619.86	614.32	1.69	1.25	12.44	6.19	184.84	1050.43	5.51	2.72	5.54	5.54
Dawson County	D7	RM 85.39	34449.3	100-yr	3585.39	619.63	614.15	2.35	1.84	24.82	12.7	219.47	754.13	5.08	2.58	5.48	5.48
Dawson County	D7	RM 85.23	34186.4	100-yr	3585.39	619.38	614.01	2.94	2.14	38.3	17.64	157.48	689.43	5.36	2.43	5.37	5.37
Dawson County	D7	RM 85.04	33863.7	100-yr	3585.39	619.32	613.84	2.14	1.77	21.21	15.08	265.03	621.34	4.61	3.26	5.47	5.47
Dawson County	D7	RM 84.89	33626.36	100-yr	3585.39	619.22	613.92	1.92	1.8	17.37	12.66	413.04	617.44	4.43	3.24	5.3	5.3
Dawson County	D7	RM 84.72	33349.5	100-yr	3585.39	619.04	613.77	2.18	2.13	22.1	16.07	353.9	502.21	4.62	3.36	5.26	5.26
Dawson County	D7	RM 84.57	33104.21	100-yr	3585.39	618.84	613.45	2.44	2.29	26.86	16.11	294.82	527.44	4.95	2.97	5.4	5.4
Dawson County	D7	RM 84.41	32856.7	100-yr	3585.39	618.72	613.32	2.35	2.16	25.25	10.88	312.69	809.6	4.79	2.06	5.41	5.41
Dawson County	D7	RM 84.22	32552.24	100-yr	3585.39	618.63	613.16	2.13	1.73	20.65	9.26	261.68	1081.19	4.85	2.15	5.47	5.47
Dawson County	D7	RM 84.05	32270.74	100-yr	3585.39	618.46	613.14	2.36	1.76	24.94	9.2	206.16	1089.81	5.11	1.87	5.32	5.32
Dawson County	D7	RM 83.89	32017.88	100-yr	3585.39	618.22	613.11	2.72	1.97	33.21	12.5	191.2	964.53	5.04	1.89	5.12	5.12
Dawson County	D7	RM 83.73	31759.16	100-yr	3585.39	618.14	613.07	2.24	1.71	23.25	11.33	240.43	1069.54	4.66	2.26	5.07	5.07
Dawson County	D7	RM 83.53	31426.04	100-yr	3585.39	618.07	613.01	1.73	1.39	13.8	7	304.34	1087.78	4.69	2.37	5.06	5.06
Dawson County	D7	RM 83.39	31213.34	100-yr	3585.39	617.99	612.95	1.94	1.46	17.12	8.11	189.12	1082.63	4.84	2.27	5.04	5.04
Dawson County	D7	RM 83.21	30910.79	100-yr	3585.39	617.91	612.91	1.77	1.39	14.26	7.41	170.07	1034.95	4.96	2.54	5.13	5.13
Dawson County	D7	RM 83.05	30660.14	100-yr	3585.39	617.84	612.78	1.66	1.28	12.5	5.99	229.1	1199.25	4.87	2.34	5.38	5.38
Dawson County	D7	RM 82.94	30491.79	100-yr	3585.39	617.78	612.69	1.72	1.31	13.52	6.1	219.21	1272.36	4.83	2.16	5.39	5.39
Dawson County	D7	RM 82.81	30280.45	100-yr	3585.39	617.69	612.58	1.88	1.35	16.32	6.49	178.49	1440.49	4.68	1.85	5.54	5.54
Dawson County	D7	RM 82.68	30058.39	100-yr	3585.39	617.61	612.34	2	1.3	17.87	6.87	152.77	1381.5	5.26	1.99	5.51	5.51
Dawson County	D7	RM 82.51	29786.14	100-yr	3585.39	617.58	612.1	1.47	1.03	9.7	4.4	229.35	1507.5	5.15	2.31	5.73	5.73
Dawson County	D7	RM 82.33	29497.12	100-yr	3585.39	617.52	611.87	1.54	0.93	10.52	4.88	246.87	1606.4	5.29	2.41	5.77	5.77
Dawson County	D7	RM 82.22	29323.27	100-yr	3585.39	617.46	611.66	1.78	0.92	13.92	5.66	193.52	1953.42	5.43	2.19	5.8	5.8
Dawson County	D7	RM 82.06	29049.94	100-yr	3585.39	617.42	611.37	1.58	0.84	10.87	4	202.97	2086.25	5.71	2.06	6.05	6.05
Dawson County	D7	RM 81.91	28820.21	100-yr	3585.39	617.39	611.21	1.58	0.81	10.63	3.67	191.58	2162.49	6.06	2.06	6.18	6.18
Dawson County	D7	RM 81.71	28446.75	100-yr	3585.39	617.34	611.02	1.33	0.78	7.43	2.49	220.81	2348.23	6.13	2.04	6.32	6.32

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	100-yr	3585.39	617.2	610.8	2.05	0.98	17.55	4.59	165.37	2373.36	6.39	1.63	6.4	6.4
Dawson County	D7	RM 81.31	27735.46	100-yr	3613.71	616.17	610.65	4.52	2.51	90.21	13.32	131.98	2005.65	5.44	0.78	5.52	5.52
Dawson County	D8	RM 81.10	27398.33	100-yr	3613.71	616.01	610.47	3.55	1.8	55.34	8.82	160.09	2354.32	5.44	0.85	5.54	5.54
Dawson County	D8	RM 80.94	27148.21	100-yr	3613.71	615.99	610.34	2.62	1.5	30.14	5.51	225.85	2462.01	5.39	0.98	5.65	5.65
Dawson County	D8	RM 80.76	26855.69	100-yr	3613.71	615.99	610.19	2	1.04	17.21	3.99	181.68	2918.08	5.8	1.31	5.8	5.8
Dawson County	D8	RM 80.64	26669.58	100-yr	3613.71	615.94	610.09	1.98	1.06	17.13	3.73	209.02	3102.66	5.61	1.21	5.84	5.84
Dawson County	D8	RM 80.45	26373.01	100-yr	3613.71	615.95	609.94	1.38	0.82	8.2	2.5	122.91	3195.19	5.87	1.72	6.01	6.01
Dawson County	D8	RM 80.17	25926.88	100-yr	3613.71	615.83	609.71	1.93	0.93	15.85	3.35	146.98	3362.24	6.12	1.25	6.12	6.12
Dawson County	D8	RM 79.91	25496.94	100-yr	3613.71	615.74	609.42	1.51	0.83	10.03	2.54	362.06	3186.15	5.42	1.36	6.32	6.32
Dawson County	D8	RM 79.43	24626.85	100-yr	3613.71	615.49	609.14	1.89	1.08	15.29	3.57	289.02	2607.92	5.85	1.35	6.34	6.34
Dawson County	D8	RM 79.23	24229.4	100-yr	3613.71	614.93	608.87	3.29	1.95	46.97	8.4	173.46	1885.83	5.86	1.01	6.07	6.07
Dawson County	D8	RM 78.27	22640.58	100-yr	3613.71	614.22	608.6	2.29	1.48	23.52	9.27	226.68	1240.58	5.1	1.98	5.62	5.62
Dawson County	D8	RM 78.12	22398.86	100-yr	3613.71	614.17	608.48	2.07	1.46	19.22	7.21	222.94	1298.22	5.15	1.91	5.69	5.69
Dawson County	D8	RM 77.97	22135.34	100-yr	3613.71	614.04	608.34	2.27	1.56	22.62	7.91	214.67	1219.31	5.47	1.9	5.69	5.69
Dawson County	D8	RM 77.79	21831.85	100-yr	3613.71	613.97	608.18	1.87	1.45	16.38	6.98	332.54	1330.96	4.43	1.88	5.79	5.79
Dawson County	D8	RM 77.57	21474.71	100-yr	3613.71	613.73	608	2.32	1.81	23.81	8.15	250.08	1098.91	5.35	1.82	5.73	5.73
Dawson County	D8	RM 77.38	21170.35	100-yr	3613.71	613.5	607.84	2.65	1.98	30.86	10.7	215.18	989.97	5.39	1.86	5.66	5.66
Dawson County	D8	RM 77.13	20780.17	100-yr	3613.71	613.5	607.63	1.84	1.4	14.81	6.7	188.55	1274.61	5.49	2.45	5.86	5.86
Dawson County	D8	RM 77.00	20442.34	100-yr	3613.71	613.38	607.46	2.18	1.45	20.59	6.51	131.83	1395.59	5.91	1.79	5.92	5.92
Dawson County	D8	RM 76.90	20124.49	100-yr	3613.71	613.3	607.29	2.08	1.53	18.51	5.6	153.24	1355.62	5.99	1.75	6	6
Dawson County	D8	RM 76.76	19785.25	100-yr	3613.71	613.24	607.12	1.71	1.32	12.62	4.61	269.03	1351.3	5.68	2.06	6.12	6.12
Dawson County	D8	RM 76.63	19501.04	100-yr	3613.71	613.16	606.97	1.83	1.44	15.04	6.26	246.86	1179.39	5.21	2.13	6.19	6.19
Dawson County	D8	RM 76.37	19137.53	100-yr	3613.71	612.92	606.78	2.21	1.66	21.19	7.86	272.76	1043.4	5.65	2.09	6.14	6.14
Dawson County	D8	RM 76.22	18884.28	100-yr	3613.71	612.8	606.65	2.3	1.67	22.86	8.82	253.7	977.28	5.77	2.21	6.15	6.15
Dawson County	D8	RM 76.00	18519.22	100-yr	3613.71	612.55	606.61	2.63	1.71	30.3	8.98	225.2	1302.09	5.54	1.63	5.94	5.94
Dawson County	D8	RM 75.75	18119.45	100-yr	3613.71	612.21	606.58	2.94	1.97	38.17	9.95	209.51	1331.49	5.33	1.37	5.63	5.63
Dawson County	D8	RM 75.56	17818.36	100-yr	3613.71	612.13	606.75	2.29	1.56	24.16	7.63	303.99	1584.79	4.66	1.46	5.39	5.39
Dawson County	D8	RM 75.31	17411.3	100-yr	3613.71	611.97	606.34	2.19	1.5	21.43	6.65	263.12	1513.3	5.17	1.6	5.64	5.64
Dawson County	D8	RM 75.13	17092.44	100-yr	3613.71	611.85	606.17	2.1	1.38	19.95	6.66	306.22	1581.91	4.97	1.65	5.68	5.68
Dawson County	D8	RM 74.90	16719.46	100-yr	3613.71	611.46	605.98	2.87	1.73	37.3	10.55	224.87	1499.49	4.97	1.39	5.48	5.48
Dawson County	D8	RM 74.65	16308.2	100-yr	3613.71	611.35	605.91	2.2	1.39	21.96	6.96	267.86	1661.72	4.96	1.56	5.44	5.44
Dawson County	D8	RM 74.37	15846.14	100-yr	3613.71	611.11	605.85	2.41	1.57	26.88	8.02	221.55	1674.7	4.63	1.37	5.26	5.26
Dawson County	D8	RM 74.13	15464.97	100-yr	3613.71	610.93	605.82	2.18	1.49	21.94	6.1	235.57	1884.32	4.73	1.3	5.11	5.11
Dawson County	D8	RM 73.91	15098.01	100-yr	3613.71	610.8	605.99	1.87	1.29	16.41	5.89	283.69	1793.58	4.38	1.57	4.81	4.81
Dawson County	D8	RM 73.71	14783.86	100-yr	3613.71	610.7	605.87	1.77	1.2	14.66	4.39	292.2	2317.88	4.44	1.32	4.83	4.83
Dawson County	D8	RM 73.53	14496.67	100-yr	3613.71	610.61	605.72	1.74	1.09	14.02	4.8	249.62	2583.94	4.62	1.57	4.89	4.89
Dawson County	D8	RM 73.29	14096.19	100-yr	3613.71	610.15	605.51	2.98	1.9	41.52	10.25	198.62	1815.07	4.54	1.11	4.64	4.64
Dawson County	D8	RM 73.07	13729.79	100-yr	3613.71	609.72	605.52	3.19	2.2	49.01	12.58	196.15	1708.17	4.14	1.06	4.47	4.47
Dawson County	D8	RM 72.97	13573.93	100-yr	3613.71	609.36	605.5	3.62	2.59	64.74	20.22	199.11	1544.39	3.79	1.18	4.19	4.19
Dawson County	D8	RM 72.91	13479.91	100-yr	3613.71	609.22	605.45	3.49	2.63	60.99	22.57	221.07	1178.65	3.64	1.34	4.05	4.05
Dawson County		RM 72.905	13470.04	100-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	100-yr	3613.71	609.08	605.31	3.7	2.82	68.56	24.37	208.91	1037.65	3.66	1.3	3.91	3.91
Dawson County	D8	RM 72.83	13354.45	100-yr	3613.71	609.13	604.9	2.67	2.08	34.69	14.63	264.25	1078.58	3.99	1.68	4.23	4.23
Dawson County	D8	RM 72.62	13000.82	100-yr	3613.71	608.88	604.4	2.43	1.84	28.02	9.23	295.23	1598.38	4.25	1.4	4.49	4.49
Dawson County	D8	RM 72.37	12609.05	100-yr	3613.71	608.59	603.89	2.59	1.83	31.32	11.13	228.58	1266.1	4.51	1.59	4.7	4.7
Dawson County	D8	RM 72.16	12261.75	100-yr	3613.71	608.33	603.69	2.52	1.88	30.02	10.71	286.3	1316.06	4.36	1.55	4.64	4.64
Dawson County	D8	RM 71.92	11875.08	100-yr	3613.71	608.18	603.18	2.06	1.64	19.94	7.43	345.16	1390.85	4.46	1.66	4.99	4.99
Dawson County	D8	RM 71.69	11512.65	100-yr	3613.71	607.98	602.95	2.19	1.59	22.19	7.62	303.44	1454.57	4.64	1.59	5.04	5.04
Dawson County	D8	RM 71.49	11192.6	100-yr	3613.71	607.78	602.03	2.41	1.6	25.41	7.25	237.66	1495.01	5.42	1.54	5.75	5.75
Dawson County	D8	RM 71.31	10913.3	100-yr	3613.71	607.65	601.99	2.39	1.6	25.23	8.35	244.59	1327.28	5.27	1.74	5.66	5.66
Dawson County	D9	RM 71.10	10567.75	100-yr	3633.53	607.57	602.11	1.95	1.46	17.23	5.99	197.48	1489.86	4.94	1.7	5.46	5.46
Dawson County	D9	RM 70.91	10267.7	100-yr	3633.53	607.44	602.05	2.21	1.34	21.59	7.17	126.11	1606.53	5.32	1.74	5.39	5.39
Dawson County	D9	RM 70.72	9968.939	100-yr	3633.53	607.33	601.91	2.19	1.33	21.2	8.32	153.19	1543.72	5.41	2.06	5.42	5.42
Dawson County	D9	RM 70.50	9603.574	100-yr	3633.53	607.19	601.9	1.98	1.63	17.79	11.22	251.24	791.9	4.9	3.08	5.29	5.29
Dawson County	D9	RM 70.27	9238.535	100-yr	3633.53	606.88	601.31	2.6	1.88	29.95	10.29	236.79	1102.43	5.25	1.8	5.56	5.56
Dawson County	D9	RM 70.08	8928.013	100-yr	3633.53	606.75	600.85	2.42	1.6	25.77	8.32	234.44	1344.44	5.41	1.73	5.9	5.9
Dawson County	D9	RM 69.79	8464.726	100-yr	3633.53	606.62	600.61	2.07	1.23	18.63	6.1	248.41	1629.09	5.55	1.81	6.02	6.02
Dawson County	D9	RM 69.50	7983.226	100-yr	3633.53	606.52	600.56	1.93	1.1	16.28	5.72	237.14	1768.06	5.45	1.9	5.96	5.96
Dawson County	D9	RM 69.26	7575.04	100-yr	3633.53	606.4	600.35	1.96	1.11	16.71	6.2	245.78	1626.79	5.6	2.06	6.06	6.06
Dawson County	D9	RM 69.03	7206.967	100-yr	3633.53	606.32	599.95	1.87	1.2	14.86	6.45	236.36	1218.4	6.01	2.59	6.36	6.36
Dawson County	D9	RM 68.82	6851.789	100-yr	3633.53	606.1	599.77	2.31	1.48	22.94	8.94	217.59	1362.96	5.78	2.22	6.34	6.34

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

100-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	100-yr	3633.53	605.72	599.59	2.95	2.08	37.19	11.19	189.13	1177.64	6.01	1.77	6.13	6.13
Dawson County	D9	RM 68.39	6158.879	100-yr	3633.53	605.56	599.51	2.64	2.14	30.57	10.44	241.73	1169.46	5.43	1.84	6.05	6.05
Dawson County	D9	RM 68.11	5709.195	100-yr	3633.53	605.33	599.37	2.48	2.09	27.29	12.44	262.72	935.1	5.32	2.42	5.96	5.96
Dawson County	D9	RM 67.86	5308.187	100-yr	3633.53	605.13	599.17	2.66	2.26	30.63	22.02	130.41	554.77	5.79	4.08	5.96	5.96
Dawson County	D10	RM 67.57	4859.184	100-yr	3681.68	604.91	598.93	2.42	2.15	25.36	16.45	240.29	629.79	5.63	3.65	5.98	5.98
Dawson County	D10	RM 67.37	4523.862	100-yr	3681.68	604.81	598.75	2.2	1.75	21.06	8.85	224.36	1327.23	5.64	2.36	6.06	6.06
Dawson County	D10	RM 67.15	4175.103	100-yr	3681.68	604.42	598.47	3.13	2.08	42.39	13.22	158.11	1301.43	5.73	1.76	5.95	5.95
Dawson County	D10	RM 66.95	3842.803	100-yr	3681.68	604.36	598.2	2.33	1.53	24.1	11.09	211.57	1297.79	5.3	2.42	6.16	6.16
Dawson County	D10	RM 66.74	3505.323	100-yr	3681.68	604.15	598.12	2.52	1.76	27.34	10.48	189.78	1185.58	5.89	2.22	6.03	6.03
Dawson County	D10	RM 66.52	3142.889	100-yr	3681.68	603.89	598.26	2.59	2.02	29.71	12.76	249	1321.37	5.31	2.27	5.64	5.64
Dawson County	D10	RM 66.28	2774.58	100-yr	3681.68	603.4	598.21	3.32	2.8	50.07	25.97	206.17	753.97	4.94	2.56	5.19	5.19
Dawson County	D10	RM 66.11	2492.331	100-yr	3681.68	603.27	597.8	2.72	2.35	34.05	17.01	269.84	795.99	4.73	2.36	5.48	5.48
Dawson County	D10	RM 65.90	2160.839	100-yr	3681.68	603.16	597.33	2.38	1.89	25.19	11.59	227.64	875.45	5.24	2.38	5.83	5.83
Dawson County	D10	RM 65.75	1926.044	100-yr	3681.68	603.03	597.2	2.36	2	25.64	12.82	203.78	1017.7	4.77	2.36	5.83	5.83
Dawson County	D10	RM 65.60	1669.095	100-yr	3681.68	602.86	597.07	2.66	1.75	30.97	10.83	140.14	1385.06	5.56	1.91	5.8	5.8
Dawson County	D10	RM 65.42	1386.836	100-yr	3681.68	602.76	596.92	2.13	1.66	20.02	7.22	247.82	1373.25	5.38	1.92	5.84	5.84
Dawson County	D10	RM 65.23	1090.639	100-yr	3681.68	602.64	596.91	2.16	1.51	22.02	7.97	263.18	1896.2	4.37	1.56	5.73	5.73
Dawson County	D10	RM 64.96	634.963	100-yr	3681.68	602.5	597.09	1.86	1.15	15.79	5.76	270.22	2337.3	4.89	1.78	5.41	5.41

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	100-yr	3681.2	602.36	596.42	1.46	0.9	10.03	3.99	398.12	2348.36	4.4	1.74	5.94	5.94
Richland/McKenzie County	D10	RM 64.32	103200	100-yr	3681.2	602.28	596.33	1.76	0.88	13.95	4.98	232.97	2325.18	5.1	1.8	5.95	5.95
Richland/McKenzie County	D10	RM 64.12	102900	100-yr	3681.2	602.23	596.18	1.55	0.92	11.02	4.64	281.09	2051.45	4.69	1.96	6.05	6.05
Richland/McKenzie County	D10	RM 63.92	102601	100-yr	3681.2	602.18	596.08	1.46	0.81	9.93	4.7	273.38	2130.96	4.56	2.14	6.1	6.1
Richland/McKenzie County	D10	RM 63.74	102302	100-yr	3681.2	602.12	595.94	1.57	0.86	11.15	4.54	254.65	2150.21	4.97	2	6.18	6.18
Richland/McKenzie County	D10	RM 63.55	101998	100-yr	3681.2	602.06	595.79	1.66	0.84	11.9	4.42	210.56	2049.06	5.81	2.13	6.27	6.27
Richland/McKenzie County	D10	RM 63.34	101671	100-yr	3681.2	602.01	595.21	1.63	0.82	11.91	5.35	241.49	1995.35	5.06	2.26	6.8	6.8
Richland/McKenzie County	D10	RM 63.08	101293	100-yr	3681.2	601.66	595.12	2.91	1.22	37.48	13.28	159.68	1605.91	5.38	1.87	6.54	6.54
Richland/McKenzie County	D10	RM 62.96	101094	100-yr	3681.2	601.46	595.12	3.1	1.45	52.82	15.97	149.74	1501.56	5.72	1.69	6.34	6.34
Richland/McKenzie County	D10	RM 62.83	100882	100-yr	3681.2	601.32	595.12	2.99	1.45	43.24	12.83	161.51	1480.89	5.88	1.71	6.2	6.2
Richland/McKenzie County	D10	RM 62.64	100582	100-yr	3681.2	601.19	595.12	2.68	1.42	31.02	10.15	189.94	1391.87	5.79	1.86	6.07	6.07
Richland/McKenzie County	D10	RM 62.46	100282	100-yr	3681.2	600.63	595.1	3.75	2.26	63.14	19.06	161.13	1062.03	5.18	1.53	5.53	5.53
Richland/McKenzie County	D10	RM 62.27	99977	100-yr	3681.2	600.71	594.91	2.11	1.52	20	8.21	303.35	1159.76	5.16	2.09	5.8	5.8
Richland/McKenzie County	D10	RM 62.1	99691	100-yr	3681.2	600.63	594.75	1.85	1.36	15.57	7.92	274.06	1230.63	4.36	2.2	5.88	5.88
Richland/McKenzie County	D10	RM 61.91	99377	100-yr	3681.2	600.48	594.51	2.07	1.33	18.97	9.54	164.84	1172.71	4.76	2.36	5.97	5.97
Richland/McKenzie County	D10	RM 61.72	99082	100-yr	3681.2	600.33	594.36	2.19	1.46	21.23	8.22	127.17	1248.3	5.34	2.03	5.97	5.97
Richland/McKenzie County	D10	RM 61.54	98782	100-yr	3681.2	599.97	594.36	2.73	1.99	32.59	10.57	230.57	1134.2	5.09	1.63	5.61	5.61
Richland/McKenzie County	D10	RM 61.35	98482	100-yr	3681.2	599.77	594.26	2.73	1.99	33.59	11.65	215	1063.24	5.07	1.74	5.51	5.51
Richland/McKenzie County	D10	RM 61.16	98182	100-yr	3681.2	599.73	594.17	1.98	1.47	18.09	8.85	248.77	1090.48	4.73	2.3	5.56	5.56
Richland/McKenzie County	D10	RM 60.99	97906	100-yr	3681.2	599.59	594.02	2.19	1.44	21.52	8.39	216.72	1288.81	5.15	1.99	5.57	5.57
Richland/McKenzie County	D10	RM 60.79	97582	100-yr	3681.2	599.46	593.78	2.13	1.3	21.31	9.05	224.25	1517.99	4.43	1.86	5.68	5.68
Richland/McKenzie County	D10	RM 60.64	97339	100-yr	3681.2	599.45	593.58	1.39	0.97	9.29	4.94	266.31	1704.85	4.23	2.22	5.87	5.87
Richland/McKenzie County	D10	RM 60.42	96982	100-yr	3681.2	599.28	593.38	1.98	1.23	17.44	6.01	215.62	1811.32	4.97	1.69	5.9	5.9
Richland/McKenzie County	D10	RM 60.25	96700	100-yr	3681.2	599.13	593.24	2.42	1.35	27.77	10.16	192.38	1748.44	4.35	1.56	5.89	5.89
Richland/McKenzie County	D10	RM 60.04	96365	100-yr	3681.2	598.98	593.14	2.18	1.25	23.58	9.25	227.05	1995.35	3.81	1.47	5.84	5.84
Richland/McKenzie County	D10	RM 59.86	96088	100-yr	3681.2	598.89	592.99	2.02	0.99	18.01	5.73	171.89	2205.3	5.43	1.69	5.9	5.9
Richland/McKenzie County	D10	RM 59.65	95769	100-yr	3681.2	598.85	592.85	1.6	0.83	11.64	4.31	207.22	2447.62	4.95	1.8	6	6
Richland/McKenzie County	D10	RM 59.5	95530	100-yr	3681.2	598.77	592.75	1.76	0.96	14.37	4.89	206.9	2473.13	4.6	1.55	6.02	6.02
Richland/McKenzie County	D10	RM 59.29	95183	100-yr	3681.2	598.69	592.55	1.61	0.97	11.91	4.17	232.08	2332.22	4.7	1.62	6.14	6.14
Richland/McKenzie County	D10	RM 59.07	94797	100-yr	3681.2	598.62	592.36	1.44	0.94	10.51	4.19	408.43	2192.18	4.49	1.78	6.26	6.26
Richland/McKenzie County	D10	RM 58.93	94582	100-yr	3681.2	598.52	592.31	1.8	1.04	14.82	5.39	328.36	2062.09	4.78	1.72	6.21	6.21
Richland/McKenzie County	D10	RM 58.75	94282	100-yr	3681.2	598.41	592.28	1.96	1.1	16.65	5.29	264.72	1944.02	5.48	1.72	6.13	6.13
Richland/McKenzie County	D10	RM 58.56	93982	100-yr	3681.2	597.99	592.22	3.26	1.63	46.67	11.11	157.23	1761.98	5.49	1.28	5.77	5.77
Richland/McKenzie County	D10	RM 58.37	93682	100-yr	3681.2	597.77	592.22	3.09	1.77	42.39	10.25	186.39	1659.69	5.27	1.25	5.55	5.55
Richland/McKenzie County	D10	RM 58.19	93382	100-yr	3681.2	597.77	592.22	2.11	1.36	19.59	6.64	254.64	1499.81	5.38	1.8	5.55	5.55
Richland/McKenzie County	D10	RM 58.01	93086	100-yr	3681.2	597.41	592.14	2.83	2.11	36.1	10.3	236.71	1233.91	5.01	1.41	5.27	5.27
Richland/McKenzie County	D10	RM 57.82	92782	100-yr	3681.2	597.38	592.11	1.96	1.54	18.21	7.79	308.1	1292.72	4.33	1.84	5.27	5.27
Richland/McKenzie County	D10	RM 57.63	92482	100-yr	3681.2	597.23	592.11	2.42	1.55	26.75	10	160.84	1339.4	4.82	1.78	5.12	5.12
Richland/McKenzie County	D10	RM 57.46	92205	100-yr	3681.2	597.16	591.95	1.8	1.18	14.7	6.08	192.28	1609.15	4.92	2.01	5.21	5.21
Richland/McKenzie County	D10	RM 57.26	91882	100-yr	3681.2	596.93	591.9	2.27	1.56	24.4	9.43	136.34	1428.09	4.35	1.66	5.03	5.03
Richland/McKenzie County	D10	RM 57.07	91583	100-yr	3681.2	596.86	591.73	1.86	1.25	15.86	6.07	137.42	1609.21	4.88	1.83	5.13	5.13
Richland/McKenzie County	D10	RM 56.87	91253	100-yr	3681.2	596.72	591.49	1.68	1.27	13.29	6.01	186.15	1465.2	4.42	1.98	5.29	5.29
Richland/McKenzie County	D10	RM 56.68	90943	100-yr	3681.2	596.65	591.12	1.5	1.26	10.73	6.31	299.58	1392.56	4.21	2.47	5.53	5.53
Richland/McKenzie County	D10	RM 56.54	90682	100-yr	3712.3	596.44	590.76	1.96	2.01	21.82	16.24	216.66	859.31	3.74	2.77	5.72	5.72
Richland/McKenzie County	D10	RM 56.35	90387	100-yr	3712.3	596.27	590.46	2.08	2.01	20.29	17.11	174.85	644.76	4.47	3.74	5.81	5.81
Richland/McKenzie County	D11	RM 56.16	90086	100-yr	3712.3	595.75	590.11	3.2	2.95	45.7	26.32	221.5	442.45	5.2	2.96	5.64	5.64
Richland/McKenzie County	D11	RM 55.96	89768	100-yr	3712.3	595.55	589.96	2.98	2.52	39.21	20.87	222.74	555.65	5.34	2.83	5.59	5.59
Richland/McKenzie County	D11	RM 55.78	89479	100-yr	3712.3	595.48	589.96	2.53	1.78	28.57	11.76	216.81	997.88	5.2	2.13	5.52	5.52
Richland/McKenzie County	D11	RM 55.61	89193	100-yr	3712.3	595.32	589.98	2.53	1.65	28.8	8.78	222.22	1457.91	5.11	1.54	5.34	5.34
Richland/McKenzie County	D11	RM 55.41	88882	100-yr	3712.3	595.17	589.76	2.4	1.48	26.22	8.99	203.81	1516.09	4.88	1.66	5.41	5.41
Richland/McKenzie County	D11	RM 55.23	88582	100-yr	3712.3	595	589.53	2.35	1.49	24.62	7.45	238.9	1584.08	5.26	1.57	5.47	5.47
Richland/McKenzie County	D11	RM 55.04	88282	100-yr	3712.3	594.78	589.39	2.57	1.66	30.36	9.4	252.08	1534.89	4.73	1.45	5.39	5.39
Richland/McKenzie County	D11	RM 54.86	87996	100-yr	3712.3	594.38	589.33	3.18	2.24	48.68	15.37	223.58	1289.7	4.12	1.29	5.05	5.05
Richland/McKenzie County	D11	RM 54.69	87715	100-yr	3712.3	594.34	589.23	2.21	1.7	22.98	9.17	188.11	1368.17	4.48	1.77	5.11	5.11
Richland/McKenzie County	D11	RM 54.48	87382	100-yr	3712.3	594.24	589.15	1.87	1.14	16.22	4.91	179.29	2476.51	4.6	1.38	5.09	5.09
Richland/McKenzie County	D11	RM 54.32	87122	100-yr	3712.3	594.16	589	1.9	1	16.43	4.85	159.94	2576.58	5.01	1.45	5.16	5.16
Richland/McKenzie County	D11	RM 54.1	86783	100-yr	3712.3	594.05	588.83	1.7	1.05	13.01	4.38	202.24	2107.07	5.06	1.68	5.22	5.22
Richland/McKenzie County	D11	RM 53.92	86482	100-yr	3712.3	593.96	588.68	1.65	1.06	12.69	4.52	255.08	2368.1	4.57	1.6	5.28	5.28
Richland/McKenzie County	D11	RM 53.73	86182	100-yr	3712.3	593.85	588.51	1.93	1.11	16.72	5.48	196.75	2681.91	5.13	1.65	5.34	5.34
Richland/McKenzie County	D11	RM 53.55	85882	100-yr	3712.3	593.7	588.37	2.01	1.27	18.3	6.05	181.72	1976.91	4.98	1.63	5.33	5.33
Richland/McKenzie County	D11	RM 53.36	85582	100-yr	3712.3	593.54	588.01	2.17	1.29	22.11	6.86	166.55	2224.7	4.48	1.37	5.53	5.53

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 53.17	85290	100-yr	3712.3	592.99	587.56	3.3	1.84	49.24	9.97	205.83	2042.61	4.95	0.99	5.43	5.43
Richland/McKenzie County	D11	RM 52.98	84982	100-yr	3712.3	592.77	587.56	2.88	1.33	42.31	14.82	271.44	2693.44	3.5	1.21	5.21	5.21
Richland/McKenzie County	D11	RM 52.79	84682	100-yr	3712.3	592.56	587.56	2.28	1.25	27.12	11.69	387.04	2457.68	3.28	1.4	5	5
Richland/McKenzie County	D11	RM 52.61	84390	100-yr	3712.3	592.41	587.43	1.9	1.27	17.66	5.93	450.01	2733.99	3.91	1.3	4.98	4.98
Richland/McKenzie County	D11	RM 52.42	84082	100-yr	3712.3	592.34	587.28	1.62	1.01	13.33	5.41	409.99	2833.12	3.5	1.41	5.06	5.06
Richland/McKenzie County	D11	RM 52.24	83798	100-yr	3712.3	592.28	587.28	1.53	0.74	11.15	3.93	227.41	3574.93	4.2	1.46	5	5
Richland/McKenzie County	D11	RM 52.01	83423	100-yr	3712.3	592.11	587.23	2.07	0.94	19.97	4.96	124.91	3749.91	4.66	1.12	4.87	4.87
Richland/McKenzie County	D11	RM 51.87	83182	100-yr	3712.3	592.03	587.16	1.65	0.85	13.83	5.25	156.7	3394.33	3.47	1.29	4.87	4.87
Richland/McKenzie County	D11	RM 51.69	82882	100-yr	3712.3	591.94	587.16	1.48	0.77	10.65	3.72	151.24	3545	3.98	1.36	4.78	4.78
Richland/McKenzie County	D11	RM 51.51	82585	100-yr	3712.3	591.87	587.16	1.7	0.86	14.39	4.73	149.84	3632.34	3.7	1.19	4.71	4.71
Richland/McKenzie County	D11	RM 51.32	82274	100-yr	3712.3	591.82	587.16	1.39	0.74	9.65	3.8	173.83	3569.66	3.65	1.41	4.66	4.66
Richland/McKenzie County	D11	RM 51.13	81982	100-yr	3712.3	591.77	587.13	1.5	0.76	10.55	3.26	164.51	3631.85	4.46	1.35	4.66	4.66
Richland/McKenzie County	D11	RM 50.95	81682	100-yr	3712.3	591.7	587.08	1.37	0.66	8.83	3.07	144.96	3763.18	4.4	1.51	4.62	4.62
Richland/McKenzie County	D11	RM 50.76	81378	100-yr	3712.3	591.64	586.89	1.28	0.59	7.88	3.24	174.41	3685.16	4.25	1.71	4.75	4.75
Richland/McKenzie County	D11	RM 50.56	81065	100-yr	3712.3	591.5	586.37	1.64	0.75	12.12	3.66	171.61	3393.35	5.01	1.48	5.13	5.13
Richland/McKenzie County	D11	RM 50.39	80787	100-yr	3712.3	591.46	585.7	1.54	0.72	10.34	3.04	196.96	3147.7	5.66	1.63	5.76	5.76
Richland/McKenzie County	D11	RM 50.21	80482	100-yr	3712.3	591.38	585.55	1.53	0.85	10.51	3.57	234.94	2539.54	5.11	1.72	5.83	5.83
Richland/McKenzie County	D11	RM 50.02	80182	100-yr	3740.7	591.24	585.55	1.9	1.08	16.26	5.21	197.51	2178.5	5.05	1.58	5.69	5.69
Richland/McKenzie County	D12	RM 49.82	79860	100-yr	3740.7	590.86	585.55	2.87	1.63	37.04	8.58	212.06	1980.28	5.07	1.16	5.31	5.31
Richland/McKenzie County	D12	RM 49.65	79582	100-yr	3740.7	590.5	585.55	3.25	2.11	48.71	12.15	213.94	1526.4	4.7	1.16	4.95	4.95
Richland/McKenzie County	D12	RM 49.5	79348	100-yr	3740.7	590.64	585.49	1.63	1.13	11.99	4.02	356	1963.26	5.06	1.69	5.19	5.19
Richland/McKenzie County	D12	RM 49.26	78981	100-yr	3740.7	590.55	585.29	1.91	1.2	16.42	5.45	137.44	1894.28	5.04	1.64	5.26	5.26
Richland/McKenzie County	D12	RM 49.08	78682	100-yr	3740.7	590.42	585.11	2.06	1.26	19.12	5.77	156.64	1982.44	5.04	1.5	5.38	5.38
Richland/McKenzie County	D12	RM 48.87	78351	100-yr	3740.7	590.32	584.96	1.99	1.19	17.77	5.63	209.35	2023.97	5.08	1.6	5.36	5.36
Richland/McKenzie County	D12	RM 48.7	78082	100-yr	3740.7	590.23	584.86	1.9	1.23	17.12	7.22	252.25	1700	4.34	1.8	5.37	5.37
Richland/McKenzie County	D12	RM 48.52	77782	100-yr	3740.7	590.21	584.74	1.27	0.94	7.73	4.14	473.03	1746.19	4.26	2.27	5.47	5.47
Richland/McKenzie County	D12	RM 48.33	77482	100-yr	3740.7	590.16	584.51	1.31	0.97	9.69	5.71	517.65	1806.64	3.64	2.14	5.65	5.65
Richland/McKenzie County	D12	RM 48.15	77182	100-yr	3740.7	590.05	584.24	1.55	0.92	11.44	6.87	497.96	1816.49	3.76	2.25	5.81	5.81
Richland/McKenzie County	D12	RM 47.97	76887	100-yr	3740.7	590.03	584.09	1.16	0.85	6.33	4.51	601.73	2181.27	3.43	2.44	5.94	5.94
Richland/McKenzie County	D12	RM 47.76	76570	100-yr	3740.7	589.98	583.86	1.12	0.89	6.35	4.12	565.5	2101.54	3.76	2.44	6.12	6.12
Richland/McKenzie County	D12	RM 47.59	76293	100-yr	3740.7	589.92	583.71	1.27	0.93	7.84	4.05	391.27	2069.4	4.48	2.31	6.21	6.21
Richland/McKenzie County	D12	RM 47.4	75982	100-yr	3740.7	589.82	583.42	1.68	1	12.37	5.25	196.88	1964.38	5.33	2.24	6.4	6.4
Richland/McKenzie County	D12	RM 47.12	75521	100-yr	3740.7	589.59	583.04	2.1	1.21	18.52	6	234.72	1792.25	6.29	2.01	6.55	6.55
Richland/McKenzie County	D12	RM 47	75323	100-yr	3740.7	589.24	583.04	3.25	1.63	45.96	12.75	162.2	1696.81	5.63	1.54	6.2	6.2
Richland/McKenzie County	D12	RM 46.85	75082	100-yr	3740.7	589.1	583.04	3	1.63	39.17	11.06	184.53	1606.92	5.6	1.56	6.06	6.06
Richland/McKenzie County	D12	RM 46.67	74782	100-yr	3740.7	588.81	583.04	3.19	1.98	44.19	11.92	185.83	1345.31	5.61	1.49	5.77	5.77
Richland/McKenzie County	D12	RM 46.47	74459	100-yr	3740.7	588.8	583.04	2.17	1.65	21.01	8.57	312.11	1092.66	5.12	2.07	5.76	5.76
Richland/McKenzie County	D12	RM 46.3	74186	100-yr	3740.7	588.68	583.04	2.12	1.78	20.12	12.54	421.1	879.5	3.85	2.38	5.64	5.64
Richland/McKenzie County	D12	RM 46.14	73920	100-yr	3740.7	588.56	583.04	1.97	1.68	17.33	11.49	454.73	857.8	3.93	2.59	5.52	5.52
Richland/McKenzie County	D12	RM 45.9	73546	100-yr	3740.7	588.42	582.97	1.99	1.41	18.45	8.89	339.6	1255.3	4.57	2.2	5.45	5.45
Richland/McKenzie County	D12	RM 45.75	73307	100-yr	3740.7	588.26	582.88	2.2	1.51	23.63	10.98	351.5	1547.16	3.97	1.84	5.38	5.38
Richland/McKenzie County	D12	RM 45.54	72980	100-yr	3740.7	588.15	582.55	1.84	1.36	15.74	7.7	382.5	1854.51	4.6	2.23	5.6	5.6
Richland/McKenzie County	D12	RM 45.29	72680	100-yr	3740.7	588.02	582.25	1.99	1.4	18.51	8.69	347.33	1782.76	4.54	2.12	5.77	5.77
Richland/McKenzie County	D12	RM 45.09	72380	100-yr	3740.7	587.89	582.08	2.1	1.39	19.47	7.46	267.36	1999.62	5.41	2.06	5.81	5.81
Richland/McKenzie County	D12	RM 44.91	72080	100-yr	3740.7	587.79	582.01	2.05	1.37	18.67	7.39	283.48	2093.56	5.18	2.03	5.78	5.78
Richland/McKenzie County	D12	RM 44.72	71783	100-yr	3740.7	587.53	581.97	2.64	1.56	30.93	10.07	208.81	2298.25	5.25	1.69	5.56	5.56
Richland/McKenzie County	D12	RM 44.53	71483	100-yr	3740.7	587.27	581.82	2.99	1.82	40.45	14.93	177.29	2105.14	5	1.82	5.45	5.45
Richland/McKenzie County	D12	RM 44.34	71183	100-yr	3740.7	587.01	581.8	2.98	1.82	42.04	14.81	199.5	2229.39	4.4	1.53	5.21	5.21
Richland/McKenzie County	D12	RM 44.17	70899	100-yr	3740.7	587.02	581.79	1.81	1.28	14.61	5.14	301.73	2186.68	5.15	1.8	5.23	5.23
Richland/McKenzie County	D12	RM 43.97	70594	100-yr	3740.7	586.95	581.73	1.66	1.15	13.1	5.2	326.68	2617.45	4.36	1.71	5.22	5.22
Richland/McKenzie County	D12	RM 43.74	70230	100-yr	3740.7	586.79	581.66	1.94	1.43	18.14	5.69	164.51	2422.65	4.16	1.29	5.13	5.13
Richland/McKenzie County	D12	RM 43.59	69983	100-yr	3740.7	586.69	581.56	1.65	0.88	12.99	5.13	143.76	2748.57	4.26	1.65	5.13	5.13
Richland/McKenzie County	D12	RM 43.4	69684	100-yr	3740.7	586.6	581.49	1.64	0.9	12.86	4.62	150.64	2914.88	4.46	1.58	5.11	5.11
Richland/McKenzie County	D12	RM 43.03	69084	100-yr	3740.7	586.49	581.37	1.53	0.79	11.18	4.54	131.62	3241.24	4.24	1.69	5.12	5.12
Richland/McKenzie County	D12	RM 42.66	68489	100-yr	3740.7	586.41	581.18	1.71	0.8	13.72	4.99	115.82	3361.24	4.59	1.63	5.23	5.23
Richland/McKenzie County	D12	RM 42.29	67889	100-yr	3740.7	586.35	580.87	1.29	0.73	7.61	2.88	281.47	3583.15	4.88	1.82	5.48	5.48
Richland/McKenzie County	D12	RM 42.08	67558	100-yr	3740.7	586.3	580.61	1.47	0.72	9.52	3.34	180.64	3380.65	5.44	1.88	5.69	5.69
Richland/McKenzie County	D12	RM 41.89	67260	100-yr	3740.7	586.21	580.31	1.6	0.83	11.33	4.04	292.42	2974.51	5.32	1.88	5.9	5.9
Richland/McKenzie County	D12	RM 41.75	67037	100-yr	3740.7	586.13	579.99	1.7	0.91	13.39	4.93	337.38	2714.01	4.64	1.69	6.14	6.14
Richland/McKenzie County	D12	RM 41.54	66695	100-yr	3740.7	585.94	579.72	2.22	0.99	21	6.21	196.39	2192.2	5.91	1.72	6.22	6.22
Richland/McKenzie County	D12	RM 41.34	66361	100-yr	3740.7	585.79	579.43	2.29	1.15	23.75	7.8	218.95	2005.49	5	1.62	6.36	6.36

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 41.18	66116	100-yr	3740.7	585.63	579.08	2.44	1.23	26.14	7.91	195.81	1856.96	5.53	1.64	6.55	6.55
Richland/McKenzie County	D12	RM 40.99	65802	100-yr	3740.7	585.54	578.99	2.16	1.06	20.63	6.7	203.5	2042.53	5.4	1.73	6.55	6.55
Richland/McKenzie County	D12	RM 40.8	65502	100-yr	3740.7	585.37	578.97	2.2	1.26	22.13	6.49	273.63	2114.42	4.83	1.4	6.4	6.4
Richland/McKenzie County	D12	RM 40.62	65205	100-yr	3740.7	585.34	578.92	1.58	0.9	11.81	4.2	375.4	2953.95	4.37	1.54	6.42	6.42
Richland/McKenzie County	D12	RM 40.24	64602	100-yr	3740.7	585.19	578.6	1.44	0.82	10.08	3.84	507.11	3254.61	3.84	1.45	6.59	6.59
Richland/McKenzie County	D12	RM 40	64219	100-yr	3740.7	585.05	578.56	1.79	0.87	14.62	3.99	309.03	3355.97	4.89	1.31	6.49	6.49
Richland/McKenzie County	D12	RM 39.87	64002	100-yr	3740.7	584.91	578.55	2.23	0.98	21.57	4.75	222	3273.45	5.6	1.21	6.36	6.36
Richland/McKenzie County	D12	RM 39.68	63702	100-yr	3740.7	584.83	578.45	2.08	0.98	19.6	4.67	241.95	3256.79	5.04	1.18	6.38	6.38
Richland/McKenzie County	D12	RM 39.5	63402	100-yr	3740.7	584.75	578.35	2	0.89	18.22	4.72	226.39	3344.45	4.91	1.25	6.4	6.4
Richland/McKenzie County	D12	RM 39.31	63102	100-yr	3740.7	584.67	578.31	1.89	0.91	15.94	4.14	227.2	3088.59	5.2	1.33	6.36	6.36
Richland/McKenzie County	D12	RM 39.13	62802	100-yr	3740.7	584.58	578.2	1.86	0.9	15.84	4.63	286.13	2977.47	4.84	1.4	6.38	6.38
Richland/McKenzie County	D12	RM 38.94	62501	100-yr	3740.7	584.52	578.12	1.72	0.8	13.17	4.05	264.19	2961.65	5.18	1.57	6.4	6.4
Richland/McKenzie County	D12	RM 38.76	62201	100-yr	3740.7	584.45	578.03	1.71	0.8	12.68	3.62	245.72	2886.34	5.76	1.62	6.42	6.42
Richland/McKenzie County	D12	RM 38.57	61901	100-yr	3740.7	584.39	577.87	1.76	0.81	14.04	4.98	236.46	2684.99	4.9	1.72	6.52	6.52
Richland/McKenzie County	D12	RM 38.38	61601	100-yr	3740.7	584.38	577.84	1.03	0.59	4.99	2.63	268.55	2449.43	4.98	2.6	6.54	6.54
Richland/McKenzie County	D12	RM 38.2	61301	100-yr	3740.7	584.32	577.82	1.3	0.72	7.23	3.3	244.45	2358.8	5.8	2.62	6.5	6.5
Richland/McKenzie County	D12	RM 38.01	61008	100-yr	3740.7	584.28	577.81	1.34	0.87	8.29	4.69	307.49	1632.02	4.69	2.63	6.47	6.47
Richland/McKenzie County	D12	RM 37.84	60708	100-yr	3740.7	584.21	577.71	1.53	1.04	12.03	6.16	335.25	1530.52	4.72	2.4	6.5	6.5
Richland/McKenzie County	D12	RM 37.65	60408	100-yr	3740.7	584.2	577.66	1.07	0.83	5.28	3.35	565.75	1608.04	4.64	2.93	6.54	6.54
Richland/McKenzie County	D12	RM 37.5	60107	100-yr	3740.7	584.16	577.54	1.05	0.93	5.47	3.86	561.58	1402.94	4.18	2.94	6.62	6.62
Richland/McKenzie County	D12	RM 37.35	59808	100-yr	3740.7	584.07	577.37	1.24	0.97	8.67	5.82	427.63	1307.92	4.54	3.04	6.7	6.7
Richland/McKenzie County	D12	RM 37.16	59508	100-yr	3740.7	583.94	577.24	1.77	1.19	15.05	9.47	280.03	1113.99	4.71	2.94	6.7	6.7
Richland/McKenzie County	D12	RM 36.97	59208	100-yr	3740.7	583.84	576.96	1.97	1.32	17.78	11.77	222.26	1612.47	4.58	3	6.88	6.88
Richland/McKenzie County	D12	RM 36.78	58908	100-yr	3740.7	583.75	576.87	1.93	1.36	16.31	10.67	217.29	2096.46	5.43	3.53	6.88	6.88
Richland/McKenzie County	D12	RM 36.6	58608	100-yr	3740.7	583.65	576.66	2.03	1.42	17.25	7.76	182.19	2165.73	6.34	2.78	6.99	6.99
Richland/McKenzie County	D12	RM 36.38	58263	100-yr	3786	583.49	576.49	2.06	1.66	18.06	7.3	290.42	2095.93	5.93	2.37	7	7
Richland/McKenzie County	D13	RM 36.23	58011	100-yr	3786	583.28	576.43	2.62	1.75	28.56	8.51	199.11	2186.3	6.41	1.87	6.85	6.85
Richland/McKenzie County	D13	RM 36.04	57708	100-yr	3786	583.15	576.42	2.7	1.56	31.52	10.13	194.14	2244.08	5.74	1.81	6.73	6.73
Richland/McKenzie County	D13	RM 35.85	57408	100-yr	3786	583.09	576.41	2.2	1.33	20.73	7.64	278.61	2377.8	4.88	1.78	6.68	6.68
Richland/McKenzie County	D13	RM 35.66	57108	100-yr	3786	583.08	576.36	1.61	1.06	11.41	4.38	327.66	2448.11	5.55	2.12	6.72	6.72
Richland/McKenzie County	D13	RM 35.48	56810	100-yr	3786	582.93	576.3	2.2	1.21	20.6	6.68	189.87	2377.42	5.93	1.89	6.63	6.63
Richland/McKenzie County	D13	RM 35.29	56508	100-yr	3786	582.84	576.19	2.11	1.24	19.9	7.02	216.77	2442.52	5.23	1.82	6.65	6.65
Richland/McKenzie County	D13	RM 35.1	56208	100-yr	3786	582.7	576.07	2.07	1.29	18.24	6.74	244.46	2303.02	6.15	2.22	6.63	6.63
Richland/McKenzie County	D13	RM 34.92	55908	100-yr	3786	582.6	576.09	2.08	1.31	21.8	8.81	254.13	2304.51	5.65	2.26	6.51	6.51
Richland/McKenzie County	D13	RM 34.73	55605	100-yr	3786	582.53	575.89	1.69	1.32	12.44	6.72	414.63	1593.94	4.83	2.6	6.64	6.64
Richland/McKenzie County	D13	RM 34.54	55297	100-yr	3786	582.45	575.79	1.64	1.29	13.4	7.78	394.66	1672.94	4.3	2.48	6.66	6.66
Richland/McKenzie County	D13	RM 34.36	55008	100-yr	3786	582.41	575.75	1.5	1.03	9.38	4.29	323.48	1721.79	5.82	2.64	6.66	6.66
Richland/McKenzie County	D13	RM 34.17	54708	100-yr	3786	582.39	575.49	1.31	0.88	7.54	3.67	380.95	1889.58	5.33	2.58	6.9	6.9
Richland/McKenzie County	D13	RM 33.94	54408	100-yr	3786	582.36	575.34	1.22	0.86	6.42	3.04	374.48	1767.99	5.46	2.57	7.02	7.02
Richland/McKenzie County	D13	RM 33.76	54079	100-yr	3786	582.31	575.12	1.37	0.96	8.15	3.85	286.39	1750.44	5.63	2.61	7.19	7.19
Richland/McKenzie County	D13	RM 33.6	53799	100-yr	3786	582.28	574.88	1.32	0.96	8.29	4.4	376.74	1649.8	5.26	2.76	7.4	7.4
Richland/McKenzie County	D13	RM 33.42	53508	100-yr	3786	582.21	574.61	1.51	1.03	9.32	4.46	262.09	1592.32	6.43	3.03	7.6	7.6
Richland/McKenzie County	D13	RM 33.23	53208	100-yr	3786	582.18	574.45	1.48	1.08	8.85	5.15	209.05	1758.4	6.94	4.01	7.73	7.73
Richland/McKenzie County	D13	RM 33.04	52908	100-yr	3786	582.09	574.3	1.79	1.21	12.74	5.73	193.34	1774.58	7.46	3.3	7.79	7.79
Richland/McKenzie County	D13	RM 32.86	52608	100-yr	3786	581.96	574.18	2.11	1.22	18.07	7.85	209.27	1656.57	6.96	2.97	7.78	7.78
Richland/McKenzie County	D13	RM 32.67	52308	100-yr	3786	581.91	574.18	2.02	1.05	16.69	8	188.53	1633	6.77	3.19	7.73	7.73
Richland/McKenzie County	D13	RM 32.48	52008	100-yr	3786	581.81	574.04	2.13	1.07	18.87	8.55	196.91	1613.26	6.48	2.87	7.77	7.77
Richland/McKenzie County	D13	RM 32.29	51709	100-yr	3786	581.76	574.04	1.84	1.02	13.9	7.06	224.23	1552.13	6.72	3.36	7.72	7.72
Richland/McKenzie County	D13	RM 32.11	51423	100-yr	3786	581.71	573.94	1.77	1.08	12.71	5.02	220.08	1514.26	7.02	2.74	7.77	7.77
Richland/McKenzie County	D13	RM 31.92	51108	100-yr	3786	581.68	573.85	1.54	0.98	9.89	4.63	211.85	1547.8	6.29	2.9	7.83	7.83
Richland/McKenzie County	D13	RM 31.73	50809	100-yr	3786	581.64	573.72	1.41	0.89	8.68	3.82	261.37	1448.7	7.09	3.08	7.92	7.92
Richland/McKenzie County	D13	RM 31.51	50462	100-yr	3786	581.49	573.24	2.13	1.24	17.48	7.54	162.22	1015.26	7.14	3.02	8.25	8.25
Richland/McKenzie County	D13	RM 31.35	50208	100-yr	3786	581.39	573.24	2.27	1.54	21.53	11.77	169.04	719	6.39	3.43	8.15	8.15
Richland/McKenzie County	D13	RM 31.22	50009	100-yr	3786	581.19	573.24	2.74	1.84	30.62	16.86	149.68	606.81	6.89	3.72	7.95	7.95
Richland/McKenzie County	D13	RM 31.12	49859	100-yr	3786	581.04	570.86	2.64	2.59	38.63	35.65	196.27	218.26	7.24	6.69	10.18	10.18
Richland/McKenzie County	D13	Highway 23	49844	100-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	100-yr	3786	580.98	570.86	2.68	2.63	38.61	35.39	192.51	216.25	7.27	6.66	10.12	10.12
Richland/McKenzie County	D13	RM 30.97	49608	100-yr	3786	580.95	573.24	2.26	2.07	20.48	14.59	225.84	638.74	7.29	5.16	7.71	7.71
Richland/McKenzie County	D13	RM 30.79	49308	100-yr	3786	580.72	573.24	2.74	2.13	31.22	17.61	199.27	759.62	6.53	3.64	7.48	7.48
Richland/McKenzie County	D13	RM 30.6	49009	100-yr	3786	580.56	573.24	2.85	1.9	34.02	18.01	187.26	861.24	6.29	3.28	7.32	7.32
Richland/McKenzie County	D13	RM 30.41	48706	100-yr	3786	580.52	573.15	2.35	1.64	24.17	12.38	212.3	1216.91	6.25	3.16	7.37	7.37

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 30.22	48403	100-yr	3786	580.41	573.15	2.34	1.44	22.35	9.3	199.03	1498.16	6.8	2.78	7.26	7.26
Richland/McKenzie County	D13	RM 30.03	48102	100-yr	3786	580.43	573.15	1.56	1.03	10.13	4.9	315.48	1593.34	6.58	3.1	7.28	7.28
Richland/McKenzie County	D13	RM 29.85	47809	100-yr	3786	580.4	573.15	1.43	0.93	8.76	4.49	376.84	1362.47	6.04	3.05	7.25	7.25
Richland/McKenzie County	D13	RM 29.66	47508	100-yr	3786	580.33	573.11	1.57	0.96	10.31	4.9	393.01	1900.88	5.03	2.35	7.22	7.22
Richland/McKenzie County	D13	RM 29.48	47209	100-yr	3786	580.28	573.11	1.5	0.97	9.49	4.31	346.87	1469.48	5.9	2.64	7.17	7.17
Richland/McKenzie County	D13	RM 29.28	46894	100-yr	3786	580.24	572.98	1.37	1.06	8.24	4.18	401.07	1313.57	5.51	2.78	7.26	7.26
Richland/McKenzie County	D13	RM 29.1	46608	100-yr	3786	580.17	572.94	1.78	1.06	13.29	5.43	169.86	1419.01	6.27	2.52	7.23	7.23
Richland/McKenzie County	D13	RM 28.92	46308	100-yr	3786	580.1	572.85	1.87	1.11	14.26	4.81	146.69	1549.75	6.78	2.24	7.25	7.25
Richland/McKenzie County	D13	RM 28.73	46008	100-yr	3786	580.07	572.67	1.6	0.96	10.68	4.54	152.03	1475.02	6.52	2.73	7.4	7.4
Richland/McKenzie County	D13	RM 28.54	45708	100-yr	3786	580.04	572.67	1.46	0.9	8.7	4.02	201.29	1732.89	6.11	2.78	7.37	7.37
Richland/McKenzie County	D13	RM 28.36	45419	100-yr	3786	580	572.48	1.41	0.88	8.27	3.71	233.95	1815.45	6.53	2.89	7.52	7.52
Richland/McKenzie County	D13	RM 28.15	45071	100-yr	3786	579.93	572.25	1.33	1.06	7.4	4.1	429.8	1384.65	6.14	3.37	7.68	7.68
Richland/McKenzie County	D13	RM 27.98	44808	100-yr	3786	579.78	572.04	2.03	1.31	16.63	5.66	236.34	1999.78	6.97	2.34	7.74	7.74
Richland/McKenzie County	D13	RM 27.8	44508	100-yr	3786	579.7	571.87	2.03	1.33	16.26	5	226.85	2019.14	7.58	2.29	7.83	7.83
Richland/McKenzie County	D14	RM 27.61	44208	100-yr	3786	579.65	571.87	1.92	1.27	14.8	5.44	246.37	2095.9	7.04	2.55	7.78	7.78
Richland/McKenzie County	D14	RM 27.43	43916	100-yr	3786	579.63	571.87	1.68	1.07	11.23	3.86	261.74	2546.09	7.39	2.5	7.76	7.76
Richland/McKenzie County	D14	RM 27.23	43608	100-yr	3786	579.62	571.87	1.36	0.84	7.24	2.55	310.87	2563.74	7.63	2.65	7.75	7.75
Richland/McKenzie County	D14	RM 27.04	43305	100-yr	3786	579.57	571.87	1.55	0.86	9.75	3.34	277.5	2644.23	7.09	2.37	7.7	7.7
Richland/McKenzie County	D14	RM 26.86	43008	100-yr	3786	579.5	571.87	1.77	0.9	12.43	3.84	229.41	2661.84	7.34	2.22	7.63	7.63
Richland/McKenzie County	D14	RM 26.67	42708	100-yr	3786	579.46	571.87	1.64	0.87	10.72	3.35	252.42	2637.05	7.32	2.26	7.59	7.59
Richland/McKenzie County	D14	RM 26.48	42408	100-yr	3786	579.35	571.87	2.01	1.02	16.18	4.66	209.83	2447.98	7.18	2.03	7.48	7.48
Richland/McKenzie County	D14	RM 26.29	42108	100-yr	3786	579.28	571.87	2	1.12	16.13	4.84	205.84	1995.11	7.11	2.1	7.41	7.41
Richland/McKenzie County	D14	RM 26.11	41808	100-yr	3786	579.25	571.87	1.76	1.12	12.43	4.22	249.58	1429.56	7.08	2.37	7.38	7.38
Richland/McKenzie County	D14	RM 25.92	41508	100-yr	3786	579.2	571.87	1.6	1.11	10.37	3.7	305.76	1367.9	7.04	2.49	7.33	7.33
Richland/McKenzie County	D14	RM 25.73	41208	100-yr	3786	579.15	571.74	1.63	1.34	10.57	3.25	309.7	2281.59	7.19	2.19	7.41	7.41
Richland/McKenzie County	D14	RM 25.55	40918	100-yr	3786	579.09	571.74	1.68	1.42	11.97	4.27	346.01	2259.15	6.13	2.17	7.35	7.35
Richland/McKenzie County	D14	RM 25.37	40619	100-yr	3786	579.02	571.74	1.7	1.42	12.49	4.99	353.9	2175.46	5.94	2.36	7.28	7.28
Richland/McKenzie County	D14	RM 25.17	40310	100-yr	3786	578.93	571.74	1.79	1.43	14.74	8.08	361.09	1840.7	5.46	2.98	7.19	7.19
Richland/McKenzie County	D14	RM 24.99	40008	100-yr	3786	578.9	571.74	1.5	1.16	9.68	5.27	384.4	1681.59	6.2	3.36	7.16	7.16
Richland/McKenzie County	D14	RM 24.8	39703	100-yr	3786	578.87	571.71	1.34	1.15	8.09	5.02	401.45	1492.45	6.85	4.23	7.16	7.16
Richland/McKenzie County	D14	RM 24.62	39408	100-yr	3786	578.75	571.64	1.83	1.51	13.98	8.57	278.78	1379.92	6.45	3.93	7.11	7.11
Richland/McKenzie County	D14	RM 24.45	39139	100-yr	3786	578.55	571.64	2.32	2.07	22.09	13.95	239.98	1410.09	6.68	4.2	6.91	6.91
Richland/McKenzie County	D14	RM 24.24	38801	100-yr	3786	578.44	571.58	2.3	1.97	21.67	14.42	237.24	1435.36	6.66	4.41	6.86	6.86
Richland/McKenzie County	D14	RM 24.05	38506	100-yr	3786	578.37	571.48	2.12	1.92	18.51	11.96	264.93	1471.25	6.64	4.27	6.89	6.89
Richland/McKenzie County	D14	RM 23.87	38210	100-yr	3786	578.38	571.28	1.62	1.48	10.68	6.76	334.4	1868.72	6.9	4.35	7.1	7.1
Richland/McKenzie County	D14	RM 23.66	37912	100-yr	3786	578.37	571.21	1.31	1.2	7.1	4.66	442.5	2083.63	6.44	4.21	7.16	7.16
Richland/McKenzie County	D14	RM 23.48	37610	100-yr	3786	578.34	571.12	1.35	1.18	8.05	5.05	347.97	2248.09	5.62	3.52	7.22	7.22
Richland/McKenzie County	D14	RM 23.29	37312	100-yr	3786	578.29	570.86	1.46	1.16	9.62	5.16	313.75	2125.38	5.52	2.94	7.43	7.43
Richland/McKenzie County	D14	RM 23.1	37006	100-yr	3786	578.25	570.82	1.47	1.04	9.69	4.29	254.67	2287.61	6.31	2.76	7.43	7.43
Richland/McKenzie County	D14	RM 22.92	36721	100-yr	3786	578.2	570.8	1.51	0.99	9.76	3.8	214.08	2412.31	6.24	2.39	7.4	7.4
Richland/McKenzie County	D14	RM 22.72	36402	100-yr	3786	578.12	570.81	1.85	1.08	13.93	4.82	178.19	2167.13	6.92	2.36	7.31	7.31
Richland/McKenzie County	D14	RM 22.54	36108	100-yr	3786	578.05	570.76	1.7	1.07	12.16	4.47	276.8	1939.83	6.72	2.45	7.29	7.29
Richland/McKenzie County	D14	RM 22.35	35808	100-yr	3786	578	570.74	1.61	1.07	10.68	3.71	308.52	1860.03	6.52	2.25	7.26	7.26
Richland/McKenzie County	D14	RM 22.17	35508	100-yr	3786	577.95	570.68	1.6	1.06	10.24	3.4	303.06	1535.08	7.07	2.32	7.27	7.27
Richland/McKenzie County	D14	RM 22.02	35264	100-yr	3786	577.93	570.68	1.42	1.09	8.09	3	354.21	1324.14	7.14	2.62	7.25	7.25
Richland/McKenzie County	D14	RM 21.8	34901	100-yr	3786	577.87	570.69	1.52	1.24	9.95	5.37	401.53	968.06	5.88	3.15	7.17	7.17
Richland/McKenzie County	D14	RM 21.61	34626	100-yr	3786	577.82	570.67	1.48	1.28	9.72	5.55	468.94	983.54	5.31	3.01	7.15	7.15
Richland/McKenzie County	D14	RM 21.34	34140	100-yr	3786	577.8	570.67	1.26	0.97	6.58	3.36	289.68	1193.83	6.46	3.26	7.12	7.12
Richland/McKenzie County	D14	RM 21.25	33973	100-yr	3786	577.76	570.67	1.49	1.05	9.49	4.62	204.54	1266.94	5.94	2.85	7.09	7.09
Richland/McKenzie County	D14	RM 21.06	33672	100-yr	3786	577.75	570.6	1.27	0.92	6.82	3.46	267.5	1350.77	6.06	3.05	7.15	7.15
Richland/McKenzie County	D14	RM 20.9	33400	100-yr	3786	577.72	570.58	1.32	0.98	7.61	4.34	251.38	1228.32	5.57	3.14	7.14	7.14
Richland/McKenzie County	D14	RM 20.71	33101	100-yr	3786	577.65	570.53	1.62	1.05	11.3	5.63	247.47	1260.3	5.81	2.87	7.12	7.12
Richland/McKenzie County	D14	RM 20.52	32800	100-yr	3786	577.62	570.52	1.48	0.96	9.23	4.26	280.27	1377.38	6.21	2.85	7.1	7.1
Richland/McKenzie County	D14	RM 20.34	32500	100-yr	3786	577.58	570.52	1.52	1	9.71	4.31	256.92	1359.65	6.3	2.77	7.06	7.06
Richland/McKenzie County	D14	RM 20.15	32200	100-yr	3786	577.51	570.52	1.66	1.07	13.4	5.49	231.21	1357.42	6.45	2.62	6.99	6.99
Richland/McKenzie County	D14	RM 19.96	31900	100-yr	3786	577.26	570.52	2.52	1.37	26.47	8.55	189.46	1356.19	6.44	2.04	6.74	6.74
Richland/McKenzie County	D14	RM 19.77	31600	100-yr	3786	577.3	570.5	1.56	1	10.16	4.01	332.93	1542.1	6.27	2.45	6.8	6.8
Richland/McKenzie County	D14	RM 19.59	31297	100-yr	3786	577.27	570.45	1.45	0.89	9.11	3.76	334.34	1735.82	5.98	2.45	6.82	6.82
Richland/McKenzie County	D14	RM 19.4	30995	100-yr	3786	577.21	570.45	1.58	0.87	10.79	4.65	284.81	1770.72	5.77	2.46	6.76	6.76
Richland/McKenzie County	D14	RM 19.21	30710	100-yr	3786	577.2	570.38	1.18	0.72	5.77	2.69	380.6	1773.11	6.38	2.96	6.82	6.82
Richland/McKenzie County	D14	RM 19.03	30402	100-yr	3786	577.17	570.38	1.17	0.73	5.7	2.59	428.38	1999.8	5.74	2.58	6.79	6.79

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 18.83	30086	100-yr	3786	577.15	570.38	1.1	0.67	5.16	2.43	505.09	2499.92	4.83	2.26	6.77	6.77
Richland/McKenzie County	D14	RM 18.66	29802	100-yr	3786	577.12	570.38	1.09	0.62	5.4	2.33	455.27	2947.88	4.84	2.06	6.74	6.74
Richland/McKenzie County	D14	RM 18.47	29499	100-yr	3786	577.08	570.36	1.3	0.66	7.44	2.39	299.05	5125.62	5.38	1.7	6.72	6.72
Richland/McKenzie County	D14	RM 18.28	29197	100-yr	3786	577.02	570.36	1.45	0.73	9.13	2.12	299.23	5043.05	6.1	1.4	6.66	6.66
Richland/McKenzie County	D14	RM 17.89	28624	100-yr	3786	577	570.33	1	0.61	4.1	0.93	468.41	4577.12	6.54	1.47	6.67	6.67
Richland/McKenzie County	D14	RM 17.56	27975	100-yr	3786	576.91	570.29	1.31	0.8	7.53	1.63	460.6	4191.57	5.26	1.13	6.62	6.62
Richland/McKenzie County	D14	RM 17.36	27539	100-yr	3786	576.69	570.31	2.12	1.28	18.99	3.02	254.84	3095.49	6.09	0.96	6.38	6.38
Richland/McKenzie County	D14	RM 17.1	27113	100-yr	3786	576.62	570.28	1.83	1.14	14.18	2.32	298.39	3408.11	6.11	0.99	6.34	6.34
Richland/McKenzie County	D14	RM 16.74	26537	100-yr	3786	576.57	570.14	1.35	0.89	7.63	1.5	406.85	3561.73	6.09	1.19	6.43	6.43
Richland/McKenzie County	D14	RM 16.35	25925	100-yr	3786	576.51	569.46	1.33	0.79	7.16	1.4	346.21	3644.83	6.84	1.32	7.05	7.05
Richland/McKenzie County	D14	RM 16.17	25629	100-yr	3786	576.49	569.2	1.25	0.76	6.64	1.48	377.41	3307.22	6.81	1.51	7.29	7.29
Richland/McKenzie County	D14	RM 15.95	25324	100-yr	3786	576.48	568.99	1.03	0.71	4.22	0.98	457.34	3178.48	7.29	1.67	7.49	7.49
Richland/McKenzie County	D14	RM 15.75	25032	100-yr	3786	576.45	568.85	1.11	0.82	5.05	1.27	462.46	2738.74	6.72	1.68	7.6	7.6
Richland/McKenzie County	D14	RM 15.56	24777	100-yr	3786	576.32	568.85	1.79	1.28	12.99	2.26	291.53	2530.04	6.83	1.17	7.47	7.47
Richland/McKenzie County	D14	RM 15.34	24438	100-yr	3786	576.24	568.79	1.87	1.27	13.99	2.38	261.89	2479.24	7.21	1.21	7.45	7.45
Richland/McKenzie County	D14	RM 15.16	24144	100-yr	3786	576.19	568.75	1.84	1.27	13.61	2.38	267.44	2409.49	7.19	1.24	7.44	7.44
Richland/McKenzie County	D14	RM 14.98	23841	100-yr	3786	576.11	568.76	1.91	1.3	16.45	3.11	254.68	2201.98	7.11	1.33	7.35	7.35
Richland/McKenzie County	D14	RM 14.79	23543	100-yr	3786	576.06	568.72	1.82	1.27	13.73	3.2	286.41	1991.83	6.54	1.5	7.34	7.34
Richland/McKenzie County	D14	RM 14.61	23241	100-yr	3786	576	568.7	1.82	1.36	13.36	3.41	274.36	1569.89	7.02	1.77	7.3	7.3
Richland/McKenzie County	D14	RM 14.42	22940	100-yr	3786	575.98	568.69	1.53	1.24	9.44	2.88	328.42	1424.62	7.08	2.14	7.29	7.29
Richland/McKenzie County	D14	RM 14.23	22647	100-yr	3786	575.98	568.67	1.17	0.98	5.55	2.27	444.61	1373.77	6.94	2.82	7.31	7.31
Richland/McKenzie County	D14	RM 14.05	22341	100-yr	3786	575.96	568.68	1	0.89	5.79	3.42	601.92	1176.91	6.11	3.6	7.28	7.28
Richland/McKenzie County	D14	RM 13.88	22040	100-yr	3786	575.92	568.67	1.07	0.99	5.79	4.82	682.22	904.86	5.1	4.23	7.25	7.25
Richland/McKenzie County	D14	RM 13.7	21728	100-yr	3786	575.84	568.65	1.38	1.38	8.5	8.28	502.19	636.25	5.44	5.31	7.19	7.19
Richland/McKenzie County	D14	RM 13.51	21429	100-yr	3786	575.78	568.63	1.44	1.4	8.6	7.95	409.72	477.54	6.37	5.89	7.15	7.15
Richland/McKenzie County	D15	RM 13.31	21145	100-yr	3786	575.76	568.51	1.29	1.28	7.02	6.74	457.14	518.43	6.39	6.15	7.25	7.25
Richland/McKenzie County	D15	RM 13.12	20858	100-yr	3786	575.68	568.39	1.57	1.56	9.99	9.34	344.8	459.7	6.97	6.53	7.29	7.29
Richland/McKenzie County	D15	RM 12.9	20507	100-yr	3786	575.57	568.39	1.81	1.78	13.33	11.4	303.98	447.07	6.86	5.87	7.18	7.18
Richland/McKenzie County	D15	RM 12.73	20241	100-yr	3786	575.52	568.35	1.82	1.77	13.42	10.2	297.97	461.36	6.95	5.27	7.17	7.17
Richland/McKenzie County	D15	RM 12.56	19961	100-yr	3786	575.5	568.34	1.59	1.51	10.24	7.72	337.44	492.1	6.99	5.26	7.16	7.16
Richland/McKenzie County	D15	RM 12.38	19686	100-yr	3786	575.5	568.23	1.29	1.21	6.73	5.08	425.75	909.27	6.85	5.15	7.27	7.27
Richland/McKenzie County	D15	RM 12.21	19384	100-yr	3786	575.46	568.17	1.27	1.15	7.06	5.83	513.36	964.48	5.61	4.64	7.29	7.29
Richland/McKenzie County	D15	RM 11.99	19084	100-yr	3786	575.43	568.16	1.18	1.06	6.38	5.04	592.13	863.87	5.26	4.14	7.27	7.27
Richland/McKenzie County	D15	RM 11.53	18484	100-yr	3786	575.36	568.11	1.16	0.99	5.08	4	693.79	1162.56	4.21	3.3	7.25	7.25
Richland/McKenzie County	D15	RM 11.34	18216	100-yr	3786	575.32	568.06	1.05	0.99	18.09	15.59	710.89	1043.33	4.26	3.66	7.26	7.26
Richland/McKenzie County	D15	RM 11.17	17885	100-yr	3786	575.11	567.88	1.25	1.2	25.85	24.71	777.3	947.35	3.71	3.55	7.23	7.23
Richland/McKenzie County	D15	RM 10.97	17584	100-yr	3786	575.03	567.8	1.18	1.13	5.46	5.21	780.34	891.5	3.97	3.79	7.23	7.23
Richland/McKenzie County	D15	RM 10.75	17284	100-yr	3786	575	567.79	1.1	1.04	4.83	4.38	717.39	859.92	4.69	4.25	7.21	7.21
Richland/McKenzie County	D15	RM 10.53	16964	100-yr	3786	574.94	567.73	1.26	1.16	6.4	5.42	641.5	849.77	4.55	3.84	7.21	7.21
Richland/McKenzie County	D15	RM 10.35	16670	100-yr	3786	574.88	567.73	1.36	1.14	8.22	5.7	517.24	944.99	5.08	3.51	7.15	7.15
Richland/McKenzie County	D15	RM 10.15	16384	100-yr	3786	574.85	567.73	1.44	1	8.39	4.3	251.85	1091.32	6.82	3.47	7.12	7.12
Richland/McKenzie County	D15	RM 9.94	16084	100-yr	3786	574.84	567.73	1.12	0.88	5.19	2.83	272.39	1196.07	6.63	3.59	7.11	7.11
Richland/McKenzie County	D15	RM 9.76	15797	100-yr	3786	574.79	567.65	1.28	0.93	6.59	3.77	352.04	1188.57	6.25	3.56	7.14	7.14
Richland/McKenzie County	D15	RM 9.57	15487	100-yr	3786	574.73	567.58	1.49	1.04	9.04	5.2	245.67	981.36	6.93	3.97	7.15	7.15
Richland/McKenzie County	D15	RM 9.37	15187	100-yr	3786	574.64	567.58	1.77	1.3	12.76	8.87	203.96	613.52	6.86	4.75	7.06	7.06
Richland/McKenzie County	D15	RM 9.24	14963	100-yr	3786	574.4	564.5	2.26	2.16	20.66	17.96	234.33	285.2	7.07	6.15	9.9	9.9
Richland/McKenzie County	D15	RR/Walkway	14952	100-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	100-yr	3786	574.35	564.5	2.27	2.17	20.99	18.17	234.33	296.63	7.02	6.06	9.85	9.85
Richland/McKenzie County	D15	RM 9.1	14741	100-yr	3786	574.19	567.39	2.57	2.31	28.18	17.57	231.83	433.35	6.26	3.88	6.8	6.8
Richland/McKenzie County	D15	RM 9.03	14639	100-yr	3786	574.18	565.46	2.31	2.13	21.96	15.08	248.61	398.82	6.5	4.46	8.72	8.72
Richland/McKenzie County	D15	Highway 68	14629	100-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	100-yr	3786	574.13	565.46	2.32	2.15	22.33	15.29	248.61	398.59	6.46	4.42	8.67	8.67
Richland/McKenzie County	D15	RM 8.82	14300	100-yr	3786	574.14	567.41	1.53	1.4	9.86	7.06	381.12	1001.8	6.25	4.46	6.73	6.73
Richland/McKenzie County	D15	RM 8.61	13963	100-yr	3786	574.08	567.39	1.64	1.29	11.33	6.92	313.8	1005.4	6.17	3.75	6.69	6.69
Richland/McKenzie County	D15	RM 8.44	13687	100-yr	3786	574.01	567.32	1.77	1.25	13.04	7.29	258.5	1033.26	6.44	3.58	6.69	6.69
Richland/McKenzie County	D15	RM 8.24	13387	100-yr	3786	573.93	567.32	1.87	1.22	14.53	8.46	229.73	831.84	6.46	3.72	6.61	6.61
Richland/McKenzie County	D15	RM 8.05	13080	100-yr	3786	573.87	567.05	1.79	1.28	13.23	7.85	266.23	761.72	6.56	3.87	6.82	6.82
Richland/McKenzie County	D15	RM 7.87	12786	100-yr	3786	573.76	567.05	2.01	1.43	16.83	9.76	229.92	800.96	6.46	3.73	6.71	6.71
Richland/McKenzie County	D15	RM 7.69	12506	100-yr	3786	573.7	567.05	1.87	1.48	14.44	10.22	266.56	562.9	6.43	4.54	6.65	6.65
Richland/McKenzie County	D15	RM 7.48	12179	100-yr	3786	573.66	566.95	1.59	1.59	10.47	10.2	361.54	372.42	6.56	6.41	6.71	6.71
Richland/McKenzie County	D16	RM 7.3	11891	100-yr	3786	573.57	566.76	1.78	1.78	13.14	13.01	337.01	340.42	6.3	6.25	6.81	6.81

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 7.14	11639	100-yr	3786	573.51	566.76	1.8	1.72	13.88	12.31	324.06	417.29	5.93	5.27	6.75	6.75
Richland/McKenzie County	D16	RM 6.94	11319	100-yr	3786	573.45	566.76	1.75	1.49	12.68	9.2	297.15	539	6.5	4.71	6.69	6.69
Richland/McKenzie County	D16	RM 6.77	11043	100-yr	3786	573.43	566.76	1.51	1.25	9.53	6.81	349.25	683.36	6.2	4.42	6.67	6.67
Richland/McKenzie County	D16	RM 6.58	10733	100-yr	3786	573.4	566.59	1.41	1.1	8.28	5.25	342.3	847.5	6.43	4.05	6.81	6.81
Richland/McKenzie County	D16	RM 6.38	10417	100-yr	3786	573.3	566.59	1.95	1.17	15.72	6.89	182.43	1285.37	6.48	2.79	6.71	6.71
Richland/McKenzie County	D16	RM 6.21	10138	100-yr	3786	573.24	566.44	1.79	1.01	13.29	5.57	217.11	1476.87	6.53	2.7	6.8	6.8
Richland/McKenzie County	D16	RM 6.01	9825	100-yr	3786	573.23	566.17	1.26	0.86	6.63	3.38	412.46	1547.43	6.27	3.17	7.06	7.06
Richland/McKenzie County	D16	RM 5.83	9551	100-yr	3786	573.22	565.96	1.06	0.76	4.59	2.46	480.72	1750.75	6.56	3.49	7.26	7.26
Richland/McKenzie County	D16	RM 5.67	9297	100-yr	3786	573.19	565.96	1.23	0.8	6.32	3.39	342.29	1689.2	6.44	3.41	7.23	7.23
Richland/McKenzie County	D16	RM 5.43	8926	100-yr	3786	573.12	565.96	1.54	0.99	10.2	4.55	269.78	1844.88	5.83	2.56	7.16	7.16
Richland/McKenzie County	D16	RM 5.25	8623	100-yr	3786	572.87	565.96	2.36	1.43	22.92	7.93	206.77	1494.5	6.63	2.27	6.91	6.91
Richland/McKenzie County	D16	RM 5.06	8331	100-yr	3786	572.86	565.82	1.77	1.23	12.9	4.46	289.25	1415.55	6.59	2.26	7.04	7.04
Richland/McKenzie County	D16	RM 4.87	8029	100-yr	3786	572.85	565.67	1.41	1.1	8.34	3.31	335.83	1392.33	6.3	2.47	7.18	7.18
Richland/McKenzie County	D16	RM 4.71	7757	100-yr	3786	572.79	565.54	1.64	1.2	10.94	4.36	253.72	1173.48	6.83	2.68	7.25	7.25
Richland/McKenzie County	D16	RM 4.53	7456	100-yr	3786	572.66	565.54	2.09	1.42	17.84	7.85	199	895.72	6.87	2.97	7.12	7.12
Richland/McKenzie County	D16	RM 4.34	7156	100-yr	3786	572.6	565.54	1.91	1.41	17.66	10.01	217.7	719.21	6.7	3.74	7.06	7.06
Richland/McKenzie County	D16	RM 4.17	6884	100-yr	3786	572.52	565.54	1.96	1.38	15.76	7.28	226.72	1134.97	6.69	3.05	6.98	6.98
Richland/McKenzie County	D16	RM 3.96	6550	100-yr	3786	572.5	565.54	1.57	1.16	10.1	6.23	216.6	1055.34	6.68	4.1	6.96	6.96
Richland/McKenzie County	D16	RM 3.78	6249	100-yr	3786	572.45	565.54	1.68	1.16	12.01	7.06	196.52	1073.28	6.12	3.56	6.91	6.91
Richland/McKenzie County	D16	RM 3.55	5904	100-yr	3786	572.38	565.54	1.66	1.23	11.32	6.98	206.04	998.39	6.65	4.07	6.84	6.84
Richland/McKenzie County	D16	RM 3.38	5657	100-yr	3786	572.28	565.53	2.04	1.45	17.28	9.85	171.27	899.61	6.49	3.65	6.75	6.75
Richland/McKenzie County	D16	RM 3.2	5363	100-yr	3786	572.18	565.54	2.15	1.6	20.05	9.32	168.06	1166.83	5.76	2.64	6.64	6.64
Richland/McKenzie County	D16	RM 3.01	5062	100-yr	3786	572.11	565.54	1.86	1.42	14.79	7.91	310	1035.22	5.94	3.14	6.57	6.57
Richland/McKenzie County	D16	RM 2.82	4763	100-yr	3786	572.06	565.46	1.66	1.37	12.34	7.38	423.69	1065.18	5.1	3.03	6.6	6.6

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	2% - 50yr	1118.52	1281.96	1278.12	2.82	2.33	41.48	22.04	110.15	439.08	3.28	1.73	3.84	3.84
Sweet Grass County	A1	RM 478.10	225378	2% - 50yr	1118.52	1281.46	1277.66	3.52	3.15	71.58	49.15	114.8	375.74	2.39	1.64	3.8	3.8
Sweet Grass County	A1	RM 478.00	224862	2% - 50yr	1118.52	1280.97	1277.97	3.39	3.15	69.19	57.08	137.18	382.87	2.1	1.73	3	3
Sweet Grass County	A1	RM 477.91	224362	2% - 50yr	1118.52	1280.4	1277.65	3.81	3.13	77.55	51.65	86.74	365.16	2.37	1.57	2.75	2.75
Sweet Grass County	A1	RM 477.81	223862	2% - 50yr	1118.52	1280.02	1276.96	3.3	2.81	48.79	37.11	127.17	324.65	1.98	1.5	3.05	3.05
Sweet Grass County	A1	RM 477.72	223354	2% - 50yr	1118.52	1279.66	1276.32	2.71	2.35	47.34	33.64	184.55	437.67	1.71	1.21	3.34	3.34
Sweet Grass County	A1	RM 477.63	222892	2% - 50yr	1118.52	1279.58	1275.76	1.64	1.51	16.37	11.81	259.36	667.41	2.07	1.49	3.82	3.82
Sweet Grass County	A1	RM 477.49	222220	2% - 50yr	1118.52	1279.39	1276.07	1.74	1.47	16.56	11.21	256.97	791.04	1.88	1.27	3.33	3.33
Sweet Grass County	A1	RM 477.40	221702	2% - 50yr	1118.52	1279.34	1275.47	1.34	0.99	10.02	6.4	242.4	864.17	2.62	1.67	3.88	3.88
Sweet Grass County	A1	RM 477.31	221259	2% - 50yr	1118.52	1278.87	1275.74	3.04	1.77	51.97	19.25	122.52	848.64	2.61	0.96	3.13	3.13
Sweet Grass County	A1	RM 477.21	220767	2% - 50yr	1118.52	1278.67	1275.28	2.77	1.7	41.59	14.89	126.43	833.29	2.86	1.02	3.39	3.39
Sweet Grass County	A1	RM 477.11	220252	2% - 50yr	1118.52	1278.35	1274.86	2.95	1.77	51.49	23.83	147.45	807.27	2.2	1.02	3.49	3.49
Sweet Grass County	A1	RM 477.04	219860	2% - 50yr	1118.52	1278.07	1275.13	3.02	1.74	52.85	24.39	131.95	814.7	2.35	1.08	2.93	2.93
Sweet Grass County	A1	RM 476.95	219422	2% - 50yr	1118.52	1277.54	1274.55	3.38	2.2	71.01	33.27	154.85	764.92	1.9	0.89	2.98	2.98
Sweet Grass County	A1	RM 476.84	218828	2% - 50yr	1118.52	1277.22	1273.95	2.76	1.99	44.65	21.91	134.66	689.34	2.28	1.11	3.27	3.27
Sweet Grass County	A1	RM 476.75	218345	2% - 50yr	1118.52	1276.93	1273.54	2.66	2	38.18	19.3	172.58	767.47	2.21	1.11	3.39	3.39
Sweet Grass County	A1	RM 476.66	217855	2% - 50yr	1118.52	1276.6	1273.45	2.85	1.93	44.15	20.78	160.17	879.61	2.18	1.02	3.15	3.15
Sweet Grass County	A1	RM 476.57	217396	2% - 50yr	1118.52	1276.22	1273.09	3.29	1.95	60.15	25.58	98.93	853.57	2.66	1.12	3.13	3.13
Sweet Grass County	A1	RM 476.47	216861	2% - 50yr	1118.52	1275.81	1273.04	3.2	2.27	60.17	27.13	126.17	721.87	2.25	1.02	2.77	2.77
Sweet Grass County	A1	RM 476.38	216362	2% - 50yr	1118.52	1275.63	1272.1	2.7	1.77	39.7	18.07	105.41	886.83	2.81	1.27	3.53	3.53
Sweet Grass County	A1	RM 476.28	215816	2% - 50yr	1118.52	1274.92	1271.85	3.76	3.27	81.19	45.8	100.31	394.04	2.43	1.36	3.06	3.06
Sweet Grass County	A1	RM 476.15	215126	2% - 50yr	1118.52	1274.4	1271.76	3.18	2.63	60.88	39.84	133.16	469.78	2.09	1.37	2.64	2.64
Sweet Grass County	A1	RM 476.01	214437	2% - 50yr	1118.52	1274.09	1270.96	2.54	2.34	36.56	25.67	142.38	378.35	2.54	1.77	3.14	3.14
Sweet Grass County	A1	RM 475.91	213787	2% - 50yr	1118.52	1273.63	1270.35	2.87	2.63	46.63	37.94	150.4	209.69	2.52	2.05	3.28	3.28
Sweet Grass County	A1	RM 475.76	213072	2% - 50yr	1118.52	1273.09	1270.22	3.1	2.58	55.91	36.36	146.41	315.65	2.33	1.52	2.88	2.88
Sweet Grass County	A1	RM 475.63	212347	2% - 50yr	1118.52	1272.87	1269.34	2.34	1.97	30.55	22.79	173.18	289.56	2.63	1.96	3.53	3.53
Sweet Grass County	A1	RM 475.47	211539	2% - 50yr	1118.52	1272.35	1268.97	2.94	2.68	46.68	39.32	128.96	171.68	2.88	2.43	3.38	3.38
Sweet Grass County	A1	RM 475.35	210875	2% - 50yr	1118.52	1271.67	1268.88	3.59	3.37	72.78	45.71	120.05	206.61	2.57	1.61	2.78	2.78
Sweet Grass County	A1	RM 475.24	210333	2% - 50yr	1118.52	1271.69	1267.53	2.43	2.14	29.48	19.33	118.16	326.77	3.76	2.45	4.16	4.16
Sweet Grass County	A2	RM 475.12	209673	2% - 50yr	1118.52	1270.68	1267.9	4.28	3.79	108.88	75.59	116.49	235.93	2.18	1.51	2.77	2.77
Sweet Grass County	A2	RM 475.00	209034	2% - 50yr	1118.52	1270	1266.93	3.24	3.24	63.56	63.44	164.39	164.69	2.1	2.09	3.06	3.06
Sweet Grass County	A2	RM 474.87	208359	2% - 50yr	1118.52	1269.82	1266.75	2.45	2.23	32.75	24.85	80.79	283.32	2.93	2.18	3.07	3.07
Sweet Grass County	A2	RM 474.76	207797	2% - 50yr	1118.52	1269.26	1266.42	3.49	2.79	68.37	35.64	77.58	309.79	2.65	1.35	2.84	2.84
Sweet Grass County	A2	RM 474.67	207305	2% - 50yr	1118.52	1268.81	1266.29	3.51	2.96	71.19	46.96	66.54	266.09	2.46	1.58	2.52	2.52
Sweet Grass County	A2	RM 474.54	206635	2% - 50yr	1118.52	1268.52	1264.92	2.63	2.31	37.86	26.61	128.46	281.88	2.79	1.95	3.6	3.6
Sweet Grass County	A2	RM 474.43	205945	2% - 50yr	1118.52	1268.19	1265.16	2.84	2.14	44.28	17.7	89.64	468.59	2.84	1.12	3.02	3.02
Sweet Grass County	A2	RM 474.30	205321	2% - 50yr	1118.52	1267.95	1264.46	2.55	1.71	35.33	15.92	133.45	532.37	2.88	1.29	3.48	3.48
Sweet Grass County	A2	RM 474.21	204877	2% - 50yr	1118.52	1267.47	1264.22	3.37	2.22	61.67	21.88	103.39	518.27	2.88	1.01	3.25	3.25
Sweet Grass County	A2	RM 474.12	204378	2% - 50yr	1118.52	1267.36	1263.24	2.59	1.69	37.1	17.04	140.42	737.8	2.72	1.24	4.12	4.12
Sweet Grass County	A2	RM 474.01	203787	2% - 50yr	1118.52	1266.8	1263.55	3.28	2.34	63.08	29.72	138.78	461.07	2.28	1.07	3.25	3.25
Sweet Grass County	A2	RM 473.87	203072	2% - 50yr	1118.52	1266.35	1263.52	3.14	2.23	54.17	18.12	100.52	779.21	2.49	0.83	2.83	2.83
Sweet Grass County	A2	RM 473.74	202395	2% - 50yr	1118.52	1266.04	1263.06	2.62	1.89	38.84	16.23	121.28	739.36	2.52	1.05	2.98	2.98
Sweet Grass County	A2	RM 473.62	201781	2% - 50yr	1118.52	1265.66	1262.63	2.79	1.91	46.24	19.32	150.66	704.06	2.2	0.92	3.03	3.03
Sweet Grass County	A2	RM 473.50	201110	2% - 50yr	1118.52	1265.31	1261.83	2.49	1.97	36.36	18.12	179.13	569.22	2.3	1.13	3.48	3.48
Sweet Grass County	A2	RM 473.36	200362	2% - 50yr	1118.52	1265.05	1261.08	2.44	1.95	31.12	12.79	133.21	611.05	3.23	1.32	3.97	3.97
Sweet Grass County	A2	RM 473.27	199862	2% - 50yr	1118.52	1264.73	1260.81	2.92	2.36	45.77	21.52	117.77	485.7	2.98	1.39	3.93	3.93
Sweet Grass County	A2	RM 473.17	199362	2% - 50yr	1118.52	1264.5	1260.56	2.92	2.52	43.07	15.81	102.94	339.1	3.6	1.31	3.94	3.94
Sweet Grass County	A2	RM 473.08	198879	2% - 50yr	1118.52	1264.02	1260.56	3.57	3.19	68.58	37.65	104.67	218.92	2.93	1.6	3.46	3.46
Sweet Grass County	A2	RM 472.98	198340	2% - 50yr	1118.52	1263.83	1260.21	2.98	2.6	47.45	22.25	120.55	316.76	3.01	1.41	3.63	3.63
Sweet Grass County	A2	RM 472.89	197862	2% - 50yr	1118.52	1263.33	1260.5	3.65	2.75	75.94	33.2	108.06	379.31	2.49	1.08	2.83	2.83
Sweet Grass County	A2	RM 472.79	197362	2% - 50yr	1118.52	1263.06	1259.98	3.04	2.39	52.82	22.24	136.27	453.94	2.46	1.03	3.08	3.08
Sweet Grass County	A2	RM 472.70	196862	2% - 50yr	1118.52	1262.46	1259.35	3.6	2.67	76.39	37.31	125.74	386.62	2.23	1.09	3.11	3.11
Sweet Grass County	A2	RM 472.60	196360	2% - 50yr	1118.52	1262.35	1259.01	2.38	1.95	33.86	20.49	181.89	441.13	2.15	1.3	3.34	3.34
Sweet Grass County	A2	RM 472.50	195816	2% - 50yr	1118.52	1262.03	1258.53	2.53	2.04	38.49	24.56	177.8	410.12	2.15	1.36	3.5	3.5
Sweet Grass County	A2	RM 472.41	195349	2% - 50yr	1118.52	1261.75	1258.52	2.51	2.11	38.36	26.64	198.55	385.39	2.05	1.42	3.23	3.23
Sweet Grass County	A2	RM 472.31	194860	2% - 50yr	1118.52	1261.53	1258.34	2.47	1.93	33.39	19.19	149.41	396.87	2.76	1.58	3.2	3.2
Sweet Grass County	A2	RM 472.22	194356	2% - 50yr	1118.52	1261.37	1257.3	2.53	1.8	31.27	13.75	115.58	443.87	3.25	1.4	4.07	4.07
Sweet Grass County	A2	RM 472.09	193660	2% - 50yr	1118.52	1260.56	1257.45	3.94	2.88	87.25	30.8	93.59	423.87	2.67	0.92	3.1	3.1
Sweet Grass County	A2	RM 471.95	192935	2% - 50yr	1118.52	1260.54	1256.05	2.46	1.64	30.32	13.21	103.53	427.38	3.74	1.6	4.49	4.49
Sweet Grass County	A2	RM 471.86	192442	2% - 50yr	1118.52	1259.96	1256.23	3.76	2.45	74.18	32.01	76.65	331.47	3.26	1.38	3.72	3.72
Sweet Grass County	A2	RM 471.75	191870	2% - 50yr	1118.52	1259.84	1256.47	2.67	1.93	38.76	20.04	134.52	396.21	2.83	1.46	3.37	3.37

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	2% - 50yr	1118.52	1259.05	1256.54	3.89	2.96	90.06	40.18	124.48	389.94	2.18	0.97	2.52	2.52
Sweet Grass County	A2	RM 471.52	190686	2% - 50yr	1118.52	1258.9	1255.75	2.6	1.78	37.22	15.93	127.76	534.62	2.78	1.18	3.15	3.15
Sweet Grass County	A2	RM 471.38	189910	2% - 50yr	1118.52	1258.05	1255.44	3.58	2.79	83.98	42.49	150.23	491.22	1.61	0.82	2.61	2.61
Sweet Grass County	A2	RM 471.28	189362	2% - 50yr	1118.52	1257.54	1254.65	2.57	2.19	45.35	33.17	228.65	527.02	1.42	1.04	2.9	2.9
Sweet Grass County	A2	RM 471.18	188875	2% - 50yr	1118.52	1257.17	1254.2	2.65	2.07	37.72	22.73	155.58	510.13	1.79	1.08	2.97	2.97
Sweet Grass County	A2	RM 471.06	188150	2% - 50yr	1118.52	1256.82	1253.95	2.32	1.57	33.42	19.06	140.6	653.55	1.91	1.09	2.87	2.87
Sweet Grass County	A2	RM 470.94	187526	2% - 50yr	1118.52	1256.4	1253.58	2.76	1.95	42.23	20.14	108.67	568.67	2.26	1.07	2.82	2.82
Sweet Grass County	A2	RM 470.84	186938	2% - 50yr	1118.52	1256.13	1252.88	2.42	1.76	35.54	20.43	157.2	617.09	2.06	1.17	3.25	3.25
Sweet Grass County	A2	RM 470.73	186362	2% - 50yr	1118.52	1255.97	1253.49	1.79	1.6	20.28	14.66	189.13	578.53	1.84	1.32	2.9	2.9
Sweet Grass County	A2	RM 470.65	185977	2% - 50yr	1118.52	1255.71	1252.18	2.24	1.82	29.21	15.62	202.91	634.12	2.32	1.23	3.53	3.53
Sweet Grass County	A2	RM 470.56	185491	2% - 50yr	1118.52	1255.57	1252.52	2.09	1.65	25.02	13.93	189.32	664.24	2.46	1.36	3.05	3.05
Sweet Grass County	A2	RM 470.44	184875	2% - 50yr	1118.52	1255.45	1251.39	1.89	1.45	18.54	10.32	158.35	421.05	3.33	1.84	4.06	4.06
Sweet Grass County	A2	RM 470.35	184363	2% - 50yr	1118.52	1254.49	1251.52	4.18	3.6	102.39	57.29	113.84	244.79	2.28	1.27	2.96	2.96
Sweet Grass County	A2	RM 470.23	183828	2% - 50yr	1118.52	1254.22	1251.51	2.87	2.44	49.89	32.29	180.8	345.17	2.04	1.33	2.71	2.71
Sweet Grass County	A2	RM 470.13	183304	2% - 50yr	1118.52	1253.97	1249.86	2.52	2.22	37.56	29.38	162.28	289.87	2.24	1.74	4.11	4.11
Sweet Grass County	A2	RM 470.05	182914	2% - 50yr	1118.52	1253.86	1250.59	2.13	1.92	26.5	21.14	175.23	317.45	2.3	1.84	3.26	3.26
Sweet Grass County	A2	RM 469.93	182267	2% - 50yr	1118.52	1253.1	1249.62	3.56	3.07	70.6	35.16	105.63	277.24	2.65	1.31	3.48	3.48
Sweet Grass County	A2	RM 469.85	181860	2% - 50yr	1118.52	1252.87	1249.59	3.31	2.44	59.37	26.55	96.24	368.31	2.91	1.29	3.29	3.29
Sweet Grass County	A2	RM 469.75	181348	2% - 50yr	1118.52	1252.86	1248.77	2.25	1.66	26.39	12.98	116.21	419.98	3.3	1.61	4.09	4.09
Sweet Grass County	A2	RM 469.68	180952	2% - 50yr	1118.52	1252.68	1249.31	2.44	1.74	32.06	16.8	135.73	460.13	2.96	1.55	3.37	3.37
Sweet Grass County	A2	RM 469.58	180427	2% - 50yr	1118.52	1252.63	1247.94	1.96	1.53	18.91	11.68	130.56	400.4	3.93	2.41	4.69	4.69
Sweet Grass County	A2	RM 469.47	179860	2% - 50yr	1118.52	1252.12	1247.85	3.13	2.78	46.97	41.38	90.09	351.66	3.72	3.28	4.27	4.27
Sweet Grass County			179808	2% - 50yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	2% - 50yr	1118.52	1252.08	1247.84	2.82	2.79	40.21	38.59	112.89	348.85	3.51	3.38	4.23	4.23
Sweet Grass County	A2	RM 469.39	179400	2% - 50yr	1118.52	1251.6	1248.45	3.58	3.29	72.16	57.43	118.53	305.25	2.57	2.04	3.15	3.15
Sweet Grass County	A2	RM 469.30	178975	2% - 50yr	1118.52	1251.6	1247.55	2.69	2.2	36.65	22.39	106.16	336.51	3.59	2.16	4.05	4.05
Sweet Grass County	A2	RM 469.21	178467	2% - 50yr	1118.52	1250.94	1248.31	3.88	3.05	87.06	45.07	107.26	369.7	2.36	1.22	2.63	2.63
Sweet Grass County	A2	RM 469.09	177862	2% - 50yr	1118.52	1250.67	1247.12	2.31	1.76	30.51	18.46	118.23	497.81	2.48	1.5	3.55	3.55
Sweet Grass County	A2	RM 469.00	177350	2% - 50yr	1118.52	1250.06	1247.58	3.63	2.45	79.21	35.04	89.39	501.56	2.13	0.93	2.49	2.49
Sweet Grass County	A2	RM 468.90	176865	2% - 50yr	1118.52	1249.68	1246.48	2.47	1.92	31.5	16.96	157.69	502.07	2.19	1.17	3.2	3.2
Sweet Grass County	A2	RM 468.80	176341	2% - 50yr	1118.52	1249.37	1246.11	2.68	2.05	41.81	20.48	136.31	510.93	2.35	1.14	3.26	3.26
Sweet Grass County	A2	RM 468.71	175823	2% - 50yr	1118.52	1249.03	1246.41	2.75	2.28	47.45	27.36	147.29	523.54	1.87	1.08	2.62	2.62
Sweet Grass County	A2	RM 468.57	175192	2% - 50yr	1118.52	1248.86	1245.17	1.93	1.55	21.41	12.52	178.26	720.41	2.41	1.4	3.69	3.69
Sweet Grass County	A2	RM 468.42	174099	2% - 50yr	1118.52	1248.15	1244.97	2.88	2.35	49.6	30.11	168.48	512.57	2.15	1.31	3.18	3.18
Sweet Grass County	A3	RM 468.25	173324	2% - 50yr	1118.52	1247.98	1242.97	2.21	1.58	24.86	11.36	129.09	574.54	3.54	1.6	5	5
Sweet Grass County	A3	RM 468.16	172855	2% - 50yr	1118.52	1247.78	1243.58	2.59	1.8	35.95	18.19	119.05	580.41	3	1.51	4.2	4.2
Sweet Grass County	A3	RM 468.07	172364	2% - 50yr	1118.52	1247.74	1243.89	1.99	1.48	21.26	11.74	136.65	659.56	3	1.65	3.85	3.85
Sweet Grass County	A3	RM 467.97	171839	2% - 50yr	1118.52	1247.05	1244.32	3.88	2.75	89.02	46.64	92.44	521.32	2.24	1.15	2.74	2.74
Sweet Grass County	A3	RM 467.87	171312	2% - 50yr	1118.52	1246.81	1243.46	2.42	2.14	33.26	21.99	159.56	521.27	2.51	1.66	3.35	3.35
Sweet Grass County	A3	RM 467.78	170840	2% - 50yr	1118.52	1246.27	1243.74	3.49	2.78	72.67	41.97	100.58	321.96	2.17	1.25	2.53	2.53
Sweet Grass County	A3	RM 467.69	170376	2% - 50yr	1118.52	1245.97	1242.96	2.97	2.35	51.46	29.73	115.51	426.88	2.35	1.34	3.01	3.01
Sweet Grass County	A3	RM 467.55	169614	2% - 50yr	1118.52	1245.59	1242.1	2.38	2.04	34.48	23.62	133.88	440.41	2.06	1.4	3.48	3.48
Sweet Grass County	A3	RM 467.41	168870	2% - 50yr	1118.52	1245.4	1241.15	2.05	1.38	22.09	10.02	133.26	691.05	3.17	1.42	4.25	4.25
Sweet Grass County	A3	RM 467.30	168362	2% - 50yr	1118.52	1244.77	1242.15	3.78	2.26	81.5	27.32	90.65	671.15	2.47	0.82	2.62	2.62
Sweet Grass County	A3	RM 467.16	167641	2% - 50yr	1118.52	1244.44	1240.78	2.18	1.41	26.78	10.65	159.04	844.65	2.59	1.02	3.66	3.66
Sweet Grass County	A3	RM 467.00	166780	2% - 50yr	1118.52	1243.97	1240.48	2.76	1.7	44.64	17.67	141.03	839.97	2.29	0.89	3.49	3.49
Sweet Grass County	A3	RM 466.83	165902	2% - 50yr	1118.52	1243.52	1239.84	2.76	1.64	41.43	16.01	111.13	710.67	2.89	1.11	3.67	3.67
Sweet Grass County	A3	RM 466.73	165364	2% - 50yr	1118.52	1243.22	1239.81	2.85	1.82	44.21	16.55	115.43	603.47	2.85	1.06	3.42	3.42
Sweet Grass County	A3	RM 466.64	164858	2% - 50yr	1118.52	1242.69	1239.36	3.61	2.41	66.2	22.23	100.5	611.48	2.52	0.84	3.32	3.32
Sweet Grass County	A3	RM 466.49	164108	2% - 50yr	1118.52	1242.35	1239.67	2.83	1.75	45.76	22.41	107.44	650.3	2.44	1.19	2.68	2.68
Sweet Grass County	A3	RM 466.25	162845	2% - 50yr	1118.52	1241.06	1238.71	3.84	2.72	86.69	30.67	78.03	517.24	2.34	0.8	2.35	2.35
Sweet Grass County	A3	RM 465.79	160351	2% - 50yr	1118.52	1240.03	1236.48	2.24	1.18	27.84	11.31	110.96	859.04	2.8	1.1	3.55	3.55
Sweet Grass County	A3	RM 465.01	155919	2% - 50yr	1118.52	1237.81	1234.44	3.25	2.63	59.94	24.98	129.45	445.73	2.53	1.05	3.37	3.37
Sweet Grass County	A3	RM 464.68	154254	2% - 50yr	1118.52	1236.82	1233.35	2.7	2.17	42.85	21.65	171.79	490.81	2.26	1.14	3.48	3.48
Sweet Grass County	A3	RM 464.48	153160	2% - 50yr	1118.52	1236.28	1232.71	2.42	1.82	34.89	17.89	183.52	581.81	2.18	1.12	3.57	3.57
Sweet Grass County	A3	RM 464.33	152378	2% - 50yr	1118.52	1235.88	1232.61	2.44	1.78	35.17	17.9	183.37	555.9	2.23	1.13	3.26	3.26
Sweet Grass County	A3	RM 464.16	151621	2% - 50yr	1118.52	1235.49	1232.45	2.49	1.75	36.71	17.94	167.98	643.74	2.2	1.07	3.04	3.04
Sweet Grass County	A3	RM 464.04	150961	2% - 50yr	1118.52	1235.26	1231.48	2.41	1.55	30.11	14.1	118.42	616.08	3.29	1.52	3.78	3.78
Sweet Grass County	A3	RM 463.88	150174	2% - 50yr	1118.52	1234.59	1231.85	3.36	2.53	67.18	37.52	136.95	448.58	2.16	1.2	2.74	2.74
Sweet Grass County	A3	RM 463.78	149616	2% - 50yr	1118.52	1234.27	1230.54	2.83	2.25	45.95	30.37	149.53	444.31	2.42	1.59	3.73	3.73
Sweet Grass County	A3	RM 463.67	149069	2% - 50yr	1118.52	1233.97	1230.86	2.81	1.99	45.19	29.24	136.34	501.51	2.42	1.56	3.11	3.11

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	2% - 50yr	1118.52	1233.78	1230.39	2.62	1.81	37.69	23.27	135.08	1004.6	2.77	1.71	3.39	3.39
Sweet Grass County	A3	RM 463.49	148111	2% - 50yr	1118.52	1232.92	1229.73	3.98	3.1	94.06	45.6	121.76	901.71	2.2	1.06	3.19	3.19
Sweet Grass County	A3	RM 463.34	147326	2% - 50yr	1118.52	1232.55	1229.72	2.57	1.84	40.17	23.25	179.41	1250.81	2.01	1.16	2.83	2.83
Sweet Grass County	A3	RM 463.20	146616	2% - 50yr	1118.52	1232.18	1228.95	2.42	1.56	35.79	19.94	123.53	1503.93	2.02	1.1	3.23	3.23
Sweet Grass County	A3	RM 463.06	145881	2% - 50yr	1118.52	1231.96	1228.89	1.79	1.01	19.32	11.88	147.76	1514.43	2.09	1.28	3.07	3.07
Sweet Grass County	A4	RM 462.79	144435	2% - 50yr	1118.52	1231.83	1228.25	1.22	0.66	8.08	5.34	133.61	1428.33	2.87	1.86	3.58	3.58
Sweet Grass County	A4	RM 462.16	141146	2% - 50yr	1118.52	1229.4	1226.15	3.38	2.24	67.11	29.1	108.78	701.8	2.31	0.98	3.25	3.25
Sweet Grass County		RM 461.97	140135	2% - 50yr	1118.52	1228.88	1226.06	2.51	1.52	38.15	21.8	120.82	735.31	2.07	1.18	2.82	2.82
Sweet Grass County	A4	RM 461.71	138705	2% - 50yr	1118.52	1227.34	1224.75	3.79	3.13	91.41	54.08	100.93	392.6	1.79	1.05	2.59	2.59
Sweet Grass County	A4	RM 461.52	137683	2% - 50yr	1118.52	1226.91	1222.31	2.39	1.76	28.73	11.24	85.42	638.56	3.74	1.4	4.6	4.6
Sweet Grass County	A4	RM 461.33	136718	2% - 50yr	1118.52	1226.68	1223.38	2.09	1.57	24.91	14.72	125.5	733.48	2.46	1.45	3.3	3.3
Sweet Grass County	A4	RM 461.14	135736	2% - 50yr	1118.52	1225.95	1222.44	3.15	2.21	54.73	22.29	117.1	502.57	2.74	1.1	3.51	3.51
Sweet Grass County	A4	RM 460.99	134951	2% - 50yr	1118.52	1225.51	1221.98	3	2.21	49.04	20.4	121.6	435.66	2.82	1.17	3.53	3.53
Sweet Grass County	A4	RM 460.85	134214	2% - 50yr	1118.52	1225.28	1222.07	2.48	1.86	32.64	18.55	147.93	460.17	2.7	1.53	3.21	3.21
Sweet Grass County	A4	RM 460.74	133616	2% - 50yr	1118.52	1225.19	1220.27	2.05	1.66	20.22	12.53	125.57	469.21	4.11	2.53	4.92	4.92
Sweet Grass County	A4	RM 460.63	133067	2% - 50yr	1118.52	1225.18	1218.9	1.64	1.24	11.65	4.35	106.45	588.31	5.86	2.12	6.28	6.28
Sweet Grass County			132957	2% - 50yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	2% - 50yr	1118.52	1224.41	1221.09	3.34	2.69	61.45	29.3	112.67	512.79	2.74	1.3	3.32	3.32
Sweet Grass County	A4	RM 460.50	132281	2% - 50yr	1118.52	1223.5	1221.12	3.93	3.78	96.74	66.56	151.68	416.61	1.86	1.28	2.38	2.38
Sweet Grass County	A4	RM 460.38	131785	2% - 50yr	1118.52	1223.27	1220.5	2.72	2.35	42.15	25.73	139.17	526.69	2.05	1.25	2.78	2.78
Sweet Grass County	A4	RM 460.29	131287	2% - 50yr	1118.52	1222.95	1219.97	2.75	2.44	45.23	25.99	135.07	427.12	2.17	1.24	2.97	2.97
Sweet Grass County	A4	RM 460.19	130793	2% - 50yr	1118.52	1222.75	1219.38	2.47	2.1	34.05	22.33	118.6	343.74	2.64	1.73	3.36	3.36
Sweet Grass County	A4	RM 460.08	130210	2% - 50yr	1118.52	1222.36	1218.23	2.78	2.52	41.25	20.89	132.3	321.64	3	1.51	4.13	4.13
Sweet Grass County	A4	RM 459.99	129763	2% - 50yr	1118.52	1222.02	1218.01	3.15	2.9	52.27	31.16	110.76	235.78	3.17	1.88	4.01	4.01
Sweet Grass County	A4	RM 459.90	129246	2% - 50yr	1118.52	1221.85	1217.62	2.88	2.65	41.86	28.98	106.75	249.77	3.58	2.47	4.24	4.24
Sweet Grass County	A4	RM 459.81	128792	2% - 50yr	1118.52	1221.06	1218.15	4.18	4.06	97.21	77.75	99.73	211.34	2.67	2.13	2.91	2.91
Sweet Grass County	A4	RM 459.72	128310	2% - 50yr	1220.46	1221.01	1217.31	3.05	2.55	49.79	29.55	127.21	326.57	2.98	1.76	3.7	3.7
Sweet Grass County	A4	RM 459.62	127798	2% - 50yr	1220.46	1220.8	1217.46	2.89	2.41	46.22	26.94	128.42	321.69	2.7	1.58	3.33	3.33
Sweet Grass County	A5	RM 459.53	127324	2% - 50yr	1220.46	1220.09	1217.26	3.66	3.61	80.48	69.11	156.8	187.53	2.12	1.82	2.82	2.82
Sweet Grass County	A5	RM 459.44	126881	2% - 50yr	1220.46	1219.89	1216.93	2.85	2.76	47.45	40.07	185.47	263.53	2.29	1.94	2.96	2.96
Sweet Grass County	A5	RM 459.31	126192	2% - 50yr	1220.46	1219.47	1215.66	2.9	2.71	46.58	35.58	153.23	441.47	2.72	2.07	3.8	3.8
Sweet Grass County	A5	RM 459.24	125848	2% - 50yr	1220.46	1219.15	1215.69	3.21	2.99	57.85	44.01	145.56	489.81	2.58	1.96	3.45	3.45
Sweet Grass County	A5	RM 459.16	125420	2% - 50yr	1220.46	1218.53	1215.82	3.72	3.72	83.93	80.52	158.87	235.04	2.06	1.98	2.71	2.71
Sweet Grass County	A5	RM 459.02	124624	2% - 50yr	1220.46	1218.27	1214.8	2.44	2.34	34.07	25.27	200.81	519.79	2.47	1.83	3.46	3.46
Sweet Grass County	A5	RM 458.79	123371	2% - 50yr	1220.46	1217.37	1214.02	3.15	3.04	55.85	35.06	151.01	264.74	2.55	1.6	3.35	3.35
Sweet Grass County	A5	RM 458.48	121727	2% - 50yr	1220.46	1216.27	1213.35	2.68	2.59	45.21	41.63	165.37	298.5	1.85	1.7	2.93	2.93
Sweet Grass County	A5	RM 458.36	121100	2% - 50yr	1220.46	1215.21	1212.73	4.04	3.62	98.38	71.45	117.71	240.89	1.93	1.4	2.48	2.48
Sweet Grass County	A5	RM 458.25	120543	2% - 50yr	1220.46	1215.1	1211.35	2.51	2.15	33.78	23.88	122.03	269.72	2.99	2.1	3.75	3.75
Sweet Grass County	A5	RM 458.13	119849	2% - 50yr	1220.46	1214.81	1211.21	2.58	2.32	36.39	29.09	131.08	236.22	2.8	2.23	3.59	3.59
Sweet Grass County	A5	RM 458.03	119256	2% - 50yr	1220.46	1214.63	1210.09	2.41	2.16	28.9	19.63	122.91	223.29	3.75	2.53	4.55	4.55
Sweet Grass County	A5	RM 457.87	118444	2% - 50yr	1220.46	1214.34	1209.57	2.67	2.59	33.73	25.54	104.9	148.76	4.35	3.28	4.77	4.77
Sweet Grass County	A5	RM 457.76	117858	2% - 50yr	1220.46	1214.11	1210.24	2.81	2.76	41.69	36.12	137.04	161.83	3.15	2.73	3.87	3.87
Sweet Grass County	A5	RM 457.66	117350	2% - 50yr	1220.46	1213.82	1210.03	3.01	2.92	48.17	39.67	132.62	187.47	3.04	2.5	3.79	3.79
Sweet Grass County	A5	RM 457.54	116694	2% - 50yr	1220.46	1213.42	1209.93	3.16	2.97	53.96	40.97	131.05	210.68	2.9	2.21	3.48	3.48
Sweet Grass County	A5	RM 457.35	115703	2% - 50yr	1220.46	1212.05	1209.69	4.18	4.18	109.11	109.11	155.49	155.49	1.88	1.88	2.36	2.36
Sweet Grass County	A5	RM 457.20	114921	2% - 50yr	1220.46	1211.87	1208.7	2.44	2.44	33.57	33.57	196.87	196.87	2.54	2.54	3.16	3.16
Sweet Grass County	A5	RM 457.02	113974	2% - 50yr	1220.46	1211.25	1208.04	3.2	2.58	55.99	27.35	103.04	348.48	2.79	1.36	3.2	3.2
Sweet Grass County	A5	RM 456.84	113009	2% - 50yr	1220.46	1210.78	1206.55	2.89	2.75	42.47	27.32	120.66	199.1	3.48	2.23	4.23	4.23
Sweet Grass County	A5	RM 456.68	112164	2% - 50yr	1220.46	1210.03	1206.59	3.7	3.64	73.94	64.22	113.81	133.36	2.89	2.52	3.44	3.44
Sweet Grass County	A5	RM 456.55	111455	2% - 50yr	1220.46	1209.76	1206.19	2.92	2.89	46.34	43.06	146.88	159.67	2.84	2.64	3.58	3.58
Sweet Grass County	A5	RM 456.43	110857	2% - 50yr	1220.46	1209.46	1205.33	3.02	2.9	46.1	32.89	110.87	163.92	3.62	2.57	4.13	4.13
Sweet Grass County	A6	RM 456.29	110121	2% - 50yr	1220.46	1208.97	1205.45	3.4	3.24	57.81	44.74	118.64	186.57	3.01	2.32	3.52	3.52
Sweet Grass County	A6	RM 456.18	109508	2% - 50yr	1220.46	1208.53	1205.45	3.42	3.39	66.08	61.47	139.71	253.74	2.55	2.38	3.08	3.08
Sweet Grass County	A6	RM 456.03	108721	2% - 50yr	1220.46	1208.04	1204.59	2.97	2.88	51.46	41.76	176.21	311.26	2.32	1.88	3.45	3.45
Sweet Grass County	A6	RM 455.84	107742	2% - 50yr	1220.46	1207.62	1204.05	2.53	2.47	34	23.57	183.51	370.3	2.62	1.82	3.57	3.57
Sweet Grass County	A6	RM 455.70	106976	2% - 50yr	1220.46	1207.33	1203.14	2.58	2.56	32.93	29.83	143.46	338.7	3.29	2.98	4.19	4.19
Sweet Grass County	A6	RM 455.56	106256	2% - 50yr	1220.46	1206.83	1203.35	3.24	3.06	53.8	31.98	119.56	362.47	3.1	1.84	3.48	3.48
Sweet Grass County	A6	RM 455.39	105360	2% - 50yr	1220.46	1206.62	1202.74	2.49	2.31	32.64	24.37	151.06	315.4	3.15	2.35	3.87	3.87
Sweet Grass County	A6	RM 455.26	104667	2% - 50yr	1220.46	1205.58	1202.83	4.2	3.71	103.36	62.56	125.68	282.09	2.25	1.36	2.75	2.75
Sweet Grass County	A6	RM 455.09	103771	2% - 50yr	1220.46	1205.26	1201.58	2.41	2.11	31.04	18.79	159.8	313.3	3.07	1.85	3.68	3.68
Sweet Grass County	A6	RM 454.95	103072	2% - 50yr	1220.46	1204.61	1201.94	3.31	3.15	68.55	55.93	179.76	252.71	1.87	1.53	2.67	2.67

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	2% - 50yr	1220.46	1204.25	1200.61	2.51	2.37	37.27	32.64	178.91	254.11	2.32	2.03	3.64	3.64
Sweet Grass County	A6	RM 454.72	101863	2% - 50yr	1220.46	1203.76	1200.47	3.02	3.02	49.47	49.32	188.13	188.58	2.15	2.14	3.29	3.29
Sweet Grass County	A6	RM 454.64	101419	2% - 50yr	1220.46	1203.63	1199.69	2.47	2.46	32.63	32.44	195.79	211.53	2.53	2.51	3.94	3.94
Sweet Grass County	A6	RM 454.53	100846	2% - 50yr	1220.46	1203.13	1199.59	3.23	3.21	53.74	48.69	120.59	192.66	3.13	2.84	3.54	3.54
Sweet Grass County	A6	RM 454.43	100338	2% - 50yr	1220.46	1202.84	1199	3.25	3.24	55.55	48.38	115.82	184.41	3.24	2.82	3.85	3.85
Sweet Grass County	A6	RM 454.29	99597	2% - 50yr	1220.46	1202.43	1198.71	3.27	3.26	55.9	50.77	114.12	201.14	3.27	2.97	3.72	3.72
Sweet Grass County	A6	RM 454.15	98861	2% - 50yr	1220.46	1202.13	1198.68	2.98	2.87	45.79	35.15	136.69	187.34	2.96	2.27	3.45	3.45
Sweet Grass County	A6	RM 454.00	98105	2% - 50yr	1220.46	1201.73	1198.53	2.89	2.89	42.2	41.94	195.3	196.4	2.16	2.15	3.2	3.2
Sweet Grass County	A6	RM 453.89	97523	2% - 50yr	1220.46	1201.37	1198.31	2.92	2.84	46.47	43.44	180.86	203.31	2.26	2.12	3.06	3.06
Sweet Grass County	A6	RM 453.78	96929	2% - 50yr	1220.46	1201.21	1197.07	2.42	2.35	30.48	20.63	153.06	235.12	3.27	2.21	4.14	4.14
Sweet Grass County	A6	RM 453.67	96361	2% - 50yr	1220.46	1200.82	1197.77	3.02	2.65	50.17	33.39	151.58	275.35	2.51	1.67	3.05	3.05
Sweet Grass County	A6	RM 453.58	95863	2% - 50yr	1220.46	1200.75	1196.37	2.3	2.29	26.14	25.34	182.6	189.93	3.41	3.31	4.38	4.38
Sweet Grass County	A6	RM 453.48	95355	2% - 50yr	1220.46	1200.1	1196.86	3.66	3.61	70.93	62.11	118.04	136.91	2.82	2.47	3.24	3.24
Sweet Grass County	A6	RM 453.35	94633	2% - 50yr	1220.46	1199.54	1196.43	3.57	3.48	68.61	58.05	133.91	205.22	2.54	2.16	3.1	3.1
Sweet Grass County	A7	RM 453.23	93994	2% - 50yr	1220.46	1199.14	1196.41	3.19	2.99	56.16	50.65	113	204.85	2.25	2.02	2.73	2.73
Sweet Grass County	A7	RM 453.11	93361	2% - 50yr	1220.46	1198.92	1195.68	2.46	2.42	24.74	24.35	264.6	282.33	1.81	1.79	3.23	3.23
Sweet Grass County	A7	RM 453.01	92863	2% - 50yr	1220.46	1198.43	1195.38	3.2	3.08	46.94	44.08	180.42	214.35	1.97	1.85	3.05	3.05
Sweet Grass County	A7	RM 452.91	92363	2% - 50yr	1220.46	1198.32	1194.85	2.62	2.27	34.7	21.6	117.27	316.25	2.77	1.72	3.47	3.47
Sweet Grass County	A7	RM 452.82	91863	2% - 50yr	1220.46	1198.06	1194.65	2.67	2.54	38.67	35.12	111.14	182.23	2.9	2.64	3.41	3.41
Sweet Grass County	A7	RM 452.72	91363	2% - 50yr	1220.46	1198	1193.29	2.17	2.09	23.26	18.66	144.32	188.32	3.87	3.1	4.7	4.7
Sweet Grass County	A7	RM 452.64	90932	2% - 50yr	1220.46	1197.76	1194.02	2.71	2.23	38.64	27.76	133.5	282.9	3.13	2.25	3.74	3.74
Sweet Grass County	A7	RM 452.53	90362	2% - 50yr	1220.46	1197.3	1193.87	3.31	3	56.64	41.57	116.37	190.2	2.92	2.14	3.44	3.44
Sweet Grass County	A7	RM 452.43	89864	2% - 50yr	1220.46	1196.94	1193.52	3.44	3.07	61.46	40.86	111.62	202.44	2.96	1.96	3.42	3.42
Sweet Grass County	A7	RM 452.33	89331	2% - 50yr	1220.46	1196.66	1193.16	3.2	3.01	52.22	40.03	134.45	216.48	2.78	2.13	3.49	3.49
Sweet Grass County	A7	RM 452.25	88863	2% - 50yr	1220.46	1196.39	1192.91	3.16	2.98	51.51	37.57	138.6	204.1	2.77	2.02	3.48	3.48
Sweet Grass County	A7	RM 452.16	88399	2% - 50yr	1220.46	1196.07	1192.68	3.33	2.76	57.97	34.24	119.78	291.39	2.92	1.72	3.39	3.39
Sweet Grass County	A7	RM 452.06	87882	2% - 50yr	1220.46	1195.83	1192.4	3.09	2.62	50.5	32.54	120.32	303.27	3.11	2	3.43	3.43
Sweet Grass County	A7	RM 451.96	87394	2% - 50yr	1220.46	1195.57	1191.9	3.13	2.57	53.29	29.9	125.87	295.86	2.87	1.61	3.67	3.67
Sweet Grass County	A7	RM 451.86	86835	2% - 50yr	1220.46	1195.35	1191.79	2.89	2.33	42.23	28.06	122.39	255.54	3.1	2.05	3.56	3.56
Sweet Grass County	A7	RM 451.75	86230	2% - 50yr	1220.46	1195.02	1191.43	2.95	2.95	44.85	44.8	133.43	133.58	3.1	3.1	3.59	3.59
Sweet Grass County	A7	RM 451.61	85483	2% - 50yr	1220.46	1194.73	1190.7	2.74	2.74	40.53	39.39	152.65	159.25	2.92	2.84	4.03	4.03
Sweet Grass County	A7	RM 451.49	84861	2% - 50yr	1220.46	1194.15	1191.07	3.46	3.28	62.04	53.07	126.46	159.13	2.73	2.34	3.08	3.08
Sweet Grass County	A7	RM 451.34	84113	2% - 50yr	1220.46	1194.1	1190.06	2.26	2.21	25.98	21.83	150.96	263.49	3.55	2.98	4.04	4.04
Sweet Grass County	A7	RM 451.20	83363	2% - 50yr	1220.46	1193.4	1189.8	3.59	3.56	67.05	58.1	103.86	169.64	3.27	2.83	3.6	3.6
Sweet Grass County	A7	RM 451.10	82863	2% - 50yr	1220.46	1193.27	1189.79	2.97	2.93	46.54	38.53	133.83	164.52	3.06	2.54	3.48	3.48
Sweet Grass County	A7	RM 451.00	82325	2% - 50yr	1220.46	1193.12	1189.55	2.67	2.47	37.8	27.17	118.3	224.39	3.07	2.2	3.57	3.57
Sweet Grass County	A7	RM 450.86	81602	2% - 50yr	1220.46	1192.94	1188.29	2.25	1.99	48.87	25.03	90.13	272.34	4.55	2.26	4.64	4.64
Sweet Grass County	A7	RM 450.73	80923	2% - 50yr	1220.46	1191.9	1188.46	4.08	3.71	91.85	63.87	101.7	170.57	2.79	1.93	3.44	3.44
Sweet Grass County	A7	RM 450.63	80374	2% - 50yr	1220.46	1191.6	1188.16	3.34	3.26	61.89	48	135.79	180.48	2.68	2.08	3.44	3.44
Sweet Grass County	A7	RM 450.53	79863	2% - 50yr	1220.46	1191.35	1187.88	3	2.94	46.75	35.52	151.07	203.82	2.68	2.04	3.48	3.48
Sweet Grass County	A7	RM 450.43	79300	2% - 50yr	1220.46	1191.11	1187.72	2.87	2.68	42.02	33.7	133.66	222.74	2.55	2.04	3.39	3.39
Sweet Grass County	A7	RM 450.34	78849	2% - 50yr	1282.75	1190.81	1188.05	2.98	2.75	49.83	41	125.77	239.24	2.37	1.95	2.76	2.76
Sweet Grass County	A7	RM 450.23	78298	2% - 50yr	1282.75	1190.7	1186.92	2.19	2.06	25.24	19.02	195.68	424.61	2.97	2.23	3.77	3.77
Sweet Grass County	A7	RM 450.14	77822	2% - 50yr	1282.75	1190.42	1186.4	2.67	2.27	38.43	18.99	152.44	417.27	3.01	1.46	4.02	4.02
Sweet Grass County	A7	RM 450.05	77362	2% - 50yr	1282.75	1189.77	1187.2	3.71	3.54	78.59	58.39	139.69	255.6	2.45	1.82	2.57	2.57
Sweet Grass County	A7	RM 449.96	76841	2% - 50yr	1282.75	1189.54	1186.28	3.13	2.71	51.94	32.8	127.89	349.3	3.09	1.94	3.26	3.26
Sweet Grass County	A7	RM 449.86	76356	2% - 50yr	1282.75	1189.2	1185.58	3.36	2.71	58.2	26.26	108.58	416.61	3.38	1.51	3.62	3.62
Sweet Grass County	A7	RM 449.77	75860	2% - 50yr	1282.75	1188.88	1185.68	3.34	2.94	56.18	47.38	168.44	309.73	2.16	1.82	3.2	3.2
Sweet Grass County	A7	RM 449.68	75373	2% - 50yr	1282.75	1188.56	1185.9	2.91	2.69	52.31	43.58	220.37	387.7	1.95	1.63	2.66	2.66
Sweet Grass County	A7	RM 449.59	74904	2% - 50yr	1282.75	1188.45	1184.15	2.55	2.14	32.26	17.69	112.22	366.7	3.86	2.08	4.3	4.3
Sweet Grass County	A7	RM 449.48	74351	2% - 50yr	1282.75	1188.06	1184.86	3.23	2.72	60.81	38.11	121.9	335.34	2.32	1.45	3.2	3.2
Sweet Grass County	A7	RM 449.37	73741	2% - 50yr	1282.75	1187.93	1184.73	2.11	1.79	25.77	15.78	210.35	612.21	2.37	1.45	3.19	3.19
Sweet Grass County	A7	RM 449.26	73165	2% - 50yr	1282.75	1187.84	1184.33	1.88	1.17	17.67	10.3	128.66	852.81	2.95	1.7	3.51	3.51
Sweet Grass County	A7	RM 449.10	72364	2% - 50yr	1282.75	1187.04	1183.97	3.9	2.02	82.65	32.28	87.4	830.59	2.94	1.12	3.07	3.07
Sweet Grass County	A7	RM 449.00	71858	2% - 50yr	1282.75	1186.31	1183.97	3.88	2.52	92.23	46.22	113.75	538.59	2.03	1	2.34	2.34
Sweet Grass County	A7	RM 448.88	71223	2% - 50yr	1282.75	1186.11	1183.11	2.02	1.78	24.53	17.01	231.52	547.03	2.12	1.47	3	3
Sweet Grass County	A7	RM 448.76	70537	2% - 50yr	1282.75	1186.08	1182.01	1.19	1.15	8.25	7.59	312.73	514.86	2.35	2.16	4.06	4.06
Sweet Grass County	A7	RM 448.55	69424	2% - 50yr	1282.75	1185.87	1181.8	1.78	1.53	15.95	11.32	154.14	580.22	3.6	2.55	4.07	4.07
Sweet Grass County	A7	RM 448.41	68815	2% - 50yr	1282.75	1185.27	1181.16	3.37	3.03	51.52	36.18	108.05	181.39	3.37	2.33	4.11	4.11
Sweet Grass County	A7	RM 448.32	68353	2% - 50yr	1282.75	1185.42	1179.91	2	1.96	18.24	16.39	126.03	256.17	5.06	4.55	5.51	5.51
Sweet Grass County	A7	RM 448.23	67851	2% - 50yr	1282.75	1185.2	1179.82	2.49	2.44	28.46	25.55	105.4	296.59	4.87	4.36	5.38	5.38

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	2% - 50yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	2% - 50yr	1282.75	1184.42	1180.89	3.98	3.95	85.01	79.13	107.64	273.14	2.99	2.78	3.54	3.54
Sweet Grass County	A7	RM 448.07	67043	2% - 50yr	1282.75	1184.12	1180.7	3.01	2.74	49.57	36.08	149.15	414.95	2.81	2.04	3.42	3.42
Sweet Grass County	A7	RM 447.94	66348	2% - 50yr	1282.75	1183.75	1180.22	3.07	2.5	49.35	19.63	125.42	528.46	3.22	1.27	3.54	3.54
Sweet Grass County	A7	RM 447.85	65863	2% - 50yr	1282.75	1183.34	1180.39	3.46	2.52	66.97	25.38	134.05	518.46	2.6	0.98	2.95	2.95
Sweet Grass County	A7	RM 447.75	65363	2% - 50yr	1282.75	1183.27	1179.55	2.6	1.96	32.72	14.59	143.24	447.83	3.28	1.46	3.73	3.73
Sweet Grass County	A7	RM 447.66	64865	2% - 50yr	1282.75	1182.93	1179.59	3.1	2.11	50.6	18.06	121.32	540.7	3.18	1.12	3.34	3.34
Sweet Grass County	A7	RM 447.56	64365	2% - 50yr	1282.75	1182.36	1179.67	3.75	2.53	82.64	35.77	136.94	518.47	2.27	0.98	2.69	2.69
Sweet Grass County	A7	RM 447.49	64001	2% - 50yr	1282.75	1182.25	1179.82	2.79	2.13	45.26	26.92	193.72	464.03	2.19	1.3	2.43	2.43
Sweet Grass County	A7	RM 447.39	63473	2% - 50yr	1282.75	1181.68	1178.85	3.77	2.44	77.3	31	92.79	529.9	2.49	0.99	2.82	2.82
Sweet Grass County	A7	RM 447.27	62880	2% - 50yr	1282.75	1181.32	1178.26	3.16	2.22	57.87	26.44	108.44	537.56	2.39	1.08	3.07	3.07
Sweet Grass County	A7	RM 447.17	62358	2% - 50yr	1282.75	1181.01	1177.92	2.99	1.89	51.66	25.95	112.86	571.77	2.38	1.18	3.09	3.09
Sweet Grass County	A7	RM 447.08	61863	2% - 50yr	1282.75	1180.59	1177.91	3.11	1.93	59.83	34.75	102.06	587.1	1.96	1.13	2.68	2.68
Sweet Grass County	A7	RM 446.98	61358	2% - 50yr	1282.75	1180.09	1177.28	3.28	2.04	58.99	24.64	95.47	610	2.48	1.03	2.81	2.81
Sweet Grass County	A7	RM 446.89	60841	2% - 50yr	1282.75	1179.71	1176.94	3.46	2.06	68.12	28.17	79.77	654.19	2.49	1.02	2.76	2.76
Sweet Grass County	A7	RM 446.80	60396	2% - 50yr	1282.75	1179.53	1175.92	2.73	1.82	40.83	21.17	96.31	734.5	2.8	1.43	3.61	3.61
Sweet Grass County	A7	RM 446.70	59903	2% - 50yr	1282.75	1179.25	1176.22	3.2	2.11	55.98	23.96	65.99	657.88	2.98	1.22	3.04	3.04
Sweet Grass County	A7	RM 446.60	59371	2% - 50yr	1282.75	1178.96	1175.91	3.11	2.06	51.23	22.67	77.2	598.58	2.78	1.2	3.05	3.05
Sweet Grass County	A7	RM 446.51	58868	2% - 50yr	1282.75	1178.78	1175.24	2.67	2.06	39.18	20.09	117.15	501.03	2.8	1.42	3.53	3.53
Sweet Grass County	A7	RM 446.41	58363	2% - 50yr	1282.75	1178.59	1174.39	2.39	1.92	29.43	14.25	148.64	501.52	2.94	1.42	4.2	4.2
Sweet Grass County	A7	RM 446.30	57762	2% - 50yr	1282.75	1178.29	1174.85	2.73	2.13	38.56	15.49	123.97	516.45	2.91	1.17	3.45	3.45
Sweet Grass County	A7	RM 446.22	57365	2% - 50yr	1282.75	1177.72	1174.39	3.58	3.45	68.87	43.53	129.19	214.49	2.76	1.74	3.32	3.32
Sweet Grass County	A7	RM 446.12	56852	2% - 50yr	1282.75	1177.49	1174.04	3.15	2.83	51.58	21.1	140.19	390.62	2.85	1.16	3.45	3.45
Sweet Grass County	A7	RM 446.02	56303	2% - 50yr	1282.75	1177.39	1173.3	2.73	1.98	36.62	15.1	98.27	405.28	4	1.6	4.09	4.09
Sweet Grass County	A7	RM 445.94	55871	2% - 50yr	1282.75	1176.55	1173.6	4.37	3.77	106.8	49.48	94.4	280.37	2.67	1.22	2.96	2.96
Sweet Grass County	A7	RM 445.82	55236	2% - 50yr	1282.75	1176.49	1173.05	2.46	2.28	34.77	27.34	208.84	326.58	2.41	1.9	3.44	3.44
Sweet Grass County	A7	RM 445.71	54753	2% - 50yr	1282.75	1176.33	1172.38	2.29	2.22	26.12	22.83	210.48	293.9	2.62	2.29	3.95	3.95
Sweet Grass County	A7	RM 445.60	54202	2% - 50yr	1282.75	1176.12	1172.32	2.42	2.32	30.1	26.95	190.57	288.66	2.74	2.46	3.8	3.8
Sweet Grass County	A7	RM 445.46	53453	2% - 50yr	1282.75	1175.59	1171.04	3.17	2.82	50.33	33.73	132.44	237.34	2.87	1.92	4.55	4.55
Sweet Grass County	A7	RM 445.36	52888	2% - 50yr	1282.75	1175.39	1170.25	2.97	2.39	45.22	28.3	105.4	316.33	3.43	2.13	5.14	5.14
Sweet Grass County	A7	RM 445.26	52344	2% - 50yr	1282.75	1174.65	1171.35	4.01	3.51	87.94	49.28	105.72	244.82	2.81	1.57	3.3	3.3
Sweet Grass County	A7	RM 445.17	51873	2% - 50yr	1282.75	1174.13	1171.83	3.96	3.67	93.07	69.31	136.95	242.74	2.2	1.64	2.3	2.3
Sweet Grass County	A7	RM 445.07	51376	2% - 50yr	1282.75	1174.18	1170.28	2.34	2.12	29.81	19.17	181.57	398.83	2.87	1.84	3.9	3.9
Sweet Grass County	A7	RM 444.97	50844	2% - 50yr	1282.75	1173.67	1170.19	3.21	3	54.33	32.37	148.01	317.23	2.65	1.57	3.49	3.49
Sweet Grass County	A7	RM 444.88	50352	2% - 50yr	1282.75	1173.42	1170.05	3.07	2.65	49.75	23.79	144.09	363.98	2.82	1.34	3.37	3.37
Sweet Grass County	A7	RM 444.79	49860	2% - 50yr	1282.75	1173.12	1169.94	3.18	2.5	55.03	28.13	132.48	370.78	2.82	1.44	3.18	3.18
Sweet Grass County	A7	RM 444.69	49316	2% - 50yr	1282.75	1172.81	1169.55	3.16	2.43	54.06	27.64	130.16	413.42	2.89	1.48	3.25	3.25
Sweet Grass County	A7	RM 444.60	48863	2% - 50yr	1282.75	1172.77	1167.23	2.6	1.87	30.64	13.02	88.53	568.32	5.16	2.1	5.54	5.54
Sweet Grass County	A7	RM 444.50	48367	2% - 50yr	1282.75	1172.54	1168.66	3.08	2.33	49.61	29.98	103.9	638.02	3.23	1.94	3.87	3.87
Sweet Grass County	A7	RM 444.41	47863	2% - 50yr	1282.75	1172.44	1168.6	2.48	2.26	30.8	20.25	129.86	707.37	3.28	2.15	3.84	3.84
Sweet Grass County	A7	RM 444.30	47336	2% - 50yr	1282.75	1172.36	1168.26	2.09	1.77	21.82	14.4	167.8	706.25	3.44	2.27	4.1	4.1
Sweet Grass County	A7	RM 444.20	46789	2% - 50yr	1282.75	1171.44	1167.97	4.14	3.59	93.84	48.82	107.59	453.1	2.82	1.45	3.48	3.48
Sweet Grass County	A7	RM 444.12	46346	2% - 50yr	1282.75	1171.07	1167.62	3.97	3.36	83.4	41.29	100.31	256.57	3.14	1.53	3.45	3.45
Sweet Grass County	A7	RM 444.02	45829	2% - 50yr	1282.75	1170.9	1167.57	3.21	2.82	50.68	25.56	143.97	451.93	2.73	1.37	3.33	3.33
Sweet Grass County	A7	RM 443.91	45243	2% - 50yr	1282.75	1170.61	1167.08	2.98	2.46	49.67	20.3	153.34	718.12	2.62	1.06	3.53	3.53
Sweet Grass County	A7	RM 443.84	44853	2% - 50yr	1282.75	1170.04	1167.23	3.62	3.29	80.22	42.57	173.99	440.77	1.99	1.05	2.8	2.8
Sweet Grass County	A7	RM 443.75	44415	2% - 50yr	1282.75	1169.84	1166.67	2.84	2.73	46.32	23.57	183.8	628.96	2.44	1.24	3.17	3.17
Sweet Grass County	A7	RM 443.64	43870	2% - 50yr	1282.75	1169.75	1166.09	2.37	1.71	30.07	14.53	110.6	883.61	2.99	1.43	3.65	3.65
Sweet Grass County	A7	RM 443.53	43290	2% - 50yr	1282.75	1169.6	1165.72	2.39	1.84	28.81	14.04	87.59	815.99	3.59	1.72	3.88	3.88
Sweet Grass County	A8	RM 443.45	42860	2% - 50yr	1282.75	1169.1	1165.25	3.19	2.89	53.77	29.56	139.17	671.09	2.84	1.56	3.85	3.85
Sweet Grass County	A8	RM 443.35	42363	2% - 50yr	1282.75	1168.22	1164.95	4.39	4.01	106.61	70.17	101.62	506.95	2.73	1.78	3.27	3.27
Sweet Grass County	A8	RM 443.25	41863	2% - 50yr	1282.75	1168.13	1165.05	3.14	2.61	54.77	28.28	127.8	572.14	2.69	1.38	3.09	3.09
Sweet Grass County	A8	RM 443.16	41342	2% - 50yr	1282.75	1167.89	1165.43	2.79	2.08	46.76	26.91	152.93	808.86	2.09	1.2	2.46	2.46
Sweet Grass County	A8	RM 443.07	40863	2% - 50yr	1282.75	1167.49	1164.49	3.01	2	53.45	25.64	139	785.74	2.21	1.06	3	3
Sweet Grass County	A8	RM 442.97	40345	2% - 50yr	1282.75	1167.2	1164.28	2.63	1.84	37.84	23.39	161.78	649.05	2.13	1.32	2.92	2.92
Sweet Grass County	A8	RM 442.88	39863	2% - 50yr	1282.75	1166.99	1164.06	2.27	1.78	30.03	19.68	177.36	737.53	2.06	1.35	2.94	2.94
Sweet Grass County	A8	RM 442.78	39363	2% - 50yr	1282.75	1166.24	1164.18	3.58	3.08	84.7	55.23	141.29	540.65	1.57	1.03	2.39	2.39
Sweet Grass County	A8	RM 442.68	38840	2% - 50yr	1282.75	1165.96	1162.8	2.58	1.97	33.16	19.02	117.57	573.98	2.33	1.33	3.16	3.16
Sweet Grass County	A8	RM 442.60	38390	2% - 50yr	1282.75	1165.88	1162.57	1.9	1.57	20.55	12.38	157.4	553.87	2.49	1.5	3.31	3.31
Sweet Grass County	A8	RM 442.50	37863	2% - 50yr	1282.75	1165.44	1162.29	3.21	2.3	49.96	22.26	102.55	529.06	2.41	1.07	3.16	3.16
Sweet Grass County	A8	RM 442.42	37461	2% - 50yr	1282.75	1165.21	1162.07	3.05	2.26	44.05	23.2	121.06	512.28	2.16	1.13	3.15	3.15

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	2% - 50yr	1282.75	1164.95	1161.85	2.83	2.18	45.34	23.02	107.71	493.95	2.52	1.27	3.1	3.1
Sweet Grass County	A8	RM 442.24	36451	2% - 50yr	1282.75	1164.7	1161.75	2.75	2.27	39.3	21.53	130.05	531.69	2.15	1.18	2.95	2.95
Sweet Grass County	A8	RM 442.12	35820	2% - 50yr	1282.75	1164.33	1161.12	2.93	2.23	42.93	21.26	123.17	571.99	2.38	1.17	3.21	3.21
Sweet Grass County	A8	RM 442.03	35367	2% - 50yr	1282.75	1164.07	1161.18	2.81	2.32	46.16	25.21	123.16	537.04	2.28	1.25	2.9	2.9
Sweet Grass County	A8	RM 441.95	34945	2% - 50yr	1282.75	1164.01	1160.28	2.13	1.61	24.79	11.82	133.86	761.41	2.85	1.33	3.73	3.73
Sweet Grass County	A8	RM 441.84	34360	2% - 50yr	1282.75	1163.53	1160.33	2.92	2.15	44.1	22.74	186.27	550.88	2.1	1.08	3.21	3.21
Sweet Grass County	A8	RM 441.74	33863	2% - 50yr	1282.75	1163.21	1160.06	2.94	2.12	45.94	21.75	171.23	576.14	2.26	1.07	3.15	3.15
Sweet Grass County	A8	RM 441.65	33357	2% - 50yr	1282.75	1163.1	1159.78	2.3	1.51	28.31	12.51	173.66	890.1	2.74	1.2	3.32	3.32
Sweet Grass County	A8	RM 441.53	32732	2% - 50yr	1282.75	1162.65	1159.44	2.95	1.9	49.4	18.46	152.04	787.66	2.53	0.94	3.21	3.21
Sweet Grass County	A8	RM 441.47	32366	2% - 50yr	1282.75	1162.52	1158.95	2.69	1.66	39.06	14.39	138.98	838.65	2.93	1.08	3.57	3.57
Sweet Grass County	A8	RM 441.38	31928	2% - 50yr	1282.75	1162.57	1158.24	1.73	1.1	15.61	8.29	153.74	1012.83	3.25	1.72	4.32	4.32
Sweet Grass County	A8	RM 441.27	31350	2% - 50yr	1282.75	1162.04	1158.76	3.4	2.09	63.85	20.94	97.16	1020.27	2.75	0.89	3.29	3.29
Sweet Grass County	A8	RM 441.18	30882	2% - 50yr	1282.75	1161.79	1158.5	2.56	1.57	34.29	12.79	126.18	1001.39	2.66	0.99	3.29	3.29
Sweet Grass County	A8	RM 441.07	30295	2% - 50yr	1282.75	1161.64	1158.19	2.25	1.44	27.95	11.09	149.54	993.15	2.75	1.09	3.46	3.46
Sweet Grass County	A8	RM 441.00	29913	2% - 50yr	1282.75	1161.56	1157.63	2.13	1.35	24.97	10.76	146.59	947.45	2.77	1.19	3.93	3.93
Sweet Grass County	A8	RM 440.80	28852	2% - 50yr	1282.75	1160.77	1157.49	3.56	2.44	66.2	20.63	103.86	603.45	2.82	0.88	3.28	3.28
Sweet Grass County	A8	RM 440.60	27841	2% - 50yr	1282.75	1159.84	1157.2	3.09	2.36	55.97	27.7	121.05	484.48	2.27	1.12	2.64	2.64
Sweet Grass County	A8	RM 440.51	27361	2% - 50yr	1282.75	1159.24	1156.41	3.57	2.77	74.85	39.81	109.89	391.46	2.28	1.2	2.83	2.83
Sweet Grass County	A8	RM 440.42	26862	2% - 50yr	1282.75	1158.78	1156.26	3.45	2.67	70.87	36.83	89.14	423.87	2.19	1.13	2.52	2.52
Sweet Grass County	A8	RM 440.30	26223	2% - 50yr	1282.75	1158.75	1155.63	1.77	1.43	17.88	12.37	97.18	603.57	2.47	1.7	3.12	3.12
Sweet Grass County	A8	RM 440.17	25466	2% - 50yr	1282.75	1158.56	1154.7	2.25	1.67	26.47	15.62	64.56	422.39	3.31	1.89	3.86	3.86
Sweet Grass County	A8	RM 440.06	24863	2% - 50yr	1282.75	1158.31	1153.97	2.37	1.92	28.96	18.07	130.95	325.58	3.37	2.09	4.34	4.34
Sweet Grass County	A8	RM 439.96	24366	2% - 50yr	1282.75	1158.06	1154.18	2.84	2.14	40.87	20.72	95.94	406.78	3.54	1.78	3.88	3.88
Sweet Grass County	A8	RM 439.87	23863	2% - 50yr	1282.75	1157.68	1153.59	3.2	2.52	49.32	21.78	103.39	345.71	3.71	1.63	4.09	4.09
Sweet Grass County	A8	RM 439.77	23365	2% - 50yr	1282.75	1157.45	1153.6	3.17	2.64	50.05	16.94	124.68	489.94	3.15	1.06	3.85	3.85
Sweet Grass County	A8	RM 439.68	22863	2% - 50yr	1282.75	1157.19	1153.45	3.18	2.58	49.77	18.93	135.35	492.61	2.85	1.07	3.74	3.74
Sweet Grass County	A8	RM 439.58	22363	2% - 50yr	1282.75	1157.13	1153.39	2.47	1.78	31.08	13.59	150.28	560	3.08	1.35	3.74	3.74
Sweet Grass County	A8	RM 439.49	21863	2% - 50yr	1282.75	1156.99	1152.86	2.51	1.74	30.95	11.52	116.13	553.28	3.85	1.42	4.13	4.13
Sweet Grass County	A8	RM 439.39	21363	2% - 50yr	1282.75	1156.87	1153.06	2.45	1.75	30.68	12.58	131.98	575.62	3.37	1.36	3.81	3.81
Sweet Grass County	A8	RM 439.30	20863	2% - 50yr	1282.75	1156.62	1152.92	2.84	1.9	40.74	15.84	110.38	571.86	3.33	1.29	3.71	3.71
Sweet Grass County	A8	RM 439.20	20353	2% - 50yr	1282.75	1155.64	1152.64	4.35	3.96	99.94	47.69	111.19	289.05	2.6	1.24	3	3
Sweet Grass County	A8	RM 439.11	19864	2% - 50yr	1282.75	1155.64	1152.34	2.88	2.22	44.1	18.56	98.01	583.38	3.03	1.27	3.3	3.3
Sweet Grass County	A8	RM 439.01	19360	2% - 50yr	1282.75	1155	1152.4	3.66	3.05	73.66	34.8	126.94	445.38	2.12	1	2.6	2.6
Sweet Grass County	A8	RM 438.91	18848	2% - 50yr	1282.75	1154.87	1151.92	2.72	2.09	39.54	17.69	121.85	555.87	2.51	1.12	2.95	2.95
Sweet Grass County	A8	RM 438.82	18363	2% - 50yr	1282.75	1154.54	1151.23	2.91	2.37	47.51	23.44	119.9	482.23	2.58	1.27	3.31	3.31
Sweet Grass County	A8	RM 438.73	17853	2% - 50yr	1282.75	1154.25	1151.37	2.87	2.25	43.85	26.13	124.01	435.5	2.2	1.31	2.88	2.88
Sweet Grass County	A8	RM 438.63	17363	2% - 50yr	1282.75	1154.14	1150.74	2.25	1.84	27.13	18.61	100.37	363.22	2.96	2.03	3.4	3.4
Sweet Grass County	A8	RM 438.54	16863	2% - 50yr	1282.75	1154	1150.59	2.24	1.94	26.35	20.49	105.25	268.95	3.2	2.45	3.41	3.41
Sweet Grass County	A8	RM 438.43	16307	2% - 50yr	1282.75	1153.77	1149.52	2.37	2.27	29.35	21.83	165.05	267.76	3.24	2.4	4.25	4.25
Sweet Grass County	A9	RM 438.36	15889	2% - 50yr	1282.75	1153.64	1149.4	2.39	2.33	26.15	23.6	187.56	230.9	2.82	2.55	4.24	4.24
Sweet Grass County	A9	RM 438.26	15363	2% - 50yr	1282.75	1153.01	1149.84	3.7	3.08	72.82	33.75	115.65	342.3	2.75	1.27	3.17	3.17
Sweet Grass County	A9	RM 438.16	14863	2% - 50yr	1282.75	1152.76	1149.31	3.27	2.38	54.12	22.15	123.27	467.62	2.92	1.19	3.45	3.45
Sweet Grass County	A9	RM 438.07	14394	2% - 50yr	1282.75	1152.45	1149.19	3.36	2.3	62.91	25.31	128.79	552.03	2.64	1.06	3.25	3.25
Sweet Grass County	A9	RM 437.96	13827	2% - 50yr	1282.75	1152.25	1149.19	2.85	1.85	46.19	19.98	120.84	668.99	2.5	1.07	3.06	3.06
Sweet Grass County	A9	RM 437.88	13363	2% - 50yr	1282.75	1152.04	1148.94	2.86	1.79	42.23	18.66	109.09	698.42	2.47	1.08	3.1	3.1
Sweet Grass County	A9	RM 437.78	12844	2% - 50yr	1282.75	1151.69	1148.72	3.17	1.98	53.64	22.18	99.77	670.52	2.54	1.04	2.97	2.97
Sweet Grass County	A9	RM 437.69	12354	2% - 50yr	1282.75	1151.53	1148.45	2.4	1.71	33.61	17.32	147.13	659.35	2.28	1.17	3.07	3.07
Sweet Grass County	A9	RM 437.59	11863	2% - 50yr	1282.75	1151.24	1148.76	2.57	1.87	41.5	21.08	151.34	732.85	1.84	0.93	2.83	2.83
Sweet Grass County	A9	RM 437.50	11362	2% - 50yr	1282.75	1151.01	1148.29	2.27	1.72	31.33	16.75	189.39	693.62	2.01	1.08	2.71	2.71
Sweet Grass County	A9	RM 437.41	10902	2% - 50yr	1282.75	1150.72	1148.26	2.52	1.86	39.56	20.55	175.96	708.16	1.87	0.97	2.47	2.47
Sweet Grass County	A9	RM 437.31	10361	2% - 50yr	1282.75	1150.32	1147.37	2.81	1.94	47.38	22.23	148.16	659.46	2.13	1	2.94	2.94
Sweet Grass County	A9	RM 437.20	9764	2% - 50yr	1282.75	1150	1147.02	2.77	1.84	40.05	17.85	110.89	671.26	2.34	1.04	2.98	2.98
Sweet Grass County	A9	RM 437.08	9128	2% - 50yr	1282.75	1149.56	1146.9	2.73	2.09	42.73	21.7	193.45	636.96	1.9	0.96	2.66	2.66
Sweet Grass County	A9	RM 436.95	8363	2% - 50yr	1282.75	1149.34	1145.32	2.42	1.55	23.44	11.56	106.12	659.26	2.61	1.26	4.02	4.02
Sweet Grass County	A9	RM 436.83	7805	2% - 50yr	1282.75	1149.2	1145.93	1.83	1.43	21.03	13.31	154.6	764.83	1.86	1.17	3.27	3.27
Sweet Grass County	A9	RM 436.75	6857	2% - 50yr	1282.75	1148.67	1145.61	3.26	1.76	60.82	20.89	67.61	865.27	2.49	0.84	3.06	3.06
Sweet Grass County	A9	RM 436.66	6193	2% - 50yr	1282.75	1148.19	1145.68	3.01	1.87	53.54	19.76	97.51	863.58	2.16	0.8	2.51	2.51
Sweet Grass County	A9	RM 436.56	5280	2% - 50yr	1282.75	1147.74	1144.44	3.16	1.83	43.25	17.45	68.28	743.11	2.47	0.94	3.3	3.3
Sweet Grass County	A9	RM 436.40	4576	2% - 50yr	1282.75	1147.54	1144.05	2.53	1.54	34.56	12.97	57.78	772.12	3.08	1.1	3.5	3.5
Sweet Grass County	A9	RM 436.29	3787	2% - 50yr	1282.75	1147.1	1144.44	2.86	2.06	48.47	25.41	99.03	668.63	2.22	1.16	2.67	2.67
Sweet Grass County	A9	RM 436.16	3087	2% - 50yr	1282.75	1146.35	1143.57	3.37	2.65	67.62	32.16	107.65	704.2	2.17	1.03	2.77	2.77

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	2% - 50yr	1282.75	1146.12	1143.09	2.87	2.24	44.27	25.66	102.06	896.93	2.19	1.26	3.03	3.03
Sweet Grass County	A9	RM 435.98	2200	2% - 50yr	1282.75	1145.77	1142.85	3.04	2.28	54.98	26.01	78.3	880.18	2.21	1.02	2.93	2.93
Sweet Grass County	A9	RM 435.88	1580	2% - 50yr	1282.75	1145.42	1142.56	2.33	1.95	35.24	20.63	85.36	794.81	1.69	0.98	2.86	2.86
Sweet Grass County	A9	RM 435.73	890	2% - 50yr	1282.75	1145.1	1141.99	2.29	1.91	30.36	20.41	80.13	723.58	2.41	1.58	3.11	3.11
Sweet Grass County	A9	RM 435.62	104	2% - 50yr	1282.75	1144.64	1141.54	2.73	2.19	44.12	31.43	129.43	616.56	2.21	1.56	3.11	3.11

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	2% - 50yr	1282.75	1144.52	1140.73	1.57	1.36	13.93	8.22	151.59	763.3	2.52	1.49	3.83	3.83
Stillwater County	A9	RM 435.38	231282.1	2% - 50yr	1282.75	1144.31	1139.61	1.76	1.35	16.45	7.71	197.46	713.35	3.08	1.44	4.7	4.7
Stillwater County	A9	RM 435.25	230611.3	2% - 50yr	1282.75	1143.71	1138.48	3.28	2.4	57	17.18	118.64	573.4	3.12	0.93	5.23	5.23
Stillwater County	A9	RM 435.16	230122.9	2% - 50yr	1282.75	1143.51	1138.39	3.08	2.09	49.56	16.61	118.38	574	3.21	1.07	5.12	5.12
Stillwater County	A9	RM 435.07	229649	2% - 50yr	1282.75	1143.42	1137.85	2.75	1.76	37.63	13.56	103.72	553.35	3.71	1.33	5.57	5.57
Stillwater County	A9	RM 434.97	229153	2% - 50yr	1282.75	1143.08	1137.87	3.15	2.22	50.55	17.7	105.26	476.52	3.5	1.22	5.21	5.21
Stillwater County	A9	RM 434.84	228443.5	2% - 50yr	1282.75	1142.79	1137	3.08	2.41	47.59	20.39	103.65	345.55	3.64	1.55	5.79	5.79
Stillwater County	A9	RM 434.73	227855.5	2% - 50yr	1282.75	1142.43	1135.61	3.37	2.8	53.77	27.8	82.85	252.24	4.41	2.25	6.82	6.82
Stillwater County	A9	RM 434.63	227328.2	2% - 50yr	1282.75	1142.17	1135.42	3.43	3.42	57.09	50.84	91.85	257.28	4.07	3.62	6.75	6.75
Stillwater County	A9	RM 434.57	227011.2	2% - 50yr	1282.75	1142.03	1136.35	3.38	3.35	57.46	48.28	104.18	360.85	3.64	3.05	5.68	5.68
Stillwater County	A9	RM 434.53	226817.6	2% - 50yr	1282.75	1141.93	1136.73	3.37	3.34	59.55	52.73	118.94	401.21	3.19	2.83	5.2	5.2
Stillwater County	A10	RM 434.49	226573.3	2% - 50yr	1282.75	1141.85	1137.23	3.08	3.06	49.13	46.03	126.91	548.57	3.28	3.08	4.62	4.62
Stillwater County			226533.4	2% - 50yr	Bridge												
Stillwater County	A10	RM 434.47	226483	2% - 50yr	1282.75	1141.69	1137.49	3.07	3.07	49.86	49.09	135.7	649.66	3.08	3.04	4.2	4.2
Stillwater County	A10	RM 434.42	226233.2	2% - 50yr	1282.75	1141.57	1137.1	3.05	2.97	49.81	40.29	138.92	533.56	3	2.43	4.47	4.47
Stillwater County	A10	RM 434.37	225940.2	2% - 50yr	1282.75	1141.28	1136.51	3.38	3.31	60.96	50.49	124.51	446.59	3.03	2.51	4.77	4.77
Stillwater County	A10	RM 434.24	225278.2	2% - 50yr	1282.75	1140.97	1136.56	3.17	3	53.12	43.02	117.42	216.81	3.1	2.51	4.41	4.41
Stillwater County	A10	RM 434.15	224819.6	2% - 50yr	1282.75	1140.77	1137.06	2.89	2.53	46.69	29.33	157.63	339.51	2.62	1.65	3.71	3.71
Stillwater County	A10	RM 434.07	224366.5	2% - 50yr	1282.75	1140.4	1136.55	3.27	2.81	60.98	41.58	116.1	277.95	2.45	1.68	4	4
Stillwater County	A10	RM 433.98	223883.5	2% - 50yr	1282.75	1140.28	1136.28	2.4	2.27	32.34	25.05	137.26	519.51	2.59	2.01	4	4
Stillwater County	A10	RM 433.87	223309.3	2% - 50yr	1282.75	1140.04	1135.82	2.62	2.41	36.59	26.78	107.67	499.12	3.08	2.24	4.22	4.22
Stillwater County	A10	RM 433.78	222850	2% - 50yr	1282.75	1139.8	1135.54	2.66	2.55	39.12	27.81	177.68	509.96	2.7	1.92	4.26	4.26
Stillwater County	A10	RM 433.66	222201.9	2% - 50yr	1282.75	1139.41	1135.16	2.94	2.77	46.44	30.42	145.25	413.64	2.96	1.94	4.25	4.25
Stillwater County	A10	RM 433.54	221596.6	2% - 50yr	1282.75	1139.01	1135.33	3.17	2.93	54.37	30.38	138.64	409.32	2.86	1.6	3.68	3.68
Stillwater County	A10	RM 433.42	220956.2	2% - 50yr	1282.75	1138.48	1134.88	3.45	3.22	64.97	38.77	131.81	372.9	2.79	1.66	3.6	3.6
Stillwater County	A10	RM 433.31	220362.5	2% - 50yr	1282.75	1138.29	1134.67	2.63	2.41	40.32	28.13	204.81	502.59	2.31	1.61	3.62	3.62
Stillwater County	A10	RM 433.20	219758.6	2% - 50yr	1282.75	1138.21	1134.17	1.95	1.49	21.25	14.09	148.63	775.08	2.6	1.72	4.04	4.04
Stillwater County	A10	RM 433.09	219185.2	2% - 50yr	1282.75	1137.89	1133.45	2.38	2.2	30.44	18.79	180.26	605.48	2.93	1.8	4.44	4.44
Stillwater County	A10	RM 432.97	218599.7	2% - 50yr	1282.75	1137.55	1133.57	2.79	2.64	42.09	30.69	153.1	502.09	2.91	2.13	3.98	3.98
Stillwater County	A10	RM 432.84	217905.9	2% - 50yr	1282.75	1137.31	1132.7	2.68	2.18	37.25	17.35	136.55	624.76	3.3	1.53	4.61	4.61
Stillwater County	A10	RM 432.69	217146.9	2% - 50yr	1282.75	1136.75	1131.51	3.44	2.87	58.15	23.52	90.53	355.78	3.91	1.57	5.24	5.24
Stillwater County	A10	RM 432.60	216656.8	2% - 50yr	1282.75	1136.54	1132.1	3.3	2.85	54.57	28.09	102.27	374.36	3.7	1.88	4.44	4.44
Stillwater County	A10	RM 432.45	215889.7	2% - 50yr	1282.75	1136.22	1132.07	3.04	2.64	49.39	20.4	138.19	600.4	3.01	1.24	4.15	4.15
Stillwater County	A10	RM 432.35	215361.3	2% - 50yr	1282.75	1136.08	1132.33	2.6	1.95	36.39	14.31	159.07	845.95	2.95	1.16	3.75	3.75
Stillwater County	A10	RM 432.20	214585.3	2% - 50yr	1319.57	1135.39	1131.29	3.47	2.95	64.26	22.09	125.07	489.98	2.99	1.03	4.1	4.1
Stillwater County	A10	RM 432.10	214039.1	2% - 50yr	1319.57	1135.15	1130.7	3.18	2.39	53.51	21.13	124.1	681.55	3.08	1.22	4.45	4.45
Stillwater County	A10	RM 432.02	213606.1	2% - 50yr	1319.57	1135.08	1130.52	2.54	2.07	34.73	13.32	161.07	827.7	2.92	1.12	4.56	4.56
Stillwater County	A10	RM 431.87	212811.5	2% - 50yr	1319.57	1134.78	1129.24	2.43	2.01	34.18	16.32	210.92	811.61	2.34	1.12	5.54	5.54
Stillwater County	A10	RM 431.74	212127.4	2% - 50yr	1319.57	1134.63	1129.66	2.11	1.34	23.54	10.95	161.11	886.7	3.14	1.46	4.97	4.97
Stillwater County	A10	RM 431.60	211373.6	2% - 50yr	1319.57	1134.05	1129.96	3.15	2.81	52.58	20.71	134.23	483.22	3.06	1.2	4.09	4.09
Stillwater County	A10	RM 431.49	210820.2	2% - 50yr	1319.57	1133.77	1129.62	3.08	2.63	50.33	16.08	134.11	551.59	3.09	0.98	4.15	4.15
Stillwater County	A10	RM 431.41	210365.9	2% - 50yr	1319.57	1133.41	1129.57	3.37	3.03	60.98	25.16	130.37	360.66	2.95	1.21	3.83	3.83
Stillwater County	A10	RM 431.28	209716.5	2% - 50yr	1319.57	1133.08	1129.79	3	2.62	50.53	20.09	164.87	491.1	2.59	1.03	3.29	3.29
Stillwater County	A10	RM 431.14	208918.5	2% - 50yr	1319.57	1132.72	1129.82	2.48	2.5	36.25	22.05	132.14	383.93	2.26	1.37	3.96	3.96
Stillwater County	A10	RM 431.03	208358.8	2% - 50yr	1319.57	1132.33	1128.56	2.78	2.85	46.72	41.19	128.56	257.4	2.08	1.83	3.77	3.77
Stillwater County	A10	RM 430.93	207821.9	2% - 50yr	1319.57	1132.19	1128.76	2.36	2.07	32.06	23.63	126.38	433.24	2.42	1.79	3.43	3.43
Stillwater County	A10	RM 430.83	207325.6	2% - 50yr	1319.57	1131.94	1127.66	2.48	2.21	34.25	22.62	160.64	403.29	2.67	1.77	4.28	4.28
Stillwater County	A10	RM 430.70	206629.1	2% - 50yr	1319.57	1131.84	1126.9	1.98	1.74	20.6	10.77	150.14	538.2	3.37	1.77	4.94	4.94
Stillwater County	A10	RM 430.59	206064.9	2% - 50yr	1319.57	1131.7	1127.2	2.18	1.71	23.92	9.62	134.54	627.37	3.6	1.44	4.5	4.5
Stillwater County	A10	RM 430.51	205629.5	2% - 50yr	1319.57	1131.29	1126.28	3.14	2.55	50.08	18.14	107.05	521.79	3.53	1.27	5.01	5.01
Stillwater County	A10	RM 430.43	205204.2	2% - 50yr	1319.57	1131.02	1126.08	3.35	2.66	56.37	17.58	98.33	497.47	3.65	1.13	4.94	4.94
Stillwater County	A10	RM 430.34	204728.4	2% - 50yr	1319.57	1130.64	1126.07	3.63	3.04	68.11	25.17	103.36	459.69	3.31	1.22	4.56	4.56
Stillwater County	A11	RM 430.23	204119.7	2% - 50yr	1319.57	1130.56	1126.63	2.55	2.12	35.12	17.43	169.21	696.54	2.92	1.45	3.93	3.93
Stillwater County	A11	RM 430.12	203479.6	2% - 50yr	1319.57	1130.34	1126.96	2.73	2.18	40.73	18.82	112.27	784.46	2.78	1.28	3.81	3.81
Stillwater County	A11	RM 430.04	202968.2	2% - 50yr	1319.57	1130.06	1127.24	2.85	2.41	46.01	21.25	112.8	742.72	2.57	1.18	3.42	3.42
Stillwater County	A11	RM 429.95	202589.5	2% - 50yr	1319.57	1129.89	1126.33	2.54	2.11	37.37	17.94	141.98	770.29	2.39	1.14	3.56	3.56
Stillwater County	A11	RM 429.88	202224.7	2% - 50yr	1319.57	1129.73	1125.62	2.56	1.93	36.44	16.73	127.11	762.42	2.65	1.21	4.11	4.11
Stillwater County	A11	RM 429.78	201933.6	2% - 50yr	1319.57	1129.43	1123.72	3.04	2.12	48.08	17.7	92.29	648.54	3.15	1.14	5.71	5.71
Stillwater County	A11	RM 429.69	201539.9	2% - 50yr	1319.57	1128.89	1123.39	3.75	2.86	77.09	32.82	91.42	416.26	2.81	1.19	5.5	5.5
Stillwater County	A11	RM 429.58	200961.9	2% - 50yr	1319.57	1128.66	1124.69	2.91	1.97	47.88	22.74	116.91	568.51	2.49	1.18	3.96	3.96

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	2% - 50yr	1319.57	1128.24	1125.15	2.27	1.8	30.56	17.91	184.65	564.36	2.22	1.3	3.81	3.81
Stillwater County	A11	RM 429.28	199644.1	2% - 50yr	1319.57	1127.95	1123.59	2.46	1.89	34.72	17.84	148.55	560.96	2.43	1.24	4.36	4.36
Stillwater County	A11	RM 429.18	199152	2% - 50yr	1319.57	1127.76	1124.66	2.14	1.75	27.36	15.63	144.34	613.63	2.15	1.23	3.85	3.85
Stillwater County	A11	RM 429.10	198708.6	2% - 50yr	1319.57	1127.4	1124.26	2.73	2.15	43.79	21.17	87.69	562.64	2.26	1.09	3.82	3.82
Stillwater County	A11	RM 429.00	198203.8	2% - 50yr	1319.57	1127.21	1123.47	2.29	1.95	31.65	21.79	124.54	473.94	2.06	1.43	3.74	3.74
Stillwater County	A11	RM 428.89	197650.5	2% - 50yr	1319.57	1126.99	1121.26	2.48	1.92	32.93	17.03	150.77	446.74	2.98	1.54	5.73	5.73
Stillwater County	A11	RM 428.81	197194.1	2% - 50yr	1319.57	1126.81	1121.47	2.73	1.98	38.05	18.24	98.54	405.02	3.44	1.64	5.34	5.34
Stillwater County	A11	RM 428.66	196404.4	2% - 50yr	1319.57	1126.64	1122.31	2.11	1.79	25.03	15.71	204.39	622.7	2.6	1.63	4.33	4.33
Stillwater County	A11	RM 428.52	195702.6	2% - 50yr	1319.57	1126.35	1122.1	2.33	2.03	30.49	18.78	206.65	655.99	2.57	1.58	4.25	4.25
Stillwater County	A11	RM 428.44	195293.8	2% - 50yr	1319.57	1126.09	1121.18	2.73	2.32	39.16	19.86	146.38	639.88	3.12	1.58	4.91	4.91
Stillwater County	A11	RM 428.39	195075.5	2% - 50yr	1319.57	1125.88	1120.72	3.12	2.6	50.46	23.27	122.37	580.88	3.25	1.5	5.15	5.15
Stillwater County	A11	RM 428.33	194724.6	2% - 50yr	1319.57	1125.77	1121.22	2.87	2.47	43.09	23.93	135.66	695.25	3.19	1.77	4.55	4.55
Stillwater County	A11	RM 428.28	194450.8	2% - 50yr	1319.57	1125.67	1121.2	2.8	2.51	41.46	26.73	147.1	663.76	3.07	1.98	4.46	4.46
Stillwater County	A11	RM 428.23	194235.2	2% - 50yr	1319.57	1125.57	1120.74	2.79	2.64	40.7	32.85	143.06	609.88	3.22	2.6	4.83	4.83
Stillwater County	A11	RM 428.20	194033.4	2% - 50yr	1319.57	1125.51	1120.37	2.74	2.58	37.76	31.48	121.13	565.92	3.62	3.01	5.14	5.14
Stillwater County			193969.6	2% - 50yr	Bridge												
Stillwater County	A11	RM 428.17	193915	2% - 50yr	1319.57	1125.25	1120.32	2.89	2.7	42.15	35.21	115.85	551.54	3.56	2.97	4.93	4.93
Stillwater County			193871.1	2% - 50yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	2% - 50yr	1319.57	1125.08	1120.23	2.9	2.68	43.09	35.08	114.51	564.17	3.45	2.8	4.85	4.85
Stillwater County	A11	RM 428.11	193602.7	2% - 50yr	1319.57	1125.05	1119.42	2.64	2.41	36.55	27.59	131.19	570.55	3.23	2.43	5.63	5.63
Stillwater County	A11	RM 428.09	193436.6	2% - 50yr	1319.57	1124.91	1119.9	2.88	2.59	43.92	28.91	120.2	560.69	3.15	2.06	5.01	5.01
Stillwater County	A11	RM 428.05	193246.1	2% - 50yr	1319.57	1124.86	1120.1	2.74	2.41	40.04	24.22	126.82	586.77	3.06	1.84	4.76	4.76
Stillwater County	A11	RM 428.00	192989.8	2% - 50yr	1319.57	1124.78	1120.28	2.61	2.21	35.76	22.44	128.45	603.2	3.19	1.99	4.5	4.5
Stillwater County	A11	RM 427.95	192728.8	2% - 50yr	1319.57	1124.73	1119.57	2.45	1.97	31.05	16.73	133.81	629.46	3.31	1.78	5.16	5.16
Stillwater County	A11	RM 427.88	192333.2	2% - 50yr	1319.57	1124.44	1119.27	3.03	2.31	46.62	22.13	105.31	682.69	3.52	1.66	5.17	5.17
Stillwater County	A11	RM 427.83	192088.8	2% - 50yr	1319.57	1124.33	1119.18	3.04	2.48	46.74	26.2	104.99	659.12	3.55	1.98	5.15	5.15
Stillwater County	A11	RM 427.76	191724.1	2% - 50yr	1319.57	1124.21	1119.07	2.92	2.65	42.36	33.13	101.84	503.16	3.77	2.94	5.14	5.14
Stillwater County			191581.1	2% - 50yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	2% - 50yr	1319.57	1123.75	1118.71	3.31	3.18	56.46	47.58	114.36	187.59	3.38	2.84	5.04	5.04
Stillwater County	A11	RM 427.65	191155.9	2% - 50yr	1319.57	1123.72	1118.58	2.6	2.45	34.02	26.62	139.89	694.78	3.58	2.81	5.14	5.14
Stillwater County	A11	RM 427.53	190509.6	2% - 50yr	1319.57	1123.19	1117.37	3.46	3.28	58.92	38.48	96.4	530.61	3.92	2.54	5.82	5.82
Stillwater County	A11	RM 427.41	189886.1	2% - 50yr	1319.57	1122.95	1118.73	3.22	3.15	52.43	37.04	115.97	432.1	3.53	2.49	4.22	4.22
Stillwater County	A11	RM 427.29	189253.3	2% - 50yr	1319.57	1122.65	1119.12	3.01	2.94	51.57	41.63	176.76	379.12	2.47	2	3.53	3.53
Stillwater County	A11	RM 427.17	188639.5	2% - 50yr	1319.57	1122.43	1118.44	2.52	2.18	36	24.84	197.68	440.48	2.52	1.74	3.99	3.99
Stillwater County	A11	RM 427.09	188179.7	2% - 50yr	1319.57	1122.01	1118.34	3.18	2.42	53.92	23.83	127.59	452.92	3.01	1.32	3.67	3.67
Stillwater County	A11	RM 427.00	187745.4	2% - 50yr	1319.57	1121.89	1117.71	2.75	2.14	41.01	25.08	143.34	494.19	2.86	1.76	4.18	4.18
Stillwater County	A11	RM 426.92	187309.3	2% - 50yr	1319.57	1121.71	1117.32	2.56	2.21	37.85	26.74	205.73	383.75	2.37	1.68	4.38	4.38
Stillwater County	A11	RM 426.86	186960.4	2% - 50yr	1319.57	1121.57	1116.77	2.42	2.16	33.29	23.72	210.76	382.53	2.51	1.79	4.8	4.8
Stillwater County	A11	RM 426.75	186401.3	2% - 50yr	1319.57	1121.33	1116.11	2.49	2.16	34.29	26.5	182.86	347.78	2.72	2.11	5.22	5.22
Stillwater County	A11	RM 426.67	185983.5	2% - 50yr	1319.57	1121.08	1115.84	2.77	2.67	39.41	28.33	138.91	325.47	3.41	2.45	5.24	5.24
Stillwater County	A11	RM 426.59	185580.4	2% - 50yr	1319.57	1120.69	1115.47	3.41	3.21	58.44	40	106	165.65	3.61	2.48	5.22	5.22
Stillwater County	A11	RM 426.52	185166.5	2% - 50yr	1319.57	1120.49	1115.54	3.35	3.34	56.28	50.01	108.17	122.14	3.64	3.23	4.95	4.95
Stillwater County	A11	RM 426.43	184738.3	2% - 50yr	1319.57	1120.29	1115.89	3.32	3.27	56.51	50.03	116.29	133.93	3.4	3.02	4.4	4.4
Stillwater County	A11	RM 426.32	184158.4	2% - 50yr	1319.57	1120.01	1116.39	3.17	3.17	53.17	52.34	133.45	135.56	3.12	3.07	3.62	3.62
Stillwater County	A11	RM 426.20	183517.2	2% - 50yr	1319.57	1119.72	1116.07	2.78	2.75	45.86	43.92	216.15	228.05	2.19	2.1	3.65	3.65
Stillwater County	A11	RM 426.11	183030.7	2% - 50yr	1319.57	1119.54	1115.37	2.32	2.28	29.95	29.13	270.07	303.22	2.1	2.04	4.17	4.17
Stillwater County	A11	RM 426.00	182442.5	2% - 50yr	1319.57	1119.32	1115.74	2.22	2.04	28.79	25.07	243.38	375.07	2.31	2.02	3.58	3.58
Stillwater County	A11	RM 425.89	181895	2% - 50yr	1319.57	1119.04	1115.1	2.47	2.31	33.21	20.89	186.62	418.08	2.83	1.78	3.94	3.94
Stillwater County	A11	RM 425.72	181043.5	2% - 50yr	1319.57	1118.64	1113.77	2.75	2.46	40.02	21.33	151.01	424.2	3.11	1.65	4.87	4.87
Stillwater County	A11	RM 425.58	180310.5	2% - 50yr	1319.57	1118.06	1112.19	3.47	3.12	59.78	27.64	98.64	273.04	3.79	1.75	5.87	5.87
Stillwater County	A11	RM 425.46	179669.9	2% - 50yr	1319.57	1117.55	1112.78	3.85	3.36	75.85	36.69	95.93	278.85	3.43	1.65	4.77	4.77
Stillwater County	A11	RM 425.34	179022.4	2% - 50yr	1319.57	1117.49	1113.64	2.69	2.37	38.62	25.9	137.57	276.16	3.01	2.01	3.85	3.85
Stillwater County	A11	RM 425.24	178485.9	2% - 50yr	1319.57	1117.24	1114.19	2.69	2.38	41.37	32.2	126.45	381.94	2.47	1.92	3.1	3.1
Stillwater County	A11	RM 425.18	178205.8	2% - 50yr	1319.57	1116.96	1113.81	2.98	2.74	51.29	42.04	128.32	248.98	2.35	1.93	3.65	3.65
Stillwater County	A11	RM 425.11	177826.8	2% - 50yr	1319.57	1116.68	1113.29	2.89	2.82	48.26	35.4	120.72	265.46	2.4	1.76	4.39	4.39
Stillwater County	A11	RM 425.04	177454.7	2% - 50yr	1319.57	1116.49	1112.86	2.89	2.51	45.72	31.59	106.76	274.67	2.77	1.91	4.02	4.02
Stillwater County	A11	RM 424.97	177098.9	2% - 50yr	1319.57	1116.14	1113.11	3.21	2.9	58.32	40.29	106.81	260.77	2.52	1.74	3.13	3.13
Stillwater County	A11	RM 424.89	176675.9	2% - 50yr	1319.57	1116.01	1112.27	2.42	2.24	33.76	27.68	136.62	371.18	2.38	1.97	5.21	5.21
Stillwater County	A11	RM 424.81	176242.8	2% - 50yr	1319.57	1115.58	1112.25	2.85	2.81	51.23	48.17	139.22	382.76	1.83	1.73	3.58	3.58
Stillwater County	A11	RM 424.70	175789.3	2% - 50yr	1319.57	1115.44	1111.91	2.37	2.19	31.63	26.34	161.26	457.99	2.53	2.11	3.53	3.53

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	2% - 50yr	1319.57	1115.1	1111.34	2.72	2.34	42.71	31.55	132.2	390.51	2.38	1.76	3.76	3.76
Stillwater County	A11	RM 424.51	174723.2	2% - 50yr	1319.57	1114.9	1110.93	2.45	2.21	36.47	28.05	140.84	469.82	2.04	1.57	3.97	3.97
Stillwater County	A11	RM 424.38	174051	2% - 50yr	1319.57	1114.5	1110.98	2.64	2.24	42.08	23.42	135.76	598.58	2.07	1.15	3.52	3.52
Stillwater County	A11	RM 424.30	173607.9	2% - 50yr	1319.57	1114.25	1110.75	2.66	2.08	44.82	25.57	158.99	691.94	1.78	1.02	3.49	3.49
Stillwater County	A11	RM 424.21	173153.7	2% - 50yr	1319.57	1113.98	1110.74	2.28	1.82	32.33	16.45	188.24	817.68	1.9	0.97	3.24	3.24
Stillwater County	A11	RM 424.13	172713.5	2% - 50yr	1319.57	1113.76	1110.43	2.36	1.53	34.42	18.1	103.08	851.98	1.93	1.01	3.41	3.41
Stillwater County	A11	RM 424.05	172309.3	2% - 50yr	1319.57	1113.59	1110.18	1.83	1.38	20.85	12.53	155.55	843.62	1.89	1.13	3.41	3.41
Stillwater County	A11	RM 423.98	171892.1	2% - 50yr	1319.57	1113.51	1110.15	1.64	1.24	15.73	8.74	252.66	834.98	2.3	1.28	3.36	3.36
Stillwater County	A11	RM 423.90	171454.2	2% - 50yr	1319.57	1113.32	1109.55	2.22	1.51	27.78	12.32	156.66	776.72	2.57	1.13	3.76	3.76
Stillwater County	A11	RM 423.84	171147.5	2% - 50yr	1319.57	1113.22	1109.08	2.21	1.42	26.12	10.99	126.81	738.37	3.01	1.26	4.14	4.14
Stillwater County	A11	RM 423.74	170686.3	2% - 50yr	1319.57	1113.19	1108.91	1.7	1.12	15.23	8.21	124.33	688.76	3.19	1.71	4.28	4.28
Stillwater County	A11	RM 423.69	170436.3	2% - 50yr	1319.57	1113.03	1108.49	2.3	1.53	27.43	13.23	88.65	545.98	3.32	1.58	4.54	4.54
Stillwater County	A11	RM 423.57	169782.9	2% - 50yr	1319.57	1112.75	1108.2	2.39	1.96	29.79	16.35	159.21	610.65	3.24	1.77	4.55	4.55
Stillwater County	A11	RM 423.47	169296.5	2% - 50yr	1319.57	1112.31	1107.67	3.19	2.69	52.6	20.82	120.55	531.34	3.35	1.32	4.64	4.64
Stillwater County	A11	RM 423.39	168860.7	2% - 50yr	1319.57	1111.95	1107.7	3.54	2.91	64.89	22.66	107.8	483.77	3.33	1.16	4.25	4.25
Stillwater County	A11	RM 423.27	168178	2% - 50yr	1319.57	1111.39	1107.36	3.73	3.31	75.03	26.26	118.28	390.14	2.94	1.02	4.02	4.02
Stillwater County	A12	RM 423.17	167687.7	2% - 50yr	1319.57	1111.22	1107.46	3.04	2.61	50.99	24.67	153.74	431.87	2.72	1.31	3.76	3.76
Stillwater County	A12	RM 423.08	167239.6	2% - 50yr	1319.57	1110.99	1107.21	3.03	2.52	50.94	26.36	129.63	466.71	2.7	1.39	3.78	3.78
Stillwater County	A12	RM 423.01	166844.5	2% - 50yr	1319.57	1110.77	1106.84	2.86	2.43	47.73	29.03	144.56	440.78	2.32	1.41	3.93	3.93
Stillwater County	A12	RM 422.91	166338	2% - 50yr	1319.57	1110.41	1106.54	3.1	2.52	52.32	26.52	112.6	402.47	2.85	1.44	3.87	3.87
Stillwater County	A12	RM 422.80	165757.6	2% - 50yr	1319.57	1110.1	1106.83	2.94	2.55	48.52	22.61	147.05	468.84	2.58	1.2	3.27	3.27
Stillwater County	A12	RM 422.70	165279.2	2% - 50yr	1319.57	1110.01	1105.79	2.24	1.82	28.68	18.43	203.12	526.21	2.45	1.58	4.22	4.22
Stillwater County	A12	RM 422.63	164895.4	2% - 50yr	1319.57	1109.91	1105.43	2.11	1.61	25.25	14.71	179.41	614.04	2.47	1.44	4.48	4.48
Stillwater County	A12	RM 422.53	164348.1	2% - 50yr	1319.57	1109.72	1104.76	2.19	1.73	26.55	14.36	167.27	603.69	2.7	1.45	4.96	4.96
Stillwater County	A12	RM 422.39	163609.2	2% - 50yr	1319.57	1109.37	1104.22	2.62	2.08	35.32	15.23	132.53	459.01	3.4	1.46	5.15	5.15
Stillwater County	A12	RM 422.30	163120.4	2% - 50yr	1319.57	1108.9	1104.18	3.38	3.1	57.78	27.59	109.03	291.31	3.51	1.67	4.72	4.72
Stillwater County	A12	RM 422.19	162534.3	2% - 50yr	1319.57	1108.71	1103.72	3	2.75	45.72	23.28	122.19	268.05	3.54	1.79	4.99	4.99
Stillwater County	A12	RM 422.08	161934.5	2% - 50yr	1319.57	1108.16	1104.18	3.65	3.44	70.2	41.05	113.23	208.84	3.15	1.84	3.98	3.98
Stillwater County	A12	RM 421.98	161402.1	2% - 50yr	1319.57	1108.05	1103.86	2.88	2.79	43.22	33.32	142.02	191.64	3.21	2.47	4.19	4.19
Stillwater County	A12	RM 421.90	161037.7	2% - 50yr	1319.57	1107.9	1103.14	2.79	2.79	42.6	42	168.31	170.72	2.81	2.77	4.76	4.76
Stillwater County	A12	RM 421.86	160799.3	2% - 50yr	1319.57	1107.79	1102.54	2.73	2.7	42.46	33.84	193.24	250.77	2.49	1.99	5.25	5.25
Stillwater County	A12	RM 421.81	160535.9	2% - 50yr	1319.57	1107.67	1102.38	2.62	2.61	40.29	33.24	221.63	282.32	2.27	1.87	5.29	5.29
Stillwater County	A12	RM 421.77	160279.4	2% - 50yr	1319.57	1107.48	1102.41	2.83	2.63	46.21	27.57	182.53	353.08	2.38	1.42	5.07	5.07
Stillwater County	A12	RM 421.69	159875.5	2% - 50yr	1319.57	1107.33	1102.56	2.68	2.18	36.6	15.12	130.2	422.44	3.49	1.43	4.77	4.77
Stillwater County	A12	RM 421.60	159411.4	2% - 50yr	1319.57	1106.97	1103.26	3.25	2.7	57.53	25.95	131.13	385.01	2.81	1.27	3.71	3.71
Stillwater County	A12	RM 421.53	159038	2% - 50yr	1319.57	1106.56	1102.81	3.59	3.19	73.57	37.69	133.17	325.81	2.48	1.27	3.75	3.75
Stillwater County	A12	RM 421.45	158590.5	2% - 50yr	1319.57	1106.42	1103.26	2.82	2.48	45.44	28.19	154.9	391.54	2.46	1.52	3.16	3.16
Stillwater County	A12	RM 421.32	157930.2	2% - 50yr	1319.57	1106.02	1102.82	2.81	2.56	48.42	35.2	98.13	358.78	1.97	1.43	3.2	3.2
Stillwater County	A12	RM 421.24	157513	2% - 50yr	1319.57	1105.75	1103.05	2.59	2.34	43.19	35.23	126.63	401.08	1.72	1.41	3.27	3.27
Stillwater County	A12	RM 421.13	156951.5	2% - 50yr	1319.57	1105.56	1100.38	2.22	1.95	29.36	21.17	118.8	431.01	2.18	1.57	5.18	5.18
Stillwater County	A12	RM 421.05	156536.5	2% - 50yr	1319.57	1105.47	1102.11	1.88	1.72	21.07	16.89	103.99	537.03	2.15	1.72	3.36	3.36
Stillwater County	A12	RM 420.94	155960.1	2% - 50yr	1319.57	1105.2	1101.68	2.1	1.98	23.95	19.01	213.29	389.68	2.87	2.28	3.52	3.52
Stillwater County	A12	RM 420.85	155473.6	2% - 50yr	1319.57	1104.54	1100.98	3.67	2.74	77.2	38.24	135.54	426.17	2.4	1.19	3.56	3.56
Stillwater County	A12	RM 420.75	154957.2	2% - 50yr	1319.57	1104.42	1099.95	2.66	1.99	39.1	19.23	157.51	497.92	2.71	1.33	4.47	4.47
Stillwater County	A12	RM 420.66	154483	2% - 50yr	1319.57	1104.27	1099.89	2.43	1.78	31.7	17.94	165.17	542.34	2.95	1.66	4.38	4.38
Stillwater County	A12	RM 420.58	154037.5	2% - 50yr	1319.57	1103.89	1100.13	3.13	2.22	51.84	22.2	122.25	450.53	3.09	1.32	3.76	3.76
Stillwater County	A12	RM 420.52	153691.5	2% - 50yr	1319.57	1103.72	1099.7	3.08	2.19	50.98	19.67	131.23	535.54	2.92	1.13	4.02	4.02
Stillwater County	A12	RM 420.46	153398	2% - 50yr	1319.57	1103.47	1099.36	3.24	2.53	57.74	24.02	137.72	459.46	2.74	1.14	4.11	4.11
Stillwater County	A12	RM 420.38	152998.3	2% - 50yr	1319.57	1103.37	1099.19	2.64	1.95	39.33	17.88	176.81	592.94	2.53	1.15	4.18	4.18
Stillwater County	A12	RM 420.30	152566.4	2% - 50yr	1319.57	1103.31	1099.43	2	1.48	22.82	13.32	230.5	624.3	2.47	1.44	3.88	3.88
Stillwater County	A12	RM 420.21	152106.2	2% - 50yr	1319.57	1103.14	1098.69	2.09	1.62	25.87	17.19	238.7	549.61	2.23	1.48	4.45	4.45
Stillwater County	A12	RM 420.15	151738.6	2% - 50yr	1319.57	1103.03	1098.38	2	1.75	19.86	13.32	260.73	467.05	2.42	1.62	4.65	4.65
Stillwater County	A12	RM 420.08	151399.3	2% - 50yr	1319.57	1102.88	1097.97	2.22	1.97	26.58	14.67	196.82	417.33	2.92	1.61	4.91	4.91
Stillwater County	A12	RM 420.03	151123.2	2% - 50yr	1319.57	1102.72	1097.96	2.55	2.02	33.48	15.7	142.7	410.45	3.41	1.59	4.76	4.76
Stillwater County	A12	RM 419.96	150779.4	2% - 50yr	1319.57	1102.52	1098.1	2.89	2.12	43.26	19.23	128.1	428.93	3.26	1.45	4.42	4.42
Stillwater County	A12	RM 419.91	150511.3	2% - 50yr	1319.57	1102.2	1097.83	3.41	2.59	58.53	19.92	102.77	421.2	3.59	1.21	4.37	4.37
Stillwater County	A12	RM 419.85	150192.4	2% - 50yr	1319.57	1101.81	1097.85	3.88	3.02	80.13	27.2	106.79	421.71	3.06	1.04	3.95	3.95
Stillwater County	A12	RM 419.78	149807.6	2% - 50yr	1319.57	1101.69	1097.13	3.39	2.41	58.76	22.47	104.97	414.94	3.47	1.32	4.56	4.56
Stillwater County	A12	RM 419.70	149371.5	2% - 50yr	1319.57	1101.42	1097.73	3.34	2.74	61.23	27.78	138.38	385.71	2.76	1.25	3.69	3.69
Stillwater County	A12	RM 419.63	149047.6	2% - 50yr	1319.57	1101.3	1097.92	2.93	2.52	47.8	24.22	168.37	394.59	2.62	1.33	3.38	3.38

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	2% - 50yr	1319.57	1100.95	1097.22	3.13	2.48	57.38	32.42	136.61	417.48	2.25	1.27	3.73	3.73
Stillwater County	A12	RM 419.46	148117.9	2% - 50yr	1319.57	1100.76	1097.34	2.71	2.16	42.68	24.38	133.46	461.79	2.32	1.32	3.68	3.68
Stillwater County	A12	RM 419.38	147728.5	2% - 50yr	1319.57	1100.59	1097.36	2.29	1.94	31.34	23.52	149.23	423.54	2.14	1.61	3.23	3.23
Stillwater County	A12	RM 419.31	147342.9	2% - 50yr	1319.57	1100.5	1096.9	1.93	1.74	20.42	16.1	114.45	348.62	2.75	2.18	3.6	3.6
Stillwater County	A12	RM 419.19	146720.3	2% - 50yr	1319.57	1100.36	1096.42	1.73	1.86	16.27	14.28	106.51	321.28	2.82	2.48	5.96	5.96
Stillwater County	A12	RM 419.10	146243.9	2% - 50yr	1319.57	1100.23	1095.09	2.16	1.94	23	12.03	156.37	439.31	3.81	1.99	5.14	5.14
Stillwater County	A12	RM 419.03	145859.8	2% - 50yr	1319.57	1099.9	1095.88	2.92	2.71	47.87	26.1	172.29	374.3	2.59	1.41	4.02	4.02
Stillwater County	A12	RM 418.95	145435.3	2% - 50yr	1319.57	1099.69	1095.15	2.74	2.47	43.99	24.82	207.31	462.61	2.26	1.28	4.53	4.53
Stillwater County	A12	RM 418.84	144864	2% - 50yr	1319.57	1099.33	1094.92	2.73	2.34	44.76	24.73	222.59	507.29	2.09	1.15	4.41	4.41
Stillwater County	A12	RM 418.69	144066	2% - 50yr	1319.57	1098.77	1095.29	2.93	2.33	50.53	25.45	169.11	584.62	2.22	1.12	3.48	3.48
Stillwater County	A12	RM 418.57	143452.8	2% - 50yr	1319.57	1098.3	1095.1	3.09	2.43	55.93	22.76	135.5	595.7	2.26	0.92	3.2	3.2
Stillwater County	A12	RM 418.49	143008.1	2% - 50yr	1319.57	1098.23	1094.94	2.16	1.52	26.57	12.81	169.36	843.28	2.47	1.19	3.29	3.29
Stillwater County	A12	RM 418.35	142310.9	2% - 50yr	1319.57	1097.76	1093.15	2.94	1.95	49.92	20.98	128.91	698.23	2.31	0.97	4.61	4.61
Stillwater County	A12	RM 418.25	141740.8	2% - 50yr	1319.57	1097.54	1093.71	2.19	1.63	29.19	19.54	178.18	656	2.05	1.37	3.83	3.83
Stillwater County	A12	RM 418.08	140894.8	2% - 50yr	1319.57	1097.24	1092.65	2.2	1.82	27.09	13.82	139.46	555.58	2.59	1.32	4.59	4.59
Stillwater County	A12	RM 417.89	139893.7	2% - 50yr	1319.57	1096.49	1092.75	3.31	2.76	59.84	26.28	128.08	493.64	2.81	1.23	3.74	3.74
Stillwater County	A12	RM 417.79	139376.4	2% - 50yr	1319.57	1096.27	1091.64	2.99	2.36	49.53	23.72	128.51	526.65	2.68	1.28	4.63	4.63
Stillwater County	A12	RM 417.65	138633.4	2% - 50yr	1319.57	1095.8	1091.57	3.27	2.65	56.07	29.37	97.66	328.51	3.19	1.66	4.23	4.23
Stillwater County	A12	RM 417.54	138089.5	2% - 50yr	1319.57	1095.17	1091.15	3.98	3.33	83.7	43.91	87.71	243.9	3.1	1.62	4.02	4.02
Stillwater County	A12	RM 417.40	137321.3	2% - 50yr	1497.96	1094.93	1091.71	2.83	2.39	45.64	31.14	128.55	408.34	2.46	1.68	3.22	3.22
Stillwater County	A12	RM 417.30	136818.2	2% - 50yr	1497.96	1094.59	1091.51	2.78	2.53	45.26	31.01	205.97	414.33	2.26	1.55	3.08	3.08
Stillwater County	A12	RM 417.20	136304	2% - 50yr	1497.96	1094.52	1091.27	1.91	1.83	20.75	17.96	205	522	2.47	2.14	3.25	3.25
Stillwater County	A13	RM 417.09	135706	2% - 50yr	1497.96	1093.88	1090.35	3.24	2.81	60.87	38.87	189.98	362.69	2.36	1.51	3.53	3.53
Stillwater County	A13	RM 417.01	135303.6	2% - 50yr	1497.96	1093.78	1090	2.5	2.31	36.2	27.99	252.81	456.12	2.33	1.8	3.78	3.78
Stillwater County	A13	RM 416.94	134899.8	2% - 50yr	1497.96	1093.36	1089.69	3.1	2.85	49.48	37.75	223.56	365.82	2.12	1.62	3.67	3.67
Stillwater County	A13	RM 416.85	134457.6	2% - 50yr	1497.96	1093.17	1089.62	2.79	2.36	42.45	23.69	186.73	409.02	2.79	1.55	3.55	3.55
Stillwater County	A13	RM 416.73	133843.5	2% - 50yr	1497.96	1092.71	1089.6	3.08	2.65	55.93	32.24	214.87	444.54	2.2	1.27	3.1	3.1
Stillwater County	A13	RM 416.63	133286.1	2% - 50yr	1497.96	1092.32	1089.3	3.01	2.67	55.35	38.56	134.05	397.94	2.02	1.41	3.02	3.02
Stillwater County	A13	RM 416.52	132717.9	2% - 50yr	1497.96	1092.05	1089.09	2.61	2	41.54	27.09	104.23	573.26	1.99	1.3	2.96	2.96
Stillwater County	A13	RM 416.43	132250.3	2% - 50yr	1497.96	1091.74	1088.74	2.44	2	37.04	25.82	115.08	587.01	1.9	1.33	3	3
Stillwater County	A13	RM 416.33	131707.5	2% - 50yr	1497.96	1091.52	1088.02	2.21	1.87	29.75	22.26	132.56	625.42	2.04	1.53	3.5	3.5
Stillwater County	A13	RM 416.22	131140.9	2% - 50yr	1497.96	1091.09	1087.56	3.15	2.29	54.77	30.57	84.28	516.83	2.73	1.52	3.53	3.53
Stillwater County	A13	RM 416.13	130626.3	2% - 50yr	1497.96	1090.76	1086.65	2.94	2.33	47.95	27.54	148.11	489.99	2.65	1.52	4.11	4.11
Stillwater County	A13	RM 416.04	130164.9	2% - 50yr	1497.96	1090.43	1085.03	3.2	2.17	55.6	25.59	125.06	611.55	2.84	1.3	5.4	5.4
Stillwater County	A13	RM 415.96	129734.7	2% - 50yr	1497.96	1090.37	1085.48	2.41	1.61	30.99	14.91	133.05	818.34	3.03	1.45	4.89	4.89
Stillwater County	A13	RM 415.90	129423.4	2% - 50yr	1497.96	1090.29	1085.77	2.04	1.35	22.82	12.19	159.69	903.65	2.79	1.49	4.52	4.52
Stillwater County	A13	RM 415.83	129071.6	2% - 50yr	1497.96	1090.21	1085.89	1.92	1.33	19.6	11.62	152.97	742.46	3.05	1.81	4.88	4.88
Stillwater County	A13	RM 415.74	128639.5	2% - 50yr	1497.96	1089.99	1084.72	2.44	1.59	30.32	14.68	154.02	787.29	3.51	1.69	5.27	5.27
Stillwater County	A13	RM 415.72	128521.2	2% - 50yr	1497.96	1089.87	1084.8	2.78	1.8	38.91	18.47	132.67	760.89	3.58	1.69	5.07	5.07
Stillwater County	A13	RM 415.65	128106.2	2% - 50yr	1497.96	1089.74	1083.7	2.68	1.94	38.68	24.28	170.19	825.95	2.93	1.83	6.04	6.04
Stillwater County	A13	RM 415.59	127828.3	2% - 50yr	1497.96	1089.45	1083.61	3.15	2.64	51.21	34.66	136.01	709.11	3.35	2.26	5.84	5.84
Stillwater County	A13	RM 415.55	127620.5	2% - 50yr	1497.96	1089.43	1082.84	2.52	2.5	29.71	27.5	132.97	409.82	4.48	4.15	6.59	6.59
Stillwater County			127503	2% - 50yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	2% - 50yr	1497.96	1088.99	1082.96	2.62	2.61	31.79	31.1	122.78	180.91	4.65	4.57	6.03	6.03
Stillwater County	A13	RM 415.50	127340.9	2% - 50yr	1497.96	1088.81	1083.14	2.94	2.94	44.62	44.53	151.61	280.46	3.36	3.35	5.67	5.67
Stillwater County	A13	RM 415.45	127087.4	2% - 50yr	1497.96	1088.44	1083.18	3.56	3.56	70.98	70.31	160.08	365.48	2.63	2.6	5.26	5.26
Stillwater County	A13	RM 415.39	126788	2% - 50yr	1497.96	1088.31	1084.07	3.22	3.18	56.2	47.27	162.04	498.17	2.87	2.41	4.24	4.24
Stillwater County	A13	RM 415.34	126499.1	2% - 50yr	1497.96	1088.2	1084.45	3.13	2.92	53.28	42.25	129.56	527.28	2.82	2.24	3.75	3.75
Stillwater County	A13	RM 415.25	126040.7	2% - 50yr	1497.96	1087.91	1082.42	3.24	2.93	56.16	33.3	123.59	485.6	3.01	1.79	5.49	5.49
Stillwater County	A13	RM 415.18	125663.1	2% - 50yr	1497.96	1087.77	1083.81	2.96	2.67	46.51	26.51	135.23	420.69	3.08	1.76	3.96	3.96
Stillwater County	A13	RM 415.10	125251.2	2% - 50yr	1497.96	1087.3	1083.01	3.64	3.3	70.91	46.73	110.55	326.66	3.01	1.98	4.29	4.29
Stillwater County	A13	RM 414.97	124585.1	2% - 50yr	1497.96	1086.91	1082.64	3.37	2.85	61.84	39.77	121.02	444.18	2.83	1.82	4.27	4.27
Stillwater County	A13	RM 414.88	124110.1	2% - 50yr	1497.96	1086.62	1083.02	3.26	2.85	57.8	39.86	124.56	389.51	2.85	1.96	3.59	3.59
Stillwater County	A13	RM 414.71	123222	2% - 50yr	1497.96	1086.1	1080.88	3.03	3.01	49.03	44.17	165.46	369.08	2.99	2.69	5.22	5.22
Stillwater County	A13	RM 414.57	122473.6	2% - 50yr	1497.96	1085.5	1081.21	3.48	3.12	65.51	33.68	146.86	380.79	2.89	1.48	4.29	4.29
Stillwater County	A13	RM 414.43	121696.6	2% - 50yr	1497.96	1085.01	1080.49	3.25	2.82	59.16	33.95	170.98	676.88	2.59	1.49	4.52	4.52
Stillwater County	A13	RM 414.21	120527.7	2% - 50yr	1497.96	1084.3	1080.81	2.8	2.5	47.38	33	221.17	660.13	2.07	1.45	3.49	3.49
Stillwater County	A13	RM 413.90	118914.7	2% - 50yr	1497.96	1082.94	1079.28	3.38	2.51	63.92	26.42	156.25	552.73	2.61	1.08	3.66	3.66
Stillwater County	A13	RM 413.65	117570.4	2% - 50yr	1497.96	1082.22	1078.15	3.01	1.76	48.94	22.63	141.88	641.09	2.87	1.33	4.07	4.07
Stillwater County	A14	RM 413.44	116446.3	2% - 50yr	1497.96	1081.48	1076.4	3.24	1.89	57.52	18.83	147.43	874.17	2.77	0.91	5.08	5.08

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	2% - 50yr	1497.96	1080.95	1077.8	3.05	1.83	55	24.1	176.76	851.83	2.2	0.96	3.15	3.15
Stillwater County	A14	RM 413.11	114697.4	2% - 50yr	1497.96	1080.43	1077.12	2.71	1.77	42.95	18.55	197.28	888.94	2.31	0.99	3.31	3.31
Stillwater County	A14	RM 412.99	114113.2	2% - 50yr	1497.96	1080.06	1076.41	2.84	1.86	47.56	22.45	188.34	859.69	2.25	1.06	3.65	3.65
Stillwater County	A14	RM 412.88	113533.6	2% - 50yr	1497.96	1079.69	1076.03	2.95	2.14	47.83	21.2	144.49	699.24	2.77	1.23	3.66	3.66
Stillwater County	A14	RM 412.73	112742.6	2% - 50yr	1497.96	1079.2	1074.72	3.02	2.11	52.35	29.24	173.05	651.04	2.41	1.34	4.48	4.48
Stillwater County	A14	RM 412.59	112005.5	2% - 50yr	1497.96	1078.77	1074.72	2.81	2.05	45.29	27.72	198.19	728.59	2.4	1.47	4.05	4.05
Stillwater County	A14	RM 412.49	111442.5	2% - 50yr	1497.96	1078.69	1074.54	2.11	1.64	24.27	11.68	189.08	906.42	2.8	1.35	4.15	4.15
Stillwater County	A14	RM 412.31	110522	2% - 50yr	1497.96	1078.34	1072.96	2.47	1.86	29.88	12.63	144.87	753.05	3.9	1.64	5.38	5.38
Stillwater County	A14	RM 412.19	109955.3	2% - 50yr	1497.96	1077.49	1071.57	4.16	3.45	89.22	33.98	103.6	342.5	3.37	1.27	5.92	5.92
Stillwater County	A14	RM 412.05	109175.2	2% - 50yr	1497.96	1077.15	1072.08	3.51	2.8	62.42	23.98	114.94	436.91	3.53	1.35	5.07	5.07
Stillwater County	A14	RM 411.92	108510.2	2% - 50yr	1497.96	1076.87	1072.88	3.15	3.1	51.73	35.04	145.54	219.43	3.26	2.2	3.99	3.99
Stillwater County	A14	RM 411.81	107950.5	2% - 50yr	1497.96	1076.35	1070.62	3.63	3.63	69.92	69.9	134.16	139.58	3.07	3.07	5.73	5.73
Stillwater County	A14	RM 411.71	107391.9	2% - 50yr	1497.96	1076.07	1070.83	3.42	3.41	58.68	56.02	119.39	169.65	3.66	3.5	5.24	5.24
Stillwater County	A14	RM 411.58	106721	2% - 50yr	1497.96	1075.78	1071.65	3.15	3.09	53.48	38.7	161.77	357.85	2.93	2.12	4.13	4.13
Stillwater County	A14	RM 411.47	106133.7	2% - 50yr	1497.96	1075.47	1071.87	3.1	2.59	52.36	31.4	159.31	363.79	2.83	1.69	3.6	3.6
Stillwater County	A14	RM 411.32	105338.4	2% - 50yr	1497.96	1074.95	1069.29	3.19	2.77	55.78	34.86	163.15	368.43	2.78	1.73	5.66	5.66
Stillwater County	A14	RM 411.14	104374.6	2% - 50yr	1497.96	1073.99	1067.92	3.93	2.94	81.41	34.07	115.14	390.07	3.13	1.3	6.07	6.07
Stillwater County	A14	RM 411.00	103638.4	2% - 50yr	1497.96	1073.53	1069.6	3.5	2.61	69.03	38.08	142.16	407.77	2.56	1.41	3.92	3.92
Stillwater County	A14	RM 410.85	102835.8	2% - 50yr	1497.96	1073.11	1069.92	2.74	2.15	45.65	26.83	83.64	816.55	2.03	1.19	3.19	3.19
Stillwater County	A14	RM 410.74	102286.3	2% - 50yr	1497.96	1072.66	1068.99	3.01	2.14	53.46	29.76	75.14	791.15	2.25	1.24	3.67	3.67
Stillwater County	A14	RM 410.63	101668.3	2% - 50yr	1497.96	1072.39	1068.37	2.54	1.81	35.84	20.21	83.69	931.49	2.67	1.5	4.02	4.02
Stillwater County	A14	RM 410.52	101115.7	2% - 50yr	1497.96	1072.05	1067.81	2.71	2.17	40.16	25.44	123.09	864.24	2.83	1.79	4.24	4.24
Stillwater County	A14	RM 410.42	100568.4	2% - 50yr	1497.96	1071.56	1066.66	3	2.94	53.84	39.16	149.68	419.68	2.16	1.56	4.9	4.9
Stillwater County	A14	RM 410.33	100099.2	2% - 50yr	1497.96	1071.34	1066.6	2.68	2.35	39.57	26.64	198.78	897.74	2.71	1.83	4.74	4.74
Stillwater County	A14	RM 410.22	99589.26	2% - 50yr	1497.96	1070.83	1066.94	3.38	2.76	62.8	32.39	152.78	938.41	2.74	1.41	3.89	3.89
Stillwater County	A14	RM 410.12	99057.4	2% - 50yr	1497.96	1070.43	1065.8	3.34	2.77	64.9	41.47	176.07	943.29	2.33	1.49	4.63	4.63
Stillwater County	A14	RM 410.03	98630.66	2% - 50yr	1497.96	1070.11	1065.33	3.12	2.67	58.35	42.56	206.73	757.76	2.14	1.56	4.78	4.78
Stillwater County	A14	RM 409.99	98385.41	2% - 50yr	1497.96	1069.91	1065.38	3.11	2.59	58.06	35.68	205.96	863.59	2.13	1.31	4.53	4.53
Stillwater County	A14	RM 409.94	98072.09	2% - 50yr	1497.96	1069.77	1065.51	2.76	2.12	44.01	24.1	206.82	1106.39	2.36	1.29	4.25	4.25
Stillwater County	A14	RM 409.87	97717.24	2% - 50yr	1497.96	1069.72	1065.52	2.28	1.55	26.94	12.14	166.7	1350.26	3.32	1.49	4.2	4.2
Stillwater County	A14	RM 409.76	97130.84	2% - 50yr	1497.96	1069.31	1065.37	3.07	2.08	50.61	18.75	146.97	1070.03	2.92	1.08	3.94	3.94
Stillwater County	A14	RM 409.60	96278.7	2% - 50yr	1497.96	1068.38	1064.65	3.82	2.87	87.72	44.39	166.1	511.85	2.11	1.07	3.73	3.73
Stillwater County	A14	RM 409.43	95381.62	2% - 50yr	1497.96	1067.71	1063.55	3.23	2.19	58.1	26.38	135.01	860.08	2.65	1.2	4.16	4.16
Stillwater County	A14	RM 409.24	94405.29	2% - 50yr	1497.96	1067.03	1064.55	2.33	1.89	37.29	26.66	159.47	947.23	1.41	1.01	2.81	2.81
Stillwater County	A14	RM 409.15	93912.54	2% - 50yr	1497.96	1066.64	1064.27	2.09	1.84	28.78	20.55	168.29	721.72	1.58	1.13	4.57	4.57
Stillwater County	A14	RM 408.99	93008.08	2% - 50yr	1497.96	1065.9	1063.94	2.48	2.49	42.01	27.76	163.26	633.31	1.43	0.95	3.37	3.37
Stillwater County	A14	RM 408.84	92229.27	2% - 50yr	1497.96	1065.37	1062.1	2.58	2.49	44.79	32.17	180.76	553.95	1.5	1.09	3.27	3.27
Stillwater County	A14	RM 408.63	91072.98	2% - 50yr	1497.96	1064.81	1061.85	2.12	1.93	27.72	23.47	211.69	487.75	1.93	1.64	3.23	3.23
Stillwater County	A14	RM 408.41	89726.16	2% - 50yr	1497.96	1064.34	1059.04	2.5	2.02	30.89	16.06	105.48	374.43	3.84	1.98	5.3	5.3
Stillwater County	A14	RM 408.26	88966.66	2% - 50yr	1497.96	1064.06	1058.13	2.68	2.19	35.18	18.11	130.93	340.71	3.91	2.01	5.93	5.93
Stillwater County	A14	RM 408.10	88091.52	2% - 50yr	1497.96	1063.16	1057.78	4.04	3.69	81.14	38.21	98.48	232.11	3.72	1.75	5.38	5.38
Stillwater County	A14	RM 408.02	87720.33	2% - 50yr	1497.96	1063.09	1058.61	3.43	2.98	60.52	30.23	126.79	328.83	3.37	1.68	4.48	4.48
Stillwater County	A14	RM 407.83	86708.48	2% - 50yr	1497.96	1062.51	1058.65	3.06	2.75	56.55	36	158.67	409.97	2.08	1.33	3.86	3.86
Stillwater County	A14	RM 407.71	86078.99	2% - 50yr	1497.96	1062.07	1057.9	3.29	2.69	59.38	26.97	119.46	446.42	2.75	1.25	4.17	4.17
Stillwater County	A14	RM 407.61	85508.29	2% - 50yr	1497.96	1061.83	1058.36	2.71	2.38	43.82	29.01	170.72	444.82	2.14	1.42	3.47	3.47
Stillwater County	A14	RM 407.50	84909.3	2% - 50yr	1497.96	1061.56	1058.55	2.57	2.24	40.46	29.94	179.36	453.01	1.99	1.47	3.5	3.5
Stillwater County	A14	RM 407.41	84433.26	2% - 50yr	1497.96	1061.39	1057.85	2.47	1.93	35.23	22.28	122.26	512.81	2.39	1.51	3.73	3.73
Stillwater County	A14	RM 407.36	84180.66	2% - 50yr	1497.96	1061.22	1057.59	2.87	1.99	45.63	23.85	101.75	534.91	2.7	1.4	3.63	3.63
Stillwater County	A14	RM 407.29	83775.88	2% - 50yr	1497.96	1060.89	1057.08	2.48	2.46	36.98	29.76	155.21	354.82	2.13	1.71	4.07	4.07
Stillwater County	A14	RM 407.13	82954.84	2% - 50yr	1497.96	1060.56	1056.27	2.24	2.17	29.06	23.64	280.17	357.2	2.37	1.93	4.29	4.29
Stillwater County	A14	RM 406.98	82156.72	2% - 50yr	1497.96	1060.33	1056.37	2.2	2.07	25.1	18.24	200.41	334.7	3.32	2.41	3.96	3.96
Stillwater County	A14	RM 406.86	81532.92	2% - 50yr	1497.96	1059.49	1055.69	3.96	3.75	82.34	62.55	115.75	164.36	3.2	2.43	3.79	3.79
Stillwater County	A14	RM 406.77	81053.3	2% - 50yr	1497.96	1059.22	1053.84	3.71	3.25	70.77	44.85	112.47	214.84	3.39	2.15	5.38	5.38
Stillwater County	A14	RM 406.64	80405.13	2% - 50yr	1497.96	1058.94	1054.89	3.25	3	55.29	39.52	139.28	371.69	3.18	2.28	4.05	4.05
Stillwater County	A14	RM 406.48	79524.79	2% - 50yr	1497.96	1058.45	1054.8	3.01	2.41	50.52	30.72	208.18	540.88	2.11	1.28	3.65	3.65
Stillwater County	A14	RM 406.25	78337.26	2% - 50yr	1497.96	1057.74	1054.03	3.01	2.34	48.93	20.04	145.23	562.63	2.93	1.19	3.71	3.71
Stillwater County	A14	RM 406.08	77409.13	2% - 50yr	1497.96	1057.38	1052.87	2.78	1.84	41.04	16.61	131.8	693.85	3.12	1.25	4.51	4.51
Stillwater County	A14	RM 405.93	76624.91	2% - 50yr	1497.96	1056.58	1052.64	3.72	3.27	71.1	31.74	114.34	303.34	3.39	1.51	3.94	3.94
Stillwater County	A14	RM 405.81	75994.44	2% - 50yr	1497.96	1056.24	1051.93	3.44	3.3	62.37	57.16	133.87	219.2	3.15	2.9	4.31	4.31
Stillwater County	A15	RM 405.77	75764.36	2% - 50yr	1497.96	1055.95	1052.63	3.79	3.49	80.29	66.83	142.49	197.07	2.61	2.18	3.32	3.32

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	2% - 50yr	1497.96	1055.63	1052.06	3.27	2.82	59.33	44.76	82.19	294.71	2.68	2.03	3.56	3.56
Stillwater County	A15	RM 405.61	74883.52	2% - 50yr	1497.96	1055.45	1051.81	3.47	2.65	63.79	33.86	69.55	445.58	3.06	1.63	3.64	3.64
Stillwater County	A15	RM 405.52	74415.92	2% - 50yr	1497.96	1054.98	1051.43	4.01	2.82	85.2	46.22	52.24	474.45	3.08	1.67	3.55	3.55
Stillwater County	A15	RM 405.45	74031.34	2% - 50yr	1497.96	1054.95	1051.1	3.06	1.97	47.75	28.45	57.4	654.27	3.43	2.05	3.86	3.86
Stillwater County	A15	RM 405.34	73437.72	2% - 50yr	1497.96	1054.47	1050.67	3.26	2.68	55.41	31.27	116.05	587.88	3.22	1.82	3.79	3.79
Stillwater County	A15	RM 405.18	72616.33	2% - 50yr	1497.96	1054.04	1049.45	3.38	2.75	56.71	30.18	94.83	509.78	3.74	1.98	4.59	4.59
Stillwater County	A15	RM 405.09	72171.48	2% - 50yr	1497.96	1053.92	1049.09	2.91	2.56	42.49	25.79	115.98	654.07	3.64	2.21	4.83	4.83
Stillwater County	A15	RM 405.02	71774.52	2% - 50yr	1497.96	1053.47	1048.59	3.76	3.24	70.23	35.24	88.03	359.49	3.73	1.86	4.89	4.89
Stillwater County	A15	RM 404.97	71526.86	2% - 50yr	1497.96	1053.45	1048.35	3.22	2.91	52.21	34.6	105.86	681.04	3.61	2.4	5.1	5.1
Stillwater County	A15	RM 404.90	71150.58	2% - 50yr	1497.96	1053.31	1048.99	3.16	2.77	50.42	29.64	104.62	719.88	3.58	2.1	4.32	4.32
Stillwater County	A15	RM 404.84	70801.47	2% - 50yr	1497.96	1053.28	1049.19	2.72	2.27	37.26	18.88	118.04	1049.44	3.56	1.8	4.09	4.09
Stillwater County	A15	RM 404.77	70415.17	2% - 50yr	1497.96	1053.12	1048.51	3.02	2.24	44.89	17.36	86.33	1034.97	3.91	1.49	4.61	4.61
Stillwater County	A15	RM 404.71	70152.7	2% - 50yr	1497.96	1053.08	1048.14	2.66	2.22	34.64	17.89	86.12	1036.43	4.01	2.04	4.94	4.94
Stillwater County	A15	RM 404.59	69477.61	2% - 50yr	1497.96	1052.33	1047.56	3.82	3.38	74.79	27.09	110.64	377.37	3.46	1.23	4.77	4.77
Stillwater County	A15	RM 404.54	69214.33	2% - 50yr	1497.96	1052.26	1047.65	3.43	2.92	61.53	23.24	130.48	452.1	3.22	1.2	4.6	4.6
Stillwater County	A15	RM 404.35	68254.38	2% - 50yr	1497.96	1051.77	1048.18	3.04	2.71	51.88	29.44	146.86	375.14	2.58	1.47	4	4
Stillwater County	A15	RM 404.23	67606.98	2% - 50yr	1497.96	1051.33	1047.77	3.12	3.06	53.74	50.07	132.49	246.16	2.7	2.53	3.56	3.56
Stillwater County	A15	RM 404.10	66934.17	2% - 50yr	1497.96	1050.98	1047.61	2.94	2.79	46.92	39.18	123.69	450.88	2.84	2.37	3.37	3.37
Stillwater County	A15	RM 403.94	66110.59	2% - 50yr	1497.96	1050.67	1045.27	2.87	2.34	43.45	25.12	113.06	541.27	3.14	1.81	5.4	5.4
Stillwater County	A15	RM 403.85	65604.39	2% - 50yr	1497.96	1050.2	1044.79	3.65	3.01	66.63	44.27	79.34	452.35	3.71	2.45	5.41	5.41
Stillwater County	A15	RM 403.75	65058.55	2% - 50yr	1497.96	1049.5	1046.13	4.27	3.75	100.53	72.57	101.02	250.65	2.74	1.97	3.37	3.37
Stillwater County	A15	RM 403.69	64721.22	2% - 50yr	1497.96	1049.46	1046.02	3.05	2.91	53	48.44	134.89	384.97	2.49	2.28	3.44	3.44
Stillwater County	A15	RM 403.62	64341.29	2% - 50yr	1497.96	1049.15	1045.75	3.29	3.07	64.82	51.44	92.83	404.45	2.11	1.69	3.4	3.4
Stillwater County	A15	RM 403.55	63997.04	2% - 50yr	1497.96	1049.03	1045.95	2.75	2.35	44.51	32.58	117.68	484.53	2.25	1.65	3.08	3.08
Stillwater County	A15	RM 403.38	62985.06	2% - 50yr	1497.96	1048.73	1043.43	2.17	1.97	25.58	20.48	194.68	446.57	2.88	2.3	5.3	5.3
Stillwater County	A15	RM 403.24	62260	2% - 50yr	1497.96	1048.37	1043.43	2.62	2.49	35.24	23.41	167.56	438.7	3.39	2.25	4.94	4.94
Stillwater County	A15	RM 403.15	61770.95	2% - 50yr	1497.96	1047.83	1042.51	3.56	3.27	66.51	35.19	130.41	359.42	3.19	1.68	5.32	5.32
Stillwater County	A15	RM 403.05	61263.44	2% - 50yr	1497.96	1047.53	1043.23	3.43	3.21	62.94	36.38	146.94	331.04	2.96	1.71	4.3	4.3
Stillwater County	A15	RM 402.97	60777.65	2% - 50yr	1497.96	1047.3	1043.89	3.05	2.94	52.44	42.35	190.96	323.19	2.56	2.07	3.41	3.41
Stillwater County	A15	RM 402.83	60113.9	2% - 50yr	1497.96	1046.74	1043.49	3.16	3.15	61.79	58.88	246.5	428.38	1.92	1.83	3.24	3.24
Stillwater County	A15	RM 402.68	59309.8	2% - 50yr	1497.96	1046.23	1042.55	2.71	2.37	42.67	25.47	233.75	815.6	2.31	1.38	3.68	3.68
Stillwater County	A15	RM 402.53	58529.61	2% - 50yr	1497.96	1045.84	1040.51	2.95	1.87	43.1	12.83	121.12	923.31	3.8	1.13	5.33	5.33
Stillwater County	A15	RM 402.37	57665.93	2% - 50yr	1497.96	1045.27	1041.09	3.28	2.41	66.21	32.1	213.2	758.22	1.95	0.95	4.18	4.18
Stillwater County	A15	RM 402.24	56987.42	2% - 50yr	1497.96	1045.14	1040.75	2.08	1.49	24.74	12.36	251.22	952.66	2.45	1.22	4.39	4.39
Stillwater County	A15	RM 402.07	56034.67	2% - 50yr	1497.96	1044.57	1041.1	2.8	2.04	45.83	25.62	204.64	571.87	2.3	1.28	3.47	3.47
Stillwater County	A15	RM 401.87	54972.92	2% - 50yr	1497.96	1043.99	1040.1	2.92	1.92	46.39	20.14	150.47	631.07	2.86	1.24	3.89	3.89
Stillwater County	A15	RM 401.69	54002.29	2% - 50yr	1497.96	1043.84	1038.43	1.89	1.54	19.44	11.47	248.14	588.46	2.8	1.65	5.41	5.41
Stillwater County	A15	RM 401.55	53267.48	2% - 50yr	1497.96	1042.97	1036.56	4	3.22	74.64	25.63	74.7	298.68	4.59	1.56	6.41	6.41
Stillwater County	A15	RM 401.41	52506.25	2% - 50yr	1497.96	1042.9	1037.91	2.84	2.37	41.5	26.73	136.71	363.6	3.34	2.15	4.99	4.99
Stillwater County	A15	RM 401.31	51997.63	2% - 50yr	1497.96	1042.52	1038.08	3.32	2.81	57.22	34.87	119.22	267.15	3.27	1.99	4.44	4.44
Stillwater County	A15	RM 401.17	51259.17	2% - 50yr	1497.96	1042.03	1037.38	3.33	2.99	59.13	33.49	146.14	318.5	3.03	1.72	4.65	4.65
Stillwater County	A15	RM 401.03	50507.04	2% - 50yr	1497.96	1041.61	1036.56	3.33	2.73	56.35	23.7	125.18	373.65	3.5	1.47	5.05	5.05
Stillwater County	A15	RM 400.90	49826.69	2% - 50yr	1497.96	1041.02	1036.25	3.7	3.34	76.18	53.22	147.97	278.28	2.67	1.87	4.76	4.76
Stillwater County	A15	RM 400.74	49002.09	2% - 50yr	1497.96	1040.51	1037.21	3.41	2.49	63.45	34.99	111.86	384.17	2.87	1.57	3.3	3.3
Stillwater County	A15	RM 400.61	48243.95	2% - 50yr	1497.96	1040.27	1035.99	2.49	2.14	34.46	25.2	144.82	356.68	2.7	1.96	4.28	4.28
Stillwater County	A15	RM 400.50	47710.55	2% - 50yr	1497.96	1039.95	1035.67	2.72	2.53	40.96	29.55	149.16	300.36	2.74	1.97	4.28	4.28
Stillwater County	A15	RM 400.42	47243.72	2% - 50yr	1497.96	1039.59	1034.87	3.23	2.86	54.41	32.55	103.89	272.21	3.24	1.93	4.72	4.72
Stillwater County	A15	RM 400.34	46832.6	2% - 50yr	1497.96	1039.41	1034.91	3.15	2.69	50.51	24.5	95.8	328.63	3.5	1.7	4.5	4.5
Stillwater County	A15	RM 400.25	46335.82	2% - 50yr	1497.96	1039.26	1035.01	2.9	2.38	43.34	22.88	107.99	354.5	3.38	1.78	4.25	4.25
Stillwater County	A15	RM 400.18	45999.89	2% - 50yr	1497.96	1039.1	1034.98	2.97	2.47	46.48	26.13	115.05	341.25	3.17	1.77	4.12	4.12
Stillwater County	A15	RM 400.13	45714.33	2% - 50yr	1497.96	1038.97	1035.2	2.93	2.4	44.96	26.88	122.23	324.13	3.23	1.92	3.77	3.77
Stillwater County	A15	RM 400.11	45623.77	2% - 50yr	1497.96	1038.88	1035.11	3.04	2.46	49.51	31.67	129.57	330.12	2.98	1.89	3.77	3.77
Stillwater County	A15	RM 400.09	45529.19	2% - 50yr	1497.96	1038.73	1035.05	3.34	2.78	61.82	40.4	128.18	333.12	2.72	1.77	3.68	3.68
Stillwater County	A15	RM 400.03	45177.97	2% - 50yr	1497.96	1038.53	1034.82	3.12	2.8	53.76	43.17	137.4	383.45	2.71	2.18	3.71	3.71
Stillwater County	A15	RM 399.95	44761.86	2% - 50yr	1497.96	1038.3	1033.69	2.99	2.99	46.23	45.7	149.97	291.41	3.34	3.3	4.61	4.61
Stillwater County	A16	RM 399.85	44225.61	2% - 50yr	1497.96	1037.83	1033.63	3.48	3.48	65.01	64.74	144.73	162.25	2.98	2.97	4.2	4.2
Stillwater County	A16	RM 399.74	43664.16	2% - 50yr	1497.96	1037.61	1033.48	2.95	2.95	48.38	48	188.33	212.88	2.69	2.68	4.12	4.12
Stillwater County	A16	RM 399.62	43026.17	2% - 50yr	1497.96	1037.28	1033.67	2.78	2.78	44.12	44.02	218.71	326.69	2.46	2.46	3.61	3.61
Stillwater County	A16	RM 399.50	42404.94	2% - 50yr	1497.96	1036.98	1031.89	2.79	2.79	40.82	40.28	167.47	239.76	3.2	3.16	5.09	5.09
Stillwater County	A16	RM 399.39	41801.43	2% - 50yr	1497.96	1036.61	1031.8	3.09	3.09	50.65	50.1	156.53	252.38	3.09	3.06	4.81	4.81

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

2% - 50yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	2% - 50yr	1497.96	1036.28	1031.14	3.29	3.02	57.95	42.47	146.13	239.02	3	2.19	5.14	5.14
Stillwater County	A16	RM 399.19	40736.83	2% - 50yr	1497.96	1035.64	1031.46	3.85	3.42	81.11	46.82	134.81	273.29	2.81	1.62	4.18	4.18
Stillwater County	A16	RM 399.09	40202.15	2% - 50yr	1497.96	1035.36	1031.09	3.45	2.92	62.46	30.18	129.05	336.56	3.16	1.52	4.27	4.27
Stillwater County	A16	RM 399.00	39710.39	2% - 50yr	1497.96	1035.18	1031.41	3.03	2.37	50.43	32.23	144.92	355.86	2.78	1.78	3.77	3.77
Stillwater County	A16	RM 398.91	39231.58	2% - 50yr	1497.96	1034.89	1031.73	2.91	2.33	51.49	34.87	180.79	470.98	2.04	1.38	3.16	3.16
Stillwater County	A16	RM 398.80	38666.26	2% - 50yr	1497.96	1034.49	1031.55	2.82	2.22	47.39	31.18	190.46	480.22	2.14	1.41	2.94	2.94
Stillwater County	A16	RM 398.73	38275.64	2% - 50yr	1497.96	1034.22	1030.78	2.74	2.17	38.2	25.22	225.12	542.14	1.93	1.27	3.44	3.44
Stillwater County	A16	RM 398.62	37715.08	2% - 50yr	1497.96	1033.9	1030.19	2.62	2.22	35.73	26.53	207.76	450.11	2.03	1.5	3.71	3.71
Stillwater County	A16	RM 398.51	37115.9	2% - 50yr	1497.96	1033.55	1030.68	2.61	2.24	40.34	26.82	212.08	476.98	2.23	1.48	2.89	2.89
Stillwater County	A16	RM 398.40	36522.49	2% - 50yr	1497.96	1033.38	1028.27	2.22	1.88	23	17.78	225.87	475.37	2.17	1.67	5.11	5.11
Stillwater County	A16	RM 398.29	35952.65	2% - 50yr	1497.96	1032.99	1027.62	2.58	2.29	40.92	29.84	282.79	450.67	1.99	1.45	5.37	5.37
Stillwater County	A16	RM 398.17	35320.39	2% - 50yr	1497.96	1032.77	1028.88	2.27	2.11	28.06	18.44	233.17	385.43	2.81	1.84	3.88	3.88
Stillwater County	A16	RM 398.04	34597.07	2% - 50yr	1497.96	1032.45	1027.24	2.38	2.24	38.82	28.44	256.29	449.71	2.44	1.78	5.21	5.21
Stillwater County	A16	RM 397.95	34133.39	2% - 50yr	1497.96	1032.09	1027.15	2.75	2.64	44.45	35.73	240.56	318.71	2.25	1.81	4.94	4.94
Stillwater County	A16	RM 397.81	33366.95	2% - 50yr	1497.96	1031.82	1027.05	2.32	2.17	29.94	23.09	238.11	355.58	2.68	2.06	4.77	4.77
Stillwater County	A16	RM 397.68	32754.86	2% - 50yr	1497.96	1031.58	1026.97	2.44	2.24	31.32	22.07	195.63	373.83	3.1	2.19	4.61	4.61
Stillwater County	A16	RM 397.56	32104.4	2% - 50yr	1497.96	1030.9	1026.76	3.59	3.32	68.5	38.38	135	579.65	3.05	1.71	4.14	4.14
Stillwater County	A16	RM 397.40	31237.31	2% - 50yr	1497.96	1030.37	1026.27	3.24	2.87	59.31	43.45	175.99	665.23	2.55	1.87	4.1	4.1
Stillwater County	A16	RM 397.17	30082.69	2% - 50yr	1497.96	1029.77	1025.84	2.52	1.96	38.81	24.28	268.93	996.55	2.01	1.26	3.93	3.93
Stillwater County	A16	RM 396.97	29050.44	2% - 50yr	1497.96	1029.36	1025.61	2.11	1.47	26.14	14.54	280.04	1096.41	2.28	1.27	3.75	3.75
Stillwater County	A16	RM 396.71	27639.86	2% - 50yr	1497.96	1028.76	1022.48	2.8	1.45	39.83	11.99	127.44	1117.03	3.51	1.04	6.28	6.28
Stillwater County	A16	RM 396.62	27103.31	2% - 50yr	1497.96	1028.28	1022.36	3.52	2.03	60.73	13.21	99.61	994.72	3.92	0.84	5.92	5.92
Stillwater County	A16	RM 396.52	26616.35	2% - 50yr	1497.96	1028.04	1023.41	3.51	1.91	63.12	15.81	108.11	919.52	3.44	0.85	4.63	4.63
Stillwater County	A16	RM 396.29	25423.1	2% - 50yr	1497.96	1027.69	1023.53	2.47	1.57	34.16	14.09	188.51	899.85	2.61	1.08	4.16	4.16
Stillwater County	A16	RM 396.14	24635.78	2% - 50yr	1497.96	1026.81	1022.46	3.77	2.96	79.45	39.82	129.67	541.48	2.6	1.3	4.35	4.35
Stillwater County	A16	RM 396.03	24026.24	2% - 50yr	1497.96	1026.7	1024.1	2.42	1.9	34.51	20.18	186.55	746.74	2.23	1.3	2.6	2.6
Stillwater County	A16	RM 395.89	23301.08	2% - 50yr	1497.96	1026.21	1022.79	2.83	2.02	49.19	25.2	152.52	853.61	1.97	1.01	3.41	3.41
Stillwater County	A16	RM 395.73	22420.29	2% - 50yr	1497.96	1025.84	1022.66	1.66	1.36	16.95	10.8	186.62	1028.74	1.99	1.26	3.18	3.18
Stillwater County	A16	RM 395.64	21923.33	2% - 50yr	1497.96	1025.6	1022.13	2.21	1.51	28.89	13.33	144.53	1150.93	2.21	1.02	3.78	3.78
Stillwater County	A16	RM 395.57	21526.11	2% - 50yr	1497.96	1025.17	1021.61	3.06	1.88	52.39	17.63	78.2	1241.86	2.63	0.88	3.56	3.56
Stillwater County	A16	RM 395.48	21053.74	2% - 50yr	1497.96	1024.82	1021.89	2.71	2.09	45.91	23.77	114.8	982.41	1.86	0.96	2.93	2.93
Stillwater County	A16	RM 395.36	20532.68	2% - 50yr	1497.96	1024.57	1021.53	2.31	1.8	31.51	14.62	131.95	1046.87	2.23	1.03	3.04	3.04
Stillwater County	A16	RM 394.98	18666.37	2% - 50yr	1497.96	1023.95	1020.31	2.9	2.07	48.91	21.19	110.79	837.86	2.31	1	3.64	3.64
Stillwater County	A16	RM 394.80	17678.79	2% - 50yr	1497.96	1023.57	1019.23	2.69	2.13	43.38	24.65	140.79	634.01	2.12	1.2	4.34	4.34
Stillwater County	A16	RM 394.71	17254.4	2% - 50yr	1497.96	1023.37	1019.74	2.36	1.99	32.38	16.76	146.7	659.62	2.36	1.22	3.63	3.63
Stillwater County	A16	RM 394.65	16921.48	2% - 50yr	1497.96	1023.12	1019.93	2.38	2.21	34.78	21.54	169.35	680.65	2	1.23	4.12	4.12
Stillwater County	A16	RM 394.59	16622.61	2% - 50yr	1497.96	1022.72	1019.92	2.52	2.49	41.47	34.43	164.57	604.67	1.64	1.36	3.15	3.15
Stillwater County	A16	RM 394.53	16295.21	2% - 50yr	1497.96	1022.47	1019.83	2.38	2.21	36.61	30.88	158.81	523.51	1.7	1.43	3.46	3.46
Stillwater County	A16	RM 394.45	15858.14	2% - 50yr	1497.96	1021.97	1019.03	3.01	2.71	54.42	38.52	113.58	374.91	2.13	1.51	3.09	3.09
Stillwater County	A16	RM 394.20	14503.23	2% - 50yr	1497.96	1021.31	1016.38	2.76	2.3	42.6	22.49	149.53	477.48	2.58	1.37	4.93	4.93
Stillwater County	A16	RM 394.12	14088.57	2% - 50yr	1497.96	1020.9	1016.74	3.23	2.65	59.98	29.53	152.22	476.93	2.41	1.19	4.16	4.16
Stillwater County	A16	RM 393.99	13393.6	2% - 50yr	1497.96	1020.53	1017.11	2.7	2.08	43.83	25.95	125.32	574.96	2.11	1.25	3.42	3.42
Stillwater County	A16	RM 393.85	12650.05	2% - 50yr	1497.96	1020.03	1016.49	2.5	2.13	39.47	27.64	178.93	550.67	1.82	1.28	3.54	3.54
Stillwater County	A16	RM 393.59	11240.84	2% - 50yr	1497.96	1019.52	1015.45	1.88	1.48	21	11.78	272.87	816.65	2.21	1.24	4.07	4.07
Stillwater County	A16	RM 393.27	9813.245	2% - 50yr	1497.96	1018.49	1013.32	2.98	2.74	60.42	42.09	261.61	538.74	1.46	1.01	5.16	5.16
Stillwater County	A16	RM 393.10	8870.543	2% - 50yr	1497.96	1017.88	1013.34	2.16	1.99	30.19	25.33	340.65	534.49	1.68	1.41	4.54	4.54
Stillwater County	A16	RM 392.95	8114.595	2% - 50yr	1497.96	1017.08	1014.13	2.84	2.74	54.5	49.96	329.31	402.78	1.48	1.36	2.95	2.95
Stillwater County	A16	RM 392.69	6912.838	2% - 50yr	1497.96	1016.55	1012.43	2.03	1.76	24.2	15	191.97	878.08	2.29	1.41	4.12	4.12
Stillwater County	A16	RM 392.44	5710.825	2% - 50yr	1497.96	1015.96	1011.68	2.65	1.91	38.73	15.56	135.35	1126.13	2.75	1.1	4.28	4.28
Stillwater County	A17	RM 392.20	4388.056	2% - 50yr	1497.96	1014.92	1010.8	3.28	2.41	64.98	31.26	200.78	711.05	2.08	1	4.12	4.12
Stillwater County	A17	RM 392.00	3345.174	2% - 50yr	1497.96	1014.29	1009.53	2.9	2.27	46.84	21.46	166.65	569.45	2.63	1.2	4.76	4.76
Stillwater County	A17	RM 391.84	2491.214	2% - 50yr	1497.96	1013.97	1010.51	2.39	1.87	33.91	17.57	154.86	717.22	2.17	1.12	3.56	3.56
Stillwater County	A17	RM 391.68	1656.536	2% - 50yr	1497.96	1013.64	1010.5	1.97	1.64	24.9	17.15	255.36	759.89	1.75	1.2	3.14	3.14
Stillwater County	A17	RM 391.58	1120.168	2% - 50yr	1497.96	1013.38	1009.55	2.03	1.6	26.34	16.64	363.9	847.43	1.76	1.11	3.83	3.83
Stillwater County	A17	RM 391.46	505.9	2% - 50yr	1497.96	1013.13	1009.4	2.04	1.46	25.16	14.02	297.18	900.92	2.08	1.16	3.73	3.73

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	50-yr	1497.96	1012.7	1008.74	2.48	1.62	35.03	15.16	209.94	867.45	2.46	1.06	3.96	3.96
Yellowstone County	A17	RM 391.14	149661.4	50-yr	1497.96	1012.24	1007.82	2.56	1.61	45.97	23.01	204.17	776.78	2.4	1.2	4.42	4.42
Yellowstone County	A17	RM 390.83	149168.3	50-yr	1497.96	1011.25	1007.89	2.49	1.98	40.9	24.84	264.9	704.79	1.9	1.15	3.36	3.36
Yellowstone County	A17	RM 390.51	148644.1	50-yr	1497.96	1010.52	1006	1.87	1.62	29.99	18.11	203.7	548.47	2.8	1.69	4.52	4.52
Yellowstone County	A17	RM 390.34	148387.5	50-yr	1497.96	1010.07	1005.26	2.54	2.1	52.79	33.83	155.99	393.67	2.84	1.81	4.81	4.81
Yellowstone County	A17	RM 390.13	148054.9	50-yr	1497.96	1009.44	1005.54	2.78	2.19	54.91	32.05	146.43	411.72	2.85	1.66	3.9	3.9
Yellowstone County	A17	RM 389.96	147776.4	50-yr	1497.96	1009.11	1004.81	2.21	1.94	31.39	19.54	175.73	476.3	2.6	1.62	4.29	4.29
Yellowstone County	A17	RM 389.76	147468.2	50-yr	1497.96	1008.87	1004.52	1.65	1.47	22.76	15.59	300.8	722.52	2.84	1.94	4.35	4.35
Yellowstone County	A17	RM 389.55	147162.3	50-yr	1497.96	1008.31	1003.2	2.21	2.21	59.47	57.51	323.02	334.19	2.1	2.03	5.11	5.11
Yellowstone County	A17	RM 389.31	146731.1	50-yr	1497.96	1007.55	1003.49	2.21	2.06	29.87	24.14	256.17	347.37	2.6	2.1	4.06	4.06
Yellowstone County	A17	RM 389.08	146349	50-yr	1497.96	1007.03	1001.61	1.85	1.62	45.6	30.01	309.68	659.58	2.13	1.4	5.42	5.42
Yellowstone County	A17	RM 388.92	146095.5	50-yr	1497.96	1006.63	1002.49	2.02	1.66	23.77	13.4	267.1	642.46	2.5	1.41	4.14	4.14
Yellowstone County	A17	RM 388.79	145883.6	50-yr	1497.96	1006.42	1002.14	2.19	1.46	26.84	12.19	163.94	655.56	3.49	1.56	4.28	4.28
Yellowstone County	A17	RM 388.61	145594.9	50-yr	1497.96	1005.93	1000.48	2.81	1.98	60.66	31.41	146.75	503.8	2.92	1.5	5.45	5.45
Yellowstone County	A17	RM 388.58	145547	50-yr	1497.96	1005.78	1000.28	2.76	2.04	70.58	32.62	154.88	567.72	2.98	1.37	5.5	5.5
Yellowstone County	A17	RM 388.36	145196.7	50-yr	1497.96	1005.13	1001.21	2.74	2.04	47.58	25.53	162.05	491.05	2.78	1.5	3.92	3.92
Yellowstone County	A17	RM 388.22	144960.1	50-yr	1497.96	1004.58	1000.23	3.09	2.22	62.81	29.19	162.16	831.72	2.08	0.97	4.35	4.35
Yellowstone County	A17	RM 388.09	144745.8	50-yr	1497.96	1004.01	999.87	2.63	2.04	47.37	27.67	231.4	837.64	1.74	1.01	4.14	4.14
Yellowstone County	A17	RM 387.91	144452	50-yr	1497.96	1003.39	999.77	1.68	1.73	26.84	21.23	381.68	791.71	1.42	1.12	3.62	3.62
Yellowstone County	A17	RM 387.79	144255.2	50-yr	1497.96	1003.27	999.17	1.25	1.16	7.1	6.48	556.46	963.96	1.51	1.38	4.1	4.1
Yellowstone County	A17	RM 387.59	143932.9	50-yr	1497.96	1002.99	998.1	1.14	1.13	35.33	33.52	991.19	1111.76	1.25	1.19	4.89	4.89
Yellowstone County	A17	RM 387.36	143562.1	50-yr	1497.96	1002	997.78	1.86	1.82	18.53	17.4	795.61	882.36	1	0.94	4.22	4.22
Yellowstone County	A17	RM 387.24	143353.9	50-yr	1497.96	1001.62	997.71	2.02	2.01	20.98	20.68	495.18	514.17	1.5	1.48	3.91	3.91
Yellowstone County	A17	RM 387.04	143026.2	50-yr	1497.96	1001.14	996.49	1.91	1.8	18.88	16.79	625.82	803.33	1.18	1.05	4.65	4.65
Yellowstone County	A17	RM 386.86	142750.4	50-yr	1497.96	1000.57	997.01	1.68	1.53	49.56	35.37	483.64	829.22	1.68	1.2	3.56	3.56
Yellowstone County	A17	RM 386.74	142538.5	50-yr	1497.96	1000.08	996.31	1.94	1.77	30.69	18.77	351.54	671.44	2.06	1.26	3.77	3.77
Yellowstone County	A17	RM 386.61	142318.4	50-yr	1497.96	999.49	995.9	2.82	2.49	51.83	25.19	187.79	497.07	2.49	1.21	3.59	3.59
Yellowstone County	A17	RM 386.47	142095.8	50-yr	1497.96	999.13	995.18	2.6	2.06	41.27	20.99	170.18	541.59	2.65	1.35	3.95	3.95
Yellowstone County	A17	RM 386.33	141875.1	50-yr	1497.96	998.7	994.36	2.88	2.05	43.58	21.08	166.12	603.73	2.51	1.21	4.34	4.34
Yellowstone County	A17	RM 386.17	141622.7	50-yr	1497.96	998.26	993.9	2.63	2.16	43.96	22.34	207.5	576.37	2.36	1.2	4.36	4.36
Yellowstone County	A17	RM 386.08	141479.6	50-yr	1497.96	998.02	994.12	2.52	2.01	49.28	24.98	179.18	526.04	2.81	1.42	3.9	3.9
Yellowstone County	A17	RM 386.03	141389.2	50-yr	1497.96	997.9	993.82	2.34	2.03	30.8	19.27	224.91	475.6	2.48	1.55	4.08	4.08
Yellowstone County	A17	RM 385.96	141289.2	50-yr	1497.96	997.87	993.01	1.91	1.7	18.45	12.89	244.51	496.8	2.94	2.06	4.86	4.86
Yellowstone County	A17	RM 385.91	141204.9	50-yr	1497.96	997.78	992.33	1.97	1.92	20.45	16.08	264.65	513.61	2.87	2.26	5.45	5.45
Yellowstone County	A17	RM 385.84	141096	50-yr	1497.96	997.52	990.57	2.56	2.56	34.03	34.03	344.06	430.92	3.97	3.97	6.95	6.95
Yellowstone County		RM 342.71	141053	50-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	50-yr	1497.96	997.25	992.45	2.89	2.89	67.66	67.66	142.44	142.44	3.64	3.64	4.8	4.8
Yellowstone County	A17	RM 385.79	141006	50-yr	1497.96	997.24	992.48	2.71	2.71	33.41	33.34	166.37	367.66	3.32	3.32	4.76	4.76
Yellowstone County	A18	RM 385.69	140846.5	50-yr	1497.96	997.02	992.9	2.59	2.37	64.91	47.62	212.08	521.9	2.69	1.97	4.12	4.12
Yellowstone County	A18	RM 385.60	140705.5	50-yr	1497.96	996.64	992.71	2.76	2.47	59.07	41.2	203.79	488.13	2.59	1.8	3.93	3.93
Yellowstone County	A18	RM 385.50	140538.8	50-yr	1497.96	996.29	990.71	2.81	2.35	57.44	24	150.86	450.67	3.41	1.42	5.58	5.58
Yellowstone County	A18	RM 385.39	140367.1	50-yr	1497.96	996.01	992.41	2.81	2.37	41.1	23.42	204.79	444.03	2.49	1.42	3.6	3.6
Yellowstone County	A18	RM 385.30	140231.3	50-yr	1497.96	995.7	992.53	2.83	2.46	64.02	39.62	239.85	468.92	2.1	1.3	3.17	3.17
Yellowstone County	A18	RM 385.23	140108.3	50-yr	1497.96	995.46	992.01	2.39	2.15	46.91	35.1	233.04	447.11	2.08	1.56	3.45	3.45
Yellowstone County	A18	RM 385.12	139921.2	50-yr	1497.96	994.67	991.37	3.02	2.93	67.67	55.49	254.42	407.2	1.53	1.26	3.3	3.3
Yellowstone County	A18	RM 384.93	139688.7	50-yr	1497.96	994.3	991.06	2.24	2.01	28.37	19.49	241.64	528.1	2.06	1.41	3.24	3.24
Yellowstone County	A18	RM 384.75	139352.1	50-yr	1497.96	993.18	989.77	3.84	3.08	109.44	57.68	117.55	429.94	2.22	1.17	3.41	3.41
Yellowstone County	A18	RM 384.63	139146.9	50-yr	1497.96	992.92	989.58	1.85	1.72	23.61	20.89	197.2	826.36	1.6	1.42	3.34	3.34
Yellowstone County	A18	RM 384.48	138904.5	50-yr	1497.96	992.58	989.55	1.55	1.77	23.21	19.02	184.55	532.36	2	1.64	3.23	3.23
Yellowstone County	A18	RM 384.34	138682.4	50-yr	1497.96	992.33	988.23	1.69	1.58	38.83	17.2	169.48	910.87	2.68	1.18	4.1	4.1
Yellowstone County	A18	RM 384.26	138551.1	50-yr	1497.96	992.07	987.34	2.47	1.71	63.67	25.73	91.46	877.02	3.17	1.27	4.73	4.73
Yellowstone County	A18	RM 384.15	138370.3	50-yr	1497.96	991.1	987.39	4.01	3.21	119.92	50.03	78.95	425.32	2.65	1.1	3.71	3.71
Yellowstone County	A18	RM 384.06	138235.3	50-yr	1497.96	990.94	987.31	2.93	1.99	51.52	26.79	85.62	713.43	2.58	1.33	3.63	3.63
Yellowstone County	A18	RM 383.96	138072.3	50-yr	1497.96	990.55	987.67	2.53	2.26	43.9	33.59	139.22	541.73	1.6	1.22	2.88	2.88
Yellowstone County	A18	RM 383.86	137914.6	50-yr	1497.96	990.35	987.24	1.97	1.8	23.3	16.97	154.49	521.43	2.2	1.6	3.11	3.11
Yellowstone County	A18	RM 383.75	137749.9	50-yr	1497.96	990.09	986.55	1.8	1.93	26.93	20.48	207.26	612.56	1.67	1.26	3.61	3.61
Yellowstone County	A18	RM 383.62	137544.5	50-yr	1497.96	989.87	986.32	1.74	1.55	19.12	12.71	176.89	737.15	1.98	1.31	4.25	4.25
Yellowstone County	A18	RM 383.54	137415.7	50-yr	1497.96	989.78	984.41	1.58	1.37	14.51	9.03	392.45	774.43	2.27	1.42	5.37	5.37
Yellowstone County	B1	RM 383.39	137175.7	50-yr	1911.39	989.34	984.98	2.42	2.34	21.98	19.01	572.02	686.02	1.38	1.19	4.36	4.36
Yellowstone County	B1	RM 383.31	137040.5	50-yr	1911.39	989.18	984.86	2.11	1.83	21.09	18.82	629.63	856.69	1.37	1.22	4.32	4.32
Yellowstone County	B1	RM 383.16	136817.2	50-yr	1911.39	988.96	984.9	1.64	1.42	13.48	13.14	783.69	997.7	1.38	1.35	4.06	4.06

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	50-yr	1911.39	988.54	983.64	1.66	1.47	16.24	14.7	626.81	847.21	1.69	1.53	4.9	4.9
Yellowstone County	B1	RM 382.61	135921.1	50-yr	1911.39	987.99	982.68	2.42	1.79	31.67	15.27	196.01	617.51	3.59	1.73	5.31	5.31
Yellowstone County	B1	RM 382.44	135657.8	50-yr	1911.39	987.59	981.56	3.01	2.02	46.09	20.05	132.77	547.79	3.98	1.73	6.03	6.03
Yellowstone County	B1	RM 382.28	135389.1	50-yr	1911.39	987.44	981.45	2.44	1.74	33.03	15.87	139.32	533.49	4.31	2.06	5.99	5.99
Yellowstone County	B1	RM 382.11	135122	50-yr	1911.39	986.93	980.52	3.18	2.25	57.23	22.78	133.61	536.36	4.01	1.59	6.41	6.41
Yellowstone County	B1	RM 381.93	134829.3	50-yr	1911.39	986.53	981.3	2.75	2.39	67.3	34.08	182.96	444.54	3.56	1.8	5.23	5.23
Yellowstone County	B1	RM 381.79	134602.8	50-yr	1911.39	986.04	981.63	3.05	2.61	52.18	26.85	167.52	403.86	3.55	1.82	4.41	4.41
Yellowstone County	B1	RM 381.69	134426.2	50-yr	1911.39	985.97	981.06	2.3	2.06	33.7	23.16	207.55	355.51	3.8	2.61	4.91	4.91
Yellowstone County	B1	RM 381.58	134232.5	50-yr	1911.39	985.83	981.02	2.12	1.82	26.97	16.88	271.39	549.5	3.1	1.94	4.81	4.81
Yellowstone County	B1	RM 381.47	134047.3	50-yr	1911.39	985.65	980.95	1.87	1.66	44.82	26.22	333.31	740.45	2.81	1.64	4.7	4.7
Yellowstone County	B1	RM 381.35	133871.9	50-yr	1911.39	985.34	980.79	1.83	1.65	49.29	29.25	366.2	738.92	2.65	1.57	4.55	4.55
Yellowstone County	B1	RM 381.22	133659.2	50-yr	1911.39	984.81	979.74	1.96	1.94	62.42	57.79	432.23	473.66	2.25	2.08	5.07	5.07
Yellowstone County	B1	RM 381.11	133491.4	50-yr	1911.39	984.24	979.61	2.16	2.24	69.59	58.62	287.45	427.74	2.37	2	4.63	4.63
Yellowstone County	B1	RM 381.00	133302.9	50-yr	1911.39	983.65	978.23	3.03	2.61	47.81	23.53	189.34	521.42	2.86	1.4	5.42	5.42
Yellowstone County	B1	RM 380.92	133180	50-yr	1911.39	983.53	976.97	2.74	2.22	47.86	19.7	152.78	568.15	3.69	1.51	6.56	6.56
Yellowstone County	B1	RM 380.81	132986.3	50-yr	1911.39	983.19	978.55	2.85	2.36	47.07	22.49	193.61	547.98	3.1	1.48	4.64	4.64
Yellowstone County	B1	RM 380.69	132800.2	50-yr	1911.39	983.03	978.53	2.37	2	30.8	18.86	264.93	554.35	2.82	1.72	4.5	4.5
Yellowstone County	B1	RM 380.57	132628.6	50-yr	1911.39	982.83	978.7	2.27	1.99	40.97	21.52	229.16	1267.25	3.08	1.62	4.13	4.13
Yellowstone County	B1	RM 380.48	132470	50-yr	1911.39	982.62	978.24	2.36	2.01	39.42	21.27	201.91	1314.18	3.32	1.79	4.38	4.38
Yellowstone County	B1	RM 380.34	132222.4	50-yr	1911.39	982.22	977.37	2.71	2.2	40.89	26.93	205.99	447.24	2.94	1.94	4.85	4.85
Yellowstone County	B1	RM 380.22	132032.4	50-yr	1911.39	981.6	977.02	3.48	3.22	66.63	45.73	172.52	284.68	3.04	2.08	4.58	4.58
Yellowstone County	B1	RM 380.11	131847.7	50-yr	1911.39	981.39	976.29	2.93	2.51	53.4	30.99	181.17	531.99	2.86	1.66	5.1	5.1
Yellowstone County	B1	RM 380.01	131671.4	50-yr	1911.39	981.18	976.21	2.63	1.98	49.96	25.52	174.5	701.67	2.99	1.53	4.96	4.96
Yellowstone County	B1	RM 379.92	131538.8	50-yr	1911.39	980.89	976.69	2.84	2.13	43.89	21.28	193.23	697.48	2.65	1.29	4.2	4.2
Yellowstone County	B1	RM 379.84	131406.9	50-yr	1911.39	980.84	975.94	1.9	1.61	21.14	14.76	420.23	755.06	2.26	1.57	4.9	4.9
Yellowstone County	B1	RM 379.75	131265.1	50-yr	1911.39	980.65	974.98	2.04	1.74	29.6	19.18	375.66	714.98	2.38	1.54	5.67	5.67
Yellowstone County	B1	RM 379.65	131104.3	50-yr	1911.39	980.47	975.6	2.02	1.81	24.15	21.4	379.73	509.08	2.34	2.07	4.87	4.87
Yellowstone County	B1	RM 379.56	130964.3	50-yr	1911.39	980.35	975.94	1.91	1.67	21.73	15.24	313.71	1464.04	2.57	1.8	4.41	4.41
Yellowstone County	B1	RM 379.46	130794	50-yr	1911.39	980.16	974.74	2.07	1.65	23.71	14.19	298.45	1253.55	2.45	1.46	5.42	5.42
Yellowstone County	B1	RM 379.36	130642.3	50-yr	1911.39	980.09	975.71	1.79	1.19	24.83	12.66	247.15	1070.34	3.34	1.7	4.38	4.38
Yellowstone County	B1	RM 379.27	130496.2	50-yr	1911.39	979.75	974.66	2.74	1.66	63.92	29.49	164.74	802.27	3.12	1.43	5.09	5.09
Yellowstone County	B1	RM 379.17	130345.7	50-yr	1911.39	979.19	973.93	3.39	2.06	74.76	25.88	154.92	851.22	3.15	1.09	5.26	5.26
Yellowstone County	B1	RM 379.04	130142	50-yr	1911.39	978.96	974.79	2.74	1.68	41.6	19.32	203.31	900.24	2.71	1.26	4.16	4.16
Yellowstone County	B1	RM 378.97	130026.7	50-yr	1911.39	978.7	974.64	2.86	1.88	46.79	20.83	231.05	916.19	2.5	1.11	4.06	4.06
Yellowstone County	B1	RM 378.86	129850.9	50-yr	1911.39	978.33	974.4	2.9	1.94	52.5	23.59	250.72	947.28	2.32	1.04	3.92	3.92
Yellowstone County	B1	RM 378.76	129682.3	50-yr	1911.39	978	974.17	2.75	1.9	44.69	20	272.3	968.33	2.32	1.04	3.83	3.83
Yellowstone County	B1	RM 378.67	129541.3	50-yr	1911.39	977.78	973.97	2.63	1.73	34.67	20.07	284.63	890.69	2.14	1.24	3.81	3.81
Yellowstone County	B1	RM 378.61	129443.1	50-yr	1911.39	977.68	973.83	1.95	1.53	48.44	30.06	254.91	978.53	2.06	1.27	3.85	3.85
Yellowstone County	B1	RM 378.52	129297.7	50-yr	1911.39	977.47	973.62	1.75	1.44	18.88	15.03	561.38	959.15	1.74	1.39	3.85	3.85
Yellowstone County	B1	RM 378.46	129200.8	50-yr	1911.39	977.4	973.48	1.51	1.34	17.28	12.84	613.46	965.91	1.98	1.47	3.92	3.92
Yellowstone County	B1	RM 378.40	129112.2	50-yr	1911.39	977.29	973.41	1.48	1.35	35.62	27.03	605.91	921.14	2.03	1.54	3.88	3.88
Yellowstone County	B1	RM 378.29	128929.4	50-yr	1911.39	977.18	972.93	1.23	1.1	10.7	7.72	567.41	913.42	2.64	1.91	4.25	4.25
Yellowstone County	B1	RM 378.13	128673.7	50-yr	1911.39	976.93	971.4	1.87	1.74	16.2	11.89	438.15	925.84	2.29	1.68	5.53	5.53
Yellowstone County	B1	RM 378.07	128569	50-yr	1911.39	976.84	970.46	1.98	1.9	17.16	13.97	347.76	709.61	2.75	2.24	6.38	6.38
Yellowstone County	B1	RM 377.96	128380.3	50-yr	1911.39	976.25	968.85	3.18	3.18	74.26	74.26	111	111	5.41	5.41	7.4	7.4
Yellowstone County		RM 338.83	128364	50-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	50-yr	1911.39	976.19	967.19	3	3	72.95	72.95	109.78	109.78	5.8	5.8	9	9
Yellowstone County	B1	RM 377.87	128244.4	50-yr	1911.39	976.02	970.56	2.98	2.98	59.86	59.85	223.61	352.01	2.93	2.93	5.46	5.46
Yellowstone County	B1	RM 377.79	128118	50-yr	1911.39	975.84	970.94	2.64	2.64	35.66	35.64	344.77	722.51	2.1	2.1	4.9	4.9
Yellowstone County	B1	RM 377.69	127964.3	50-yr	1911.39	975.66	969.86	2.3	2.24	26.48	23.37	423.76	781.36	1.95	1.72	5.8	5.8
Yellowstone County	B1	RM 377.61	127824.8	50-yr	1911.39	975.19	970.53	3.06	2.99	35.94	31.87	397.88	594.09	1.57	1.39	4.66	4.66
Yellowstone County	B1	RM 377.55	127735.1	50-yr	1911.39	975.11	970.41	2.58	2.53	26.66	22.87	441.52	611.19	1.67	1.43	4.7	4.7
Yellowstone County	B1	RM 377.48	127618.1	50-yr	1911.39	974.95	970.26	2.39	2.37	27.15	23.98	469.81	693.21	1.7	1.5	4.69	4.69
Yellowstone County	B1	RM 377.39	127466.6	50-yr	1911.39	974.67	969.73	2.51	2.3	29.37	20.76	418.84	656.61	1.79	1.27	4.94	4.94
Yellowstone County	B1	RM 377.34	127391.5	50-yr	1911.39	974.37	969.95	2.75	2.6	125.19	95.08	386.98	550.57	1.76	1.33	4.42	4.42
Yellowstone County	B1	RM 377.25	127241.9	50-yr	1911.39	974.12	970.26	2.06	1.97	24.79	20.52	437.5	563.22	2.08	1.72	3.86	3.86
Yellowstone County	B1	RM 377.16	127097.7	50-yr	1911.39	973.96	969.82	1.99	1.86	25.2	18.32	410.87	692.72	2.03	1.48	4.14	4.14
Yellowstone County	B1	RM 377.08	126969	50-yr	1911.39	973.91	969	1.57	1.36	13.86	9.09	417.58	802.77	2.66	1.75	4.91	4.91
Yellowstone County	B1	RM 377.04	126900.8	50-yr	1911.39	973.81	968.6	1.7	1.58	50.2	41.31	570.04	765.89	1.91	1.57	5.21	5.21
Yellowstone County	B1	RM 376.98	126797.5	50-yr	1911.39	973.6	969.02	1.9	1.75	20.27	15.8	531.66	756.39	1.86	1.45	4.58	4.58
Yellowstone County	B1	RM 376.92	126710.1	50-yr	1911.39	973.51	969.01	1.63	1.51	37.96	30.49	505.35	702.5	2.25	1.8	4.5	4.5

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	50-yr	1911.39	973.42	967.73	1.4	1.31	16.48	13.89	449.07	671.3	2.57	2.17	5.69	5.69
Yellowstone County	B1	RM 376.75	126442.1	50-yr	1911.39	973.29	967.82	1.5	1.48	23.96	21.25	406.87	527.15	2.75	2.44	5.47	5.47
Yellowstone County	B1	RM 376.67	126309	50-yr	1911.39	973.08	967.23	1.85	1.8	39.93	32.84	333.94	472.27	2.74	2.25	5.85	5.85
Yellowstone County	B1	RM 376.58	126174.1	50-yr	1911.39	972.74	966.82	2.26	2.24	55.46	50.39	307.65	369.45	2.54	2.31	5.92	5.92
Yellowstone County	B1	RM 376.51	126058.2	50-yr	1911.39	972.4	966.77	2.62	2.62	48.19	48.19	266.71	266.71	2.73	2.73	5.63	5.63
Yellowstone County	B1	RM 376.42	125918.5	50-yr	1911.39	972.25	967.68	2.39	2.39	32.13	30.9	257.31	268.12	3.11	2.99	4.57	4.57
Yellowstone County	B1	RM 376.35	125809.8	50-yr	1911.39	972.15	966.71	2.4	2.4	29.84	29.51	225.28	227.62	3.53	3.5	5.43	5.43
Yellowstone County	B1	RM 376.28	125697	50-yr	1911.39	971.76	966.28	3.17	3.17	56.91	56.74	222.28	222.92	2.72	2.71	5.48	5.48
Yellowstone County	B1	RM 376.20	125565.9	50-yr	1911.39	971.53	966.16	2.96	2.96	52.11	51.99	252.75	253.27	2.55	2.55	5.37	5.37
Yellowstone County	B1	RM 376.10	125404.8	50-yr	1911.39	971.2	966.61	2.93	2.78	48.94	43.58	270.77	339.05	2.28	2.03	4.59	4.59
Yellowstone County	B1	RM 376.00	125250.5	50-yr	1911.39	970.91	967.42	2.8	2.38	48.46	31.64	242.51	599.15	2.53	1.65	3.49	3.49
Yellowstone County	B1	RM 375.88	125055.1	50-yr	1911.39	970.6	966.01	2.7	1.99	48.42	24.1	185.92	1026.65	2.97	1.48	4.59	4.59
Yellowstone County	B1	RM 375.78	124897.3	50-yr	1911.39	970.42	965.37	2.44	1.75	38.76	18.48	187.57	916.93	2.86	1.37	5.05	5.05
Yellowstone County	B1	RM 375.67	124708.2	50-yr	1911.39	970.22	965.8	2.31	1.78	33.93	16.13	225.05	855.55	2.64	1.25	4.42	4.42
Yellowstone County	B1	RM 375.58	124564.2	50-yr	1911.39	969.96	966.54	2.54	2	40.36	19.24	225.55	779.27	2.58	1.23	3.42	3.42
Yellowstone County	B1	RM 375.23	124013.6	50-yr	1911.39	969.29	965.23	2.3	1.65	35.22	13.83	230.24	1057.43	2.8	1.1	4.06	4.06
Yellowstone County	B1	RM 375.10	123799.5	50-yr	1911.39	968.66	963.88	3.43	2.22	79.8	24.96	126.34	811.99	3.41	1.06	4.78	4.78
Yellowstone County	B1	RM 374.97	123580.4	50-yr	1911.39	968.43	963.97	2.59	1.75	52.12	17.93	136.61	981.78	3.29	1.11	4.46	4.46
Yellowstone County	B1	RM 374.83	123365.5	50-yr	1911.39	968.18	963.52	2.3	1.57	32.28	11.82	132.69	1088.14	3.08	1.12	4.66	4.66
Yellowstone County	B1	RM 374.73	123195.7	50-yr	1911.39	968.1	963.36	1.75	1.24	16.7	6.87	143.69	1171.77	3.21	1.32	4.74	4.74
Yellowstone County	B1	RM 374.61	123010.3	50-yr	1911.39	967.88	963.49	2.18	1.59	36.4	12.82	162.75	1146	3.17	1.11	4.39	4.39
Yellowstone County	B1	RM 374.53	122875.3	50-yr	1973.68	967.64	963.14	2.47	1.91	38.95	14.5	186.43	913.72	3.05	1.13	4.5	4.5
Yellowstone County	B1	RM 374.44	122726.7	50-yr	1973.68	967.32	963.04	2.96	2.06	63.41	18.33	127.34	929.33	3.59	1.03	4.28	4.28
Yellowstone County	B1	RM 374.32	122535.1	50-yr	1973.68	967.13	962.82	2.23	1.91	40.57	17.93	193.08	843.93	2.77	1.22	4.31	4.31
Yellowstone County	B1	RM 374.22	122379	50-yr	1973.68	966.95	960.92	2.4	1.54	33.2	11.62	134.27	1014.36	3.62	1.27	6.03	6.03
Yellowstone County	B1	RM 374.13	122231.1	50-yr	1973.68	966.84	960.11	2.44	1.53	31.6	13.13	137.18	953.42	3.27	1.36	6.73	6.73
Yellowstone County	B1	RM 373.97	121972.4	50-yr	1973.68	966.64	958.8	1.96	1.55	26.9	11.85	234.16	927.09	3.15	1.38	7.84	7.84
Yellowstone County	B1	RM 373.88	121829.3	50-yr	1973.68	966.48	962.21	2.13	1.54	32.39	13.13	194.77	969.35	3.27	1.32	4.27	4.27
Yellowstone County	B1	RM 373.79	121688.7	50-yr	1973.68	966.37	961.66	1.97	1.39	31.23	14.27	192.66	950.81	3.27	1.49	4.71	4.71
Yellowstone County	B1	RM 373.69	121523.5	50-yr	1973.68	966.22	961.11	1.99	1.41	24.15	13.45	202.68	792.08	3.18	1.77	5.11	5.11
Yellowstone County	B1	RM 373.56	121314.3	50-yr	1973.68	965.61	959.37	3.13	2.71	61.46	39.75	204.31	388.79	2.9	1.87	6.24	6.24
Yellowstone County	B1	RM 373.39	121015.9	50-yr	1973.68	965.08	958.78	2.97	2.82	57.34	40.49	186.8	286.55	3.46	2.44	6.3	6.3
Yellowstone County	B1	RM 373.26	120802.3	50-yr	1973.68	965	960.81	1.95	1.82	24.08	18.33	355.66	737.87	2.76	2.1	4.19	4.19
Yellowstone County	B1	RM 373.09	120539.5	50-yr	1973.68	964.6	959.94	2.41	2.24	34.09	27.56	304.46	1457.9	2.62	2.12	4.66	4.66
Yellowstone County	B1	RM 372.99	120365.2	50-yr	1973.68	964.38	959.69	2.22	1.99	42.11	29.72	329.9	1474.41	2.56	1.81	4.69	4.69
Yellowstone County	B1	RM 372.82	120107.7	50-yr	1973.68	964.15	959.03	1.75	1.69	18.23	16.77	469.06	531.64	2.38	2.19	5.12	5.12
Yellowstone County	B1	RM 372.72	119922.5	50-yr	1973.68	963.92	958.92	1.93	1.9	34.04	31.66	442.03	1497.74	2.31	2.15	5	5
Yellowstone County	B1	RM 372.65	119797.7	50-yr	1973.68	963.75	957.32	1.98	1.9	25.86	24.53	397.31	442.84	2.47	2.34	6.43	6.43
Yellowstone County	B1	RM 372.58	119676.6	50-yr	1973.68	963.68	958.2	1.74	1.69	18.79	16.86	441.67	1544.45	2.54	2.28	5.48	5.48
Yellowstone County	B1	RM 372.41	119395.9	50-yr	1973.68	963.52	958.82	1.56	1.5	13.38	12.18	485.58	566.78	2.55	2.32	4.7	4.7
Yellowstone County	B1	RM 372.32	119268.8	50-yr	1973.68	963.41	957.24	1.56	1.51	36.44	30.99	534.02	669.75	2.31	1.97	6.17	6.17
Yellowstone County	B1	RM 372.20	119079.1	50-yr	1973.68	963.08	956.93	1.59	1.47	43.14	30.89	512.44	1365.94	2.22	1.58	6.15	6.15
Yellowstone County	B1	RM 372.08	118886.4	50-yr	1973.68	962.61	956.2	1.83	1.76	53.76	44.77	470.73	1100.76	2.2	1.83	6.41	6.41
Yellowstone County	B1	RM 371.94	118669.8	50-yr	1973.68	961.94	957.58	2.13	2.13	59.51	58.7	446.82	782.26	2.07	2.04	4.36	4.36
Yellowstone County	B1	RM 371.83	118490.4	50-yr	1973.68	961.6	957.52	2.02	1.95	34.47	28.22	393.72	743.89	2.38	1.95	4.08	4.08
Yellowstone County	B1	RM 371.74	118350.7	50-yr	1973.68	961.41	957.48	2.07	1.9	28.04	19.03	386.04	789.51	2.32	1.58	3.93	3.93
Yellowstone County	B1	RM 371.62	118155.6	50-yr	1973.68	961.19	956.41	2.19	1.58	32.62	14.83	220.59	808.95	3.4	1.55	4.78	4.78
Yellowstone County	B1	RM 371.53	118001.4	50-yr	1973.68	960.94	955.99	2.5	1.88	37.07	19.3	235.13	688.56	2.94	1.53	4.95	4.95
Yellowstone County	B1	RM 371.43	117839.2	50-yr	1973.68	960.58	955.47	2.68	2.09	78.22	37.3	253.33	1022.67	2.57	1.22	5.11	5.11
Yellowstone County	B1	RM 371.37	117745.1	50-yr	1973.68	960.42	955.72	2.48	1.92	31.38	16.36	292.28	912.82	2.54	1.32	4.7	4.7
Yellowstone County	B1	RM 371.32	117662.6	50-yr	1973.68	960.4	956.41	2	1.49	32.48	16.83	299.65	906.71	2.81	1.46	3.99	3.99
Yellowstone County	B1	RM 371.25	117560.3	50-yr	1973.68	960.31	955.99	1.84	1.45	20.07	13.34	377.5	893.08	2.6	1.72	4.32	4.32
Yellowstone County	B1	RM 371.21	117499	50-yr	1973.68	960.29	955.72	1.69	1.42	17.23	12.7	357.71	685.29	2.74	2.03	4.57	4.57
Yellowstone County	B1	RM 371.12	117353.9	50-yr	1973.68	960.13	955.54	1.86	1.86	20.81	20.81	391.01	391.01	2.71	2.71	4.59	4.59
Yellowstone County	B1	RM 371.04	117225.1	50-yr	1973.68	959.65	954.84	2.93	2.93	50.07	50.07	233.32	532.76	2.89	2.89	4.81	4.81
Yellowstone County		RM 335.51	117205	50-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	50-yr	1973.68	959.56	954.9	2.88	2.88	49.6	49.6	229.69	415.02	2.98	2.98	4.66	4.66
Yellowstone County	B1	RM 370.94	117054.9	50-yr	1973.68	959.38	955.57	2.66	2.53	48.35	35.53	242.96	973.48	3.03	2.23	3.81	3.81
Yellowstone County	B1	RM 370.85	116910.9	50-yr	1973.68	959.05	954.47	2.93	2.6	56.37	32.08	219.19	1020.73	3.02	1.71	4.58	4.58
Yellowstone County	B1	RM 370.77	116793.6	50-yr	1973.68	958.82	953.84	3	2.42	48	24.82	224.11	1061.93	2.82	1.46	4.98	4.98
Yellowstone County	B1	RM 370.72	116711.6	50-yr	1973.68	958.57	953.13	3.36	2.41	68.07	28.3	165.01	1049.21	3.23	1.34	5.44	5.44

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	50-yr	1973.68	958.62	953.05	2.86	2.02	41.68	21.77	200.55	1117.97	2.87	1.5	5.57	5.57
Yellowstone County	B1	RM 370.63	116558.9	50-yr	1973.68	958.44	953.42	2.76	2	60.95	22.51	181.27	1148.41	3.49	1.29	5.02	5.02
Yellowstone County	B1	RM 370.56	116440.6	50-yr	1973.68	958.36	953.34	2.49	1.61	28.71	10.43	178.41	1037.91	3.88	1.41	5.02	5.02
Yellowstone County	B1	RM 370.44	116241.1	50-yr	1973.68	957.99	952.03	3.11	1.84	60.19	17.19	134.17	915.69	4.13	1.17	5.96	5.96
Yellowstone County	B1	RM 370.34	116071.6	50-yr	1973.68	957.79	949.79	3.04	1.82	59.73	15.7	118.14	898.51	4.64	1.2	8	8
Yellowstone County	B1	RM 370.24	115908.6	50-yr	1973.68	957.66	950.22	2.8	1.68	46.14	14.3	117.55	790.93	4.84	1.48	7.44	7.44
Yellowstone County	B1	RM 370.11	115705	50-yr	1973.68	957.39	952.12	2.83	1.92	52.31	19.53	161	747.79	3.69	1.37	5.27	5.27
Yellowstone County	B1	RM 370.00	115535.2	50-yr	1973.68	957.09	952.2	2.51	2.16	72.89	43.7	261.98	629.64	2.42	1.45	4.89	4.89
Yellowstone County	B1	RM 369.89	115356.1	50-yr	1973.68	956.75	953.15	2.32	2.1	27.67	21.37	416.93	634.46	1.92	1.48	3.6	3.6
Yellowstone County	B1	RM 369.77	115164.3	50-yr	1973.68	956.48	952.34	2.16	2.08	25.56	22.59	496.39	755	1.83	1.61	4.14	4.14
Yellowstone County	B1	RM 369.64	114965.6	50-yr	1973.68	956.2	951.9	2.06	1.9	30.19	23.98	503.16	811.39	1.81	1.44	4.3	4.3
Yellowstone County	B1	RM 369.54	114789.5	50-yr	1973.68	955.98	952.38	1.89	1.62	21.26	16.18	506.38	859.45	1.89	1.44	3.6	3.6
Yellowstone County	B1	RM 369.45	114650.1	50-yr	1973.68	955.86	951	1.74	1.57	20.15	16.97	466.31	693.2	2.16	1.81	4.86	4.86
Yellowstone County	B1	RM 369.32	114431.1	50-yr	1973.68	955.63	951.1	1.79	1.55	28.75	19.57	377.04	691.42	2.71	1.84	4.53	4.53
Yellowstone County	B1	RM 369.17	114210.5	50-yr	1973.68	955.29	949.85	2.21	2.13	43.47	26.95	199.28	485.11	3.09	1.91	5.44	5.44
Yellowstone County	B1	RM 369.06	114022.4	50-yr	1973.68	954.67	949.89	3.34	2.66	69.68	36.34	152.2	434.52	3.28	1.7	4.78	4.78
Yellowstone County	B1	RM 368.96	113871.2	50-yr	1973.68	954.5	949.68	2.83	2.2	50.8	26.07	169.92	529.28	3.31	1.69	4.82	4.82
Yellowstone County	B1	RM 368.88	113745.9	50-yr	1973.68	954.34	948.77	2.59	2.03	40.72	22.94	214.99	663.03	2.88	1.62	5.57	5.57
Yellowstone County	B1	RM 368.82	113641	50-yr	1973.68	954.18	948.47	2.4	1.99	45.06	31.15	296.96	627.06	2.29	1.58	5.71	5.71
Yellowstone County	B1	RM 368.72	113477.3	50-yr	1973.68	954	948.45	1.9	1.61	30.38	22.98	349.89	662.44	2.46	1.85	5.55	5.55
Yellowstone County	B1	RM 368.63	113328.9	50-yr	1973.68	953.85	947.82	1.79	1.5	27.41	18.9	315.25	726.67	2.63	1.81	6.03	6.03
Yellowstone County	B1	RM 368.54	113195.6	50-yr	1973.68	953.67	947.51	2.04	1.55	26.94	15.51	271.13	717.19	3.09	1.78	6.16	6.16
Yellowstone County	B1	RM 368.44	113035.8	50-yr	1973.68	953.45	947.4	2.16	1.75	51.87	32.55	258.3	609.85	2.94	1.85	6.05	6.05
Yellowstone County	B1	RM 368.35	112878.7	50-yr	1973.68	953.4	946.64	1.63	1.48	15.03	10.69	283.07	449.74	4.18	2.97	6.76	6.76
Yellowstone County	B1	RM 368.26	112737.6	50-yr	1973.68	953.1	946.23	2.46	2.46	87.85	87.13	227.9	229.63	3.52	3.5	6.87	6.87
Yellowstone County	B1	RM 368.18	112604.7	50-yr	1973.68	952.69	947.11	2.98	2.98	52.54	52.46	162.87	1184.79	4.06	4.06	5.58	5.58
Yellowstone County	B2	RM 368.09	112456.7	50-yr	1973.68	952.39	947.7	3.18	3.18	75.18	75.18	160.55	160.55	3.87	3.87	4.69	4.69
Yellowstone County	B2	RM 368.00	112314.4	50-yr	1973.68	952.35	947.56	2.47	2.47	33.64	32.99	198.48	478.73	4.02	3.95	4.79	4.79
Yellowstone County	B2	RM 367.86	112104.7	50-yr	1973.68	951.92	946.1	3	3	73.73	73.73	186.19	186.19	3.53	3.53	5.82	5.82
Yellowstone County	B2	RM 367.79	111989.2	50-yr	1973.68	951.64	945.04	3.08	3.08	82.31	81.88	168.87	169.45	3.8	3.79	6.6	6.6
Yellowstone County	B2	RM 367.72	111876.5	50-yr	1973.68	951.49	945.45	2.99	2.73	47.87	30.9	149.5	436.22	4.23	2.73	6.04	6.04
Yellowstone County	B2	RM 367.64	111739.2	50-yr	1973.68	951.25	945.68	3.17	2.72	67.64	33.65	140.74	398.3	4.1	2.03	5.57	5.57
Yellowstone County	B2	RM 367.50	111519.9	50-yr	1973.68	950.82	945.21	3.32	2.64	75.01	30.2	133.21	453.26	4.14	1.65	5.61	5.61
Yellowstone County	B2	RM 367.40	111357.1	50-yr	1973.68	950.59	944.36	3.29	2.48	60.54	22.4	113.47	475.84	4.57	1.67	6.23	6.23
Yellowstone County	B2	RM 367.31	111214.8	50-yr	1973.68	950.42	945.36	3.12	2.36	48.55	21.59	144.65	478.92	3.94	1.75	5.06	5.06
Yellowstone County	B2	RM 367.19	110992.7	50-yr	1973.68	950.27	945.91	2.48	2.04	34.31	20.63	245.08	535.62	3.02	1.81	4.36	4.36
Yellowstone County	B2	RM 367.11	110813.5	50-yr	1973.68	950.1	945.17	2.3	1.86	30.9	20.56	295.2	592.3	2.7	1.8	4.93	4.93
Yellowstone County	B2	RM 367.03	110669.4	50-yr	1973.68	950.04	945.89	1.79	1.58	17.1	15.03	418.55	565.55	2.51	2.21	4.15	4.15
Yellowstone County	B2	RM 366.95	110543	50-yr	1973.68	949.99	945.34	1.31	1.24	20.28	19.29	560.16	647.11	2.58	2.46	4.65	4.65
Yellowstone County	B2	RM 366.84	110376	50-yr	1973.68	949.89	944.61	1.15	1.11	15.95	13.2	603.9	784.44	2.75	2.27	5.28	5.28
Yellowstone County	B2	RM 366.78	110300.8	50-yr	1973.68	949.83	943.84	1.23	1.11	18.46	14.11	562.74	943.21	2.78	2.12	5.99	5.99
Yellowstone County	B2	RM 366.73	110074.8	50-yr	1973.68	949.59	943.42	1.58	1.57	27.86	26.2	436.31	766.49	2.86	2.69	6.17	6.17
Yellowstone County	B2	RM 366.68	109931.6	50-yr	1973.68	949.35	942.77	1.96	1.92	41.01	35.36	312.18	370.5	3.23	2.78	6.58	6.58
Yellowstone County	B2	RM 366.53	109747.6	50-yr	1973.68	948.89	940.86	2.88	2.88	40.02	40.02	165.46	165.46	4.14	4.14	8.03	8.03
Yellowstone County	B2	RM 366.38	109510.8	50-yr	1973.68	948.39	941.55	3.43	3.43	79.88	79.75	115.77	115.91	4.97	4.96	6.84	6.84
Yellowstone County	B2	RM 366.27	109345.5	50-yr	1973.68	948.42	942.72	2.23	2.23	39.05	38.94	226.22	484.43	3.92	3.91	5.7	5.7
Yellowstone County	B2	RM 366.15	109158.9	50-yr	1973.68	948.16	941.59	2.21	2.21	62.09	62.09	292.93	410.75	3.06	3.06	6.57	6.57
Yellowstone County	B2	RM 366.04	108972.6	50-yr	1973.68	947.88	941.41	2.37	2.36	23.21	22.15	313.21	329.04	2.66	2.54	6.47	6.47
Yellowstone County	B2	RM 365.94	108818.8	50-yr	1973.68	947.79	940.93	2.1	2.1	19.02	19.02	362.27	362.27	2.6	2.6	6.86	6.86
Yellowstone County	B2	RM 365.83	108647.5	50-yr	1973.68	947.59	939.93	2.06	2.01	69.04	64.44	331.75	369.67	2.84	2.65	7.66	7.66
Yellowstone County	B2	RM 365.75	108521.3	50-yr	1973.68	947.32	941.33	2.06	2.01	59.48	50.45	264.5	374.26	3.1	2.62	5.99	5.99
Yellowstone County	B2	RM 365.71	108446.5	50-yr	1973.68	947.14	941.83	2.27	2.02	57.28	40.37	234.5	394.7	3.53	2.48	5.31	5.31
Yellowstone County	B2	RM 365.64	108343.5	50-yr	1973.68	946.98	942.19	2.1	1.85	49.95	36.69	306.44	493.07	2.94	2.16	4.79	4.79
Yellowstone County	B2	RM 365.57	108220.5	50-yr	1973.68	946.73	942.08	2.3	2.02	50.8	34.05	252.77	450.11	3.24	2.17	4.65	4.65
Yellowstone County	B2	RM 365.51	108118.9	50-yr	1973.68	946.57	941.87	2.23	1.95	54.93	37.32	265.35	470.93	3.17	2.15	4.7	4.7
Yellowstone County	B2	RM 365.46	108042.9	50-yr	1973.68	946.53	941.73	1.87	1.71	29.2	21.24	317.69	491.04	3.23	2.35	4.8	4.8
Yellowstone County	B2	RM 365.41	107956.5	50-yr	1973.68	946.47	941.46	1.77	1.67	25.91	20.67	326.34	440.47	3.37	2.68	5	5
Yellowstone County	B2	RM 365.37	107905.7	50-yr	1973.68	946.42	940.74	1.81	1.78	18.4	15.36	309.36	378.86	3.51	2.93	5.68	5.68
Yellowstone County	B2	RM 365.31	107792.4	50-yr	1973.68	946.31	939.27	2.05	1.96	22.3	17.64	257.08	346.22	3.68	2.91	7.04	7.04
Yellowstone County	B2	RM 365.27	107727.9	50-yr	1973.68	946.23	939.34	2.18	2.07	27.95	22.05	251.44	341.28	3.54	2.79	6.89	6.89
Yellowstone County	B2	RM 365.23	107674.2	50-yr	1973.68	946.15	939.52	2.35	2.24	26.63	21.49	230.94	390.89	3.58	2.89	6.63	6.63

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	50-yr	1973.68	946.12	939.93	2.18	2.12	30.7	26.68	240.6	286.58	3.74	3.24	6.19	6.19
Yellowstone County	B2	RM 365.15	107534.7	50-yr	1973.68	946.06	939.68	2.2	2.11	25.52	21.77	214.18	267.94	4.11	3.5	6.38	6.38
Yellowstone County	B2	RM 365.10	107466	50-yr	1973.68	945.96	938.61	2.4	2.28	30.08	18.6	186.92	322.89	4.35	2.68	7.35	7.35
Yellowstone County	B2	RM 365.06	107396.2	50-yr	1973.68	945.92	939.07	2.38	2.18	33.15	19.48	170.56	327.01	4.73	2.77	6.85	6.85
Yellowstone County	B2	RM 365.01	107325.8	50-yr	1973.68	945.89	939.22	2.18	2.04	45.33	29.61	175.43	295.39	5.04	3.28	6.67	6.67
Yellowstone County	B2	RM 364.99	107287.5	50-yr	1973.68	945.84	939.27	2.26	2.11	51.5	36.65	170.9	266.61	4.93	3.51	6.57	6.57
Yellowstone County	B2	RM 364.90	107128.3	50-yr	1973.68	945.56	937.97	2.68	2.47	32.96	26.76	149.64	202.61	4.85	3.94	7.59	7.59
Yellowstone County		RM 331.55	107100	50-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	50-yr	1973.68	945.44	938.58	2.66	2.49	32.36	26.54	153.19	208.96	4.81	3.96	6.86	6.86
Yellowstone County	B2	RM 364.81	106996.1	50-yr	1973.68	945.47	938.93	2.12	2.12	20.65	20.47	257.6	259.74	3.62	3.59	6.54	6.54
Yellowstone County	B2	RM 364.74	106893.3	50-yr	1973.68	945.3	938.94	2.49	2.38	40.54	37.18	164.71	263.43	4.75	4.39	6.36	6.36
Yellowstone County	B2	RM 364.64	106739.2	50-yr	1973.68	944.94	939.09	3.1	3	43.68	39.52	136.52	685.39	4.95	4.5	5.85	5.85
Yellowstone County		RM 331.32	106722	50-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	50-yr	1973.68	944.76	939.16	3.14	3.06	52.46	49.15	140.89	168.35	4.73	4.46	5.6	5.6
Yellowstone County	B2	RM 364.61	106686.8	50-yr	1973.68	944.79	939.21	2.83	2.83	37.77	37.47	158.49	513.45	4.4	4.36	5.58	5.58
Yellowstone County	B2	RM 364.60	106666.6	50-yr	1973.68	944.69	939.26	3.04	3.04	43.76	43.76	150.85	150.85	4.31	4.31	5.43	5.43
Yellowstone County		RM 331.14	106644	50-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	50-yr	1973.68	944.6	939.21	3.02	3.02	42.66	42.66	153.06	153.06	4.47	4.47	5.39	5.39
Yellowstone County	B2	RM 364.53	106558.4	50-yr	1973.68	944.56	939.11	2.81	2.8	36.79	31.29	165.98	196.2	4.23	3.59	5.45	5.45
Yellowstone County	B2	RM 364.49	106490.3	50-yr	1973.68	944.5	939.24	2.81	2.76	42.24	35.12	162.03	199.13	4.33	3.59	5.26	5.26
Yellowstone County	B2	RM 364.43	106394	50-yr	1973.68	944.4	939.13	2.8	2.71	42.69	31.74	160.06	223.82	4.39	3.26	5.27	5.27
Yellowstone County	B2	RM 364.37	106296.4	50-yr	1973.68	944.32	938.98	2.78	2.52	36.47	24.78	149.36	247.63	4.68	3.16	5.34	5.34
Yellowstone County	B2	RM 364.32	106215.1	50-yr	1973.68	944.25	938.52	2.75	2.47	58.88	40.73	154.13	254.97	4.54	3.13	5.73	5.73
Yellowstone County	B2	RM 364.29	106172.9	50-yr	1973.68	944.29	938.13	2.15	1.95	59.74	42.74	191	599.27	4.65	3.31	6.16	6.16
Yellowstone County	B2	RM 364.26	106126.6	50-yr	1973.68	944.04	937.7	2.88	2.49	67.89	48.85	146.24	248.16	4.44	3.19	6.34	6.34
Yellowstone County	B2	RM 364.22	106055.2	50-yr	1973.68	943.8	938.15	3.16	3.02	83.46	49.27	137.27	244.92	4.53	2.67	5.65	5.65
Yellowstone County	B2	RM 364.14	105927.3	50-yr	1973.68	943.39	938.12	3.58	3.09	98.68	62.65	125.05	237.36	4.26	2.69	5.27	5.27
Yellowstone County	B2	RM 364.06	105809.9	50-yr	1973.68	943.27	938.22	3.06	2.59	66.58	37.1	155.47	342	4.01	2.23	5.05	5.05
Yellowstone County	B2	RM 363.96	105648.3	50-yr	1973.68	943.16	938.28	2.38	2.26	41.09	36.18	248.12	382.44	3.29	2.89	4.88	4.88
Yellowstone County	B2	RM 363.85	105472.4	50-yr	1973.68	942.84	936.25	2.91	2.47	40.9	25.48	150.34	316.74	4.08	2.52	6.59	6.59
Yellowstone County	B2	RM 363.76	105316.8	50-yr	1973.68	942.7	937.03	2.75	2.4	51.91	29.99	147.64	337.87	4.21	2.43	5.67	5.67
Yellowstone County	B2	RM 363.63	105118.1	50-yr	1973.68	942.44	937.93	2.27	2.27	52.61	52.61	339.03	339.03	2.56	2.56	4.51	4.51
Yellowstone County	B2	RM 363.52	104943.9	50-yr	1973.68	942.1	937.54	2.12	2.01	50.15	41.75	372.43	481.29	2.45	2.04	4.56	4.56
Yellowstone County	B2	RM 363.46	104841.5	50-yr	1973.68	941.96	937.16	1.96	1.73	36.32	25.17	330.96	623.65	2.93	2.03	4.8	4.8
Yellowstone County	B2	RM 363.33	104622.9	50-yr	1973.68	941.65	936.36	1.97	1.54	47.98	28.74	300.88	848.62	2.77	1.65	5.29	5.29
Yellowstone County	B2	RM 363.20	104414.5	50-yr	1973.68	941.29	936.48	2.15	1.5	35.79	17.66	282.91	1043.08	2.81	1.38	4.81	4.81
Yellowstone County	B2	RM 363.10	104256.4	50-yr	1973.68	941.02	936.25	2.33	1.68	42.36	21.54	275.6	867.53	2.67	1.36	4.77	4.77
Yellowstone County	B2	RM 363.03	104144.8	50-yr	1973.68	940.86	936.22	2.27	1.58	34.32	16.43	285.05	1004.48	2.71	1.29	4.64	4.64
Yellowstone County	B2	RM 362.86	103869.6	50-yr	1973.68	940.73	934.32	1.6	1.2	15	9.25	405.06	983.08	2.71	1.67	6.41	6.41
Yellowstone County	B2	RM 362.74	103671.4	50-yr	1973.68	940.51	934.52	2.02	1.52	24.55	15.26	371.13	890.36	2.36	1.46	5.99	5.99
Yellowstone County	B2	RM 362.63	103493.2	50-yr	1973.68	940.28	934.5	1.94	1.51	41.55	27.35	388.17	870.6	2.29	1.5	5.78	5.78
Yellowstone County	B2	RM 362.52	103330.7	50-yr	1973.68	940	934.5	1.79	1.48	38.96	26.66	435.44	851.32	2.3	1.57	5.5	5.5
Yellowstone County	B2	RM 362.43	103185.5	50-yr	1973.68	939.85	934.1	1.75	1.58	16.65	14.41	438.52	779.64	2.48	2.15	5.75	5.75
Yellowstone County	B2	RM 362.36	103070.8	50-yr	1973.68	939.75	932.98	1.87	1.8	16.96	15.89	404.84	506.98	2.58	2.42	6.77	6.77
Yellowstone County	B2	RM 362.27	102929.3	50-yr	1973.68	939.51	932.93	2.43	2.43	27.92	27.92	197.1	197.1	4.13	4.13	6.58	6.58
Yellowstone County	B2	RM 362.20	102813.3	50-yr	1973.68	938.82	933.37	4	4	81.73	81.73	112	112	4.4	4.4	5.45	5.45
Yellowstone County	B2	RM 362.13	102693.1	50-yr	1973.68	938.59	933.47	3.96	3.96	76.71	76.71	125.78	167.81	3.96	3.96	5.12	5.12
Yellowstone County	B3	RM 362.05	102570.9	50-yr	1973.68	938.55	933.85	3.26	3.22	54.27	47.86	182.38	210.25	3.31	2.91	4.7	4.7
Yellowstone County	B3	RM 362.00	102488.8	50-yr	1973.68	938.56	934.11	2.63	2.63	41.02	40.48	244.3	316.27	3.07	3.03	4.45	4.45
Yellowstone County	B3	RM 361.93	102368.8	50-yr	1973.68	938.47	934.31	2.29	2.29	29.37	29.24	367.9	369.95	2.67	2.66	4.16	4.16
Yellowstone County	B3	RM 361.86	102261.1	50-yr	1973.68	938.25	934.36	2.44	2.42	53.71	52.26	364.24	441.97	2.21	2.15	3.89	3.89
Yellowstone County	B3	RM 361.78	102138.9	50-yr	1973.68	938.16	933.72	1.95	1.92	22.02	20.76	407.75	505.8	2.47	2.33	4.44	4.44
Yellowstone County	B3	RM 361.68	101970.2	50-yr	1973.68	938.04	933.64	1.76	1.71	20.34	19.36	426.43	562.81	2.62	2.49	4.4	4.4
Yellowstone County	B3	RM 361.65	101918.4	50-yr	1973.68	938.02	933.71	1.63	1.6	18.4	17.2	403.7	627.19	2.99	2.8	4.31	4.31
Yellowstone County	B3	RM 361.61	101855.6	50-yr	1973.68	937.91	932.7	1.96	1.94	22.91	22.22	335.34	634.22	3	2.91	5.21	5.21
Yellowstone County	B3	RM 361.56	101767.4	50-yr	1973.68	937.8	930.29	2.13	2.1	24.35	23.13	267.33	625.68	3.47	3.3	7.51	7.51
Yellowstone County	B3	RM 361.48	101644.6	50-yr	1973.68	937.55	929.97	2.64	2.38	50.9	31.66	181.61	719.1	4.04	2.5	7.58	7.58
Yellowstone County	B3	RM 361.42	101546.2	50-yr	1973.68	937.33	932.36	2.98	2.56	42.63	26.62	186.79	1316.03	3.45	2.16	4.97	4.97
Yellowstone County	B3	RM 361.37	101468.9	50-yr	1973.68	937.3	932.21	2.74	2.23	37.09	21.38	171.32	1506.51	3.98	2.29	5.09	5.09
Yellowstone County	B3	RM 361.33	101409.4	50-yr	1973.68	937.16	932.02	3.01	2.35	46.67	24.39	163.06	1427.48	3.73	1.95	5.14	5.14
Yellowstone County	B3	RM 361.29	101346	50-yr	1973.68	936.92	930.51	3.45	2.74	61.05	28.23	140.23	904.16	3.8	1.75	6.41	6.41

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	50-yr	1973.68	936.26	928.42	4.61	3.95	107.88	54.05	116.67	849.59	3.54	1.76	7.84	7.84
Yellowstone County	B3	RM 361.21	101251.*	50-yr	1973.68	936.49	927.55	3.45	2.82	113.87	45.52	119.06	1385.66	4.46	1.77	8.95	8.95
Yellowstone County		RM 361.21	101217.5	50-yr	1973.68	936.53	926.68	3.03	2.37	45.15	17.86	114.36	1421.67	5.34	2.09	9.85	9.85
Yellowstone County	B3	RM 361.18	101167.2	50-yr	1973.68	936.52	928.03	2.85	2.35	48.59	15.78	136.96	1526.2	4.66	1.5	8.49	8.49
Yellowstone County	B3	RM 361.16	101134.2	50-yr	1973.68	936.57	928.92	2.39	2.08	36.74	27.9	209.1	1550.37	3.69	2.8	7.65	7.65
Yellowstone County	B3	RM 361.09	101028.7	50-yr	1973.68	936.46	931.28	2.27	2.25	28.9	25.89	360.02	1638.41	2.41	2.16	5.18	5.18
Yellowstone County	B3	RM 361.01	100891.3	50-yr	1973.68	936.26	931.55	2.31	2.31	32.21	31.82	366.98	1680.81	2.32	2.3	4.71	4.71
Yellowstone County	B3	RM 360.92	100756	50-yr	1973.68	936.11	931.05	1.9	1.89	39.77	37.87	459.67	1831.92	2.26	2.15	5.06	5.06
Yellowstone County	B3	RM 360.81	100570.1	50-yr	1973.68	935.77	929.52	1.88	1.86	39.88	37.57	479.5	1779.47	2.18	2.06	6.25	6.25
Yellowstone County	B3	RM 360.69	100383.5	50-yr	1973.68	935.55	930.6	1.81	1.63	27.12	20.74	340.51	2103.45	3.01	2.3	5.66	5.66
Yellowstone County	B3	RM 360.59	100227.2	50-yr	1973.68	935.33	930.53	2.21	1.71	28.04	17.11	269.12	2165.72	2.93	1.79	5.12	5.12
Yellowstone County	B3	RM 360.50	100081	50-yr	1973.68	935.04	930.55	2.62	2.22	43.57	28.15	214.5	2152.57	3.33	2.14	4.49	4.49
Yellowstone County	B3	RM 360.42	99970.7	50-yr	1973.68	934.82	929.97	2.86	2.35	47.88	30.37	194.88	1995.19	3.32	2.1	4.85	4.85
Yellowstone County	B3	RM 360.36	99862.66	50-yr	1973.68	934.74	929.68	2.53	2.14	34.47	25.02	242.5	2038.07	3.06	2.22	5.06	5.06
Yellowstone County	B3	RM 360.27	99717.18	50-yr	1973.68	934.44	929.52	3.02	2.38	49.4	32.24	149.73	1682.22	3.55	2.32	4.92	4.92
Yellowstone County	B3	RM 360.18	99578.06	50-yr	1973.68	933.97	929.32	3.56	2.88	80.09	38.87	135.32	1495.94	3.94	1.89	4.65	4.65
Yellowstone County	B3	RM 360.11	99458.59	50-yr	1973.68	934.07	929.38	2.52	1.93	33.03	21.36	148.51	1528.83	3.59	2.33	4.69	4.69
Yellowstone County	B3	RM 360.03	99328	50-yr	1993.51	933.98	929.58	2.26	1.75	37.02	22.51	168.97	1746.15	3.61	2.19	4.4	4.4
Yellowstone County	B3	RM 359.96	99226.54	50-yr	1993.51	933.84	929.2	2.45	1.72	36.46	19.15	163.81	1550.85	3.68	1.93	4.64	4.64
Yellowstone County	B3	RM 359.88	99098.18	50-yr	1993.51	933.64	927.78	2.76	1.92	40.67	19.57	144	1452.89	4	1.92	5.86	5.86
Yellowstone County	B3	RM 359.78	98940.52	50-yr	1993.51	933.5	928.1	2.67	1.82	48.81	22.45	150.37	1463.78	4.07	1.86	5.4	5.4
Yellowstone County	B3	RM 359.70	98813.18	50-yr	1993.51	932.66	928.32	4.26	3.31	123.98	41.69	124.11	1245.79	3.43	1.14	4.34	4.34
Yellowstone County	B3	RM 359.61	98663.44	50-yr	1993.51	932.71	928.8	2.29	1.88	35.52	18.87	311.48	1377.18	2.61	1.38	3.91	3.91
Yellowstone County	B3	RM 359.50	98492.66	50-yr	1993.51	932.47	928.22	2.35	1.92	31.92	16.39	321.98	1494.76	2.42	1.24	4.25	4.25
Yellowstone County	B3	RM 359.38	98291.15	50-yr	1993.51	932.16	927.09	2.17	1.91	52.41	31.89	380.94	1425.11	2.04	1.24	5.06	5.06
Yellowstone County	B3	RM 359.26	98107.42	50-yr	1993.51	931.77	927.71	2.21	1.8	31.91	17.92	415.16	1347.71	1.95	1.09	4.06	4.06
Yellowstone County	B3	RM 359.18	97966.53	50-yr	1993.51	931.62	927.28	2.1	1.51	26.24	12.21	299.78	1286.35	2.54	1.18	4.34	4.34
Yellowstone County	B3	RM 359.10	97841.82	50-yr	1993.51	931.47	926.69	2.06	1.6	26.09	16.61	374.84	1190.73	2.21	1.41	4.78	4.78
Yellowstone County	B3	RM 359.01	97692.75	50-yr	1993.51	931.3	925.91	1.98	1.41	34.53	22.88	329.94	1110.05	2.37	1.57	5.39	5.39
Yellowstone County	B3	RM 358.90	97524.59	50-yr	1993.51	930.8	926.77	2.82	1.88	54.86	25.6	227.3	863.21	2.63	1.23	4.03	4.03
Yellowstone County	B3	RM 358.81	97374.99	50-yr	1993.51	930.34	926.37	3.17	2.2	52.46	21.7	225.13	849.31	2.58	1.07	3.97	3.97
Yellowstone County	B3	RM 358.74	97267.71	50-yr	1993.51	930.17	925.53	3.07	1.76	74.03	31.01	166.88	1421.11	2.8	1.17	4.64	4.64
Yellowstone County	B3	RM 358.67	97155.8	50-yr	1993.51	930.1	925.59	2.2	1.59	27.93	15	277.83	1422.08	2.26	1.21	4.51	4.51
Yellowstone County	B3	RM 358.61	97062.24	50-yr	1993.51	930.02	925.74	1.73	1.41	24.37	13.7	389.39	1547.49	2.16	1.22	4.28	4.28
Yellowstone County	B3	RM 358.56	96985.92	50-yr	1993.51	929.96	926.2	1.57	1.31	18.4	11.06	457.52	1509.81	2.05	1.23	5.37	5.37
Yellowstone County	B3	RM 358.50	96888.4	50-yr	1993.51	929.89	925.64	1.44	1.2	13.76	9.76	550.02	1444.02	1.89	1.34	4.25	4.25
Yellowstone County	B3	RM 358.43	96788.43	50-yr	1993.51	929.85	925.27	1.07	0.96	11.25	9.05	650.58	1405.77	1.95	1.57	4.58	4.58
Yellowstone County	B3	RM 358.30	96638.82	50-yr	1993.51	929.8	924.7	0.99	0.85	8.07	6.08	686.1	1273.06	2.52	1.89	5.1	5.1
Yellowstone County	B3	RM 358.24	96561.93	50-yr	1993.51	929.77	923.57	1.06	0.9	8.54	6.86	644.55	1227.1	2.37	1.9	6.2	6.2
Yellowstone County	B3	RM 358.20	96500.79	50-yr	1993.51	929.7	922.99	1.35	1.24	12.85	9.51	617.89	981.03	2.22	1.64	6.71	6.71
Yellowstone County	B3	RM 358.14	96404.93	50-yr	1993.51	929.64	922.57	1.41	1.2	12.23	7.79	543.4	1261.04	2.39	1.52	7.07	7.07
Yellowstone County	B3	RM 358.12	96368.05	50-yr	1993.51	929.62	922.78	1.49	1.11	13.74	7.55	349.09	1235.36	2.98	1.63	6.84	6.84
Yellowstone County	B3	RM 358.04	96244.75	50-yr	1993.51	929.48	923.22	2.13	1.35	37.32	12.81	162.23	1135.79	3.8	1.3	6.26	6.26
Yellowstone County	B3	RM 358.00	96168.44	50-yr	1993.51	929.35	923.39	2.6	1.36	44.57	13.57	101.88	1198.05	4.08	1.22	5.96	5.96
Yellowstone County	B3	RM 357.93	96065.49	50-yr	1993.51	929.18	923.1	2.89	1.51	38.3	11.59	106.83	1140.28	3.85	1.16	6.08	6.08
Yellowstone County	B3	RM 357.88	95975.44	50-yr	1993.51	929.22	923.91	1.97	1.22	23.62	9.13	153.56	1157.82	3.67	1.41	5.31	5.31
Yellowstone County	B3	RM 357.82	95884.99	50-yr	1993.51	929.13	924.01	1.98	1.45	23.63	9.29	193.1	1054.48	3.66	1.44	5.12	5.12
Yellowstone County	B3	RM 357.78	95821.69	50-yr	1993.51	929.09	924.08	1.77	1.56	24.46	11.68	257.61	854.64	3.15	1.5	5.01	5.01
Yellowstone County	B3	RM 357.69	95683.91	50-yr	1993.51	928.91	923.81	2.05	1.73	21.94	10.66	304.42	789.4	3.02	1.46	5.1	5.1
Yellowstone County	B4	RM 357.62	95571.15	50-yr	1993.51	928.68	921.84	2.53	2.17	39.92	16.48	253.43	753.79	2.97	1.22	6.84	6.84
Yellowstone County	B4	RM 357.56	95469.4	50-yr	1993.51	928.62	918.46	2.21	1.9	31.76	13.28	225.69	890.23	3.82	1.59	10.16	10.16
Yellowstone County	B4	RM 357.48	95351.48	50-yr	1993.51	928.26	922.69	2.98	2.65	49.73	25.21	198.91	820.23	3.29	1.66	5.57	5.57
Yellowstone County	B4	RM 357.44	95275.91	50-yr	1993.51	928.1	922.22	3.07	2.83	55.42	37.82	196.39	317.39	3.26	2.22	5.88	5.88
Yellowstone County	B4	RM 357.34	95127.12	50-yr	1993.51	927.86	923.1	3.05	2.75	52.56	35.38	182.26	306.81	3.52	2.36	4.76	4.76
Yellowstone County	B4	RM 357.23	94939.75	50-yr	1993.51	927.6	920.81	3.04	2.57	55.79	30.05	143.2	336.46	4.3	2.3	6.79	6.79
Yellowstone County	B4	RM 357.13	94789.23	50-yr	1993.51	927.44	921.26	3.06	2.42	47.4	21.9	139	564.82	3.83	1.76	6.18	6.18
Yellowstone County	B4	RM 357.01	94595.53	50-yr	1993.51	927.32	921.72	2.5	1.83	30.48	16.39	185.55	527.29	3.85	2.07	5.6	5.6
Yellowstone County	B4	RM 356.90	94412.13	50-yr	1993.51	927.14	921.02	2.49	1.91	32.25	18.52	234.48	581.69	3.13	1.79	6.12	6.12
Yellowstone County	B4	RM 356.81	94272.48	50-yr	1993.51	927	919.95	2.46	1.87	34.43	22.05	233.74	558.62	2.99	1.91	7.05	7.05
Yellowstone County	B4	RM 356.73	94148.77	50-yr	1993.51	926.91	921.15	2.14	1.67	26.34	14.31	299.9	907.62	2.62	1.42	5.76	5.76
Yellowstone County	B4	RM 356.66	94030.68	50-yr	1993.51	926.81	921.75	2.06	1.54	23.01	11.28	300.18	982.96	2.79	1.37	5.06	5.06

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	50-yr	1993.51	926.73	921.88	1.93	1.36	24.76	10.46	252.57	1056.2	3.33	1.4	4.85	4.85
Yellowstone County	B4	RM 356.50	93782.14	50-yr	1993.51	926.58	921.75	2.31	1.47	35.85	12.3	153.48	1031.96	3.91	1.33	4.83	4.83
Yellowstone County	B4	RM 356.44	93670.16	50-yr	1993.51	926.4	921.33	2.66	1.66	34.65	11.28	135.34	984.9	3.84	1.24	5.07	5.07
Yellowstone County	B4	RM 356.35	93525.27	50-yr	1993.51	926.22	919.71	2.79	1.75	54.03	16.31	115.63	911.28	4.27	1.27	6.51	6.51
Yellowstone County	B4	RM 356.26	93386.36	50-yr	1993.51	926.07	919.77	2.76	1.71	32.8	11.23	125.06	861.4	4.42	1.51	6.3	6.3
Yellowstone County	B4	RM 356.18	93264.31	50-yr	1993.51	926.02	919.95	2.47	1.69	36.98	14.18	128.53	695.59	4.46	1.69	6.07	6.07
Yellowstone County	B4	RM 356.11	93150.71	50-yr	1993.51	925.95	920.24	2.12	1.51	37.24	15.96	179.63	750.44	4.15	1.77	5.71	5.71
Yellowstone County	B4	RM 356.04	93034.25	50-yr	1993.51	925.74	920.36	2.42	1.77	53.15	21.78	173.49	729.02	3.79	1.54	5.38	5.38
Yellowstone County	B4	RM 355.97	92927.46	50-yr	1993.51	925.54	920.09	2.68	1.86	51.17	20.45	153.88	729.29	3.7	1.47	5.45	5.45
Yellowstone County	B4	RM 355.91	92825.82	50-yr	1993.51	925.5	919.82	2.31	1.47	25.64	11.53	153.74	902.54	3.95	1.77	5.68	5.68
Yellowstone County	B4	RM 355.82	92688.73	50-yr	1993.51	925.42	919.51	2.1	1.37	25.87	12.64	155.48	890.8	4.08	1.98	5.91	5.91
Yellowstone County	B4	RM 355.69	92483.67	50-yr	1993.51	924.4	919.96	4.48	3.14	108.33	59.02	108.06	719.34	3.22	1.75	4.44	4.44
Yellowstone County	B4	RM 355.68	92480	50-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	50-yr	1993.51	924.4	919.92	3.73	2.66	70.38	39.27	123	747.61	3.56	1.98	4.48	4.48
Yellowstone County	B4	RM 355.66	92419.94	50-yr	1993.51	924.5	919.8	2.94	2.33	42.34	23.64	139.95	843.3	3.64	2.04	4.7	4.7
Yellowstone County	B4	RM 355.60	92333.48	50-yr	1993.51	924.4	919.42	2.87	2.24	43.1	21.43	148.04	859.69	3.63	1.81	4.98	4.98
Yellowstone County	B4	RM 355.49	92159.95	50-yr	1993.51	924.29	918.52	2.25	1.82	48.65	24.01	141.27	972.84	3.67	1.81	5.76	5.76
Yellowstone County	B4	RM 355.43	92061.2	50-yr	1993.51	924.16	918.67	2.23	1.77	46.26	21.84	134.53	950.88	3.99	1.88	5.49	5.49
Yellowstone County	B4	RM 355.41	92020.68	50-yr	1993.51	924.16	919.02	1.78	1.56	39.27	21.72	159.91	1084.28	3.62	2	5.14	5.14
Yellowstone County	B4	RM 355.38	91976.12	50-yr	1993.51	924.09	919.25	2.1	1.56	33.9	16.74	125.74	1197.56	4.07	2	4.84	4.84
Yellowstone County	B4	RM 355.35	91933.98	50-yr	1993.51	924.06	919.21	2.13	1.46	24.47	11.85	109.82	1166.07	4.35	2.09	4.85	4.85
Yellowstone County	B4	RM 355.32	91885.87	50-yr	1993.51	924.04	919.16	2.11	1.44	24.02	11.7	107.08	1135.07	4.3	2.08	4.88	4.88
Yellowstone County	B4	RM 355.29	91828.99	50-yr	1993.51	923.99	918.93	2.18	1.46	24.96	12.24	104.17	1115.82	4.32	2.09	5.46	5.46
Yellowstone County	B4	RM 355.23	91732.97	50-yr	1993.51	923.9	918.68	2.27	1.68	30.77	15.65	101.56	1158.65	4.48	2.26	5.46	5.46
Yellowstone County	B4	RM 355.14	91596.1	50-yr	1993.51	923.78	918.52	2.29	1.84	27.26	18.43	118.49	1274.02	4.39	2.95	5.26	5.26
Yellowstone County	B4	RM 354.94	91268.08	50-yr	1993.51	923.35	917.25	2.54	2.11	64.56	47.61	167.19	1427.47	4.27	3.15	6.1	6.1
Yellowstone County	B4	RM 354.86	91153.59	50-yr	1993.51	923.03	917.03	3.04	2.37	73.59	41.79	125.07	1559.12	4.81	2.73	6	6
Yellowstone County	B4	RM 354.80	91056.05	50-yr	1993.51	922.8	915.66	3.26	2.37	82.42	40.59	117.98	1655.26	4.64	2.27	7.14	7.14
Yellowstone County	B4	RM 354.70	90880.27	50-yr	1993.51	922.51	915.38	3	2.63	79.66	54.13	153.63	294.94	3.77	2.57	7.13	7.13
Yellowstone County	B4	RM 354.61	90744.35	50-yr	1993.51	922.38	917.13	2.58	2.39	32.38	28.72	215.25	1741.7	3.24	2.89	5.25	5.25
Yellowstone County	B4	RM 354.53	90609.24	50-yr	1993.51	922.34	916.52	2.09	2	25.09	21.11	238.32	1330.4	3.77	3.18	5.82	5.82
Yellowstone County	B4	RM 354.45	90486.63	50-yr	1993.51	922.14	915.87	2.49	2.31	41.59	30.83	205.43	1342.06	3.56	2.63	6.27	6.27
Yellowstone County	B4	RM 354.39	90385.43	50-yr	1993.51	921.9	915.24	2.93	2.58	51.69	31.96	165.51	1511.07	3.68	2.26	6.66	6.66
Yellowstone County	B4	RM 354.33	90291.31	50-yr	1993.51	921.9	915.37	2.48	2.09	30.05	19.5	150.94	1474.57	3.94	2.55	6.53	6.53
Yellowstone County	B4	RM 354.23	90133.96	50-yr	1993.51	921.43	915.46	3.39	2.6	78.36	36.04	118.76	1727.25	4.3	1.97	5.97	5.97
Yellowstone County	B4	RM 354.13	89983.48	50-yr	1993.51	921.15	914.94	3.24	2.57	84.48	37.09	134.11	1776.53	4.32	1.9	6.21	6.21
Yellowstone County	B4	RM 354.00	89778.46	50-yr	1993.51	920.95	916.2	2.72	1.97	55.3	26.78	158.7	1815.14	3.7	1.79	4.75	4.75
Yellowstone County	B5	RM 353.90	89604.28	50-yr	1993.51	920.62	917.06	2.76	2.2	50.78	25.08	232.57	1832.54	2.92	1.44	3.72	3.72
Yellowstone County	B5	RM 353.80	89446.75	50-yr	2106.77	920.37	916.36	2.5	2.12	55.33	33.76	301.86	1864.53	2.63	1.6	4.01	4.01
Yellowstone County	B5	RM 353.70	89288.94	50-yr	2106.77	920.13	915.92	2.04	1.73	45.69	30.1	391.82	1862.9	2.42	1.59	4.21	4.21
Yellowstone County	B5	RM 353.65	89204.58	50-yr	2106.77	919.95	915.49	1.97	1.65	48.99	31.5	403.73	1758.62	2.36	1.51	4.46	4.46
Yellowstone County	B5	RM 353.56	89077.56	50-yr	2106.77	919.73	914.2	1.94	1.53	45.17	25.48	364.2	1576.24	2.56	1.44	5.53	5.53
Yellowstone County	B5	RM 353.50	88982.39	50-yr	2106.77	919.63	914.58	1.74	1.29	31.86	15.55	307.55	1445.89	3.21	1.56	5.05	5.05
Yellowstone County	B5	RM 353.41	88846.15	50-yr	2106.77	919.41	914.41	2.04	1.41	39.64	16.28	230.95	1357.85	3.13	1.28	5	5
Yellowstone County	B5	RM 353.32	88709.14	50-yr	2106.77	919.23	913.6	2.23	1.34	36.24	14.39	194.16	1198.11	3.32	1.31	5.63	5.63
Yellowstone County	B5	RM 353.25	88587.13	50-yr	2106.77	919.01	912.76	2.63	1.49	43.53	16.07	160.68	1135.9	3.39	1.25	6.25	6.25
Yellowstone County	B5	RM 353.15	88438.48	50-yr	2106.77	918.85	912.71	2.51	1.55	37.91	17.51	215.51	1137.95	2.6	1.2	6.14	6.14
Yellowstone County	B5	RM 353.08	88321.13	50-yr	2106.77	918.79	912.99	2.12	1.35	26.09	11.75	197.65	1138.14	3.04	1.37	5.8	5.8
Yellowstone County	B5	RM 353.01	88210.34	50-yr	2106.77	918.73	913.13	1.75	1.27	21.02	11.76	249.61	1006.38	2.95	1.65	5.6	5.6
Yellowstone County	B5	RM 352.94	88090.6	50-yr	2106.77	918.68	912.5	1.62	1.23	17.39	9.25	175.48	857.08	3.78	2.01	6.18	6.18
Yellowstone County	B5	RM 352.86	87957.76	50-yr	2106.77	918.59	913.38	1.95	1.47	27.46	13.66	122.41	695.62	4.17	2.06	5.21	5.21
Yellowstone County	B5	RM 352.79	87857.09	50-yr	2106.77	918.49	913.06	1.96	1.71	34.57	19.48	106.33	550.34	4.01	2.24	5.43	5.43
Yellowstone County	B5	RM 352.72	87748.15	50-yr	2106.77	918.31	911.97	2.59	2	49.69	25.93	91.72	432.03	4.73	2.44	6.34	6.34
Yellowstone County	B5	RM 352.68	87677.1	50-yr	2106.77	918.12	912.27	2.46	2.46	81.57	81.57	335.79	335.79	2.55	2.55	5.85	5.85
Yellowstone County	B5	RM 352.64	87605.18	50-yr	2106.77	917.61	911.68	3.15	3.15	108.88	108.88	229.99	231.54	2.91	2.91	5.93	5.93
Yellowstone County	B5	RM 352.63	87594	50-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	50-yr	2106.77	917.45	911.45	3.09	3.09	93.87	93.87	228.5	228.5	2.98	2.98	6	6
Yellowstone County	B5	RM 352.54	87461.4	50-yr	2106.77	917.3	912.57	2.5	2.27	38.97	27.6	267.53	619.35	3.01	2.13	4.73	4.73
Yellowstone County	B5	RM 352.47	87340.46	50-yr	2106.77	917.2	912.2	2.34	1.79	33.35	20.45	231.64	1173.61	2.74	1.68	5	5
Yellowstone County	B5	RM 352.39	87216.99	50-yr	2106.77	916.72	912.01	3.43	2.51	68.9	33.36	187.19	1838.08	2.31	1.12	5.53	5.53
Yellowstone County	B5	RM 352.31	87079.16	50-yr	2106.77	916.34	910.66	3.34	2.52	81.02	37.62	183.87	1196.31	2.23	1.04	5.68	5.68

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	50-yr	2106.77	916.08	911.35	2.5	2.35	43.11	31	252.75	1209.02	1.77	1.27	4.73	4.73
Yellowstone County	B5	RM 352.18	86873.5	50-yr	2106.77	916.19	911.21	1.08	1.17	7.23	5.76	227.07	1441.39	2.4	1.9	4.98	4.98
Yellowstone County	B5	RM 352.09	86723.6	50-yr	2106.77	915.97	912.18	2.4	1.9	37.28	16.62	175.12	1344.19	2.6	1.16	3.79	3.79
Yellowstone County	B5	RM 351.99	86568.41	50-yr	2106.77	915.46	912.6	3.45	2.61	67.16	32.53	146.66	691.14	2.41	1.17	2.88	2.88
Yellowstone County	B5	RM 351.93	86466.74	50-yr	2106.77	915.36	911.69	2.75	1.98	46.55	27.01	173.37	1172.74	2.11	1.22	3.67	3.67
Yellowstone County	B5	RM 351.88	86386.8	50-yr	2106.77	915.31	911.38	1.88	1.49	28.89	22.8	190.67	1613.5	1.88	1.49	3.93	3.93
Yellowstone County	B5	RM 351.81	86277.68	50-yr	2106.77	915.21	910.99	1.66	1.31	19.93	17.32	242.52	1759.43	1.72	1.5	4.22	4.22
Yellowstone County	B5	RM 351.74	86159.62	50-yr	2106.77	914.9	911.37	1.64	1.59	21.16	19.3	299.24	1488.56	1.31	1.2	4.07	4.07
Yellowstone County	B5	RM 351.67	86034.59	50-yr	2106.77	914.64	911.31	1.95	1.63	29.04	18.17	201.3	1124.44	1.9	1.19	4.26	4.26
Yellowstone County	B5	RM 351.58	85891.33	50-yr	2106.77	914.44	911.47	1.68	1.62	22.15	16.21	237.01	996.27	1.84	1.35	4.35	4.35
Yellowstone County	B5	RM 351.52	85811.35	50-yr	2106.77	914.3	911.37	2.01	1.77	24.74	18.32	251.85	926.21	1.79	1.33	3.58	3.58
Yellowstone County	B5	RM 351.47	85728.2	50-yr	2106.77	914.19	911.17	2	1.74	22.47	16.11	195.31	872.36	2.16	1.55	3.65	3.65
Yellowstone County	B5	RM 351.40	85601.48	50-yr	2106.77	914.06	910.26	2.07	1.65	25.47	16.18	158.94	1383.95	2.08	1.32	4.15	4.15
Yellowstone County	B5	RM 351.34	85482.66	50-yr	2106.77	913.96	909.98	1.49	1.47	29.4	16.07	145.88	1502.71	2.47	1.35	3.99	3.99
Yellowstone County	B5	RM 351.25	85342.53	50-yr	2106.77	913.84	909.91	1.53	1.29	17.6	12.48	261.24	1442.23	1.9	1.34	3.96	3.96
Yellowstone County	B5	RM 351.21	85257.19	50-yr	2106.77	913.77	909.48	1.7	1.27	20.01	13.26	212.02	1302.67	1.94	1.28	4.29	4.29
Yellowstone County	B5	RM 351.12	85127.55	50-yr	2106.77	913.69	909.49	1.77	1.3	19.32	11.61	173.51	1261.16	2.22	1.32	4.2	4.2
Yellowstone County	B5	RM 351.04	84988.05	50-yr	2106.77	913.56	908.79	2.1	1.38	26.61	11.72	126.15	1205.37	2.95	1.28	4.77	4.77
Yellowstone County	B5	RM 350.90	84769.91	50-yr	2106.77	913.51	909.27	1.47	1.15	15.79	7.62	102.67	1268.02	3.27	1.55	4.24	4.24
Yellowstone County	B5	RM 350.75	84536.19	50-yr	2106.77	913.35	909.72	1.32	1.5	27.06	19.48	269.58	908.03	2.16	1.56	3.97	3.97
Yellowstone County	B5	RM 350.66	84383.33	50-yr	2106.77	913.16	909.32	1.73	1.65	35.94	19.27	175.64	953.27	2.5	1.34	3.84	3.84
Yellowstone County	B5	RM 350.57	84244.69	50-yr	2106.77	912.87	908.48	2.12	1.77	48.02	21.49	152.17	935.47	2.87	1.27	4.39	4.39
Yellowstone County	B5	RM 350.50	84128.62	50-yr	2106.77	912.61	908.49	2.28	1.92	53.73	25.7	161.33	883.23	2.62	1.25	4.12	4.12
Yellowstone County	B5	RM 350.40	83974.24	50-yr	2106.77	912.4	908.73	1.76	1.66	27.27	19.49	318.28	897.73	1.98	1.42	3.67	3.67
Yellowstone County	B5	RM 350.33	83868.06	50-yr	2106.77	912.28	908.17	1.78	1.59	22.13	16.69	326.5	872	2.02	1.52	4.11	4.11
Yellowstone County	B5	RM 350.23	83712.91	50-yr	2106.77	912.05	907.61	2.01	1.67	30.33	20.49	300.73	950.71	2.02	1.36	4.44	4.44
Yellowstone County	B5	RM 350.14	83563.43	50-yr	2106.77	911.87	907.94	1.81	1.5	26.1	17.01	302.07	1088.51	2.09	1.36	3.93	3.93
Yellowstone County	B5	RM 350.06	83419.86	50-yr	2106.77	911.66	907.84	1.68	1.43	26.89	16.89	344.48	1157.51	2.03	1.27	3.82	3.82
Yellowstone County	B5	RM 349.94	83229.4	50-yr	2106.77	911.44	906.93	1.78	1.41	25.74	14.16	275.98	1360.01	2.28	1.25	4.51	4.51
Yellowstone County	B5	RM 349.83	83071.99	50-yr	2106.77	911.3	907.36	1.71	1.19	15.68	7.25	370.02	1392.36	2.92	1.35	3.94	3.94
Yellowstone County	B5	RM 349.68	82904.73	50-yr	2106.77	911.1	906.92	2.1	1.46	33.64	15.37	347.97	1306.4	2.42	1.1	4.18	4.18
Yellowstone County	B5	RM 349.54	82632.78	50-yr	2106.77	910.72	906.29	2.06	1.68	27.9	15.52	449.31	1066.49	2.11	1.18	4.43	4.43
Yellowstone County	B5	RM 349.33	82276.28	50-yr	2106.77	910.46	906.45	1.34	1.22	15.9	11.84	351.95	1040.36	2.24	1.66	4.01	4.01
Yellowstone County	B5	RM 349.19	82046.53	50-yr	2106.77	910.15	905.16	2.07	1.39	25.81	13.34	282.11	1247.73	2.35	1.21	4.99	4.99
Yellowstone County	B5	RM 349.04	81800.47	50-yr	2222.87	909.98	904.5	1.65	1.26	16.99	9.74	345.54	1207.24	2.55	1.46	5.48	5.48
Yellowstone County	B5	RM 348.89	81574.02	50-yr	2222.87	909.87	904.75	1.3	1.11	17.81	10.43	550.23	2035.02	2.77	1.62	5.12	5.12
Yellowstone County	B5	RM 348.77	81370.46	50-yr	2222.87	909.73	905.09	1.38	1.13	22.09	12.37	461.6	1930.01	2.89	1.61	4.64	4.64
Yellowstone County	B5	RM 348.64	81138.52	50-yr	2222.87	909.56	903.35	1.69	1.16	16.41	7.08	292.71	1254.46	3.57	1.53	6.21	6.21
Yellowstone County	B5	RM 348.52	80960.09	50-yr	2222.87	909.44	902.88	1.95	1.31	30.31	11.68	208.13	1113.29	3.99	1.52	6.56	6.56
Yellowstone County	B5	RM 348.38	80737.31	50-yr	2222.87	909.03	902.85	2.71	1.95	51.81	22.08	187.14	695.93	3.88	1.64	6.18	6.18
Yellowstone County	B5	RM 348.26	80551.51	50-yr	2222.87	908.82	902.73	2.57	1.89	53.75	23.78	168.37	654.99	4.1	1.8	6.09	6.09
Yellowstone County	B5	RM 348.09	80276.34	50-yr	2222.87	908.16	901.64	3.22	2.72	68.24	30.27	171.66	893.7	3.77	1.67	6.52	6.52
Yellowstone County	B5	RM 347.95	80055.79	50-yr	2222.87	908.01	902.96	2.7	2.09	35.2	13.25	165.09	1004	4.07	1.53	5.05	5.05
Yellowstone County	B5	RM 347.82	79844.2	50-yr	2222.87	907.87	902.93	2.31	1.76	44.09	15.63	180.88	1151.53	3.75	1.33	4.94	4.94
Yellowstone County	B5	RM 347.77	79751.93	50-yr	2222.87	907.75	902.38	2.37	1.68	47.59	17.26	178.59	1073.99	3.77	1.37	5.37	5.37
Yellowstone County	B5	RM 347.70	79643.98	50-yr	2222.87	907.65	901.91	2.2	1.43	40.24	15.27	182.31	1192.48	3.71	1.4	5.74	5.74
Yellowstone County	B5	RM 347.61	79501.64	50-yr	2222.87	907.58	902.2	1.92	1.2	18.46	9.93	192.93	857.99	4.02	2.16	5.38	5.38
Yellowstone County	B5	RM 347.51	79347.38	50-yr	2222.87	907.16	900.54	3.26	2.04	49.04	20.57	112.36	554.9	4.71	1.96	6.62	6.62
Yellowstone County	B5	RM 347.42	79196.21	50-yr	2222.87	907.07	900.73	2.7	2.04	68	35.22	147.27	513.03	4.11	2.12	6.34	6.34
Yellowstone County	B5	RM 347.35	79079.87	50-yr	2222.87	907.14	900.77	1.38	1.37	9.19	8.79	498.82	527.55	3.21	3.07	6.37	6.37
Yellowstone County	B5	RM 347.23	78895.71	50-yr	2222.87	907.06	900.89	1.48	1.47	13.22	12.66	509.63	538.11	2.94	2.81	6.17	6.17
Yellowstone County	B5	RM 347.13	78732.21	50-yr	2222.87	906.93	900.98	1.61	1.52	28.77	19.77	441.33	1500.14	3.08	2.11	5.95	5.95
Yellowstone County	B5	RM 346.93	78400.21	50-yr	2222.87	906.38	900.98	1.88	1.77	67.97	56.76	465.4	610.66	2.46	2.05	5.4	5.4
Yellowstone County	B5	RM 346.80	78193.27	50-yr	2222.87	905.81	900.02	1.99	1.7	55.34	40.63	454.62	790.53	2.26	1.66	5.79	5.79
Yellowstone County	B5	RM 346.64	77938.83	50-yr	2222.87	905.53	900.47	2.07	1.45	22.47	10.66	247.29	917.4	3.53	1.67	5.06	5.06
Yellowstone County	B5	RM 346.49	77706.6	50-yr	2222.87	905.27	900.21	2.54	1.57	38.6	13.78	176.73	1103.46	3.7	1.31	5.06	5.06
Yellowstone County	B6	RM 346.35	77480.6	50-yr	2222.87	905.07	900.33	2.27	1.45	36.01	14.63	214.73	1078.53	3.59	1.45	4.74	4.74
Yellowstone County	B6	RM 346.23	77285.9	50-yr	2222.87	904.79	900.11	2.64	1.6	35.97	13.17	177.47	994.13	3.84	1.4	4.68	4.68
Yellowstone County	B6	RM 346.11	77095.33	50-yr	2222.87	904.58	899.75	2.62	1.82	48.36	23.04	182.61	934.46	3.79	1.8	4.83	4.83
Yellowstone County	B6	RM 346.00	76926.16	50-yr	2222.87	904.4	899.8	2.57	1.76	38.9	16.37	178.01	1007.36	3.95	1.65	4.6	4.6
Yellowstone County	B6	RM 345.90	76766.95	50-yr	2222.87	904.11	899.51	2.87	1.96	54.21	23.77	179.39	848.73	3.72	1.62	4.6	4.6

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	50-yr	2222.87	903.97	899.04	2.56	1.81	38.92	17.83	199.8	1085.91	3.75	1.71	5.07	5.07
Yellowstone County	B6	RM 345.73	76484.99	50-yr	2222.87	903.8	899.01	2.68	1.83	42.22	18.14	198.24	1065.33	3.44	1.48	4.9	4.9
Yellowstone County	B6	RM 345.67	76386.71	50-yr	2222.87	903.75	899.1	2.32	1.6	30.95	14.63	212.43	784.19	3.75	1.77	4.85	4.85
Yellowstone County	B6	RM 345.60	76268.76	50-yr	2222.87	903.65	899.22	2.26	1.63	33.73	18.39	235.37	738.41	3.39	1.85	4.75	4.75
Yellowstone County	B6	RM 345.50	76118.1	50-yr	2222.87	903.51	899.07	1.94	1.63	40.83	27.12	280.8	693.28	3.03	2.01	4.61	4.61
Yellowstone County	B6	RM 345.37	75909.53	50-yr	2222.87	903.07	897.51	2.35	1.99	44.31	23.15	316.61	887.32	2.85	1.48	5.56	5.56
Yellowstone County	B6	RM 345.27	75751.01	50-yr	2222.87	902.81	898.15	2.54	1.99	39.77	22.32	252.45	623.23	3.21	1.79	4.66	4.66
Yellowstone County	B6	RM 345.07	75427.56	50-yr	2222.87	902.61	897.07	2.07	1.48	23	9.69	241.2	1173.69	3.77	1.58	5.54	5.54
Yellowstone County	B6	RM 344.90	75166.64	50-yr	2222.87	902.46	897.3	1.92	1.6	21.06	12.53	294.53	648.51	3.6	2.15	5.16	5.16
Yellowstone County	B6	RM 344.75	74927.69	50-yr	2222.87	902.28	896.02	2.07	1.5	33.89	13.51	235.86	987.02	3.79	1.5	6.26	6.26
Yellowstone County	B6	RM 344.64	74743.45	50-yr	2222.87	901.92	895.93	2.83	1.87	42.19	12.81	158.71	902.7	4.34	1.31	5.99	5.99
Yellowstone County	B6	RM 344.53	74576.12	50-yr	2222.87	901.8	895.39	2.51	1.66	52.81	17.42	162.09	995.87	4.1	1.35	6.41	6.41
Yellowstone County	B6	RM 344.43	74405.67	50-yr	2222.87	901.69	896.11	2.24	1.35	24.03	8.6	179.43	1172.58	3.95	1.41	5.58	5.58
Yellowstone County	B6	RM 344.29	74192.79	50-yr	2222.87	901.52	895.87	2.29	1.64	30.61	13.72	179.75	1034.48	4.14	1.85	5.65	5.65
Yellowstone County	B6	RM 344.13	73931.76	50-yr	2222.87	901.27	895.4	2.52	1.85	35.9	16.91	157.02	569.15	4.5	2.11	5.87	5.87
Yellowstone County	B6	RM 343.87	73520.95	50-yr	2222.87	901.03	895.23	2.05	1.7	21.56	15.38	287.43	1254.16	3.53	2.51	5.8	5.8
Yellowstone County	B6	RM 343.80	73403.19	50-yr	2222.87	900.97	894.69	1.72	1.54	32.17	27.05	356.81	1230.78	3.34	2.81	6.28	6.28
Yellowstone County	B6	RM 343.66	73173.16	50-yr	2222.87	900.66	894.63	1.83	1.77	49.52	44.6	395.84	1166.72	3.02	2.72	6.03	6.03
Yellowstone County	B6	RM 343.55	72997.33	50-yr	2222.87	900.37	894.63	1.85	1.78	45.49	38.89	370.56	962.74	3.19	2.72	5.74	5.74
Yellowstone County	B6	RM 343.45	72840.49	50-yr	2222.87	900.13	894.78	1.91	1.9	40.29	39.21	401.77	959.99	2.89	2.82	5.35	5.35
Yellowstone County	B6	RM 343.37	72718.86	50-yr	2222.87	899.82	894.5	2.31	2.31	63.33	63.32	343.17	343.39	2.81	2.81	5.32	5.32
Yellowstone County	B6	RM 343.29	72586.22	50-yr	2222.87	899.56	894.28	2.34	2.16	52.81	42.74	280.15	387.74	3.28	2.66	5.28	5.28
Yellowstone County	B6	RM 343.21	72458.03	50-yr	2222.87	899.35	893.99	2.09	1.91	62.5	50.01	357.01	625.61	2.83	2.26	5.36	5.36
Yellowstone County	B6	RM 343.14	72328.78	50-yr	2222.87	899.04	893.94	1.99	1.79	64.51	51.54	432.74	892.34	2.42	1.93	5.1	5.1
Yellowstone County	B6	RM 343.04	72174.44	50-yr	2222.87	898.88	894.12	1.69	1.42	18.97	14.71	485.75	801.74	2.54	1.97	4.76	4.76
Yellowstone County	B6	RM 342.96	72046.7	50-yr	2222.87	898.75	894.17	1.6	1.4	38.52	29.73	506.74	856.44	2.4	1.85	4.58	4.58
Yellowstone County	B6	RM 342.87	71890.42	50-yr	2222.87	898.46	893.92	1.59	1.4	44.66	32.84	541.41	1147.3	2.2	1.62	4.54	4.54
Yellowstone County	B6	RM 342.78	71759.64	50-yr	2222.87	898.32	893.85	1.57	1.3	14.32	10.18	525.24	1308.54	2.21	1.57	4.47	4.47
Yellowstone County	B6	RM 342.71	71649.64	50-yr	2222.87	898.25	893.88	1.51	1.29	13.2	9.82	525.58	1683.61	2.14	1.59	4.37	4.37
Yellowstone County	B6	RM 342.64	71534.72	50-yr	2222.87	898.13	893.45	1.44	1.36	33.07	29.04	689.58	1060.25	2.12	1.87	4.68	4.68
Yellowstone County	B6	RM 342.59	71441.82	50-yr	2222.87	897.95	893.13	1.53	1.53	38.78	38.75	689.8	2357.49	2.11	2.11	4.82	4.82
Yellowstone County	B6	RM 342.49	71299.94	50-yr	2222.87	897.79	892.73	1.33	1.33	23.87	23.85	659.83	2619.43	2.54	2.53	5.06	5.06
Yellowstone County	B6	RM 342.40	71182.23	50-yr	2222.87	897.71	892.4	1.19	1.19	18.97	18.93	592.67	2642.28	3.14	3.13	5.31	5.31
Yellowstone County	B6	RM 342.29	70973.95	50-yr	2222.87	897.48	891.26	1.59	1.59	28.75	28.64	478.95	2470.61	2.92	2.91	6.22	6.22
Yellowstone County	B6	RM 342.17	70788.09	50-yr	2222.87	897.04	891.21	2.31	2.31	65.62	65.62	379.98	1906.37	2.53	2.53	5.83	5.83
Yellowstone County	B6	RM 342.09	70668.79	50-yr	2222.87	896.84	892.22	2.02	1.95	45.73	36.78	378.33	1637.86	2.88	2.31	4.62	4.62
Yellowstone County	B6	RM 341.96	70472.35	50-yr	2222.87	896.66	891.5	1.78	1.74	17.94	15.47	503.7	1542.39	2.47	2.13	5.16	5.16
Yellowstone County	B6	RM 341.82	70207.79	50-yr	2222.87	896.52	890.89	1.39	1.33	18.72	15.13	582.05	1024.5	2.66	2.15	5.63	5.63
Yellowstone County	B6	RM 341.68	69974.03	50-yr	2222.87	896.3	890.38	1.57	1.5	25.88	21.35	481.57	630.78	2.85	2.35	5.92	5.92
Yellowstone County	B6	RM 341.57	69788.71	50-yr	2222.87	896.01	889.58	2.13	2.13	22.06	20.72	432.97	461.87	2.41	2.26	6.43	6.43
Yellowstone County	B6	RM 341.47	69629.19	50-yr	2222.87	895.83	889.76	1.9	1.78	53.53	37.88	395.38	709.21	2.8	1.98	6.07	6.07
Yellowstone County	B6	RM 341.32	69391.37	50-yr	2222.87	895.35	890.36	1.96	1.82	52.2	38.17	401.26	620.39	2.69	1.96	4.99	4.99
Yellowstone County	B6	RM 341.24	69252.71	50-yr	2222.87	895.23	890.28	1.76	1.55	17.94	12.03	396.74	825.15	2.9	1.95	4.95	4.95
Yellowstone County	B6	RM 341.11	69044.61	50-yr	2222.87	894.95	890	2.23	1.76	38.4	22.8	324.62	760.56	2.81	1.66	4.95	4.95
Yellowstone County	B6	RM 340.94	68773.18	50-yr	2222.87	894.63	889.22	2.16	1.5	34.1	16.78	280.24	1002.24	3.11	1.53	5.41	5.41
Yellowstone County	B6	RM 340.81	68556.42	50-yr	2222.87	894.53	889.05	1.59	1.1	21.08	11.17	315.44	1158.23	3.3	1.74	5.48	5.48
Yellowstone County	B6	RM 340.65	68325.7	50-yr	2222.87	894.31	888.87	2.19	1.29	23.07	9.76	204.11	1052.1	3.89	1.64	5.44	5.44
Yellowstone County	B6	RM 340.52	68126.27	50-yr	2222.87	894.09	887.3	2.6	1.45	44.51	14.3	130.27	970.92	4.94	1.58	6.79	6.79
Yellowstone County	B6	RM 340.40	67936.51	50-yr	2222.87	893.97	886.73	2.22	1.41	40.58	16.92	170.6	857.02	4.46	1.85	7.24	7.24
Yellowstone County	B7	RM 340.26	67715.84	50-yr	2222.87	893.7	887.99	2.16	1.64	53.42	29.24	252.22	705.89	3.51	1.92	5.71	5.71
Yellowstone County	B7	RM 340.16	67550.99	50-yr	2222.87	893.41	888.43	2.05	1.68	61.99	41.01	313.83	668.92	3	1.98	4.98	4.98
Yellowstone County	B7	RM 340.06	67387.35	50-yr	2222.87	893.12	888.74	2.02	1.76	43.98	30.45	315.76	584.73	3.12	2.16	4.38	4.38
Yellowstone County	B7	RM 339.96	67234.59	50-yr	2222.87	892.86	888.85	2.26	2.08	29.5	19.78	360.5	600.97	2.65	1.78	4.01	4.01
Yellowstone County	B7	RM 339.88	67094.07	50-yr	2222.87	892.7	888.78	1.98	1.88	42.59	34.22	445.51	603.5	2.44	1.96	3.92	3.92
Yellowstone County	B7	RM 339.79	66960.51	50-yr	2222.87	892.4	888.98	2.22	2.22	34.93	34.53	505.46	511.38	1.98	1.96	3.42	3.42
Yellowstone County	B7	RM 339.72	66843.76	50-yr	2222.87	892.27	888.72	1.97	1.89	25.52	22.8	512.4	608.22	2.17	1.94	3.55	3.55
Yellowstone County	B7	RM 339.66	66753.41	50-yr	2222.87	892.21	887.9	1.71	1.63	18.31	15.82	524.73	712	2.42	2.09	4.31	4.31
Yellowstone County	B7	RM 339.52	66527.74	50-yr	2222.87	892.03	887.31	1.93	1.52	19.88	12.8	312.36	699.32	3.27	2.1	4.72	4.72
Yellowstone County	B7	RM 339.37	66324.85	50-yr	2222.87	891.85	887.17	2.11	1.57	42.41	22.77	232.31	751.84	3.51	1.88	4.68	4.68
Yellowstone County	B7	RM 339.24	66108.49	50-yr	2222.87	891.37	886.45	2.85	2.13	42.94	23.16	218.09	657.58	2.97	1.6	4.92	4.92
Yellowstone County	B7	RM 339.13	65940.41	50-yr	2222.87	891.14	885.31	2.91	1.95	51.84	26.18	143.34	637.02	3.57	1.79	5.83	5.83

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	50-yr	2222.87	890.78	886.09	2.98	2.19	46.66	21.85	187.64	689.77	3.14	1.47	4.69	4.69
Yellowstone County	B7	RM 338.94	65621.59	50-yr	2222.87	890.72	886.36	2.44	1.77	31.63	18.7	223.57	713.79	2.97	1.76	4.36	4.36
Yellowstone County	B7	RM 338.83	65433.26	50-yr	2222.87	890.54	886.37	2.17	1.64	34.55	18.49	225.04	856.92	3.01	1.61	4.52	4.52
Yellowstone County	B7	RM 338.72	65256.88	50-yr	2222.87	890.3	886.18	2.25	1.9	40.04	25.55	205.92	614.87	3.24	2.07	4.5	4.5
Yellowstone County	B7	RM 338.62	65095.08	50-yr	2222.87	889.95	886.28	2.86	2.23	44.52	26.35	179.33	617.51	3.06	1.81	4.33	4.33
Yellowstone County	B7	RM 338.49	64891.36	50-yr	2222.87	889.77	885.05	2.51	1.94	34.12	20.28	174.25	799.86	3.19	1.89	4.72	4.72
Yellowstone County	B7	RM 338.40	64742.15	50-yr	2222.87	889.75	884.28	1.74	1.44	15.7	10.68	165.86	927.41	3.34	2.26	5.47	5.47
Yellowstone County	B7	RM 338.29	64577.05	50-yr	2222.87	889.63	884.18	2.13	1.52	23.79	11.23	123.01	961.83	3.72	1.75	5.45	5.45
Yellowstone County	B7	RM 338.19	64384.71	50-yr	2222.87	889.58	885.23	1.47	1.19	13.2	9.56	393.33	990.85	2.74	1.99	4.35	4.35
Yellowstone County	B7	RM 338.06	64164.59	50-yr	2222.87	889.49	884.64	1.52	1.06	14.15	8.23	284.25	1177.24	3.27	1.9	4.85	4.85
Yellowstone County	B7	RM 337.91	63921.69	50-yr	2222.87	889.32	884.16	1.96	1.21	18.81	9.5	205.66	1202.49	3.55	1.8	5.16	5.16
Yellowstone County	B7	RM 337.83	63789.53	50-yr	2222.87	889.01	882.72	2.85	1.72	47.33	19.09	178.21	906.15	3.55	1.42	6.29	6.29
Yellowstone County	B7	RM 337.75	63667.96	50-yr	2222.87	888.65	881.69	3.42	2.04	61.53	22.04	143.17	814.65	3.76	1.33	6.96	6.96
Yellowstone County	B7	RM 337.68	63550.4	50-yr	2222.87	888.47	882.49	3.2	2.18	61.77	21.08	161.63	784.27	3.82	1.3	5.98	5.98
Yellowstone County	B7	RM 337.58	63396.62	50-yr	2222.87	888.25	883.62	3.1	2.12	50.1	19.49	189.36	833.76	3.23	1.26	4.63	4.63
Yellowstone County	B7	RM 337.47	63212.44	50-yr	2222.87	888.1	883.31	2.62	1.77	41.89	17.62	178.55	878.81	3.41	1.43	4.79	4.79
Yellowstone County	B7	RM 337.38	63064.58	50-yr	2222.87	887.89	883.29	2.77	1.72	38.87	16.47	177.51	941.99	3.26	1.37	4.6	4.6
Yellowstone County	B7	RM 337.27	62894.98	50-yr	2222.87	887.89	883.15	1.84	1.19	16.97	8.55	210.44	1117.64	3.32	1.67	4.74	4.74
Yellowstone County	B7	RM 337.16	62717.85	50-yr	2222.87	887.84	882.57	1.41	1.07	10.69	6.81	397.24	1193.45	2.95	1.87	5.27	5.27
Yellowstone County	B7	RM 337.04	62524.52	50-yr	2222.87	887.77	879.61	1.64	1.08	13.58	5.93	154.37	1047.19	4.81	2.09	8.16	8.16
Yellowstone County	B7	RM 336.96	62390.64	50-yr	2222.87	887.7	880.21	1.77	1.25	22.67	10.67	185.87	1117.35	4.24	1.98	7.49	7.49
Yellowstone County	B7	RM 336.87	62246.97	50-yr	2222.87	887.56	881.41	2.12	1.4	24.85	11.04	156.32	819.9	4.4	1.94	6.15	6.15
Yellowstone County	B7	RM 336.80	62131.42	50-yr	2222.87	887.5	881.33	2.01	1.38	31.86	15.31	162.29	1067.7	4.04	1.93	6.17	6.17
Yellowstone County	B7	RM 336.72	62005.73	50-yr	2222.87	887.26	881.38	2.6	1.69	51.34	17.77	136.15	1003.4	4.25	1.46	5.88	5.88
Yellowstone County	B7	RM 336.66	61902.64	50-yr	2222.87	886.75	881.45	3.69	2.54	94.42	27.91	117.37	765.23	3.91	1.15	5.3	5.3
Yellowstone County	B7	RM 336.59	61800.43	50-yr	2222.87	886.67	880.66	2.99	2.1	64.92	18.62	135.93	861.69	4.3	1.23	6.01	6.01
Yellowstone County	B7	RM 336.52	61689.55	50-yr	2222.87	886.53	881.76	2.89	1.97	52.6	18.55	145.49	872.51	3.67	1.29	4.77	4.77
Yellowstone County	B7	RM 336.46	61580.5	50-yr	2222.87	886.41	882.13	2.62	1.88	52.49	19.84	162.48	932.2	3.37	1.27	4.28	4.28
Yellowstone County	B7	RM 336.40	61491.01	50-yr	2222.87	886.25	882.03	2.69	1.82	53.38	20.48	162.53	922.26	3.45	1.32	4.22	4.22
Yellowstone County	B7	RM 336.34	61394.22	50-yr	2222.87	886.1	881.93	2.73	1.74	48.64	21.55	163.69	878.76	3.29	1.45	4.17	4.17
Yellowstone County	B7	RM 336.27	61278.9	50-yr	2222.87	885.95	881.67	2.63	1.63	44.67	19.68	169.95	945.29	3.28	1.44	4.28	4.28
Yellowstone County	B7	RM 336.19	61159.07	50-yr	2222.87	885.78	882.11	2.59	1.75	36.42	17.93	211.78	1016.08	2.55	1.25	3.67	3.67
Yellowstone County	B7	RM 336.09	60993.57	50-yr	2222.87	885.63	882.16	1.99	1.38	25.09	15.25	319.78	1087.75	2.43	1.48	3.47	3.47
Yellowstone County	B7	RM 335.98	60812.26	50-yr	2222.87	885.48	881.93	1.46	1.32	27.02	21.48	442.1	1054.95	2	1.59	3.75	3.75
Yellowstone County	B7	RM 335.89	60669.74	50-yr	2222.87	885.3	880.16	1.67	1.51	16.14	14.34	735.3	1002.07	1.65	1.47	5.14	5.14
Yellowstone County	B7	RM 335.77	60465.85	50-yr	2222.87	884.97	880.49	1.61	1.57	46.2	41.21	881.3	1099.46	1.45	1.29	4.48	4.48
Yellowstone County	B7	RM 335.68	60324.8	50-yr	2222.87	884.66	880.65	1.84	1.72	17.07	14.69	869.51	1603.38	1.34	1.15	4.01	4.01
Yellowstone County	B7	RM 335.59	60183.7	50-yr	2222.87	884.47	880.3	1.82	1.69	17.73	14.6	914.31	1629.71	1.29	1.06	4.17	4.17
Yellowstone County	B7	RM 335.51	60046.12	50-yr	2222.87	884.3	880.03	1.78	1.63	15.69	12.11	933.78	1678.03	1.3	1	4.27	4.27
Yellowstone County	B7	RM 335.41	59899.97	50-yr	2222.87	884.2	879.45	1.36	1.18	12.68	9.68	911.11	1550.64	1.66	1.27	4.75	4.75
Yellowstone County	B7	RM 335.36	59814.82	50-yr	2222.87	884.19	878.65	1.03	0.87	6.13	4.44	896.25	1883.64	2.23	1.62	5.54	5.54
Yellowstone County	B7	RM 335.12	59393.71	50-yr	2222.87	883.97	878.54	1.74	0.99	16.82	6.81	331.92	1965.86	2.82	1.14	5.43	5.43
Yellowstone County	B7	RM 335.03	59228.59	50-yr	2222.87	883.67	876.8	2.82	1.32	53.5	14.05	149.84	1935.27	3.32	0.87	6.87	6.87
Yellowstone County	B7	RM 334.91	59041.32	50-yr	2222.87	883.48	878.31	2.22	1.14	34.88	12.31	229.84	1975.17	2.79	0.98	5.17	5.17
Yellowstone County	B7	RM 334.85	58937.73	50-yr	2222.87	883.34	878.66	2.19	1.11	35.62	12.64	224.38	1979.58	2.85	1.01	4.68	4.68
Yellowstone County	B7	RM 334.73	58737.5	50-yr	2222.87	882.88	879.52	2.93	1.51	51.77	15.67	192.81	1728.84	2.82	0.85	3.5	3.5
Yellowstone County	B7	RM 334.63	58573.32	50-yr	2222.87	882.79	878.31	2.27	1.26	27.8	10.98	187.59	1555.02	2.88	1.14	4.48	4.48
Yellowstone County	B7	RM 334.54	58424.99	50-yr	2222.87	882.77	877.09	1.15	1.04	13.55	6.32	154.81	1475.53	3.12	1.45	5.68	5.68
Yellowstone County	B7	RM 334.22	57821.07	50-yr	2222.87	882.41	875.76	2.16	1.48	20.91	10.45	196.73	1073.25	4.04	2.02	6.65	6.65
Yellowstone County	B7	RM 334.09	57621.62	50-yr	2222.87	882.21	875.55	2.73	1.72	59.57	24.04	119.41	823.87	3.89	1.57	6.66	6.66
Yellowstone County	B7	RM 333.98	57440.64	50-yr	2222.87	882.06	875.46	2.49	1.67	31.04	12.81	140.01	682.48	4.72	1.95	6.6	6.6
Yellowstone County	B7	RM 333.83	57207.78	50-yr	2222.87	881.86	875.4	2.49	1.97	44.35	24.28	162.51	535.56	3.88	2.11	6.46	6.46
Yellowstone County	B7	RM 333.69	56989.22	50-yr	2222.87	881.61	873.45	2.01	1.86	41.98	27.8	337.33	715.53	3.22	2.13	8.16	8.16
Yellowstone County	B7	RM 333.54	56738.21	50-yr	2222.87	881.47	874.22	1.38	1.22	21.64	13.55	409.8	1004.57	3.65	2.28	7.25	7.25
Yellowstone County	B7	RM 333.42	56552.03	50-yr	2222.87	881.3	873.42	1.55	1.42	30.27	17.91	426.33	859.05	3.1	1.82	7.88	7.88
Yellowstone County	B7	RM 333.30	56351.75	50-yr	2222.87	880.98	875.65	1.76	1.66	51.94	33.55	449.89	786.96	2.63	1.7	5.33	5.33
Yellowstone County	B7	RM 333.19	56177.76	50-yr	2222.87	880.57	875.72	2.06	1.96	45.91	37.51	398.96	539.98	2.58	2.1	4.85	4.85
Yellowstone County	B7	RM 333.09	56027.56	50-yr	2222.87	880.43	875.59	1.85	1.66	19.34	15.83	428.38	608.71	2.69	2.2	4.84	4.84
Yellowstone County	B7	RM 332.99	55855.76	50-yr	2222.87	880.25	873.86	1.88	1.6	44.69	32.17	384.98	705.11	2.75	1.97	6.39	6.39
Yellowstone County	B7	RM 332.88	55687.68	50-yr	2222.87	880.14	874.43	1.57	1.39	16.03	11.46	408.95	753.45	2.96	2.12	5.71	5.71
Yellowstone County	B7	RM 332.77	55504.73	50-yr	2222.87	880.08	875.49	1.39	1.16	10.8	7.15	376.01	829.96	3.5	2.32	4.59	4.59

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	50-yr	2222.87	880	874.96	1.51	1.2	15.86	10.25	334.72	814.6	3.53	2.28	5.04	5.04
Yellowstone County	B7	RM 332.56	55182.74	50-yr	2222.87	879.92	874.54	1.59	1.19	16.65	9.07	312.14	892.53	3.87	2.1	5.38	5.38
Yellowstone County	B7	RM 332.47	55059.84	50-yr	2222.87	879.89	873.95	1.42	1.03	14.36	6.97	281.38	2195.33	4.15	2	5.94	5.94
Yellowstone County	B7	RM 332.38	54913.1	50-yr	2222.87	879.74	873.16	2.07	1.23	28.23	8.78	159.71	1205.82	4.88	1.49	6.58	6.58
Yellowstone County	B7	RM 332.33	54822.67	50-yr	2222.87	879.73	872.5	1.7	1.12	29.2	10.68	188.81	1234.04	4.42	1.61	7.23	7.23
Yellowstone County	B7	RM 332.21	54626.48	50-yr	2222.87	879.55	873.4	1.97	1.34	32.22	10.03	177.38	1433.09	4.74	1.46	6.15	6.15
Yellowstone County	B7	RM 332.20	54613	50-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	50-yr	2222.87	879.3	873.19	2.19	1.57	43.25	12.61	192.2	1287.29	4.25	1.23	6.11	6.11
Yellowstone County	B7	RM 332.17	54575.38	50-yr	2222.87	879.27	872.76	2.15	1.37	33.81	9.44	145.13	1432.86	4.99	1.37	6.51	6.51
Yellowstone County	B7	RM 332.16	54558	50-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	50-yr	2222.87	879.1	872.47	2.45	1.45	31.57	7.95	130.77	1435.53	5.12	1.27	6.63	6.63
Yellowstone County	B7	RM 332.08	54422.01	50-yr	2222.87	879	873.77	2.4	1.52	37.73	10.01	155.85	1411.1	4.39	1.15	5.23	5.23
Yellowstone County	B7	RM 331.96	54224.76	50-yr	2222.87	878.84	873.18	2.06	1.48	40.59	13.47	205.19	1204.09	3.78	1.24	5.66	5.66
Yellowstone County	B7	RM 331.85	54057.19	50-yr	2222.87	878.65	873.16	1.98	1.47	50.9	18.23	250.07	1165.24	3.65	1.3	5.48	5.48
Yellowstone County	B7	RM 331.74	53882.8	50-yr	2222.87	878.02	872.62	3.25	2.29	67.64	16.81	149.7	943.7	4.18	1.03	5.4	5.4
Yellowstone County	B8	RM 331.66	53744.64	50-yr	2222.87	877.96	871.68	2.48	1.89	46.53	14.52	219.63	1006.88	3.76	1.17	6.28	6.28
Yellowstone County	B8	RM 331.55	53575.67	50-yr	2222.87	877.8	872.61	2.36	1.71	40.97	14.25	202.55	1061.14	3.54	1.22	5.19	5.19
Yellowstone County	B8	RM 331.41	53354.89	50-yr	2222.87	877.5	872.56	2.52	1.83	43.72	16.1	218.29	991.91	3.34	1.22	4.94	4.94
Yellowstone County	B8	RM 331.32	53209.79	50-yr	2222.87	877.32	871.92	2.26	1.62	36.45	18.91	275.52	957.76	2.77	1.43	5.4	5.4
Yellowstone County	B8	RM 331.23	53053.99	50-yr	2222.87	877.17	871.53	1.88	1.49	25.81	17.01	375.96	906.85	2.51	1.64	5.64	5.64
Yellowstone County	B8	RM 331.14	52919.44	50-yr	2222.87	877.1	871.72	1.59	1.32	19.14	11.31	309.55	1141.13	2.95	1.73	5.38	5.38
Yellowstone County	B8	RM 331.08	52820.06	50-yr	2222.87	877	871.29	1.72	1.34	21.15	10.36	305.99	1034.29	3.3	1.61	5.71	5.71
Yellowstone County	B8	RM 331.01	52700.37	50-yr	2222.87	876.91	871.8	1.74	1.37	22.65	13.63	299.81	830.85	3.26	1.95	5.11	5.11
Yellowstone County	B8	RM 330.93	52576.5	50-yr	2222.87	876.8	871.67	1.82	1.56	24.86	15.31	250.76	622.02	3.72	2.29	5.13	5.13
Yellowstone County	B8	RM 330.83	52418.21	50-yr	2222.87	876.54	870.75	2.59	2.03	36.4	17.98	141.59	495.46	4.52	2.21	5.79	5.79
Yellowstone County	B8	RM 330.77	52321.13	50-yr	2222.87	876.42	870.68	2.61	2.21	43.23	25.63	174.99	978.6	3.82	2.27	5.74	5.74
Yellowstone County	B8	RM 330.68	52174.9	50-yr	2222.87	876.1	870.33	3.18	2.43	52.88	24.32	129.59	473.15	4.21	1.93	5.77	5.77
Yellowstone County	B8	RM 330.58	52000.46	50-yr	2222.87	875.94	869.72	2.92	2.25	60.96	26.46	117.85	512.2	4.49	1.93	6.22	6.22
Yellowstone County	B8	RM 330.48	51852.83	50-yr	2222.87	875.73	868.81	3.03	2.18	61.27	25.75	105.84	537.33	4.81	1.99	6.92	6.92
Yellowstone County	B8	RM 330.39	51701.57	50-yr	2222.87	875.59	869.32	2.86	2.01	42.08	17.02	134.29	674.97	4.06	1.64	6.27	6.27
Yellowstone County	B8	RM 330.32	51592.04	50-yr	2222.87	875.48	869.57	2.87	1.88	39.85	12.42	135.54	1001.97	4.22	1.31	5.91	5.91
Yellowstone County	B8	RM 330.25	51473.55	50-yr	2222.87	875.4	868.38	2.67	1.76	37.93	13.72	145.01	947.9	3.92	1.41	7.02	7.02
Yellowstone County	B8	RM 330.17	51344.77	50-yr	2222.87	875.25	869.9	2.69	1.81	39.47	14.26	151.95	908.08	3.76	1.35	5.35	5.35
Yellowstone County	B8	RM 330.10	51243.99	50-yr	2222.87	875.07	870.02	2.78	1.89	46.16	18.18	186.22	889.83	3.37	1.32	5.05	5.05
Yellowstone County	B8	RM 330.05	51150.67	50-yr	2222.87	875.06	869.94	2.02	1.49	25.29	14.24	298.82	962.05	2.76	1.55	5.12	5.12
Yellowstone County	B8	RM 329.95	50995.78	50-yr	2222.87	874.9	869.67	1.93	1.55	26.17	15.32	399.18	939.06	2.62	1.53	5.23	5.23
Yellowstone County	B8	RM 329.86	50853.11	50-yr	2222.87	874.79	869.99	1.69	1.4	25.7	16.45	443.98	992.95	2.5	1.59	4.8	4.8
Yellowstone County	B8	RM 329.75	50682.47	50-yr	2222.87	874.6	869.45	1.43	1.28	33.38	24.93	611.47	1089.47	2.14	1.6	5.15	5.15
Yellowstone County	B8	RM 329.66	50540.7	50-yr	2222.87	874.29	869.45	1.65	1.51	42.55	32.48	646.82	1103.34	1.75	1.33	4.84	4.84
Yellowstone County	B8	RM 329.57	50390.78	50-yr	2222.87	874.05	869.17	1.78	1.52	18.88	14.79	564.45	961.99	1.95	1.52	4.88	4.88
Yellowstone County	B8	RM 329.49	50267.58	50-yr	2222.87	873.91	869.52	1.85	1.54	20.06	15.41	524.9	953.18	1.98	1.52	4.39	4.39
Yellowstone County	B8	RM 329.43	50165.22	50-yr	2222.87	873.87	869.82	1.51	1.3	13.65	9.46	543.15	959.53	2.57	1.78	4.05	4.05
Yellowstone County	B8	RM 329.37	50053.96	50-yr	2222.87	873.82	869.58	1.45	1.2	12.45	8.85	447.42	954.9	2.72	1.93	4.24	4.24
Yellowstone County	B8	RM 329.31	49969.13	50-yr	2222.87	873.76	869.66	1.56	1.23	18.14	12.38	378.18	993.36	2.66	1.82	4.1	4.1
Yellowstone County	B8	RM 329.26	49883.05	50-yr	2222.87	873.69	868.74	1.63	1.28	15.45	9.92	376.88	1020.92	2.66	1.71	4.95	4.95
Yellowstone County	B8	RM 329.20	49785.51	50-yr	2222.87	873.63	868.71	1.66	1.28	16.5	11.04	397.53	1033.31	2.52	1.68	4.92	4.92
Yellowstone County	B8	RM 329.15	49699.71	50-yr	2432.42	873.57	868.64	1.55	1.24	20.59	14.06	463.75	1058.99	2.7	1.85	4.93	4.93
Yellowstone County	B8	RM 329.08	49597.49	50-yr	2432.42	873.5	869.34	1.43	1.15	19.47	13.73	471.8	1106.91	2.71	1.91	4.16	4.16
Yellowstone County	B8	RM 328.96	49388.08	50-yr	2432.42	873.38	868.99	1.58	1.1	16.98	10.4	305.95	1180.73	3.06	1.87	4.39	4.39
Yellowstone County	B8	RM 328.85	49197.37	50-yr	2432.42	873.25	866.79	1.71	1.33	15	11.1	472.82	1091.47	2.27	1.68	6.46	6.46
Yellowstone County	B8	RM 328.75	49036.09	50-yr	2432.42	873.18	866.93	1.52	1.23	14.98	11.28	424.64	1060.23	2.49	1.87	6.25	6.25
Yellowstone County	B8	RM 328.68	48920.76	50-yr	2432.42	873.04	867.09	1.92	1.37	23.22	13.18	303.39	1055.55	2.98	1.69	5.95	5.95
Yellowstone County	B8	RM 328.60	48788.86	50-yr	2432.42	872.81	866.36	2.57	1.64	32.37	13.2	196.23	1001.8	3.7	1.48	6.45	6.45
Yellowstone County	B8	RM 328.52	48664.7	50-yr	2432.42	872.86	867.75	1.67	1.23	14.97	8.73	167.5	988.42	3.45	2	5.11	5.11
Yellowstone County	B8	RM 328.44	48539.46	50-yr	2432.42	872.55	867.34	2.85	1.79	52.32	17.84	137.8	923.57	4.38	1.47	5.21	5.21
Yellowstone County	B8	RM 328.36	48405.85	50-yr	2432.42	872.28	867.12	3.27	1.98	50.49	18.4	131.89	838.66	4.09	1.46	5.16	5.16
Yellowstone County	B8	RM 328.28	48276.93	50-yr	2432.42	872.25	867.73	2.39	1.81	46.37	20.63	191.8	818.86	3.7	1.64	5.14	5.14
Yellowstone County	B8	RM 328.16	48097.58	50-yr	2432.42	872.05	866.7	2.19	1.71	41.07	21.23	224.09	873.36	3.15	1.63	5.35	5.35
Yellowstone County	B8	RM 328.05	47914.16	50-yr	2432.42	871.88	866.62	2	1.55	30.38	16.41	264.18	924.32	3.15	1.7	5.26	5.26
Yellowstone County	B8	RM 327.93	47729.4	50-yr	2432.42	871.65	865.67	2.26	1.69	26.73	13.88	305.74	950.73	2.92	1.51	5.98	5.98
Yellowstone County	B8	RM 327.88	47641.03	50-yr	2432.42	871.51	866	2.5	1.69	37.59	17.46	246.29	991.53	3.13	1.45	5.51	5.51

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	50-yr	2432.42	871.39	866.29	2.62	1.68	32.74	13.26	182.9	926.68	3.86	1.56	5.1	5.1
Yellowstone County	B8	RM 327.75	47432.57	50-yr	2432.42	871.09	865.09	3.34	2.01	49.95	15.63	136.3	896.67	4.34	1.35	6	6
Yellowstone County	B8	RM 327.69	47341.24	50-yr	2432.42	870.67	864.48	4.28	2.58	76.32	26.85	108.2	670.4	4.05	1.41	6.19	6.19
Yellowstone County	B8	RM 327.62	47227.31	50-yr	2432.42	870.82	863.86	2.88	1.82	40.2	16.48	129.12	816.85	4.02	1.63	6.96	6.96
Yellowstone County	B8	RM 327.56	47124.87	50-yr	2432.42	870.83	864.46	2.26	1.54	24.94	12.85	158.59	850.4	3.6	1.85	6.37	6.37
Yellowstone County	B8	RM 327.51	47053.82	50-yr	2432.42	870.78	865.84	2.1	1.62	25.09	18.05	311.18	867.53	2.4	1.73	4.94	4.94
Yellowstone County	B8	RM 327.44	46933.28	50-yr	2432.42	870.77	866.93	1.28	1.28	11.32	9.97	390.42	882.4	2.45	2.15	4.15	4.15
Yellowstone County	B8	RM 327.37	46817.72	50-yr	2432.42	870.64	866.26	1.86	1.49	23.39	14.81	342.21	956	2.71	1.71	4.38	4.38
Yellowstone County	B8	RM 327.29	46687.12	50-yr	2432.42	870.56	866.04	1.83	1.38	20.39	12.07	304.88	1043.91	2.85	1.69	4.52	4.52
Yellowstone County	B8	RM 327.23	46600.07	50-yr	2432.42	870.49	866.25	1.93	1.41	22.02	12.8	287.86	1051.44	2.83	1.65	4.64	4.64
Yellowstone County	B8	RM 327.16	46485.25	50-yr	2432.42	870.36	865.67	2.11	1.44	29.61	15.43	271.45	1117.79	2.9	1.51	4.69	4.69
Yellowstone County	B8	RM 327.08	46360.36	50-yr	2432.42	870.31	864.94	1.76	1.21	18.68	9.94	266.92	1138.31	3.33	1.77	5.37	5.37
Yellowstone County	B8	RM 327.00	46240.1	50-yr	2432.42	870.2	864.56	1.91	1.44	27.37	12.37	227.91	915.65	4.08	1.85	5.64	5.64
Yellowstone County	B8	RM 326.94	46091.8	50-yr	2432.42	870.09	864.04	2.04	1.48	20.03	9.65	223.67	839.44	4.07	1.96	6.05	6.05
Yellowstone County	B8	RM 326.88	46003.77	50-yr	2432.42	869.99	864.08	2.34	1.66	35.31	15.9	170.66	844.13	3.85	1.73	5.91	5.91
Yellowstone County	B8	RM 326.82	45901.15	50-yr	2432.42	869.91	864.18	2.26	1.64	31.55	17.24	201.73	890.99	3.04	1.66	5.73	5.73
Yellowstone County	B8	RM 326.78	45830.7	50-yr	2432.42	869.85	864.46	2.33	1.63	28.26	16.22	163.64	804.88	3.23	1.86	5.39	5.39
Yellowstone County	B8	RM 326.70	45707.6	50-yr	2432.42	869.79	864.66	2.01	1.51	19.59	13.09	264.32	880.01	2.76	1.84	5.13	5.13
Yellowstone County	B8	RM 326.64	45589.72	50-yr	2432.42	869.69	864.92	1.69	1.56	47.16	34.51	430.75	907.92	2.35	1.72	4.77	4.77
Yellowstone County	B8	RM 326.55	45430.24	50-yr	2432.42	869.47	864.83	2.04	1.7	23.36	15.09	350.63	765.19	2.9	1.87	4.64	4.64
Yellowstone County	B8	RM 326.45	45281.78	50-yr	2432.42	869.35	864.12	2.05	1.74	24.96	17.23	340.28	694.34	2.92	2.01	5.23	5.23
Yellowstone County	B8	RM 326.41	45207.36	50-yr	2432.42	869.34	864.32	1.69	1.49	16.43	12.02	432.08	850.22	2.82	2.06	5.02	5.02
Yellowstone County	B8	RM 326.35	45106.57	50-yr	2432.42	869.31	864.43	1.49	1.25	12.54	8.78	483.02	1034.75	3.12	2.18	4.88	4.88
Yellowstone County	B8	RM 326.28	45022.31	50-yr	2432.42	869.32	864.61	1.07	0.93	5.89	4.17	548.28	1019.04	3.79	2.68	4.71	4.71
Yellowstone County	B8	RM 326.07	44588.61	50-yr	2432.42	869.11	862.39	1.7	1.45	12.61	8.68	711.45	1290.33	1.89	1.3	6.72	6.72
Yellowstone County	B8	RM 326.00	44481.07	50-yr	2432.42	869.05	861.24	1.63	1.43	11.69	8.38	749.88	1270.8	1.88	1.34	7.81	7.81
Yellowstone County	B8	RM 325.94	44379.11	50-yr	2432.42	868.99	861.85	1.3	1.19	29	22.81	828.24	1292.26	2.02	1.58	7.14	7.14
Yellowstone County	B8	RM 325.89	44304.17	50-yr	2432.42	868.88	863	1.25	1.17	27.89	23.33	845.05	1297.57	2.09	1.74	5.88	5.88
Yellowstone County	B8	RM 325.86	44262.16	50-yr	2432.42	868.84	863.76	1.32	1.18	8.89	7.43	823.53	1140.55	2.16	1.8	5.08	5.08
Yellowstone County	B8	RM 325.81	44176.46	50-yr	2432.42	868.8	863.1	1.29	1.15	8.98	7.82	846.47	1173.73	2.08	1.81	5.7	5.7
Yellowstone County	B8	RM 325.76	44089.5	50-yr	2432.42	868.75	862.66	1.16	1.07	23.06	18.92	851.26	1303.18	2.21	1.81	6.09	6.09
Yellowstone County	B8	RM 325.69	43989.97	50-yr	2432.42	868.68	862.55	1.3	1.02	9.09	5.92	625.32	1417.92	2.7	1.75	6.13	6.13
Yellowstone County	B8	RM 325.58	43809.68	50-yr	2432.42	868.6	862.61	1.28	1.01	24.87	14.66	476.8	1283.6	3.2	1.88	5.99	5.99
Yellowstone County	B8	RM 325.50	43680.96	50-yr	2432.42	868.45	862.6	1.47	1.17	30.05	16.58	434.18	1196.83	3.19	1.74	5.85	5.85
Yellowstone County	B8	RM 325.43	43556.76	50-yr	2432.42	868.33	860.89	1.48	1.18	32.25	17.38	386.89	1123.9	3.43	1.84	7.44	7.44
Yellowstone County	B8	RM 325.37	43461.41	50-yr	2432.42	868.26	861.36	1.39	1.13	27.94	14.84	345.07	1111.66	3.65	1.93	6.9	6.9
Yellowstone County	B8	RM 325.30	43343.13	50-yr	2432.42	868.14	861.56	1.72	1.26	26.31	11.95	266.83	1066.66	4.01	1.81	6.58	6.58
Yellowstone County	B8	RM 325.21	43210.67	50-yr	2432.42	867.98	861.34	2.11	1.46	27.77	11.39	204.41	898.74	4.55	1.85	6.64	6.64
Yellowstone County	B8	RM 325.13	43078.9	50-yr	2432.42	867.83	861.36	2.45	1.59	38.78	13.52	149.46	847.59	5.22	1.8	6.47	6.47
Yellowstone County	B8	RM 325.06	42966.54	50-yr	2432.42	867.44	860.78	3.37	2.16	71.25	21.41	122.98	761.31	4.98	1.48	6.66	6.66
Yellowstone County	B8	RM 324.99	42864.51	50-yr	2432.42	867.37	861.24	2.97	1.87	59.53	21.31	135.3	787.89	4.66	1.65	6.13	6.13
Yellowstone County	B8	RM 324.91	42729.7	50-yr	2432.42	867.16	860.76	3.04	1.92	63.88	21.71	133.01	770	4.87	1.64	6.4	6.4
Yellowstone County	B8	RM 324.81	42573.19	50-yr	2432.42	866.92	860.39	3.07	2.1	68.17	24.33	140.39	686.88	4.75	1.69	6.53	6.53
Yellowstone County	B8	RM 324.73	42451.12	50-yr	2432.42	866.82	861.59	2.74	1.95	48.68	21.47	179.41	688.16	4.12	1.81	5.23	5.23
Yellowstone County	B8	RM 324.65	42323.44	50-yr	2432.42	866.76	861.99	2	1.65	43.03	27.16	300.92	717.68	3.26	2.05	4.77	4.77
Yellowstone County	B8	RM 324.56	42178.25	50-yr	2432.42	866.61	861.76	2	1.6	19.01	15.02	404.18	786.02	2.45	1.94	4.85	4.85
Yellowstone County	B8	RM 324.48	42039.74	50-yr	2432.42	866.47	861.58	1.78	1.53	45.66	33.39	477.36	890.26	2.44	1.78	4.89	4.89
Yellowstone County	B8	RM 324.42	41946.09	50-yr	2432.42	866.36	861.04	1.54	1.3	31	21.01	478.13	949.97	2.91	1.97	5.32	5.32
Yellowstone County	B8	RM 324.34	41812.99	50-yr	2432.42	866.14	861.07	1.83	1.41	49.41	29.45	378.78	1021.6	2.83	1.68	5.07	5.07
Yellowstone County	B8	RM 324.28	41712.42	50-yr	2432.42	865.97	859.64	1.8	1.44	49.22	29.25	364.85	1051.5	2.71	1.61	6.33	6.33
Yellowstone County	B8	RM 324.20	41597.64	50-yr	2432.42	865.89	860.59	1.14	1.06	18.87	14.94	675.53	1060.52	2.74	2.16	5.3	5.3
Yellowstone County	B8	RM 324.16	41526.97	50-yr	2432.42	865.79	861.07	1.51	1.36	13.49	9.85	664.63	1100.57	2.25	1.64	4.72	4.72
Yellowstone County	B8	RM 324.10	41434.55	50-yr	2432.42	865.74	860.81	1.32	1.23	23.66	16.72	690.95	1126.88	2.5	1.76	4.93	4.93
Yellowstone County	B8	RM 324.04	41346.42	50-yr	2432.42	865.68	860.39	1.21	1.12	16.02	11.02	637.89	1186.8	2.67	1.83	5.29	5.29
Yellowstone County	B8	RM 323.97	41219.29	50-yr	2432.42	865.61	860.64	1.15	1.07	14.17	10.23	573.41	1135.43	2.78	2	4.97	4.97
Yellowstone County	B8	RM 323.83	40977.08	50-yr	2432.42	865.49	860.31	1.29	1	11.89	7.19	453.87	1217.43	3.31	1.99	5.18	5.18
Yellowstone County	B8	RM 323.71	40786.71	50-yr	2432.42	865.3	858.49	2.07	1.3	25.99	10.35	221.5	1170.73	4.04	1.6	6.81	6.81
Yellowstone County	B8	RM 323.60	40615.85	50-yr	2432.42	865.3	858.06	1.63	1.12	16.18	6.55	121.97	1098.08	4.94	1.98	7.24	7.24
Yellowstone County	B8	RM 323.55	40536.83	50-yr	2432.42	864.89	857.58	3.3	1.81	68.73	20.03	114.81	1047.95	4.44	1.28	7.31	7.31
Yellowstone County	B8	RM 323.49	40429.96	50-yr	2432.42	864.72	858.37	3.29	1.81	63.84	17.94	119.27	1068.69	4.52	1.26	6.35	6.35
Yellowstone County	B8	RM 323.41	40309.21	50-yr	2432.42	864.59	859.41	2.97	1.78	64.2	20.99	135.74	1030.03	4.08	1.33	5.18	5.18

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	50-yr	2432.42	864.52	859.58	2.45	1.52	33.2	13.93	175.88	1020.06	3.77	1.57	4.94	4.94
Yellowstone County	B8	RM 323.27	40082.34	50-yr	2432.42	864.39	859.66	2.5	1.54	39.05	17.14	188.89	990.3	3.64	1.59	4.73	4.73
Yellowstone County	B8	RM 323.21	39985.33	50-yr	2432.42	864.28	859.54	2.46	1.53	39.43	19.46	211.17	978.5	3.3	1.62	4.74	4.74
Yellowstone County	B8	RM 323.16	39899.29	50-yr	2432.42	864.24	859.55	1.86	1.33	33.68	20.1	276.01	1016.02	3.03	1.8	4.69	4.69
Yellowstone County	B8	RM 323.06	39735.77	50-yr	2432.42	863.99	858.56	1.76	1.49	39.23	20.42	311.52	1390.26	2.73	1.42	5.43	5.43
Yellowstone County	B8	RM 322.93	39531.81	50-yr	2432.42	863.77	859.35	1.66	1.26	26.34	12.93	322.23	1392.25	3	1.46	4.42	4.42
Yellowstone County	B8	RM 322.79	39301.41	50-yr	2432.42	863.54	858.62	2.02	1.32	26.66	12.09	220.82	1280.97	3.57	1.62	4.92	4.92
Yellowstone County	B8	RM 322.69	39142.64	50-yr	2432.42	863.42	857.47	2.18	1.39	23.32	10.66	200.75	1173.56	3.72	1.7	5.95	5.95
Yellowstone County	B8	RM 322.58	38982.22	50-yr	2432.42	862.86	856.56	3.76	2.52	86.32	30.84	116.27	727.89	3.74	1.33	6.3	6.3
Yellowstone County	B9	RM 322.51	38859.49	50-yr	2432.42	862.79	858.28	2.93	2.09	53.27	22.36	163.21	780.33	3.57	1.49	4.51	4.51
Yellowstone County	B9	RM 322.41	38696.02	50-yr	2432.42	862.7	857.62	1.71	1.63	35.6	23.32	457.48	970.27	2.44	1.59	5.08	5.08
Yellowstone County	B9	RM 322.34	38586.33	50-yr	2432.42	862.6	857.65	1.4	1.37	22.67	16.72	589.79	1062.1	2.33	1.71	4.96	4.96
Yellowstone County	B9	RM 322.23	38396.25	50-yr	2432.42	862.47	857.13	1.09	1.1	17.95	14.83	754.33	1141.6	2.36	1.95	5.34	5.34
Yellowstone County	B9	RM 322.13	38239.27	50-yr	2432.42	862.34	857.1	0.97	1.04	19.12	17.22	880.36	1169.69	2.23	2	5.24	5.24
Yellowstone County	B9	RM 322.03	38090.48	50-yr	2432.42	862.11	856.15	1.15	1.25	37.19	36.04	970.67	1135.27	1.77	1.72	5.96	5.96
Yellowstone County	B9	RM 321.91	37898.13	50-yr	2432.42	861.86	856.85	1.54	1.54	11.36	11.36	908.68	908.68	1.74	1.74	5.01	5.01
Yellowstone County	B9	RM 321.82	37758.36	50-yr	2432.42	861.82	856.34	1.32	1.32	7.25	7.18	832.71	841.31	2.21	2.19	5.48	5.48
Yellowstone County	B9	RM 321.70	37567.01	50-yr	2432.42	861.73	855.27	1.2	1.19	21.23	19.98	809.33	880.49	2.48	2.33	6.46	6.46
Yellowstone County	B9	RM 321.60	37414.63	50-yr	2432.42	861.67	854.48	1.01	1	10.1	9.48	755.46	824.99	3.16	2.96	7.19	7.19
Yellowstone County	B9	RM 321.48	37188.51	50-yr	2432.42	861.51	855.03	1.41	1.32	21.84	17.29	546.18	771.36	3.01	2.38	6.49	6.49
Yellowstone County	B9	RM 321.38	37016.94	50-yr	2432.42	861.36	854.75	1.58	1.4	22.83	15.14	471.9	876.87	3.01	1.99	6.61	6.61
Yellowstone County	B9	RM 321.28	36857.57	50-yr	2432.42	861.3	855.3	1.33	1.1	11.63	7.81	459.37	904.16	3.65	2.44	6.01	6.01
Yellowstone County	B9	RM 321.13	36652.19	50-yr	2432.42	861.2	854.69	1.55	1.18	23.1	15.66	274.03	988.5	4.45	2.99	6.51	6.51
Yellowstone County	B9	RM 321.05	36531.25	50-yr	2432.42	860.99	855.36	2.22	1.62	39.04	19.34	190.29	959.92	4.97	2.43	5.63	5.63
Yellowstone County	B9	RM 321.00	36446.98	50-yr	2432.42	860.55	855.12	3.47	2.32	78.34	30.67	129.54	583.92	4.7	1.8	5.43	5.43
Yellowstone County	B9	RM 320.71	36404.1	50-yr	2432.42	860.45	855.12	3.55	2.41	58.53	23.71	132.57	565.14	4.51	1.79	5.33	5.33
Yellowstone County	B9	RM 320.62	36361.3	50-yr	2432.42	860.36	855.12	3.64	2.48	61.55	25.34	135.77	562.72	4.32	1.74	5.24	5.24
Yellowstone County	B9	RM 320.92	36318.56	50-yr	2432.42	860.23	855.12	3.77	2.62	107.96	44.81	139.04	556.82	4.08	1.66	5.11	5.11
Yellowstone County	B9	RM 320.44	36258.3	50-yr	2432.42	860.08	855.19	3.77	2.68	64.55	27.01	144.75	541.97	4.07	1.68	4.89	4.89
Yellowstone County	B9	RM 320.38	36198.1	50-yr	2432.42	860.03	855.26	3.59	2.59	59.15	26.91	150.83	509.28	4.11	1.84	4.77	4.77
Yellowstone County	B9	RM 320.80	36137.92	50-yr	2432.42	859.98	855.33	3.36	2.4	79.26	34.91	156.85	772.15	4.14	1.79	4.65	4.65
Yellowstone County	B9	RM 320.71	35990.21	50-yr	2432.42	860.02	854.38	2.03	1.69	34.98	18.38	275.47	1484.52	4.06	2.12	5.63	5.63
Yellowstone County	B9	RM 320.54	35839.45	50-yr	2432.42	859.89	853.99	2	1.62	28.42	15.19	324.02	1391.18	3.49	1.84	5.9	5.9
Yellowstone County	B9	RM 320.44	35717.45	50-yr	2432.42	859.82	854.32	1.9	1.45	21.34	11.72	334.82	1346.74	3.32	1.81	5.5	5.5
Yellowstone County	B9	RM 320.62	35556.9	50-yr	2432.42	859.73	854.17	1.79	1.32	34.35	16.81	262.61	1537.34	3.51	1.69	5.55	5.55
Yellowstone County	B9	RM 320.38	35461.42	50-yr	2432.42	859.62	854.17	2.01	1.28	27.13	10.42	198.87	1541.43	4.33	1.63	5.45	5.45
Yellowstone County	B9	RM 320.32	35359.13	50-yr	2432.42	859.48	854.57	2.48	1.5	46.93	14.12	140.58	1541.77	4.61	1.35	4.91	4.91
Yellowstone County	B9	RM 320.25	35241.01	50-yr	2432.42	858.96	854.29	3.75	2.2	88.62	23.9	110.85	992.71	4.25	1.11	4.67	4.67
Yellowstone County	B9	RM 320.20	35163.52	50-yr	2432.42	858.86	854.2	3.33	2.17	87.53	29.55	134.5	946.86	3.74	1.23	4.66	4.66
Yellowstone County	B9	RM 320.14	35071.29	50-yr	2432.42	858.67	854.32	3.18	2.16	67.77	26.64	160.87	1348.32	3.5	1.35	4.35	4.35
Yellowstone County	B9	RM 320.01	34865.89	50-yr	2432.42	858.18	854.42	3	2.82	45.47	33.38	122.19	809.51	2.76	2.02	3.83	3.83
Yellowstone County		RM 319.44	34790	50-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	50-yr	2432.42	858.18	854.66	1.65	1.88	18.21	15.14	143.74	786.27	2.9	2.39	4.6	4.6
Yellowstone County	B9	RM 319.86	34625.68	50-yr	2432.42	858.13	854.6	1.58	1.82	21.07	16.33	153.74	971.84	2.78	2.14	4.57	4.57
Yellowstone County	B9	RM 319.78	34508.06	50-yr	2432.42	858.01	854.51	2.36	2	37.92	23.21	111.07	1024.21	3.21	1.94	4.49	4.49
Yellowstone County	B9	RM 319.73	34426.63	50-yr	2432.42	857.65	854.69	3.53	2.03	65.9	44.7	156.77	957.38	2.65	1.79	4.18	4.18
Yellowstone County	B9	RM 319.66	34314.84	50-yr	2432.42	857.64	854.51	2.29	1.84	26.85	19.04	158.66	927.47	2.62	1.85	4.21	4.21
Yellowstone County	B9	RM 319.57	34163.05	50-yr	2432.42	857.51	853.93	2.21	1.84	23.7	16.43	198.21	733.21	2.71	1.87	4.17	4.17
Yellowstone County	B9	RM 319.44	33955.96	50-yr	2432.42	857.41	853.14	2.03	1.76	26.96	17.23	153.57	737.37	3	1.89	4.28	4.28
Yellowstone County	B9	RM 319.39	33872.4	50-yr	2432.42	857.36	852.65	2.17	1.66	23.43	13.44	137.96	857.96	3.15	1.77	4.71	4.71
Yellowstone County	B9	RM 319.34	33786.83	50-yr	2432.42	857.32	852.83	2.03	1.52	19.85	12.43	178.14	819.64	3.14	1.95	4.49	4.49
Yellowstone County	B9	RM 319.22	33580.15	50-yr	2432.42	857.28	851.79	2.07	1.32	18.73	9.22	80.63	889.43	4.35	2.07	5.48	5.48
Yellowstone County	B9	RM 319.17	33497.33	50-yr	2432.42	857.27	851.64	1.62	1.27	13.93	8.03	121.71	1043.89	3.56	2.01	5.62	5.62
Yellowstone County	B9	RM 319.09	33368.53	50-yr	2432.42	857.03	851.25	2.54	1.94	51.64	19.24	135.44	878.29	3.98	1.44	5.78	5.78
Yellowstone County	B9	RM 319.04	33287.21	50-yr	2432.42	856.79	851.49	3.11	2.14	75.88	23.35	112.99	942.58	4.33	1.29	5.3	5.3
Yellowstone County	B9	RM 318.96	33153.16	50-yr	2432.42	856.57	851.64	2.93	2.14	62.93	21.24	156.74	943.91	3.9	1.3	4.93	4.93
Yellowstone County	B9	RM 318.91	33065.54	50-yr	2432.42	856.49	851.86	2.56	2.04	60.5	23.29	189.76	948.02	3.56	1.36	4.63	4.63
Yellowstone County	B9	RM 318.82	32939.33	50-yr	2432.42	856.18	851.86	3.07	2.21	44.46	15.48	160.48	842.34	3.8	1.31	4.32	4.32
Yellowstone County	B9	RM 318.74	32833.24	50-yr	2432.42	856.25	851.86	1.95	1.51	24.8	11.66	184.97	910.92	3.81	1.77	4.4	4.4
Yellowstone County	B9	RM 318.62	32649.76	50-yr	2432.42	856.09	850.67	1.82	1.63	31.71	19.2	316.37	847.72	2.97	1.79	5.43	5.43
Yellowstone County	B9	RM 318.42	32315.28	50-yr	2432.42	855.69	850.15	2.14	1.92	25.88	15.09	347.98	925.45	3.16	1.83	5.54	5.54

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	50-yr	2432.42	855.33	849.17	2.31	1.51	33.87	11.69	211.8	1196.2	4.17	1.42	6.15	6.15
Yellowstone County	B9	RM 317.97	31551.39	50-yr	2432.42	855	848.35	2.51	1.9	27.57	11.96	238.16	829.26	3.82	1.64	6.65	6.65
Yellowstone County	B10	RM 317.87	31388.76	50-yr	2432.42	854.76	848.78	2.98	1.95	46.39	16.24	163.86	871.58	4.2	1.44	5.99	5.99
Yellowstone County	B10	RM 317.78	31248.07	50-yr	2432.42	854.77	848.75	2.38	1.48	29.02	10.23	143.48	1172.03	4.89	1.69	6.02	6.02
Yellowstone County	B10	RM 317.70	31120.75	50-yr	2432.42	854.81	848.56	1.58	1.14	13.32	6.5	172.51	1350.01	4.3	2.06	6.24	6.24
Yellowstone County	B10	RM 317.61	30982.56	50-yr	2432.42	854.71	848.29	1.91	1.3	17.87	8.07	195.11	1421.68	4.04	1.79	6.42	6.42
Yellowstone County	B10	RM 317.53	30849.94	50-yr	2432.42	854.67	848.5	1.57	1.25	13.92	7.26	345.3	1393.55	3.5	1.81	6.17	6.17
Yellowstone County	B10	RM 317.45	30723.4	50-yr	2432.42	854.61	848.47	1.63	1.28	16.23	9.82	369.71	1462.63	3.06	1.84	6.13	6.13
Yellowstone County	B10	RM 317.37	30601.88	50-yr	2432.42	854.56	848.17	1.43	1.18	16.13	11.3	371.24	1406.72	3.04	2.11	6.39	6.39
Yellowstone County	B10	RM 317.30	30483.81	50-yr	2432.42	854.48	848.41	1.67	1.25	14.52	8.68	273.82	1367.79	3.74	2.21	6.07	6.07
Yellowstone County	B10	RM 317.19	30302.33	50-yr	2432.42	854.41	848.84	1.82	1.13	16.48	6.76	161.88	1241.58	5.08	2.04	5.57	5.57
Yellowstone County	B10	RM 317.05	30079.26	50-yr	2432.42	854.11	848.38	2.57	1.96	29.74	11.03	159.02	765.27	5.16	1.88	5.73	5.73
Yellowstone County	B10	RM 316.93	29889.26	50-yr	2432.42	853.79	847.25	3.07	2.45	52.97	27.92	150.51	730.35	4.99	2.58	6.53	6.53
Yellowstone County	B10	RM 316.79	29668.4	50-yr	2432.42	853.61	847.89	2.87	2.14	47.12	17.92	146.89	581.42	5.24	1.96	5.72	5.72
Yellowstone County	B10	RM 316.66	29466.39	50-yr	2432.42	853.41	847.86	2.82	2.23	42.53	20.55	163.28	458.4	4.99	2.38	5.55	5.55
Yellowstone County	B10	RM 316.58	29329.04	50-yr	2432.42	853.31	847.74	2.69	1.94	51.98	25.82	174.62	604.51	4.63	2.28	5.57	5.57
Yellowstone County	B10	RM 316.51	29227.18	50-yr	2432.42	853.15	847.41	2.81	1.99	49.21	24.43	183.91	592.73	4.21	2.06	5.74	5.74
Yellowstone County	B10	RM 316.43	29091.4	50-yr	2432.42	853	847.41	2.54	1.91	52.64	31.88	239.94	603.37	3.52	2.11	5.6	5.6
Yellowstone County	B10	RM 316.33	28935.99	50-yr	2432.42	852.74	847.74	2.47	1.98	57.78	38.72	286.27	598.88	3.08	2.06	5	5
Yellowstone County	B10	RM 316.24	28786.65	50-yr	2432.42	852.53	847.5	2.03	1.83	48.4	34.06	356.21	649.31	2.92	2.05	5.03	5.03
Yellowstone County	B10	RM 316.14	28628.02	50-yr	2432.42	852.3	846.92	2.02	1.7	36.4	23.21	330.46	665.24	3.4	2.15	5.39	5.39
Yellowstone County	B10	RM 316.05	28475.44	50-yr	2432.42	852.03	846.73	2.32	1.9	48.9	25.33	295.19	745.53	3.34	1.72	5.3	5.3
Yellowstone County	B10	RM 315.97	28355.68	50-yr	2432.42	851.91	846.43	2.27	1.83	24.3	14.46	303.08	686.46	3.26	1.93	5.48	5.48
Yellowstone County	B10	RM 315.84	28140.65	50-yr	2432.42	851.56	846.58	2.86	2.15	64.48	27.06	175.29	718.58	3.79	1.57	4.97	4.97
Yellowstone County	B10	RM 315.71	27926.69	50-yr	2432.42	851.28	846.34	2.8	1.92	34.13	14.2	207.16	1018.23	3.32	1.37	4.94	4.94
Yellowstone County	B10	RM 315.58	27720.72	50-yr	2432.42	851.29	846.16	1.65	1.26	22.45	10.76	155.7	1084.87	3.81	1.79	5.14	5.14
Yellowstone County	B10	RM 315.44	27505.06	50-yr	2432.42	851.05	846.09	2.32	1.33	30.32	9.89	152.39	1277.22	4.47	1.43	4.96	4.96
Yellowstone County	B10	RM 315.30	27283.58	50-yr	2432.42	850.98	844.45	1.55	1.06	16.19	8.6	317.48	1435.77	3.05	1.6	6.53	6.53
Yellowstone County	B10	RM 315.18	27097.16	50-yr	2432.42	850.94	844.72	1.25	0.96	8.71	5.63	454.19	1505.71	2.62	1.68	6.22	6.22
Yellowstone County	B10	RM 315.01	26818.99	50-yr	2432.42	850.8	844.66	1.5	1.11	16.99	8.79	477.22	1544.32	2.76	1.42	6.14	6.14
Yellowstone County	B10	RM 314.85	26559.67	50-yr	2432.42	850.51	844.84	2.36	1.4	36.34	9.13	167.45	1532.44	4.64	1.13	5.67	5.67
Yellowstone County	B10	RM 314.69	26324.37	50-yr	2432.42	850.25	844.24	2.61	1.61	40.68	10.34	173.59	1387.81	4.4	1.09	6.02	6.02
Yellowstone County	B10	RM 314.57	26132.54	50-yr	2432.42	849.98	844.63	2.91	1.8	52.36	12.37	147.42	1223.03	4.78	1.11	5.35	5.35
Yellowstone County	B10	RM 314.46	25963.96	50-yr	2432.42	849.88	844.48	2.43	1.59	40.25	11.44	201.48	1308.35	4.17	1.17	5.41	5.41
Yellowstone County	B10	RM 314.35	25782.69	50-yr	2432.42	849.62	844.51	2.42	2.02	61.43	19.63	269.19	1081.66	3.52	1.11	5.11	5.11
Yellowstone County	B10	RM 314.24	25607.48	50-yr	2432.42	849.45	844.14	2.36	1.91	22.1	9.16	288.19	920.83	3.39	1.38	5.3	5.3
Yellowstone County	B10	RM 314.15	25461.23	50-yr	2432.42	849.32	844.05	2.24	1.95	56.61	25.86	306.05	849.7	3.26	1.47	5.26	5.26
Yellowstone County	B10	RM 314.06	25326.45	50-yr	2432.42	849.28	843.63	1.65	1.39	13.19	7.27	455.22	1059.19	3.11	1.7	5.66	5.66
Yellowstone County	B10	RM 313.98	25189.4	50-yr	2432.42	849.23	843.05	1.42	1.21	22.81	15.57	559.69	1074.57	2.77	1.88	6.18	6.18
Yellowstone County	B10	RM 313.83	24942.42	50-yr	2432.42	849.07	843.2	1.42	1.28	15.32	8.9	476.74	963.03	3.43	1.98	5.87	5.87
Yellowstone County	B10	RM 313.72	24768.08	50-yr	2432.42	848.96	842.35	1.66	1.27	16.5	7.66	330.48	1053.3	3.96	1.82	6.62	6.62
Yellowstone County	B10	RM 313.66	24671.51	50-yr	2432.42	848.89	843.14	1.85	1.34	18.27	8.58	286.85	968.34	4.04	1.88	5.75	5.75
Yellowstone County	B10	RM 313.57	24513.04	50-yr	2432.42	848.81	842.47	1.82	1.36	18.77	9.94	303.74	878.67	3.88	2.04	6.35	6.35
Yellowstone County	B10	RM 313.47	24364.02	50-yr	2432.42	848.72	841.55	1.86	1.47	19.21	9.72	283.74	776.26	4.28	2.13	7.17	7.17
Yellowstone County	B10	RM 313.33	24143.26	50-yr	2432.42	848.42	842.65	2.54	1.88	51.59	21.08	187.38	687.68	4.66	1.88	5.77	5.77
Yellowstone County	B10	RM 313.18	23899.74	50-yr	2432.42	847.67	842.19	3.54	2.8	110.75	44.63	165.74	560.84	3.91	1.55	5.48	5.48
Yellowstone County	B10	RM 313.07	23728.15	50-yr	2432.42	847.31	842.62	3.44	2.93	64.41	26.82	163.3	478.12	4.22	1.73	4.69	4.69
Yellowstone County	B10	RM 312.98	23590.93	50-yr	2432.42	847.33	842.5	2.69	2.21	33.13	16.78	198.44	541.66	4.04	2.03	4.84	4.84
Yellowstone County	B10	RM 312.90	23455.11	50-yr	2432.42	847.26	842.38	2.4	2.05	43.56	21.94	203.79	689.46	4.11	2.06	4.88	4.88
Yellowstone County	B10	RM 312.75	23227.05	50-yr	2432.42	847.04	841.71	2.4	1.83	33.34	16.11	224.64	752.01	3.69	1.77	5.34	5.34
Yellowstone County	B10	RM 312.65	23058.61	50-yr	2432.42	846.94	841.61	2.12	1.67	27.76	16.28	273.98	761.82	3.28	1.91	5.33	5.33
Yellowstone County	B10	RM 312.53	22873.59	50-yr	2432.42	846.86	841.37	1.9	1.42	20.41	10.83	238.98	760.09	4.28	2.25	5.49	5.49
Yellowstone County	B10	RM 312.49	22797.96	50-yr	2432.42	846.75	841.34	2.25	1.59	27.65	13.54	204.76	743.99	4.24	2.06	5.41	5.41
Yellowstone County	B10	RM 312.39	22646.67	50-yr	2432.42	846.61	840.85	2.59	1.73	41.64	20.36	151.04	726.59	4.03	1.94	5.76	5.76
Yellowstone County	B10	RM 312.33	22536.68	50-yr	2432.42	846.42	840.82	2.91	1.87	50.43	21.69	139.06	735.59	4.2	1.77	5.6	5.6
Yellowstone County	B10	RM 312.22	22360.55	50-yr	2432.42	846.37	840.91	2.31	1.68	35.06	14.62	128.68	765.84	4.61	1.89	5.45	5.45
Yellowstone County	B10	RM 312.13	22230.65	50-yr	2432.42	846.32	840.94	1.76	1.46	21	13.17	350.72	751.93	3.55	2.22	5.38	5.38
Yellowstone County	B10	RM 312.04	22082.88	50-yr	2432.42	846.18	840.82	1.93	1.59	26.27	15.6	346.94	785.99	3.3	1.95	5.36	5.36
Yellowstone County	B10	RM 311.95	21934.61	50-yr	2432.42	846.04	840.79	2	1.64	26.83	16.01	350.23	921.05	3.29	1.96	5.25	5.25
Yellowstone County	B10	RM 311.89	21840.24	50-yr	2432.42	845.97	840.76	1.94	1.63	29.79	18.56	325.27	898.81	3.64	2.26	5.21	5.21
Yellowstone County	B10	RM 311.77	21651.91	50-yr	2432.42	845.82	840.18	2.06	1.57	27.82	11.21	226.3	899.38	4.74	1.89	5.64	5.64

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	50-yr	2432.42	845.64	839.85	2.59	1.65	41.2	12.91	150.81	1023.1	5.16	1.57	5.79	5.79
Yellowstone County	B10	RM 311.58	21350.77	50-yr	2432.42	845.52	839.63	2.43	1.52	37.21	12.71	171.57	1148.63	4.56	1.53	5.89	5.89
Yellowstone County	B10	RM 311.48	21191.11	50-yr	2432.42	845.44	839.42	2.13	1.37	25.67	9.78	228.87	1196.2	3.94	1.48	6.02	6.02
Yellowstone County	B10	RM 311.37	21010.53	50-yr	2432.42	845.35	839.18	1.8	1.29	21.17	11.82	336.85	1244.91	3.37	1.87	6.17	6.17
Yellowstone County	B10	RM 311.27	20852.82	50-yr	2432.42	845.26	838.96	1.77	1.23	20.94	11.02	322.44	1206.42	3.48	1.81	6.29	6.29
Yellowstone County	B10	RM 311.19	20716.8	50-yr	2432.42	845.19	838.84	1.79	1.15	20.15	8.82	247.96	1172.09	4.39	1.89	6.35	6.35
Yellowstone County	B10	RM 311.09	20559.11	50-yr	2432.42	844.87	839.14	2.86	1.62	45.66	14.53	144.57	1059.15	4.8	1.5	5.72	5.72
Yellowstone County	B10	RM 310.97	20364.78	50-yr	2432.42	844.74	839.45	2.53	1.55	38.52	14.15	172.98	1017.19	4.62	1.67	5.29	5.29
Yellowstone County	B10	RM 310.87	20211.96	50-yr	2432.42	844.62	839.02	2.48	1.59	36.29	13.36	190.23	1038.42	4.43	1.61	5.59	5.59
Yellowstone County	B10	RM 310.76	20019.23	50-yr	2432.42	844.15	839.18	3.35	2.16	60.69	16.33	144.34	948.68	4.53	1.19	4.97	4.97
Yellowstone County	B11	RM 310.67	19877.9	50-yr	2432.42	844.07	839.11	2.79	1.8	60.53	18.58	174.84	1061.16	4.2	1.27	4.96	4.96
Yellowstone County	B11	RM 310.57	19727.96	50-yr	2432.42	843.88	839.08	2.62	1.69	56.82	18.42	195.83	1112.6	4.03	1.29	4.8	4.8
Yellowstone County	B11	RM 310.48	19578.86	50-yr	2432.42	843.72	838.96	2.48	1.56	43.3	15.09	210.22	1143.62	3.94	1.36	4.76	4.76
Yellowstone County	B11	RM 310.39	19437.53	50-yr	2432.42	843.66	838.54	2.13	1.4	20.62	8.42	264.49	1184.77	3.62	1.47	5.12	5.12
Yellowstone County	B11	RM 310.31	19317.45	50-yr	2432.42	843.59	838.23	2.05	1.48	19.21	10.17	356.08	1053.26	2.96	1.56	5.36	5.36
Yellowstone County	B11	RM 310.24	19187.47	50-yr	2432.42	843.53	838.23	1.58	1.31	37.01	23.44	461.89	1059.77	2.78	1.75	5.3	5.3
Yellowstone County	B11	RM 310.16	19069.04	50-yr	2432.42	843.37	837.93	1.48	1.34	35.05	25.95	568.4	942.58	2.6	1.92	5.45	5.45
Yellowstone County	B11	RM 310.09	18955.28	50-yr	2432.42	843.28	837.93	1.56	1.26	11.65	8.54	554.78	1039.73	2.54	1.86	5.35	5.35
Yellowstone County	B11	RM 309.97	18765.62	50-yr	2432.42	843.22	837.59	1.17	1.02	15.4	10.47	601.54	1082.02	3.24	2.19	5.63	5.63
Yellowstone County	B11	RM 309.90	18643.48	50-yr	2432.42	843.14	837.5	1.36	1.16	8.79	6.38	625.24	1076.54	2.7	1.95	5.65	5.65
Yellowstone County	B11	RM 309.82	18525.48	50-yr	2432.42	843.09	837.5	1.24	1.16	24.54	20.12	697.55	1020.72	2.52	2.06	5.59	5.59
Yellowstone County	B11	RM 309.73	18379.74	50-yr	2432.42	842.98	837.35	1.11	1.06	18.42	15.37	802.28	1044.39	2.64	2.2	5.63	5.63
Yellowstone County	B11	RM 309.65	18253.83	50-yr	2432.42	842.92	837.38	0.94	0.91	12.05	10.82	876.43	1023.76	2.9	2.6	5.54	5.54
Yellowstone County	B11	RM 309.52	18029.98	50-yr	2432.42	842.78	836.68	1.12	1.1	17.85	16.71	816.46	899.56	2.63	2.46	6.1	6.1
Yellowstone County	B11	RM 309.39	17824.11	50-yr	2432.42	842.7	836.74	0.96	0.96	10.22	10.15	764.99	770.11	3.32	3.3	5.96	5.96
Yellowstone County	B11	RM 309.22	17557.23	50-yr	2432.42	842.52	836.07	1.6	1.41	14.87	8.89	334.78	662.87	4.38	2.6	6.45	6.45
Yellowstone County	B11	RM 309.06	17331.95	50-yr	2432.42	842.27	835.79	2.26	1.72	55.58	23.39	191.59	683.89	5.01	2.06	6.48	6.48
Yellowstone County	B11	RM 308.94	17142.36	50-yr	2432.42	841.48	835.4	3.86	2.84	92.89	36.07	121.56	490.36	4.63	1.75	6.09	6.09
Yellowstone County	B11	RM 308.83	16971.41	50-yr	2432.42	841.47	836.04	2.74	2.1	51.68	24.15	159.13	518.39	4.85	2.23	5.44	5.44
Yellowstone County	B11	RM 308.71	16778.65	50-yr	2432.42	841.42	835.91	2.14	1.7	20.67	11.71	251.14	620.24	4.1	2.3	5.5	5.5
Yellowstone County	B11	RM 308.62	16631.4	50-yr	2432.42	841.33	835.85	1.93	1.54	48.59	29.31	300.08	745.21	3.53	2.12	5.48	5.48
Yellowstone County	B11	RM 308.55	16518.64	50-yr	2432.42	841.16	835.85	1.88	1.55	46.07	28.38	368.88	845.4	3.02	1.85	5.31	5.31
Yellowstone County	B11	RM 308.43	16328.3	50-yr	2432.42	840.91	834.51	1.64	1.4	39.89	25.75	420.94	918.28	2.96	1.9	6.4	6.4
Yellowstone County	B11	RM 308.35	16192.95	50-yr	2432.42	840.77	834.88	1.58	1.27	25.23	15.38	402.97	972.11	3.26	1.97	5.89	5.89
Yellowstone County	B11	RM 308.24	16015.46	50-yr	2432.42	840.68	834.63	1.52	1.14	14.69	8.94	363.15	958.13	3.69	2.23	6.04	6.04
Yellowstone County	B11	RM 308.12	15826.82	50-yr	2432.42	840.61	834.63	1.43	1.12	12.68	7.97	382.83	915.2	3.79	2.37	5.98	5.98
Yellowstone County	B11	RM 308.02	15675.58	50-yr	2432.42	840.54	834.76	1.59	1.2	12.14	6.25	304.01	868.33	4.57	2.34	5.78	5.78
Yellowstone County	B11	RM 307.88	15434.86	50-yr	2432.42	840.17	834.45	3.07	1.91	57.81	20.65	113.52	768.66	4.79	1.66	5.72	5.72
Yellowstone County	B11	RM 307.77	15261.75	50-yr	2432.42	839.73	834.45	3.49	2.47	85.29	30.9	128.5	669.15	4.17	1.47	5.28	5.28
Yellowstone County	B11	RM 307.68	15125.28	50-yr	2432.42	839.58	834.85	2.92	2.12	56.96	25.04	158.67	629.66	4.21	1.82	4.73	4.73
Yellowstone County	B11	RM 307.60	14980.1	50-yr	2432.42	839.54	834.36	2.09	1.79	24.65	14.06	274.17	591.83	4.05	2.29	5.18	5.18
Yellowstone County	B11	RM 307.52	14873.7	50-yr	2432.42	839.36	834.12	2.49	2.07	37.54	20.8	253.91	589.28	3.63	1.99	5.24	5.24
Yellowstone County	B11	RM 307.46	14779.11	50-yr	2432.42	839.23	833.6	2.4	2.07	67.33	43.42	313.06	609.74	3.01	1.93	5.63	5.63
Yellowstone County	B11	RM 307.39	14664.34	50-yr	2432.42	839.08	833.63	2.35	1.98	22.36	15.68	365.52	659.98	2.66	1.86	5.45	5.45
Yellowstone County	B11	RM 307.30	14517.89	50-yr	2432.42	838.91	833.81	2.17	1.95	57.4	42.32	407.44	694.22	2.44	1.79	5.1	5.1
Yellowstone County	B11	RM 307.22	14385.45	50-yr	2432.42	838.65	833.87	2.11	1.88	44.65	32.1	396.39	695.19	2.59	1.86	4.78	4.78
Yellowstone County	B11	RM 307.14	14262.57	50-yr	2432.42	838.5	833.51	2.01	1.72	32.19	19.88	334.95	727.13	3.16	1.94	4.99	4.99
Yellowstone County	B11	RM 307.08	14166.72	50-yr	2432.42	838.45	833.11	1.85	1.57	19.54	12.14	348.63	752.62	3.33	2.05	5.34	5.34
Yellowstone County	B11	RM 307.01	14050.92	50-yr	2432.42	838.36	832.65	1.91	1.63	17.36	11.61	376.22	765.84	2.93	1.95	5.71	5.71
Yellowstone County	B11	RM 306.95	13949.23	50-yr	2432.42	838.26	832.35	2.09	1.65	26.32	17.58	324.62	757.9	2.94	1.95	5.91	5.91
Yellowstone County	B11	RM 306.90	13869.87	50-yr	2432.42	838.16	832.56	2.14	1.71	30.59	21	350.07	724.76	2.89	1.97	5.6	5.6
Yellowstone County	B11	RM 306.82	13726.64	50-yr	2432.42	838.04	832.62	1.99	1.59	25.88	16.52	361.85	798.22	3.02	1.92	5.42	5.42
Yellowstone County	B11	RM 306.72	13574.53	50-yr	2432.42	837.89	831.8	2.23	1.57	29.85	14.65	222.2	877.29	3.66	1.77	6.09	6.09
Yellowstone County	B11	RM 306.62	13414.11	50-yr	2432.42	837.73	832.77	2.35	1.74	41.99	19.25	215.2	868.09	3.55	1.61	4.95	4.95
Yellowstone County	B11	RM 306.52	13251.36	50-yr	2432.42	837.32	832.87	3.14	2.08	54.53	18.28	152.64	883.32	4.02	1.32	4.45	4.45
Yellowstone County	B11	RM 306.42	13099.73	50-yr	2432.42	836.97	832.74	3.57	2.47	66.82	23.13	135.43	776.5	3.75	1.27	4.23	4.23
Yellowstone County	B11	RM 306.34	12958.96	50-yr	2432.42	836.95	832.84	2.42	1.81	37.45	16.02	236.52	986.47	3.31	1.41	4.12	4.12
Yellowstone County	B11	RM 306.25	12825.95	50-yr	2432.42	836.79	832.35	2.39	1.83	36.25	16.91	312.14	1095.01	2.69	1.24	4.44	4.44
Yellowstone County	B11	RM 306.16	12673.7	50-yr	2432.42	836.59	832.41	2.31	1.8	34.7	16.76	324.33	1065.04	2.65	1.27	4.18	4.18
Yellowstone County	B11	RM 306.11	12592.39	50-yr	2432.42	836.47	832.17	2.33	1.83	45.99	23.03	313.02	1024.89	2.61	1.3	4.31	4.31
Yellowstone County	B11	RM 306.03	12457.47	50-yr	2432.42	836.32	831.25	2.11	1.67	28.77	16.58	366.55	1030.44	2.48	1.41	5.07	5.07

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	50-yr	2432.42	836.11	831.25	2.25	1.89	36.33	19.88	356.55	1014.89	2.33	1.27	4.86	4.86
Yellowstone County	B11	RM 305.84	12159.82	50-yr	2432.42	835.88	831.1	2.37	1.98	36.74	19.13	264.17	834.35	2.85	1.47	4.78	4.78
Yellowstone County	B11	RM 305.74	11989.73	50-yr	2432.42	835.6	830.64	2.6	2.01	48.13	17.8	196.26	905.36	3.68	1.34	4.95	4.95
Yellowstone County	B11	RM 305.67	11883.31	50-yr	2432.42	835.42	830.43	2.86	2.01	48.87	16.47	162.5	970.08	3.77	1.25	4.99	4.99
Yellowstone County	B11	RM 305.60	11764.11	50-yr	2432.42	835.47	830.18	1.64	1.41	15.23	7.74	167.63	1163.14	3.11	1.55	5.28	5.28
Yellowstone County	B11	RM 305.52	11651.48	50-yr	2432.42	835.3	830.18	2.31	1.62	30.29	11.54	151.74	1235.01	3.25	1.21	5.12	5.12
Yellowstone County	B11	RM 305.44	11514.64	50-yr	2432.42	835.24	830.43	1.87	1.33	16.39	7.73	158.15	1160.86	3.4	1.58	4.81	4.81
Yellowstone County	B11	RM 305.40	11441.77	50-yr	2432.42	835.12	830.61	1.96	1.6	16.36	8	239	1317.56	2.7	1.31	4.51	4.51
Yellowstone County	B11	RM 305.32	11312.15	50-yr	2432.42	835.06	830.61	1.91	1.35	22.7	9.15	167.71	1621.52	3.16	1.26	4.45	4.45
Yellowstone County	B11	RM 305.24	11186.22	50-yr	2432.42	835.05	830.43	1.21	0.96	10.13	6.04	156.67	1557.51	3.13	1.84	4.62	4.62
Yellowstone County	B11	RM 305.06	10905.09	50-yr	2432.42	834.98	830.15	1.17	0.91	6.85	5.17	302.98	1344.36	2.78	2.09	4.83	4.83
Yellowstone County	B11	RM 304.71	10460.6	50-yr	2432.42	834.86	828.96	1.31	1.16	11.18	8.67	396.33	1023	2.98	2.3	5.9	5.9
Yellowstone County	B11	RM 304.62	10332.33	50-yr	2432.42	834.83	829.09	1.23	1.07	8.67	5.66	206.74	1060.11	4.33	2.79	5.75	5.75
Yellowstone County	B11	RM 304.50	10132.63	50-yr	2432.42	834.57	829.09	2.43	2.02	48.83	22.39	122.8	772.2	4.76	2.13	5.48	5.48
Yellowstone County	B11	RM 304.42	10011.11	50-yr	2432.42	834.49	829.18	2.11	1.82	36.11	17.21	152.19	784.35	4.49	2.1	5.31	5.31
Yellowstone County	B11	RM 304.34	9873.393	50-yr	2432.42	834.35	828.78	2.13	1.83	22.84	12.64	263.04	754.63	4.13	2.28	5.57	5.57
Yellowstone County	B11	RM 304.25	9735.197	50-yr	2432.42	834.16	828.39	2.51	1.99	41.76	20.16	199.97	575.85	4.52	2.15	5.78	5.78
Yellowstone County	B11	RM 304.18	9615.178	50-yr	2432.42	834.06	828.54	2.5	2.02	28.44	14.52	216.26	625.88	4.27	2.16	5.52	5.52
Yellowstone County	B11	RM 304.09	9478.266	50-yr	2432.42	833.9	828.6	2.68	2.17	44.22	19.26	182.87	886.09	4.68	2.01	5.3	5.3
Yellowstone County	B11	RM 304.00	9326.206	50-yr	2432.42	833.81	828.39	2.46	1.83	39.9	15.95	190.99	994.17	4.77	1.88	5.42	5.42
Yellowstone County	B11	RM 303.91	9177.479	50-yr	2432.42	833.76	828.14	2.07	1.43	31.1	14.08	215.99	1165.47	4.56	2.05	5.62	5.62
Yellowstone County	B11	RM 303.78	8973.508	50-yr	2432.42	833.49	827.93	2.56	1.67	41.21	13.01	164.27	967.9	4.89	1.5	5.56	5.56
Yellowstone County	B11	RM 303.65	8773.522	50-yr	2432.42	833.31	827.9	2.54	1.71	47.74	15.59	170.59	956.97	4.64	1.49	5.41	5.41
Yellowstone County	B11	RM 303.55	8608.195	50-yr	2432.42	833.21	827.65	2.28	1.65	23.67	9.94	248.33	955.49	3.82	1.58	5.55	5.55
Yellowstone County	B11	RM 303.43	8422.329	50-yr	2432.42	833.14	827.87	1.72	1.4	32.42	15.74	329.92	1061.52	3.39	1.63	5.27	5.27
Yellowstone County	B11	RM 303.34	8276.308	50-yr	2432.42	833.08	826.92	1.54	1.18	13.01	6.13	325.32	1086.22	4.06	1.89	6.16	6.16
Yellowstone County	B11	RM 303.26	8138.725	50-yr	2432.42	832.91	826.98	1.99	1.66	43.56	18.78	304.82	958.46	3.59	1.53	5.93	5.93
Yellowstone County	B11	RM 303.18	8018.762	50-yr	2432.42	832.75	826.22	1.99	1.69	47.28	22.12	308.76	882.55	3.52	1.63	6.53	6.53
Yellowstone County	B11	RM 303.09	7876.674	50-yr	2432.42	832.57	825.43	1.92	1.65	42.61	21.64	337.57	875.87	3.35	1.68	7.14	7.14
Yellowstone County	B11	RM 302.99	7711.603	50-yr	2432.42	832.44	826.22	1.64	1.41	28.02	16.94	336.71	806.49	3.57	2.15	6.22	6.22
Yellowstone County	B11	RM 302.89	7556.419	50-yr	2432.42	832.25	825.73	1.92	1.65	35.11	21.03	290.29	640.9	3.87	2.29	6.51	6.51
Yellowstone County	B11	RM 302.81	7423.411	50-yr	2432.42	832.05	825.86	2.26	1.9	42.52	22.14	221.32	564.61	4.42	2.27	6.19	6.19
Yellowstone County	B11	RM 302.70	7257.14	50-yr	2432.42	831.92	826.01	2.29	1.84	28.22	13.22	184.02	538.86	5.29	2.45	5.91	5.91
Yellowstone County	B12	RM 302.56	7050.708	50-yr	2432.42	831.28	825.25	3.43	3.43	64.44	64.44	167.9	481.33	4.31	4.31	6.03	6.03
Yellowstone County		RM 300.55	7034	50-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	50-yr	2432.42	831.19	825.95	3.37	3.36	60.82	58.4	169.07	284.65	4.57	4.38	5.24	5.24
Yellowstone County	B12	RM 302.49	6918.549	50-yr	2432.42	831.09	825.92	3.19	3.01	57.78	42.18	170.36	541.91	4.43	3.22	5.17	5.17
Yellowstone County	B12	RM 302.41	6794.522	50-yr	2432.42	831.03	825.64	2.98	2.58	38.99	23.15	161.6	648.4	4.35	2.56	5.38	5.38
Yellowstone County	B12	RM 302.34	6674.634	50-yr	2432.42	830.92	825.76	2.74	2.31	53.51	32.21	214.42	897.44	3.68	2.2	5.16	5.16
Yellowstone County	B12	RM 302.22	6485.378	50-yr	2432.42	830.84	825.76	2.05	1.69	27.07	17.83	235.89	828.45	3.48	2.27	5.07	5.07
Yellowstone County	B12	RM 302.14	6360.047	50-yr	2432.42	830.6	825.76	2.67	1.95	45.13	20.08	178.16	750.36	3.79	1.67	4.83	4.83
Yellowstone County	B12	RM 302.08	6267.13	50-yr	2432.42	830.52	825.79	2.43	1.96	26.65	13.93	265.5	747.33	3.2	1.66	4.72	4.72
Yellowstone County	B12	RM 301.98	6100.949	50-yr	2432.42	830.45	825.34	2	1.63	26.93	13.23	257.2	795.23	3.85	1.87	5.12	5.12
Yellowstone County	B12	RM 301.88	5944.005	50-yr	2432.42	830.35	824.7	1.94	1.56	22.79	13.22	307.5	795.86	3.44	1.98	5.65	5.65
Yellowstone County	B12	RM 301.79	5801.18	50-yr	2432.42	830.29	824.36	1.79	1.52	15.28	10.48	369.92	728.87	3.21	2.19	5.93	5.93
Yellowstone County	B12	RM 301.72	5685.105	50-yr	2432.42	830.22	824.85	1.86	1.57	21.7	14.24	328.47	707.38	3.36	2.2	5.37	5.37
Yellowstone County	B12	RM 301.65	5569.191	50-yr	2432.42	830.09	824.61	2.07	1.72	29.23	18.43	311.48	712.36	3.17	1.99	5.49	5.49
Yellowstone County	B12	RM 301.59	5465.51	50-yr	2432.42	829.98	824.42	2.11	1.82	32.59	20.07	318.53	713.03	3.06	1.87	5.55	5.55
Yellowstone County	B12	RM 301.53	5366.723	50-yr	2432.42	829.88	824.12	1.9	1.72	36.65	24.42	364.63	724.75	2.94	1.95	5.77	5.77
Yellowstone County	B12	RM 301.47	5270.902	50-yr	2432.42	829.77	824.12	1.92	1.72	36.01	23.53	353.58	717.21	3.03	1.97	5.65	5.65
Yellowstone County	B12	RM 301.39	5140.04	50-yr	2432.42	829.71	824.36	1.54	1.35	20.57	14.46	345.85	748.7	3.52	2.46	5.35	5.35
Yellowstone County	B12	RM 301.33	5044.575	50-yr	2432.42	829.61	824.12	1.76	1.49	19.9	11.41	331	781.78	3.67	2.09	5.5	5.5
Yellowstone County	B12	RM 301.24	4906.408	50-yr	2432.42	829.5	823.87	1.93	1.62	21.75	12.55	313.42	779.71	3.54	2.03	5.63	5.63
Yellowstone County	B12	RM 301.18	4802.631	50-yr	2432.42	829.39	823.17	2.12	1.77	27.11	16.49	313.55	790.58	3.12	1.88	6.22	6.22
Yellowstone County	B12	RM 301.12	4698.913	50-yr	2432.42	829.25	823.81	2.26	1.97	30.24	18.94	308.86	735.23	3.3	2.05	5.43	5.43
Yellowstone County	B12	RM 301.07	4611.142	50-yr	2432.42	829.19	824	2.15	1.83	26.19	14.93	285.58	682.92	3.71	2.1	5.2	5.2
Yellowstone County	B12	RM 301.02	4531.484	50-yr	2432.42	829.11	823.81	2.28	1.93	22.97	12.92	261	600.46	3.82	2.14	5.3	5.3
Yellowstone County	B12	RM 300.97	4453.011	50-yr	2432.42	828.91	823.9	2.83	2.38	34.65	18.2	196.12	489.15	4.01	2.09	5.01	5.01
Yellowstone County	B12	RM 300.89	4332.618	50-yr	2432.42	828.76	823.66	2.9	2.52	54.71	31.41	198.89	448.71	3.76	2.15	5.1	5.1
Yellowstone County	B12	RM 300.83	4232.362	50-yr	2432.42	828.58	823.78	3.06	2.59	58.52	33.16	175.01	452.62	3.69	2.07	4.79	4.79
Yellowstone County	B12	RM 300.77	4151.049	50-yr	2432.42	828.47	823.75	2.87	2.51	58.62	36.29	176.08	411.78	3.84	2.35	4.72	4.72

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	50-yr	2432.42	828.39	823.63	2.44	1.97	28.5	16.33	206.02	626.94	4.02	2.28	4.75	4.75
Yellowstone County	B12	RM 300.55	3793.957	50-yr	2432.42	828.26	822.93	2.05	1.66	29.94	18.39	263.47	746.76	3.42	2.09	5.34	5.34
Yellowstone County	B12	RM 300.45	3633.035	50-yr	2432.42	828.12	822.53	1.66	1.59	33.89	24.27	335.99	730.38	2.94	2.1	5.58	5.58
Yellowstone County	B12	RM 300.35	3461.833	50-yr	2432.42	827.84	822.66	2.16	1.66	20.78	14.19	389.33	823.58	2.6	1.77	5.19	5.19
Yellowstone County	B12	RM 300.24	3286.175	50-yr	2432.42	827.63	822.47	2.06	1.75	51.44	37.13	421.27	779.44	2.47	1.78	5.16	5.16
Yellowstone County	B12	RM 300.15	3141.724	50-yr	2432.42	827.34	822.47	1.96	1.77	46.82	36.64	481.67	731.99	2.41	1.88	4.86	4.86
Yellowstone County	B12	RM 300.10	3054.752	50-yr	2432.42	827.22	822.35	2.05	1.76	17.01	14.04	462.66	737.55	2.28	1.88	4.87	4.87
Yellowstone County	B12	RM 300.00	2887.728	50-yr	2432.42	827.04	821.22	1.92	1.81	48.14	35.61	467.25	843.13	2.4	1.77	5.81	5.81
Yellowstone County	B12	RM 299.91	2736.431	50-yr	2432.42	826.87	821.5	1.9	1.71	23.18	12.68	350.2	1102.24	2.82	1.53	5.37	5.37
Yellowstone County	B12	RM 299.83	2614.069	50-yr	2432.42	826.7	821.41	1.93	1.88	35.26	19.9	388.69	1052.18	2.38	1.33	5.3	5.3
Yellowstone County	B12	RM 299.72	2484.158	50-yr	2432.42	826.52	820.89	1.99	1.74	34.07	16.61	420.05	1050.3	2.82	1.36	5.64	5.64
Yellowstone County	B12	RM 299.59	2312.328	50-yr	2432.42	826.25	821.13	2.55	1.86	34.75	15.59	221.1	996.56	3.39	1.5	5.12	5.12
Yellowstone County	B12	RM 299.48	2160.343	50-yr	2432.42	825.99	821.13	3.07	1.97	42.47	15.41	138.95	969.32	3.96	1.41	4.86	4.86
Yellowstone County	B12	RM 299.38	1995.229	50-yr	2432.42	825.9	821.13	2.48	1.69	58.28	21.66	138.22	1203.43	3.81	1.39	4.77	4.77
Yellowstone County	B12	RM 299.31	1874.433	50-yr	2432.42	825.57	821.22	3.05	2.02	42.14	14.73	147.51	1120.89	3.6	1.24	4.35	4.35
Yellowstone County	B12	RM 299.22	1738.666	50-yr	2432.42	825.4	821.16	3.08	1.84	52.76	16.46	129.2	1146.22	3.87	1.18	4.24	4.24
Yellowstone County	B12	RM 299.15	1613.992	50-yr	2432.42	825.38	820.95	2.34	1.3	29.92	12.42	154.73	1332.85	3.72	1.52	4.43	4.43
Yellowstone County	B12	RM 299.06	1473.748	50-yr	2432.42	825.33	820.64	2.02	1.17	26.97	10.33	116.53	1341.2	4.16	1.55	4.69	4.69
Yellowstone County	B12	RM 298.99	1360.532	50-yr	2432.42	825.26	820.46	1.93	1.25	30.57	11.35	103.35	1352.54	4.07	1.46	4.8	4.8
Yellowstone County	B12	RM 298.93	1269.876	50-yr	2432.42	825.2	820.46	1.88	1.24	30.88	11.87	109.06	1343.18	3.92	1.46	4.74	4.74
Yellowstone County	B12	RM 298.88	1195.725	50-yr	2432.42	825.12	820.43	1.98	1.25	31.18	12.47	119.35	1321.68	3.81	1.48	4.69	4.69
Yellowstone County	B12	RM 298.82	1096.849	50-yr	2432.42	824.93	820.58	2.6	1.44	35.59	14.9	155.45	1270.92	3.23	1.33	4.34	4.34
Yellowstone County	B12	RM 298.77	1018.392	50-yr	2432.42	824.85	820.4	2.32	1.38	32.53	14.18	185.01	1285.96	3.19	1.37	4.45	4.45
Yellowstone County	B12	RM 298.67	854.844	50-yr	2432.42	824.77	819.39	2.09	1.36	19.07	10.5	244.95	1270.46	2.6	1.41	5.38	5.38
Yellowstone County	B12	RM 298.59	724.135	50-yr	2432.42	824.69	819.55	1.72	1.38	21.05	12.5	274.42	1214.74	2.48	1.45	5.15	5.15
Yellowstone County	B12	RM 298.49	579.164	50-yr	2432.42	824.59	819.27	1.91	1.27	17.16	8.48	214.03	1254.82	3.14	1.53	5.31	5.31
Yellowstone County	B12	RM 298.42	469.573	50-yr	2432.42	824.51	819.27	1.97	1.27	27.51	12.07	176.57	1251.03	3.56	1.53	5.24	5.24
Yellowstone County	B12	RM 298.35	368.049	50-yr	2432.42	824.37	819.97	2.35	1.38	30.18	11.06	147.33	1203.03	4.07	1.47	4.39	4.39
Yellowstone County	B12	RM 298.30	290.003	50-yr	2432.42	824.35	819.82	2.02	1.21	19.2	9.52	197.73	1154.21	3.54	1.73	4.53	4.53
Yellowstone County	B12	RM 298.26	211.35	50-yr	2432.42	824.28	819.82	2.03	1.36	24.58	12.97	220.82	1078.76	3.18	1.66	4.46	4.46
Yellowstone County	B12	RM 298.19	83.499	50-yr	2432.42	824.14	819.49	2.29	1.58	24.19	13.05	189.7	923.49	3.12	1.66	4.66	4.66

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	50-yr	2568.3	824	820.43	1.82	1.33	17.29	8.33	197.15	1596.72	3.28	1.56	3.57	3.57
Treasure County	C1	RM 297.89	61639	50-yr	2568.3	823.83	820.07	1.76	1.45	17.05	10.65	362.24	1094.14	2.67	1.66	3.77	3.77
Treasure County	C1	RM 297.76	61392	50-yr	2568.3	823.66	819.93	1.85	1.61	21.66	13.51	331	953.8	2.74	1.7	3.73	3.73
Treasure County	C1	RM 297.62	61179	50-yr	2568.3	823.59	819.69	1.58	1.32	12.74	8.83	290.46	1367.81	2.96	2.04	3.9	3.9
Treasure County	C1	RM 297.5	60985	50-yr	2568.3	823.39	819.39	2.32	1.53	26.97	11.88	159.01	1316.34	3.71	1.62	4	4
Treasure County	C1	RM 297.36	60767	50-yr	2568.3	823.25	819.14	2.18	1.47	24.13	11.32	169.82	1139.32	3.56	1.66	4.11	4.11
Treasure County	C1	RM 297.22	60535	50-yr	2568.3	823.14	819	1.97	1.4	19.58	8.95	149.14	1131.6	3.64	1.64	4.14	4.14
Treasure County	C1	RM 297.08	60314	50-yr	2568.3	823.01	818.76	1.99	1.33	19.65	9.24	194.31	1333.52	3.77	1.75	4.25	4.25
Treasure County	C1	RM 296.94	60093	50-yr	2568.3	822.88	818.42	2.08	1.39	21.55	10.5	177.08	1486.3	3.76	1.81	4.46	4.46
Treasure County	C1	RM 296.79	59847	50-yr	2568.3	822.81	817.97	1.56	1.25	12.2	7.39	246.81	1227.68	3.66	2.2	4.84	4.84
Treasure County	C1	RM 296.64	59608	50-yr	2568.3	822.73	817.9	1.67	1.27	13.68	8.14	177.49	1093.88	3.88	2.28	4.83	4.83
Treasure County	C1	RM 296.51	59386	50-yr	2568.3	822.68	817.8	1.32	1.14	8.7	6.01	477.13	1054.89	3.75	2.59	4.88	4.88
Treasure County	C1	RM 296.33	59113	50-yr	2568.3	822.58	817.52	1.55	1.26	11.24	7.01	335.57	1031.91	4.5	2.79	5.06	5.06
Treasure County	C1	RM 296.16	58839	50-yr	2568.3	821.58	817.46	4.37	3.1	94.11	30.71	137.37	694.48	3.88	1.24	4.12	4.12
Treasure County	C1	RM 296.01	58583	50-yr	2568.3	821.29	817.45	2.82	2.47	41.33	24.25	259.72	639.64	3.36	1.96	3.84	3.84
Treasure County	C1	RM 295.83	58296	50-yr	2568.3	821.14	817.4	1.87	1.86	17.72	17.29	627.05	667.32	2.18	2.13	3.75	3.75
Treasure County	C1	RM 295.66	58032	50-yr	2568.3	820.83	817.27	2.17	2.17	22.85	22.85	555.58	555.67	2.13	2.13	3.56	3.56
Treasure County	C1	RM 295.52	57800	50-yr	2568.3	820.73	816.19	1.58	1.58	12.76	12.76	659.56	659.56	2.46	2.46	4.54	4.54
Treasure County	C1	RM 295.31	57474	50-yr	2568.3	820.61	815.61	1.43	1.36	9.98	8.84	554.61	695.45	3.06	2.71	5	5
Treasure County	C1	RM 295.13	57174	50-yr	2568.3	820.45	815.57	1.76	1.41	16.75	8.96	360.88	962.8	3.56	1.9	4.88	4.88
Treasure County	C1	RM 294.94	56877	50-yr	2568.3	819.97	815.46	2.98	2.18	42.85	14.71	189.73	894.77	3.88	1.32	4.51	4.51
Treasure County	C1	RM 294.76	56587	50-yr	2568.3	819.73	815.45	2.58	1.99	32.53	12.84	257.05	962.47	3.47	1.36	4.27	4.27
Treasure County	C1	RM 294.55	56261	50-yr	2568.3	819.49	815.36	2.47	1.84	30.49	12.18	194.71	969.55	3.68	1.45	4.12	4.12
Treasure County	C1	RM 294.38	55980	50-yr	2568.3	819.3	815.07	2.19	1.72	25.24	10.55	227.09	1145.67	3.18	1.32	4.23	4.23
Treasure County	C1	RM 294.21	55714	50-yr	2568.3	819.01	814.88	2.57	1.68	33.27	9.2	201.2	1562.92	3.63	0.99	4.13	4.13
Treasure County	C1	RM 294.02	55401	50-yr	2568.3	818.79	814.59	2.32	1.59	25.84	8.68	231.94	1597.3	3.09	1.03	4.2	4.2
Treasure County	C1	RM 293.83	55100	50-yr	2568.3	818.62	814.3	2	1.35	19.04	7	274.8	1777.17	2.96	1.08	4.32	4.32
Treasure County	C1	RM 293.63	54777	50-yr	2568.3	818.47	813.55	1.81	1.21	14.89	4.37	329.58	1883.06	3.91	1.14	4.92	4.92
Treasure County	C1	RM 293.43	54432	50-yr	2568.3	818.17	813.29	2.51	1.31	30.16	7.43	202.13	1935.24	4.19	1.02	4.88	4.88
Treasure County	C1	RM 293.26	54152	50-yr	2568.3	818.03	813.24	2.31	1.13	25	9.08	247.33	1913.85	3.3	1.19	4.79	4.79
Treasure County	C1	RM 293.07	53839	50-yr	2568.3	817.85	813.24	2.16	0.99	24.17	9.48	241.79	2135.99	3.32	1.29	4.61	4.61
Treasure County	C1	RM 292.83	53458	50-yr	2568.3	817.77	813.1	1.39	0.83	10.26	4.4	380.97	2382.28	3.36	1.44	4.67	4.67
Treasure County	C1	RM 292.6	53082	50-yr	2568.3	817.55	812.6	2	1.21	19.04	4.81	238.91	2161.97	4.28	1.08	4.95	4.95
Treasure County	C2	RM 292.32	52612	50-yr	2568.3	817.38	811.76	2.05	1.11	18.74	5.5	207.17	1816.67	4.38	1.27	5.62	5.62
Treasure County	C2	RM 292.09	52256	50-yr	2568.3	817.25	811.6	2.11	1.27	19.56	5.97	174.28	1457.63	4.62	1.38	5.65	5.65
Treasure County	C2	RM 291.9	51956	50-yr	2568.3	817.14	811.55	1.92	1.24	17.98	7.3	240.72	1312.3	3.94	1.58	5.59	5.59
Treasure County	C2	RM 291.71	51639	50-yr	2568.3	816.51	811.5	3.11	2.35	71.68	34.32	244.31	772.7	2.98	1.41	5.01	5.01
Treasure County	C2	RM 291.52	51333	50-yr	2568.3	816.29	811.46	2.4	1.61	27.35	10.67	214.15	1005.08	4.27	1.65	4.83	4.83
Treasure County	C2	RM 291.33	51042	50-yr	2568.3	816.04	811.46	2.5	1.88	31.17	12.17	232.04	941.69	3.76	1.45	4.59	4.59
Treasure County	C2	RM 291.15	50747	50-yr	2568.3	816	811.4	1.7	1.39	13.86	7.22	297.47	869.41	4.21	2.18	4.6	4.6
Treasure County	C2	RM 290.94	50437	50-yr	2568.3	815.84	811.31	1.96	1.34	19.22	10.39	259.99	972.74	3.66	1.96	4.53	4.53
Treasure County	C2	RM 290.78	50179	50-yr	2568.3	815.72	810.97	1.66	1.26	14	9.4	393.13	962.68	3.17	2.12	4.76	4.76
Treasure County	C2	RM 290.6	49891	50-yr	2568.3	815.64	810.54	1.41	1.27	9.94	7.9	473.72	685.07	3.73	2.96	5.1	5.1
Treasure County	C2	RM 290.43	49607	50-yr	2568.3	815.41	810.13	2.13	1.74	22.23	13.91	273.61	677.37	3.78	2.35	5.28	5.28
Treasure County	C2	RM 290.23	49287	50-yr	2568.3	814.77	810.07	3.39	2.49	54.39	21.61	154.05	610.41	4.39	1.72	4.7	4.7
Treasure County	C2	RM 290.04	48976	50-yr	2568.3	814.66	810.04	2.4	1.88	27.2	11.93	209.93	937.72	4.44	1.93	4.62	4.62
Treasure County	C2	RM 289.85	48667	50-yr	2568.3	814.55	809.87	1.84	1.5	17.33	8.75	359.02	1309.71	3.36	1.69	4.68	4.68
Treasure County	C2	RM 289.67	48372	50-yr	2568.3	814.38	809.87	1.82	1.47	17.15	7.82	397.84	1487.45	3.25	1.47	4.51	4.51
Treasure County	C2	RM 289.46	48067	50-yr	2568.3	814.29	809.56	1.53	1.18	10.82	5.56	411.53	1205.75	3.53	1.8	4.72	4.72
Treasure County	C2	RM 289.27	47769	50-yr	2568.3	814.05	809.32	2.07	1.56	21.92	9.72	320.68	1079.07	3.46	1.53	4.74	4.74
Treasure County	C2	RM 289.11	47515	50-yr	2568.3	813.88	809	2.19	1.54	22.41	8.27	228.59	1007.88	4.51	1.65	4.88	4.88
Treasure County	C2	RM 288.94	47232	50-yr	2568.3	813.63	808.59	2.56	1.68	30.3	9.76	186.59	1018.97	4.73	1.5	5.05	5.05
Treasure County	C2	RM 288.76	46939	50-yr	2568.3	813.5	808.33	2.26	1.37	24.29	9.8	217.33	1099.96	4.34	1.73	5.17	5.17
Treasure County	C2	RM 288.55	46613	50-yr	2568.3	813.11	808.24	2.78	1.92	38.88	13.8	224.04	1046.44	3.66	1.28	4.87	4.87
Treasure County	C2	RM 288.36	46302	50-yr	2568.3	813.01	807.91	2.13	1.46	20.58	6.18	219.5	1204.56	4.93	1.46	5.1	5.1
Treasure County	C2	RM 288.18	46008	50-yr	2568.3	812.86	807.77	2.19	1.51	23	8.23	246.26	1604.01	4.02	1.42	5.09	5.09
Treasure County	C2	RM 287.99	45713	50-yr	2568.3	812.73	807.58	2.02	1.41	18.92	7.55	241.63	1801.71	4.04	1.6	5.15	5.15
Treasure County	C2	RM 287.81	45421	50-yr	2568.3	812.61	807.25	1.92	1.44	17.58	7.65	229.88	1334	4.28	1.85	5.36	5.36
Treasure County	C2	RM 287.62	45112	50-yr	2568.3	812.25	807.19	2.91	1.83	39.42	12.91	138.03	935.13	4.67	1.5	5.06	5.06
Treasure County	C2	RM 287.42	44789	50-yr	2568.3	811.92	807.15	2.99	1.93	42.36	14.96	159.71	902.6	4.34	1.51	4.77	4.77

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	50-yr	2568.3	811.85	806.81	1.79	1.55	16.8	10.37	420.05	1091.44	3.2	1.97	5.04	5.04
Treasure County	C2	RM 287.06	44222	50-yr	2568.3	811.75	806.77	1.54	1.36	13.03	6.33	515.12	1781.44	3.06	1.48	4.98	4.98
Treasure County	C2	RM 286.9	43958	50-yr	2568.3	811.56	806.52	1.98	1.5	18.55	4.9	277.39	1729.68	4.29	1.12	5.04	5.04
Treasure County	C2	RM 286.72	43671	50-yr	2568.3	811.16	802.22	2.99	1.84	37.61	6.98	122.22	1447.01	6.3	1.13	8.94	8.94
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	50-yr	2568.3	811.06	802.22	3.16	2.15	42.42	7.81	122.3	1340.09	6.13	1.09	8.85	8.85
Treasure County	C3	RM 286.58	43448	50-yr	2568.3	810.97	806.32	2.89	1.9	39.44	13.34	176.07	1472.83	4.38	1.46	4.65	4.65
Treasure County	C3	RM 286.51	43344	50-yr	2568.3	810.89	806.32	2.71	2.12	35.27	15.62	206.15	1528.43	4.2	1.84	4.58	4.58
Treasure County	C3	RM 286.46	43257	50-yr	2568.3	810.82	804.36	2.7	2.18	34.37	17.29	196.04	1200	4.46	2.22	6.46	6.46
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	50-yr	2568.3	810.66	804.36	2.9	2.37	40.2	19.72	202.47	1291.34	4.25	2.07	6.3	6.3
Treasure County	C3	RM 286.37	43117	50-yr	2568.3	810.61	806.17	2.6	2.07	34.19	16.07	309.67	1484.3	3.58	1.67	4.44	4.44
Treasure County	C3	RM 286.26	42931	50-yr	2568.3	810.35	806.17	2.75	1.9	69.33	22.54	219.21	1792.12	3.28	1.05	4.18	4.18
Treasure County	C3	RM 286.06	42624	50-yr	2568.3	810.14	806.08	1.92	1.2	18.83	6.25	354.48	2048.08	3.2	1.05	4.06	4.06
Treasure County	C3	RM 285.81	42213	50-yr	2568.3	809.91	805.78	1.9	1.05	16.8	6.64	221.81	2856.6	2.6	1.01	4.13	4.13
Treasure County	C3	RM 285.56	41812	50-yr	2568.3	809.72	805.34	1.77	0.94	15.12	3.73	237.24	3106.64	4.12	1.01	4.38	4.38
Treasure County	C3	RM 285.23	41280	50-yr	2568.3	809.49	805.17	2.01	0.92	20.84	5.67	152.4	3353.06	3.4	0.91	4.33	4.33
Treasure County	C3	RM 284.69	40395	50-yr	2568.3	809.01	804.85	2.52	1.39	34.74	8.92	159.53	2564.2	2.86	0.72	4.16	4.16
Treasure County	C3	RM 284.26	39705	50-yr	2568.3	808.62	804.6	1.89	1.39	19.22	5.84	348.37	2018.48	3.04	0.92	4.02	4.02
Treasure County	C3	RM 283.96	39199	50-yr	2568.3	808.32	804.3	2.07	1.31	22.38	6.93	244.91	2517.05	3.23	0.99	4.02	4.02
Treasure County	C3	RM 283.69	38766	50-yr	2568.3	808.12	803.9	1.96	1.1	18.97	4.88	189.27	2719.34	3.85	0.97	4.22	4.22
Treasure County	C3	RM 283.35	38229	50-yr	2568.3	807.94	803.42	1.66	0.97	14.01	5.27	285.52	2360.86	3.35	1.24	4.52	4.52
Treasure County	C3	RM 283.05	37749	50-yr	2568.3	807.61	803.32	2.34	1.24	27.79	7.33	194.02	2434.37	3.5	0.91	4.29	4.29
Treasure County	C3	RM 282.78	37306	50-yr	2568.3	807.36	803.11	1.97	1.08	18.66	5.7	257.25	2767.2	3.09	0.93	4.25	4.25
Treasure County	C3	RM 282.56	36942	50-yr	2568.3	807.25	802.83	1.46	0.83	11.22	3.83	281.44	3169.96	3.05	1.03	4.42	4.42
Treasure County	C3	RM 282.31	36546	50-yr	2568.3	807.12	802.74	1.64	0.76	13.26	3.88	187.32	3074.2	3.96	1.13	4.39	4.39
Treasure County	C3	RM 282.09	36195	50-yr	2568.3	806.92	802.56	2.23	1.07	25.82	8.5	181.69	2777.96	3.32	1.08	4.36	4.36
Treasure County	C4	RM 281.73	35619	50-yr	2568.3	806.65	801.74	1.78	1.18	14.94	5.89	426.96	2524.55	2.78	1.09	4.91	4.91
Treasure County	C4	RM 281.35	35005	50-yr	2568.3	806.47	801.53	1.53	0.96	11.08	3.32	316.27	2550.79	4.42	1.31	4.94	4.94
Treasure County	C4	RM 281.03	34521	50-yr	2568.3	806.23	801.19	2.1	1.13	21.26	6.15	228.85	2433.38	4.16	1.19	5.04	5.04
Treasure County	C4	RM 280.73	34051	50-yr	2568.3	806.11	800.82	1.36	0.98	9.09	5.45	693.36	2433.38	2.27	1.36	5.29	5.29
Treasure County	C4	RM 280.5	33687	50-yr	2568.3	806	800.66	1.21	0.91	7.97	5.09	756.46	2332.55	2.33	1.48	5.34	5.34
Treasure County	C4	RM 280.27	33304	50-yr	2568.3	805.91	800.31	1.08	0.83	6.87	4.58	759.73	2206.9	2.62	1.74	5.59	5.59
Treasure County	C4	RM 279.95	32800	50-yr	2568.3	805.79	800.08	1.16	0.78	7.7	4.15	503.81	2338.27	3.5	1.87	5.71	5.71
Treasure County	C4	RM 279.6	32231	50-yr	2568.3	805.45	799.98	2.15	1.25	21.52	10.78	304.47	1321.16	3.18	1.58	5.47	5.47
Treasure County	C4	RM 279.33	31805	50-yr	2568.3	804.87	799.98	2.88	1.99	40.98	16.96	244.79	1057.77	3.33	1.36	4.89	4.89
Treasure County	C4	RM 279.14	31495	50-yr	2568.3	804.72	799.96	2.27	1.53	23.88	9.95	238.29	1490.62	3.95	1.63	4.76	4.76
Treasure County	C4	RM 278.96	31209	50-yr	2568.3	804.66	799.87	1.65	1.3	13.81	6.26	367.55	1868.03	3.86	1.74	4.79	4.79
Treasure County	C4	RM 278.76	30894	50-yr	2568.3	804.52	799.6	1.71	1.36	14.44	6.99	423.61	1954.71	3.16	1.52	4.92	4.92
Treasure County	C4	RM 278.56	30571	50-yr	2568.3	804.33	799.53	1.92	1.34	18.99	7.35	336.63	2265.17	3.41	1.31	4.8	4.8
Treasure County	C4	RM 278.37	30259	50-yr	2568.3	804.24	799.26	1.55	1.16	11.57	4.04	369.33	2114.02	4.12	1.42	4.98	4.98
Treasure County	C5	RM 278.16	29915	50-yr	2568.3	803.89	798.81	2.56	1.67	31.4	7.12	207.39	1889.18	4.36	0.98	5.07	5.07
Treasure County	C5	RM 277.99	29648	50-yr	2568.3	803.54	798.77	2.96	2.08	42.4	9.1	189.71	1526.08	4.25	0.9	4.76	4.76
Treasure County	C5	RM 277.8	29336	50-yr	2568.3	803.31	798.74	2.65	1.94	33.56	8.42	212.34	1296.32	4.25	1.06	4.57	4.57
Treasure County	C5	RM 277.61	29041	50-yr	2568.3	803.08	798.72	2.63	1.92	33.2	9	216.71	1349.98	4.18	1.12	4.36	4.36
Treasure County	C5	RM 277.43	28747	50-yr	2568.3	802.95	798.48	2.11	1.61	22.26	7.93	306.39	1367.09	3.69	1.3	4.47	4.47
Treasure County	C5	RM 277.22	28415	50-yr	2568.3	802.68	798.47	2.18	1.89	22.28	10.38	424.41	1147.17	2.7	1.25	4.22	4.22
Treasure County	C5	RM 277.04	28123	50-yr	2568.3	802.49	798.4	2	1.72	17.42	10.81	459.83	909.07	2.7	1.67	4.09	4.09
Treasure County	C5	RM 276.81	27791	50-yr	2568.3	802.39	797.8	1.6	1.29	12.58	5.88	376.57	1104.97	3.92	1.83	4.59	4.59
Treasure County	C5	RM 276.63	27499	50-yr	2568.3	802.15	797.4	2.29	1.55	25.58	8.92	234.28	1214.39	3.99	1.38	4.75	4.75
Treasure County	C5	RM 276.4	27133	50-yr	2568.3	801.93	797.1	2.24	1.51	24.12	9.1	239.33	1127.47	4.07	1.52	4.83	4.83
Treasure County	C5	RM 276.19	26801	50-yr	2568.3	801.75	796.87	2.27	1.6	24.88	9.86	189.04	998.1	4.15	1.62	4.88	4.88
Treasure County	C5	RM 276.01	26502	50-yr	2568.3	801.55	796.74	2.42	1.63	27.67	8.39	158.58	1198.6	4.47	1.33	4.81	4.81
Treasure County	C5	RM 275.81	26193	50-yr	2568.3	801.44	796.61	2.04	1.38	19.73	5.9	179.56	1506.18	4.28	1.26	4.83	4.83
Treasure County	C5	RM 275.63	25896	50-yr	2568.3	801.29	796.49	2.27	1.35	24.24	7.04	134.65	1485.97	4.54	1.29	4.79	4.79
Treasure County	C5	RM 275.45	25606	50-yr	2568.3	801.21	796.37	1.77	1.28	15.09	5.48	153.92	1372.52	4.13	1.48	4.84	4.84
Treasure County	C5	RM 275.26	25299	50-yr	2568.3	800.99	796.16	2.04	1.6	19.43	7.73	251.91	934.75	4.59	1.81	4.82	4.82
Treasure County	C5	RM 275.09	25033	50-yr	2568.3	800.68	796.13	2.67	2.12	33.6	14.5	199.32	851.36	4.41	1.88	4.55	4.55
Treasure County	C6	RM 274.89	24716	50-yr	2568.3	800.52	796.04	2.32	1.54	26.12	11.39	228.5	1899.43	4.07	1.76	4.48	4.48
Treasure County	C6	RM 274.72	24440	50-yr	2568.3	799.81	796.04	3.54	2.73	66.24	29.41	214.5	1393.59	3.12	1.37	3.77	3.77

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	50-yr	2568.3	799.72	795.79	2.07	1.43	24.79	10.08	294.37	2616.32	2.8	1.13	3.93	3.93
Treasure County	C6	RM 274.38	23892	50-yr	2568.3	799.54	795.55	1.95	1.25	19.81	6.23	229.3	2942.08	3.3	1.03	3.99	3.99
Treasure County	C6	RM 274.13	23491	50-yr	2568.3	799.34	795.16	2.06	1.3	22.89	7.74	224.37	2943.81	2.91	0.97	4.18	4.18
Treasure County	C6	RM 273.83	22999	50-yr	2568.3	799.15	794.46	1.86	1.07	16.96	4.23	184.4	3451.76	3.88	0.95	4.68	4.68
Treasure County	C6	RM 273.58	22595	50-yr	2568.3	798.86	794.04	2.39	1.19	26.17	5.65	178.89	3530.49	3.57	0.76	4.83	4.83
Treasure County	C6	RM 273.35	22238	50-yr	2568.3	798.66	794.04	2.04	1.01	20.09	6.62	230.93	3664.02	2.86	0.93	4.62	4.62
Treasure County	C6	RM 273.15	21916	50-yr	2568.3	798.53	793.92	1.7	0.9	14.65	5.45	266.7	3733.05	2.88	1.06	4.61	4.61
Treasure County	C6	RM 272.83	21397	50-yr	2568.3	798.39	793.79	1.55	0.82	11.12	3.8	263.82	3932.07	3.32	1.12	4.6	4.6
Treasure County	C6	RM 272.5	20872	50-yr	2568.3	798.16	793.46	2.06	0.98	22.61	7.32	229.86	3915.27	2.97	0.95	4.71	4.71
Treasure County	C6	RM 272.19	20368	50-yr	2568.3	797.82	793.34	2.21	1.1	23.63	6.67	247.4	3520.09	3.49	0.98	4.49	4.49
Treasure County	C6	RM 271.91	19902	50-yr	2568.3	797.61	793.18	2.1	1.16	21.75	5.84	227.32	3526.21	3.87	1.03	4.43	4.43
Treasure County	C6	RM 271.68	19534	50-yr	2568.3	797.25	792.81	2.7	1.63	36.69	8.85	192.12	2924.42	3.61	0.86	4.44	4.44
Treasure County	C6	RM 271.41	19102	50-yr	2568.3	797.21	792.54	1.42	0.94	10.47	4.61	302.07	2967.47	3.35	1.46	4.67	4.67
Treasure County	C6	RM 271.06	18548	50-yr	2568.3	796.73	792.18	2.84	1.85	41.4	11.54	172.42	2052.46	3.47	0.95	4.56	4.56
Treasure County	C6	RM 270.64	17870	50-yr	2568.3	796.54	792.05	1.62	0.99	13.69	4.75	234.57	2790.04	3.2	1.1	4.49	4.49
Treasure County	C6	RM 270.05	16897	50-yr	2568.3	796.25	791.48	2	0.96	18.09	5.84	174.33	2715.73	3.63	1.15	4.77	4.77
Treasure County	C6	RM 269.75	16413	50-yr	2568.3	795.9	791.35	2.36	1.28	27.89	8.09	224.16	2518.35	3.65	1.05	4.55	4.55
Treasure County	C6	RM 269.47	15967	50-yr	2568.3	795.53	791.23	2.58	1.81	32.83	7.84	209.38	2356.83	3.86	0.91	4.29	4.29
Treasure County	C7	RM 269.27	15645	50-yr	2568.3	795.41	791.23	1.98	1.41	19.37	6.53	279.64	2409.29	3.58	1.2	4.18	4.18
Treasure County	C7	RM 269.06	15308	50-yr	2568.3	795.3	791.01	1.56	1.06	12.68	4.31	197.37	2723.38	3.3	1.1	4.29	4.29
Treasure County	C7	RM 268.83	14957	50-yr	2568.3	795.23	790.6	1.06	0.77	6	2.56	267.05	2948.39	3.04	1.28	4.63	4.63
Treasure County	C7	RM 268.55	14516	50-yr	2568.3	795.11	790.17	1.42	0.82	9.86	3.25	224.66	2852.74	4	1.3	4.94	4.94
Treasure County	C7	RM 268.2	13976	50-yr	2568.3	794.87	789.62	2.02	0.96	19.87	5.53	234.34	2950.3	4.05	1.11	5.24	5.24
Treasure County	C7	RM 267.87	13439	50-yr	2568.3	794.48	789.53	2.46	1.13	27.46	7.76	227.32	2628.56	3.73	1.04	4.95	4.95
Treasure County	C7	RM 267.53	12884	50-yr	2568.3	793.85	789.5	2.91	1.53	43.14	12.62	242.41	1954.39	3.02	0.87	4.35	4.35
Treasure County	C7	RM 267.14	12253	50-yr	2568.3	793.65	789.26	1.82	1.06	16.33	5.47	227.28	2131.77	3.46	1.15	4.39	4.39
Treasure County	C7	RM 266.8	11700	50-yr	2568.3	793.47	789.2	1.88	1.1	18.05	5.28	214.75	2308.51	3.52	1.01	4.27	4.27
Treasure County	C7	RM 266.41	11078	50-yr	2568.3	793.24	789.14	2.13	1.11	24.01	7.45	159.5	2396.89	3.17	0.97	4.11	4.11
Treasure County	C7	RM 266.11	10593	50-yr	2568.3	793.02	788.83	1.95	1.16	20.26	6.81	259.43	2184.45	3.06	1.02	4.19	4.19
Treasure County	C7	RM 265.92	10283	50-yr	2568.3	792.91	788.65	1.67	1.11	13.18	5.7	341.48	2138.62	2.52	1.08	4.26	4.26
Treasure County	C7	RM 265.68	9915	50-yr	2568.3	792.63	788.21	2.33	1.54	26.04	6.97	180	1497.4	4.22	1.11	4.42	4.42
Treasure County	C7	RM 265.52	9650	50-yr	2568.3	792.49	788.07	2.31	1.41	27.22	8.03	161.95	1814.42	3.49	1.01	4.42	4.42
Treasure County	C7	RM 265.34	9362	50-yr	2568.3	792.26	788.07	2.23	1.42	26.43	9.29	179.19	1733.64	3.06	1.06	4.19	4.19
Treasure County	C7	RM 265.16	9071	50-yr	2568.3	792.07	787.95	1.81	1.39	19.53	8.3	297.09	1638.66	2.69	1.13	4.12	4.12
Treasure County	C7	RM 264.98	8775	50-yr	2568.3	791.87	787.59	1.87	1.43	15.49	9.04	459.03	1787.77	1.77	1.03	4.29	4.29
Treasure County	C7	RM 264.81	8508	50-yr	2568.3	791.78	787.35	1.19	1.05	11.17	7.08	661.27	1990.05	2.08	1.32	4.43	4.43
Treasure County	C7	RM 264.64	8216	50-yr	2568.3	791.66	787.22	1.26	1.08	10.85	6.61	652.12	1930.19	2.11	1.28	4.44	4.44
Treasure County	C7	RM 264.39	7803	50-yr	2568.3	791.42	786.86	1.75	1.33	18.06	6.48	343.32	1934.18	2.82	1	4.57	4.57
Treasure County	C7	RM 264.15	7406	50-yr	2568.3	791.32	786.6	1.42	1.03	10.7	5.26	202.21	1739.6	2.97	1.44	4.72	4.72
Treasure County	C7	RM 263.97	7116	50-yr	2568.3	791.2	786.49	1.71	1.21	13.87	4.48	179.44	1603.13	4.32	1.37	4.71	4.71
Treasure County	C7	RM 263.79	6834	50-yr	2568.3	791.02	786.49	2.16	1.33	22.61	8.05	204.2	1713.18	3.36	1.18	4.53	4.53
Treasure County	C7	RM 263.6	6534	50-yr	2568.3	790.85	786.37	2.01	1.26	20.12	8.41	206.17	1512.54	3.72	1.54	4.48	4.48
Treasure County	C7	RM 263.39	6194	50-yr	2568.3	790.7	786.25	1.58	1.25	12.69	5.6	459.15	1684.49	3.14	1.38	4.45	4.45
Treasure County	C7	RM 263.19	5862	50-yr	2568.3	790.48	786	1.94	1.15	20.43	8.04	333.53	1979.21	2.9	1.13	4.48	4.48
Treasure County	C7	RM 262.95	5479	50-yr	2568.3	790.2	785.85	1.96	1.36	16.36	6.54	414.9	1750.89	2.71	1.08	4.35	4.35
Treasure County	C7	RM 262.78	5206	50-yr	2568.3	790.1	785.76	1.58	1.01	13.68	6.13	440.96	2198.97	2.59	1.15	4.34	4.34
Treasure County	C7	RM 262.58	4883	50-yr	2568.3	789.99	785.64	1.21	0.83	9.38	5.32	621.05	2237.24	2.64	1.49	4.35	4.35
Treasure County	C7	RM 262.42	4613	50-yr	2568.3	789.93	785.54	1.08	0.75	6.73	3.88	655.56	2250.45	2.74	1.57	4.39	4.39
Treasure County	C7	RM 262.24	4323	50-yr	2568.3	789.87	785.43	0.98	0.79	5.49	3.35	839.62	2066.63	2.89	1.76	4.44	4.44
Treasure County	C7	RM 261.95	3917	50-yr	2568.3	789.74	785.28	1.25	1.01	8.88	5.45	654.59	1655.4	2.96	1.81	4.46	4.46
Treasure County	C7	RM 261.7	3519	50-yr	2568.3	789.51	784.87	1.41	1.35	29.18	14.49	605.89	1380.82	2.97	1.47	4.64	4.64
Treasure County	C7	RM 261.53	3256	50-yr	2568.3	789.19	784.51	1.54	1.44	34.07	20.63	623.93	1203.85	2.56	1.54	4.68	4.68
Treasure County	C7	RM 261.35	2959	50-yr	2568.3	789.07	784.33	1.25	1.16	7.86	4.75	580.98	1135.32	3.45	2.07	4.74	4.74
Treasure County	C7	RM 261.2	2720	50-yr	2568.3	788.95	784.14	1.42	1.34	27.28	17.54	545.92	1115.3	3.2	2.05	4.81	4.81
Treasure County	C7	RM 261.03	2441	50-yr	2568.3	788.83	783.66	1.46	1.24	10.3	4.54	401.64	1193.42	4.26	1.86	5.17	5.17
Treasure County	C7	RM 260.84	2142	50-yr	2568.3	788.7	783.41	1.69	1.32	13.76	5.46	341.22	1227.24	4.26	1.68	5.29	5.29
Treasure County	C7	RM 260.66	1863	50-yr	2568.3	788.62	783.29	1.63	1.18	12.65	5.88	351.21	1215.1	3.99	1.84	5.33	5.33
Treasure County	C8	RM 259.9	634	50-yr	2568.3	787.47	782.46	3.42	2.44	54.59	23.96	151.91	565.38	4.52	1.96	5.01	5.01
Treasure County	C8	RM 259.72	347	50-yr	2568.3	787.23	782.45	3.02	2.17	43.05	19.01	179.3	618.27	4.38	1.91	4.78	4.78
Treasure County	C8	RM 259.55	68	50-yr	2568.3	787.17	782.2	2.03	2.03	18.69	18.34	399.72	407.33	3.16	3.11	4.97	4.97

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	50-yr	2565.5	787.17	782.19	2.46	2.18	27.4	20.68	221.77	344.81	4.52	3.41	4.98	4.98
Rosebud County	C8	RM 259.41	87598	50-yr	2565.5	786.92	781.96	2.59	2.49	34.12	22.36	209.53	341.35	4.69	3.07	4.96	4.96
Rosebud County	C8	RM 259.22	87292	50-yr	2565.5	786.8	781.55	2.25	1.94	23.38	18.49	233.09	359.38	4.67	3.68	5.25	5.25
Rosebud County	C8	RM 259.04	87004	50-yr	2565.5	786.6	781	2.39	2.04	30.27	15.74	211.32	546.61	4.69	2.4	5.6	5.6
Rosebud County	C8	RM 258.85	86696	50-yr	2565.5	786.42	780.9	2.27	1.88	22.82	11	288.74	835.94	3.66	1.75	5.52	5.52
Rosebud County	C8	RM 258.66	86399	50-yr	2565.5	786.19	780.78	2.48	1.88	27.52	8.81	183.46	840.54	5.16	1.62	5.41	5.41
Rosebud County	C8	RM 258.47	86098	50-yr	2565.5	786	780.65	2.54	1.89	29.91	11.71	202.57	917.46	4.29	1.66	5.35	5.35
Rosebud County	C8	RM 258.28	85798	50-yr	2565.5	785.84	780.53	2.31	1.65	24.69	12.12	222.43	796.83	4	1.95	5.31	5.31
Rosebud County	C8	RM 258.1	85498	50-yr	2565.5	785.62	780.14	2.46	1.71	27.41	10.52	180.25	797.76	4.98	1.88	5.48	5.48
Rosebud County	C8	RM 257.91	85200	50-yr	2565.5	785.47	780.14	2.31	1.6	26.18	9.3	224.43	1166.36	3.92	1.37	5.33	5.33
Rosebud County	C8	RM 257.71	84875	50-yr	2565.5	785.22	780.14	2.41	1.67	29.68	13.57	219.86	1208.38	3.5	1.58	5.08	5.08
Rosebud County	C8	RM 257.54	84597	50-yr	2565.5	785.06	780.17	2.25	1.46	23.55	9.76	209	1403.61	4.03	1.65	4.89	4.89
Rosebud County	C8	RM 257.36	84298	50-yr	2565.5	784.92	780.05	2.13	1.28	21.67	8.6	188.65	1279.14	3.94	1.56	4.87	4.87
Rosebud County	C8	RM 257.16	83984	50-yr	2565.5	784.88	780	1.4	0.99	9.05	3.59	305.45	1417.41	4.62	1.83	4.88	4.88
Rosebud County	C8	RM 256.87	83608	50-yr	2565.5	784.48	779.89	2.76	1.78	35.96	11.16	181.39	1110.31	4.24	1.3	4.59	4.59
Rosebud County	C8	RM 256.65	83257	50-yr	2565.5	784.46	779.82	1.76	1.24	14.91	6	171.34	1210.93	4.31	1.71	4.64	4.64
Rosebud County	C8	RM 256.45	82941	50-yr	2565.5	784.26	779.67	2.03	1.48	19.36	7.22	222.18	1058.46	4.43	1.64	4.59	4.59
Rosebud County	C8	RM 256.26	82630	50-yr	2565.5	784.08	779.58	1.87	1.43	31.2	19.49	369.93	932.06	3.09	1.92	4.5	4.5
Rosebud County	C8	RM 256.1	82375	50-yr	2565.5	783.93	779.42	1.58	1.55	11.32	7.76	594.53	885.29	2.73	1.87	4.51	4.51
Rosebud County	C8	RM 255.91	82077	50-yr	2565.5	783.86	779.09	1.31	1.22	7.88	4.79	591.1	1061.51	3.26	1.98	4.77	4.77
Rosebud County	C8	RM 255.7	81747	50-yr	2565.5	783.65	778.73	1.94	1.54	17.82	7.59	306.33	973.28	4.04	1.71	4.93	4.93
Rosebud County	C8	RM 255.51	81446	50-yr	2565.5	783.48	778.49	2.1	1.59	21.37	10.19	269.19	848.92	4.03	1.91	4.99	4.99
Rosebud County	C8	RM 255.31	81125	50-yr	2565.5	783.32	778.36	2.03	1.51	24.27	10.38	242.95	889.44	4.5	1.91	4.96	4.96
Rosebud County	C8	RM 255.14	80856	50-yr	2565.5	783.08	778.24	2.37	1.76	26.03	10.34	210.87	799.76	4.63	1.82	4.84	4.84
Rosebud County	C8	RM 254.95	80554	50-yr	2565.5	782.86	778.12	2.5	1.89	29.21	10.98	205.86	802.72	4.54	1.69	4.74	4.74
Rosebud County	C8	RM 254.76	80251	50-yr	2565.5	782.69	778	2.37	1.77	26.27	10.14	218.15	838.43	4.52	1.73	4.69	4.69
Rosebud County	C8	RM 254.58	79960	50-yr	2565.5	782.51	777.88	2.35	1.86	25.89	8.63	229.98	931.07	4.5	1.49	4.63	4.63
Rosebud County	C8	RM 254.39	79658	50-yr	2565.5	782.45	777.41	1.85	1.45	16.2	6.23	296.93	1108.77	4.36	1.67	5.04	5.04
Rosebud County	C8	RM 254.2	79359	50-yr	2565.5	782.18	777.39	2.35	1.91	27.12	11.87	269.75	793.19	3.87	1.69	4.79	4.79
Rosebud County	C8	RM 254.01	79052	50-yr	2565.5	781.96	776.82	2.43	1.89	26.73	8.98	209.61	847.11	4.82	1.61	5.14	5.14
Rosebud County	C9	RM 253.82	78779	50-yr	2565.5	781.78	776.24	2.43	1.79	31.66	11.66	246.7	1033.42	3.91	1.42	5.54	5.54
Rosebud County	C9	RM 253.63	78478	50-yr	2565.5	781.4	776.12	2.65	1.75	68.98	20.08	180.25	1264.28	4.11	1.18	5.28	5.28
Rosebud County	C9	RM 253.45	78178	50-yr	2565.5	781.13	775.97	2.41	1.39	26.99	9.24	172.93	1371.22	4.02	1.35	5.16	5.16
Rosebud County	C9	RM 253.26	77879	50-yr	2565.5	781.03	775.72	1.89	1.08	14.55	5.71	240.93	1464.9	4.19	1.63	5.31	5.31
Rosebud County	C9	RM 253.07	77578	50-yr	2565.5	780.74	775.57	2.6	1.44	30.03	9.89	189.71	1435.74	3.86	1.25	5.17	5.17
Rosebud County	C9	RM 252.88	77278	50-yr	2565.5	780.61	775.45	2.1	1.33	21.98	6.88	221.89	1695.75	3.71	1.14	5.16	5.16
Rosebud County	C9	RM 252.69	76962	50-yr	2565.5	780.54	775.33	1.57	0.89	12.14	4.25	260.67	2276.71	3.91	1.35	5.21	5.21
Rosebud County	C9	RM 252.49	76646	50-yr	2565.5	780.17	775.36	2.81	1.35	35.66	7.59	161.39	2878.47	3.86	0.81	4.81	4.81
Rosebud County	C9	RM 252.24	76252	50-yr	2565.5	779.98	775.4	2.22	1.1	25.56	6.51	167.1	3197.8	3.55	0.89	4.58	4.58
Rosebud County	C9	RM 252.01	75885	50-yr	2565.5	779.81	775.39	1.8	0.98	23.69	6.42	252.1	3502.93	3.3	0.88	4.42	4.42
Rosebud County	C9	RM 251.7	75438	50-yr	2565.5	779.66	775.01	1.35	0.89	7.9	3.48	603.44	3218.87	2.35	1.03	4.65	4.65
Rosebud County	C9	RM 251.49	75098	50-yr	2565.5	779.55	775.02	1.25	0.81	9.65	5.33	716.44	3214.45	1.82	1	4.53	4.53
Rosebud County	C9	RM 251.23	74691	50-yr	2565.5	779.35	775.05	1.36	0.89	9.13	4.28	754.16	3331.46	1.85	0.87	4.3	4.3
Rosebud County	C9	RM 251.01	74322	50-yr	2565.5	779.2	774.84	1.41	0.84	7.98	3.29	595.57	3379.92	2.21	0.91	4.36	4.36
Rosebud County	C9	RM 250.79	73973	50-yr	2565.5	779.09	774.42	1.45	0.84	9.88	3.44	417.99	3091.46	2.93	1.02	4.67	4.67
Rosebud County	C9	RM 250.6	73678	50-yr	2565.5	778.95	774.17	1.54	0.95	20.32	7.48	376.03	2737.51	2.71	0.99	4.78	4.78
Rosebud County	C9	RM 250.37	73306	50-yr	2565.5	778.64	774.05	2.19	1.1	21.49	5.84	233.23	2329.85	3.73	1.01	4.59	4.59
Rosebud County	C9	RM 250.17	72982	50-yr	2565.5	778.46	773.93	2.35	1.08	28.05	9.54	214.36	2352.26	3.08	1.04	4.53	4.53
Rosebud County	C9	RM 249.95	72617	50-yr	2565.5	778.19	773.83	2.28	1.24	25.72	6.87	226.06	2160.99	3.64	0.96	4.36	4.36
Rosebud County	C9	RM 249.73	72253	50-yr	2565.5	778	773.71	2.09	1.11	21.83	6.53	273.96	2399.21	3.24	0.97	4.29	4.29
Rosebud County	C9	RM 249.53	71936	50-yr	2565.5	777.91	773.38	1.54	0.88	11.52	3.7	362.14	2582.83	3.54	1.13	4.53	4.53
Rosebud County	C9	RM 249.31	71579	50-yr	2565.5	777.67	773.14	1.97	1.25	22.41	7.89	363.92	2941.3	2.72	0.95	4.53	4.53
Rosebud County	C9	RM 249.13	71274	50-yr	2565.5	777.5	772.84	1.85	1.02	17.24	5.09	301.37	3012.87	3.61	1.06	4.66	4.66
Rosebud County	C9	RM 248.94	70978	50-yr	2565.5	777.21	772.56	2.49	1.2	29.93	7.52	201.55	2967.15	3.62	0.9	4.65	4.65
Rosebud County	C9	RM 248.76	70681	50-yr	2565.5	777.19	772.32	1.34	0.84	9.5	3.23	424.32	2882.6	3.47	1.17	4.87	4.87
Rosebud County	C9	RM 248.53	70312	50-yr	2565.5	777.12	772.17	1.39	0.67	8.75	2.97	164.13	3134.21	4.07	1.37	4.95	4.95
Rosebud County	C9	RM 248.31	69962	50-yr	2565.5	776.97	772.04	1.74	0.89	15.19	4.99	277.15	2608.41	3.4	1.11	4.93	4.93
Rosebud County	C9	RM 248.08	69603	50-yr	2565.5	776.79	771.92	2.05	0.89	18.17	4.58	211.49	2958.9	3.92	0.98	4.87	4.87
Rosebud County	C9	RM 247.88	69253	50-yr	2565.5	776.67	771.92	1.67	0.93	22.52	8.29	348.22	2913.94	2.6	0.95	4.75	4.75
Rosebud County	C9	RM 247.64	68836	50-yr	2565.5	776.42	771.95	1.72	1	15.98	5.43	416.51	2736.92	2.76	0.93	4.47	4.47

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	50-yr	2565.5	776.28	771.87	1.53	0.82	11.17	3.02	282.85	3167.5	3.98	1.07	4.41	4.41
Rosebud County	C9	RM 247.11	67963	50-yr	2565.5	776.01	771.45	2.46	1.24	30.4	7.64	199.91	2636.3	3.42	0.85	4.56	4.56
Rosebud County	C9	RM 246.83	67502	50-yr	2565.5	775.85	770.97	1.97	1.06	20.34	5.46	194.9	2650.86	4.29	1.14	4.88	4.88
Rosebud County	C9	RM 246.52	67019	50-yr	2565.5	775.7	770.61	1.78	1.05	14.88	4.15	225.63	2817.34	4.48	1.24	5.09	5.09
Rosebud County	C9	RM 246.22	66538	50-yr	2565.5	774.9	770.53	3.52	2.02	64.23	16.55	217.05	2279.64	2.82	0.72	4.37	4.37
Rosebud County	C9	RM 245.94	66068	50-yr	2565.5	774.38	770.29	2.14	1.65	24.6	10.88	297.16	1293.73	2.83	1.24	4.09	4.09
Rosebud County	C9	RM 245.66	65624	50-yr	2565.5	774.25	769.81	1.55	0.92	12.78	4.38	198.01	1991.11	4.18	1.41	5.01	5.01
Rosebud County	C9	RM 245.4	65205	50-yr	2565.5	774.06	769.59	1.81	1.28	14.9	6.43	363.01	1925.85	2.46	1.05	4.9	4.9
Rosebud County	C9	RM 245.15	64804	50-yr	2565.5	773.76	769.41	1.64	1.46	38.53	16.37	327.06	2093.81	2.16	0.91	4.6	4.6
Rosebud County	C9	RM 244.89	64387	50-yr	2565.5	773.05	769.41	2.83	2.05	41.38	11.98	189.43	1365.25	3.33	0.95	4.02	4.02
Rosebud County	C9	RM 244.7	64085	50-yr	2565.5	773.07	769.37	1.41	1.13	10.24	4.78	221.5	1698.62	3.12	1.45	4.16	4.16
Rosebud County	C9	RM 244.51	63776	50-yr	2565.5	773	769.35	1.22	0.97	8.89	4.28	264.21	2048.15	3.14	1.51	4.09	4.09
Rosebud County	C9	RM 244.33	63499	50-yr	2565.5	772.98	769.16	0.8	0.73	3.47	2.08	274.46	2320.12	2.95	1.76	4.55	4.55
Rosebud County	C9	RM 244.14	63224	50-yr	2565.5	772.95	768.52	1.04	0.74	5.39	2.43	208.4	2290.88	3.66	1.64	4.52	4.52
Rosebud County	C9	RM 243.96	62927	50-yr	2565.5	772.88	768.13	1.37	0.84	9.19	3.69	176.71	2051.1	3.87	1.55	4.75	4.75
Rosebud County	C9	RM 243.77	62617	50-yr	2565.5	772.85	767.57	0.92	0.64	3.86	1.84	160.76	1780.37	4.79	2.26	5.28	5.28
Rosebud County	C9	RM 243.59	62327	50-yr	2565.5	772.77	766.98	1.53	0.88	12.25	3.64	122.45	2266.47	5.38	1.55	5.79	5.79
Rosebud County	C9	RM 243.39	62012	50-yr	2565.5	772.53	766.86	2.24	1.19	23.07	5.44	156.08	2318.59	4.79	1.11	5.67	5.67
Rosebud County	C9	RM 243.21	61718	50-yr	2565.5	772.41	766.74	2.07	1.15	19.26	4.65	203.35	2063.41	5.15	1.22	5.67	5.67
Rosebud County	C10	RM 243.03	61422	50-yr	2565.5	772.16	766.73	2.66	1.31	33.94	9.28	174.13	1726.28	4.25	1.14	5.43	5.43
Rosebud County	C10	RM 242.84	61125	50-yr	2565.5	771.66	766.76	3.25	1.89	50.91	12.46	171.81	1389.5	4.06	0.97	4.9	4.9
Rosebud County	C10	RM 242.65	60825	50-yr	2565.5	771.5	766.76	2.59	1.62	32.44	8.05	204.6	1522.04	4.26	1.04	4.74	4.74
Rosebud County	C10	RM 242.47	60527	50-yr	2565.5	771.37	766.77	2.19	1.42	22.81	6.93	241.01	1401.19	4.34	1.31	4.6	4.6
Rosebud County	C10	RM 242.29	60239	50-yr	2565.5	771.26	766.64	1.97	1.37	19.05	7.25	282.31	1186.85	4.17	1.57	4.62	4.62
Rosebud County	C10	RM 242.1	59939	50-yr	2565.5	771.06	766.29	2.16	1.41	24.1	8.32	280	1567.28	3.73	1.28	4.77	4.77
Rosebud County	C10	RM 241.9	59618	50-yr	2565.5	770.89	765.95	2.05	1.21	19.49	5.66	249.51	1905.15	4.33	1.25	4.94	4.94
Rosebud County	C10	RM 241.72	59324	50-yr	2565.5	770.83	765.5	1.68	1.04	13.13	4.62	289.97	1586.07	4.44	1.55	5.33	5.33
Rosebud County	C10	RM 241.53	59025	50-yr	2565.5	770.5	765.17	2.65	1.45	36.59	7.52	160	1776.62	4.93	1	5.33	5.33
Rosebud County	C10	RM 241.34	58725	50-yr	2565.5	770.37	765.02	2.31	1.18	24.56	6.41	177.78	1769.78	4.76	1.22	5.35	5.35
Rosebud County	C10	RM 241.16	58424	50-yr	2565.5	770.31	764.97	1.8	0.99	14.9	5.35	171.92	1600.85	4.55	1.61	5.34	5.34
Rosebud County	C10	RM 240.97	58132	50-yr	2565.5	770.22	764.83	1.72	0.96	13.63	4.94	189.7	1550.52	4.79	1.72	5.39	5.39
Rosebud County	C10	RM 240.78	57818	50-yr	2565.5	770.2	764.56	1.36	0.76	8.2	3.2	159.68	1655.3	5.3	2.04	5.64	5.64
Rosebud County	C10	RM 240.56	57467	50-yr	2565.5	770.12	764.28	1.45	0.85	13.53	5.87	212.38	1599.88	4.93	2.12	5.84	5.84
Rosebud County	C10	RM 240.41	57228	50-yr	2565.5	770.05	763.91	1.45	0.95	11.45	5.3	216.4	1393.88	5.46	2.5	6.14	6.14
Rosebud County	C10	RM 240.22	56944	50-yr	2565.5	769.81	763.51	2.27	1.41	22.82	10.2	157.35	1096.23	5.98	2.59	6.3	6.3
Rosebud County	C10	RM 240.09	56741	50-yr	2565.5	769.37	763.47	3.42	2.18	41.07	18.81	120.86	947.19	5.48	2.45	5.9	5.9
Rosebud County	C10	RM 239.97	56546	50-yr	2565.5	769.26	763.47	2.98	2.51	50.98	32.77	155.75	730.57	5.27	3.35	5.79	5.79
Rosebud County	C10	RM 239.86	56371	50-yr	2565.5	769.22	760.88	2.32	2.31	25.16	24.42	205.85	380.81	5.36	5.2	8.34	8.34
Rosebud County			56353	50-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	50-yr	2565.5	769.18	760.88	2.3	2.29	18.45	17.8	202.33	324.51	5.5	5.31	8.3	8.3
Rosebud County	C10	RM 239.68	56093	50-yr	2565.5	768.73	763.02	3.21	2.98	37.57	30.74	172.44	231.61	4.57	3.71	5.71	5.71
Rosebud County	C10	RM 239.56	55888	50-yr	2565.5	768.54	757.33	3.32	2.94	37.15	21	119.25	248.65	6.38	3.51	11.21	11.21
Rosebud County			55879	50-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	50-yr	2565.5	768.48	757.33	3.43	3.03	39.03	20.46	111.85	252.05	6.61	3.36	11.15	11.15
Rosebud County	C10	RM 239.41	55655	50-yr	2565.5	768.08	763.17	3.86	3.42	55.52	29.76	144.11	311.96	4.56	2.41	4.91	4.91
Rosebud County	C10	RM 239.25	55398	50-yr	2565.5	767.84	763.17	3.58	3.17	48.66	30.52	164.41	303.42	4.29	2.66	4.67	4.67
Rosebud County	C10	RM 239.07	55108	50-yr	2565.5	767.85	763.2	2.5	2.25	23.71	18.49	219.55	338.76	4.33	3.36	4.65	4.65
Rosebud County	C10	RM 238.89	54826	50-yr	2565.5	767.6	763.23	2.81	2.22	30.05	18.95	191.74	436.61	4.23	2.64	4.37	4.37
Rosebud County	C10	RM 238.73	54570	50-yr	2565.5	767.42	763.38	2.66	2.24	27.81	17.23	242.11	482.59	3.86	2.38	4.04	4.04
Rosebud County	C10	RM 238.51	54223	50-yr	2565.5	767.33	762.88	1.84	1.82	17.3	16.05	435.56	476.5	3.2	2.97	4.45	4.45
Rosebud County	C10	RM 238.33	53926	50-yr	2565.5	767.14	762.37	2.01	1.79	19.81	12.83	306.34	548.95	4.06	2.61	4.77	4.77
Rosebud County	C10	RM 238.14	53626	50-yr	2565.5	766.83	762.25	2.59	1.87	32.04	15.22	214.01	698.57	4.21	2	4.58	4.58
Rosebud County	C10	RM 237.95	53321	50-yr	2565.5	766.58	762.09	2.71	1.88	35.02	14.94	189.37	899.19	4.25	1.81	4.49	4.49
Rosebud County	C10	RM 237.77	53027	50-yr	2565.5	766.54	761.85	1.83	1.34	16.01	7.53	294.75	1025.34	4.19	1.97	4.69	4.69
Rosebud County	C10	RM 237.56	52703	50-yr	2565.5	766.45	761.46	1.58	1.13	12.54	6.62	410.69	1227.73	3.53	1.85	4.99	4.99
Rosebud County	C10	RM 237.36	52386	50-yr	2565.5	766.39	761.22	1.35	0.91	8.97	4.85	443.16	1429.28	3.67	1.97	5.17	5.17
Rosebud County	C10	RM 237.15	52029	50-yr	2565.5	766.31	760.88	1.37	0.91	9.04	4.51	385.86	1381.99	4.12	2.05	5.43	5.43
Rosebud County	C10	RM 236.99	51756	50-yr	2565.5	766.05	760.22	2.33	1.38	18.9	6.29	177.1	1186.82	5.52	1.81	5.83	5.83
Rosebud County	C10	RM 236.83	51500	50-yr	2565.5	765.76	760.07	2.93	1.89	31.49	11.6	167.82	1207.72	4.8	1.74	5.69	5.69
Rosebud County	C10	RM 236.66	51221	50-yr	2565.5	765.69	760.07	2.46	1.94	21.67	10.76	188.48	892.39	5.15	2.52	5.62	5.62

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	50-yr	2565.5	765.56	759.94	2.43	2.01	20.91	10.59	193.41	484.81	5.27	2.64	5.62	5.62
Rosebud County	C11	RM 236.29	50623	50-yr	2565.5	765.45	760	2.34	1.95	19.68	7.89	211.22	663.75	5	1.98	5.45	5.45
Rosebud County	C11	RM 236.1	50327	50-yr	2565.5	765.23	760	2.64	2.26	25.86	15.59	206.87	433.21	4.54	2.72	5.23	5.23
Rosebud County	C11	RM 235.91	50024	50-yr	2565.5	764.87	760	3.1	2.44	44.85	22.37	170.49	485.25	4.57	2.25	4.87	4.87
Rosebud County	C11	RM 235.73	49726	50-yr	2565.5	764.81	760.15	2.18	1.97	22.78	18.55	243.8	403.68	4.14	3.36	4.66	4.66
Rosebud County	C11	RM 235.57	49480	50-yr	2565.5	764.71	760.02	1.94	1.85	18.07	10.23	318.23	652.6	4.13	2.33	4.69	4.69
Rosebud County	C11	RM 235.36	49133	50-yr	2565.5	764.53	759.74	1.95	1.85	16.4	11.26	428.22	738.3	3.03	2.07	4.79	4.79
Rosebud County	C11	RM 235.17	48830	50-yr	2565.5	764.37	759.55	1.89	1.79	16.9	11.8	455.8	736.51	2.94	2.05	4.82	4.82
Rosebud County	C11	RM 235	48571	50-yr	2565.5	764.25	759.29	1.87	1.6	16.48	7.44	320.92	904.99	4.15	1.86	4.96	4.96
Rosebud County	C11	RM 234.82	48271	50-yr	2565.5	763.68	759.21	3.25	2.55	52.13	23.24	190.08	611.87	3.86	1.71	4.47	4.47
Rosebud County	C11	RM 234.63	47978	50-yr	2565.5	763.53	759.21	2.47	1.89	29.48	13.47	238.2	789.55	3.83	1.74	4.32	4.32
Rosebud County	C11	RM 234.45	47692	50-yr	2565.5	763.36	759.12	2.22	1.78	24.26	10.46	283.79	917.39	3.65	1.57	4.24	4.24
Rosebud County	C11	RM 234.2	47305	50-yr	2565.5	763.25	758.6	1.61	1.38	10.7	7.85	516.58	943.41	2.7	1.97	4.65	4.65
Rosebud County	C11	RM 234.01	47006	50-yr	2565.5	763.19	758.27	1.16	1.04	6.28	5.59	818.93	1069.71	2.59	2.3	4.92	4.92
Rosebud County	C11	RM 233.84	46737	50-yr	2565.5	763.09	758.12	1.33	1.15	9.31	5.88	578.61	1118.13	3.16	1.99	4.97	4.97
Rosebud County	C11	RM 233.61	46365	50-yr	2565.5	762.95	757.67	1.61	1.24	11.67	3.92	302.81	1238.45	4.96	1.66	5.28	5.28
Rosebud County	C11	RM 233.35	45943	50-yr	2565.5	762.74	757.03	2.12	1.31	21.01	6.5	214.65	1414.63	4.51	1.38	5.71	5.71
Rosebud County	C11	RM 233.13	45584	50-yr	2565.5	762.52	756.45	2.24	1.57	22.49	5.13	206.27	1406.21	5.17	1.16	6.07	6.07
Rosebud County	C11	RM 232.94	45281	50-yr	2565.5	762.23	756.15	2.73	1.95	33.36	7.43	169.36	1153.78	5.23	1.14	6.08	6.08
Rosebud County	C11	RM 232.75	44978	50-yr	2565.5	762.16	756.03	2.22	1.66	21.79	5.42	204.46	1183.08	5.35	1.31	6.13	6.13
Rosebud County	C11	RM 232.56	44674	50-yr	2565.5	762.02	755.79	2.2	1.7	22.56	5.89	241.48	1271.3	4.62	1.18	6.23	6.23
Rosebud County	C11	RM 232.37	44366	50-yr	2565.5	761.8	755.72	2.47	1.62	28.91	9.33	206.42	1215.8	4.42	1.4	6.08	6.08
Rosebud County	C11	RM 232.19	44074	50-yr	2565.5	761.62	755.67	2.43	1.71	27.12	8.39	204.11	1035.08	4.77	1.45	5.95	5.95
Rosebud County	C11	RM 232.01	43791	50-yr	2565.5	761.45	755.65	2.39	1.75	27.22	10.05	232.27	949.56	4.25	1.55	5.8	5.8
Rosebud County	C11	RM 231.81	43473	50-yr	2565.5	761.2	755.6	2.57	1.59	31.19	13.84	201.55	901.68	4.1	1.79	5.6	5.6
Rosebud County	C11	RM 231.62	43160	50-yr	2565.5	760.95	755.57	2.57	1.84	27.7	11.45	229.82	906.59	3.77	1.54	5.38	5.38
Rosebud County	C11	RM 231.42	42835	50-yr	2565.5	760.92	755.45	1.83	1.22	15.07	6.05	229.33	1047.91	5.08	2.01	5.47	5.47
Rosebud County	C11	RM 231.22	42522	50-yr	2565.5	760.77	755.45	2.14	1.31	20.24	8.46	204	1058.69	4.51	1.85	5.32	5.32
Rosebud County	C11	RM 230.99	42160	50-yr	2565.5	760.23	755.45	3.28	1.83	51.94	16.79	154.03	1065.49	4.15	1.31	4.78	4.78
Rosebud County	C11	RM 230.79	41841	50-yr	2565.5	760.05	755.43	2.55	1.63	30.97	10.68	202.2	1069.5	4.34	1.48	4.62	4.62
Rosebud County	C11	RM 230.53	41415	50-yr	2565.5	759.95	755.17	1.72	1.38	14.89	8.51	299.8	1001.11	3.36	1.91	4.78	4.78
Rosebud County	C11	RM 230.29	41045	50-yr	2565.5	759.72	755.15	2.08	1.45	20.5	8.1	234.88	1201.95	3.75	1.47	4.57	4.57
Rosebud County	C11	RM 230.06	40676	50-yr	2565.5	759.5	754.81	2.03	1.56	21.52	9.05	287.47	1218.13	3.23	1.35	4.69	4.69
Rosebud County	C11	RM 229.81	40276	50-yr	2565.5	759.34	754.74	1.74	1.16	14.96	6.07	320.68	1866.39	3.78	1.52	4.6	4.6
Rosebud County	C11	RM 229.6	39937	50-yr	2565.5	759.13	754.58	2.01	1.26	17.91	8.93	412.79	1884	2.54	1.26	4.55	4.55
Rosebud County	C11	RM 229.4	39596	50-yr	2565.5	758.96	754.34	1.91	1.29	18.11	5.36	283.63	1901.2	3.96	1.16	4.62	4.62
Rosebud County	C11	RM 229.2	39273	50-yr	2565.5	758.64	754.15	2.63	1.6	35.27	11.2	214.46	1448.51	3.51	1.1	4.49	4.49
Rosebud County	C11	RM 229.02	38994	50-yr	2565.5	758.41	754.12	2.59	1.57	33.76	11.22	211.31	1471.88	3.59	1.18	4.29	4.29
Rosebud County	C11	RM 228.82	38676	50-yr	2565.5	758.23	753.8	2.17	1.47	23.85	8.04	271.56	1516.26	3.56	1.19	4.43	4.43
Rosebud County	C11	RM 228.64	38383	50-yr	2565.5	758.09	753.73	2.06	1.27	21.26	7.63	224.38	1644.73	3.63	1.29	4.4	4.4
Rosebud County	C11	RM 228.46	38093	50-yr	2565.5	758.01	753.53	1.57	1	12.37	5.05	301.72	1789.91	3.7	1.5	4.48	4.48
Rosebud County	C11	RM 228.26	37771	50-yr	2565.5	757.95	753.35	1.4	0.8	9.72	4.25	273.91	1961.71	3.84	1.66	4.6	4.6
Rosebud County	C11	RM 228.03	37408	50-yr	2565.5	757.82	753.16	1.74	0.87	14.84	5.54	233.4	2065.05	3.97	1.47	4.66	4.66
Rosebud County	C11	RM 227.74	36949	50-yr	2565.5	757.65	752.95	1.98	1.11	18.71	5.9	167.04	1761.45	4.22	1.31	4.7	4.7
Rosebud County	C11	RM 227.49	36537	50-yr	2565.5	757.53	752.83	1.9	1.05	17.22	6.31	175.55	1630.19	4.2	1.51	4.7	4.7
Rosebud County	C11	RM 227.2	36062	50-yr	2565.5	757.41	752.41	1.82	1.11	15.99	6.52	180.83	2313.17	4.13	1.66	5	5
Rosebud County	C11	RM 226.98	35709	50-yr	2565.5	757.06	752.31	2.53	1.46	31.85	13.85	211.99	1227.58	3.73	1.61	4.75	4.75
Rosebud County	C11	RM 226.79	35400	50-yr	2565.5	756.92	752.25	1.95	1.34	21.09	11.48	268.83	940.49	3.85	2.08	4.67	4.67
Rosebud County	C11	RM 226.56	35065	50-yr	2565.5	756.79	751.83	1.65	1.24	15.7	10.22	338.41	819.57	3.89	2.52	4.96	4.96
Rosebud County	C11	RM 226.36	34743	50-yr	2565.5	756.52	751.68	2.12	1.69	24.44	11.62	303.18	859.82	3.74	1.76	4.84	4.84
Rosebud County	C11	RM 226.2	34476	50-yr	2565.5	756.46	751.25	1.57	1.28	12.62	7.37	424.72	1029.82	3.52	2.05	5.21	5.21
Rosebud County	C11	RM 226.01	34177	50-yr	2565.5	756.31	750.81	1.73	1.27	23.91	10.07	284.2	1425.93	4.48	1.87	5.5	5.5
Rosebud County	C11	RM 225.83	33884	50-yr	2565.5	755.99	750.59	2.62	1.45	31.5	11.11	159.74	1317.61	4.82	1.67	5.4	5.4
Rosebud County	C11	RM 225.64	33580	50-yr	2565.5	755.9	750.56	1.95	1.41	18.38	9.38	293.96	1417.37	4.06	2.05	5.34	5.34
Rosebud County	C11	RM 225.45	33275	50-yr	2565.5	755.81	750.31	1.72	1.44	13.92	7.48	332.17	1412.78	4.35	2.32	5.5	5.5
Rosebud County	C11	RM 225.26	32969	50-yr	2565.5	755.65	750.25	1.94	1.66	17.81	9.74	291.78	1523.54	4.4	2.39	5.4	5.4
Rosebud County	C11	RM 225.16	32805	50-yr	2565.5	755.46	750.19	2.38	2.11	26.26	15.55	224.54	1078.26	4.71	2.77	5.27	5.27
Rosebud County	C11	RM 225.06	32646	50-yr	2565.5	755.14	747.9	2.97	2.86	38.17	29.56	169.61	898.17	5.07	3.9	7.24	7.24
Rosebud County			32620	50-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	50-yr	2565.5	755.02	747.9	3.02	2.98	41.4	33.29	169.8	960.27	4.99	4	7.12	7.12

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	50-yr	2565.5	754.97	750.09	2.26	2.14	24.05	15.47	249.97	1064.88	4.46	2.86	4.88	4.88
Rosebud County	C12	RM 224.71	32083	50-yr	2565.5	754.82	750.04	2.1	1.98	19.91	14.65	392.55	578.96	3.07	2.25	4.78	4.78
Rosebud County	C12	RM 224.53	31796	50-yr	2565.5	754.62	749.96	2.14	2.08	18.63	14.59	412.38	726.16	2.9	2.27	4.66	4.66
Rosebud County	C12	RM 224.34	31486	50-yr	2565.5	754.44	750.03	1.86	1.73	20.02	15.71	476.88	867.41	2.6	2.04	4.41	4.41
Rosebud County	C12	RM 224.16	31195	50-yr	2565.5	754.27	749.78	1.92	1.54	17.46	8.24	263.29	1473.82	3.91	1.83	4.59	4.59
Rosebud County	C12	RM 223.96	30878	50-yr	2565.5	754.09	749.48	2.2	1.55	23.08	8.76	179.51	1318.55	4.25	1.6	4.71	4.71
Rosebud County	C12	RM 223.76	30567	50-yr	2565.5	753.92	749.18	2.36	1.62	27.42	10.19	162.95	1404.7	3.83	1.4	4.74	4.74
Rosebud County	C12	RM 223.55	30235	50-yr	2565.5	753.77	748.87	2.06	1.43	19.77	6.06	229.9	1550.26	4.61	1.4	4.9	4.9
Rosebud County	C12	RM 223.37	29952	50-yr	2565.5	753.54	748.72	2.42	1.58	27.28	7.99	208.3	1297.23	4.57	1.32	4.82	4.82
Rosebud County	C12	RM 223.2	29681	50-yr	2565.5	753.38	748.51	2.36	1.53	25.85	7.31	209.66	1393.11	4.68	1.31	4.87	4.87
Rosebud County	C12	RM 223.02	29391	50-yr	2565.5	753.29	748.51	2.01	1.33	19.27	6.73	265.78	1606.61	4.23	1.46	4.78	4.78
Rosebud County	C12	RM 222.82	29071	50-yr	2565.5	753.16	748.5	1.92	1.21	17.56	6.35	268.13	1820.11	4.26	1.53	4.66	4.66
Rosebud County	C12	RM 222.64	28787	50-yr	2565.5	753.01	748.46	2.09	1.27	20.78	8.64	236.97	1260.94	4.3	1.78	4.55	4.55
Rosebud County	C12	RM 222.45	28479	50-yr	2565.5	752.89	748.44	1.91	1.17	17.91	8.65	281.49	1179.98	3.86	1.85	4.45	4.45
Rosebud County	C12	RM 222.22	28128	50-yr	2565.5	752.75	748.15	1.84	1.15	16	7.08	261.1	1180.06	4.32	1.9	4.6	4.6
Rosebud County	C12	RM 222.01	27784	50-yr	2565.5	752.68	747.57	1.45	1	10.45	5.07	372.22	1407.47	4.04	1.95	5.11	5.11
Rosebud County	C12	RM 221.77	27401	50-yr	2565.5	752.63	747.18	0.97	0.82	6	4.34	725.95	1364.91	3.19	2.3	5.45	5.45
Rosebud County	C12	RM 221.55	27042	50-yr	2565.5	752.56	747.07	0.93	0.8	6.17	4.74	807.88	1335.62	3.13	2.4	5.49	5.49
Rosebud County	C12	RM 221.34	26708	50-yr	2565.5	752.5	746.94	0.97	0.79	5.21	3.73	648.68	1486.03	3.41	2.43	5.56	5.56
Rosebud County	C12	RM 221.15	26406	50-yr	2565.5	752.38	746.7	1.55	1.09	10.64	4.85	265.14	1168.59	5.25	2.36	5.68	5.68
Rosebud County	C12	RM 220.96	26081	50-yr	2565.5	751.94	746.66	3.13	1.93	45.62	16.63	138.9	807.86	4.64	1.65	5.28	5.28
Rosebud County	C12	RM 220.77	25779	50-yr	2565.5	751.37	746.73	3.5	2.9	58.42	21.04	163.4	577.91	4.3	1.53	4.64	4.64
Rosebud County	C12	RM 220.6	25513	50-yr	2565.5	751.44	746.72	2.12	1.76	21.09	10.42	256.78	668.92	4.44	2.17	4.72	4.72
Rosebud County	C12	RM 220.4	25183	50-yr	2565.5	751.28	746.88	1.94	1.63	17.87	10.67	395.04	866.36	3.06	1.81	4.4	4.4
Rosebud County	C12	RM 220.23	24914	50-yr	2565.5	751.22	746.8	1.44	1.33	9.16	7.56	642.3	882.69	2.65	2.18	4.42	4.42
Rosebud County	C12	RM 220.02	24578	50-yr	2565.5	751.1	746.54	1.32	1.26	8.95	8.19	792.77	934.67	2.39	2.18	4.56	4.56
Rosebud County	C12	RM 219.83	24268	50-yr	2565.5	751.02	746.18	1.15	1.08	6.83	6.02	775.68	954.97	2.82	2.49	4.84	4.84
Rosebud County	C12	RM 219.63	23947	50-yr	2565.5	750.88	745.79	1.44	1.32	11.36	9.44	587.54	808.4	2.91	2.41	5.09	5.09
Rosebud County	C12	RM 219.47	23683	50-yr	2565.5	750.77	745.56	1.58	1.3	12.49	7.52	380.14	828	3.99	2.39	5.21	5.21
Rosebud County	C12	RM 219.29	23386	50-yr	2565.5	750.48	745.27	2.46	1.69	28.6	12.82	208.04	797.84	4.34	1.92	5.21	5.21
Rosebud County	C12	RM 219.11	23085	50-yr	2565.5	750.3	745.15	2.43	1.62	27.92	11.75	176.7	907.28	4.35	1.81	5.15	5.15
Rosebud County	C12	RM 218.92	22783	50-yr	2565.5	750.17	745.15	2.07	1.38	20.9	10.03	229.91	1019.88	3.83	1.82	5.02	5.02
Rosebud County	C12	RM 218.73	22473	50-yr	2565.5	750	745.06	2.08	1.34	20.1	8.42	226.8	1005.09	4.6	1.91	4.94	4.94
Rosebud County	C12	RM 218.54	22180	50-yr	2565.5	749.87	744.99	1.98	1.43	18.73	10.46	274.48	755.72	4.24	2.37	4.88	4.88
Rosebud County	C12	RM 218.38	21902	50-yr	2565.5	749.76	744.43	1.99	1.39	18.22	9.07	234.82	775.87	4.79	2.37	5.33	5.33
Rosebud County	C12	RM 218.18	21580	50-yr	2565.5	749.5	743.9	2.52	1.51	29.38	12.01	182.74	910.07	4.67	1.88	5.6	5.6
Rosebud County	C12	RM 217.99	21276	50-yr	2565.5	749.32	743.66	2.41	1.5	27.89	9.68	211.96	1186.97	4.23	1.45	5.66	5.66
Rosebud County	C12	RM 217.81	20981	50-yr	2565.5	749.28	743.51	1.73	1.28	13.41	4.19	293.45	1417.31	4.77	1.47	5.77	5.77
Rosebud County	C12	RM 217.64	20702	50-yr	2565.5	748.91	743.41	2.82	1.77	37.07	8.61	176.29	1373.35	4.62	1.05	5.5	5.5
Rosebud County	C12	RM 217.45	20392	50-yr	2565.5	748.7	743.29	2.7	1.54	34.67	9.14	184.69	1491.78	4.31	1.12	5.41	5.41
Rosebud County	C12	RM 217.25	20070	50-yr	2565.5	748.64	743.29	2.06	1.17	19.21	5.03	191.77	1714.47	4.97	1.28	5.35	5.35
Rosebud County	C12	RM 217	19662	50-yr	2565.5	748.35	743.25	2.45	1.4	28.14	7.07	192.47	1641.21	4.51	1.12	5.1	5.1
Rosebud County	C12	RM 216.77	19300	50-yr	2565.5	748.14	743.25	2.39	1.38	27.97	8.79	217.02	1538.39	3.89	1.21	4.89	4.89
Rosebud County	C12	RM 216.53	18912	50-yr	2565.5	748	743.3	1.9	1.05	17.78	7.24	274.18	1675.53	3.8	1.53	4.7	4.7
Rosebud County	C12	RM 216.27	18500	50-yr	2565.5	747.88	743.24	1.61	0.98	13.03	6.33	358.3	1507.58	3.58	1.73	4.64	4.64
Rosebud County	C12	RM 215.98	18038	50-yr	2565.5	747.77	743.12	1.47	0.87	10.64	5.22	273.73	1553.13	3.87	1.9	4.65	4.65
Rosebud County	C12	RM 215.68	17550	50-yr	2565.5	747.62	742.31	1.6	0.99	11.55	4.12	269.37	1458.95	5.02	1.79	5.31	5.31
Rosebud County	C12	RM 215.41	17101	50-yr	2565.5	747.39	741.82	2.12	1.44	20.74	7.65	218.66	1162.67	4.71	1.72	5.57	5.57
Rosebud County	C12	RM 215.21	16781	50-yr	2565.5	747.04	741.65	2.9	1.81	39.17	14.27	159.7	1059.94	4.57	1.64	5.39	5.39
Rosebud County	C12	RM 215.02	16479	50-yr	2565.5	746.66	741.68	3.23	2.14	48.7	16.79	146.57	772.91	4.62	1.56	4.98	4.98
Rosebud County	C13	RM 214.86	16220	50-yr	2565.5	746.69	741.64	2	1.59	18.27	9.55	252.91	750.11	4.84	2.51	5.05	5.05
Rosebud County	C13	RM 214.65	15883	50-yr	2565.5	746.54	741.6	1.94	1.77	17.46	10.49	399.8	756.37	3.26	1.95	4.94	4.94
Rosebud County	C13	RM 214.46	15577	50-yr	2565.5	746.41	741.6	1.79	1.44	13.07	8.31	460.25	1174.4	2.91	1.84	4.81	4.81
Rosebud County	C13	RM 214.27	15282	50-yr	2565.5	746.31	741.59	1.57	1.27	10.78	6.16	505.93	1224.6	2.9	1.65	4.72	4.72
Rosebud County	C13	RM 214.07	14957	50-yr	2565.5	746.2	741.54	1.44	1.09	13.56	6.55	425.03	1497.87	3.67	1.76	4.66	4.66
Rosebud County	C13	RM 213.9	14672	50-yr	2565.5	746.02	741.37	1.77	1.47	15.53	6.77	363.41	1089.33	3.75	1.62	4.65	4.65
Rosebud County	C13	RM 213.7	14343	50-yr	2565.5	745.71	740.88	2.38	1.96	26.64	8.3	232.58	1481.97	4.48	1.38	4.83	4.83
Rosebud County	C13	RM 213.54	14083	50-yr	2565.5	745.39	740.59	2.87	2.08	38.82	10.48	191.86	1885.17	4.39	1.17	4.8	4.8
Rosebud County	C13	RM 213.36	13792	50-yr	2565.5	745.24	740.39	2.43	1.92	28.87	11.7	245.2	1933.85	3.96	1.59	4.85	4.85
Rosebud County	C13	RM 213.16	13475	50-yr	2565.5	745.08	740.27	2.25	1.62	24.4	8.98	214.03	1931.54	3.79	1.38	4.81	4.81

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	50-yr	2565.5	744.91	740.31	2.27	1.7	23.35	8.51	212.05	1999.42	3.61	1.3	4.6	4.6
Rosebud County	C13	RM 212.79	12880	50-yr	2565.5	744.73	740.19	2.25	1.34	24.08	7.59	178.07	2106.96	4.34	1.35	4.54	4.54
Rosebud County	C13	RM 212.6	12572	50-yr	2565.5	744.58	739.79	2.06	1.22	19.8	6.25	240.96	2134.88	4.46	1.4	4.79	4.79
Rosebud County	C13	RM 212.42	12284	50-yr	2565.5	744.39	739.58	2.32	1.32	26.31	8.05	211.31	2080.48	4.14	1.25	4.81	4.81
Rosebud County	C13	RM 212.23	11983	50-yr	2565.5	744.28	739.17	1.97	1.18	18.78	6.03	257.92	2108.91	4.06	1.29	5.11	5.11
Rosebud County	C13	RM 212.05	11688	50-yr	2565.5	744.11	738.83	2.11	1.3	20.75	5.51	227.41	2018.97	4.6	1.2	5.28	5.28
Rosebud County	C13	RM 211.85	11386	50-yr	2565.5	743.92	738.79	2.26	1.49	24.86	8.42	251.66	1594.04	3.98	1.33	5.13	5.13
Rosebud County	C13	RM 211.65	11066	50-yr	2565.5	743.74	738.58	2.22	1.4	23.62	8.39	248.86	1557.67	4.06	1.43	5.16	5.16
Rosebud County	C13	RM 211.44	10724	50-yr	2565.5	743.59	738.38	2.2	1.23	22.92	9.29	199.53	1786.2	4.33	1.74	5.21	5.21
Rosebud County	C13	RM 211.21	10353	50-yr	2565.5	743.48	737.87	1.95	1.17	16.56	7.63	207.36	1512.99	4.33	1.98	5.61	5.61
Rosebud County	C13	RM 210.96	9946	50-yr	2565.5	743.17	737.72	2.59	1.51	31.98	14.62	169.56	1108.09	4.3	1.94	5.45	5.45
Rosebud County	C13	RM 210.75	9612	50-yr	2565.5	743.09	737.48	2.05	1.28	19.54	8.43	191.27	1133.16	4.68	1.99	5.61	5.61
Rosebud County	C13	RM 210.57	9317	50-yr	2565.5	743.01	737.5	1.81	1.19	15.14	6.07	244	1240.86	4.65	1.85	5.51	5.51
Rosebud County	C13	RM 210.36	8986	50-yr	2565.5	742.67	737.54	2.62	1.63	32.8	13.34	194.77	1003.23	4.25	1.71	5.13	5.13
Rosebud County	C13	RM 210.16	8674	50-yr	2565.5	742.44	737.53	2.37	1.76	28.53	13.36	288.45	986.75	3.53	1.64	4.91	4.91
Rosebud County	C13	RM 209.98	8382	50-yr	2565.5	742.44	737.25	1.54	1.15	11.06	5.65	307.03	1187.72	4.51	2.29	5.19	5.19
Rosebud County	C13	RM 209.8	8091	50-yr	2565.5	742.34	736.96	1.75	1.12	13.64	4.79	218.68	1563.86	5.24	1.82	5.38	5.38
Rosebud County	C13	RM 209.6	7774	50-yr	2565.5	742.17	736.72	2.14	1.09	20.71	6.72	179.37	1917.29	5.05	1.62	5.45	5.45
Rosebud County	C13	RM 209.41	7482	50-yr	2565.5	742.1	736.53	1.81	1.05	15.24	5.75	238.7	1770.62	4.56	1.7	5.57	5.57
Rosebud County	C13	RM 209.21	7161	50-yr	2565.5	741.88	736.29	2.28	1.43	24.04	7.62	197.21	1478.31	4.65	1.45	5.59	5.59
Rosebud County	C13	RM 209.03	6871	50-yr	2565.5	741.73	736.14	2.33	1.37	25.01	8.29	186.2	1271.42	4.73	1.54	5.59	5.59
Rosebud County	C13	RM 208.85	6571	50-yr	2565.5	741.65	736.03	1.94	1.24	17.25	7.12	229.12	1128.51	4.75	1.94	5.62	5.62
Rosebud County	C13	RM 208.65	6257	50-yr	2565.5	741.56	735.74	1.88	1.25	16.56	8.3	218.32	1051.98	4.52	2.24	5.82	5.82
Rosebud County	C13	RM 208.46	5945	50-yr	2565.5	741.33	735.69	2.3	1.67	25.41	11.48	204.54	868.4	3.98	1.77	5.64	5.64
Rosebud County	C13	RM 208.29	5682	50-yr	2565.5	740.54	735.63	3.94	3.22	73.6	26.77	116.29	507.19	4.43	1.57	4.91	4.91
Rosebud County	C14	RM 208.1	5374	50-yr	2565.5	740.41	735.61	2.69	2.29	33.63	14.15	201.37	688.98	4.6	1.91	4.8	4.8
Rosebud County	C14	RM 207.91	5064	50-yr	2565.5	740.26	735.56	2.28	1.75	26.1	14.01	293.26	788.37	3.5	1.86	4.7	4.7
Rosebud County	C14	RM 207.72	4766	50-yr	2565.5	740.07	735.52	2.04	1.6	19.88	10.95	404.67	1283.06	2.81	1.54	4.55	4.55
Rosebud County	C14	RM 207.53	4450	50-yr	2565.5	739.99	735.35	1.45	1.12	11.36	6.55	469.61	1396.59	3.19	1.83	4.64	4.64
Rosebud County	C14	RM 207.33	4123	50-yr	2565.5	739.83	735.27	1.78	1.18	15.41	7.29	282.48	1169.59	3.94	1.85	4.56	4.56
Rosebud County	C14	RM 207.15	3851	50-yr	2565.5	739.77	735.14	1.55	1.05	11.86	5.23	313.39	1507.1	4.01	1.76	4.63	4.63
Rosebud County	C14	RM 206.99	3599	50-yr	2565.5	739.72	734.95	1.4	0.89	9.63	4.52	327.09	1683.08	3.82	1.79	4.77	4.77
Rosebud County	C14	RM 206.81	3315	50-yr	2565.5	739.66	734.49	1.42	0.84	9.57	4.19	257.4	1619.19	4.34	1.88	5.17	5.17
Rosebud County	C14	RM 206.61	2997	50-yr	2565.5	739.52	733.91	1.82	1.03	15.08	6.34	197.48	1288.82	4.87	2.03	5.61	5.61
Rosebud County	C14	RM 206.43	2701	50-yr	2565.5	739.48	733.52	1.54	0.87	11.39	5.52	244.31	1610.76	4.12	1.97	5.96	5.96
Rosebud County	C14	RM 206.21	2350	50-yr	2565.5	739.39	733.38	1.53	0.96	11.72	4.93	253.17	1733.25	4.35	1.81	6.01	6.01
Rosebud County	C14	RM 205.97	1963	50-yr	2565.5	739.25	732.73	1.72	1.11	12.82	4.62	223.85	1493.26	5.73	2.04	6.52	6.52
Rosebud County	C14	RM 205.72	1563	50-yr	2565.5	738.51	732.73	3.96	2.13	94.79	22.05	107.48	1468.39	4.8	1.07	5.78	5.78
Rosebud County	C14	RM 205.49	1198	50-yr	2565.5	738.29	732.63	2.65	1.77	42.9	12.7	192.62	1481.05	4.47	1.31	5.66	5.66
Rosebud County	C14	RM 205.3	907	50-yr	2565.5	737.98	732.76	2.7	1.86	37.05	15.47	246.92	1218.28	3.49	1.44	5.22	5.22
Rosebud County	C14	RM 205.11	594	50-yr	2565.5	737.74	732.8	2.62	1.81	31.94	11.04	192	1210.04	4.55	1.55	4.94	4.94
Rosebud County	C14	RM 204.9	243	50-yr	2565.5	737.44	732.63	2.67	2.02	34.66	13.6	224.67	1145.12	3.98	1.55	4.81	4.81

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	50-yr	2562.7	737.44	732.67	2.41	1.4	28.37	11.65	192.07	1153.56	3.91	1.59	4.77	4.77
Custer County	C14	RM 204.43	73135	50-yr	2562.7	737.29	732.44	2.06	1.26	20.82	9.87	266.74	1116.24	3.88	1.83	4.85	4.85
Custer County	C14	RM 204.22	72808	50-yr	2562.7	737.08	732.3	2.21	1.35	24.62	10.61	262.16	1229.8	3.59	1.54	4.78	4.78
Custer County	C14	RM 204	72454	50-yr	2562.7	736.95	731.9	1.86	1.18	16.11	6.33	261.19	1210.26	4.6	1.8	5.05	5.05
Custer County	C14	RM 203.82	72156	50-yr	2562.7	736.64	731.14	2.61	1.56	32.48	13.63	197.43	923.42	4.3	1.78	5.5	5.5
Custer County	C14	RM 203.65	71895	50-yr	2562.7	736.48	730.95	2.67	1.4	33.92	15.77	162.5	915.31	4.36	1.99	5.53	5.53
Custer County	C14	RM 203.5	71641	50-yr	2562.7	736.41	730.78	2.12	1.27	21.41	10.21	195.78	997.5	4.32	2.03	5.63	5.63
Custer County	C14	RM 203.3	71324	50-yr	2562.7	736.37	730.79	1.63	0.97	12.25	6.04	161.79	1150.89	4.73	2.28	5.58	5.58
Custer County	C14	RM 203.1	71035	50-yr	2562.7	736.05	730.79	2.59	1.42	32.53	13.18	184.4	1288.83	4.07	1.62	5.26	5.26
Custer County	C14	RM 202.9	70718	50-yr	2562.7	735.91	730.67	2.19	1.47	25.36	13.85	249.02	1131.36	3.12	1.68	5.24	5.24
Custer County	C14	RM 202.71	70415	50-yr	2562.7	735.63	730.64	2.38	1.56	28.25	13.4	231.45	937.37	3.73	1.75	4.99	4.99
Custer County	C14	RM 202.51	70088	50-yr	2562.7	735.25	730.68	2.89	1.69	40.25	13.31	152.2	1123.75	4.14	1.35	4.57	4.57
Custer County	C14	RM 202.34	69815	50-yr	2562.7	735.14	730.63	1.97	1.31	19.82	9.01	321.87	1255.31	3.46	1.56	4.51	4.51
Custer County	C14	RM 202.13	69483	50-yr	2562.7	734.96	730.54	1.97	1.26	18.97	9.37	282.19	1214.79	3.96	1.94	4.42	4.42
Custer County	C14	RM 201.97	69219	50-yr	2562.7	734.78	730.01	2.15	1.59	22.64	12.44	264.21	758.08	3.88	2.12	4.77	4.77
Custer County	C14	RM 201.75	68884	50-yr	2562.7	734.71	729.45	1.61	1.31	11.74	5.6	306.87	845.79	4.88	2.31	5.26	5.26
Custer County	C14	RM 201.57	68612	50-yr	2562.7	734.56	729.37	1.94	1.47	19.64	11.71	362.67	915.94	3.21	1.9	5.19	5.19
Custer County	C14	RM 201.38	68299	50-yr	2562.7	734.23	729.23	2.35	1.8	30.61	16.81	356.22	963.74	2.71	1.48	5	5
Custer County	C14	RM 201.23	68055	50-yr	2562.7	734.05	729.13	2.03	1.39	22.18	11.54	369.58	1205.68	2.95	1.53	4.92	4.92
Custer County	C14	RM 201.06	67778	50-yr	2562.7	734.04	729.03	1.28	1.01	8.23	4.99	262.3	1330.72	3.68	2.21	5.01	5.01
Custer County	C14	RM 200.85	67439	50-yr	2562.7	733.55	729.05	3.37	2.35	54.35	19.58	114.21	740.64	4.28	1.5	4.5	4.5
Custer County	C14	RM 200.64	67103	50-yr	2562.7	733.47	728.97	2.09	1.57	20.75	11.52	216.42	787.01	4.35	2.39	4.5	4.5
Custer County	C14	RM 200.48	66842	50-yr	2562.7	733.41	728.8	1.62	1.39	13.12	9	307.41	726.89	3.72	2.53	4.61	4.61
Custer County	C14	RM 200.27	66515	50-yr	2562.7	733.25	728.63	1.73	1.41	14.67	9.96	359.69	692.56	3.87	2.62	4.62	4.62
Custer County	C14	RM 200.05	66162	50-yr	2562.7	733.06	728.3	1.88	1.63	18.04	13.32	388.52	634.77	3.36	2.47	4.76	4.76
Custer County	C14	RM 199.9	65916	50-yr	2562.7	732.99	727.78	1.62	1.55	12.67	8.32	381.62	612.92	4.12	2.69	5.21	5.21
Custer County	C14	RM 199.71	65614	50-yr	2562.7	732.65	727.34	2.5	2.32	27.33	17.3	260.73	454.07	3.87	2.43	5.31	5.31
Custer County	C14	RM 199.53	65326	50-yr	2562.7	732.58	727.34	2	1.83	18.31	8.64	259.62	616.6	4.85	2.27	5.24	5.24
Custer County	C14	RM 199.38	65076	50-yr	2562.7	732.48	727.34	1.94	1.71	18.27	9.3	364.29	885.63	3.5	1.77	5.14	5.14
Custer County	C14	RM 199.18	64754	50-yr	2562.7	732.3	727.64	1.87	1.57	18.13	9.78	456.73	1130.06	2.8	1.5	4.66	4.66
Custer County	C14	RM 199.04	64535	50-yr	2562.7	732.21	727.64	1.65	1.33	13.78	5.98	419.11	1305.78	3.41	1.48	4.57	4.57
Custer County	C14	RM 198.77	64102	50-yr	2562.7	731.99	727.28	1.88	1.49	16.7	6.47	294.95	1085.37	4.3	1.65	4.71	4.71
Custer County	C14	RM 198.57	63773	50-yr	2562.7	731.6	726.99	2.71	2.12	34.57	10.34	204.81	932.99	4.38	1.29	4.61	4.61
Custer County	C14	RM 198.4	63505	50-yr	2562.7	731.39	726.86	2.69	2.01	34.56	15.52	199.72	1037.06	4.25	1.89	4.53	4.53
Custer County	C14	RM 198.22	63215	50-yr	2562.7	731.15	726.57	2.71	1.81	35.37	16.03	190.38	967.28	4.15	1.86	4.58	4.58
Custer County	C14	RM 198.04	62923	50-yr	2562.7	731.01	726.32	2.26	1.6	24.52	9.23	227.09	1143.22	4.21	1.57	4.69	4.69
Custer County	C14	RM 197.84	62611	50-yr	2562.7	730.96	726.04	1.63	1.29	12.97	5.11	351.59	1386.3	3.89	1.52	4.92	4.92
Custer County	C14	RM 197.65	62306	50-yr	2562.7	730.85	725.69	1.73	1.15	12.8	5.17	317.28	1546.88	3.7	1.48	5.16	5.16
Custer County	C14	RM 197.47	62013	50-yr	2562.7	730.84	725.29	1.28	0.8	7.26	2.65	296.45	1693.37	5.34	1.93	5.55	5.55
Custer County	C14	RM 197.27	61686	50-yr	2562.7	730.77	724.81	1.63	0.83	12.25	5.05	212.12	1739.12	4.69	1.92	5.96	5.96
Custer County	C14	RM 197.07	61373	50-yr	2562.7	730.69	724.81	1.7	0.94	13.24	4.73	204.54	1617.03	4.84	1.7	5.88	5.88
Custer County	C14	RM 196.91	61115	50-yr	2562.7	730.68	724.81	1.28	0.67	7.45	3.61	222.8	1649.09	4.87	2.33	5.87	5.87
Custer County	C14	RM 196.73	60815	50-yr	2562.7	730.64	724.76	1.31	0.7	7.7	3.73	241.57	1525.06	5.03	2.42	5.88	5.88
Custer County	C14	RM 196.54	60518	50-yr	2562.7	730.58	724.67	1.43	0.82	9.52	4.53	270.26	1930.25	4.53	2.13	5.91	5.91
Custer County	C14	RM 196.33	60178	50-yr	2562.7	730.51	724.57	1.48	0.95	9.72	4.5	247.23	1726.25	5.27	2.41	5.94	5.94
Custer County	C14	RM 196.17	59915	50-yr	2562.7	730.45	724.51	1.58	1.21	11.06	6.89	191.57	1321.29	5.42	3.35	5.94	5.94
Custer County	C15	RM 195.98	59615	50-yr	2559.8	728.98	724.52	5.04	4.76	125.77	80.15	132.07	240.47	3.83	2.42	4.46	4.46
Custer County	C15	RM 195.81	59337	50-yr	2559.8	728.91	724.33	3.41	3.23	55.02	25.15	169.25	414.27	4.41	1.99	4.58	4.58
Custer County	C15	RM 195.61	59020	50-yr	2559.8	728.82	724.24	2.47	2.24	28.77	13.18	230.07	568.72	4.43	2.01	4.58	4.58
Custer County	C15	RM 195.43	58727	50-yr	2559.8	728.63	724.22	2.33	2.07	27.62	17.16	305.61	568.35	3.51	2.17	4.41	4.41
Custer County	C15	RM 195.23	58415	50-yr	2559.8	728.5	723.93	1.84	1.71	17.84	12.29	391.57	622.11	3.5	2.4	4.57	4.57
Custer County	C15	RM 195.04	58114	50-yr	2559.8	728.27	723.54	2.21	1.96	24.16	12.78	269.46	657.16	3.78	1.99	4.73	4.73
Custer County	C15	RM 194.86	57824	50-yr	2559.8	728.08	722.93	2.28	1.71	24.79	10.93	209.92	793.17	4.33	1.89	5.15	5.15
Custer County	C15	RM 194.67	57521	50-yr	2559.8	727.93	722.75	2.18	1.71	21.52	8.3	217.41	787.91	4.98	1.9	5.18	5.18
Custer County	C15	RM 194.49	57231	50-yr	2559.8	727.84	722.53	1.99	1.53	18.02	8.33	232.49	741.01	4.92	2.25	5.31	5.31
Custer County	C15	RM 194.32	56946	50-yr	2559.8	727.64	722.5	2.27	1.82	23.48	13.08	259.82	647.63	4	2.21	5.14	5.14
Custer County	C15	RM 194.13	56643	50-yr	2559.8	727.39	722.5	2.42	2.14	28.29	18.55	251.45	463.54	4.06	2.65	4.89	4.89
Custer County	C15	RM 193.93	56331	50-yr	2559.8	727.24	722.31	2.19	1.99	22.33	16.21	247.7	468.85	4.57	3.31	4.93	4.93
Custer County	C15	RM 193.74	56024	50-yr	2559.8	727.07	722.23	2.28	1.95	24.07	11.95	229.39	718.13	4.67	2.3	4.84	4.84
Custer County	C15	RM 193.55	55708	50-yr	2559.8	726.85	722.13	2.43	1.97	27.55	11.18	216.5	725.97	4.56	1.83	4.72	4.72

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	50-yr	2559.8	726.65	722.13	2.49	1.94	29.47	11.76	219.51	802.26	4.34	1.72	4.52	4.52
Custer County	C15	RM 193.2	55158	50-yr	2559.8	726.59	722.13	1.96	1.54	18.22	8.22	280.33	895.5	4.31	1.93	4.46	4.46
Custer County	C15	RM 193	54825	50-yr	2559.8	726.43	721.84	1.98	1.56	18.66	10.44	281.95	791.07	4.29	2.39	4.59	4.59
Custer County	C15	RM 192.81	54525	50-yr	2559.8	726.28	721.37	2.18	1.51	21.8	8.46	207.4	950.35	4.74	1.82	4.91	4.91
Custer County	C15	RM 192.63	54247	50-yr	2559.8	726.09	721.01	2.3	1.71	24.19	9.5	217.13	835.91	4.8	1.86	5.08	5.08
Custer County	C15	RM 192.44	53935	50-yr	2559.8	726	721.01	1.95	1.46	17.6	7.45	241	895.7	4.65	1.95	4.99	4.99
Custer County	C16	RM 192.26	53653	50-yr	2559.8	725.76	721.01	2.36	2	25.9	11.29	228.38	647.3	4.59	1.98	4.75	4.75
Custer County	C16	RM 192.05	53309	50-yr	2559.8	725.04	721.11	3.57	3.21	63.53	37.49	186.81	363.29	3.75	2.2	3.93	3.93
Custer County	C16	RM 191.74	52809	50-yr	2559.8	724.83	721.1	1.94	1.86	16.32	14.78	553.46	644.35	2.36	2.14	3.73	3.73
Custer County	C16	RM 191.35	52181	50-yr	2559.8	724.4	721.02	1.74	1.7	13.16	12.59	799.1	859.11	1.84	1.76	3.38	3.38
Custer County	C16	RM 191.12	51812	50-yr	2559.8	724.22	720.51	1.45	1.45	10.12	10.09	805.05	807.49	2.19	2.19	3.71	3.71
Custer County	C16	RM 190.87	51406	50-yr	2559.8	724.06	719.89	1.28	1.25	8.51	7.98	867.72	948.54	2.3	2.15	4.17	4.17
Custer County	C16	RM 190.54	50885	50-yr	2559.8	723.94	719.15	1.03	0.96	6.49	4.52	789.81	1267.92	3.1	2.16	4.79	4.79
Custer County	C16	RM 190.29	50477	50-yr	2559.8	723.35	718.45	3.03	2.19	43.44	12.72	179.8	1045.39	4.39	1.27	4.9	4.9
Custer County	C16	RM 190.1	50176	50-yr	2559.8	723.09	718.43	2.77	2.21	37.63	12.89	226.75	1502.14	3.91	1.33	4.66	4.66
Custer County	C16	RM 189.85	49765	50-yr	2559.8	722.91	718.13	2	1.88	20.05	11.64	334.92	1966.04	3.7	2.14	4.78	4.78
Custer County	C16	RM 189.65	49458	50-yr	2559.8	722.71	713.92	2.09	2.07	19.35	18.68	340.01	2158.9	3.61	3.48	8.79	8.79
Custer County	C16		49425	50-yr	Bridge												
Custer County	C16	RM 189.62	49416	50-yr	2559.8	722.64	713.92	2.14	2.13	19.9	19.06	339.42	1947.49	3.52	3.37	8.72	8.72
Custer County	C16	RM 189.43	49103	50-yr	2559.8	722.16	718.09	2.83	2.79	41.25	34.49	269.94	1198.98	3.34	2.79	4.07	4.07
Custer County	C16	RM 189.22	48763	50-yr	2559.8	722.2	717.93	1.42	1.39	9.91	8.34	452.46	1741.34	3.96	3.32	4.27	4.27
Custer County	C16	RM 188.91	48267	50-yr	2559.8	722.01	717.54	1.63	1.52	13.31	9.66	472.67	1639.62	3.27	2.37	4.47	4.47
Custer County	C16	RM 188.66	47869	50-yr	2559.8	721.53	716.75	2.74	2.17	34.98	12.95	195.28	1282.62	4.6	1.68	4.78	4.78
Custer County	C16	RM 188.51	47622	50-yr	2559.8	721.36	716.72	2.62	1.95	32.86	12.95	217.17	1106.89	4.22	1.65	4.64	4.64
Custer County	C16	RM 188.32	47314	50-yr	2559.8	721.3	716.79	1.91	1.51	18.45	8.5	151.92	924.19	4.07	1.84	4.51	4.51
Custer County	C16	RM 188.14	47024	50-yr	2559.8	721.14	716.93	1.31	1.44	8.73	8.98	474.59	1019.42	1.7	1.75	4.21	4.21
Custer County	C16	RM 187.98	46768	50-yr	2559.8	721.05	716.91	1.7	1.27	14.23	8.41	222.44	901.28	3.82	2.24	4.14	4.14
Custer County	C16	RM 187.78	46440	50-yr	2559.8	720.97	716.69	1.45	1.16	11.24	6.21	251.06	1122.07	3.61	1.98	4.28	4.28
Custer County	C16	RM 187.55	46083	50-yr	2559.8	720.74	716.04	2.07	1.28	20.37	8.68	224.37	1111.93	4.28	1.81	4.7	4.7
Custer County	C16	RM 187.35	45750	50-yr	2559.8	720.29	715.34	2.92	1.9	40.44	14.58	182.36	965.81	4.33	1.54	4.95	4.95
Custer County	C16	RM 187.14	45421	50-yr	2559.8	720.21	715.3	2.11	1.47	21.4	10.3	259.08	1112.62	4.17	1.99	4.91	4.91
Custer County	C16	RM 187.01	45211	50-yr	2559.8	720.16	715.3	1.79	1.31	15.2	7.73	300.38	1245.59	4.34	2.2	4.86	4.86
Custer County	C16	RM 186.84	44930	50-yr	2559.8	719.98	715.03	2.03	1.66	19.99	12.45	294.8	1265.31	4.04	2.5	4.96	4.96
Custer County	C16	RM 186.62	44553	50-yr	2559.8	719.69	712.45	2.39	2.38	24.58	23.99	188.38	363.45	5.69	5.58	7.24	7.24
Custer County	C16		44545	50-yr	Bridge												
Custer County	C16	RM 186.61	44538	50-yr	2559.8	719.66	712.45	2.4	2.39	24.83	24.23	188.38	476.22	5.67	5.55	7.21	7.21
Custer County	C16	RM 186.46	44311	50-yr	2559.8	719.2	714.53	3.23	2.93	50.01	34.59	186.01	777.18	4.2	2.88	4.67	4.67
Custer County	C16	RM 186.26	43996	50-yr	2559.8	718.92	714.27	2.92	2.74	40.7	31.33	205.3	464.45	4.23	3.24	4.65	4.65
Custer County	C16	RM 186.1	43730	50-yr	2559.8	718.85	713.9	2.19	2.18	23.27	21.08	293.59	476.68	3.99	3.61	4.95	4.95
Custer County	C16	RM 185.91	43424	50-yr	2491.9	718.67	713.84	2.08	2.06	19.92	18.87	388.65	534.28	3.09	2.92	4.83	4.83
Custer County	C16	RM 185.71	43110	50-yr	2491.9	718.11	713.84	3	2.75	38.84	27.57	325.31	511.43	2.51	1.77	4.27	4.27
Custer County	C16	RM 185.52	42808	50-yr	2491.9	718.09	713.71	1.77	1.6	15.61	10.65	365.98	627.96	3.76	2.56	4.38	4.38
Custer County	C16	RM 185.34	42508	50-yr	2491.9	717.9	713.28	1.93	1.88	16.47	14.97	511.74	669.52	2.52	2.29	4.62	4.62
Custer County	C16	RM 185.16	42219	50-yr	2491.9	717.81	712.93	1.54	1.48	11.72	9.92	419.95	1378.54	3.82	3.23	4.88	4.88
Custer County	C17	RM 184.95	41881	50-yr	2491.9	717.61	712.72	1.96	1.64	19.54	13.07	289.28	1115.7	4.21	2.8	4.89	4.89
Custer County	C17	RM 184.78	41621	50-yr	2491.9	717.33	712.51	2.52	2.09	29.79	19.05	214.69	424.35	4.43	2.81	4.82	4.82
Custer County	C17	RM 184.59	41311	50-yr	2491.9	717.05	711.96	2.68	2.44	33.27	26.59	194.78	275.45	4.66	3.71	5.09	5.09
Custer County	C17	RM 184.4	41010	50-yr	2491.9	716.99	711.62	2.09	2.07	19.85	18.92	242.39	257.32	4.91	4.68	5.37	5.37
Custer County	C17	RM 184.23	40728	50-yr	2491.9	716.76	711.31	2.4	2.36	27.33	25.56	237.53	259.36	4.35	4.07	5.45	5.45
Custer County	C17	RM 184.1	40517	50-yr	2491.9	716.59	710.39	2.52	2.36	28.97	23.65	203.14	268.45	4.8	3.94	6.2	6.2
Custer County	C17		40500	50-yr	Bridge												
Custer County	C17	RM 184.08	40496	50-yr	2491.9	716.56	710.39	2.54	2.38	29.53	24.08	203.14	268.28	4.77	3.91	6.17	6.17
Custer County	C17	RM 184.03	40407	50-yr	2491.9	716.52	711.49	2.4	2.34	26.69	24.36	222.9	251.77	4.64	4.23	5.03	5.03
Custer County	C17	RM 183.83	40098	50-yr	2491.9	716.37	711.42	2.27	2.24	23.89	22.16	233.74	256.95	4.68	4.33	4.95	4.95
Custer County	C17	RM 183.65	39806	50-yr	2491.9	716.17	711.39	2.4	2.39	26.66	26.21	224.23	228.66	4.63	4.56	4.78	4.78
Custer County	C17	RM 183.47	39513	50-yr	2491.9	715.87	711.39	2.72	2.72	35.16	35.16	210.32	210.32	4.35	4.35	4.48	4.48
Custer County	C17	RM 183.28	39210	50-yr	2491.9	715.77	711.31	2.15	2.14	21.93	21.26	264.64	275.51	4.36	4.23	4.46	4.46
Custer County	C17	RM 183.09	38909	50-yr	2491.9	715.51	711.04	2.46	2.46	28.94	28.94	239.34	239.34	4.23	4.23	4.47	4.47
Custer County	C17	RM 182.94	38660	50-yr	2491.9	715.4	710.66	2.22	2.22	22.91	22.91	246.69	246.69	4.56	4.56	4.74	4.74
Custer County	C17	RM 182.72	38316	50-yr	2491.9	715.2	710.1	2.28	2.2	24.58	22.84	250.1	281.18	4.33	4.03	5.1	5.1

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	50-yr	2491.9	714.68	710.12	3.23	2.86	49.47	37.27	173.67	268.15	4.32	3.24	4.56	4.56
Custer County	C17	RM 182.34	37706	50-yr	2491.9	714.52	710.27	2.53	2.24	31.44	20.68	240.92	440.83	3.85	2.52	4.25	4.25
Custer County	C17	RM 182.15	37402	50-yr	2491.9	714.29	710.26	2.42	2.19	28.72	17.12	252.37	493.67	3.88	2.31	4.03	4.03
Custer County	C17	RM 181.97	37127	50-yr	2491.9	714.12	710.26	2.22	2.06	24.65	14.51	292.15	555.99	3.7	2.17	3.86	3.86
Custer County	C17	RM 181.78	36815	50-yr	2491.9	713.88	710.09	2.25	2.03	21.85	13.38	397.76	762.03	2.64	1.61	3.79	3.79
Custer County	C17	RM 181.59	36505	50-yr	2491.9	713.54	709.76	2.44	2.22	26.75	18.6	379.73	618.05	2.61	1.81	3.78	3.78
Custer County	C17	RM 181.37	36155	50-yr	2491.9	713.26	709.37	2.34	1.96	27.71	17.73	276.84	560.04	3.55	2.27	3.89	3.89
Custer County	C17	RM 181.23	35925	50-yr	2491.9	712.97	709.36	2.67	2.38	36.85	25.78	247.28	445.06	3.36	2.35	3.61	3.61
Custer County	C17	RM 181.03	35607	50-yr	2491.9	712.81	709.02	1.99	1.92	20.21	16.72	354.1	495.66	3.46	2.86	3.79	3.79
Custer County	C17	RM 180.83	35292	50-yr	2491.9	712.69	708.68	1.74	1.56	15.5	11.52	362.09	863.14	3.4	2.53	4.01	4.01
Custer County	C17	RM 180.66	35006	50-yr	2491.9	712.49	708.22	1.98	1.86	19.53	14.9	342.47	484.28	3.64	2.77	4.27	4.27
Custer County	C18	RM 180.46	34700	50-yr	2491.9	712.29	708.05	2.1	1.88	21.32	15.86	281.53	433.64	4.11	3.05	4.24	4.24
Custer County	C18	RM 180.29	34421	50-yr	2491.9	712.04	707.79	2.47	2.04	30.26	14.75	243.73	666.05	3.79	1.84	4.25	4.25
Custer County	C18	RM 180.08	34086	50-yr	2491.9	711.84	707.53	2.21	1.91	23.38	12.21	254.14	605.3	4.16	2.16	4.31	4.31
Custer County	C18	RM 179.9	33807	50-yr	2491.9	711.7	707.32	2.13	1.89	22.09	13.04	266.42	581.56	4	2.35	4.38	4.38
Custer County	C18	RM 179.73	33525	50-yr	2491.9	711.39	706.89	2.52	2.32	31.42	24.29	256.8	407.62	3.77	2.91	4.5	4.5
Custer County	C18	RM 179.54	33218	50-yr	2491.9	711.14	706.7	2.4	2.3	30.29	23.65	312.1	420.8	3.31	2.58	4.44	4.44
Custer County	C18	RM 179.35	32914	50-yr	2491.9	710.98	706.45	2.09	1.9	21.19	14.75	292.41	471.41	4	2.78	4.53	4.53
Custer County	C18	RM 179.16	32611	50-yr	2491.9	710.7	706.29	2.44	2.34	28.86	21.16	237.48	340.1	4.28	3.14	4.41	4.41
Custer County	C18	RM 178.99	32337	50-yr	2491.9	710.55	706.07	2.27	2.18	24.51	20.59	254.29	332.18	4.29	3.6	4.48	4.48
Custer County	C18	RM 178.79	32025	50-yr	2491.9	710.34	705.9	2.35	2.26	26.41	23.83	251.59	300.68	4.18	3.77	4.44	4.44
Custer County	C18	RM 178.61	31730	50-yr	2491.9	710.17	705.59	2.27	2.24	24.66	23.02	259.81	414.13	4.21	3.93	4.58	4.58
Custer County	C18	RM 178.43	31434	50-yr	2491.9	709.99	705.25	2.27	2.27	24.39	23.8	249.19	283.86	4.39	4.29	4.74	4.74
Custer County	C18	RM 178.23	31114	50-yr	2491.9	709.8	704.7	2.28	2.28	24.63	24.06	249.24	286.43	4.37	4.28	5.1	5.1
Custer County	C18	RM 178.06	30848	50-yr	2491.9	709.62	704.57	2.41	2.27	26.88	19.77	219.45	322.54	4.64	3.4	5.05	5.05
Custer County	C18	RM 177.88	30549	50-yr	2491.9	709.4	704.57	2.48	2.33	29.22	21.6	229.01	334.9	4.33	3.19	4.83	4.83
Custer County	C18	RM 177.66	30211	50-yr	2531.5	708.86	704.57	3.21	3.07	49.99	37.84	193.53	270.04	4.05	3.05	4.29	4.29
Custer County	C18	RM 177.49	29932	50-yr	2531.5	708.69	704.47	2.62	2.6	33.13	29.64	236.92	267.45	4.08	3.64	4.22	4.22
Custer County	C19	RM 177.3	29625	50-yr	2531.5	708.54	704.46	2.21	2.2	24.2	23.44	302.47	348.29	3.79	3.67	4.08	4.08
Custer County	C19	RM 177.11	29314	50-yr	2531.5	708.21	704.46	2.5	2.43	27.15	23.74	369.02	435.78	2.74	2.39	3.75	3.75
Custer County	C19	RM 176.93	29040	50-yr	2531.5	708.07	704.42	1.99	1.9	17.79	15.93	436.64	518.34	2.87	2.57	3.65	3.65
Custer County	C19	RM 176.74	28720	50-yr	2531.5	707.91	704.21	1.85	1.74	17.62	14.39	342.3	592.9	3.38	2.76	3.7	3.7
Custer County	C19	RM 176.53	28384	50-yr	2531.5	707.66	703.63	2.06	1.94	23.02	20.29	344.95	514.09	2.87	2.54	4.03	4.03
Custer County	C19	RM 176.36	28109	50-yr	2531.5	707.43	703.08	2.12	2.05	22.48	19.35	324.02	393.02	3.65	3.15	4.35	4.35
Custer County	C19	RM 176.18	27824	50-yr	2531.5	706.72	702.71	3.5	3.3	61.96	46.31	199.69	326.87	3.57	2.66	4.01	4.01
Custer County	C19	RM 176	27527	50-yr	2531.5	706.56	702.51	2.55	2.41	32.29	26.93	259.98	360.64	3.72	3.1	4.05	4.05
Custer County	C19	RM 175.81	27227	50-yr	2531.5	706.33	702.24	2.38	2.3	28.66	25.13	297.33	369.46	3.54	3.1	4.09	4.09
Custer County	C19	RM 175.62	26928	50-yr	2531.5	706.04	701.81	2.58	2.32	32.71	24.68	234.72	420.36	3.84	2.89	4.23	4.23
Custer County	C19	RM 175.43	26622	50-yr	2531.5	705.66	701.81	2.87	2.2	41.91	33.04	214.93	432.29	3.5	2.75	3.85	3.85
Custer County	C19	RM 175.25	26325	50-yr	2531.5	705.31	701.72	2.78	2.52	39.55	30.64	212.23	398.44	3.44	2.65	3.59	3.59
Custer County	C19	RM 175.08	26048	50-yr	2531.5	705.11	701.63	2.21	2.2	25.62	24.92	357.35	387.83	3.2	3.11	3.48	3.48
Custer County	C19	RM 174.9	25768	50-yr	2531.5	704.8	701.31	2.41	2.41	30.63	30.55	337.4	338.29	3.11	3.11	3.49	3.49
Custer County	C19	RM 174.69	25444	50-yr	2531.5	704.47	700.82	2.39	2.36	30.66	26.77	351.06	418.34	3.01	2.62	3.65	3.65
Custer County	C19	RM 174.49	25112	50-yr	2531.5	704.09	700.04	2.55	2.49	33.02	25.36	279.46	375.17	3.53	2.71	4.05	4.05
Custer County	C19	RM 174.32	24844	50-yr	2531.5	703.69	699.39	2.94	2.85	42.7	30.27	222.49	326.9	3.84	2.72	4.3	4.3
Custer County	C19	RM 174.13	24549	50-yr	2531.5	703.58	698.84	2.3	2.23	24.75	16.98	244.91	372.02	4.48	3.06	4.74	4.74
Custer County	C19	RM 173.94	24238	50-yr	2531.5	703.31	698.14	2.55	2.4	31.18	18.05	239.67	444.17	4.12	2.37	5.17	5.17
Custer County	C19	RM 173.75	23939	50-yr	2531.5	702.94	697.92	2.99	2.53	41.44	19.35	172.39	465	4.63	2.15	5.02	5.02
Custer County	C19	RM 173.57	23651	50-yr	2531.5	702.79	697.83	2.57	2.44	30.42	17.22	208.71	392.04	4.69	2.65	4.96	4.96
Custer County	C19	RM 173.39	23352	50-yr	2531.5	702.41	697.83	2.97	2.88	42.31	27.38	203.05	325.6	4.19	2.7	4.58	4.58
Custer County	C19	RM 173.2	23054	50-yr	2531.5	702.18	697.72	2.72	2.49	35.82	27.98	226.21	343.03	4	3.13	4.46	4.46
Custer County	C19	RM 173.02	22756	50-yr	2531.5	701.95	697.29	2.54	2.37	31.23	20.81	244.03	421.49	4.04	2.68	4.66	4.66
Custer County	C19	RM 172.82	22437	50-yr	2531.5	701.81	696.82	1.96	1.93	20.21	18.69	414.44	467.56	3.11	2.88	4.99	4.99
Custer County	C19	RM 172.67	22200	50-yr	2531.5	701.62	696.52	2.05	2.03	22.61	21.98	421.93	453.51	2.92	2.84	5.1	5.1
Custer County	C19	RM 172.49	21903	50-yr	2531.5	701.42	696.23	1.99	1.98	20.25	19.44	365.62	394.1	3.46	3.33	5.19	5.19
Custer County	C19	RM 172.29	21585	50-yr	2531.5	701.15	695.79	2.37	2.25	25.86	19.33	226.44	505.42	4.67	3.48	5.36	5.36
Custer County	C19	RM 172.12	21325	50-yr	2531.5	700.53	695.81	3.36	3.33	57.31	53.56	216.64	257.46	3.48	3.25	4.72	4.72
Custer County	C19		21310	50-yr	Bridge												
Custer County	C19	RM 172.11	21300	50-yr	2531.5	700.37	695.81	3.53	3.51	64.31	61.22	216.4	249.05	3.31	3.15	4.56	4.56
Custer County	C19	RM 171.89	20942	50-yr	2531.5	700.1	695.57	2.57	2.5	31.4	25.99	228.36	285.99	4.29	3.55	4.53	4.53

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	50-yr	2531.5	699.78	695.49	2.78	2.68	37.82	31.52	231.98	290.45	3.9	3.25	4.29	4.29
Custer County	C19	RM 171.52	20341	50-yr	2531.5	699.58	695.3	2.47	2.42	29.57	26.1	249.92	291.37	4.07	3.59	4.28	4.28
Custer County	C19	RM 171.34	20043	50-yr	2531.5	699.29	695.11	2.62	2.6	33.59	31.07	244.86	312.86	3.93	3.64	4.18	4.18
Custer County	C19	RM 171.15	19745	50-yr	2531.5	699.07	694.86	2.51	2.5	30.44	29.58	249.21	257.02	4.05	3.94	4.21	4.21
Custer County	C19	RM 170.96	19437	50-yr	2531.5	698.86	694.67	2.4	2.39	28.07	26.16	261.96	285.91	4.02	3.74	4.19	4.19
Custer County	C19	RM 170.78	19143	50-yr	2531.5	698.62	694.2	2.49	2.42	29.74	25.22	245.9	299.63	4.12	3.49	4.42	4.42
Custer County	C19	RM 170.58	18838	50-yr	2531.5	698.33	693.91	2.65	2.58	34.45	30.76	245.35	284.39	3.86	3.45	4.42	4.42
Custer County	C19	RM 170.4	18543	50-yr	2531.5	698.16	693.9	2.3	2.29	25.51	24.81	269.24	278.05	4.08	3.98	4.26	4.26
Custer County	C19	RM 170.22	18257	50-yr	2531.5	697.99	693.7	2.24	2.23	24.22	22.81	272.95	292.29	4.13	3.89	4.29	4.29
Custer County	C19	RM 170.03	17941	50-yr	2531.5	697.7	693.31	2.54	2.53	30.75	30.3	237.46	241.3	4.2	4.14	4.39	4.39
Custer County	C19	RM 169.84	17641	50-yr	2531.5	697.45	692.78	2.63	2.63	32.48	32.25	214.88	216.29	4.48	4.45	4.67	4.67
Custer County	C19	RM 169.65	17341	50-yr	2531.5	697.17	692.47	2.77	2.76	35.92	35.03	203.97	209.65	4.48	4.37	4.7	4.7
Custer County	C19	RM 169.47	17041	50-yr	2531.5	696.87	692.17	2.9	2.78	39.97	32.51	199.81	260.85	4.3	3.49	4.7	4.7
Custer County	C19	RM 169.28	16732	50-yr	2531.5	696.64	692	2.68	2.56	34.06	26.68	214.83	291.66	4.34	3.39	4.64	4.64
Custer County	C19	RM 169.09	16441	50-yr	2531.5	696.39	691.96	2.68	2.67	34.31	33.21	225.9	256.81	4.18	4.05	4.43	4.43
Custer County	C19	RM 168.91	16152	50-yr	2531.5	696.13	691.93	2.72	2.7	35.83	32.54	230.07	255.81	4.04	3.67	4.2	4.2
Custer County	C19	RM 168.72	15846	50-yr	2531.5	695.97	691.82	2.26	2.26	24.89	24.47	280.43	285.39	3.99	3.92	4.15	4.15
Custer County	C19	RM 168.51	15500	50-yr	2531.5	695.75	691.6	2.23	2.19	24.58	22.85	296.39	327.85	3.8	3.53	4.15	4.15
Custer County	C19	RM 168.35	15241	50-yr	2531.5	695.48	691.48	2.51	2.38	31.44	26.92	269.3	336.42	3.7	3.17	4	4
Custer County	C19	RM 168.15	14931	50-yr	2531.5	695.11	691.2	2.77	2.6	38.15	29.42	240.34	340.15	3.72	2.86	3.91	3.91
Custer County	C19	RM 167.97	14639	50-yr	2531.5	694.9	690.59	2.5	2.49	30.09	28.56	247.71	261.45	4.09	3.88	4.31	4.31
Custer County	C19	RM 167.79	14340	50-yr	2531.5	694.67	690.5	2.49	2.48	30.04	28.93	249.29	350.74	4.07	3.92	4.17	4.17
Custer County	C19	RM 167.61	14054	50-yr	2531.5	694.34	690.42	2.75	2.73	37.6	35.84	244.91	259.76	3.75	3.58	3.92	3.92
Custer County	C19	RM 167.41	13735	50-yr	2531.5	694.11	690.14	2.47	2.24	30.21	21.48	264.94	422.12	3.76	2.68	3.97	3.97
Custer County	C19	RM 167.22	13433	50-yr	2531.5	693.91	689.79	2.3	2.22	25.65	19.99	276.96	370.18	3.96	3.08	4.12	4.12
Custer County	C19	RM 167.04	13143	50-yr	2531.5	693.74	689.14	2.27	2.15	24.44	19.94	256.62	364.03	4.3	3.51	4.6	4.6
Custer County	C19	RM 166.85	12847	50-yr	2531.5	693.39	688.98	2.73	2.56	36.98	29.72	240.01	344.69	3.77	3.03	4.41	4.41
Custer County	C19	RM 166.67	12552	50-yr	2531.5	693.17	688.84	2.49	2.45	29.95	22.94	252.35	336.06	4.03	3.08	4.33	4.33
Custer County	C19	RM 166.52	12319	50-yr	2531.5	693.09	688.64	2.11	2.09	21.21	18.91	278.87	316.82	4.29	3.82	4.45	4.45
Custer County	C19	RM 166.31	11978	50-yr	2531.5	692.83	688.02	2.39	2.29	26.42	17.86	249.27	387.35	4.23	2.85	4.81	4.81
Custer County	C20	RM 166.2	11806	50-yr	2540	692.69	687.4	2.48	2.35	28.99	18.93	229.93	376	4.42	2.87	5.29	5.29
Custer County	C20	RM 166.06	11569	50-yr	2540	692.45	687.38	2.66	2.55	34.6	23.41	239.53	372.53	3.96	2.67	5.07	5.07
Custer County	C20	RM 165.92	11350	50-yr	2540	692.19	687.38	2.82	2.69	39.13	26.38	229.76	361.58	3.89	2.61	4.81	4.81
Custer County	C20	RM 165.73	11039	50-yr	2540	692.01	687.26	2.37	2.32	27.27	22.08	264.5	334.53	4.04	3.27	4.75	4.75
Custer County	C20	RM 165.55	10750	50-yr	2540	691.82	687.11	2.34	2.29	26.56	23	272.37	321.42	3.98	3.44	4.71	4.71
Custer County	C20	RM 165.35	10440	50-yr	2540	691.61	686.75	2.31	2.25	26.1	21.79	279.36	347.06	3.9	3.25	4.86	4.86
Custer County	C20	RM 165.17	10140	50-yr	2540	691.42	686.41	2.31	2.18	25.4	19.08	247.1	361.41	4.3	3.22	5.01	5.01
Custer County	C20	RM 165.01	9883	50-yr	2540	691.25	686.16	2.31	2.23	25.72	20.46	262.27	345.59	4.15	3.3	5.09	5.09
Custer County	C20	RM 164.81	9577	50-yr	2540	691.08	686.04	2.2	2.07	23.61	17.14	284.5	425.4	3.99	2.89	5.04	5.04
Custer County	C20	RM 164.61	9252	50-yr	2540	690.96	685.8	1.87	1.69	15.52	11.49	374.23	575.82	3.54	2.61	5.16	5.16
Custer County	C20	RM 164.42	8945	50-yr	2540	690.81	685.78	1.87	1.87	15.36	15.15	416.56	430.69	3.25	3.21	5.03	5.03
Custer County	C20	RM 164.23	8641	50-yr	2540	690.68	685.85	1.69	1.69	16.46	16.28	452.11	469.25	3.32	3.29	4.83	4.83
Custer County	C20	RM 164.06	8372	50-yr	2540	690.55	685.64	1.81	1.67	15.08	11.6	294.56	422.88	4.69	3.6	4.91	4.91
Custer County	C20	RM 163.85	8031	50-yr	2540	690.39	685	1.99	1.99	18.47	18.2	277.99	282.13	4.58	4.53	5.39	5.39
Custer County	C20	RM 163.67	7743	50-yr	2540	690.14	684.45	2.44	2.43	26.28	25.51	191.84	198.36	5.42	5.27	5.69	5.69
Custer County	C20	RM 163.48	7449	50-yr	2540	689.82	684.13	2.93	2.9	37.83	35.47	162.29	174.64	5.34	5.01	5.69	5.69
Custer County	C20	RM 163.3	7150	50-yr	2540	689.73	684.13	2.42	2.37	26.35	23.65	204.93	235.02	5.09	4.57	5.6	5.6
Custer County	C20	RM 163.12	6859	50-yr	2540	689.67	683.91	1.98	1.89	18.44	15.56	267.05	338.94	4.71	3.97	5.75	5.75
Custer County	C20	RM 162.94	6583	50-yr	2540	689.45	683.78	2.37	2.17	25.21	17.16	204.74	336.73	5.13	3.47	5.67	5.67
Custer County	C20	RM 162.74	6254	50-yr	2540	689.03	683.77	3.03	2.8	42.55	27.29	177.33	306.88	4.65	2.95	5.26	5.26
Custer County	C20	RM 162.55	5957	50-yr	2540	688.8	683.96	2.7	2.67	37.8	34.91	231.24	253.19	4.06	3.75	4.85	4.85
Custer County	C20	RM 162.34	5620	50-yr	2540	688.69	683.92	2.03	1.99	19.87	17.09	304.55	364.14	4.09	3.51	4.77	4.77
Custer County	C20	RM 162.18	5352	50-yr	2540	688.56	683.41	1.82	1.82	25.89	25.35	354.23	363.53	3.93	3.85	5.15	5.15
Custer County	C20	RM 162.03	5111	50-yr	2540	688.47	683.26	1.73	1.73	14.1	13.88	322.26	345.85	4.55	4.49	5.21	5.21
Custer County	C20	RM 161.81	4770	50-yr	2540	687.98	682.63	2.96	2.88	39.89	31.64	174.77	227.55	4.89	3.87	5.35	5.35
Custer County	C20	RM 161.62	4470	50-yr	2540	687.71	682.53	3.03	2.68	42.57	32.2	174.2	356.8	4.62	3.48	5.18	5.18
Custer County	C20	RM 161.43	4159	50-yr	2540	687.48	682.63	2.74	2.63	35.26	26.98	206.33	284.02	4.46	3.4	4.85	4.85
Custer County	C20	RM 161.24	3859	50-yr	2540	687.17	682.51	2.89	2.69	39.54	27.72	199.39	312.92	4.33	3.02	4.66	4.66
Custer County	C20	RM 161.06	3559	50-yr	2540	686.96	682.38	2.64	2.47	32.87	23.48	218.97	331.62	4.36	3.1	4.58	4.58
Custer County	C20	RM 160.87	3258	50-yr	2540	686.58	682.24	2.99	2.9	43.17	33.92	204.8	271.59	4.12	3.22	4.33	4.33

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	50-yr	2540	686.42	682.11	2.42	2.4	28.19	25.69	252.16	280.09	4.15	3.78	4.31	4.31
Custer County	C20	RM 160.5	2662	50-yr	2540	686.23	681.85	2.29	2.28	26.29	24.14	303.03	332.31	3.66	3.36	4.38	4.38
Custer County	C20	RM 160.31	2364	50-yr	2540	686.05	681.58	2.15	2.09	23.19	20.32	321.4	380.64	3.64	3.19	4.47	4.47
Custer County	C20	RM 160.12	2063	50-yr	2540	685.87	681.02	2.16	2.08	22.42	19.61	277.19	335.15	4.17	3.64	4.85	4.85
Custer County	C20	RM 159.93	1758	50-yr	2540	685.58	680.9	2.45	2.4	30.57	27.31	292.2	352.91	3.51	3.14	4.68	4.68
Custer County	C20	RM 159.75	1459	50-yr	2540	685.33	680.88	2.46	2.42	29.18	25.64	251.96	302.69	4.09	3.59	4.45	4.45
Custer County	C20	RM 159.55	1151	50-yr	2540	685.14	680.74	2.34	2.32	26.32	24.6	261.92	294.75	4.13	3.86	4.4	4.4
Custer County	C20	RM 159.38	876	50-yr	2540	684.9	680.37	2.54	2.4	30.57	22.4	229.23	334.56	4.32	3.17	4.53	4.53
Custer County	C20	RM 159.19	566	50-yr	2540	684.71	679.77	2.41	2.41	27.88	27.25	236.5	242.32	4.45	4.36	4.94	4.94
Custer County	C20	RM 158.98	229	50-yr	2540	684.43	679.44	2.59	2.55	31.37	28.92	217.29	241	4.49	4.14	4.99	4.99

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	50-yr	2548.5	684.43	679.22	2.54	2.46	29.89	25.39	214.16	261.95	4.65	3.95	5.21	5.21
Prairie County	C21	RM 158.55	61087	50-yr	2548.5	684.31	678.98	2.23	2.22	22.45	21.86	226.29	269.16	5.04	4.91	5.33	5.33
Prairie County	C21	RM 158.36	60787	50-yr	2548.5	684.18	678.83	2.15	2.14	21.18	20.11	249.45	291.93	4.75	4.51	5.35	5.35
Prairie County	C21	RM 158.17	60481	50-yr	2548.5	684.02	678.35	2.2	2.15	24.66	20.98	253.18	345	4.54	3.86	5.67	5.67
Prairie County	C21	RM 157.98	60173	50-yr	2548.5	683.71	678.22	2.61	2.53	32.62	25.85	231.17	304.33	4.19	3.31	5.48	5.48
Prairie County	C21	RM 157.78	59862	50-yr	2548.5	683.45	678.23	2.67	2.47	33.06	21.4	201.99	346.63	4.62	2.97	5.22	5.22
Prairie County	C21	RM 157.6	59561	50-yr	2548.5	683.35	678.14	2.24	2.14	22.88	18.32	233.85	309.1	4.82	3.85	5.21	5.21
Prairie County	C21	RM 157.38	59209	50-yr	2548.5	683.21	677.81	2.04	1.9	20.02	15.83	288.08	417.55	4.14	3.27	5.4	5.4
Prairie County	C21	RM 157.18	58885	50-yr	2548.5	683.06	677.42	2.06	1.74	19.47	12.11	235.66	512.74	4.81	2.97	5.64	5.64
Prairie County	C21	RM 156.99	58595	50-yr	2548.5	682.8	677.32	2.59	2.03	30.6	17.44	173.83	453.12	4.91	2.77	5.49	5.49
Prairie County	C21	RM 156.8	58287	50-yr	2548.5	682.36	677.32	3.28	2.58	50.32	31.11	149.83	356.69	4.53	2.77	5.04	5.04
Prairie County	C21	RM 156.62	57990	50-yr	2548.5	682.27	677.29	2.4	2.26	26.93	21.36	207.6	310.67	4.58	3.63	4.98	4.98
Prairie County	C21	RM 156.42	57683	50-yr	2548.5	682.15	677.21	2.07	1.97	20.1	16.78	271.12	345.47	4.49	3.74	4.94	4.94
Prairie County	C21	RM 156.24	57378	50-yr	2548.5	681.87	676.91	2.49	2.36	29.86	24.13	245.34	323.9	4.13	3.33	4.96	4.96
Prairie County	C21	RM 156.04	57069	50-yr	2548.5	681.71	676.56	2.3	2.16	24.08	15.01	226.07	390.73	4.86	3.01	5.15	5.15
Prairie County	C21	RM 155.85	56762	50-yr	2548.5	681.44	676.11	2.62	2.41	31.57	19.94	204.32	358.94	4.7	2.95	5.33	5.33
Prairie County	C21	RM 155.66	56455	50-yr	2548.5	681.03	675.96	3.12	2.76	45.8	28.12	177.2	337.5	4.49	2.73	5.07	5.07
Prairie County	C21	RM 155.47	56151	50-yr	2548.5	680.91	675.89	2.37	2.2	27.22	19.23	257.44	401.23	4.1	2.89	5.02	5.02
Prairie County	C21	RM 155.27	55835	50-yr	2548.5	680.72	675.92	2.2	2.18	24.23	22.5	317.77	345.05	3.65	3.39	4.8	4.8
Prairie County	C21	RM 155.08	55530	50-yr	2548.5	680.49	675.95	2.28	2.25	25.74	23.84	296.49	323.99	3.77	3.49	4.54	4.54
Prairie County	C21	RM 154.88	55209	50-yr	2548.5	680.3	675.64	2.17	2.17	22.66	22.32	300.68	305.32	3.91	3.85	4.66	4.66
Prairie County	C21	RM 154.69	54901	50-yr	2548.5	679.99	675.39	2.53	2.5	31.65	29.14	264.93	314.02	3.79	3.49	4.6	4.6
Prairie County	C21	RM 154.5	54588	50-yr	2548.5	679.74	675.02	2.48	2.45	29.95	28.35	257.32	282.51	3.98	3.77	4.72	4.72
Prairie County	C21	RM 154.3	54273	50-yr	2548.5	679.54	674.8	2.32	2.3	26.14	25.32	277.5	287.8	3.96	3.85	4.74	4.74
Prairie County	C21	RM 154.1	53959	50-yr	2548.5	679.29	674.67	2.42	2.38	28.74	25.6	269.5	309.25	3.89	3.47	4.62	4.62
Prairie County	C21	RM 153.91	53650	50-yr	2548.5	679.11	674.51	2.25	2.23	24.02	22	260.55	288.46	4.33	3.97	4.6	4.6
Prairie County	C21	RM 153.72	53338	50-yr	2548.5	678.88	674.06	2.44	2.25	27.85	19.5	225.99	367.93	4.51	3.15	4.82	4.82
Prairie County	C21	RM 153.52	53023	50-yr	2548.5	678.5	673.78	2.91	2.65	41.26	31.14	206.24	319.58	4	3.01	4.72	4.72
Prairie County	C21	RM 153.32	52704	50-yr	2548.5	678.22	673.64	2.63	2.6	34.04	30.76	249.02	298.01	3.88	3.5	4.58	4.58
Prairie County	C21	RM 153.12	52380	50-yr	2548.5	678.06	673.43	2.24	2.2	23.88	20.41	270.43	370.56	4.2	3.59	4.63	4.63
Prairie County	C21	RM 152.92	52065	50-yr	2548.5	677.88	672.88	2.2	2.17	22.78	19.55	270.87	407.43	4.27	3.65	5	5
Prairie County	C21	RM 152.73	51762	50-yr	2548.5	677.71	672.27	2.21	2.16	23.3	20.23	271.58	331.78	4.22	3.66	5.44	5.44
Prairie County	C21	RM 152.54	51463	50-yr	2548.5	677.52	671.85	2.28	2.27	24.56	24.19	251.98	291.23	4.44	4.38	5.67	5.67
Prairie County	C21	RM 152.35	51157	50-yr	2548.5	677.38	671.41	2.2	2.19	21.98	20.98	229.76	242.34	5.03	4.8	5.97	5.97
Prairie County	C21	RM 152.16	50852	50-yr	2548.5	677.26	671.23	2.08	2.03	20.27	17.84	268.26	315.31	4.53	3.98	6.03	6.03
Prairie County	C21	RM 151.97	50546	50-yr	2548.5	677.15	670.99	1.97	1.82	16.29	13.65	284.09	385.98	4.34	3.62	6.16	6.16
Prairie County	C21	RM 151.77	50227	50-yr	2548.5	677.05	670.87	1.96	1.69	16.67	11.25	204.89	400.28	5.61	3.76	6.18	6.18
Prairie County	C21	RM 151.59	49936	50-yr	2548.5	676.73	670.75	2.77	2.38	34.28	20.66	152.18	338.69	5.31	3.16	5.98	5.98
Prairie County	C21	RM 151.38	49599	50-yr	2548.5	676.59	670.9	2.37	2.15	25.05	17.09	199.41	335.32	5.22	3.54	5.69	5.69
Prairie County	C21	RM 151.19	49287	50-yr	2548.5	676.48	670.96	2.15	2.09	20.63	16.38	226.6	295.11	5.21	4.13	5.52	5.52
Prairie County	C21	RM 151.01	49012	50-yr	2548.5	676.4	670.91	1.94	1.91	18.67	16.75	288.76	328.9	4.53	4.06	5.49	5.49
Prairie County	C21	RM 150.81	48683	50-yr	2548.5	676.33	670.79	1.57	1.56	11.02	10.75	428.92	441.82	3.78	3.69	5.53	5.53
Prairie County	C21	RM 150.63	48400	50-yr	3075.2	676.21	670.45	1.74	1.71	13.56	11.96	405.47	494.8	4.31	3.8	5.76	5.76
Prairie County	C21	RM 150.44	48094	50-yr	3075.2	675.99	669.86	2.21	2.1	22.19	17.4	273.64	394.09	4.94	3.87	6.13	6.13
Prairie County	C21	RM 150.25	47780	50-yr	3075.2	675.42	669.38	3.37	3.19	58.3	45.46	166.06	240.09	5.38	4.18	6.04	6.04
Prairie County	C21	RM 150.05	47474	50-yr	3075.2	675.32	669.21	2.68	2.65	31.35	28.24	204.16	229.87	5.6	5.05	6.11	6.11
Prairie County	C21	RM 149.87	47178	50-yr	3075.2	675.2	669.02	2.41	2.32	26.8	22.95	269.57	329.62	4.7	4.01	6.18	6.18
Prairie County	C21	RM 149.66	46846	50-yr	3075.2	675.08	668.97	2.05	1.98	18.7	15.99	331.18	406.41	4.49	3.82	6.11	6.11
Prairie County	C21	RM 149.48	46551	50-yr	3075.2	674.76	668.91	2.65	2.43	33.05	21.93	261.52	634.38	4.37	2.89	5.85	5.85
Prairie County	C21	RM 149.27	46219	50-yr	3075.2	674.59	668.94	2.51	2.03	28.84	17.31	208.49	658.11	4.78	2.84	5.65	5.65
Prairie County	D1	RM 149.08	45914	50-yr	3075.2	674.37	668.95	2.45	2.26	27.5	18.09	254.75	524.67	4.82	3.16	5.42	5.42
Prairie County	D1	RM 148.89	45608	50-yr	3078	674.29	668.96	2.03	2.01	18.74	18.22	314.73	422.73	4.82	4.7	5.33	5.33
Prairie County	D1	RM 148.7	45301	50-yr	3078	674.15	668.73	2.03	2	20.07	18.86	347.94	377.34	4.33	4.07	5.42	5.42
Prairie County	D1	RM 148.5	44987	50-yr	3078	673.89	668.42	2.47	2.21	27.38	21.35	235.13	352.92	5.07	3.95	5.47	5.47
Prairie County	D1	RM 148.3	44667	50-yr	3078	673.54	668.01	2.96	2.63	39.31	28.53	193.35	313.67	5.15	3.73	5.53	5.53
Prairie County	D1	RM 148.11	44353	50-yr	3078	673.39	667.73	2.57	2.44	29.7	25.4	230.09	302.37	5.1	4.36	5.66	5.66
Prairie County	D1	RM 147.93	44062	50-yr	3078	673.29	667.4	2.21	2.19	22.65	21.68	306.12	322.82	4.55	4.36	5.89	5.89
Prairie County	D1	RM 147.74	43761	50-yr	3078	673.17	667.21	2.14	1.97	21.95	17.62	251.8	401.26	4.87	3.89	5.96	5.96
Prairie County	D1	RM 147.55	43454	50-yr	3078	672.96	666.79	2.45	2.17	26.62	15.71	197.43	453.11	5.36	3.13	6.17	6.17
Prairie County	D1	RM 147.34	43128	50-yr	3078	672.76	666.46	2.65	2.29	30.83	17.78	173.86	426.14	5.55	3.15	6.3	6.3

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	50-yr	3078	672.57	666.42	2.7	2.37	32.41	23.65	178.57	340.23	5.26	3.81	6.15	6.15
Prairie County	D1	RM 146.96	42505	50-yr	3078	672.24	666.49	2.96	2.84	38.44	32.94	187.33	245.91	5.47	4.69	5.75	5.75
Prairie County	D1	RM 146.77	42199	50-yr	3078	672.11	666.48	2.56	2.56	29.15	28.56	225.21	229.69	5.33	5.23	5.63	5.63
Prairie County	D1	RM 146.58	41899	50-yr	3078	672.05	666.59	2.07	2.06	19.38	18.91	296.32	304.27	5.02	4.9	5.46	5.46
Prairie County	D1	RM 146.32	41487	50-yr	3078	671.82	666.62	2.23	2.19	23.38	21.17	325.06	365.77	4.24	3.84	5.2	5.2
Prairie County	D1	RM 146	40968	50-yr	3078	671.48	666.48	2.38	2.35	27.39	25.73	277.27	299.02	4.65	4.37	5	5
Prairie County	D1	RM 145.65	40420	50-yr	3078	671.09	665.52	2.53	2.48	30.75	27.1	247.14	287.44	4.9	4.32	5.57	5.57
Prairie County	D1	RM 145.36	39958	50-yr	3078	670.84	664.91	2.36	2.3	27.17	23.9	264.9	312.15	4.87	4.29	5.93	5.93
Prairie County	D1	RM 145.13	39579	50-yr	3078	670.67	664.58	2.24	2.19	23.65	19.69	266.31	328.2	5.15	4.28	6.08	6.08
Prairie County	D1	RM 144.92	39251	50-yr	3078	670.51	664.24	2.21	2.16	23.97	19.74	272.39	340.21	5.09	4.18	6.27	6.27
Prairie County	D1	RM 144.73	38942	50-yr	3078	670.33	663.99	2.31	2.22	26.06	21.3	264.25	342.35	4.97	4.05	6.34	6.34
Prairie County	D1	RM 144.56	38672	50-yr	3078	670.14	663.14	2.42	2.35	26.98	24.24	265.15	308.31	4.73	4.25	7	7
Prairie County	D1		38642.5	50-yr	Bridge												
Prairie County	D1	RM 144.52	38613	50-yr	3078	670.06	663.14	2.47	2.4	28.28	24.78	265.15	316.18	4.65	4.07	6.92	6.92
Prairie County	D1	RM 144.33	38305	50-yr	3078	669.86	664.19	2.52	2.36	28.3	21.48	232.15	335.2	5.15	3.9	5.67	5.67
Prairie County	D1	RM 144.13	37987	50-yr	3078	669.77	664.33	2.17	2.09	20.93	17.61	271.37	336.94	5.19	4.37	5.44	5.44
Prairie County	D1	RM 143.91	37637	50-yr	3078	669.67	663.96	1.95	1.76	17.05	12.66	299.48	467.72	5.04	3.73	5.71	5.71
Prairie County	D1	RM 143.71	37320	50-yr	3078	669.29	663.43	2.83	2.54	35.3	23.82	191.55	332.23	5.45	3.65	5.86	5.86
Prairie County	D1	RM 143.45	36908	50-yr	3078	668.83	663.01	3.24	3.04	46.91	34.95	179.26	262.43	5.19	3.85	5.82	5.82
Prairie County	D1	RM 143.21	36511	50-yr	3078	668.68	662.92	2.56	2.52	29.02	25.86	224.58	257.42	5.33	4.75	5.76	5.76
Prairie County	D1	RM 142.97	36139	50-yr	3078	668.51	662.7	2.43	2.39	25.88	23.8	232.06	256.54	5.45	5.01	5.81	5.81
Prairie County	D1	RM 142.71	35717	50-yr	3078	667.97	662.52	3.23	3.22	47.24	44.93	192.11	202.72	4.96	4.72	5.45	5.45
Prairie County	D1	RM 142.46	35322	50-yr	3078	667.85	662.36	2.4	2.33	26.08	21.2	254.79	325.6	5	4.06	5.49	5.49
Prairie County	D1	RM 142.23	34952	50-yr	3078	667.61	662.21	2.54	2.43	29.06	22.05	237.35	330.72	5.06	3.83	5.4	5.4
Prairie County	D1	RM 142.02	34614	50-yr	3078	667.43	662.21	2.42	2.25	27.55	22.5	269.68	383.29	4.37	3.57	5.22	5.22
Prairie County	D1	RM 141.8	34258	50-yr	3078	667.36	662.01	1.76	1.75	14.43	14.11	393.92	404.65	4.43	4.34	5.35	5.35
Prairie County	D1	RM 141.6	33942	50-yr	3078	667.15	661.72	2.12	2.12	18.42	18.21	399.13	404.17	3.63	3.6	5.43	5.43
Prairie County	D1	RM 141.42	33642	50-yr	3078	667.09	661.32	1.67	1.66	10.99	10.78	486.59	497.26	3.79	3.72	5.77	5.77
Prairie County	D1	RM 141.22	33325	50-yr	3078	666.96	660.91	1.85	1.84	15.37	15.01	326.47	357.67	5.09	4.98	6.05	6.05
Prairie County	D1	RM 141.02	33011	50-yr	3078	666.59	660.58	2.77	2.71	33.37	26.06	194.42	256.37	5.69	4.43	6.01	6.01
Prairie County	D1	RM 140.84	32709	50-yr	3078	666.5	660.35	2.37	2.35	24.88	22.41	241.98	271.97	5.35	4.82	6.15	6.15
Prairie County	D1	RM 140.64	32394	50-yr	3078	666.4	660.07	2.19	2.16	20.51	19.13	239.5	260.22	5.86	5.47	6.33	6.33
Prairie County	D1	RM 140.44	32074	50-yr	3078	666.18	659.63	2.49	2.45	27.23	24.69	225.88	253.38	5.46	4.95	6.55	6.55
Prairie County	D1	RM 140.23	31738	50-yr	3078	665.87	659.62	2.85	2.82	36.26	32.66	207.01	232.87	5.2	4.7	6.25	6.25
Prairie County	D1	RM 140.03	31420	50-yr	3078	665.79	659.59	2.3	2.28	23.4	21.38	253.77	279.57	5.27	4.83	6.2	6.2
Prairie County	D1	RM 139.84	31118	50-yr	3078	665.7	659.19	2.01	1.96	18.45	16.81	309.19	356.73	4.91	4.48	6.51	6.51
Prairie County	D1	RM 139.64	30801	50-yr	3078	665.54	658.96	2.23	2	21.24	13.74	222.13	398.62	5.99	3.86	6.58	6.58
Prairie County	D1	RM 139.44	30466	50-yr	3078	665.43	658.72	2.15	1.99	20.15	14.02	250.57	399.76	5.59	3.88	6.71	6.71
Prairie County	D1	RM 139.23	30138	50-yr	3078	665.26	658.34	2.28	2.26	25.38	24.01	219.78	234.22	6.13	5.81	6.92	6.92
Prairie County	D1	RM 139.02	29799	50-yr	3078	664.88	658.14	2.92	2.84	44.65	37.11	179.74	225.59	5.8	4.81	6.74	6.74
Prairie County	D1	RM 138.81	29470	50-yr	3078	664.84	658.11	2.18	2.12	22.81	20.31	219.94	255.2	6.39	5.68	6.73	6.73
Prairie County	D1	RM 138.62	29157	50-yr	3078	664.7	657.94	2.29	2.2	22.21	19.56	216.79	258.98	6.14	5.4	6.76	6.76
Prairie County	D1	RM 138.41	28823	50-yr	3078	664.47	657.82	2.57	2.48	31.14	27.81	202.45	237.11	5.86	5.23	6.65	6.65
Prairie County	D1	RM 138.22	28519	50-yr	3078	664.3	657.8	2.59	2.52	28.85	25.23	198.68	234.14	5.94	5.21	6.5	6.5
Prairie County	D1	RM 138.02	28200	50-yr	3078	664.29	657.74	1.97	1.94	17.42	16.19	246.99	270.29	6.32	5.87	6.55	6.55
Prairie County	D1	RM 137.82	27874	50-yr	3078	664.17	656.95	2.05	1.99	19.48	16.22	263.32	328.68	5.67	4.72	7.22	7.22
Prairie County	D1	RM 137.62	27552	50-yr	3078	663.97	656.75	2.31	2.25	25.48	22.79	234.81	477.62	5.62	5.03	7.22	7.22
Prairie County	D1	RM 137.42	27247	50-yr	3078	663.74	656.66	2.58	2.55	31.3	27.06	204.7	285.6	5.82	5.04	7.08	7.08
Prairie County	D1	RM 137.24	26944	50-yr	3078	663.58	656.66	2.52	2.47	30.86	25.29	205.46	329.41	5.91	4.83	6.92	6.92
Prairie County	D1	RM 137.04	26627	50-yr	3095	663.42	655.41	2.51	2.49	29.89	28.62	208.71	219.31	5.9	5.67	8.01	8.01
Prairie County	D1		26616.5	50-yr	Bridge												
Prairie County	D1	RM 137.02	26606	50-yr	3095	663.38	655.41	2.52	2.51	30.31	29.03	208.58	219.12	5.87	5.64	7.97	7.97
Prairie County	D2	RM 136.84	26475	50-yr	3095	663.34	656.46	2.38	2.37	25.36	24.39	207.19	215.98	6.29	6.05	6.88	6.88
Prairie County	D2		26471.5	50-yr	Bridge												
Prairie County	D2	RM 136.65	26468	50-yr	3095	663.32	656.45	2.37	2.35	25.62	24.16	207.2	221.37	6.3	5.95	6.87	6.87
Prairie County	D2	RM 136.44	26317	50-yr	3095	663.29	656.37	2.14	2.11	21.23	18.81	228.7	262.01	6.33	5.6	6.92	6.92
Prairie County	D2	RM 136.23	26001	50-yr	3095	663.13	656.19	2.26	2.19	23.17	19.62	246.47	301.08	5.54	4.69	6.94	6.94
Prairie County	D2	RM 136.04	25673	50-yr	3095	662.97	656.01	2.38	2.31	23.45	18.02	211.82	343.64	6.13	4.69	6.96	6.96
Prairie County	D2	RM 135.85	25337	50-yr	3095	662.7	655.93	2.75	2.74	32.27	31.2	186.08	192.56	6.04	5.86	6.77	6.77
Prairie County	D2	RM 135.66	25033	50-yr	3095	662.58	655.91	2.55	2.53	27.56	25.85	202.14	277	6.01	5.64	6.67	6.67

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	50-yr	3095	662.41	655.86	2.56	2.49	33.46	26.1	199.11	263.5	6.05	4.71	6.55	6.55
Prairie County	D2	RM 135.24	24417	50-yr	3095	662.35	655.68	2.13	2.11	22.69	20.92	229.44	252	6.32	5.83	6.67	6.67
Prairie County	D2	RM 135	24090	50-yr	3095	662.19	655.56	2.23	2.19	24.08	20.88	246.98	292.28	5.58	4.83	6.63	6.63
Prairie County	D2	RM 134.78	23742	50-yr	3095	662.03	655.36	2.27	2.2	24.73	17.12	223.84	337.22	6.06	4.18	6.67	6.67
Prairie County	D2	RM 134.58	23351	50-yr	3095	661.7	655.29	2.74	2.67	38.35	29.58	189.75	254.73	5.92	4.56	6.41	6.41
Prairie County	D2	RM 134.39	23000	50-yr	3095	661.49	655.24	2.58	2.51	34.17	30.59	216.99	251.65	5.48	4.9	6.25	6.25
Prairie County	D2	RM 134.19	22682	50-yr	3095	661.38	655.11	2.27	2.15	23.11	20.33	263.97	583.91	5.08	4.47	6.27	6.27
Prairie County	D2	RM 133.99	22372	50-yr	3095	661.25	654.97	2.2	2.13	21.31	18.36	264.94	321.02	5.27	4.53	6.28	6.28
Prairie County	D2	RM 133.79	22053	50-yr	3095	661.02	655	2.52	2.35	27.98	21.49	226.1	321	5.35	4.1	6.02	6.02
Prairie County	D2	RM 133.59	21733	50-yr	3095	660.87	654.96	2.38	2.33	25.21	21.93	247	291.93	5.24	4.55	5.91	5.91
Prairie County	D2	RM 133.41	21417	50-yr	3095	660.75	654.78	2.23	2.15	21.84	16.85	254.87	346.11	5.41	4.17	5.97	5.97
Prairie County	D2	RM 133.21	21104	50-yr	3095	660.55	654.64	2.45	2.32	26.36	18.1	229.84	359.18	5.44	3.72	5.91	5.91
Prairie County	D2	RM 133.02	20811	50-yr	3095	660.43	654.53	2.35	2.23	24.35	15.47	246.2	412.52	5.31	3.37	5.9	5.9
Prairie County	D2	RM 132.83	20491	50-yr	3095	660.29	654.29	2.27	2.14	23.2	17.42	262.67	382.08	5.06	3.79	6	6
Prairie County	D2	RM 132.63	20184	50-yr	3095	660.18	654.04	2.17	1.97	21.16	16.11	254.86	404.3	5.12	3.88	6.14	6.14
Prairie County	D2	RM 132.42	19875	50-yr	3095	659.98	653.98	2.4	2.21	25.25	17.01	221.68	375.96	5.54	3.72	6	6
Prairie County	D2	RM 132.23	19553	50-yr	3095	659.9	653.88	2.05	1.89	18.21	14.01	257.21	378.35	5.63	4.32	6.02	6.02
Prairie County	D2	RM 132.02	19225	50-yr	3095	659.68	653.63	2.4	2.27	25.64	21.24	246.63	318.06	5.18	4.28	6.05	6.05
Prairie County	D2	RM 131.81	18910	50-yr	3095	659.46	653.37	2.57	2.41	29.25	23.64	226.33	301.49	5.26	4.25	6.09	6.09
Prairie County	D2	RM 131.58	18573	50-yr	3095	659.37	653.02	2.21	2.12	20.88	18.09	238.03	329.89	5.85	5.07	6.35	6.35
Prairie County	D2	RM 131.38	18237	50-yr	3095	659.21	652.75	2.34	2.21	23.52	20.5	212.37	272.5	5.88	5.13	6.46	6.46
Prairie County	D2	RM 131.18	17875	50-yr	3095	658.93	652.49	2.66	2.59	31	25.84	209.79	260.49	5.51	4.59	6.44	6.44
Prairie County	D2	RM 130.98	17548	50-yr	3095	658.73	652.34	2.72	2.59	31.91	26.51	197.09	252.15	5.71	4.74	6.39	6.39
Prairie County	D2	RM 130.78	17227	50-yr	3095	658.61	652.27	2.45	2.27	26.03	18.79	216.24	345.02	5.73	4.12	6.34	6.34
Prairie County	D2	RM 130.59	16914	50-yr	3095	658.54	652.16	2.14	2.04	19.43	15.58	239.07	316.12	5.99	4.79	6.38	6.38
Prairie County	D2	RM 130.39	16588	50-yr	3095	658.32	651.95	2.47	2.46	26.07	25.36	212.42	233.26	5.9	5.76	6.37	6.37
Prairie County	D2	RM 130.19	16280	50-yr	3095	658.15	651.81	2.54	2.53	28.26	27.44	219.93	248.11	5.54	5.38	6.34	6.34
Prairie County	D2	RM 130	15965	50-yr	3095	658.05	651.57	2.26	2.25	22.15	21.05	244.4	280.11	5.61	5.33	6.48	6.48
Prairie County	D2	RM 129.81	15649	50-yr	3095	657.94	651.47	2.2	2.16	20.56	18.66	235.14	283.91	5.97	5.42	6.47	6.47
Prairie County	D2	RM 129.62	15337	50-yr	3095	657.76	651.34	2.44	2.24	25.71	18.47	216.64	336.75	5.73	4.1	6.42	6.42
Prairie County	D2	RM 129.43	15031	50-yr	3095	657.64	651.21	2.31	2.27	22.93	20.42	227.37	261.28	5.87	5.22	6.43	6.43
Prairie County	D2	RM 129.24	14724	50-yr	3163	657.43	651.06	2.58	2.53	29.09	25.34	222.31	314.05	5.5	4.79	6.37	6.37
Prairie County	D2	RM 129.04	14417	50-yr	3163	657.2	651.06	2.74	2.68	32.79	29.19	209.54	301.93	5.49	4.9	6.14	6.14
Prairie County	D2	RM 128.82	14112	50-yr	3163	657	651.05	2.76	2.73	33.49	30.35	209.12	327.18	5.46	4.96	5.95	5.95
Prairie County	D2	RM 128.62	13798	50-yr	3163	656.87	651.08	2.49	2.48	27.18	26.18	228.13	380.9	5.55	5.36	5.79	5.79
Prairie County	D2	RM 128.41	13446	50-yr	3163	656.73	651.07	2.33	2.27	24.1	19.37	255.09	328.11	5.29	4.25	5.66	5.66
Prairie County	D2	RM 128.21	13125	50-yr	3163	656.57	650.98	2.37	2.2	24.8	19.14	246.55	351.92	5.31	4.08	5.59	5.59
Prairie County	D2	RM 127.98	12790	50-yr	3163	656.42	650.84	2.34	2.25	24.18	16.85	250.67	378.51	5.36	3.72	5.58	5.58
Prairie County	D2	RM 127.75	12473	50-yr	3163	656.32	650.59	2.11	2.05	19.85	15.73	287.96	375.07	5.19	4.1	5.73	5.73
Prairie County	D2	RM 127.55	12112	50-yr	3163	656.18	650.35	2.08	2.01	19.33	16.32	287.38	356.93	5.22	4.4	5.83	5.83
Prairie County	D2	RM 127.27	11729	50-yr	3163	656.02	649.95	2.12	2.08	19.88	16.12	277.2	351.65	5.35	4.33	6.07	6.07
Prairie County	D2	RM 126.97	11415	50-yr	3163	655.78	649.68	2.53	2.47	28.1	22.35	226.77	294.88	5.48	4.35	6.1	6.1
Prairie County	D2	RM 126.71	10962	50-yr	3163	655.54	649.49	2.54	2.49	27.93	21.93	218.29	284.63	5.69	4.47	6.05	6.05
Prairie County	D2	RM 126.43	10478	50-yr	3163	655.42	649.32	2.04	2.02	18.19	16.13	275.96	315.15	5.6	4.97	6.1	6.1
Prairie County	D2	RM 126.42	10074	50-yr	3163	655.17	649.05	2.39	2.32	25.28	20.81	249.83	314.86	5.27	4.34	6.12	6.12
Prairie County	D2	RM 126.41	9625	50-yr	3163	654.91	648.27	2.52	2.39	27.39	21.43	220.07	301.25	5.63	4.4	6.64	6.64
Prairie County	D2		9598.5	50-yr	Bridge												
Prairie County	D2	RM 126.4	9572	50-yr	3163	654.85	648.27	2.54	2.42	28.14	21.97	220.07	300.92	5.57	4.35	6.58	6.58
Prairie County	D3	RM 126.38	9533	50-yr	3163	654.83	648.27	2.56	2.43	28.45	22.2	220.07	300.79	5.54	4.32	6.55	6.55
Prairie County	D3		9523	50-yr	Bridge												
Prairie County	D3	RM 126.36	9513	50-yr	3163	654.8	648.27	2.57	2.45	28.78	22.44	220.07	300.65	5.52	4.3	6.53	6.53
Prairie County	D3	RM 126.22	9286	50-yr	3163	654.72	648.8	2.32	2.29	23.51	18.88	246.62	311.43	5.52	4.43	5.92	5.92
Prairie County	D3	RM 126.03	8974	50-yr	3163	654.62	648.71	2.17	2.13	20.72	15.19	269.32	377.33	5.4	3.94	5.91	5.91
Prairie County	D3	RM 125.82	8648	50-yr	3163	654.48	648.36	2.17	2.13	20.96	16.3	282.4	371.2	5.16	4.01	6.12	6.12
Prairie County	D3	RM 125.63	8335	50-yr	3163	654.36	648.12	2.15	2.11	20.17	18.77	259.94	285.64	5.62	5.24	6.24	6.24
Prairie County	D3	RM 125.43	8020	50-yr	3163	654.17	647.8	2.41	2.21	24.93	17.32	217.06	350.65	5.91	4.09	6.37	6.37
Prairie County	D3	RM 125.24	7711	50-yr	3163	654.09	647.26	2.22	2.06	20.58	14.09	226.37	363.03	6.22	4.23	6.83	6.83
Prairie County	D3	RM 125.05	7403	50-yr	3163	653.93	647.23	2.39	2.2	23.99	16.35	209.96	341	6.21	4.21	6.7	6.7
Prairie County	D3	RM 124.83	7059	50-yr	3163	653.82	647.25	2.24	2.17	21.35	19.17	237.41	311	5.93	5.32	6.57	6.57
Prairie County	D3	RM 124.62	6712	50-yr	3163	653.69	647.25	2.2	2.14	21.08	17.9	257.84	313.31	5.56	4.71	6.44	6.44

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	50-yr	3163	653.47	647.27	2.52	2.2	27.82	14.93	221.62	871.21	5.46	2.91	6.2	6.2
Prairie County	D3	RM 124.15	5960	50-yr	3163	653.2	647.27	2.61	2.27	30.61	13.75	232.47	746.96	5.1	2.27	5.93	5.93
Prairie County	D3	RM 123.94	5627	50-yr	3163	652.85	647.27	3.01	2.47	40.73	17.09	199.91	610	5.06	2.1	5.58	5.58
Prairie County	D3	RM 123.74	5312	50-yr	3163	652.6	647.25	2.96	2.51	39.47	16.49	206.88	602.65	5.05	2.09	5.35	5.35
Prairie County	D3	RM 123.56	5014	50-yr	3163	652.64	647.24	1.88	1.59	15.66	7.39	311.23	799.98	5.28	2.48	5.4	5.4
Prairie County	D3	RM 123.24	4500	50-yr	3163	652.52	647.19	1.12	1.12	15.18	15.11	934.44	939.16	3.01	3	5.33	5.33
Prairie County	D3	RM 122.99	4116	50-yr	3163	652.36	646.67	1.39	1.35	9.05	8.4	527.26	592.49	4.26	3.95	5.69	5.69
Prairie County	D3	RM 122.76	3746	50-yr	3163	652.21	646.22	1.73	1.71	13.5	12.83	362.48	385.41	5.03	4.79	5.99	5.99
Prairie County	D3	RM 122.55	3414	50-yr	3163	651.96	645.7	2.32	2.31	23.38	22.59	242.74	269.16	5.61	5.43	6.26	6.26
Prairie County	D3	RM 122.3	3012	50-yr	3163	651.65	645.57	2.71	2.63	32.17	26.12	214.39	451.12	5.43	4.4	6.08	6.08
Prairie County	D3	RM 122.08	2651	50-yr	3163	651.47	645.49	2.52	2.45	28.18	22.43	240.65	436.49	5.18	4.12	5.98	5.98
Prairie County	D3	RM 121.88	2338	50-yr	3163	651.32	645.42	2.42	2.35	25.76	22.17	244.44	460.17	5.32	4.58	5.9	5.9
Prairie County	D3	RM 121.66	1982	50-yr	3163	651.08	645.3	2.59	2.54	29.44	26.12	226.93	349.94	5.36	4.75	5.78	5.78
Prairie County	D3	RM 121.46	1651	50-yr	3163	650.91	645.06	2.5	2.46	28.04	26.22	243.93	306.7	5.15	4.82	5.85	5.85
Prairie County	D3	RM 121.24	1304	50-yr	3163	650.7	644.99	2.55	2.43	29.74	26.13	247.35	299.79	4.95	4.35	5.71	5.71
Prairie County	D3	RM 121.02	957	50-yr	3163	650.53	644.88	2.37	2.21	26.21	20.91	259.65	356.58	5.04	4.02	5.65	5.65
Prairie County	D3	RM 120.84	660	50-yr	3163	650.36	644.78	2.39	2.36	28.34	26.48	255.32	299.04	5.18	4.84	5.58	5.58
Prairie County	D3	RM 120.64	350	50-yr	3163	650.2	644.42	2.38	2.37	24.83	23.85	244.23	255.19	5.44	5.24	5.78	5.78

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	50-yr	3163.41	650.2	643.94	2.24	2.13	22.21	20.24	254.01	344.92	5.34	4.86	6.25	6.25
Dawson County	D3	RM 120.28	90838.07	50-yr	3163.41	650.13	643.78	2.28	2.12	22.69	16.72	233.12	366.12	5.55	4.08	6.35	6.35
Dawson County	D3	RM 120.18	90675.23	50-yr	3163.41	650.04	643.7	2.35	2.23	23.79	19.53	213.48	295.17	5.83	4.8	6.34	6.34
Dawson County	D3	RM 120.00	90388.96	50-yr	3163.41	649.93	643.56	2.31	2.2	22.68	18.31	226.64	297.73	5.98	4.83	6.36	6.36
Dawson County	D3	RM 119.84	90136.35	50-yr	3163.41	649.78	643.44	2.46	2.36	25.87	20.93	213.73	299.21	5.94	4.81	6.34	6.34
Dawson County	D3	RM 119.68	89873.82	50-yr	3163.41	649.56	643.31	2.76	2.65	32.53	28.07	189.21	234.69	5.94	5.13	6.25	6.25
Dawson County	D3	RM 119.53	89627.16	50-yr	3163.41	649.46	643.2	2.59	2.57	28.7	26.8	204.32	221.37	5.95	5.57	6.27	6.27
Dawson County	D3	RM 119.39	89404.11	50-yr	3163.41	649.4	643.09	2.34	2.29	23.51	22.03	231.36	312.06	5.8	5.47	6.32	6.32
Dawson County	D3	RM 119.26	89201.38	50-yr	3163.41	649.35	642.99	2.19	2.07	21.02	15.68	263.7	377.74	5.42	4.04	6.36	6.36
Dawson County	D3	RM 119.12	88969.13	50-yr	3163.41	649.11	642.87	2.69	2.39	30.96	19.39	193.4	466.48	5.87	3.66	6.24	6.24
Dawson County	D3	RM 119.00	88780.83	50-yr	3163.41	649.03	642.78	2.59	2.33	28.96	15.68	199.46	432.86	5.81	3.14	6.25	6.25
Dawson County	D3	RM 118.85	88537.07	50-yr	3163.41	648.97	642.66	2.26	2.12	22.23	16.09	241.51	401	5.54	4.01	6.31	6.31
Dawson County	D3	RM 118.72	88336.12	50-yr	3163.41	648.93	642.56	2.09	1.9	18.54	12.1	237.19	490.82	5.97	3.9	6.36	6.36
Dawson County	D3	RM 118.60	88130.39	50-yr	3163.41	648.78	642.46	2.37	2.16	24.17	13.97	220.72	483	5.8	3.35	6.32	6.32
Dawson County	D3	RM 118.47	87924.15	50-yr	3163.41	648.62	642.37	2.6	2.42	29.76	22.5	211.72	320.37	5.38	4.08	6.26	6.26
Dawson County	D3	RM 118.34	87719.85	50-yr	3163.41	648.39	642.27	2.9	2.73	38.65	26.78	214.06	350.78	4.77	3.31	6.13	6.13
Dawson County	D3	RM 118.21	87507.02	50-yr	3163.41	648.26	642.16	2.83	2.55	34.36	21.46	175.82	338.38	5.92	3.67	6.1	6.1
Dawson County	D3	RM 118.07	87276.02	50-yr	3194.56	648.23	642.05	2.22	2.17	22.45	19.26	297.49	354.82	4.83	4.14	6.18	6.18
Dawson County	D4	RM 117.90	87004.77	50-yr	3194.56	648.17	641.92	2.02	1.8	18	14.56	234.19	418.38	5.4	4.35	6.25	6.25
Dawson County	D4	RM 117.77	86795.88	50-yr	3194.56	648.12	641.81	1.94	1.64	16.64	12.07	217.15	549.93	5.33	3.83	6.3	6.3
Dawson County	D4	RM 117.62	86560.03	50-yr	3194.56	648.04	641.7	1.92	1.67	15.9	10.29	247.32	565.47	5.68	3.67	6.34	6.34
Dawson County	D4	RM 117.46	86294.2	50-yr	3194.56	647.81	641.57	2.56	2.11	28.55	13.5	183	573.86	5.64	2.64	6.24	6.24
Dawson County	D4	RM 117.33	86073.88	50-yr	3194.56	647.51	641.46	3.15	2.57	42.73	20.02	137.01	464.35	5.98	2.73	6.05	6.05
Dawson County	D4	RM 117.16	85808.16	50-yr	3194.56	647.46	641.33	2.49	2.16	26.54	16.33	182.25	421.59	5.9	3.61	6.13	6.13
Dawson County	D4	RM 117.03	85604.68	50-yr	3194.56	647.41	641.3	2.14	2.01	20.38	14.29	243.69	449.96	5.27	3.69	6.11	6.11
Dawson County	D4	RM 116.87	85336.88	50-yr	3194.56	647.36	641.29	1.92	1.58	16.14	9.75	238.63	631.21	5.4	3.26	6.07	6.07
Dawson County	D4	RM 116.69	85043.25	50-yr	3194.56	647.23	641.44	2.02	1.72	18.77	12.57	279.08	585.26	4.76	3.18	5.79	5.79
Dawson County	D4	RM 116.56	84823.15	50-yr	3194.56	647.07	641.34	2.32	1.88	24.75	13.08	234.35	682.82	4.75	2.49	5.73	5.73
Dawson County	D4	RM 116.39	84558.58	50-yr	3194.56	646.99	641.21	1.96	1.68	17.2	8.7	269.92	741.24	5.1	2.57	5.78	5.78
Dawson County	D4	RM 116.22	84287.19	50-yr	3194.56	646.85	641	2.12	1.72	19.79	7.82	259.34	863.93	5.45	2.15	5.85	5.85
Dawson County	D4	RM 116.05	84007.59	50-yr	3194.56	646.66	640.84	2.45	1.82	26.25	9.95	213.93	849.58	5.46	2.07	5.82	5.82
Dawson County	D4	RM 115.87	83722.29	50-yr	3194.56	646.49	640.8	2.56	1.87	29.44	10.65	214.27	921.58	5.15	1.85	5.69	5.69
Dawson County	D4	RM 115.73	83500.35	50-yr	3194.56	646.45	640.69	2.06	1.56	20.06	9.5	310.77	1001.78	4.34	2.05	5.75	5.75
Dawson County	D4	RM 115.61	83294.37	50-yr	3194.56	646.4	640.59	1.72	1.43	13.77	7.4	385.01	930.08	4.51	2.42	5.81	5.81
Dawson County	D4	RM 115.45	83034.82	50-yr	3194.56	646.33	640.37	1.64	1.39	12.78	8.6	407.6	810.89	4.22	2.83	5.97	5.97
Dawson County	D4	RM 115.29	82782.88	50-yr	3194.56	646.19	640.34	1.93	1.68	17.2	9	319.39	765.53	4.78	2.48	5.84	5.84
Dawson County	D4	RM 115.09	82480.02	50-yr	3194.56	646.13	640.2	1.7	1.42	12.69	6.37	324	835.89	5.39	2.7	5.93	5.93
Dawson County	D4	RM 114.96	82177.99	50-yr	3194.56	645.96	640	2.1	1.8	19.3	11.36	260.73	600.79	5.45	3.19	5.96	5.96
Dawson County	D4	RM 114.74	81836.48	50-yr	3194.56	645.48	639.98	3.15	2.52	43.96	19.04	179.76	555.49	5.32	2.29	5.5	5.5
Dawson County	D4	RM 114.58	81577.9	50-yr	3194.56	645.48	639.46	2.29	2.16	22.84	20.33	195.77	354.84	5.64	5	6.02	6.02
Dawson County	D4	RM 114.42	81309.47	50-yr	3194.56	645.34	639.33	2.32	2.25	23.94	20.47	257.79	316.88	5.24	4.48	6.01	6.01
Dawson County	D4	RM 114.28	81078.59	50-yr	3194.56	645.1	639.21	2.72	2.55	32.49	23.61	213.07	317.54	5.44	3.95	5.89	5.89
Dawson County	D4	RM 114.11	80813.63	50-yr	3194.56	644.89	639.2	2.84	2.65	35.75	24.43	210.21	334.63	5.28	3.6	5.69	5.69
Dawson County	D4	RM 113.97	80580.15	50-yr	3194.56	644.72	639.45	2.83	2.56	36.38	24.11	225.76	432.42	4.91	3.25	5.27	5.27
Dawson County	D4	RM 113.79	80292.13	50-yr	3194.56	644.63	639.45	2.45	2.12	27.27	20.04	201.08	421.53	4.85	3.57	5.18	5.18
Dawson County	D4	RM 113.60	79987.05	50-yr	3194.56	644.62	639.2	1.68	1.51	12.56	10.41	179.84	500.74	5.27	4.34	5.42	5.42
Dawson County	D4	RM 113.43	79712.89	50-yr	3194.56	644.49	638.73	2.03	1.7	17.9	11.28	173.8	534.66	5.63	3.51	5.76	5.76
Dawson County	D4	RM 113.24	79405.49	50-yr	3194.56	644.17	638.43	2.84	2.36	35.27	18.66	130.78	460.82	5.63	2.93	5.73	5.73
Dawson County	D4	RM 113.08	79152.39	50-yr	3194.56	644	638.37	2.72	2.4	32.49	21.57	138.2	367.76	5.52	3.63	5.64	5.64
Dawson County	D4	RM 112.94	78925.1	50-yr	3194.56	643.99	638.26	1.99	1.85	17.64	14.29	194.62	401.06	5.35	4.3	5.74	5.74
Dawson County	D4	RM 112.74	78585.88	50-yr	3194.56	643.82	638.09	2.2	2.01	21.81	14.57	237.95	478.28	4.98	3.32	5.73	5.73
Dawson County	D4	RM 112.59	78355.25	50-yr	3194.56	643.68	637.98	2.28	2.02	24.27	16.71	271.99	501.1	4.6	3.15	5.7	5.7
Dawson County	D4	RM 112.37	78008.78	50-yr	3194.56	643.66	637.88	1.62	1.45	11.68	7.98	206.92	693.55	5.3	3.59	5.78	5.78
Dawson County	D4	RM 112.19	77721.27	50-yr	3194.56	643.49	637.59	2.08	1.9	19.06	13.64	213.8	438.43	5.36	3.83	5.89	5.89
Dawson County	D4	RM 111.89	77240.22	50-yr	3194.56	643.16	637.16	2.47	2.33	26.68	19.03	235.68	354.39	5.43	3.87	6	6
Dawson County	D4	RM 111.42	76486.24	50-yr	3194.56	642.88	636.91	2.11	1.98	19.74	14.07	287.11	433.95	5.22	3.72	5.97	5.97
Dawson County	D4	RM 111.26	76213.83	50-yr	3194.56	642.81	636.66	1.92	1.8	16.57	10	329.26	595.81	5	3.01	6.15	6.15
Dawson County	D4	RM 111.09	75911.9	50-yr	3194.56	642.5	636.51	2.59	2.5	29.98	23.84	240.23	361.14	5.12	4.06	5.99	5.99
Dawson County	D4	RM 110.95	75678.54	50-yr	3194.56	642.24	636.4	2.94	2.83	37.65	30.78	194.97	258.65	5.54	4.52	5.84	5.84
Dawson County	D4	RM 110.78	75415.61	50-yr	3194.56	641.95	636.27	3.18	3.12	44.66	35.69	186.03	238.02	5.39	4.3	5.68	5.68
Dawson County	D4	RM 110.55	75040.65	50-yr	3194.56	641.83	636.09	2.53	2.48	28.59	21.49	240.69	328.6	5.22	3.93	5.74	5.74

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	50-yr	3194.56	641.77	635.96	2.11	2.03	19.99	16.16	293.1	381.34	5.1	4.12	5.81	5.81
Dawson County	D4	RM 110.17	74428.56	50-yr	3194.56	641.58	635.79	2.23	2.13	23.52	16.98	321.63	476.89	4.37	3.15	5.79	5.79
Dawson County	D4	RM 109.95	74074.87	50-yr	3194.56	641.44	635.62	2.08	1.95	19.54	10.76	297.98	588.71	5.06	2.78	5.82	5.82
Dawson County	D4	RM 109.75	73741.09	50-yr	3194.56	641.26	635.46	2.24	2.09	22.51	12.47	272.8	536.93	5.14	2.84	5.8	5.8
Dawson County	D4	RM 109.54	73418.83	50-yr	3194.56	641.15	635.3	2.08	1.71	19.32	10.54	287.56	673.14	5.11	2.78	5.85	5.85
Dawson County	D4	RM 109.37	73150.54	50-yr	3194.56	640.97	635.17	2.4	1.97	25.47	12.32	224.7	628.41	5.34	2.58	5.8	5.8
Dawson County	D4	RM 109.19	72864.56	50-yr	3194.56	640.8	635.03	2.44	2.18	26.21	13.42	238.65	537.77	5.33	2.72	5.77	5.77
Dawson County	D4	RM 109.04	72628	50-yr	3194.56	640.47	634.92	3.02	2.75	40.52	22.04	194.23	404.12	5.31	2.88	5.56	5.56
Dawson County	D4	RM 108.86	72339.73	50-yr	3194.56	640.48	634.77	2.11	2.04	20.28	18.02	287.17	363.25	4.84	4.31	5.7	5.7
Dawson County	D4	RM 108.70	72072.36	50-yr	3194.56	640.39	634.65	1.96	1.9	17.4	15.24	291.61	382.48	5	4.39	5.75	5.75
Dawson County	D4	RM 108.55	71827.97	50-yr	3194.56	640.31	634.53	1.92	1.92	16.9	16.59	343.64	350.46	4.83	4.76	5.78	5.78
Dawson County	D4	RM 108.40	71587.18	50-yr	3194.56	640.13	634.41	2.24	2.22	20.32	19.1	363.68	389.78	3.92	3.69	5.72	5.72
Dawson County	D4	RM 108.25	71345.86	50-yr	3194.56	640.02	634.29	2.13	2.08	19.93	16.28	361.89	456.35	4.13	3.37	5.73	5.73
Dawson County	D4	RM 108.12	71131.88	50-yr	3194.56	639.92	634.19	2.16	2.05	20.99	14.88	289.42	435.48	5.04	3.57	5.73	5.73
Dawson County	D4	RM 107.98	70905.01	50-yr	3194.56	639.7	634.08	2.53	2.43	28.83	19.11	245.46	389.24	5.1	3.38	5.63	5.63
Dawson County	D4	RM 107.82	70651.22	50-yr	3194.56	639.49	633.95	2.72	2.49	33.55	18.17	231.93	476.51	4.97	2.69	5.54	5.54
Dawson County	D4	RM 107.68	70418.24	50-yr	3194.56	639.29	633.84	2.83	2.65	36.19	23.8	219.72	365.11	5.01	3.31	5.45	5.45
Dawson County	D4	RM 107.50	70132.11	50-yr	3194.56	639.14	633.17	2.6	2.38	30.59	20.68	239.71	398.83	4.95	3.37	5.97	5.97
Dawson County	D4	RM 107.31	69834.56	50-yr	3194.56	638.92	633.23	2.64	2.5	32.51	22.69	264.38	403.56	4.5	3.16	5.69	5.69
Dawson County	D4	RM 107.13	69541.52	50-yr	3194.56	638.74	633.98	2.43	2.3	28.55	22.44	322.33	441.14	4	3.15	4.76	4.76
Dawson County	D5	RM 106.98	69305.02	50-yr	3208.72	638.67	634.16	1.96	1.89	18.94	17.29	421.85	487.7	3.78	3.47	4.51	4.51
Dawson County	D5	RM 106.85	69065.27	50-yr	3208.72	638.57	633.6	1.88	1.84	17.51	16.29	412.29	497.9	3.75	3.51	4.97	4.97
Dawson County	D5	RM 106.65	68764.02	50-yr	3208.72	638.32	632.98	2.23	2.17	23.08	21.45	360.27	448.83	3.59	3.35	5.34	5.34
Dawson County	D5	RM 106.47	68475.87	50-yr	3208.72	638.15	632.51	2.23	1.81	24.14	15.55	307.26	726.69	4.03	2.6	5.64	5.64
Dawson County	D5	RM 106.28	68173.97	50-yr	3208.72	637.73	631.71	2.98	2.37	41.07	20.77	204.05	576.37	4.63	2.35	6.02	6.02
Dawson County	D5	RM 106.10	67879.83	50-yr	3208.72	637.53	631.29	2.8	2.19	37.17	22.94	206.53	551.4	4.3	2.66	6.24	6.24
Dawson County	D5	RM 105.89	67550.49	50-yr	3208.72	637.33	631.76	2.48	2.05	29.4	17.37	226.74	633.96	4.17	2.47	5.57	5.57
Dawson County	D5	RM 105.74	67300.35	50-yr	3208.72	637.18	632.3	2.34	1.68	26.21	15.17	203.14	785.04	4.2	2.43	4.88	4.88
Dawson County	D5	RM 105.54	66973.54	50-yr	3208.72	636.9	632.17	2.65	2.05	33.8	20.72	147.79	690.7	4.04	2.49	4.73	4.73
Dawson County	D5	RM 105.30	66609.03	50-yr	3208.72	636.77	632.29	1.71	1.52	15	11.84	219.79	796.83	3.38	2.67	4.65	4.65
Dawson County	D5	RM 105.06	66212.24	50-yr	3208.72	636.61	631.19	1.94	1.79	19.27	14.42	181.11	1023.65	3.38	2.53	5.42	5.42
Dawson County	D5	RM 104.89	65945.5	50-yr	3208.72	636.41	631.5	2.06	1.82	22.35	16.97	205.87	981.94	3.1	2.36	4.99	4.99
Dawson County	D5	RM 104.77	65742.33	50-yr	3208.72	636.29	631.67	2.2	1.67	23.57	12.54	125.62	1070.81	3.96	2.11	5.58	5.58
Dawson County	D5	RM 104.64	65530.83	50-yr	3208.72	636.22	632.1	1.85	1.44	17.11	8.92	172.34	1350.69	3.73	1.93	5.26	5.26
Dawson County	D5	RM 104.43	65180.62	50-yr	3208.72	636.15	631.56	1.25	1.05	8.38	6.29	361.11	1380.46	2.93	2.2	5.36	5.36
Dawson County	D5	RM 104.26	64906.83	50-yr	3208.72	636.08	631.59	1.22	1.02	7.61	4.81	218.58	1481.74	3.35	2.12	5.44	5.44
Dawson County	D5	RM 104.10	64643.2	50-yr	3208.72	635.99	630.81	1.55	1.16	11.68	4.64	150.64	1746.94	3.96	1.58	5.55	5.55
Dawson County	D5	RM 103.95	64410.06	50-yr	3208.72	635.94	631.24	1.6	1.02	12.65	5.46	185.01	1946.65	3.74	1.62	6.12	6.12
Dawson County	D5	RM 103.68	63957.56	50-yr	3208.72	635.84	629.68	1.66	0.92	13.15	6	188.7	1835.24	4.14	1.89	6.4	6.4
Dawson County	D5	RM 103.48	63615.6	50-yr	3208.72	635.77	630.4	1.79	1.02	14.9	5.96	152.55	1741.97	4.53	1.8	6.26	6.26
Dawson County	D5	RM 103.26	63259.44	50-yr	3208.72	635.71	630.13	1.67	1	12.87	5.74	173.17	1578.44	4.6	2.04	6.3	6.3
Dawson County	D5	RM 102.58	62131.5	50-yr	3208.72	635.53	629.72	1.58	1.22	11.48	7.06	178.73	929.77	4.59	2.83	5.85	5.85
Dawson County	D5	RM 102.44	61920.83	50-yr	3208.72	635.39	629.74	2.03	1.55	19.09	10.48	255.44	829.73	4.55	2.5	5.65	5.65
Dawson County	D5	RM 102.31	61720.14	50-yr	3208.72	635.25	629.03	2.37	1.7	26.02	13.91	200.53	761.99	4.62	2.48	6.22	6.22
Dawson County	D5	RM 102.15	61456.58	50-yr	3208.72	635.13	629.39	2.28	1.74	23.73	13.3	201.3	681.64	4.81	2.71	5.74	5.74
Dawson County	D5	RM 102.00	61217.89	50-yr	3208.72	635.05	629.48	1.99	1.58	18.71	11.96	267.9	734.59	4.3	2.77	5.57	5.57
Dawson County	D5	RM 101.84	60967.97	50-yr	3208.72	635	629.23	1.72	1.19	13.83	8.98	155.67	924.27	4.48	2.91	5.77	5.77
Dawson County	D5	RM 101.60	60582.61	50-yr	3208.72	634.86	628.87	1.61	1.43	12.26	7.69	336.08	849.19	4.38	2.75	5.99	5.99
Dawson County	D5	RM 101.45	60336.09	50-yr	3208.72	634.64	629.16	2.27	1.82	23.37	9.21	251.39	915.28	4.87	1.92	5.48	5.48
Dawson County	D5	RM 101.25	60019.5	50-yr	3208.72	634.4	627.81	2.57	1.93	29.68	9.78	209.15	996.27	5.06	1.67	6.59	6.59
Dawson County	D5	RM 101.09	59759.25	50-yr	3208.72	634.29	627.99	2.43	1.74	26.64	10.51	216.65	948.58	4.93	1.95	6.3	6.3
Dawson County	D5	RM 100.88	59426.42	50-yr	3208.72	634.16	627.86	2.29	1.65	23.32	9.38	196.58	951.13	5.13	2.07	6.3	6.3
Dawson County	D5	RM 100.67	59075.4	50-yr	3208.72	633.97	627.1	2.55	1.61	28.14	9.83	151.88	1068.37	5.62	1.97	6.87	6.87
Dawson County	D5	RM 100.46	58743.44	50-yr	3208.72	633.92	627.92	1.85	1.26	15.28	7.43	202.94	1051.92	5.14	2.5	6	6
Dawson County	D5	RM 100.25	58401.49	50-yr	3208.72	633.68	627.57	2.38	1.73	25.37	12.25	196.17	877.86	5.12	2.47	6.11	6.11
Dawson County	D5	RM 100.05	58077.55	50-yr	3208.72	633.53	626.86	2.34	1.85	24.29	12.08	176.97	676.93	5.18	2.57	6.67	6.67
Dawson County	D5	RM 99.87	57778.81	50-yr	3208.72	633.28	626.4	2.44	2.24	28.05	14.34	301.61	650.84	4.3	2.2	6.88	6.88
Dawson County	D5	RM 99.68	57474.16	50-yr	3208.72	633.1	626.29	2.43	2.14	26.35	14.07	246.92	547.39	5.12	2.74	6.81	6.81
Dawson County	D5	RM 99.49	57160.47	50-yr	3208.72	632.81	626.53	2.8	2.36	35.24	16.48	218.38	579.96	4.99	2.34	6.28	6.28
Dawson County	D5	RM 99.30	56863.46	50-yr	3208.72	632.67	627.26	2.47	2.05	28.05	15.07	267.93	655.69	4.65	2.51	5.41	5.41
Dawson County	D5	RM 99.13	56566.63	50-yr	3208.72	632.55	626.77	2.21	1.77	22.66	12.84	293.66	908.62	4.57	2.59	5.78	5.78

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	50-yr	3208.72	632.39	626.63	2.1	1.77	21.09	11.78	339.1	799.82	4.2	2.36	5.76	5.76
Dawson County	D5	RM 98.71	55911.87	50-yr	3208.72	632.2	626.34	2.19	1.66	23.1	10.26	322.21	1066.16	4.09	1.82	5.86	5.86
Dawson County	D5	RM 98.57	55680.2	50-yr	3208.72	632.1	626.1	2.08	1.37	20.66	9.87	297.01	1169.96	4.2	2	6	6
Dawson County	D5	RM 98.35	55325.95	50-yr	3208.72	631.8	625.91	2.51	1.57	28.45	10.07	216.82	1165.81	4.95	1.75	5.89	5.89
Dawson County	D5	RM 98.19	55066.09	50-yr	3208.72	631.6	624.42	2.71	1.66	32.12	9.82	184	1166.68	5.41	1.66	7.18	7.18
Dawson County	D5	RM 97.99	54752.97	50-yr	3208.72	631.34	625.04	2.76	2.15	35.12	14.35	236.53	818.42	4.63	1.89	6.3	6.3
Dawson County	D5	RM 97.84	54493.48	50-yr	3208.72	631.21	625.39	2.41	2.03	27.4	13.78	292.51	718.16	4.38	2.2	5.82	5.82
Dawson County	D5	RM 97.68	54241.32	50-yr	3208.72	631.07	624.99	2.32	1.87	26.67	16.71	340.05	746.09	3.76	2.36	6.08	6.08
Dawson County	D5	RM 97.48	53918.21	50-yr	3208.72	630.92	624.81	1.9	1.56	15.92	11.52	387.03	1177.78	2.86	2.07	6.11	6.11
Dawson County	D5	RM 97.28	53585.68	50-yr	3208.72	630.72	625.86	1.95	1.45	19.04	10.04	328.8	1340.81	3.68	1.94	5.27	5.27
Dawson County	D5	RM 97.08	53263.89	50-yr	3208.72	630.43	625.27	2.49	1.91	29.37	11.98	209.17	1166.51	4.32	1.77	5.16	5.16
Dawson County	D5	RM 96.94	53030.11	50-yr	3208.72	630.24	623.97	2.65	1.91	33.36	14.14	199.17	1243.74	4.2	1.78	6.27	6.27
Dawson County	D5	RM 96.77	52762.2	50-yr	3208.72	630.05	623.51	2.57	1.99	31.56	13.73	202.34	1278.79	4.17	1.82	6.54	6.54
Dawson County	D5	RM 96.55	52403.59	50-yr	3208.72	629.84	624.57	2.54	1.55	30.06	11.49	160.42	1648.77	4.53	1.74	5.27	5.27
Dawson County	D5	RM 96.35	52079.12	50-yr	3208.72	629.83	625.39	1.18	1.19	7.2	6.55	290.07	1527.36	3.29	3.01	6.36	6.36
Dawson County	D5	RM 96.17	51777.74	50-yr	3208.72	629.61	624.71	2.21	1.87	23.72	11.67	130.42	1130.15	3.98	1.97	5.23	5.23
Dawson County	D5	RM 96.00	51500.38	50-yr	3208.72	629.46	624.3	2.1	1.62	21.23	9.08	122.42	1394.64	4.13	1.77	5.16	5.16
Dawson County	D5	RM 95.79	51156.87	50-yr	3208.72	629.38	624.35	1.5	1.14	11.54	5.11	284.94	1736.17	3.84	1.7	5.13	5.13
Dawson County	D5	RM 95.60	50859.75	50-yr	3208.72	629.29	622.97	1.54	1.04	11.47	5.4	251.15	1636.24	4.01	1.88	6.32	6.32
Dawson County	D5	RM 95.40	50547.92	50-yr	3208.72	629.21	623.13	1.4	1	9.24	5.08	377.96	1324.45	4.4	2.43	6.08	6.08
Dawson County	D5	RM 95.21	50245.97	50-yr	3208.72	629.13	622.21	1.73	0.95	13.25	5.76	217.6	1486.3	5.22	2.27	6.92	6.92
Dawson County	D5	RM 95.04	49971.19	50-yr	3208.72	629.04	621.68	1.96	1.04	17.45	8.16	174.46	1332.76	4.94	2.31	7.36	7.36
Dawson County	D5	RM 94.88	49717.07	50-yr	3208.72	628.99	621.44	1.82	0.93	14.67	7.8	152.89	1373.87	5.27	2.8	7.55	7.55
Dawson County	D5	RM 94.71	49446.9	50-yr	3208.72	628.94	621.69	1.34	1.08	8.18	5.92	234.28	1370.65	4.92	3.56	7.26	7.26
Dawson County	D5	RM 94.58	49286.95	50-yr	3208.72	628.93	618.6	1.05	1.05	4.58	4.58	456.42	1422.62	6.67	6.67	10.33	10.33
Dawson County	D5	RM 94.57	49255.56	50-yr	3208.72	628.87	618.63	1.39	1.38	7.96	7.72	360.59	947.05	6.41	6.23	10.24	10.24
Dawson County		RM 94.55	49216.94	50-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	50-yr	3208.72	628.47	620.63	2.37	2.23	24.78	19.59	256.42	1063.7	5.17	4.08	7.84	7.84
Dawson County	D5	RM 94.52	49157.18	50-yr	3208.72	628.48	620.89	2.18	2.16	21.28	20.11	287.23	1218.04	5.11	4.83	7.59	7.59
Dawson County	D6	RM 94.42	48998.19	50-yr	3208.72	628.31	621.76	2.63	2.14	31.14	17.48	219.93	1097.1	5.04	2.82	6.55	6.55
Dawson County	D6	RM 94.30	48806.79	50-yr	3228.55	628.23	621.22	2.35	1.9	26.27	15.57	295.07	1034.44	4.21	2.49	7.01	7.01
Dawson County	D6	RM 94.20	48653.06	50-yr	3228.55	628.16	621.41	2.26	1.7	23.77	12.03	261.89	907.07	4.74	2.4	6.75	6.75
Dawson County	D6	RM 94.08	48445.46	50-yr	3228.55	628.13	622.37	1.81	1.49	14.77	8.41	338.75	798.11	4.96	2.82	5.76	5.76
Dawson County	D6	RM 93.96	48246.42	50-yr	3228.55	628.02	621.88	2.01	1.7	18.81	11.71	331.74	668.57	4.58	2.85	6.14	6.14
Dawson County	D6	RM 93.83	48030.25	50-yr	3228.55	627.82	620.28	2.45	1.98	26.79	15.26	237.8	570.34	5.15	2.93	7.54	7.54
Dawson County	D6	RM 93.68	47782.89	50-yr	3228.55	627.55	620.19	2.9	2.31	36.81	19.29	191.53	494.65	5.4	2.83	7.36	7.36
Dawson County	D6	RM 93.57	47606.95	50-yr	3228.55	627.26	620.08	3.3	2.68	48.85	28.82	184.03	401.54	5.08	3	7.18	7.18
Dawson County	D6	RM 93.53	47552.11	50-yr	3228.55	627.22	620.21	3.22	2.71	45.94	27.14	184.33	383.05	5.25	3.11	7.01	7.01
Dawson County			47536.14	50-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	50-yr	3228.55	627.14	620.33	3.24	2.71	46.41	27.16	180.48	382.49	5.32	3.11	6.81	6.81
Dawson County	D6	RM 93.47	47460.74	50-yr	3228.55	627.1	618.63	3.14	2.66	43.77	28	189.97	362.96	5.23	3.34	8.47	8.47
Dawson County	D6	RM 93.43	47382.46	50-yr	3228.55	627.05	619.44	3.01	2.59	39.74	25.55	191.32	357.75	5.44	3.49	7.61	7.61
Dawson County		RM 93.415	47357.71	50-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	50-yr	3228.55	626.95	620.19	2.92	2.61	37.6	26.47	200.23	372.24	5.39	3.78	6.77	6.77
Dawson County	D6	RM 93.36	47287.92	50-yr	3228.55	626.95	620.47	2.7	2.3	31.93	20.97	213.34	395.09	5.42	3.56	6.48	6.48
Dawson County	D6	RM 93.25	47111.44	50-yr	3228.55	626.84	621.12	2.7	2.25	38.03	19.67	228.84	611.56	4.75	2.46	5.72	5.72
Dawson County	D6	RM 93.05	46807.77	50-yr	3228.55	626.76	621.74	2.09	1.63	20.23	10.4	283.11	989.2	4.7	2.41	5.02	5.02
Dawson County	D6	RM 92.93	46606.31	50-yr	3228.55	626.62	621.34	2.23	1.73	23.58	11.66	305.87	1137.98	4.32	2.13	5.28	5.28
Dawson County	D6	RM 92.83	46460.06	50-yr	3228.55	626.54	621.02	2.17	1.78	21.8	11.5	357.35	1270.97	3.79	2	5.52	5.52
Dawson County	D6	RM 92.71	46261.84	50-yr	3228.55	626.44	620.37	2.1	1.77	20.28	12.09	359.38	1303.19	3.94	2.35	6.07	6.07
Dawson County	D6	RM 92.59	46079.79	50-yr	3228.55	626.34	620.95	2.09	1.89	21.16	12.11	321.05	1288.48	4.61	2.63	5.39	5.39
Dawson County	D6	RM 92.50	45933.81	50-yr	3228.55	626.23	620.75	2.23	2.02	23.52	13.34	325.45	1330.7	4.33	2.45	5.48	5.48
Dawson County	D6	RM 92.39	45753.94	50-yr	3228.55	626.14	620.58	2.24	1.98	23.13	13.67	299.01	1424.95	4.6	2.72	5.56	5.56
Dawson County	D6	RM 92.29	45591.17	50-yr	3228.55	626.05	620.64	2.25	2.13	23.34	20.12	295.77	1390.4	4.66	4.01	5.41	5.41
Dawson County	D6	RM 92.18	45414.13	50-yr	3228.55	626	620.23	1.9	1.77	16.69	13.36	358.66	1510.52	4.57	3.66	5.77	5.77
Dawson County		RM 92.14	45354.08	50-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	50-yr	3228.55	625.74	620.04	1.92	1.76	17.29	13.04	367.04	1099.95	4.44	3.35	5.7	5.7
Dawson County	D6	RM 92.06	45238.47	50-yr	3228.55	625.67	620.12	2.09	1.92	20.91	16.11	354.46	1116.88	4.2	3.24	5.55	5.55
Dawson County	D6	RM 91.99	45117.89	50-yr	3228.55	625.67	619.81	1.73	1.69	14.65	13.06	390.42	1084.88	3.91	3.49	5.86	5.86
Dawson County	D6	RM 91.85	44886.16	50-yr	3228.55	625.62	619.7	1.63	1.38	13.97	9.94	238.98	1057.99	4.64	3.31	5.92	5.92
Dawson County	D6	RM 91.77	44752.88	50-yr	3228.55	625.57	619.28	1.63	1.37	16.2	12.13	224.91	999.88	4.36	3.28	6.29	6.29

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	50-yr	3228.55	625.4	619	2.07	1.67	19.07	11.49	148.19	1495.24	5.23	3.15	6.4	6.4
Dawson County	D6	RM 91.45	44219.47	50-yr	3228.55	625.24	618.66	2.19	2.03	22.51	14.1	189.07	1340.24	5.05	3.17	6.58	6.58
Dawson County	D6	RM 91.31	43987.79	50-yr	3228.55	624.99	618.98	2.56	2.49	30.15	17.53	271.16	1178.7	4.64	2.7	6.01	6.01
Dawson County	D6	RM 91.11	43666.49	50-yr	3228.55	624.71	618.54	2.78	2.53	34.23	14.85	219.42	979.95	5.21	2.27	6.17	6.17
Dawson County	D6	RM 90.97	43442.55	50-yr	3228.55	624.58	618.3	2.74	2.12	33.87	12.28	224.14	1094.14	4.96	1.8	6.28	6.28
Dawson County	D6	RM 90.76	43114.74	50-yr	3228.55	624.42	618.97	2.37	1.68	32.6	12.98	268.72	1399.96	4.53	1.8	5.45	5.45
Dawson County	D6	RM 90.59	42823.65	50-yr	3228.55	624.39	618.64	1.8	1.13	14.84	6.63	232.7	1442.35	4.72	2.11	5.75	5.75
Dawson County	D6	RM 90.43	42564.46	50-yr	3228.55	624.06	618.18	2.69	1.66	33.51	9.72	208.77	1471.03	4.55	1.32	5.88	5.88
Dawson County	D6	RM 90.29	42331.05	50-yr	3228.55	623.97	618.21	2.3	1.38	24.14	7.59	236.08	1556.23	4.78	1.5	5.76	5.76
Dawson County	D6	RM 90.16	42118.24	50-yr	3228.55	623.83	618.54	2.38	1.5	25.95	8.9	229.61	1343.05	4.77	1.64	5.29	5.29
Dawson County	D6	RM 89.96	41795.66	50-yr	3228.55	623.72	618.08	1.99	1.5	18.63	8.41	346.39	1205.93	4.32	1.96	5.64	5.64
Dawson County	D6	RM 89.83	41589.45	50-yr	3228.55	623.38	617.17	2.9	2	38.32	13.31	211.95	971.53	4.77	1.66	6.21	6.21
Dawson County	D6	RM 89.65	41302.33	50-yr	3228.55	623.19	618.15	2.67	1.97	33.36	12.99	251.93	951.83	4.42	1.73	5.04	5.04
Dawson County	D6	RM 89.46	41003.8	50-yr	3228.55	623.02	617.56	2.52	2.02	28.35	11.45	236.74	774.27	5.12	2.06	5.45	5.45
Dawson County	D6	RM 89.29	40732.3	50-yr	3228.55	623.02	617.42	1.84	1.58	15.3	11.59	253.25	607.86	4.92	3.73	5.6	5.6
Dawson County	D6	RM 89.13	40476.68	50-yr	3228.55	622.79	617.29	2.38	2	25.62	12.06	231.92	689.98	5	2.34	5.5	5.5
Dawson County	D6	RM 88.96	40193.97	50-yr	3254.04	622.64	617.14	2.4	2.03	25.36	12.1	186.73	628.84	5.44	2.57	5.5	5.5
Dawson County	D7	RM 88.77	39887.75	50-yr	3254.04	622.47	616.98	2.38	1.95	26.06	13.95	260.04	673.73	4.75	2.54	5.5	5.5
Dawson County	D7	RM 88.58	39581.56	50-yr	3254.04	622.15	616.82	2.91	2.17	37.64	15.88	185.88	697.64	5.26	2.19	5.33	5.33
Dawson County	D7	RM 88.44	39345.29	50-yr	3254.04	621.92	616.7	3.04	2.45	41.4	16.6	181.67	695.84	5.21	2.05	5.22	5.22
Dawson County	D7	RM 88.25	39047.22	50-yr	3254.04	621.8	616.54	2.54	2.14	29.49	14.01	221.53	699.3	4.78	2.26	5.26	5.26
Dawson County	D7	RM 88.06	38736.32	50-yr	3254.04	621.64	616.38	2.27	2.03	24.15	12.7	305.89	730.57	4.52	2.37	5.26	5.26
Dawson County	D7	RM 87.87	38426.68	50-yr	3254.04	621.57	616.22	1.8	1.55	15.96	10.05	429.53	937.75	3.84	2.42	5.35	5.35
Dawson County	D7	RM 87.70	38161.81	50-yr	3254.04	621.5	616.08	1.77	1.29	13.82	6.5	181.73	1090.31	5.42	2.49	5.42	5.42
Dawson County	D7	RM 87.52	37862.82	50-yr	3254.04	621.45	615.92	1.53	1.32	11.14	6.56	308.23	1073.64	4.33	2.53	5.53	5.53
Dawson County	D7	RM 87.34	37574.69	50-yr	3254.04	621.22	615.85	2.27	1.78	24.37	12.45	253.88	820.3	4.4	2.23	5.37	5.37
Dawson County	D7	RM 87.17	37307.08	50-yr	3254.04	620.98	615.82	2.7	2.1	32.96	15.56	162.99	654.05	5.08	2.37	5.16	5.16
Dawson County	D7	RM 87.00	37023.47	50-yr	3254.04	620.84	615.79	2.33	2.07	25.66	14.56	241.45	639.36	4.36	2.46	5.05	5.05
Dawson County	D7	RM 86.82	36748.51	50-yr	3254.04	620.66	615.76	2.42	2.17	27.44	16.16	210.89	574.41	4.48	2.61	4.9	4.9
Dawson County	D7	RM 86.67	36501.76	50-yr	3254.04	620.41	615.73	2.89	2.4	38.83	22.63	151.27	509.96	4.68	2.66	4.68	4.68
Dawson County	D7	RM 86.52	36253.46	50-yr	3254.04	620.32	615.7	2.17	1.84	22.3	14.99	250.55	602.14	4.37	2.94	4.62	4.62
Dawson County	D7	RM 86.39	36046.31	50-yr	3254.04	620.21	615.59	2.27	1.8	24.39	16.08	147.45	638.85	4.36	2.83	4.62	4.62
Dawson County	D7	RM 86.24	35796.38	50-yr	3254.04	620.16	615.46	1.57	1.45	11.49	8.6	166.41	659.69	4.63	3.41	4.7	4.7
Dawson County	D7	RM 86.08	35541.56	50-yr	3254.04	619.82	615.48	2.74	2.31	36.49	16.84	160.1	760.12	4.1	1.86	4.34	4.34
Dawson County	D7	RM 85.91	35282.1	50-yr	3254.04	619.68	615.5	2.36	1.84	26.82	13.5	191.42	864.84	4.09	2.05	4.18	4.18
Dawson County	D7	RM 85.78	35075.01	50-yr	3254.04	619.69	614.9	1.38	1.32	9.38	8.58	288.53	994.42	3.87	3.53	4.79	4.79
Dawson County	D7	RM 85.59	34774.5	50-yr	3254.04	619.62	614.32	1.64	1.25	11.98	5.71	184.84	1045.07	5.28	2.5	5.31	5.31
Dawson County	D7	RM 85.39	34449.3	50-yr	3254.04	619.4	614.15	2.27	1.83	23.62	12.28	219.47	710.49	4.85	2.5	5.25	5.25
Dawson County	D7	RM 85.23	34186.4	50-yr	3254.04	619.15	614.01	2.86	2.14	36.85	17.37	157.48	638.49	5.13	2.38	5.14	5.14
Dawson County	D7	RM 85.04	33863.7	50-yr	3254.04	619.09	613.84	2.07	1.72	20.19	14.33	265.03	609.71	4.38	3.09	5.24	5.24
Dawson County	D7	RM 84.89	33626.36	50-yr	3254.04	618.99	613.92	1.84	1.75	16.22	13.54	413.04	528.66	4.2	3.52	5.08	5.08
Dawson County	D7	RM 84.72	33349.5	50-yr	3254.04	618.82	613.77	2.08	2.05	20.4	16.8	353.9	436.77	4.4	3.63	5.04	5.04
Dawson County	D7	RM 84.57	33104.21	50-yr	3254.04	618.64	613.45	2.31	2.22	24.53	15.94	294.82	474.49	4.75	3.09	5.19	5.19
Dawson County	D7	RM 84.41	32856.7	50-yr	3254.04	618.52	613.32	2.24	2.14	23.25	13.5	312.69	571.06	4.58	2.66	5.21	5.21
Dawson County	D7	RM 84.22	32552.24	50-yr	3254.04	618.42	613.16	2.05	1.73	19.55	8.85	261.68	992.57	4.64	2.08	5.26	5.26
Dawson County	D7	RM 84.05	32270.74	50-yr	3254.04	618.25	613.14	2.28	1.78	23.69	8.95	206.16	990.7	4.91	1.84	5.12	5.12
Dawson County	D7	RM 83.89	32017.88	50-yr	3254.04	618.03	613.11	2.6	1.97	30.79	12.68	191.2	830.02	4.85	1.99	4.93	4.93
Dawson County	D7	RM 83.73	31759.16	50-yr	3254.04	617.95	613.07	2.15	1.69	21.76	11.04	240.43	954.42	4.47	2.25	4.87	4.87
Dawson County	D7	RM 83.53	31426.04	50-yr	3254.04	617.88	613.01	1.66	1.37	12.87	6.83	304.34	998.65	4.5	2.38	4.87	4.87
Dawson County	D7	RM 83.39	31213.34	50-yr	3254.04	617.8	612.95	1.85	1.44	15.91	7.55	189.12	1032.69	4.65	2.18	4.85	4.85
Dawson County	D7	RM 83.21	30910.79	50-yr	3254.04	617.72	612.91	1.7	1.35	13.27	7.07	170.07	960.4	4.78	2.51	4.94	4.94
Dawson County	D7	RM 83.05	30660.14	50-yr	3254.04	617.65	612.78	1.59	1.26	11.62	5.56	229.1	1151.03	4.69	2.25	5.19	5.19
Dawson County	D7	RM 82.94	30491.79	50-yr	3254.04	617.59	612.69	1.64	1.29	12.49	5.83	219.21	1166.17	4.65	2.16	5.2	5.2
Dawson County	D7	RM 82.81	30280.45	50-yr	3254.04	617.5	612.58	1.8	1.35	15.19	6.4	178.49	1282.59	4.5	1.88	5.35	5.35
Dawson County	D7	RM 82.68	30058.39	50-yr	3254.04	617.43	612.34	1.92	1.3	16.56	6.43	152.77	1291.17	5.08	1.95	5.33	5.33
Dawson County	D7	RM 82.51	29786.14	50-yr	3254.04	617.4	612.1	1.4	1.01	8.91	4.05	229.35	1442.27	4.98	2.23	5.55	5.55
Dawson County	D7	RM 82.33	29497.12	50-yr	3254.04	617.35	611.87	1.47	0.9	9.69	4.52	246.87	1535.34	5.12	2.34	5.6	5.6
Dawson County	D7	RM 82.22	29323.27	50-yr	3254.04	617.29	611.66	1.71	0.9	12.98	5.15	193.52	1894.91	5.26	2.07	5.63	5.63
Dawson County	D7	RM 82.06	29049.94	50-yr	3254.04	617.25	611.37	1.53	0.83	10.26	3.61	202.97	2054.75	5.54	1.91	5.88	5.88
Dawson County	D7	RM 81.91	28820.21	50-yr	3254.04	617.22	611.21	1.53	0.8	10.08	3.29	191.58	2157.77	5.89	1.89	6.01	6.01
Dawson County	D7	RM 81.71	28446.75	50-yr	3254.04	617.17	611.02	1.29	0.77	7.03	2.23	220.81	2334.27	5.96	1.88	6.15	6.15

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	50-yr	3254.04	617.01	610.8	2.05	1	17.7	4.23	165.37	2371.04	6.21	1.45	6.21	6.21
Dawson County	D7	RM 81.31	27735.46	50-yr	3276.69	616.03	610.65	4.36	2.73	84.66	12.74	131.98	1594.6	5.3	0.77	5.38	5.38
Dawson County	D8	RM 81.10	27398.33	50-yr	3276.69	615.82	610.47	3.52	2.04	55.19	8.85	160.09	1938.69	5.25	0.83	5.35	5.35
Dawson County	D8	RM 80.94	27148.21	50-yr	3276.69	615.81	610.34	2.58	1.67	29.7	5.11	225.85	2210.26	5.21	0.89	5.46	5.46
Dawson County	D8	RM 80.76	26855.69	50-yr	3276.69	615.81	610.19	1.96	1.1	16.77	3.72	181.68	2686.13	5.61	1.21	5.62	5.62
Dawson County	D8	RM 80.64	26669.58	50-yr	3276.69	615.74	610.09	1.98	1.14	17.25	3.59	209.02	2857.3	5.42	1.11	5.65	5.65
Dawson County	D8	RM 80.45	26373.01	50-yr	3276.69	615.75	609.94	1.35	0.83	8.02	2.3	122.91	3127.18	5.68	1.57	5.82	5.82
Dawson County	D8	RM 80.17	25926.88	50-yr	3276.69	615.63	609.71	1.93	1	16.11	3.12	146.98	3169.89	5.91	1.1	5.92	5.92
Dawson County	D8	RM 79.91	25496.94	50-yr	3276.69	615.54	609.42	1.5	0.89	10.05	2.3	362.06	3115.85	5.22	1.18	6.12	6.12
Dawson County	D8	RM 79.43	24626.85	50-yr	3276.69	615.28	609.14	1.85	1.16	14.79	3.14	289.02	2520.08	5.64	1.19	6.14	6.14
Dawson County	D8	RM 79.23	24229.4	50-yr	3276.69	614.74	608.87	3.2	2.17	44.74	7.85	173.46	1610.56	5.66	0.96	5.87	5.87
Dawson County	D8	RM 78.27	22640.58	50-yr	3276.69	614	608.6	2.23	1.5	22.79	9.43	226.68	1095.38	4.87	1.99	5.4	5.4
Dawson County	D8	RM 78.12	22398.86	50-yr	3276.69	613.94	608.48	2.03	1.49	18.67	7.11	222.94	1182.74	4.92	1.86	5.46	5.46
Dawson County	D8	RM 77.97	22135.34	50-yr	3276.69	613.81	608.34	2.2	1.6	21.62	8.19	214.67	1040.75	5.25	1.97	5.47	5.47
Dawson County	D8	RM 77.79	21831.85	50-yr	3276.69	613.74	608.18	1.83	1.49	16.02	6.9	332.54	1222.29	4.2	1.8	5.56	5.56
Dawson County	D8	RM 77.57	21474.71	50-yr	3276.69	613.51	608	2.24	1.84	22.51	8.9	250.08	880.5	5.13	2.02	5.51	5.51
Dawson County	D8	RM 77.38	21170.35	50-yr	3276.69	613.29	607.84	2.55	2	28.91	11.71	215.18	785.08	5.18	2.09	5.45	5.45
Dawson County	D8	RM 77.13	20780.17	50-yr	3276.69	613.27	607.63	1.78	1.39	14.04	6.86	188.55	1035.46	5.27	2.54	5.64	5.64
Dawson County	D8	RM 77.00	20442.34	50-yr	3276.69	613.16	607.46	2.12	1.48	19.63	7.26	131.83	1101.01	5.69	2.02	5.7	5.7
Dawson County	D8	RM 76.90	20124.49	50-yr	3276.69	613.07	607.29	2	1.56	17.41	6.5	153.24	1009.53	5.77	2.08	5.78	5.78
Dawson County	D8	RM 76.76	19785.25	50-yr	3276.69	613.02	607.12	1.64	1.34	11.74	4.38	269.03	1234.23	5.46	2.02	5.91	5.91
Dawson County	D8	RM 76.63	19501.04	50-yr	3276.69	612.94	606.97	1.77	1.44	14.19	6.05	246.86	1081.73	5	2.1	5.97	5.97
Dawson County	D8	RM 76.37	19137.53	50-yr	3276.69	612.72	606.78	2.11	1.66	19.47	7.25	272.76	976.55	5.45	2.02	5.94	5.94
Dawson County	D8	RM 76.22	18884.28	50-yr	3276.69	612.6	606.65	2.2	1.66	21.1	7.7	253.7	975.2	5.57	2.02	5.96	5.96
Dawson County	D8	RM 76.00	18519.22	50-yr	3276.69	612.36	606.61	2.54	1.75	28.55	8.06	225.2	1250.31	5.35	1.49	5.74	5.74
Dawson County	D8	RM 75.75	18119.45	50-yr	3276.69	612.03	606.58	2.83	2.02	35.74	10.78	209.51	1054.02	5.15	1.54	5.45	5.45
Dawson County	D8	RM 75.56	17818.36	50-yr	3276.69	611.95	606.75	2.21	1.6	22.81	7.5	303.99	1394.92	4.48	1.47	5.2	5.2
Dawson County	D8	RM 75.31	17411.3	50-yr	3276.69	611.79	606.34	2.12	1.52	20.22	6.69	263.12	1314.58	4.99	1.64	5.45	5.45
Dawson County	D8	RM 75.13	17092.44	50-yr	3276.69	611.67	606.17	2.02	1.4	18.74	6.6	306.22	1394.54	4.79	1.68	5.5	5.5
Dawson County	D8	RM 74.90	16719.46	50-yr	3276.69	611.29	605.98	2.77	1.77	35.12	10.09	224.87	1353.77	4.8	1.37	5.31	5.31
Dawson County	D8	RM 74.65	16308.2	50-yr	3276.69	611.18	605.91	2.13	1.41	20.71	6.5	267.86	1550	4.79	1.49	5.26	5.26
Dawson County	D8	RM 74.37	15846.14	50-yr	3276.69	610.93	605.85	2.35	1.62	25.81	8.25	221.55	1432.99	4.46	1.41	5.08	5.08
Dawson County	D8	RM 74.13	15464.97	50-yr	3276.69	610.76	605.82	2.12	1.54	20.84	5.92	235.57	1673.15	4.56	1.28	4.94	4.94
Dawson County	D8	RM 73.91	15098.01	50-yr	3276.69	610.63	605.99	1.8	1.3	15.5	5.89	283.69	1578.95	4.21	1.6	4.64	4.64
Dawson County	D8	RM 73.71	14783.86	50-yr	3276.69	610.53	605.87	1.72	1.24	14	4.3	292.2	2068.03	4.27	1.3	4.66	4.66
Dawson County	D8	RM 73.53	14496.67	50-yr	3276.69	610.44	605.72	1.7	1.11	13.53	4.3	249.62	2546.79	4.45	1.41	4.72	4.72
Dawson County	D8	RM 73.29	14096.19	50-yr	3276.69	609.97	605.51	2.93	2.02	40.57	10.84	198.62	1487.49	4.37	1.16	4.46	4.46
Dawson County	D8	RM 73.07	13729.79	50-yr	3276.69	609.53	605.52	3.15	2.37	48.52	15.22	196.15	1251.39	3.94	1.23	4.28	4.28
Dawson County	D8	RM 72.97	13573.93	50-yr	3276.69	609.19	605.5	3.49	2.69	61.15	21.68	199.11	1219.89	3.63	1.28	4.02	4.02
Dawson County	D8	RM 72.91	13479.91	50-yr	3276.69	608.99	605.45	3.51	2.94	63.09	28.8	221.07	949.17	3.41	1.56	3.82	3.82
Dawson County		RM 72.905	13470.04	50-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	50-yr	3276.69	608.88	605.31	3.63	2.96	67.05	28.84	208.91	793.44	3.46	1.49	3.71	3.71
Dawson County	D8	RM 72.83	13354.45	50-yr	3276.69	608.93	604.9	2.6	2.11	33.36	15.81	264.25	900.39	3.79	1.8	4.03	4.03
Dawson County	D8	RM 72.62	13000.82	50-yr	3276.69	608.67	604.4	2.37	1.93	27.1	10.81	295.23	1207.63	4.04	1.61	4.28	4.28
Dawson County	D8	RM 72.37	12609.05	50-yr	3276.69	608.37	603.89	2.55	1.9	30.78	11.57	228.58	1097.69	4.29	1.6	4.48	4.48
Dawson County	D8	RM 72.16	12261.75	50-yr	3276.69	608.11	603.69	2.46	1.96	29.09	10.97	286.3	1145.92	4.14	1.56	4.42	4.42
Dawson County	D8	RM 71.92	11875.08	50-yr	3276.69	607.95	603.18	2.01	1.69	19.28	8.67	345.16	1073.11	4.24	1.9	4.77	4.77
Dawson County	D8	RM 71.69	11512.65	50-yr	3276.69	607.75	602.95	2.16	1.67	21.96	7.81	303.44	1275.85	4.4	1.56	4.8	4.8
Dawson County	D8	RM 71.49	11192.6	50-yr	3276.69	607.55	602.03	2.34	1.69	24.37	7.55	237.66	1238.92	5.19	1.6	5.52	5.52
Dawson County	D8	RM 71.31	10913.3	50-yr	3276.69	607.42	601.99	2.31	1.64	23.91	8.79	244.59	1104.29	5.05	1.85	5.43	5.43
Dawson County	D9	RM 71.10	10567.75	50-yr	3290.85	607.33	602.11	1.91	1.52	16.79	6.59	197.48	1212.27	4.71	1.83	5.23	5.23
Dawson County	D9	RM 70.91	10267.7	50-yr	3290.85	607.19	602.05	2.2	1.48	21.74	7.59	126.11	1579.59	5.07	1.74	5.14	5.14
Dawson County	D9	RM 70.72	9968.939	50-yr	3290.85	607.08	601.91	2.16	1.37	20.96	7.63	153.19	1528.07	5.16	1.82	5.17	5.17
Dawson County	D9	RM 70.50	9603.574	50-yr	3290.85	606.95	601.9	1.92	1.6	16.97	10.87	251.24	719.84	4.66	2.97	5.05	5.05
Dawson County	D9	RM 70.27	9238.535	50-yr	3290.85	606.63	601.31	2.53	1.95	28.79	10.44	236.79	958.92	5.01	1.81	5.32	5.32
Dawson County	D9	RM 70.08	8928.013	50-yr	3290.85	606.5	600.85	2.36	1.67	24.87	8.24	234.44	1188.12	5.16	1.69	5.65	5.65
Dawson County	D9	RM 69.79	8464.726	50-yr	3290.85	606.37	600.61	2.02	1.31	18	5.54	248.41	1572.52	5.3	1.62	5.76	5.76
Dawson County	D9	RM 69.50	7983.226	50-yr	3290.85	606.26	600.56	1.91	1.15	16.27	5.46	237.14	1681.53	5.19	1.72	5.7	5.7
Dawson County	D9	RM 69.26	7575.04	50-yr	3290.85	606.13	600.35	1.94	1.15	16.58	5.9	245.78	1553.58	5.33	1.88	5.79	5.79
Dawson County	D9	RM 69.03	7206.967	50-yr	3290.85	606.05	599.95	1.83	1.21	14.39	6.15	236.36	1157.52	5.74	2.44	6.09	6.09
Dawson County	D9	RM 68.82	6851.789	50-yr	3290.85	605.83	599.77	2.25	1.53	22.26	8.13	217.59	1174.13	5.51	1.98	6.07	6.07

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

50-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	50-yr	3290.85	605.46	599.59	2.87	2.2	35.72	10.14	189.13	954.81	5.74	1.6	5.87	5.87
Dawson County	D9	RM 68.39	6158.879	50-yr	3290.85	605.3	599.51	2.54	2.23	28.9	11.17	241.73	866.07	5.17	1.98	5.79	5.79
Dawson County	D9	RM 68.11	5709.195	50-yr	3290.85	605.08	599.37	2.39	2.11	25.77	12.02	262.72	800.31	5.06	2.36	5.7	5.7
Dawson County	D9	RM 67.86	5308.187	50-yr	3290.85	604.87	599.17	2.55	2.18	28.64	20.27	130.41	470.98	5.54	3.84	5.71	5.71
Dawson County	D10	RM 67.57	4859.184	50-yr	3327.67	604.66	598.93	2.31	2.07	23.43	16.7	240.29	508.37	5.38	3.84	5.73	5.73
Dawson County	D10	RM 67.37	4523.862	50-yr	3327.67	604.56	598.75	2.13	1.76	20.02	9.4	224.36	1131.96	5.39	2.52	5.81	5.81
Dawson County	D10	RM 67.15	4175.103	50-yr	3327.67	604.17	598.47	3.05	2.17	40.8	13.26	158.11	871.8	5.48	1.76	5.7	5.7
Dawson County	D10	RM 66.95	3842.803	50-yr	3327.67	604.1	598.2	2.29	1.55	23.55	10.56	211.57	1160.83	5.04	2.24	5.9	5.9
Dawson County	D10	RM 66.74	3505.323	50-yr	3327.67	603.9	598.12	2.43	1.77	25.77	10.81	189.78	852.19	5.65	2.34	5.78	5.78
Dawson County	D10	RM 66.52	3142.889	50-yr	3327.67	603.66	598.26	2.48	2.02	27.64	12.48	249	980.86	5.08	2.29	5.4	5.4
Dawson County	D10	RM 66.28	2774.58	50-yr	3327.67	603.2	598.21	3.15	2.71	45.58	29.16	206.17	526.62	4.74	3.04	4.99	4.99
Dawson County	D10	RM 66.11	2492.331	50-yr	3327.67	603.08	597.8	2.58	2.29	31	18.46	269.84	625.01	4.54	2.7	5.28	5.28
Dawson County	D10	RM 65.90	2160.839	50-yr	3327.67	602.96	597.33	2.28	1.85	23.38	11.67	227.64	767.28	5.04	2.49	5.64	5.64
Dawson County	D10	RM 65.75	1926.044	50-yr	3327.67	602.84	597.2	2.26	1.95	23.75	14.62	203.78	764.32	4.58	2.79	5.64	5.64
Dawson County	D10	RM 65.60	1669.095	50-yr	3327.67	602.67	597.07	2.56	1.76	29.02	10.36	140.14	1181.43	5.37	1.88	5.6	5.6
Dawson County	D10	RM 65.42	1386.836	50-yr	3327.67	602.58	596.92	2.02	1.65	18.18	7.53	247.82	1137.3	5.2	2.13	5.66	5.66
Dawson County	D10	RM 65.23	1090.639	50-yr	3327.67	602.45	596.91	2.09	1.54	21.06	8.03	263.18	1577.39	4.18	1.58	5.55	5.55
Dawson County	D10	RM 64.96	634.963	50-yr	3327.67	602.31	597.09	1.81	1.15	15.03	5.55	270.22	2129.55	4.7	1.73	5.22	5.22

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	50-yr	3327.2	602.17	596.42	1.42	0.91	9.66	3.62	398.12	2328.5	4.21	1.57	5.75	5.75
Richland/McKenzie County	D10	RM 64.32	103200	50-yr	3327.2	602.09	596.33	1.74	0.89	13.79	4.58	232.97	2322.07	4.91	1.62	5.76	5.76
Richland/McKenzie County	D10	RM 64.12	102900	50-yr	3327.2	602.04	596.18	1.5	0.92	10.54	4.2	281.09	2038.14	4.5	1.78	5.86	5.86
Richland/McKenzie County	D10	RM 63.92	102601	50-yr	3327.2	601.99	596.08	1.42	0.8	9.53	4.32	273.38	2118.54	4.37	1.96	5.91	5.91
Richland/McKenzie County	D10	RM 63.74	102302	50-yr	3327.2	601.93	595.94	1.52	0.86	10.65	4.08	254.65	2149.21	4.78	1.81	5.99	5.99
Richland/McKenzie County	D10	RM 63.55	101998	50-yr	3327.2	601.87	595.79	1.61	0.84	11.31	3.96	210.56	2048.33	5.62	1.94	6.08	6.08
Richland/McKenzie County	D10	RM 63.34	101671	50-yr	3327.2	601.82	595.21	1.58	0.81	11.39	4.87	241.49	1994.42	4.87	2.07	6.61	6.61
Richland/McKenzie County	D10	RM 63.08	101293	50-yr	3327.2	601.45	595.12	2.88	1.24	37.18	12.2	159.68	1604.59	5.18	1.67	6.33	6.33
Richland/McKenzie County	D10	RM 62.96	101094	50-yr	3327.2	601.24	595.12	3.07	1.49	52.27	15.56	149.74	1390.19	5.51	1.61	6.12	6.12
Richland/McKenzie County	D10	RM 62.83	100882	50-yr	3327.2	601.1	595.12	2.93	1.5	42.09	11.89	161.51	1413.33	5.66	1.57	5.98	5.98
Richland/McKenzie County	D10	RM 62.64	100582	50-yr	3327.2	600.97	595.12	2.61	1.45	29.71	9.3	189.94	1338.18	5.57	1.72	5.85	5.85
Richland/McKenzie County	D10	RM 62.46	100282	50-yr	3327.2	600.43	595.1	3.61	2.31	59.17	18.64	161.13	933.58	4.99	1.54	5.33	5.33
Richland/McKenzie County	D10	RM 62.27	99977	50-yr	3327.2	600.51	594.91	2.01	1.51	18.43	7.47	303.35	1108.63	4.96	1.98	5.6	5.6
Richland/McKenzie County	D10	RM 62.1	99691	50-yr	3327.2	600.44	594.75	1.78	1.34	14.59	7.9	274.06	1106.33	4.17	2.24	5.69	5.69
Richland/McKenzie County	D10	RM 61.91	99377	50-yr	3327.2	600.28	594.51	2	1.31	17.92	8.66	164.84	1166.67	4.57	2.18	5.77	5.77
Richland/McKenzie County	D10	RM 61.72	99082	50-yr	3327.2	600.13	594.36	2.12	1.45	20.27	7.52	127.17	1222.89	5.15	1.87	5.77	5.77
Richland/McKenzie County	D10	RM 61.54	98782	50-yr	3327.2	599.79	594.36	2.61	2.01	30.17	9.42	230.57	1091.72	4.92	1.52	5.43	5.43
Richland/McKenzie County	D10	RM 61.35	98482	50-yr	3327.2	599.61	594.26	2.62	1.99	31.26	10.64	215	1024.86	4.91	1.65	5.35	5.35
Richland/McKenzie County	D10	RM 61.16	98182	50-yr	3327.2	599.57	594.17	1.9	1.43	16.88	8.78	248.77	997.83	4.56	2.36	5.4	5.4
Richland/McKenzie County	D10	RM 60.99	97906	50-yr	3327.2	599.42	594.02	2.11	1.41	20.05	7.57	216.72	1266.44	4.98	1.87	5.4	5.4
Richland/McKenzie County	D10	RM 60.79	97582	50-yr	3327.2	599.3	593.78	2.07	1.29	20.31	8.27	224.25	1510.5	4.26	1.72	5.52	5.52
Richland/McKenzie County	D10	RM 60.64	97339	50-yr	3327.2	599.29	593.58	1.34	0.95	8.67	4.5	266.31	1701.65	4.07	2.09	5.71	5.71
Richland/McKenzie County	D10	RM 60.42	96982	50-yr	3327.2	599.13	593.38	1.89	1.22	16.08	5.22	215.62	1803.09	4.82	1.55	5.75	5.75
Richland/McKenzie County	D10	RM 60.25	96700	50-yr	3327.2	598.98	593.24	2.32	1.34	25.84	8.95	192.38	1731.95	4.2	1.43	5.74	5.74
Richland/McKenzie County	D10	RM 60.04	96365	50-yr	3327.2	598.83	593.14	2.14	1.26	22.93	8.46	227.05	1987.18	3.66	1.33	5.69	5.69
Richland/McKenzie County	D10	RM 59.86	96088	50-yr	3327.2	598.74	592.99	1.97	0.98	17.29	5.17	171.89	2201.99	5.28	1.54	5.75	5.75
Richland/McKenzie County	D10	RM 59.65	95769	50-yr	3327.2	598.71	592.85	1.55	0.82	11.01	3.92	207.22	2410.54	4.81	1.68	5.86	5.86
Richland/McKenzie County	D10	RM 59.5	95530	50-yr	3327.2	598.62	592.75	1.72	0.96	13.91	4.45	206.9	2461.72	4.45	1.4	5.87	5.87
Richland/McKenzie County	D10	RM 59.29	95183	50-yr	3327.2	598.54	592.55	1.56	0.97	11.43	3.77	232.08	2320.34	4.55	1.48	5.99	5.99
Richland/McKenzie County	D10	RM 59.07	94797	50-yr	3327.2	598.47	592.36	1.39	0.93	9.97	3.8	408.43	2176.09	4.34	1.65	6.11	6.11
Richland/McKenzie County	D10	RM 58.93	94582	50-yr	3327.2	598.37	592.31	1.75	1.03	14.12	4.84	328.36	2061.49	4.63	1.57	6.06	6.06
Richland/McKenzie County	D10	RM 58.75	94282	50-yr	3327.2	598.26	592.28	1.9	1.09	15.66	4.68	264.72	1943.41	5.33	1.58	5.98	5.98
Richland/McKenzie County	D10	RM 58.56	93982	50-yr	3327.2	597.8	592.22	3.27	1.73	47.56	10.13	157.23	1737.97	5.3	1.11	5.58	5.58
Richland/McKenzie County	D10	RM 58.37	93682	50-yr	3327.2	597.54	592.22	3.14	1.95	44.54	9.33	186.39	1641.14	5.04	1.04	5.32	5.32
Richland/McKenzie County	D10	RM 58.19	93382	50-yr	3327.2	597.53	592.22	2.17	1.48	21.16	6.61	254.64	1413.86	5.14	1.59	5.31	5.31
Richland/McKenzie County	D10	RM 58.01	93086	50-yr	3327.2	597.21	592.14	2.73	2.2	33.99	9.99	236.71	1081.21	4.82	1.4	5.07	5.07
Richland/McKenzie County	D10	RM 57.82	92782	50-yr	3327.2	597.18	592.11	1.91	1.56	17.53	7.56	308.1	1200.37	4.13	1.77	5.07	5.07
Richland/McKenzie County	D10	RM 57.63	92482	50-yr	3327.2	597.01	592.11	2.38	1.59	26.45	9.59	160.84	1274.64	4.6	1.65	4.9	4.9
Richland/McKenzie County	D10	RM 57.46	92205	50-yr	3327.2	596.94	591.95	1.76	1.2	14.37	6.41	192.28	1477.72	4.7	2.08	4.99	4.99
Richland/McKenzie County	D10	RM 57.26	91882	50-yr	3327.2	596.69	591.9	2.28	1.69	25.15	10.71	136.34	1335.92	4.11	1.73	4.79	4.79
Richland/McKenzie County	D10	RM 57.07	91583	50-yr	3327.2	596.62	591.73	1.85	1.33	15.98	7.15	137.42	1497.59	4.64	2.04	4.89	4.89
Richland/McKenzie County	D10	RM 56.87	91253	50-yr	3327.2	596.47	591.49	1.66	1.32	13.16	6.23	186.15	1376.06	4.17	1.96	5.04	5.04
Richland/McKenzie County	D10	RM 56.68	90943	50-yr	3327.2	596.4	591.12	1.45	1.28	10.26	6.35	299.58	1368.8	3.96	2.45	5.28	5.28
Richland/McKenzie County	D10	RM 56.54	90682	50-yr	3349.9	596.19	590.76	1.88	1.99	20.17	14.89	216.66	691.76	3.49	2.57	5.47	5.47
Richland/McKenzie County	D10	RM 56.35	90387	50-yr	3349.9	596.04	590.46	1.97	1.93	18.52	16.19	174.85	503.89	4.24	3.67	5.58	5.58
Richland/McKenzie County	D11	RM 56.16	90086	50-yr	3349.9	595.58	590.11	2.99	2.82	40.55	24.04	221.39	428.66	5.03	2.95	5.47	5.47
Richland/McKenzie County	D11	RM 55.96	89768	50-yr	3349.9	595.39	589.96	2.79	2.42	34.83	20.33	222.74	509.99	5.18	3.01	5.43	5.43
Richland/McKenzie County	D11	RM 55.78	89479	50-yr	3349.9	595.31	589.96	2.41	1.75	26.1	11.54	216.81	925.69	5.04	2.21	5.35	5.35
Richland/McKenzie County	D11	RM 55.61	89193	50-yr	3349.9	595.15	589.98	2.44	1.76	27.02	10.31	222.22	1320.46	4.94	1.87	5.17	5.17
Richland/McKenzie County	D11	RM 55.41	88882	50-yr	3349.9	594.99	589.76	2.36	1.6	25.76	10.71	203.81	1371.2	4.7	1.94	5.23	5.23
Richland/McKenzie County	D11	RM 55.23	88582	50-yr	3349.9	594.83	589.53	2.26	1.58	23.01	9.24	238.9	1358.2	5.1	2.02	5.3	5.3
Richland/McKenzie County	D11	RM 55.04	88282	50-yr	3349.9	594.62	589.39	2.46	1.74	28.13	12.19	252.08	1338.84	4.58	1.97	5.23	5.23
Richland/McKenzie County	D11	RM 54.86	87996	50-yr	3349.9	594.25	589.33	3.04	2.31	45.08	21.09	223.4	1071.5	3.99	1.85	4.92	4.92
Richland/McKenzie County	D11	RM 54.69	87715	50-yr	3349.9	594.21	589.23	2.1	1.72	20.94	12.33	188.11	1092.31	4.34	2.53	4.98	4.98
Richland/McKenzie County	D11	RM 54.48	87382	50-yr	3349.9	594.1	589.15	1.82	1.28	15.57	7.22	179.29	2170.71	4.46	2.04	4.95	4.95
Richland/McKenzie County	D11	RM 54.32	87122	50-yr	3349.9	594.01	589	1.89	1.17	16.33	6.51	159.94	2449.37	4.86	1.9	5.01	5.01
Richland/McKenzie County	D11	RM 54.1	86783	50-yr	3349.9	593.88	588.83	1.77	1.26	14.21	5.64	202.24	2001.08	4.9	1.92	5.05	5.05
Richland/McKenzie County	D11	RM 53.92	86482	50-yr	3349.9	593.82	588.68	1.58	1.08	11.82	4.46	255.08	2275.6	4.42	1.64	5.14	5.14
Richland/McKenzie County	D11	RM 53.73	86182	50-yr	3349.9	593.72	588.51	1.83	1.09	15.22	4.92	196.75	2589.47	4.99	1.58	5.21	5.21
Richland/McKenzie County	D11	RM 53.55	85882	50-yr	3349.9	593.58	588.37	1.9	1.24	16.46	5.24	181.72	1949.96	4.86	1.53	5.2	5.2
Richland/McKenzie County	D11	RM 53.36	85582	50-yr	3349.9	593.42	588.01	2.05	1.25	19.84	5.92	166.55	2170.18	4.36	1.29	5.41	5.41

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 53.17	85290	50-yr	3349.9	592.98	587.56	2.99	1.69	40.56	8.91	205.81	2039.27	4.94	1.08	5.42	5.42
Richland/McKenzie County	D11	RM 52.98	84982	50-yr	3349.9	592.65	587.56	3.09	1.66	49.16	15.27	271.44	2657.35	3.37	1.04	5.09	5.09
Richland/McKenzie County	D11	RM 52.79	84682	50-yr	3349.9	592.42	587.56	2.36	1.46	29.44	12.58	387.04	2363.66	3.14	1.33	4.86	4.86
Richland/McKenzie County	D11	RM 52.61	84390	50-yr	3349.9	592.29	587.43	1.85	1.44	16.93	6.01	450.01	2549.94	3.78	1.33	4.86	4.86
Richland/McKenzie County	D11	RM 52.42	84082	50-yr	3349.9	592.21	587.28	1.61	1.11	13.32	5.68	409.99	2625.69	3.37	1.43	4.93	4.93
Richland/McKenzie County	D11	RM 52.24	83798	50-yr	3349.9	592.14	587.28	1.53	0.81	11.37	4.03	227.41	3509.22	4.06	1.42	4.86	4.86
Richland/McKenzie County	D11	RM 52.01	83423	50-yr	3349.9	591.94	587.23	2.13	1.07	21.44	4.64	124.91	3698.09	4.5	0.95	4.71	4.71
Richland/McKenzie County	D11	RM 51.87	83182	50-yr	3349.9	591.87	587.16	1.63	0.88	13.8	4.86	156.7	3331.75	3.31	1.15	4.71	4.71
Richland/McKenzie County	D11	RM 51.69	82882	50-yr	3349.9	591.77	587.16	1.47	0.79	10.55	3.52	151.24	3413.95	3.82	1.25	4.61	4.61
Richland/McKenzie County	D11	RM 51.51	82585	50-yr	3349.9	591.7	587.16	1.68	0.9	14.31	4.37	149.84	3524.45	3.53	1.06	4.54	4.54
Richland/McKenzie County	D11	RM 51.32	82274	50-yr	3349.9	591.65	587.16	1.37	0.76	9.64	3.58	173.83	3497.01	3.48	1.27	4.49	4.49
Richland/McKenzie County	D11	RM 51.13	81982	50-yr	3349.9	591.6	587.13	1.49	0.78	10.53	2.96	164.51	3625.02	4.29	1.18	4.49	4.49
Richland/McKenzie County	D11	RM 50.95	81682	50-yr	3349.9	591.52	587.08	1.35	0.67	8.73	2.82	144.96	3737.61	4.22	1.34	4.44	4.44
Richland/McKenzie County	D11	RM 50.76	81378	50-yr	3349.9	591.47	586.89	1.27	0.59	7.78	3	174.41	3675.16	4.08	1.54	4.58	4.58
Richland/McKenzie County	D11	RM 50.56	81065	50-yr	3349.9	591.32	586.37	1.64	0.78	12.26	3.39	171.61	3367.12	4.83	1.31	4.95	4.95
Richland/McKenzie County	D11	RM 50.39	80787	50-yr	3349.9	591.28	585.7	1.53	0.74	10.26	2.77	196.96	3137.81	5.47	1.45	5.58	5.58
Richland/McKenzie County	D11	RM 50.21	80482	50-yr	3349.9	591.2	585.55	1.5	0.86	10.24	3.24	234.94	2523.65	4.93	1.55	5.65	5.65
Richland/McKenzie County	D11	RM 50.02	80182	50-yr	3369.7	591.06	585.55	1.86	1.11	15.87	4.69	197.51	2167.36	4.86	1.4	5.51	5.51
Richland/McKenzie County	D12	RM 49.82	79860	50-yr	3369.7	590.66	585.55	2.83	1.76	36.52	8.42	211.98	1730.82	4.87	1.11	5.11	5.11
Richland/McKenzie County	D12	RM 49.65	79582	50-yr	3369.7	590.32	585.55	3.14	2.22	46.15	11.9	213.94	1313.07	4.52	1.16	4.77	4.77
Richland/McKenzie County	D12	RM 49.5	79348	50-yr	3369.7	590.46	585.49	1.57	1.14	11.16	3.62	356	1882.53	4.87	1.57	5.01	5.01
Richland/McKenzie County	D12	RM 49.26	78981	50-yr	3369.7	590.37	585.29	1.84	1.21	15.4	5.25	137.44	1707.56	4.86	1.63	5.08	5.08
Richland/McKenzie County	D12	RM 49.08	78682	50-yr	3369.7	590.24	585.11	1.98	1.28	17.98	5.31	156.64	1853.13	4.86	1.42	5.2	5.2
Richland/McKenzie County	D12	RM 48.87	78351	50-yr	3369.7	590.13	584.96	1.92	1.21	16.82	4.92	209.35	1967.63	4.9	1.42	5.17	5.17
Richland/McKenzie County	D12	RM 48.7	78082	50-yr	3369.7	590.05	584.86	1.82	1.23	16.03	6.5	252.25	1660.14	4.16	1.66	5.19	5.19
Richland/McKenzie County	D12	RM 48.52	77782	50-yr	3369.7	590.03	584.74	1.21	0.92	7.08	3.69	473.03	1728.99	4.08	2.12	5.29	5.29
Richland/McKenzie County	D12	RM 48.33	77482	50-yr	3369.7	589.98	584.51	1.26	0.95	8.83	5.14	517.65	1765.97	3.46	2	5.47	5.47
Richland/McKenzie County	D12	RM 48.15	77182	50-yr	3369.7	589.87	584.24	1.5	0.9	10.62	6.17	497.96	1815.18	3.58	2.07	5.63	5.63
Richland/McKenzie County	D12	RM 47.97	76887	50-yr	3369.7	589.85	584.09	1.14	0.85	5.91	4.18	601.73	2179.42	3.25	2.3	5.76	5.76
Richland/McKenzie County	D12	RM 47.76	76570	50-yr	3369.7	589.8	583.86	1.1	0.9	6.03	3.94	565.5	2100.28	3.58	2.34	5.94	5.94
Richland/McKenzie County	D12	RM 47.59	76293	50-yr	3369.7	589.74	583.71	1.25	0.95	7.54	3.88	391.27	2068.73	4.3	2.21	6.03	6.03
Richland/McKenzie County	D12	RM 47.4	75982	50-yr	3369.7	589.64	583.42	1.63	1.01	11.78	4.94	196.88	1963.64	5.15	2.14	6.22	6.22
Richland/McKenzie County	D12	RM 47.12	75521	50-yr	3369.7	589.42	583.04	2.02	1.21	17.29	5.39	234.72	1790.56	6.12	1.88	6.38	6.38
Richland/McKenzie County	D12	RM 47	75323	50-yr	3369.7	589.03	583.04	3.26	1.74	46.7	11.85	162.2	1692.38	5.41	1.35	5.99	5.99
Richland/McKenzie County	D12	RM 46.85	75082	50-yr	3369.7	588.89	583.04	2.98	1.74	39.27	10.17	184.53	1605.56	5.38	1.37	5.85	5.85
Richland/McKenzie County	D12	RM 46.67	74782	50-yr	3369.7	588.6	583.04	3.11	2.09	42.59	10.77	185.83	1324.39	5.4	1.35	5.56	5.56
Richland/McKenzie County	D12	RM 46.47	74459	50-yr	3369.7	588.59	583.04	2.09	1.68	19.93	7.78	312.11	1091.81	4.91	1.9	5.55	5.55
Richland/McKenzie County	D12	RM 46.3	74186	50-yr	3369.7	588.47	583.04	2.06	1.76	18.7	11.27	421.1	877.84	3.65	2.18	5.43	5.43
Richland/McKenzie County	D12	RM 46.14	73920	50-yr	3369.7	588.37	583.04	1.89	1.64	15.89	10.29	454.73	853.89	3.74	2.41	5.33	5.33
Richland/McKenzie County	D12	RM 45.9	73546	50-yr	3369.7	588.22	582.97	1.92	1.39	17.29	8.44	339.6	1138.49	4.38	2.13	5.25	5.25
Richland/McKenzie County	D12	RM 45.75	73307	50-yr	3369.7	588.05	582.88	2.16	1.55	22.55	10.8	351.5	1525.62	3.77	1.8	5.17	5.17
Richland/McKenzie County	D12	RM 45.54	72980	50-yr	3369.7	587.95	582.55	1.77	1.34	14.77	6.94	382.5	1840.53	4.4	2.05	5.4	5.4
Richland/McKenzie County	D12	RM 45.29	72680	50-yr	3369.7	587.82	582.25	1.93	1.4	17.56	7.86	347.33	1768.53	4.35	1.93	5.57	5.57
Richland/McKenzie County	D12	RM 45.09	72380	50-yr	3369.7	587.7	582.08	2.02	1.38	18.21	6.64	267.36	1978.57	5.22	1.89	5.62	5.62
Richland/McKenzie County	D12	RM 44.91	72080	50-yr	3369.7	587.6	582.01	1.95	1.35	17.26	6.75	283.48	2016.15	4.99	1.94	5.59	5.59
Richland/McKenzie County	D12	RM 44.72	71783	50-yr	3369.7	587.35	581.97	2.53	1.57	28.75	9.18	208.81	2201.37	5.07	1.6	5.38	5.38
Richland/McKenzie County	D12	RM 44.53	71483	50-yr	3369.7	587.1	581.82	2.86	1.8	37.37	14.25	177.29	1848.97	4.83	1.82	5.28	5.28
Richland/McKenzie County	D12	RM 44.34	71183	50-yr	3369.7	586.83	581.8	2.93	1.86	41.13	13.89	199.24	2010.99	4.22	1.41	5.03	5.03
Richland/McKenzie County	D12	RM 44.17	70899	50-yr	3369.7	586.84	581.79	1.73	1.28	13.47	4.59	301.73	2021.37	4.97	1.68	5.05	5.05
Richland/McKenzie County	D12	RM 43.97	70594	50-yr	3369.7	586.77	581.73	1.59	1.15	12.18	4.63	326.68	2573.66	4.18	1.57	5.04	5.04
Richland/McKenzie County	D12	RM 43.74	70230	50-yr	3369.7	586.61	581.66	1.85	1.48	16.62	5.59	164.51	2103.19	3.98	1.32	4.95	4.95
Richland/McKenzie County	D12	RM 43.59	69983	50-yr	3369.7	586.52	581.56	1.6	0.89	12.29	4.62	143.76	2786.55	4.09	1.51	4.96	4.96
Richland/McKenzie County	D12	RM 43.4	69684	50-yr	3369.7	586.43	581.49	1.59	0.9	12.13	4.22	150.64	2999.9	4.29	1.47	4.94	4.94
Richland/McKenzie County	D12	RM 43.03	69084	50-yr	3369.7	586.32	581.37	1.5	0.79	10.93	4.17	131.62	3473.51	4.06	1.52	4.95	4.95
Richland/McKenzie County	D12	RM 42.66	68489	50-yr	3369.7	586.24	581.18	1.68	0.81	13.37	4.52	115.82	3581.3	4.41	1.46	5.06	5.06
Richland/McKenzie County	D12	RM 42.29	67889	50-yr	3369.7	586.17	580.87	1.25	0.72	7.22	2.56	281.47	3732.79	4.71	1.65	5.3	5.3
Richland/McKenzie County	D12	RM 42.08	67558	50-yr	3369.7	586.13	580.61	1.43	0.72	9.1	3	180.64	3416.04	5.26	1.71	5.52	5.52
Richland/McKenzie County	D12	RM 41.89	67260	50-yr	3369.7	586.04	580.31	1.55	0.82	10.7	3.62	292.42	2869.86	5.14	1.73	5.73	5.73
Richland/McKenzie County	D12	RM 41.75	67037	50-yr	3369.7	585.96	579.99	1.66	0.92	12.87	4.42	337.38	2697.71	4.46	1.51	5.97	5.97
Richland/McKenzie County	D12	RM 41.54	66695	50-yr	3369.7	585.78	579.72	2.12	0.99	19.36	5.48	196.39	2135.58	5.75	1.6	6.06	6.06
Richland/McKenzie County	D12	RM 41.34	66361	50-yr	3369.7	585.64	579.43	2.18	1.14	21.72	6.84	218.95	1956.52	4.85	1.51	6.21	6.21

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 41.18	66116	50-yr	3369.7	585.49	579.08	2.32	1.21	23.87	6.97	195.81	1809.02	5.39	1.54	6.41	6.41
Richland/McKenzie County	D12	RM 40.99	65802	50-yr	3369.7	585.4	578.99	2.08	1.04	19.19	5.91	203.5	2035.78	5.26	1.59	6.41	6.41
Richland/McKenzie County	D12	RM 40.8	65502	50-yr	3369.7	585.23	578.97	2.15	1.32	21.4	6.06	273.63	2055.1	4.69	1.31	6.26	6.26
Richland/McKenzie County	D12	RM 40.62	65205	50-yr	3369.7	585.18	578.92	1.6	0.99	12.18	4.47	375.4	2857.51	4.22	1.53	6.26	6.26
Richland/McKenzie County	D12	RM 40.24	64602	50-yr	3369.7	585.02	578.6	1.42	0.84	9.79	3.83	507.11	3121.79	3.68	1.43	6.42	6.42
Richland/McKenzie County	D12	RM 40	64219	50-yr	3369.7	584.88	578.56	1.77	0.91	14.43	3.9	309.03	3204.55	4.72	1.26	6.32	6.32
Richland/McKenzie County	D12	RM 39.87	64002	50-yr	3369.7	584.74	578.55	2.18	1.01	20.93	4.78	222	2942.86	5.43	1.22	6.19	6.19
Richland/McKenzie County	D12	RM 39.68	63702	50-yr	3369.7	584.65	578.45	2.09	1.03	20.01	4.52	241.95	3035.01	4.86	1.08	6.2	6.2
Richland/McKenzie County	D12	RM 39.5	63402	50-yr	3369.7	584.55	578.35	2.1	1.01	20.39	4.8	226.39	3273.03	4.7	1.09	6.2	6.2
Richland/McKenzie County	D12	RM 39.31	63102	50-yr	3369.7	584.46	578.31	1.94	1	16.89	4.35	227.2	2990.18	4.99	1.27	6.15	6.15
Richland/McKenzie County	D12	RM 39.13	62802	50-yr	3369.7	584.36	578.2	1.89	0.97	16.64	4.4	286.13	2954.4	4.62	1.21	6.16	6.16
Richland/McKenzie County	D12	RM 38.94	62501	50-yr	3369.7	584.29	578.12	1.74	0.84	13.67	3.81	264.19	2929.51	4.96	1.36	6.17	6.17
Richland/McKenzie County	D12	RM 38.76	62201	50-yr	3369.7	584.22	578.03	1.72	0.84	12.98	3.32	245.72	2877.96	5.53	1.39	6.19	6.19
Richland/McKenzie County	D12	RM 38.57	61901	50-yr	3369.7	584.15	577.87	1.78	0.85	14.74	4.78	236.46	2661.21	4.67	1.49	6.28	6.28
Richland/McKenzie County	D12	RM 38.38	61601	50-yr	3369.7	584.14	577.84	1.08	0.62	5.53	2.66	268.55	2428.7	4.74	2.25	6.3	6.3
Richland/McKenzie County	D12	RM 38.2	61301	50-yr	3369.7	584.08	577.82	1.28	0.71	7.11	3.08	244.45	2352.43	5.56	2.38	6.26	6.26
Richland/McKenzie County	D12	RM 38.01	61008	50-yr	3369.7	584.04	577.81	1.32	0.86	8.15	4.57	307.49	1578.58	4.45	2.48	6.23	6.23
Richland/McKenzie County	D12	RM 37.84	60708	50-yr	3369.7	583.96	577.71	1.5	1.04	11.8	5.79	335.25	1482.57	4.47	2.18	6.25	6.25
Richland/McKenzie County	D12	RM 37.65	60408	50-yr	3369.7	583.95	577.66	1.04	0.82	5.05	3.18	565.75	1501.6	4.39	2.75	6.29	6.29
Richland/McKenzie County	D12	RM 37.5	60107	50-yr	3369.7	583.91	577.54	1.02	0.91	5.21	3.58	561.58	1370.62	3.93	2.7	6.37	6.37
Richland/McKenzie County	D12	RM 37.35	59808	50-yr	3369.7	583.83	577.37	1.19	0.95	8.09	5.28	427.63	1270.45	4.3	2.79	6.46	6.46
Richland/McKenzie County	D12	RM 37.16	59508	50-yr	3369.7	583.7	577.24	1.71	1.16	14	8.71	280.03	1050.68	4.47	2.76	6.46	6.46
Richland/McKenzie County	D12	RM 36.97	59208	50-yr	3369.7	583.61	576.96	1.9	1.29	16.44	10.59	222.26	940.89	4.35	2.77	6.65	6.65
Richland/McKenzie County	D12	RM 36.78	58908	50-yr	3369.7	583.52	576.87	1.84	1.31	14.83	9.48	217.29	774.53	5.2	3.31	6.65	6.65
Richland/McKenzie County	D12	RM 36.6	58608	50-yr	3369.7	583.42	576.66	1.93	1.39	15.92	6.84	182.19	946.55	6.12	2.56	6.76	6.76
Richland/McKenzie County	D12	RM 36.38	58263	50-yr	3403.7	583.27	576.49	1.97	1.65	16.71	6.39	290.42	959.01	5.71	2.16	6.78	6.78
Richland/McKenzie County	D13	RM 36.23	58011	50-yr	3403.7	583.06	576.43	2.54	1.79	27.21	7.39	199.11	1182.72	6.18	1.65	6.63	6.63
Richland/McKenzie County	D13	RM 36.04	57708	50-yr	3403.7	582.9	576.42	2.7	1.63	31.97	9.5	194.14	1375.79	5.49	1.6	6.48	6.48
Richland/McKenzie County	D13	RM 35.85	57408	50-yr	3403.7	582.82	576.41	2.23	1.41	21.38	7.08	278.61	1733.02	4.61	1.51	6.41	6.41
Richland/McKenzie County	D13	RM 35.66	57108	50-yr	3403.7	582.81	576.36	1.6	1.1	11.31	4.11	327.66	1851.23	5.28	1.91	6.45	6.45
Richland/McKenzie County	D13	RM 35.48	56810	50-yr	3403.7	582.65	576.3	2.19	1.27	20.76	6.22	189.87	1805.46	5.65	1.67	6.35	6.35
Richland/McKenzie County	D13	RM 35.29	56508	50-yr	3403.7	582.55	576.19	2.12	1.32	20.4	6.75	216.77	1794.23	4.94	1.61	6.36	6.36
Richland/McKenzie County	D13	RM 35.1	56208	50-yr	3403.7	582.42	576.07	2.03	1.33	17.76	6.13	244.46	1603.29	5.87	1.98	6.35	6.35
Richland/McKenzie County	D13	RM 34.92	55908	50-yr	3403.7	582.3	576.09	2.1	1.44	22.53	9.92	254.13	1921.08	5.35	2.34	6.21	6.21
Richland/McKenzie County	D13	RM 34.73	55605	50-yr	3403.7	582.24	575.89	1.66	1.37	12.24	6.95	414.63	1486.13	4.54	2.57	6.35	6.35
Richland/McKenzie County	D13	RM 34.54	55297	50-yr	3403.7	582.15	575.79	1.63	1.31	13.12	7.8	394.66	1526.69	4	2.36	6.36	6.36
Richland/McKenzie County	D13	RM 34.36	55008	50-yr	3403.7	582.11	575.75	1.47	1.05	9.09	4.02	323.48	1520.3	5.52	2.42	6.36	6.36
Richland/McKenzie County	D13	RM 34.17	54708	50-yr	3403.7	582.08	575.49	1.29	0.89	7.47	3.72	380.95	1594.22	5.03	2.49	6.59	6.59
Richland/McKenzie County	D13	RM 33.94	54408	50-yr	3403.7	582.05	575.34	1.19	0.87	6.15	3.67	374.48	1301.3	5.15	3.06	6.71	6.71
Richland/McKenzie County	D13	RM 33.76	54079	50-yr	3403.7	582	575.12	1.36	1.04	8.25	5.08	286.39	1636.15	5.31	3.22	6.88	6.88
Richland/McKenzie County	D13	RM 33.6	53799	50-yr	3403.7	581.97	574.88	1.3	0.99	8.12	5.08	376.74	1625.61	4.95	3.06	7.09	7.09
Richland/McKenzie County	D13	RM 33.42	53508	50-yr	3403.7	581.9	574.61	1.46	1.03	8.83	4.39	262.09	1472.36	6.12	3	7.29	7.29
Richland/McKenzie County	D13	RM 33.23	53208	50-yr	3403.7	581.87	574.45	1.42	1.06	8.34	4.77	209.05	1704.48	6.64	3.76	7.42	7.42
Richland/McKenzie County	D13	RM 33.04	52908	50-yr	3403.7	581.79	574.3	1.73	1.2	11.98	5.22	193.34	1718.43	7.15	3.07	7.49	7.49
Richland/McKenzie County	D13	RM 32.86	52608	50-yr	3403.7	581.65	574.18	2.05	1.22	17.29	7.06	209.27	1619.48	6.65	2.67	7.47	7.47
Richland/McKenzie County	D13	RM 32.67	52308	50-yr	3403.7	581.6	574.18	1.98	1.05	16.37	7.43	188.53	1596.74	6.46	2.88	7.42	7.42
Richland/McKenzie County	D13	RM 32.48	52008	50-yr	3403.7	581.49	574.04	2.1	1.08	18.7	7.93	196.91	1489.84	6.17	2.56	7.45	7.45
Richland/McKenzie County	D13	RM 32.29	51709	50-yr	3403.7	581.44	574.04	1.8	1.02	13.44	6.5	224.23	1340.59	6.4	3.05	7.4	7.4
Richland/McKenzie County	D13	RM 32.11	51423	50-yr	3403.7	581.39	573.94	1.74	1.1	12.43	4.63	220.08	1249.78	6.7	2.47	7.45	7.45
Richland/McKenzie County	D13	RM 31.92	51108	50-yr	3403.7	581.36	573.85	1.54	0.99	10.12	4.93	211.85	1434.45	5.96	2.87	7.51	7.51
Richland/McKenzie County	D13	RM 31.73	50809	50-yr	3403.7	581.32	573.72	1.4	0.91	8.61	3.78	261.37	1440.05	6.76	2.94	7.6	7.6
Richland/McKenzie County	D13	RM 31.51	50462	50-yr	3403.7	581.16	573.24	2.13	1.25	17.69	7.18	162.22	1007.29	6.8	2.71	7.92	7.92
Richland/McKenzie County	D13	RM 31.35	50208	50-yr	3403.7	581.06	573.24	2.26	1.53	21.79	11.36	169.04	717.77	6.05	3.1	7.82	7.82
Richland/McKenzie County	D13	RM 31.22	50009	50-yr	3403.7	580.86	573.24	2.68	1.82	29.72	15.72	149.68	600	6.56	3.4	7.62	7.62
Richland/McKenzie County	D13	RM 31.12	49859	50-yr	3403.7	580.76	570.86	2.47	2.43	34.32	31.74	196.27	217.2	6.96	6.45	9.9	9.9
Richland/McKenzie County	D13	Highway 23	49844	50-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	50-yr	3403.7	580.71	570.86	2.51	2.46	34.22	31.44	192.51	215.1	7	6.42	9.85	9.85
Richland/McKenzie County	D13	RM 30.97	49608	50-yr	3403.7	580.68	573.24	2.12	1.96	18.24	12.82	225.84	624.53	7.01	4.9	7.44	7.44
Richland/McKenzie County	D13	RM 30.79	49308	50-yr	3403.7	580.46	573.24	2.6	2.06	28.4	15.51	199.27	701.19	6.26	3.38	7.22	7.22
Richland/McKenzie County	D13	RM 30.6	49009	50-yr	3403.7	580.3	573.24	2.72	1.86	31.53	16.04	187.26	775.85	6.03	3.02	7.06	7.06
Richland/McKenzie County	D13	RM 30.41	48706	50-yr	3403.7	580.24	573.15	2.28	1.61	22.85	11.2	212.3	1022.59	5.97	2.89	7.09	7.09

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 30.22	48403	50-yr	3403.7	580.14	573.15	2.26	1.44	21.25	8.31	199.03	1271.55	6.52	2.51	6.99	6.99
Richland/McKenzie County	D13	RM 30.03	48102	50-yr	3403.7	580.16	573.15	1.5	1.02	9.5	4.37	315.48	1317.25	6.3	2.82	7.01	7.01
Richland/McKenzie County	D13	RM 29.85	47809	50-yr	3403.7	580.12	573.15	1.38	0.92	8.2	4.1	376.84	1306.33	5.77	2.84	6.97	6.97
Richland/McKenzie County	D13	RM 29.66	47508	50-yr	3403.7	580.05	573.11	1.54	0.97	9.74	4.96	393.01	1478.44	4.75	2.38	6.94	6.94
Richland/McKenzie County	D13	RM 29.48	47209	50-yr	3403.7	580	573.11	1.46	0.98	9.04	4.5	346.87	1354.39	5.63	2.76	6.89	6.89
Richland/McKenzie County	D13	RM 29.28	46894	50-yr	3403.7	579.96	572.98	1.32	1.05	7.78	5.29	401.07	1042.23	5.24	3.55	6.98	6.98
Richland/McKenzie County	D13	RM 29.1	46608	50-yr	3403.7	579.9	572.94	1.72	1.09	12.62	7.46	169.86	1188.7	5.99	3.5	6.96	6.96
Richland/McKenzie County	D13	RM 28.92	46308	50-yr	3403.7	579.81	572.85	1.83	1.17	13.86	5.31	146.69	1439.63	6.49	2.44	6.96	6.96
Richland/McKenzie County	D13	RM 28.73	46008	50-yr	3403.7	579.79	572.67	1.56	0.97	10.27	4.13	152.03	1431.62	6.24	2.46	7.12	7.12
Richland/McKenzie County	D13	RM 28.54	45708	50-yr	3403.7	579.75	572.67	1.43	0.9	8.47	3.71	201.29	1500.28	5.83	2.52	7.08	7.08
Richland/McKenzie County	D13	RM 28.36	45419	50-yr	3403.7	579.71	572.48	1.37	0.87	7.89	3.22	233.95	1550.31	6.25	2.52	7.23	7.23
Richland/McKenzie County	D13	RM 28.15	45071	50-yr	3403.7	579.65	572.25	1.27	1.04	6.89	3.69	429.8	1046.87	5.86	3.12	7.4	7.4
Richland/McKenzie County	D13	RM 27.98	44808	50-yr	3403.7	579.5	572.04	1.96	1.34	15.82	5.12	236.34	1288.22	6.7	2.14	7.46	7.46
Richland/McKenzie County	D13	RM 27.8	44508	50-yr	3403.7	579.43	571.87	1.93	1.35	14.85	4.4	226.85	1182.03	7.31	2.13	7.56	7.56
Richland/McKenzie County	D14	RM 27.61	44208	50-yr	3403.7	579.38	571.87	1.85	1.28	13.92	4.99	246.37	1940.29	6.78	2.4	7.51	7.51
Richland/McKenzie County	D14	RM 27.43	43916	50-yr	3403.7	579.36	571.87	1.62	1.07	10.56	3.43	261.74	2331.98	7.12	2.28	7.49	7.49
Richland/McKenzie County	D14	RM 27.23	43608	50-yr	3403.7	579.35	571.87	1.31	0.85	6.79	2.24	310.87	2511.37	7.37	2.39	7.48	7.48
Richland/McKenzie County	D14	RM 27.04	43305	50-yr	3403.7	579.29	571.87	1.51	0.88	9.36	2.99	277.5	2561.81	6.82	2.13	7.42	7.42
Richland/McKenzie County	D14	RM 26.86	43008	50-yr	3403.7	579.22	571.87	1.73	0.92	12.09	3.42	229.41	2530.54	7.07	1.96	7.35	7.35
Richland/McKenzie County	D14	RM 26.67	42708	50-yr	3403.7	579.19	571.87	1.6	0.89	10.32	3.03	252.42	2458.28	7.05	2.04	7.32	7.32
Richland/McKenzie County	D14	RM 26.48	42408	50-yr	3403.7	579.08	571.87	1.96	1.05	15.59	4.41	209.83	2149.72	6.9	1.92	7.2	7.2
Richland/McKenzie County	D14	RM 26.29	42108	50-yr	3403.7	579.01	571.87	1.98	1.16	15.95	4.47	205.84	1915.2	6.83	1.89	7.14	7.14
Richland/McKenzie County	D14	RM 26.11	41808	50-yr	3403.7	578.97	571.87	1.72	1.14	12.09	3.78	249.58	1426.36	6.8	2.1	7.1	7.1
Richland/McKenzie County	D14	RM 25.92	41508	50-yr	3403.7	578.93	571.87	1.53	1.12	9.53	3.67	305.76	1360.26	6.77	2.58	7.06	7.06
Richland/McKenzie County	D14	RM 25.73	41208	50-yr	3403.7	578.88	571.74	1.54	1.34	9.62	4.46	309.7	2167.14	6.92	3.18	7.14	7.14
Richland/McKenzie County	D14	RM 25.55	40918	50-yr	3403.7	578.82	571.74	1.61	1.41	11.09	5.8	346.01	2179.94	5.87	3.05	7.08	7.08
Richland/McKenzie County	D14	RM 25.37	40619	50-yr	3403.7	578.76	571.74	1.63	1.39	11.55	6.28	353.9	1991.42	5.67	3.07	7.02	7.02
Richland/McKenzie County	D14	RM 25.17	40310	50-yr	3403.7	578.67	571.74	1.72	1.41	13.5	7.21	361.09	1602.71	5.2	2.76	6.93	6.93
Richland/McKenzie County	D14	RM 24.99	40008	50-yr	3403.7	578.64	571.74	1.42	1.13	8.75	4.62	384.4	1363.2	5.94	3.13	6.9	6.9
Richland/McKenzie County	D14	RM 24.8	39703	50-yr	3403.7	578.62	571.71	1.26	1.1	7.23	4.53	401.43	771.47	6.59	4.11	6.91	6.91
Richland/McKenzie County	D14	RM 24.62	39408	50-yr	3403.7	578.51	571.64	1.73	1.45	12.58	7.54	278.78	634.86	6.21	3.69	6.87	6.87
Richland/McKenzie County	D14	RM 24.45	39139	50-yr	3403.7	578.33	571.64	2.17	1.96	19.48	12.5	239.98	420.15	6.46	4.12	6.69	6.69
Richland/McKenzie County	D14	RM 24.24	38801	50-yr	3403.7	578.23	571.58	2.14	1.86	19.09	12.6	237.24	432.55	6.45	4.24	6.65	6.65
Richland/McKenzie County	D14	RM 24.05	38506	50-yr	3403.7	578.17	571.48	1.97	1.82	16.19	10.41	264.93	455.28	6.44	4.12	6.69	6.69
Richland/McKenzie County	D14	RM 23.87	38210	50-yr	3403.7	578.17	571.28	1.51	1.4	9.33	5.82	334.4	585.31	6.69	4.16	6.89	6.89
Richland/McKenzie County	D14	RM 23.66	37912	50-yr	3403.7	578.16	571.21	1.22	1.14	6.25	4.08	442.5	739.76	6.23	4.05	6.95	6.95
Richland/McKenzie County	D14	RM 23.48	37610	50-yr	3403.7	578.13	571.12	1.27	1.13	7.22	4.47	347.97	901.43	5.41	3.35	7.01	7.01
Richland/McKenzie County	D14	RM 23.29	37312	50-yr	3403.7	578.08	570.86	1.39	1.12	8.76	4.57	313.75	1142.11	5.31	2.75	7.22	7.22
Richland/McKenzie County	D14	RM 23.1	37006	50-yr	3403.7	578.04	570.82	1.4	1.01	8.76	3.95	254.67	2132.86	6.1	2.72	7.22	7.22
Richland/McKenzie County	D14	RM 22.92	36721	50-yr	3403.7	578	570.8	1.45	0.98	9.05	3.86	214.08	2199.32	6.04	2.53	7.2	7.2
Richland/McKenzie County	D14	RM 22.72	36402	50-yr	3403.7	577.92	570.81	1.78	1.07	12.98	4.76	178.19	2068.3	6.72	2.42	7.11	7.11
Richland/McKenzie County	D14	RM 22.54	36108	50-yr	3403.7	577.86	570.76	1.62	1.07	11.05	4.52	276.8	1908.66	6.53	2.65	7.1	7.1
Richland/McKenzie County	D14	RM 22.35	35808	50-yr	3403.7	577.81	570.74	1.54	1.09	9.85	3.8	308.52	1808.88	6.33	2.42	7.07	7.07
Richland/McKenzie County	D14	RM 22.17	35508	50-yr	3403.7	577.76	570.68	1.52	1.1	9.43	3.66	303.06	1520.46	6.89	2.65	7.08	7.08
Richland/McKenzie County	D14	RM 22.02	35264	50-yr	3403.7	577.75	570.68	1.33	1.07	7.12	3.57	354.21	1192.89	6.96	3.45	7.07	7.07
Richland/McKenzie County	D14	RM 21.8	34901	50-yr	3403.7	577.69	570.69	1.42	1.18	8.75	4.9	401.53	909.04	5.71	3.17	7	7
Richland/McKenzie County	D14	RM 21.61	34626	50-yr	3403.7	577.65	570.67	1.38	1.22	8.57	4.83	468.94	970.15	5.14	2.88	6.98	6.98
Richland/McKenzie County	D14	RM 21.34	34140	50-yr	3403.7	577.62	570.67	1.18	0.92	5.83	2.9	289.68	1191.01	6.28	3.1	6.95	6.95
Richland/McKenzie County	D14	RM 21.25	33973	50-yr	3403.7	577.59	570.67	1.41	1	8.54	4.04	204.54	1264.38	5.77	2.69	6.92	6.92
Richland/McKenzie County	D14	RM 21.06	33672	50-yr	3403.7	577.58	570.6	1.19	0.88	6.1	3.02	267.5	1342.5	5.89	2.89	6.98	6.98
Richland/McKenzie County	D14	RM 20.9	33400	50-yr	3403.7	577.55	570.58	1.25	0.93	6.85	3.83	251.38	1223.54	5.41	2.99	6.97	6.97
Richland/McKenzie County	D14	RM 20.71	33101	50-yr	3403.7	577.49	570.53	1.52	1	10.07	4.87	247.47	1259.28	5.65	2.71	6.96	6.96
Richland/McKenzie County	D14	RM 20.52	32800	50-yr	3403.7	577.46	570.52	1.38	0.92	8.13	3.64	280.27	1376.48	6.06	2.69	6.94	6.94
Richland/McKenzie County	D14	RM 20.34	32500	50-yr	3403.7	577.43	570.52	1.42	0.96	8.51	3.72	256.92	1339.14	6.15	2.66	6.9	6.9
Richland/McKenzie County	D14	RM 20.15	32200	50-yr	3403.7	577.37	570.52	1.55	1.01	11.77	4.69	231.21	1350.3	6.31	2.48	6.85	6.85
Richland/McKenzie County	D14	RM 19.96	31900	50-yr	3403.7	577.14	570.52	2.36	1.31	23.26	7.26	189.46	1346.88	6.32	1.93	6.62	6.62
Richland/McKenzie County	D14	RM 19.77	31600	50-yr	3403.7	577.17	570.5	1.47	0.98	9.03	3.75	332.93	1523.76	6.14	2.53	6.67	6.67
Richland/McKenzie County	D14	RM 19.59	31297	50-yr	3403.7	577.14	570.45	1.38	0.88	8.2	3.57	334.34	1733.52	5.85	2.53	6.69	6.69
Richland/McKenzie County	D14	RM 19.4	30995	50-yr	3403.7	577.08	570.45	1.51	0.86	9.89	4.48	284.81	1768.84	5.65	2.53	6.63	6.63
Richland/McKenzie County	D14	RM 19.21	30710	50-yr	3403.7	577.08	570.38	1.11	0.71	5.17	2.53	380.6	1765.96	6.26	3.05	6.7	6.7
Richland/McKenzie County	D14	RM 19.03	30402	50-yr	3403.7	577.05	570.38	1.12	0.74	5.26	2.52	428.38	1996.99	5.62	2.67	6.67	6.67

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 18.83	30086	50-yr	3403.7	577.02	570.38	1.08	0.72	5.01	2.99	505.09	2493.61	4.71	2.79	6.64	6.64
Richland/McKenzie County	D14	RM 18.66	29802	50-yr	3403.7	576.99	570.38	1.13	0.73	5.83	3.47	455.27	2937.69	4.71	2.77	6.61	6.61
Richland/McKenzie County	D14	RM 18.47	29499	50-yr	3403.7	576.92	570.36	1.47	0.93	9.69	4.72	299.05	5091.91	5.22	2.5	6.56	6.56
Richland/McKenzie County	D14	RM 18.28	29197	50-yr	3403.7	576.82	570.36	1.66	1.13	12	4.37	299.23	5022.35	5.9	2.13	6.46	6.46
Richland/McKenzie County	D14	RM 17.89	28624	50-yr	3403.7	576.81	570.33	1.04	0.83	4.47	2.13	468.41	4088.99	6.35	3.01	6.48	6.48
Richland/McKenzie County	D14	RM 17.56	27975	50-yr	3403.7	576.69	570.29	1.4	1.18	8.56	4.22	460.6	3241.15	5.04	2.47	6.4	6.4
Richland/McKenzie County	D14	RM 17.36	27539	50-yr	3403.7	576.4	570.31	2.27	2.01	22.09	9.41	254.84	2151.81	5.8	2.45	6.09	6.09
Richland/McKenzie County	D14	RM 17.1	27113	50-yr	3403.7	576.31	570.28	1.93	1.71	15.93	8.21	298.39	2014.47	5.8	2.98	6.03	6.03
Richland/McKenzie County	D14	RM 16.74	26537	50-yr	3403.7	576.26	570.14	1.38	1.2	8.1	4.91	406.85	2381.31	5.78	3.5	6.12	6.12
Richland/McKenzie County	D14	RM 16.35	25925	50-yr	3403.7	576.19	569.46	1.34	1.01	7.45	3.55	346.21	2812.89	6.52	3.09	6.73	6.73
Richland/McKenzie County	D14	RM 16.17	25629	50-yr	3403.7	576.17	569.2	1.25	0.92	6.76	3.82	377.41	2399.14	6.49	3.64	6.97	6.97
Richland/McKenzie County	D14	RM 15.95	25324	50-yr	3403.7	576.16	568.99	1.01	0.84	4.12	2.33	457.34	2393.73	6.97	3.92	7.17	7.17
Richland/McKenzie County	D14	RM 15.75	25032	50-yr	3403.7	576.13	568.85	1.1	1	5.05	2.86	462.46	2316.86	6.4	3.6	7.28	7.28
Richland/McKenzie County	D14	RM 15.56	24777	50-yr	3403.7	575.98	568.85	1.79	1.72	13.18	6.37	291.53	1793.45	6.5	3.12	7.13	7.13
Richland/McKenzie County	D14	RM 15.34	24438	50-yr	3403.7	575.9	568.79	1.86	1.64	14.02	5.94	261.89	1831.32	6.87	2.88	7.11	7.11
Richland/McKenzie County	D14	RM 15.16	24144	50-yr	3403.7	575.85	568.75	1.81	1.58	13.4	6.54	267.44	1306.44	6.85	3.31	7.1	7.1
Richland/McKenzie County	D14	RM 14.98	23841	50-yr	3403.7	575.77	568.76	1.9	1.59	16.49	7.51	254.68	1285.82	6.76	3.05	7.01	7.01
Richland/McKenzie County	D14	RM 14.79	23543	50-yr	3403.7	575.7	568.72	1.83	1.56	13.93	7.43	286.41	1414.91	6.19	3.26	6.98	6.98
Richland/McKenzie County	D14	RM 14.61	23241	50-yr	3403.7	575.65	568.7	1.76	1.51	12.73	7.7	274.36	971.98	6.67	4.01	6.95	6.95
Richland/McKenzie County	D14	RM 14.42	22940	50-yr	3403.7	575.63	568.69	1.47	1.32	8.88	6.35	328.42	914.51	6.74	4.8	6.94	6.94
Richland/McKenzie County	D14	RM 14.23	22647	50-yr	3403.7	575.63	568.67	1.13	1.02	5.26	3.87	444.61	1183.45	6.59	4.83	6.96	6.96
Richland/McKenzie County	D14	RM 14.05	22341	50-yr	3403.7	575.62	568.68	0.96	0.89	5.4	4.43	601.92	914.26	5.76	4.72	6.94	6.94
Richland/McKenzie County	D14	RM 13.88	22040	50-yr	3403.7	575.58	568.67	1.03	0.97	5.41	4.45	682.22	901.37	4.75	3.9	6.91	6.91
Richland/McKenzie County	D14	RM 13.7	21728	50-yr	3403.7	575.49	568.65	1.33	1.32	7.76	7.4	502.19	528.44	5.1	4.87	6.84	6.84
Richland/McKenzie County	D14	RM 13.51	21429	50-yr	3403.7	575.44	568.63	1.37	1.33	7.86	7.29	409.72	456.89	6.03	5.58	6.81	6.81
Richland/McKenzie County	D15	RM 13.31	21145	50-yr	3403.7	575.42	568.51	1.23	1.22	6.41	6.18	457.14	486.16	6.05	5.84	6.91	6.91
Richland/McKenzie County	D15	RM 13.12	20858	50-yr	3403.7	575.35	568.39	1.49	1.48	9.06	8.5	344.8	375.65	6.64	6.24	6.96	6.96
Richland/McKenzie County	D15	RM 12.9	20507	50-yr	3403.7	575.25	568.39	1.71	1.69	12.08	9.53	303.98	391.57	6.54	5.15	6.86	6.86
Richland/McKenzie County	D15	RM 12.73	20241	50-yr	3403.7	575.2	568.35	1.72	1.7	12.17	9.2	297.97	401.39	6.63	5	6.85	6.85
Richland/McKenzie County	D15	RM 12.56	19961	50-yr	3403.7	575.18	568.34	1.5	1.44	9.29	6.92	337.44	476.52	6.67	4.96	6.84	6.84
Richland/McKenzie County	D15	RM 12.38	19686	50-yr	3403.7	575.17	568.23	1.22	1.16	6.11	4.74	425.75	604.05	6.53	5.04	6.94	6.94
Richland/McKenzie County	D15	RM 12.21	19384	50-yr	3403.7	575.14	568.17	1.22	1.11	6.44	5.41	513.36	754.74	5.29	4.45	6.97	6.97
Richland/McKenzie County	D15	RM 11.99	19084	50-yr	3403.7	575.11	568.16	1.14	1.03	5.87	4.56	592.13	862.17	4.93	3.82	6.95	6.95
Richland/McKenzie County	D15	RM 11.53	18484	50-yr	3403.7	575.04	568.11	1.15	0.98	4.71	3.93	693.79	1076.32	3.88	3.23	6.93	6.93
Richland/McKenzie County	D15	RM 11.34	18216	50-yr	3403.7	574.99	568.06	1.04	0.98	18.12	15.83	710.89	1013.24	3.93	3.43	6.93	6.93
Richland/McKenzie County	D15	RM 11.17	17885	50-yr	3403.7	574.76	567.88	1.24	1.19	26.5	25.25	777.3	891.5	3.36	3.2	6.88	6.88
Richland/McKenzie County	D15	RM 10.97	17584	50-yr	3403.7	574.68	567.8	1.17	1.12	5.05	4.81	780.34	880.25	3.62	3.45	6.88	6.88
Richland/McKenzie County	D15	RM 10.75	17284	50-yr	3403.7	574.65	567.79	1.08	1.02	4.43	3.98	717.39	858.52	4.34	3.9	6.86	6.86
Richland/McKenzie County	D15	RM 10.53	16964	50-yr	3403.7	574.59	567.73	1.24	1.15	5.94	4.97	641.5	847.39	4.2	3.5	6.86	6.86
Richland/McKenzie County	D15	RM 10.35	16670	50-yr	3403.7	574.54	567.73	1.33	1.14	7.8	5.39	517.24	918.61	4.74	3.26	6.81	6.81
Richland/McKenzie County	D15	RM 10.15	16384	50-yr	3403.7	574.5	567.73	1.4	1	8.07	3.98	251.85	1077.31	6.47	3.16	6.77	6.77
Richland/McKenzie County	D15	RM 9.94	16084	50-yr	3403.7	574.49	567.73	1.1	0.88	5.08	2.7	272.39	1167.4	6.28	3.32	6.76	6.76
Richland/McKenzie County	D15	RM 9.76	15797	50-yr	3403.7	574.44	567.65	1.24	0.93	6.37	3.53	352.04	1158.96	5.89	3.25	6.79	6.79
Richland/McKenzie County	D15	RM 9.57	15487	50-yr	3403.7	574.38	567.58	1.45	1.03	8.64	4.88	245.67	957.28	6.58	3.69	6.8	6.8
Richland/McKenzie County	D15	RM 9.37	15187	50-yr	3403.7	574.3	567.58	1.7	1.26	11.96	8.15	203.96	611.68	6.51	4.41	6.72	6.72
Richland/McKenzie County	D15	RM 9.24	14963	50-yr	3403.7	574.09	564.5	2.13	2.05	18.67	16.22	234.33	283.56	6.75	5.87	9.59	9.59
Richland/McKenzie County	D15	RR/Walkway	14952	50-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	50-yr	3403.7	574.04	564.5	2.15	2.06	18.95	16.39	234.33	285.78	6.7	5.79	9.54	9.54
Richland/McKenzie County	D15	RM 9.1	14741	50-yr	3403.7	573.88	567.39	2.43	2.25	25.7	18.22	231.83	360.21	5.95	4.21	6.49	6.49
Richland/McKenzie County	D15	RM 9.03	14639	50-yr	3403.7	573.87	565.46	2.19	2.05	20.07	13.53	248.61	397.11	6.2	4.18	8.41	8.41
Richland/McKenzie County	D15	Highway 68	14629	50-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	50-yr	3403.7	573.83	565.46	2.2	2.07	20.39	13.71	248.61	396.83	6.16	4.14	8.37	8.37
Richland/McKenzie County	D15	RM 8.82	14300	50-yr	3403.7	573.83	567.41	1.46	1.35	9.13	6.4	381.12	976.1	5.95	4.16	6.42	6.42
Richland/McKenzie County	D15	RM 8.61	13963	50-yr	3403.7	573.77	567.39	1.58	1.26	10.65	6.3	313.8	998.2	5.86	3.45	6.38	6.38
Richland/McKenzie County	D15	RM 8.44	13687	50-yr	3403.7	573.7	567.32	1.72	1.23	12.42	6.67	258.5	1031.91	6.13	3.27	6.38	6.38
Richland/McKenzie County	D15	RM 8.24	13387	50-yr	3403.7	573.62	567.32	1.81	1.2	13.85	7.8	229.73	828.85	6.15	3.42	6.3	6.3
Richland/McKenzie County	D15	RM 8.05	13080	50-yr	3403.7	573.56	567.05	1.72	1.25	12.4	7.13	266.23	759.64	6.26	3.58	6.51	6.51
Richland/McKenzie County	D15	RM 7.87	12786	50-yr	3403.7	573.45	567.05	1.93	1.41	15.76	9.5	229.92	767.07	6.16	3.69	6.4	6.4
Richland/McKenzie County	D15	RM 7.69	12506	50-yr	3403.7	573.4	567.05	1.78	1.43	13.34	9.27	266.56	561.74	6.13	4.25	6.35	6.35
Richland/McKenzie County	D15	RM 7.48	12179	50-yr	3403.7	573.36	566.95	1.5	1.5	9.43	9.21	361.54	371.41	6.26	6.13	6.41	6.41
Richland/McKenzie County	D16	RM 7.3	11891	50-yr	3403.7	573.28	566.76	1.68	1.68	11.83	11.74	337.01	339.74	6.01	5.97	6.52	6.52

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 7.14	11639	50-yr	3403.7	573.22	566.76	1.72	1.64	12.77	11.28	324.06	416.27	5.64	5	6.46	6.46
Richland/McKenzie County	D16	RM 6.94	11319	50-yr	3403.7	573.17	566.76	1.66	1.43	11.61	8.31	297.15	537.34	6.21	4.43	6.41	6.41
Richland/McKenzie County	D16	RM 6.77	11043	50-yr	3403.7	573.14	566.76	1.44	1.21	8.82	6.19	349.25	681.66	5.91	4.14	6.38	6.38
Richland/McKenzie County	D16	RM 6.58	10733	50-yr	3403.7	573.11	566.59	1.35	1.07	7.74	4.8	342.3	843.04	6.14	3.78	6.52	6.52
Richland/McKenzie County	D16	RM 6.38	10417	50-yr	3403.7	572.99	566.59	1.94	1.18	15.88	6.51	182.43	1279.89	6.17	2.49	6.4	6.4
Richland/McKenzie County	D16	RM 6.21	10138	50-yr	3403.7	572.94	566.44	1.77	1.02	13.16	5.19	217.11	1379.69	6.23	2.43	6.5	6.5
Richland/McKenzie County	D16	RM 6.01	9825	50-yr	3403.7	572.93	566.17	1.22	0.86	6.32	3.09	412.46	1427.36	5.96	2.89	6.76	6.76
Richland/McKenzie County	D16	RM 5.83	9551	50-yr	3403.7	572.92	565.96	1.02	0.75	4.32	2.24	480.72	1576.15	6.26	3.22	6.96	6.96
Richland/McKenzie County	D16	RM 5.67	9297	50-yr	3403.7	572.89	565.96	1.19	0.82	6	3.33	342.28	1481.3	6.14	3.36	6.93	6.93
Richland/McKenzie County	D16	RM 5.43	8926	50-yr	3403.7	572.81	565.96	1.53	1.09	10.19	5.55	269.67	1585.05	5.53	2.97	6.85	6.85
Richland/McKenzie County	D16	RM 5.25	8623	50-yr	3403.7	572.56	565.96	2.3	1.55	22.1	9.82	206.77	1048.76	6.33	2.78	6.6	6.6
Richland/McKenzie County	D16	RM 5.06	8331	50-yr	3403.7	572.56	565.82	1.71	1.35	12.19	7.64	289.25	1064.27	6.29	3.92	6.74	6.74
Richland/McKenzie County	D16	RM 4.87	8029	50-yr	3403.7	572.55	565.67	1.37	1.21	8.04	5.04	335.83	1206.74	5.99	3.73	6.88	6.88
Richland/McKenzie County	D16	RM 4.71	7757	50-yr	3403.7	572.49	565.54	1.58	1.26	10.38	6.81	253.72	940.88	6.52	4.24	6.95	6.95
Richland/McKenzie County	D16	RM 4.53	7456	50-yr	3403.7	572.36	565.54	2.02	1.4	16.8	8.68	199	725.18	6.57	3.34	6.82	6.82
Richland/McKenzie County	D16	RM 4.34	7156	50-yr	3403.7	572.3	565.54	1.84	1.37	16.55	10.01	217.16	674.25	6.42	3.83	6.76	6.76
Richland/McKenzie County	D16	RM 4.17	6884	50-yr	3403.7	572.22	565.54	1.89	1.37	14.82	8.06	226.46	752.03	6.4	3.44	6.68	6.68
Richland/McKenzie County	D16	RM 3.96	6550	50-yr	3403.7	572.2	565.54	1.5	1.13	9.4	5.49	216.6	814.12	6.39	3.71	6.66	6.66
Richland/McKenzie County	D16	RM 3.78	6249	50-yr	3403.7	572.15	565.54	1.63	1.14	11.42	6.47	196.52	914.71	5.82	3.26	6.61	6.61
Richland/McKenzie County	D16	RM 3.55	5904	50-yr	3403.7	572.08	565.54	1.59	1.19	10.54	6.24	206.04	811.51	6.36	3.74	6.54	6.54
Richland/McKenzie County	D16	RM 3.38	5657	50-yr	3403.7	571.99	565.53	1.95	1.41	16.11	8.95	171.27	777.86	6.2	3.4	6.46	6.46
Richland/McKenzie County	D16	RM 3.2	5363	50-yr	3403.7	571.89	565.54	2.06	1.6	18.7	9.76	168.06	812	5.47	2.82	6.35	6.35
Richland/McKenzie County	D16	RM 3.01	5062	50-yr	3403.7	571.83	565.54	1.78	1.4	13.79	7.62	310	858.06	5.66	3.08	6.29	6.29
Richland/McKenzie County	D16	RM 2.82	4763	50-yr	3403.7	571.77	565.46	1.6	1.35	11.65	7.39	423.69	910.34	4.81	3.03	6.31	6.31

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	5% - 20yr	1008.08	1281.82	1278.12	2.7	2.28	38.57	20.21	110.15	378.97	3.14	1.63	3.7	3.7
Sweet Grass County	A1	RM 478.10	225378	5% - 20yr	1008.08	1281.34	1277.66	3.39	3.05	67.3	49.53	113.63	283.37	2.29	1.69	3.67	3.67
Sweet Grass County	A1	RM 478.00	224862	5% - 20yr	1008.08	1280.85	1277.97	3.27	3.05	65.61	54.49	137.18	303	1.98	1.64	2.88	2.88
Sweet Grass County	A1	RM 477.91	224362	5% - 20yr	1008.08	1280.27	1277.65	3.69	3.06	73.98	49.81	85.75	321.48	2.27	1.52	2.62	2.62
Sweet Grass County	A1	RM 477.81	223862	5% - 20yr	1008.08	1279.91	1276.96	3.14	2.71	43.61	34.04	126.86	290.84	1.88	1.46	2.95	2.95
Sweet Grass County	A1	RM 477.72	223354	5% - 20yr	1008.08	1279.54	1276.32	2.65	2.34	46.51	33.61	183.94	388.19	1.6	1.15	3.22	3.22
Sweet Grass County	A1	RM 477.63	222892	5% - 20yr	1008.08	1279.46	1275.76	1.59	1.48	15.5	11.48	251.71	605.34	2.01	1.49	3.7	3.7
Sweet Grass County	A1	RM 477.49	222220	5% - 20yr	1008.08	1279.27	1276.07	1.71	1.47	16.19	11.03	256.97	765.79	1.76	1.19	3.2	3.2
Sweet Grass County	A1	RM 477.40	221702	5% - 20yr	1008.08	1279.22	1275.47	1.29	0.97	9.43	5.86	242.4	862.4	2.5	1.54	3.75	3.75
Sweet Grass County	A1	RM 477.31	221259	5% - 20yr	1008.08	1278.76	1275.74	2.94	1.8	49.27	17.39	122.27	811.13	2.5	0.88	3.02	3.02
Sweet Grass County	A1	RM 477.21	220767	5% - 20yr	1008.08	1278.57	1275.28	2.64	1.7	38.26	13.07	126.43	812.94	2.76	0.94	3.29	3.29
Sweet Grass County	A1	RM 477.11	220252	5% - 20yr	1008.08	1278.25	1274.86	2.85	1.77	48.77	21.68	147.45	794.2	2.1	0.93	3.39	3.39
Sweet Grass County	A1	RM 477.04	219860	5% - 20yr	1008.08	1277.96	1275.13	2.94	1.75	50.88	22.16	131.95	781.44	2.24	0.97	2.82	2.82
Sweet Grass County	A1	RM 476.95	219422	5% - 20yr	1008.08	1277.44	1274.55	3.28	2.23	68.01	30.61	154.53	731.04	1.81	0.81	2.88	2.88
Sweet Grass County	A1	RM 476.84	218828	5% - 20yr	1008.08	1277.11	1273.95	2.67	1.99	42.68	21.01	134.66	612.77	2.17	1.06	3.16	3.16
Sweet Grass County	A1	RM 476.75	218345	5% - 20yr	1008.08	1276.83	1273.54	2.55	1.98	35.47	18.28	172.58	720.23	2.11	1.08	3.29	3.29
Sweet Grass County	A1	RM 476.66	217855	5% - 20yr	1008.08	1276.5	1273.45	2.76	1.93	41.71	19.04	160.17	859.08	2.07	0.94	3.04	3.04
Sweet Grass County	A1	RM 476.57	217396	5% - 20yr	1008.08	1276.1	1273.09	3.22	1.96	58.64	24.34	98.93	832.75	2.54	1.05	3.01	3.01
Sweet Grass County	A1	RM 476.47	216861	5% - 20yr	1008.08	1275.68	1273.04	3.14	2.31	58.96	29.78	126.17	588.23	2.13	1.08	2.64	2.64
Sweet Grass County	A1	RM 476.38	216362	5% - 20yr	1008.08	1275.48	1272.1	2.66	1.81	39.26	16.8	105.41	877.75	2.66	1.14	3.38	3.38
Sweet Grass County	A1	RM 476.28	215816	5% - 20yr	1008.08	1274.81	1271.85	3.61	3.19	76.02	47.49	100.31	325.05	2.32	1.44	2.95	2.95
Sweet Grass County	A1	RM 476.15	215126	5% - 20yr	1008.08	1274.27	1271.76	3.1	2.62	59.35	42.28	133.16	322.34	1.95	1.39	2.5	2.5
Sweet Grass County	A1	RM 476.01	214437	5% - 20yr	1008.08	1273.94	1270.96	2.47	2.3	35.2	26.4	142.26	333.07	2.39	1.78	2.98	2.98
Sweet Grass County	A1	RM 475.91	213787	5% - 20yr	1008.08	1273.5	1270.35	2.73	2.53	43.15	35.41	150.4	203.62	2.39	1.96	3.15	3.15
Sweet Grass County	A1	RM 475.76	213072	5% - 20yr	1008.08	1272.93	1270.22	3.05	2.59	55.23	35.26	146.41	308.91	2.17	1.39	2.72	2.72
Sweet Grass County	A1	RM 475.63	212347	5% - 20yr	1008.08	1272.69	1269.34	2.29	1.96	29.95	21.86	173.18	288.44	2.45	1.78	3.35	3.35
Sweet Grass County	A1	RM 475.47	211539	5% - 20yr	1008.08	1272.18	1268.97	2.82	2.59	43.89	37.08	128.96	169.33	2.71	2.3	3.21	3.21
Sweet Grass County	A1	RM 475.35	210875	5% - 20yr	1008.08	1271.51	1268.88	3.47	3.34	69.24	49	119.83	176.94	2.42	1.7	2.62	2.62
Sweet Grass County	A1	RM 475.24	210333	5% - 20yr	1008.08	1271.52	1267.53	2.31	2.07	27	17.27	118.16	313.31	3.59	2.28	3.99	3.99
Sweet Grass County	A2	RM 475.12	209673	5% - 20yr	1008.08	1270.45	1267.9	4.32	3.96	114.27	89.36	113.07	185.9	2.01	1.57	2.55	2.55
Sweet Grass County	A2	RM 475.00	209034	5% - 20yr	1008.08	1269.87	1266.93	3.11	3.11	59.08	59.08	158.8	158.81	2.04	2.04	2.93	2.93
Sweet Grass County	A2	RM 474.87	208359	5% - 20yr	1008.08	1269.69	1266.75	2.35	2.13	30.34	24.18	80.33	239.39	2.82	2.2	2.94	2.94
Sweet Grass County	A2	RM 474.76	207797	5% - 20yr	1008.08	1269.13	1266.42	3.38	2.74	65.34	37.03	77.58	261.57	2.53	1.41	2.72	2.72
Sweet Grass County	A2	RM 474.67	207305	5% - 20yr	1008.08	1268.69	1266.29	3.42	2.88	68.8	47.85	66.54	232.34	2.33	1.58	2.39	2.39
Sweet Grass County	A2	RM 474.54	206635	5% - 20yr	1008.08	1268.4	1264.92	2.53	2.22	35.52	24.82	128.46	255.74	2.66	1.85	3.47	3.47
Sweet Grass County	A2	RM 474.43	205945	5% - 20yr	1008.08	1268.06	1265.16	2.76	2.16	42.36	17.09	89.64	432.84	2.71	1.08	2.9	2.9
Sweet Grass County	A2	RM 474.30	205321	5% - 20yr	1008.08	1267.81	1264.46	2.48	1.72	33.9	14.44	133.1	506.5	2.75	1.16	3.35	3.35
Sweet Grass County	A2	RM 474.21	204877	5% - 20yr	1008.08	1267.35	1264.22	3.26	2.27	58.53	19.71	103.2	487.23	2.76	0.92	3.13	3.13
Sweet Grass County	A2	RM 474.12	204378	5% - 20yr	1008.08	1267.24	1263.24	2.51	1.69	35.25	15.49	140.42	568.11	2.6	1.13	3.99	3.99
Sweet Grass County	A2	RM 474.01	203787	5% - 20yr	1008.08	1266.71	1263.55	3.12	2.3	57.96	26.45	138.78	442.16	2.19	0.99	3.16	3.16
Sweet Grass County	A2	RM 473.87	203072	5% - 20yr	1008.08	1266.25	1263.52	3.04	2.25	51.29	17.29	100.4	723.11	2.4	0.8	2.73	2.73
Sweet Grass County	A2	RM 473.74	202395	5% - 20yr	1008.08	1265.97	1263.06	2.49	1.83	35.53	14.33	121.09	730.39	2.45	0.99	2.91	2.91
Sweet Grass County	A2	RM 473.62	201781	5% - 20yr	1008.08	1265.53	1262.63	2.82	1.99	47.91	18.55	150.66	663.01	2.08	0.8	2.9	2.9
Sweet Grass County	A2	RM 473.50	201110	5% - 20yr	1008.08	1265.16	1261.83	2.49	2.06	37.15	17.58	179.13	508.05	2.14	1	3.33	3.33
Sweet Grass County	A2	RM 473.36	200362	5% - 20yr	1008.08	1264.89	1261.08	2.38	2	29.97	12.04	133.21	447.89	3.07	1.22	3.81	3.81
Sweet Grass County	A2	RM 473.27	199862	5% - 20yr	1008.08	1264.53	1260.81	2.94	2.49	47.33	20.48	117.77	366.45	2.78	1.19	3.73	3.73
Sweet Grass County	A2	RM 473.17	199362	5% - 20yr	1008.08	1264.33	1260.56	2.8	2.57	40.19	17.45	102.94	265.42	3.43	1.48	3.77	3.77
Sweet Grass County	A2	RM 473.08	198879	5% - 20yr	1008.08	1263.88	1260.56	3.4	3.13	63.03	35.47	103.8	203.75	2.82	1.58	3.32	3.32
Sweet Grass County	A2	RM 472.98	198340	5% - 20yr	1008.08	1263.7	1260.21	2.84	2.56	43.6	24.08	120.55	248.79	2.88	1.59	3.5	3.5
Sweet Grass County	A2	RM 472.89	197862	5% - 20yr	1008.08	1263.2	1260.5	3.53	2.77	72.01	39.14	107.68	284.78	2.36	1.28	2.71	2.71
Sweet Grass County	A2	RM 472.79	197362	5% - 20yr	1008.08	1262.93	1259.98	2.91	2.42	49.23	25.83	136.27	342.05	2.32	1.22	2.94	2.94
Sweet Grass County	A2	RM 472.70	196862	5% - 20yr	1008.08	1262.36	1259.35	3.41	2.62	69.7	37.02	125.74	340.81	2.13	1.13	3.02	3.02
Sweet Grass County	A2	RM 472.60	196360	5% - 20yr	1008.08	1262.23	1259.01	2.3	1.93	32.25	20.69	181.89	401.57	2.03	1.3	3.22	3.22
Sweet Grass County	A2	RM 472.50	195816	5% - 20yr	1008.08	1261.9	1258.53	2.46	2.02	37.02	23.16	177.8	402.3	2.02	1.26	3.38	3.38
Sweet Grass County	A2	RM 472.41	195349	5% - 20yr	1008.08	1261.62	1258.52	2.45	2.08	37.16	26.68	196.56	357.13	1.94	1.39	3.1	3.1
Sweet Grass County	A2	RM 472.31	194860	5% - 20yr	1008.08	1261.41	1258.34	2.37	1.89	31.26	17.68	149.41	376.4	2.64	1.49	3.07	3.07
Sweet Grass County	A2	RM 472.22	194356	5% - 20yr	1008.08	1261.24	1257.3	2.44	1.79	29.38	12.34	115.58	439.25	3.12	1.28	3.94	3.94
Sweet Grass County	A2	RM 472.09	193660	5% - 20yr	1008.08	1260.38	1257.45	3.94	3.12	88.55	35.67	92.12	325.37	2.54	0.99	2.93	2.93
Sweet Grass County	A2	RM 471.95	192935	5% - 20yr	1008.08	1260.37	1256.05	2.4	1.64	29.18	11.99	103.53	425.76	3.58	1.44	4.32	4.32
Sweet Grass County	A2	RM 471.86	192442	5% - 20yr	1008.08	1259.82	1256.23	3.63	2.45	70.11	31.19	76.65	303.05	3.12	1.36	3.58	3.58
Sweet Grass County	A2	RM 471.75	191870	5% - 20yr	1008.08	1259.69	1256.47	2.57	1.93	36.57	18.6	134.52	383.19	2.68	1.37	3.23	3.23

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	5% - 20yr	1008.08	1258.95	1256.54	3.72	2.95	83.63	40.7	124.48	338.89	2.08	1.01	2.42	2.42
Sweet Grass County	A2	RM 471.52	190686	5% - 20yr	1008.08	1258.77	1255.75	2.52	1.79	35.58	14.68	127.76	519.17	2.65	1.08	3.02	3.02
Sweet Grass County	A2	RM 471.38	189910	5% - 20yr	1008.08	1258.02	1255.44	3.3	2.6	71.93	37.04	150.14	474.8	1.59	0.82	2.58	2.58
Sweet Grass County	A2	RM 471.28	189362	5% - 20yr	1008.08	1257.46	1254.65	2.5	2.14	43.65	31.58	228.65	514.65	1.34	0.97	2.81	2.81
Sweet Grass County	A2	RM 471.18	188875	5% - 20yr	1008.08	1257.08	1254.2	2.58	2.03	35.65	21.94	155.47	482.33	1.71	1.05	2.88	2.88
Sweet Grass County	A2	RM 471.06	188150	5% - 20yr	1008.08	1256.71	1253.95	2.3	1.57	33.38	18.19	140.6	653.06	1.81	0.98	2.76	2.76
Sweet Grass County	A2	RM 470.94	187526	5% - 20yr	1008.08	1256.29	1253.58	2.67	1.96	40.05	18.71	108.65	547.32	2.16	1	2.71	2.71
Sweet Grass County	A2	RM 470.84	186938	5% - 20yr	1008.08	1256	1252.88	2.42	1.78	36.25	21.15	157.2	566.75	1.92	1.12	3.11	3.11
Sweet Grass County	A2	RM 470.73	186362	5% - 20yr	1008.08	1255.82	1253.49	1.75	1.61	19.77	15.02	189.13	525.3	1.69	1.28	2.75	2.75
Sweet Grass County	A2	RM 470.65	185977	5% - 20yr	1008.08	1255.56	1252.18	2.2	1.86	28.76	15.59	202.9	598.71	2.17	1.17	3.38	3.38
Sweet Grass County	A2	RM 470.56	185491	5% - 20yr	1008.08	1255.4	1252.52	2.09	1.69	25.63	14.25	189.32	636.31	2.29	1.26	2.88	2.88
Sweet Grass County	A2	RM 470.44	184875	5% - 20yr	1008.08	1255.28	1251.39	1.83	1.43	17.65	9.7	158.35	408.67	3.17	1.72	3.9	3.9
Sweet Grass County	A2	RM 470.35	184363	5% - 20yr	1008.08	1254.33	1251.52	4.09	3.67	100.52	56.73	113.84	229.87	2.12	1.2	2.81	2.81
Sweet Grass County	A2	RM 470.23	183828	5% - 20yr	1008.08	1254.1	1251.51	2.77	2.41	47.36	30.55	180.8	335.06	1.92	1.25	2.59	2.59
Sweet Grass County	A2	RM 470.13	183304	5% - 20yr	1008.08	1253.83	1249.86	2.45	2.17	36.32	28.16	162.28	287.12	2.1	1.62	3.97	3.97
Sweet Grass County	A2	RM 470.05	182914	5% - 20yr	1008.08	1253.71	1250.59	2.1	1.88	26.25	20.68	175.23	315.92	2.15	1.7	3.11	3.11
Sweet Grass County	A2	RM 469.93	182267	5% - 20yr	1008.08	1252.96	1249.62	3.44	3.07	67.45	37.09	105.63	238.75	2.51	1.37	3.34	3.34
Sweet Grass County	A2	RM 469.85	181860	5% - 20yr	1008.08	1252.68	1249.59	3.34	2.59	61.79	25.94	96.24	349.83	2.71	1.13	3.09	3.09
Sweet Grass County	A2	RM 469.75	181348	5% - 20yr	1008.08	1252.67	1248.77	2.22	1.7	26.2	12.08	116.21	418.86	3.11	1.42	3.9	3.9
Sweet Grass County	A2	RM 469.68	180952	5% - 20yr	1008.08	1252.47	1249.31	2.46	1.82	33.31	16.23	135.73	458.88	2.75	1.33	3.15	3.15
Sweet Grass County	A2	RM 469.58	180427	5% - 20yr	1008.08	1252.43	1247.94	1.9	1.5	17.97	10.86	130.56	396.02	3.73	2.24	4.48	4.48
Sweet Grass County	A2	RM 469.47	179860	5% - 20yr	1008.08	1251.97	1247.85	2.94	2.63	41.95	36.78	89.8	347.5	3.59	3.14	4.12	4.12
Sweet Grass County			179808	5% - 20yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	5% - 20yr	1008.08	1251.94	1247.84	2.65	2.63	36	34.54	112.89	347.17	3.37	3.24	4.09	4.09
Sweet Grass County	A2	RM 469.39	179400	5% - 20yr	1008.08	1251.5	1248.45	3.38	3.12	65.11	51.29	118.53	304.76	2.47	1.94	3.05	3.05
Sweet Grass County	A2	RM 469.30	178975	5% - 20yr	1008.08	1251.49	1247.55	2.53	2.09	32.75	19.6	106.16	324.12	3.48	2.05	3.94	3.94
Sweet Grass County	A2	RM 469.21	178467	5% - 20yr	1008.08	1250.8	1248.31	3.83	3.09	86.55	44.77	107.18	350.74	2.22	1.14	2.49	2.49
Sweet Grass County	A2	RM 469.09	177862	5% - 20yr	1008.08	1250.58	1247.12	2.22	1.69	28.37	16.73	118.23	497.35	2.39	1.4	3.46	3.46
Sweet Grass County	A2	RM 469.00	177350	5% - 20yr	1008.08	1249.97	1247.58	3.55	2.47	76.99	32.35	89.39	489.33	2.03	0.84	2.39	2.39
Sweet Grass County	A2	RM 468.90	176865	5% - 20yr	1008.08	1249.55	1246.48	2.42	1.93	30.38	15.8	157.69	492.7	2.07	1.07	3.08	3.08
Sweet Grass County	A2	RM 468.80	176341	5% - 20yr	1008.08	1249.27	1246.11	2.56	2.02	38.7	18.86	136.31	469.67	2.25	1.09	3.16	3.16
Sweet Grass County	A2	RM 468.71	175823	5% - 20yr	1008.08	1248.9	1246.41	2.72	2.32	47.36	29.19	146.67	469.34	1.75	1.08	2.49	2.49
Sweet Grass County	A2	RM 468.57	175192	5% - 20yr	1008.08	1248.72	1245.17	1.87	1.55	20.54	11.51	178.26	719.29	2.28	1.26	3.55	3.55
Sweet Grass County	A2	RM 468.42	174099	5% - 20yr	1008.08	1248.04	1244.97	2.76	2.3	46.21	29	168.48	468.74	2.04	1.28	3.07	3.07
Sweet Grass County	A3	RM 468.25	173324	5% - 20yr	1008.08	1247.88	1242.97	2.08	1.52	22.19	9.8	129.09	558.66	3.45	1.51	4.91	4.91
Sweet Grass County	A3	RM 468.16	172855	5% - 20yr	1008.08	1247.7	1243.58	2.44	1.71	32.13	15.84	119.05	574.54	2.92	1.43	4.12	4.12
Sweet Grass County	A3	RM 468.07	172364	5% - 20yr	1008.08	1247.66	1243.89	1.88	1.4	19.09	10.31	136.65	658.02	2.92	1.57	3.77	3.77
Sweet Grass County	A3	RM 467.97	171839	5% - 20yr	1008.08	1246.79	1244.32	4.22	3.2	109.98	54.58	92.44	455.21	1.97	0.96	2.47	2.47
Sweet Grass County	A3	RM 467.87	171312	5% - 20yr	1008.08	1246.64	1243.46	2.41	2.15	33.62	21.69	159.56	490.89	2.34	1.51	3.17	3.17
Sweet Grass County	A3	RM 467.78	170840	5% - 20yr	1008.08	1246.13	1243.74	3.29	2.81	65.9	39.27	100.58	297.61	2.03	1.21	2.39	2.39
Sweet Grass County	A3	RM 467.69	170376	5% - 20yr	1008.08	1245.86	1242.96	2.73	2.3	44.09	25.01	115.51	364.9	2.24	1.26	2.9	2.9
Sweet Grass County	A3	RM 467.55	169614	5% - 20yr	1008.08	1245.47	1242.1	2.32	2	33.24	22.78	133.88	396.46	1.95	1.33	3.37	3.37
Sweet Grass County	A3	RM 467.41	168870	5% - 20yr	1008.08	1245.29	1241.15	1.96	1.35	20.41	8.9	133.26	648.41	3.06	1.32	4.14	4.14
Sweet Grass County	A3	RM 467.30	168362	5% - 20yr	1008.08	1244.67	1242.15	3.67	2.33	78.22	25.64	90.58	581.31	2.37	0.77	2.52	2.52
Sweet Grass County	A3	RM 467.16	167641	5% - 20yr	1008.08	1244.34	1240.78	2.1	1.41	25.17	9.49	159.04	825.03	2.49	0.93	3.56	3.56
Sweet Grass County	A3	RM 467.00	166780	5% - 20yr	1008.08	1243.84	1240.48	2.73	1.78	44.57	16.44	141.03	793.5	2.17	0.79	3.37	3.37
Sweet Grass County	A3	RM 466.83	165902	5% - 20yr	1008.08	1243.39	1239.84	2.69	1.68	39.88	14.5	111.13	630.69	2.76	0.99	3.54	3.54
Sweet Grass County	A3	RM 466.73	165364	5% - 20yr	1008.08	1243.1	1239.81	2.76	1.86	42.25	14.82	115.43	579.43	2.72	0.95	3.29	3.29
Sweet Grass County	A3	RM 466.64	164858	5% - 20yr	1008.08	1242.59	1239.36	3.47	2.44	61.43	21.28	100.5	551.22	2.42	0.83	3.23	3.23
Sweet Grass County	A3	RM 466.49	164108	5% - 20yr	1008.08	1242.21	1239.67	2.81	1.77	46.13	21.38	107.44	634.43	2.3	1.07	2.54	2.54
Sweet Grass County	A3	RM 466.25	162845	5% - 20yr	1008.08	1240.96	1238.71	3.61	2.76	77.78	29.38	78.03	447.18	2.24	0.82	2.25	2.25
Sweet Grass County	A3	RM 465.79	160351	5% - 20yr	1008.08	1239.9	1236.48	2.21	1.2	27.53	10.66	110.96	834.8	2.67	1	3.42	3.42
Sweet Grass County	A3	RM 465.01	155919	5% - 20yr	1008.08	1237.7	1234.44	3.11	2.63	55.75	27.84	129.41	336.01	2.41	1.2	3.26	3.26
Sweet Grass County	A3	RM 464.68	154254	5% - 20yr	1008.08	1236.71	1233.35	2.6	2.16	40.28	20.03	171.57	458	2.15	1.07	3.37	3.37
Sweet Grass County	A3	RM 464.48	153160	5% - 20yr	1008.08	1236.17	1232.71	2.34	1.81	33.02	17.43	183.52	539.08	2.07	1.09	3.46	3.46
Sweet Grass County	A3	RM 464.33	152378	5% - 20yr	1008.08	1235.77	1232.61	2.34	1.76	32.94	16.39	183.37	542.22	2.13	1.05	3.16	3.16
Sweet Grass County	A3	RM 464.16	151621	5% - 20yr	1008.08	1235.36	1232.45	2.47	1.8	37.04	16.94	167.98	598.78	2.06	0.94	2.91	2.91
Sweet Grass County	A3	RM 464.04	150961	5% - 20yr	1008.08	1235.14	1231.48	2.31	1.52	28.09	12.56	118.42	524.47	3.16	1.4	3.66	3.66
Sweet Grass County	A3	RM 463.88	150174	5% - 20yr	1008.08	1234.46	1231.85	3.29	2.56	65.94	35.01	136.95	446.37	2.03	1.07	2.61	2.61
Sweet Grass County	A3	RM 463.78	149616	5% - 20yr	1008.08	1234.14	1230.54	2.73	2.2	43.76	29.38	149.53	430.34	2.29	1.53	3.6	3.6
Sweet Grass County	A3	RM 463.67	149069	5% - 20yr	1008.08	1233.81	1230.86	2.78	2	45.31	28.2	136.34	488.47	2.26	1.4	2.95	2.95

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	5% - 20yr	1008.08	1233.61	1230.39	2.56	1.81	36.77	22.17	135.08	850.18	2.6	1.57	3.22	3.22
Sweet Grass County	A3	RM 463.49	148111	5% - 20yr	1008.08	1232.83	1229.73	3.76	3.05	85.02	41.82	121.08	757.48	2.12	1.04	3.1	3.1
Sweet Grass County	A3	RM 463.34	147326	5% - 20yr	1008.08	1232.44	1229.72	2.48	1.81	38.24	21.49	179.31	1169.62	1.91	1.07	2.73	2.73
Sweet Grass County	A3	RM 463.20	146616	5% - 20yr	1008.08	1232.07	1228.95	2.36	1.57	34.85	18.69	122.74	1485.02	1.92	1.01	3.11	3.11
Sweet Grass County	A3	RM 463.06	145881	5% - 20yr	1008.08	1231.82	1228.89	1.82	1.03	20.48	12	147.76	1512.35	1.94	1.13	2.92	2.92
Sweet Grass County	A4	RM 462.79	144435	5% - 20yr	1008.08	1231.67	1228.25	1.21	0.65	8.12	5.22	133.61	1422.05	2.71	1.71	3.42	3.42
Sweet Grass County	A4	RM 462.16	141146	5% - 20yr	1008.08	1229.32	1226.15	3.25	2.2	62.66	26.98	108.49	566.07	2.23	0.94	3.16	3.16
Sweet Grass County		RM 461.97	140135	5% - 20yr	1008.08	1228.79	1226.06	2.44	1.48	36.4	20.21	120.82	732.09	1.99	1.1	2.73	2.73
Sweet Grass County	A4	RM 461.71	138705	5% - 20yr	1008.08	1227.23	1224.75	3.72	3.11	90.04	59.68	100.51	340.53	1.68	1.11	2.48	2.48
Sweet Grass County	A4	RM 461.52	137683	5% - 20yr	1008.08	1226.79	1222.31	2.29	1.73	26.77	10.7	84.94	529.8	3.64	1.4	4.48	4.48
Sweet Grass County	A4	RM 461.33	136718	5% - 20yr	1008.08	1226.56	1223.38	2.04	1.55	24.26	13.82	125.5	690	2.34	1.33	3.18	3.18
Sweet Grass County	A4	RM 461.14	135736	5% - 20yr	1008.08	1225.8	1222.44	3.1	2.29	54.13	20.34	116.96	480.4	2.6	0.96	3.36	3.36
Sweet Grass County	A4	RM 460.99	134951	5% - 20yr	1008.08	1225.35	1221.98	2.94	2.29	48.13	20.95	121.6	382.27	2.66	1.15	3.37	3.37
Sweet Grass County	A4	RM 460.85	134214	5% - 20yr	1008.08	1225.07	1222.07	2.51	1.93	34.08	18.16	147.93	446.15	2.49	1.32	3	3
Sweet Grass County	A4	RM 460.74	133616	5% - 20yr	1008.08	1225	1220.27	1.95	1.62	18.75	11.32	125.57	465.03	3.92	2.35	4.74	4.74
Sweet Grass County	A4	RM 460.63	133067	5% - 20yr	1008.08	1224.97	1218.9	1.66	1.57	12.03	8.52	106.45	549.42	5.66	3.95	6.08	6.08
Sweet Grass County			132957	5% - 20yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	5% - 20yr	1008.08	1224.19	1221.09	3.54	3.48	70.84	66.14	112.67	487.34	2.52	2.35	3.1	3.1
Sweet Grass County	A4	RM 460.50	132281	5% - 20yr	1008.08	1223.36	1221.12	3.85	3.81	95.12	72.47	150.72	376.93	1.73	1.32	2.24	2.24
Sweet Grass County	A4	RM 460.38	131785	5% - 20yr	1008.08	1223.14	1220.5	2.7	2.38	41.91	24.74	139.06	506.37	1.92	1.13	2.64	2.64
Sweet Grass County	A4	RM 460.29	131287	5% - 20yr	1008.08	1222.76	1219.97	2.75	2.56	46.37	28.24	134.92	379.03	1.98	1.2	2.79	2.79
Sweet Grass County	A4	RM 460.19	130793	5% - 20yr	1008.08	1222.54	1219.38	2.48	2.14	35.09	22.7	118.6	333.15	2.44	1.57	3.16	3.16
Sweet Grass County	A4	RM 460.08	130210	5% - 20yr	1008.08	1222.16	1218.23	2.71	2.58	40.03	24.3	132.3	234.24	2.8	1.7	3.93	3.93
Sweet Grass County	A4	RM 459.99	129763	5% - 20yr	1008.08	1221.83	1218.01	3.05	2.91	49.83	30.78	110.65	202.27	2.98	1.83	3.82	3.82
Sweet Grass County	A4	RM 459.90	129246	5% - 20yr	1008.08	1221.66	1217.62	2.76	2.59	39.15	26.59	106.75	246.97	3.39	2.29	4.05	4.05
Sweet Grass County	A4	RM 459.81	128792	5% - 20yr	1008.08	1220.96	1218.15	3.92	3.84	86.59	69.13	99.73	186.92	2.57	2.05	2.81	2.81
Sweet Grass County	A4	RM 459.72	128310	5% - 20yr	1101.53	1220.88	1217.31	2.92	2.49	46.47	26.96	127.21	310.23	2.84	1.64	3.56	3.56
Sweet Grass County	A4	RM 459.62	127798	5% - 20yr	1101.53	1220.62	1217.46	2.89	2.43	47.25	27.81	128.42	304.25	2.53	1.49	3.16	3.16
Sweet Grass County	A5	RM 459.53	127324	5% - 20yr	1101.53	1219.95	1217.26	3.53	3.51	76.37	68.36	156.05	175.68	2	1.79	2.69	2.69
Sweet Grass County	A5	RM 459.44	126881	5% - 20yr	1101.53	1219.73	1216.93	2.77	2.72	45.99	39.62	184.51	219.44	2.14	1.85	2.8	2.8
Sweet Grass County	A5	RM 459.31	126192	5% - 20yr	1101.53	1219.31	1215.66	2.77	2.64	43.48	35.55	153.23	333.38	2.57	2.1	3.65	3.65
Sweet Grass County	A5	RM 459.24	125848	5% - 20yr	1101.53	1219.01	1215.69	3.07	2.91	54.03	42.32	145.56	449.64	2.44	1.91	3.31	3.31
Sweet Grass County	A5	RM 459.16	125420	5% - 20yr	1101.53	1218.41	1215.82	3.58	3.58	79.03	78.8	158.86	189.64	1.94	1.93	2.59	2.59
Sweet Grass County	A5	RM 459.02	124624	5% - 20yr	1101.53	1218.11	1214.8	2.36	2.3	32.57	25.33	200.81	419.44	2.31	1.8	3.31	3.31
Sweet Grass County	A5	RM 458.79	123371	5% - 20yr	1101.53	1217.25	1214.02	2.99	2.95	51.29	38.37	150.24	211.22	2.44	1.83	3.23	3.23
Sweet Grass County	A5	RM 458.48	121727	5% - 20yr	1101.53	1216.17	1213.35	2.58	2.49	42.47	39.69	164.1	285.91	1.76	1.64	2.82	2.82
Sweet Grass County	A5	RM 458.36	121100	5% - 20yr	1101.53	1215.07	1212.73	3.99	3.6	100.04	73.56	114.9	226.14	1.84	1.35	2.34	2.34
Sweet Grass County	A5	RM 458.25	120543	5% - 20yr	1101.53	1214.92	1211.35	2.49	2.12	33.89	23.34	122.03	269.5	2.8	1.92	3.57	3.57
Sweet Grass County	A5	RM 458.13	119849	5% - 20yr	1101.53	1214.6	1211.21	2.57	2.31	37.25	29.2	130.9	235.61	2.6	2.03	3.39	3.39
Sweet Grass County	A5	RM 458.03	119256	5% - 20yr	1101.53	1214.43	1210.09	2.34	2.12	27.73	18.6	122.91	219.93	3.54	2.36	4.34	4.34
Sweet Grass County	A5	RM 457.87	118444	5% - 20yr	1101.53	1214.17	1209.57	2.51	2.45	30.24	25.74	104.9	126.47	4.18	3.55	4.6	4.6
Sweet Grass County	A5	RM 457.76	117858	5% - 20yr	1101.53	1213.94	1210.24	2.69	2.65	38.71	33.92	137.04	158.72	2.99	2.62	3.7	3.7
Sweet Grass County	A5	RM 457.66	117350	5% - 20yr	1101.53	1213.66	1210.03	2.87	2.81	44.62	38.12	132.62	159.05	2.89	2.46	3.63	3.63
Sweet Grass County	A5	RM 457.54	116694	5% - 20yr	1101.53	1213.27	1209.93	3.02	2.88	50.24	37.85	131.05	193.22	2.75	2.08	3.33	3.33
Sweet Grass County	A5	RM 457.35	115703	5% - 20yr	1101.53	1211.93	1209.69	4.03	4.03	103.9	103.9	154.97	154.97	1.76	1.76	2.24	2.24
Sweet Grass County	A5	RM 457.20	114921	5% - 20yr	1101.53	1211.72	1208.7	2.33	2.33	31.25	31.25	196.31	196.31	2.41	2.41	3.02	3.02
Sweet Grass County	A5	RM 457.02	113974	5% - 20yr	1101.53	1211.04	1208.04	3.21	2.72	57.81	31.25	103.04	291.95	2.58	1.39	2.99	2.99
Sweet Grass County	A5	RM 456.84	113009	5% - 20yr	1101.53	1210.59	1206.55	2.77	2.7	39.84	28.14	120.66	176.24	3.29	2.32	4.04	4.04
Sweet Grass County	A5	RM 456.68	112164	5% - 20yr	1101.53	1209.86	1206.59	3.55	3.52	69.48	61.48	113.81	129.92	2.73	2.41	3.27	3.27
Sweet Grass County	A5	RM 456.55	111455	5% - 20yr	1101.53	1209.57	1206.19	2.83	2.81	44.43	42.52	145.9	153.49	2.67	2.55	3.39	3.39
Sweet Grass County	A5	RM 456.43	110857	5% - 20yr	1101.53	1209.29	1205.33	2.87	2.8	42.33	30.25	110.87	160.39	3.45	2.45	3.96	3.96
Sweet Grass County	A6	RM 456.29	110121	5% - 20yr	1101.53	1208.82	1205.45	3.23	3.12	52.92	41.5	118.64	157.61	2.86	2.24	3.37	3.37
Sweet Grass County	A6	RM 456.18	109508	5% - 20yr	1101.53	1208.4	1205.45	3.26	3.24	61.15	57.21	139.71	151.48	2.41	2.26	2.94	2.94
Sweet Grass County	A6	RM 456.03	108721	5% - 20yr	1101.53	1207.88	1204.59	2.89	2.84	49.86	41.93	176.21	226.93	2.16	1.81	3.29	3.29
Sweet Grass County	A6	RM 455.84	107742	5% - 20yr	1101.53	1207.43	1204.05	2.47	2.46	32.79	28.44	183.51	290.65	2.43	2.11	3.38	3.38
Sweet Grass County	A6	RM 455.70	106976	5% - 20yr	1101.53	1207.16	1203.14	2.46	2.45	30.29	28.28	143.06	306.37	3.13	2.92	4.02	4.02
Sweet Grass County	A6	RM 455.56	106256	5% - 20yr	1101.53	1206.69	1203.35	3.09	2.97	49.27	33.91	119.56	314.6	2.96	2.03	3.34	3.34
Sweet Grass County	A6	RM 455.39	105360	5% - 20yr	1101.53	1206.47	1202.74	2.37	2.22	30.09	22.14	151.06	313.81	3.01	2.21	3.73	3.73
Sweet Grass County	A6	RM 455.26	104667	5% - 20yr	1101.53	1205.36	1202.83	4.26	3.94	108.72	72.37	121.84	218.91	2.09	1.39	2.53	2.53
Sweet Grass County	A6	RM 455.09	103771	5% - 20yr	1101.53	1205.13	1201.58	2.29	2.05	28.28	18.3	158.96	283.21	2.95	1.9	3.54	3.54
Sweet Grass County	A6	RM 454.95	103072	5% - 20yr	1101.53	1204.47	1201.94	3.24	3.11	67.45	62.98	179.63	217.76	1.74	1.63	2.53	2.53

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	5% - 20yr	1101.53	1204.08	1200.61	2.45	2.33	36.26	32.56	178.58	244.72	2.16	1.93	3.47	3.47
Sweet Grass County	A6	RM 454.72	101863	5% - 20yr	1101.53	1203.56	1200.47	3	3	49.48	49.45	185.58	185.63	1.98	1.98	3.09	3.09
Sweet Grass County	A6	RM 454.64	101419	5% - 20yr	1101.53	1203.42	1199.69	2.43	2.43	32.29	32.27	191.45	200.69	2.37	2.37	3.73	3.73
Sweet Grass County	A6	RM 454.53	100846	5% - 20yr	1101.53	1202.94	1199.59	3.1	3.09	50.34	47.11	120.59	178.58	2.95	2.76	3.36	3.36
Sweet Grass County	A6	RM 454.43	100338	5% - 20yr	1101.53	1202.67	1199	3.1	3.1	51.38	51.24	115.82	163.18	3.07	3.06	3.68	3.68
Sweet Grass County	A6	RM 454.29	99597	5% - 20yr	1101.53	1202.29	1198.71	3.1	3.1	50.77	49.93	114.12	181.94	3.12	3.07	3.57	3.57
Sweet Grass County	A6	RM 454.15	98861	5% - 20yr	1101.53	1201.98	1198.68	2.84	2.77	42.14	32.71	136.69	182.43	2.82	2.18	3.3	3.3
Sweet Grass County	A6	RM 454.00	98105	5% - 20yr	1101.53	1201.58	1198.53	2.81	2.81	39.75	39.69	194.98	195.19	2.01	2.01	3.05	3.05
Sweet Grass County	A6	RM 453.89	97523	5% - 20yr	1101.53	1201.2	1198.31	2.84	2.77	44.82	42.17	179.55	199.63	2.11	1.99	2.9	2.9
Sweet Grass County	A6	RM 453.78	96929	5% - 20yr	1101.53	1201.05	1197.07	2.3	2.27	28.02	21.47	153.06	203.49	3.12	2.39	3.98	3.98
Sweet Grass County	A6	RM 453.67	96361	5% - 20yr	1101.53	1200.61	1197.77	3.05	2.74	52.47	33.6	151.58	273.03	2.3	1.47	2.84	2.84
Sweet Grass County	A6	RM 453.58	95863	5% - 20yr	1101.53	1200.56	1196.37	2.2	2.19	24.3	23.64	182.6	188.76	3.22	3.13	4.19	4.19
Sweet Grass County	A6	RM 453.48	95355	5% - 20yr	1101.53	1199.96	1196.86	3.48	3.45	65.17	59.87	118.04	129.81	2.68	2.46	3.09	3.09
Sweet Grass County	A6	RM 453.35	94633	5% - 20yr	1101.53	1199.41	1196.43	3.39	3.32	62.52	54.44	133.91	195.17	2.42	2.11	2.98	2.98
Sweet Grass County	A7	RM 453.23	93994	5% - 20yr	1101.53	1199	1196.41	3.12	2.91	54.32	48.9	112.92	200.39	2.1	1.89	2.58	2.58
Sweet Grass County	A7	RM 453.11	93361	5% - 20yr	1101.53	1198.75	1195.68	2.42	2.38	28.65	27.73	210.58	228.02	2.09	2.03	3.07	3.07
Sweet Grass County	A7	RM 453.01	92863	5% - 20yr	1101.53	1198.25	1195.38	3.18	3.06	50.76	46.62	160.97	194.44	2.02	1.85	2.87	2.87
Sweet Grass County	A7	RM 452.91	92363	5% - 20yr	1101.53	1198.12	1194.85	2.62	2.31	34.92	22.13	117.27	296.55	2.57	1.62	3.27	3.27
Sweet Grass County	A7	RM 452.82	91863	5% - 20yr	1101.53	1197.88	1194.65	2.6	2.46	37.42	33.9	111.14	181.6	2.71	2.46	3.23	3.23
Sweet Grass County	A7	RM 452.72	91363	5% - 20yr	1101.53	1197.82	1193.29	2.06	2	21.27	17.82	144.32	178.4	3.68	3.08	4.52	4.52
Sweet Grass County	A7	RM 452.64	90932	5% - 20yr	1101.53	1197.58	1194.02	2.63	2.19	37.16	26.1	133.5	279.95	2.95	2.07	3.56	3.56
Sweet Grass County	A7	RM 452.53	90362	5% - 20yr	1101.53	1197.1	1193.87	3.24	2.97	55.39	42.04	116.37	179.65	2.72	2.06	3.24	3.24
Sweet Grass County	A7	RM 452.43	89864	5% - 20yr	1101.53	1196.79	1193.52	3.26	2.99	55.89	39.72	111.04	183.72	2.83	2	3.27	3.27
Sweet Grass County	A7	RM 452.33	89331	5% - 20yr	1101.53	1196.49	1193.16	3.09	2.94	49.38	37.5	134.45	188.64	2.61	1.98	3.33	3.33
Sweet Grass County	A7	RM 452.25	88863	5% - 20yr	1101.53	1196.23	1192.91	3.02	2.9	47.83	36.99	138.6	187.54	2.61	2.02	3.32	3.32
Sweet Grass County	A7	RM 452.16	88399	5% - 20yr	1101.53	1195.91	1192.68	3.2	2.73	54.35	33.12	119.78	242.77	2.76	1.68	3.23	3.23
Sweet Grass County	A7	RM 452.06	87882	5% - 20yr	1101.53	1195.68	1192.4	2.96	2.56	47.19	31.02	120.24	221.87	2.96	1.94	3.28	3.28
Sweet Grass County	A7	RM 451.96	87394	5% - 20yr	1101.53	1195.37	1191.9	3.09	2.62	52.95	30.01	125.87	277.28	2.67	1.51	3.47	3.47
Sweet Grass County	A7	RM 451.86	86835	5% - 20yr	1101.53	1195.14	1191.79	2.86	2.34	41.97	27.53	122.39	249.48	2.88	1.89	3.35	3.35
Sweet Grass County	A7	RM 451.75	86230	5% - 20yr	1101.53	1194.84	1191.43	2.83	2.83	41.97	41.97	132.73	132.73	2.93	2.93	3.4	3.4
Sweet Grass County	A7	RM 451.61	85483	5% - 20yr	1101.53	1194.54	1190.7	2.65	2.65	38.72	38.44	152.65	153.65	2.73	2.71	3.83	3.83
Sweet Grass County	A7	RM 451.49	84861	5% - 20yr	1101.53	1193.94	1191.07	3.39	3.23	60.22	53.25	126.46	152.38	2.52	2.24	2.88	2.88
Sweet Grass County	A7	RM 451.34	84113	5% - 20yr	1101.53	1193.89	1190.06	2.18	2.15	24.62	21.16	150.96	178.8	3.34	2.86	3.83	3.83
Sweet Grass County	A7	RM 451.20	83363	5% - 20yr	1101.53	1193.23	1189.8	3.42	3.41	61.91	57.73	103.86	116.55	3.1	2.89	3.43	3.43
Sweet Grass County	A7	RM 451.10	82863	5% - 20yr	1101.53	1193.08	1189.79	2.86	2.84	43.94	40.45	133.83	146.61	2.88	2.65	3.29	3.29
Sweet Grass County	A7	RM 451.00	82325	5% - 20yr	1101.53	1192.91	1189.55	2.63	2.44	37.45	31.06	118.3	190.3	2.86	2.37	3.36	3.36
Sweet Grass County	A7	RM 450.86	81602	5% - 20yr	1101.53	1192.72	1188.29	2.19	1.97	47.08	27.26	90.13	230.05	4.33	2.43	4.42	4.42
Sweet Grass County	A7	RM 450.73	80923	5% - 20yr	1101.53	1191.72	1188.46	3.96	3.65	86.14	64.4	94.33	143.65	2.83	2.1	3.27	3.27
Sweet Grass County	A7	RM 450.63	80374	5% - 20yr	1101.53	1191.45	1188.16	3.2	3.16	57.71	50.12	134.39	157.37	2.55	2.22	3.29	3.29
Sweet Grass County	A7	RM 450.53	79863	5% - 20yr	1101.53	1191.2	1187.88	2.88	2.85	43.41	36.79	150.31	179.1	2.55	2.16	3.33	3.33
Sweet Grass County	A7	RM 450.43	79300	5% - 20yr	1101.53	1190.94	1187.72	2.79	2.62	40.21	34.86	132.81	202.13	2.41	2.08	3.22	3.22
Sweet Grass County	A7	RM 450.34	78849	5% - 20yr	1152.5	1190.63	1188.05	2.92	2.71	48.77	42.07	125.25	224.04	2.21	1.9	2.58	2.58
Sweet Grass County	A7	RM 450.23	78298	5% - 20yr	1152.5	1190.52	1186.92	2.1	2.01	23.6	18.43	195.39	386.56	2.8	2.18	3.6	3.6
Sweet Grass County	A7	RM 450.14	77822	5% - 20yr	1152.5	1190.23	1186.4	2.62	2.34	37.72	18.72	152.31	375.49	2.82	1.38	3.83	3.83
Sweet Grass County	A7	RM 450.05	77362	5% - 20yr	1152.5	1189.61	1187.2	3.57	3.46	74.75	60.16	139.44	216.08	2.3	1.85	2.41	2.41
Sweet Grass County	A7	RM 449.96	76841	5% - 20yr	1152.5	1189.37	1186.28	3	2.66	48.7	30.02	127.41	333.4	2.94	1.8	3.09	3.09
Sweet Grass County	A7	RM 449.86	76356	5% - 20yr	1152.5	1189.07	1185.58	3.17	2.66	52.52	24.54	108.25	342.39	3.26	1.51	3.49	3.49
Sweet Grass County	A7	RM 449.77	75860	5% - 20yr	1152.5	1188.76	1185.68	3.19	2.82	51.09	45.17	168.44	235.93	2.04	1.8	3.08	3.08
Sweet Grass County	A7	RM 449.68	75373	5% - 20yr	1152.5	1188.43	1185.9	2.82	2.63	50.23	42.3	220.37	285.54	1.82	1.53	2.52	2.52
Sweet Grass County	A7	RM 449.59	74904	5% - 20yr	1152.5	1188.32	1184.15	2.42	2.05	29.44	15.79	112.07	315.28	3.74	1.96	4.17	4.17
Sweet Grass County	A7	RM 449.48	74351	5% - 20yr	1152.5	1187.94	1184.86	3.12	2.66	57.55	36.89	121.47	306.91	2.21	1.41	3.08	3.08
Sweet Grass County	A7	RM 449.37	73741	5% - 20yr	1152.5	1187.8	1184.73	2.01	1.76	23.7	14.55	210.35	592.48	2.25	1.38	3.07	3.07
Sweet Grass County	A7	RM 449.26	73165	5% - 20yr	1152.5	1187.72	1184.33	1.81	1.14	16.63	9.39	128.66	849.17	2.82	1.57	3.38	3.38
Sweet Grass County	A7	RM 449.10	72364	5% - 20yr	1152.5	1186.94	1183.97	3.76	2	77.79	28.6	87.4	821.42	2.84	1.01	2.97	2.97
Sweet Grass County	A7	RM 449.00	71858	5% - 20yr	1152.5	1186.2	1183.97	3.77	2.52	88.68	44.35	113.67	508.72	1.93	0.95	2.24	2.24
Sweet Grass County	A7	RM 448.88	71223	5% - 20yr	1152.5	1185.88	1183.11	2.12	1.89	27.88	19.85	231.08	498.82	1.89	1.34	2.77	2.77
Sweet Grass County	A7	RM 448.76	70537	5% - 20yr	1152.5	1185.83	1182.01	1.2	1.17	8.73	8.15	312.73	502.55	2.11	1.97	3.82	3.82
Sweet Grass County	A7	RM 448.55	69424	5% - 20yr	1152.5	1185.62	1181.8	1.75	1.53	15.74	10.89	154.14	328.35	3.34	2.31	3.82	3.82
Sweet Grass County	A7	RM 448.41	68815	5% - 20yr	1152.5	1185.01	1181.16	3.33	3.07	50.37	34.35	108.05	179.64	3.11	2.09	3.85	3.85
Sweet Grass County	A7	RM 448.32	68353	5% - 20yr	1152.5	1185.17	1179.91	1.9	1.87	16.61	14.87	126.03	185.97	4.81	4.3	5.26	5.26
Sweet Grass County	A7	RM 448.23	67851	5% - 20yr	1152.5	1184.98	1179.82	2.35	2.31	25.78	23.05	105.4	244.53	4.64	4.13	5.15	5.15

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	5% - 20yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	5% - 20yr	1152.5	1184.28	1180.89	3.76	3.74	77.19	71.7	107.64	260.05	2.85	2.64	3.39	3.39
Sweet Grass County	A7	RM 448.07	67043	5% - 20yr	1152.5	1183.96	1180.7	2.89	2.67	46.35	33.26	149.15	409.71	2.65	1.9	3.26	3.26
Sweet Grass County	A7	RM 447.94	66348	5% - 20yr	1152.5	1183.6	1180.22	2.94	2.55	45.94	18.06	124.55	495.3	3.09	1.21	3.38	3.38
Sweet Grass County	A7	RM 447.85	65863	5% - 20yr	1152.5	1183.19	1180.39	3.33	2.63	63.26	26	133.05	432.48	2.47	1.01	2.8	2.8
Sweet Grass County	A7	RM 447.75	65363	5% - 20yr	1152.5	1183.13	1179.55	2.48	1.96	29.97	12.96	143.24	435.54	3.13	1.35	3.58	3.58
Sweet Grass County	A7	RM 447.66	64865	5% - 20yr	1152.5	1182.8	1179.59	2.97	2.15	47.17	16.2	121.32	517.09	3.04	1.04	3.2	3.2
Sweet Grass County	A7	RM 447.56	64365	5% - 20yr	1152.5	1182.25	1179.67	3.6	2.54	77.07	33.85	136.66	478.12	2.16	0.95	2.58	2.58
Sweet Grass County	A7	RM 447.49	64001	5% - 20yr	1152.5	1182.13	1179.82	2.68	2.1	42.65	25.54	193.72	443.46	2.06	1.24	2.31	2.31
Sweet Grass County	A7	RM 447.39	63473	5% - 20yr	1152.5	1181.58	1178.85	3.59	2.42	71.06	27.54	91.98	511.59	2.42	0.93	2.73	2.73
Sweet Grass County	A7	RM 447.27	62880	5% - 20yr	1152.5	1181.22	1178.26	3.1	2.21	56.1	24.58	105.92	516.78	2.34	1.01	2.96	2.96
Sweet Grass County	A7	RM 447.17	62358	5% - 20yr	1152.5	1180.91	1177.92	2.89	1.86	49.16	23.75	112.59	566.76	2.28	1.09	2.99	2.99
Sweet Grass County	A7	RM 447.08	61863	5% - 20yr	1152.5	1180.48	1177.91	3.07	1.92	59.06	33.64	101.37	568.67	1.86	1.05	2.57	2.57
Sweet Grass County	A7	RM 446.98	61358	5% - 20yr	1152.5	1179.98	1177.28	3.19	2.05	56.47	23.87	95.3	563.92	2.38	1	2.69	2.69
Sweet Grass County	A7	RM 446.89	60841	5% - 20yr	1152.5	1179.59	1176.94	3.38	2.1	65.93	26.67	79.23	592.01	2.39	0.96	2.64	2.64
Sweet Grass County	A7	RM 446.80	60396	5% - 20yr	1152.5	1179.41	1175.92	2.63	1.78	38.66	19.47	96.2	680.79	2.68	1.33	3.49	3.49
Sweet Grass County	A7	RM 446.70	59903	5% - 20yr	1152.5	1179.11	1176.22	3.19	2.14	56.32	24.56	65.84	530.29	2.85	1.19	2.89	2.89
Sweet Grass County	A7	RM 446.60	59371	5% - 20yr	1152.5	1178.78	1175.91	3.13	2.16	52.61	22.37	77.2	528.49	2.61	1.08	2.88	2.88
Sweet Grass County	A7	RM 446.51	58868	5% - 20yr	1152.5	1178.6	1175.24	2.62	2.12	38.62	19.13	117.15	436.18	2.62	1.29	3.35	3.35
Sweet Grass County	A7	RM 446.41	58363	5% - 20yr	1152.5	1178.41	1174.39	2.34	1.95	28.45	15.34	148.64	416.23	2.76	1.49	4.02	4.02
Sweet Grass County	A7	RM 446.30	57762	5% - 20yr	1152.5	1178.08	1174.85	2.74	2.3	39.71	17.57	123.97	420.2	2.69	1.19	3.23	3.23
Sweet Grass County	A7	RM 446.22	57365	5% - 20yr	1152.5	1177.57	1174.39	3.41	3.35	63.57	50.58	129.04	165.75	2.61	2.07	3.18	3.18
Sweet Grass County	A7	RM 446.12	56852	5% - 20yr	1152.5	1177.32	1174.04	3.04	2.91	48.8	25.86	140.19	278.72	2.69	1.42	3.28	3.28
Sweet Grass County	A7	RM 446.02	56303	5% - 20yr	1152.5	1177.2	1173.3	2.67	2.01	35.7	13.75	98.14	401.14	3.82	1.43	3.9	3.9
Sweet Grass County	A7	RM 445.94	55871	5% - 20yr	1152.5	1176.42	1173.6	4.2	3.76	100.31	55.7	94.18	219.53	2.54	1.4	2.82	2.82
Sweet Grass County	A7	RM 445.82	55236	5% - 20yr	1152.5	1176.32	1173.05	2.39	2.25	33.72	26.85	208.65	307.02	2.24	1.79	3.27	3.27
Sweet Grass County	A7	RM 445.71	54753	5% - 20yr	1152.5	1176.16	1172.38	2.21	2.15	24.39	21.85	210.48	274.91	2.45	2.2	3.78	3.78
Sweet Grass County	A7	RM 445.60	54202	5% - 20yr	1152.5	1175.96	1172.32	2.31	2.23	27.74	24.91	190.57	274.01	2.58	2.32	3.64	3.64
Sweet Grass County	A7	RM 445.46	53453	5% - 20yr	1152.5	1175.41	1171.04	3.12	2.86	49.19	34.04	132.44	227.18	2.68	1.85	4.36	4.36
Sweet Grass County	A7	RM 445.36	52888	5% - 20yr	1152.5	1175.2	1170.25	2.88	2.35	43.38	26.5	105.34	286.69	3.24	1.97	4.95	4.95
Sweet Grass County	A7	RM 445.26	52344	5% - 20yr	1152.5	1174.53	1171.35	3.79	3.39	79.62	47.98	105.58	219.24	2.7	1.62	3.19	3.19
Sweet Grass County	A7	RM 445.17	51873	5% - 20yr	1152.5	1173.98	1171.83	3.85	3.61	89.86	70.35	136.43	213.41	2.06	1.61	2.15	2.15
Sweet Grass County	A7	RM 445.07	51376	5% - 20yr	1152.5	1174.01	1170.28	2.28	2.1	28.81	18.11	181.57	383.82	2.69	1.69	3.73	3.73
Sweet Grass County	A7	RM 444.97	50844	5% - 20yr	1152.5	1173.52	1170.19	3.09	2.95	50.8	34.27	148.01	268.89	2.5	1.68	3.33	3.33
Sweet Grass County	A7	RM 444.88	50352	5% - 20yr	1152.5	1173.26	1170.05	2.95	2.66	46.54	24.99	144.09	305.43	2.67	1.43	3.22	3.22
Sweet Grass County	A7	RM 444.79	49860	5% - 20yr	1152.5	1172.94	1169.94	3.11	2.55	53.83	29.03	132.22	326.89	2.65	1.43	3	3
Sweet Grass County	A7	RM 444.69	49316	5% - 20yr	1152.5	1172.61	1169.55	3.09	2.49	52.76	27.93	128.88	333.68	2.72	1.44	3.06	3.06
Sweet Grass County	A7	RM 444.60	48863	5% - 20yr	1152.5	1172.6	1167.23	2.46	1.84	27.79	11.58	88.24	537.95	5	2	5.36	5.36
Sweet Grass County	A7	RM 444.50	48367	5% - 20yr	1152.5	1172.33	1168.66	3.05	2.35	49.8	29.36	103.53	621.4	3.03	1.77	3.66	3.66
Sweet Grass County	A7	RM 444.41	47863	5% - 20yr	1152.5	1172.23	1168.6	2.41	2.25	29.7	19.93	129.86	683.41	3.07	2.06	3.63	3.63
Sweet Grass County	A7	RM 444.30	47336	5% - 20yr	1152.5	1172.15	1168.26	2.04	1.76	21.07	13.5	167.8	698.98	3.23	2.06	3.89	3.89
Sweet Grass County	A7	RM 444.20	46789	5% - 20yr	1152.5	1171.29	1167.97	3.96	3.59	87.42	48.02	106.67	395.73	2.69	1.46	3.32	3.32
Sweet Grass County	A7	RM 444.12	46346	5% - 20yr	1152.5	1170.95	1167.62	3.73	3.26	74.73	39.25	100.02	231.5	3.03	1.57	3.33	3.33
Sweet Grass County	A7	RM 444.02	45829	5% - 20yr	1152.5	1170.78	1167.57	3.03	2.75	45.44	26.81	143.97	293.4	2.61	1.54	3.21	3.21
Sweet Grass County	A7	RM 443.91	45243	5% - 20yr	1152.5	1170.48	1167.08	2.89	2.48	47.34	22.13	152.73	504.87	2.5	1.16	3.4	3.4
Sweet Grass County	A7	RM 443.84	44853	5% - 20yr	1152.5	1169.88	1167.23	3.58	3.43	80.58	47.13	173.99	335.52	1.83	1.07	2.65	2.65
Sweet Grass County	A7	RM 443.75	44415	5% - 20yr	1152.5	1169.69	1166.67	2.73	2.7	43.72	36.07	183.8	434.75	2.29	1.89	3.02	3.02
Sweet Grass County	A7	RM 443.64	43870	5% - 20yr	1152.5	1169.53	1166.09	2.45	1.8	33.09	14.66	110.6	851.57	2.77	1.22	3.44	3.44
Sweet Grass County	A7	RM 443.53	43290	5% - 20yr	1152.5	1169.38	1165.72	2.38	1.89	29.22	13.43	87.59	801.93	3.37	1.52	3.66	3.66
Sweet Grass County	A8	RM 443.45	42860	5% - 20yr	1152.5	1168.91	1165.25	3.11	2.94	51.81	30.71	137.91	618.23	2.67	1.58	3.65	3.65
Sweet Grass County	A8	RM 443.35	42363	5% - 20yr	1152.5	1168.14	1164.95	4.09	3.76	93.62	61.91	101.62	471.65	2.65	1.74	3.2	3.2
Sweet Grass County	A8	RM 443.25	41863	5% - 20yr	1152.5	1168.03	1165.05	2.98	2.52	49.82	27.45	127.8	505.53	2.59	1.42	2.99	2.99
Sweet Grass County	A8	RM 443.16	41342	5% - 20yr	1152.5	1167.79	1165.43	2.67	2.03	43.55	25.98	152.93	681.63	1.99	1.18	2.35	2.35
Sweet Grass County	A8	RM 443.07	40863	5% - 20yr	1152.5	1167.38	1164.49	2.92	2	51.46	23.89	139	742.43	2.1	0.97	2.89	2.89
Sweet Grass County	A8	RM 442.97	40345	5% - 20yr	1152.5	1167.09	1164.28	2.54	1.79	35.49	22.62	161.4	585.17	2.03	1.29	2.81	2.81
Sweet Grass County	A8	RM 442.88	39863	5% - 20yr	1152.5	1166.89	1164.06	2.18	1.73	27.95	19.35	177.36	648.88	1.96	1.36	2.84	2.84
Sweet Grass County	A8	RM 442.78	39363	5% - 20yr	1152.5	1166.14	1164.18	3.51	3.08	82.46	54.54	136.1	477.95	1.52	1.01	2.28	2.28
Sweet Grass County	A8	RM 442.68	38840	5% - 20yr	1152.5	1165.84	1162.8	2.53	1.94	31.88	17.83	117.57	529.84	2.21	1.23	3.04	3.04
Sweet Grass County	A8	RM 442.60	38390	5% - 20yr	1152.5	1165.77	1162.57	1.81	1.53	18.97	11.57	157.4	530.03	2.38	1.45	3.2	3.2
Sweet Grass County	A8	RM 442.50	37863	5% - 20yr	1152.5	1165.32	1162.29	3.15	2.33	48.31	21.85	102.08	485.24	2.3	1.04	3.03	3.03
Sweet Grass County	A8	RM 442.42	37461	5% - 20yr	1152.5	1165.08	1162.07	3.01	2.28	42.63	23.69	121.06	460.06	2.03	1.12	3.02	3.02

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	5% - 20yr	1152.5	1164.78	1161.85	2.86	2.22	47.53	26.39	107.64	424.35	2.35	1.3	2.94	2.94
Sweet Grass County	A8	RM 442.24	36451	5% - 20yr	1152.5	1164.51	1161.75	2.73	2.39	39.2	24.54	126.61	406.59	2.02	1.26	2.76	2.76
Sweet Grass County	A8	RM 442.12	35820	5% - 20yr	1152.5	1164.22	1161.12	2.64	2.2	34.89	19.12	123.17	469.53	2.27	1.24	3.1	3.1
Sweet Grass County	A8	RM 442.03	35367	5% - 20yr	1152.5	1163.95	1161.18	2.69	2.31	43.15	23.91	123.16	457.35	2.15	1.2	2.78	2.78
Sweet Grass County	A8	RM 441.95	34945	5% - 20yr	1152.5	1163.88	1160.28	2.06	1.59	23.52	11.42	133.86	682.05	2.72	1.3	3.6	3.6
Sweet Grass County	A8	RM 441.84	34360	5% - 20yr	1152.5	1163.41	1160.33	2.85	2.18	42.13	21.88	186.27	516.43	1.98	1.03	3.08	3.08
Sweet Grass County	A8	RM 441.74	33863	5% - 20yr	1152.5	1163.08	1160.06	2.86	2.14	43.81	22.07	171.23	499.89	2.14	1.08	3.03	3.03
Sweet Grass County	A8	RM 441.65	33357	5% - 20yr	1152.5	1162.97	1159.78	2.23	1.52	27.1	11.32	173.66	821.62	2.6	1.08	3.18	3.18
Sweet Grass County	A8	RM 441.53	32732	5% - 20yr	1152.5	1162.55	1159.44	2.82	1.92	45.67	17.22	152.04	679.2	2.43	0.91	3.1	3.1
Sweet Grass County	A8	RM 441.47	32366	5% - 20yr	1152.5	1162.43	1158.95	2.56	1.63	35.59	13.5	138.98	765.94	2.84	1.07	3.47	3.47
Sweet Grass County	A8	RM 441.38	31928	5% - 20yr	1152.5	1162.46	1158.24	1.66	1.05	14.46	7.45	153.74	973.29	3.14	1.61	4.22	4.22
Sweet Grass County	A8	RM 441.27	31350	5% - 20yr	1152.5	1161.9	1158.76	3.41	2.23	65.38	19.47	97.16	911.72	2.61	0.77	3.15	3.15
Sweet Grass County	A8	RM 441.18	30882	5% - 20yr	1152.5	1161.69	1158.5	2.52	1.56	33.55	11.71	126.18	986.81	2.56	0.89	3.19	3.19
Sweet Grass County	A8	RM 441.07	30295	5% - 20yr	1152.5	1161.54	1158.19	2.21	1.43	27.1	10.17	149.54	979.98	2.65	0.99	3.36	3.36
Sweet Grass County	A8	RM 441.00	29913	5% - 20yr	1152.5	1161.46	1157.63	2.08	1.33	24.12	9.92	146.59	939.91	2.67	1.09	3.83	3.83
Sweet Grass County	A8	RM 440.80	28852	5% - 20yr	1152.5	1160.66	1157.49	3.47	2.49	63.7	18.84	103.86	578.39	2.71	0.8	3.17	3.17
Sweet Grass County	A8	RM 440.60	27841	5% - 20yr	1152.5	1159.7	1157.2	3.1	2.46	57.67	28.49	121.05	467.45	2.13	1.05	2.49	2.49
Sweet Grass County	A8	RM 440.51	27361	5% - 20yr	1152.5	1159.15	1156.41	3.4	2.69	68.96	39.74	109.89	345.52	2.18	1.25	2.73	2.73
Sweet Grass County	A8	RM 440.42	26862	5% - 20yr	1152.5	1158.64	1156.26	3.46	2.74	72.56	38.22	88.95	391.22	2.05	1.08	2.37	2.37
Sweet Grass County	A8	RM 440.30	26223	5% - 20yr	1152.5	1158.58	1155.63	1.79	1.42	18.64	12.59	97.18	565.65	2.31	1.55	2.96	2.96
Sweet Grass County	A8	RM 440.17	25466	5% - 20yr	1152.5	1158.37	1154.7	2.28	1.66	27.81	15.78	64.56	409.69	3.13	1.71	3.67	3.67
Sweet Grass County	A8	RM 440.06	24863	5% - 20yr	1152.5	1158.13	1153.97	2.31	1.89	27.97	17.05	130.76	319.12	3.19	1.93	4.15	4.15
Sweet Grass County	A8	RM 439.96	24366	5% - 20yr	1152.5	1157.88	1154.18	2.76	2.14	39.2	19.13	95.94	352.19	3.36	1.63	3.7	3.7
Sweet Grass County	A8	RM 439.87	23863	5% - 20yr	1152.5	1157.55	1153.59	3	2.43	43.84	21.56	103.39	300.22	3.58	1.76	3.96	3.96
Sweet Grass County	A8	RM 439.77	23365	5% - 20yr	1152.5	1157.32	1153.6	3.02	2.69	45.71	14.84	124.68	469.4	3.02	0.98	3.72	3.72
Sweet Grass County	A8	RM 439.68	22863	5% - 20yr	1152.5	1157.05	1153.45	3.08	2.66	47.03	16.83	135.18	477.24	2.71	0.96	3.6	3.6
Sweet Grass County	A8	RM 439.58	22363	5% - 20yr	1152.5	1156.98	1153.39	2.41	1.81	30.08	12.33	150.28	555.21	2.93	1.2	3.59	3.59
Sweet Grass County	A8	RM 439.49	21863	5% - 20yr	1152.5	1156.84	1152.86	2.42	1.74	29.34	10.33	116.13	543.59	3.7	1.29	3.98	3.98
Sweet Grass County	A8	RM 439.39	21363	5% - 20yr	1152.5	1156.71	1153.06	2.41	1.78	30.2	11.55	131.98	571.02	3.21	1.21	3.66	3.66
Sweet Grass County	A8	RM 439.30	20863	5% - 20yr	1152.5	1156.39	1152.92	2.96	2.09	45.29	15.66	110.38	556.95	3.1	1.06	3.47	3.47
Sweet Grass County	A8	RM 439.20	20353	5% - 20yr	1152.5	1155.43	1152.64	4.29	4.14	98.7	66.36	111.19	195.47	2.4	1.61	2.79	2.79
Sweet Grass County	A8	RM 439.11	19864	5% - 20yr	1152.5	1155.52	1152.34	2.74	2.19	40.66	17.22	98.01	541.89	2.91	1.23	3.18	3.18
Sweet Grass County	A8	RM 439.01	19360	5% - 20yr	1152.5	1154.88	1152.4	3.57	3.11	71.17	34.69	125.89	393.65	2.01	0.98	2.48	2.48
Sweet Grass County	A8	RM 438.91	18848	5% - 20yr	1152.5	1154.73	1151.92	2.66	2.12	38.23	17.93	121.85	493.61	2.37	1.11	2.81	2.81
Sweet Grass County	A8	RM 438.82	18363	5% - 20yr	1152.5	1154.42	1151.23	2.8	2.33	44.59	23.27	118.97	430.15	2.48	1.29	3.19	3.19
Sweet Grass County	A8	RM 438.73	17853	5% - 20yr	1152.5	1154.07	1151.37	2.98	2.35	47.59	27.5	124.01	420.71	2.02	1.17	2.7	2.7
Sweet Grass County	A8	RM 438.63	17363	5% - 20yr	1152.5	1153.96	1150.74	2.24	1.82	27.56	18.38	100.37	342.97	2.77	1.85	3.21	3.21
Sweet Grass County	A8	RM 438.54	16863	5% - 20yr	1152.5	1153.82	1150.59	2.19	1.89	25.69	19.57	104.83	268.42	3.03	2.28	3.23	3.23
Sweet Grass County	A8	RM 438.43	16307	5% - 20yr	1152.5	1153.6	1149.52	2.25	2.19	27	20.58	165.05	243.82	3.08	2.34	4.09	4.09
Sweet Grass County	A9	RM 438.36	15889	5% - 20yr	1152.5	1153.48	1149.4	2.29	2.23	23.83	21.73	187.56	212.19	2.66	2.43	4.08	4.08
Sweet Grass County	A9	RM 438.26	15363	5% - 20yr	1152.5	1152.9	1149.84	3.5	3.02	66.12	35.01	115.51	281.72	2.64	1.4	3.06	3.06
Sweet Grass County	A9	RM 438.16	14863	5% - 20yr	1152.5	1152.66	1149.31	3.11	2.35	49.38	19.98	122.94	442.97	2.82	1.14	3.34	3.34
Sweet Grass County	A9	RM 438.07	14394	5% - 20yr	1152.5	1152.36	1149.19	3.18	2.25	57.04	22.45	128.67	533.26	2.56	1	3.17	3.17
Sweet Grass County	A9	RM 437.96	13827	5% - 20yr	1152.5	1152.14	1149.19	2.78	1.85	44.58	18.19	120.63	663.25	2.39	0.97	2.95	2.95
Sweet Grass County	A9	RM 437.88	13363	5% - 20yr	1152.5	1151.92	1148.94	2.83	1.81	41.62	17.44	108.61	681.66	2.36	0.98	2.98	2.98
Sweet Grass County	A9	RM 437.78	12844	5% - 20yr	1152.5	1151.59	1148.72	3.04	1.96	49.93	20.23	99.77	643.54	2.44	0.98	2.87	2.87
Sweet Grass County	A9	RM 437.69	12354	5% - 20yr	1152.5	1151.44	1148.45	2.27	1.66	30.69	16.15	147.1	622.21	2.19	1.15	2.98	2.98
Sweet Grass County	A9	RM 437.59	11863	5% - 20yr	1152.5	1151.14	1148.76	2.5	1.87	39.87	19.94	151.2	705.21	1.75	0.87	2.73	2.73
Sweet Grass County	A9	RM 437.50	11362	5% - 20yr	1152.5	1150.91	1148.29	2.18	1.69	29.33	15.76	189.39	662.6	1.92	1.03	2.62	2.62
Sweet Grass County	A9	RM 437.41	10902	5% - 20yr	1152.5	1150.62	1148.26	2.46	1.86	38.42	19.82	175.96	677.27	1.77	0.92	2.37	2.37
Sweet Grass County	A9	RM 437.31	10361	5% - 20yr	1152.5	1150.23	1147.37	2.71	1.91	44.47	20.76	148.16	630.67	2.04	0.96	2.85	2.85
Sweet Grass County	A9	RM 437.20	9764	5% - 20yr	1152.5	1149.89	1147.02	2.73	1.82	38.97	17.09	110.89	644.78	2.24	0.98	2.88	2.88
Sweet Grass County	A9	RM 437.08	9128	5% - 20yr	1152.5	1149.46	1146.9	2.66	2.08	41.14	21.34	190.53	584.28	1.83	0.95	2.56	2.56
Sweet Grass County	A9	RM 436.95	8363	5% - 20yr	1152.5	1149.25	1145.32	2.33	1.49	21.4	10.52	106.12	650.16	2.53	1.21	3.94	3.94
Sweet Grass County	A9	RM 436.83	7805	5% - 20yr	1152.5	1149.13	1145.93	1.74	1.37	19.22	11.9	154.6	762.03	1.78	1.1	3.19	3.19
Sweet Grass County	A9	RM 436.75	6857	5% - 20yr	1152.5	1148.59	1145.61	3.2	1.75	59.12	19.07	67.61	862.3	2.41	0.77	2.98	2.98
Sweet Grass County	A9	RM 436.66	6193	5% - 20yr	1152.5	1148.11	1145.68	2.94	1.86	51.84	18.8	97.51	821.57	2.08	0.75	2.43	2.43
Sweet Grass County	A9	RM 436.56	5280	5% - 20yr	1152.5	1147.65	1144.44	3.12	1.82	41.92	16.5	67.67	709.22	2.4	0.89	3.21	3.21
Sweet Grass County	A9	RM 436.40	4576	5% - 20yr	1152.5	1147.44	1144.05	2.56	1.57	35.65	12.96	57.78	737.07	2.97	1.03	3.39	3.39
Sweet Grass County	A9	RM 436.29	3787	5% - 20yr	1152.5	1146.99	1144.44	2.81	2.05	47.45	23.72	99.03	589.21	2.11	1.05	2.55	2.55
Sweet Grass County	A9	RM 436.16	3087	5% - 20yr	1152.5	1146.25	1143.57	3.24	2.61	63.64	30.77	107.65	598.2	2.07	1	2.68	2.68

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	5% - 20yr	1152.5	1146.03	1143.09	2.74	2.15	40.59	24.35	102.06	830.55	2.1	1.25	2.94	2.94
Sweet Grass County	A9	RM 435.98	2200	5% - 20yr	1152.5	1145.68	1142.85	2.97	2.24	53.01	25.6	76.95	792.76	2.16	1.02	2.84	2.84
Sweet Grass County	A9	RM 435.88	1580	5% - 20yr	1152.5	1145.29	1142.56	2.34	2.01	36.26	21.2	84.77	716.64	1.58	0.91	2.73	2.73
Sweet Grass County	A9	RM 435.73	890	5% - 20yr	1152.5	1144.97	1141.99	2.23	1.87	29.36	19.81	80.05	602.03	2.28	1.5	2.97	2.97
Sweet Grass County	A9	RM 435.62	104	5% - 20yr	1152.5	1144.49	1141.54	2.71	2.18	44.61	31.79	128.68	488.27	2.07	1.46	2.95	2.95

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	5% - 20yr	1152.6	1144.35	1140.73	1.53	1.36	13.51	9.1	151.59	632.61	2.35	1.59	3.66	3.66
Stillwater County	A9	RM 435.38	231282.1	5% - 20yr	1152.6	1144.14	1139.61	1.71	1.38	15.86	7.15	197.46	680.75	2.91	1.31	4.53	4.53
Stillwater County	A9	RM 435.25	230611.3	5% - 20yr	1152.6	1143.53	1138.48	3.23	2.65	56.21	16.67	118.54	503.37	2.94	0.86	5.05	5.05
Stillwater County	A9	RM 435.16	230122.9	5% - 20yr	1152.6	1143.29	1138.39	3.08	2.32	50.82	16.43	118.38	514.32	3	0.97	4.9	4.9
Stillwater County	A9	RM 435.07	229649	5% - 20yr	1152.6	1143.15	1137.85	2.85	1.96	41.47	13.57	103.72	525.56	3.44	1.12	5.3	5.3
Stillwater County	A9	RM 434.97	229153	5% - 20yr	1152.6	1142.84	1137.87	3.12	2.45	50.53	18.18	104.99	401.77	3.27	1.17	4.97	4.97
Stillwater County	A9	RM 434.84	228443.5	5% - 20yr	1152.6	1142.54	1137	3.03	2.55	47.29	22.85	103.24	276.98	3.4	1.64	5.54	5.54
Stillwater County	A9	RM 434.73	227855.5	5% - 20yr	1152.6	1142.21	1135.61	3.24	2.8	50.42	25.52	82.59	223.31	4.2	2.1	6.6	6.6
Stillwater County	A9	RM 434.63	227328.2	5% - 20yr	1152.6	1141.98	1135.42	3.23	3.23	51.39	48.91	91.78	169.53	3.89	3.7	6.56	6.56
Stillwater County	A9	RM 434.57	227011.2	5% - 20yr	1152.6	1141.85	1136.35	3.2	3.19	52.43	47.65	104.18	220.72	3.45	3.14	5.5	5.5
Stillwater County	A9	RM 434.53	226817.6	5% - 20yr	1152.6	1141.74	1136.73	3.23	3.22	55.6	51.59	118.79	224.81	3.01	2.79	5.01	5.01
Stillwater County	A10	RM 434.49	226573.3	5% - 20yr	1152.6	1141.66	1137.23	2.94	2.93	45.74	43.18	126.91	435.29	3.09	2.92	4.43	4.43
Stillwater County			226533.4	5% - 20yr	Bridge												
Stillwater County	A10	RM 434.47	226483	5% - 20yr	1152.6	1141.52	1137.49	2.93	2.92	46.24	45.81	135.7	491.1	2.9	2.88	4.03	4.03
Stillwater County	A10	RM 434.42	226233.2	5% - 20yr	1152.6	1141.39	1137.1	2.93	2.88	46.84	38.12	138.92	463.12	2.82	2.3	4.29	4.29
Stillwater County	A10	RM 434.37	225940.2	5% - 20yr	1152.6	1141.13	1136.51	3.22	3.17	56.04	46.28	124.51	341.66	2.87	2.37	4.61	4.61
Stillwater County	A10	RM 434.24	225278.2	5% - 20yr	1152.6	1140.82	1136.56	2.99	2.85	48.09	42.31	116.66	182.96	2.98	2.62	4.26	4.26
Stillwater County	A10	RM 434.15	224819.6	5% - 20yr	1152.6	1140.63	1137.06	2.75	2.47	43.04	31.61	157.22	269.09	2.49	1.83	3.57	3.57
Stillwater County	A10	RM 434.07	224366.5	5% - 20yr	1152.6	1140.23	1136.55	3.22	2.79	60.6	45.91	116.1	238.49	2.28	1.74	3.83	3.83
Stillwater County	A10	RM 433.98	223883.5	5% - 20yr	1152.6	1140.1	1136.28	2.34	2.24	31.45	26.71	137.26	369.96	2.4	2.05	3.82	3.82
Stillwater County	A10	RM 433.87	223309.3	5% - 20yr	1152.6	1139.85	1135.82	2.55	2.36	35.17	27.77	107.67	410.82	2.89	2.27	4.03	4.03
Stillwater County	A10	RM 433.78	222850	5% - 20yr	1152.6	1139.61	1135.54	2.58	2.53	37.61	29.75	176.73	446.78	2.52	1.99	4.07	4.07
Stillwater County	A10	RM 433.66	222201.9	5% - 20yr	1152.6	1139.23	1135.16	2.83	2.73	43.82	32.54	143.77	370.51	2.81	2.09	4.06	4.06
Stillwater County	A10	RM 433.54	221596.6	5% - 20yr	1152.6	1138.83	1135.33	3.05	2.91	51.29	35.47	135.62	316.81	2.75	1.9	3.5	3.5
Stillwater County	A10	RM 433.42	220956.2	5% - 20yr	1152.6	1138.34	1134.88	3.28	3.15	59.72	38.25	130.72	309.93	2.67	1.71	3.46	3.46
Stillwater County	A10	RM 433.31	220362.5	5% - 20yr	1152.6	1138.11	1134.67	2.59	2.42	39.93	29.67	203.99	434.77	2.14	1.59	3.44	3.44
Stillwater County	A10	RM 433.20	219758.6	5% - 20yr	1152.6	1138	1134.17	1.94	1.52	21.62	13.99	148.63	614.17	2.39	1.55	3.83	3.83
Stillwater County	A10	RM 433.09	219185.2	5% - 20yr	1152.6	1137.68	1133.45	2.33	2.23	29.96	18.72	179.88	511.92	2.73	1.7	4.23	4.23
Stillwater County	A10	RM 432.97	218599.7	5% - 20yr	1152.6	1137.35	1133.57	2.71	2.61	40.47	32.96	152.63	362.51	2.72	2.22	3.78	3.78
Stillwater County	A10	RM 432.84	217905.9	5% - 20yr	1152.6	1137.11	1132.7	2.57	2.23	34.86	17.9	136.55	491.77	3.1	1.59	4.41	4.41
Stillwater County	A10	RM 432.69	217146.9	5% - 20yr	1152.6	1136.57	1131.51	3.28	2.87	53.73	25.46	90.53	249.73	3.74	1.76	5.06	5.06
Stillwater County	A10	RM 432.60	216656.8	5% - 20yr	1152.6	1136.38	1132.1	3.13	2.8	49.89	26.56	102.17	277.81	3.54	1.86	4.28	4.28
Stillwater County	A10	RM 432.45	215889.7	5% - 20yr	1152.6	1136.06	1132.07	2.91	2.69	46.07	23.47	137.89	464.13	2.85	1.45	3.99	3.99
Stillwater County	A10	RM 432.35	215361.3	5% - 20yr	1152.6	1135.89	1132.33	2.55	2.07	35.62	14.69	158.69	719.59	2.77	1.14	3.56	3.56
Stillwater County	A10	RM 432.20	214585.3	5% - 20yr	1186.6	1135.25	1131.29	3.3	3.02	59.19	24.91	125.03	361.26	2.85	1.2	3.96	3.96
Stillwater County	A10	RM 432.10	214039.1	5% - 20yr	1186.6	1135.01	1130.7	3.04	2.41	49.74	22.12	124.1	535.6	2.94	1.31	4.31	4.31
Stillwater County	A10	RM 432.02	213606.1	5% - 20yr	1186.6	1134.93	1130.52	2.45	2.12	33.09	15.08	161.07	671.45	2.76	1.26	4.41	4.41
Stillwater County	A10	RM 431.87	212811.5	5% - 20yr	1186.6	1134.6	1129.24	2.4	2.11	34.42	19.94	210.92	575.1	2.16	1.25	5.36	5.36
Stillwater County	A10	RM 431.74	212127.4	5% - 20yr	1186.6	1134.44	1129.66	2.07	1.37	22.96	12.05	161.11	688.23	2.94	1.54	4.78	4.78
Stillwater County	A10	RM 431.60	211373.6	5% - 20yr	1186.6	1133.88	1129.96	3.01	2.85	49.09	26.58	134.23	299.39	2.89	1.56	3.92	3.92
Stillwater County	A10	RM 431.49	210820.2	5% - 20yr	1186.6	1133.6	1129.62	2.97	2.75	47.57	21.82	133.26	347.57	2.94	1.34	3.98	3.98
Stillwater County	A10	RM 431.41	210365.9	5% - 20yr	1186.6	1133.27	1129.57	3.2	3.02	55.89	30.91	130.07	252.97	2.82	1.56	3.7	3.7
Stillwater County	A10	RM 431.28	209716.5	5% - 20yr	1186.6	1132.94	1129.79	2.89	2.67	47.85	25.09	164.5	346.87	2.45	1.28	3.15	3.15
Stillwater County	A10	RM 431.14	208918.5	5% - 20yr	1186.6	1132.56	1129.82	2.38	2.49	34.01	26.01	131.59	294	2.11	1.62	3.81	3.81
Stillwater County	A10	RM 431.03	208358.8	5% - 20yr	1186.6	1132.18	1128.56	2.68	2.78	44.4	44.34	128.16	220.98	1.93	1.93	3.62	3.62
Stillwater County	A10	RM 430.93	207821.9	5% - 20yr	1186.6	1132.01	1128.76	2.33	2.07	32.04	23.89	126.38	382.36	2.24	1.68	3.25	3.25
Stillwater County	A10	RM 430.83	207325.6	5% - 20yr	1186.6	1131.76	1127.66	2.42	2.21	33.24	23.76	160.64	324.77	2.49	1.78	4.1	4.1
Stillwater County	A10	RM 430.70	206629.1	5% - 20yr	1186.6	1131.65	1126.9	1.91	1.74	19.43	10.91	150.14	478.81	3.18	1.79	4.75	4.75
Stillwater County	A10	RM 430.59	206064.9	5% - 20yr	1186.6	1131.51	1127.2	2.13	1.78	23.2	9.11	134.54	593.52	3.4	1.33	4.31	4.31
Stillwater County	A10	RM 430.51	205629.5	5% - 20yr	1186.6	1131.12	1126.28	3.02	2.61	47.07	20.2	106.98	417.87	3.36	1.44	4.84	4.84
Stillwater County	A10	RM 430.43	205204.2	5% - 20yr	1186.6	1130.85	1126.08	3.24	2.79	53.41	17.46	98.33	425.8	3.48	1.13	4.77	4.77
Stillwater County	A10	RM 430.34	204728.4	5% - 20yr	1186.6	1130.52	1126.07	3.42	2.99	61.26	27.3	103.13	377.8	3.2	1.42	4.45	4.45
Stillwater County	A11	RM 430.23	204119.7	5% - 20yr	1186.6	1130.43	1126.63	2.44	2.09	32.58	15.59	168.93	687.48	2.8	1.34	3.8	3.8
Stillwater County	A11	RM 430.12	203479.6	5% - 20yr	1186.6	1130.19	1126.96	2.65	2.22	39.27	17.51	112.27	717.46	2.64	1.17	3.66	3.66
Stillwater County	A11	RM 430.04	202968.2	5% - 20yr	1186.6	1129.92	1127.24	2.74	2.46	43.23	21.93	112.58	622.58	2.43	1.22	3.27	3.27
Stillwater County	A11	RM 429.95	202589.5	5% - 20yr	1186.6	1129.74	1126.33	2.46	2.18	35.8	17.25	141.87	665.58	2.24	1.08	3.41	3.41
Stillwater County	A11	RM 429.88	202224.7	5% - 20yr	1186.6	1129.57	1125.62	2.49	1.98	35.16	15.5	126.1	699.98	2.51	1.1	3.95	3.95
Stillwater County	A11	RM 429.78	201933.6	5% - 20yr	1186.6	1129.27	1123.72	2.96	2.21	46.49	16.09	92.05	625.02	2.99	1.02	5.55	5.55
Stillwater County	A11	RM 429.69	201539.9	5% - 20yr	1186.6	1128.77	1123.39	3.57	2.82	70.32	34.3	90.12	343.06	2.74	1.33	5.38	5.38
Stillwater County	A11	RM 429.58	200961.9	5% - 20yr	1186.6	1128.53	1124.69	2.82	1.97	45.49	22.07	116.91	526.67	2.36	1.15	3.84	3.84

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	5% - 20yr	1186.6	1128.11	1125.15	2.2	1.79	29.19	17.09	184.49	540.53	2.09	1.22	3.68	3.68
Stillwater County	A11	RM 429.28	199644.1	5% - 20yr	1186.6	1127.82	1123.59	2.38	1.89	33.11	17.33	148.31	522.64	2.3	1.2	4.23	4.23
Stillwater County	A11	RM 429.18	199152	5% - 20yr	1186.6	1127.63	1124.66	2.04	1.76	25.45	14.34	144.34	593.71	2.02	1.14	3.72	3.72
Stillwater County	A11	RM 429.10	198708.6	5% - 20yr	1186.6	1127.26	1124.26	2.65	2.22	42.13	19.65	87.69	542.25	2.11	0.98	3.68	3.68
Stillwater County	A11	RM 429.00	198203.8	5% - 20yr	1186.6	1127.05	1123.47	2.23	1.96	30.79	21.85	124.54	444.93	1.91	1.36	3.58	3.58
Stillwater County	A11	RM 428.89	197650.5	5% - 20yr	1186.6	1126.85	1121.26	2.39	1.91	30.99	15.89	150.68	428.86	2.84	1.45	5.59	5.59
Stillwater County	A11	RM 428.81	197194.1	5% - 20yr	1186.6	1126.66	1121.47	2.65	1.97	36.47	16.84	98.54	398.69	3.28	1.51	5.19	5.19
Stillwater County	A11	RM 428.66	196404.4	5% - 20yr	1186.6	1126.48	1122.31	2.06	1.79	24.35	14.7	204.39	580.72	2.44	1.47	4.17	4.17
Stillwater County	A11	RM 428.52	195702.6	5% - 20yr	1186.6	1126.16	1122.1	2.32	2.07	30.99	18.17	206.65	651.89	2.38	1.39	4.06	4.06
Stillwater County	A11	RM 428.44	195293.8	5% - 20yr	1186.6	1125.9	1121.18	2.66	2.35	38.12	19.13	146.38	606.08	2.94	1.47	4.72	4.72
Stillwater County	A11	RM 428.39	195075.5	5% - 20yr	1186.6	1125.69	1120.72	3.05	2.67	49.3	22.62	122.37	538.8	3.06	1.4	4.96	4.96
Stillwater County	A11	RM 428.33	194724.6	5% - 20yr	1186.6	1125.57	1121.22	2.83	2.51	42.79	22.49	135.66	660.67	2.99	1.57	4.34	4.34
Stillwater County	A11	RM 428.28	194450.8	5% - 20yr	1186.6	1125.46	1121.2	2.75	2.52	40.92	25.24	146.1	652.54	2.88	1.77	4.26	4.26
Stillwater County	A11	RM 428.23	194235.2	5% - 20yr	1186.6	1125.38	1120.74	2.7	2.57	38.74	30.83	143.06	589.99	3.02	2.4	4.63	4.63
Stillwater County	A11	RM 428.20	194033.4	5% - 20yr	1186.6	1125.32	1120.37	2.63	2.48	35.4	29.27	121.13	552.35	3.42	2.83	4.95	4.95
Stillwater County			193969.6	5% - 20yr	Bridge												
Stillwater County	A11	RM 428.17	193915	5% - 20yr	1186.6	1125.06	1120.32	2.78	2.6	39.72	32.87	115.84	534.57	3.36	2.78	4.74	4.74
Stillwater County			193871.1	5% - 20yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	5% - 20yr	1186.6	1124.9	1120.23	2.79	2.58	40.48	32.71	114.51	530.52	3.27	2.64	4.67	4.67
Stillwater County	A11	RM 428.11	193602.7	5% - 20yr	1186.6	1124.87	1119.42	2.55	2.35	34.71	26.01	131.19	473.75	3.05	2.27	5.45	5.45
Stillwater County	A11	RM 428.09	193436.6	5% - 20yr	1186.6	1124.73	1119.9	2.79	2.55	42	27.98	119.89	545.03	2.97	1.97	4.83	4.83
Stillwater County	A11	RM 428.05	193246.1	5% - 20yr	1186.6	1124.66	1120.1	2.7	2.41	39.48	25.1	126.4	557.31	2.88	1.82	4.56	4.56
Stillwater County	A11	RM 428.00	192989.8	5% - 20yr	1186.6	1124.58	1120.28	2.59	2.21	36.1	22.42	128.45	587.95	2.98	1.84	4.3	4.3
Stillwater County	A11	RM 427.95	192728.8	5% - 20yr	1186.6	1124.51	1119.57	2.44	2.02	31.45	16.16	133.33	619.64	3.11	1.59	4.94	4.94
Stillwater County	A11	RM 427.88	192333.2	5% - 20yr	1186.6	1124.24	1119.27	2.93	2.34	44.38	21.41	105.26	642.26	3.32	1.59	4.97	4.97
Stillwater County	A11	RM 427.83	192088.8	5% - 20yr	1186.6	1124.13	1119.18	2.96	2.49	45.34	24.42	104.7	653.47	3.35	1.79	4.95	4.95
Stillwater County	A11	RM 427.76	191724.1	5% - 20yr	1186.6	1124.01	1119.07	2.83	2.56	40.39	31.08	101.84	437.37	3.57	2.73	4.94	4.94
Stillwater County			191581.1	5% - 20yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	5% - 20yr	1186.6	1123.54	1118.71	3.19	3.08	53.59	46.39	114.28	176.09	3.17	2.74	4.83	4.83
Stillwater County	A11	RM 427.65	191155.9	5% - 20yr	1186.6	1123.51	1118.58	2.5	2.38	32.03	25.21	139.89	662.72	3.36	2.65	4.93	4.93
Stillwater County	A11	RM 427.53	190509.6	5% - 20yr	1186.6	1123.03	1117.37	3.26	3.14	52.8	39.33	96.4	453.52	3.76	2.79	5.66	5.66
Stillwater County	A11	RM 427.41	189886.1	5% - 20yr	1186.6	1122.81	1118.73	3.02	2.99	46.78	39.17	115.97	327.23	3.39	2.83	4.08	4.08
Stillwater County	A11	RM 427.29	189253.3	5% - 20yr	1186.6	1122.51	1119.12	2.87	2.83	48.01	43.46	176.35	331.36	2.33	2.11	3.39	3.39
Stillwater County	A11	RM 427.17	188639.5	5% - 20yr	1186.6	1122.26	1118.44	2.46	2.16	34.89	24.04	197.68	418.71	2.35	1.62	3.82	3.82
Stillwater County	A11	RM 427.09	188179.7	5% - 20yr	1186.6	1121.85	1118.34	3.09	2.47	51.87	25	126.94	387.19	2.85	1.37	3.51	3.51
Stillwater County	A11	RM 427.00	187745.4	5% - 20yr	1186.6	1121.72	1117.71	2.68	2.14	39.94	25.37	143.34	426.43	2.68	1.71	4.01	4.01
Stillwater County	A11	RM 426.92	187309.3	5% - 20yr	1186.6	1121.51	1117.32	2.54	2.25	38.38	27.36	205.37	361.89	2.18	1.56	4.18	4.18
Stillwater County	A11	RM 426.86	186960.4	5% - 20yr	1186.6	1121.36	1116.77	2.37	2.18	32.71	25.09	210.44	335.82	2.3	1.77	4.59	4.59
Stillwater County	A11	RM 426.75	186401.3	5% - 20yr	1186.6	1121.1	1116.11	2.46	2.17	34.41	28.37	182.86	279.69	2.49	2.06	4.99	4.99
Stillwater County	A11	RM 426.67	185983.5	5% - 20yr	1186.6	1120.86	1115.84	2.67	2.62	37.45	29.43	138.91	233.34	3.19	2.51	5.02	5.02
Stillwater County	A11	RM 426.59	185580.4	5% - 20yr	1186.6	1120.51	1115.47	3.23	3.1	53.25	42.75	106	138.43	3.43	2.77	5.04	5.04
Stillwater County	A11	RM 426.52	185166.5	5% - 20yr	1186.6	1120.33	1115.54	3.16	3.16	50.76	49.88	108.06	109.99	3.48	3.42	4.79	4.79
Stillwater County	A11	RM 426.43	184738.3	5% - 20yr	1186.6	1120.13	1115.89	3.13	3.09	50.89	46.31	115.4	128.64	3.27	2.98	4.24	4.24
Stillwater County	A11	RM 426.32	184158.4	5% - 20yr	1186.6	1119.88	1116.39	2.99	2.99	47.79	47.65	133.42	133.79	2.98	2.97	3.49	3.49
Stillwater County	A11	RM 426.20	183517.2	5% - 20yr	1186.6	1119.56	1116.07	2.69	2.67	44.13	42.55	215.58	225.28	2.04	1.97	3.49	3.49
Stillwater County	A11	RM 426.11	183030.7	5% - 20yr	1186.6	1119.36	1115.37	2.28	2.25	29.05	28.22	270.07	302.5	1.92	1.86	3.99	3.99
Stillwater County	A11	RM 426.00	182442.5	5% - 20yr	1186.6	1119.12	1115.74	2.19	2.03	28.77	26.22	240.46	341.42	2.14	1.95	3.38	3.38
Stillwater County	A11	RM 425.89	181895	5% - 20yr	1186.6	1118.84	1115.1	2.4	2.31	32.24	25.35	185.98	301.41	2.64	2.07	3.74	3.74
Stillwater County	A11	RM 425.72	181043.5	5% - 20yr	1186.6	1118.41	1113.77	2.71	2.56	39.69	21.38	150.71	369.94	2.89	1.55	4.64	4.64
Stillwater County	A11	RM 425.58	180310.5	5% - 20yr	1186.6	1117.88	1112.19	3.3	3.08	54.89	31.94	98.64	199.79	3.61	2.1	5.69	5.69
Stillwater County	A11	RM 425.46	179669.9	5% - 20yr	1186.6	1117.43	1112.78	3.61	3.24	67.37	39.68	95.23	223.58	3.33	1.96	4.65	4.65
Stillwater County	A11	RM 425.34	179022.4	5% - 20yr	1186.6	1117.35	1113.64	2.55	2.29	35.2	25.26	136.8	250.97	2.88	2.07	3.71	3.71
Stillwater County	A11	RM 425.24	178485.9	5% - 20yr	1186.6	1117.09	1114.19	2.63	2.32	40.37	30.88	126.45	381.07	2.32	1.78	2.95	2.95
Stillwater County	A11	RM 425.18	178205.8	5% - 20yr	1186.6	1116.82	1113.81	2.88	2.66	49.06	40.64	127.6	241.96	2.22	1.85	3.51	3.51
Stillwater County	A11	RM 425.11	177826.8	5% - 20yr	1186.6	1116.53	1113.29	2.76	2.77	45.01	33.63	120.72	254.81	2.24	1.68	4.24	4.24
Stillwater County	A11	RM 425.04	177454.7	5% - 20yr	1186.6	1116.35	1112.86	2.75	2.43	42.29	30.43	106.76	257.96	2.63	1.89	3.88	3.88
Stillwater County	A11	RM 424.97	177098.9	5% - 20yr	1186.6	1116.01	1113.11	3.07	2.8	54.48	41.27	106.81	233.1	2.39	1.82	3	3
Stillwater County	A11	RM 424.89	176675.9	5% - 20yr	1186.6	1115.88	1112.27	2.31	2.16	31.37	25.48	136.62	365.88	2.25	1.84	5.08	5.08
Stillwater County	A11	RM 424.81	176242.8	5% - 20yr	1186.6	1115.45	1112.25	2.74	2.72	48.37	46.68	139.15	343.43	1.7	1.65	3.45	3.45
Stillwater County	A11	RM 424.70	175789.3	5% - 20yr	1186.6	1115.31	1111.91	2.26	2.1	29.42	24.63	161.26	432.89	2.4	2.01	3.4	3.4

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	5% - 20yr	1186.6	1115	1111.34	2.56	2.24	38.4	28.65	131.46	367.32	2.29	1.71	3.66	3.66
Stillwater County	A11	RM 424.51	174723.2	5% - 20yr	1186.6	1114.79	1110.93	2.34	2.12	33.75	25.87	140.84	448.34	1.93	1.49	3.86	3.86
Stillwater County	A11	RM 424.38	174051	5% - 20yr	1186.6	1114.41	1110.98	2.51	2.18	38.53	22.02	135.76	541.53	1.98	1.13	3.43	3.43
Stillwater County	A11	RM 424.30	173607.9	5% - 20yr	1186.6	1114.14	1110.75	2.63	2.08	44.72	25.28	158.99	650.05	1.68	0.95	3.39	3.39
Stillwater County	A11	RM 424.21	173153.7	5% - 20yr	1186.6	1113.87	1110.74	2.21	1.85	31.12	16.17	188.24	742.86	1.79	0.93	3.13	3.13
Stillwater County	A11	RM 424.13	172713.5	5% - 20yr	1186.6	1113.63	1110.43	2.33	1.57	34.1	17.99	100.55	778.46	1.85	0.97	3.28	3.28
Stillwater County	A11	RM 424.05	172309.3	5% - 20yr	1186.6	1113.44	1110.18	1.83	1.42	21.41	12.65	155.5	811.23	1.74	1.03	3.26	3.26
Stillwater County	A11	RM 423.98	171892.1	5% - 20yr	1186.6	1113.36	1110.15	1.63	1.26	15.83	8.71	252.63	796.54	2.15	1.18	3.2	3.2
Stillwater County	A11	RM 423.90	171454.2	5% - 20yr	1186.6	1113.14	1109.55	2.24	1.6	29.06	12.7	156.66	717.21	2.39	1.04	3.59	3.59
Stillwater County	A11	RM 423.84	171147.5	5% - 20yr	1186.6	1113.03	1109.08	2.25	1.5	27.59	10.77	126.81	722.38	2.82	1.1	3.95	3.95
Stillwater County	A11	RM 423.74	170686.3	5% - 20yr	1186.6	1113	1108.91	1.7	1.13	15.45	7.91	124.33	685.76	3	1.53	4.09	4.09
Stillwater County	A11	RM 423.69	170436.3	5% - 20yr	1186.6	1112.83	1108.49	2.31	1.57	28.23	13.31	88.65	521.04	3.11	1.45	4.34	4.34
Stillwater County	A11	RM 423.57	169782.9	5% - 20yr	1186.6	1112.56	1108.2	2.32	1.97	28.65	15.1	159.19	555.6	3.05	1.6	4.36	4.36
Stillwater County	A11	RM 423.47	169296.5	5% - 20yr	1186.6	1112.15	1107.67	3.06	2.73	48.94	20.66	120.55	453.45	3.18	1.34	4.48	4.48
Stillwater County	A11	RM 423.39	168860.7	5% - 20yr	1186.6	1111.78	1107.7	3.42	3.04	61.58	22.16	107.8	420.49	3.17	1.13	4.08	4.08
Stillwater County	A11	RM 423.27	168178	5% - 20yr	1186.6	1111.26	1107.36	3.54	3.36	68.61	26.66	118.28	324.94	2.82	1.09	3.9	3.9
Stillwater County	A12	RM 423.17	167687.7	5% - 20yr	1186.6	1111.09	1107.46	2.92	2.61	47.73	23.61	153.73	392.33	2.58	1.27	3.63	3.63
Stillwater County	A12	RM 423.08	167239.6	5% - 20yr	1186.6	1110.85	1107.21	2.94	2.5	48.57	28.58	129.52	390.52	2.56	1.5	3.64	3.64
Stillwater County	A12	RM 423.01	166844.5	5% - 20yr	1186.6	1110.6	1106.84	2.83	2.45	47.65	30.09	143.89	391.56	2.16	1.37	3.76	3.76
Stillwater County	A12	RM 422.91	166338	5% - 20yr	1186.6	1110.26	1106.54	2.98	2.5	49.06	28.23	111.9	338.06	2.72	1.57	3.72	3.72
Stillwater County	A12	RM 422.80	165757.6	5% - 20yr	1186.6	1109.95	1106.83	2.82	2.54	45.5	26.72	146.64	398.35	2.45	1.44	3.12	3.12
Stillwater County	A12	RM 422.70	165279.2	5% - 20yr	1186.6	1109.85	1105.79	2.18	1.81	27.79	18.3	202.68	492.21	2.3	1.52	4.06	4.06
Stillwater County	A12	RM 422.63	164895.4	5% - 20yr	1186.6	1109.74	1105.43	2.09	1.64	25.54	14.81	179.41	562.19	2.3	1.33	4.31	4.31
Stillwater County	A12	RM 422.53	164348.1	5% - 20yr	1186.6	1109.52	1104.76	2.21	1.8	27.7	14.4	167.27	521.48	2.5	1.29	4.76	4.76
Stillwater County	A12	RM 422.39	163609.2	5% - 20yr	1186.6	1109.13	1104.22	2.65	2.23	36.97	15.19	132.51	412.8	3.16	1.29	4.91	4.91
Stillwater County	A12	RM 422.30	163120.4	5% - 20yr	1186.6	1108.72	1104.18	3.23	3.08	53.76	35.03	109.03	210.93	3.33	2.17	4.54	4.54
Stillwater County	A12	RM 422.19	162534.3	5% - 20yr	1186.6	1108.53	1103.72	2.88	2.74	42.71	23.74	122.19	234.07	3.35	1.85	4.81	4.81
Stillwater County	A12	RM 422.08	161934.5	5% - 20yr	1186.6	1108.01	1104.18	3.48	3.36	64.44	37.93	112.57	199.37	3.02	1.77	3.83	3.83
Stillwater County	A12	RM 421.98	161402.1	5% - 20yr	1186.6	1107.9	1103.86	2.72	2.66	39.28	31.36	142.02	182.72	3.06	2.44	4.04	4.04
Stillwater County	A12	RM 421.90	161037.7	5% - 20yr	1186.6	1107.76	1103.14	2.64	2.64	38.82	38.82	167.7	167.7	2.68	2.68	4.62	4.62
Stillwater County	A12	RM 421.86	160799.3	5% - 20yr	1186.6	1107.65	1102.54	2.61	2.61	39.56	36.48	193.24	209.93	2.35	2.17	5.11	5.11
Stillwater County	A12	RM 421.81	160535.9	5% - 20yr	1186.6	1107.52	1102.38	2.52	2.52	38.16	38.16	220.85	220.85	2.13	2.13	5.14	5.14
Stillwater County	A12	RM 421.77	160279.4	5% - 20yr	1186.6	1107.33	1102.41	2.73	2.6	44.03	34.37	182.26	261.46	2.23	1.74	4.91	4.91
Stillwater County	A12	RM 421.69	159875.5	5% - 20yr	1186.6	1107.18	1102.56	2.56	2.19	33.96	13.57	130.2	408.88	3.34	1.33	4.62	4.62
Stillwater County	A12	RM 421.60	159411.4	5% - 20yr	1186.6	1106.83	1103.26	3.1	2.69	53.28	25.54	131.13	343.08	2.68	1.29	3.57	3.57
Stillwater County	A12	RM 421.53	159038	5% - 20yr	1186.6	1106.45	1102.81	3.42	3.12	67.71	39.35	133.15	276.36	2.37	1.38	3.64	3.64
Stillwater County	A12	RM 421.45	158590.5	5% - 20yr	1186.6	1106.3	1103.26	2.7	2.41	42.23	28.81	154.46	330.21	2.35	1.6	3.04	3.04
Stillwater County	A12	RM 421.32	157930.2	5% - 20yr	1186.6	1105.9	1102.82	2.71	2.5	46.05	36.01	97.48	325.07	1.86	1.46	3.08	3.08
Stillwater County	A12	RM 421.24	157513	5% - 20yr	1186.6	1105.62	1103.05	2.52	2.31	41.94	34.82	126.41	386.98	1.59	1.33	3.13	3.13
Stillwater County	A12	RM 421.13	156951.5	5% - 20yr	1186.6	1105.41	1100.38	2.2	1.94	29.58	21.88	118.8	407.99	2.03	1.5	5.03	5.03
Stillwater County	A12	RM 421.05	156536.5	5% - 20yr	1186.6	1105.3	1102.11	1.85	1.72	21.05	16.81	103.98	488.4	1.98	1.58	3.19	3.19
Stillwater County	A12	RM 420.94	155960.1	5% - 20yr	1186.6	1105.05	1101.68	2	1.9	22.09	19.25	213.29	324.26	2.72	2.37	3.37	3.37
Stillwater County	A12	RM 420.85	155473.6	5% - 20yr	1186.6	1104.42	1100.98	3.51	2.71	71.97	38.54	135.44	374.86	2.29	1.23	3.44	3.44
Stillwater County	A12	RM 420.75	154957.2	5% - 20yr	1186.6	1104.26	1099.95	2.63	2.03	38.91	18.55	157.51	481.22	2.54	1.21	4.31	4.31
Stillwater County	A12	RM 420.66	154483	5% - 20yr	1186.6	1104.11	1099.89	2.36	1.77	30.42	16.68	165.14	462.86	2.79	1.52	4.22	4.22
Stillwater County	A12	RM 420.58	154037.5	5% - 20yr	1186.6	1103.74	1100.13	3.02	2.22	49.13	23.55	122.25	379.17	2.94	1.41	3.61	3.61
Stillwater County	A12	RM 420.52	153691.5	5% - 20yr	1186.6	1103.56	1099.7	3	2.26	49.28	21.95	131.23	426.44	2.76	1.23	3.86	3.86
Stillwater County	A12	RM 420.46	153398	5% - 20yr	1186.6	1103.35	1099.36	3.09	2.51	53.1	27.06	136.26	351.26	2.64	1.34	3.99	3.99
Stillwater County	A12	RM 420.38	152998.3	5% - 20yr	1186.6	1103.22	1099.19	2.59	2	38.78	18.03	176.14	536.15	2.39	1.11	4.03	4.03
Stillwater County	A12	RM 420.30	152566.4	5% - 20yr	1186.6	1103.14	1099.43	1.98	1.5	22.76	13.06	230.5	601.29	2.3	1.32	3.71	3.71
Stillwater County	A12	RM 420.21	152106.2	5% - 20yr	1186.6	1102.96	1098.69	2.1	1.67	26.7	17.35	238.7	536.23	2.05	1.33	4.27	4.27
Stillwater County	A12	RM 420.15	151738.6	5% - 20yr	1186.6	1102.84	1098.38	1.99	1.79	19.25	12.54	260.6	459.48	2.23	1.45	4.46	4.46
Stillwater County	A12	RM 420.08	151399.3	5% - 20yr	1186.6	1102.7	1097.97	2.16	1.98	25.68	14.69	196.53	381.8	2.74	1.57	4.73	4.73
Stillwater County	A12	RM 420.03	151123.2	5% - 20yr	1186.6	1102.55	1097.96	2.47	2.05	31.88	14.44	142.7	398.72	3.23	1.45	4.59	4.59
Stillwater County	A12	RM 419.96	150779.4	5% - 20yr	1186.6	1102.32	1098.1	2.86	2.21	43.33	18.35	128.1	414.18	3.06	1.29	4.22	4.22
Stillwater County	A12	RM 419.91	150511.3	5% - 20yr	1186.6	1102.05	1097.83	3.25	2.65	54.04	18.8	102.77	377.75	3.44	1.19	4.22	4.22
Stillwater County	A12	RM 419.85	150192.4	5% - 20yr	1186.6	1101.66	1097.85	3.72	3.12	74.78	27.8	106.71	378.61	2.92	1.08	3.81	3.81
Stillwater County	A12	RM 419.78	149807.6	5% - 20yr	1186.6	1101.55	1097.13	3.23	2.42	54.05	20.13	104.8	397.41	3.34	1.24	4.42	4.42
Stillwater County	A12	RM 419.70	149371.5	5% - 20yr	1186.6	1101.3	1097.73	3.16	2.7	55.74	27.19	138.38	341.14	2.64	1.29	3.57	3.57
Stillwater County	A12	RM 419.63	149047.6	5% - 20yr	1186.6	1101.19	1097.92	2.76	2.46	43.27	24.68	168.16	336.75	2.51	1.43	3.27	3.27

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	5% - 20yr	1186.6	1100.82	1097.22	3.05	2.47	55.67	33.18	135.82	376	2.14	1.28	3.6	3.6
Stillwater County	A12	RM 419.46	148117.9	5% - 20yr	1186.6	1100.61	1097.34	2.65	2.18	41.77	23.96	133.46	437.35	2.17	1.24	3.53	3.53
Stillwater County	A12	RM 419.38	147728.5	5% - 20yr	1186.6	1100.42	1097.36	2.28	1.94	31.84	24	149.15	410.34	1.97	1.49	3.06	3.06
Stillwater County	A12	RM 419.31	147342.9	5% - 20yr	1186.6	1100.33	1096.9	1.86	1.69	19.38	15.2	114.45	344.5	2.58	2.03	3.43	3.43
Stillwater County	A12	RM 419.19	146720.3	5% - 20yr	1186.6	1100.21	1096.42	1.63	1.77	14.69	15.08	106.51	271.22	2.67	2.75	5.81	5.81
Stillwater County	A12	RM 419.10	146243.9	5% - 20yr	1186.6	1100.09	1095.09	2.03	1.87	20.61	12.84	156.37	329.95	3.66	2.28	5	5
Stillwater County	A12	RM 419.03	145859.8	5% - 20yr	1186.6	1099.78	1095.88	2.76	2.64	43.36	28.64	171.38	295.79	2.48	1.64	3.9	3.9
Stillwater County	A12	RM 418.95	145435.3	5% - 20yr	1186.6	1099.57	1095.15	2.61	2.43	40.72	25.2	206.87	380.9	2.15	1.33	4.42	4.42
Stillwater County	A12	RM 418.84	144864	5% - 20yr	1186.6	1099.21	1094.92	2.62	2.32	42.24	25.33	222.59	444.4	1.97	1.18	4.29	4.29
Stillwater County	A12	RM 418.69	144066	5% - 20yr	1186.6	1098.65	1095.29	2.81	2.31	47.53	26.57	168.81	481.82	2.12	1.18	3.36	3.36
Stillwater County	A12	RM 418.57	143452.8	5% - 20yr	1186.6	1098.19	1095.1	2.96	2.45	52.28	23.69	135.5	500.15	2.15	0.98	3.09	3.09
Stillwater County	A12	RM 418.49	143008.1	5% - 20yr	1186.6	1098.11	1094.94	2.1	1.52	25.58	12.47	169.36	791.47	2.35	1.15	3.17	3.17
Stillwater County	A12	RM 418.35	142310.9	5% - 20yr	1186.6	1097.63	1093.15	2.88	2	49.25	21.44	127.43	617.54	2.21	0.96	4.48	4.48
Stillwater County	A12	RM 418.25	141740.8	5% - 20yr	1186.6	1097.4	1093.71	2.15	1.62	28.52	20.23	177.47	593.44	1.92	1.36	3.69	3.69
Stillwater County	A12	RM 418.08	140894.8	5% - 20yr	1186.6	1097.09	1092.65	2.16	1.83	26.8	14.97	139.46	475.79	2.44	1.36	4.44	4.44
Stillwater County	A12	RM 417.89	139893.7	5% - 20yr	1186.6	1096.35	1092.75	3.19	2.76	56.41	29.73	128.08	405.22	2.68	1.41	3.6	3.6
Stillwater County	A12	RM 417.79	139376.4	5% - 20yr	1186.6	1096.11	1091.64	2.92	2.38	48.35	28.09	128.41	350.68	2.53	1.47	4.47	4.47
Stillwater County	A12	RM 417.65	138633.4	5% - 20yr	1186.6	1095.62	1091.57	3.22	2.67	55.29	28.96	97.66	300.9	3.01	1.57	4.05	4.05
Stillwater County	A12	RM 417.54	138089.5	5% - 20yr	1186.6	1095.05	1091.15	3.78	3.23	76.29	42.94	86.68	217.09	3.02	1.69	3.9	3.9
Stillwater County	A12	RM 417.40	137321.3	5% - 20yr	1345.2	1094.77	1091.71	2.78	2.36	44.89	30.63	128.02	375.32	2.32	1.58	3.06	3.06
Stillwater County	A12	RM 417.30	136818.2	5% - 20yr	1345.2	1094.43	1091.51	2.71	2.51	43.68	33.17	200.92	351.71	2.16	1.64	2.92	2.92
Stillwater County	A12	RM 417.20	136304	5% - 20yr	1345.2	1094.35	1091.27	1.85	1.78	19.96	17.48	203.94	443.75	2.31	2.03	3.08	3.08
Stillwater County	A13	RM 417.09	135706	5% - 20yr	1345.2	1093.74	1090.35	3.13	2.78	57.67	37.77	189.43	332.44	2.22	1.46	3.39	3.39
Stillwater County	A13	RM 417.01	135303.6	5% - 20yr	1345.2	1093.63	1090	2.4	2.26	34.3	28.63	250.71	384.7	2.19	1.83	3.63	3.63
Stillwater County	A13	RM 416.94	134899.8	5% - 20yr	1345.2	1093.21	1089.69	2.99	2.8	46.81	38.88	218.71	318.67	2.02	1.68	3.52	3.52
Stillwater County	A13	RM 416.85	134457.6	5% - 20yr	1345.2	1093.03	1089.62	2.64	2.31	38.82	22.43	185.89	378.42	2.67	1.54	3.41	3.41
Stillwater County	A13	RM 416.73	133843.5	5% - 20yr	1345.2	1092.59	1089.6	2.92	2.6	51.34	31.75	214.87	400.03	2.09	1.3	2.99	2.99
Stillwater County	A13	RM 416.63	133286.1	5% - 20yr	1345.2	1092.21	1089.3	2.86	2.58	50.82	37.89	133.52	362.5	1.92	1.44	2.91	2.91
Stillwater County	A13	RM 416.52	132717.9	5% - 20yr	1345.2	1091.93	1089.09	2.55	1.98	40.46	27.15	104.23	539.42	1.87	1.26	2.84	2.84
Stillwater County	A13	RM 416.43	132250.3	5% - 20yr	1345.2	1091.6	1088.74	2.4	2.01	36.62	25.44	114.3	555.71	1.77	1.23	2.86	2.86
Stillwater County	A13	RM 416.33	131707.5	5% - 20yr	1345.2	1091.36	1088.02	2.18	1.87	29.68	22.73	132.13	538.66	1.89	1.45	3.34	3.34
Stillwater County	A13	RM 416.22	131140.9	5% - 20yr	1345.2	1090.94	1087.56	3.03	2.28	51.57	30.05	84.28	420.75	2.57	1.5	3.37	3.37
Stillwater County	A13	RM 416.13	130626.3	5% - 20yr	1345.2	1090.6	1086.65	2.84	2.31	45.58	29.5	147.14	383.54	2.51	1.63	3.95	3.95
Stillwater County	A13	RM 416.04	130164.9	5% - 20yr	1345.2	1090.26	1085.03	3.14	2.23	54.49	26.64	123.78	483.1	2.69	1.31	5.23	5.23
Stillwater County	A13	RM 415.96	129734.7	5% - 20yr	1345.2	1090.18	1085.48	2.42	1.67	32.02	15.06	133.05	756.34	2.83	1.33	4.7	4.7
Stillwater County	A13	RM 415.90	129423.4	5% - 20yr	1345.2	1090.08	1085.77	2.05	1.41	23.5	12.03	159.46	863.13	2.59	1.32	4.31	4.31
Stillwater County	A13	RM 415.83	129071.6	5% - 20yr	1345.2	1090	1085.89	1.89	1.35	19.46	11.41	152.97	716.44	2.84	1.67	4.67	4.67
Stillwater County	A13	RM 415.74	128639.5	5% - 20yr	1345.2	1089.79	1084.72	2.38	1.63	29.37	14.3	154.02	727.67	3.3	1.6	5.07	5.07
Stillwater County	A13	RM 415.72	128521.2	5% - 20yr	1345.2	1089.66	1084.8	2.73	1.84	38.13	17.38	130.65	703.4	3.42	1.55	4.86	4.86
Stillwater County	A13	RM 415.65	128106.2	5% - 20yr	1345.2	1089.51	1083.7	2.66	1.98	39.13	24.25	170.19	769.24	2.7	1.67	5.81	5.81
Stillwater County	A13	RM 415.59	127828.3	5% - 20yr	1345.2	1089.24	1083.61	3.04	2.6	48.74	32.08	136.01	640.66	3.15	2.06	5.63	5.63
Stillwater County	A13	RM 415.55	127620.5	5% - 20yr	1345.2	1089.23	1082.84	2.36	2.36	26.63	25.49	132.97	359.28	4.28	4.1	6.39	6.39
Stillwater County			127503	5% - 20yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	5% - 20yr	1345.2	1088.8	1082.96	2.45	2.45	28.17	27.68	122.78	160.26	4.47	4.4	5.84	5.84
Stillwater County	A13	RM 415.50	127340.9	5% - 20yr	1345.2	1088.63	1083.14	2.79	2.79	40.76	40.76	149.8	173.88	3.21	3.21	5.49	5.49
Stillwater County	A13	RM 415.45	127087.4	5% - 20yr	1345.2	1088.28	1083.18	3.41	3.41	65.56	65.53	154.43	262.22	2.56	2.55	5.1	5.1
Stillwater County	A13	RM 415.39	126788	5% - 20yr	1345.2	1088.15	1084.07	3.06	3.05	51.79	46.42	162.04	438.16	2.71	2.43	4.08	4.08
Stillwater County	A13	RM 415.34	126499.1	5% - 20yr	1345.2	1088.03	1084.45	3.02	2.83	50.69	42.41	129.56	419.76	2.64	2.22	3.58	3.58
Stillwater County	A13	RM 415.25	126040.7	5% - 20yr	1345.2	1087.73	1082.42	3.11	2.89	52.78	35.24	123.59	404.84	2.84	1.9	5.31	5.31
Stillwater County	A13	RM 415.18	125663.1	5% - 20yr	1345.2	1087.59	1083.81	2.84	2.63	43.66	30.87	135.23	314.06	2.9	2.06	3.78	3.78
Stillwater County	A13	RM 415.10	125251.2	5% - 20yr	1345.2	1087.15	1083.01	3.48	3.19	65.71	47.05	109.73	229.31	2.88	2.06	4.14	4.14
Stillwater County	A13	RM 414.97	124585.1	5% - 20yr	1345.2	1086.74	1082.64	3.28	2.81	59.95	38.25	121.02	377.19	2.67	1.7	4.1	4.1
Stillwater County	A13	RM 414.88	124110.1	5% - 20yr	1345.2	1086.43	1083.02	3.22	2.82	57.58	39.8	124.24	338.48	2.66	1.84	3.41	3.41
Stillwater County	A13	RM 414.71	123222	5% - 20yr	1345.2	1085.94	1080.88	2.88	2.88	45.18	43.42	164.36	275.47	2.84	2.73	5.05	5.05
Stillwater County	A13	RM 414.57	122473.6	5% - 20yr	1345.2	1085.36	1081.21	3.31	3.09	60.08	32.53	146.86	339.56	2.75	1.48	4.15	4.15
Stillwater County	A13	RM 414.43	121696.6	5% - 20yr	1345.2	1084.89	1080.49	3.08	2.76	54.07	33.3	170.98	624.01	2.46	1.52	4.4	4.4
Stillwater County	A13	RM 414.21	120527.7	5% - 20yr	1345.2	1084.17	1080.81	2.7	2.46	44.73	32.23	220.34	591.96	1.95	1.41	3.36	3.36
Stillwater County	A13	RM 413.90	118914.7	5% - 20yr	1345.2	1082.8	1079.28	3.28	2.57	61.14	25.92	155.63	497.64	2.49	1.05	3.52	3.52
Stillwater County	A13	RM 413.65	117570.4	5% - 20yr	1345.2	1082.08	1078.15	2.9	1.76	46.33	21.13	141.08	609.5	2.75	1.25	3.93	3.93
Stillwater County	A14	RM 413.44	116446.3	5% - 20yr	1345.2	1081.37	1076.4	3.11	1.94	53.42	16.85	146.13	822.81	2.68	0.84	4.97	4.97

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	5% - 20yr	1345.2	1080.84	1077.8	2.94	1.85	52.03	23.66	176.5	766.51	2.1	0.95	3.04	3.04
Stillwater County	A14	RM 413.11	114697.4	5% - 20yr	1345.2	1080.33	1077.12	2.61	1.77	40.2	17.4	197.07	813.81	2.21	0.95	3.21	3.21
Stillwater County	A14	RM 412.99	114113.2	5% - 20yr	1345.2	1079.92	1076.41	2.82	1.92	47.73	21.58	186.22	819.46	2.13	0.96	3.51	3.51
Stillwater County	A14	RM 412.88	113533.6	5% - 20yr	1345.2	1079.56	1076.03	2.88	2.14	46.21	21.12	143.54	630.94	2.66	1.21	3.53	3.53
Stillwater County	A14	RM 412.73	112742.6	5% - 20yr	1345.2	1079.04	1074.72	2.97	2.13	51.79	27.97	171.82	594.34	2.27	1.23	4.32	4.32
Stillwater County	A14	RM 412.59	112005.5	5% - 20yr	1345.2	1078.57	1074.72	2.78	2.1	45.86	30.79	198.13	642.15	2.21	1.48	3.85	3.85
Stillwater County	A14	RM 412.49	111442.5	5% - 20yr	1345.2	1078.46	1074.54	2.12	1.74	25.32	13.13	189.08	784.08	2.57	1.33	3.92	3.92
Stillwater County	A14	RM 412.31	110522	5% - 20yr	1345.2	1078.11	1072.96	2.42	1.93	29.28	12.47	144.87	581.61	3.67	1.55	5.15	5.15
Stillwater County	A14	RM 412.19	109955.3	5% - 20yr	1345.2	1077.31	1071.57	3.99	3.53	83.91	38.95	103.6	259.67	3.19	1.47	5.74	5.74
Stillwater County	A14	RM 412.05	109175.2	5% - 20yr	1345.2	1076.92	1072.08	3.45	2.98	61.45	25.91	113.54	349.43	3.35	1.4	4.84	4.84
Stillwater County	A14	RM 411.92	108510.2	5% - 20yr	1345.2	1076.65	1072.88	3.04	3.03	48.85	46.15	144.02	152.75	3.08	2.91	3.77	3.77
Stillwater County	A14	RM 411.81	107950.5	5% - 20yr	1345.2	1076.17	1070.62	3.47	3.47	64.87	64.87	132.25	136.75	2.93	2.93	5.55	5.55
Stillwater County	A14	RM 411.71	107391.9	5% - 20yr	1345.2	1075.91	1070.83	3.22	3.21	52.71	50.89	119.39	144.7	3.5	3.38	5.08	5.08
Stillwater County	A14	RM 411.58	106721	5% - 20yr	1345.2	1075.62	1071.65	3	2.99	49.27	41.83	160.83	274.89	2.79	2.36	3.97	3.97
Stillwater County	A14	RM 411.47	106133.7	5% - 20yr	1345.2	1075.28	1071.87	3.05	2.62	51.84	29.99	157.75	340.26	2.66	1.54	3.41	3.41
Stillwater County	A14	RM 411.32	105338.4	5% - 20yr	1345.2	1074.76	1069.29	3.1	2.76	53.62	38.23	161.33	272.38	2.62	1.86	5.47	5.47
Stillwater County	A14	RM 411.14	104374.6	5% - 20yr	1345.2	1073.86	1067.92	3.74	2.93	74.37	33.44	113.45	337.65	3.04	1.36	5.93	5.93
Stillwater County	A14	RM 411.00	103638.4	5% - 20yr	1345.2	1073.42	1069.6	3.3	2.52	61.99	35.21	141.3	380.97	2.47	1.4	3.82	3.82
Stillwater County	A14	RM 410.85	102835.8	5% - 20yr	1345.2	1072.97	1069.92	2.71	2.19	45.66	29.28	83.64	541.8	1.88	1.21	3.05	3.05
Stillwater County	A14	RM 410.74	102286.3	5% - 20yr	1345.2	1072.52	1068.99	2.86	2.15	48.94	28.28	73.8	609.53	2.15	1.23	3.53	3.53
Stillwater County	A14	RM 410.63	101668.3	5% - 20yr	1345.2	1072.23	1068.37	2.55	1.81	36.79	20.05	83.69	762.45	2.51	1.36	3.86	3.86
Stillwater County	A14	RM 410.52	101115.7	5% - 20yr	1345.2	1071.9	1067.81	2.63	2.13	38.3	23.74	123.09	667.58	2.68	1.66	4.09	4.09
Stillwater County	A14	RM 410.42	100568.4	5% - 20yr	1345.2	1071.39	1066.66	2.91	2.92	51.79	45.13	149.68	283.09	1.99	1.73	4.73	4.73
Stillwater County	A14	RM 410.33	100099.2	5% - 20yr	1345.2	1071.18	1066.6	2.58	2.31	37.4	25.01	198.78	627.16	2.55	1.71	4.58	4.58
Stillwater County	A14	RM 410.22	99589.26	5% - 20yr	1345.2	1070.68	1066.94	3.27	2.78	59.93	30.69	151.76	796.71	2.6	1.33	3.74	3.74
Stillwater County	A14	RM 410.12	99057.4	5% - 20yr	1345.2	1070.31	1065.8	3.15	2.69	58.49	41.7	174.78	726.88	2.23	1.59	4.51	4.51
Stillwater County	A14	RM 410.03	98630.66	5% - 20yr	1345.2	1069.99	1065.33	2.97	2.58	53.57	41.07	206.25	626.62	2.03	1.55	4.66	4.66
Stillwater County	A14	RM 409.99	98385.41	5% - 20yr	1345.2	1069.78	1065.38	3.01	2.56	55.19	38.75	204.95	673.33	2.01	1.41	4.4	4.4
Stillwater County	A14	RM 409.94	98072.09	5% - 20yr	1345.2	1069.62	1065.51	2.7	2.14	42.87	24.02	205.32	951.09	2.23	1.25	4.11	4.11
Stillwater County	A14	RM 409.87	97717.24	5% - 20yr	1345.2	1069.57	1065.52	2.2	1.54	25.36	12.36	166.24	1177.32	3.18	1.55	4.05	4.05
Stillwater County	A14	RM 409.76	97130.84	5% - 20yr	1345.2	1069.18	1065.37	2.92	2.09	46.73	18.19	146.97	857.48	2.8	1.09	3.82	3.82
Stillwater County	A14	RM 409.60	96278.7	5% - 20yr	1345.2	1068.24	1064.65	3.74	2.93	86.06	48.98	166.1	430.65	1.97	1.12	3.59	3.59
Stillwater County	A14	RM 409.43	95381.62	5% - 20yr	1345.2	1067.61	1063.55	3.05	2.14	52.27	24.15	133.7	793.52	2.57	1.18	4.06	4.06
Stillwater County	A14	RM 409.24	94405.29	5% - 20yr	1345.2	1066.92	1064.55	2.28	1.88	36.24	25.63	156.11	913.98	1.34	0.95	2.71	2.71
Stillwater County	A14	RM 409.15	93912.54	5% - 20yr	1345.2	1066.56	1064.27	1.95	1.78	25.59	18.25	167.8	704.5	1.5	1.07	4.48	4.48
Stillwater County	A14	RM 408.99	93008.08	5% - 20yr	1345.2	1065.74	1063.94	2.42	2.65	41.36	31.08	161.86	525.13	1.28	0.97	3.2	3.2
Stillwater County	A14	RM 408.84	92229.27	5% - 20yr	1345.2	1065.22	1062.1	2.67	2.55	46.83	32.41	153.99	470.5	1.61	1.12	3.12	3.12
Stillwater County	A14	RM 408.63	91072.98	5% - 20yr	1345.2	1064.6	1061.85	2.13	1.99	29.29	24.97	211.69	474.55	1.72	1.46	3.02	3.02
Stillwater County	A14	RM 408.41	89726.16	5% - 20yr	1345.2	1064.11	1059.04	2.43	2.04	29.88	16.99	105.48	323.82	3.6	2.04	5.07	5.07
Stillwater County	A14	RM 408.26	88966.66	5% - 20yr	1345.2	1063.82	1058.13	2.62	2.23	34.33	18.51	130.93	306.31	3.67	1.97	5.69	5.69
Stillwater County	A14	RM 408.10	88091.52	5% - 20yr	1345.2	1063.04	1057.78	3.74	3.51	70.48	46.74	98.48	160.36	3.6	2.39	5.26	5.26
Stillwater County	A14	RM 408.02	87720.33	5% - 20yr	1345.2	1062.97	1058.61	3.22	2.89	53.75	27.17	125.81	300.22	3.27	1.65	4.35	4.35
Stillwater County	A14	RM 407.83	86708.48	5% - 20yr	1345.2	1062.37	1058.65	2.96	2.73	53.97	36.7	157.98	368.99	1.96	1.33	3.72	3.72
Stillwater County	A14	RM 407.71	86078.99	5% - 20yr	1345.2	1061.95	1057.9	3.15	2.66	55.02	25.34	117.69	410.69	2.67	1.23	4.05	4.05
Stillwater County	A14	RM 407.61	85508.29	5% - 20yr	1345.2	1061.7	1058.36	2.6	2.33	41.15	27.9	170.55	421.55	2.02	1.37	3.34	3.34
Stillwater County	A14	RM 407.50	84909.3	5% - 20yr	1345.2	1061.42	1058.55	2.51	2.21	39.38	29.71	178.94	433.04	1.85	1.4	3.36	3.36
Stillwater County	A14	RM 407.41	84433.26	5% - 20yr	1345.2	1061.24	1057.85	2.46	1.93	35.67	22.48	122.26	494.9	2.23	1.41	3.58	3.58
Stillwater County	A14	RM 407.36	84180.66	5% - 20yr	1345.2	1061.05	1057.59	2.83	2.02	45.39	23.42	101.75	510.94	2.53	1.3	3.46	3.46
Stillwater County	A14	RM 407.29	83775.88	5% - 20yr	1345.2	1060.7	1057.08	2.42	2.48	36.27	28.95	154.31	347.7	1.95	1.56	3.88	3.88
Stillwater County	A14	RM 407.13	82954.84	5% - 20yr	1345.2	1060.35	1056.27	2.22	2.18	29.33	25.99	279.07	320.87	2.16	1.92	4.08	4.08
Stillwater County	A14	RM 406.98	82156.72	5% - 20yr	1345.2	1060.11	1056.37	2.13	2.04	24	18.41	199.52	280.05	3.11	2.39	3.74	3.74
Stillwater County	A14	RM 406.86	81532.92	5% - 20yr	1345.2	1059.34	1055.69	3.75	3.58	74.64	59.62	115.12	153.35	3.07	2.45	3.65	3.65
Stillwater County	A14	RM 406.77	81053.3	5% - 20yr	1345.2	1059.08	1053.84	3.52	3.12	64.62	41.32	112.47	207.84	3.25	2.07	5.24	5.24
Stillwater County	A14	RM 406.64	80405.13	5% - 20yr	1345.2	1058.82	1054.89	3.05	2.83	49.18	37.52	138.74	272.75	3.07	2.35	3.93	3.93
Stillwater County	A14	RM 406.48	79524.79	5% - 20yr	1345.2	1058.3	1054.8	2.98	2.44	50.75	31.05	204.24	471.88	2	1.22	3.5	3.5
Stillwater County	A14	RM 406.25	78337.26	5% - 20yr	1345.2	1057.59	1054.03	2.91	2.39	46.16	19.96	143.47	465.78	2.81	1.21	3.56	3.56
Stillwater County	A14	RM 406.08	77409.13	5% - 20yr	1345.2	1057.15	1052.87	2.88	2.03	45.12	16.52	131.8	672.81	2.89	1.05	4.28	4.28
Stillwater County	A14	RM 405.93	76624.91	5% - 20yr	1345.2	1056.42	1052.64	3.54	3.25	65.53	34.29	114.34	245.03	3.23	1.69	3.78	3.78
Stillwater County	A14	RM 405.81	75994.44	5% - 20yr	1345.2	1056.11	1051.93	3.24	3.11	55.89	51.11	133.87	205.82	3.02	2.77	4.17	4.17
Stillwater County	A15	RM 405.77	75764.36	5% - 20yr	1345.2	1055.83	1052.63	3.58	3.31	72.69	62.45	142.49	189.52	2.49	2.15	3.2	3.2

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	5% - 20yr	1345.2	1055.5	1052.06	3.13	2.69	55.18	41.55	82.19	262	2.56	1.94	3.44	3.44
Stillwater County	A15	RM 405.61	74883.52	5% - 20yr	1345.2	1055.3	1051.81	3.4	2.6	62.16	35.12	69.55	391.79	2.91	1.65	3.49	3.49
Stillwater County	A15	RM 405.52	74415.92	5% - 20yr	1345.2	1054.81	1051.43	3.97	2.82	85.07	45.32	52.24	459	2.91	1.54	3.38	3.38
Stillwater County	A15	RM 405.45	74031.34	5% - 20yr	1345.2	1054.77	1051.1	3.01	1.94	47.04	27.81	57.4	562.66	3.25	1.93	3.67	3.67
Stillwater County	A15	RM 405.34	73437.72	5% - 20yr	1345.2	1054.3	1050.67	3.15	2.63	52.56	31.45	116.05	483.56	3.05	1.83	3.63	3.63
Stillwater County	A15	RM 405.18	72616.33	5% - 20yr	1345.2	1053.83	1049.45	3.35	2.75	56.84	30.41	94.83	386.99	3.53	1.88	4.38	4.38
Stillwater County	A15	RM 405.09	72171.48	5% - 20yr	1345.2	1053.71	1049.09	2.82	2.51	40.74	27.21	115.98	422.04	3.43	2.29	4.63	4.63
Stillwater County	A15	RM 405.02	71774.52	5% - 20yr	1345.2	1053.3	1048.59	3.59	3.16	65.35	41.26	88.03	278.19	3.56	2.24	4.71	4.71
Stillwater County	A15	RM 404.97	71526.86	5% - 20yr	1345.2	1053.27	1048.35	3.08	2.8	48.59	36.71	105.86	490.52	3.44	2.6	4.93	4.93
Stillwater County	A15	RM 404.90	71150.58	5% - 20yr	1345.2	1053.13	1048.99	3.03	2.7	47.13	33.15	104.62	519.58	3.4	2.39	4.14	4.14
Stillwater County	A15	RM 404.84	70801.47	5% - 20yr	1345.2	1053.09	1049.19	2.63	2.27	35.66	18.33	118.04	935.28	3.37	1.73	3.9	3.9
Stillwater County	A15	RM 404.77	70415.17	5% - 20yr	1345.2	1052.89	1048.51	3.03	2.37	46.06	17.75	86.33	862.51	3.68	1.4	4.38	4.38
Stillwater County	A15	RM 404.71	70152.7	5% - 20yr	1345.2	1052.86	1048.14	2.61	2.23	33.88	16.53	86.12	859.44	3.79	1.82	4.72	4.72
Stillwater County	A15	RM 404.59	69477.61	5% - 20yr	1345.2	1052.15	1047.56	3.67	3.46	70.1	32.95	110	266.55	3.3	1.53	4.59	4.59
Stillwater County	A15	RM 404.54	69214.33	5% - 20yr	1345.2	1052.06	1047.65	3.34	3.05	59.22	27.4	127.72	312.84	3.09	1.42	4.41	4.41
Stillwater County	A15	RM 404.35	68254.38	5% - 20yr	1345.2	1051.58	1048.18	2.89	2.75	47.76	33.78	145.54	284.67	2.41	1.72	3.81	3.81
Stillwater County	A15	RM 404.23	67606.98	5% - 20yr	1345.2	1051.17	1047.77	2.98	2.93	50.2	47.36	132.49	228.8	2.53	2.41	3.4	3.4
Stillwater County	A15	RM 404.10	66934.17	5% - 20yr	1345.2	1050.81	1047.61	2.83	2.69	44.17	39.41	123.69	329.49	2.67	2.38	3.2	3.2
Stillwater County	A15	RM 403.94	66110.59	5% - 20yr	1345.2	1050.47	1045.27	2.83	2.36	43.12	25.15	113.06	505.31	2.94	1.71	5.19	5.19
Stillwater County	A15	RM 403.85	65604.39	5% - 20yr	1345.2	1050.02	1044.79	3.53	2.92	63.31	42.16	78.95	389.44	3.55	2.35	5.23	5.23
Stillwater County	A15	RM 403.75	65058.55	5% - 20yr	1345.2	1049.39	1046.13	4.03	3.56	90.78	65.45	101.02	223.77	2.63	1.89	3.26	3.26
Stillwater County	A15	RM 403.69	64721.22	5% - 20yr	1345.2	1049.33	1046.02	2.9	2.76	48.7	44.46	134.45	337.42	2.37	2.17	3.31	3.31
Stillwater County	A15	RM 403.62	64341.29	5% - 20yr	1345.2	1049	1045.75	3.2	3.02	62.82	53.58	92.18	337.32	1.97	1.7	3.25	3.25
Stillwater County	A15	RM 403.55	63997.04	5% - 20yr	1345.2	1048.84	1045.95	2.73	2.37	45.04	32.09	117.25	446.87	2.07	1.48	2.89	2.89
Stillwater County	A15	RM 403.38	62985.06	5% - 20yr	1345.2	1048.52	1043.43	2.16	1.95	25.84	20.39	194.68	370.82	2.67	2.1	5.09	5.09
Stillwater County	A15	RM 403.24	62260	5% - 20yr	1345.2	1048.18	1043.43	2.5	2.43	32.79	23.13	167.56	335.36	3.2	2.25	4.75	4.75
Stillwater County	A15	RM 403.15	61770.95	5% - 20yr	1345.2	1047.69	1042.51	3.36	3.19	60.23	37.51	130.41	249.9	3.05	1.89	5.18	5.18
Stillwater County	A15	RM 403.05	61263.44	5% - 20yr	1345.2	1047.4	1043.23	3.23	3.11	56.68	35.29	146.94	269.9	2.83	1.76	4.17	4.17
Stillwater County	A15	RM 402.97	60777.65	5% - 20yr	1345.2	1047.17	1043.89	2.89	2.81	47.7	38.8	190.96	289.35	2.43	1.98	3.28	3.28
Stillwater County	A15	RM 402.83	60113.9	5% - 20yr	1345.2	1046.61	1043.49	3.04	3.03	58.42	57.03	246.5	415.85	1.8	1.75	3.12	3.12
Stillwater County	A15	RM 402.68	59309.8	5% - 20yr	1345.2	1046.1	1042.55	2.6	2.36	40.26	25.81	233.75	735.72	2.17	1.39	3.54	3.54
Stillwater County	A15	RM 402.53	58529.61	5% - 20yr	1345.2	1045.73	1040.51	2.79	1.86	38.79	11.48	121.12	847.62	3.68	1.09	5.22	5.22
Stillwater County	A15	RM 402.37	57665.93	5% - 20yr	1345.2	1045.16	1041.09	3.19	2.46	63.84	32.32	212.4	683.72	1.84	0.93	4.06	4.06
Stillwater County	A15	RM 402.24	56987.42	5% - 20yr	1345.2	1045.01	1040.75	2.02	1.5	23.7	11.67	251.22	912.15	2.31	1.14	4.26	4.26
Stillwater County	A15	RM 402.07	56034.67	5% - 20yr	1345.2	1044.44	1041.1	2.71	2.03	43.6	25.85	204.28	515.36	2.17	1.29	3.34	3.34
Stillwater County	A15	RM 401.87	54972.92	5% - 20yr	1345.2	1043.79	1040.1	2.92	2.03	47.44	21.34	150.47	555.73	2.66	1.19	3.69	3.69
Stillwater County	A15	RM 401.69	54002.29	5% - 20yr	1345.2	1043.61	1038.43	1.89	1.61	20.16	11.37	248.14	577.95	2.57	1.45	5.18	5.18
Stillwater County	A15	RM 401.55	53267.48	5% - 20yr	1345.2	1042.81	1036.56	3.79	3.19	67.65	26.61	74.7	244.85	4.43	1.72	6.25	6.25
Stillwater County	A15	RM 401.41	52506.25	5% - 20yr	1345.2	1042.7	1037.91	2.77	2.34	40.3	25.32	136.71	341.8	3.14	1.97	4.79	4.79
Stillwater County	A15	RM 401.31	51997.63	5% - 20yr	1345.2	1042.31	1038.08	3.25	2.8	56	36.23	119.17	242.03	3.07	1.99	4.23	4.23
Stillwater County	A15	RM 401.17	51259.17	5% - 20yr	1345.2	1041.84	1037.38	3.2	2.99	55.68	34.96	145.64	269.79	2.85	1.79	4.46	4.46
Stillwater County	A15	RM 401.03	50507.04	5% - 20yr	1345.2	1041.45	1036.56	3.16	2.74	51.46	24.54	125.06	309.03	3.33	1.59	4.88	4.88
Stillwater County	A15	RM 400.90	49826.69	5% - 20yr	1345.2	1040.89	1036.25	3.5	3.2	68.65	50.29	146.14	241.52	2.58	1.9	4.64	4.64
Stillwater County	A15	RM 400.74	49002.09	5% - 20yr	1345.2	1040.35	1037.21	3.36	2.48	62.73	35.18	111.86	360.55	2.7	1.5	3.14	3.14
Stillwater County	A15	RM 400.61	48243.95	5% - 20yr	1345.2	1040.09	1035.99	2.48	2.13	34.92	24.91	144.76	355.23	2.51	1.78	4.1	4.1
Stillwater County	A15	RM 400.50	47710.55	5% - 20yr	1345.2	1039.76	1035.67	2.63	2.5	39.11	30.82	149.16	268.37	2.55	2.01	4.09	4.09
Stillwater County	A15	RM 400.42	47243.72	5% - 20yr	1345.2	1039.41	1034.87	3.08	2.81	50.64	32.71	103.89	243.32	3.06	1.97	4.54	4.54
Stillwater County	A15	RM 400.34	46832.6	5% - 20yr	1345.2	1039.24	1034.91	3.01	2.68	46.95	24.03	95.8	295.23	3.32	1.7	4.33	4.33
Stillwater County	A15	RM 400.25	46335.82	5% - 20yr	1345.2	1039.09	1035.01	2.78	2.36	40.59	21.33	107.99	339.2	3.21	1.68	4.08	4.08
Stillwater County	A15	RM 400.18	45999.89	5% - 20yr	1345.2	1038.92	1034.98	2.88	2.47	44.34	23.97	114.67	337.16	3.01	1.61	3.94	3.94
Stillwater County	A15	RM 400.13	45714.33	5% - 20yr	1345.2	1038.79	1035.2	2.85	2.37	43.09	25.99	122.23	309.13	3.05	1.83	3.59	3.59
Stillwater County	A15	RM 400.11	45623.77	5% - 20yr	1345.2	1038.69	1035.11	2.97	2.45	48.56	29.94	129.52	326.64	2.8	1.71	3.58	3.58
Stillwater County	A15	RM 400.09	45529.19	5% - 20yr	1345.2	1038.53	1035.05	3.31	2.8	61.97	40.88	128.18	294.32	2.52	1.66	3.48	3.48
Stillwater County	A15	RM 400.03	45177.97	5% - 20yr	1345.2	1038.32	1034.82	3.09	2.79	54.1	43.94	137.4	244.83	2.5	2.03	3.5	3.5
Stillwater County	A15	RM 399.95	44761.86	5% - 20yr	1345.2	1038.11	1033.69	2.85	2.84	42.64	42.33	149.97	177.35	3.15	3.13	4.42	4.42
Stillwater County	A16	RM 399.85	44225.61	5% - 20yr	1345.2	1037.68	1033.63	3.3	3.3	59.55	59.47	144.71	160.54	2.82	2.81	4.05	4.05
Stillwater County	A16	RM 399.74	43664.16	5% - 20yr	1345.2	1037.43	1033.48	2.83	2.83	45.53	45.27	188.33	195.13	2.52	2.51	3.95	3.95
Stillwater County	A16	RM 399.62	43026.17	5% - 20yr	1345.2	1037.09	1033.67	2.71	2.71	43.02	42.97	218.04	245.35	2.28	2.28	3.42	3.42
Stillwater County	A16	RM 399.50	42404.94	5% - 20yr	1345.2	1036.8	1031.89	2.66	2.66	37.83	37.55	167.47	235.94	3.02	3	4.91	4.91
Stillwater County	A16	RM 399.39	41801.43	5% - 20yr	1345.2	1036.45	1031.8	2.93	2.93	46.42	46.28	156.51	201.71	2.93	2.92	4.65	4.65

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% - 20yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	5% - 20yr	1345.2	1036.11	1031.14	3.16	2.94	54.51	40.14	146.01	232.02	2.83	2.08	4.97	4.97
Stillwater County	A16	RM 399.19	40736.83	5% - 20yr	1345.2	1035.5	1031.46	3.67	3.35	74.71	43.56	134.5	257.16	2.68	1.56	4.04	4.04
Stillwater County	A16	RM 399.09	40202.15	5% - 20yr	1345.2	1035.24	1031.09	3.24	2.82	55.86	30.02	129.05	291.81	3.05	1.63	4.15	4.15
Stillwater County	A16	RM 399.00	39710.39	5% - 20yr	1345.2	1035.07	1031.41	2.88	2.27	46.06	29	144.75	352.2	2.67	1.68	3.66	3.66
Stillwater County	A16	RM 398.91	39231.58	5% - 20yr	1345.2	1034.77	1031.73	2.82	2.29	49.24	32.36	180.59	463.76	1.92	1.26	3.04	3.04
Stillwater County	A16	RM 398.80	38666.26	5% - 20yr	1345.2	1034.36	1031.55	2.74	2.19	45.58	30.28	189.66	458.86	2.02	1.34	2.81	2.81
Stillwater County	A16	RM 398.73	38275.64	5% - 20yr	1345.2	1034.09	1030.78	2.68	2.18	36.84	23.76	220.26	522.15	1.84	1.18	3.31	3.31
Stillwater County	A16	RM 398.62	37715.08	5% - 20yr	1345.2	1033.76	1030.19	2.55	2.19	33.96	25.45	204.44	428.19	1.92	1.44	3.57	3.57
Stillwater County	A16	RM 398.51	37115.9	5% - 20yr	1345.2	1033.4	1030.68	2.56	2.24	39.51	25.64	212.08	464.09	2.08	1.35	2.74	2.74
Stillwater County	A16	RM 398.40	36522.49	5% - 20yr	1345.2	1033.22	1028.27	2.18	1.87	22.11	16.83	219.99	459.46	2.06	1.57	4.95	4.95
Stillwater County	A16	RM 398.29	35952.65	5% - 20yr	1345.2	1032.82	1027.62	2.55	2.32	40.73	29.77	275.75	424.36	1.88	1.37	5.2	5.2
Stillwater County	A16	RM 398.17	35320.39	5% - 20yr	1345.2	1032.6	1028.88	2.17	2.06	26.15	19.12	233.17	337.18	2.64	1.93	3.72	3.72
Stillwater County	A16	RM 398.04	34597.07	5% - 20yr	1345.2	1032.29	1027.24	2.3	2.21	37.03	28.55	255.66	389.62	2.27	1.75	5.05	5.05
Stillwater County	A16	RM 397.95	34133.39	5% - 20yr	1345.2	1031.91	1027.15	2.69	2.62	43.7	38.66	240.53	284.2	2.07	1.83	4.76	4.76
Stillwater County	A16	RM 397.81	33366.95	5% - 20yr	1345.2	1031.61	1027.05	2.26	2.16	29.2	22.87	237.95	337.72	2.48	1.94	4.56	4.56
Stillwater County	A16	RM 397.68	32754.86	5% - 20yr	1345.2	1031.38	1026.97	2.35	2.21	29.74	21.66	194.14	353.14	2.92	2.13	4.41	4.41
Stillwater County	A16	RM 397.56	32104.4	5% - 20yr	1345.2	1030.77	1026.76	3.38	3.21	61.55	42.16	135	485.62	2.91	2	4.01	4.01
Stillwater County	A16	RM 397.40	31237.31	5% - 20yr	1345.2	1030.26	1026.27	3.05	2.73	53.23	39.96	175.19	643.66	2.45	1.84	3.99	3.99
Stillwater County	A16	RM 397.17	30082.69	5% - 20yr	1345.2	1029.65	1025.84	2.44	1.94	37.19	22.96	268.35	976.4	1.89	1.17	3.81	3.81
Stillwater County	A16	RM 396.97	29050.44	5% - 20yr	1345.2	1029.23	1025.61	2.05	1.48	25.02	13.31	280.04	1061.21	2.15	1.14	3.62	3.62
Stillwater County	A16	RM 396.71	27639.86	5% - 20yr	1345.2	1028.57	1022.48	2.79	1.58	40.26	10.84	127.44	1070.15	3.33	0.88	6.09	6.09
Stillwater County	A16	RM 396.62	27103.31	5% - 20yr	1345.2	1028.15	1022.36	3.34	2.14	55.53	12	99.61	860.52	3.79	0.81	5.79	5.79
Stillwater County	A16	RM 396.52	26616.35	5% - 20yr	1345.2	1027.91	1023.41	3.39	2.01	59.32	14.88	107.14	807.68	3.34	0.83	4.5	4.5
Stillwater County	A16	RM 396.29	25423.1	5% - 20yr	1345.2	1027.53	1023.53	2.44	1.65	34.02	13.39	188.17	852.36	2.45	0.97	4	4
Stillwater County	A16	RM 396.14	24635.78	5% - 20yr	1345.2	1026.73	1022.46	3.53	2.83	70.59	36.81	129.38	482.65	2.53	1.32	4.27	4.27
Stillwater County	A16	RM 396.03	24026.24	5% - 20yr	1345.2	1026.6	1024.1	2.3	1.85	31.75	18.35	186.55	682.78	2.13	1.23	2.5	2.5
Stillwater County	A16	RM 395.89	23301.08	5% - 20yr	1345.2	1026.1	1022.79	2.77	2.02	47.81	24.73	152.52	768.35	1.86	0.97	3.31	3.31
Stillwater County	A16	RM 395.73	22420.29	5% - 20yr	1345.2	1025.73	1022.66	1.59	1.33	15.77	10.01	186.62	994.49	1.88	1.19	3.07	3.07
Stillwater County	A16	RM 395.64	21923.33	5% - 20yr	1345.2	1025.49	1022.13	2.13	1.51	27.2	12.36	144.53	1090.96	2.1	0.95	3.67	3.67
Stillwater County	A16	RM 395.57	21526.11	5% - 20yr	1345.2	1025.07	1021.61	2.99	1.9	50.59	17.53	78.17	1134.23	2.52	0.87	3.46	3.46
Stillwater County	A16	RM 395.48	21053.74	5% - 20yr	1345.2	1024.7	1021.89	2.67	2.12	45.4	25.81	113.35	849.3	1.77	1	2.81	2.81
Stillwater County	A16	RM 395.36	20532.68	5% - 20yr	1345.2	1024.45	1021.53	2.25	1.82	30.36	15.56	131.95	903.85	2.1	1.07	2.92	2.92
Stillwater County	A16	RM 394.98	18666.37	5% - 20yr	1345.2	1023.81	1020.31	2.8	2.12	46.39	21.22	108.29	709.09	2.23	1.02	3.5	3.5
Stillwater County	A16	RM 394.80	17678.79	5% - 20yr	1345.2	1023.45	1019.23	2.57	2.13	40.49	23.26	140.79	595.86	2	1.14	4.22	4.22
Stillwater County	A16	RM 394.71	17254.4	5% - 20yr	1345.2	1023.25	1019.74	2.28	1.99	30.7	17.25	146.7	570.54	2.23	1.25	3.51	3.51
Stillwater County	A16	RM 394.65	16921.48	5% - 20yr	1345.2	1022.99	1019.93	2.3	2.19	32.98	22.16	167.36	580.94	1.89	1.27	3.99	3.99
Stillwater County	A16	RM 394.59	16622.61	5% - 20yr	1345.2	1022.6	1019.92	2.46	2.44	40.09	34.79	157.86	520.62	1.59	1.37	3.03	3.03
Stillwater County	A16	RM 394.53	16295.21	5% - 20yr	1345.2	1022.34	1019.83	2.31	2.18	35.45	29.92	158.81	492.93	1.57	1.32	3.33	3.33
Stillwater County	A16	RM 394.45	15858.14	5% - 20yr	1345.2	1021.85	1019.03	2.89	2.64	51.13	37.84	113.58	343.52	2.01	1.49	2.97	2.97
Stillwater County	A16	RM 394.20	14503.23	5% - 20yr	1345.2	1021.18	1016.38	2.68	2.27	40.86	24.12	149.53	408.83	2.45	1.45	4.8	4.8
Stillwater County	A16	RM 394.12	14088.57	5% - 20yr	1345.2	1020.77	1016.74	3.13	2.64	57.1	29.92	149.56	418.34	2.32	1.22	4.03	4.03
Stillwater County	A16	RM 393.99	13393.6	5% - 20yr	1345.2	1020.41	1017.11	2.59	2.05	40.72	24.49	122.16	531.53	2.05	1.23	3.3	3.3
Stillwater County	A16	RM 393.85	12650.05	5% - 20yr	1345.2	1019.92	1016.49	2.43	2.09	37.99	27.1	178.06	524.29	1.72	1.23	3.43	3.43
Stillwater County	A16	RM 393.59	11240.84	5% - 20yr	1345.2	1019.4	1015.45	1.81	1.46	19.64	11.09	272.87	779.04	2.1	1.18	3.95	3.95
Stillwater County	A16	RM 393.27	9813.245	5% - 20yr	1345.2	1018.38	1013.32	2.92	2.71	58.48	44.38	251.76	463.25	1.41	1.07	5.06	5.06
Stillwater County	A16	RM 393.10	8870.543	5% - 20yr	1345.2	1017.77	1013.34	2.09	1.94	28.99	24.56	339.78	521.08	1.57	1.33	4.43	4.43
Stillwater County	A16	RM 392.95	8114.595	5% - 20yr	1345.2	1016.95	1014.13	2.8	2.71	53.35	48.86	308.91	375.26	1.45	1.33	2.82	2.82
Stillwater County	A16	RM 392.69	6912.838	5% - 20yr	1345.2	1016.42	1012.43	1.97	1.74	23.22	15.3	191.31	792.3	2.16	1.42	3.99	3.99
Stillwater County	A16	RM 392.44	5710.825	5% - 20yr	1345.2	1015.84	1011.68	2.56	1.93	36.55	15.02	135.35	1039.19	2.63	1.08	4.16	4.16
Stillwater County	A17	RM 392.20	4388.056	5% - 20yr	1345.2	1014.79	1010.8	3.21	2.48	63.02	30.72	197.91	565.5	1.98	0.97	3.99	3.99
Stillwater County	A17	RM 392.00	3345.174	5% - 20yr	1345.2	1014.18	1009.53	2.76	2.22	43.14	24.11	165.54	441.46	2.53	1.41	4.65	4.65
Stillwater County	A17	RM 391.84	2491.214	5% - 20yr	1345.2	1013.86	1010.51	2.28	1.85	31.48	17.27	154.57	640.66	2.06	1.13	3.45	3.45
Stillwater County	A17	RM 391.68	1656.536	5% - 20yr	1345.2	1013.53	1010.5	1.89	1.62	23.45	16.71	255.36	714	1.63	1.16	3.03	3.03
Stillwater County	A17	RM 391.58	1120.168	5% - 20yr	1345.2	1013.26	1009.55	1.97	1.6	25.36	16.3	363.9	800.83	1.64	1.05	3.71	3.71
Stillwater County	A17	RM 391.46	505.9	5% - 20yr	1345.2	1013	1009.4	1.99	1.46	24.25	13.41	297.18	849.26	1.96	1.08	3.6	3.6

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions
20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	20-yr	1345.05	1012.58	1008.74	2.38	1.63	32.89	13.92	209.13	827.57	2.35	1	3.84	3.84
Yellowstone County	A17	RM 391.14	149661.4	20-yr	1345.05	1012.14	1007.82	2.44	1.57	42.45	20.89	204.17	755.92	2.3	1.13	4.32	4.32
Yellowstone County	A17	RM 390.83	149168.3	20-yr	1345.05	1011.11	1007.89	2.48	2.01	41.63	26.05	260.03	642.53	1.79	1.12	3.22	3.22
Yellowstone County	A17	RM 390.51	148644.1	20-yr	1345.05	1010.36	1006	1.8	1.6	28.27	16.59	203.11	540.48	2.65	1.55	4.36	4.36
Yellowstone County	A17	RM 390.34	148387.5	20-yr	1345.05	1009.91	1005.26	2.46	2.05	50.18	31.62	155.49	386.51	2.69	1.69	4.65	4.65
Yellowstone County	A17	RM 390.13	148054.9	20-yr	1345.05	1009.29	1005.54	2.7	2.16	51.37	29.16	145.16	402.8	2.72	1.54	3.75	3.75
Yellowstone County	A17	RM 389.96	147776.4	20-yr	1345.05	1008.96	1004.81	2.14	1.91	29.55	19.67	175.73	430.65	2.45	1.63	4.14	4.14
Yellowstone County	A17	RM 389.76	147468.2	20-yr	1345.05	1008.71	1004.52	1.59	1.44	21.6	14.37	299.96	721.01	2.69	1.78	4.19	4.19
Yellowstone County	A17	RM 389.55	147162.3	20-yr	1345.05	1008.16	1003.2	2.13	2.13	56.79	56.79	321.49	321.49	1.96	1.96	4.96	4.96
Yellowstone County	A17	RM 389.31	146731.1	20-yr	1345.05	1007.42	1003.49	2.1	1.97	27.34	21.91	256.17	345.96	2.46	1.97	3.92	3.92
Yellowstone County	A17	RM 389.08	146349	20-yr	1345.05	1006.88	1001.61	1.83	1.63	45.4	31.03	309.21	611.13	1.98	1.35	5.26	5.26
Yellowstone County	A17	RM 388.92	146095.5	20-yr	1345.05	1006.46	1002.49	1.96	1.66	22.96	14.74	266.8	539.4	2.35	1.5	3.97	3.97
Yellowstone County	A17	RM 388.79	145883.6	20-yr	1345.05	1006.26	1002.14	2.13	1.47	25.6	11.2	163.73	637.84	3.32	1.44	4.11	4.11
Yellowstone County	A17	RM 388.61	145594.9	20-yr	1345.05	1005.81	1000.48	2.66	1.93	52.99	27.86	143.89	467.54	2.85	1.49	5.33	5.33
Yellowstone County	A17	RM 388.58	145547	20-yr	1345.05	1005.66	1000.28	2.66	2.02	66.31	30.09	154.87	530.37	2.85	1.29	5.38	5.38
Yellowstone County	A17	RM 388.36	145196.7	20-yr	1345.05	1005.07	1001.21	2.55	1.91	41.21	22.06	161.37	480.32	2.73	1.46	3.86	3.86
Yellowstone County	A17	RM 388.22	144960.1	20-yr	1345.05	1004.48	1000.23	3.06	2.37	62.48	33.14	162.03	562.32	1.99	1.06	4.25	4.25
Yellowstone County	A17	RM 388.09	144745.8	20-yr	1345.05	1003.91	999.87	2.56	2.03	45.54	27.1	230.63	790.5	1.64	0.98	4.04	4.04
Yellowstone County	A17	RM 387.91	144452	20-yr	1345.05	1003.27	999.77	1.61	1.73	25.07	20.82	375.4	726.56	1.32	1.1	3.5	3.5
Yellowstone County	A17	RM 387.79	144255.2	20-yr	1345.05	1003.16	999.17	1.22	1.13	6.62	5.9	529.74	930.6	1.47	1.31	3.99	3.99
Yellowstone County	A17	RM 387.59	143932.9	20-yr	1345.05	1002.88	998.1	1.13	1.12	35.17	33.19	976.8	1095.83	1.16	1.1	4.78	4.78
Yellowstone County	A17	RM 387.36	143562.1	20-yr	1345.05	1001.84	997.78	1.97	1.94	18.64	17.55	682.73	748.43	1	0.94	4.06	4.06
Yellowstone County	A17	RM 387.24	143353.9	20-yr	1345.05	1001.5	997.71	1.97	1.96	20.42	20.21	461.49	477.03	1.48	1.47	3.79	3.79
Yellowstone County	A17	RM 387.04	143026.2	20-yr	1345.05	1000.98	996.49	1.99	1.88	20.72	17.79	538.85	703.47	1.2	1.03	4.49	4.49
Yellowstone County	A17	RM 386.86	142750.4	20-yr	1345.05	1000.41	997.01	1.72	1.58	46.55	32.8	443.47	731.37	1.65	1.17	3.4	3.4
Yellowstone County	A17	RM 386.74	142538.5	20-yr	1345.05	999.93	996.31	1.89	1.79	29.65	21.3	350.38	547.3	1.92	1.38	3.62	3.62
Yellowstone County	A17	RM 386.61	142318.4	20-yr	1345.05	999.34	995.9	2.72	2.49	48.75	30.13	186.27	368.93	2.37	1.47	3.44	3.44
Yellowstone County	A17	RM 386.47	142095.8	20-yr	1345.05	998.99	995.18	2.53	2.05	39.27	22.01	168.46	463.45	2.53	1.42	3.81	3.81
Yellowstone County	A17	RM 386.33	141875.1	20-yr	1345.05	998.54	994.36	2.83	2.09	43.26	22.46	163.09	516.82	2.39	1.24	4.18	4.18
Yellowstone County	A17	RM 386.17	141622.7	20-yr	1345.05	998.07	993.9	2.62	2.27	44.63	25.28	200.83	465.65	2.25	1.28	4.17	4.17
Yellowstone County	A17	RM 386.08	141479.6	20-yr	1345.05	997.8	994.12	2.54	2.11	50.45	26.32	178.02	469.66	2.61	1.36	3.68	3.68
Yellowstone County	A17	RM 386.03	141389.2	20-yr	1345.05	997.66	993.82	2.38	2.12	32.74	23.51	220	385.36	2.29	1.65	3.84	3.84
Yellowstone County	A17	RM 385.96	141289.2	20-yr	1345.05	997.63	993.01	1.89	1.71	18.33	13.4	240.7	449.7	2.75	2.01	4.62	4.62
Yellowstone County	A17	RM 385.91	141204.9	20-yr	1345.05	997.55	992.33	1.92	1.91	19.88	16.77	262.03	478.16	2.67	2.25	5.22	5.22
Yellowstone County	A17	RM 385.84	141096	20-yr	1345.05	997.32	990.57	2.42	2.42	30.85	30.85	342.54	408.75	3.77	3.77	6.75	6.75
Yellowstone County		RM 342.71	141053	20-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	20-yr	1345.05	997.09	992.45	2.72	2.72	58.72	58.72	140.74	140.74	3.52	3.52	4.64	4.64
Yellowstone County	A17	RM 385.79	141006	20-yr	1345.05	997.07	992.48	2.56	2.56	30.3	30.3	162.65	327.05	3.24	3.24	4.59	4.59
Yellowstone County	A18	RM 385.69	140846.5	20-yr	1345.05	996.86	992.9	2.49	2.32	59.69	43.22	210.58	506.61	2.55	1.84	3.96	3.96
Yellowstone County	A18	RM 385.60	140705.5	20-yr	1345.05	996.48	992.71	2.65	2.42	55.04	37.87	202.81	414.15	2.45	1.68	3.77	3.77
Yellowstone County	A18	RM 385.50	140538.8	20-yr	1345.05	996.17	990.71	2.65	2.31	51.73	22.1	150.3	416.49	3.3	1.4	5.46	5.46
Yellowstone County	A18	RM 385.39	140367.1	20-yr	1345.05	995.89	992.41	2.68	2.32	37.46	21.08	203.51	430.75	2.39	1.35	3.48	3.48
Yellowstone County	A18	RM 385.30	140231.3	20-yr	1345.05	995.59	992.53	2.72	2.42	60.09	36.85	239.85	456.93	1.98	1.22	3.06	3.06
Yellowstone County	A18	RM 385.23	140108.3	20-yr	1345.05	995.34	992.01	2.33	2.09	44.63	33.41	229.33	430.97	1.99	1.49	3.33	3.33
Yellowstone County	A18	RM 385.12	139921.2	20-yr	1345.05	994.54	991.37	2.99	2.92	66.5	55.67	239.02	368.18	1.49	1.25	3.17	3.17
Yellowstone County	A18	RM 384.93	139688.7	20-yr	1345.05	994.18	991.06	2.16	1.96	26.78	20.02	236.65	464.21	1.98	1.48	3.12	3.12
Yellowstone County	A18	RM 384.75	139352.1	20-yr	1345.05	993.07	989.77	3.74	3.03	104.8	57.51	116.21	391.65	2.14	1.17	3.3	3.3
Yellowstone County	A18	RM 384.63	139146.9	20-yr	1345.05	992.77	989.58	1.85	1.71	24.04	21.07	190.17	773.91	1.52	1.33	3.19	3.19
Yellowstone County	A18	RM 384.48	138904.5	20-yr	1345.05	992.42	989.55	1.52	1.74	22.27	20.84	181.47	454.55	1.88	1.76	3.07	3.07
Yellowstone County	A18	RM 384.34	138682.4	20-yr	1345.05	992.15	988.23	1.69	1.66	38.98	17.08	167.93	801.02	2.53	1.1	3.92	3.92
Yellowstone County	A18	RM 384.26	138551.1	20-yr	1345.05	991.91	987.34	2.4	1.75	58.05	23.92	89.03	679.16	3.09	1.26	4.57	4.57
Yellowstone County	A18	RM 384.15	138370.3	20-yr	1345.05	990.99	987.39	3.85	3.18	111.19	49.73	78.38	372.26	2.56	1.14	3.6	3.6
Yellowstone County	A18	RM 384.06	138235.3	20-yr	1345.05	990.84	987.31	2.83	1.93	48.5	25.45	84.99	667.15	2.49	1.3	3.53	3.53
Yellowstone County	A18	RM 383.96	138072.3	20-yr	1345.05	990.43	987.67	2.51	2.25	44.29	35.44	138.34	503.39	1.49	1.19	2.76	2.76
Yellowstone County	A18	RM 383.86	137914.6	20-yr	1345.05	990.22	987.24	1.9	1.74	21.95	17.17	152.59	470.71	2.1	1.64	2.98	2.98
Yellowstone County	A18	RM 383.75	137749.9	20-yr	1345.05	989.95	986.55	1.74	1.94	25.8	20.47	200.16	552.65	1.59	1.25	3.47	3.47
Yellowstone County	A18	RM 383.62	137544.5	20-yr	1345.05	989.73	986.32	1.69	1.55	18.19	12.5	176.05	684.72	1.85	1.27	4.11	4.11
Yellowstone County	A18	RM 383.54	137415.7	20-yr	1345.05	989.64	984.41	1.52	1.36	13.83	10.16	392.45	758.93	2.14	1.57	5.23	5.23
Yellowstone County	B1	RM 383.39	137175.7	20-yr	1716	989.19	984.98	2.42	2.38	23.02	20	485.03	569.68	1.46	1.27	4.21	4.21
Yellowstone County	B1	RM 383.31	137040.5	20-yr	1716	989.02	984.86	2.14	1.86	21.41	18.31	562.72	786.04	1.37	1.17	4.16	4.16
Yellowstone County	B1	RM 383.16	136817.2	20-yr	1716	988.8	984.9	1.68	1.45	12.52	12.15	775.5	989.14	1.23	1.2	3.9	3.9

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions
20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	20-yr	1716	988.36	983.64	1.69	1.5	15.68	13.97	617.97	837.7	1.53	1.36	4.72	4.72
Yellowstone County	B1	RM 382.61	135921.1	20-yr	1716	987.81	982.68	2.34	1.79	29.98	13.76	196.01	612.48	3.41	1.56	5.13	5.13
Yellowstone County	B1	RM 382.44	135657.8	20-yr	1716	987.41	981.56	2.91	2.01	43.8	19.47	132.77	505.72	3.81	1.69	5.85	5.85
Yellowstone County	B1	RM 382.28	135389.1	20-yr	1716	987.26	981.45	2.37	1.71	31.67	14.5	139.32	532.98	4.13	1.89	5.81	5.81
Yellowstone County	B1	RM 382.11	135122	20-yr	1716	986.75	980.52	3.08	2.26	54.32	20.32	133.18	529.54	3.84	1.43	6.23	6.23
Yellowstone County	B1	RM 381.93	134829.3	20-yr	1716	986.35	981.3	2.66	2.38	64.02	31.18	182.96	438.46	3.38	1.64	5.05	5.05
Yellowstone County	B1	RM 381.79	134602.8	20-yr	1716	985.89	981.63	2.91	2.55	48.11	23.79	167.32	401.93	3.4	1.67	4.26	4.26
Yellowstone County	B1	RM 381.69	134426.2	20-yr	1716	985.83	981.06	2.17	1.96	30.3	20.51	207.55	354.39	3.66	2.47	4.77	4.77
Yellowstone County	B1	RM 381.58	134232.5	20-yr	1716	985.69	981.02	2.03	1.77	25.01	15.26	271.39	538.5	2.96	1.8	4.67	4.67
Yellowstone County	B1	RM 381.47	134047.3	20-yr	1716	985.5	980.95	1.81	1.64	42.8	24.53	333.31	688.51	2.66	1.52	4.55	4.55
Yellowstone County	B1	RM 381.35	133871.9	20-yr	1716	985.19	980.79	1.78	1.64	47.39	28.6	365.74	696.21	2.5	1.5	4.4	4.4
Yellowstone County	B1	RM 381.22	133659.2	20-yr	1716	984.65	979.74	1.9	1.89	60.01	56.88	431.56	459.55	2.09	1.98	4.91	4.91
Yellowstone County	B1	RM 381.11	133491.4	20-yr	1716	984.07	979.61	2.13	2.19	67.26	57.38	282.68	409.72	2.24	1.91	4.46	4.46
Yellowstone County	B1	RM 381.00	133302.9	20-yr	1716	983.47	978.23	2.93	2.64	45.77	25.71	187.29	425.88	2.72	1.52	5.24	5.24
Yellowstone County	B1	RM 380.92	133180	20-yr	1716	983.35	976.97	2.66	2.25	45.76	20.11	152.78	496.09	3.52	1.54	6.38	6.38
Yellowstone County	B1	RM 380.81	132986.3	20-yr	1716	983.03	978.55	2.75	2.38	44.47	22.58	193.59	486.25	2.93	1.48	4.48	4.48
Yellowstone County	B1	RM 380.69	132800.2	20-yr	1716	982.85	978.53	2.3	2	29.25	17.75	264.93	536.21	2.64	1.6	4.32	4.32
Yellowstone County	B1	RM 380.57	132628.6	20-yr	1716	982.65	978.7	2.2	2.01	39.23	21.64	229.16	533.07	2.9	1.6	3.95	3.95
Yellowstone County	B1	RM 380.48	132470	20-yr	1716	982.44	978.24	2.27	1.99	37.02	20.93	201.87	484.93	3.15	1.78	4.2	4.2
Yellowstone County	B1	RM 380.34	132222.4	20-yr	1716	982.04	977.37	2.63	2.17	38.84	24.98	205.99	443.24	2.77	1.78	4.67	4.67
Yellowstone County	B1	RM 380.22	132032.4	20-yr	1716	981.49	977.02	3.28	3.06	59.76	42.3	172.31	271.05	2.92	2.07	4.47	4.47
Yellowstone County	B1	RM 380.11	131847.7	20-yr	1716	981.27	976.29	2.81	2.44	49.87	30.12	181.17	498.58	2.73	1.65	4.98	4.98
Yellowstone County	B1	RM 380.01	131671.4	20-yr	1716	981.04	976.21	2.56	1.95	47.52	24.16	174.08	644.24	2.86	1.45	4.83	4.83
Yellowstone County	B1	RM 379.92	131538.8	20-yr	1716	980.76	976.69	2.76	2.13	41.97	20.48	192.4	652.11	2.53	1.23	4.07	4.07
Yellowstone County	B1	RM 379.84	131406.9	20-yr	1716	980.7	975.94	1.83	1.58	20.16	13.9	417.15	738.37	2.14	1.47	4.76	4.76
Yellowstone County	B1	RM 379.75	131265.1	20-yr	1716	980.51	974.98	1.96	1.71	27.87	18.04	375.45	692.63	2.24	1.45	5.53	5.53
Yellowstone County	B1	RM 379.65	131104.3	20-yr	1716	980.34	975.6	1.93	1.74	22.49	19.84	379.61	507.22	2.2	1.94	4.74	4.74
Yellowstone County	B1	RM 379.56	130964.3	20-yr	1716	980.22	975.94	1.82	1.61	20.19	13.83	313.71	1409.22	2.44	1.67	4.28	4.28
Yellowstone County	B1	RM 379.46	130794	20-yr	1716	980.03	974.74	1.99	1.63	22.42	12.92	294.39	1213.07	2.35	1.35	5.29	5.29
Yellowstone County	B1	RM 379.36	130642.3	20-yr	1716	979.95	975.71	1.72	1.16	23.26	11.48	247.15	1051.02	3.2	1.57	4.24	4.24
Yellowstone County	B1	RM 379.27	130496.2	20-yr	1716	979.62	974.66	2.67	1.65	61.65	27.33	164.56	789.77	2.99	1.32	4.96	4.96
Yellowstone County	B1	RM 379.17	130345.7	20-yr	1716	979.08	973.93	3.27	2.07	70.14	22.66	154.92	845.88	3.03	0.98	5.15	5.15
Yellowstone County	B1	RM 379.04	130142	20-yr	1716	978.83	974.79	2.67	1.68	39.79	17.52	203.31	897.1	2.59	1.14	4.04	4.04
Yellowstone County	B1	RM 378.97	130026.7	20-yr	1716	978.58	974.64	2.77	1.88	44.17	19.3	231.05	877.07	2.38	1.04	3.94	3.94
Yellowstone County	B1	RM 378.86	129850.9	20-yr	1716	978.21	974.4	2.81	1.96	49.83	22.62	249.71	875.1	2.21	1	3.81	3.81
Yellowstone County	B1	RM 378.76	129682.3	20-yr	1716	977.88	974.17	2.66	1.93	42.52	19.03	271.3	902.31	2.21	0.99	3.71	3.71
Yellowstone County	B1	RM 378.67	129541.3	20-yr	1716	977.65	973.97	2.58	1.73	34.22	18.85	274.53	860.88	2.09	1.15	3.68	3.68
Yellowstone County	B1	RM 378.61	129443.1	20-yr	1716	977.5	973.83	2.17	1.65	56.31	33.34	243.49	932.73	1.97	1.17	3.67	3.67
Yellowstone County	B1	RM 378.52	129297.7	20-yr	1716	977.28	973.62	1.8	1.5	19.37	14.96	554.82	946.15	1.57	1.21	3.66	3.66
Yellowstone County	B1	RM 378.46	129200.8	20-yr	1716	977.2	973.48	1.53	1.39	17.13	13.32	613.46	891	1.78	1.39	3.72	3.72
Yellowstone County	B1	RM 378.40	129112.2	20-yr	1716	977.07	973.41	1.52	1.41	38.9	28.95	605.91	904.23	1.81	1.35	3.66	3.66
Yellowstone County	B1	RM 378.29	128929.4	20-yr	1716	976.94	972.93	1.23	1.12	11.01	7.82	567.41	893.73	2.41	1.71	4.01	4.01
Yellowstone County	B1	RM 378.13	128673.7	20-yr	1716	976.66	971.4	1.92	1.85	15.89	11.8	438.15	816.6	2.03	1.5	5.26	5.26
Yellowstone County	B1	RM 378.07	128569	20-yr	1716	976.58	970.46	1.97	1.91	16.12	13.85	347.31	599.76	2.5	2.15	6.12	6.12
Yellowstone County	B1	RM 377.96	128380.3	20-yr	1716	976.09	968.85	2.94	2.94	62.93	62.93	110.27	110.27	5.29	5.29	7.24	7.24
Yellowstone County		RM 338.83	128364	20-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	20-yr	1716	976.05	967.19	2.76	2.76	60.94	60.94	109.12	109.12	5.69	5.69	8.86	8.86
Yellowstone County	B1	RM 377.87	128244.4	20-yr	1716	975.87	970.56	2.82	2.82	54.58	54.56	223.61	347.63	2.78	2.78	5.31	5.31
Yellowstone County	B1	RM 377.79	128118	20-yr	1716	975.68	970.94	2.57	2.57	33.45	33.43	335.31	615.26	1.99	1.99	4.74	4.74
Yellowstone County	B1	RM 377.69	127964.3	20-yr	1716	975.49	969.86	2.27	2.23	24.1	21.48	421.93	740.18	1.79	1.59	5.63	5.63
Yellowstone County	B1	RM 377.61	127824.8	20-yr	1716	975.01	970.53	3.06	3.02	42.82	38.86	303.45	434.74	1.85	1.68	4.48	4.48
Yellowstone County	B1	RM 377.55	127735.1	20-yr	1716	974.93	970.41	2.59	2.57	27.73	25.19	383.84	496.38	1.73	1.57	4.52	4.52
Yellowstone County	B1	RM 377.48	127618.1	20-yr	1716	974.76	970.26	2.41	2.41	26.42	25.93	449.43	597.17	1.58	1.55	4.5	4.5
Yellowstone County	B1	RM 377.39	127466.6	20-yr	1716	974.44	969.73	2.6	2.49	30.15	22.27	396.25	563.28	1.66	1.22	4.71	4.71
Yellowstone County	B1	RM 377.34	127391.5	20-yr	1716	974.16	969.95	2.81	2.72	97.12	76.43	313.42	415.72	1.93	1.52	4.21	4.21
Yellowstone County	B1	RM 377.25	127241.9	20-yr	1716	973.97	970.26	2	1.93	23.76	19.95	411.52	514.91	2.06	1.73	3.71	3.71
Yellowstone County	B1	RM 377.16	127097.7	20-yr	1716	973.81	969.82	1.95	1.85	24.66	20.15	410.23	600.96	1.88	1.54	3.99	3.99
Yellowstone County	B1	RM 377.08	126969	20-yr	1716	973.76	969	1.51	1.34	12.88	8.31	417.58	790.86	2.51	1.62	4.76	4.76
Yellowstone County	B1	RM 377.04	126900.8	20-yr	1716	973.65	968.6	1.68	1.58	50.65	41.15	569.68	760.14	1.75	1.42	5.05	5.05
Yellowstone County	B1	RM 376.98	126797.5	20-yr	1716	973.42	969.02	1.9	1.78	19.1	14.87	531.66	736.28	1.68	1.31	4.4	4.4
Yellowstone County	B1	RM 376.92	126710.1	20-yr	1716	973.33	969.01	1.6	1.5	37.87	30.1	505	694.51	2.07	1.64	4.32	4.32

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	20-yr	1716	973.23	967.73	1.36	1.29	15.89	13.28	448.68	666.92	2.38	2	5.5	5.5
Yellowstone County	B1	RM 376.75	126442.1	20-yr	1716	973.1	967.82	1.45	1.44	22.69	20.28	405.74	517.32	2.57	2.3	5.28	5.28
Yellowstone County	B1	RM 376.67	126309	20-yr	1716	972.9	967.23	1.78	1.76	38.12	31.33	333.61	465.06	2.55	2.1	5.67	5.67
Yellowstone County	B1	RM 376.58	126174.1	20-yr	1716	972.55	966.82	2.2	2.19	53.88	48.98	307.3	366.14	2.35	2.14	5.73	5.73
Yellowstone County	B1	RM 376.51	126058.2	20-yr	1716	972.22	966.77	2.52	2.52	45.27	45.27	264.98	264.98	2.57	2.57	5.45	5.45
Yellowstone County	B1	RM 376.42	125918.5	20-yr	1716	972.07	967.68	2.28	2.28	29.67	28.93	256.71	263.38	2.93	2.86	4.39	4.39
Yellowstone County	B1	RM 376.35	125809.8	20-yr	1716	971.98	966.71	2.27	2.27	26.98	26.87	225.28	226.06	3.36	3.35	5.27	5.27
Yellowstone County	B1	RM 376.28	125697	20-yr	1716	971.62	966.28	3	3	51.62	51.62	221.55	221.55	2.59	2.59	5.34	5.34
Yellowstone County	B1	RM 376.20	125565.9	20-yr	1716	971.39	966.16	2.81	2.81	47.45	47.38	252.15	252.46	2.42	2.42	5.23	5.23
Yellowstone County	B1	RM 376.10	125404.8	20-yr	1716	971.06	966.61	2.81	2.67	46.2	40.85	269.29	336.95	2.15	1.91	4.45	4.45
Yellowstone County	B1	RM 376.00	125250.5	20-yr	1716	970.78	967.42	2.69	2.32	45.35	29.46	242.08	583.33	2.4	1.56	3.36	3.36
Yellowstone County	B1	RM 375.88	125055.1	20-yr	1716	970.46	966.01	2.6	1.97	45.64	21.74	185.4	1016.11	2.84	1.35	4.45	4.45
Yellowstone County	B1	RM 375.78	124897.3	20-yr	1716	970.28	965.37	2.35	1.74	36.31	18.11	187.08	834.16	2.73	1.36	4.91	4.91
Yellowstone County	B1	RM 375.67	124708.2	20-yr	1716	970.08	965.8	2.24	1.79	32.38	16.19	224.2	763.51	2.51	1.25	4.28	4.28
Yellowstone County	B1	RM 375.58	124564.2	20-yr	1716	969.83	966.54	2.45	2	37.92	19.25	224.84	690.17	2.45	1.24	3.29	3.29
Yellowstone County	B1	RM 375.23	124013.6	20-yr	1716	969.15	965.23	2.26	1.68	33.52	13.97	228.07	913.08	2.68	1.12	3.92	3.92
Yellowstone County	B1	RM 375.10	123799.5	20-yr	1716	968.53	963.88	3.34	2.25	76.22	25.42	126.19	699.05	3.28	1.09	4.65	4.65
Yellowstone County	B1	RM 374.97	123580.4	20-yr	1716	968.28	963.97	2.54	1.79	50.94	18.74	136.6	842.5	3.14	1.14	4.31	4.31
Yellowstone County	B1	RM 374.83	123365.5	20-yr	1716	968.03	963.52	2.24	1.6	31.3	12.84	132.49	894.19	2.93	1.2	4.51	4.51
Yellowstone County	B1	RM 374.73	123195.7	20-yr	1716	967.95	963.36	1.71	1.25	16.18	6.92	143.43	1050.29	3.06	1.31	4.59	4.59
Yellowstone County	B1	RM 374.61	123010.3	20-yr	1716	967.72	963.49	2.15	1.66	35.61	13.07	161.4	963.09	3.03	1.11	4.23	4.23
Yellowstone County	B1	RM 374.53	122875.3	20-yr	1772.64	967.49	963.14	2.4	1.96	37.51	15.55	186.43	755	2.9	1.2	4.35	4.35
Yellowstone County	B1	RM 374.44	122726.7	20-yr	1772.64	967.16	963.04	2.92	2.16	59.92	19.53	125.63	729.25	3.47	1.13	4.12	4.12
Yellowstone County	B1	RM 374.32	122535.1	20-yr	1772.64	966.96	962.82	2.19	1.94	39.05	20.68	191.01	652.77	2.64	1.4	4.14	4.14
Yellowstone County	B1	RM 374.22	122379	20-yr	1772.64	966.78	960.92	2.39	1.59	33.36	11.81	134.27	916.75	3.44	1.22	5.86	5.86
Yellowstone County	B1	RM 374.13	122231.1	20-yr	1772.64	966.64	960.11	2.47	1.58	32.95	14.15	137.18	848.75	3.08	1.32	6.53	6.53
Yellowstone County	B1	RM 373.97	121972.4	20-yr	1772.64	966.45	958.8	1.95	1.6	24.11	11.11	226.05	791.02	3.07	1.4	7.65	7.65
Yellowstone County	B1	RM 373.88	121829.3	20-yr	1772.64	966.3	962.21	2.11	1.6	32.31	13.23	194.77	880.69	3.09	1.26	4.09	4.09
Yellowstone County	B1	RM 373.79	121688.7	20-yr	1772.64	966.18	961.66	1.95	1.43	30.66	14.14	191.06	868.65	3.1	1.43	4.52	4.52
Yellowstone County	B1	RM 373.69	121523.5	20-yr	1772.64	966.02	961.11	1.96	1.42	23.9	12.87	202.68	777.22	2.98	1.6	4.91	4.91
Yellowstone County	B1	RM 373.56	121314.3	20-yr	1772.64	965.43	959.37	3.02	2.68	57.96	38.03	204.12	370.11	2.72	1.78	6.07	6.07
Yellowstone County	B1	RM 373.39	121015.9	20-yr	1772.64	964.93	958.78	2.8	2.68	51.17	38.81	186.59	262.45	3.32	2.52	6.15	6.15
Yellowstone County	B1	RM 373.26	120802.3	20-yr	1772.64	964.84	960.81	1.87	1.76	22.33	17.84	355.66	635.51	2.6	2.08	4.03	4.03
Yellowstone County	B1	RM 373.09	120539.5	20-yr	1772.64	964.46	959.94	2.3	2.15	31.42	25.18	304.46	558.83	2.48	1.99	4.52	4.52
Yellowstone County	B1	RM 372.99	120365.2	20-yr	1772.64	964.24	959.69	2.13	1.93	39.51	28.16	329.84	1452.63	2.42	1.72	4.55	4.55
Yellowstone County	B1	RM 372.82	120107.7	20-yr	1772.64	964.01	959.03	1.67	1.62	16.65	15.25	469.06	531.32	2.24	2.05	4.98	4.98
Yellowstone County	B1	RM 372.72	119922.5	20-yr	1772.64	963.79	958.92	1.84	1.81	31.5	29.19	442.03	1476.89	2.18	2.02	4.87	4.87
Yellowstone County	B1	RM 372.65	119797.7	20-yr	1772.64	963.63	957.32	1.87	1.8	23.35	22.09	397.08	442.6	2.35	2.23	6.31	6.31
Yellowstone County	B1	RM 372.58	119676.6	20-yr	1772.64	963.56	958.2	1.64	1.6	16.8	15.1	441.61	508.9	2.42	2.18	5.36	5.36
Yellowstone County	B1	RM 372.41	119395.9	20-yr	1772.64	963.42	958.82	1.47	1.41	11.74	10.64	485.58	566.63	2.45	2.22	4.6	4.6
Yellowstone County	B1	RM 372.32	119268.8	20-yr	1772.64	963.31	957.24	1.47	1.42	32.9	27.76	533.9	669.64	2.22	1.87	6.07	6.07
Yellowstone County	B1	RM 372.20	119079.1	20-yr	1772.64	962.95	956.93	1.62	1.59	45.23	42.62	512.44	567.17	2.08	1.96	6.02	6.02
Yellowstone County	B1	RM 372.08	118886.4	20-yr	1772.64	962.47	956.2	1.76	1.71	50.71	42.63	469.65	1056.43	2.07	1.73	6.27	6.27
Yellowstone County	B1	RM 371.94	118669.8	20-yr	1772.64	961.8	957.58	2.05	2.05	56.52	55.98	446.65	741.96	1.93	1.91	4.22	4.22
Yellowstone County	B1	RM 371.83	118490.4	20-yr	1772.64	961.46	957.52	1.93	1.88	32.3	28.11	393.63	688.42	2.24	1.95	3.94	3.94
Yellowstone County	B1	RM 371.74	118350.7	20-yr	1772.64	961.26	957.48	2	1.88	26.68	18.89	386.04	737.08	2.17	1.54	3.78	3.78
Yellowstone County	B1	RM 371.62	118155.6	20-yr	1772.64	961.05	956.41	2.1	1.56	30.53	13.81	220.59	770.05	3.25	1.47	4.64	4.64
Yellowstone County	B1	RM 371.53	118001.4	20-yr	1772.64	960.8	955.99	2.41	1.86	35.05	17.55	234.87	682.08	2.8	1.4	4.81	4.81
Yellowstone County	B1	RM 371.43	117839.2	20-yr	1772.64	960.38	955.47	2.71	2.22	81.95	37.8	253.33	967.73	2.38	1.09	4.91	4.91
Yellowstone County	B1	RM 371.37	117745.1	20-yr	1772.64	960.23	955.72	2.46	2	30.27	16.15	292.28	821.02	2.34	1.25	4.51	4.51
Yellowstone County	B1	RM 371.32	117662.6	20-yr	1772.64	960.2	956.41	1.98	1.55	32.76	17.31	299.65	830.39	2.61	1.38	3.79	3.79
Yellowstone County	B1	RM 371.25	117560.3	20-yr	1772.64	960.1	955.99	1.84	1.48	20.65	13.05	373.94	860.34	2.41	1.52	4.11	4.11
Yellowstone County	B1	RM 371.21	117499	20-yr	1772.64	960.08	955.72	1.66	1.42	17.13	12.57	357.44	668.36	2.54	1.86	4.36	4.36
Yellowstone County	B1	RM 371.12	117353.9	20-yr	1772.64	959.92	955.54	1.81	1.81	20.02	20.02	390.08	390.08	2.51	2.51	4.38	4.38
Yellowstone County	B1	RM 371.04	117225.1	20-yr	1772.64	959.47	954.84	2.8	2.8	46.14	46.14	231.66	510.29	2.73	2.73	4.63	4.63
Yellowstone County		RM 335.51	117205	20-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	20-yr	1772.64	959.39	954.9	2.74	2.74	45.17	45.17	226.9	394.44	2.85	2.85	4.49	4.49
Yellowstone County	B1	RM 370.94	117054.9	20-yr	1772.64	959.22	955.57	2.53	2.45	44.71	33.28	242.96	949.17	2.87	2.13	3.65	3.65
Yellowstone County	B1	RM 370.85	116910.9	20-yr	1772.64	958.9	954.47	2.79	2.56	51.69	30.64	218.67	982.31	2.88	1.7	4.43	4.43
Yellowstone County	B1	RM 370.77	116793.6	20-yr	1772.64	958.67	953.84	2.89	2.43	45.19	23.02	223.33	1032.17	2.68	1.36	4.83	4.83
Yellowstone County	B1	RM 370.72	116711.6	20-yr	1772.64	958.41	953.13	3.25	2.45	64.95	27.74	165.01	989.57	3.07	1.31	5.28	5.28

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	20-yr	1772.64	958.44	953.05	2.79	2.04	40.11	22.2	198.37	1037.96	2.73	1.51	5.39	5.39
Yellowstone County	B1	RM 370.63	116558.9	20-yr	1772.64	958.26	953.42	2.7	2.08	57.99	20.57	180.02	1093.99	3.34	1.18	4.84	4.84
Yellowstone County	B1	RM 370.56	116440.6	20-yr	1772.64	958.18	953.34	2.41	1.65	26.99	9.23	178.41	1016.56	3.71	1.26	4.84	4.84
Yellowstone County	B1	RM 370.44	116241.1	20-yr	1772.64	957.84	952.03	2.97	1.9	55.66	15.05	134.01	874.03	3.98	1.07	5.81	5.81
Yellowstone County	B1	RM 370.34	116071.6	20-yr	1772.64	957.61	949.79	2.99	1.92	58.5	13.9	118.14	882.98	4.46	1.05	7.82	7.82
Yellowstone County	B1	RM 370.24	115908.6	20-yr	1772.64	957.49	950.22	2.72	1.7	44.14	12.82	117.55	775.34	4.67	1.34	7.27	7.27
Yellowstone County	B1	RM 370.11	115705	20-yr	1772.64	957.25	952.12	2.69	1.91	47.82	18.1	160.83	690.16	3.55	1.34	5.13	5.13
Yellowstone County	B1	RM 370.00	115535.2	20-yr	1772.64	956.95	952.2	2.45	2.14	69.19	44.94	258.72	553.24	2.31	1.5	4.75	4.75
Yellowstone County	B1	RM 369.89	115356.1	20-yr	1772.64	956.61	953.15	2.26	2.07	25.57	20.17	412.51	602.21	1.8	1.42	3.46	3.46
Yellowstone County	B1	RM 369.77	115164.3	20-yr	1772.64	956.35	952.34	2.09	2.03	23.8	21.11	485.93	708.51	1.73	1.54	4.01	4.01
Yellowstone County	B1	RM 369.64	114965.6	20-yr	1772.64	956.06	951.9	2.02	1.89	29.58	23.18	502.12	803.03	1.67	1.31	4.16	4.16
Yellowstone County	B1	RM 369.54	114789.5	20-yr	1772.64	955.82	952.38	1.88	1.64	21.53	16.51	501.82	815.89	1.74	1.33	3.44	3.44
Yellowstone County	B1	RM 369.45	114650.1	20-yr	1772.64	955.69	951	1.7	1.56	19.86	16.82	465.65	677.57	1.99	1.68	4.69	4.69
Yellowstone County	B1	RM 369.32	114431.1	20-yr	1772.64	955.44	951.1	1.75	1.54	27.88	20.19	376.33	629.07	2.53	1.83	4.34	4.34
Yellowstone County	B1	RM 369.17	114210.5	20-yr	1772.64	955.1	949.85	2.15	2.1	41.65	30.4	198.04	396.78	2.92	2.13	5.25	5.25
Yellowstone County	B1	RM 369.06	114022.4	20-yr	1772.64	954.49	949.89	3.23	2.66	66.05	33.92	151.61	417.64	3.12	1.6	4.6	4.6
Yellowstone County	B1	RM 368.96	113871.2	20-yr	1772.64	954.34	949.68	2.68	2.18	45.86	23.55	169.35	502.27	3.16	1.62	4.66	4.66
Yellowstone County	B1	RM 368.88	113745.9	20-yr	1772.64	954.17	948.77	2.51	2.03	38.59	20.88	214.61	651.83	2.72	1.47	5.4	5.4
Yellowstone County	B1	RM 368.82	113641	20-yr	1772.64	953.99	948.47	2.39	2.03	45.79	30.4	296.36	625.7	2.11	1.4	5.52	5.52
Yellowstone County	B1	RM 368.72	113477.3	20-yr	1772.64	953.79	948.45	1.9	1.63	31.29	23.17	349.47	654.91	2.24	1.66	5.34	5.34
Yellowstone County	B1	RM 368.63	113328.9	20-yr	1772.64	953.61	947.82	1.82	1.55	29	19.52	313.84	708.02	2.4	1.61	5.79	5.79
Yellowstone County	B1	RM 368.54	113195.6	20-yr	1772.64	953.41	947.51	2.04	1.61	27.21	16.36	269.79	645.21	2.85	1.71	5.9	5.9
Yellowstone County	B1	RM 368.44	113035.8	20-yr	1772.64	953.15	947.4	2.24	1.86	57.01	37.46	256.52	545.77	2.66	1.75	5.75	5.75
Yellowstone County	B1	RM 368.35	112878.7	20-yr	1772.64	953.1	946.64	1.59	1.47	14.64	10.13	283.07	448.27	3.89	2.69	6.46	6.46
Yellowstone County	B1	RM 368.26	112737.6	20-yr	1772.64	952.8	946.23	2.41	2.41	87.02	86.67	227.9	228.74	3.23	3.22	6.57	6.57
Yellowstone County	B1	RM 368.18	112604.7	20-yr	1772.64	952.41	947.11	2.88	2.88	49.88	49.88	161.96	972.55	3.8	3.8	5.3	5.3
Yellowstone County	B2	RM 368.09	112456.7	20-yr	1772.64	952.11	947.7	3.07	3.07	66.33	66.33	156.17	156.17	3.7	3.7	4.41	4.41
Yellowstone County	B2	RM 368.00	112314.4	20-yr	1772.64	952.07	947.56	2.39	2.38	32.16	31.57	198.48	477	3.74	3.68	4.51	4.51
Yellowstone County	B2	RM 367.86	112104.7	20-yr	1772.64	951.66	946.1	2.9	2.9	60.95	60.95	176.53	176.53	3.46	3.46	5.56	5.56
Yellowstone County	B2	RM 367.79	111989.2	20-yr	1772.64	951.43	945.04	2.93	2.93	73.75	73.47	167.91	168.34	3.61	3.6	6.39	6.39
Yellowstone County	B2	RM 367.72	111876.5	20-yr	1772.64	951.28	945.45	2.85	2.66	44.2	27.87	149.5	420.93	4.02	2.54	5.83	5.83
Yellowstone County	B2	RM 367.64	111739.2	20-yr	1772.64	951.04	945.68	3.06	2.72	63.96	32.96	140.51	366.65	3.89	2	5.36	5.36
Yellowstone County	B2	RM 367.50	111519.9	20-yr	1772.64	950.61	945.21	3.23	2.7	66.01	25.39	126.99	417.76	4.13	1.57	5.4	5.4
Yellowstone County	B2	RM 367.40	111357.1	20-yr	1772.64	950.41	944.36	3.16	2.48	56.42	21.64	113.33	427.99	4.4	1.67	6.05	6.05
Yellowstone County	B2	RM 367.31	111214.8	20-yr	1772.64	950.25	945.36	3	2.35	45.19	19.49	144.65	465.68	3.77	1.62	4.89	4.89
Yellowstone County	B2	RM 367.19	110992.7	20-yr	1772.64	950.08	945.91	2.42	2.05	33.31	19.35	244.98	529.35	2.83	1.64	4.17	4.17
Yellowstone County	B2	RM 367.11	110813.5	20-yr	1772.64	949.89	945.17	2.27	1.88	31.06	21.08	295.2	557.76	2.49	1.69	4.72	4.72
Yellowstone County	B2	RM 367.03	110669.4	20-yr	1772.64	949.82	945.89	1.77	1.58	16.55	14.4	418.55	564.02	2.29	1.99	3.93	3.93
Yellowstone County	B2	RM 366.95	110543	20-yr	1772.64	949.77	945.34	1.29	1.23	20.4	19.34	560.16	645.91	2.36	2.24	4.43	4.43
Yellowstone County	B2	RM 366.84	110376	20-yr	1772.64	949.65	944.61	1.15	1.11	16.33	13.31	603.35	780.26	2.51	2.04	5.04	5.04
Yellowstone County	B2	RM 366.78	110300.8	20-yr	1772.64	949.59	943.84	1.22	1.13	18.94	14.04	562.72	930.49	2.53	1.87	5.75	5.75
Yellowstone County	B2	RM 366.73	110074.8	20-yr	1772.64	949.32	943.42	1.57	1.56	28.24	27.27	436.09	727.59	2.6	2.51	5.9	5.9
Yellowstone County	B2	RM 366.68	109931.6	20-yr	1772.64	949.08	942.77	1.93	1.91	40.4	35.63	310.98	355.89	2.96	2.61	6.31	6.31
Yellowstone County	B2	RM 366.53	109747.6	20-yr	1772.64	948.64	940.86	2.75	2.75	37.15	37.15	163.97	163.97	3.93	3.93	7.78	7.78
Yellowstone County	B2	RM 366.38	109510.8	20-yr	1772.64	948.21	941.55	3.2	3.2	69.02	69.02	115.35	115.35	4.8	4.8	6.66	6.66
Yellowstone County	B2	RM 366.27	109345.5	20-yr	1772.64	948.22	942.72	2.11	2.11	35.69	35.59	225.92	417.46	3.71	3.7	5.5	5.5
Yellowstone County	B2	RM 366.15	109158.9	20-yr	1772.64	947.95	941.59	2.13	2.13	58.6	58.6	292.19	308.01	2.85	2.85	6.36	6.36
Yellowstone County	B2	RM 366.04	108972.6	20-yr	1772.64	947.67	941.41	2.31	2.31	20.86	20.86	312.39	312.39	2.46	2.46	6.26	6.26
Yellowstone County	B2	RM 365.94	108818.8	20-yr	1772.64	947.58	940.93	2.05	2.05	17.06	17.06	360.89	360.89	2.4	2.4	6.65	6.65
Yellowstone County	B2	RM 365.83	108647.5	20-yr	1772.64	947.38	939.93	2.01	1.96	66.91	62.21	331.38	368.6	2.64	2.45	7.45	7.45
Yellowstone County	B2	RM 365.75	108521.3	20-yr	1772.64	947.09	941.33	2.02	1.97	58.2	49.04	264.14	371.04	2.88	2.42	5.76	5.76
Yellowstone County	B2	RM 365.71	108446.5	20-yr	1772.64	946.91	941.83	2.21	1.99	55.1	37.83	234.24	393	3.31	2.26	5.08	5.08
Yellowstone County	B2	RM 365.64	108343.5	20-yr	1772.64	946.74	942.19	2.08	1.87	50.3	36.34	306.44	485.45	2.7	1.95	4.55	4.55
Yellowstone County	B2	RM 365.57	108220.5	20-yr	1772.64	946.47	942.08	2.27	2.05	50.39	35.77	252.14	407.83	2.99	2.12	4.39	4.39
Yellowstone County	B2	RM 365.51	108118.9	20-yr	1772.64	946.29	941.87	2.24	2.01	57.33	38.08	265.35	459.7	2.89	1.91	4.42	4.42
Yellowstone County	B2	RM 365.46	108042.9	20-yr	1772.64	946.23	941.73	1.87	1.75	30.17	22.49	317.69	462.75	2.93	2.19	4.5	4.5
Yellowstone County	B2	RM 365.41	107956.5	20-yr	1772.64	946.16	941.46	1.76	1.69	26.44	21.83	326.34	415.94	3.06	2.53	4.7	4.7
Yellowstone County	B2	RM 365.37	107905.7	20-yr	1772.64	946.12	940.74	1.79	1.78	18.42	16.65	309.23	344.59	3.21	2.9	5.38	5.38
Yellowstone County	B2	RM 365.31	107792.4	20-yr	1772.64	946	939.27	2.02	1.96	22.3	18.85	257.08	317.48	3.37	2.85	6.73	6.73
Yellowstone County	B2	RM 365.27	107727.9	20-yr	1772.64	945.91	939.34	2.17	2.09	28.58	23.23	251.44	323.96	3.22	2.61	6.57	6.57
Yellowstone County	B2	RM 365.23	107674.2	20-yr	1772.64	945.82	939.52	2.34	2.26	26.46	21.6	230.94	319.11	3.26	2.66	6.3	6.3

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions
20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	20-yr	1772.64	945.79	939.93	2.15	2.11	30.78	27.52	240.29	274.66	3.42	3.05	5.86	5.86
Yellowstone County	B2	RM 365.15	107534.7	20-yr	1772.64	945.73	939.68	2.16	2.09	25.18	21.55	213.91	262.82	3.79	3.23	6.05	6.05
Yellowstone County	B2	RM 365.10	107466	20-yr	1772.64	945.63	938.61	2.35	2.31	29.54	21.5	186.92	263.27	4.02	2.92	7.02	7.02
Yellowstone County	B2	RM 365.06	107396.2	20-yr	1772.64	945.59	939.07	2.33	2.2	32.49	21.32	170.56	279.95	4.4	2.88	6.52	6.52
Yellowstone County	B2	RM 365.01	107325.8	20-yr	1772.64	945.56	939.22	2.13	2.04	44.2	28.46	175.34	288.44	4.7	3.02	6.34	6.34
Yellowstone County	B2	RM 364.99	107287.5	20-yr	1772.64	945.5	939.27	2.21	2.1	50.54	35.82	170.9	260.15	4.59	3.25	6.23	6.23
Yellowstone County	B2	RM 364.90	107128.3	20-yr	1772.64	945.24	937.97	2.59	2.42	31.33	25.62	149.12	197.32	4.55	3.72	7.27	7.27
Yellowstone County		RM 331.55	107100	20-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	20-yr	1772.64	945.13	938.58	2.56	2.43	30.67	25.81	152.9	197.5	4.5	3.8	6.55	6.55
Yellowstone County	B2	RM 364.81	106996.1	20-yr	1772.64	945.14	938.93	2.09	2.09	19.94	19.78	256.79	258.93	3.3	3.27	6.21	6.21
Yellowstone County	B2	RM 364.74	106893.3	20-yr	1772.64	944.99	938.94	2.4	2.3	38.44	35.18	164.71	262.56	4.44	4.09	6.05	6.05
Yellowstone County	B2	RM 364.64	106739.2	20-yr	1772.64	944.65	939.09	2.96	2.88	40.56	36.64	131.47	601.91	4.67	4.23	5.56	5.56
Yellowstone County		RM 331.32	106722	20-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	20-yr	1772.64	944.49	939.16	3	2.92	48.6	45.37	139.23	159.6	4.46	4.19	5.33	5.33
Yellowstone County	B2	RM 364.61	106686.8	20-yr	1772.64	944.51	939.21	2.71	2.71	35.42	35.15	158.46	474.41	4.12	4.09	5.3	5.3
Yellowstone County	B2	RM 364.60	106666.6	20-yr	1772.64	944.42	939.26	2.91	2.91	40.83	40.83	149.39	149.39	4.08	4.08	5.16	5.16
Yellowstone County		RM 331.14	106644	20-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	20-yr	1772.64	944.33	939.21	2.88	2.88	39.53	39.53	149.74	149.74	4.23	4.23	5.12	5.12
Yellowstone County	B2	RM 364.53	106558.4	20-yr	1772.64	944.3	939.11	2.7	2.7	34.52	34.52	164.36	164.36	4	4	5.19	5.19
Yellowstone County	B2	RM 364.49	106490.3	20-yr	1772.64	944.23	939.24	2.69	2.67	39.45	34.57	161.53	186.24	4.08	3.57	4.99	4.99
Yellowstone County	B2	RM 364.43	106394	20-yr	1772.64	944.14	939.13	2.68	2.62	38.93	33.65	159.65	189.17	4.14	3.58	5.01	5.01
Yellowstone County	B2	RM 364.37	106296.4	20-yr	1772.64	944.06	938.98	2.66	2.46	33.88	23.79	148.64	232.35	4.44	3.1	5.08	5.08
Yellowstone County	B2	RM 364.32	106215.1	20-yr	1772.64	943.98	938.52	2.64	2.42	54.6	37.77	153.78	247.5	4.29	2.96	5.46	5.46
Yellowstone County	B2	RM 364.29	106172.9	20-yr	1772.64	944.02	938.13	2.07	1.91	56.52	40.33	191	591.88	4.37	3.11	5.89	5.89
Yellowstone County	B2	RM 364.26	106126.6	20-yr	1772.64	943.78	937.7	2.78	2.43	61.8	43.53	145.02	245.37	4.22	2.97	6.08	6.08
Yellowstone County	B2	RM 364.22	106055.2	20-yr	1772.64	943.57	938.15	3	2.96	75.3	46.15	136.91	227.28	4.32	2.64	5.42	5.42
Yellowstone County	B2	RM 364.14	105927.3	20-yr	1772.64	943.19	938.12	3.39	2.99	87.09	55.11	124.02	229.78	4.1	2.58	5.07	5.07
Yellowstone County	B2	RM 364.06	105809.9	20-yr	1772.64	943.08	938.22	2.91	2.54	59.87	33.58	154.34	324.08	3.85	2.15	4.86	4.86
Yellowstone County	B2	RM 363.96	105648.3	20-yr	1772.64	942.96	938.28	2.28	2.18	38.49	33.58	247.91	373.37	3.09	2.7	4.68	4.68
Yellowstone County	B2	RM 363.85	105472.4	20-yr	1772.64	942.66	936.25	2.76	2.38	37.42	25.56	150.25	281.06	3.9	2.65	6.41	6.41
Yellowstone County	B2	RM 363.76	105316.8	20-yr	1772.64	942.52	937.03	2.61	2.32	46.9	27.67	147.09	319.97	4.06	2.39	5.49	5.49
Yellowstone County	B2	RM 363.63	105118.1	20-yr	1772.64	942.28	937.93	2.17	2.17	46.36	46.36	331.48	331.48	2.46	2.46	4.35	4.35
Yellowstone County	B2	RM 363.52	104943.9	20-yr	1772.64	941.96	937.54	2.03	1.94	46.98	38.82	372.43	479.13	2.31	1.91	4.42	4.42
Yellowstone County	B2	RM 363.46	104841.5	20-yr	1772.64	941.82	937.16	1.86	1.67	33.41	22.93	330.96	601.08	2.79	1.91	4.66	4.66
Yellowstone County	B2	RM 363.33	104622.9	20-yr	1772.64	941.51	936.36	1.91	1.51	45.92	26.55	300.23	825.06	2.63	1.52	5.15	5.15
Yellowstone County	B2	RM 363.20	104414.5	20-yr	1772.64	941.15	936.48	2.09	1.51	34.46	16.33	282.91	1018.76	2.67	1.26	4.67	4.67
Yellowstone County	B2	RM 363.10	104256.4	20-yr	1772.64	940.87	936.25	2.26	1.68	40.42	20.51	275.01	821.4	2.53	1.28	4.62	4.62
Yellowstone County	B2	RM 363.03	104144.8	20-yr	1772.64	940.72	936.22	2.2	1.6	32.85	15.35	284.75	928.4	2.56	1.19	4.5	4.5
Yellowstone County	B2	RM 362.86	103869.6	20-yr	1772.64	940.57	934.32	1.55	1.19	14.23	8.5	405.06	977.44	2.56	1.53	6.25	6.25
Yellowstone County	B2	RM 362.74	103671.4	20-yr	1772.64	940.35	934.52	1.99	1.53	24.33	14.46	371	888.88	2.19	1.3	5.83	5.83
Yellowstone County	B2	RM 362.63	103493.2	20-yr	1772.64	940.09	934.5	1.96	1.55	43.53	27.49	388.17	864.22	2.1	1.32	5.58	5.58
Yellowstone County	B2	RM 362.52	103330.7	20-yr	1772.64	939.74	934.5	1.88	1.59	44.4	29.13	435.44	835.35	2.04	1.33	5.24	5.24
Yellowstone County	B2	RM 362.43	103185.5	20-yr	1772.64	939.57	934.1	1.79	1.64	16.63	14.1	438.25	774.05	2.2	1.86	5.47	5.47
Yellowstone County	B2	RM 362.36	103070.8	20-yr	1772.64	939.46	932.98	1.9	1.84	16.43	15.25	404.54	504.51	2.29	2.13	6.48	6.48
Yellowstone County	B2	RM 362.27	102929.3	20-yr	1772.64	939.25	932.93	2.32	2.32	25.75	25.75	196.12	196.12	3.89	3.89	6.32	6.32
Yellowstone County	B2	RM 362.20	102813.3	20-yr	1772.64	938.65	933.37	3.73	3.73	71.61	71.61	111.62	111.62	4.25	4.25	5.28	5.28
Yellowstone County	B2	RM 362.13	102693.1	20-yr	1772.64	938.45	933.47	3.69	3.69	67.37	67.37	125.53	166.87	3.83	3.83	4.98	4.98
Yellowstone County	B3	RM 362.05	102570.9	20-yr	1772.64	938.39	933.85	3.08	3.06	49	43.64	181.43	205.73	3.17	2.82	4.54	4.54
Yellowstone County	B3	RM 362.00	102488.8	20-yr	1772.64	938.38	934.11	2.5	2.5	37.75	37.63	243.99	306.03	2.9	2.89	4.27	4.27
Yellowstone County	B3	RM 361.93	102368.8	20-yr	1772.64	938.29	934.31	2.21	2.21	27.92	27.83	367.9	369.18	2.49	2.48	3.98	3.98
Yellowstone County	B3	RM 361.86	102261.1	20-yr	1772.64	938.05	934.36	2.42	2.41	54.62	52.99	363.84	440.8	2.01	1.95	3.69	3.69
Yellowstone County	B3	RM 361.78	102138.9	20-yr	1772.64	937.94	933.72	1.93	1.91	21.22	19.89	407.16	489.03	2.25	2.11	4.22	4.22
Yellowstone County	B3	RM 361.68	101970.2	20-yr	1772.64	937.81	933.64	1.74	1.7	20.61	19.53	425.91	555.1	2.38	2.26	4.17	4.17
Yellowstone County	B3	RM 361.65	101918.4	20-yr	1772.64	937.78	933.71	1.59	1.57	18.17	16.9	403.7	623.04	2.75	2.56	4.07	4.07
Yellowstone County	B3	RM 361.61	101855.6	20-yr	1772.64	937.67	932.7	1.91	1.9	22.39	21.67	335.01	633.18	2.76	2.67	4.97	4.97
Yellowstone County	B3	RM 361.56	101767.4	20-yr	1772.64	937.57	930.29	2.05	2.03	23.01	21.8	267.33	621.07	3.24	3.07	7.28	7.28
Yellowstone County	B3	RM 361.48	101644.6	20-yr	1772.64	937.34	929.97	2.53	2.35	47.53	29.02	181.61	668.71	3.82	2.32	7.37	7.37
Yellowstone County	B3	RM 361.42	101546.2	20-yr	1772.64	937.11	932.36	2.89	2.56	40.34	24.29	186.79	1246.69	3.23	1.94	4.75	4.75
Yellowstone County	B3	RM 361.37	101468.9	20-yr	1772.64	937.07	932.21	2.65	2.22	35.49	20.07	171.32	1415.16	3.75	2.12	4.86	4.86
Yellowstone County	B3	RM 361.33	101409.4	20-yr	1772.64	936.91	932.02	2.97	2.43	46.64	23.14	163.06	1280.58	3.48	1.72	4.89	4.89
Yellowstone County	B3	RM 361.29	101346	20-yr	1772.64	936.64	930.51	3.46	2.91	62.68	28.36	140.23	676.82	3.52	1.59	6.13	6.13

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	20-yr	1772.64	936.16	928.42	4.26	3.74	92.16	48.9	112.82	774.12	3.56	1.87	7.74	7.74
Yellowstone County	B3	RM 361.21	101251.*	20-yr	1772.64	936.33	927.55	3.28	2.77	104.44	43.93	118.58	1165.08	4.31	1.8	8.79	8.79
Yellowstone County		RM 361.21	101217.5	20-yr	1772.64	936.38	926.68	2.84	2.29	40.14	16	114.36	1283.12	5.19	2.05	9.7	9.7
Yellowstone County	B3	RM 361.18	101167.2	20-yr	1772.64	936.37	928.03	2.7	2.26	41.43	22.13	135.75	1421.71	4.55	2.42	8.34	8.34
Yellowstone County	B3	RM 361.16	101134.2	20-yr	1772.64	936.41	928.92	2.26	1.98	31.96	24.08	207.62	1369.2	3.56	2.68	7.49	7.49
Yellowstone County	B3	RM 361.09	101028.7	20-yr	1772.64	936.3	931.28	2.18	2.17	27.06	25.68	358.86	1482.83	2.27	2.15	5.02	5.02
Yellowstone County	B3	RM 361.01	100891.3	20-yr	1772.64	936.11	931.55	2.23	2.22	30.44	30.06	364.87	1534.72	2.18	2.15	4.56	4.56
Yellowstone County	B3	RM 360.92	100756	20-yr	1772.64	935.94	931.05	1.84	1.84	38.02	36.06	457.87	1719.51	2.1	1.99	4.89	4.89
Yellowstone County	B3	RM 360.81	100570.1	20-yr	1772.64	935.58	929.52	1.85	1.84	39.77	37.4	478.87	1675.57	2	1.88	6.06	6.06
Yellowstone County	B3	RM 360.69	100383.5	20-yr	1772.64	935.35	930.6	1.76	1.61	26.21	19.62	340.51	2034.03	2.8	2.1	5.46	5.46
Yellowstone County	B3	RM 360.59	100227.2	20-yr	1772.64	935.11	930.53	2.19	1.75	27.85	16.5	269.12	2085.43	2.72	1.61	4.9	4.9
Yellowstone County	B3	RM 360.50	100081	20-yr	1772.64	934.83	930.55	2.55	2.21	41.87	26.24	214.5	2063.86	3.12	1.95	4.28	4.28
Yellowstone County	B3	RM 360.42	99970.7	20-yr	1772.64	934.61	929.97	2.77	2.33	45.43	28.16	194.16	1803.13	3.13	1.94	4.64	4.64
Yellowstone County	B3	RM 360.36	99862.66	20-yr	1772.64	934.52	929.68	2.47	2.13	32.98	23.25	242.5	1936.49	2.84	2	4.84	4.84
Yellowstone County	B3	RM 360.27	99717.18	20-yr	1772.64	934.23	929.52	2.93	2.35	47.39	30.36	149.73	1650.48	3.34	2.14	4.71	4.71
Yellowstone County	B3	RM 360.18	99578.06	20-yr	1772.64	933.82	929.32	3.34	2.8	71.18	34.31	135.25	1446.07	3.79	1.81	4.5	4.5
Yellowstone County	B3	RM 360.11	99458.59	20-yr	1772.64	933.88	929.38	2.44	1.88	31.44	19.76	148.51	1470.22	3.41	2.15	4.5	4.5
Yellowstone County	B3	RM 360.03	99328	20-yr	1789.63	933.79	929.58	2.18	1.72	35.24	20.67	168.97	1655.85	3.42	2.01	4.21	4.21
Yellowstone County	B3	RM 359.96	99226.54	20-yr	1789.63	933.65	929.2	2.38	1.71	35.11	17.54	163.81	1487.38	3.49	1.74	4.45	4.45
Yellowstone County	B3	RM 359.88	99098.18	20-yr	1789.63	933.46	927.78	2.66	1.91	38.39	17.57	144	1438.73	3.82	1.75	5.68	5.68
Yellowstone County	B3	RM 359.78	98940.52	20-yr	1789.63	933.3	928.1	2.61	1.82	47.08	20.33	150	1457.4	3.88	1.67	5.2	5.2
Yellowstone County	B3	RM 359.70	98813.18	20-yr	1789.63	932.49	928.32	4.14	3.43	114.78	45.31	122.7	1048.88	3.3	1.29	4.17	4.17
Yellowstone County	B3	RM 359.61	98663.44	20-yr	1789.63	932.6	928.8	2.19	1.84	32.66	16.64	310.16	1326.21	2.51	1.27	3.8	3.8
Yellowstone County	B3	RM 359.50	98492.66	20-yr	1789.63	932.36	928.22	2.26	1.89	29.86	15.06	321.82	1470.06	2.31	1.16	4.14	4.14
Yellowstone County	B3	RM 359.38	98291.15	20-yr	1789.63	932.03	927.09	2.12	1.9	50.97	29.79	380.94	1419.59	1.92	1.12	4.94	4.94
Yellowstone County	B3	RM 359.26	98107.42	20-yr	1789.63	931.65	927.71	2.16	1.82	30.64	18.37	405.03	1157.19	1.87	1.12	3.94	3.94
Yellowstone County	B3	RM 359.18	97966.53	20-yr	1789.63	931.49	927.28	2.05	1.53	25.42	11.87	299.78	1205.14	2.41	1.12	4.21	4.21
Yellowstone County	B3	RM 359.10	97841.82	20-yr	1789.63	931.34	926.69	1.99	1.58	24.81	15.58	374.84	1127.14	2.09	1.31	4.65	4.65
Yellowstone County	B3	RM 359.01	97692.75	20-yr	1789.63	931.16	925.91	1.93	1.38	33.4	21.45	329.94	1108.42	2.24	1.43	5.25	5.25
Yellowstone County	B3	RM 358.90	97524.59	20-yr	1789.63	930.65	926.77	2.77	1.92	53.73	23.59	227.3	855.34	2.49	1.09	3.88	3.88
Yellowstone County	B3	RM 358.81	97374.99	20-yr	1789.63	930.23	926.37	3.04	2.21	49.36	19.71	219.98	804.28	2.52	1.01	3.86	3.86
Yellowstone County	B3	RM 358.74	97267.71	20-yr	1789.63	930.02	925.53	3.06	1.8	74.43	29.7	166.3	1313.35	2.67	1.06	4.49	4.49
Yellowstone County	B3	RM 358.67	97155.8	20-yr	1789.63	929.97	925.59	2.1	1.59	25.85	14.51	276.85	1313.77	2.14	1.2	4.38	4.38
Yellowstone County	B3	RM 358.61	97062.24	20-yr	1789.63	929.89	925.74	1.68	1.43	23.35	12.97	389.27	1480.11	2.03	1.13	4.15	4.15
Yellowstone County	B3	RM 358.56	96985.92	20-yr	1789.63	929.82	926.2	1.52	1.33	17.51	10.21	449.84	1448.8	1.94	1.14	5.23	5.23
Yellowstone County	B3	RM 358.50	96888.4	20-yr	1789.63	929.74	925.64	1.41	1.2	13.44	9.23	537.87	1395.73	1.79	1.23	4.1	4.1
Yellowstone County	B3	RM 358.43	96788.43	20-yr	1789.63	929.71	925.27	1.05	0.95	11.08	8.73	650.58	1382.52	1.8	1.42	4.44	4.44
Yellowstone County	B3	RM 358.30	96638.82	20-yr	1789.63	929.66	924.7	0.96	0.82	7.71	5.72	686.04	1252.81	2.37	1.75	4.96	4.96
Yellowstone County	B3	RM 358.24	96561.93	20-yr	1789.63	929.63	923.57	1.02	0.88	8.21	6.49	644.55	1199.79	2.22	1.75	6.06	6.06
Yellowstone County	B3	RM 358.20	96500.79	20-yr	1789.63	929.56	922.99	1.31	1.22	12.32	9.47	617.69	923.89	2.08	1.59	6.57	6.57
Yellowstone County	B3	RM 358.14	96404.93	20-yr	1789.63	929.49	922.57	1.37	1.19	11.81	7.26	543.4	1199.1	2.24	1.37	6.92	6.92
Yellowstone County	B3	RM 358.12	96368.05	20-yr	1789.63	929.47	922.78	1.45	1.1	13.09	7.05	348.85	1184.08	2.84	1.52	6.69	6.69
Yellowstone County	B3	RM 358.04	96244.75	20-yr	1789.63	929.32	923.22	2.11	1.38	36.98	12.46	162.23	1063.92	3.64	1.22	6.1	6.1
Yellowstone County	B3	RM 358.00	96168.44	20-yr	1789.63	929.16	923.39	2.67	1.44	47.61	13.01	101.88	1183.94	3.89	1.05	5.77	5.77
Yellowstone County	B3	RM 357.93	96065.49	20-yr	1789.63	928.96	923.1	3	1.67	41.15	11.27	106.83	1086.51	3.62	0.99	5.86	5.86
Yellowstone County	B3	RM 357.88	95975.44	20-yr	1789.63	929.01	923.91	2.01	1.28	25.03	8.94	153.56	1133.52	3.46	1.23	5.1	5.1
Yellowstone County	B3	RM 357.82	95884.99	20-yr	1789.63	928.93	924.01	1.94	1.49	22.93	9.59	193.1	923.19	3.46	1.44	4.92	4.92
Yellowstone County	B3	RM 357.78	95821.69	20-yr	1789.63	928.89	924.08	1.75	1.61	24.42	11.66	257.61	793.83	2.94	1.4	4.8	4.8
Yellowstone County	B3	RM 357.69	95683.91	20-yr	1789.63	928.7	923.81	2.03	1.81	22.04	10.44	303.72	744.94	2.81	1.33	4.89	4.89
Yellowstone County	B4	RM 357.62	95571.15	20-yr	1789.63	928.46	921.84	2.51	2.33	39.8	20.04	252.48	553.96	2.76	1.38	6.62	6.62
Yellowstone County	B4	RM 357.56	95469.4	20-yr	1789.63	928.4	918.46	2.16	1.96	30.7	13.78	225.69	626.73	3.6	1.61	9.94	9.94
Yellowstone County	B4	RM 357.48	95351.48	20-yr	1789.63	928.06	922.69	2.88	2.68	47.1	28.6	198.59	538.86	3.09	1.87	5.37	5.37
Yellowstone County	B4	RM 357.44	95275.91	20-yr	1789.63	927.91	922.22	2.94	2.77	51.48	34.21	196.02	316.2	3.08	2.04	5.69	5.69
Yellowstone County	B4	RM 357.34	95127.12	20-yr	1789.63	927.69	923.1	2.89	2.66	48.08	32.1	182.02	301.26	3.36	2.24	4.59	4.59
Yellowstone County	B4	RM 357.23	94939.75	20-yr	1789.63	927.45	920.81	2.87	2.48	50.1	26.76	143.05	327.95	4.15	2.2	6.64	6.64
Yellowstone County	B4	RM 357.13	94789.23	20-yr	1789.63	927.28	921.26	2.95	2.4	44.49	19.44	138.75	559.74	3.67	1.59	6.02	6.02
Yellowstone County	B4	RM 357.01	94595.53	20-yr	1789.63	927.17	921.72	2.37	1.76	27.64	15.24	185.37	497.15	3.71	2.04	5.45	5.45
Yellowstone County	B4	RM 356.90	94412.13	20-yr	1789.63	927	921.02	2.38	1.87	29.83	17.31	234.38	554.84	2.98	1.73	5.98	5.98
Yellowstone County	B4	RM 356.81	94272.48	20-yr	1789.63	926.86	919.95	2.35	1.82	32.04	20.13	233.74	551.66	2.85	1.79	6.91	6.91
Yellowstone County	B4	RM 356.73	94148.77	20-yr	1789.63	926.76	921.15	2.09	1.68	25.51	13.3	299.9	874	2.47	1.29	5.61	5.61
Yellowstone County	B4	RM 356.66	94030.68	20-yr	1789.63	926.65	921.75	2.01	1.57	22.43	10.34	300.18	965.11	2.63	1.21	4.9	4.9

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions
20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	20-yr	1789.63	926.57	921.88	1.89	1.38	24.09	9.47	252.57	1053.91	3.17	1.24	4.69	4.69
Yellowstone County	B4	RM 356.50	93782.14	20-yr	1789.63	926.41	921.75	2.26	1.51	35.02	10.98	153.48	1030.18	3.74	1.16	4.66	4.66
Yellowstone County	B4	RM 356.44	93670.16	20-yr	1789.63	926.23	921.33	2.61	1.73	33.78	9.93	135.34	976.44	3.67	1.07	4.9	4.9
Yellowstone County	B4	RM 356.35	93525.27	20-yr	1789.63	926.03	919.71	2.79	1.86	54.93	14.68	115.42	904.42	4.08	1.08	6.32	6.32
Yellowstone County	B4	RM 356.26	93386.36	20-yr	1789.63	925.9	919.77	2.67	1.73	30.69	10.04	125.06	814.46	4.25	1.39	6.13	6.13
Yellowstone County	B4	RM 356.18	93264.31	20-yr	1789.63	925.84	919.95	2.41	1.69	35.58	12.87	128.53	689.3	4.28	1.54	5.89	5.89
Yellowstone County	B4	RM 356.11	93150.71	20-yr	1789.63	925.77	920.24	2.07	1.5	36.06	14.81	179.47	736.33	3.98	1.62	5.53	5.53
Yellowstone County	B4	RM 356.04	93034.25	20-yr	1789.63	925.56	920.36	2.4	1.8	52.71	20.84	173.25	700.57	3.61	1.42	5.2	5.2
Yellowstone County	B4	RM 355.97	92927.46	20-yr	1789.63	925.33	920.09	2.71	1.94	52.91	19.96	153.67	702.53	3.5	1.31	5.24	5.24
Yellowstone County	B4	RM 355.91	92825.82	20-yr	1789.63	925.28	919.82	2.31	1.5	26.08	10.92	153.74	841.59	3.74	1.56	5.46	5.46
Yellowstone County	B4	RM 355.82	92688.73	20-yr	1789.63	925.21	919.51	2.1	1.38	26.43	12.16	155.48	888.44	3.86	1.76	5.7	5.7
Yellowstone County	B4	RM 355.69	92483.67	20-yr	1789.63	924.22	919.96	4.35	3.14	104.19	58.06	108.06	680.01	3.04	1.69	4.26	4.26
Yellowstone County	B4	RM 355.68	92480	20-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	20-yr	1789.63	924.22	919.92	3.6	2.63	66.6	37.76	123	709.79	3.37	1.91	4.3	4.3
Yellowstone County	B4	RM 355.66	92419.94	20-yr	1789.63	924.3	919.8	2.87	2.32	40.35	21.79	139.95	762.87	3.44	1.86	4.5	4.5
Yellowstone County	B4	RM 355.60	92333.48	20-yr	1789.63	924.21	919.42	2.78	2.25	40.47	20.65	148.04	804.02	3.43	1.76	4.79	4.79
Yellowstone County	B4	RM 355.49	92159.95	20-yr	1789.63	924.07	918.52	2.26	1.86	49.84	23.44	141.27	929.08	3.45	1.62	5.55	5.55
Yellowstone County	B4	RM 355.43	92061.2	20-yr	1789.63	923.93	918.67	2.23	1.81	47.23	20.78	134.53	927.86	3.76	1.65	5.26	5.26
Yellowstone County	B4	RM 355.41	92020.68	20-yr	1789.63	923.93	919.02	1.79	1.59	40.53	21.18	159.91	986.61	3.39	1.77	4.91	4.91
Yellowstone County	B4	RM 355.38	91976.12	20-yr	1789.63	923.85	919.25	2.12	1.59	35.11	16.23	125.74	1156.58	3.83	1.76	4.6	4.6
Yellowstone County	B4	RM 355.35	91933.98	20-yr	1789.63	923.82	919.21	2.14	1.48	25.07	11.41	109.82	1161.44	4.11	1.86	4.61	4.61
Yellowstone County	B4	RM 355.32	91885.87	20-yr	1789.63	923.79	919.16	2.11	1.46	24.51	11.23	107.08	1128.87	4.06	1.84	4.63	4.63
Yellowstone County	B4	RM 355.29	91828.99	20-yr	1789.63	923.75	918.93	2.17	1.49	25	11.57	103.85	1090.58	4.09	1.87	5.22	5.22
Yellowstone County	B4	RM 355.23	91732.97	20-yr	1789.63	923.66	918.68	2.23	1.69	30.27	14.57	101.56	1153.4	4.24	2.02	5.22	5.22
Yellowstone County	B4	RM 355.14	91596.1	20-yr	1789.63	923.55	918.52	2.21	1.8	25.8	17.02	118.49	1256.54	4.15	2.72	5.03	5.03
Yellowstone County	B4	RM 354.94	91268.08	20-yr	1789.63	923.14	917.25	2.43	2.04	59.81	44.32	167.15	291.97	4.06	3.01	5.89	5.89
Yellowstone County	B4	RM 354.86	91153.59	20-yr	1789.63	922.83	917.03	2.88	2.29	67.21	36.98	125.07	1541.07	4.62	2.54	5.8	5.8
Yellowstone County	B4	RM 354.80	91056.05	20-yr	1789.63	922.61	915.66	3.12	2.33	76.93	36.17	117.98	1649.54	4.44	2.07	6.95	6.95
Yellowstone County	B4	RM 354.70	90880.27	20-yr	1789.63	922.32	915.38	2.86	2.55	73.9	49.65	153.63	291.11	3.59	2.41	6.94	6.94
Yellowstone County	B4	RM 354.61	90744.35	20-yr	1789.63	922.2	917.13	2.47	2.29	29.44	25.97	215.25	289.99	3.05	2.71	5.07	5.07
Yellowstone County	B4	RM 354.53	90609.24	20-yr	1789.63	922.16	916.52	1.99	1.91	23.06	19.28	238.32	1301.89	3.59	3.01	5.63	5.63
Yellowstone County	B4	RM 354.45	90486.63	20-yr	1789.63	921.96	915.87	2.4	2.23	39.17	28.58	205.43	1302.64	3.38	2.46	6.09	6.09
Yellowstone County	B4	RM 354.39	90385.43	20-yr	1789.63	921.71	915.24	2.84	2.52	49.33	30.11	165.51	1460.03	3.49	2.12	6.47	6.47
Yellowstone County	B4	RM 354.33	90291.31	20-yr	1789.63	921.71	915.37	2.4	2.03	28.64	18.35	150.94	1450.97	3.75	2.39	6.34	6.34
Yellowstone County	B4	RM 354.23	90133.96	20-yr	1789.63	921.27	915.46	3.22	2.54	71.73	31.55	118.76	1723.73	4.14	1.82	5.81	5.81
Yellowstone County	B4	RM 354.13	89983.48	20-yr	1789.63	921.02	914.94	3.03	2.47	74.92	31.71	134.11	408.06	4.2	1.77	6.08	6.08
Yellowstone County	B4	RM 354.00	89778.46	20-yr	1789.63	920.82	916.2	2.6	1.91	51.14	23.8	158.7	1814.39	3.57	1.66	4.62	4.62
Yellowstone County	B5	RM 353.90	89604.28	20-yr	1789.63	920.52	917.06	2.61	2.13	45.77	21.72	232.43	1830.66	2.81	1.33	3.62	3.62
Yellowstone County	B5	RM 353.80	89446.75	20-yr	1891.57	920.28	916.36	2.35	2.02	49.33	29.43	301.86	1863.46	2.54	1.51	3.92	3.92
Yellowstone County	B5	RM 353.70	89288.94	20-yr	1891.57	920.06	915.92	1.9	1.63	40.05	25.98	391.75	1861.37	2.35	1.52	4.14	4.14
Yellowstone County	B5	RM 353.65	89204.58	20-yr	1891.57	919.82	915.49	2.1	2.08	56.25	52.37	403.67	438.96	2.23	2.07	4.33	4.33
Yellowstone County	B5	RM 353.56	89077.56	20-yr	1891.57	919.59	914.2	1.89	1.51	43.48	23.49	363.95	1571.89	2.43	1.31	5.39	5.39
Yellowstone County	B5	RM 353.50	88982.39	20-yr	1891.57	919.5	914.58	1.68	1.26	30.02	14	307.02	1442.74	3.08	1.43	4.92	4.92
Yellowstone County	B5	RM 353.41	88846.15	20-yr	1891.57	919.28	914.41	2	1.41	38.63	14.95	230.62	1347.95	3	1.15	4.87	4.87
Yellowstone County	B5	RM 353.32	88709.14	20-yr	1891.57	919.09	913.6	2.2	1.35	35.72	13.23	194.16	1197.25	3.18	1.17	5.49	5.49
Yellowstone County	B5	RM 353.25	88587.13	20-yr	1891.57	918.85	912.76	2.62	1.52	43.72	14.97	160.68	1124.49	3.24	1.11	6.09	6.09
Yellowstone County	B5	RM 353.15	88438.48	20-yr	1891.57	918.66	912.71	2.56	1.64	40.27	17.09	214.2	1122.52	2.43	1.03	5.95	5.95
Yellowstone County	B5	RM 353.08	88321.13	20-yr	1891.57	918.59	912.99	2.18	1.42	28.14	11.76	197.65	1123.4	2.84	1.18	5.6	5.6
Yellowstone County	B5	RM 353.01	88210.34	20-yr	1891.57	918.53	913.13	1.78	1.3	22.35	12.04	249.61	985.18	2.75	1.48	5.4	5.4
Yellowstone County	B5	RM 352.94	88090.6	20-yr	1891.57	918.48	912.5	1.62	1.23	17.65	8.93	175.48	854.99	3.57	1.8	5.98	5.98
Yellowstone County	B5	RM 352.86	87957.76	20-yr	1891.57	918.38	913.38	1.95	1.47	27.89	13.08	122.14	695.15	3.97	1.85	5	5
Yellowstone County	B5	RM 352.79	87857.09	20-yr	1891.57	918.28	913.06	1.95	1.7	34.19	18.31	105.47	548.74	3.83	2.03	5.22	5.22
Yellowstone County	B5	RM 352.72	87748.15	20-yr	1891.57	918.1	911.97	2.55	1.97	48.65	24.2	91.44	431.58	4.53	2.22	6.13	6.13
Yellowstone County	B5	RM 352.68	87677.1	20-yr	1891.57	917.91	912.27	2.41	2.41	80.15	80.15	335.25	335.25	2.34	2.34	5.64	5.64
Yellowstone County	B5	RM 352.64	87605.18	20-yr	1891.57	917.43	911.68	3.01	3.01	100.66	100.66	229.49	229.49	2.74	2.74	5.75	5.75
Yellowstone County	B5	RM 352.63	87594	20-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	20-yr	1891.57	917.3	911.45	2.92	2.92	79.09	79.09	216.6	216.6	2.99	2.99	5.85	5.85
Yellowstone County	B5	RM 352.54	87461.4	20-yr	1891.57	917.16	912.57	2.38	2.18	35.81	25.42	267.09	608.74	2.87	2.03	4.59	4.59
Yellowstone County	B5	RM 352.47	87340.46	20-yr	1891.57	917.04	912.2	2.29	1.77	32.58	19.37	231.12	1165.74	2.59	1.54	4.84	4.84
Yellowstone County	B5	RM 352.39	87216.99	20-yr	1891.57	916.64	912.01	3.15	2.43	58.51	28.89	185.55	1586.47	2.24	1.11	5.45	5.45
Yellowstone County	B5	RM 352.31	87079.16	20-yr	1891.57	916.22	910.66	3.28	2.54	79.92	39.26	183.52	1021.75	2.12	1.04	5.56	5.56

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	20-yr	1891.57	915.95	911.35	2.46	2.32	42.07	36.16	250.57	1028.48	1.66	1.43	4.6	4.6
Yellowstone County	B5	RM 352.18	86873.5	20-yr	1891.57	916.06	911.21	1.03	1.13	6.59	5.23	223.9	1370.09	2.3	1.82	4.85	4.85
Yellowstone County	B5	RM 352.09	86723.6	20-yr	1891.57	915.84	912.18	2.33	1.91	35.52	16.35	174.64	1256.09	2.48	1.14	3.66	3.66
Yellowstone County	B5	RM 351.99	86568.41	20-yr	1891.57	915.37	912.6	3.29	2.55	61.92	30.57	145.59	644.71	2.33	1.15	2.79	2.79
Yellowstone County	B5	RM 351.93	86466.74	20-yr	1891.57	915.26	911.69	2.67	1.95	44.64	25.16	171.91	1111.24	2.02	1.14	3.57	3.57
Yellowstone County	B5	RM 351.88	86386.8	20-yr	1891.57	915.2	911.38	1.83	1.45	27.4	21.44	189.8	1443.37	1.78	1.4	3.82	3.82
Yellowstone County	B5	RM 351.81	86277.68	20-yr	1891.57	915.1	910.99	1.6	1.27	18.99	16.33	240.43	1651.77	1.63	1.4	4.11	4.11
Yellowstone County	B5	RM 351.74	86159.62	20-yr	1891.57	914.78	911.37	1.62	1.58	21.6	19.21	276.41	1284.42	1.29	1.15	3.95	3.95
Yellowstone County	B5	RM 351.67	86034.59	20-yr	1891.57	914.51	911.31	1.89	1.62	27.96	19.73	200.3	962.98	1.78	1.26	4.13	4.13
Yellowstone County	B5	RM 351.58	85891.33	20-yr	1891.57	914.31	911.47	1.6	1.6	20.65	16.12	235.71	904.24	1.72	1.35	4.22	4.22
Yellowstone County	B5	RM 351.52	85811.35	20-yr	1891.57	914.17	911.37	1.92	1.75	23.33	17.97	250.32	862.45	1.67	1.29	3.45	3.45
Yellowstone County	B5	RM 351.47	85728.2	20-yr	1891.57	914.07	911.17	1.91	1.69	20.94	15.84	192.51	761.27	2.06	1.56	3.53	3.53
Yellowstone County	B5	RM 351.40	85601.48	20-yr	1891.57	913.94	910.26	2	1.63	24.14	15.52	157.6	1252.74	1.97	1.27	4.03	4.03
Yellowstone County	B5	RM 351.34	85482.66	20-yr	1891.57	913.83	909.98	1.45	1.45	28.72	15.71	144.97	1388.91	2.35	1.29	3.86	3.86
Yellowstone County	B5	RM 351.25	85342.53	20-yr	1891.57	913.71	909.91	1.48	1.28	16.87	11.85	261.01	1323.64	1.77	1.24	3.83	3.83
Yellowstone County	B5	RM 351.21	85257.19	20-yr	1891.57	913.63	909.48	1.71	1.28	20.42	12.59	201.57	1268.14	1.9	1.17	4.15	4.15
Yellowstone County	B5	RM 351.12	85127.55	20-yr	1891.57	913.55	909.49	1.73	1.3	18.81	11.13	172.5	1181.4	2.09	1.23	4.06	4.06
Yellowstone County	B5	RM 351.04	84988.05	20-yr	1891.57	913.42	908.79	2.04	1.38	25.41	11.4	125.66	1094.28	2.83	1.25	4.63	4.63
Yellowstone County	B5	RM 350.90	84769.91	20-yr	1891.57	913.37	909.27	1.5	1.13	15.19	6.81	98.79	1165.35	3.26	1.44	4.1	4.1
Yellowstone County	B5	RM 350.75	84536.19	20-yr	1891.57	913.22	909.72	1.29	1.47	25.92	19.11	262.99	840.82	2.08	1.53	3.84	3.84
Yellowstone County	B5	RM 350.66	84383.33	20-yr	1891.57	913.02	909.32	1.7	1.65	34.51	18.4	173.2	898.86	2.39	1.27	3.7	3.7
Yellowstone County	B5	RM 350.57	84244.69	20-yr	1891.57	912.73	908.48	2.05	1.77	45.39	19.74	151.67	900.56	2.74	1.18	4.25	4.25
Yellowstone County	B5	RM 350.50	84128.62	20-yr	1891.57	912.48	908.49	2.2	1.92	50.31	23.68	160.44	842.22	2.5	1.17	3.99	3.99
Yellowstone County	B5	RM 350.40	83974.24	20-yr	1891.57	912.28	908.73	1.68	1.63	25.09	17.54	317.02	889.69	1.87	1.3	3.55	3.55
Yellowstone County	B5	RM 350.33	83868.06	20-yr	1891.57	912.16	908.17	1.7	1.55	20.59	15.23	326.5	868.6	1.9	1.4	3.99	3.99
Yellowstone County	B5	RM 350.23	83712.91	20-yr	1891.57	911.93	907.61	1.93	1.64	28.66	18.82	300.73	935.01	1.9	1.24	4.32	4.32
Yellowstone County	B5	RM 350.14	83563.43	20-yr	1891.57	911.75	907.94	1.74	1.48	24.46	15.44	301.23	1067.46	1.97	1.24	3.81	3.81
Yellowstone County	B5	RM 350.06	83419.86	20-yr	1891.57	911.54	907.84	1.62	1.42	25.67	15.54	344.33	1154.08	1.91	1.15	3.7	3.7
Yellowstone County	B5	RM 349.94	83229.4	20-yr	1891.57	911.31	906.93	1.73	1.41	24.71	13.3	275.98	1320.01	2.15	1.15	4.38	4.38
Yellowstone County	B5	RM 349.83	83071.99	20-yr	1891.57	911.18	907.36	1.64	1.18	14.6	6.46	370.02	1325.2	2.8	1.24	3.82	3.82
Yellowstone County	B5	RM 349.68	82904.73	20-yr	1891.57	910.98	906.92	2.04	1.48	32.25	15.11	347.08	1192.81	2.3	1.07	4.06	4.06
Yellowstone County	B5	RM 349.54	82632.78	20-yr	1891.57	910.59	906.29	1.99	1.68	26.44	14.93	449.31	1002.36	1.99	1.12	4.3	4.3
Yellowstone County	B5	RM 349.33	82276.28	20-yr	1891.57	910.34	906.45	1.26	1.17	14.46	11.16	351.73	985.88	2.12	1.63	3.89	3.89
Yellowstone County	B5	RM 349.19	82046.53	20-yr	1891.57	910.04	905.16	1.99	1.37	24.36	12.59	282.11	1192.35	2.24	1.16	4.88	4.88
Yellowstone County	B5	RM 349.04	81800.47	20-yr	1993.51	909.88	904.5	1.57	1.22	15.56	8.7	345.54	1199.44	2.44	1.36	5.38	5.38
Yellowstone County	B5	RM 348.89	81574.02	20-yr	1993.51	909.77	904.75	1.23	1.06	16.09	9.26	550.23	1235.1	2.67	1.54	5.02	5.02
Yellowstone County	B5	RM 348.77	81370.46	20-yr	1993.51	909.54	905.09	1.58	1.56	29.76	25.84	461.45	545.22	2.71	2.35	4.45	4.45
Yellowstone County	B5	RM 348.64	81138.52	20-yr	1993.51	909.39	903.35	1.67	1.17	16.27	6.57	292.56	1249.28	3.4	1.36	6.04	6.04
Yellowstone County	B5	RM 348.52	80960.09	20-yr	1993.51	909.25	902.88	1.96	1.34	31.07	11.11	207.94	1103	3.8	1.35	6.37	6.37
Yellowstone County	B5	RM 348.38	80737.31	20-yr	1993.51	908.85	902.85	2.64	1.97	50.05	19.94	186.97	692.41	3.69	1.46	6	6
Yellowstone County	B5	RM 348.26	80551.51	20-yr	1993.51	908.62	902.73	2.54	1.91	53.32	22.02	168.12	654.04	3.9	1.6	5.89	5.89
Yellowstone County	B5	RM 348.09	80276.34	20-yr	1993.51	908	901.64	3.08	2.69	63.25	27.97	171.66	860.72	3.61	1.59	6.36	6.36
Yellowstone County	B5	RM 347.95	80055.79	20-yr	1993.51	907.85	902.96	2.59	2.06	32.89	15.93	165.09	753.36	3.9	1.89	4.89	4.89
Yellowstone County	B5	RM 347.82	79844.2	20-yr	1993.51	907.69	902.93	2.26	1.82	42.67	15.34	180.88	937.82	3.57	1.28	4.76	4.76
Yellowstone County	B5	RM 347.77	79751.93	20-yr	1993.51	907.57	902.38	2.32	1.72	46.48	18.13	178.59	902.64	3.58	1.4	5.19	5.19
Yellowstone County	B5	RM 347.70	79643.98	20-yr	1993.51	907.45	901.91	2.22	1.5	41.73	14.35	182.31	1116.1	3.51	1.2	5.54	5.54
Yellowstone County	B5	RM 347.61	79501.64	20-yr	1993.51	907.39	902.2	1.86	1.18	17.54	9.11	192.93	850.27	3.83	1.99	5.19	5.19
Yellowstone County	B5	RM 347.51	79347.38	20-yr	1993.51	907	900.54	3.1	1.99	44.74	17.88	112.36	554.21	4.56	1.81	6.46	6.46
Yellowstone County	B5	RM 347.42	79196.21	20-yr	1993.51	906.91	900.73	2.58	1.97	62.59	31.22	145.44	506.69	4.01	1.99	6.18	6.18
Yellowstone County	B5	RM 347.35	79079.87	20-yr	1993.51	906.98	900.77	1.31	1.3	8.09	7.82	498.58	521.01	3.05	2.95	6.21	6.21
Yellowstone County	B5	RM 347.23	78895.71	20-yr	1993.51	906.9	900.89	1.4	1.39	12.06	11.54	509.14	536.75	2.79	2.67	6.01	6.01
Yellowstone County	B5	RM 347.13	78732.21	20-yr	1993.51	906.78	900.98	1.53	1.47	26.46	18.04	440.92	680	2.93	1.99	5.8	5.8
Yellowstone County	B5	RM 346.93	78400.21	20-yr	1993.51	906.24	900.98	1.8	1.7	63.24	52.34	465.24	608.69	2.33	1.92	5.26	5.26
Yellowstone County	B5	RM 346.80	78193.27	20-yr	1993.51	905.65	900.02	1.96	1.69	54.71	39.08	454.41	789.45	2.1	1.5	5.63	5.63
Yellowstone County	B5	RM 346.64	77938.83	20-yr	1993.51	905.37	900.47	1.98	1.44	20.97	9.8	247.09	883.14	3.37	1.57	4.9	4.9
Yellowstone County	B5	RM 346.49	77706.6	20-yr	1993.51	905.11	900.21	2.47	1.6	36.92	12.63	176.6	1054.41	3.54	1.2	4.9	4.9
Yellowstone County	B6	RM 346.35	77480.6	20-yr	1993.51	904.9	900.33	2.22	1.47	35.24	13.25	214.61	1076.26	3.42	1.28	4.57	4.57
Yellowstone County	B6	RM 346.23	77285.9	20-yr	1993.51	904.61	900.11	2.6	1.65	35.46	11.88	177.3	990.36	3.66	1.22	4.5	4.5
Yellowstone County	B6	RM 346.11	77095.33	20-yr	1993.51	904.41	899.75	2.55	1.8	46.16	21.2	182.35	827.58	3.62	1.66	4.66	4.66
Yellowstone County	B6	RM 346.00	76926.16	20-yr	1993.51	904.23	899.8	2.49	1.76	36.88	14.66	177.9	903.69	3.78	1.49	4.43	4.43
Yellowstone County	B6	RM 345.90	76766.95	20-yr	1993.51	903.95	899.51	2.76	1.95	50.94	22.27	179.39	753.85	3.56	1.55	4.44	4.44

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	20-yr	1993.51	903.81	899.04	2.45	1.79	35.95	15.55	198.89	1006.02	3.61	1.56	4.91	4.91
Yellowstone County	B6	RM 345.73	76484.99	20-yr	1993.51	903.63	899.01	2.61	1.84	40.51	16.26	198.24	1063.47	3.28	1.31	4.73	4.73
Yellowstone County	B6	RM 345.67	76386.71	20-yr	1993.51	903.59	899.1	2.22	1.57	28.71	12.99	212.27	778.93	3.6	1.63	4.69	4.69
Yellowstone County	B6	RM 345.60	76268.76	20-yr	1993.51	903.49	899.22	2.16	1.59	31.25	17.59	235.37	689.24	3.24	1.82	4.59	4.59
Yellowstone County	B6	RM 345.50	76118.1	20-yr	1993.51	903.35	899.07	1.85	1.58	37.92	26.43	280.8	630.2	2.88	2	4.45	4.45
Yellowstone County	B6	RM 345.37	75909.53	20-yr	1993.51	902.94	897.51	2.24	1.96	40.96	21.69	316.61	775.82	2.72	1.43	5.43	5.43
Yellowstone County	B6	RM 345.27	75751.01	20-yr	1993.51	902.7	898.15	2.39	1.9	35.34	19.34	252.45	621.99	3.11	1.69	4.55	4.55
Yellowstone County	B6	RM 345.07	75427.56	20-yr	1993.51	902.52	897.07	1.95	1.41	20.5	8.35	241.2	1165.52	3.68	1.49	5.45	5.45
Yellowstone County	B6	RM 344.90	75166.64	20-yr	1993.51	902.39	897.3	1.77	1.48	18.02	10.58	294.53	647.98	3.53	2.07	5.09	5.09
Yellowstone County	B6	RM 344.75	74927.69	20-yr	1993.51	902.16	896.02	2.12	1.74	35.92	18.77	235.68	602.89	3.66	1.9	6.14	6.14
Yellowstone County	B6	RM 344.64	74743.45	20-yr	1993.51	901.74	895.93	2.9	2.38	44.94	23.08	158.71	391.52	4.17	2.14	5.81	5.81
Yellowstone County	B6	RM 344.53	74576.12	20-yr	1993.51	901.56	895.39	2.77	2.19	65.45	32.53	162.09	477.44	3.85	1.91	6.17	6.17
Yellowstone County	B6	RM 344.43	74405.67	20-yr	1993.51	901.48	896.11	2.26	1.42	24.33	8.21	179.43	1120.38	3.74	1.26	5.37	5.37
Yellowstone County	B6	RM 344.29	74192.79	20-yr	1993.51	901.32	895.87	2.24	1.65	29.99	12.82	179.75	1012.55	3.94	1.68	5.45	5.45
Yellowstone County	B6	RM 344.13	73931.76	20-yr	1993.51	901.07	895.4	2.44	1.82	34.02	15.29	157.02	566.93	4.31	1.93	5.67	5.67
Yellowstone County	B6	RM 343.87	73520.95	20-yr	1993.51	900.84	895.23	1.96	1.64	20.01	14.35	287.43	506.42	3.34	2.39	5.61	5.61
Yellowstone County	B6	RM 343.80	73403.19	20-yr	1993.51	900.79	894.69	1.65	1.48	30.07	25.02	356.81	513.79	3.15	2.62	6.1	6.1
Yellowstone County	B6	RM 343.66	73173.16	20-yr	1993.51	900.47	894.63	1.75	1.7	46.41	41.59	395.61	462.11	2.84	2.54	5.84	5.84
Yellowstone County	B6	RM 343.55	72997.33	20-yr	1993.51	900.2	894.63	1.77	1.71	42.24	35.82	370.38	457.06	3.01	2.55	5.57	5.57
Yellowstone County	B6	RM 343.45	72840.49	20-yr	1993.51	899.96	894.78	1.82	1.82	37.42	36.47	401.64	413.36	2.72	2.65	5.18	5.18
Yellowstone County	B6	RM 343.37	72718.86	20-yr	1993.51	899.66	894.5	2.19	2.19	58.11	58.11	341.43	341.43	2.67	2.67	5.16	5.16
Yellowstone County	B6	RM 343.29	72586.22	20-yr	1993.51	899.42	894.28	2.2	2.05	47.52	38.05	279.85	387.45	3.14	2.52	5.14	5.14
Yellowstone County	B6	RM 343.21	72458.03	20-yr	1993.51	899.22	893.99	1.99	1.82	57.17	45.15	356.85	623.45	2.7	2.13	5.23	5.23
Yellowstone County	B6	RM 343.14	72328.78	20-yr	1993.51	898.92	893.94	1.9	1.72	60.07	47.29	432.56	819.11	2.29	1.8	4.97	4.97
Yellowstone County	B6	RM 343.04	72174.44	20-yr	1993.51	898.75	894.12	1.6	1.36	17.43	13.32	485.75	801.66	2.42	1.84	4.63	4.63
Yellowstone County	B6	RM 342.96	72046.7	20-yr	1993.51	898.63	894.17	1.54	1.35	36.07	27.38	506.57	856.27	2.28	1.73	4.46	4.46
Yellowstone County	B6	RM 342.87	71890.42	20-yr	1993.51	898.32	893.92	1.59	1.43	45.98	36.41	541.23	857.88	2.06	1.63	4.4	4.4
Yellowstone County	B6	RM 342.78	71759.64	20-yr	1993.51	898.16	893.85	1.58	1.41	14.27	11.57	525.09	847.13	2.05	1.67	4.31	4.31
Yellowstone County	B6	RM 342.71	71649.64	20-yr	1993.51	898.09	893.88	1.54	1.38	13.23	10.96	525.44	883.36	1.97	1.64	4.21	4.21
Yellowstone County	B6	RM 342.64	71534.72	20-yr	1993.51	897.97	893.45	1.42	1.34	32.6	28.55	689.46	1051.65	1.96	1.72	4.52	4.52
Yellowstone County	B6	RM 342.59	71441.82	20-yr	1993.51	897.78	893.13	1.49	1.49	38.12	38.1	689.61	2222.99	1.94	1.94	4.65	4.65
Yellowstone County	B6	RM 342.49	71299.94	20-yr	1993.51	897.6	892.73	1.28	1.28	22.85	22.84	659.63	2328.2	2.35	2.35	4.87	4.87
Yellowstone County	B6	RM 342.40	71182.23	20-yr	1993.51	897.53	892.4	1.14	1.14	17.54	17.51	592.31	2492.78	2.96	2.95	5.13	5.13
Yellowstone County	B6	RM 342.29	70973.95	20-yr	1993.51	897.31	891.26	1.52	1.51	26.68	26.59	478.66	2158.94	2.75	2.74	6.05	6.05
Yellowstone County	B6	RM 342.17	70788.09	20-yr	1993.51	896.88	891.21	2.21	2.21	61.28	61.28	379.39	1567.36	2.37	2.37	5.67	5.67
Yellowstone County	B6	RM 342.09	70668.79	20-yr	1993.51	896.68	892.22	1.94	1.92	43.08	41.32	378.05	397.86	2.72	2.61	4.46	4.46
Yellowstone County	B6	RM 341.96	70472.35	20-yr	1993.51	896.5	891.5	1.72	1.72	16.31	16.07	503.51	511.56	2.3	2.27	5	5
Yellowstone County	B6	RM 341.82	70207.79	20-yr	1993.51	896.35	890.89	1.34	1.29	17.9	14.27	582.01	946.46	2.49	1.99	5.46	5.46
Yellowstone County	B6	RM 341.68	69974.03	20-yr	1993.51	896.13	890.38	1.51	1.45	24.18	19.74	480.15	627.17	2.69	2.19	5.75	5.75
Yellowstone County	B6	RM 341.57	69788.71	20-yr	1993.51	895.86	889.58	2.03	2.03	19.34	19.34	431.42	431.42	2.27	2.27	6.28	6.28
Yellowstone County	B6	RM 341.47	69629.19	20-yr	1993.51	895.68	889.76	1.88	1.84	53.41	45.11	395.38	485.23	2.65	2.24	5.92	5.92
Yellowstone County	B6	RM 341.32	69391.37	20-yr	1993.51	895.19	890.36	1.89	1.77	49.52	35.78	401.07	613.79	2.53	1.83	4.83	4.83
Yellowstone County	B6	RM 341.24	69252.71	20-yr	1993.51	895.08	890.28	1.7	1.55	16.99	13.74	396.74	579.12	2.75	2.22	4.8	4.8
Yellowstone County	B6	RM 341.11	69044.61	20-yr	1993.51	894.8	890	2.14	1.73	36.14	21.3	324.56	737.44	2.66	1.56	4.8	4.8
Yellowstone County	B6	RM 340.94	68773.18	20-yr	1993.51	894.47	889.22	2.11	1.5	33.09	15.39	280.24	999.23	2.95	1.37	5.25	5.25
Yellowstone County	B6	RM 340.81	68556.42	20-yr	1993.51	894.36	889.05	1.55	1.09	20.45	10.7	315.44	1119.84	3.13	1.63	5.31	5.31
Yellowstone County	B6	RM 340.65	68325.7	20-yr	1993.51	894.14	888.87	2.12	1.28	21.88	9.07	204.11	1009.54	3.72	1.54	5.27	5.27
Yellowstone County	B6	RM 340.52	68126.27	20-yr	1993.51	893.92	887.3	2.55	1.47	43.43	12.88	130.27	968.47	4.77	1.4	6.62	6.62
Yellowstone County	B6	RM 340.40	67936.51	20-yr	1993.51	893.79	886.73	2.17	1.39	39.15	15.41	170.6	855.24	4.28	1.67	7.06	7.06
Yellowstone County	B7	RM 340.26	67715.84	20-yr	1993.51	893.53	887.99	2.07	1.61	49.99	27.79	251.81	667.45	3.36	1.86	5.54	5.54
Yellowstone County	B7	RM 340.16	67550.99	20-yr	1993.51	893.25	888.43	1.99	1.64	59.2	38.1	313.62	666.88	2.84	1.82	4.82	4.82
Yellowstone County	B7	RM 340.06	67387.35	20-yr	1993.51	892.97	888.74	1.92	1.7	40.71	28.46	315.76	566.35	2.96	2.07	4.23	4.23
Yellowstone County	B7	RM 339.96	67234.59	20-yr	1993.51	892.7	888.85	2.18	2.05	27.89	18.22	360.17	597.7	2.5	1.63	3.85	3.85
Yellowstone County	B7	RM 339.88	67094.07	20-yr	1993.51	892.54	888.78	1.91	1.83	40.45	34.66	445.51	557.39	2.28	1.95	3.76	3.76
Yellowstone County	B7	RM 339.79	66960.51	20-yr	1993.51	892.23	888.98	2.17	2.17	33.22	33.22	503.3	503.3	1.82	1.82	3.25	3.25
Yellowstone County	B7	RM 339.72	66843.76	20-yr	1993.51	892.09	888.72	1.93	1.86	24.46	21.78	511.42	603.09	2	1.78	3.37	3.37
Yellowstone County	B7	RM 339.66	66753.41	20-yr	1993.51	892.04	887.9	1.67	1.6	17.46	14.93	524.19	650.56	2.25	1.92	4.14	4.14
Yellowstone County	B7	RM 339.52	66527.74	20-yr	1993.51	891.86	887.31	1.85	1.48	18.59	11.61	312.36	697.23	3.1	1.93	4.55	4.55
Yellowstone County	B7	RM 339.37	66324.85	20-yr	1993.51	891.67	887.17	2.05	1.56	40.8	21.01	232.31	747.73	3.34	1.71	4.5	4.5
Yellowstone County	B7	RM 339.24	66108.49	20-yr	1993.51	891.2	886.45	2.76	2.13	40.31	22.86	218.09	589.42	2.81	1.59	4.75	4.75
Yellowstone County	B7	RM 339.13	65940.41	20-yr	1993.51	890.97	885.31	2.82	1.93	49.42	24.63	143.34	614.32	3.4	1.68	5.66	5.66

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	20-yr	1993.51	890.62	886.09	2.88	2.21	43.66	20.84	187.64	636.83	2.97	1.42	4.53	4.53
Yellowstone County	B7	RM 338.94	65621.59	20-yr	1993.51	890.55	886.36	2.36	1.76	29.86	17.13	223.57	705.59	2.8	1.61	4.19	4.19
Yellowstone County	B7	RM 338.83	65433.26	20-yr	1993.51	890.37	886.37	2.12	1.65	33.26	17.56	224.37	819.02	2.84	1.5	4.35	4.35
Yellowstone County	B7	RM 338.72	65256.88	20-yr	1993.51	890.13	886.18	2.16	1.85	37.4	23.82	205.61	596.55	3.08	1.96	4.33	4.33
Yellowstone County	B7	RM 338.62	65095.08	20-yr	1993.51	889.79	886.28	2.73	2.18	41.32	23.54	178.72	597.27	2.92	1.66	4.17	4.17
Yellowstone County	B7	RM 338.49	64891.36	20-yr	1993.51	889.61	885.05	2.43	1.89	32.24	19.03	173.59	702.09	3.05	1.8	4.56	4.56
Yellowstone County	B7	RM 338.40	64742.15	20-yr	1993.51	889.59	884.28	1.69	1.39	14.94	10.13	165.71	912.54	3.19	2.15	5.31	5.31
Yellowstone County	B7	RM 338.29	64577.05	20-yr	1993.51	889.47	884.18	2.08	1.5	22.93	10.49	123.01	930.93	3.55	1.62	5.29	5.29
Yellowstone County	B7	RM 338.19	64384.71	20-yr	1993.51	889.41	885.23	1.42	1.17	12.65	8.99	393.33	957.68	2.58	1.84	4.18	4.18
Yellowstone County	B7	RM 338.06	64164.59	20-yr	1993.51	889.32	884.64	1.48	1.04	13.66	7.64	284.25	1165.79	3.1	1.74	4.68	4.68
Yellowstone County	B7	RM 337.91	63921.69	20-yr	1993.51	889.15	884.16	1.92	1.2	18.21	8.76	205.66	1162.99	3.38	1.63	4.99	4.99
Yellowstone County	B7	RM 337.83	63789.53	20-yr	1993.51	888.84	882.72	2.78	1.75	45.54	17.21	178.02	895.05	3.38	1.27	6.12	6.12
Yellowstone County	B7	RM 337.75	63667.96	20-yr	1993.51	888.49	881.69	3.31	2.07	58.54	20.42	142.97	771.1	3.6	1.25	6.8	6.8
Yellowstone County	B7	RM 337.68	63550.4	20-yr	1993.51	888.33	882.49	3.05	2.18	57.04	19.87	161.63	714.19	3.68	1.28	5.84	5.84
Yellowstone County	B7	RM 337.58	63396.62	20-yr	1993.51	888.11	883.62	3	2.14	47.11	18.45	189.36	770.72	3.09	1.21	4.49	4.49
Yellowstone County	B7	RM 337.47	63212.44	20-yr	1993.51	887.96	883.31	2.54	1.77	40.04	16.25	178.55	854.42	3.26	1.32	4.65	4.65
Yellowstone County	B7	RM 337.38	63064.58	20-yr	1993.51	887.73	883.29	2.73	1.74	37.99	15.58	177.15	903.79	3.1	1.27	4.44	4.44
Yellowstone County	B7	RM 337.27	62894.98	20-yr	1993.51	887.72	883.15	1.81	1.18	16.49	7.91	210.44	1113.01	3.16	1.52	4.57	4.57
Yellowstone County	B7	RM 337.16	62717.85	20-yr	1993.51	887.67	882.57	1.38	1.06	10.46	6.43	396.57	1102.92	2.78	1.71	5.1	5.1
Yellowstone County	B7	RM 337.04	62524.52	20-yr	1993.51	887.6	879.61	1.59	1.05	12.79	5.33	153.97	981.71	4.66	1.93	7.99	7.99
Yellowstone County	B7	RM 336.96	62390.64	20-yr	1993.51	887.53	880.21	1.73	1.23	21.88	9.93	185.65	893.67	4.08	1.84	7.32	7.32
Yellowstone County	B7	RM 336.87	62246.97	20-yr	1993.51	887.4	881.41	2.06	1.37	23.6	10.08	156.32	811.85	4.23	1.8	5.99	5.99
Yellowstone County	B7	RM 336.80	62131.42	20-yr	1993.51	887.34	881.33	1.96	1.35	30.83	14.33	162.29	953.48	3.88	1.79	6.01	6.01
Yellowstone County	B7	RM 336.72	62005.73	20-yr	1993.51	887.09	881.38	2.55	1.7	49.83	17.11	136.15	912.92	4.08	1.39	5.71	5.71
Yellowstone County	B7	RM 336.66	61902.64	20-yr	1993.51	886.59	881.45	3.6	2.61	90.7	30.83	116.96	603.38	3.76	1.27	5.14	5.14
Yellowstone County	B7	RM 336.59	61800.43	20-yr	1993.51	886.53	880.66	2.85	2.13	59.52	22.76	135.93	590.66	4.16	1.58	5.87	5.87
Yellowstone County	B7	RM 336.52	61689.55	20-yr	1993.51	886.39	881.76	2.78	2.01	49.02	21.56	145.49	636.73	3.53	1.56	4.63	4.63
Yellowstone County	B7	RM 336.46	61580.5	20-yr	1993.51	886.27	882.13	2.52	1.91	49.24	21.42	162.48	743.05	3.23	1.4	4.14	4.14
Yellowstone County	B7	RM 336.40	61491.01	20-yr	1993.51	886.12	882.03	2.58	1.81	49.65	17.99	162.53	915.59	3.33	1.2	4.09	4.09
Yellowstone County	B7	RM 336.34	61394.22	20-yr	1993.51	885.98	881.93	2.61	1.7	44.98	19.3	163.69	863.68	3.17	1.36	4.05	4.05
Yellowstone County	B7	RM 336.27	61278.9	20-yr	1993.51	885.84	881.67	2.5	1.59	41.1	17.47	169.95	935.27	3.16	1.34	4.17	4.17
Yellowstone County	B7	RM 336.19	61159.07	20-yr	1993.51	885.66	882.11	2.51	1.73	34.46	16.19	211.78	1011.89	2.44	1.14	3.55	3.55
Yellowstone County	B7	RM 336.09	60993.57	20-yr	1993.51	885.52	882.16	1.91	1.34	23.42	13.82	319.78	1085.43	2.32	1.37	3.36	3.36
Yellowstone County	B7	RM 335.98	60812.26	20-yr	1993.51	885.37	881.93	1.41	1.28	25.4	19.81	437.9	1049.05	1.91	1.49	3.64	3.64
Yellowstone County	B7	RM 335.89	60669.74	20-yr	1993.51	885.19	880.16	1.62	1.46	14.72	12.94	729.64	995.35	1.56	1.37	5.03	5.03
Yellowstone County	B7	RM 335.77	60465.85	20-yr	1993.51	884.87	880.49	1.57	1.53	44.46	39.35	871.59	1085.27	1.36	1.2	4.38	4.38
Yellowstone County	B7	RM 335.68	60324.8	20-yr	1993.51	884.55	880.65	1.81	1.7	15.94	13.5	845.14	1509.5	1.27	1.08	3.9	3.9
Yellowstone County	B7	RM 335.59	60183.7	20-yr	1993.51	884.37	880.3	1.8	1.68	16.17	13.11	907.64	1559.16	1.19	0.97	4.07	4.07
Yellowstone County	B7	RM 335.51	60046.12	20-yr	1993.51	884.19	880.03	1.75	1.63	14.27	10.73	919.1	1655.03	1.21	0.91	4.16	4.16
Yellowstone County	B7	RM 335.41	59899.97	20-yr	1993.51	884.1	879.45	1.31	1.15	11.85	8.92	910.09	1481.63	1.57	1.18	4.65	4.65
Yellowstone County	B7	RM 335.36	59814.82	20-yr	1993.51	884.09	878.65	0.97	0.83	5.54	3.94	896.25	1848.78	2.13	1.52	5.44	5.44
Yellowstone County	B7	RM 335.12	59393.71	20-yr	1993.51	883.88	878.54	1.66	0.96	15.51	6.06	331.92	1941.89	2.73	1.06	5.34	5.34
Yellowstone County	B7	RM 335.03	59228.59	20-yr	1993.51	883.57	876.8	2.78	1.35	52.55	12.92	149.68	1876.3	3.22	0.79	6.77	6.77
Yellowstone County	B7	RM 334.91	59041.32	20-yr	1993.51	883.36	878.31	2.2	1.16	34.8	11.56	229.84	1939.18	2.68	0.89	5.05	5.05
Yellowstone County	B7	RM 334.85	58937.73	20-yr	1993.51	883.22	878.66	2.19	1.13	36.26	11.86	224.38	1973.72	2.73	0.89	4.56	4.56
Yellowstone County	B7	RM 334.73	58737.5	20-yr	1993.51	882.72	879.52	2.94	1.64	53.11	16.2	192.7	1499.07	2.67	0.81	3.34	3.34
Yellowstone County	B7	RM 334.63	58573.32	20-yr	1993.51	882.6	878.31	2.34	1.34	30.26	11.65	187.59	1432.94	2.69	1.04	4.29	4.29
Yellowstone County	B7	RM 334.54	58424.99	20-yr	1993.51	882.59	877.09	1.15	1.06	13.86	6.72	154.81	1327.43	2.93	1.42	5.5	5.5
Yellowstone County	B7	RM 334.22	57821.07	20-yr	1993.51	882.23	875.76	2.08	1.46	19.32	9.18	196.15	1068.85	3.87	1.84	6.47	6.47
Yellowstone County	B7	RM 334.09	57621.62	20-yr	1993.51	882.01	875.55	2.72	1.77	60.49	22.92	119.41	806.49	3.69	1.39	6.46	6.46
Yellowstone County	B7	RM 333.98	57440.64	20-yr	1993.51	881.87	875.46	2.36	1.65	28.45	11.95	140.01	633.29	4.54	1.9	6.41	6.41
Yellowstone County	B7	RM 333.83	57207.78	20-yr	1993.51	881.68	875.4	2.4	1.93	40.15	21	159.03	526.03	3.78	1.97	6.28	6.28
Yellowstone County	B7	RM 333.69	56989.22	20-yr	1993.51	881.45	873.45	1.91	1.8	38.51	27.2	337.33	580.77	3.06	2.16	8	8
Yellowstone County	B7	RM 333.54	56738.21	20-yr	1993.51	881.31	874.22	1.32	1.18	20.02	12.29	409.8	884.7	3.49	2.14	7.09	7.09
Yellowstone County	B7	RM 333.42	56552.03	20-yr	1993.51	881.14	873.42	1.49	1.39	28.74	18.93	426.05	746.34	2.94	1.93	7.72	7.72
Yellowstone County	B7	RM 333.30	56351.75	20-yr	1993.51	880.81	875.65	1.72	1.64	50.33	36	449.89	689.84	2.47	1.76	5.16	5.16
Yellowstone County	B7	RM 333.19	56177.76	20-yr	1993.51	880.41	875.72	2	1.91	43.9	36.04	397.53	527.46	2.42	1.98	4.69	4.69
Yellowstone County	B7	RM 333.09	56027.56	20-yr	1993.51	880.27	875.59	1.78	1.61	18.02	14.57	427.45	606.06	2.53	2.05	4.68	4.68
Yellowstone County	B7	RM 332.99	55855.76	20-yr	1993.51	880.08	873.86	1.83	1.57	43.27	30.43	384.62	702.45	2.58	1.81	6.22	6.22
Yellowstone County	B7	RM 332.88	55687.68	20-yr	1993.51	879.96	874.43	1.53	1.36	15.19	10.6	408.68	751.89	2.79	1.95	5.53	5.53
Yellowstone County	B7	RM 332.77	55504.73	20-yr	1993.51	879.91	875.49	1.34	1.12	10.21	6.6	376.01	827.73	3.33	2.15	4.42	4.42

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	20-yr	1993.51	879.83	874.96	1.46	1.16	15.01	9.46	334.72	812.28	3.36	2.11	4.87	4.87
Yellowstone County	B7	RM 332.56	55182.74	20-yr	1993.51	879.75	874.54	1.51	1.16	15.31	8.08	311.94	884.83	3.7	1.95	5.21	5.21
Yellowstone County	B7	RM 332.47	55059.84	20-yr	1993.51	879.72	873.95	1.37	1.01	13.52	6.35	281.38	1168.66	3.98	1.86	5.77	5.77
Yellowstone County	B7	RM 332.38	54913.1	20-yr	1993.51	879.55	873.16	2.08	1.26	28.66	8.15	159.71	1200.79	4.69	1.31	6.39	6.39
Yellowstone County	B7	RM 332.33	54822.67	20-yr	1993.51	879.54	872.5	1.73	1.14	30.6	10.41	188.72	1221.71	4.23	1.43	7.04	7.04
Yellowstone County	B7	RM 332.21	54626.48	20-yr	1993.51	879.36	873.4	1.95	1.38	31.95	9.88	177.29	1327.52	4.54	1.4	5.96	5.96
Yellowstone County	B7	RM 332.20	54613	20-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	20-yr	1993.51	879.15	873.19	2.13	1.6	40.57	11.41	191.23	1179.16	4.12	1.15	5.96	5.96
Yellowstone County	B7	RM 332.17	54575.38	20-yr	1993.51	879.12	872.76	2.12	1.37	33.04	8.49	145.13	1422.14	4.85	1.22	6.36	6.36
Yellowstone County	B7	RM 332.16	54558	20-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	20-yr	1993.51	878.95	872.47	2.4	1.47	30.55	7.05	130.77	1428.44	4.98	1.13	6.48	6.48
Yellowstone County	B7	RM 332.08	54422.01	20-yr	1993.51	878.84	873.77	2.38	1.58	37.3	9.09	155.32	1373.19	4.25	1.02	5.07	5.07
Yellowstone County	B7	RM 331.96	54224.76	20-yr	1993.51	878.67	873.18	2.06	1.54	41.15	12.48	205.19	1193.93	3.62	1.09	5.49	5.49
Yellowstone County	B7	RM 331.85	54057.19	20-yr	1993.51	878.46	873.16	2.01	1.53	53.18	17.66	249.87	1135.38	3.46	1.15	5.3	5.3
Yellowstone County	B7	RM 331.74	53882.8	20-yr	1993.51	877.87	872.62	3.12	2.36	62.88	17.74	149.37	748.1	4.04	1.13	5.25	5.25
Yellowstone County	B8	RM 331.66	53744.64	20-yr	1993.51	877.81	871.68	2.39	1.95	43.67	14.01	219.63	890.79	3.61	1.15	6.13	6.13
Yellowstone County	B8	RM 331.55	53575.67	20-yr	1993.51	877.63	872.61	2.35	1.78	39.83	12.74	198.53	1025.58	3.44	1.09	5.02	5.02
Yellowstone County	B8	RM 331.41	53354.89	20-yr	1993.51	877.34	872.56	2.46	1.88	42.33	15.7	218.29	903.62	3.18	1.17	4.78	4.78
Yellowstone County	B8	RM 331.32	53209.79	20-yr	1993.51	877.15	871.92	2.23	1.65	36.24	18.55	275.48	913.63	2.6	1.32	5.23	5.23
Yellowstone County	B8	RM 331.23	53053.99	20-yr	1993.51	876.99	871.53	1.86	1.5	25.74	16.72	374.94	880.83	2.33	1.51	5.46	5.46
Yellowstone County	B8	RM 331.14	52919.44	20-yr	1993.51	876.9	871.72	1.57	1.36	18.96	14.06	309.55	718.93	2.76	2.04	5.18	5.18
Yellowstone County	B8	RM 331.08	52820.06	20-yr	1993.51	876.81	871.29	1.68	1.36	20.47	9.45	305.99	1028.84	3.11	1.43	5.52	5.52
Yellowstone County	B8	RM 331.01	52700.37	20-yr	1993.51	876.72	871.8	1.69	1.36	21.77	12.6	299.81	828.25	3.07	1.77	4.92	4.92
Yellowstone County	B8	RM 330.93	52576.5	20-yr	1993.51	876.62	871.67	1.74	1.52	23.23	13.89	250.66	619.59	3.54	2.11	4.95	4.95
Yellowstone County	B8	RM 330.83	52418.21	20-yr	1993.51	876.37	870.75	2.45	1.96	33.04	16.03	141.59	485.4	4.36	2.1	5.62	5.62
Yellowstone County	B8	RM 330.77	52321.13	20-yr	1993.51	876.26	870.68	2.47	2.13	39.34	22.66	174.99	978.08	3.66	2.11	5.58	5.58
Yellowstone County	B8	RM 330.68	52174.9	20-yr	1993.51	875.93	870.33	3.09	2.39	50.35	22.2	129.38	468.93	4.05	1.78	5.6	5.6
Yellowstone County	B8	RM 330.58	52000.46	20-yr	1993.51	875.78	869.72	2.8	2.19	56.62	23.64	117.71	506.32	4.34	1.8	6.06	6.06
Yellowstone County	B8	RM 330.48	51852.83	20-yr	1993.51	875.59	868.81	2.9	2.11	56.23	22.78	105.65	515.99	4.68	1.86	6.78	6.78
Yellowstone County	B8	RM 330.39	51701.57	20-yr	1993.51	875.44	869.32	2.76	1.98	39.31	15.18	133.86	666.81	3.93	1.51	6.12	6.12
Yellowstone County	B8	RM 330.32	51592.04	20-yr	1993.51	875.33	869.57	2.77	1.89	37.52	10.88	135.54	989.22	4.07	1.17	5.76	5.76
Yellowstone County	B8	RM 330.25	51473.55	20-yr	1993.51	875.26	868.38	2.58	1.75	35.9	12.12	144.85	944.01	3.79	1.27	6.88	6.88
Yellowstone County	B8	RM 330.17	51344.77	20-yr	1993.51	875.11	869.9	2.6	1.8	37.11	12.66	151.76	896.94	3.63	1.23	5.21	5.21
Yellowstone County	B8	RM 330.10	51243.99	20-yr	1993.51	874.94	870.02	2.67	1.87	43.09	16.14	186	878.9	3.25	1.21	4.92	4.92
Yellowstone County	B8	RM 330.05	51150.67	20-yr	1993.51	874.93	869.94	1.94	1.46	23.71	12.91	298.64	957.07	2.63	1.43	4.99	4.99
Yellowstone County	B8	RM 329.95	50995.78	20-yr	1993.51	874.78	869.67	1.85	1.5	24.22	13.9	399.09	925.93	2.5	1.43	5.11	5.11
Yellowstone County	B8	RM 329.86	50853.11	20-yr	1993.51	874.67	869.99	1.63	1.36	24.22	15.14	443.98	988.14	2.38	1.48	4.68	4.68
Yellowstone County	B8	RM 329.75	50682.47	20-yr	1993.51	874.47	869.45	1.39	1.24	32.05	23.51	611.08	1085.31	2.02	1.48	5.02	5.02
Yellowstone County	B8	RM 329.66	50540.7	20-yr	1993.51	874.15	869.45	1.65	1.52	42.72	31.77	634.37	1080.66	1.64	1.22	4.7	4.7
Yellowstone County	B8	RM 329.57	50390.78	20-yr	1993.51	873.9	869.17	1.76	1.51	18.86	14.29	544.34	936.2	1.87	1.41	4.73	4.73
Yellowstone County	B8	RM 329.49	50267.58	20-yr	1993.51	873.76	869.52	1.83	1.53	19.85	14.81	511.28	931.5	1.87	1.4	4.24	4.24
Yellowstone County	B8	RM 329.43	50165.22	20-yr	1993.51	873.71	869.82	1.46	1.28	12.89	8.8	543.15	946.79	2.42	1.65	3.89	3.89
Yellowstone County	B8	RM 329.37	50053.96	20-yr	1993.51	873.67	869.58	1.4	1.17	11.74	8.27	447.42	939.77	2.56	1.81	4.09	4.09
Yellowstone County	B8	RM 329.31	49969.13	20-yr	1993.51	873.61	869.66	1.51	1.21	17.32	11.6	378.18	983.41	2.5	1.68	3.95	3.95
Yellowstone County	B8	RM 329.26	49883.05	20-yr	1993.51	873.54	868.74	1.57	1.26	14.69	9.17	376.88	1014.26	2.5	1.56	4.8	4.8
Yellowstone County	B8	RM 329.20	49785.51	20-yr	1993.51	873.47	868.71	1.61	1.26	15.83	10.38	397.53	1020.25	2.36	1.55	4.76	4.76
Yellowstone County	B8	RM 329.15	49699.71	20-yr	2186.06	873.41	868.64	1.5	1.22	19.74	13.18	463.75	1052.25	2.55	1.7	4.77	4.77
Yellowstone County	B8	RM 329.08	49597.49	20-yr	2186.06	873.34	869.34	1.39	1.13	18.69	12.89	471.62	1101.45	2.55	1.76	3.99	3.99
Yellowstone County	B8	RM 328.96	49388.08	20-yr	2186.06	873.22	868.99	1.54	1.09	16.44	9.78	305.72	1170.86	2.9	1.72	4.23	4.23
Yellowstone County	B8	RM 328.85	49197.37	20-yr	2186.06	873.08	866.79	1.7	1.33	14.1	10.15	472.61	1089.13	2.1	1.51	6.29	6.29
Yellowstone County	B8	RM 328.75	49036.09	20-yr	2186.06	873	866.93	1.5	1.21	14.03	10.32	424.64	1058.38	2.32	1.7	6.07	6.07
Yellowstone County	B8	RM 328.68	48920.76	20-yr	2186.06	872.87	867.09	1.88	1.37	22.76	12.34	303.39	1052.84	2.8	1.52	5.78	5.78
Yellowstone County	B8	RM 328.60	48788.86	20-yr	2186.06	872.63	866.36	2.51	1.67	31.02	11.86	196.18	988.88	3.52	1.33	6.27	6.27
Yellowstone County	B8	RM 328.52	48664.7	20-yr	2186.06	872.68	867.75	1.62	1.22	14.24	8.01	167.5	985.45	3.28	1.83	4.93	4.93
Yellowstone County	B8	RM 328.44	48539.46	20-yr	2186.06	872.38	867.34	2.78	1.83	50.57	16	137.73	911.04	4.2	1.31	5.04	5.04
Yellowstone County	B8	RM 328.36	48405.85	20-yr	2186.06	872.12	867.12	3.15	2	47.22	16.02	131.85	834.1	3.93	1.31	5	5
Yellowstone County	B8	RM 328.28	48276.93	20-yr	2186.06	872.09	867.73	2.3	1.8	43.53	18.54	191.79	807.09	3.54	1.51	4.98	4.98
Yellowstone County	B8	RM 328.16	48097.58	20-yr	2186.06	871.88	866.7	2.14	1.72	39.76	19.53	224.09	870.76	2.98	1.46	5.18	5.18
Yellowstone County	B8	RM 328.05	47914.16	20-yr	2186.06	871.7	866.62	1.94	1.55	29.4	15.39	264.18	907.19	2.97	1.56	5.08	5.08
Yellowstone County	B8	RM 327.93	47729.4	20-yr	2186.06	871.47	865.67	2.22	1.72	26.27	13.16	302.58	916.48	2.77	1.39	5.8	5.8
Yellowstone County	B8	RM 327.88	47641.03	20-yr	2186.06	871.32	866	2.46	1.74	37.15	16.58	246.29	957.93	2.94	1.31	5.32	5.32

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	20-yr	2186.06	871.2	866.29	2.55	1.71	31.23	12.23	182.52	887.43	3.69	1.44	4.91	4.91
Yellowstone County	B8	RM 327.75	47432.57	20-yr	2186.06	870.91	865.09	3.25	2.08	47.42	14.09	136.03	854.17	4.17	1.23	5.82	5.82
Yellowstone County	B8	RM 327.69	47341.24	20-yr	2186.06	870.54	864.48	4.07	2.54	68.71	25.36	108.1	602.34	3.92	1.43	6.06	6.06
Yellowstone County	B8	RM 327.62	47227.31	20-yr	2186.06	870.67	863.86	2.8	1.81	38.7	15.34	128.77	793.77	3.88	1.52	6.81	6.81
Yellowstone County	B8	RM 327.56	47124.87	20-yr	2186.06	870.68	864.46	2.19	1.51	23.6	11.66	158.59	849.49	3.45	1.7	6.22	6.22
Yellowstone County	B8	RM 327.51	47053.82	20-yr	2186.06	870.62	865.84	2.05	1.6	24.33	17.02	310.53	866.17	2.25	1.58	4.78	4.78
Yellowstone County	B8	RM 327.44	46933.28	20-yr	2186.06	870.61	866.93	1.22	1.24	10.52	9.18	389.77	881.48	2.29	2	3.99	3.99
Yellowstone County	B8	RM 327.37	46817.72	20-yr	2186.06	870.49	866.26	1.8	1.47	22.34	13.66	342.21	954.15	2.55	1.56	4.23	4.23
Yellowstone County	B8	RM 327.29	46687.12	20-yr	2186.06	870.41	866.04	1.77	1.37	19.4	11.1	304.88	1036.61	2.69	1.54	4.37	4.37
Yellowstone County	B8	RM 327.23	46600.07	20-yr	2186.06	870.33	866.25	1.87	1.4	21.07	11.74	287.86	1049.65	2.67	1.49	4.48	4.48
Yellowstone County	B8	RM 327.16	46485.25	20-yr	2186.06	870.19	865.67	2.07	1.45	28.92	14.25	271.45	1117.07	2.74	1.35	4.52	4.52
Yellowstone County	B8	RM 327.08	46360.36	20-yr	2186.06	870.14	864.94	1.71	1.2	17.97	9.12	266.92	1137.54	3.16	1.61	5.2	5.2
Yellowstone County	B8	RM 327.00	46240.1	20-yr	2186.06	870.04	864.56	1.83	1.41	25.34	12.12	227.91	827.92	3.92	1.88	5.48	5.48
Yellowstone County	B8	RM 326.94	46091.8	20-yr	2186.06	869.95	864.04	1.93	1.43	18.24	9.34	223.67	760.05	3.93	2.01	5.91	5.91
Yellowstone County	B8	RM 326.88	46003.77	20-yr	2186.06	869.84	864.08	2.24	1.63	33	16.23	170.66	738.3	3.7	1.82	5.76	5.76
Yellowstone County	B8	RM 326.82	45901.15	20-yr	2186.06	869.76	864.18	2.2	1.62	30.22	17.98	201.73	785.24	2.89	1.72	5.58	5.58
Yellowstone County	B8	RM 326.78	45830.7	20-yr	2186.06	869.7	864.46	2.26	1.59	27.13	15.7	163.64	769.85	3.08	1.79	5.24	5.24
Yellowstone County	B8	RM 326.70	45707.6	20-yr	2186.06	869.63	864.66	1.96	1.48	18.45	12.7	264.15	828.78	2.6	1.79	4.97	4.97
Yellowstone County	B8	RM 326.64	45589.72	20-yr	2186.06	869.54	864.92	1.65	1.54	46.12	35.08	430.55	851.66	2.19	1.67	4.62	4.62
Yellowstone County	B8	RM 326.55	45430.24	20-yr	2186.06	869.31	864.83	1.95	1.66	21.91	14.19	350.63	741.61	2.74	1.78	4.48	4.48
Yellowstone County	B8	RM 326.45	45281.78	20-yr	2186.06	869.2	864.12	1.96	1.69	23.11	15.58	338.98	691.06	2.78	1.87	5.08	5.08
Yellowstone County	B8	RM 326.41	45207.36	20-yr	2186.06	869.19	864.32	1.62	1.45	15.37	11.24	432.08	774.19	2.67	1.95	4.87	4.87
Yellowstone County	B8	RM 326.35	45106.57	20-yr	2186.06	869.15	864.43	1.43	1.21	11.62	7.96	483.02	912.3	2.97	2.03	4.72	4.72
Yellowstone County	B8	RM 326.28	45022.31	20-yr	2186.06	869.17	864.61	1.01	0.89	5.34	3.71	548.28	1008.27	3.63	2.52	4.56	4.56
Yellowstone County	B8	RM 326.07	44588.61	20-yr	2186.06	868.95	862.39	1.69	1.48	11.38	7.87	711.36	1235.33	1.73	1.2	6.56	6.56
Yellowstone County	B8	RM 326.00	44481.07	20-yr	2186.06	868.89	861.24	1.62	1.44	10.51	7.57	749.88	1221.87	1.72	1.24	7.65	7.65
Yellowstone County	B8	RM 325.94	44379.11	20-yr	2186.06	868.83	861.85	1.29	1.18	29.47	22.61	824.51	1288.29	1.87	1.43	6.98	6.98
Yellowstone County	B8	RM 325.89	44304.17	20-yr	2186.06	868.71	863	1.24	1.17	28.3	23.27	844.01	1296.2	1.92	1.58	5.71	5.71
Yellowstone County	B8	RM 325.86	44262.16	20-yr	2186.06	868.67	863.76	1.29	1.17	8.04	6.62	823.38	1139.31	1.99	1.64	4.91	4.91
Yellowstone County	B8	RM 325.81	44176.46	20-yr	2186.06	868.64	863.1	1.28	1.13	8.16	7.02	846.47	1172.97	1.91	1.65	5.54	5.54
Yellowstone County	B8	RM 325.76	44089.5	20-yr	2186.06	868.59	862.66	1.15	1.06	23.01	18.53	851.17	1302.25	2.04	1.64	5.93	5.93
Yellowstone County	B8	RM 325.69	43989.97	20-yr	2186.06	868.51	862.55	1.27	1.01	8.51	5.35	625.1	1417.19	2.54	1.59	5.96	5.96
Yellowstone County	B8	RM 325.58	43809.68	20-yr	2186.06	868.43	862.61	1.25	0.99	24.31	13.79	476.8	1282.82	3.04	1.71	5.82	5.82
Yellowstone County	B8	RM 325.50	43680.96	20-yr	2186.06	868.28	862.6	1.44	1.16	29.58	15.68	434.18	1187.25	3.02	1.58	5.68	5.68
Yellowstone County	B8	RM 325.43	43556.76	20-yr	2186.06	868.16	860.89	1.46	1.17	31.69	16.51	386.73	1107.92	3.26	1.69	7.27	7.27
Yellowstone County	B8	RM 325.37	43461.41	20-yr	2186.06	868.08	861.36	1.37	1.12	27.7	14.24	344.71	1095.08	3.47	1.78	6.72	6.72
Yellowstone County	B8	RM 325.30	43343.13	20-yr	2186.06	867.95	861.56	1.7	1.26	26	11.32	266.61	1047.5	3.83	1.66	6.39	6.39
Yellowstone County	B8	RM 325.21	43210.67	20-yr	2186.06	867.8	861.34	2.05	1.45	26.54	10.84	204.14	848.72	4.38	1.77	6.46	6.46
Yellowstone County	B8	RM 325.13	43078.9	20-yr	2186.06	867.65	861.36	2.38	1.59	36.93	12.95	149.29	787.56	5.05	1.75	6.29	6.29
Yellowstone County	B8	RM 325.06	42966.54	20-yr	2186.06	867.27	860.78	3.27	2.2	67.63	18.91	122.78	747.97	4.81	1.33	6.49	6.49
Yellowstone County	B8	RM 324.99	42864.51	20-yr	2186.06	867.19	861.24	2.91	1.88	57.6	19.81	135.08	761.49	4.49	1.53	5.95	5.95
Yellowstone County	B8	RM 324.91	42729.7	20-yr	2186.06	866.99	860.76	2.95	1.92	60.39	19.71	132.74	745.7	4.72	1.53	6.23	6.23
Yellowstone County	B8	RM 324.81	42573.19	20-yr	2186.06	866.77	860.39	2.94	2.06	63.21	22.1	140.39	661.7	4.6	1.6	6.38	6.38
Yellowstone County	B8	RM 324.73	42451.12	20-yr	2186.06	866.68	861.59	2.62	1.9	45.16	19.64	179.41	666.59	3.98	1.72	5.09	5.09
Yellowstone County	B8	RM 324.65	42323.44	20-yr	2186.06	866.62	861.99	1.93	1.59	40.54	24.94	300.92	716.28	3.11	1.91	4.63	4.63
Yellowstone County	B8	RM 324.56	42178.25	20-yr	2186.06	866.47	861.76	1.94	1.55	17.22	13.4	404.18	785.52	2.31	1.8	4.71	4.71
Yellowstone County	B8	RM 324.48	42039.74	20-yr	2186.06	866.33	861.58	1.74	1.5	44.13	31.59	477.36	889.05	2.3	1.64	4.75	4.75
Yellowstone County	B8	RM 324.42	41946.09	20-yr	2186.06	866.22	861.04	1.48	1.26	29.14	19.28	478.13	949.28	2.77	1.83	5.18	5.18
Yellowstone County	B8	RM 324.34	41812.99	20-yr	2186.06	866	861.07	1.79	1.39	47.96	27.56	378.78	1020.75	2.68	1.54	4.93	4.93
Yellowstone County	B8	RM 324.28	41712.42	20-yr	2186.06	865.81	859.64	1.78	1.43	49.5	28.45	364.85	1041.84	2.55	1.47	6.17	6.17
Yellowstone County	B8	RM 324.20	41597.64	20-yr	2186.06	865.73	860.59	1.1	1.03	18.14	14.21	674.64	1053.32	2.58	2.02	5.14	5.14
Yellowstone County	B8	RM 324.16	41526.97	20-yr	2186.06	865.63	861.07	1.48	1.35	12.68	9.37	664.57	1055.05	2.09	1.54	4.56	4.56
Yellowstone County	B8	RM 324.10	41434.55	20-yr	2186.06	865.57	860.81	1.29	1.21	23.19	16.25	690.71	1103.96	2.34	1.63	4.76	4.76
Yellowstone County	B8	RM 324.04	41346.42	20-yr	2186.06	865.52	860.39	1.19	1.11	15.44	10.27	631.25	1177.56	2.53	1.68	5.12	5.12
Yellowstone County	B8	RM 323.97	41219.29	20-yr	2186.06	865.44	860.64	1.12	1.05	13.85	9.78	573.41	1132.8	2.61	1.84	4.8	4.8
Yellowstone County	B8	RM 323.83	40977.08	20-yr	2186.06	865.33	860.31	1.25	0.98	11.33	6.64	453.65	1212.74	3.14	1.83	5.02	5.02
Yellowstone County	B8	RM 323.71	40786.71	20-yr	2186.06	865.13	858.49	2.01	1.31	24.95	9.37	221.36	1159.07	3.87	1.44	6.64	6.64
Yellowstone County	B8	RM 323.60	40615.85	20-yr	2186.06	865.13	858.06	1.57	1.1	15.09	5.93	121.77	1071.82	4.78	1.86	7.07	7.07
Yellowstone County	B8	RM 323.55	40536.83	20-yr	2186.06	864.73	857.58	3.2	1.84	65.27	20.15	114.53	904.43	4.29	1.31	7.15	7.15
Yellowstone County	B8	RM 323.49	40429.96	20-yr	2186.06	864.57	858.37	3.16	1.83	59.83	17.16	119.27	960.35	4.37	1.24	6.2	6.2
Yellowstone County	B8	RM 323.41	40309.21	20-yr	2186.06	864.44	859.41	2.89	1.81	61.6	18.64	135.74	1023.11	3.93	1.18	5.03	5.03

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	20-yr	2186.06	864.37	859.58	2.37	1.51	31.39	12.43	175.88	1018.47	3.62	1.43	4.79	4.79
Yellowstone County	B8	RM 323.27	40082.34	20-yr	2186.06	864.25	859.66	2.4	1.53	36.67	15.28	188.89	987.48	3.5	1.45	4.59	4.59
Yellowstone County	B8	RM 323.21	39985.33	20-yr	2186.06	864.14	859.54	2.37	1.51	37.21	17.64	211.17	971.46	3.16	1.49	4.6	4.6
Yellowstone County	B8	RM 323.16	39899.29	20-yr	2186.06	864.09	859.55	1.8	1.3	32.01	18.47	276.01	1015.32	2.88	1.66	4.54	4.54
Yellowstone County	B8	RM 323.06	39735.77	20-yr	2186.06	863.83	858.56	1.73	1.5	38.6	19.09	311.52	1381.27	2.57	1.27	5.27	5.27
Yellowstone County	B8	RM 322.93	39531.81	20-yr	2186.06	863.61	859.35	1.63	1.27	26.05	12.11	322.23	1341.24	2.84	1.31	4.26	4.26
Yellowstone County	B8	RM 322.79	39301.41	20-yr	2186.06	863.38	858.62	1.96	1.32	25.54	11.3	220.82	1204.41	3.4	1.5	4.76	4.76
Yellowstone County	B8	RM 322.69	39142.64	20-yr	2186.06	863.26	857.47	2.1	1.37	22.05	9.82	200.75	1087.11	3.55	1.58	5.79	5.79
Yellowstone County	B8	RM 322.58	38982.22	20-yr	2186.06	862.72	856.56	3.62	2.53	80.81	27.3	116.13	714.16	3.61	1.21	6.16	6.16
Yellowstone County	B9	RM 322.51	38859.49	20-yr	2186.06	862.65	858.28	2.81	2.08	49.79	19.67	162.98	779.59	3.43	1.35	4.37	4.37
Yellowstone County	B9	RM 322.41	38696.02	20-yr	2186.06	862.55	857.62	1.65	1.62	33.68	21.87	457.39	945.3	2.29	1.48	4.93	4.93
Yellowstone County	B9	RM 322.34	38586.33	20-yr	2186.06	862.45	857.65	1.36	1.35	21.74	16.09	589.59	1031.47	2.17	1.6	4.8	4.8
Yellowstone County	B9	RM 322.23	38396.25	20-yr	2186.06	862.31	857.13	1.05	1.07	17.28	14.07	754.2	1141.05	2.2	1.79	5.18	5.18
Yellowstone County	B9	RM 322.13	38239.27	20-yr	2186.06	862.18	857.1	0.94	1.02	18.45	16.48	880.36	1168.95	2.06	1.84	5.08	5.08
Yellowstone County	B9	RM 322.03	38090.48	20-yr	2186.06	861.92	856.15	1.15	1.26	38.61	37.29	970.34	1134.27	1.58	1.53	5.76	5.76
Yellowstone County	B9	RM 321.91	37898.13	20-yr	2186.06	861.66	856.85	1.56	1.56	10.06	10.06	907.77	907.77	1.54	1.54	4.81	4.81
Yellowstone County	B9	RM 321.82	37758.36	20-yr	2186.06	861.63	856.34	1.3	1.3	6.49	6.46	832.58	836.01	2.01	2.01	5.29	5.29
Yellowstone County	B9	RM 321.70	37567.01	20-yr	2186.06	861.54	855.27	1.17	1.16	20.91	19.63	809.33	877.55	2.28	2.14	6.27	6.27
Yellowstone County	B9	RM 321.60	37414.63	20-yr	2186.06	861.47	854.48	0.97	0.96	9.52	8.93	755.32	821.07	2.96	2.77	7	7
Yellowstone County	B9	RM 321.48	37188.51	20-yr	2186.06	861.32	855.03	1.37	1.29	20.99	17.08	546.18	737.81	2.82	2.29	6.29	6.29
Yellowstone County	B9	RM 321.38	37016.94	20-yr	2186.06	861.15	854.75	1.55	1.4	22.57	14.88	471.9	850.72	2.81	1.84	6.4	6.4
Yellowstone County	B9	RM 321.28	36857.57	20-yr	2186.06	861.1	855.3	1.28	1.08	11.14	7.27	459.37	902.72	3.44	2.24	5.8	5.8
Yellowstone County	B9	RM 321.13	36652.19	20-yr	2186.06	861	854.69	1.49	1.13	21.67	14.35	274.03	934.74	4.25	2.78	6.31	6.31
Yellowstone County	B9	RM 321.05	36531.25	20-yr	2186.06	860.8	855.36	2.13	1.58	36.44	17.35	190.29	615.21	4.77	2.25	5.44	5.44
Yellowstone County	B9	RM 321.00	36446.98	20-yr	2186.06	860.36	855.12	3.36	2.33	74.6	27.34	128.95	578.86	4.53	1.62	5.24	5.24
Yellowstone County	B9	RM 320.71	36404.1	20-yr	2186.06	860.28	855.12	3.42	2.39	54.41	20.68	131.9	563.65	4.36	1.62	5.16	5.16
Yellowstone County	B9	RM 320.62	36361.3	20-yr	2186.06	860.19	855.12	3.5	2.46	57.13	22.09	134.62	558.99	4.19	1.59	5.08	5.08
Yellowstone County	B9	RM 320.92	36318.56	20-yr	2186.06	860.05	855.12	3.66	2.64	102.6	39.4	136.36	551.79	3.99	1.5	4.93	4.93
Yellowstone County	B9	RM 320.44	36258.3	20-yr	2186.06	859.95	855.19	3.57	2.62	58.18	23.34	144.45	536.54	3.94	1.56	4.76	4.76
Yellowstone County	B9	RM 320.38	36198.1	20-yr	2186.06	859.9	855.26	3.38	2.5	52.71	23.05	150.69	508.61	3.99	1.72	4.64	4.64
Yellowstone County	B9	RM 320.80	36137.92	20-yr	2186.06	859.85	855.33	3.17	2.33	71.58	30.49	156.74	707.15	4.02	1.68	4.52	4.52
Yellowstone County	B9	RM 320.71	35990.21	20-yr	2186.06	859.88	854.38	1.92	1.63	31.48	16.1	275.47	1477.03	3.93	1.99	5.5	5.5
Yellowstone County	B9	RM 320.54	35839.45	20-yr	2186.06	859.76	853.99	1.89	1.56	25.72	13.57	324.02	1370.17	3.36	1.75	5.77	5.77
Yellowstone County	B9	RM 320.44	35717.45	20-yr	2186.06	859.69	854.32	1.82	1.4	19.73	10.47	334.82	1343.84	3.19	1.68	5.37	5.37
Yellowstone County	B9	RM 320.62	35556.9	20-yr	2186.06	859.59	854.17	1.74	1.29	32.7	15.32	262.43	1298.44	3.38	1.56	5.42	5.42
Yellowstone County	B9	RM 320.38	35461.42	20-yr	2186.06	859.5	854.17	1.93	1.25	25.03	9.13	198.59	1402.94	4.21	1.5	5.32	5.32
Yellowstone County	B9	RM 320.32	35359.13	20-yr	2186.06	859.34	854.57	2.44	1.5	45.59	12.68	140.31	1393.61	4.48	1.22	4.77	4.77
Yellowstone County	B9	RM 320.25	35241.01	20-yr	2186.06	858.8	854.29	3.73	2.31	89.13	22.71	110.85	934.9	4.09	1.01	4.5	4.5
Yellowstone County	B9	RM 320.20	35163.52	20-yr	2186.06	858.68	854.2	3.38	2.28	91.36	28.92	134.17	869.67	3.56	1.1	4.48	4.48
Yellowstone County	B9	RM 320.14	35071.29	20-yr	2186.06	858.46	854.32	3.24	2.29	71.49	25.91	160.53	840.84	3.3	1.18	4.14	4.14
Yellowstone County	B9	RM 320.01	34865.89	20-yr	2186.06	858.03	854.42	2.87	2.74	41.49	30.91	122.19	696.94	2.61	1.94	3.68	3.68
Yellowstone County		RM 319.44	34790	20-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	20-yr	2186.06	858.02	854.66	1.55	1.81	16.31	13.41	143.74	774.61	2.74	2.24	4.44	4.44
Yellowstone County	B9	RM 319.86	34625.68	20-yr	2186.06	857.97	854.6	1.49	1.77	19.16	14.67	153.74	854.03	2.62	1.99	4.41	4.41
Yellowstone County	B9	RM 319.78	34508.06	20-yr	2186.06	857.85	854.51	2.26	1.97	35.63	21.12	111.07	952.28	3.04	1.78	4.33	4.33
Yellowstone County	B9	RM 319.73	34426.63	20-yr	2186.06	857.5	854.69	3.4	1.98	61.65	43.34	156.77	884.92	2.5	1.75	4.03	4.03
Yellowstone County	B9	RM 319.66	34314.84	20-yr	2186.06	857.48	854.51	2.24	1.82	25.88	17.86	158.66	918.2	2.46	1.69	4.05	4.05
Yellowstone County	B9	RM 319.57	34163.05	20-yr	2186.06	857.35	853.93	2.15	1.81	22.31	15.05	198.21	729.32	2.54	1.71	4.01	4.01
Yellowstone County	B9	RM 319.44	33955.96	20-yr	2186.06	857.25	853.14	1.98	1.73	25.94	16.75	153.57	706.22	2.84	1.81	4.11	4.11
Yellowstone County	B9	RM 319.39	33872.4	20-yr	2186.06	857.19	852.65	2.13	1.65	22.62	12.53	137.96	825.04	2.98	1.62	4.54	4.54
Yellowstone County	B9	RM 319.34	33786.83	20-yr	2186.06	857.16	852.83	1.98	1.5	18.94	11.65	178.14	806.38	2.97	1.81	4.33	4.33
Yellowstone County	B9	RM 319.22	33580.15	20-yr	2186.06	857.11	851.79	2.01	1.29	17.84	8.4	80.63	888.49	4.18	1.9	5.31	5.31
Yellowstone County	B9	RM 319.17	33497.33	20-yr	2186.06	857.1	851.64	1.57	1.25	13.23	7.34	121.71	1041.97	3.39	1.84	5.45	5.45
Yellowstone County	B9	RM 319.09	33368.53	20-yr	2186.06	856.85	851.25	2.48	1.98	48.93	16.87	135.01	869.18	3.82	1.28	5.61	5.61
Yellowstone County	B9	RM 319.04	33287.21	20-yr	2186.06	856.61	851.49	3.06	2.23	73.91	21.36	112.78	887	4.15	1.16	5.12	5.12
Yellowstone County	B9	RM 318.96	33153.16	20-yr	2186.06	856.39	851.64	2.86	2.22	60.91	20.33	156.31	854.49	3.73	1.23	4.75	4.75
Yellowstone County	B9	RM 318.91	33065.54	20-yr	2186.06	856.3	851.86	2.52	2.12	59.83	23.25	189.76	847.54	3.37	1.3	4.44	4.44
Yellowstone County	B9	RM 318.82	32939.33	20-yr	2186.06	856	851.86	2.98	2.28	42.39	16.17	159.43	699.03	3.64	1.37	4.15	4.15
Yellowstone County	B9	RM 318.74	32833.24	20-yr	2186.06	856.07	851.86	1.89	1.51	23.65	10.89	184.37	875.07	3.64	1.66	4.21	4.21
Yellowstone County	B9	RM 318.62	32649.76	20-yr	2186.06	855.9	850.67	1.78	1.63	31.18	18.72	316.37	816.42	2.78	1.66	5.24	5.24
Yellowstone County	B9	RM 318.42	32315.28	20-yr	2186.06	855.51	850.15	2.06	1.9	24.48	15.62	347.83	631.54	2.98	1.89	5.36	5.36

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions
20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	20-yr	2186.06	855.13	849.17	2.25	1.57	32.62	11.7	211.69	997.19	3.97	1.4	5.95	5.95
Yellowstone County	B9	RM 317.97	31551.39	20-yr	2186.06	854.82	848.35	2.42	1.92	25.4	11.16	238.16	728.93	3.63	1.58	6.47	6.47
Yellowstone County	B10	RM 317.87	31388.76	20-yr	2186.06	854.55	848.78	2.95	2.05	46.25	15.44	163.67	819.39	3.99	1.3	5.77	5.77
Yellowstone County	B10	RM 317.78	31248.07	20-yr	2186.06	854.54	848.75	2.37	1.52	29.28	10.29	143.48	978.97	4.67	1.61	5.8	5.8
Yellowstone County	B10	RM 317.70	31120.75	20-yr	2186.06	854.59	848.56	1.58	1.14	13.44	6.7	172.18	1002.95	4.09	2	6.02	6.02
Yellowstone County	B10	RM 317.61	30982.56	20-yr	2186.06	854.48	848.29	1.9	1.33	18.06	8.15	194.89	975.71	3.82	1.69	6.19	6.19
Yellowstone County	B10	RM 317.53	30849.94	20-yr	2186.06	854.44	848.5	1.54	1.27	13.69	7.22	344.94	1002.02	3.27	1.71	5.94	5.94
Yellowstone County	B10	RM 317.45	30723.4	20-yr	2186.06	854.37	848.47	1.62	1.32	16.45	9.71	369.44	1263.41	2.83	1.66	5.9	5.9
Yellowstone County	B10	RM 317.37	30601.88	20-yr	2186.06	854.32	848.17	1.42	1.2	16.43	11.29	371	1361.68	2.8	1.91	6.15	6.15
Yellowstone County	B10	RM 317.30	30483.81	20-yr	2186.06	854.23	848.41	1.65	1.26	14.51	8.33	273.63	1271.13	3.5	1.98	5.82	5.82
Yellowstone County	B10	RM 317.19	30302.33	20-yr	2186.06	854.16	848.84	1.83	1.16	16.86	6.41	161.55	1148.9	4.83	1.8	5.32	5.32
Yellowstone County	B10	RM 317.05	30079.26	20-yr	2186.06	853.88	848.38	2.47	1.95	27.77	14.32	159.02	448.1	4.93	2.51	5.5	5.5
Yellowstone County	B10	RM 316.93	29889.26	20-yr	2186.06	853.59	847.25	2.9	2.38	48.01	25.82	150.51	608.85	4.79	2.53	6.34	6.34
Yellowstone County	B10	RM 316.79	29668.4	20-yr	2186.06	853.41	847.89	2.75	2.14	43.82	15.93	146.89	567.86	5.04	1.8	5.52	5.52
Yellowstone County	B10	RM 316.66	29466.39	20-yr	2186.06	853.24	847.86	2.66	2.16	38.11	18.26	162.99	443.07	4.82	2.28	5.37	5.37
Yellowstone County	B10	RM 316.58	29329.04	20-yr	2186.06	853.13	847.74	2.57	1.89	47.76	22.8	174.46	581.05	4.46	2.11	5.39	5.39
Yellowstone County	B10	RM 316.51	29227.18	20-yr	2186.06	852.98	847.41	2.68	1.95	45.35	21.7	183.91	588.29	4.04	1.91	5.57	5.57
Yellowstone County	B10	RM 316.43	29091.4	20-yr	2186.06	852.83	847.41	2.45	1.87	49.51	28.96	239.71	602.8	3.35	1.94	5.43	5.43
Yellowstone County	B10	RM 316.33	28935.99	20-yr	2186.06	852.57	847.74	2.38	1.93	54.72	36.13	285.79	589.47	2.92	1.92	4.83	4.83
Yellowstone County	B10	RM 316.24	28786.65	20-yr	2186.06	852.35	847.5	1.96	1.8	46.25	32.22	356.21	638.41	2.74	1.9	4.86	4.86
Yellowstone County	B10	RM 316.14	28628.02	20-yr	2186.06	852.13	846.92	1.94	1.66	34.12	21.49	330.46	653.38	3.22	2.02	5.21	5.21
Yellowstone County	B10	RM 316.05	28475.44	20-yr	2186.06	851.86	846.73	2.24	1.89	46.44	23.21	295.19	733.81	3.17	1.57	5.13	5.13
Yellowstone County	B10	RM 315.97	28355.68	20-yr	2186.06	851.75	846.43	2.17	1.8	22.21	12.92	302.67	676.42	3.1	1.8	5.32	5.32
Yellowstone County	B10	RM 315.84	28140.65	20-yr	2186.06	851.39	846.58	2.8	2.16	59.73	24.07	172.18	689.39	3.69	1.47	4.81	4.81
Yellowstone County	B10	RM 315.71	27926.69	20-yr	2186.06	851.13	846.34	2.72	1.94	32.24	12.49	205.26	1009.47	3.2	1.23	4.79	4.79
Yellowstone County	B10	RM 315.58	27720.72	20-yr	2186.06	851.14	846.16	1.62	1.24	21.87	10.13	155.61	1067.51	3.66	1.66	4.98	4.98
Yellowstone County	B10	RM 315.44	27505.06	20-yr	2186.06	850.9	846.09	2.25	1.34	28.85	8.76	152.19	1266.25	4.32	1.29	4.81	4.81
Yellowstone County	B10	RM 315.30	27283.58	20-yr	2186.06	850.83	844.45	1.51	1.05	15.67	8.05	317.48	1413.49	2.9	1.47	6.38	6.38
Yellowstone County	B10	RM 315.18	27097.16	20-yr	2186.06	850.78	844.72	1.21	0.95	8.39	5.38	454.13	1466.77	2.46	1.56	6.06	6.06
Yellowstone County	B10	RM 315.01	26818.99	20-yr	2186.06	850.64	844.66	1.47	1.12	16.75	8.81	477.22	1435.44	2.6	1.35	5.98	5.98
Yellowstone County	B10	RM 314.85	26559.67	20-yr	2186.06	850.33	844.84	2.32	1.49	35.73	8.53	167.34	1416.5	4.46	1.04	5.49	5.49
Yellowstone County	B10	RM 314.69	26324.37	20-yr	2186.06	850.06	844.24	2.58	1.73	40.23	10.31	173.35	1196.31	4.21	1.05	5.83	5.83
Yellowstone County	B10	RM 314.57	26132.54	20-yr	2186.06	849.79	844.63	2.84	1.9	50.59	13.7	147.42	941.36	4.59	1.22	5.16	5.16
Yellowstone County	B10	RM 314.46	25963.96	20-yr	2186.06	849.69	844.48	2.39	1.71	39.46	10.97	201.33	1172.66	3.97	1.09	5.21	5.21
Yellowstone County	B10	RM 314.35	25782.69	20-yr	2186.06	849.42	844.51	2.37	2.14	59.72	24.61	268.39	748.66	3.34	1.36	4.91	4.91
Yellowstone County	B10	RM 314.24	25607.48	20-yr	2186.06	849.25	844.14	2.31	1.99	20.88	8.94	283.4	803.23	3.25	1.37	5.1	5.1
Yellowstone County	B10	RM 314.15	25461.23	20-yr	2186.06	849.11	844.05	2.21	1.99	55.84	31.63	305.67	640.5	3.06	1.72	5.06	5.06
Yellowstone County	B10	RM 314.06	25326.45	20-yr	2186.06	849.08	843.63	1.62	1.42	12.36	6.6	455.22	1032.55	2.9	1.54	5.45	5.45
Yellowstone County	B10	RM 313.98	25189.4	20-yr	2186.06	849.02	843.05	1.41	1.22	23.24	15.46	559.69	1060.15	2.56	1.69	5.97	5.97
Yellowstone County	B10	RM 313.83	24942.42	20-yr	2186.06	848.85	843.2	1.39	1.29	14.97	8.91	476.74	896.36	3.21	1.9	5.65	5.65
Yellowstone County	B10	RM 313.72	24768.08	20-yr	2186.06	848.74	842.35	1.63	1.29	16.28	7.54	330.48	987.42	3.74	1.71	6.39	6.39
Yellowstone County	B10	RM 313.66	24671.51	20-yr	2186.06	848.66	843.14	1.81	1.36	17.98	8.11	286.85	941.13	3.82	1.7	5.53	5.53
Yellowstone County	B10	RM 313.57	24513.04	20-yr	2186.06	848.59	842.47	1.79	1.37	18.44	9.5	303.74	853.95	3.65	1.87	6.12	6.12
Yellowstone County	B10	RM 313.47	24364.02	20-yr	2186.06	848.5	841.55	1.8	1.47	18.27	9.41	283.74	722.8	4.06	2.06	6.95	6.95
Yellowstone County	B10	RM 313.33	24143.26	20-yr	2186.06	848.2	842.65	2.46	1.91	49.06	20.28	187.19	631.78	4.45	1.81	5.55	5.55
Yellowstone County	B10	RM 313.18	23899.74	20-yr	2186.06	847.45	842.19	3.45	2.9	105.94	43.06	164.87	507.62	3.72	1.49	5.26	5.26
Yellowstone County	B10	RM 313.07	23728.15	20-yr	2186.06	847.14	842.62	3.25	2.89	57.46	28.31	162.57	381.62	4.06	1.98	4.52	4.52
Yellowstone County	B10	RM 312.98	23590.93	20-yr	2186.06	847.15	842.5	2.57	2.18	30.93	16.03	194.32	494.57	3.94	2.03	4.65	4.65
Yellowstone County	B10	RM 312.90	23455.11	20-yr	2186.06	847.08	842.38	2.29	2.02	39.77	20.3	202.68	548.35	3.95	2	4.7	4.7
Yellowstone County	B10	RM 312.75	23227.05	20-yr	2186.06	846.86	841.71	2.32	1.83	31.27	14.8	224.05	723.73	3.52	1.65	5.16	5.16
Yellowstone County	B10	RM 312.65	23058.61	20-yr	2186.06	846.76	841.61	2.05	1.66	26.47	15.22	273.65	744.08	3.1	1.77	5.14	5.14
Yellowstone County	B10	RM 312.53	22873.59	20-yr	2186.06	846.68	841.37	1.82	1.39	18.87	9.61	238.68	759.58	4.11	2.07	5.31	5.31
Yellowstone County	B10	RM 312.49	22797.96	20-yr	2186.06	846.58	841.34	2.16	1.56	25.6	11.93	203.9	742.33	4.08	1.89	5.24	5.24
Yellowstone County	B10	RM 312.39	22646.67	20-yr	2186.06	846.43	840.85	2.53	1.71	39.27	18.34	150.14	717.97	3.87	1.78	5.57	5.57
Yellowstone County	B10	RM 312.33	22536.68	20-yr	2186.06	846.24	840.82	2.82	1.86	47.97	19.67	139.06	725.56	4.02	1.62	5.42	5.42
Yellowstone County	B10	RM 312.22	22360.55	20-yr	2186.06	846.19	840.91	2.24	1.67	32.83	13.73	128.07	718.15	4.45	1.83	5.28	5.28
Yellowstone County	B10	RM 312.13	22230.65	20-yr	2186.06	846.15	840.94	1.68	1.42	19.33	12.07	350.72	732.68	3.38	2.1	5.2	5.2
Yellowstone County	B10	RM 312.04	22082.88	20-yr	2186.06	846.01	840.82	1.86	1.56	24.73	14.25	346.94	779.43	3.13	1.79	5.19	5.19
Yellowstone County	B10	RM 311.95	21934.61	20-yr	2186.06	845.87	840.79	1.91	1.61	25.07	15.01	350.23	726.6	3.13	1.87	5.08	5.08
Yellowstone County	B10	RM 311.89	21840.24	20-yr	2186.06	845.81	840.76	1.84	1.58	27.43	16.87	325.27	837.86	3.47	2.13	5.05	5.05
Yellowstone County	B10	RM 311.77	21651.91	20-yr	2186.06	845.66	840.18	1.97	1.54	25.54	9.76	226.3	871.76	4.58	1.73	5.48	5.48

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions
20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	20-yr	2186.06	845.47	839.85	2.51	1.66	39.13	11.36	150.75	961.06	5	1.41	5.62	5.62
Yellowstone County	B10	RM 311.58	21350.77	20-yr	2186.06	845.35	839.63	2.39	1.54	36.38	11.52	171.57	1089.91	4.38	1.36	5.71	5.71
Yellowstone County	B10	RM 311.48	21191.11	20-yr	2186.06	845.26	839.42	2.09	1.39	25.16	9.24	228.87	1147.47	3.77	1.37	5.84	5.84
Yellowstone County	B10	RM 311.37	21010.53	20-yr	2186.06	845.17	839.18	1.76	1.28	20.43	10.93	336.85	1221.03	3.2	1.7	6	6
Yellowstone County	B10	RM 311.27	20852.82	20-yr	2186.06	845.08	838.96	1.74	1.22	20.38	10.19	322.24	1180.66	3.3	1.63	6.12	6.12
Yellowstone County	B10	RM 311.19	20716.8	20-yr	2186.06	845.01	838.84	1.74	1.14	19.25	7.95	247.96	1155.2	4.21	1.71	6.17	6.17
Yellowstone County	B10	RM 311.09	20559.11	20-yr	2186.06	844.68	839.14	2.8	1.67	44.48	12.89	144.57	1030.58	4.62	1.31	5.54	5.54
Yellowstone County	B10	RM 310.97	20364.78	20-yr	2186.06	844.56	839.45	2.46	1.56	36.84	12.5	172.34	988.28	4.46	1.49	5.11	5.11
Yellowstone County	B10	RM 310.87	20211.96	20-yr	2186.06	844.43	839.02	2.41	1.61	34.83	11.85	190.23	1010.64	4.25	1.42	5.41	5.41
Yellowstone County	B10	RM 310.76	20019.23	20-yr	2186.06	843.99	839.18	3.2	2.22	55.89	14.83	143.82	866.77	4.39	1.14	4.82	4.82
Yellowstone County	B11	RM 310.67	19877.9	20-yr	2186.06	843.9	839.11	2.73	1.87	59.17	17.1	174.84	1017.48	4.02	1.15	4.78	4.78
Yellowstone County	B11	RM 310.57	19727.96	20-yr	2186.06	843.71	839.08	2.55	1.75	54.24	17.55	195.39	1011.51	3.87	1.24	4.62	4.62
Yellowstone County	B11	RM 310.48	19578.86	20-yr	2186.06	843.54	838.96	2.42	1.61	41.64	14.04	209.73	1078.51	3.77	1.26	4.58	4.58
Yellowstone County	B11	RM 310.39	19437.53	20-yr	2186.06	843.49	838.54	2.05	1.41	19.18	8	263.28	1076.12	3.47	1.44	4.95	4.95
Yellowstone County	B11	RM 310.31	19317.45	20-yr	2186.06	843.42	838.23	1.99	1.49	17.96	9.29	354.7	1017.21	2.8	1.44	5.19	5.19
Yellowstone County	B11	RM 310.24	19187.47	20-yr	2186.06	843.35	838.23	1.56	1.31	36.71	22.86	461.89	1036.16	2.61	1.61	5.12	5.12
Yellowstone County	B11	RM 310.16	19069.04	20-yr	2186.06	843.18	837.93	1.46	1.33	34.71	26.43	567.88	893.35	2.42	1.84	5.26	5.26
Yellowstone County	B11	RM 310.09	18955.28	20-yr	2186.06	843.09	837.93	1.54	1.26	10.8	7.74	554.63	1031.96	2.35	1.68	5.16	5.16
Yellowstone County	B11	RM 309.97	18765.62	20-yr	2186.06	843.03	837.59	1.13	1.01	14.77	9.82	601.54	1073.71	3.05	2.02	5.44	5.44
Yellowstone County	B11	RM 309.90	18643.48	20-yr	2186.06	842.95	837.5	1.33	1.15	8.05	5.89	625.03	1039.52	2.51	1.83	5.45	5.45
Yellowstone County	B11	RM 309.82	18525.48	20-yr	2186.06	842.9	837.5	1.23	1.15	24.72	19.96	697.17	1016.62	2.32	1.87	5.4	5.4
Yellowstone County	B11	RM 309.73	18379.74	20-yr	2186.06	842.77	837.35	1.09	1.05	18.37	15.09	801.66	1042.23	2.44	2	5.42	5.42
Yellowstone County	B11	RM 309.65	18253.83	20-yr	2186.06	842.71	837.38	0.92	0.89	11.7	10.49	876.43	1015.59	2.69	2.41	5.33	5.33
Yellowstone County	B11	RM 309.52	18029.98	20-yr	2186.06	842.56	836.68	1.1	1.08	17.74	16.65	816.46	892.19	2.41	2.26	5.89	5.89
Yellowstone County	B11	RM 309.39	17824.11	20-yr	2186.06	842.48	836.74	0.92	0.92	9.67	9.67	764.13	764.13	3.11	3.11	5.74	5.74
Yellowstone County	B11	RM 309.22	17557.23	20-yr	2186.06	842.31	836.07	1.52	1.38	13.68	8.63	334.45	606.97	4.17	2.61	6.24	6.24
Yellowstone County	B11	RM 309.06	17331.95	20-yr	2186.06	842.06	835.79	2.18	1.72	52.08	21.19	191.52	664.72	4.8	1.91	6.27	6.27
Yellowstone County	B11	RM 308.94	17142.36	20-yr	2186.06	841.32	835.4	3.69	2.81	86.07	31.82	121.56	484.57	4.47	1.61	5.92	5.92
Yellowstone County	B11	RM 308.83	16971.41	20-yr	2186.06	841.31	836.04	2.61	2.04	47.62	21.34	158.84	517.38	4.69	2.07	5.27	5.27
Yellowstone County	B11	RM 308.71	16778.65	20-yr	2186.06	841.26	835.91	2.04	1.64	18.73	10.3	251.14	618.8	3.94	2.15	5.34	5.34
Yellowstone County	B11	RM 308.62	16631.4	20-yr	2186.06	841.17	835.85	1.87	1.5	46.08	27.01	300.08	742.48	3.37	1.96	5.32	5.32
Yellowstone County	B11	RM 308.55	16518.64	20-yr	2186.06	841	835.85	1.84	1.54	45.03	26.75	368.88	844.14	2.85	1.69	5.14	5.14
Yellowstone County	B11	RM 308.43	16328.3	20-yr	2186.06	840.73	834.51	1.63	1.39	39.89	25.01	420.94	910.73	2.78	1.73	6.21	6.21
Yellowstone County	B11	RM 308.35	16192.95	20-yr	2186.06	840.58	834.88	1.55	1.26	24.88	14.62	402.97	968.41	3.07	1.79	5.7	5.7
Yellowstone County	B11	RM 308.24	16015.46	20-yr	2186.06	840.48	834.63	1.47	1.12	14.11	8.28	363.15	957.44	3.49	2.04	5.85	5.85
Yellowstone County	B11	RM 308.12	15826.82	20-yr	2186.06	840.42	834.63	1.39	1.1	12.04	7.34	382.83	914.04	3.6	2.18	5.79	5.79
Yellowstone County	B11	RM 308.02	15675.58	20-yr	2186.06	840.35	834.76	1.52	1.17	11.21	5.53	303.88	867.67	4.39	2.15	5.59	5.59
Yellowstone County	B11	RM 307.88	15434.86	20-yr	2186.06	839.97	834.45	3.03	1.95	56.84	18.83	113.28	758.55	4.6	1.48	5.52	5.52
Yellowstone County	B11	RM 307.77	15261.75	20-yr	2186.06	839.55	834.45	3.39	2.53	81.19	28.52	128.29	632.18	4	1.37	5.1	5.1
Yellowstone County	B11	RM 307.68	15125.28	20-yr	2186.06	839.41	834.85	2.8	2.1	53.15	22.18	158.47	625.86	4.04	1.66	4.56	4.56
Yellowstone County	B11	RM 307.60	14980.1	20-yr	2186.06	839.38	834.36	1.98	1.73	22.37	12.61	274.02	579.49	3.89	2.18	5.02	5.02
Yellowstone County	B11	RM 307.52	14873.7	20-yr	2186.06	839.2	834.12	2.37	2.02	34.48	18.42	253.81	588.5	3.47	1.84	5.09	5.09
Yellowstone County	B11	RM 307.46	14779.11	20-yr	2186.06	839.07	833.6	2.31	2.02	63.62	39.94	312.71	606.34	2.86	1.78	5.48	5.48
Yellowstone County	B11	RM 307.39	14664.34	20-yr	2186.06	838.93	833.63	2.27	1.94	20	13.74	365.52	656.01	2.51	1.72	5.3	5.3
Yellowstone County	B11	RM 307.30	14517.89	20-yr	2186.06	838.76	833.81	2.12	1.92	55.79	40.74	407.35	684.11	2.29	1.67	4.95	4.95
Yellowstone County	B11	RM 307.22	14385.45	20-yr	2186.06	838.49	833.87	2.05	1.85	43.19	30.54	396.39	688.4	2.43	1.71	4.61	4.61
Yellowstone County	B11	RM 307.14	14262.57	20-yr	2186.06	838.34	833.51	1.94	1.69	30.69	18.56	334.95	717.56	3	1.81	4.83	4.83
Yellowstone County	B11	RM 307.08	14166.72	20-yr	2186.06	838.28	833.11	1.78	1.53	18.3	11.1	348.63	746.69	3.16	1.91	5.17	5.17
Yellowstone County	B11	RM 307.01	14050.92	20-yr	2186.06	838.2	832.65	1.83	1.59	16.06	10.7	374.83	744	2.78	1.84	5.55	5.55
Yellowstone County	B11	RM 306.95	13949.23	20-yr	2186.06	838.1	832.35	2.02	1.61	24.89	16.21	324.62	755.32	2.78	1.8	5.75	5.75
Yellowstone County	B11	RM 306.90	13869.87	20-yr	2186.06	838.01	832.56	2.05	1.65	28.31	20.52	349.64	669.91	2.74	1.97	5.45	5.45
Yellowstone County	B11	RM 306.82	13726.64	20-yr	2186.06	837.89	832.62	1.91	1.55	24.26	15.64	361.85	767.43	2.87	1.84	5.27	5.27
Yellowstone County	B11	RM 306.72	13574.53	20-yr	2186.06	837.74	831.8	2.16	1.54	28.44	13.33	222.2	875.12	3.5	1.62	5.94	5.94
Yellowstone County	B11	RM 306.62	13414.11	20-yr	2186.06	837.57	832.77	2.29	1.74	40.68	17.8	215.2	857.71	3.39	1.47	4.79	4.79
Yellowstone County	B11	RM 306.52	13251.36	20-yr	2186.06	837.16	832.87	3.06	2.12	51.87	16.86	152.25	834.83	3.87	1.24	4.29	4.29
Yellowstone County	B11	RM 306.42	13099.73	20-yr	2186.06	836.8	832.74	3.5	2.54	65.1	23.05	134.08	687.14	3.61	1.25	4.06	4.06
Yellowstone County	B11	RM 306.34	12958.96	20-yr	2186.06	836.79	832.84	2.35	1.83	35.99	15.47	236.52	897.59	3.14	1.34	3.95	3.95
Yellowstone County	B11	RM 306.25	12825.95	20-yr	2186.06	836.61	832.35	2.36	1.91	35.82	16.9	311.55	973.49	2.51	1.18	4.26	4.26
Yellowstone County	B11	RM 306.16	12673.7	20-yr	2186.06	836.41	832.41	2.3	1.87	32.6	15.31	305.05	953.52	2.62	1.22	4	4
Yellowstone County	B11	RM 306.11	12592.39	20-yr	2186.06	836.29	832.17	2.34	1.9	43.33	19.51	273.57	923.93	2.79	1.24	4.13	4.13
Yellowstone County	B11	RM 306.03	12457.47	20-yr	2186.06	836.15	831.25	2.07	1.7	28.02	15.79	363.76	990.68	2.33	1.3	4.9	4.9

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	20-yr	2186.06	835.92	831.25	2.24	1.96	35.54	22.35	351.59	818.96	2.18	1.36	4.67	4.67
Yellowstone County	B11	RM 305.84	12159.82	20-yr	2186.06	835.69	831.1	2.33	2.02	35.48	20.18	256.99	700.91	2.75	1.55	4.6	4.6
Yellowstone County	B11	RM 305.74	11989.73	20-yr	2186.06	835.42	830.64	2.52	2.05	44.85	18.08	194.67	761.12	3.53	1.4	4.78	4.78
Yellowstone County	B11	RM 305.67	11883.31	20-yr	2186.06	835.23	830.43	2.81	2.1	47.46	16.84	161.46	829.96	3.61	1.26	4.8	4.8
Yellowstone County	B11	RM 305.60	11764.11	20-yr	2186.06	835.28	830.18	1.59	1.43	14.5	7.7	165.44	998.12	2.97	1.55	5.1	5.1
Yellowstone County	B11	RM 305.52	11651.48	20-yr	2186.06	835.1	830.18	2.34	1.71	31.55	13.64	151.63	985.32	3.06	1.3	4.92	4.92
Yellowstone County	B11	RM 305.44	11514.64	20-yr	2186.06	835.04	830.43	1.85	1.34	15.98	8.81	157.39	930.27	3.21	1.75	4.61	4.61
Yellowstone County	B11	RM 305.40	11441.77	20-yr	2186.06	834.92	830.61	1.93	1.67	15.58	9.95	239	826.91	2.49	1.59	4.3	4.3
Yellowstone County	B11	RM 305.32	11312.15	20-yr	2186.06	834.84	830.61	1.96	1.45	24.03	9.48	160.43	1258.62	3.08	1.2	4.23	4.23
Yellowstone County	B11	RM 305.24	11186.22	20-yr	2186.06	834.84	830.43	1.2	0.97	10.23	5.9	156.67	1367.33	2.92	1.66	4.41	4.41
Yellowstone County	B11	RM 305.06	10905.09	20-yr	2186.06	834.76	830.15	1.18	0.92	6.9	5.25	302.98	1238.12	2.56	1.94	4.61	4.61
Yellowstone County	B11	RM 304.71	10460.6	20-yr	2186.06	834.64	828.96	1.29	1.15	11.03	8.38	395.01	908.36	2.77	2.09	5.67	5.67
Yellowstone County	B11	RM 304.62	10332.33	20-yr	2186.06	834.61	829.09	1.19	1.05	8.12	5.28	206.47	883.85	4.11	2.64	5.53	5.53
Yellowstone County	B11	RM 304.50	10132.63	20-yr	2186.06	834.35	829.09	2.38	2.02	47.18	21.02	122.6	564.28	4.54	1.97	5.26	5.26
Yellowstone County	B11	RM 304.42	10011.11	20-yr	2186.06	834.26	829.18	2.05	1.83	34.66	16.47	151.91	622.71	4.27	2	5.09	5.09
Yellowstone County	B11	RM 304.34	9873.393	20-yr	2186.06	834.14	828.78	2.05	1.81	21.03	11.42	263.04	599.93	3.93	2.12	5.36	5.36
Yellowstone County	B11	RM 304.25	9735.197	20-yr	2186.06	833.96	828.39	2.4	1.98	38.87	17.97	199.81	563.55	4.32	1.97	5.58	5.58
Yellowstone County	B11	RM 304.18	9615.178	20-yr	2186.06	833.87	828.54	2.39	1.99	25.83	12.78	216.01	552.39	4.09	2	5.33	5.33
Yellowstone County	B11	RM 304.09	9478.266	20-yr	2186.06	833.73	828.6	2.54	2.12	40	18.49	182.68	682.6	4.51	2.06	5.13	5.13
Yellowstone County	B11	RM 304.00	9326.206	20-yr	2186.06	833.63	828.39	2.34	1.81	36.68	14.11	190.99	891.09	4.59	1.74	5.24	5.24
Yellowstone County	B11	RM 303.91	9177.479	20-yr	2186.06	833.58	828.14	1.99	1.41	29.21	12.67	215.99	1054.08	4.38	1.88	5.44	5.44
Yellowstone County	B11	RM 303.78	8973.508	20-yr	2186.06	833.31	827.93	2.5	1.71	38.22	11.37	162.02	925.9	4.77	1.38	5.38	5.38
Yellowstone County	B11	RM 303.65	8773.522	20-yr	2186.06	833.14	827.9	2.46	1.73	45.36	14.43	170.41	903.06	4.47	1.4	5.24	5.24
Yellowstone County	B11	RM 303.55	8608.195	20-yr	2186.06	833.03	827.65	2.22	1.67	22.16	8.7	248.24	951.13	3.65	1.41	5.38	5.38
Yellowstone County	B11	RM 303.43	8422.329	20-yr	2186.06	832.95	827.87	1.73	1.42	33.17	15.3	329.7	1047.42	3.21	1.47	5.09	5.09
Yellowstone County	B11	RM 303.34	8276.308	20-yr	2186.06	832.9	826.92	1.48	1.17	12.28	5.62	325.32	1059.52	3.88	1.76	5.98	5.98
Yellowstone County	B11	RM 303.26	8138.725	20-yr	2186.06	832.72	826.98	1.98	1.71	43.92	17.55	304.39	952.8	3.4	1.35	5.74	5.74
Yellowstone County	B11	RM 303.18	8018.762	20-yr	2186.06	832.54	826.22	2	1.74	48.46	21.12	308.24	876.85	3.32	1.43	6.32	6.32
Yellowstone County	B11	RM 303.09	7876.674	20-yr	2186.06	832.34	825.43	1.95	1.72	44.87	21.53	337.14	858.8	3.12	1.48	6.91	6.91
Yellowstone County	B11	RM 302.99	7711.603	20-yr	2186.06	832.18	826.22	1.67	1.43	29.65	17.06	336.71	804.6	3.32	1.9	5.96	5.96
Yellowstone County	B11	RM 302.89	7556.419	20-yr	2186.06	831.98	825.73	1.92	1.68	35.79	21.27	289.91	613.43	3.61	2.12	6.25	6.25
Yellowstone County	B11	RM 302.81	7423.411	20-yr	2186.06	831.77	825.86	2.24	1.94	43	21.83	221.32	543.86	4.14	2.07	5.91	5.91
Yellowstone County	B11	RM 302.70	7257.14	20-yr	2186.06	831.64	826.01	2.24	1.86	27.35	12.19	184.02	531.07	5.02	2.21	5.64	5.64
Yellowstone County	B12	RM 302.56	7050.708	20-yr	2186.06	831.09	825.25	3.22	3.22	57.22	57.22	167.54	461.24	4.13	4.13	5.85	5.85
Yellowstone County		RM 300.55	7034	20-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	20-yr	2186.06	831.01	825.95	3.15	3.14	53.65	51.61	168.23	240.35	4.4	4.23	5.07	5.07
Yellowstone County	B12	RM 302.49	6918.549	20-yr	2186.06	830.92	825.92	2.99	2.86	51.43	37.37	170.3	470.25	4.26	3.08	5	5
Yellowstone County	B12	RM 302.41	6794.522	20-yr	2186.06	830.85	825.64	2.83	2.49	35.46	20.43	161.6	574.99	4.17	2.38	5.2	5.2
Yellowstone County	B12	RM 302.34	6674.634	20-yr	2186.06	830.74	825.76	2.63	2.26	49.47	28.94	213.74	679	3.51	2.04	4.98	4.98
Yellowstone County	B12	RM 302.22	6485.378	20-yr	2186.06	830.65	825.76	1.96	1.65	25.17	16.61	235.89	807.76	3.3	2.16	4.89	4.89
Yellowstone County	B12	RM 302.14	6360.047	20-yr	2186.06	830.41	825.76	2.59	1.97	43.33	18.42	178.16	733.85	3.6	1.51	4.65	4.65
Yellowstone County	B12	RM 302.08	6267.13	20-yr	2186.06	830.33	825.79	2.36	1.97	24.92	13.04	265.5	705.79	3.02	1.57	4.54	4.54
Yellowstone County	B12	RM 301.98	6100.949	20-yr	2186.06	830.27	825.34	1.92	1.63	25.4	12.07	257.2	778.49	3.67	1.73	4.93	4.93
Yellowstone County	B12	RM 301.88	5944.005	20-yr	2186.06	830.17	824.7	1.87	1.54	21.7	12.14	307.5	784.45	3.26	1.81	5.47	5.47
Yellowstone County	B12	RM 301.79	5801.18	20-yr	2186.06	830.1	824.36	1.72	1.49	14.16	9.89	369.92	696.1	3.03	2.1	5.74	5.74
Yellowstone County	B12	RM 301.72	5685.105	20-yr	2186.06	830.03	824.85	1.79	1.54	20.35	13.07	328.47	701.55	3.17	2.03	5.18	5.18
Yellowstone County	B12	RM 301.65	5569.191	20-yr	2186.06	829.91	824.61	2	1.7	27.94	17.05	311.48	709.4	2.99	1.81	5.3	5.3
Yellowstone County	B12	RM 301.59	5465.51	20-yr	2186.06	829.79	824.42	2.05	1.82	31.44	18.77	318.53	705.43	2.87	1.7	5.36	5.36
Yellowstone County	B12	RM 301.53	5366.723	20-yr	2186.06	829.69	824.12	1.85	1.72	35.33	23.69	363.88	694.35	2.75	1.83	5.57	5.57
Yellowstone County	B12	RM 301.47	5270.902	20-yr	2186.06	829.57	824.12	1.88	1.72	34.96	22.75	352.93	692.33	2.84	1.83	5.45	5.45
Yellowstone County	B12	RM 301.39	5140.04	20-yr	2186.06	829.51	824.36	1.49	1.32	19.65	13.67	345.85	723.58	3.32	2.3	5.14	5.14
Yellowstone County	B12	RM 301.33	5044.575	20-yr	2186.06	829.42	824.12	1.69	1.48	18.85	10.6	330.8	762.31	3.47	1.94	5.3	5.3
Yellowstone County	B12	RM 301.24	4906.408	20-yr	2186.06	829.3	823.87	1.87	1.61	20.72	11.89	313.13	714.88	3.34	1.91	5.43	5.43
Yellowstone County	B12	RM 301.18	4802.631	20-yr	2186.06	829.19	823.17	2.07	1.78	26.54	15.94	313.31	708.03	2.91	1.73	6.02	6.02
Yellowstone County	B12	RM 301.12	4698.913	20-yr	2186.06	829.05	823.81	2.18	1.96	28.73	17.79	308.64	660.82	3.11	1.91	5.24	5.24
Yellowstone County	B12	RM 301.07	4611.142	20-yr	2186.06	829	824	2.07	1.82	24.6	13.77	285.21	620.09	3.52	1.95	5	5
Yellowstone County	B12	RM 301.02	4531.484	20-yr	2186.06	828.92	823.81	2.18	1.91	21.02	11.59	260.77	575.73	3.63	1.99	5.1	5.1
Yellowstone County	B12	RM 300.97	4453.011	20-yr	2186.06	828.73	823.9	2.7	2.33	31.59	16.09	196.12	483.39	3.84	1.94	4.83	4.83
Yellowstone County	B12	RM 300.89	4332.618	20-yr	2186.06	828.59	823.66	2.75	2.45	50.25	28.8	198.89	434.38	3.59	2.05	4.93	4.93
Yellowstone County	B12	RM 300.83	4232.362	20-yr	2186.06	828.4	823.78	2.94	2.53	54.6	31.41	175.01	430.32	3.52	2.01	4.62	4.62
Yellowstone County	B12	RM 300.77	4151.049	20-yr	2186.06	828.31	823.75	2.72	2.42	53.45	34.39	175.83	385.02	3.69	2.35	4.55	4.55

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	20-yr	2186.06	828.22	823.63	2.32	1.9	25.89	14.39	205.84	601.42	3.86	2.13	4.59	4.59
Yellowstone County	B12	RM 300.55	3793.957	20-yr	2186.06	828.1	822.93	1.97	1.62	28.01	16.77	263.47	702.59	3.26	1.94	5.17	5.17
Yellowstone County	B12	RM 300.45	3633.035	20-yr	2186.06	827.95	822.53	1.59	1.55	31.8	22.4	335.99	725.74	2.78	1.95	5.42	5.42
Yellowstone County	B12	RM 300.35	3461.833	20-yr	2186.06	827.69	822.66	2.1	1.64	18.67	12.42	389.33	821.51	2.45	1.63	5.03	5.03
Yellowstone County	B12	RM 300.24	3286.175	20-yr	2186.06	827.48	822.47	2	1.72	49.55	35.02	421.27	776.31	2.32	1.64	5.01	5.01
Yellowstone County	B12	RM 300.15	3141.724	20-yr	2186.06	827.18	822.47	1.9	1.73	45.17	34.88	481.67	727.47	2.25	1.73	4.71	4.71
Yellowstone County	B12	RM 300.10	3054.752	20-yr	2186.06	827.06	822.35	2.01	1.72	15.37	12.53	462.66	735	2.12	1.73	4.71	4.71
Yellowstone County	B12	RM 300.00	2887.728	20-yr	2186.06	826.88	821.22	1.87	1.77	46.28	38.42	465.11	663.57	2.25	1.87	5.66	5.66
Yellowstone County	B12	RM 299.91	2736.431	20-yr	2186.06	826.71	821.5	1.83	1.7	21.84	14.09	350.2	779.79	2.66	1.71	5.21	5.21
Yellowstone County	B12	RM 299.83	2614.069	20-yr	2186.06	826.53	821.41	1.87	1.91	34.04	23.97	388.69	740.15	2.21	1.55	5.13	5.13
Yellowstone County	B12	RM 299.72	2484.158	20-yr	2186.06	826.36	820.89	1.92	1.76	31.68	16.9	415.31	872.01	2.69	1.42	5.47	5.47
Yellowstone County	B12	RM 299.59	2312.328	20-yr	2186.06	826.09	821.13	2.46	1.85	32.86	15.21	220.65	850.27	3.24	1.48	4.96	4.96
Yellowstone County	B12	RM 299.48	2160.343	20-yr	2186.06	825.84	821.13	2.98	1.97	39.9	14.84	138.95	798.33	3.81	1.39	4.71	4.71
Yellowstone County	B12	RM 299.38	1995.229	20-yr	2186.06	825.73	821.13	2.45	1.71	56.4	21.8	136.92	1001.52	3.69	1.4	4.6	4.6
Yellowstone County	B12	RM 299.31	1874.433	20-yr	2186.06	825.42	821.22	2.96	2.05	40.6	14.3	143.7	908.61	3.54	1.23	4.2	4.2
Yellowstone County	B12	RM 299.22	1738.666	20-yr	2186.06	825.25	821.16	3.01	1.89	50.93	15.62	129.04	1058.71	3.72	1.12	4.09	4.09
Yellowstone County	B12	RM 299.15	1613.992	20-yr	2186.06	825.22	820.95	2.29	1.3	29.17	11.38	154.73	1281.73	3.57	1.37	4.27	4.27
Yellowstone County	B12	RM 299.06	1473.748	20-yr	2186.06	825.17	820.64	2	1.17	26.56	9.56	116.53	1332.77	4	1.4	4.53	4.53
Yellowstone County	B12	RM 298.99	1360.532	20-yr	2186.06	825.1	820.46	1.98	1.27	30.48	10.48	102	1333.01	3.96	1.31	4.64	4.64
Yellowstone County	B12	RM 298.93	1269.876	20-yr	2186.06	825.03	820.46	1.88	1.26	30.87	11.03	108.82	1334.2	3.76	1.3	4.57	4.57
Yellowstone County	B12	RM 298.88	1195.725	20-yr	2186.06	824.96	820.43	1.96	1.26	30.53	11.32	119.05	1320.26	3.66	1.31	4.53	4.53
Yellowstone County	B12	RM 298.82	1096.849	20-yr	2186.06	824.76	820.58	2.58	1.48	35.39	14.01	154.96	1234.89	3.07	1.19	4.17	4.17
Yellowstone County	B12	RM 298.77	1018.392	20-yr	2186.06	824.68	820.4	2.3	1.42	31.77	13.15	184.49	1248.96	3.03	1.24	4.28	4.28
Yellowstone County	B12	RM 298.67	854.844	20-yr	2186.06	824.6	819.39	2.05	1.39	18.26	10.04	244.95	1197.71	2.42	1.31	5.2	5.2
Yellowstone County	B12	RM 298.59	724.135	20-yr	2186.06	824.51	819.55	1.72	1.42	21.34	12.04	273.43	1202.65	2.3	1.28	4.96	4.96
Yellowstone County	B12	RM 298.49	579.164	20-yr	2186.06	824.4	819.27	1.88	1.29	16.59	7.91	214.03	1217.49	2.96	1.39	5.13	5.13
Yellowstone County	B12	RM 298.42	469.573	20-yr	2186.06	824.32	819.27	1.96	1.3	27.6	11.28	176.57	1242.29	3.37	1.35	5.04	5.04
Yellowstone County	B12	RM 298.35	368.049	20-yr	2186.06	824.17	819.97	2.34	1.43	30.41	10.23	147.33	1190.9	3.87	1.28	4.19	4.19
Yellowstone County	B12	RM 298.30	290.003	20-yr	2186.06	824.15	819.82	2	1.23	18.95	8.86	197.73	1148.45	3.34	1.54	4.33	4.33
Yellowstone County	B12	RM 298.26	211.35	20-yr	2186.06	824.08	819.82	2.01	1.39	24.67	12.22	220.28	1074.76	2.98	1.46	4.26	4.26
Yellowstone County	B12	RM 298.19	83.499	20-yr	2186.06	823.93	819.49	2.28	1.63	24.09	12.21	185.98	903.34	2.97	1.49	4.45	4.45

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	20-yr	2234.2	823.79	820.43	1.75	1.33	16.35	7.6	197.15	1402.99	3.07	1.41	3.36	3.36
Treasure County	C1	RM 297.89	61639	20-yr	2234.2	823.62	820.07	1.69	1.43	16	11.78	362.24	890.87	2.46	1.8	3.56	3.56
Treasure County	C1	RM 297.76	61392	20-yr	2234.2	823.45	819.93	1.77	1.56	20.21	15.53	331	747.37	2.53	1.94	3.52	3.52
Treasure County	C1	RM 297.62	61179	20-yr	2234.2	823.37	819.69	1.51	1.28	11.83	8.14	290.46	1229.89	2.75	1.88	3.68	3.68
Treasure County	C1	RM 297.5	60985	20-yr	2234.2	823.17	819.39	2.28	1.55	26.44	10.7	159.01	1303.72	3.48	1.39	3.77	3.77
Treasure County	C1	RM 297.36	60767	20-yr	2234.2	823.01	819.14	2.17	1.5	24.32	10.46	169.82	1134.88	3.32	1.42	3.87	3.87
Treasure County	C1	RM 297.22	60535	20-yr	2234.2	822.88	819	1.96	1.44	19.73	8.61	149.14	1078.32	3.39	1.46	3.89	3.89
Treasure County	C1	RM 297.08	60314	20-yr	2234.2	822.75	818.76	1.96	1.35	19.52	8.63	194.31	1284.98	3.51	1.53	3.99	3.99
Treasure County	C1	RM 296.94	60093	20-yr	2234.2	822.6	818.42	2.09	1.42	22.23	9.94	177.08	1403.45	3.48	1.54	4.18	4.18
Treasure County	C1	RM 296.79	59847	20-yr	2234.2	822.53	817.97	1.51	1.24	11.66	7.15	246.81	1099.24	3.38	2.06	4.56	4.56
Treasure County	C1	RM 296.64	59608	20-yr	2234.2	822.45	817.9	1.61	1.25	12.96	7.44	177.49	1068.12	3.6	2.04	4.55	4.55
Treasure County	C1	RM 296.51	59386	20-yr	2234.2	822.41	817.8	1.27	1.11	8.21	5.5	477.13	1046.33	3.48	2.32	4.6	4.6
Treasure County	C1	RM 296.33	59113	20-yr	2234.2	822.31	817.52	1.47	1.22	10.29	6.16	335.57	981.74	4.23	2.52	4.79	4.79
Treasure County	C1	RM 296.16	58839	20-yr	2234.2	821.06	817.46	4.69	4.06	113.91	53.6	137.21	374.59	3.36	1.56	3.6	3.6
Treasure County	C1	RM 296.01	58583	20-yr	2234.2	821.07	817.45	2.68	2.42	38.12	21.6	259.71	625.04	3.14	1.77	3.61	3.61
Treasure County	C1	RM 295.83	58296	20-yr	2234.2	820.9	817.4	1.83	1.83	16.4	16.1	616.53	637.02	1.97	1.94	3.51	3.51
Treasure County	C1	RM 295.66	58032	20-yr	2234.2	820.58	817.27	2.14	2.14	20.73	20.73	549.93	549.93	1.9	1.9	3.31	3.31
Treasure County	C1	RM 295.52	57800	20-yr	2234.2	820.49	816.19	1.52	1.52	11.36	11.36	637.95	637.95	2.3	2.3	4.3	4.3
Treasure County	C1	RM 295.31	57474	20-yr	2234.2	820.38	815.61	1.36	1.3	8.66	7.64	554.61	691.38	2.83	2.49	4.77	4.77
Treasure County	C1	RM 295.13	57174	20-yr	2234.2	820.22	815.57	1.68	1.39	15.46	7.88	360.88	948.47	3.33	1.69	4.64	4.64
Treasure County	C1	RM 294.94	56877	20-yr	2234.2	819.76	815.46	2.83	2.21	39.08	14.7	189.73	740.84	3.67	1.37	4.3	4.3
Treasure County	C1	RM 294.76	56587	20-yr	2234.2	819.53	815.45	2.44	2.02	29.38	11.23	256.17	900.57	3.28	1.25	4.07	4.07
Treasure County	C1	RM 294.55	56261	20-yr	2234.2	819.29	815.36	2.34	1.83	27.88	11.58	194.71	860.05	3.49	1.43	3.93	3.93
Treasure County	C1	RM 294.38	55980	20-yr	2234.2	819.11	815.07	2.07	1.73	22.88	10.5	227.09	962.8	2.99	1.36	4.05	4.05
Treasure County	C1	RM 294.21	55714	20-yr	2234.2	818.83	814.88	2.45	1.77	30.77	8.35	200.81	1379.7	3.45	0.93	3.95	3.95
Treasure County	C1	RM 294.02	55401	20-yr	2234.2	818.61	814.59	2.24	1.66	24.05	7.83	231.94	1450.53	2.91	0.94	4.02	4.02
Treasure County	C1	RM 293.83	55100	20-yr	2234.2	818.44	814.3	1.96	1.41	17.89	6.33	274.8	1640.17	2.77	0.97	4.13	4.13
Treasure County	C1	RM 293.63	54777	20-yr	2234.2	818.29	813.55	1.71	1.24	13.48	3.64	327.09	1798.8	3.77	1.01	4.75	4.75
Treasure County	C1	RM 293.43	54432	20-yr	2234.2	817.99	813.29	2.42	1.38	28.4	6.43	202.13	1824.28	4.01	0.9	4.71	4.71
Treasure County	C1	RM 293.26	54152	20-yr	2234.2	817.83	813.24	2.3	1.18	25.01	8.14	247.33	1891.58	3.1	1	4.59	4.59
Treasure County	C1	RM 293.07	53839	20-yr	2234.2	817.62	813.24	2.18	1.05	25.22	8.8	241.79	2054.93	3.1	1.07	4.38	4.38
Treasure County	C1	RM 292.83	53458	20-yr	2234.2	817.53	813.1	1.37	0.86	10.02	3.98	380.97	2268.25	3.12	1.24	4.43	4.43
Treasure County	C1	RM 292.6	53082	20-yr	2234.2	817.31	812.6	1.94	1.32	18.24	4.79	238.91	1623.28	4.04	1.06	4.71	4.71
Treasure County	C2	RM 292.32	52612	20-yr	2234.2	817.12	811.76	2.03	1.21	18.41	5.1	207.17	1644.14	4.12	1.13	5.36	5.36
Treasure County	C2	RM 292.09	52256	20-yr	2234.2	816.98	811.6	2.09	1.37	19.43	5.67	174.28	1312.27	4.34	1.24	5.38	5.38
Treasure County	C2	RM 291.9	51956	20-yr	2234.2	816.85	811.55	1.92	1.31	18.54	6.85	240.72	1278.01	3.66	1.33	5.3	5.3
Treasure County	C2	RM 291.71	51639	20-yr	2234.2	816.27	811.5	2.94	2.4	65.71	40.75	243.28	550.89	2.75	1.69	4.77	4.77
Treasure County	C2	RM 291.52	51333	20-yr	2234.2	816.02	811.46	2.3	1.66	25.69	10.99	214.15	820.69	4	1.7	4.56	4.56
Treasure County	C2	RM 291.33	51042	20-yr	2234.2	815.77	811.46	2.41	1.96	29.53	13.44	232.02	723.03	3.49	1.57	4.32	4.32
Treasure County	C2	RM 291.15	50747	20-yr	2234.2	815.72	811.4	1.62	1.38	12.8	6.53	297.47	828.13	3.94	2	4.32	4.32
Treasure County	C2	RM 290.94	50437	20-yr	2234.2	815.56	811.31	1.9	1.36	18.64	10.04	259.99	909.75	3.38	1.81	4.25	4.25
Treasure County	C2	RM 290.78	50179	20-yr	2234.2	815.44	810.97	1.62	1.26	13.39	8.81	393.13	935.37	2.88	1.89	4.47	4.47
Treasure County	C2	RM 290.6	49891	20-yr	2234.2	815.35	810.54	1.34	1.22	9.15	7.19	473.72	678.22	3.44	2.71	4.82	4.82
Treasure County	C2	RM 290.43	49607	20-yr	2234.2	815.13	810.13	2.04	1.72	20.58	12.28	273.61	672.54	3.5	2.07	5	5
Treasure County	C2	RM 290.23	49287	20-yr	2234.2	814.54	810.07	3.19	2.5	48.93	18.48	153.74	576.56	4.17	1.55	4.47	4.47
Treasure County	C2	RM 290.04	48976	20-yr	2234.2	814.44	810.04	2.24	1.83	24.03	11.4	209.93	710.77	4.22	1.98	4.39	4.39
Treasure County	C2	RM 289.85	48667	20-yr	2234.2	814.32	809.87	1.74	1.49	15.72	9.44	359.02	1061.8	3.14	1.88	4.45	4.45
Treasure County	C2	RM 289.67	48372	20-yr	2234.2	814.14	809.87	1.78	1.52	16.15	6.83	397.84	1354.65	3.02	1.27	4.27	4.27
Treasure County	C2	RM 289.46	48067	20-yr	2234.2	814.05	809.56	1.48	1.18	10.19	5.01	411.53	1174.75	3.3	1.61	4.49	4.49
Treasure County	C2	RM 289.27	47769	20-yr	2234.2	813.82	809.32	2.01	1.6	21.13	9.28	320.68	992.04	3.23	1.41	4.5	4.5
Treasure County	C2	RM 289.11	47515	20-yr	2234.2	813.66	809	2.08	1.55	20.64	7.47	228.59	938.06	4.29	1.54	4.65	4.65
Treasure County	C2	RM 288.94	47232	20-yr	2234.2	813.42	808.59	2.42	1.69	27.48	8.85	186.28	921.37	4.53	1.43	4.83	4.83
Treasure County	C2	RM 288.76	46939	20-yr	2234.2	813.29	808.33	2.16	1.36	22.43	8.37	217.33	1095.57	4.13	1.52	4.96	4.96
Treasure County	C2	RM 288.55	46613	20-yr	2234.2	812.89	808.24	2.7	2.01	37.5	12.09	223.96	1017.12	3.44	1.09	4.65	4.65
Treasure County	C2	RM 288.36	46302	20-yr	2234.2	812.8	807.91	2	1.47	18.43	5.53	219.5	1089.39	4.72	1.4	4.89	4.89
Treasure County	C2	RM 288.18	46008	20-yr	2234.2	812.63	807.77	2.15	1.57	22.84	7.24	243.98	1596.47	3.83	1.2	4.87	4.87
Treasure County	C2	RM 287.99	45713	20-yr	2234.2	812.5	807.58	1.98	1.43	18.15	6.54	239.05	1792.15	3.86	1.38	4.92	4.92
Treasure County	C2	RM 287.81	45421	20-yr	2234.2	812.39	807.25	1.83	1.41	16.14	7.1	229.88	896.27	4.06	1.77	5.14	5.14
Treasure County	C2	RM 287.62	45112	20-yr	2234.2	812.02	807.19	2.83	1.88	37.89	11.14	137.55	925.31	4.46	1.28	4.83	4.83
Treasure County	C2	RM 287.42	44789	20-yr	2234.2	811.72	807.15	2.83	1.93	38.63	12.58	159.26	885.81	4.15	1.33	4.57	4.57

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	20-yr	2234.2	811.66	806.81	1.69	1.49	15.24	9.74	420.05	784.18	3	1.91	4.84	4.84
Treasure County	C2	RM 287.06	44222	20-yr	2234.2	811.55	806.77	1.45	1.34	11.76	7.43	514.55	919.36	2.87	1.81	4.78	4.78
Treasure County	C2	RM 286.9	43958	20-yr	2234.2	811.38	806.52	1.85	1.53	16.42	5.6	277.39	1052.96	4.11	1.39	4.86	4.86
Treasure County	C2	RM 286.72	43671	20-yr	2234.2	810.98	802.22	2.86	2.18	34.78	10.66	122.22	1311.57	6.11	1.82	8.76	8.76
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	20-yr	2234.2	810.89	802.22	3.01	2.58	38.87	12.52	122.08	1131.86	5.97	1.87	8.67	8.67
Treasure County	C3	RM 286.58	43448	20-yr	2234.2	810.78	806.32	2.83	2.19	38.42	19.58	175.62	1266.21	4.2	2.12	4.46	4.46
Treasure County	C3	RM 286.51	43344	20-yr	2234.2	810.73	806.32	2.57	2.29	32.03	25.41	204.67	1324.65	4.06	3.21	4.41	4.41
Treasure County	C3	RM 286.46	43257	20-yr	2234.2	810.66	804.36	2.53	2.27	30.43	24.94	195.75	1067.37	4.31	3.52	6.3	6.3
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	20-yr	2234.2	810.58	804.36	2.58	2.34	32.05	25.84	202.06	1214.02	4.18	3.37	6.22	6.22
Treasure County	C3	RM 286.37	43117	20-yr	2234.2	810.51	806.17	2.43	2.21	30.04	24.75	307.28	1457.74	3.49	2.87	4.35	4.35
Treasure County	C3	RM 286.26	42931	20-yr	2234.2	810.21	806.17	2.73	2.2	68.42	34.05	218.02	1574.46	3.15	1.56	4.04	4.04
Treasure County	C3	RM 286.06	42624	20-yr	2234.2	810.01	806.08	1.87	1.37	18.2	8.01	354.48	1905.56	3.07	1.34	3.93	3.93
Treasure County	C3	RM 285.81	42213	20-yr	2234.2	809.78	805.78	1.92	1.16	16.99	7.48	220.44	2703.26	2.48	1.08	4	4
Treasure County	C3	RM 285.56	41812	20-yr	2234.2	809.6	805.34	1.7	0.99	13.95	3.69	236.86	2984.17	4.01	1.05	4.26	4.26
Treasure County	C3	RM 285.23	41280	20-yr	2234.2	809.37	805.17	1.97	0.95	20.32	5.71	152.4	3125.81	3.28	0.9	4.2	4.2
Treasure County	C3	RM 284.69	40395	20-yr	2234.2	808.84	804.85	2.48	1.54	34.36	8.9	159.53	2119.37	2.69	0.68	3.99	3.99
Treasure County	C3	RM 284.26	39705	20-yr	2234.2	808.47	804.6	1.77	1.42	17.07	6.17	348.37	1519.98	2.89	1.04	3.87	3.87
Treasure County	C3	RM 283.96	39199	20-yr	2234.2	808.17	804.3	1.98	1.32	20.81	7.18	244.22	2110.16	3.09	1.05	3.87	3.87
Treasure County	C3	RM 283.69	38766	20-yr	2234.2	807.98	803.9	1.87	1.11	17.37	4.55	188.15	2422.11	3.73	0.96	4.08	4.08
Treasure County	C3	RM 283.35	38229	20-yr	2234.2	807.81	803.42	1.59	0.94	12.87	4.75	282.13	2230.26	3.25	1.18	4.39	4.39
Treasure County	C3	RM 283.05	37749	20-yr	2234.2	807.46	803.32	2.29	1.27	27.08	7	193.64	2205.14	3.36	0.86	4.14	4.14
Treasure County	C3	RM 282.78	37306	20-yr	2234.2	807.21	803.11	1.92	1.1	17.56	5.78	256.97	2310.16	2.94	0.96	4.1	4.1
Treasure County	C3	RM 282.56	36942	20-yr	2234.2	807.1	802.83	1.42	0.84	10.59	3.68	281.02	2817.01	2.9	1	4.27	4.27
Treasure County	C3	RM 282.31	36546	20-yr	2234.2	806.96	802.74	1.6	0.77	12.81	3.47	187.32	2978.45	3.8	1	4.23	4.23
Treasure County	C3	RM 282.09	36195	20-yr	2234.2	806.75	802.56	2.22	1.1	26.08	8.2	181.69	2618.61	3.14	0.97	4.18	4.18
Treasure County	C4	RM 281.73	35619	20-yr	2234.2	806.46	801.74	1.73	1.24	13.94	5.25	426.66	2360.74	2.59	0.97	4.72	4.72
Treasure County	C4	RM 281.35	35005	20-yr	2234.2	806.28	801.53	1.47	0.97	10.37	2.89	316.27	2431.44	4.23	1.17	4.75	4.75
Treasure County	C4	RM 281.03	34521	20-yr	2234.2	806.03	801.19	2.06	1.17	20.73	5.74	226.27	2237.84	4	1.09	4.84	4.84
Treasure County	C4	RM 280.73	34051	20-yr	2234.2	805.89	800.82	1.38	1.01	8.55	4.79	693.36	2407.06	2.05	1.15	5.08	5.08
Treasure County	C4	RM 280.5	33687	20-yr	2234.2	805.78	800.66	1.23	0.93	7.51	4.52	756.46	2297.28	2.11	1.26	5.11	5.11
Treasure County	C4	RM 280.27	33304	20-yr	2234.2	805.68	800.31	1.07	0.84	6.46	4.1	759.73	2176.19	2.39	1.51	5.36	5.36
Treasure County	C4	RM 279.95	32800	20-yr	2234.2	805.56	800.08	1.13	0.78	7.29	3.69	503.81	2304.8	3.26	1.64	5.47	5.47
Treasure County	C4	RM 279.6	32231	20-yr	2234.2	805.2	799.98	2.13	1.29	20.51	9.52	304.47	1302.92	2.93	1.35	5.22	5.22
Treasure County	C4	RM 279.33	31805	20-yr	2234.2	804.63	799.98	2.78	2.07	38.22	16.53	244.79	836.22	3.1	1.32	4.65	4.65
Treasure County	C4	RM 279.14	31495	20-yr	2234.2	804.48	799.96	2.17	1.56	22.04	8.69	237.31	1089.01	3.73	1.46	4.52	4.52
Treasure County	C4	RM 278.96	31209	20-yr	2234.2	804.42	799.87	1.56	1.31	12.41	5.47	367.55	1686.33	3.62	1.59	4.55	4.55
Treasure County	C4	RM 278.76	30894	20-yr	2234.2	804.28	799.6	1.65	1.4	13.64	6.2	423.04	1694	2.92	1.32	4.68	4.68
Treasure County	C4	RM 278.56	30571	20-yr	2234.2	804.07	799.53	1.88	1.42	18.61	7.57	336.63	1600.96	3.15	1.27	4.55	4.55
Treasure County	C4	RM 278.37	30259	20-yr	2234.2	803.98	799.26	1.49	1.21	10.96	3.92	369.33	1827.43	3.86	1.37	4.72	4.72
Treasure County	C5	RM 278.16	29915	20-yr	2234.2	803.63	798.81	2.49	1.9	29.71	7.46	207.39	1360.71	4.1	1.02	4.81	4.81
Treasure County	C5	RM 277.99	29648	20-yr	2234.2	803.3	798.77	2.82	2.26	38.82	11.64	189.71	933.26	4.01	1.19	4.53	4.53
Treasure County	C5	RM 277.8	29336	20-yr	2234.2	803.08	798.74	2.51	2.06	30.72	10.43	212.34	839.45	4.02	1.35	4.34	4.34
Treasure County	C5	RM 277.61	29041	20-yr	2234.2	802.86	798.72	2.49	2	30.16	10.38	215.89	956.92	3.98	1.36	4.14	4.14
Treasure County	C5	RM 277.43	28747	20-yr	2234.2	802.72	798.48	2.02	1.67	20.78	8.45	306.39	1027.3	3.46	1.39	4.24	4.24
Treasure County	C5	RM 277.22	28415	20-yr	2234.2	802.45	798.47	2.12	2	20.36	11.02	424.16	878.36	2.47	1.33	3.99	3.99
Treasure County	C5	RM 277.04	28123	20-yr	2234.2	802.26	798.4	1.92	1.72	15.59	9.72	459.83	856.03	2.48	1.54	3.86	3.86
Treasure County	C5	RM 276.81	27791	20-yr	2234.2	802.17	797.8	1.53	1.27	11.6	5.27	376.57	1059.06	3.7	1.67	4.37	4.37
Treasure County	C5	RM 276.63	27499	20-yr	2234.2	801.91	797.4	2.24	1.61	24.82	8.67	234.28	1080.44	3.75	1.3	4.51	4.51
Treasure County	C5	RM 276.4	27133	20-yr	2234.2	801.69	797.1	2.18	1.55	23.01	8.38	239.33	1051.46	3.83	1.38	4.59	4.59
Treasure County	C5	RM 276.19	26801	20-yr	2234.2	801.51	796.87	2.16	1.61	22.85	9.68	186.28	845.81	3.98	1.66	4.65	4.65
Treasure County	C5	RM 276.01	26502	20-yr	2234.2	801.31	796.74	2.34	1.71	26.1	7.46	158.01	1106.17	4.25	1.19	4.57	4.57
Treasure County	C5	RM 275.81	26193	20-yr	2234.2	801.2	796.61	1.97	1.47	18.87	5.37	179.56	1369.49	4.04	1.14	4.59	4.59
Treasure County	C5	RM 275.63	25896	20-yr	2234.2	801.03	796.49	2.23	1.46	23.66	6.1	134.65	1430.87	4.29	1.08	4.54	4.54
Treasure County	C5	RM 275.45	25606	20-yr	2234.2	800.96	796.37	1.73	1.34	14.71	5	153.92	1298.43	3.88	1.3	4.59	4.59
Treasure County	C5	RM 275.26	25299	20-yr	2234.2	800.75	796.16	1.94	1.6	17.74	6.83	251.91	871.22	4.35	1.66	4.59	4.59
Treasure County	C5	RM 275.09	25033	20-yr	2234.2	800.47	796.13	2.51	2.07	30.31	12.61	199.32	741.73	4.2	1.73	4.34	4.34
Treasure County	C6	RM 274.89	24716	20-yr	2234.2	800.3	796.04	2.22	1.53	24.16	9.89	228.02	1639.47	3.87	1.57	4.27	4.27
Treasure County	C6	RM 274.72	24440	20-yr	2234.2	799.69	796.04	3.26	2.59	56.76	25.49	214.5	1345.24	3	1.34	3.65	3.65

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	20-yr	2234.2	799.57	795.79	1.98	1.43	23.13	9.05	294.37	2528.24	2.65	1.03	3.78	3.78
Treasure County	C6	RM 274.38	23892	20-yr	2234.2	799.4	795.55	1.87	1.26	18.44	5.68	227.56	2767.87	3.18	0.97	3.85	3.85
Treasure County	C6	RM 274.13	23491	20-yr	2234.2	799.19	795.16	1.97	1.31	21.3	7.8	223.94	2553.96	2.77	1	4.04	4.04
Treasure County	C6	RM 273.83	22999	20-yr	2234.2	799.01	794.46	1.75	1.08	15.34	3.66	184.04	3229.59	3.75	0.88	4.55	4.55
Treasure County	C6	RM 273.58	22595	20-yr	2234.2	798.73	794.04	2.32	1.25	24.89	5.13	176.93	3151.43	3.48	0.7	4.69	4.69
Treasure County	C6	RM 273.35	22238	20-yr	2234.2	798.52	794.04	2.02	1.02	19.49	6.02	230.93	3542.77	2.72	0.83	4.49	4.49
Treasure County	C6	RM 273.15	21916	20-yr	2234.2	798.39	793.92	1.66	0.9	13.92	4.96	266.7	3607.2	2.74	0.97	4.47	4.47
Treasure County	C6	RM 272.83	21397	20-yr	2234.2	798.25	793.79	1.5	0.81	10.33	3.51	263.82	3702.96	3.18	1.07	4.46	4.46
Treasure County	C6	RM 272.5	20872	20-yr	2234.2	798	793.46	2.08	1.02	22.94	6.8	228.81	3738.29	2.82	0.82	4.54	4.54
Treasure County	C6	RM 272.19	20368	20-yr	2234.2	797.62	793.34	2.2	1.19	23.54	5.88	247.19	3414.49	3.29	0.81	4.29	4.29
Treasure County	C6	RM 271.91	19902	20-yr	2234.2	797.4	793.18	2.04	1.24	20.83	6.04	227.01	2873.67	3.67	1.05	4.22	4.22
Treasure County	C6	RM 271.68	19534	20-yr	2234.2	797.07	792.81	2.53	1.73	32.78	11.18	191.73	1891.48	3.43	1.16	4.26	4.26
Treasure County	C6	RM 271.41	19102	20-yr	2234.2	797.02	792.54	1.36	0.94	9.69	4.12	302.07	2690.62	3.15	1.33	4.48	4.48
Treasure County	C6	RM 271.06	18548	20-yr	2234.2	796.56	792.18	2.67	1.91	37.05	11.35	172.42	1523.24	3.3	1	4.39	4.39
Treasure County	C6	RM 270.64	17870	20-yr	2234.2	796.36	792.05	1.54	1.01	12.74	4.61	234.57	2304.58	3.03	1.08	4.31	4.31
Treasure County	C6	RM 270.05	16897	20-yr	2234.2	796.04	791.48	2	1.01	18.07	5.2	174.28	2428.77	3.43	0.97	4.57	4.57
Treasure County	C6	RM 269.75	16413	20-yr	2234.2	795.7	791.35	2.27	1.37	26.29	7.48	223.67	1884.02	3.46	0.97	4.35	4.35
Treasure County	C6	RM 269.47	15967	20-yr	2234.2	795.35	791.23	2.42	1.89	29.22	8.13	208.62	1655.45	3.69	1.02	4.11	4.11
Treasure County	C7	RM 269.27	15645	20-yr	2234.2	795.23	791.23	1.86	1.42	17.31	6.52	279.64	1932.9	3.41	1.27	4	4
Treasure County	C7	RM 269.06	15308	20-yr	2234.2	795.13	791.01	1.49	1.09	11.82	3.95	197.37	2471.57	3.12	1.03	4.11	4.11
Treasure County	C7	RM 268.83	14957	20-yr	2234.2	795.05	790.6	1.01	0.77	5.55	2.47	267.05	2562.93	2.87	1.26	4.45	4.45
Treasure County	C7	RM 268.55	14516	20-yr	2234.2	794.94	790.17	1.35	0.82	9	2.77	224.66	2770.78	3.83	1.16	4.77	4.77
Treasure County	C7	RM 268.2	13976	20-yr	2234.2	794.69	789.62	1.95	0.99	18.76	4.66	234.34	2884.53	3.88	0.95	5.07	5.07
Treasure County	C7	RM 267.87	13439	20-yr	2234.2	794.3	789.53	2.4	1.2	26.07	6.42	227.32	2513.23	3.55	0.86	4.77	4.77
Treasure County	C7	RM 267.53	12884	20-yr	2234.2	793.67	789.5	2.79	1.62	40	12.88	241.57	1533.39	2.86	0.91	4.17	4.17
Treasure County	C7	RM 267.14	12253	20-yr	2234.2	793.48	789.26	1.71	1.07	14.39	5.06	227.28	1835.71	3.3	1.14	4.23	4.23
Treasure County	C7	RM 266.8	11700	20-yr	2234.2	793.31	789.2	1.78	1.13	16.35	4.66	214.75	2094.01	3.35	0.94	4.11	4.11
Treasure County	C7	RM 266.41	11078	20-yr	2234.2	793.07	789.14	2.09	1.17	23.44	7.14	159.1	2126.46	3	0.9	3.93	3.93
Treasure County	C7	RM 266.11	10593	20-yr	2234.2	792.83	788.83	1.9	1.22	19.61	6.83	259.43	1854.71	2.87	0.99	4	4
Treasure County	C7	RM 265.92	10283	20-yr	2234.2	792.71	788.65	1.65	1.15	12.36	6.46	341.38	1612.15	2.33	1.21	4.06	4.06
Treasure County	C7	RM 265.68	9915	20-yr	2234.2	792.45	788.21	2.19	1.54	23.28	8.19	180	1032.34	4.04	1.4	4.24	4.24
Treasure County	C7	RM 265.52	9650	20-yr	2234.2	792.31	788.07	2.23	1.48	25.87	8.09	160.72	1483.09	3.33	1.03	4.24	4.24
Treasure County	C7	RM 265.34	9362	20-yr	2234.2	792.07	788.07	2.15	1.47	25.14	9.11	178.91	1476.17	2.87	1.03	4	4
Treasure County	C7	RM 265.16	9071	20-yr	2234.2	791.88	787.95	1.73	1.43	18.06	7.53	297.09	1506.07	2.5	1.03	3.93	3.93
Treasure County	C7	RM 264.98	8775	20-yr	2234.2	791.67	787.59	1.9	1.53	14.16	8.37	450.98	1551.16	1.6	0.94	4.08	4.08
Treasure County	C7	RM 264.81	8508	20-yr	2234.2	791.58	787.35	1.17	1.08	10.42	6.43	650.35	1767.8	1.92	1.18	4.23	4.23
Treasure County	C7	RM 264.64	8216	20-yr	2234.2	791.46	787.22	1.23	1.11	9.95	5.95	651.5	1767.53	1.91	1.14	4.23	4.23
Treasure County	C7	RM 264.39	7803	20-yr	2234.2	791.22	786.86	1.69	1.42	16.89	6.98	343.32	1468.27	2.61	1.07	4.36	4.36
Treasure County	C7	RM 264.15	7406	20-yr	2234.2	791.11	786.6	1.39	1.05	10.33	4.9	202.21	1642.8	2.76	1.29	4.51	4.51
Treasure County	C7	RM 263.97	7116	20-yr	2234.2	791	786.49	1.63	1.2	12.79	5.11	179.44	1146.61	4.12	1.62	4.51	4.51
Treasure County	C7	RM 263.79	6834	20-yr	2234.2	790.81	786.49	2.11	1.41	21.56	6.97	204.2	1593.04	3.15	1	4.32	4.32
Treasure County	C7	RM 263.6	6534	20-yr	2234.2	790.64	786.37	1.93	1.26	18.82	8.09	204.35	1245.65	3.55	1.51	4.27	4.27
Treasure County	C7	RM 263.39	6194	20-yr	2234.2	790.5	786.25	1.49	1.26	11.56	5.58	455.2	1442.74	2.97	1.43	4.25	4.25
Treasure County	C7	RM 263.19	5862	20-yr	2234.2	790.26	786	1.93	1.23	20.73	7.87	333.53	1803.07	2.68	1.01	4.25	4.25
Treasure County	C7	RM 262.95	5479	20-yr	2234.2	789.98	785.85	1.91	1.43	15.15	7	400.1	1307.08	2.6	1.19	4.13	4.13
Treasure County	C7	RM 262.78	5206	20-yr	2234.2	789.87	785.76	1.59	1.1	13.51	5.8	440.96	2024.35	2.35	1.01	4.11	4.11
Treasure County	C7	RM 262.58	4883	20-yr	2234.2	789.75	785.64	1.2	0.86	9.38	5.23	620.86	2099.51	2.4	1.34	4.11	4.11
Treasure County	C7	RM 262.42	4613	20-yr	2234.2	789.68	785.54	1.07	0.77	6.52	3.6	655.56	2184.79	2.49	1.37	4.14	4.14
Treasure County	C7	RM 262.24	4323	20-yr	2234.2	789.62	785.43	0.96	0.8	5.31	3.23	839.62	1971.85	2.63	1.6	4.19	4.19
Treasure County	C7	RM 261.95	3917	20-yr	2234.2	789.49	785.28	1.21	1	8.15	5.37	654.59	1269.6	2.71	1.78	4.21	4.21
Treasure County	C7	RM 261.7	3519	20-yr	2234.2	789.26	784.87	1.36	1.35	27.82	22.32	605.89	820.27	2.71	2.17	4.39	4.39
Treasure County	C7	RM 261.53	3256	20-yr	2234.2	788.9	784.51	1.53	1.46	34.96	31.17	623.93	777.91	2.27	2.02	4.39	4.39
Treasure County	C7	RM 261.35	2959	20-yr	2234.2	788.78	784.33	1.21	1.17	7.25	4.52	580.98	1010.48	3.16	1.96	4.45	4.45
Treasure County	C7	RM 261.2	2720	20-yr	2234.2	788.65	784.14	1.4	1.36	27.31	18.28	545.92	1010.15	2.9	1.94	4.51	4.51
Treasure County	C7	RM 261.03	2441	20-yr	2234.2	788.53	783.66	1.39	1.26	9.43	5	401.64	928.1	3.96	2.08	4.87	4.87
Treasure County	C7	RM 260.84	2142	20-yr	2234.2	788.41	783.41	1.61	1.36	12.81	5.98	341.22	939.86	3.96	1.84	5	5
Treasure County	C7	RM 260.66	1863	20-yr	2234.2	788.32	783.29	1.6	1.22	12.14	5.58	351.21	1116.6	3.69	1.68	5.03	5.03
Treasure County	C8	RM 259.9	634	20-yr	2234.2	787.18	782.46	3.26	2.49	50.94	20.49	151.91	543.26	4.24	1.68	4.73	4.73
Treasure County	C8	RM 259.72	347	20-yr	2234.2	786.93	782.45	2.89	2.23	40.54	16.99	179.3	591.86	4.08	1.69	4.48	4.48
Treasure County	C8	RM 259.55	68	20-yr	2234.2	786.87	782.2	1.95	1.95	16.38	16.34	399.72	400.5	2.86	2.86	4.67	4.67

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	20-yr	2234.2	786.87	782.19	2.31	2.08	24.35	19.2	221.77	323.45	4.23	3.33	4.68	4.68
Rosebud County	C8	RM 259.41	87598	20-yr	2234.2	786.65	781.96	2.41	2.37	29.95	21.37	209.38	299.44	4.42	3.15	4.69	4.69
Rosebud County	C8	RM 259.22	87292	20-yr	2234.2	786.53	781.55	2.09	1.82	20.51	16.05	233.09	357.35	4.4	3.43	4.98	4.98
Rosebud County	C8	RM 259.04	87004	20-yr	2234.2	786.34	781	2.23	1.98	26.7	13.86	210.07	505.68	4.45	2.28	5.34	5.34
Rosebud County	C8	RM 258.85	86696	20-yr	2234.2	786.16	780.9	2.17	1.89	20.43	11.49	288.74	621.6	3.4	1.9	5.26	5.26
Rosebud County	C8	RM 258.66	86399	20-yr	2234.2	785.95	780.78	2.34	1.92	24.99	7.72	183.46	780.89	4.92	1.49	5.17	5.17
Rosebud County	C8	RM 258.47	86098	20-yr	2234.2	785.76	780.65	2.42	1.93	27.68	10.2	202.57	803.56	4.05	1.47	5.11	5.11
Rosebud County	C8	RM 258.28	85798	20-yr	2234.2	785.6	780.53	2.2	1.64	22.64	10.66	222.43	775.59	3.76	1.76	5.07	5.07
Rosebud County	C8	RM 258.1	85498	20-yr	2234.2	785.39	780.14	2.32	1.81	24.8	10.6	180.25	776.45	4.75	2	5.25	5.25
Rosebud County	C8	RM 257.91	85200	20-yr	2234.2	785.23	780.14	2.23	1.75	24.9	11.27	224.43	989.6	3.69	1.65	5.09	5.09
Rosebud County	C8	RM 257.71	84875	20-yr	2234.2	784.98	780.14	2.35	1.7	28.86	13.26	219.86	918.07	3.26	1.48	4.84	4.84
Rosebud County	C8	RM 257.54	84597	20-yr	2234.2	784.8	780.17	2.18	1.5	22.49	8.93	209	1161.19	3.78	1.48	4.63	4.63
Rosebud County	C8	RM 257.36	84298	20-yr	2234.2	784.66	780.05	2.07	1.33	20.69	8.1	188.65	1166.86	3.68	1.44	4.61	4.61
Rosebud County	C8	RM 257.16	83984	20-yr	2234.2	784.62	780	1.34	0.99	8.4	3.45	305.45	1260.19	4.37	1.79	4.62	4.62
Rosebud County	C8	RM 256.87	83608	20-yr	2234.2	784.24	779.89	2.65	1.88	33.57	10.75	181.39	940.25	4	1.27	4.35	4.35
Rosebud County	C8	RM 256.65	83257	20-yr	2234.2	784.2	779.82	1.72	1.27	14.42	5.27	171.34	1203.17	4.05	1.46	4.38	4.38
Rosebud County	C8	RM 256.45	82941	20-yr	2234.2	784.01	779.67	1.96	1.51	18.5	7.19	222.18	934.16	4.18	1.61	4.34	4.34
Rosebud County	C8	RM 256.26	82630	20-yr	2234.2	783.81	779.58	1.83	1.44	30.71	21.31	369.93	821.46	2.82	1.95	4.23	4.23
Rosebud County	C8	RM 256.1	82375	20-yr	2234.2	783.67	779.42	1.52	1.52	10.54	10.51	579.22	587.86	2.54	2.53	4.25	4.25
Rosebud County	C8	RM 255.91	82077	20-yr	2234.2	783.6	779.09	1.26	1.24	7.14	5.49	591.1	955.55	2.99	2.29	4.51	4.51
Rosebud County	C8	RM 255.7	81747	20-yr	2234.2	783.39	778.73	1.87	1.58	16.8	6.83	306.33	926.18	3.77	1.52	4.66	4.66
Rosebud County	C8	RM 255.51	81446	20-yr	2234.2	783.21	778.49	2.03	1.61	20.46	9.2	269.19	830.17	3.76	1.68	4.72	4.72
Rosebud County	C8	RM 255.31	81125	20-yr	2234.2	783.04	778.36	1.96	1.53	23	9.79	242.95	817.17	4.22	1.79	4.68	4.68
Rosebud County	C8	RM 255.14	80856	20-yr	2234.2	782.82	778.24	2.27	1.79	24.32	9.48	210.87	741.69	4.36	1.68	4.58	4.58
Rosebud County	C8	RM 254.95	80554	20-yr	2234.2	782.6	778.12	2.38	1.92	26.93	10.6	205.86	696.97	4.29	1.67	4.48	4.48
Rosebud County	C8	RM 254.76	80251	20-yr	2234.2	782.44	778	2.25	1.79	24.2	9.58	218.15	744.48	4.27	1.68	4.44	4.44
Rosebud County	C8	RM 254.58	79960	20-yr	2234.2	782.27	777.88	2.21	1.91	23.32	8.31	229.98	782.05	4.26	1.51	4.39	4.39
Rosebud County	C8	RM 254.39	79658	20-yr	2234.2	782.2	777.41	1.76	1.45	14.84	6.01	296.93	959.43	4.12	1.66	4.79	4.79
Rosebud County	C8	RM 254.2	79359	20-yr	2234.2	781.95	777.39	2.22	1.92	24.7	10.46	269.75	756.19	3.64	1.54	4.56	4.56
Rosebud County	C8	RM 254.01	79052	20-yr	2234.2	781.76	776.82	2.25	1.87	23.11	7.85	209.61	767.96	4.62	1.56	4.94	4.94
Rosebud County	C9	RM 253.82	78779	20-yr	2234.2	781.59	776.24	2.29	1.8	28.61	9.96	246.32	991.48	3.72	1.28	5.35	5.35
Rosebud County	C9	RM 253.63	78478	20-yr	2234.2	781.21	776.12	2.56	1.8	64.91	21.03	179.34	1008.02	3.94	1.26	5.09	5.09
Rosebud County	C9	RM 253.45	78178	20-yr	2234.2	780.95	775.97	2.3	1.39	24.61	8.59	172.93	1228.33	3.84	1.32	4.98	4.98
Rosebud County	C9	RM 253.26	77879	20-yr	2234.2	780.86	775.72	1.78	1.05	12.74	4.78	240.93	1435.2	4.02	1.49	5.14	5.14
Rosebud County	C9	RM 253.07	77578	20-yr	2234.2	780.59	775.57	2.47	1.42	26.94	8.43	189.44	1382.37	3.71	1.14	5.02	5.02
Rosebud County	C9	RM 252.88	77278	20-yr	2234.2	780.47	775.45	1.99	1.32	19.98	6.03	221.89	1603.94	3.56	1.06	5.02	5.02
Rosebud County	C9	RM 252.69	76962	20-yr	2234.2	780.4	775.33	1.48	0.86	10.92	3.72	260.67	2056.91	3.77	1.27	5.06	5.06
Rosebud County	C9	RM 252.49	76646	20-yr	2234.2	780.05	775.36	2.66	1.38	32.09	6.43	161.17	2726.03	3.74	0.74	4.69	4.69
Rosebud County	C9	RM 252.24	76252	20-yr	2234.2	779.86	775.4	2.15	1.1	24.23	5.64	167.1	3150.2	3.43	0.79	4.46	4.46
Rosebud County	C9	RM 252.01	75885	20-yr	2234.2	779.69	775.39	1.72	0.98	21.93	5.93	252.1	3305.88	3.18	0.85	4.3	4.3
Rosebud County	C9	RM 251.7	75438	20-yr	2234.2	779.55	775.01	1.29	0.87	6.91	3.03	599.84	3028.39	2.25	0.98	4.54	4.54
Rosebud County	C9	RM 251.49	75098	20-yr	2234.2	779.44	775.02	1.26	0.85	9.37	5.09	716.44	3199.43	1.71	0.93	4.42	4.42
Rosebud County	C9	RM 251.23	74691	20-yr	2234.2	779.19	775.05	1.5	1.05	10.39	4.38	741.99	3080.39	1.72	0.72	4.14	4.14
Rosebud County	C9	RM 251.01	74322	20-yr	2234.2	779.04	774.84	1.41	0.88	7.46	2.95	590.93	3114.86	2.07	0.81	4.2	4.2
Rosebud County	C9	RM 250.79	73973	20-yr	2234.2	778.93	774.42	1.41	0.86	9.06	2.96	417.99	2946.68	2.77	0.9	4.51	4.51
Rosebud County	C9	RM 250.6	73678	20-yr	2234.2	778.78	774.17	1.53	0.99	20.58	7.19	376.03	2563.32	2.54	0.88	4.61	4.61
Rosebud County	C9	RM 250.37	73306	20-yr	2234.2	778.48	774.05	2.1	1.14	19.77	5.19	233.23	2108.9	3.56	0.93	4.43	4.43
Rosebud County	C9	RM 250.17	72982	20-yr	2234.2	778.28	773.93	2.3	1.13	27	8.72	214.36	2188.99	2.9	0.93	4.35	4.35
Rosebud County	C9	RM 249.95	72617	20-yr	2234.2	778.04	773.83	2.15	1.26	22.98	7.08	226.06	1667.61	3.49	1.07	4.21	4.21
Rosebud County	C9	RM 249.73	72253	20-yr	2234.2	777.83	773.71	2.06	1.2	21.44	6.62	273.96	2250.01	3.07	0.95	4.12	4.12
Rosebud County	C9	RM 249.53	71936	20-yr	2234.2	777.75	773.38	1.47	0.9	10.47	3.43	362.14	2439.98	3.38	1.11	4.37	4.37
Rosebud County	C9	RM 249.31	71579	20-yr	2234.2	777.51	773.14	1.9	1.29	21.1	7.47	363.92	2635.87	2.56	0.9	4.37	4.37
Rosebud County	C9	RM 249.13	71274	20-yr	2234.2	777.35	772.84	1.75	1.03	15.67	4.61	301.1	2636.87	3.46	1.01	4.51	4.51
Rosebud County	C9	RM 248.94	70978	20-yr	2234.2	777.08	772.56	2.36	1.23	27.28	6.56	199.53	2764.15	3.52	0.84	4.52	4.52
Rosebud County	C9	RM 248.76	70681	20-yr	2234.2	777.06	772.32	1.26	0.82	8.42	2.95	424.32	2535.32	3.34	1.16	4.74	4.74
Rosebud County	C9	RM 248.53	70312	20-yr	2234.2	777	772.17	1.32	0.65	7.85	2.52	164.08	3106.04	3.94	1.26	4.83	4.83
Rosebud County	C9	RM 248.31	69962	20-yr	2234.2	776.85	772.04	1.66	0.86	13.86	4.29	277.15	2562.23	3.28	1.01	4.81	4.81
Rosebud County	C9	RM 248.08	69603	20-yr	2234.2	776.67	771.92	1.96	0.88	16.71	3.92	211.49	2887.16	3.8	0.89	4.75	4.75
Rosebud County	C9	RM 247.88	69253	20-yr	2234.2	776.54	771.92	1.65	0.93	22.47	7.71	348.22	2849.76	2.47	0.84	4.62	4.62
Rosebud County	C9	RM 247.64	68836	20-yr	2234.2	776.27	771.95	1.69	1.03	15.32	4.93	416.51	2589.86	2.62	0.84	4.32	4.32

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	20-yr	2234.2	776.14	771.87	1.46	0.82	10.25	2.62	282.83	3023.81	3.83	0.97	4.27	4.27
Rosebud County	C9	RM 247.11	67963	20-yr	2234.2	775.87	771.45	2.39	1.29	28.96	7.55	199.91	2254.71	3.27	0.85	4.42	4.42
Rosebud County	C9	RM 246.83	67502	20-yr	2234.2	775.7	770.97	1.88	1.06	18.71	4.73	194.9	2558.67	4.15	1.04	4.73	4.73
Rosebud County	C9	RM 246.52	67019	20-yr	2234.2	775.57	770.61	1.68	1.03	13.27	3.44	225.63	2787.33	4.34	1.12	4.96	4.96
Rosebud County	C9	RM 246.22	66538	20-yr	2234.2	774.56	770.53	3.84	2.73	80.43	24.89	208.1	1194.67	2.59	0.79	4.03	4.03
Rosebud County	C9	RM 245.94	66068	20-yr	2234.2	774.2	770.29	2.01	1.63	22.25	11.77	296.83	1010.71	2.66	1.4	3.91	3.91
Rosebud County	C9	RM 245.66	65624	20-yr	2234.2	774.07	769.81	1.5	0.91	12.02	3.93	197.16	1899.15	4.03	1.29	4.83	4.83
Rosebud County	C9	RM 245.4	65205	20-yr	2234.2	773.88	769.59	1.75	1.34	13.97	5.44	354.14	1863.98	2.34	0.9	4.72	4.72
Rosebud County	C9	RM 245.15	64804	20-yr	2234.2	773.54	769.41	1.72	1.69	40.96	16.21	307.2	1811.08	2.06	0.81	4.38	4.38
Rosebud County	C9	RM 244.89	64387	20-yr	2234.2	772.86	769.41	2.67	2.15	37.65	14.39	188.56	904.66	3.15	1.19	3.83	3.83
Rosebud County	C9	RM 244.7	64085	20-yr	2234.2	772.87	769.37	1.34	1.13	9.29	5.57	220.97	1325.85	2.93	1.76	3.96	3.96
Rosebud County	C9	RM 244.51	63776	20-yr	2234.2	772.8	769.35	1.17	0.99	8.31	4.64	264.09	1705.24	2.94	1.64	3.89	3.89
Rosebud County	C9	RM 244.33	63499	20-yr	2234.2	772.78	769.16	0.75	0.72	3.14	2.14	274.46	2260.55	2.75	1.87	4.35	4.35
Rosebud County	C9	RM 244.14	63224	20-yr	2234.2	772.75	768.52	1	0.76	5.12	2.5	208.4	2171.47	3.46	1.68	4.32	4.32
Rosebud County	C9	RM 243.96	62927	20-yr	2234.2	772.68	768.13	1.33	0.86	8.84	3.38	176.71	1992.6	3.67	1.4	4.55	4.55
Rosebud County	C9	RM 243.77	62617	20-yr	2234.2	772.65	767.57	0.87	0.61	3.49	1.63	160.76	1726.53	4.6	2.13	5.08	5.08
Rosebud County	C9	RM 243.59	62327	20-yr	2234.2	772.57	766.98	1.46	0.87	11.29	3.26	122.45	2067.05	5.19	1.46	5.59	5.59
Rosebud County	C9	RM 243.39	62012	20-yr	2234.2	772.34	766.86	2.17	1.25	21.96	4.69	156.08	2213.67	4.6	0.96	5.48	5.48
Rosebud County	C9	RM 243.21	61718	20-yr	2234.2	772.23	766.74	1.97	1.18	17.6	3.91	203.35	1822.71	4.97	1.09	5.49	5.49
Rosebud County	C10	RM 243.03	61422	20-yr	2234.2	771.93	766.73	2.69	1.44	35.24	8.36	173.76	1665.5	4.03	0.94	5.2	5.2
Rosebud County	C10	RM 242.84	61125	20-yr	2234.2	771.44	766.76	3.16	2.11	48.63	10.98	171.51	1241.27	3.84	0.85	4.68	4.68
Rosebud County	C10	RM 242.65	60825	20-yr	2234.2	771.26	766.76	2.52	1.76	31.1	8.59	204.18	1156.62	4.04	1.1	4.5	4.5
Rosebud County	C10	RM 242.47	60527	20-yr	2234.2	771.14	766.77	2.09	1.48	21.15	6.24	241.01	1263.59	4.11	1.21	4.37	4.37
Rosebud County	C10	RM 242.29	60239	20-yr	2234.2	771.03	766.64	1.87	1.38	17.44	6.56	282.31	1099.24	3.94	1.47	4.39	4.39
Rosebud County	C10	RM 242.1	59939	20-yr	2234.2	770.82	766.29	2.11	1.52	23.44	9.32	280	1407.85	3.49	1.38	4.53	4.53
Rosebud County	C10	RM 241.9	59618	20-yr	2234.2	770.65	765.95	2.01	1.36	18.96	5.91	249.51	1844.33	4.08	1.26	4.7	4.7
Rosebud County	C10	RM 241.72	59324	20-yr	2234.2	770.58	765.5	1.63	1.07	12.55	4.03	289.97	1554.74	4.2	1.34	5.08	5.08
Rosebud County	C10	RM 241.53	59025	20-yr	2234.2	770.2	765.17	2.71	1.78	39.08	7.11	160	1517.7	4.64	0.83	5.03	5.03
Rosebud County	C10	RM 241.34	58725	20-yr	2234.2	770.03	765.02	2.43	1.41	27.52	6.04	177.78	1655.53	4.43	0.96	5.01	5.01
Rosebud County	C10	RM 241.16	58424	20-yr	2234.2	769.97	764.97	1.88	1.1	16.6	5.2	171.92	1564.6	4.2	1.3	5	5
Rosebud County	C10	RM 240.97	58132	20-yr	2234.2	769.86	764.83	1.78	1.06	14.97	4.77	189.7	1505.74	4.43	1.4	5.03	5.03
Rosebud County	C10	RM 240.78	57818	20-yr	2234.2	769.83	764.56	1.39	0.81	8.84	3.14	159.68	1602.58	4.93	1.73	5.27	5.27
Rosebud County	C10	RM 240.56	57467	20-yr	2234.2	769.73	764.28	1.52	0.91	15.14	5.83	212.38	1580.65	4.54	1.73	5.45	5.45
Rosebud County	C10	RM 240.41	57228	20-yr	2234.2	769.66	763.91	1.45	0.98	11.71	4.94	216.4	1391.72	5.07	2.12	5.75	5.75
Rosebud County	C10	RM 240.22	56944	20-yr	2234.2	769.42	763.51	2.23	1.45	22.54	9.14	157.35	1094.31	5.59	2.2	5.91	5.91
Rosebud County	C10	RM 240.09	56741	20-yr	2234.2	768.97	763.47	3.35	2.27	40.39	16.72	120.86	944.19	5.08	2.05	5.5	5.5
Rosebud County	C10	RM 239.97	56546	20-yr	2234.2	768.88	763.47	2.84	2.47	47.6	29.31	155.75	727.15	4.89	2.98	5.41	5.41
Rosebud County	C10	RM 239.86	56371	20-yr	2234.2	768.84	760.88	2.18	2.17	22.69	22.09	205.85	312.78	4.98	4.84	7.96	7.96
Rosebud County			56353	20-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	20-yr	2234.2	768.81	760.88	2.15	2.15	16.37	15.84	202.33	313.51	5.12	4.96	7.93	7.93
Rosebud County	C10	RM 239.68	56093	20-yr	2234.2	768.39	763.02	3.04	2.86	33.7	27.45	172.44	228.58	4.22	3.41	5.37	5.37
Rosebud County	C10	RM 239.56	55888	20-yr	2234.2	768.24	757.33	3.06	2.79	31.85	17.34	118.83	247.11	6.1	3.24	10.91	10.91
Rosebud County			55879	20-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	20-yr	2234.2	768.19	757.33	3.14	2.88	33.15	16.91	111.41	246.63	6.35	3.15	10.86	10.86
Rosebud County	C10	RM 239.41	55655	20-yr	2234.2	767.82	763.17	3.59	3.35	49.22	25.03	144.11	310.77	4.29	2.15	4.65	4.65
Rosebud County	C10	RM 239.25	55398	20-yr	2234.2	767.59	763.17	3.33	3.05	43.08	27.22	164.41	290.02	4.04	2.53	4.42	4.42
Rosebud County	C10	RM 239.07	55108	20-yr	2234.2	767.57	763.2	2.35	2.14	21.31	16.4	219.55	336.75	4.05	3.1	4.37	4.37
Rosebud County	C10	RM 238.89	54826	20-yr	2234.2	767.33	763.23	2.65	2.15	27.39	16.85	191.74	429.77	3.95	2.41	4.1	4.1
Rosebud County	C10	RM 238.73	54570	20-yr	2234.2	767.16	763.38	2.51	2.19	25.39	15.43	242.11	469.96	3.59	2.17	3.78	3.78
Rosebud County	C10	RM 238.51	54223	20-yr	2234.2	767.05	762.88	1.76	1.75	15.72	14.54	435.56	474.79	2.92	2.7	4.17	4.17
Rosebud County	C10	RM 238.33	53926	20-yr	2234.2	766.87	762.37	1.9	1.74	17.83	11.15	306.34	546.2	3.79	2.36	4.5	4.5
Rosebud County	C10	RM 238.14	53626	20-yr	2234.2	766.56	762.25	2.48	1.88	29.98	13.21	214.01	691.19	3.94	1.73	4.31	4.31
Rosebud County	C10	RM 237.95	53321	20-yr	2234.2	766.29	762.09	2.63	1.94	33.7	13.33	189.37	868.15	3.96	1.56	4.2	4.2
Rosebud County	C10	RM 237.77	53027	20-yr	2234.2	766.25	761.85	1.77	1.38	15.31	6.63	294.75	1014.59	3.9	1.69	4.4	4.4
Rosebud County	C10	RM 237.56	52703	20-yr	2234.2	766.15	761.46	1.57	1.18	12.34	5.98	410.69	1223.74	3.23	1.55	4.69	4.69
Rosebud County	C10	RM 237.36	52386	20-yr	2234.2	766.07	761.22	1.34	0.94	9	4.49	443.16	1426.09	3.36	1.66	4.85	4.85
Rosebud County	C10	RM 237.15	52029	20-yr	2234.2	765.98	760.88	1.36	0.94	9.09	4.15	385.86	1380.59	3.8	1.72	5.1	5.1
Rosebud County	C10	RM 236.99	51756	20-yr	2234.2	765.73	760.22	2.26	1.47	18.13	5.26	177.1	1173.63	5.19	1.48	5.51	5.51
Rosebud County	C10	RM 236.83	51500	20-yr	2234.2	765.44	760.07	2.84	2.01	30.17	9.73	167.82	1145.81	4.49	1.42	5.37	5.37
Rosebud County	C10	RM 236.66	51221	20-yr	2234.2	765.38	760.07	2.33	1.92	19.82	10.26	188.34	706.7	4.85	2.47	5.31	5.31

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	20-yr	2234.2	765.26	759.94	2.27	1.97	18.71	9.1	193.41	474.9	4.97	2.39	5.32	5.32
Rosebud County	C11	RM 236.29	50623	20-yr	2234.2	765.16	760	2.19	1.92	17.69	10.66	211.22	413.63	4.7	2.81	5.16	5.16
Rosebud County	C11	RM 236.1	50327	20-yr	2234.2	764.95	760	2.48	2.19	23.36	14.1	206.87	413.8	4.26	2.55	4.95	4.95
Rosebud County	C11	RM 235.91	50024	20-yr	2234.2	764.6	760	2.94	2.41	41.03	19.59	170.49	473.13	4.3	2.03	4.6	4.6
Rosebud County	C11	RM 235.73	49726	20-yr	2234.2	764.54	760.15	2.05	1.86	20.51	17.06	243.8	389.12	3.86	3.2	4.39	4.39
Rosebud County	C11	RM 235.57	49480	20-yr	2234.2	764.44	760.02	1.82	1.81	16.29	11.88	318.23	457.8	3.86	2.81	4.42	4.42
Rosebud County	C11	RM 235.36	49133	20-yr	2234.2	764.26	759.74	1.88	1.84	14.6	11.76	428.22	595.58	2.75	2.21	4.52	4.52
Rosebud County	C11	RM 235.17	48830	20-yr	2234.2	764.09	759.55	1.83	1.79	15.35	13	455.8	577.86	2.66	2.25	4.54	4.54
Rosebud County	C11	RM 235	48571	20-yr	2234.2	763.97	759.29	1.77	1.62	14.91	8.92	320.92	671.54	3.88	2.31	4.68	4.68
Rosebud County	C11	RM 234.82	48271	20-yr	2234.2	763.43	759.21	3.1	2.54	48.37	23.79	190.08	508.9	3.62	1.77	4.22	4.22
Rosebud County	C11	RM 234.63	47978	20-yr	2234.2	763.27	759.21	2.37	1.89	27.58	14.54	238.2	638.6	3.57	1.87	4.06	4.06
Rosebud County	C11	RM 234.45	47692	20-yr	2234.2	763.09	759.12	2.14	1.84	22.95	11.51	283.79	715.82	3.38	1.7	3.97	3.97
Rosebud County	C11	RM 234.2	47305	20-yr	2234.2	762.97	758.6	1.59	1.39	10.07	7.63	504.73	857.89	2.48	1.87	4.37	4.37
Rosebud County	C11	RM 234.01	47006	20-yr	2234.2	762.91	758.27	1.14	1.03	5.55	5.2	818.93	1004.86	2.31	2.16	4.64	4.64
Rosebud County	C11	RM 233.84	46737	20-yr	2234.2	762.82	758.12	1.29	1.15	8.6	5.8	571.34	983.75	2.92	1.97	4.7	4.7
Rosebud County	C11	RM 233.61	46365	20-yr	2234.2	762.68	757.67	1.51	1.26	10.53	4.12	302.81	966.69	4.69	1.83	5.01	5.01
Rosebud County	C11	RM 233.35	45943	20-yr	2234.2	762.46	757.03	2.1	1.42	20.97	6.64	214.65	1190.08	4.22	1.33	5.43	5.43
Rosebud County	C11	RM 233.13	45584	20-yr	2234.2	762.25	756.45	2.15	1.74	21.05	5.17	206.27	1083.75	4.89	1.19	5.8	5.8
Rosebud County	C11	RM 232.94	45281	20-yr	2234.2	761.98	756.15	2.58	2.11	30.23	7.97	169.36	822.88	4.98	1.29	5.83	5.83
Rosebud County	C11	RM 232.75	44978	20-yr	2234.2	761.91	756.03	2.07	1.72	19.3	7.41	204.11	672.78	5.11	1.93	5.88	5.88
Rosebud County	C11	RM 232.56	44674	20-yr	2234.2	761.78	755.79	2.08	1.84	20.59	6.66	241.15	870.09	4.38	1.39	5.99	5.99
Rosebud County	C11	RM 232.37	44366	20-yr	2234.2	761.56	755.72	2.35	1.68	26.52	8.95	206.42	1043.83	4.18	1.39	5.84	5.84
Rosebud County	C11	RM 232.19	44074	20-yr	2234.2	761.39	755.67	2.28	1.74	24.24	8.11	204.08	857.02	4.54	1.5	5.72	5.72
Rosebud County	C11	RM 232.01	43791	20-yr	2234.2	761.22	755.65	2.26	1.77	24.93	8.78	232.27	901.75	4.02	1.4	5.57	5.57
Rosebud County	C11	RM 231.81	43473	20-yr	2234.2	760.98	755.6	2.45	1.57	28.62	12.04	201.55	882.38	3.88	1.61	5.38	5.38
Rosebud County	C11	RM 231.62	43160	20-yr	2234.2	760.74	755.57	2.45	1.83	24.68	11.55	229.13	739.42	3.58	1.65	5.17	5.17
Rosebud County	C11	RM 231.42	42835	20-yr	2234.2	760.71	755.45	1.72	1.18	13.55	5.21	229.33	1025.44	4.87	1.85	5.26	5.26
Rosebud County	C11	RM 231.22	42522	20-yr	2234.2	760.56	755.45	2.04	1.28	18.52	7.25	204	1053.69	4.3	1.66	5.11	5.11
Rosebud County	C11	RM 230.99	42160	20-yr	2234.2	760.01	755.45	3.2	1.91	50.35	14.47	154.03	1055.5	3.93	1.11	4.56	4.56
Rosebud County	C11	RM 230.79	41841	20-yr	2234.2	759.85	755.43	2.4	1.63	27.83	8.94	202.2	1044.47	4.14	1.31	4.42	4.42
Rosebud County	C11	RM 230.53	41415	20-yr	2234.2	759.75	755.17	1.63	1.33	13.37	7.62	299.65	939.04	3.17	1.79	4.58	4.58
Rosebud County	C11	RM 230.29	41045	20-yr	2234.2	759.53	755.15	1.99	1.52	18.95	10.13	234.55	1058.54	3.56	1.89	4.38	4.38
Rosebud County	C11	RM 230.06	40676	20-yr	2234.2	759.33	754.81	1.9	1.54	19.25	10.16	287.41	919.28	3.06	1.6	4.52	4.52
Rosebud County	C11	RM 229.81	40276	20-yr	2234.2	759.18	754.74	1.62	1.13	13.2	5.28	320.68	1785.54	3.61	1.43	4.44	4.44
Rosebud County	C11	RM 229.6	39937	20-yr	2234.2	758.96	754.58	1.95	1.27	16.35	7.81	411.39	1829.65	2.38	1.13	4.38	4.38
Rosebud County	C11	RM 229.4	39596	20-yr	2234.2	758.81	754.34	1.77	1.28	15.84	4.86	283.63	1694.98	3.81	1.16	4.47	4.47
Rosebud County	C11	RM 229.2	39273	20-yr	2234.2	758.43	754.15	2.66	1.94	36.75	12.29	214.46	1173.88	3.3	1.09	4.28	4.28
Rosebud County	C11	RM 229.02	38994	20-yr	2234.2	758.21	754.12	2.48	1.62	31.65	11.4	211.31	1230.46	3.39	1.21	4.09	4.09
Rosebud County	C11	RM 228.82	38676	20-yr	2234.2	758.03	753.8	2.05	1.49	21.71	9.48	271.56	1069.15	3.36	1.46	4.23	4.23
Rosebud County	C11	RM 228.64	38383	20-yr	2234.2	757.89	753.73	1.95	1.29	19.4	7.76	224.38	1319.21	3.43	1.36	4.2	4.2
Rosebud County	C11	RM 228.46	38093	20-yr	2234.2	757.82	753.53	1.48	0.99	11.19	5.15	301.72	1486.36	3.5	1.6	4.29	4.29
Rosebud County	C11	RM 228.26	37771	20-yr	2234.2	757.76	753.35	1.33	0.78	8.91	3.97	273.91	1802.63	3.65	1.61	4.41	4.41
Rosebud County	C11	RM 228.03	37408	20-yr	2234.2	757.62	753.16	1.7	0.88	14.41	5.03	233.4	2005.75	3.77	1.3	4.46	4.46
Rosebud County	C11	RM 227.74	36949	20-yr	2234.2	757.43	752.95	1.96	1.16	18.71	5.2	167.04	1756.3	4	1.09	4.48	4.48
Rosebud County	C11	RM 227.49	36537	20-yr	2234.2	757.3	752.83	1.89	1.07	17.54	5.77	175.55	1619.62	3.96	1.29	4.47	4.47
Rosebud County	C11	RM 227.2	36062	20-yr	2234.2	757.16	752.41	1.79	1.13	15.77	5.85	180.83	1626.42	3.89	1.42	4.75	4.75
Rosebud County	C11	RM 226.98	35709	20-yr	2234.2	756.78	752.31	2.55	1.55	33.29	12.97	211.99	1104.91	3.44	1.33	4.47	4.47
Rosebud County	C11	RM 226.79	35400	20-yr	2234.2	756.63	752.25	1.93	1.35	20.71	10.54	268.83	931.35	3.57	1.8	4.38	4.38
Rosebud County	C11	RM 226.56	35065	20-yr	2234.2	756.5	751.83	1.59	1.22	14.72	9.56	338.41	787.71	3.6	2.33	4.67	4.67
Rosebud County	C11	RM 226.36	34743	20-yr	2234.2	756.23	751.68	2.05	1.74	23.27	12.2	302.16	712.71	3.46	1.8	4.55	4.55
Rosebud County	C11	RM 226.2	34476	20-yr	2234.2	756.16	751.25	1.54	1.31	12.1	6.71	424.72	1006.58	3.21	1.78	4.91	4.91
Rosebud County	C11	RM 226.01	34177	20-yr	2234.2	756	750.81	1.72	1.33	24.11	9.13	284.2	1392.49	4.17	1.56	5.19	5.19
Rosebud County	C11	RM 225.83	33884	20-yr	2234.2	755.67	750.59	2.53	1.55	30.08	10.24	159.74	1208.72	4.5	1.51	5.08	5.08
Rosebud County	C11	RM 225.64	33580	20-yr	2234.2	755.57	750.56	1.9	1.46	18.05	8.53	293.96	1388.95	3.73	1.75	5.01	5.01
Rosebud County	C11	RM 225.45	33275	20-yr	2234.2	755.48	750.31	1.64	1.46	13.14	6.74	332.17	1375.64	4.02	2.05	5.17	5.17
Rosebud County	C11	RM 225.26	32969	20-yr	2234.2	755.32	750.25	1.86	1.67	16.67	8.89	291.78	1459.79	4.07	2.16	5.07	5.07
Rosebud County	C11	RM 225.16	32805	20-yr	2234.2	755.15	750.19	2.24	2.07	23.8	14.16	224.54	957.89	4.4	2.6	4.96	4.96
Rosebud County	C11	RM 225.06	32646	20-yr	2234.2	754.89	747.9	2.73	2.66	32.5	25.14	169.32	772.38	4.82	3.71	6.99	6.99
Rosebud County			32620	20-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	20-yr	2234.2	754.79	747.9	2.76	2.74	35.2	30.3	169.8	797.32	4.76	4.08	6.89	6.89

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	20-yr	2234.2	754.73	750.09	2.1	2.03	21.05	14.91	249.97	806.62	4.22	2.98	4.64	4.64
Rosebud County	C12	RM 224.71	32083	20-yr	2234.2	754.58	750.04	2	1.94	17.77	13.04	391.97	561.06	2.83	2.07	4.54	4.54
Rosebud County	C12	RM 224.53	31796	20-yr	2234.2	754.39	749.96	2.02	2.01	15.92	13.33	412.29	675.91	2.68	2.24	4.43	4.43
Rosebud County	C12	RM 224.34	31486	20-yr	2234.2	754.21	750.03	1.8	1.7	18.54	14.27	474.2	856.55	2.39	1.84	4.18	4.18
Rosebud County	C12	RM 224.16	31195	20-yr	2234.2	754.05	749.78	1.82	1.52	15.86	7.08	263.29	1308.05	3.69	1.63	4.37	4.37
Rosebud County	C12	RM 223.96	30878	20-yr	2234.2	753.87	749.48	2.11	1.57	21.61	7.5	179.51	1220.18	4.03	1.38	4.49	4.49
Rosebud County	C12	RM 223.76	30567	20-yr	2234.2	753.68	749.18	2.31	1.71	26.99	9.01	162.95	1334.75	3.58	1.18	4.5	4.5
Rosebud County	C12	RM 223.55	30235	20-yr	2234.2	753.52	748.87	1.99	1.51	18.7	5.36	229.9	1449.08	4.36	1.24	4.65	4.65
Rosebud County	C12	RM 223.37	29952	20-yr	2234.2	753.3	748.72	2.32	1.67	25.58	7.03	208.3	1162.8	4.33	1.18	4.58	4.58
Rosebud County	C12	RM 223.2	29681	20-yr	2234.2	753.15	748.51	2.26	1.62	24	6.33	209.66	1196.95	4.45	1.16	4.64	4.64
Rosebud County	C12	RM 223.02	29391	20-yr	2234.2	753.05	748.51	1.93	1.39	18.19	5.87	265.78	1279.68	3.99	1.28	4.54	4.54
Rosebud County	C12	RM 222.82	29071	20-yr	2234.2	752.91	748.5	1.87	1.26	17.05	5.52	268.13	1719.14	4.01	1.29	4.41	4.41
Rosebud County	C12	RM 222.64	28787	20-yr	2234.2	752.76	748.46	2.02	1.28	19.84	7.55	236.97	1236.14	4.06	1.53	4.3	4.3
Rosebud County	C12	RM 222.45	28479	20-yr	2234.2	752.63	748.44	1.86	1.18	17.48	7.83	281.49	1176.16	3.61	1.61	4.19	4.19
Rosebud County	C12	RM 222.22	28128	20-yr	2234.2	752.49	748.15	1.79	1.16	15.52	6.36	259.78	1165.43	4.08	1.66	4.34	4.34
Rosebud County	C12	RM 222.01	27784	20-yr	2234.2	752.42	747.57	1.41	1	9.93	4.64	372.22	1269.3	3.78	1.75	4.85	4.85
Rosebud County	C12	RM 221.77	27401	20-yr	2234.2	752.36	747.18	0.95	0.8	5.58	3.97	725.95	1342.64	2.93	2.08	5.18	5.18
Rosebud County	C12	RM 221.55	27042	20-yr	2234.2	752.29	747.07	0.9	0.78	5.65	4.24	807.88	1330.68	2.87	2.15	5.22	5.22
Rosebud County	C12	RM 221.34	26708	20-yr	2234.2	752.24	746.94	0.94	0.77	4.86	3.36	648.68	1478	3.15	2.17	5.3	5.3
Rosebud County	C12	RM 221.15	26406	20-yr	2234.2	752.12	746.7	1.48	1.06	9.86	4.22	265.14	1157.68	4.99	2.11	5.42	5.42
Rosebud County	C12	RM 220.96	26081	20-yr	2234.2	751.61	746.66	3.2	2.09	48.7	15.73	138.47	781.89	4.32	1.36	4.95	4.95
Rosebud County	C12	RM 220.77	25779	20-yr	2234.2	751.15	746.73	3.28	2.9	52	22.13	163.4	447.78	4.08	1.72	4.42	4.42
Rosebud County	C12	RM 220.6	25513	20-yr	2234.2	751.19	746.72	1.99	1.73	19.06	9.24	256.78	641.53	4.19	2.02	4.47	4.47
Rosebud County	C12	RM 220.4	25183	20-yr	2234.2	751.03	746.88	1.92	1.66	16.92	9.56	394.04	856.37	2.81	1.58	4.15	4.15
Rosebud County	C12	RM 220.23	24914	20-yr	2234.2	750.96	746.8	1.41	1.32	8.32	6.74	641.42	878.35	2.39	1.93	4.16	4.16
Rosebud County	C12	RM 220.02	24578	20-yr	2234.2	750.84	746.54	1.3	1.24	8.16	7.4	792.77	933.03	2.13	1.93	4.3	4.3
Rosebud County	C12	RM 219.83	24268	20-yr	2234.2	750.76	746.18	1.1	1.05	6.07	5.36	775.68	940.06	2.56	2.26	4.58	4.58
Rosebud County	C12	RM 219.63	23947	20-yr	2234.2	750.63	745.79	1.39	1.28	10.14	8.28	587.54	806.47	2.65	2.16	4.84	4.84
Rosebud County	C12	RM 219.47	23683	20-yr	2234.2	750.52	745.56	1.49	1.26	11.21	6.48	380.14	825.94	3.74	2.15	4.96	4.96
Rosebud County	C12	RM 219.29	23386	20-yr	2234.2	750.23	745.27	2.36	1.68	26.87	11.19	208.04	792.5	4.09	1.69	4.96	4.96
Rosebud County	C12	RM 219.11	23085	20-yr	2234.2	750.05	745.15	2.34	1.63	26.44	10.79	176.7	845.96	4.11	1.65	4.9	4.9
Rosebud County	C12	RM 218.92	22783	20-yr	2234.2	749.92	745.15	2.01	1.39	19.87	9.22	229.91	974.58	3.57	1.64	4.77	4.77
Rosebud County	C12	RM 218.73	22473	20-yr	2234.2	749.75	745.06	1.98	1.33	18.57	7.55	226.8	955.43	4.36	1.76	4.69	4.69
Rosebud County	C12	RM 218.54	22180	20-yr	2234.2	749.63	744.99	1.87	1.39	16.96	9.04	274.48	754.86	4	2.13	4.64	4.64
Rosebud County	C12	RM 218.38	21902	20-yr	2234.2	749.52	744.43	1.87	1.34	16.33	7.84	234.82	763.1	4.56	2.18	5.09	5.09
Rosebud County	C12	RM 218.18	21580	20-yr	2234.2	749.28	743.9	2.38	1.49	26.74	10.36	182.74	887.31	4.45	1.7	5.38	5.38
Rosebud County	C12	RM 217.99	21276	20-yr	2234.2	749.1	743.66	2.3	1.54	25.78	9.04	211.96	1055.39	4.01	1.39	5.44	5.44
Rosebud County	C12	RM 217.81	20981	20-yr	2234.2	749.06	743.51	1.63	1.31	11.91	3.35	293.45	1401.38	4.55	1.27	5.55	5.55
Rosebud County	C12	RM 217.64	20702	20-yr	2234.2	748.71	743.41	2.67	1.89	33.65	7.57	176.29	1209.71	4.42	0.98	5.3	5.3
Rosebud County	C12	RM 217.45	20392	20-yr	2234.2	748.5	743.29	2.59	1.63	32.37	7.72	184.69	1419.86	4.11	0.96	5.21	5.21
Rosebud County	C12	RM 217.25	20070	20-yr	2234.2	748.43	743.29	1.96	1.2	17.72	4.59	191.77	1529.74	4.77	1.21	5.14	5.14
Rosebud County	C12	RM 217	19662	20-yr	2234.2	748.14	743.25	2.38	1.49	26.84	6.62	192.47	1439.4	4.3	1.04	4.89	4.89
Rosebud County	C12	RM 216.77	19300	20-yr	2234.2	747.91	743.25	2.35	1.46	27.67	8.34	217.02	1397.31	3.66	1.09	4.66	4.66
Rosebud County	C12	RM 216.53	18912	20-yr	2234.2	747.76	743.3	1.86	1.08	17.55	6.64	273.88	1626.37	3.57	1.34	4.46	4.46
Rosebud County	C12	RM 216.27	18500	20-yr	2234.2	747.62	743.24	1.58	1	12.9	5.85	358.3	1488.86	3.33	1.5	4.38	4.38
Rosebud County	C12	RM 215.98	18038	20-yr	2234.2	747.5	743.12	1.44	0.88	10.37	4.86	273.73	1502.72	3.6	1.69	4.38	4.38
Rosebud County	C12	RM 215.68	17550	20-yr	2234.2	747.36	742.31	1.54	1	10.79	3.72	269.37	1356.19	4.76	1.64	5.05	5.05
Rosebud County	C12	RM 215.41	17101	20-yr	2234.2	747.13	741.82	2.04	1.45	19.46	7.99	218.66	861.09	4.45	1.81	5.31	5.31
Rosebud County	C12	RM 215.21	16781	20-yr	2234.2	746.76	741.65	2.84	1.89	38.32	13.14	159.7	925.47	4.29	1.45	5.11	5.11
Rosebud County	C12	RM 215.02	16479	20-yr	2234.2	746.39	741.68	3.1	2.23	45.52	15.21	146.57	706.76	4.36	1.43	4.71	4.71
Rosebud County	C13	RM 214.86	16220	20-yr	2234.2	746.43	741.64	1.87	1.54	16.21	8.08	252.91	653.22	4.58	2.26	4.79	4.79
Rosebud County	C13	RM 214.65	15883	20-yr	2234.2	746.28	741.6	1.85	1.76	15.46	9.75	399.8	680.79	3.01	1.89	4.68	4.68
Rosebud County	C13	RM 214.46	15577	20-yr	2234.2	746.15	741.6	1.75	1.46	11.83	7.14	459.79	1141.31	2.65	1.59	4.55	4.55
Rosebud County	C13	RM 214.27	15282	20-yr	2234.2	746.04	741.59	1.57	1.31	10.27	5.51	505.93	1205.85	2.64	1.41	4.45	4.45
Rosebud County	C13	RM 214.07	14957	20-yr	2234.2	745.93	741.54	1.4	1.11	13.03	6.64	425.03	1305.91	3.41	1.73	4.39	4.39
Rosebud County	C13	RM 213.9	14672	20-yr	2234.2	745.77	741.37	1.67	1.47	14.02	7.85	363.41	789.58	3.49	1.95	4.4	4.4
Rosebud County	C13	RM 213.7	14343	20-yr	2234.2	745.49	740.88	2.22	1.95	23.4	10.98	232.58	1112.34	4.25	1.98	4.61	4.61
Rosebud County	C13	RM 213.54	14083	20-yr	2234.2	745.18	740.59	2.7	2.17	35.02	12.06	191.86	1652.15	4.18	1.42	4.59	4.59
Rosebud County	C13	RM 213.36	13792	20-yr	2234.2	745.04	740.39	2.27	1.89	25.52	11.05	241.54	1719.4	3.82	1.64	4.65	4.65
Rosebud County	C13	RM 213.16	13475	20-yr	2234.2	744.88	740.27	2.14	1.63	22.87	9.05	208.86	1703.04	3.68	1.44	4.61	4.61

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	20-yr	2234.2	744.7	740.31	2.19	1.73	21.5	8.53	212.05	1761.9	3.41	1.34	4.39	4.39
Rosebud County	C13	RM 212.79	12880	20-yr	2234.2	744.53	740.19	2.18	1.37	22.9	6.76	178.07	2006.81	4.13	1.2	4.34	4.34
Rosebud County	C13	RM 212.6	12572	20-yr	2234.2	744.38	739.79	1.95	1.23	18.14	5.27	240.96	2095.5	4.27	1.23	4.59	4.59
Rosebud County	C13	RM 212.42	12284	20-yr	2234.2	744.17	739.58	2.29	1.39	25.99	7.11	211.31	2037.93	3.93	1.06	4.59	4.59
Rosebud County	C13	RM 212.23	11983	20-yr	2234.2	744.05	739.17	1.95	1.25	18.77	5.42	257.92	2061.88	3.83	1.09	4.88	4.88
Rosebud County	C13	RM 212.05	11688	20-yr	2234.2	743.88	738.83	2.06	1.4	20.09	4.74	227.23	1948.61	4.37	1.02	5.05	5.05
Rosebud County	C13	RM 211.85	11386	20-yr	2234.2	743.69	738.79	2.2	1.58	24.08	7.48	251.61	1521.39	3.74	1.15	4.9	4.9
Rosebud County	C13	RM 211.65	11066	20-yr	2234.2	743.5	738.58	2.15	1.46	22.75	8.06	248.86	1331	3.82	1.34	4.92	4.92
Rosebud County	C13	RM 211.44	10724	20-yr	2234.2	743.34	738.38	2.11	1.23	21.43	9.26	199.53	1326.14	4.08	1.75	4.96	4.96
Rosebud County	C13	RM 211.21	10353	20-yr	2234.2	743.23	737.87	1.87	1.16	15.19	6.65	207.36	1383.82	4.09	1.78	5.36	5.36
Rosebud County	C13	RM 210.96	9946	20-yr	2234.2	742.92	737.72	2.51	1.51	30.53	13.05	169.56	867.88	4.05	1.71	5.2	5.2
Rosebud County	C13	RM 210.75	9612	20-yr	2234.2	742.84	737.48	1.96	1.28	18.11	7.6	191.27	955.24	4.42	1.83	5.36	5.36
Rosebud County	C13	RM 210.57	9317	20-yr	2234.2	742.76	737.5	1.73	1.2	14.08	5.37	244	1123.33	4.4	1.66	5.26	5.26
Rosebud County	C13	RM 210.36	8986	20-yr	2234.2	742.43	737.54	2.5	1.65	30.49	11.58	194.77	904.85	4.01	1.51	4.89	4.89
Rosebud County	C13	RM 210.16	8674	20-yr	2234.2	742.2	737.53	2.26	1.79	26.45	11.59	288.09	925.07	3.29	1.43	4.67	4.67
Rosebud County	C13	RM 209.98	8382	20-yr	2234.2	742.2	737.25	1.45	1.12	10.02	4.86	307.02	1030.42	4.27	2.06	4.95	4.95
Rosebud County	C13	RM 209.8	8091	20-yr	2234.2	742.1	736.96	1.65	1.12	12.27	5.11	218.68	1183.53	5	2.07	5.14	5.14
Rosebud County	C13	RM 209.6	7774	20-yr	2234.2	741.92	736.72	2.1	1.14	20.16	6.67	179.37	1606.71	4.8	1.57	5.2	5.2
Rosebud County	C13	RM 209.41	7482	20-yr	2234.2	741.85	736.53	1.77	1.08	14.88	5.9	238.7	1688.66	4.31	1.69	5.32	5.32
Rosebud County	C13	RM 209.21	7161	20-yr	2234.2	741.62	736.29	2.23	1.5	23.6	8.22	197.21	1161.31	4.38	1.51	5.33	5.33
Rosebud County	C13	RM 209.03	6871	20-yr	2234.2	741.45	736.14	2.31	1.47	25.02	8.98	185.89	1106.5	4.45	1.57	5.31	5.31
Rosebud County	C13	RM 208.85	6571	20-yr	2234.2	741.37	736.03	1.88	1.27	16.68	7.16	229.12	1081.76	4.46	1.9	5.34	5.34
Rosebud County	C13	RM 208.65	6257	20-yr	2234.2	741.28	735.74	1.82	1.24	15.92	7.47	218.32	1025.76	4.23	1.96	5.54	5.54
Rosebud County	C13	RM 208.46	5945	20-yr	2234.2	741.03	735.69	2.26	1.77	24.62	11.07	204.34	863.54	3.69	1.64	5.34	5.34
Rosebud County	C13	RM 208.29	5682	20-yr	2234.2	740.34	735.63	3.64	3.15	63.76	31.72	116.29	344.42	4.23	2.06	4.71	4.71
Rosebud County	C14	RM 208.1	5374	20-yr	2234.2	740.23	735.61	2.46	2.19	28.67	12.93	201.37	568.9	4.41	1.97	4.62	4.62
Rosebud County	C14	RM 207.91	5064	20-yr	2234.2	740.07	735.56	2.14	1.69	23.01	11.86	293.26	782	3.32	1.69	4.51	4.51
Rosebud County	C14	RM 207.72	4766	20-yr	2234.2	739.89	735.52	1.94	1.57	17.77	9.49	404.67	1240.26	2.64	1.4	4.37	4.37
Rosebud County	C14	RM 207.53	4450	20-yr	2234.2	739.81	735.35	1.37	1.08	10.35	5.85	469.61	1360.81	3.01	1.69	4.46	4.46
Rosebud County	C14	RM 207.33	4123	20-yr	2234.2	739.66	735.27	1.68	1.13	13.91	6.31	282.48	1159.19	3.77	1.7	4.39	4.39
Rosebud County	C14	RM 207.15	3851	20-yr	2234.2	739.6	735.14	1.47	1.01	10.73	4.47	313.39	1502.82	3.84	1.59	4.46	4.46
Rosebud County	C14	RM 206.99	3599	20-yr	2234.2	739.55	734.95	1.33	0.85	8.85	3.95	327.09	1678.69	3.65	1.63	4.6	4.6
Rosebud County	C14	RM 206.81	3315	20-yr	2234.2	739.49	734.49	1.34	0.8	8.63	3.61	257.4	1609.43	4.17	1.73	5	5
Rosebud County	C14	RM 206.61	2997	20-yr	2234.2	739.38	733.91	1.68	0.96	13.06	5.27	197.48	1230.42	4.72	1.88	5.47	5.47
Rosebud County	C14	RM 206.43	2701	20-yr	2234.2	739.31	733.52	1.59	1.02	12.39	6.74	244.31	1601.41	3.95	2.13	5.79	5.79
Rosebud County	C14	RM 206.21	2350	20-yr	2234.2	739.22	733.38	1.52	1.07	11.52	5.99	253.17	1726.6	4.19	2.16	5.84	5.84
Rosebud County	C14	RM 205.97	1963	20-yr	2234.2	739.08	732.73	1.7	1.3	12.57	6.35	223.85	1491.21	5.56	2.78	6.34	6.34
Rosebud County	C14	RM 205.72	1563	20-yr	2234.2	738.24	732.73	4.01	2.53	98.91	30.85	107.35	1374.89	4.53	1.37	5.51	5.51
Rosebud County	C14	RM 205.49	1198	20-yr	2234.2	738.06	732.63	2.52	1.82	39.55	16.48	192.62	893.53	4.23	1.75	5.43	5.43
Rosebud County	C14	RM 205.3	907	20-yr	2234.2	737.74	732.76	2.61	1.98	35.54	17.67	246.92	994.3	3.24	1.6	4.98	4.98
Rosebud County	C14	RM 205.11	594	20-yr	2234.2	737.51	732.8	2.46	1.82	28.68	11.39	192	987.14	4.31	1.7	4.71	4.71
Rosebud County	C14	RM 204.9	243	20-yr	2234.2	737.21	732.63	2.53	2.03	31.78	13.59	224.67	952.1	3.75	1.59	4.58	4.58

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	20-yr	2231.4	737.21	732.67	2.33	1.41	27.05	11.44	192.07	1022.25	3.68	1.54	4.54	4.54
Custer County	C14	RM 204.43	73135	20-yr	2231.4	737.06	732.44	1.98	1.25	19.62	8.65	266.74	1114.44	3.66	1.6	4.62	4.62
Custer County	C14	RM 204.22	72808	20-yr	2231.4	736.84	732.3	2.13	1.38	23.4	9.67	262.16	1168.45	3.35	1.38	4.54	4.54
Custer County	C14	RM 204	72454	20-yr	2231.4	736.72	731.9	1.75	1.17	14.5	5.52	261.19	1150.57	4.37	1.65	4.82	4.82
Custer County	C14	RM 203.82	72156	20-yr	2231.4	736.44	731.14	2.46	1.53	29.31	11.65	197.43	906.07	4.09	1.6	5.3	5.3
Custer County	C14	RM 203.65	71895	20-yr	2231.4	736.27	730.95	2.55	1.37	31.44	13.76	162.5	913.73	4.15	1.79	5.32	5.32
Custer County	C14	RM 203.5	71641	20-yr	2231.4	736.19	730.78	2.04	1.23	20.07	9.05	195.78	993.02	4.11	1.82	5.41	5.41
Custer County	C14	RM 203.3	71324	20-yr	2231.4	736.16	730.79	1.54	0.94	11.14	5.26	161.79	1141.98	4.52	2.09	5.37	5.37
Custer County	C14	RM 203.1	71035	20-yr	2231.4	735.85	730.79	2.49	1.42	30.55	11.44	184.4	1282.27	3.87	1.42	5.05	5.05
Custer County	C14	RM 202.9	70718	20-yr	2231.4	735.69	730.67	2.14	1.47	24.85	12.66	248.71	1130.01	2.9	1.46	5.02	5.02
Custer County	C14	RM 202.71	70415	20-yr	2231.4	735.41	730.64	2.29	1.56	26.56	11.85	231.13	924.48	3.52	1.55	4.77	4.77
Custer County	C14	RM 202.51	70088	20-yr	2231.4	735.02	730.68	2.8	1.77	38.53	11.8	152.2	1067.38	3.91	1.18	4.34	4.34
Custer County	C14	RM 202.34	69815	20-yr	2231.4	734.9	730.63	1.91	1.33	18.97	8.05	321.87	1229.44	3.23	1.36	4.27	4.27
Custer County	C14	RM 202.13	69483	20-yr	2231.4	734.73	730.54	1.87	1.24	17.47	8.12	282.19	1204.55	3.73	1.72	4.19	4.19
Custer County	C14	RM 201.97	69219	20-yr	2231.4	734.56	730.01	2.03	1.54	20.55	10.78	264.21	755.71	3.67	1.91	4.55	4.55
Custer County	C14	RM 201.75	68884	20-yr	2231.4	734.5	729.45	1.49	1.26	10.23	4.71	306.87	833.86	4.68	2.13	5.05	5.05
Custer County	C14	RM 201.57	68612	20-yr	2231.4	734.35	729.37	1.85	1.44	18.4	10.53	362.67	908.43	3	1.71	4.98	4.98
Custer County	C14	RM 201.38	68299	20-yr	2231.4	733.98	729.23	2.34	1.87	31.27	16.65	356.08	915.31	2.47	1.3	4.75	4.75
Custer County	C14	RM 201.23	68055	20-yr	2231.4	733.78	729.13	2.02	1.47	22.78	11.82	369.58	1099.19	2.67	1.38	4.65	4.65
Custer County	C14	RM 201.06	67778	20-yr	2231.4	733.76	729.03	1.26	1	8.11	4.75	262.3	1232.39	3.4	1.97	4.73	4.73
Custer County	C14	RM 200.85	67439	20-yr	2231.4	733.26	729.05	3.27	2.52	52.36	18.77	114.21	647.93	3.99	1.39	4.21	4.21
Custer County	C14	RM 200.64	67103	20-yr	2231.4	733.19	728.97	2	1.55	19.44	10.17	216.09	703.26	4.07	2.11	4.22	4.22
Custer County	C14	RM 200.48	66842	20-yr	2231.4	733.12	728.8	1.55	1.37	12.34	8.62	307.41	687.7	3.43	2.38	4.32	4.32
Custer County	C14	RM 200.27	66515	20-yr	2231.4	732.97	728.63	1.65	1.38	13.72	9.35	359.69	665.4	3.58	2.43	4.34	4.34
Custer County	C14	RM 200.05	66162	20-yr	2231.4	732.77	728.3	1.81	1.6	17.01	13.9	388.2	556.5	3.07	2.51	4.47	4.47
Custer County	C14	RM 199.9	65916	20-yr	2231.4	732.7	727.78	1.52	1.5	11.47	10.22	381.62	436.06	3.83	3.41	4.92	4.92
Custer County	C14	RM 199.71	65614	20-yr	2231.4	732.39	727.34	2.35	2.23	23.79	18	260.36	368.6	3.61	2.72	5.05	5.05
Custer County	C14	RM 199.53	65326	20-yr	2231.4	732.32	727.34	1.86	1.79	16.15	8.07	259.62	556.78	4.59	2.27	4.98	4.98
Custer County	C14	RM 199.38	65076	20-yr	2231.4	732.21	727.34	1.89	1.78	17.02	8.72	364.29	832.25	3.22	1.64	4.87	4.87
Custer County	C14	RM 199.18	64754	20-yr	2231.4	732.01	727.64	1.89	1.68	17.39	9.58	456.73	1018.28	2.51	1.37	4.37	4.37
Custer County	C14	RM 199.04	64535	20-yr	2231.4	731.92	727.64	1.63	1.4	13.18	6.95	419.11	1019.86	3.12	1.64	4.28	4.28
Custer County	C14	RM 198.77	64102	20-yr	2231.4	731.7	727.28	1.82	1.6	16.09	8.45	294.95	906.82	4.01	2.09	4.42	4.42
Custer County	C14	RM 198.57	63773	20-yr	2231.4	731.32	726.99	2.61	2.29	32.77	12.29	204.81	650.21	4.09	1.52	4.33	4.33
Custer County	C14	RM 198.4	63505	20-yr	2231.4	731.11	726.86	2.57	2.04	32.33	14.06	199.72	763.55	3.97	1.71	4.25	4.25
Custer County	C14	RM 198.22	63215	20-yr	2231.4	730.87	726.57	2.6	1.84	33.28	16.09	190.38	676.62	3.86	1.85	4.3	4.3
Custer County	C14	RM 198.04	62923	20-yr	2231.4	730.71	726.32	2.21	1.69	23.9	9.45	227.09	870.38	3.91	1.53	4.39	4.39
Custer County	C14	RM 197.84	62611	20-yr	2231.4	730.64	726.04	1.62	1.42	13.24	4.87	351.59	1215.96	3.57	1.31	4.6	4.6
Custer County	C14	RM 197.65	62306	20-yr	2231.4	730.5	725.69	1.78	1.3	13.54	4.91	317.28	1429.24	3.35	1.2	4.81	4.81
Custer County	C14	RM 197.47	62013	20-yr	2231.4	730.49	725.29	1.28	0.85	7.36	2.39	296	1637.01	5	1.61	5.2	5.2
Custer County	C14	RM 197.27	61686	20-yr	2231.4	730.39	724.81	1.69	0.89	13.52	5.01	211.64	1628.45	4.33	1.59	5.58	5.58
Custer County	C14	RM 197.07	61373	20-yr	2231.4	730.3	724.81	1.78	1.06	14.84	4.58	204.54	1561.93	4.45	1.35	5.49	5.49
Custer County	C14	RM 196.91	61115	20-yr	2231.4	730.29	724.81	1.3	0.69	7.93	3.86	222.53	1495.86	4.48	2.15	5.48	5.48
Custer County	C14	RM 196.73	60815	20-yr	2231.4	730.24	724.76	1.32	0.72	8.05	3.58	241.23	1506.36	4.63	2.04	5.48	5.48
Custer County	C14	RM 196.54	60518	20-yr	2231.4	730.17	724.67	1.45	0.88	10.12	4.56	270.26	1790.08	4.12	1.84	5.5	5.5
Custer County	C14	RM 196.33	60178	20-yr	2231.4	730.1	724.57	1.46	1	9.77	4.14	247.23	1703.07	4.85	2.04	5.53	5.53
Custer County	C14	RM 196.17	59915	20-yr	2231.4	730.04	724.51	1.53	1.2	10.55	6.29	191.57	1300.23	5	2.97	5.53	5.53
Custer County	C15	RM 195.98	59615	20-yr	2228.5	728.76	724.52	4.66	4.51	109.6	82.76	132.07	196.13	3.61	2.71	4.24	4.24
Custer County	C15	RM 195.81	59337	20-yr	2228.5	728.67	724.33	3.16	3.11	47.94	41.72	168.9	238.15	4.17	3.62	4.34	4.34
Custer County	C15	RM 195.61	59020	20-yr	2228.5	728.56	724.24	2.32	2.27	25.84	18.98	230.07	428.11	4.17	3.05	4.32	4.32
Custer County	C15	RM 195.43	58727	20-yr	2228.5	728.36	724.22	2.23	2.11	26	18.64	305.61	538.86	3.24	2.31	4.14	4.14
Custer County	C15	RM 195.23	58415	20-yr	2228.5	728.23	723.93	1.76	1.73	16.35	13.57	391.57	560.76	3.23	2.67	4.3	4.3
Custer County	C15	RM 195.04	58114	20-yr	2228.5	728	723.54	2.1	1.91	22.36	15.57	269.46	476.83	3.51	2.44	4.46	4.46
Custer County	C15	RM 194.86	57824	20-yr	2228.5	727.8	722.93	2.22	1.8	23.84	13.36	209.79	712.46	4.05	2.25	4.87	4.87
Custer County	C15	RM 194.67	57521	20-yr	2228.5	727.63	722.75	2.14	1.92	21.23	9.45	217.41	768.59	4.68	2.06	4.88	4.88
Custer County	C15	RM 194.49	57231	20-yr	2228.5	727.53	722.53	1.97	1.67	18.1	8.76	232.49	735.89	4.61	2.21	5	5
Custer County	C15	RM 194.32	56946	20-yr	2228.5	727.33	722.5	2.21	1.85	22.39	11.67	259.82	632.86	3.69	1.91	4.83	4.83
Custer County	C15	RM 194.13	56643	20-yr	2228.5	727.1	722.5	2.3	2.09	26.3	16.55	251.15	458.72	3.78	2.36	4.6	4.6
Custer County	C15	RM 193.93	56331	20-yr	2228.5	726.96	722.31	2.05	1.9	20.05	14.29	247.7	413.93	4.29	3.04	4.65	4.65
Custer County	C15	RM 193.74	56024	20-yr	2228.5	726.78	722.23	2.16	1.93	22.04	11.24	229.07	635.19	4.39	2.22	4.55	4.55
Custer County	C15	RM 193.55	55708	20-yr	2228.5	726.57	722.13	2.31	1.99	25.51	11.47	216.22	595.32	4.28	1.91	4.44	4.44

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	20-yr	2228.5	726.36	722.13	2.41	2	28.16	12	219.51	662.4	4.04	1.71	4.23	4.23
Custer County	C15	RM 193.2	55158	20-yr	2228.5	726.29	722.13	1.88	1.56	17.22	8.53	280.09	738.88	4.01	1.98	4.16	4.16
Custer County	C15	RM 193	54825	20-yr	2228.5	726.13	721.84	1.9	1.55	17.49	9.25	281.95	696.86	3.99	2.1	4.29	4.29
Custer County	C15	RM 192.81	54525	20-yr	2228.5	725.97	721.37	2.11	1.56	20.87	8.53	207.4	808.32	4.43	1.8	4.6	4.6
Custer County	C15	RM 192.63	54247	20-yr	2228.5	725.79	721.01	2.19	1.75	22.48	9.43	216.54	680.22	4.51	1.87	4.78	4.78
Custer County	C15	RM 192.44	53935	20-yr	2228.5	725.7	721.01	1.87	1.49	16.57	7.72	241	744.99	4.35	2.01	4.69	4.69
Custer County	C16	RM 192.26	53653	20-yr	2228.5	725.47	721.01	2.22	2.04	23.48	15.7	227.88	503.18	4.31	2.87	4.46	4.46
Custer County	C16	RM 192.05	53309	20-yr	2228.5	724.83	721.11	3.33	3.08	56.25	35.11	186.81	330.09	3.53	2.19	3.72	3.72
Custer County	C16	RM 191.74	52809	20-yr	2228.5	724.58	721.1	1.86	1.8	17.85	16.02	451.51	524.76	2.62	2.35	3.48	3.48
Custer County	C16	RM 191.35	52181	20-yr	2228.5	724.12	721.02	1.76	1.73	14.28	13.73	693.83	737.33	1.82	1.75	3.1	3.1
Custer County	C16	RM 191.12	51812	20-yr	2228.5	723.93	720.51	1.44	1.44	9.89	9.87	743.49	744.99	2.08	2.08	3.42	3.42
Custer County	C16	RM 190.87	51406	20-yr	2228.5	723.77	719.89	1.28	1.26	8.42	7.79	819.98	898.78	2.13	1.97	3.88	3.88
Custer County	C16	RM 190.54	50885	20-yr	2228.5	723.64	719.15	1	0.96	6.19	4.96	789.49	1102.01	2.8	2.24	4.49	4.49
Custer County	C16	RM 190.29	50477	20-yr	2228.5	723.06	718.45	2.92	2.36	41.2	15.14	179.8	705.66	4.1	1.49	4.61	4.61
Custer County	C16	RM 190.1	50176	20-yr	2228.5	722.79	718.43	2.68	2.42	36.13	20.42	226.11	1020.71	3.62	2.05	4.36	4.36
Custer County	C16	RM 189.85	49765	20-yr	2228.5	722.6	718.13	1.92	1.85	18.84	17.47	334.92	1143.36	3.39	3.15	4.47	4.47
Custer County	C16	RM 189.65	49458	20-yr	2228.5	722.41	713.92	1.98	1.98	17.45	16.92	340.01	1727.61	3.3	3.2	8.49	8.49
Custer County	C16		49425	20-yr	Bridge												
Custer County	C16	RM 189.62	49416	20-yr	2228.5	722.35	713.92	2.04	2.03	17.84	17.14	339.42	1347.24	3.22	3.1	8.43	8.43
Custer County	C16	RM 189.43	49103	20-yr	2228.5	721.89	718.09	2.68	2.66	38.11	36.37	269.63	753.92	3.08	2.94	3.8	3.8
Custer County	C16	RM 189.22	48763	20-yr	2228.5	721.92	717.93	1.34	1.33	8.98	7.77	452.27	1360.7	3.67	3.17	3.99	3.99
Custer County	C16	RM 188.91	48267	20-yr	2228.5	721.72	717.54	1.57	1.51	12.05	8.77	472.67	1446.25	2.98	2.17	4.18	4.18
Custer County	C16	RM 188.66	47869	20-yr	2228.5	721.28	716.75	2.57	2.21	31.43	11.24	195.28	1214.22	4.35	1.54	4.53	4.53
Custer County	C16	RM 188.51	47622	20-yr	2228.5	721.11	716.72	2.49	2	30.34	11.64	217.17	1040.12	3.96	1.51	4.39	4.39
Custer County	C16	RM 188.32	47314	20-yr	2228.5	721.03	716.79	1.86	1.53	17.7	8.29	151.7	832.52	3.8	1.75	4.24	4.24
Custer County	C16	RM 188.14	47024	20-yr	2228.5	720.86	716.93	1.34	1.48	7.54	8.17	474.59	977.44	1.42	1.54	3.93	3.93
Custer County	C16	RM 187.98	46768	20-yr	2228.5	720.78	716.91	1.63	1.26	13.46	7.7	222.44	877.37	3.54	2.01	3.87	3.87
Custer County	C16	RM 187.78	46440	20-yr	2228.5	720.69	716.69	1.4	1.17	10.56	5.87	251.06	1037.61	3.33	1.84	4	4
Custer County	C16	RM 187.55	46083	20-yr	2228.5	720.44	716.04	2.07	1.33	20.84	8.21	224.37	1079.73	3.98	1.56	4.4	4.4
Custer County	C16	RM 187.35	45750	20-yr	2228.5	719.96	715.34	2.89	2.08	40.72	13.24	182.36	840.86	4	1.28	4.62	4.62
Custer County	C16	RM 187.14	45421	20-yr	2228.5	719.86	715.3	2.09	1.54	21.47	9.63	259.08	952.14	3.83	1.7	4.56	4.56
Custer County	C16	RM 187.01	45211	20-yr	2228.5	719.8	715.3	1.76	1.36	15.08	7.02	300.38	1080.88	3.98	1.85	4.5	4.5
Custer County	C16	RM 186.84	44930	20-yr	2228.5	719.63	715.03	1.98	1.68	19.58	11.49	294.8	1036.58	3.69	2.15	4.6	4.6
Custer County	C16	RM 186.62	44553	20-yr	2228.5	719.38	712.45	2.19	2.19	21.19	20.76	188.38	249.68	5.39	5.29	6.93	6.93
Custer County	C16		44545	20-yr	Bridge												
Custer County	C16	RM 186.61	44538	20-yr	2228.5	719.36	712.45	2.2	2.2	21.38	20.96	188.38	388.84	5.37	5.28	6.91	6.91
Custer County	C16	RM 186.46	44311	20-yr	2228.5	718.94	714.53	3.02	2.81	44.66	30.93	185.83	661.48	3.93	2.71	4.41	4.41
Custer County	C16	RM 186.26	43996	20-yr	2228.5	718.67	714.27	2.71	2.58	35.87	27.33	205.3	395.31	3.98	3.02	4.4	4.4
Custer County	C16	RM 186.1	43730	20-yr	2228.5	718.59	713.9	2.03	2.03	20.58	20.58	292.86	385.41	3.74	3.74	4.69	4.69
Custer County	C16	RM 185.91	43424	20-yr	2194.6	718.41	713.84	2	1.99	18.16	17.31	388.35	488.11	2.83	2.69	4.57	4.57
Custer County	C16	RM 185.71	43110	20-yr	2194.6	717.79	713.84	3.06	2.94	37.04	25.9	325.31	488.69	2.19	1.53	3.95	3.95
Custer County	C16	RM 185.52	42808	20-yr	2194.6	717.78	713.71	1.71	1.6	14.97	10.6	365.38	566.52	3.46	2.45	4.07	4.07
Custer County	C16	RM 185.34	42508	20-yr	2194.6	717.56	713.28	1.96	1.93	16.02	14.97	510.83	628.43	2.19	2.05	4.28	4.28
Custer County	C16	RM 185.16	42219	20-yr	2194.6	717.48	712.93	1.49	1.45	11.35	9.5	419.95	1231	3.49	2.92	4.55	4.55
Custer County	C17	RM 184.95	41881	20-yr	2194.6	717.27	712.72	1.91	1.65	18.93	12.1	288.8	987.92	3.87	2.46	4.55	4.55
Custer County	C17	RM 184.78	41621	20-yr	2194.6	716.99	712.51	2.43	2.09	28.65	17.53	214.27	421.43	4.1	2.49	4.48	4.48
Custer County	C17	RM 184.59	41311	20-yr	2194.6	716.72	711.96	2.56	2.35	30.97	24.31	194.39	274.48	4.34	3.4	4.76	4.76
Custer County	C17	RM 184.4	41010	20-yr	2194.6	716.65	711.62	1.97	1.96	18.15	17.39	242.39	255.23	4.58	4.39	5.03	5.03
Custer County	C17	RM 184.23	40728	20-yr	2194.6	716.43	711.31	2.29	2.26	25.48	23.81	237.08	257.62	4.03	3.77	5.12	5.12
Custer County	C17	RM 184.1	40517	20-yr	2194.6	716.27	710.39	2.39	2.26	26.62	21.54	203.14	266.8	4.48	3.64	5.88	5.88
Custer County	C17		40500	20-yr	Bridge												
Custer County	C17	RM 184.08	40496	20-yr	2194.6	716.24	710.39	2.41	2.28	27.11	21.92	203.14	266.63	4.45	3.61	5.85	5.85
Custer County	C17	RM 184.03	40407	20-yr	2194.6	716.2	711.49	2.27	2.23	24.52	22.33	222.74	250.47	4.32	3.93	4.71	4.71
Custer County	C17	RM 183.83	40098	20-yr	2194.6	716.05	711.42	2.15	2.13	21.85	20.23	233.03	255.27	4.37	4.04	4.63	4.63
Custer County	C17	RM 183.65	39806	20-yr	2194.6	715.86	711.39	2.26	2.26	24.27	23.94	223.82	227.24	4.33	4.28	4.47	4.47
Custer County	C17	RM 183.47	39513	20-yr	2194.6	715.58	711.39	2.57	2.57	32.02	32.02	209.6	209.6	4.07	4.07	4.19	4.19
Custer County	C17	RM 183.28	39210	20-yr	2194.6	715.48	711.31	2.04	2.03	20.09	19.48	264.17	274.39	4.07	3.95	4.17	4.17
Custer County	C17	RM 183.09	38909	20-yr	2194.6	715.23	711.04	2.32	2.32	26.37	26.37	238.48	238.48	3.96	3.96	4.19	4.19
Custer County	C17	RM 182.94	38660	20-yr	2194.6	715.12	710.66	2.08	2.08	20.59	20.59	245.59	245.59	4.29	4.29	4.46	4.46
Custer County	C17	RM 182.72	38316	20-yr	2194.6	714.93	710.1	2.15	2.08	22.29	20.7	250.1	280.08	4.06	3.77	4.82	4.82

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	20-yr	2194.6	714.45	710.12	3.02	2.71	44.08	32.75	173.67	266.92	4.09	3.03	4.33	4.33
Custer County	C17	RM 182.34	37706	20-yr	2194.6	714.28	710.27	2.39	2.18	28.87	18.83	240.92	429.3	3.61	2.34	4.01	4.01
Custer County	C17	RM 182.15	37402	20-yr	2194.6	714.06	710.26	2.28	2.13	26.11	17.79	252.37	415.94	3.65	2.48	3.8	3.8
Custer County	C17	RM 181.97	37127	20-yr	2194.6	713.89	710.26	2.1	2.01	22.46	16.43	290.94	429.39	3.49	2.55	3.63	3.63
Custer County	C17	RM 181.78	36815	20-yr	2194.6	713.64	710.09	2.19	2.06	22.11	15.8	360.3	562.56	2.66	1.89	3.55	3.55
Custer County	C17	RM 181.59	36505	20-yr	2194.6	713.29	709.76	2.38	2.23	25.82	20.14	362.43	507.17	2.49	1.94	3.53	3.53
Custer County	C17	RM 181.37	36155	20-yr	2194.6	713.01	709.37	2.25	1.93	26.19	17.16	276.6	525.31	3.3	2.16	3.64	3.64
Custer County	C17	RM 181.23	35925	20-yr	2194.6	712.71	709.36	2.59	2.35	35.58	26.08	247.28	411.4	3.1	2.27	3.35	3.35
Custer County	C17	RM 181.03	35607	20-yr	2194.6	712.55	709.02	1.91	1.86	19.01	16.65	353.7	454.82	3.2	2.8	3.53	3.53
Custer County	C17	RM 180.83	35292	20-yr	2194.6	712.41	708.68	1.69	1.54	14.99	10.99	362.09	673.5	3.12	2.29	3.73	3.73
Custer County	C17	RM 180.66	35006	20-yr	2194.6	712.21	708.22	1.89	1.8	18.29	15.39	342.47	431.02	3.37	2.83	3.99	3.99
Custer County	C18	RM 180.46	34700	20-yr	2194.6	712.03	708.05	2	1.82	19.61	14.34	281.53	430.75	3.84	2.81	3.98	3.98
Custer County	C18	RM 180.29	34421	20-yr	2194.6	711.75	707.79	2.42	2.11	29.66	14.55	243.73	608.78	3.51	1.71	3.96	3.96
Custer County	C18	RM 180.08	34086	20-yr	2194.6	711.56	707.53	2.12	1.9	22.09	13.33	253.49	495.38	3.88	2.33	4.03	4.03
Custer County	C18	RM 179.9	33807	20-yr	2194.6	711.4	707.32	2.06	1.88	21.2	14.44	266.02	468.86	3.71	2.52	4.08	4.08
Custer County	C18	RM 179.73	33525	20-yr	2194.6	711.11	706.89	2.42	2.26	29.7	23.27	256.8	356.28	3.48	2.73	4.22	4.22
Custer County	C18	RM 179.54	33218	20-yr	2194.6	710.83	706.7	2.33	2.28	29.15	24.77	312.1	377.72	3	2.55	4.13	4.13
Custer County	C18	RM 179.35	32914	20-yr	2194.6	710.66	706.45	2.01	1.89	20.26	14.62	292.41	439	3.68	2.65	4.21	4.21
Custer County	C18	RM 179.16	32611	20-yr	2194.6	710.39	706.29	2.32	2.27	26.75	21.1	237.48	308.77	3.98	3.14	4.11	4.11
Custer County	C18	RM 178.99	32337	20-yr	2194.6	710.24	706.07	2.16	2.1	22.73	19.2	254.29	320.4	3.98	3.36	4.17	4.17
Custer County	C18	RM 178.79	32025	20-yr	2194.6	710.03	705.9	2.24	2.16	24.55	22.16	251.59	294.23	3.87	3.5	4.13	4.13
Custer County	C18	RM 178.61	31730	20-yr	2194.6	709.86	705.59	2.16	2.14	22.86	21.4	259.81	405.06	3.9	3.65	4.27	4.27
Custer County	C18	RM 178.43	31434	20-yr	2194.6	709.69	705.25	2.15	2.15	22.33	22	249.19	268.75	4.09	4.04	4.44	4.44
Custer County	C18	RM 178.23	31114	20-yr	2194.6	709.51	704.7	2.16	2.16	22.53	22.11	249.24	268.47	4.08	4	4.81	4.81
Custer County	C18	RM 178.06	30848	20-yr	2194.6	709.33	704.57	2.28	2.18	24.61	18.72	219.45	305.34	4.35	3.3	4.76	4.76
Custer County	C18	RM 177.88	30549	20-yr	2194.6	709.12	704.57	2.36	2.25	26.9	20.1	229.01	323.29	4.04	3.01	4.55	4.55
Custer County	C18	RM 177.66	30211	20-yr	2225.7	708.61	704.57	3.01	2.93	44.94	36.83	192.39	243.35	3.82	3.12	4.04	4.04
Custer County	C18	RM 177.49	29932	20-yr	2225.7	708.45	704.47	2.45	2.44	29.63	28.06	236.92	251.03	3.83	3.63	3.98	3.98
Custer County	C19	RM 177.3	29625	20-yr	2225.7	708.29	704.46	2.08	2.08	21.88	21.38	302.2	331.07	3.54	3.46	3.83	3.83
Custer County	C19	RM 177.11	29314	20-yr	2225.7	707.95	704.46	2.43	2.39	25.6	22.04	358.96	424.33	2.55	2.2	3.49	3.49
Custer County	C19	RM 176.93	29040	20-yr	2225.7	707.81	704.42	1.94	1.86	17.44	15.34	412.39	492.64	2.77	2.43	3.39	3.39
Custer County	C19	RM 176.74	28720	20-yr	2225.7	707.64	704.21	1.78	1.69	16.77	13.56	341.73	569.02	3.12	2.52	3.43	3.43
Custer County	C19	RM 176.53	28384	20-yr	2225.7	707.37	703.63	2.01	1.92	22.66	20.51	344.95	494.67	2.59	2.35	3.74	3.74
Custer County	C19	RM 176.36	28109	20-yr	2225.7	707.15	703.08	2.03	1.98	21.09	18.01	324.02	391.05	3.37	2.88	4.07	4.07
Custer County	C19	RM 176.18	27824	20-yr	2225.7	706.48	702.71	3.31	3.17	56.68	43.05	199.69	306.86	3.34	2.53	3.77	3.77
Custer County	C19	RM 176	27527	20-yr	2225.7	706.31	702.51	2.41	2.3	29.62	25.02	259.98	350.48	3.47	2.93	3.8	3.8
Custer County	C19	RM 175.81	27227	20-yr	2225.7	706.08	702.24	2.26	2.2	26.45	23.14	297.33	351.6	3.29	2.88	3.84	3.84
Custer County	C19	RM 175.62	26928	20-yr	2225.7	705.79	701.81	2.45	2.23	30.27	22.8	234.72	402.26	3.6	2.7	3.98	3.98
Custer County	C19	RM 175.43	26622	20-yr	2225.7	705.41	701.81	2.75	2.12	39.47	30.71	214.93	416.1	3.26	2.52	3.6	3.6
Custer County	C19	RM 175.25	26325	20-yr	2225.7	705.06	701.72	2.65	2.44	36.89	29.44	212.23	374.92	3.19	2.54	3.34	3.34
Custer County	C19	RM 175.08	26048	20-yr	2225.7	704.85	701.63	2.12	2.11	24.11	23.55	357.35	367.38	2.94	2.87	3.22	3.22
Custer County	C19	RM 174.9	25768	20-yr	2225.7	704.54	701.31	2.31	2.31	29.03	28.99	336.98	337.4	2.86	2.85	3.23	3.23
Custer County	C19	RM 174.69	25444	20-yr	2225.7	704.18	700.82	2.33	2.31	30.02	28.49	351.06	379.3	2.72	2.58	3.36	3.36
Custer County	C19	RM 174.49	25112	20-yr	2225.7	703.79	700.04	2.46	2.44	31.61	27.57	279.46	324.06	3.23	2.82	3.75	3.75
Custer County	C19	RM 174.32	24844	20-yr	2225.7	703.4	699.39	2.81	2.78	40.01	32.37	222.49	278.74	3.55	2.87	4.01	4.01
Custer County	C19	RM 174.13	24549	20-yr	2225.7	703.28	698.84	2.17	2.15	22.66	18.05	244.91	311.6	4.18	3.32	4.44	4.44
Custer County	C19	RM 173.94	24238	20-yr	2225.7	703.01	698.14	2.43	2.39	29.08	20.01	239.3	355.12	3.83	2.62	4.87	4.87
Custer County	C19	RM 173.75	23939	20-yr	2225.7	702.64	697.92	2.88	2.55	39.15	20.86	172.39	380.13	4.33	2.3	4.72	4.72
Custer County	C19	RM 173.57	23651	20-yr	2225.7	702.49	697.83	2.42	2.38	27.59	19.22	208.71	305.7	4.4	3.06	4.66	4.66
Custer County	C19	RM 173.39	23352	20-yr	2225.7	702.15	697.83	2.79	2.77	38.2	32.87	202.23	237.62	3.94	3.38	4.32	4.32
Custer County	C19	RM 173.2	23054	20-yr	2225.7	701.91	697.72	2.57	2.38	32.75	27.38	226.21	301.21	3.74	3.13	4.19	4.19
Custer County	C19	RM 173.02	22756	20-yr	2225.7	701.69	697.29	2.4	2.3	28.62	19.72	244.03	378.43	3.78	2.59	4.4	4.4
Custer County	C19	RM 172.82	22437	20-yr	2225.7	701.53	696.82	1.9	1.88	19.62	18.33	414.44	447.69	2.83	2.64	4.71	4.71
Custer County	C19	RM 172.67	22200	20-yr	2225.7	701.31	696.52	2.01	2	22.73	22.16	421.93	436.75	2.61	2.55	4.79	4.79
Custer County	C19	RM 172.49	21903	20-yr	2225.7	701.1	696.23	1.93	1.92	19.71	19.19	365.62	378.44	3.14	3.06	4.87	4.87
Custer County	C19	RM 172.29	21585	20-yr	2225.7	700.84	695.79	2.24	2.16	23.72	18.33	226.44	467.95	4.36	3.36	5.05	5.05
Custer County	C19	RM 172.12	21325	20-yr	2225.7	700.24	695.81	3.22	3.21	54.28	51.9	216.08	237.51	3.2	3.05	4.43	4.43
Custer County	C19		21310	20-yr	Bridge												
Custer County	C19	RM 172.11	21300	20-yr	2225.7	700.08	695.81	3.4	3.39	61.4	59.06	215.66	235.62	3.04	2.92	4.27	4.27
Custer County	C19	RM 171.89	20942	20-yr	2225.7	699.8	695.57	2.44	2.39	28.87	24.06	228.36	279.84	3.99	3.32	4.23	4.23

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	20-yr	2225.7	699.48	695.49	2.65	2.59	35.41	30.08	231.98	280.57	3.6	3.06	3.99	3.99
Custer County	C19	RM 171.52	20341	20-yr	2225.7	699.28	695.3	2.36	2.32	27.52	24.54	249.92	285.51	3.77	3.36	3.98	3.98
Custer County	C19	RM 171.34	20043	20-yr	2225.7	698.99	695.11	2.5	2.49	31.31	29.8	244.86	258.76	3.63	3.46	3.88	3.88
Custer County	C19	RM 171.15	19745	20-yr	2225.7	698.77	694.86	2.38	2.38	28.22	27.85	249.21	252.7	3.75	3.7	3.91	3.91
Custer County	C19	RM 170.96	19437	20-yr	2225.7	698.55	694.67	2.29	2.28	26.13	24.94	261.66	274.93	3.71	3.54	3.88	3.88
Custer County	C19	RM 170.78	19143	20-yr	2225.7	698.32	694.2	2.37	2.33	27.77	23.7	245.9	293.8	3.81	3.25	4.12	4.12
Custer County	C19	RM 170.58	18838	20-yr	2225.7	698.01	693.91	2.54	2.5	32.68	29.34	245.35	280.02	3.55	3.19	4.1	4.1
Custer County	C19	RM 170.4	18543	20-yr	2225.7	697.84	693.9	2.2	2.19	23.9	23.4	269.24	275.63	3.76	3.69	3.94	3.94
Custer County	C19	RM 170.22	18257	20-yr	2225.7	697.67	693.7	2.14	2.14	22.73	21.58	272.95	288.58	3.8	3.61	3.97	3.97
Custer County	C19	RM 170.03	17941	20-yr	2225.7	697.38	693.31	2.41	2.41	28.55	28.31	237.08	239.23	3.89	3.86	4.07	4.07
Custer County	C19	RM 169.84	17641	20-yr	2225.7	697.14	692.78	2.48	2.48	29.62	29.54	214.46	214.99	4.18	4.17	4.36	4.36
Custer County	C19	RM 169.65	17341	20-yr	2225.7	696.88	692.47	2.6	2.6	32.53	32.1	203.68	206.56	4.19	4.14	4.41	4.41
Custer County	C19	RM 169.47	17041	20-yr	2225.7	696.57	692.17	2.75	2.66	36.73	30.79	199.81	249.34	4.01	3.36	4.41	4.41
Custer County	C19	RM 169.28	16732	20-yr	2225.7	696.34	692	2.54	2.46	31.38	24.52	214.83	286.63	4.04	3.15	4.34	4.34
Custer County	C19	RM 169.09	16441	20-yr	2225.7	696.11	691.96	2.53	2.52	31.27	30.59	225.9	250.23	3.9	3.82	4.15	4.15
Custer County	C19	RM 168.91	16152	20-yr	2225.7	695.85	691.93	2.57	2.56	32.77	31.12	230.07	243.15	3.76	3.58	3.92	3.92
Custer County	C19	RM 168.72	15846	20-yr	2225.7	695.69	691.82	2.14	2.14	22.82	22.71	279.35	280.69	3.72	3.7	3.87	3.87
Custer County	C19	RM 168.51	15500	20-yr	2225.7	695.47	691.6	2.13	2.09	22.92	21.31	296.39	326.07	3.51	3.26	3.87	3.87
Custer County	C19	RM 168.35	15241	20-yr	2225.7	695.2	691.48	2.4	2.29	29.5	25.03	269.24	334.92	3.42	2.9	3.72	3.72
Custer County	C19	RM 168.15	14931	20-yr	2225.7	694.82	691.2	2.67	2.55	36.3	27.84	239.92	332.53	3.44	2.63	3.62	3.62
Custer County	C19	RM 167.97	14639	20-yr	2225.7	694.61	690.59	2.36	2.36	27.58	27.45	247.71	248.92	3.8	3.79	4.02	4.02
Custer County	C19	RM 167.79	14340	20-yr	2225.7	694.39	690.5	2.35	2.35	27.52	26.88	249.29	342.67	3.79	3.7	3.89	3.89
Custer County	C19	RM 167.61	14054	20-yr	2225.7	694.07	690.42	2.62	2.6	34.84	33.24	244.8	258.49	3.47	3.31	3.65	3.65
Custer County	C19	RM 167.41	13735	20-yr	2225.7	693.81	690.14	2.39	2.22	29.04	20.02	264.94	420.48	3.46	2.39	3.67	3.67
Custer County	C19	RM 167.22	13433	20-yr	2225.7	693.61	689.79	2.19	2.15	23.99	19.93	276.96	340.66	3.66	3.04	3.82	3.82
Custer County	C19	RM 167.04	13143	20-yr	2225.7	693.44	689.14	2.15	2.06	22.54	18.58	256.62	326.97	4	3.3	4.3	4.3
Custer County	C19	RM 166.85	12847	20-yr	2225.7	693.09	688.98	2.64	2.51	35.42	28.23	240.01	331.8	3.47	2.76	4.11	4.11
Custer County	C19	RM 166.67	12552	20-yr	2225.7	692.86	688.84	2.37	2.36	27.95	26.44	252.35	268.25	3.72	3.52	4.03	4.03
Custer County	C19	RM 166.52	12319	20-yr	2225.7	692.78	688.64	2.01	2	19.6	18.36	278.87	299.27	3.98	3.73	4.14	4.14
Custer County	C19	RM 166.31	11978	20-yr	2225.7	692.52	688.02	2.27	2.23	24.22	19.12	249.27	322.51	3.92	3.09	4.5	4.5
Custer County	C20	RM 166.2	11806	20-yr	2231.4	692.39	687.4	2.35	2.28	26.53	20.19	229.93	312.52	4.12	3.13	4.99	4.99
Custer County	C20	RM 166.06	11569	20-yr	2231.4	692.15	687.38	2.54	2.51	32.4	26.04	239.53	302.95	3.66	2.93	4.77	4.77
Custer County	C20	RM 165.92	11350	20-yr	2231.4	691.89	687.38	2.7	2.65	36.78	27.86	229.52	310.71	3.59	2.71	4.51	4.51
Custer County	C20	RM 165.73	11039	20-yr	2231.4	691.7	687.26	2.26	2.24	25.46	22.79	264.5	298.37	3.73	3.34	4.44	4.44
Custer County	C20	RM 165.55	10750	20-yr	2231.4	691.51	687.11	2.23	2.2	24.79	23.09	270.43	294	3.7	3.44	4.4	4.4
Custer County	C20	RM 165.35	10440	20-yr	2231.4	691.29	686.75	2.22	2.19	24.82	21.91	278.66	322.5	3.59	3.17	4.54	4.54
Custer County	C20	RM 165.17	10140	20-yr	2231.4	691.1	686.41	2.21	2.11	23.85	20.57	247.1	308.73	3.98	3.42	4.69	4.69
Custer County	C20	RM 165.01	9883	20-yr	2231.4	690.93	686.16	2.22	2.17	24.29	19.87	262.27	328.97	3.82	3.12	4.77	4.77
Custer County	C20	RM 164.81	9577	20-yr	2231.4	690.74	686.04	2.13	2.04	22.72	18.06	284.43	377.62	3.65	2.9	4.7	4.7
Custer County	C20	RM 164.61	9252	20-yr	2231.4	690.61	685.8	1.84	1.71	14.59	11.17	374.16	537.2	3.18	2.43	4.8	4.8
Custer County	C20	RM 164.42	8945	20-yr	2231.4	690.45	685.78	1.85	1.85	14.44	14.3	416.56	426.36	2.89	2.86	4.67	4.67
Custer County	C20	RM 164.23	8641	20-yr	2231.4	690.31	685.85	1.67	1.67	15.92	15.79	452.11	464.58	2.95	2.92	4.46	4.46
Custer County	C20	RM 164.06	8372	20-yr	2231.4	690.18	685.64	1.74	1.63	14.29	10.77	294.56	420.81	4.32	3.25	4.54	4.54
Custer County	C20	RM 163.85	8031	20-yr	2231.4	690.02	685	1.9	1.9	17.33	17.15	277.99	280.9	4.22	4.18	5.02	5.02
Custer County	C20	RM 163.67	7743	20-yr	2231.4	689.8	684.45	2.29	2.28	23.68	23.12	191.84	197.15	5.07	4.95	5.35	5.35
Custer County	C20	RM 163.48	7449	20-yr	2231.4	689.5	684.13	2.74	2.72	33.74	32.06	162.29	171.75	5.02	4.77	5.37	5.37
Custer County	C20	RM 163.3	7150	20-yr	2231.4	689.41	684.13	2.28	2.24	23.8	21.67	204.93	230.07	4.77	4.34	5.27	5.27
Custer County	C20	RM 163.12	6859	20-yr	2231.4	689.33	683.91	1.89	1.81	16.91	14.14	267.05	337.22	4.38	3.66	5.42	5.42
Custer County	C20	RM 162.94	6583	20-yr	2231.4	689.13	683.78	2.24	2.1	23	15.33	204.74	333.23	4.81	3.19	5.35	5.35
Custer County	C20	RM 162.74	6254	20-yr	2231.4	688.73	683.77	2.87	2.73	39.02	25.31	177.33	292.22	4.36	2.8	4.96	4.96
Custer County	C20	RM 162.55	5957	20-yr	2231.4	688.51	683.96	2.56	2.55	34.3	32.21	231.24	247.67	3.76	3.53	4.55	4.55
Custer County	C20	RM 162.34	5620	20-yr	2231.4	688.38	683.92	1.93	1.91	18.5	16.8	304.55	341.65	3.78	3.43	4.46	4.46
Custer County	C20	RM 162.18	5352	20-yr	2231.4	688.25	683.41	1.74	1.74	24.29	23.84	354.23	362.15	3.61	3.55	4.84	4.84
Custer County	C20	RM 162.03	5111	20-yr	2231.4	688.16	683.26	1.63	1.63	12.75	12.59	322.26	342.52	4.24	4.19	4.9	4.9
Custer County	C20	RM 161.81	4770	20-yr	2231.4	687.72	682.63	2.74	2.7	34.92	29.65	174.77	209.74	4.64	3.94	5.09	5.09
Custer County	C20	RM 161.62	4470	20-yr	2231.4	687.38	682.53	2.98	2.98	42.31	41.32	174.2	312.38	4.3	4.2	4.85	4.85
Custer County	C20	RM 161.43	4159	20-yr	2231.4	687.18	682.63	2.59	2.53	32.33	24.73	206.33	277.77	4.16	3.17	4.55	4.55
Custer County	C20	RM 161.24	3859	20-yr	2231.4	686.88	682.51	2.74	2.62	36.59	25.97	199.39	299.49	4.03	2.85	4.37	4.37
Custer County	C20	RM 161.06	3559	20-yr	2231.4	686.66	682.38	2.5	2.4	30.32	21.22	218.97	328.56	4.06	2.83	4.28	4.28
Custer County	C20	RM 160.87	3258	20-yr	2231.4	686.29	682.24	2.84	2.79	39.72	32.58	204.8	255.06	3.83	3.13	4.05	4.05

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	20-yr	2231.4	686.13	682.11	2.29	2.28	25.84	23.96	252.16	273.5	3.86	3.58	4.02	4.02
Custer County	C20	RM 160.5	2662	20-yr	2231.4	685.94	681.85	2.19	2.19	24.74	24.06	302.71	311.75	3.36	3.27	4.09	4.09
Custer County	C20	RM 160.31	2364	20-yr	2231.4	685.74	681.58	2.07	2.03	22.21	19.49	321.4	375.43	3.33	2.92	4.16	4.16
Custer County	C20	RM 160.12	2063	20-yr	2231.4	685.56	681.02	2.06	2	20.94	18.31	277.19	331.56	3.86	3.37	4.54	4.54
Custer County	C20	RM 159.93	1758	20-yr	2231.4	685.26	680.9	2.38	2.35	29.79	26.76	292.2	332.36	3.19	2.86	4.36	4.36
Custer County	C20	RM 159.75	1459	20-yr	2231.4	685.01	680.88	2.35	2.33	27.45	25.56	251.96	277.38	3.76	3.5	4.13	4.13
Custer County	C20	RM 159.55	1151	20-yr	2231.4	684.81	680.74	2.24	2.23	24.79	23.46	261.92	280.01	3.8	3.59	4.07	4.07
Custer County	C20	RM 159.38	876	20-yr	2231.4	684.57	680.37	2.43	2.35	28.64	22.54	229.23	302.99	3.99	3.14	4.2	4.2
Custer County	C20	RM 159.19	566	20-yr	2231.4	684.37	679.77	2.29	2.29	25.82	25.47	236.5	239.91	4.11	4.06	4.6	4.6
Custer County	C20	RM 158.98	229	20-yr	2231.4	684.1	679.44	2.46	2.43	29.04	26.94	217.29	238.06	4.16	3.86	4.66	4.66

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	20-yr	2237	684.1	679.22	2.41	2.36	27.44	23.24	214.16	259.5	4.33	3.66	4.88	4.88
Prairie County	C21	RM 158.55	61087	20-yr	2237	683.99	678.98	2.09	2.09	20.2	19.81	226.29	231.26	4.72	4.63	5.01	5.01
Prairie County	C21	RM 158.36	60787	20-yr	2237	683.86	678.83	2.02	2.02	19.24	18.54	249.45	284.12	4.43	4.27	5.03	5.03
Prairie County	C21	RM 158.17	60481	20-yr	2237	683.7	678.35	2.08	2.05	22.64	20.21	253.18	289.5	4.22	3.77	5.35	5.35
Prairie County	C21	RM 157.98	60173	20-yr	2237	683.39	678.22	2.49	2.44	30.38	25.89	231.17	278.18	3.88	3.3	5.17	5.17
Prairie County	C21	RM 157.78	59862	20-yr	2237	683.14	678.23	2.54	2.41	30.57	22.49	201.99	293.9	4.31	3.16	4.91	4.91
Prairie County	C21	RM 157.6	59561	20-yr	2237	683.03	678.14	2.11	2.04	20.81	16.58	233.85	305.4	4.5	3.58	4.89	4.89
Prairie County	C21	RM 157.38	59209	20-yr	2237	682.89	677.81	1.95	1.84	18.86	15.25	288.08	395.95	3.82	3.08	5.08	5.08
Prairie County	C21	RM 157.18	58885	20-yr	2237	682.74	677.42	1.97	1.71	18.27	10.88	235.66	507.94	4.49	2.66	5.32	5.32
Prairie County	C21	RM 156.99	58595	20-yr	2237	682.48	677.32	2.49	2.01	28.89	15.67	173.83	450.6	4.59	2.46	5.16	5.16
Prairie County	C21	RM 156.8	58287	20-yr	2237	682.04	677.32	3.16	2.56	47.81	28.91	149.83	347.84	4.21	2.52	4.72	4.72
Prairie County	C21	RM 156.62	57990	20-yr	2237	681.95	677.29	2.29	2.17	24.93	19.99	207.6	301.63	4.26	3.41	4.66	4.66
Prairie County	C21	RM 156.42	57683	20-yr	2237	681.83	677.21	1.96	1.9	18.6	15.37	271.12	343.77	4.17	3.43	4.62	4.62
Prairie County	C21	RM 156.24	57378	20-yr	2237	681.55	676.91	2.37	2.29	27.93	23.35	245.34	307.54	3.81	3.18	4.64	4.64
Prairie County	C21	RM 156.04	57069	20-yr	2237	681.4	676.56	2.16	2.09	21.84	17.25	226.07	298.36	4.55	3.58	4.84	4.84
Prairie County	C21	RM 155.85	56762	20-yr	2237	681.14	676.11	2.47	2.34	28.73	19.98	204.3	314.42	4.4	3.04	5.03	5.03
Prairie County	C21	RM 155.66	56455	20-yr	2237	680.74	675.96	2.95	2.7	41.86	25.45	177.05	326.18	4.21	2.54	4.78	4.78
Prairie County	C21	RM 155.47	56151	20-yr	2237	680.62	675.89	2.26	2.15	25.35	18.56	257.44	374.94	3.8	2.78	4.73	4.73
Prairie County	C21	RM 155.27	55835	20-yr	2237	680.42	675.92	2.1	2.1	22.87	21.87	317.77	333.14	3.34	3.2	4.5	4.5
Prairie County	C21	RM 155.08	55530	20-yr	2237	680.18	675.95	2.18	2.16	24.19	22.73	296.49	317.52	3.46	3.25	4.23	4.23
Prairie County	C21	RM 154.88	55209	20-yr	2237	679.99	675.64	2.07	2.07	20.96	20.78	300.68	303.26	3.6	3.57	4.35	4.35
Prairie County	C21	RM 154.69	54901	20-yr	2237	679.68	675.39	2.42	2.4	29.74	28.01	264.93	291.14	3.49	3.28	4.29	4.29
Prairie County	C21	RM 154.5	54588	20-yr	2237	679.43	675.02	2.36	2.34	27.9	26.62	257.32	278	3.67	3.51	4.41	4.41
Prairie County	C21	RM 154.3	54273	20-yr	2237	679.23	674.8	2.21	2.2	24.44	23.87	277.5	284.92	3.65	3.57	4.43	4.43
Prairie County	C21	RM 154.1	53959	20-yr	2237	678.97	674.67	2.32	2.3	27.2	24.61	269.5	301.39	3.57	3.23	4.3	4.3
Prairie County	C21	RM 153.91	53650	20-yr	2237	678.79	674.51	2.14	2.13	22.22	20.79	260.55	280.51	4.01	3.75	4.28	4.28
Prairie County	C21	RM 153.72	53338	20-yr	2237	678.55	674.06	2.34	2.2	26.13	17.77	225.99	364.08	4.19	2.84	4.49	4.49
Prairie County	C21	RM 153.52	53023	20-yr	2237	678.17	673.78	2.82	2.6	39.73	31.67	206.24	294.85	3.67	2.92	4.39	4.39
Prairie County	C21	RM 153.32	52704	20-yr	2237	677.87	673.64	2.54	2.53	32.73	30.54	249.02	273.26	3.53	3.29	4.23	4.23
Prairie County	C21	RM 153.12	52380	20-yr	2237	677.69	673.43	2.15	2.14	22.78	21.55	270.43	314.49	3.84	3.63	4.26	4.26
Prairie County	C21	RM 152.92	52065	20-yr	2237	677.51	672.88	2.12	2.11	21.54	19.92	270.6	368.99	3.9	3.6	4.63	4.63
Prairie County	C21	RM 152.73	51762	20-yr	2237	677.33	672.27	2.14	2.12	22.38	19.27	271.58	320.21	3.84	3.3	5.06	5.06
Prairie County	C21	RM 152.54	51463	20-yr	2237	677.14	671.85	2.19	2.19	23.15	22.91	251.98	284.43	4.06	4.02	5.29	5.29
Prairie County	C21	RM 152.35	51157	20-yr	2237	676.99	671.41	2.09	2.09	20.4	19.73	229.76	238.34	4.65	4.49	5.58	5.58
Prairie County	C21	RM 152.16	50852	20-yr	2237	676.86	671.23	2.01	1.97	19.41	17.1	268.26	311.17	4.14	3.64	5.63	5.63
Prairie County	C21	RM 151.97	50546	20-yr	2237	676.74	670.99	1.93	1.8	15.32	12.87	284.09	377.59	3.94	3.3	5.75	5.75
Prairie County	C21	RM 151.77	50227	20-yr	2237	676.64	670.87	1.9	1.67	16.12	10.6	204.89	395.36	5.2	3.39	5.77	5.77
Prairie County	C21	RM 151.59	49936	20-yr	2237	676.31	670.75	2.72	2.41	33.76	19.44	152.18	334.51	4.9	2.78	5.56	5.56
Prairie County	C21	RM 151.38	49599	20-yr	2237	676.17	670.9	2.29	2.14	24.01	18.95	199.41	303.12	4.8	3.77	5.27	5.27
Prairie County	C21	RM 151.19	49287	20-yr	2237	676.06	670.96	2.06	2.03	19.5	16.96	226.6	264.84	4.78	4.16	5.1	5.1
Prairie County	C21	RM 151.01	49012	20-yr	2237	675.96	670.91	1.89	1.89	18.14	17.81	288.76	313.32	4.09	4.02	5.05	5.05
Prairie County	C21	RM 150.81	48683	20-yr	2237	675.87	670.79	1.57	1.56	10.77	10.65	428.92	435.16	3.33	3.29	5.08	5.08
Prairie County	C21	RM 150.63	48400	20-yr	2647.6	675.76	670.45	1.68	1.66	12.61	12.02	405.47	433.81	3.86	3.68	5.31	5.31
Prairie County	C21	RM 150.44	48094	20-yr	2647.6	675.55	669.86	2.1	2.01	20.27	17.83	273.64	332.26	4.5	3.96	5.69	5.69
Prairie County	C21	RM 150.25	47780	20-yr	2647.6	675.03	669.38	3.16	3.03	52.41	40.56	166.06	232.31	4.99	3.85	5.65	5.65
Prairie County	C21	RM 150.05	47474	20-yr	2647.6	674.93	669.21	2.48	2.47	27.55	25.54	204.16	221.82	5.22	4.83	5.72	5.72
Prairie County	C21	RM 149.87	47178	20-yr	2647.6	674.8	669.02	2.27	2.22	24.63	21.02	269.57	325.76	4.3	3.66	5.78	5.78
Prairie County	C21	RM 149.66	46846	20-yr	2647.6	674.68	668.97	1.95	1.9	16.66	14.17	331.18	401.92	4.08	3.46	5.71	5.71
Prairie County	C21	RM 149.48	46551	20-yr	2647.6	674.37	668.91	2.52	2.42	31.07	21.28	261.52	492.51	3.98	2.72	5.46	5.46
Prairie County	C21	RM 149.27	46219	20-yr	2647.6	674.16	668.94	2.46	2.05	28.25	15.85	208.49	653.78	4.35	2.42	5.22	5.22
Prairie County	D1	RM 149.08	45914	20-yr	2647.6	673.96	668.95	2.34	2.23	25.78	17.27	254.75	422.08	4.4	2.94	5.01	5.01
Prairie County	D1	RM 148.89	45608	20-yr	2650.5	673.87	668.96	1.91	1.9	17.16	16.68	314.73	419.31	4.41	4.29	4.91	4.91
Prairie County	D1	RM 148.7	45301	20-yr	2650.5	673.73	668.73	1.94	1.92	18.59	17.48	347.94	374.73	3.91	3.68	5	5
Prairie County	D1	RM 148.5	44987	20-yr	2650.5	673.48	668.42	2.34	2.13	25.39	19.4	235.13	351.29	4.65	3.55	5.06	5.06
Prairie County	D1	RM 148.3	44667	20-yr	2650.5	673.13	668.01	2.81	2.54	36.21	25.57	193.35	312.14	4.75	3.34	5.12	5.12
Prairie County	D1	RM 148.11	44353	20-yr	2650.5	672.99	667.73	2.42	2.32	26.98	22.92	230.09	295.77	4.7	3.99	5.26	5.26
Prairie County	D1	RM 147.93	44062	20-yr	2650.5	672.88	667.4	2.09	2.08	20.99	20.23	306.12	319.49	4.14	3.99	5.48	5.48
Prairie County	D1	RM 147.74	43761	20-yr	2650.5	672.74	667.21	2.07	1.9	21.09	16.69	251.8	397.74	4.44	3.5	5.53	5.53
Prairie County	D1	RM 147.55	43454	20-yr	2650.5	672.54	666.79	2.34	2.11	24.99	18.34	197.43	349.42	4.93	3.59	5.75	5.75
Prairie County	D1	RM 147.34	43128	20-yr	2650.5	672.32	666.46	2.55	2.25	29.27	19.82	173.86	344.96	5.12	3.42	5.86	5.86

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	20-yr	2650.5	672.12	666.42	2.61	2.31	31.25	22.17	178.57	338.01	4.82	3.39	5.7	5.7
Prairie County	D1	RM 146.96	42505	20-yr	2650.5	671.83	666.49	2.77	2.68	34.53	29.5	187.33	233.69	5.06	4.32	5.34	5.34
Prairie County	D1	RM 146.77	42199	20-yr	2650.5	671.71	666.48	2.39	2.39	26.03	25.81	225.09	226.77	4.92	4.89	5.23	5.23
Prairie County	D1	RM 146.58	41899	20-yr	2650.5	671.64	666.59	1.94	1.94	17.61	17.32	296.32	301.5	4.6	4.53	5.05	5.05
Prairie County	D1	RM 146.32	41487	20-yr	2650.5	671.39	666.62	2.13	2.12	21.61	20.35	325.06	348.52	3.81	3.59	4.77	4.77
Prairie County	D1	RM 146	40968	20-yr	2650.5	671.05	666.48	2.26	2.24	25.44	24.29	277.27	292.8	4.23	4.04	4.57	4.57
Prairie County	D1	RM 145.65	40420	20-yr	2650.5	670.67	665.52	2.39	2.36	28.34	25.47	247.14	278.94	4.48	4.03	5.15	5.15
Prairie County	D1	RM 145.36	39958	20-yr	2650.5	670.41	664.91	2.24	2.2	25.21	22.61	264.9	302.57	4.44	3.99	5.5	5.5
Prairie County	D1	RM 145.13	39579	20-yr	2650.5	670.23	664.58	2.11	2.09	21.65	19.45	266.31	300.23	4.71	4.23	5.65	5.65
Prairie County	D1	RM 144.92	39251	20-yr	2650.5	670.08	664.24	2.09	2.06	22.03	19.54	272.39	311.13	4.66	4.13	5.84	5.84
Prairie County	D1	RM 144.73	38942	20-yr	2650.5	669.89	663.99	2.2	2.14	24.26	20.36	264.25	326.9	4.53	3.79	5.9	5.9
Prairie County	D1	RM 144.56	38672	20-yr	2650.5	669.7	663.14	2.31	2.26	25.42	22.72	265.15	306.65	4.29	3.83	6.56	6.56
Prairie County	D1		38642.5	20-yr	Bridge												
Prairie County	D1	RM 144.52	38613	20-yr	2650.5	669.61	663.14	2.36	2.32	26.76	23.85	265.15	305.6	4.21	3.74	6.48	6.48
Prairie County	D1	RM 144.33	38305	20-yr	2650.5	669.42	664.19	2.39	2.29	26.43	20.7	232.15	315.88	4.7	3.67	5.23	5.23
Prairie County	D1	RM 144.13	37987	20-yr	2650.5	669.31	664.33	2.05	2	19.32	16.93	271.37	318.76	4.74	4.16	4.98	4.98
Prairie County	D1	RM 143.91	37637	20-yr	2650.5	669.2	663.96	1.88	1.73	16.39	12.1	299.48	454.51	4.57	3.37	5.24	5.24
Prairie County	D1	RM 143.71	37320	20-yr	2650.5	668.84	663.43	2.7	2.48	33.06	22.45	191.55	316.68	5	3.37	5.41	5.41
Prairie County	D1	RM 143.45	36908	20-yr	2650.5	668.39	663.01	3.08	2.94	43.51	34.05	179.26	242.92	4.75	3.71	5.38	5.38
Prairie County	D1	RM 143.21	36511	20-yr	2650.5	668.23	662.92	2.41	2.39	26.5	24.51	224.58	245.64	4.88	4.52	5.31	5.31
Prairie County	D1	RM 142.97	36139	20-yr	2650.5	668.06	662.7	2.28	2.26	23.52	22.01	232.06	250.57	5	4.68	5.36	5.36
Prairie County	D1	RM 142.71	35717	20-yr	2650.5	667.55	662.52	3.04	3.03	42.99	42.39	191.67	194.54	4.56	4.49	5.03	5.03
Prairie County	D1	RM 142.46	35322	20-yr	2650.5	667.41	662.36	2.28	2.24	24.2	20.39	254.79	307.94	4.56	3.83	5.05	5.05
Prairie County	D1	RM 142.23	34952	20-yr	2650.5	667.17	662.21	2.41	2.35	26.88	21.98	237.35	299.14	4.62	3.77	4.96	4.96
Prairie County	D1	RM 142.02	34614	20-yr	2650.5	666.96	662.21	2.36	2.23	27.3	21.97	269.68	378.86	3.9	3.14	4.75	4.75
Prairie County	D1	RM 141.8	34258	20-yr	2650.5	666.87	662.01	1.7	1.7	13.99	13.74	393.92	402.25	3.94	3.88	4.86	4.86
Prairie County	D1	RM 141.6	33942	20-yr	2650.5	666.64	661.72	2.11	2.1	19.2	19.04	365.81	369.03	3.44	3.41	4.92	4.92
Prairie County	D1	RM 141.42	33642	20-yr	2650.5	666.57	661.32	1.66	1.65	10.79	10.67	466.1	471.97	3.43	3.4	5.25	5.25
Prairie County	D1	RM 141.22	33325	20-yr	2650.5	666.45	660.91	1.77	1.77	14.59	14.36	326.47	335.79	4.58	4.52	5.54	5.54
Prairie County	D1	RM 141.02	33011	20-yr	2650.5	666.1	660.58	2.62	2.6	30.56	28.76	194.42	207.92	5.21	4.9	5.52	5.52
Prairie County	D1	RM 140.84	32709	20-yr	2650.5	666	660.35	2.25	2.25	23.2	22.23	241.98	253.06	4.86	4.66	5.65	5.65
Prairie County	D1	RM 140.64	32394	20-yr	2650.5	665.9	660.07	2.06	2.05	18.64	17.68	239.5	254.55	5.37	5.09	5.83	5.83
Prairie County	D1	RM 140.44	32074	20-yr	2650.5	665.69	659.63	2.36	2.34	25.1	23.5	225.88	243.6	4.97	4.65	6.06	6.06
Prairie County	D1	RM 140.23	31738	20-yr	2650.5	665.38	659.62	2.71	2.69	33.66	31.89	207.01	219.87	4.71	4.48	5.76	5.76
Prairie County	D1	RM 140.03	31420	20-yr	2650.5	665.28	659.59	2.19	2.19	21.87	20.76	253.77	267.47	4.77	4.53	5.69	5.69
Prairie County	D1	RM 139.84	31118	20-yr	2650.5	665.18	659.19	1.95	1.91	17.88	16.37	309.19	348.41	4.39	4.02	5.99	5.99
Prairie County	D1	RM 139.64	30801	20-yr	2650.5	665.02	658.96	2.14	1.99	20.06	13.12	222.13	374.08	5.47	3.56	6.06	6.06
Prairie County	D1	RM 139.44	30466	20-yr	2650.5	664.9	658.72	2.07	1.96	19.23	14.42	250.57	356.69	5.06	3.79	6.18	6.18
Prairie County	D1	RM 139.23	30138	20-yr	2650.5	664.74	658.34	2.15	2.14	23.15	22.24	219.78	229.75	5.61	5.4	6.4	6.4
Prairie County	D1	RM 139.02	29799	20-yr	2650.5	664.38	658.14	2.77	2.72	41.33	35.41	179.74	215.1	5.3	4.53	6.24	6.24
Prairie County	D1	RM 138.81	29470	20-yr	2650.5	664.33	658.11	2.04	2.01	20.66	18.79	219.94	247.47	5.88	5.34	6.22	6.22
Prairie County	D1	RM 138.62	29157	20-yr	2650.5	664.19	657.94	2.16	2.09	20.21	17.79	216.79	256.11	5.63	4.95	6.25	6.25
Prairie County	D1	RM 138.41	28823	20-yr	2650.5	663.97	657.82	2.43	2.36	28.68	25.69	202.45	234.05	5.35	4.79	6.15	6.15
Prairie County	D1	RM 138.22	28519	20-yr	2650.5	663.8	657.8	2.45	2.4	26.3	22.99	198.68	231.58	5.44	4.77	6	6
Prairie County	D1	RM 138.02	28200	20-yr	2650.5	663.78	657.74	1.84	1.83	15.77	14.9	246.99	264.47	5.8	5.49	6.03	6.03
Prairie County	D1	RM 137.82	27874	20-yr	2650.5	663.65	656.95	1.95	1.91	18.19	15.9	263.32	307.73	5.15	4.5	6.7	6.7
Prairie County	D1	RM 137.62	27552	20-yr	2650.5	663.46	656.75	2.2	2.15	23.78	21.56	234.81	459.57	5.11	4.63	6.71	6.71
Prairie County	D1	RM 137.42	27247	20-yr	2650.5	663.24	656.66	2.43	2.42	28.71	27.34	204.7	247.89	5.32	5.07	6.58	6.58
Prairie County	D1	RM 137.24	26944	20-yr	2650.5	663.08	656.66	2.38	2.36	28.3	26.32	205.46	263.2	5.4	5.02	6.42	6.42
Prairie County	D1	RM 137.04	26627	20-yr	2664.6	662.91	655.41	2.36	2.35	27.32	26.37	208.71	217.05	5.4	5.22	7.5	7.5
Prairie County	D1		26616.5	20-yr	Bridge												
Prairie County	D1	RM 137.02	26606	20-yr	2664.6	662.88	655.41	2.38	2.37	27.73	26.77	208.58	216.84	5.37	5.19	7.47	7.47
Prairie County	D2	RM 136.84	26475	20-yr	2664.6	662.83	656.46	2.22	2.22	22.84	22.45	207.19	210.9	5.79	5.69	6.37	6.37
Prairie County	D2		26471.5	20-yr	Bridge												
Prairie County	D2	RM 136.65	26468	20-yr	2664.6	662.82	656.45	2.22	2.21	23.07	22.13	207.2	216.72	5.8	5.57	6.37	6.37
Prairie County	D2	RM 136.44	26317	20-yr	2664.6	662.78	656.37	2	1.99	19.14	17.67	228.7	248.75	5.82	5.38	6.41	6.41
Prairie County	D2	RM 136.23	26001	20-yr	2664.6	662.63	656.19	2.14	2.11	21.15	18.05	246.47	293.83	5.04	4.29	6.44	6.44
Prairie County	D2	RM 136.04	25673	20-yr	2664.6	662.47	656.01	2.23	2.2	21.02	18.51	211.82	256.44	5.63	4.95	6.46	6.46
Prairie County	D2	RM 135.85	25337	20-yr	2664.6	662.23	655.93	2.57	2.57	28.96	28.3	186.08	190.29	5.56	5.45	6.3	6.3
Prairie County	D2	RM 135.66	25033	20-yr	2664.6	662.11	655.91	2.38	2.37	24.78	23.8	202.14	231.71	5.53	5.32	6.2	6.2

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	20-yr	2664.6	661.94	655.86	2.39	2.36	30.08	26.86	199.11	226.14	5.58	4.98	6.08	6.08
Prairie County	D2	RM 135.24	24417	20-yr	2664.6	661.87	655.68	1.99	1.97	20.23	18.77	229.44	248.89	5.84	5.42	6.19	6.19
Prairie County	D2	RM 135	24090	20-yr	2664.6	661.72	655.56	2.11	2.09	22.1	20.13	246.98	275.06	5.1	4.65	6.16	6.16
Prairie County	D2	RM 134.78	23742	20-yr	2664.6	661.56	655.36	2.13	2.11	22.31	20.08	223.84	270.45	5.59	5.03	6.2	6.2
Prairie County	D2	RM 134.58	23351	20-yr	2664.6	661.25	655.29	2.56	2.54	34.39	31.91	189.75	221.41	5.48	5.08	5.96	5.96
Prairie County	D2	RM 134.39	23000	20-yr	2664.6	661.05	655.24	2.43	2.38	31.08	27.89	216.99	248.64	5.03	4.51	5.81	5.81
Prairie County	D2	RM 134.19	22682	20-yr	2664.6	660.91	655.11	2.16	2.07	21.61	18.8	263.97	582.66	4.62	4.02	5.8	5.8
Prairie County	D2	RM 133.99	22372	20-yr	2664.6	660.79	654.97	2.08	2.04	19.41	16.81	264.94	314.83	4.81	4.15	5.82	5.82
Prairie County	D2	RM 133.79	22053	20-yr	2664.6	660.56	655	2.39	2.28	25.97	19.64	226.1	317.13	4.89	3.69	5.56	5.56
Prairie County	D2	RM 133.59	21733	20-yr	2664.6	660.41	654.96	2.25	2.22	23.26	20.66	247	282.35	4.78	4.24	5.45	5.45
Prairie County	D2	RM 133.41	21417	20-yr	2664.6	660.29	654.78	2.11	2.07	20.08	17.39	254.87	301.07	4.95	4.28	5.51	5.51
Prairie County	D2	RM 133.21	21104	20-yr	2664.6	660.1	654.64	2.31	2.24	24.19	20.35	229.84	294.9	4.98	4.18	5.46	5.46
Prairie County	D2	RM 133.02	20811	20-yr	2664.6	659.97	654.53	2.22	2.18	22.51	19.34	246.2	304.78	4.85	4.17	5.44	5.44
Prairie County	D2	RM 132.83	20491	20-yr	2664.6	659.82	654.29	2.18	2.09	22.05	17.49	262.67	350.57	4.59	3.64	5.53	5.53
Prairie County	D2	RM 132.63	20184	20-yr	2664.6	659.69	654.04	2.11	1.94	20.61	15.35	254.86	399.66	4.63	3.44	5.65	5.65
Prairie County	D2	RM 132.42	19875	20-yr	2664.6	659.49	653.98	2.3	2.17	23.77	17.79	221.68	326.08	5.05	3.77	5.51	5.51
Prairie County	D2	RM 132.23	19553	20-yr	2664.6	659.41	653.88	1.95	1.83	17.02	13.11	257.21	367.37	5.14	3.95	5.53	5.53
Prairie County	D2	RM 132.02	19225	20-yr	2664.6	659.19	653.63	2.29	2.2	24.13	19.95	246.48	311.84	4.7	3.88	5.56	5.56
Prairie County	D2	RM 131.81	18910	20-yr	2664.6	658.97	653.37	2.45	2.34	27.5	22.01	226.33	297.61	4.78	3.82	5.6	5.6
Prairie County	D2	RM 131.58	18573	20-yr	2664.6	658.88	653.02	2.08	2.02	19.1	16.5	238.03	306.13	5.36	4.62	5.86	5.86
Prairie County	D2	RM 131.38	18237	20-yr	2664.6	658.72	652.75	2.22	2.1	21.63	18.96	212.37	267.54	5.39	4.73	5.97	5.97
Prairie County	D2	RM 131.18	17875	20-yr	2664.6	658.45	652.49	2.52	2.48	28.55	25.11	209.79	243.23	5.04	4.42	5.96	5.96
Prairie County	D2	RM 130.98	17548	20-yr	2664.6	658.25	652.34	2.56	2.47	29.23	25.01	197.09	240.78	5.23	4.47	5.91	5.91
Prairie County	D2	RM 130.78	17227	20-yr	2664.6	658.12	652.27	2.33	2.21	24.18	17.18	216.24	335.48	5.24	3.71	5.85	5.85
Prairie County	D2	RM 130.59	16914	20-yr	2664.6	658.05	652.16	2.01	1.95	17.72	14.86	239.07	296.62	5.51	4.61	5.89	5.89
Prairie County	D2	RM 130.39	16588	20-yr	2664.6	657.85	651.95	2.31	2.31	23.5	23.11	212.42	215.86	5.43	5.35	5.9	5.9
Prairie County	D2	RM 130.19	16280	20-yr	2664.6	657.68	651.81	2.39	2.39	25.81	25.41	219.93	233.44	5.06	4.99	5.87	5.87
Prairie County	D2	RM 130	15965	20-yr	2664.6	657.58	651.57	2.12	2.12	20.22	19.95	244.4	259.93	5.13	5.07	6.01	6.01
Prairie County	D2	RM 129.81	15649	20-yr	2664.6	657.47	651.47	2.06	2.03	18.55	17.12	235.14	269.42	5.5	5.07	6	6
Prairie County	D2	RM 129.62	15337	20-yr	2664.6	657.28	651.34	2.32	2.19	23.92	16.71	216.64	334.09	5.25	3.65	5.94	5.94
Prairie County	D2	RM 129.43	15031	20-yr	2664.6	657.17	651.21	2.17	2.15	20.77	18.86	227.37	253.81	5.39	4.89	5.96	5.96
Prairie County	D2	RM 129.24	14724	20-yr	2715.6	656.96	651.06	2.42	2.4	26.45	24.14	222.31	288.2	5.04	4.6	5.9	5.9
Prairie County	D2	RM 129.04	14417	20-yr	2715.6	656.74	651.06	2.57	2.53	29.72	27.08	209.54	277.9	5.04	4.6	5.68	5.68
Prairie County	D2	RM 128.82	14112	20-yr	2715.6	656.55	651.05	2.59	2.57	30.27	28.61	209.12	291.35	5.01	4.74	5.5	5.5
Prairie County	D2	RM 128.62	13798	20-yr	2715.6	656.42	651.08	2.33	2.33	24.47	23.89	228.13	343.83	5.1	4.98	5.34	5.34
Prairie County	D2	RM 128.41	13446	20-yr	2715.6	656.27	651.07	2.2	2.17	22.11	19.54	255.09	293.58	4.83	4.26	5.2	5.2
Prairie County	D2	RM 128.21	13125	20-yr	2715.6	656.11	650.98	2.25	2.13	23.1	17.73	246.55	343.99	4.84	3.7	5.13	5.13
Prairie County	D2	RM 127.98	12790	20-yr	2715.6	655.95	650.84	2.21	2.18	22.27	17.65	250.67	321.94	4.89	3.87	5.11	5.11
Prairie County	D2	RM 127.75	12473	20-yr	2715.6	655.84	650.59	2	1.99	18.41	15.04	287.96	354.75	4.72	3.85	5.25	5.25
Prairie County	D2	RM 127.55	12112	20-yr	2715.6	655.7	650.35	1.98	1.93	18.02	15.46	287.38	345.52	4.75	4.07	5.35	5.35
Prairie County	D2	RM 127.27	11729	20-yr	2715.6	655.55	649.95	2.01	1.99	18.34	16.32	277.2	315.3	4.87	4.34	5.6	5.6
Prairie County	D2	RM 126.97	11415	20-yr	2715.6	655.31	649.68	2.38	2.35	25.6	22.99	226.77	256.88	5.02	4.5	5.63	5.63
Prairie County	D2	RM 126.71	10962	20-yr	2715.6	655.08	649.49	2.38	2.37	25.16	24.07	218.29	242.59	5.23	5.02	5.59	5.59
Prairie County	D2	RM 126.43	10478	20-yr	2715.6	654.96	649.32	1.92	1.91	16.45	15.55	275.96	292.99	5.13	4.86	5.64	5.64
Prairie County	D2	RM 126.42	10074	20-yr	2715.6	654.72	649.05	2.25	2.21	23.18	20.54	249.83	287.73	4.81	4.26	5.67	5.67
Prairie County	D2	RM 126.41	9625	20-yr	2715.6	654.46	648.27	2.37	2.28	24.92	19.33	220.07	296.7	5.17	4.01	6.19	6.19
Prairie County	D2		9598.5	20-yr	Bridge												
Prairie County	D2	RM 126.4	9572	20-yr	2715.6	654.4	648.27	2.39	2.31	25.63	19.9	220.07	295.52	5.12	3.97	6.13	6.13
Prairie County	D3	RM 126.38	9533	20-yr	2715.6	654.38	648.27	2.41	2.33	25.93	20.13	220.07	295.04	5.09	3.95	6.1	6.1
Prairie County	D3		9523	20-yr	Bridge												
Prairie County	D3	RM 126.36	9513	20-yr	2715.6	654.35	648.27	2.42	2.34	26.25	20.39	220.07	294.52	5.07	3.93	6.08	6.08
Prairie County	D3	RM 126.22	9286	20-yr	2715.6	654.27	648.8	2.17	2.17	21.18	20.92	246.62	259.17	5.07	5.01	5.47	5.47
Prairie County	D3	RM 126.03	8974	20-yr	2715.6	654.16	648.71	2.03	2.02	18.79	18.04	269.32	283.11	4.95	4.76	5.45	5.45
Prairie County	D3	RM 125.82	8648	20-yr	2715.6	654.03	648.36	2.04	2.04	19.22	18.88	282.4	297.39	4.71	4.63	5.67	5.67
Prairie County	D3	RM 125.63	8335	20-yr	2715.6	653.91	648.12	2.01	1.98	18.12	17	259.94	281.83	5.17	4.86	5.79	5.79
Prairie County	D3	RM 125.43	8020	20-yr	2715.6	653.73	647.8	2.25	2.12	22.3	16.32	217.06	321.53	5.47	3.98	5.93	5.93
Prairie County	D3	RM 125.24	7711	20-yr	2715.6	653.65	647.26	2.06	1.97	18.18	12.56	226.37	347.36	5.78	3.97	6.39	6.39
Prairie County	D3	RM 125.05	7403	20-yr	2715.6	653.5	647.23	2.22	2.1	21.19	14.81	209.96	321.29	5.78	4.02	6.27	6.27
Prairie County	D3	RM 124.83	7059	20-yr	2715.6	653.4	647.25	2.07	2.03	18.74	16.85	237.41	299.6	5.51	4.95	6.15	6.15
Prairie County	D3	RM 124.62	6712	20-yr	2715.6	653.28	647.25	2.04	2.01	18.7	16.01	257.84	306.51	5.14	4.4	6.03	6.03

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	20-yr	2715.6	653.04	647.27	2.4	2.21	25.96	13.09	221.62	653.2	5.03	2.52	5.77	5.77
Prairie County	D3	RM 124.15	5960	20-yr	2715.6	652.78	647.27	2.47	2.32	28.25	16.13	232.47	518.27	4.68	2.66	5.51	5.51
Prairie County	D3	RM 123.94	5627	20-yr	2715.6	652.43	647.27	2.88	2.56	38.46	19.57	199.91	452.58	4.63	2.34	5.16	5.16
Prairie County	D3	RM 123.74	5312	20-yr	2715.6	652.17	647.25	2.81	2.57	36.62	21.19	206.88	396.96	4.62	2.66	4.92	4.92
Prairie County	D3	RM 123.56	5014	20-yr	2715.6	652.2	647.24	1.78	1.63	14.54	7.89	311.23	635.12	4.84	2.62	4.96	4.96
Prairie County	D3	RM 123.24	4500	20-yr	2715.6	652.04	647.19	1.15	1.15	16.72	16.66	930.49	934.12	2.54	2.53	4.85	4.85
Prairie County	D3	RM 122.99	4116	20-yr	2715.6	651.86	646.67	1.36	1.32	8.62	7.98	527.26	587.71	3.77	3.49	5.19	5.19
Prairie County	D3	RM 122.76	3746	20-yr	2715.6	651.72	646.22	1.65	1.64	12.65	12.07	362.48	382.24	4.54	4.34	5.5	5.5
Prairie County	D3	RM 122.55	3414	20-yr	2715.6	651.49	645.7	2.17	2.17	21.16	20.6	242.74	250.01	5.14	5.01	5.79	5.79
Prairie County	D3	RM 122.3	3012	20-yr	2715.6	651.19	645.57	2.54	2.52	29.29	24.48	214.39	282.57	4.97	4.15	5.62	5.62
Prairie County	D3	RM 122.08	2651	20-yr	2715.6	651.01	645.49	2.39	2.35	25.91	22.73	240.65	285.79	4.72	4.14	5.52	5.52
Prairie County	D3	RM 121.88	2338	20-yr	2715.6	650.86	645.42	2.28	2.24	23.41	21.13	244.44	276.27	4.86	4.38	5.44	5.44
Prairie County	D3	RM 121.66	1982	20-yr	2715.6	650.63	645.3	2.43	2.4	26.61	24.44	226.93	250.92	4.91	4.5	5.33	5.33
Prairie County	D3	RM 121.46	1651	20-yr	2715.6	650.45	645.06	2.36	2.33	25.75	24.32	243.93	262.82	4.7	4.43	5.39	5.39
Prairie County	D3	RM 121.24	1304	20-yr	2715.6	650.23	644.99	2.42	2.33	27.64	24.46	247.35	293.75	4.48	3.97	5.24	5.24
Prairie County	D3	RM 121.02	957	20-yr	2715.6	650.05	644.88	2.27	2.15	24.49	19.27	259.65	352.3	4.56	3.58	5.17	5.17
Prairie County	D3	RM 120.84	660	20-yr	2715.6	649.89	644.78	2.26	2.24	26.21	24.73	255.32	276	4.7	4.44	5.11	5.11
Prairie County	D3	RM 120.64	350	20-yr	2715.6	649.73	644.42	2.24	2.23	22.66	22.02	244.23	251.64	4.97	4.83	5.31	5.31

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	20-yr	2715.94	649.72	643.94	2.13	2.03	20.6	18.67	254.01	333.95	4.86	4.4	5.78	5.78
Dawson County	D3	RM 120.28	90838.07	20-yr	2715.94	649.65	643.78	2.17	2.06	21.22	15.98	233.12	346.61	5.07	3.81	5.87	5.87
Dawson County	D3	RM 120.18	90675.23	20-yr	2715.94	649.57	643.7	2.21	2.12	21.66	18.44	213.48	280.03	5.36	4.58	5.87	5.87
Dawson County	D3	RM 120.00	90388.96	20-yr	2715.94	649.46	643.56	2.15	2.08	20.29	17.5	226.64	273.83	5.52	4.76	5.9	5.9
Dawson County	D3	RM 119.84	90136.35	20-yr	2715.94	649.32	643.44	2.3	2.24	23.18	19.1	213.73	268.4	5.49	4.53	5.88	5.88
Dawson County	D3	RM 119.68	89873.82	20-yr	2715.94	649.13	643.31	2.57	2.48	28.94	25.53	189.21	224.8	5.51	4.86	5.81	5.81
Dawson County	D3	RM 119.53	89627.16	20-yr	2715.94	649.03	643.2	2.41	2.39	25.32	23.78	204.32	219.06	5.52	5.19	5.83	5.83
Dawson County	D3	RM 119.39	89404.11	20-yr	2715.94	648.97	643.09	2.18	2.13	20.85	19.61	231.36	252.65	5.37	5.07	5.88	5.88
Dawson County	D3	RM 119.26	89201.38	20-yr	2715.94	648.91	642.99	2.05	1.99	19.03	15.63	263.7	334.35	4.98	4.09	5.92	5.92
Dawson County	D3	RM 119.12	88969.13	20-yr	2715.94	648.69	642.87	2.51	2.3	27.8	18.56	193.4	386.11	5.45	3.62	5.82	5.82
Dawson County	D3	RM 119.00	88780.83	20-yr	2715.94	648.61	642.78	2.43	2.27	26.11	17.55	199.46	330.96	5.39	3.62	5.83	5.83
Dawson County	D3	RM 118.85	88537.07	20-yr	2715.94	648.55	642.66	2.12	2.02	20.08	16.16	241.51	332.2	5.11	4.12	5.88	5.88
Dawson County	D3	RM 118.72	88336.12	20-yr	2715.94	648.5	642.56	1.95	1.82	16.64	12.47	237.19	369.97	5.54	4.16	5.94	5.94
Dawson County	D3	RM 118.60	88130.39	20-yr	2715.94	648.36	642.46	2.22	2.1	21.63	14.13	220.72	377.2	5.39	3.52	5.9	5.9
Dawson County	D3	RM 118.47	87924.15	20-yr	2715.94	648.21	642.37	2.44	2.3	26.98	21.08	211.72	303.15	4.97	3.89	5.85	5.85
Dawson County	D3	RM 118.34	87719.85	20-yr	2715.94	647.99	642.27	2.75	2.64	35.78	29.11	214.06	288.79	4.36	3.56	5.72	5.72
Dawson County	D3	RM 118.21	87507.02	20-yr	2715.94	647.86	642.16	2.65	2.44	30.77	19.72	175.82	316.51	5.52	3.51	5.7	5.7
Dawson County	D3	RM 118.07	87276.02	20-yr	2741.43	647.82	642.05	2.08	2.06	20.41	18.38	297.49	333.66	4.42	3.98	5.77	5.77
Dawson County	D4	RM 117.90	87004.77	20-yr	2741.43	647.75	641.92	1.91	1.71	16.51	13.27	234.19	401.82	4.98	3.99	5.84	5.84
Dawson County	D4	RM 117.77	86795.88	20-yr	2741.43	647.7	641.81	1.86	1.58	15.72	11.07	217.15	507.57	4.91	3.43	5.88	5.88
Dawson County	D4	RM 117.62	86560.03	20-yr	2741.43	647.62	641.7	1.82	1.61	14.77	9.19	247.32	537.04	5.26	3.26	5.92	5.92
Dawson County	D4	RM 117.46	86294.2	20-yr	2741.43	647.4	641.57	2.43	2.11	26.33	14.76	183	447.64	5.23	2.91	5.82	5.82
Dawson County	D4	RM 117.33	86073.88	20-yr	2741.43	647.12	641.46	2.97	2.53	38.8	21.53	137.01	359.33	5.59	3.03	5.66	5.66
Dawson County	D4	RM 117.16	85808.16	20-yr	2741.43	647.07	641.33	2.33	2.07	23.71	15.2	182.25	382.05	5.51	3.51	5.74	5.74
Dawson County	D4	RM 117.03	85604.68	20-yr	2741.43	647.02	641.3	2	1.91	18.2	15.21	243.69	368.87	4.88	4.08	5.72	5.72
Dawson County	D4	RM 116.87	85336.88	20-yr	2741.43	646.96	641.29	1.82	1.53	15	9.19	238.63	583.95	5	3.06	5.67	5.67
Dawson County	D4	RM 116.69	85043.25	20-yr	2741.43	646.82	641.44	1.94	1.68	17.88	11.5	279.08	581.79	4.36	2.8	5.38	5.38
Dawson County	D4	RM 116.56	84823.15	20-yr	2741.43	646.66	641.34	2.22	1.88	23.36	14.12	234.35	558.54	4.35	2.62	5.33	5.33
Dawson County	D4	RM 116.39	84558.58	20-yr	2741.43	646.59	641.21	1.86	1.67	15.95	10.64	269.92	526.35	4.69	3.13	5.38	5.38
Dawson County	D4	RM 116.22	84287.19	20-yr	2741.43	646.45	641	2.02	1.78	18.31	9.07	259.34	616.05	5.04	2.5	5.45	5.45
Dawson County	D4	RM 116.05	84007.59	20-yr	2741.43	646.26	640.84	2.34	1.89	24.67	11.18	213.93	633.81	5.06	2.29	5.42	5.42
Dawson County	D4	RM 115.87	83722.29	20-yr	2741.43	646.08	640.8	2.47	1.99	28.03	12.25	214.27	667.51	4.74	2.06	5.28	5.28
Dawson County	D4	RM 115.73	83500.35	20-yr	2741.43	646.02	640.69	2.03	1.67	20.27	10.08	310.77	847.87	3.91	1.94	5.32	5.32
Dawson County	D4	RM 115.61	83294.37	20-yr	2741.43	645.97	640.59	1.67	1.49	13.42	7.11	385.01	858.26	4.08	2.16	5.37	5.37
Dawson County	D4	RM 115.45	83034.82	20-yr	2741.43	645.89	640.37	1.62	1.41	12.94	8.43	407.6	790.53	3.78	2.45	5.52	5.52
Dawson County	D4	RM 115.29	82782.88	20-yr	2741.43	645.74	640.34	1.87	1.74	16.53	9.39	319.39	645.1	4.33	2.45	5.4	5.4
Dawson County	D4	RM 115.09	82480.02	20-yr	2741.43	645.68	640.2	1.63	1.45	12.08	5.95	324	780.35	4.94	2.43	5.48	5.48
Dawson County	D4	RM 114.96	82177.99	20-yr	2741.43	645.51	640	2	1.79	18.08	10.37	260.73	578.64	5.01	2.86	5.51	5.51
Dawson County	D4	RM 114.74	81836.48	20-yr	2741.43	645.05	639.98	3.01	2.6	41.19	21.17	179.76	421.37	4.89	2.5	5.07	5.07
Dawson County	D4	RM 114.58	81577.9	20-yr	2741.43	645.05	639.46	2.16	2.03	20.76	18.34	195.77	352.56	5.21	4.58	5.59	5.59
Dawson County	D4	RM 114.42	81309.47	20-yr	2741.43	644.91	639.33	2.19	2.13	21.84	18.61	257.79	313.47	4.81	4.1	5.58	5.58
Dawson County	D4	RM 114.28	81078.59	20-yr	2741.43	644.69	639.21	2.54	2.43	29.06	22.01	213.07	296.16	5.03	3.81	5.48	5.48
Dawson County	D4	RM 114.11	80813.63	20-yr	2741.43	644.49	639.2	2.65	2.54	32.04	23.79	210.21	298.16	4.88	3.62	5.29	5.29
Dawson County	D4	RM 113.97	80580.15	20-yr	2741.43	644.32	639.45	2.67	2.51	33.43	21.35	225.76	405.96	4.5	2.87	4.87	4.87
Dawson County	D4	RM 113.79	80292.13	20-yr	2741.43	644.2	639.45	2.39	2.07	26.77	19.15	201.08	418.26	4.42	3.16	4.75	4.75
Dawson County	D4	RM 113.60	79987.05	20-yr	2741.43	644.18	639.2	1.61	1.44	11.88	9.66	179.84	496.96	4.83	3.9	4.98	4.98
Dawson County	D4	RM 113.43	79712.89	20-yr	2741.43	644.05	638.73	1.96	1.67	17.1	10.27	173.8	532.67	5.19	3.08	5.32	5.32
Dawson County	D4	RM 113.24	79405.49	20-yr	2741.43	643.73	638.43	2.74	2.36	33.69	20.24	130.78	378.33	5.19	3.08	5.29	5.29
Dawson County	D4	RM 113.08	79152.39	20-yr	2741.43	643.57	638.37	2.6	2.31	30.48	22.5	138.2	319.13	5.09	3.72	5.2	5.2
Dawson County	D4	RM 112.94	78925.1	20-yr	2741.43	643.55	638.26	1.9	1.77	16.46	13.99	194.62	374.92	4.9	4.14	5.29	5.29
Dawson County	D4	RM 112.74	78585.88	20-yr	2741.43	643.36	638.09	2.11	1.96	20.72	16.01	237.95	399.47	4.53	3.49	5.28	5.28
Dawson County	D4	RM 112.59	78355.25	20-yr	2741.43	643.22	637.98	2.21	2	23.51	19.14	271.99	408.59	4.14	3.36	5.24	5.24
Dawson County	D4	RM 112.37	78008.78	20-yr	2741.43	643.19	637.88	1.57	1.43	11.21	8.76	206.92	587.6	4.83	3.74	5.31	5.31
Dawson County	D4	RM 112.19	77721.27	20-yr	2741.43	643.02	637.59	1.98	1.84	17.76	13.99	213.8	387.33	4.89	3.85	5.43	5.43
Dawson County	D4	RM 111.89	77240.22	20-yr	2741.43	642.71	637.16	2.32	2.25	24.35	18.57	235.68	321.59	4.98	3.79	5.55	5.55
Dawson County	D4	RM 111.42	76486.24	20-yr	2741.43	642.42	636.91	1.99	1.93	18.21	14.03	287.11	388.11	4.76	3.67	5.51	5.51
Dawson County	D4	RM 111.26	76213.83	20-yr	2741.43	642.34	636.66	1.82	1.77	15.49	12.91	329.26	410.14	4.53	3.78	5.68	5.68
Dawson County	D4	RM 111.09	75911.9	20-yr	2741.43	642.06	636.51	2.44	2.41	27.53	22.7	240.23	336.4	4.67	3.84	5.54	5.54
Dawson County	D4	RM 110.95	75678.54	20-yr	2741.43	641.82	636.4	2.74	2.67	33.57	28.42	194.97	243.06	5.11	4.33	5.42	5.42
Dawson County	D4	RM 110.78	75415.61	20-yr	2741.43	641.56	636.27	2.95	2.93	39.42	36.26	186.03	203.6	4.99	4.59	5.28	5.28
Dawson County	D4	RM 110.55	75040.65	20-yr	2741.43	641.42	636.09	2.36	2.34	25.52	23.38	240.69	264.56	4.82	4.42	5.33	5.33

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	20-yr	2741.43	641.36	635.96	1.98	1.93	18.11	15.94	293.1	344.3	4.68	4.12	5.4	5.4
Dawson County	D4	RM 110.17	74428.56	20-yr	2741.43	641.16	635.79	2.13	2.06	22.2	19.96	321.63	373.62	3.95	3.55	5.37	5.37
Dawson County	D4	RM 109.95	74074.87	20-yr	2741.43	641.01	635.62	1.97	1.9	17.9	14.27	297.98	390.39	4.64	3.7	5.39	5.39
Dawson County	D4	RM 109.75	73741.09	20-yr	2741.43	640.84	635.46	2.11	2.03	20.42	16.37	272.8	355.53	4.72	3.79	5.38	5.38
Dawson County	D4	RM 109.54	73418.83	20-yr	2741.43	640.72	635.3	1.98	1.73	18.14	9.86	287.56	625.25	4.68	2.53	5.42	5.42
Dawson County	D4	RM 109.37	73150.54	20-yr	2741.43	640.55	635.17	2.28	1.95	23.51	15.26	224.7	439.74	4.92	3.19	5.38	5.38
Dawson County	D4	RM 109.19	72864.56	20-yr	2741.43	640.39	635.03	2.29	2.14	23.87	15.83	238.65	392.45	4.92	3.26	5.36	5.36
Dawson County	D4	RM 109.04	72628	20-yr	2741.43	640.09	634.92	2.82	2.64	36.11	25.1	194.23	302.68	4.93	3.43	5.18	5.18
Dawson County	D4	RM 108.86	72339.73	20-yr	2741.43	640.08	634.77	1.98	1.93	18.44	16.53	287.17	356.6	4.44	3.99	5.3	5.3
Dawson County	D4	RM 108.70	72072.36	20-yr	2741.43	639.99	634.65	1.84	1.79	15.73	14.71	291.61	355.16	4.6	4.31	5.35	5.35
Dawson County	D4	RM 108.55	71827.97	20-yr	2741.43	639.91	634.53	1.8	1.79	15.21	14.97	343.64	349.19	4.43	4.38	5.38	5.38
Dawson County	D4	RM 108.40	71587.18	20-yr	2741.43	639.73	634.41	2.14	2.13	17.94	17.57	363.68	372.5	3.52	3.46	5.32	5.32
Dawson County	D4	RM 108.25	71345.86	20-yr	2741.43	639.62	634.29	2.03	2.01	17.88	16.2	361.89	403.02	3.73	3.38	5.33	5.33
Dawson County	D4	RM 108.12	71131.88	20-yr	2741.43	639.53	634.19	2.02	1.95	18.84	15.55	289.42	364.99	4.65	3.85	5.34	5.34
Dawson County	D4	RM 107.98	70905.01	20-yr	2741.43	639.34	634.08	2.35	2.3	25.4	21.59	245.46	295.34	4.74	4.03	5.26	5.26
Dawson County	D4	RM 107.82	70651.22	20-yr	2741.43	639.14	633.95	2.54	2.42	29.81	20.07	231.93	363.64	4.62	3.11	5.18	5.18
Dawson County	D4	RM 107.68	70418.24	20-yr	2741.43	638.96	633.84	2.62	2.5	31.66	24.95	219.72	296.51	4.68	3.71	5.12	5.12
Dawson County	D4	RM 107.50	70132.11	20-yr	2741.43	638.81	633.17	2.42	2.25	26.96	19.6	239.71	360.52	4.62	3.38	5.64	5.64
Dawson County	D4	RM 107.31	69834.56	20-yr	2741.43	638.61	633.23	2.45	2.36	28.58	24.06	264.38	327.54	4.19	3.55	5.38	5.38
Dawson County	D4	RM 107.13	69541.52	20-yr	2741.43	638.43	633.98	2.26	2.17	25.54	21.92	322.33	397.11	3.69	3.17	4.45	4.45
Dawson County	D5	RM 106.98	69305.02	20-yr	2752.76	638.35	634.16	1.84	1.78	17.18	16.33	421.85	466.13	3.46	3.31	4.19	4.19
Dawson County	D5	RM 106.85	69065.27	20-yr	2752.76	638.24	633.6	1.77	1.73	15.97	15.08	412.29	488.36	3.43	3.25	4.64	4.64
Dawson County	D5	RM 106.65	68764.02	20-yr	2752.76	638.01	632.98	2.1	2.05	20.48	19.39	360.27	431.23	3.28	3.12	5.03	5.03
Dawson County	D5	RM 106.47	68475.87	20-yr	2752.76	637.83	632.51	2.12	1.76	22.34	14.09	307.26	686.45	3.72	2.35	5.32	5.32
Dawson County	D5	RM 106.28	68173.97	20-yr	2752.76	637.46	631.71	2.76	2.28	35.98	20.39	204.05	487.45	4.36	2.48	5.75	5.75
Dawson County	D5	RM 106.10	67879.83	20-yr	2752.76	637.25	631.29	2.63	2.09	33.51	20.33	206.53	538.57	4.02	2.45	5.96	5.96
Dawson County	D5	RM 105.89	67550.49	20-yr	2752.76	637.06	631.76	2.33	1.95	26.64	17.19	226.74	557.18	3.9	2.53	5.3	5.3
Dawson County	D5	RM 105.74	67300.35	20-yr	2752.76	636.91	632.3	2.22	1.61	24.05	14.24	203.14	732.1	3.92	2.33	4.61	4.61
Dawson County	D5	RM 105.54	66973.54	20-yr	2752.76	636.62	632.17	2.54	1.97	32.02	18.84	147.79	662.17	3.77	2.23	4.45	4.45
Dawson County	D5	RM 105.30	66609.03	20-yr	2752.76	636.49	632.29	1.64	1.45	14.16	11.34	219.79	764.59	3.1	2.49	4.37	4.37
Dawson County	D5	RM 105.06	66212.24	20-yr	2752.76	636.33	631.19	1.83	1.71	17.7	14.67	181.11	908.98	3.1	2.58	5.14	5.14
Dawson County	D5	RM 104.89	65945.5	20-yr	2752.76	636.13	631.5	1.98	1.77	21.35	17.24	205.87	907.24	2.81	2.28	4.71	4.71
Dawson County	D5	RM 104.77	65742.33	20-yr	2752.76	635.99	631.67	2.1	1.65	22.05	12.36	125.62	954.12	3.67	2.06	5.28	5.28
Dawson County	D5	RM 104.64	65530.83	20-yr	2752.76	635.92	632.1	1.76	1.43	15.95	10.13	172.34	1069.51	3.43	2.16	4.96	4.96
Dawson County	D5	RM 104.43	65180.62	20-yr	2752.76	635.85	631.56	1.21	1.05	8.21	6.28	361.11	1309.79	2.62	2.01	5.06	5.06
Dawson County	D5	RM 104.26	64906.83	20-yr	2752.76	635.77	631.59	1.16	1.01	7.19	5.21	218.58	1233.64	3.04	2.21	5.13	5.13
Dawson County	D5	RM 104.10	64643.2	20-yr	2752.76	635.66	630.81	1.48	1.23	10.94	4.73	150.64	1420.57	3.64	1.58	5.22	5.22
Dawson County	D5	RM 103.95	64410.06	20-yr	2752.76	635.62	631.24	1.55	1.08	12.32	5.29	185.01	1734.98	3.42	1.47	5.8	5.8
Dawson County	D5	RM 103.68	63957.56	20-yr	2752.76	635.51	629.68	1.64	0.96	13.19	5.46	188.7	1817.63	3.81	1.58	6.07	6.07
Dawson County	D5	RM 103.48	63615.6	20-yr	2752.76	635.43	630.4	1.78	1.08	15.12	5.3	152.55	1740.81	4.19	1.46	5.92	5.92
Dawson County	D5	RM 103.26	63259.44	20-yr	2752.76	635.36	630.13	1.63	1.03	12.69	5.09	173.17	1574.79	4.25	1.7	5.95	5.95
Dawson County	D5	RM 102.58	62131.5	20-yr	2752.76	635.18	629.72	1.51	1.19	10.77	6.31	178.73	927.23	4.24	2.49	5.5	5.5
Dawson County	D5	RM 102.44	61920.83	20-yr	2752.76	635.04	629.74	1.94	1.54	17.97	9.26	255.44	825.68	4.2	2.17	5.3	5.3
Dawson County	D5	RM 102.31	61720.14	20-yr	2752.76	634.9	629.03	2.29	1.7	24.86	12.42	200.53	758.41	4.27	2.14	5.87	5.87
Dawson County	D5	RM 102.15	61456.58	20-yr	2752.76	634.78	629.39	2.18	1.71	22.25	11.74	201.3	679.9	4.46	2.36	5.39	5.39
Dawson County	D5	RM 102.00	61217.89	20-yr	2752.76	634.69	629.48	1.9	1.55	17.6	10.7	267.9	733.93	3.94	2.41	5.21	5.21
Dawson County	D5	RM 101.84	60967.97	20-yr	2752.76	634.64	629.23	1.68	1.17	13.55	8.4	155.67	922.18	4.12	2.55	5.41	5.41
Dawson County	D5	RM 101.60	60582.61	20-yr	2752.76	634.5	628.87	1.54	1.39	11.42	8.76	336.08	662.07	4.01	3.09	5.63	5.63
Dawson County	D5	RM 101.45	60336.09	20-yr	2752.76	634.29	629.16	2.14	1.83	21.29	11.21	251.39	629.07	4.52	2.39	5.13	5.13
Dawson County	D5	RM 101.25	60019.5	20-yr	2752.76	634.05	627.81	2.44	2.06	27.29	9.33	209.15	828.7	4.71	1.61	6.24	6.24
Dawson County	D5	RM 101.09	59759.25	20-yr	2752.76	633.93	627.99	2.33	1.81	25.09	9.46	216.65	879.17	4.58	1.73	5.94	5.94
Dawson County	D5	RM 100.88	59426.42	20-yr	2752.76	633.8	627.86	2.2	1.7	22.03	8.85	196.58	845.11	4.77	1.92	5.94	5.94
Dawson County	D5	RM 100.67	59075.4	20-yr	2752.76	633.6	627.1	2.46	1.69	26.88	9.33	151.88	890.02	5.25	1.83	6.5	6.5
Dawson County	D5	RM 100.46	58743.44	20-yr	2752.76	633.55	627.92	1.8	1.27	14.83	6.88	202.94	980.21	4.76	2.21	5.63	5.63
Dawson County	D5	RM 100.25	58401.49	20-yr	2752.76	633.31	627.57	2.26	1.71	23.37	12.15	196.17	736.26	4.75	2.47	5.74	5.74
Dawson County	D5	RM 100.05	58077.55	20-yr	2752.76	633.17	626.86	2.21	1.81	22.23	12.78	176.97	549.36	4.82	2.77	6.31	6.31
Dawson County	D5	RM 99.87	57778.81	20-yr	2752.76	632.93	626.4	2.29	2.24	25.54	18.91	301.61	417.76	3.96	2.94	6.53	6.53
Dawson County	D5	RM 99.68	57474.16	20-yr	2752.76	632.77	626.29	2.26	2.06	23.24	14.54	246.92	445.32	4.78	3.01	6.48	6.48
Dawson County	D5	RM 99.49	57160.47	20-yr	2752.76	632.5	626.53	2.6	2.3	31.12	17.09	218.38	464.71	4.68	2.58	5.97	5.97
Dawson County	D5	RM 99.30	56863.46	20-yr	2752.76	632.36	627.26	2.3	1.99	25	13.41	267.93	607.91	4.34	2.33	5.1	5.1
Dawson County	D5	RM 99.13	56566.63	20-yr	2752.76	632.24	626.77	2.07	1.72	20.42	11.39	293.66	734.98	4.27	2.38	5.47	5.47

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	20-yr	2752.76	632.09	626.63	1.99	1.75	19.31	10.44	339.1	744.34	3.9	2.12	5.46	5.46
Dawson County	D5	RM 98.71	55911.87	20-yr	2752.76	631.88	626.34	2.12	1.72	22.2	9.36	322.21	1006.81	3.76	1.59	5.54	5.54
Dawson County	D5	RM 98.57	55680.2	20-yr	2752.76	631.77	626.1	2.04	1.41	20.48	8.96	297.01	1155.89	3.86	1.69	5.67	5.67
Dawson County	D5	RM 98.35	55325.95	20-yr	2752.76	631.47	625.91	2.42	1.66	27.12	8.86	216.82	1101.26	4.62	1.5	5.56	5.56
Dawson County	D5	RM 98.19	55066.09	20-yr	2752.76	631.27	624.42	2.59	1.76	30.03	8.92	184	1035.85	5.08	1.51	6.85	6.85
Dawson County	D5	RM 97.99	54752.97	20-yr	2752.76	631.05	625.04	2.55	2.13	30.71	15.25	236.53	601.22	4.34	2.15	6.01	6.01
Dawson County	D5	RM 97.84	54493.48	20-yr	2752.76	630.93	625.39	2.24	1.98	24.12	13.14	292.51	623.58	4.1	2.23	5.54	5.54
Dawson County	D5	RM 97.68	54241.32	20-yr	2752.76	630.78	624.99	2.18	1.81	24.12	15.22	340.05	702.63	3.48	2.2	5.79	5.79
Dawson County	D5	RM 97.48	53918.21	20-yr	2752.76	630.61	624.81	1.91	1.57	15.47	10.7	387.03	1174.05	2.55	1.76	5.8	5.8
Dawson County	D5	RM 97.28	53585.68	20-yr	2752.76	630.41	625.86	1.87	1.47	17.96	9.03	328.8	1286.97	3.37	1.7	4.96	4.96
Dawson County	D5	RM 97.08	53263.89	20-yr	2752.76	630.13	625.27	2.37	1.96	27.27	11.49	209.17	876.98	4.02	1.7	4.86	4.86
Dawson County	D5	RM 96.94	53030.11	20-yr	2752.76	629.93	623.97	2.55	1.97	31.91	13.02	199.17	977.78	3.89	1.59	5.96	5.96
Dawson County	D5	RM 96.77	52762.2	20-yr	2752.76	629.73	623.51	2.45	2.03	29.46	13.97	202.34	958.15	3.85	1.83	6.22	6.22
Dawson County	D5	RM 96.55	52403.59	20-yr	2752.76	629.49	624.57	2.56	1.67	31.17	10.81	160.42	1366.1	4.18	1.45	4.92	4.92
Dawson County	D5	RM 96.35	52079.12	20-yr	2752.76	629.48	625.39	1.12	1.15	6.74	6.34	290.07	1445.27	2.94	2.78	6.01	6.01
Dawson County	D5	RM 96.17	51777.74	20-yr	2752.76	629.25	624.71	2.12	1.87	22.46	14.58	130.42	758.92	3.63	2.37	4.87	4.87
Dawson County	D5	RM 96.00	51500.38	20-yr	2752.76	629.09	624.3	2.06	1.72	21.08	10.24	122.42	971.48	3.76	1.83	4.79	4.79
Dawson County	D5	RM 95.79	51156.87	20-yr	2752.76	629	624.35	1.46	1.21	11.18	5.77	284.94	1320.85	3.46	1.79	4.75	4.75
Dawson County	D5	RM 95.60	50859.75	20-yr	2752.76	628.9	622.97	1.5	1.1	11.35	5.95	251.15	1315.91	3.62	1.9	5.93	5.93
Dawson County	D5	RM 95.40	50547.92	20-yr	2752.76	628.82	623.13	1.36	1.01	8.9	4.94	377.96	1219.42	4.01	2.23	5.69	5.69
Dawson County	D5	RM 95.21	50245.97	20-yr	2752.76	628.73	622.21	1.7	0.99	13.13	5.58	217.6	1362.01	4.82	2.05	6.52	6.52
Dawson County	D5	RM 95.04	49971.19	20-yr	2752.76	628.63	621.68	1.98	1.09	18.22	7.65	174.46	1330.29	4.52	1.9	6.95	6.95
Dawson County	D5	RM 94.88	49717.07	20-yr	2752.76	628.57	621.44	1.81	0.94	14.95	7.36	152.89	1371.01	4.85	2.38	7.12	7.12
Dawson County	D5	RM 94.71	49446.9	20-yr	2752.76	628.52	621.69	1.32	1.05	8.11	5.66	234.28	1368.72	4.5	3.14	6.83	6.83
Dawson County	D5	RM 94.58	49286.95	20-yr	2752.76	628.51	618.6	0.96	0.96	3.92	3.92	456.42	1390.26	6.26	6.26	9.91	9.91
Dawson County	D5	RM 94.57	49255.56	20-yr	2752.76	628.46	618.63	1.27	1.27	6.84	6.62	360.59	936.7	6	5.82	9.83	9.83
Dawson County		RM 94.55	49216.94	20-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	20-yr	2752.76	628.11	620.63	2.2	2.1	21.88	16.95	256.42	1009.55	4.81	3.72	7.48	7.48
Dawson County	D5	RM 94.52	49157.18	20-yr	2752.76	628.12	620.89	2.02	2	18.64	17.55	287.23	909.21	4.75	4.46	7.22	7.22
Dawson County	D6	RM 94.42	48998.19	20-yr	2752.76	627.93	621.76	2.53	2.12	29.42	15.46	219.93	809.05	4.66	2.44	6.17	6.17
Dawson County	D6	RM 94.30	48806.79	20-yr	2766.92	627.83	621.22	2.31	1.94	26.23	14.57	295.07	919.54	3.81	2.11	6.61	6.61
Dawson County	D6	RM 94.20	48653.06	20-yr	2766.92	627.75	621.41	2.23	1.75	23.8	11.29	261.89	806.28	4.33	2.05	6.34	6.34
Dawson County	D6	RM 94.08	48445.46	20-yr	2766.92	627.73	622.37	1.73	1.49	13.91	7.61	338.75	759.94	4.56	2.49	5.36	5.36
Dawson County	D6	RM 93.96	48246.42	20-yr	2766.92	627.62	621.88	1.93	1.68	17.83	11.13	331.74	631.98	4.18	2.6	5.74	5.74
Dawson County	D6	RM 93.83	48030.25	20-yr	2766.92	627.42	620.28	2.34	1.96	25.06	13.8	237.8	550.16	4.75	2.61	7.14	7.14
Dawson County	D6	RM 93.68	47782.89	20-yr	2766.92	627.16	620.19	2.75	2.28	34.02	17.85	191.53	461	5.01	2.63	6.97	6.97
Dawson County	D6	RM 93.57	47606.95	20-yr	2766.92	626.9	620.08	3.09	2.61	43.81	24.81	184.03	396.88	4.73	2.67	6.82	6.82
Dawson County	D6	RM 93.53	47552.11	20-yr	2766.92	626.87	620.21	2.99	2.61	40.38	25.06	184.33	348.21	4.9	3.05	6.66	6.66
Dawson County			47536.14	20-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	20-yr	2766.92	626.8	620.33	3	2.6	40.54	24.68	180.48	351.43	4.98	3.03	6.47	6.47
Dawson County	D6	RM 93.47	47460.74	20-yr	2766.92	626.76	618.63	2.91	2.54	38.5	23.77	189.97	361.44	4.89	3.02	8.13	8.13
Dawson County	D6	RM 93.43	47382.46	20-yr	2766.92	626.72	619.44	2.78	2.45	34.58	21.54	191.32	355.79	5.1	3.17	7.28	7.28
Dawson County		RM 93.415	47357.71	20-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	20-yr	2766.92	626.63	620.19	2.69	2.44	32.43	22.36	200.23	368.91	5.06	3.48	6.44	6.44
Dawson County	D6	RM 93.36	47287.92	20-yr	2766.92	626.62	620.47	2.49	2.17	27.69	17.68	213.34	392.74	5.09	3.25	6.15	6.15
Dawson County	D6	RM 93.25	47111.44	20-yr	2766.92	626.5	621.12	2.57	2.22	35.31	20.24	228.84	516.03	4.41	2.52	5.38	5.38
Dawson County	D6	RM 93.05	46807.77	20-yr	2766.92	626.4	621.74	2.02	1.64	19.27	9.43	283.11	947.84	4.34	2.12	4.66	4.66
Dawson County	D6	RM 92.93	46606.31	20-yr	2766.92	626.25	621.34	2.17	1.78	22.96	10.97	305.87	1072.17	3.95	1.88	4.91	4.91
Dawson County	D6	RM 92.83	46460.06	20-yr	2766.92	626.16	621.02	2.15	1.88	21.28	10.89	357.35	1176.76	3.41	1.74	5.14	5.14
Dawson County	D6	RM 92.71	46261.84	20-yr	2766.92	626.06	620.37	2.05	1.81	19.19	10.96	359.38	1249.73	3.56	2.03	5.69	5.69
Dawson County	D6	RM 92.59	46079.79	20-yr	2766.92	625.97	620.95	2	1.89	19.85	10.71	321.05	1238.18	4.23	2.28	5.02	5.02
Dawson County	D6	RM 92.50	45933.81	20-yr	2766.92	625.86	620.75	2.14	2.05	22.34	11.84	325.45	1241.07	3.95	2.09	5.11	5.11
Dawson County	D6	RM 92.39	45753.94	20-yr	2766.92	625.76	620.58	2.15	1.97	21.95	12.17	299.01	1161.93	4.22	2.34	5.18	5.18
Dawson County	D6	RM 92.29	45591.17	20-yr	2766.92	625.68	620.64	2.11	2.01	21.18	18.19	295.77	1171.39	4.28	3.68	5.04	5.04
Dawson County	D6	RM 92.18	45414.13	20-yr	2766.92	625.62	620.23	1.79	1.69	15.31	12.06	358.66	1228.69	4.2	3.31	5.39	5.39
Dawson County		RM 92.14	45354.08	20-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	20-yr	2766.92	625.37	620.04	1.82	1.69	15.89	11.86	367.04	953.07	4.07	3.04	5.33	5.33
Dawson County	D6	RM 92.06	45238.47	20-yr	2766.92	625.31	620.12	1.98	1.84	19.22	16.61	354.46	803.67	3.83	3.32	5.19	5.19
Dawson County	D6	RM 91.99	45117.89	20-yr	2766.92	625.3	619.81	1.65	1.61	13.7	12.95	390.42	922.67	3.54	3.35	5.49	5.49
Dawson County	D6	RM 91.85	44886.16	20-yr	2766.92	625.24	619.7	1.55	1.33	12.96	8.9	238.98	961.21	4.26	2.93	5.54	5.54
Dawson County	D6	RM 91.77	44752.88	20-yr	2766.92	625.19	619.28	1.55	1.32	15.21	11.05	224.91	864.02	3.99	2.9	5.91	5.91

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	20-yr	2766.92	625.03	619	1.96	1.61	17.47	10.81	148.19	1232.5	4.86	3.01	6.03	6.03
Dawson County	D6	RM 91.45	44219.47	20-yr	2766.92	624.89	618.66	2.04	1.92	19.94	15.83	189.07	1038.3	4.7	3.74	6.23	6.23
Dawson County	D6	RM 91.31	43987.79	20-yr	2766.92	624.67	618.98	2.36	2.34	26.31	25.34	271.16	950.13	4.32	4.17	5.69	5.69
Dawson County	D6	RM 91.11	43666.49	20-yr	2766.92	624.42	618.54	2.54	2.43	29.2	18.76	219.42	762.03	4.92	3.17	5.88	5.88
Dawson County	D6	RM 90.97	43442.55	20-yr	2766.92	624.28	618.3	2.57	2.17	30.34	10.79	224.14	985.87	4.66	1.66	5.98	5.98
Dawson County	D6	RM 90.76	43114.74	20-yr	2766.92	624.1	618.97	2.29	1.74	31.23	11.4	268.72	1264.96	4.21	1.54	5.13	5.13
Dawson County	D6	RM 90.59	42823.65	20-yr	2766.92	624.06	618.64	1.76	1.15	14.48	5.88	232.7	1438.72	4.39	1.78	5.42	5.42
Dawson County	D6	RM 90.43	42564.46	20-yr	2766.92	623.72	618.18	2.64	1.88	33.33	9.56	208.77	1220.07	4.21	1.21	5.54	5.54
Dawson County	D6	RM 90.29	42331.05	20-yr	2766.92	623.61	618.21	2.27	1.53	24.12	7.23	236.08	1361.38	4.43	1.32	5.4	5.4
Dawson County	D6	RM 90.16	42118.24	20-yr	2766.92	623.48	618.54	2.33	1.63	25.38	8.18	229.61	1215.71	4.42	1.43	4.94	4.94
Dawson County	D6	RM 89.96	41795.66	20-yr	2766.92	623.36	618.08	1.91	1.56	17.75	8.1	346.39	1077.35	3.97	1.81	5.28	5.28
Dawson County	D6	RM 89.83	41589.45	20-yr	2766.92	623.02	617.17	2.79	2.15	36.42	12.76	211.95	829.44	4.41	1.55	5.85	5.85
Dawson County	D6	RM 89.65	41302.33	20-yr	2766.92	622.82	618.15	2.6	2.13	32.53	12.39	251.93	840.18	4.05	1.55	4.67	4.67
Dawson County	D6	RM 89.46	41003.8	20-yr	2766.92	622.65	617.56	2.37	2.06	25.83	11.57	236.74	630.03	4.76	2.13	5.09	5.09
Dawson County	D6	RM 89.29	40732.3	20-yr	2766.92	622.65	617.42	1.75	1.5	14.2	10.49	253.25	595.27	4.55	3.36	5.22	5.22
Dawson County	D6	RM 89.13	40476.68	20-yr	2766.92	622.43	617.29	2.24	1.98	23.17	12.83	231.92	545.36	4.65	2.56	5.14	5.14
Dawson County	D6	RM 88.96	40193.97	20-yr	2786.75	622.29	617.14	2.25	1.98	22.78	12.84	186.73	497.08	5.09	2.84	5.15	5.15
Dawson County	D7	RM 88.77	39887.75	20-yr	2786.75	622.12	616.98	2.27	1.93	24.24	13.09	260.04	619.82	4.39	2.37	5.14	5.14
Dawson County	D7	RM 88.58	39581.56	20-yr	2786.75	621.79	616.82	2.78	2.2	35.23	14.56	185.88	640.68	4.9	1.99	4.97	4.97
Dawson County	D7	RM 88.44	39345.29	20-yr	2786.75	621.58	616.7	2.86	2.44	37.54	17.67	181.67	547.27	4.88	2.26	4.88	4.88
Dawson County	D7	RM 88.25	39047.22	20-yr	2786.75	621.46	616.54	2.4	2.1	27.03	16.85	221.53	498.94	4.44	2.76	4.92	4.92
Dawson County	D7	RM 88.06	38736.32	20-yr	2786.75	621.31	616.38	2.13	1.99	21.7	14.31	305.89	551.16	4.18	2.76	4.93	4.93
Dawson County	D7	RM 87.87	38426.68	20-yr	2786.75	621.22	616.22	1.7	1.52	14.76	11.12	429.53	739.55	3.5	2.64	5	5
Dawson County	D7	RM 87.70	38161.81	20-yr	2786.75	621.15	616.08	1.72	1.29	13.37	6.46	181.73	967.96	5.06	2.39	5.07	5.07
Dawson County	D7	RM 87.52	37862.82	20-yr	2786.75	621.1	615.92	1.44	1.3	10.18	7.02	308.23	811.4	3.97	2.72	5.17	5.17
Dawson County	D7	RM 87.34	37574.69	20-yr	2786.75	620.88	615.85	2.16	1.78	22.67	12.15	253.88	726.46	4.06	2.16	5.03	5.03
Dawson County	D7	RM 87.17	37307.08	20-yr	2786.75	620.65	615.82	2.54	2.06	29.68	15.06	162.99	566.56	4.75	2.38	4.83	4.83
Dawson County	D7	RM 87.00	37023.47	20-yr	2786.75	620.51	615.79	2.19	2.02	23.23	15.64	241.45	510.85	4.03	2.7	4.72	4.72
Dawson County	D7	RM 86.82	36748.51	20-yr	2786.75	620.33	615.76	2.27	2.09	24.78	17.56	210.89	456.5	4.15	2.93	4.58	4.58
Dawson County	D7	RM 86.67	36501.76	20-yr	2786.75	620.09	615.73	2.75	2.33	36.22	22.13	151.27	460.57	4.35	2.6	4.36	4.36
Dawson County	D7	RM 86.52	36253.46	20-yr	2786.75	619.99	615.7	2.09	1.78	21.05	13.62	250.55	600.71	4.03	2.61	4.29	4.29
Dawson County	D7	RM 86.39	36046.31	20-yr	2786.75	619.86	615.59	2.24	1.75	24.47	15.48	147.45	635.35	4.02	2.5	4.27	4.27
Dawson County	D7	RM 86.24	35796.38	20-yr	2786.75	619.81	615.46	1.48	1.36	10.41	8.64	166.41	583.27	4.29	3.5	4.36	4.36
Dawson County	D7	RM 86.08	35541.56	20-yr	2786.75	619.48	615.48	2.62	2.33	34.33	21.52	160.1	517.45	3.75	2.32	4	4
Dawson County	D7	RM 85.91	35282.1	20-yr	2786.75	619.32	615.5	2.28	1.89	25.75	13.09	191.42	780.71	3.73	1.89	3.82	3.82
Dawson County	D7	RM 85.78	35075.01	20-yr	2786.75	619.33	614.9	1.32	1.26	8.8	8	288.53	992.65	3.51	3.19	4.43	4.43
Dawson County	D7	RM 85.59	34774.5	20-yr	2786.75	619.26	614.32	1.57	1.23	11.27	6	184.84	872.43	4.91	2.6	4.95	4.95
Dawson County	D7	RM 85.39	34449.3	20-yr	2786.75	619.05	614.15	2.16	1.81	21.86	11.6	219.47	649.33	4.5	2.37	4.9	4.9
Dawson County	D7	RM 85.23	34186.4	20-yr	2786.75	618.79	614.01	2.75	2.14	34.92	16.16	157.48	597.26	4.78	2.18	4.78	4.78
Dawson County	D7	RM 85.04	33863.7	20-yr	2786.75	618.72	613.84	1.97	1.67	18.91	13.09	265.03	602.38	4.02	2.77	4.88	4.88
Dawson County	D7	RM 84.89	33626.36	20-yr	2786.75	618.63	613.92	1.73	1.66	14.73	13.37	413.04	480.18	3.85	3.5	4.72	4.72
Dawson County	D7	RM 84.72	33349.5	20-yr	2786.75	618.47	613.77	1.94	1.92	18.13	17.73	353.9	364.66	4.06	3.98	4.7	4.7
Dawson County	D7	RM 84.57	33104.21	20-yr	2786.75	618.31	613.45	2.13	2.1	21.35	17.88	294.82	357.73	4.42	3.7	4.86	4.86
Dawson County	D7	RM 84.41	32856.7	20-yr	2786.75	618.2	613.32	2.07	2.02	20.38	18.63	312.69	353.23	4.26	3.9	4.88	4.88
Dawson County	D7	RM 84.22	32552.24	20-yr	2786.75	618.09	613.16	1.94	1.71	17.79	10.16	261.68	701.76	4.31	2.44	4.94	4.94
Dawson County	D7	RM 84.05	32270.74	20-yr	2786.75	617.92	613.14	2.17	1.82	21.81	9.04	206.16	809.73	4.58	1.89	4.79	4.79
Dawson County	D7	RM 83.89	32017.88	20-yr	2786.75	617.72	613.11	2.43	1.97	27.49	12.81	191.2	671.59	4.53	2.11	4.62	4.62
Dawson County	D7	RM 83.73	31759.16	20-yr	2786.75	617.63	613.07	2.03	1.66	19.77	11.54	240.43	725.81	4.15	2.41	4.56	4.56
Dawson County	D7	RM 83.53	31426.04	20-yr	2786.75	617.56	613.01	1.56	1.34	11.69	6.74	304.34	865.84	4.18	2.4	4.55	4.55
Dawson County	D7	RM 83.39	31213.34	20-yr	2786.75	617.48	612.95	1.75	1.43	14.53	7.66	189.12	864.34	4.33	2.26	4.53	4.53
Dawson County	D7	RM 83.21	30910.79	20-yr	2786.75	617.41	612.91	1.6	1.31	12.02	7.46	170.07	779.01	4.46	2.74	4.63	4.63
Dawson County	D7	RM 83.05	30660.14	20-yr	2786.75	617.34	612.78	1.49	1.24	10.42	5.3	229.1	1006.82	4.37	2.23	4.88	4.88
Dawson County	D7	RM 82.94	30491.79	20-yr	2786.75	617.28	612.69	1.54	1.29	11.18	5.54	219.21	1015.5	4.33	2.14	4.89	4.89
Dawson County	D7	RM 82.81	30280.45	20-yr	2786.75	617.19	612.58	1.69	1.37	13.67	6.44	178.49	1041.14	4.18	1.96	5.04	5.04
Dawson County	D7	RM 82.68	30058.39	20-yr	2786.75	617.12	612.34	1.8	1.3	14.92	6.06	152.77	1119.4	4.77	1.91	5.02	5.02
Dawson County	D7	RM 82.51	29786.14	20-yr	2786.75	617.1	612.1	1.31	1	7.96	3.64	229.35	1327.95	4.67	2.11	5.25	5.25
Dawson County	D7	RM 82.33	29497.12	20-yr	2786.75	617.04	611.87	1.38	0.89	8.7	4.02	246.87	1440.86	4.82	2.18	5.3	5.3
Dawson County	D7	RM 82.22	29323.27	20-yr	2786.75	616.98	611.66	1.61	0.9	11.79	4.65	193.52	1710.04	4.96	1.94	5.33	5.33
Dawson County	D7	RM 82.06	29049.94	20-yr	2786.75	616.94	611.37	1.46	0.84	9.56	3.3	202.97	1875.94	5.24	1.77	5.58	5.58
Dawson County	D7	RM 81.91	28820.21	20-yr	2786.75	616.91	611.21	1.48	0.81	9.55	2.79	191.58	2134.14	5.58	1.6	5.7	5.7
Dawson County	D7	RM 81.71	28446.75	20-yr	2786.75	616.87	611.02	1.24	0.79	6.63	1.88	220.81	2281.71	5.65	1.59	5.85	5.85

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	20-yr	2786.75	616.63	610.8	2.23	1.36	21.45	5.8	165.37	2338.75	5.83	1.54	5.83	5.83
Dawson County	D7	RM 81.31	27735.46	20-yr	2800.91	615.75	610.65	4.1	3.22	76.25	15.46	131.98	880.39	5.02	0.99	5.1	5.1
Dawson County	D8	RM 81.10	27398.33	20-yr	2800.91	615.51	610.47	3.36	2.46	51.17	12.32	160.09	971.13	4.94	1.17	5.04	5.04
Dawson County	D8	RM 80.94	27148.21	20-yr	2800.91	615.49	610.34	2.47	2.01	27.71	6.28	225.85	1269.34	4.89	1.1	5.15	5.15
Dawson County	D8	RM 80.76	26855.69	20-yr	2800.91	615.48	610.19	1.9	1.24	16.08	3.51	181.68	2067.32	5.28	1.12	5.29	5.29
Dawson County	D8	RM 80.64	26669.58	20-yr	2800.91	615.4	610.09	1.97	1.35	17.46	3.76	209.02	2089.43	5.07	1.08	5.3	5.3
Dawson County	D8	RM 80.45	26373.01	20-yr	2800.91	615.41	609.94	1.34	0.89	8.01	2.34	122.91	2650.4	5.33	1.5	5.47	5.47
Dawson County	D8	RM 80.17	25926.88	20-yr	2800.91	615.27	609.71	1.94	1.19	16.6	3.5	146.98	2160.22	5.55	1.13	5.56	5.56
Dawson County	D8	RM 79.91	25496.94	20-yr	2800.91	615.17	609.42	1.49	1.06	10.14	2.21	362.06	2505.41	4.85	1.05	5.75	5.75
Dawson County	D8	RM 79.43	24626.85	20-yr	2800.91	614.91	609.14	1.77	1.36	13.87	3.31	289.02	1680.82	5.27	1.25	5.77	5.77
Dawson County	D8	RM 79.23	24229.4	20-yr	2800.91	614.42	608.87	2.99	2.52	39.78	9.19	173.46	947.88	5.34	1.19	5.55	5.55
Dawson County	D8	RM 78.27	22640.58	20-yr	2800.91	613.64	608.6	2.16	1.55	21.8	9.03	226.68	979.96	4.51	1.85	5.03	5.03
Dawson County	D8	RM 78.12	22398.86	20-yr	2800.91	613.57	608.48	1.96	1.54	17.92	8.13	222.94	888.78	4.55	2.05	5.1	5.1
Dawson County	D8	RM 77.97	22135.34	20-yr	2800.91	613.45	608.34	2.1	1.62	20.11	9.08	214.67	791.55	4.88	2.19	5.1	5.1
Dawson County	D8	RM 77.79	21831.85	20-yr	2800.91	613.37	608.18	1.77	1.53	15.41	8.56	332.54	862.98	3.82	2.12	5.18	5.18
Dawson County	D8	RM 77.57	21474.71	20-yr	2800.91	613.15	608	2.12	1.86	20.51	9.87	250.08	658.36	4.77	2.29	5.15	5.15
Dawson County	D8	RM 77.38	21170.35	20-yr	2800.91	612.94	607.84	2.39	2.01	26.03	12.21	215.18	618.65	4.83	2.26	5.1	5.1
Dawson County	D8	RM 77.13	20780.17	20-yr	2800.91	612.91	607.63	1.69	1.36	12.98	7.1	188.55	778.64	4.91	2.65	5.28	5.28
Dawson County	D8	RM 77.00	20442.34	20-yr	2800.91	612.79	607.46	2.03	1.49	18.4	8.21	131.83	821.19	5.32	2.28	5.34	5.34
Dawson County	D8	RM 76.90	20124.49	20-yr	2800.91	612.71	607.29	1.88	1.56	15.79	7.81	153.24	691.81	5.41	2.6	5.42	5.42
Dawson County	D8	RM 76.76	19785.25	20-yr	2800.91	612.66	607.12	1.53	1.34	10.48	5.15	269.03	843.11	5.11	2.5	5.55	5.55
Dawson County	D8	RM 76.63	19501.04	20-yr	2800.91	612.58	606.97	1.67	1.45	12.89	6.5	246.86	837.19	4.64	2.31	5.61	5.61
Dawson County	D8	RM 76.37	19137.53	20-yr	2800.91	612.39	606.78	1.96	1.66	17.14	7.36	272.76	769.24	5.12	2.19	5.61	5.61
Dawson County	D8	RM 76.22	18884.28	20-yr	2800.91	612.28	606.65	2.04	1.68	18.56	6.71	253.7	883.51	5.25	1.89	5.63	5.63
Dawson County	D8	RM 76.00	18519.22	20-yr	2800.91	612.04	606.61	2.38	1.86	25.63	7.32	225.2	1056.45	5.03	1.42	5.43	5.43
Dawson County	D8	RM 75.75	18119.45	20-yr	2800.91	611.73	606.58	2.65	2.1	31.96	9.77	209.51	906.73	4.86	1.47	5.15	5.15
Dawson County	D8	RM 75.56	17818.36	20-yr	2800.91	611.64	606.75	2.11	1.68	21.3	8.01	303.99	1069.24	4.17	1.56	4.89	4.89
Dawson County	D8	RM 75.31	17411.3	20-yr	2800.91	611.48	606.34	2	1.57	18.5	6.25	263.12	1133.95	4.68	1.57	5.14	5.14
Dawson County	D8	RM 75.13	17092.44	20-yr	2800.91	611.36	606.17	1.91	1.43	17.08	6.25	306.22	1193.35	4.49	1.64	5.19	5.19
Dawson County	D8	RM 74.90	16719.46	20-yr	2800.91	611.01	605.98	2.59	1.87	31.34	9.3	224.87	1128.45	4.52	1.33	5.03	5.03
Dawson County	D8	RM 74.65	16308.2	20-yr	2800.91	610.89	605.91	2.01	1.47	18.94	6.16	267.86	1309.61	4.5	1.45	4.97	4.97
Dawson County	D8	RM 74.37	15846.14	20-yr	2800.91	610.63	605.85	2.26	1.72	24.44	8	221.55	1203.68	4.16	1.35	4.78	4.78
Dawson County	D8	RM 74.13	15464.97	20-yr	2800.91	610.46	605.82	2	1.63	19.14	7.63	235.57	1032.96	4.26	1.69	4.64	4.64
Dawson County	D8	RM 73.91	15098.01	20-yr	2800.91	610.34	605.99	1.72	1.34	14.43	5.91	283.69	1307.49	3.91	1.6	4.35	4.35
Dawson County	D8	RM 73.71	14783.86	20-yr	2800.91	610.23	605.87	1.64	1.32	13.12	4.82	292.2	1499.63	3.97	1.45	4.36	4.36
Dawson County	D8	RM 73.53	14496.67	20-yr	2800.91	610.14	605.72	1.65	1.19	13.01	4.16	249.62	2225.4	4.15	1.32	4.42	4.42
Dawson County	D8	RM 73.29	14096.19	20-yr	2800.91	609.69	605.51	2.77	2.17	37.09	13.18	198.62	971.39	4.08	1.44	4.18	4.18
Dawson County	D8	RM 73.07	13729.79	20-yr	2800.91	609.25	605.52	2.99	2.46	44.74	19.79	196.15	758.47	3.66	1.62	4	4
Dawson County	D8	RM 72.97	13573.93	20-yr	2800.91	608.92	605.5	3.32	2.8	56.74	25.87	199.11	757.21	3.35	1.53	3.75	3.75
Dawson County	D8	RM 72.91	13479.91	20-yr	2800.91	608.75	605.45	3.27	2.91	56.1	31.62	221.07	706.34	3.17	1.79	3.58	3.58
Dawson County		RM 72.905	13470.04	20-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	20-yr	2800.91	608.57	605.31	3.48	3.09	63.83	34.85	208.91	575.9	3.14	1.71	3.4	3.4
Dawson County	D8	RM 72.83	13354.45	20-yr	2800.91	608.6	604.9	2.49	2.16	31.46	17.12	264.25	718.81	3.46	1.89	3.7	3.7
Dawson County	D8	RM 72.62	13000.82	20-yr	2800.91	608.34	604.4	2.26	1.98	25.43	13.49	295.23	783.35	3.71	1.97	3.95	3.95
Dawson County	D8	RM 72.37	12609.05	20-yr	2800.91	608.02	603.89	2.46	1.97	29.49	15.04	228.58	734.24	3.93	2	4.13	4.13
Dawson County	D8	RM 72.16	12261.75	20-yr	2800.91	607.76	603.69	2.36	2.05	27.5	14.33	286.3	756.49	3.79	1.98	4.07	4.07
Dawson County	D8	RM 71.92	11875.08	20-yr	2800.91	607.59	603.18	1.93	1.74	18.25	9.93	345.16	789.31	3.87	2.1	4.41	4.41
Dawson County	D8	RM 71.69	11512.65	20-yr	2800.91	607.37	602.95	2.08	1.79	20.92	9.8	303.44	851.43	4.03	1.89	4.43	4.43
Dawson County	D8	RM 71.49	11192.6	20-yr	2800.91	607.19	602.03	2.21	1.79	22.25	8.68	237.66	859.4	4.83	1.88	5.16	5.16
Dawson County	D8	RM 71.31	10913.3	20-yr	2800.91	607.06	601.99	2.19	1.7	22.04	9.23	244.59	865.72	4.68	1.95	5.07	5.07
Dawson County	D9	RM 71.10	10567.75	20-yr	2812.23	606.97	602.11	1.83	1.53	15.81	8.97	197.48	775.57	4.34	2.44	4.86	4.86
Dawson County	D9	RM 70.91	10267.7	20-yr	2812.23	606.81	602.05	2.13	1.61	21.09	7.26	126.11	1270.21	4.69	1.59	4.76	4.76
Dawson County	D9	RM 70.72	9968.939	20-yr	2812.23	606.69	601.91	2.1	1.47	20.41	7.03	153.19	1340.61	4.77	1.59	4.78	4.78
Dawson County	D9	RM 70.50	9603.574	20-yr	2812.23	606.57	601.9	1.83	1.56	15.84	10.39	251.24	667.9	4.28	2.8	4.66	4.66
Dawson County	D9	RM 70.27	9238.535	20-yr	2812.23	606.26	601.31	2.41	2.04	26.8	11.44	236.79	724.98	4.63	1.97	4.94	4.94
Dawson County	D9	RM 70.08	8928.013	20-yr	2812.23	606.12	600.85	2.25	1.78	23.31	8.85	234.44	897.27	4.78	1.8	5.27	5.27
Dawson County	D9	RM 69.79	8464.726	20-yr	2812.23	605.98	600.61	1.94	1.44	17.13	5.77	248.41	1213.69	4.91	1.64	5.37	5.37
Dawson County	D9	RM 69.50	7983.226	20-yr	2812.23	605.85	600.56	1.88	1.27	16.15	5.21	237.14	1470.53	4.78	1.53	5.29	5.29
Dawson County	D9	RM 69.26	7575.04	20-yr	2812.23	605.71	600.35	1.9	1.24	16.44	5.73	245.78	1360.34	4.9	1.7	5.36	5.36
Dawson County	D9	RM 69.03	7206.967	20-yr	2812.23	605.62	599.95	1.77	1.24	13.79	5.78	236.36	1058.95	5.31	2.21	5.67	5.67
Dawson County	D9	RM 68.82	6851.789	20-yr	2812.23	605.4	599.77	2.18	1.64	21.4	7.91	217.59	979.98	5.08	1.85	5.64	5.64

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

20-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	20-yr	2812.23	605.06	599.59	2.71	2.38	32.54	12.91	189.13	573.65	5.34	2.09	5.47	5.47
Dawson County	D9	RM 68.39	6158.879	20-yr	2812.23	604.9	599.51	2.38	2.21	26.06	17.35	241.73	409.74	4.78	3.17	5.4	5.4
Dawson County	D9	RM 68.11	5709.195	20-yr	2812.23	604.68	599.37	2.25	2.1	23.33	15.06	262.72	515.81	4.67	3.02	5.31	5.31
Dawson County	D9	RM 67.86	5308.187	20-yr	2812.23	604.49	599.17	2.4	2.07	25.89	18.15	130.41	400.82	5.15	3.54	5.32	5.32
Dawson County	D10	RM 67.57	4859.184	20-yr	2837.72	604.29	598.93	2.15	1.95	20.82	14.94	240.29	410.56	5	3.59	5.35	5.35
Dawson County	D10	RM 67.37	4523.862	20-yr	2837.72	604.18	598.75	2.02	1.73	18.41	10.45	224.36	627.79	5.01	2.83	5.42	5.42
Dawson County	D10	RM 67.15	4175.103	20-yr	2837.72	603.8	598.47	2.89	2.26	37.55	14.15	158.11	660.76	5.11	1.9	5.32	5.32
Dawson County	D10	RM 66.95	3842.803	20-yr	2837.72	603.71	598.2	2.21	1.59	22.71	9.79	211.57	896.56	4.65	1.99	5.51	5.51
Dawson County	D10	RM 66.74	3505.323	20-yr	2837.72	603.53	598.12	2.29	1.76	23.43	11.17	189.78	650.79	5.27	2.48	5.4	5.4
Dawson County	D10	RM 66.52	3142.889	20-yr	2837.72	603.31	598.26	2.31	2.01	24.45	11.93	249	707.09	4.73	2.3	5.05	5.05
Dawson County	D10	RM 66.28	2774.58	20-yr	2837.72	602.9	598.21	2.9	2.56	39.51	26.21	206.17	433.92	4.44	2.95	4.69	4.69
Dawson County	D10	RM 66.11	2492.331	20-yr	2837.72	602.78	597.8	2.37	2.17	26.83	19.3	269.84	487.82	4.24	3.05	4.98	4.98
Dawson County	D10	RM 65.90	2160.839	20-yr	2837.72	602.66	597.33	2.12	1.78	20.74	11.23	227.64	658.74	4.74	2.54	5.33	5.33
Dawson County	D10	RM 65.75	1926.044	20-yr	2837.72	602.54	597.2	2.1	1.84	21.13	14.51	203.78	598.09	4.28	2.92	5.34	5.34
Dawson County	D10	RM 65.60	1669.095	20-yr	2837.72	602.37	597.07	2.41	1.75	26.18	10.29	140.14	905.22	5.07	1.96	5.31	5.31
Dawson County	D10	RM 65.42	1386.836	20-yr	2837.72	602.3	596.92	1.85	1.58	15.56	8.21	247.82	712.47	4.92	2.57	5.38	5.38
Dawson County	D10	RM 65.23	1090.639	20-yr	2837.72	602.17	596.91	1.97	1.56	19.04	8.32	263.18	1134.7	3.9	1.68	5.26	5.26
Dawson County	D10	RM 64.96	634.963	20-yr	2837.72	602.03	597.09	1.72	1.16	13.9	5.43	270.22	1768.9	4.41	1.72	4.94	4.94

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	20-yr	2837.3	601.88	596.42	1.36	0.95	9.04	3.33	398.12	2090.32	3.92	1.44	5.46	5.46
Richland/McKenzie County	D10	RM 64.32	103200	20-yr	2837.3	601.78	596.33	1.71	0.92	13.55	4.2	232.97	2169.37	4.6	1.41	5.45	5.45
Richland/McKenzie County	D10	RM 64.12	102900	20-yr	2837.3	601.73	596.18	1.44	0.94	9.87	3.65	281.09	1963.37	4.2	1.54	5.55	5.55
Richland/McKenzie County	D10	RM 63.92	102601	20-yr	2837.3	601.69	596.08	1.37	0.81	9.06	3.79	273.38	2088.67	4.07	1.68	5.61	5.61
Richland/McKenzie County	D10	RM 63.74	102302	20-yr	2837.3	601.63	595.94	1.46	0.87	9.97	3.49	254.65	2095.19	4.47	1.55	5.69	5.69
Richland/McKenzie County	D10	RM 63.55	101998	20-yr	2837.3	601.57	595.79	1.54	0.84	10.54	3.41	210.56	1979.18	5.31	1.7	5.78	5.78
Richland/McKenzie County	D10	RM 63.34	101671	20-yr	2837.3	601.51	595.21	1.53	0.81	10.84	4.22	241.49	1992.57	4.56	1.76	6.3	6.3
Richland/McKenzie County	D10	RM 63.08	101293	20-yr	2837.3	601.11	595.12	2.87	1.34	37.81	10.77	159.68	1571.6	4.83	1.35	5.99	5.99
Richland/McKenzie County	D10	RM 62.96	101094	20-yr	2837.3	600.9	595.12	3.01	1.6	51.31	14.24	149.74	1262.37	5.16	1.4	5.78	5.78
Richland/McKenzie County	D10	RM 62.83	100882	20-yr	2837.3	600.74	595.12	2.85	1.63	40.5	10.75	161.51	1257.44	5.31	1.38	5.62	5.62
Richland/McKenzie County	D10	RM 62.64	100582	20-yr	2837.3	600.63	595.12	2.46	1.52	27.09	8.55	189.94	1147.92	5.22	1.63	5.51	5.51
Richland/McKenzie County	D10	RM 62.46	100282	20-yr	2837.3	600.14	595.1	3.36	2.36	52.3	19.67	161.13	691.98	4.7	1.74	5.04	5.04
Richland/McKenzie County	D10	RM 62.27	99977	20-yr	2837.3	600.21	594.91	1.86	1.51	16.05	7.27	303.35	904.37	4.66	2.08	5.3	5.3
Richland/McKenzie County	D10	RM 62.1	99691	20-yr	2837.3	600.13	594.75	1.69	1.32	13.32	7.12	274.06	1048.04	3.86	2.05	5.38	5.38
Richland/McKenzie County	D10	RM 61.91	99377	20-yr	2837.3	599.97	594.51	1.9	1.3	16.58	7.72	164.84	1117.87	4.26	1.96	5.46	5.46
Richland/McKenzie County	D10	RM 61.72	99082	20-yr	2837.3	599.82	594.36	2.03	1.48	18.92	7.06	127.17	1086.2	4.84	1.77	5.46	5.46
Richland/McKenzie County	D10	RM 61.54	98782	20-yr	2837.3	599.52	594.36	2.42	2.05	26.18	9.34	230.57	845.05	4.65	1.64	5.16	5.16
Richland/McKenzie County	D10	RM 61.35	98482	20-yr	2837.3	599.35	594.26	2.44	1.98	27.47	10.87	215	797.31	4.65	1.82	5.09	5.09
Richland/McKenzie County	D10	RM 61.16	98182	20-yr	2837.3	599.3	594.17	1.79	1.37	15.29	7.6	248.77	977.21	4.3	2.12	5.13	5.13
Richland/McKenzie County	D10	RM 60.99	97906	20-yr	2837.3	599.17	594.02	1.98	1.39	17.99	6.49	216.72	1209.54	4.73	1.69	5.15	5.15
Richland/McKenzie County	D10	RM 60.79	97582	20-yr	2837.3	599.04	593.78	1.98	1.29	19.02	7.4	224.25	1431.59	4.01	1.54	5.26	5.26
Richland/McKenzie County	D10	RM 60.64	97339	20-yr	2837.3	599.03	593.58	1.26	0.92	7.85	3.88	266.31	1670.93	3.81	1.86	5.45	5.45
Richland/McKenzie County	D10	RM 60.42	96982	20-yr	2837.3	598.88	593.38	1.76	1.23	14.1	4.53	215.62	1633.67	4.57	1.45	5.5	5.5
Richland/McKenzie County	D10	RM 60.25	96700	20-yr	2837.3	598.74	593.24	2.2	1.38	23.75	7.58	192.38	1658.84	3.96	1.24	5.5	5.5
Richland/McKenzie County	D10	RM 60.04	96365	20-yr	2837.3	598.58	593.14	2.09	1.32	22.35	7.43	227.05	1923.1	3.41	1.12	5.44	5.44
Richland/McKenzie County	D10	RM 59.86	96088	20-yr	2837.3	598.49	592.99	1.92	1	16.74	4.44	171.89	2177.32	5.02	1.31	5.5	5.5
Richland/McKenzie County	D10	RM 59.65	95769	20-yr	2837.3	598.45	592.85	1.5	0.82	10.47	3.44	207.22	2349.35	4.55	1.47	5.6	5.6
Richland/McKenzie County	D10	RM 59.5	95530	20-yr	2837.3	598.36	592.75	1.66	1	13.26	4.04	206.9	2252.06	4.2	1.26	5.61	5.61
Richland/McKenzie County	D10	RM 59.29	95183	20-yr	2837.3	598.28	592.55	1.52	1	11.04	3.34	232.08	2217.65	4.29	1.28	5.73	5.73
Richland/McKenzie County	D10	RM 59.07	94797	20-yr	2837.3	598.2	592.36	1.35	0.94	9.57	3.3	408.43	2153.32	4.08	1.4	5.84	5.84
Richland/McKenzie County	D10	RM 58.93	94582	20-yr	2837.3	598.09	592.31	1.7	1.06	13.64	4.16	328.36	2039.83	4.36	1.31	5.78	5.78
Richland/McKenzie County	D10	RM 58.75	94282	20-yr	2837.3	597.99	592.28	1.83	1.12	14.75	3.86	264.72	1930.27	5.06	1.31	5.71	5.71
Richland/McKenzie County	D10	RM 58.56	93982	20-yr	2837.3	597.45	592.22	3.3	2.1	49.45	9.15	157.23	1500.49	4.95	0.9	5.23	5.23
Richland/McKenzie County	D10	RM 58.37	93682	20-yr	2837.3	597.19	592.22	3.08	2.37	43.86	10.94	186.39	1035.33	4.7	1.15	4.97	4.97
Richland/McKenzie County	D10	RM 58.19	93382	20-yr	2837.3	597.17	592.22	2.15	1.64	21.11	7.08	254.64	1280.39	4.78	1.59	4.95	4.95
Richland/McKenzie County	D10	RM 58.01	93086	20-yr	2837.3	596.9	592.14	2.54	2.26	30.3	12.86	236.45	661.3	4.51	1.9	4.76	4.76
Richland/McKenzie County	D10	RM 57.82	92782	20-yr	2837.3	596.84	592.11	1.85	1.66	16.85	9.34	308.1	1023.72	3.8	2.1	4.73	4.73
Richland/McKenzie County	D10	RM 57.63	92482	20-yr	2837.3	596.66	592.11	2.33	1.69	25.96	9.9	160.84	1050.21	4.25	1.6	4.55	4.55
Richland/McKenzie County	D10	RM 57.46	92205	20-yr	2837.3	596.58	591.95	1.72	1.22	13.94	6.68	192.28	1137.83	4.35	2.06	4.63	4.63
Richland/McKenzie County	D10	RM 57.26	91882	20-yr	2837.3	596.3	591.9	2.26	1.83	25.43	10.63	136.34	1031.32	3.73	1.54	4.4	4.4
Richland/McKenzie County	D10	RM 57.07	91583	20-yr	2837.3	596.23	591.73	1.81	1.36	15.74	8.27	137.42	978.1	4.25	2.2	4.5	4.5
Richland/McKenzie County	D10	RM 56.87	91253	20-yr	2837.3	596.08	591.49	1.6	1.35	12.73	8.41	186.15	858.16	3.77	2.48	4.65	4.65
Richland/McKenzie County	D10	RM 56.68	90943	20-yr	2837.3	596.01	591.12	1.37	1.28	9.47	6.91	299.58	964.75	3.56	2.6	4.89	4.89
Richland/McKenzie County	D10	RM 56.54	90682	20-yr	2851.5	595.78	590.76	1.77	1.99	17.9	15.37	216.66	543.37	3.08	2.64	5.06	5.06
Richland/McKenzie County	D10	RM 56.35	90387	20-yr	2851.5	595.66	590.46	1.83	1.83	16.44	15.03	174.85	446.67	3.85	3.5	5.2	5.2
Richland/McKenzie County	D11	RM 56.16	90086	20-yr	2851.5	595.26	590.11	2.73	2.66	34.42	23.98	220.64	332.4	4.73	3.27	5.15	5.15
Richland/McKenzie County	D11	RM 55.96	89768	20-yr	2851.5	595.08	589.96	2.55	2.28	29.65	18.66	222.74	452.5	4.87	3.06	5.12	5.12
Richland/McKenzie County	D11	RM 55.78	89479	20-yr	2851.5	594.99	589.96	2.25	1.72	23.32	11.44	216.81	743.02	4.72	2.3	5.03	5.03
Richland/McKenzie County	D11	RM 55.61	89193	20-yr	2851.5	594.83	589.98	2.28	1.77	24.1	9.96	222.22	1015.36	4.63	1.9	4.85	4.85
Richland/McKenzie County	D11	RM 55.41	88882	20-yr	2851.5	594.67	589.76	2.27	1.61	24.24	10.26	203.81	1200.98	4.38	1.84	4.91	4.91
Richland/McKenzie County	D11	RM 55.23	88582	20-yr	2851.5	594.53	589.53	2.11	1.55	20.37	9.41	238.9	984.34	4.79	2.19	5	5
Richland/McKenzie County	D11	RM 55.04	88282	20-yr	2851.5	594.34	589.39	2.29	1.7	24.84	13.03	252.08	835.79	4.29	2.24	4.95	4.95
Richland/McKenzie County	D11	RM 54.86	87996	20-yr	2851.5	593.97	589.33	2.88	2.3	41.28	20.59	223.04	725.51	3.72	1.84	4.64	4.64
Richland/McKenzie County	D11	RM 54.69	87715	20-yr	2851.5	593.92	589.23	1.97	1.63	18.76	12.38	188.11	782.31	4.06	2.65	4.69	4.69
Richland/McKenzie County	D11	RM 54.48	87382	20-yr	2851.5	593.81	589.15	1.74	1.26	14.51	6.97	179.29	1665.21	4.17	1.98	4.66	4.66
Richland/McKenzie County	D11	RM 54.32	87122	20-yr	2851.5	593.72	589	1.81	1.17	15.23	6.05	159.94	2017.66	4.57	1.78	4.72	4.72
Richland/McKenzie County	D11	RM 54.1	86783	20-yr	2851.5	593.6	588.83	1.65	1.24	12.64	5.71	202.24	1543.51	4.62	2.06	4.77	4.77
Richland/McKenzie County	D11	RM 53.92	86482	20-yr	2851.5	593.53	588.68	1.5	1.1	10.82	4.25	255.08	1812.89	4.14	1.6	4.85	4.85
Richland/McKenzie County	D11	RM 53.73	86182	20-yr	2851.5	593.44	588.51	1.74	1.11	13.91	4.39	196.75	2331.56	4.72	1.46	4.93	4.93
Richland/McKenzie County	D11	RM 53.55	85882	20-yr	2851.5	593.31	588.37	1.78	1.27	14.76	4.78	181.72	1697.33	4.59	1.47	4.94	4.94
Richland/McKenzie County	D11	RM 53.36	85582	20-yr	2851.5	593.14	588.01	1.95	1.35	18.35	5.35	166.55	1857.82	4.08	1.18	5.13	5.13

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 53.17	85290	20-yr	2851.5	592.79	587.56	2.71	1.73	33.66	7.24	205.44	1628.1	4.76	1.02	5.23	5.23
Richland/McKenzie County	D11	RM 52.98	84982	20-yr	2851.5	592.42	587.56	2.97	1.79	46.34	13.85	271.44	2429.52	3.15	0.93	4.86	4.86
Richland/McKenzie County	D11	RM 52.79	84682	20-yr	2851.5	592.19	587.56	2.26	1.49	27.65	11.81	386.97	2170.17	2.91	1.23	4.63	4.63
Richland/McKenzie County	D11	RM 52.61	84390	20-yr	2851.5	592.07	587.43	1.7	1.43	14.67	5.87	450.01	2166.69	3.56	1.42	4.64	4.64
Richland/McKenzie County	D11	RM 52.42	84082	20-yr	2851.5	591.98	587.28	1.53	1.1	12.3	5.57	409.99	2306.33	3.15	1.41	4.7	4.7
Richland/McKenzie County	D11	RM 52.24	83798	20-yr	2851.5	591.91	587.28	1.49	0.81	10.96	4.04	227.41	3118.54	3.83	1.39	4.63	4.63
Richland/McKenzie County	D11	RM 52.01	83423	20-yr	2851.5	591.7	587.23	2.1	1.22	21.18	4.1	124.91	3279.52	4.26	0.8	4.47	4.47
Richland/McKenzie County	D11	RM 51.87	83182	20-yr	2851.5	591.61	587.16	1.61	0.95	13.89	4.38	156.7	3156.38	3.06	0.95	4.45	4.45
Richland/McKenzie County	D11	RM 51.69	82882	20-yr	2851.5	591.51	587.16	1.46	0.84	10.53	3.22	150.39	3170.62	3.57	1.07	4.35	4.35
Richland/McKenzie County	D11	RM 51.51	82585	20-yr	2851.5	591.43	587.16	1.64	1	14.13	4.27	149.84	2943.97	3.26	0.97	4.27	4.27
Richland/McKenzie County	D11	RM 51.32	82274	20-yr	2851.5	591.38	587.16	1.37	0.81	9.88	3.39	173.83	3246.38	3.21	1.08	4.22	4.22
Richland/McKenzie County	D11	RM 51.13	81982	20-yr	2851.5	591.32	587.13	1.47	0.86	10.5	2.62	164.51	3367.45	4.01	0.98	4.21	4.21
Richland/McKenzie County	D11	RM 50.95	81682	20-yr	2851.5	591.24	587.08	1.34	0.72	8.79	2.49	144.96	3625.99	3.94	1.1	4.16	4.16
Richland/McKenzie County	D11	RM 50.76	81378	20-yr	2851.5	591.18	586.89	1.25	0.62	7.74	2.75	174.41	3514.7	3.79	1.32	4.29	4.29
Richland/McKenzie County	D11	RM 50.56	81065	20-yr	2851.5	591.02	586.37	1.65	0.86	12.72	3.06	171.61	3192.96	4.52	1.07	4.65	4.65
Richland/McKenzie County	D11	RM 50.39	80787	20-yr	2851.5	590.97	585.7	1.52	0.79	10.3	2.38	196.96	3062.62	5.16	1.17	5.27	5.27
Richland/McKenzie County	D11	RM 50.21	80482	20-yr	2851.5	590.89	585.55	1.47	0.91	10	2.8	234.94	2447.23	4.62	1.29	5.34	5.34
Richland/McKenzie County	D11	RM 50.02	80182	20-yr	2865.7	590.74	585.55	1.83	1.21	15.68	4.24	197.51	1972.38	4.54	1.2	5.19	5.19
Richland/McKenzie County	D12	RM 49.82	79860	20-yr	2865.7	590.33	585.55	2.75	2.01	35.38	8.92	211.46	1255.04	4.55	1.13	4.78	4.78
Richland/McKenzie County	D12	RM 49.65	79582	20-yr	2865.7	590.03	585.55	2.95	2.34	41.6	15.8	213.94	764.87	4.24	1.6	4.48	4.48
Richland/McKenzie County	D12	RM 49.5	79348	20-yr	2865.7	590.15	585.49	1.48	1.24	10.19	4.26	356	1516.92	4.56	1.9	4.7	4.7
Richland/McKenzie County	D12	RM 49.26	78981	20-yr	2865.7	590.06	585.29	1.74	1.23	14.17	5.86	137.44	1259.6	4.55	1.85	4.77	4.77
Richland/McKenzie County	D12	RM 49.08	78682	20-yr	2865.7	589.93	585.11	1.89	1.34	16.64	5.87	156.64	1349.04	4.55	1.59	4.89	4.89
Richland/McKenzie County	D12	RM 48.87	78351	20-yr	2865.7	589.82	584.96	1.85	1.31	15.86	4.09	209.35	1865.02	4.58	1.17	4.86	4.86
Richland/McKenzie County	D12	RM 48.7	78082	20-yr	2865.7	589.73	584.86	1.74	1.29	15.06	5.46	252.25	1626.05	3.84	1.37	4.87	4.87
Richland/McKenzie County	D12	RM 48.52	77782	20-yr	2865.7	589.72	584.74	1.14	0.92	6.39	3.19	473.03	1669.27	3.77	1.87	4.98	4.98
Richland/McKenzie County	D12	RM 48.33	77482	20-yr	2865.7	589.66	584.51	1.2	0.96	7.88	4.46	517.65	1687.51	3.15	1.77	5.15	5.15
Richland/McKenzie County	D12	RM 48.15	77182	20-yr	2865.7	589.56	584.24	1.44	0.9	9.55	5.34	497.96	1755.86	3.27	1.82	5.32	5.32
Richland/McKenzie County	D12	RM 47.97	76887	20-yr	2865.7	589.53	584.09	1.11	0.84	5.17	3.5	601.73	2175.63	2.94	1.98	5.44	5.44
Richland/McKenzie County	D12	RM 47.76	76570	20-yr	2865.7	589.49	583.86	1.05	0.89	5.27	3.3	565.5	2086.62	3.27	2.04	5.63	5.63
Richland/McKenzie County	D12	RM 47.59	76293	20-yr	2865.7	589.42	583.71	1.19	0.94	6.76	3.26	391.27	2051.46	3.99	1.92	5.71	5.71
Richland/McKenzie County	D12	RM 47.4	75982	20-yr	2865.7	589.33	583.42	1.56	1	10.98	4.19	196.88	1962.35	4.84	1.83	5.91	5.91
Richland/McKenzie County	D12	RM 47.12	75521	20-yr	2865.7	589.12	583.04	1.91	1.23	15.6	4.32	234.72	1781.33	5.82	1.59	6.08	6.08
Richland/McKenzie County	D12	RM 47	75323	20-yr	2865.7	588.69	583.04	3.21	1.97	46.35	9.86	162.2	1616.79	5.07	1.06	5.65	5.65
Richland/McKenzie County	D12	RM 46.85	75082	20-yr	2865.7	588.54	583.04	2.9	1.97	37.82	8.51	184.53	1500.59	5.04	1.12	5.5	5.5
Richland/McKenzie County	D12	RM 46.67	74782	20-yr	2865.7	588.29	583.04	2.93	2.27	38.6	9.55	185.83	1111.63	5.09	1.24	5.25	5.25
Richland/McKenzie County	D12	RM 46.47	74459	20-yr	2865.7	588.28	583.04	1.96	1.71	17.8	6.63	312.11	1024.5	4.6	1.7	5.24	5.24
Richland/McKenzie County	D12	RM 46.3	74186	20-yr	2865.7	588.16	583.04	1.97	1.75	16.74	9.52	421.1	872.55	3.33	1.88	5.12	5.12
Richland/McKenzie County	D12	RM 46.14	73920	20-yr	2865.7	588.06	583.04	1.79	1.6	13.96	8.71	454.73	843.46	3.43	2.12	5.02	5.02
Richland/McKenzie County	D12	RM 45.9	73546	20-yr	2865.7	587.91	582.97	1.82	1.38	15.78	7.18	339.6	1124.33	4.07	1.85	4.94	4.94
Richland/McKenzie County	D12	RM 45.75	73307	20-yr	2865.7	587.74	582.88	2.1	1.6	20.82	9.14	351.5	1284.73	3.45	1.51	4.86	4.86
Richland/McKenzie County	D12	RM 45.54	72980	20-yr	2865.7	587.64	582.55	1.67	1.34	13.52	6.01	382.5	1185.04	4.09	1.8	5.09	5.09
Richland/McKenzie County	D12	RM 45.29	72680	20-yr	2865.7	587.51	582.25	1.82	1.4	16.1	7.07	347.33	1158.24	4.04	1.76	5.26	5.26
Richland/McKenzie County	D12	RM 45.09	72380	20-yr	2865.7	587.39	582.08	1.91	1.4	16.54	5.5	267.36	1264.52	4.91	1.62	5.31	5.31
Richland/McKenzie County	D12	RM 44.91	72080	20-yr	2865.7	587.3	582.01	1.83	1.35	15.5	6.33	283.48	1116.11	4.69	1.9	5.29	5.29
Richland/McKenzie County	D12	RM 44.72	71783	20-yr	2865.7	587.07	581.97	2.37	1.59	25.72	9.48	208.81	1033.72	4.78	1.75	5.1	5.1
Richland/McKenzie County	D12	RM 44.53	71483	20-yr	2865.7	586.83	581.82	2.69	1.77	33.7	13.84	177.29	873.37	4.56	1.85	5.01	5.01
Richland/McKenzie County	D12	RM 44.34	71183	20-yr	2865.7	586.54	581.8	2.81	1.95	38.6	13.83	198.84	1294.35	3.95	1.4	4.74	4.74
Richland/McKenzie County	D12	RM 44.17	70899	20-yr	2865.7	586.56	581.79	1.59	1.25	11.71	5.11	301.73	1665.47	4.69	2.03	4.77	4.77
Richland/McKenzie County	D12	RM 43.97	70594	20-yr	2865.7	586.49	581.73	1.49	1.17	10.92	4.43	326.68	2261.42	3.9	1.57	4.76	4.76
Richland/McKenzie County	D12	RM 43.74	70230	20-yr	2865.7	586.33	581.66	1.7	1.51	14.49	6.92	164.51	1426.32	3.7	1.75	4.67	4.67
Richland/McKenzie County	D12	RM 43.59	69983	20-yr	2865.7	586.25	581.56	1.54	0.92	11.43	4.08	143.76	2532.93	3.81	1.33	4.69	4.69
Richland/McKenzie County	D12	RM 43.4	69684	20-yr	2865.7	586.16	581.49	1.51	0.93	11.21	3.86	150.64	2704.77	4.02	1.36	4.67	4.67
Richland/McKenzie County	D12	RM 43.03	69084	20-yr	2865.7	586.04	581.37	1.48	0.82	10.89	3.67	131.62	3440.84	3.79	1.25	4.67	4.67
Richland/McKenzie County	D12	RM 42.66	68489	20-yr	2865.7	585.95	581.18	1.63	0.85	12.85	3.84	115.82	3492.35	4.13	1.21	4.77	4.77
Richland/McKenzie County	D12	RM 42.29	67889	20-yr	2865.7	585.89	580.87	1.19	0.74	6.69	2.22	281.47	3505.73	4.42	1.45	5.02	5.02
Richland/McKenzie County	D12	RM 42.08	67558	20-yr	2865.7	585.84	580.61	1.38	0.73	8.64	2.57	180.64	3274.48	4.98	1.46	5.23	5.23
Richland/McKenzie County	D12	RM 41.89	67260	20-yr	2865.7	585.75	580.31	1.48	0.83	10.01	3.04	292.42	2764.69	4.86	1.47	5.44	5.44
Richland/McKenzie County	D12	RM 41.75	67037	20-yr	2865.7	585.67	579.99	1.61	0.96	12.4	3.74	337.38	2637.88	4.17	1.24	5.68	5.68
Richland/McKenzie County	D12	RM 41.54	66695	20-yr	2865.7	585.5	579.72	2.01	1.01	17.8	4.69	196.39	2003.31	5.47	1.42	5.78	5.78
Richland/McKenzie County	D12	RM 41.34	66361	20-yr	2865.7	585.36	579.43	2.09	1.18	20.32	6.2	218.95	1767.73	4.57	1.38	5.93	5.93

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 41.18	66116	20-yr	2865.7	585.23	579.08	2.19	1.23	21.57	5.92	195.81	1685.38	5.12	1.38	6.15	6.15
Richland/McKenzie County	D12	RM 40.99	65802	20-yr	2865.7	585.13	578.99	2.01	1.07	18.27	5.02	203.5	1992.4	4.99	1.35	6.14	6.14
Richland/McKenzie County	D12	RM 40.8	65502	20-yr	2865.7	584.97	578.97	2.03	1.39	19.33	5.09	273.63	1902.78	4.43	1.15	6	6
Richland/McKenzie County	D12	RM 40.62	65205	20-yr	2865.7	584.92	578.92	1.52	1.01	11.25	3.8	375.4	2657.08	3.95	1.32	6	6
Richland/McKenzie County	D12	RM 40.24	64602	20-yr	2865.7	584.76	578.6	1.39	0.88	9.28	3.41	507.11	2758.15	3.41	1.24	6.16	6.16
Richland/McKenzie County	D12	RM 40	64219	20-yr	2865.7	584.6	578.56	1.75	0.98	14.36	3.63	309.03	2693.66	4.44	1.11	6.04	6.04
Richland/McKenzie County	D12	RM 39.87	64002	20-yr	2865.7	584.46	578.55	2.09	1.08	19.57	4.58	222	2239.4	5.16	1.19	5.91	5.91
Richland/McKenzie County	D12	RM 39.68	63702	20-yr	2865.7	584.35	578.45	2.09	1.19	20.45	4.29	241.95	2573.34	4.56	0.94	5.9	5.9
Richland/McKenzie County	D12	RM 39.5	63402	20-yr	2865.7	584.22	578.35	2.17	1.19	22.3	4.71	226.39	2840.2	4.38	0.91	5.87	5.87
Richland/McKenzie County	D12	RM 39.31	63102	20-yr	2865.7	584.13	578.31	1.93	1.12	17.09	4.19	227.2	2412.99	4.66	1.13	5.82	5.82
Richland/McKenzie County	D12	RM 39.13	62802	20-yr	2865.7	584.02	578.2	1.89	1.12	16.99	4.32	286.13	2387	4.28	1.08	5.82	5.82
Richland/McKenzie County	D12	RM 38.94	62501	20-yr	2865.7	583.94	578.12	1.75	0.96	14.3	3.5	264.19	2682.94	4.6	1.11	5.82	5.82
Richland/McKenzie County	D12	RM 38.76	62201	20-yr	2865.7	583.86	578.03	1.73	0.95	13.36	3	245.72	2626.82	5.17	1.14	5.83	5.83
Richland/McKenzie County	D12	RM 38.57	61901	20-yr	2865.7	583.77	577.87	1.83	0.95	15.87	4.95	236.46	2280.47	4.29	1.32	5.9	5.9
Richland/McKenzie County	D12	RM 38.38	61601	20-yr	2865.7	583.77	577.84	1.07	0.63	5.52	2.5	268.55	2333.01	4.36	1.96	5.93	5.93
Richland/McKenzie County	D12	RM 38.2	61301	20-yr	2865.7	583.71	577.82	1.26	0.72	7.06	2.83	244.45	2302.26	5.19	2.06	5.89	5.89
Richland/McKenzie County	D12	RM 38.01	61008	20-yr	2865.7	583.66	577.81	1.31	0.86	8.23	4.44	307.49	1525.12	4.07	2.18	5.85	5.85
Richland/McKenzie County	D12	RM 37.84	60708	20-yr	2865.7	583.58	577.71	1.47	1.07	11.4	5.81	335.25	1300.56	4.09	2.07	5.87	5.87
Richland/McKenzie County	D12	RM 37.65	60408	20-yr	2865.7	583.57	577.66	1	0.8	4.81	3.25	565.75	1406.17	4.01	2.7	5.91	5.91
Richland/McKenzie County	D12	RM 37.5	60107	20-yr	2865.7	583.52	577.54	0.99	0.91	4.92	3.64	561.58	1316.09	3.55	2.62	5.98	5.98
Richland/McKenzie County	D12	RM 37.35	59808	20-yr	2865.7	583.44	577.37	1.13	0.94	7.4	4.58	427.63	1269.02	3.91	2.41	6.07	6.07
Richland/McKenzie County	D12	RM 37.16	59508	20-yr	2865.7	583.32	577.24	1.64	1.15	12.77	7.54	280.03	1043.14	4.08	2.39	6.08	6.08
Richland/McKenzie County	D12	RM 36.97	59208	20-yr	2865.7	583.22	576.96	1.81	1.28	14.88	9.1	222.26	936.75	3.96	2.4	6.26	6.26
Richland/McKenzie County	D12	RM 36.78	58908	20-yr	2865.7	583.14	576.87	1.72	1.26	13.05	8	217.29	772.32	4.83	2.94	6.27	6.27
Richland/McKenzie County	D12	RM 36.6	58608	20-yr	2865.7	583.05	576.66	1.81	1.38	14.17	6.04	182.19	870.35	5.75	2.39	6.39	6.39
Richland/McKenzie County	D12	RM 36.38	58263	20-yr	2891.2	582.92	576.49	1.83	1.65	14.75	5.77	290.42	843.64	5.35	2.07	6.43	6.43
Richland/McKenzie County	D13	RM 36.23	58011	20-yr	2891.2	582.7	576.43	2.39	1.9	24.61	6.95	199.11	961.85	5.83	1.62	6.27	6.27
Richland/McKenzie County	D13	RM 36.04	57708	20-yr	2891.2	582.51	576.42	2.63	1.79	31.18	8.91	194.14	1193.82	5.1	1.43	6.09	6.09
Richland/McKenzie County	D13	RM 35.85	57408	20-yr	2891.2	582.42	576.41	2.2	1.57	20.96	8.3	278.32	1241.78	4.21	1.65	6.01	6.01
Richland/McKenzie County	D13	RM 35.66	57108	20-yr	2891.2	582.41	576.36	1.55	1.18	10.68	3.87	327.66	1615.43	4.88	1.76	6.05	6.05
Richland/McKenzie County	D13	RM 35.48	56810	20-yr	2891.2	582.23	576.3	2.16	1.41	20.83	6.42	189.87	1481.62	5.23	1.59	5.93	5.93
Richland/McKenzie County	D13	RM 35.29	56508	20-yr	2891.2	582.11	576.19	2.12	1.49	21.06	7.05	216.77	1489.93	4.5	1.49	5.92	5.92
Richland/McKenzie County	D13	RM 35.1	56208	20-yr	2891.2	582	576.07	1.95	1.41	16.84	5.89	244.46	1262.49	5.44	1.86	5.93	5.93
Richland/McKenzie County	D13	RM 34.92	55908	20-yr	2891.2	581.87	576.09	2.02	1.47	21.28	9.85	254.13	1390.51	4.92	2.26	5.78	5.78
Richland/McKenzie County	D13	RM 34.73	55605	20-yr	2891.2	581.81	575.89	1.6	1.38	11.52	6.96	414.63	966.05	4.11	2.47	5.92	5.92
Richland/McKenzie County	D13	RM 34.54	55297	20-yr	2891.2	581.71	575.79	1.6	1.36	12.43	7.84	394.66	960.68	3.56	2.24	5.92	5.92
Richland/McKenzie County	D13	RM 34.36	55008	20-yr	2891.2	581.67	575.75	1.4	1.07	8.5	4.15	323.48	1099.48	5.08	2.46	5.92	5.92
Richland/McKenzie County	D13	RM 34.17	54708	20-yr	2891.2	581.64	575.49	1.25	0.91	7.25	3.58	380.95	1409.8	4.58	2.25	6.15	6.15
Richland/McKenzie County	D13	RM 33.94	54408	20-yr	2891.2	581.61	575.34	1.15	0.86	5.85	3.41	374.48	1250.21	4.7	2.73	6.27	6.27
Richland/McKenzie County	D13	RM 33.76	54079	20-yr	2891.2	581.55	575.12	1.31	1.02	7.81	4.76	286.39	1043.99	4.87	2.93	6.43	6.43
Richland/McKenzie County	D13	RM 33.6	53799	20-yr	2891.2	581.52	574.88	1.24	0.97	7.65	5.15	376.74	1008.8	4.5	3	6.64	6.64
Richland/McKenzie County	D13	RM 33.42	53508	20-yr	2891.2	581.46	574.61	1.38	1.01	8.04	4.36	262.09	1040.07	5.67	3.03	6.85	6.85
Richland/McKenzie County	D13	RM 33.23	53208	20-yr	2891.2	581.43	574.45	1.34	1.02	7.62	4.27	209.05	828.36	6.19	3.44	6.98	6.98
Richland/McKenzie County	D13	RM 33.04	52908	20-yr	2891.2	581.35	574.3	1.62	1.18	10.79	5.14	193.34	1376.18	6.71	3.15	7.05	7.05
Richland/McKenzie County	D13	RM 32.86	52608	20-yr	2891.2	581.21	574.18	1.95	1.24	16.02	5.86	209.27	1513.68	6.21	2.23	7.03	7.03
Richland/McKenzie County	D13	RM 32.67	52308	20-yr	2891.2	581.15	574.18	1.93	1.06	15.89	6.55	188.53	1498.71	6.01	2.44	6.97	6.97
Richland/McKenzie County	D13	RM 32.48	52008	20-yr	2891.2	581.03	574.04	2.06	1.12	18.43	6.94	196.91	1439.05	5.71	2.1	6.99	6.99
Richland/McKenzie County	D13	RM 32.29	51709	20-yr	2891.2	580.99	574.04	1.73	1.02	12.77	5.68	224.23	1139.41	5.95	2.61	6.95	6.95
Richland/McKenzie County	D13	RM 32.11	51423	20-yr	2891.2	580.93	573.94	1.68	1.14	11.86	4.16	220.08	1173.49	6.24	2.17	6.99	6.99
Richland/McKenzie County	D13	RM 31.92	51108	20-yr	2891.2	580.89	573.85	1.55	1.01	10.51	4.68	211.85	1190.17	5.5	2.41	7.04	7.04
Richland/McKenzie County	D13	RM 31.73	50809	20-yr	2891.2	580.85	573.72	1.36	0.91	8.27	3.63	261.37	1187.51	6.29	2.73	7.13	7.13
Richland/McKenzie County	D13	RM 31.51	50462	20-yr	2891.2	580.67	573.24	2.13	1.29	18.07	6.55	162.22	998.55	6.32	2.24	7.43	7.43
Richland/McKenzie County	D13	RM 31.35	50208	20-yr	2891.2	580.56	573.24	2.27	1.55	22.57	10.8	169.04	716.03	5.56	2.61	7.32	7.32
Richland/McKenzie County	D13	RM 31.22	50009	20-yr	2891.2	580.38	573.24	2.59	1.8	28.57	14.07	149.68	558.15	6.08	2.94	7.14	7.14
Richland/McKenzie County	D13	RM 31.12	49859	20-yr	2891.2	580.32	570.86	2.24	2.21	28.94	26.88	196.27	215.34	6.52	6.06	9.46	9.46
Richland/McKenzie County	D13	Highway 23	49844	20-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	20-yr	2891.2	580.28	570.86	2.27	2.24	28.76	26.53	192.51	213.19	6.57	6.05	9.42	9.42
Richland/McKenzie County	D13	RM 30.97	49608	20-yr	2891.2	580.25	573.24	1.93	1.83	15.42	10.59	225.84	618.09	6.58	4.49	7.01	7.01
Richland/McKenzie County	D13	RM 30.79	49308	20-yr	2891.2	580.04	573.24	2.41	2	24.93	12.86	199.27	695.62	5.85	2.98	6.8	6.8
Richland/McKenzie County	D13	RM 30.6	49009	20-yr	2891.2	579.87	573.24	2.57	1.84	28.72	13.53	187.26	771.43	5.6	2.6	6.63	6.63
Richland/McKenzie County	D13	RM 30.41	48706	20-yr	2891.2	579.8	573.15	2.21	1.62	21.5	9.65	212.3	838.92	5.52	2.45	6.65	6.65

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 30.22	48403	20-yr	2891.2	579.69	573.15	2.18	1.49	20.09	6.96	199.03	1244.79	6.07	2.07	6.54	6.54
Richland/McKenzie County	D13	RM 30.03	48102	20-yr	2891.2	579.71	573.15	1.43	1.03	8.79	3.81	315.48	1248.22	5.85	2.47	6.56	6.56
Richland/McKenzie County	D13	RM 29.85	47809	20-yr	2891.2	579.67	573.15	1.31	0.93	7.64	3.64	376.84	1248.85	5.32	2.5	6.52	6.52
Richland/McKenzie County	D13	RM 29.66	47508	20-yr	2891.2	579.59	573.11	1.52	1.02	9.26	4.54	393.01	1371.21	4.29	2.07	6.48	6.48
Richland/McKenzie County	D13	RM 29.48	47209	20-yr	2891.2	579.54	573.11	1.42	0.99	8.54	4.23	346.87	1160.26	5.17	2.53	6.43	6.43
Richland/McKenzie County	D13	RM 29.28	46894	20-yr	2891.2	579.5	572.98	1.27	1.02	7.36	4.8	401.07	914.36	4.78	3.11	6.52	6.52
Richland/McKenzie County	D13	RM 29.1	46608	20-yr	2891.2	579.44	572.94	1.62	1.06	11.53	6.72	169.86	899.58	5.53	3.18	6.5	6.5
Richland/McKenzie County	D13	RM 28.92	46308	20-yr	2891.2	579.36	572.85	1.74	1.19	12.87	5.87	146.69	929.94	6.04	2.7	6.51	6.51
Richland/McKenzie County	D13	RM 28.73	46008	20-yr	2891.2	579.32	572.67	1.51	1	9.89	4.5	152.03	1216.68	5.78	2.59	6.65	6.65
Richland/McKenzie County	D13	RM 28.54	45708	20-yr	2891.2	579.29	572.67	1.4	0.93	8.38	3.58	201.29	1371.56	5.36	2.26	6.62	6.62
Richland/McKenzie County	D13	RM 28.36	45419	20-yr	2891.2	579.25	572.48	1.32	0.9	7.51	3.15	233.95	1347.12	5.78	2.4	6.77	6.77
Richland/McKenzie County	D13	RM 28.15	45071	20-yr	2891.2	579.19	572.25	1.2	1.03	6.31	3.45	429.8	954.23	5.4	2.93	6.94	6.94
Richland/McKenzie County	D13	RM 27.98	44808	20-yr	2891.2	579.04	572.04	1.87	1.43	14.62	4.73	236.34	1080.1	6.24	1.99	7	7
Richland/McKenzie County	D13	RM 27.8	44508	20-yr	2891.2	578.99	571.87	1.78	1.4	12.91	4.88	226.85	807.38	6.87	2.56	7.12	7.12
Richland/McKenzie County	D14	RM 27.61	44208	20-yr	2891.2	578.93	571.87	1.75	1.34	12.87	4.15	246.37	1175.07	6.32	2.01	7.06	7.06
Richland/McKenzie County	D14	RM 27.43	43916	20-yr	2891.2	578.9	571.87	1.54	1.13	9.81	3.03	261.74	1740.92	6.66	2.03	7.03	7.03
Richland/McKenzie County	D14	RM 27.23	43608	20-yr	2891.2	578.9	571.87	1.24	0.88	6.27	1.95	310.87	1796.19	6.91	2.12	7.03	7.03
Richland/McKenzie County	D14	RM 27.04	43305	20-yr	2891.2	578.83	571.87	1.47	0.95	9.1	2.59	277.5	1887.5	6.36	1.76	6.96	6.96
Richland/McKenzie County	D14	RM 26.86	43008	20-yr	2891.2	578.75	571.87	1.7	1.02	11.97	2.98	229.41	1885.6	6.59	1.61	6.88	6.88
Richland/McKenzie County	D14	RM 26.67	42708	20-yr	2891.2	578.71	571.87	1.56	0.96	10.04	2.84	252.42	1835.92	6.58	1.84	6.84	6.84
Richland/McKenzie County	D14	RM 26.48	42408	20-yr	2891.2	578.59	571.87	1.92	1.16	15.36	4.29	209.83	1453.07	6.42	1.76	6.72	6.72
Richland/McKenzie County	D14	RM 26.29	42108	20-yr	2891.2	578.51	571.87	1.96	1.31	16.04	4.49	205.84	1265.57	6.34	1.75	6.64	6.64
Richland/McKenzie County	D14	RM 26.11	41808	20-yr	2891.2	578.48	571.87	1.69	1.26	11.88	3.4	249.58	1291.88	6.31	1.78	6.61	6.61
Richland/McKenzie County	D14	RM 25.92	41508	20-yr	2891.2	578.44	571.87	1.46	1.17	8.87	3.05	305.76	1331	6.28	2.14	6.57	6.57
Richland/McKenzie County	D14	RM 25.73	41208	20-yr	2891.2	578.4	571.74	1.44	1.34	8.57	3.71	309.7	1298.89	6.44	2.77	6.66	6.66
Richland/McKenzie County	D14	RM 25.55	40918	20-yr	2891.2	578.34	571.74	1.53	1.42	10.3	5.1	346.01	1257.42	5.38	2.65	6.6	6.6
Richland/McKenzie County	D14	RM 25.37	40619	20-yr	2891.2	578.28	571.74	1.55	1.4	10.74	5.55	353.9	1513.54	5.19	2.67	6.54	6.54
Richland/McKenzie County	D14	RM 25.17	40310	20-yr	2891.2	578.19	571.74	1.65	1.43	12.27	6.99	361.09	1008.31	4.71	2.67	6.45	6.45
Richland/McKenzie County	D14	RM 24.99	40008	20-yr	2891.2	578.16	571.74	1.34	1.13	7.76	4.24	384.4	1010.46	5.46	2.97	6.42	6.42
Richland/McKenzie County	D14	RM 24.8	39703	20-yr	2891.2	578.14	571.71	1.16	1.06	6.32	3.89	400.64	734.73	6.13	3.76	6.43	6.43
Richland/McKenzie County	D14	RM 24.62	39408	20-yr	2891.2	578.04	571.64	1.61	1.41	11.25	6.52	278.78	619.95	5.73	3.3	6.4	6.4
Richland/McKenzie County	D14	RM 24.45	39139	20-yr	2891.2	577.88	571.64	1.99	1.87	16.85	10.85	239.98	402.12	6.01	3.85	6.24	6.24
Richland/McKenzie County	D14	RM 24.24	38801	20-yr	2891.2	577.79	571.58	1.98	1.76	16.62	10.68	237.24	427.51	6.01	3.85	6.21	6.21
Richland/McKenzie County	D14	RM 24.05	38506	20-yr	2891.2	577.73	571.48	1.81	1.72	13.9	9.54	264.93	411.27	6	4.1	6.25	6.25
Richland/McKenzie County	D14	RM 23.87	38210	20-yr	2891.2	577.73	571.28	1.38	1.33	7.96	5.16	334.4	540.36	6.25	4.03	6.45	6.45
Richland/McKenzie County	D14	RM 23.66	37912	20-yr	2891.2	577.72	571.21	1.12	1.08	5.43	3.56	442.5	706.77	5.79	3.78	6.51	6.51
Richland/McKenzie County	D14	RM 23.48	37610	20-yr	2891.2	577.69	571.12	1.2	1.1	6.58	4.18	347.97	832.88	4.97	3.15	6.57	6.57
Richland/McKenzie County	D14	RM 23.29	37312	20-yr	2891.2	577.63	570.86	1.33	1.12	8.15	4.4	313.75	1003.26	4.87	2.61	6.77	6.77
Richland/McKenzie County	D14	RM 23.1	37006	20-yr	2891.2	577.59	570.82	1.33	1.02	8.09	3.76	254.67	1435.17	5.65	2.6	6.77	6.77
Richland/McKenzie County	D14	RM 22.92	36721	20-yr	2891.2	577.55	570.8	1.42	1.01	8.86	3.48	214.08	1737.21	5.58	2.16	6.75	6.75
Richland/McKenzie County	D14	RM 22.72	36402	20-yr	2891.2	577.45	570.81	1.76	1.12	13.03	4.42	178.19	1597.72	6.26	2.09	6.64	6.64
Richland/McKenzie County	D14	RM 22.54	36108	20-yr	2891.2	577.4	570.76	1.55	1.09	10.38	3.95	276.8	1349.91	6.07	2.29	6.64	6.64
Richland/McKenzie County	D14	RM 22.35	35808	20-yr	2891.2	577.35	570.74	1.46	1.11	9.13	4.17	308.52	1223.17	5.87	2.66	6.62	6.62
Richland/McKenzie County	D14	RM 22.17	35508	20-yr	2891.2	577.31	570.68	1.42	1.12	8.43	3.25	303.06	1278.28	6.43	2.46	6.63	6.63
Richland/McKenzie County	D14	RM 22.02	35264	20-yr	2891.2	577.3	570.68	1.22	1.04	6.18	3.2	354.21	842.7	6.51	3.34	6.62	6.62
Richland/McKenzie County	D14	RM 21.8	34901	20-yr	2891.2	577.24	570.69	1.33	1.16	7.87	4.54	401.15	826.05	5.27	3.02	6.55	6.55
Richland/McKenzie County	D14	RM 21.61	34626	20-yr	2891.2	577.2	570.67	1.3	1.21	7.8	5.29	468.94	754.94	4.69	3.17	6.53	6.53
Richland/McKenzie County	D14	RM 21.34	34140	20-yr	2891.2	577.17	570.67	1.12	0.91	5.42	2.81	289.68	1054.09	5.83	3	6.5	6.5
Richland/McKenzie County	D14	RM 21.25	33973	20-yr	2891.2	577.14	570.67	1.38	1.02	8.36	3.87	204.54	1165.65	5.32	2.42	6.47	6.47
Richland/McKenzie County	D14	RM 21.06	33672	20-yr	2891.2	577.12	570.6	1.15	0.88	5.86	2.92	267.5	1226.02	5.43	2.69	6.52	6.52
Richland/McKenzie County	D14	RM 20.9	33400	20-yr	2891.2	577.09	570.58	1.22	0.93	6.79	3.58	251.38	1199.73	4.94	2.58	6.51	6.51
Richland/McKenzie County	D14	RM 20.71	33101	20-yr	2891.2	577.03	570.53	1.48	1.02	9.77	4.41	247.47	1222.23	5.18	2.32	6.5	6.5
Richland/McKenzie County	D14	RM 20.52	32800	20-yr	2891.2	577	570.52	1.32	0.94	7.62	3.15	280.27	1342.03	5.59	2.29	6.48	6.48
Richland/McKenzie County	D14	RM 20.34	32500	20-yr	2891.2	576.96	570.52	1.36	0.98	7.99	3.34	256.92	1253.25	5.69	2.36	6.44	6.44
Richland/McKenzie County	D14	RM 20.15	32200	20-yr	2891.2	576.9	570.52	1.49	1.05	11.16	4.11	231.21	1289.77	5.84	2.13	6.38	6.38
Richland/McKenzie County	D14	RM 19.96	31900	20-yr	2891.2	576.64	570.52	2.35	1.47	23.78	6.84	189.46	1202.25	5.82	1.64	6.12	6.12
Richland/McKenzie County	D14	RM 19.77	31600	20-yr	2891.2	576.68	570.5	1.42	1.03	8.71	3.29	332.93	1434.53	5.65	2.12	6.18	6.18
Richland/McKenzie County	D14	RM 19.59	31297	20-yr	2891.2	576.65	570.45	1.34	0.93	7.9	3.33	334.34	1542.67	5.36	2.24	6.2	6.2
Richland/McKenzie County	D14	RM 19.4	30995	20-yr	2891.2	576.58	570.45	1.49	0.91	9.88	3.99	284.81	1730.65	5.14	2.06	6.13	6.13
Richland/McKenzie County	D14	RM 19.21	30710	20-yr	2891.2	576.58	570.38	1.07	0.72	4.9	2.2	380.6	1747.38	5.76	2.57	6.2	6.2
Richland/McKenzie County	D14	RM 19.03	30402	20-yr	2891.2	576.55	570.38	1.08	0.77	5.06	2.4	428.38	1825.66	5.12	2.4	6.17	6.17

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 18.83	30086	20-yr	2891.2	576.52	570.38	1.07	0.74	4.92	2.79	505.09	2161.5	4.2	2.36	6.14	6.14
Richland/McKenzie County	D14	RM 18.66	29802	20-yr	2891.2	576.48	570.38	1.13	0.76	5.84	3.33	455.27	2597.51	4.19	2.37	6.1	6.1
Richland/McKenzie County	D14	RM 18.47	29499	20-yr	2891.2	576.39	570.36	1.5	1	10.45	4.9	299.05	3951.56	4.69	2.17	6.03	6.03
Richland/McKenzie County	D14	RM 18.28	29197	20-yr	2891.2	576.28	570.36	1.67	1.25	12.43	4.5	299.23	3383.75	5.36	1.93	5.92	5.92
Richland/McKenzie County	D14	RM 17.89	28624	20-yr	2891.2	576.27	570.33	1	0.84	4.31	2.11	468.41	2774.31	5.81	2.83	5.94	5.94
Richland/McKenzie County	D14	RM 17.56	27975	20-yr	2891.2	576.15	570.29	1.36	1.23	8.03	5.03	460.6	1599.81	4.5	2.81	5.86	5.86
Richland/McKenzie County	D14	RM 17.36	27539	20-yr	2891.2	575.88	570.31	2.14	2.05	20.33	12.99	254.84	846.34	5.28	3.36	5.57	5.57
Richland/McKenzie County	D14	RM 17.1	27113	20-yr	2891.2	575.78	570.28	1.82	1.7	14.68	9.95	298.39	864.12	5.28	3.57	5.51	5.51
Richland/McKenzie County	D14	RM 16.74	26537	20-yr	2891.2	575.73	570.14	1.32	1.19	7.62	4.88	406.85	992.7	5.24	3.35	5.59	5.59
Richland/McKenzie County	D14	RM 16.35	25925	20-yr	2891.2	575.65	569.46	1.28	1.02	7.02	3.62	345.69	1095.51	5.98	3.06	6.19	6.19
Richland/McKenzie County	D14	RM 16.17	25629	20-yr	2891.2	575.62	569.2	1.2	0.91	6.32	3.56	377.41	1078.74	5.95	3.33	6.42	6.42
Richland/McKenzie County	D14	RM 15.95	25324	20-yr	2891.2	575.62	568.99	0.94	0.81	3.69	2.46	457.34	953.44	6.43	4.27	6.63	6.63
Richland/McKenzie County	D14	RM 15.75	25032	20-yr	2891.2	575.59	568.85	1.04	0.99	4.6	3.59	462.46	740.1	5.86	4.56	6.74	6.74
Richland/McKenzie County	D14	RM 15.56	24777	20-yr	2891.2	575.46	568.85	1.66	1.65	11.62	10.65	291.53	382.11	5.98	5.48	6.61	6.61
Richland/McKenzie County	D14	RM 15.34	24438	20-yr	2891.2	575.38	568.79	1.73	1.62	12.45	7.7	261.89	515.31	6.35	3.9	6.59	6.59
Richland/McKenzie County	D14	RM 15.16	24144	20-yr	2891.2	575.33	568.75	1.69	1.54	11.89	7.72	267.44	544.9	6.33	4.07	6.58	6.58
Richland/McKenzie County	D14	RM 14.98	23841	20-yr	2891.2	575.25	568.76	1.78	1.57	14.83	8.89	254.68	521.23	6.24	3.71	6.49	6.49
Richland/McKenzie County	D14	RM 14.79	23543	20-yr	2891.2	575.18	568.72	1.71	1.53	12.41	8.38	286.1	522.53	5.67	3.8	6.46	6.46
Richland/McKenzie County	D14	RM 14.61	23241	20-yr	2891.2	575.13	568.7	1.65	1.46	11.46	7.34	274.36	529.96	6.15	3.92	6.43	6.43
Richland/McKenzie County	D14	RM 14.42	22940	20-yr	2891.2	575.11	568.69	1.38	1.26	7.96	5.58	328.42	547.89	6.22	4.34	6.42	6.42
Richland/McKenzie County	D14	RM 14.23	22647	20-yr	2891.2	575.11	568.67	1.05	0.97	4.69	3.44	444.61	694.67	6.07	4.43	6.44	6.44
Richland/McKenzie County	D14	RM 14.05	22341	20-yr	2891.2	575.09	568.68	0.9	0.85	4.94	4.02	601.92	825.44	5.24	4.25	6.41	6.41
Richland/McKenzie County	D14	RM 13.88	22040	20-yr	2891.2	575.05	568.67	0.99	0.95	4.92	3.98	682.22	892.36	4.22	3.41	6.38	6.38
Richland/McKenzie County	D14	RM 13.7	21728	20-yr	2891.2	574.97	568.65	1.26	1.25	6.81	6.71	502.19	510.61	4.58	4.52	6.32	6.32
Richland/McKenzie County	D14	RM 13.51	21429	20-yr	2891.2	574.93	568.63	1.27	1.25	6.94	6.44	409.72	453.04	5.51	5.11	6.3	6.3
Richland/McKenzie County	D15	RM 13.31	21145	20-yr	2891.2	574.91	568.51	1.14	1.13	5.65	5.48	457.14	474.71	5.54	5.37	6.4	6.4
Richland/McKenzie County	D15	RM 13.12	20858	20-yr	2891.2	574.84	568.39	1.37	1.36	7.87	7.61	344.8	356.9	6.13	5.94	6.45	6.45
Richland/McKenzie County	D15	RM 12.9	20507	20-yr	2891.2	574.75	568.39	1.57	1.57	10.5	10.03	303.98	319.57	6.04	5.77	6.36	6.36
Richland/McKenzie County	D15	RM 12.73	20241	20-yr	2891.2	574.71	568.35	1.58	1.58	10.55	10.4	297.97	302.15	6.14	6.06	6.36	6.36
Richland/McKenzie County	D15	RM 12.56	19961	20-yr	2891.2	574.68	568.34	1.39	1.36	8.08	5.95	337.44	469.3	6.18	4.53	6.34	6.34
Richland/McKenzie County	D15	RM 12.38	19686	20-yr	2891.2	574.68	568.23	1.12	1.09	5.35	4.2	425.59	579.9	6.03	4.72	6.45	6.45
Richland/McKenzie County	D15	RM 12.21	19384	20-yr	2891.2	574.64	568.17	1.15	1.06	5.69	4.72	513.36	741.89	4.79	3.98	6.47	6.47
Richland/McKenzie County	D15	RM 11.99	19084	20-yr	2891.2	574.61	568.16	1.09	1.01	5.23	3.94	592.13	860.44	4.43	3.33	6.45	6.45
Richland/McKenzie County	D15	RM 11.53	18484	20-yr	2891.2	574.53	568.11	1.15	0.98	4.23	3.44	692.52	1072.52	3.38	2.74	6.42	6.42
Richland/McKenzie County	D15	RM 11.34	18216	20-yr	2891.2	574.48	568.06	1.04	0.98	19.09	16.36	710.89	1010.14	3.42	2.92	6.42	6.42
Richland/McKenzie County	D15	RM 11.17	17885	20-yr	2891.2	574.25	567.88	1.24	1.18	22.17	20.45	645.23	757.43	3.5	3.22	6.37	6.37
Richland/McKenzie County	D15	RM 10.97	17584	20-yr	2891.2	574.17	567.8	1.16	1.11	4.98	4.65	696.05	793.86	3.5	3.27	6.37	6.37
Richland/McKenzie County	D15	RM 10.75	17284	20-yr	2891.2	574.14	567.79	1.04	0.99	3.9	3.47	710.02	847.3	3.87	3.44	6.35	6.35
Richland/McKenzie County	D15	RM 10.53	16964	20-yr	2891.2	574.09	567.73	1.2	1.14	5.27	4.49	641.5	808.47	3.69	3.15	6.36	6.36
Richland/McKenzie County	D15	RM 10.35	16670	20-yr	2891.2	574.03	567.73	1.28	1.14	7.19	5.52	517.24	842.03	4.23	3.24	6.3	6.3
Richland/McKenzie County	D15	RM 10.15	16384	20-yr	2891.2	573.99	567.73	1.33	0.99	7.53	4.44	251.85	845.06	5.96	3.49	6.26	6.26
Richland/McKenzie County	D15	RM 9.94	16084	20-yr	2891.2	573.97	567.73	1.07	0.88	4.9	3.49	272.39	990.34	5.77	4.1	6.24	6.24
Richland/McKenzie County	D15	RM 9.76	15797	20-yr	2891.2	573.93	567.65	1.19	0.94	6	4.17	352.04	1045.72	5.38	3.74	6.28	6.28
Richland/McKenzie County	D15	RM 9.57	15487	20-yr	2891.2	573.87	567.58	1.38	1.01	8.06	4.32	245.67	933.02	6.08	3.24	6.29	6.29
Richland/McKenzie County	D15	RM 9.37	15187	20-yr	2891.2	573.79	567.58	1.6	1.21	10.88	7.14	203.96	610	6.01	3.92	6.21	6.21
Richland/McKenzie County	D15	RM 9.24	14963	20-yr	2891.2	573.62	564.5	1.95	1.89	16.01	13.86	234.33	281.57	6.28	5.44	9.12	9.12
Richland/McKenzie County	D15	RR/Walkway	14952	20-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	20-yr	2891.2	573.58	564.5	1.96	1.9	16.23	14	234.33	283.67	6.25	5.37	9.08	9.08
Richland/McKenzie County	D15	RM 9.1	14741	20-yr	2891.2	573.43	567.39	2.25	2.2	22.54	20.37	231.83	309.14	5.5	4.97	6.04	6.04
Richland/McKenzie County	D15	RM 9.03	14639	20-yr	2891.2	573.42	565.46	2.01	1.95	17.39	14.54	248.61	322.38	5.75	4.81	7.96	7.96
Richland/McKenzie County	D15	Highway 68	14629	20-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	20-yr	2891.2	573.39	565.46	2.02	1.96	17.64	14.8	248.61	313.46	5.72	4.8	7.93	7.93
Richland/McKenzie County	D15	RM 8.82	14300	20-yr	2891.2	573.38	567.41	1.36	1.29	8.13	5.51	381.12	789.07	5.49	3.71	5.97	5.97
Richland/McKenzie County	D15	RM 8.61	13963	20-yr	2891.2	573.31	567.39	1.5	1.24	9.81	5.48	313.8	954.15	5.41	3.01	5.92	5.92
Richland/McKenzie County	D15	RM 8.44	13687	20-yr	2891.2	573.24	567.32	1.63	1.22	11.57	5.9	258.5	978.72	5.67	2.87	5.92	5.92
Richland/McKenzie County	D15	RM 8.24	13387	20-yr	2891.2	573.16	567.32	1.73	1.18	12.97	6.88	229.73	824.43	5.69	2.98	5.84	5.84
Richland/McKenzie County	D15	RM 8.05	13080	20-yr	2891.2	573.1	567.05	1.62	1.22	11.3	6.13	266.23	756.88	5.8	3.13	6.05	6.05
Richland/McKenzie County	D15	RM 7.87	12786	20-yr	2891.2	573	567.05	1.82	1.36	14.33	8.23	229.92	696.62	5.71	3.26	5.95	5.95
Richland/McKenzie County	D15	RM 7.69	12506	20-yr	2891.2	572.95	567.05	1.66	1.35	11.89	8	266.56	560.1	5.68	3.81	5.9	5.9
Richland/McKenzie County	D15	RM 7.48	12179	20-yr	2891.2	572.92	566.95	1.37	1.37	8.09	7.92	361.54	369.94	5.82	5.71	5.97	5.97
Richland/McKenzie County	D16	RM 7.3	11891	20-yr	2891.2	572.84	566.76	1.54	1.54	10.12	10.06	336.67	338.64	5.58	5.55	6.08	6.08

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 7.14	11639	20-yr	2891.2	572.79	566.76	1.6	1.52	11.34	9.95	324.06	414.78	5.21	4.58	6.03	6.03
Richland/McKenzie County	D16	RM 6.94	11319	20-yr	2891.2	572.73	566.76	1.54	1.34	10.21	7.2	297.15	529.31	5.78	4.06	5.97	5.97
Richland/McKenzie County	D16	RM 6.77	11043	20-yr	2891.2	572.71	566.76	1.34	1.15	7.89	5.38	349.25	679.55	5.48	3.72	5.95	5.95
Richland/McKenzie County	D16	RM 6.58	10733	20-yr	2891.2	572.67	566.59	1.28	1.03	7.05	4.18	342.3	839.55	5.71	3.36	6.08	6.08
Richland/McKenzie County	D16	RM 6.38	10417	20-yr	2891.2	572.54	566.59	1.95	1.23	16.45	5.95	182.43	1168.1	5.72	2.04	5.95	5.95
Richland/McKenzie County	D16	RM 6.21	10138	20-yr	2891.2	572.48	566.44	1.73	1.05	12.96	5.23	217.11	1194.83	5.77	2.3	6.04	6.04
Richland/McKenzie County	D16	RM 6.01	9825	20-yr	2891.2	572.47	566.17	1.16	0.86	5.88	2.9	412.46	1245.08	5.51	2.7	6.3	6.3
Richland/McKenzie County	D16	RM 5.83	9551	20-yr	2891.2	572.46	565.96	0.96	0.74	3.94	2.01	480.72	1328.12	5.8	2.95	6.5	6.5
Richland/McKenzie County	D16	RM 5.67	9297	20-yr	2891.2	572.43	565.96	1.13	0.8	5.51	2.85	342.02	1374.19	5.69	2.91	6.47	6.47
Richland/McKenzie County	D16	RM 5.43	8926	20-yr	2891.2	572.35	565.96	1.45	1.09	9.52	5	269.38	1280.28	5.08	2.64	6.39	6.39
Richland/McKenzie County	D16	RM 5.25	8623	20-yr	2891.2	572.12	565.96	2.17	1.56	20.12	8.39	206.77	869.3	5.89	2.43	6.16	6.16
Richland/McKenzie County	D16	RM 5.06	8331	20-yr	2891.2	572.12	565.82	1.58	1.28	10.73	7.07	289.25	749.76	5.85	3.83	6.3	6.3
Richland/McKenzie County	D16	RM 4.87	8029	20-yr	2891.2	572.1	565.67	1.29	1.15	7.29	5.37	335.83	769.89	5.55	4.07	6.43	6.43
Richland/McKenzie County	D16	RM 4.71	7757	20-yr	2891.2	572.05	565.54	1.48	1.2	9.29	5.87	252.95	765.83	6.1	3.82	6.51	6.51
Richland/McKenzie County	D16	RM 4.53	7456	20-yr	2891.2	571.93	565.54	1.9	1.37	15.32	7.43	199	719.97	6.14	2.93	6.39	6.39
Richland/McKenzie County	D16	RM 4.34	7156	20-yr	2891.2	571.87	565.54	1.74	1.32	14.99	8.61	216.38	657.22	6.01	3.41	6.33	6.33
Richland/McKenzie County	D16	RM 4.17	6884	20-yr	2891.2	571.79	565.54	1.77	1.32	13.38	7.15	225.77	712.13	6	3.16	6.25	6.25
Richland/McKenzie County	D16	RM 3.96	6550	20-yr	2891.2	571.77	565.54	1.4	1.08	8.42	4.82	216.6	789.7	5.96	3.39	6.23	6.23
Richland/McKenzie County	D16	RM 3.78	6249	20-yr	2891.2	571.72	565.54	1.55	1.12	10.62	5.67	196.52	910.54	5.39	2.85	6.18	6.18
Richland/McKenzie County	D16	RM 3.55	5904	20-yr	2891.2	571.66	565.54	1.49	1.14	9.45	5.41	206.04	784.05	5.93	3.37	6.12	6.12
Richland/McKenzie County	D16	RM 3.38	5657	20-yr	2891.2	571.57	565.53	1.83	1.37	14.49	7.68	171.27	724.76	5.78	3.02	6.04	6.04
Richland/McKenzie County	D16	RM 3.2	5363	20-yr	2891.2	571.47	565.54	1.93	1.58	16.83	9.32	168.06	661.91	5.06	2.77	5.93	5.93
Richland/McKenzie County	D16	RM 3.01	5062	20-yr	2891.2	571.41	565.54	1.67	1.36	12.43	7.47	310	694.98	5.24	3.11	5.87	5.87
Richland/McKenzie County	D16	RM 2.82	4763	20-yr	2891.2	571.36	565.46	1.5	1.31	10.64	7.76	423.69	707.47	4.39	3.19	5.9	5.9

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	10% - 10yr	914.63	1281.69	1278.12	2.58	2.23	35.61	21.17	108.83	261.48	3.05	1.8	3.57	3.57
Sweet Grass County	A1	RM 478.10	225378	10% - 10yr	914.63	1281.23	1277.66	3.27	2.96	63.42	47.39	112.59	221.91	2.2	1.65	3.57	3.57
Sweet Grass County	A1	RM 478.00	224862	10% - 10yr	914.63	1280.74	1277.97	3.16	2.95	62.32	52.84	137.18	268.83	1.88	1.59	2.78	2.78
Sweet Grass County	A1	RM 477.91	224362	10% - 10yr	914.63	1280.17	1277.65	3.57	2.98	70.13	47.44	85.17	290.19	2.18	1.47	2.52	2.52
Sweet Grass County	A1	RM 477.81	223862	10% - 10yr	914.63	1279.81	1276.96	3.07	2.64	41.25	32.89	124.87	267.78	1.8	1.44	2.85	2.85
Sweet Grass County	A1	RM 477.72	223354	10% - 10yr	914.63	1279.43	1276.32	2.59	2.35	45.08	32.45	182.36	372	1.5	1.08	3.11	3.11
Sweet Grass County	A1	RM 477.63	222892	10% - 10yr	914.63	1279.34	1275.76	1.55	1.45	15	11.26	248.38	559.64	1.92	1.44	3.58	3.58
Sweet Grass County	A1	RM 477.49	222220	10% - 10yr	914.63	1279.15	1276.07	1.63	1.48	14.7	9.99	256.97	744.98	1.64	1.11	3.08	3.08
Sweet Grass County	A1	RM 477.40	221702	10% - 10yr	914.63	1279.1	1275.47	1.25	0.95	9	5.42	242.4	860.69	2.38	1.43	3.63	3.63
Sweet Grass County	A1	RM 477.31	221259	10% - 10yr	914.63	1278.65	1275.74	2.86	1.86	47.31	15.97	122.02	767.36	2.4	0.8	2.91	2.91
Sweet Grass County	A1	RM 477.21	220767	10% - 10yr	914.63	1278.47	1275.28	2.54	1.73	35.84	11.94	126.43	780.9	2.66	0.88	3.18	3.18
Sweet Grass County	A1	RM 477.11	220252	10% - 10yr	914.63	1278.14	1274.86	2.79	1.83	47.58	20.86	147.45	757.86	1.99	0.87	3.27	3.27
Sweet Grass County	A1	RM 477.04	219860	10% - 10yr	914.63	1277.85	1275.13	2.84	1.78	48.17	20.15	131.95	751.86	2.13	0.89	2.72	2.72
Sweet Grass County	A1	RM 476.95	219422	10% - 10yr	914.63	1277.35	1274.55	3.15	2.25	63.59	30.49	154.26	644.2	1.73	0.83	2.8	2.8
Sweet Grass County	A1	RM 476.84	218828	10% - 10yr	914.63	1277	1273.95	2.61	2	41.34	19.95	134.66	548.19	2.06	0.99	3.05	3.05
Sweet Grass County	A1	RM 476.75	218345	10% - 10yr	914.63	1276.73	1273.54	2.45	1.96	33	18.12	172.58	624.48	2.01	1.1	3.2	3.2
Sweet Grass County	A1	RM 476.66	217855	10% - 10yr	914.63	1276.41	1273.45	2.66	1.93	39.09	17.44	160.17	822.67	1.98	0.88	2.95	2.95
Sweet Grass County	A1	RM 476.57	217396	10% - 10yr	914.63	1275.98	1273.09	3.19	2	58.3	23.61	98.93	810.67	2.42	0.97	2.89	2.89
Sweet Grass County	A1	RM 476.47	216861	10% - 10yr	914.63	1275.57	1273.04	3.04	2.32	56.16	28.76	126.17	552.61	2.02	1.04	2.54	2.54
Sweet Grass County	A1	RM 476.38	216362	10% - 10yr	914.63	1275.35	1272.1	2.62	1.85	38.74	16.51	105.41	799.49	2.53	1.08	3.25	3.25
Sweet Grass County	A1	RM 476.28	215816	10% - 10yr	914.63	1274.71	1271.85	3.47	3.09	71.17	47.6	100.31	279.68	2.22	1.48	2.86	2.86
Sweet Grass County	A1	RM 476.15	215126	10% - 10yr	914.63	1274.14	1271.76	3.04	2.6	58.19	42.56	133.16	290.07	1.83	1.34	2.38	2.38
Sweet Grass County	A1	RM 476.01	214437	10% - 10yr	914.63	1273.8	1270.96	2.39	2.24	33.78	27.98	142.11	269.13	2.25	1.86	2.85	2.85
Sweet Grass County	A1	RM 475.91	213787	10% - 10yr	914.63	1273.38	1270.35	2.62	2.44	40.46	33.46	150.4	199.45	2.27	1.88	3.03	3.03
Sweet Grass County	A1	RM 475.76	213072	10% - 10yr	914.63	1272.8	1270.22	2.97	2.61	53.74	34.66	146.41	295.55	2.03	1.31	2.58	2.58
Sweet Grass County	A1	RM 475.63	212347	10% - 10yr	914.63	1272.53	1269.34	2.24	1.96	29.52	21.05	173.18	287.43	2.28	1.62	3.18	3.18
Sweet Grass County	A1	RM 475.47	211539	10% - 10yr	914.63	1272.03	1268.97	2.72	2.52	41.73	35.36	128.96	167.07	2.55	2.17	3.05	3.05
Sweet Grass County	A1	RM 475.35	210875	10% - 10yr	914.63	1271.35	1268.88	3.37	3.32	66.95	54.26	119.57	150.59	2.26	1.83	2.47	2.47
Sweet Grass County	A1	RM 475.24	210333	10% - 10yr	914.63	1271.36	1267.53	2.21	2.02	25.17	16.03	118.16	276.94	3.43	2.17	3.83	3.83
Sweet Grass County	A2	RM 475.12	209673	10% - 10yr	914.63	1270.27	1267.9	4.31	4	115.87	100.98	110.34	148.8	1.88	1.64	2.37	2.37
Sweet Grass County	A2	RM 475.00	209034	10% - 10yr	914.63	1269.75	1266.93	2.99	2.99	55.41	55.41	156.68	156.68	1.95	1.95	2.82	2.82
Sweet Grass County	A2	RM 474.87	208359	10% - 10yr	914.63	1269.57	1266.75	2.26	2.04	28.37	23.27	79.66	221.67	2.72	2.19	2.82	2.82
Sweet Grass County	A2	RM 474.76	207797	10% - 10yr	914.63	1269.03	1266.42	3.29	2.68	62.52	37.85	77.58	236.86	2.42	1.44	2.61	2.61
Sweet Grass County	A2	RM 474.67	207305	10% - 10yr	914.63	1268.56	1266.29	3.37	2.83	67.89	48.15	66.08	218.91	2.23	1.54	2.27	2.27
Sweet Grass County	A2	RM 474.54	206635	10% - 10yr	914.63	1268.28	1264.92	2.42	2.15	33.12	23.03	128.46	243.52	2.55	1.77	3.36	3.36
Sweet Grass County	A2	RM 474.43	205945	10% - 10yr	914.63	1267.94	1265.16	2.69	2.19	40.71	18.19	89.64	365.52	2.59	1.14	2.78	2.78
Sweet Grass County	A2	RM 474.30	205321	10% - 10yr	914.63	1267.69	1264.46	2.41	1.75	32.42	13.73	132.73	475.12	2.63	1.11	3.23	3.23
Sweet Grass County	A2	RM 474.21	204877	10% - 10yr	914.63	1267.24	1264.22	3.16	2.34	55.7	18.6	103.03	450.56	2.65	0.88	3.02	3.02
Sweet Grass County	A2	RM 474.12	204378	10% - 10yr	914.63	1267.12	1263.24	2.43	1.71	33.59	14.56	140.42	501.21	2.48	1.07	3.88	3.88
Sweet Grass County	A2	RM 474.01	203787	10% - 10yr	914.63	1266.62	1263.55	2.99	2.29	53.87	24.4	138.78	423.03	2.1	0.94	3.07	3.07
Sweet Grass County	A2	RM 473.87	203072	10% - 10yr	914.63	1266.17	1263.52	2.92	2.27	47.84	16.78	100.12	595.17	2.32	0.81	2.65	2.65
Sweet Grass County	A2	RM 473.74	202395	10% - 10yr	914.63	1265.9	1263.06	2.38	1.79	32.79	12.8	120.9	716.7	2.39	0.93	2.84	2.84
Sweet Grass County	A2	RM 473.62	201781	10% - 10yr	914.63	1265.41	1262.63	2.84	2.11	49.52	18.05	150.66	613.37	1.96	0.71	2.79	2.79
Sweet Grass County	A2	RM 473.50	201110	10% - 10yr	914.63	1265.01	1261.83	2.49	2.19	38.04	17.55	176.73	454.58	2.02	0.92	3.18	3.18
Sweet Grass County	A2	RM 473.36	200362	10% - 10yr	914.63	1264.73	1261.08	2.31	2.06	28.88	11.59	133.03	386.64	2.92	1.16	3.65	3.65
Sweet Grass County	A2	RM 473.27	199862	10% - 10yr	914.63	1264.36	1260.81	2.92	2.63	47.51	20.6	114.64	314.04	2.67	1.15	3.55	3.55
Sweet Grass County	A2	RM 473.17	199362	10% - 10yr	914.63	1264.18	1260.56	2.68	2.55	37.41	21.37	102.94	192.7	3.28	1.86	3.62	3.62
Sweet Grass County	A2	RM 473.08	198879	10% - 10yr	914.63	1263.76	1260.56	3.25	3.08	58.36	33.54	102.97	190.98	2.72	1.55	3.2	3.2
Sweet Grass County	A2	RM 472.98	198340	10% - 10yr	914.63	1263.58	1260.21	2.71	2.5	40.36	24.63	120.55	218.05	2.75	1.68	3.37	3.37
Sweet Grass County	A2	RM 472.89	197862	10% - 10yr	914.63	1263.09	1260.5	3.41	2.74	67.84	41.08	105.1	240.28	2.3	1.39	2.59	2.59
Sweet Grass County	A2	RM 472.79	197362	10% - 10yr	914.63	1262.82	1259.98	2.8	2.39	46.37	29.44	136.27	272.82	2.21	1.4	2.83	2.83
Sweet Grass County	A2	RM 472.70	196862	10% - 10yr	914.63	1262.28	1259.35	3.25	2.54	63.95	35.5	125.74	315.82	2.05	1.14	2.94	2.94
Sweet Grass County	A2	RM 472.60	196360	10% - 10yr	914.63	1262.11	1259.01	2.3	2.05	32.8	25.71	181.89	379.36	1.91	1.5	3.1	3.1
Sweet Grass County	A2	RM 472.50	195816	10% - 10yr	914.63	1261.77	1258.53	2.42	2.04	36.73	23.98	177.8	369.13	1.89	1.23	3.24	3.24
Sweet Grass County	A2	RM 472.41	195349	10% - 10yr	914.63	1261.48	1258.52	2.4	2.08	36.33	27.6	190.8	316.22	1.86	1.41	2.96	2.96
Sweet Grass County	A2	RM 472.31	194860	10% - 10yr	914.63	1261.27	1258.34	2.28	1.88	29.56	17.26	149.03	343.19	2.51	1.46	2.94	2.94
Sweet Grass County	A2	RM 472.22	194356	10% - 10yr	914.63	1261.09	1257.3	2.4	1.84	28.6	11.46	115.58	427.02	2.97	1.17	3.79	3.79
Sweet Grass County	A2	RM 472.09	193660	10% - 10yr	914.63	1260.25	1257.45	3.84	3.22	85	38.44	89.58	260.58	2.47	1.09	2.8	2.8
Sweet Grass County	A2	RM 471.95	192935	10% - 10yr	914.63	1260.23	1256.05	2.33	1.66	27.96	11.08	103.53	414.02	3.43	1.33	4.18	4.18
Sweet Grass County	A2	RM 471.86	192442	10% - 10yr	914.63	1259.69	1256.23	3.52	2.44	66.82	30.58	76.63	279.18	2.99	1.34	3.45	3.45
Sweet Grass County	A2	RM 471.75	191870	10% - 10yr	914.63	1259.57	1256.47	2.47	1.92	34.47	18.71	134.52	343.5	2.56	1.39	3.1	3.1

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	10% - 10yr	914.63	1258.88	1256.54	3.54	2.89	76.83	39.79	124.48	306.31	2	1.03	2.34	2.34
Sweet Grass County	A2	RM 471.52	190686	10% - 10yr	914.63	1258.69	1255.75	2.39	1.75	32.3	13.32	127.76	498.03	2.57	1.05	2.95	2.95
Sweet Grass County	A2	RM 471.38	189910	10% - 10yr	914.63	1257.92	1255.44	3.29	2.66	73.02	39.97	149.81	420.76	1.49	0.82	2.48	2.48
Sweet Grass County	A2	RM 471.28	189362	10% - 10yr	914.63	1257.38	1254.65	2.45	2.12	42.7	31.23	228.47	486.33	1.26	0.92	2.73	2.73
Sweet Grass County	A2	RM 471.18	188875	10% - 10yr	914.63	1257	1254.2	2.49	1.99	33.21	21.16	155.35	451.58	1.63	1.03	2.8	2.8
Sweet Grass County	A2	RM 471.06	188150	10% - 10yr	914.63	1256.62	1253.95	2.27	1.57	33.09	17.31	140.6	649.53	1.71	0.89	2.67	2.67
Sweet Grass County	A2	RM 470.94	187526	10% - 10yr	914.63	1256.18	1253.58	2.63	1.97	39.34	18.71	106.66	500.35	2.09	0.99	2.61	2.61
Sweet Grass County	A2	RM 470.84	186938	10% - 10yr	914.63	1255.88	1252.88	2.39	1.8	36.19	21.42	157.2	519.88	1.8	1.06	3	3
Sweet Grass County	A2	RM 470.73	186362	10% - 10yr	914.63	1255.68	1253.49	1.71	1.63	19.56	15.57	189.07	471.76	1.55	1.23	2.61	2.61
Sweet Grass County	A2	RM 470.65	185977	10% - 10yr	914.63	1255.42	1252.18	2.15	1.9	28.17	16.7	201.24	471.08	2.05	1.21	3.24	3.24
Sweet Grass County	A2	RM 470.56	185491	10% - 10yr	914.63	1255.23	1252.52	2.11	1.76	26.83	14.59	189.32	617.36	2.12	1.15	2.72	2.72
Sweet Grass County	A2	RM 470.44	184875	10% - 10yr	914.63	1255.12	1251.39	1.78	1.43	17.08	9.51	158.35	385.36	3	1.65	3.73	3.73
Sweet Grass County	A2	RM 470.35	184363	10% - 10yr	914.63	1254.26	1251.52	3.87	3.55	90.81	52.7	113.84	217.44	2.05	1.19	2.73	2.73
Sweet Grass County	A2	RM 470.23	183828	10% - 10yr	914.63	1253.99	1251.51	2.67	2.39	45.14	31.63	180.8	299.73	1.82	1.28	2.48	2.48
Sweet Grass County	A2	RM 470.13	183304	10% - 10yr	914.63	1253.71	1249.86	2.4	2.13	35.51	27.17	162.28	285.64	1.98	1.5	3.85	3.85
Sweet Grass County	A2	RM 470.05	182914	10% - 10yr	914.63	1253.57	1250.59	2.08	1.86	26.37	20.42	175.23	315.55	2.01	1.56	2.97	2.97
Sweet Grass County	A2	RM 469.93	182267	10% - 10yr	914.63	1252.84	1249.62	3.32	3.03	63.88	41.8	105.63	193.73	2.39	1.56	3.22	3.22
Sweet Grass County	A2	RM 469.85	181860	10% - 10yr	914.63	1252.51	1249.59	3.34	2.72	62.96	27.38	96.24	305.44	2.55	1.1	2.92	2.92
Sweet Grass County	A2	RM 469.75	181348	10% - 10yr	914.63	1252.5	1248.77	2.19	1.74	25.83	11.45	116.21	406.83	2.94	1.29	3.73	3.73
Sweet Grass County	A2	RM 469.68	180952	10% - 10yr	914.63	1252.28	1249.31	2.47	1.92	34.45	15.75	135.73	451.07	2.56	1.16	2.96	2.96
Sweet Grass County	A2	RM 469.58	180427	10% - 10yr	914.63	1252.25	1247.94	1.84	1.48	17.11	10.06	130.56	393.69	3.54	2.07	4.3	4.3
Sweet Grass County	A2	RM 469.47	179860	10% - 10yr	914.63	1251.84	1247.85	2.78	2.49	37.74	32.93	89.54	338.78	3.47	3.02	3.99	3.99
Sweet Grass County			179808	10% - 10yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	10% - 10yr	914.63	1251.81	1247.84	2.5	2.48	32.49	31.17	112.89	345.12	3.24	3.11	3.96	3.96
Sweet Grass County	A2	RM 469.39	179400	10% - 10yr	914.63	1251.4	1248.45	3.21	2.99	59.72	46.52	118.53	296.33	2.36	1.84	2.95	2.95
Sweet Grass County	A2	RM 469.30	178975	10% - 10yr	914.63	1251.38	1247.55	2.39	2	29.67	17.37	106.16	319.79	3.37	1.94	3.83	3.83
Sweet Grass County	A2	RM 469.21	178467	10% - 10yr	914.63	1250.68	1248.31	3.76	3.12	84.98	44.8	106.92	319.76	2.1	1.11	2.37	2.37
Sweet Grass County	A2	RM 469.09	177862	10% - 10yr	914.63	1250.49	1247.12	2.14	1.64	26.71	15.33	118.23	491.18	2.3	1.32	3.37	3.37
Sweet Grass County	A2	RM 469.00	177350	10% - 10yr	914.63	1249.91	1247.58	3.4	2.4	71.25	29.37	89.39	477.94	1.97	0.8	2.33	2.33
Sweet Grass County	A2	RM 468.90	176865	10% - 10yr	914.63	1249.45	1246.48	2.35	1.94	28.69	14.85	157.69	470.87	1.97	1.01	2.97	2.97
Sweet Grass County	A2	RM 468.80	176341	10% - 10yr	914.63	1249.18	1246.11	2.46	2	36.32	18.6	136.12	425.27	2.16	1.1	3.06	3.06
Sweet Grass County	A2	RM 468.71	175823	10% - 10yr	914.63	1248.78	1246.41	2.7	2.34	47.54	32.61	145.97	410.84	1.64	1.13	2.38	2.38
Sweet Grass County	A2	RM 468.57	175192	10% - 10yr	914.63	1248.6	1245.17	1.82	1.56	19.85	10.73	178.26	712.74	2.15	1.15	3.43	3.43
Sweet Grass County	A2	RM 468.42	174099	10% - 10yr	914.63	1247.91	1244.97	2.7	2.32	45.22	28.92	168.48	433.65	1.91	1.22	2.94	2.94
Sweet Grass County	A3	RM 468.25	173324	10% - 10yr	914.63	1247.75	1242.97	2	1.5	20.71	8.75	128.83	553.8	3.33	1.39	4.78	4.78
Sweet Grass County	A3	RM 468.16	172855	10% - 10yr	914.63	1247.57	1243.58	2.39	1.72	31.3	14.72	119.05	551.62	2.78	1.3	3.98	3.98
Sweet Grass County	A3	RM 468.07	172364	10% - 10yr	914.63	1247.51	1243.89	1.86	1.4	18.98	9.91	136.65	640.21	2.78	1.44	3.62	3.62
Sweet Grass County	A3	RM 467.97	171839	10% - 10yr	914.63	1246.78	1244.32	3.84	2.92	91.26	45.32	92.44	452.21	1.97	0.96	2.47	2.47
Sweet Grass County	A3	RM 467.87	171312	10% - 10yr	914.63	1246.53	1243.46	2.3	2.09	31.25	19.9	159.56	451.42	2.24	1.42	3.07	3.07
Sweet Grass County	A3	RM 467.78	170840	10% - 10yr	914.63	1246.04	1243.74	3.17	2.75	62.15	37.73	100.58	283.01	1.94	1.17	2.3	2.3
Sweet Grass County	A3	RM 467.69	170376	10% - 10yr	914.63	1245.77	1242.96	2.64	2.25	41.7	23.64	115.51	340.68	2.15	1.2	2.81	2.81
Sweet Grass County	A3	RM 467.55	169614	10% - 10yr	914.63	1245.37	1242.1	2.25	1.95	31.87	21.46	133.88	378.11	1.85	1.24	3.27	3.27
Sweet Grass County	A3	RM 467.41	168870	10% - 10yr	914.63	1245.2	1241.15	1.86	1.31	18.69	7.9	133.26	625.49	2.98	1.25	4.05	4.05
Sweet Grass County	A3	RM 467.30	168362	10% - 10yr	914.63	1244.48	1242.15	3.82	2.75	87.01	28.48	90.16	469.29	2.19	0.71	2.33	2.33
Sweet Grass County	A3	RM 467.16	167641	10% - 10yr	914.63	1244.24	1240.78	2.04	1.42	23.93	8.58	159.01	799.21	2.39	0.85	3.46	3.46
Sweet Grass County	A3	RM 467.00	166780	10% - 10yr	914.63	1243.73	1240.48	2.68	1.87	43.82	15.37	140.87	723.46	2.06	0.71	3.26	3.26
Sweet Grass County	A3	RM 466.83	165902	10% - 10yr	914.63	1243.27	1239.84	2.63	1.72	38.61	13.96	111.13	573.45	2.64	0.95	3.42	3.42
Sweet Grass County	A3	RM 466.73	165364	10% - 10yr	914.63	1242.99	1239.81	2.68	1.9	40.31	14.17	115.43	533.23	2.61	0.91	3.18	3.18
Sweet Grass County	A3	RM 466.64	164858	10% - 10yr	914.63	1242.5	1239.36	3.35	2.48	57.57	20.58	98.73	493.47	2.37	0.84	3.13	3.13
Sweet Grass County	A3	RM 466.49	164108	10% - 10yr	914.63	1242.11	1239.67	2.77	1.79	45.35	20.16	107.44	622.54	2.2	0.98	2.44	2.44
Sweet Grass County	A3	RM 466.25	162845	10% - 10yr	914.63	1240.88	1238.71	3.46	2.76	72.44	30.9	78.03	371.8	2.16	0.89	2.17	2.17
Sweet Grass County	A3	RM 465.79	160351	10% - 10yr	914.63	1239.78	1236.48	2.21	1.25	27.66	10.42	109.23	777.3	2.58	0.94	3.29	3.29
Sweet Grass County	A3	RM 465.01	155919	10% - 10yr	914.63	1237.58	1234.44	2.99	2.6	52.03	32.05	128.53	247.13	2.31	1.42	3.14	3.14
Sweet Grass County	A3	RM 464.68	154254	10% - 10yr	914.63	1236.61	1233.35	2.5	2.15	37.87	20.04	171.37	407.93	2.06	1.08	3.27	3.27
Sweet Grass County	A3	RM 464.48	153160	10% - 10yr	914.63	1236.07	1232.71	2.27	1.81	31.63	17.13	183.52	502.43	1.97	1.07	3.36	3.36
Sweet Grass County	A3	RM 464.33	152378	10% - 10yr	914.63	1235.68	1232.61	2.26	1.75	31.09	16	183.29	500.42	2.03	1.04	3.06	3.06
Sweet Grass County	A3	RM 464.16	151621	10% - 10yr	914.63	1235.23	1232.45	2.46	1.88	37.19	17.28	164.21	530.08	1.98	0.92	2.78	2.78
Sweet Grass County	A3	RM 464.04	150961	10% - 10yr	914.63	1235.03	1231.48	2.22	1.5	26.2	11.41	118.42	484.5	3.05	1.31	3.54	3.54
Sweet Grass County	A3	RM 463.88	150174	10% - 10yr	914.63	1234.35	1231.85	3.23	2.59	64.57	32.74	136.95	441.15	1.92	0.97	2.5	2.5
Sweet Grass County	A3	RM 463.78	149616	10% - 10yr	914.63	1234.02	1230.54	2.65	2.16	41.91	27.45	149.47	428.67	2.17	1.41	3.48	3.48
Sweet Grass County	A3	RM 463.67	149069	10% - 10yr	914.63	1233.68	1230.86	2.71	2	44.15	26.92	136.34	480.72	2.13	1.29	2.82	2.82

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	10% - 10yr	914.63	1233.47	1230.39	2.5	1.8	35.6	20.76	135.08	697.65	2.46	1.43	3.09	3.09
Sweet Grass County	A3	RM 463.49	148111	10% - 10yr	914.63	1232.76	1229.73	3.55	2.95	76.46	39	120.57	640.78	2.06	1.05	3.03	3.03
Sweet Grass County	A3	RM 463.34	147326	10% - 10yr	914.63	1232.34	1229.72	2.44	1.83	37.67	20.73	179.1	1057.5	1.81	0.99	2.62	2.62
Sweet Grass County	A3	RM 463.20	146616	10% - 10yr	914.63	1231.96	1228.95	2.23	1.58	31.5	17.52	121.1	1413.74	1.84	1	3.01	3.01
Sweet Grass County	A3	RM 463.06	145881	10% - 10yr	914.63	1231.69	1228.89	1.86	1.06	21.76	12.11	147.76	1503.31	1.81	1	2.79	2.79
Sweet Grass County	A4	RM 462.79	144435	10% - 10yr	914.63	1231.53	1228.25	1.21	0.64	8.22	5.11	133.61	1421.11	2.56	1.57	3.27	3.27
Sweet Grass County	A4	RM 462.16	141146	10% - 10yr	914.63	1229.24	1226.15	3.14	2.17	59.2	24.95	108.24	506.37	2.16	0.9	3.09	3.09
Sweet Grass County		RM 461.97	140135	10% - 10yr	914.63	1228.71	1226.06	2.38	1.45	35.02	18.81	120.82	731.53	1.91	1.02	2.65	2.65
Sweet Grass County	A4	RM 461.71	138705	10% - 10yr	914.63	1227.14	1224.75	3.66	3.07	88.53	62.03	100.15	314.65	1.6	1.12	2.39	2.39
Sweet Grass County	A4	RM 461.52	137683	10% - 10yr	914.63	1226.68	1222.31	2.21	1.69	25.02	10.83	83.64	361.31	3.59	1.49	4.37	4.37
Sweet Grass County	A4	RM 461.33	136718	10% - 10yr	914.63	1226.44	1223.38	2.01	1.54	23.9	13.08	125.5	634	2.22	1.21	3.07	3.07
Sweet Grass County	A4	RM 461.14	135736	10% - 10yr	914.63	1225.67	1222.44	3.05	2.41	53.28	18.83	116.63	458.95	2.47	0.86	3.23	3.23
Sweet Grass County	A4	RM 460.99	134951	10% - 10yr	914.63	1225.21	1221.98	2.86	2.35	46.52	20.53	121.6	351.71	2.52	1.11	3.23	3.23
Sweet Grass County	A4	RM 460.85	134214	10% - 10yr	914.63	1224.88	1222.07	2.55	2.05	35.79	17.69	147.93	399.56	2.3	1.13	2.81	2.81
Sweet Grass County	A4	RM 460.74	133616	10% - 10yr	914.63	1224.83	1220.27	1.87	1.58	17.47	10.32	125.1	457.86	3.76	2.21	4.56	4.56
Sweet Grass County	A4	RM 460.63	133067	10% - 10yr	914.63	1224.81	1218.9	1.55	1.48	10.66	7.78	106.45	477.17	5.49	3.96	5.91	5.91
Sweet Grass County			132957	10% - 10yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	10% - 10yr	914.63	1224.06	1221.09	3.39	3.35	66.16	61.79	112.67	430.83	2.39	2.23	2.97	2.97
Sweet Grass County	A4	RM 460.50	132281	10% - 10yr	914.63	1223.3	1221.12	3.63	3.62	85.41	73.11	150.23	345.7	1.68	1.43	2.18	2.18
Sweet Grass County	A4	RM 460.38	131785	10% - 10yr	914.63	1223.01	1220.5	2.67	2.43	41.61	26.15	138.73	450.99	1.79	1.12	2.51	2.51
Sweet Grass County	A4	RM 460.29	131287	10% - 10yr	914.63	1222.59	1219.97	2.74	2.66	47.6	37.46	133.92	261.64	1.83	1.43	2.62	2.62
Sweet Grass County	A4	RM 460.19	130793	10% - 10yr	914.63	1222.34	1219.38	2.48	2.22	36.28	23.54	117.88	315.29	2.25	1.46	2.95	2.95
Sweet Grass County	A4	RM 460.08	130210	10% - 10yr	914.63	1221.96	1218.23	2.65	2.6	39.11	31.82	131.43	164.89	2.63	2.13	3.74	3.74
Sweet Grass County	A4	RM 459.99	129763	10% - 10yr	914.63	1221.65	1218.01	2.94	2.89	46.5	33.74	104.38	152.08	2.97	2.15	3.64	3.64
Sweet Grass County	A4	RM 459.90	129246	10% - 10yr	914.63	1221.49	1217.62	2.65	2.53	36.67	24.88	106.75	236.17	3.22	2.17	3.88	3.88
Sweet Grass County	A4	RM 459.81	128792	10% - 10yr	914.63	1220.86	1218.15	3.71	3.67	78.74	66.6	99.73	159.74	2.47	2.08	2.7	2.7
Sweet Grass County	A4	RM 459.72	128310	10% - 10yr	999.58	1220.74	1217.31	2.81	2.46	43.75	24.68	127.06	286.35	2.71	1.52	3.43	3.43
Sweet Grass County	A4	RM 459.62	127798	10% - 10yr	999.58	1220.48	1217.46	2.82	2.44	45.96	28	128.42	282.06	2.38	1.45	3.01	3.01
Sweet Grass County	A5	RM 459.53	127324	10% - 10yr	999.58	1219.83	1217.26	3.41	3.4	72.46	67.93	155.16	165.83	1.89	1.77	2.57	2.57
Sweet Grass County	A5	RM 459.44	126881	10% - 10yr	999.58	1219.59	1216.93	2.7	2.67	44.5	39.41	183.53	210.21	2.01	1.78	2.66	2.66
Sweet Grass County	A5	RM 459.31	126192	10% - 10yr	999.58	1219.18	1215.66	2.66	2.55	40.68	36.15	153.23	246.63	2.43	2.16	3.51	3.51
Sweet Grass County	A5	RM 459.24	125848	10% - 10yr	999.58	1218.88	1215.69	2.93	2.81	50.26	41.83	145.56	377.43	2.32	1.93	3.19	3.19
Sweet Grass County	A5	RM 459.16	125420	10% - 10yr	999.58	1218.29	1215.82	3.45	3.45	75.03	75.03	158.36	174.73	1.83	1.83	2.47	2.47
Sweet Grass County	A5	RM 459.02	124624	10% - 10yr	999.58	1217.96	1214.8	2.29	2.26	31.35	25.92	200.43	329.49	2.17	1.79	3.16	3.16
Sweet Grass County	A5	RM 458.79	123371	10% - 10yr	999.58	1217.12	1214.02	2.87	2.85	47.67	41.69	149.35	171.96	2.33	2.04	3.1	3.1
Sweet Grass County	A5	RM 458.48	121727	10% - 10yr	999.58	1216.05	1213.35	2.54	2.43	41.38	38.33	155.97	270.98	1.73	1.6	2.7	2.7
Sweet Grass County	A5	RM 458.36	121100	10% - 10yr	999.58	1214.96	1212.73	3.9	3.54	97.43	73.1	114.27	215.86	1.74	1.31	2.23	2.23
Sweet Grass County	A5	RM 458.25	120543	10% - 10yr	999.58	1214.77	1211.35	2.45	2.1	33.46	22.47	122.03	269.19	2.65	1.77	3.42	3.42
Sweet Grass County	A5	RM 458.13	119849	10% - 10yr	999.58	1214.41	1211.21	2.59	2.31	38.56	29.56	130.71	235.25	2.41	1.84	3.2	3.2
Sweet Grass County	A5	RM 458.03	119256	10% - 10yr	999.58	1214.24	1210.09	2.26	2.08	26.32	19.02	122.06	197.55	3.38	2.44	4.15	4.15
Sweet Grass County	A5	RM 457.87	118444	10% - 10yr	999.58	1214.01	1209.57	2.37	2.33	27.26	23.21	104.9	125.64	4.02	3.42	4.44	4.44
Sweet Grass County	A5	RM 457.76	117858	10% - 10yr	999.58	1213.79	1210.24	2.57	2.55	36.08	32.78	137.02	152.1	2.83	2.57	3.55	3.55
Sweet Grass County	A5	RM 457.66	117350	10% - 10yr	999.58	1213.52	1210.03	2.74	2.71	41.5	35.51	132.62	157.47	2.74	2.34	3.49	3.49
Sweet Grass County	A5	RM 457.54	116694	10% - 10yr	999.58	1213.13	1209.93	2.89	2.79	46.81	35.36	131.05	182.58	2.62	1.98	3.2	3.2
Sweet Grass County	A5	RM 457.35	115703	10% - 10yr	999.58	1211.82	1209.69	3.91	3.91	99.48	99.48	154.28	154.28	1.66	1.66	2.13	2.13
Sweet Grass County	A5	RM 457.20	114921	10% - 10yr	999.58	1211.59	1208.7	2.23	2.23	29.23	29.23	195.81	195.81	2.28	2.28	2.89	2.89
Sweet Grass County	A5	RM 457.02	113974	10% - 10yr	999.58	1210.85	1208.04	3.22	2.82	59.86	36.54	103.03	243.75	2.39	1.45	2.8	2.8
Sweet Grass County	A5	RM 456.84	113009	10% - 10yr	999.58	1210.41	1206.55	2.66	2.63	37.47	31.14	120.05	146.54	3.12	2.59	3.86	3.86
Sweet Grass County	A5	RM 456.68	112164	10% - 10yr	999.58	1209.7	1206.59	3.43	3.42	66.28	62.24	113.81	121.74	2.56	2.4	3.11	3.11
Sweet Grass County	A5	RM 456.55	111455	10% - 10yr	999.58	1209.39	1206.19	2.75	2.74	42.47	40.87	141.02	147.11	2.58	2.48	3.21	3.21
Sweet Grass County	A5	RM 456.43	110857	10% - 10yr	999.58	1209.13	1205.33	2.74	2.71	38.91	30.37	110.63	143.82	3.3	2.57	3.8	3.8
Sweet Grass County	A6	RM 456.29	110121	10% - 10yr	999.58	1208.69	1205.45	3.08	3.01	48.64	38.05	118.6	155.82	2.73	2.13	3.23	3.23
Sweet Grass County	A6	RM 456.18	109508	10% - 10yr	999.58	1208.27	1205.45	3.12	3.11	56.89	53.45	139.71	149.08	2.29	2.16	2.82	2.82
Sweet Grass County	A6	RM 456.03	108721	10% - 10yr	999.58	1207.73	1204.59	2.82	2.8	48.52	44.58	175.98	204.59	2.01	1.85	3.14	3.14
Sweet Grass County	A6	RM 455.84	107742	10% - 10yr	999.58	1207.25	1204.05	2.41	2.41	31.92	31.56	183.51	246.32	2.26	2.23	3.21	3.21
Sweet Grass County	A6	RM 455.70	106976	10% - 10yr	999.58	1206.99	1203.14	2.36	2.36	28.24	26.91	141	255.44	3	2.86	3.85	3.85
Sweet Grass County	A6	RM 455.56	106256	10% - 10yr	999.58	1206.54	1203.35	2.95	2.87	45.55	38.31	119.56	264.86	2.81	2.37	3.2	3.2
Sweet Grass County	A6	RM 455.39	105360	10% - 10yr	999.58	1206.32	1202.74	2.29	2.17	28.49	20.6	151.06	312.09	2.85	2.06	3.57	3.57
Sweet Grass County	A6	RM 455.26	104667	10% - 10yr	999.58	1205.23	1202.83	4.15	3.93	104.84	73.43	120.68	200.81	1.98	1.38	2.4	2.4
Sweet Grass County	A6	RM 455.09	103771	10% - 10yr	999.58	1204.99	1201.58	2.19	1.99	26.11	18.65	158.09	249.49	2.83	2.02	3.41	3.41
Sweet Grass County	A6	RM 454.95	103072	10% - 10yr	999.58	1204.35	1201.94	3.15	3.05	65.17	61.83	179.27	212.92	1.62	1.54	2.41	2.41

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	10% - 10yr	999.58	1203.93	1200.61	2.38	2.29	34.98	32.29	178.14	235.7	2.01	1.85	3.32	3.32
Sweet Grass County	A6	RM 454.72	101863	10% - 10yr	999.58	1203.37	1200.47	3.01	3.01	50.57	50.57	184.01	184.01	1.8	1.8	2.9	2.9
Sweet Grass County	A6	RM 454.64	101419	10% - 10yr	999.58	1203.23	1199.69	2.4	2.4	32	32	177.98	177.98	2.34	2.34	3.53	3.53
Sweet Grass County	A6	RM 454.53	100846	10% - 10yr	999.58	1202.78	1199.59	2.98	2.98	47.29	47.29	120.49	159.46	2.79	2.79	3.19	3.19
Sweet Grass County	A6	RM 454.43	100338	10% - 10yr	999.58	1202.51	1199	2.96	2.96	47.6	47.6	115.27	152.4	2.93	2.93	3.52	3.52
Sweet Grass County	A6	RM 454.29	99597	10% - 10yr	999.58	1202.15	1198.71	2.94	2.94	46.36	46.36	113.71	177.54	2.99	2.99	3.43	3.43
Sweet Grass County	A6	RM 454.15	98861	10% - 10yr	999.58	1201.85	1198.68	2.71	2.66	38.81	32.33	136.55	167.67	2.69	2.24	3.17	3.17
Sweet Grass County	A6	RM 454.00	98105	10% - 10yr	999.58	1201.44	1198.53	2.73	2.73	37.73	37.72	193.03	193.09	1.9	1.9	2.91	2.91
Sweet Grass County	A6	RM 453.89	97523	10% - 10yr	999.58	1201.05	1198.31	2.78	2.72	43.44	41.05	177.8	195.95	1.98	1.88	2.75	2.75
Sweet Grass County	A6	RM 453.78	96929	10% - 10yr	999.58	1200.91	1197.07	2.19	2.18	25.77	22.53	153.06	176.36	2.98	2.6	3.84	3.84
Sweet Grass County	A6	RM 453.67	96361	10% - 10yr	999.58	1200.41	1197.77	3.07	2.85	54.52	34.82	151.58	260.57	2.1	1.35	2.65	2.65
Sweet Grass County	A6	RM 453.58	95863	10% - 10yr	999.58	1200.39	1196.37	2.11	2.1	22.65	22.12	182.6	187.71	3.04	2.97	4.02	4.02
Sweet Grass County	A6	RM 453.48	95355	10% - 10yr	999.58	1199.83	1196.86	3.32	3.3	60.17	55.54	118.04	128.66	2.55	2.35	2.96	2.96
Sweet Grass County	A6	RM 453.35	94633	10% - 10yr	999.58	1199.3	1196.43	3.23	3.18	57.34	50.88	133.91	182.73	2.31	2.05	2.87	2.87
Sweet Grass County	A7	RM 453.23	93994	10% - 10yr	999.58	1198.86	1196.41	3.08	2.85	53.47	47.9	112.62	199.21	1.97	1.76	2.44	2.44
Sweet Grass County	A7	RM 453.11	93361	10% - 10yr	999.58	1198.61	1195.68	2.36	2.32	29.72	28.55	187.26	203.79	2.2	2.12	2.92	2.92
Sweet Grass County	A7	RM 453.01	92863	10% - 10yr	999.58	1198.1	1195.38	3.13	3.01	53.32	47.96	146.42	179.34	2.07	1.85	2.72	2.72
Sweet Grass County	A7	RM 452.91	92363	10% - 10yr	999.58	1197.95	1194.85	2.58	2.33	34.16	22.98	117.27	268.33	2.4	1.61	3.1	3.1
Sweet Grass County	A7	RM 452.82	91863	10% - 10yr	999.58	1197.72	1194.65	2.53	2.39	36.11	32.62	111.14	181.07	2.55	2.31	3.07	3.07
Sweet Grass County	A7	RM 452.72	91363	10% - 10yr	999.58	1197.66	1193.29	1.96	1.91	19.42	16.47	144.32	174.83	3.53	2.99	4.37	4.37
Sweet Grass County	A7	RM 452.64	90932	10% - 10yr	999.58	1197.42	1194.02	2.54	2.15	35.38	24.32	133.5	278.94	2.79	1.92	3.4	3.4
Sweet Grass County	A7	RM 452.53	90362	10% - 10yr	999.58	1196.95	1193.87	3.15	2.91	53.07	40.82	115.96	173.51	2.58	1.98	3.09	3.09
Sweet Grass County	A7	RM 452.43	89864	10% - 10yr	999.58	1196.64	1193.52	3.16	2.92	53.22	39.78	110.4	170.2	2.69	2.01	3.12	3.12
Sweet Grass County	A7	RM 452.33	89331	10% - 10yr	999.58	1196.34	1193.16	2.98	2.88	46.56	37.67	134.45	174.01	2.46	1.99	3.18	3.18
Sweet Grass County	A7	RM 452.25	88863	10% - 10yr	999.58	1196.09	1192.91	2.91	2.83	44.76	37.54	138.6	170.56	2.47	2.07	3.18	3.18
Sweet Grass County	A7	RM 452.16	88399	10% - 10yr	999.58	1195.77	1192.68	3.09	2.7	51.21	32.5	119.78	222.64	2.62	1.66	3.09	3.09
Sweet Grass County	A7	RM 452.06	87882	10% - 10yr	999.58	1195.53	1192.4	2.85	2.5	44.38	30.02	120.09	210.02	2.82	1.9	3.13	3.13
Sweet Grass County	A7	RM 451.96	87394	10% - 10yr	999.58	1195.21	1191.9	3.03	2.66	52.14	31.69	125.46	246.07	2.51	1.53	3.31	3.31
Sweet Grass County	A7	RM 451.86	86835	10% - 10yr	999.58	1194.95	1191.79	2.83	2.36	41.84	26.93	121.7	243.58	2.71	1.74	3.15	3.15
Sweet Grass County	A7	RM 451.75	86230	10% - 10yr	999.58	1194.67	1191.43	2.72	2.72	39.58	39.58	131.99	131.99	2.78	2.78	3.23	3.23
Sweet Grass County	A7	RM 451.61	85483	10% - 10yr	999.58	1194.36	1190.7	2.57	2.57	37.15	37.07	151.01	151.25	2.58	2.57	3.66	3.66
Sweet Grass County	A7	RM 451.49	84861	10% - 10yr	999.58	1193.76	1191.07	3.32	3.18	59.91	53.94	122.31	143.5	2.42	2.19	2.69	2.69
Sweet Grass County	A7	RM 451.34	84113	10% - 10yr	999.58	1193.7	1190.06	2.1	2.09	23.37	20.68	150.96	172.04	3.15	2.78	3.63	3.63
Sweet Grass County	A7	RM 451.20	83363	10% - 10yr	999.58	1193.08	1189.8	3.26	3.26	57.33	55.17	103.86	108.05	2.95	2.84	3.28	3.28
Sweet Grass County	A7	RM 451.10	82863	10% - 10yr	999.58	1192.92	1189.79	2.75	2.74	41.58	38.68	133.83	144.44	2.71	2.52	3.13	3.13
Sweet Grass County	A7	RM 451.00	82325	10% - 10yr	999.58	1192.72	1189.55	2.58	2.4	37.08	31.72	118.3	182.24	2.67	2.29	3.18	3.18
Sweet Grass County	A7	RM 450.86	81602	10% - 10yr	999.58	1192.52	1188.29	2.12	1.93	44.64	26.59	90.13	215.98	4.14	2.39	4.23	4.23
Sweet Grass County	A7	RM 450.73	80923	10% - 10yr	999.58	1191.59	1188.46	3.81	3.54	80.56	60.41	93.19	138.99	2.72	2.03	3.13	3.13
Sweet Grass County	A7	RM 450.63	80374	10% - 10yr	999.58	1191.31	1188.16	3.07	3.04	53.72	50.08	132.75	144	2.45	2.29	3.16	3.16
Sweet Grass County	A7	RM 450.53	79863	10% - 10yr	999.58	1191.08	1187.88	2.75	2.74	40.08	37.95	149.45	158.6	2.43	2.3	3.2	3.2
Sweet Grass County	A7	RM 450.43	79300	10% - 10yr	999.58	1190.81	1187.72	2.7	2.53	37.95	32.84	131.22	198.37	2.3	1.99	3.09	3.09
Sweet Grass County	A7	RM 450.34	78849	10% - 10yr	1050.56	1190.49	1188.05	2.88	2.67	48.38	42.24	124.47	217.65	2.07	1.81	2.44	2.44
Sweet Grass County	A7	RM 450.23	78298	10% - 10yr	1050.56	1190.37	1186.92	2.03	1.96	22.36	17.46	195.14	314.47	2.65	2.07	3.45	3.45
Sweet Grass County	A7	RM 450.14	77822	10% - 10yr	1050.56	1190.08	1186.4	2.56	2.38	36.58	19.47	152.11	324.92	2.67	1.4	3.68	3.68
Sweet Grass County	A7	RM 450.05	77362	10% - 10yr	1050.56	1189.47	1187.2	3.47	3.4	71.72	59.15	139.19	191.05	2.17	1.79	2.28	2.28
Sweet Grass County	A7	RM 449.96	76841	10% - 10yr	1050.56	1189.24	1186.28	2.89	2.62	45.91	28.05	127.02	307.5	2.81	1.7	2.95	2.95
Sweet Grass County	A7	RM 449.86	76356	10% - 10yr	1050.56	1188.96	1185.58	3.02	2.61	48.02	23.58	108.08	296.49	3.15	1.54	3.37	3.37
Sweet Grass County	A7	RM 449.77	75860	10% - 10yr	1050.56	1188.65	1185.68	3.08	2.74	47.76	42.78	167.62	220.99	1.93	1.73	2.97	2.97
Sweet Grass County	A7	RM 449.68	75373	10% - 10yr	1050.56	1188.3	1185.9	2.76	2.6	48.73	43.09	216.05	263.65	1.73	1.53	2.4	2.4
Sweet Grass County	A7	RM 449.59	74904	10% - 10yr	1050.56	1188.21	1184.15	2.27	1.97	26.08	13.72	111.94	284.35	3.64	1.88	4.06	4.06
Sweet Grass County	A7	RM 449.48	74351	10% - 10yr	1050.56	1187.82	1184.86	3.07	2.64	56.77	36.51	119.77	292.45	2.12	1.36	2.96	2.96
Sweet Grass County	A7	RM 449.37	73741	10% - 10yr	1050.56	1187.7	1184.73	1.87	1.72	20.89	13.3	210.35	560.87	2.15	1.37	2.97	2.97
Sweet Grass County	A7	RM 449.26	73165	10% - 10yr	1050.56	1187.61	1184.33	1.76	1.11	15.76	8.64	128.66	845.08	2.72	1.47	3.28	3.28
Sweet Grass County	A7	RM 449.10	72364	10% - 10yr	1050.56	1186.84	1183.97	3.67	2.02	74.94	25.83	87.4	815.51	2.74	0.92	2.88	2.88
Sweet Grass County	A7	RM 449.00	71858	10% - 10yr	1050.56	1186.13	1183.97	3.66	2.5	84.47	42.2	113.43	486.5	1.86	0.91	2.16	2.16
Sweet Grass County	A7	RM 448.88	71223	10% - 10yr	1050.56	1185.7	1183.11	2.2	1.98	31.25	22.67	230.73	466.8	1.71	1.24	2.59	2.59
Sweet Grass County	A7	RM 448.76	70537	10% - 10yr	1050.56	1185.63	1182.01	1.22	1.18	9.26	8.87	312.72	487.32	1.91	1.83	3.62	3.62
Sweet Grass County	A7	RM 448.55	69424	10% - 10yr	1050.56	1185.41	1181.8	1.72	1.53	15.63	10.54	154.14	325.36	3.14	2.11	3.61	3.61
Sweet Grass County	A7	RM 448.41	68815	10% - 10yr	1050.56	1184.8	1181.16	3.28	3.1	48.67	34.51	108.05	166.73	2.9	2.03	3.64	3.64
Sweet Grass County	A7	RM 448.32	68353	10% - 10yr	1050.56	1184.97	1179.91	1.81	1.79	15.28	13.64	126.03	183.3	4.61	4.1	5.06	5.06
Sweet Grass County	A7	RM 448.23	67851	10% - 10yr	1050.56	1184.79	1179.82	2.24	2.21	23.6	20.99	105.4	210.94	4.45	3.95	4.97	4.97

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	10% - 10yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	10% - 10yr	1050.56	1184.15	1180.89	3.59	3.58	71.41	67.7	107.64	220.55	2.72	2.57	3.26	3.26
Sweet Grass County	A7	RM 448.07	67043	10% - 10yr	1050.56	1183.82	1180.7	2.79	2.63	44.08	31.25	148.91	379.12	2.51	1.78	3.12	3.12
Sweet Grass County	A7	RM 447.94	66348	10% - 10yr	1050.56	1183.47	1180.22	2.82	2.57	42.69	18.76	123.58	418.69	2.98	1.3	3.25	3.25
Sweet Grass County	A7	RM 447.85	65863	10% - 10yr	1050.56	1183.06	1180.39	3.25	2.71	61.06	29.71	132.13	338.6	2.36	1.15	2.67	2.67
Sweet Grass County	A7	RM 447.75	65363	10% - 10yr	1050.56	1182.99	1179.55	2.38	1.98	27.95	12.04	143.24	412.94	3	1.29	3.45	3.45
Sweet Grass County	A7	RM 447.66	64865	10% - 10yr	1050.56	1182.68	1179.59	2.85	2.2	43.88	15.17	121.32	476.6	2.92	1	3.09	3.09
Sweet Grass County	A7	RM 447.56	64365	10% - 10yr	1050.56	1182.17	1179.67	3.43	2.51	70.73	32	136.39	442.57	2.09	0.94	2.5	2.5
Sweet Grass County	A7	RM 447.49	64001	10% - 10yr	1050.56	1182.05	1179.82	2.57	2.05	39.53	23.52	193.72	434	1.98	1.18	2.23	2.23
Sweet Grass County	A7	RM 447.39	63473	10% - 10yr	1050.56	1181.49	1178.85	3.49	2.42	67.93	25.75	91.3	489.34	2.35	0.89	2.64	2.64
Sweet Grass County	A7	RM 447.27	62880	10% - 10yr	1050.56	1181.13	1178.26	3.04	2.2	54.12	23.14	103.89	493.25	2.29	0.97	2.87	2.87
Sweet Grass County	A7	RM 447.17	62358	10% - 10yr	1050.56	1180.83	1177.92	2.83	1.84	47.4	22.21	111.76	556.28	2.21	1.03	2.9	2.9
Sweet Grass County	A7	RM 447.08	61863	10% - 10yr	1050.56	1180.39	1177.91	3.02	1.91	58.14	32.78	100.82	550.14	1.78	1	2.48	2.48
Sweet Grass County	A7	RM 446.98	61358	10% - 10yr	1050.56	1179.89	1177.28	3.11	2.03	54	22.93	95.1	533.1	2.3	0.97	2.61	2.61
Sweet Grass County	A7	RM 446.89	60841	10% - 10yr	1050.56	1179.48	1176.94	3.33	2.13	65.09	27.06	78.89	524.97	2.3	0.95	2.54	2.54
Sweet Grass County	A7	RM 446.80	60396	10% - 10yr	1050.56	1179.32	1175.92	2.55	1.75	36.63	17.94	95.51	595.75	2.61	1.26	3.4	3.4
Sweet Grass County	A7	RM 446.70	59903	10% - 10yr	1050.56	1179.01	1176.22	3.12	2.12	54.54	23.87	65.84	479.73	2.75	1.15	2.79	2.79
Sweet Grass County	A7	RM 446.60	59371	10% - 10yr	1050.56	1178.64	1175.91	3.17	2.25	54.81	24	76.95	462.41	2.47	1.06	2.73	2.73
Sweet Grass County	A7	RM 446.51	58868	10% - 10yr	1050.56	1178.44	1175.24	2.62	2.19	39.18	19.67	117.15	400.56	2.46	1.23	3.2	3.2
Sweet Grass County	A7	RM 446.41	58363	10% - 10yr	1050.56	1178.26	1174.39	2.29	1.96	27.51	17.44	146.25	329.65	2.65	1.68	3.86	3.86
Sweet Grass County	A7	RM 446.30	57762	10% - 10yr	1050.56	1177.9	1174.85	2.75	2.44	40.58	19.66	123.97	353.12	2.52	1.22	3.05	3.05
Sweet Grass County	A7	RM 446.22	57365	10% - 10yr	1050.56	1177.44	1174.39	3.28	3.25	59.73	52.94	128.92	147.21	2.48	2.19	3.04	3.04
Sweet Grass County	A7	RM 446.12	56852	10% - 10yr	1050.56	1177.18	1174.04	2.94	2.88	46.13	34.06	140.19	194.15	2.54	1.88	3.14	3.14
Sweet Grass County	A7	RM 446.02	56303	10% - 10yr	1050.56	1177.03	1173.3	2.63	2.07	35.05	13.08	98.02	383.05	3.66	1.33	3.74	3.74
Sweet Grass County	A7	RM 445.94	55871	10% - 10yr	1050.56	1176.31	1173.6	4.04	3.69	94.03	60.37	94.08	183.54	2.43	1.55	2.71	2.71
Sweet Grass County	A7	RM 445.82	55236	10% - 10yr	1050.56	1176.17	1173.05	2.35	2.23	33.34	27.5	208.48	274.74	2.09	1.73	3.12	3.12
Sweet Grass County	A7	RM 445.71	54753	10% - 10yr	1050.56	1176.01	1172.38	2.15	2.11	23.26	21.11	208.44	260.4	2.32	2.11	3.62	3.62
Sweet Grass County	A7	RM 445.60	54202	10% - 10yr	1050.56	1175.81	1172.32	2.24	2.18	26.35	24.15	190.57	255.25	2.43	2.23	3.49	3.49
Sweet Grass County	A7	RM 445.46	53453	10% - 10yr	1050.56	1175.26	1171.04	3.03	2.82	46.79	33.07	130.85	214.8	2.57	1.81	4.22	4.22
Sweet Grass County	A7	RM 445.36	52888	10% - 10yr	1050.56	1175.05	1170.25	2.81	2.32	41.9	24.81	105.01	269.34	3.1	1.82	4.8	4.8
Sweet Grass County	A7	RM 445.26	52344	10% - 10yr	1050.56	1174.44	1171.35	3.6	3.28	72.69	45.68	105.47	204.28	2.61	1.64	3.09	3.09
Sweet Grass County	A7	RM 445.17	51873	10% - 10yr	1050.56	1173.85	1171.83	3.78	3.58	88.44	70.97	135.75	194.27	1.94	1.56	2.02	2.02
Sweet Grass County	A7	RM 445.07	51376	10% - 10yr	1050.56	1173.86	1170.28	2.22	2.09	27.81	18.28	181.57	353.54	2.54	1.67	3.58	3.58
Sweet Grass County	A7	RM 444.97	50844	10% - 10yr	1050.56	1173.39	1170.19	2.99	2.91	48.14	34.72	147.79	239.55	2.37	1.7	3.2	3.2
Sweet Grass County	A7	RM 444.88	50352	10% - 10yr	1050.56	1173.13	1170.05	2.84	2.65	43.84	27.58	143.96	250.28	2.54	1.59	3.08	3.08
Sweet Grass County	A7	RM 444.79	49860	10% - 10yr	1050.56	1172.79	1169.94	3.04	2.58	52.48	30.88	131.73	282.28	2.51	1.48	2.85	2.85
Sweet Grass County	A7	RM 444.69	49316	10% - 10yr	1050.56	1172.46	1169.55	3.02	2.53	51.14	28.48	127.73	287.2	2.59	1.44	2.9	2.9
Sweet Grass County	A7	RM 444.60	48863	10% - 10yr	1050.56	1172.45	1167.23	2.34	1.8	25.3	10.83	87.99	419.8	4.86	2	5.22	5.22
Sweet Grass County	A7	RM 444.50	48367	10% - 10yr	1050.56	1172.15	1168.66	3.03	2.37	50.04	29.49	103.16	595.61	2.86	1.68	3.49	3.49
Sweet Grass County	A7	RM 444.41	47863	10% - 10yr	1050.56	1172.05	1168.6	2.35	2.22	28.67	22.36	129.86	629.98	2.89	2.26	3.46	3.46
Sweet Grass County	A7	RM 444.30	47336	10% - 10yr	1050.56	1171.96	1168.26	2	1.76	20.51	12.75	167.8	692.9	3.05	1.89	3.7	3.7
Sweet Grass County	A7	RM 444.20	46789	10% - 10yr	1050.56	1171.15	1167.97	3.82	3.57	82.51	50.88	105.84	353.22	2.58	1.58	3.18	3.18
Sweet Grass County	A7	RM 444.12	46346	10% - 10yr	1050.56	1170.85	1167.62	3.53	3.18	67.69	38.09	99.76	208.48	2.93	1.63	3.23	3.23
Sweet Grass County	A7	RM 444.02	45829	10% - 10yr	1050.56	1170.67	1167.57	2.89	2.68	41.56	27.53	143.97	236.71	2.5	1.66	3.1	3.1
Sweet Grass County	A7	RM 443.91	45243	10% - 10yr	1050.56	1170.36	1167.08	2.81	2.51	45.63	21.93	152.18	409.43	2.39	1.14	3.28	3.28
Sweet Grass County	A7	RM 443.84	44853	10% - 10yr	1050.56	1169.77	1167.23	3.5	3.44	78.84	59.93	173.87	236.29	1.72	1.31	2.53	2.53
Sweet Grass County	A7	RM 443.75	44415	10% - 10yr	1050.56	1169.57	1166.67	2.63	2.61	41.06	37.61	183.8	317.62	2.17	1.99	2.9	2.9
Sweet Grass County	A7	RM 443.64	43870	10% - 10yr	1050.56	1169.36	1166.09	2.53	1.91	36.01	14.61	110.6	827.12	2.6	1.05	3.27	3.27
Sweet Grass County	A7	RM 443.53	43290	10% - 10yr	1050.56	1169.2	1165.72	2.37	1.94	29.52	13.54	87.59	756.96	3.19	1.44	3.48	3.48
Sweet Grass County	A8	RM 443.45	42860	10% - 10yr	1050.56	1168.76	1165.25	3.02	2.95	49.36	31.52	136.55	512.07	2.54	1.62	3.5	3.5
Sweet Grass County	A8	RM 443.35	42363	10% - 10yr	1050.56	1168.06	1164.95	3.87	3.59	84.81	57.16	101.62	368.11	2.57	1.72	3.12	3.12
Sweet Grass County	A8	RM 443.25	41863	10% - 10yr	1050.56	1167.94	1165.05	2.84	2.44	45.64	26.37	127.8	461.94	2.5	1.44	2.9	2.9
Sweet Grass County	A8	RM 443.16	41342	10% - 10yr	1050.56	1167.69	1165.43	2.59	2.01	41.72	25.61	152.5	568.75	1.89	1.16	2.26	2.26
Sweet Grass County	A8	RM 443.07	40863	10% - 10yr	1050.56	1167.29	1164.49	2.83	2.01	48.79	22.8	139	689.04	2.01	0.94	2.8	2.8
Sweet Grass County	A8	RM 442.97	40345	10% - 10yr	1050.56	1167	1164.28	2.46	1.75	33.43	21.62	161.1	556.92	1.95	1.26	2.72	2.72
Sweet Grass County	A8	RM 442.88	39863	10% - 10yr	1050.56	1166.8	1164.06	2.09	1.68	26.04	18.54	177.36	604.07	1.88	1.34	2.75	2.75
Sweet Grass County	A8	RM 442.78	39363	10% - 10yr	1050.56	1166.03	1164.18	3.49	3.12	82.8	53.92	133.01	436.92	1.45	0.95	2.18	2.18
Sweet Grass County	A8	RM 442.68	38840	10% - 10yr	1050.56	1165.73	1162.8	2.51	1.94	31.35	17.34	117.57	492.29	2.1	1.16	2.93	2.93
Sweet Grass County	A8	RM 442.60	38390	10% - 10yr	1050.56	1165.66	1162.57	1.75	1.5	17.93	11.43	157.4	492.95	2.27	1.45	3.09	3.09
Sweet Grass County	A8	RM 442.50	37863	10% - 10yr	1050.56	1165.22	1162.29	3.04	2.32	46.2	21.94	97.98	423.56	2.3	1.09	2.94	2.94
Sweet Grass County	A8	RM 442.42	37461	10% - 10yr	1050.56	1164.98	1162.07	2.96	2.27	40.84	22.6	121.06	443.59	1.93	1.06	2.92	2.92

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	10% - 10yr	1050.56	1164.67	1161.85	2.86	2.22	47.97	26.06	106.78	406.92	2.26	1.22	2.82	2.82
Sweet Grass County	A8	RM 442.24	36451	10% - 10yr	1050.56	1164.4	1161.75	2.63	2.36	36.93	26.15	125.09	336.54	1.94	1.37	2.65	2.65
Sweet Grass County	A8	RM 442.12	35820	10% - 10yr	1050.56	1164.12	1161.12	2.56	2.17	32.81	20.73	122.74	375.28	2.18	1.37	3	3
Sweet Grass County	A8	RM 442.03	35367	10% - 10yr	1050.56	1163.85	1161.18	2.62	2.29	41.45	25.32	123.16	388.15	2.05	1.26	2.67	2.67
Sweet Grass County	A8	RM 441.95	34945	10% - 10yr	1050.56	1163.78	1160.28	2	1.57	22.41	11.68	133.82	580.99	2.62	1.34	3.5	3.5
Sweet Grass County	A8	RM 441.84	34360	10% - 10yr	1050.56	1163.3	1160.33	2.79	2.2	40.57	20.94	186.27	493.83	1.87	0.97	2.98	2.98
Sweet Grass County	A8	RM 441.74	33863	10% - 10yr	1050.56	1162.98	1160.06	2.78	2.15	41.83	21.64	171.23	464.45	2.03	1.05	2.92	2.92
Sweet Grass County	A8	RM 441.65	33357	10% - 10yr	1050.56	1162.86	1159.78	2.17	1.54	25.94	10.58	173.66	752.36	2.5	1.01	3.08	3.08
Sweet Grass County	A8	RM 441.53	32732	10% - 10yr	1050.56	1162.46	1159.44	2.71	1.92	42.67	16.91	152.04	596.32	2.34	0.92	3.02	3.02
Sweet Grass County	A8	RM 441.47	32366	10% - 10yr	1050.56	1162.35	1158.95	2.43	1.61	32.57	12.46	138.98	681.14	2.76	1.05	3.39	3.39
Sweet Grass County	A8	RM 441.38	31928	10% - 10yr	1050.56	1162.37	1158.24	1.59	1.02	13.47	6.76	153.74	939.71	3.05	1.53	4.13	4.13
Sweet Grass County	A8	RM 441.27	31350	10% - 10yr	1050.56	1161.8	1158.76	3.38	2.31	64.7	19.66	97.12	752.82	2.51	0.76	3.05	3.05
Sweet Grass County	A8	RM 441.18	30882	10% - 10yr	1050.56	1161.63	1158.5	2.45	1.54	31.9	10.59	126.18	966.14	2.5	0.82	3.12	3.12
Sweet Grass County	A8	RM 441.07	30295	10% - 10yr	1050.56	1161.48	1158.19	2.12	1.39	25.24	9.17	149.54	966.83	2.59	0.94	3.3	3.3
Sweet Grass County	A8	RM 441.00	29913	10% - 10yr	1050.56	1161.4	1157.63	1.99	1.28	22.22	8.87	146.59	933.41	2.62	1.04	3.77	3.77
Sweet Grass County	A8	RM 440.80	28852	10% - 10yr	1050.56	1160.37	1157.49	3.83	3.26	79.67	33.85	103.86	314.39	2.42	1.03	2.88	2.88
Sweet Grass County	A8	RM 440.60	27841	10% - 10yr	1050.56	1159.58	1157.2	3.09	2.52	58.13	28.6	121.05	441.95	2.01	0.99	2.38	2.38
Sweet Grass County	A8	RM 440.51	27361	10% - 10yr	1050.56	1159.08	1156.41	3.25	2.59	63.46	39.17	109.89	314.41	2.11	1.3	2.66	2.66
Sweet Grass County	A8	RM 440.42	26862	10% - 10yr	1050.56	1158.53	1156.26	3.45	2.76	73.63	41.63	88.81	347.62	1.94	1.1	2.26	2.26
Sweet Grass County	A8	RM 440.30	26223	10% - 10yr	1050.56	1158.45	1155.63	1.81	1.42	19.5	12.81	97.18	542.57	2.17	1.42	2.82	2.82
Sweet Grass County	A8	RM 440.17	25466	10% - 10yr	1050.56	1158.21	1154.7	2.33	1.67	29.62	16.11	64.56	407.03	2.97	1.56	3.51	3.51
Sweet Grass County	A8	RM 440.06	24863	10% - 10yr	1050.56	1157.97	1153.97	2.27	1.88	27.48	16.22	130.58	315.48	3.04	1.78	3.99	3.99
Sweet Grass County	A8	RM 439.96	24366	10% - 10yr	1050.56	1157.72	1154.18	2.7	2.16	38.22	18.73	95.94	325.88	3.19	1.56	3.53	3.53
Sweet Grass County	A8	RM 439.87	23863	10% - 10yr	1050.56	1157.43	1153.59	2.85	2.38	39.84	20.21	103.39	280.59	3.46	1.75	3.84	3.84
Sweet Grass County	A8	RM 439.77	23365	10% - 10yr	1050.56	1157.21	1153.6	2.88	2.72	41.78	21.72	124.68	285.35	2.91	1.51	3.61	3.61
Sweet Grass County	A8	RM 439.68	22863	10% - 10yr	1050.56	1156.92	1153.45	2.99	2.78	44.44	15.45	135.04	445.21	2.59	0.89	3.48	3.48
Sweet Grass County	A8	RM 439.58	22363	10% - 10yr	1050.56	1156.84	1153.39	2.37	1.87	29.55	11.37	150.28	547.75	2.79	1.07	3.45	3.45
Sweet Grass County	A8	RM 439.49	21863	10% - 10yr	1050.56	1156.7	1152.86	2.37	1.78	28.38	9.46	116.13	528.37	3.56	1.18	3.84	3.84
Sweet Grass County	A8	RM 439.39	21363	10% - 10yr	1050.56	1156.56	1153.06	2.41	1.87	30.64	10.87	131.98	561.43	3.05	1.07	3.5	3.5
Sweet Grass County	A8	RM 439.30	20863	10% - 10yr	1050.56	1156.17	1152.92	3.05	2.35	49.09	17.27	110.38	477.61	2.88	1.01	3.26	3.26
Sweet Grass County	A8	RM 439.20	20353	10% - 10yr	1050.56	1155.37	1152.64	4.01	3.9	86.55	65.24	111.19	173.16	2.34	1.76	2.74	2.74
Sweet Grass County	A8	RM 439.11	19864	10% - 10yr	1050.56	1155.41	1152.34	2.66	2.18	38.63	19.34	98.01	431.26	2.8	1.4	3.07	3.07
Sweet Grass County	A8	RM 439.01	19360	10% - 10yr	1050.56	1154.78	1152.4	3.48	3.13	68.14	37.08	125.35	329.91	1.92	1.04	2.37	2.37
Sweet Grass County	A8	RM 438.91	18848	10% - 10yr	1050.56	1154.59	1151.92	2.66	2.19	38.6	20.32	121.85	409.96	2.23	1.18	2.67	2.67
Sweet Grass County	A8	RM 438.82	18363	10% - 10yr	1050.56	1154.29	1151.23	2.72	2.33	42.84	26.99	117.89	338.53	2.37	1.49	3.06	3.06
Sweet Grass County	A8	RM 438.73	17853	10% - 10yr	1050.56	1153.93	1151.37	2.88	2.42	44.58	27.73	124.01	372.05	1.88	1.17	2.55	2.55
Sweet Grass County	A8	RM 438.63	17363	10% - 10yr	1050.56	1153.8	1150.74	2.25	1.81	28.21	18.31	100.37	342.19	2.62	1.7	3.06	3.06
Sweet Grass County	A8	RM 438.54	16863	10% - 10yr	1050.56	1153.66	1150.59	2.16	1.85	25.36	18.95	104.48	267.97	2.88	2.12	3.07	3.07
Sweet Grass County	A8	RM 438.43	16307	10% - 10yr	1050.56	1153.46	1149.52	2.17	2.17	25.38	25.33	163.42	223.71	2.96	2.95	3.94	3.94
Sweet Grass County	A9	RM 438.36	15889	10% - 10yr	1050.56	1153.34	1149.4	2.2	2.16	22.07	20.29	187.56	209.53	2.52	2.32	3.94	3.94
Sweet Grass County	A9	RM 438.26	15363	10% - 10yr	1050.56	1152.79	1149.84	3.36	2.96	61.32	36.46	115.14	234.94	2.54	1.51	2.95	2.95
Sweet Grass County	A9	RM 438.16	14863	10% - 10yr	1050.56	1152.56	1149.31	2.98	2.34	45.71	17.97	121.14	421.78	2.77	1.08	3.24	3.24
Sweet Grass County	A9	RM 438.07	14394	10% - 10yr	1050.56	1152.28	1149.19	3.03	2.22	52.25	20.54	128.5	505.03	2.48	0.97	3.09	3.09
Sweet Grass County	A9	RM 437.96	13827	10% - 10yr	1050.56	1152.05	1149.19	2.71	1.85	42.75	16.73	120.22	649.05	2.31	0.9	2.86	2.86
Sweet Grass County	A9	RM 437.88	13363	10% - 10yr	1050.56	1151.81	1148.94	2.82	1.85	41.83	16.3	106.61	666.5	2.3	0.89	2.87	2.87
Sweet Grass County	A9	RM 437.78	12844	10% - 10yr	1050.56	1151.5	1148.72	2.94	1.96	47.17	18.85	99.67	614.12	2.35	0.93	2.78	2.78
Sweet Grass County	A9	RM 437.69	12354	10% - 10yr	1050.56	1151.36	1148.45	2.17	1.62	28.35	15.11	147	593.94	2.12	1.12	2.9	2.9
Sweet Grass County	A9	RM 437.59	11863	10% - 10yr	1050.56	1151.05	1148.76	2.46	1.91	39.43	19.68	151.05	667.54	1.66	0.83	2.64	2.64
Sweet Grass County	A9	RM 437.50	11362	10% - 10yr	1050.56	1150.83	1148.29	2.08	1.67	27.25	15.16	189.35	615.43	1.83	1.02	2.54	2.54
Sweet Grass County	A9	RM 437.41	10902	10% - 10yr	1050.56	1150.54	1148.26	2.37	1.85	36.35	19.44	175.96	625.77	1.69	0.91	2.28	2.28
Sweet Grass County	A9	RM 437.31	10361	10% - 10yr	1050.56	1150.15	1147.37	2.62	1.9	42.3	19.71	148.07	603.31	1.96	0.92	2.77	2.77
Sweet Grass County	A9	RM 437.20	9764	10% - 10yr	1050.56	1149.81	1147.02	2.68	1.82	37.83	16.25	110.89	624.85	2.15	0.92	2.79	2.79
Sweet Grass County	A9	RM 437.08	9128	10% - 10yr	1050.56	1149.38	1146.9	2.6	2.08	39.69	20.92	189.4	547.62	1.75	0.92	2.48	2.48
Sweet Grass County	A9	RM 436.95	8363	10% - 10yr	1050.56	1149.18	1145.32	2.23	1.44	19.46	9.35	106.12	641.81	2.46	1.15	3.87	3.87
Sweet Grass County	A9	RM 436.83	7805	10% - 10yr	1050.56	1149.06	1145.93	1.66	1.33	17.76	10.77	154.6	760.02	1.72	1.04	3.13	3.13
Sweet Grass County	A9	RM 436.75	6857	10% - 10yr	1050.56	1148.52	1145.61	3.16	1.74	57.95	17.68	67.35	852.68	2.35	0.71	2.91	2.91
Sweet Grass County	A9	RM 436.66	6193	10% - 10yr	1050.56	1148.05	1145.68	2.87	1.85	49.93	17.91	97.51	786.67	2.01	0.72	2.37	2.37
Sweet Grass County	A9	RM 436.56	5280	10% - 10yr	1050.56	1147.57	1144.44	3.11	1.81	43.05	15.76	64.27	684.66	2.44	0.85	3.13	3.13
Sweet Grass County	A9	RM 436.40	4576	10% - 10yr	1050.56	1147.37	1144.05	2.49	1.54	33.96	12.32	57.78	705.14	2.9	1	3.32	3.32
Sweet Grass County	A9	RM 436.29	3787	10% - 10yr	1050.56	1146.89	1144.44	2.8	2.18	48.14	25.36	99.03	546.46	2.01	1.05	2.45	2.45
Sweet Grass County	A9	RM 436.16	3087	10% - 10yr	1050.56	1146.17	1143.57	3.15	2.57	60.61	31.64	107.65	522.9	1.99	1.04	2.6	2.6

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	10% - 10yr	1050.56	1145.96	1143.09	2.66	2.09	38.31	23.24	102.06	773.64	2.03	1.22	2.87	2.87
Sweet Grass County	A9	RM 435.98	2200	10% - 10yr	1050.56	1145.6	1142.85	2.92	2.21	51.49	24.9	75.14	725.37	2.13	1.01	2.76	2.76
Sweet Grass County	A9	RM 435.88	1580	10% - 10yr	1050.56	1145.19	1142.56	2.34	2.05	37.09	24.09	83.85	607.22	1.49	0.96	2.62	2.62
Sweet Grass County	A9	RM 435.73	890	10% - 10yr	1050.56	1144.86	1141.99	2.17	1.83	28.31	19.13	79.35	534.33	2.19	1.45	2.87	2.87
Sweet Grass County	A9	RM 435.62	104	10% - 10yr	1050.56	1144.35	1141.54	2.73	2.19	46.18	32.96	128.02	408.12	1.94	1.37	2.81	2.81

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	10% - 10yr	1050.56	1144.19	1140.73	1.5	1.37	13.36	10.13	151.56	511.74	2.19	1.67	3.5	3.5
Stillwater County	A9	RM 435.38	231282.1	10% - 10yr	1050.56	1143.98	1139.61	1.68	1.43	15.58	6.96	197.35	615.74	2.75	1.23	4.37	4.37
Stillwater County	A9	RM 435.25	230611.3	10% - 10yr	1050.56	1143.38	1138.48	3.14	2.83	53.91	20.66	118.29	348.86	2.8	1.07	4.9	4.9
Stillwater County	A9	RM 435.16	230122.9	10% - 10yr	1050.56	1143.12	1138.39	3.05	2.52	50.67	18.17	118.38	412.7	2.83	1.01	4.73	4.73
Stillwater County	A9	RM 435.07	229649	10% - 10yr	1050.56	1142.93	1137.85	2.93	2.21	44.99	14.09	103.72	474.66	3.22	1	5.08	5.08
Stillwater County	A9	RM 434.97	229153	10% - 10yr	1050.56	1142.65	1137.87	3.06	2.59	49.78	23.85	104.6	274.66	3.09	1.48	4.78	4.78
Stillwater County	A9	RM 434.84	228443.5	10% - 10yr	1050.56	1142.33	1137	2.98	2.62	46.41	26.35	102.56	220.06	3.21	1.82	5.33	5.33
Stillwater County	A9	RM 434.73	227855.5	10% - 10yr	1050.56	1142.03	1135.61	3.11	2.78	47.1	23.9	82.37	204.11	4.03	2.02	6.42	6.42
Stillwater County	A9	RM 434.63	227328.2	10% - 10yr	1050.56	1141.83	1135.42	3.06	3.06	46.71	46.71	91.11	155.06	3.76	3.76	6.41	6.41
Stillwater County	A9	RM 434.57	227011.2	10% - 10yr	1050.56	1141.7	1136.35	3.05	3.05	48.28	46.52	104.18	143.49	3.3	3.18	5.35	5.35
Stillwater County	A9	RM 434.53	226817.6	10% - 10yr	1050.56	1141.58	1136.73	3.1	3.1	52.21	51.03	118.59	164.47	2.86	2.79	4.85	4.85
Stillwater County	A10	RM 434.49	226573.3	10% - 10yr	1050.56	1141.5	1137.23	2.82	2.82	42.73	42.73	126.06	333.43	2.96	2.96	4.27	4.27
Stillwater County			226533.4	10% - 10yr	Bridge												
Stillwater County	A10	RM 434.47	226483	10% - 10yr	1050.56	1141.37	1137.49	2.8	2.8	43.22	43.05	135.7	344.55	2.76	2.75	3.88	3.88
Stillwater County	A10	RM 434.42	226233.2	10% - 10yr	1050.56	1141.24	1137.1	2.82	2.8	44.25	37.77	138.63	334.84	2.68	2.29	4.14	4.14
Stillwater County	A10	RM 434.37	225940.2	10% - 10yr	1050.56	1141	1136.51	3.07	3.06	51.99	44.21	124.51	222.37	2.74	2.33	4.49	4.49
Stillwater County	A10	RM 434.24	225278.2	10% - 10yr	1050.56	1140.71	1136.56	2.85	2.71	43.99	39.51	115.82	158.21	2.88	2.59	4.15	4.15
Stillwater County	A10	RM 434.15	224819.6	10% - 10yr	1050.56	1140.51	1137.06	2.65	2.4	40.42	30.73	156.76	244.55	2.38	1.81	3.45	3.45
Stillwater County	A10	RM 434.07	224366.5	10% - 10yr	1050.56	1140.09	1136.55	3.18	2.76	60.39	46.61	116.1	229.2	2.14	1.66	3.69	3.69
Stillwater County	A10	RM 433.98	223883.5	10% - 10yr	1050.56	1139.94	1136.28	2.29	2.2	30.75	27.14	137.26	308.81	2.25	1.99	3.66	3.66
Stillwater County	A10	RM 433.87	223309.3	10% - 10yr	1050.56	1139.7	1135.82	2.48	2.3	33.97	28.35	107.6	345.55	2.73	2.27	3.88	3.88
Stillwater County	A10	RM 433.78	222850	10% - 10yr	1050.56	1139.45	1135.54	2.51	2.49	36.34	32.17	175.73	409.68	2.38	2.11	3.91	3.91
Stillwater County	A10	RM 433.66	222201.9	10% - 10yr	1050.56	1139.07	1135.16	2.74	2.68	41.64	32.23	142.98	350.29	2.67	2.07	3.91	3.91
Stillwater County	A10	RM 433.54	221596.6	10% - 10yr	1050.56	1138.69	1135.33	2.95	2.87	48.71	36.39	133.87	270.19	2.63	1.97	3.36	3.36
Stillwater County	A10	RM 433.42	220956.2	10% - 10yr	1050.56	1138.23	1134.88	3.13	3.06	55.07	40.04	128.9	264.36	2.59	1.88	3.35	3.35
Stillwater County	A10	RM 433.31	220362.5	10% - 10yr	1050.56	1137.97	1134.67	2.54	2.42	39.52	29.64	203.33	389.92	2	1.5	3.3	3.3
Stillwater County	A10	RM 433.20	219758.6	10% - 10yr	1050.56	1137.82	1134.17	1.94	1.56	22.28	14.58	148.63	555.42	2.21	1.45	3.65	3.65
Stillwater County	A10	RM 433.09	219185.2	10% - 10yr	1050.56	1137.51	1133.45	2.28	2.24	29.23	21.49	179.6	377.03	2.56	1.88	4.06	4.06
Stillwater County	A10	RM 432.97	218599.7	10% - 10yr	1050.56	1137.18	1133.57	2.64	2.56	39.03	34.65	150.9	290	2.58	2.3	3.61	3.61
Stillwater County	A10	RM 432.84	217905.9	10% - 10yr	1050.56	1136.92	1132.7	2.51	2.27	34.07	20.25	136.55	337.84	2.91	1.73	4.22	4.22
Stillwater County	A10	RM 432.69	217146.9	10% - 10yr	1050.56	1136.41	1131.51	3.16	2.84	50.49	27.62	90.21	193.88	3.59	1.95	4.9	4.9
Stillwater County	A10	RM 432.60	216656.8	10% - 10yr	1050.56	1136.23	1132.1	2.99	2.74	46.09	29.37	102.09	189.95	3.4	2.15	4.13	4.13
Stillwater County	A10	RM 432.45	215889.7	10% - 10yr	1050.56	1135.91	1132.07	2.81	2.69	43.4	27.16	136.34	347.99	2.74	1.71	3.84	3.84
Stillwater County	A10	RM 432.35	215361.3	10% - 10yr	1050.56	1135.73	1132.33	2.51	2.18	35.15	15.31	158.35	540.17	2.61	1.13	3.4	3.4
Stillwater County	A10	RM 432.20	214585.3	10% - 10yr	1078.87	1135.13	1131.29	3.15	3.02	54.68	29.34	124.77	261.63	2.73	1.47	3.84	3.84
Stillwater County	A10	RM 432.10	214039.1	10% - 10yr	1078.87	1134.88	1130.7	2.92	2.4	46.38	22.97	124.1	457.13	2.81	1.4	4.18	4.18
Stillwater County	A10	RM 432.02	213606.1	10% - 10yr	1078.87	1134.79	1130.52	2.37	2.14	31.43	16.43	161.07	521.54	2.63	1.37	4.27	4.27
Stillwater County	A10	RM 431.87	212811.5	10% - 10yr	1078.87	1134.44	1129.24	2.39	2.17	34.83	23.73	210.01	450.75	2.01	1.37	5.2	5.2
Stillwater County	A10	RM 431.74	212127.4	10% - 10yr	1078.87	1134.27	1129.66	2.03	1.39	22.56	14.21	161.11	504.07	2.77	1.74	4.61	4.61
Stillwater County	A10	RM 431.60	211373.6	10% - 10yr	1078.87	1133.74	1129.96	2.89	2.8	46.06	37.39	134.04	182.86	2.75	2.23	3.78	3.78
Stillwater County	A10	RM 431.49	210820.2	10% - 10yr	1078.87	1133.47	1129.62	2.85	2.72	44.33	30.56	132.36	227.34	2.82	1.94	3.84	3.84
Stillwater County	A10	RM 431.41	210365.9	10% - 10yr	1078.87	1133.15	1129.57	3.06	2.95	51.67	32.07	129.8	218.25	2.7	1.67	3.58	3.58
Stillwater County	A10	RM 431.28	209716.5	10% - 10yr	1078.87	1132.81	1129.79	2.79	2.66	45.39	27.67	164.1	285.64	2.33	1.42	3.02	3.02
Stillwater County	A10	RM 431.14	208918.5	10% - 10yr	1078.87	1132.43	1129.82	2.28	2.44	31.93	29.31	131.13	240.78	1.99	1.83	3.68	3.68
Stillwater County	A10	RM 431.03	208358.8	10% - 10yr	1078.87	1132.05	1128.56	2.59	2.7	42.39	43.8	127.38	212.51	1.82	1.88	3.49	3.49
Stillwater County	A10	RM 430.93	207821.9	10% - 10yr	1078.87	1131.85	1128.76	2.32	2.07	32.48	24.5	126.38	356.17	2.08	1.58	3.09	3.09
Stillwater County	A10	RM 430.83	207325.6	10% - 10yr	1078.87	1131.59	1127.66	2.37	2.21	32.74	24.69	160.18	277.54	2.33	1.76	3.93	3.93
Stillwater County	A10	RM 430.70	206629.1	10% - 10yr	1078.87	1131.48	1126.9	1.85	1.73	18.51	12.09	150.14	381.48	3.01	1.98	4.58	4.58
Stillwater County	A10	RM 430.59	206064.9	10% - 10yr	1078.87	1131.33	1127.2	2.08	1.84	22.59	10.25	134.54	493.12	3.22	1.46	4.13	4.13
Stillwater County	A10	RM 430.51	205629.5	10% - 10yr	1078.87	1130.96	1126.28	2.92	2.64	44.52	21.45	106.78	323.2	3.21	1.54	4.68	4.68
Stillwater County	A10	RM 430.43	205204.2	10% - 10yr	1078.87	1130.71	1126.08	3.1	2.84	49.67	19.83	98.18	327.25	3.34	1.33	4.63	4.63
Stillwater County	A10	RM 430.34	204728.4	10% - 10yr	1078.87	1130.41	1126.07	3.24	2.93	55.65	27.82	102.53	332.96	3.11	1.55	4.34	4.34
Stillwater County	A11	RM 430.23	204119.7	10% - 10yr	1078.87	1130.31	1126.63	2.34	2.08	30.34	14.58	168.69	662.28	2.68	1.29	3.68	3.68
Stillwater County	A11	RM 430.12	203479.6	10% - 10yr	1078.87	1130.06	1126.96	2.58	2.25	37.7	17.75	112.27	599.81	2.51	1.18	3.53	3.53
Stillwater County	A11	RM 430.04	202968.2	10% - 10yr	1078.87	1129.79	1127.24	2.64	2.47	40.88	24.49	112.36	450.31	2.31	1.37	3.15	3.15
Stillwater County	A11	RM 429.95	202589.5	10% - 10yr	1078.87	1129.6	1126.33	2.4	2.25	34.64	19.94	141.76	486.97	2.1	1.21	3.27	3.27
Stillwater County	A11	RM 429.88	202224.7	10% - 10yr	1078.87	1129.43	1125.62	2.43	2.06	34.16	15.19	124.8	601.3	2.39	1.06	3.81	3.81
Stillwater County	A11	RM 429.78	201933.6	10% - 10yr	1078.87	1129.12	1123.72	2.89	2.32	45.15	16.34	91.22	540.88	2.87	1.03	5.4	5.4
Stillwater County	A11	RM 429.69	201539.9	10% - 10yr	1078.87	1128.68	1123.39	3.39	2.74	64.24	36.37	89.85	280.44	2.65	1.49	5.29	5.29
Stillwater County	A11	RM 429.58	200961.9	10% - 10yr	1078.87	1128.43	1124.69	2.73	1.96	43.25	22.25	116.91	474.56	2.26	1.16	3.74	3.74

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	10% - 10yr	1078.87	1128	1125.15	2.14	1.79	28.11	16.58	184.35	515.7	1.98	1.17	3.57	3.57
Stillwater County	A11	RM 429.28	199644.1	10% - 10yr	1078.87	1127.71	1123.59	2.32	1.9	31.9	16.47	148.11	504.39	2.19	1.13	4.12	4.12
Stillwater County	A11	RM 429.18	199152	10% - 10yr	1078.87	1127.51	1124.66	1.99	1.77	24.5	14.98	144.34	523.41	1.9	1.16	3.6	3.6
Stillwater County	A11	RM 429.10	198708.6	10% - 10yr	1078.87	1127.13	1124.26	2.56	2.3	40.27	20.21	87.43	469.58	1.99	1	3.55	3.55
Stillwater County	A11	RM 429.00	198203.8	10% - 10yr	1078.87	1126.93	1123.47	2.15	1.96	29.27	21.47	124.54	419.06	1.78	1.31	3.46	3.46
Stillwater County	A11	RM 428.89	197650.5	10% - 10yr	1078.87	1126.72	1121.26	2.31	1.89	29.4	15.47	150.46	399.61	2.71	1.43	5.46	5.46
Stillwater County	A11	RM 428.81	197194.1	10% - 10yr	1078.87	1126.53	1121.47	2.58	1.96	35.07	15.98	98.54	385.03	3.15	1.43	5.06	5.06
Stillwater County	A11	RM 428.66	196404.4	10% - 10yr	1078.87	1126.34	1122.31	2.02	1.8	23.77	13.79	204.39	571.94	2.3	1.34	4.03	4.03
Stillwater County	A11	RM 428.52	195702.6	10% - 10yr	1078.87	1125.99	1122.1	2.31	2.14	31.59	17.56	206.65	647.3	2.22	1.23	3.89	3.89
Stillwater County	A11	RM 428.44	195293.8	10% - 10yr	1078.87	1125.74	1121.18	2.6	2.39	37.01	19.66	146.38	558.27	2.78	1.47	4.56	4.56
Stillwater County	A11	RM 428.39	195075.5	10% - 10yr	1078.87	1125.53	1120.72	2.97	2.72	47.69	23.31	122.37	489.41	2.91	1.42	4.81	4.81
Stillwater County	A11	RM 428.33	194724.6	10% - 10yr	1078.87	1125.4	1121.22	2.77	2.56	41.93	21	135.66	609.61	2.82	1.41	4.18	4.18
Stillwater County	A11	RM 428.28	194450.8	10% - 10yr	1078.87	1125.29	1121.2	2.69	2.54	39.96	23.74	145.01	583.27	2.73	1.62	4.08	4.08
Stillwater County	A11	RM 428.23	194235.2	10% - 10yr	1078.87	1125.21	1120.74	2.61	2.51	37.08	29.11	143.06	574.45	2.85	2.24	4.47	4.47
Stillwater County	A11	RM 428.20	194033.4	10% - 10yr	1078.87	1125.15	1120.37	2.53	2.39	33.44	27.43	121.13	538.65	3.26	2.67	4.78	4.78
Stillwater County			193969.6	10% - 10yr	Bridge												
Stillwater County	A11	RM 428.17	193915	10% - 10yr	1078.87	1124.89	1120.32	2.68	2.52	37.42	31.4	115.23	474.36	3.21	2.69	4.57	4.57
Stillwater County			193871.1	10% - 10yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	10% - 10yr	1078.87	1124.75	1120.23	2.7	2.49	38.45	30.8	114.51	466.48	3.11	2.49	4.52	4.52
Stillwater County	A11	RM 428.11	193602.7	10% - 10yr	1078.87	1124.71	1119.42	2.47	2.29	33.25	26.3	131.19	403.73	2.89	2.27	5.28	5.28
Stillwater County	A11	RM 428.09	193436.6	10% - 10yr	1078.87	1124.57	1119.9	2.7	2.51	39.81	31.04	119.6	500.91	2.82	2.19	4.67	4.67
Stillwater County	A11	RM 428.05	193246.1	10% - 10yr	1078.87	1124.49	1120.1	2.65	2.39	38.83	28.66	125.77	479.8	2.72	2	4.39	4.39
Stillwater County	A11	RM 428.00	192989.8	10% - 10yr	1078.87	1124.4	1120.28	2.56	2.21	35.82	23.46	128.06	551.56	2.82	1.84	4.12	4.12
Stillwater County	A11	RM 427.95	192728.8	10% - 10yr	1078.87	1124.33	1119.57	2.42	2.07	31.63	15.83	132.92	603.61	2.93	1.46	4.76	4.76
Stillwater County	A11	RM 427.88	192333.2	10% - 10yr	1078.87	1124.07	1119.27	2.86	2.38	43.24	21.06	105.02	574.14	3.15	1.53	4.8	4.8
Stillwater County	A11	RM 427.83	192088.8	10% - 10yr	1078.87	1123.95	1119.18	2.89	2.5	43.92	23.62	104.45	600.69	3.18	1.7	4.77	4.77
Stillwater County	A11	RM 427.76	191724.1	10% - 10yr	1078.87	1123.83	1119.07	2.75	2.49	38.79	29.37	101.84	329.22	3.39	2.56	4.76	4.76
Stillwater County			191581.1	10% - 10yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	10% - 10yr	1078.87	1123.37	1118.71	3.09	3	51.22	44.35	114	150.35	3	2.6	4.65	4.65
Stillwater County	A11	RM 427.65	191155.9	10% - 10yr	1078.87	1123.32	1118.58	2.41	2.32	30.41	23.92	139.89	653.13	3.18	2.51	4.74	4.74
Stillwater County	A11	RM 427.53	190509.6	10% - 10yr	1078.87	1122.89	1117.37	3.08	3	47.83	37.32	96.4	419.54	3.62	2.81	5.52	5.52
Stillwater County	A11	RM 427.41	189886.1	10% - 10yr	1078.87	1122.68	1118.73	2.85	2.84	42.32	37.08	115.83	275.83	3.26	2.86	3.95	3.95
Stillwater County	A11	RM 427.29	189253.3	10% - 10yr	1078.87	1122.38	1119.12	2.77	2.73	45.23	42.42	175.82	289.97	2.21	2.08	3.26	3.26
Stillwater County	A11	RM 427.17	188639.5	10% - 10yr	1078.87	1122.11	1118.44	2.4	2.16	33.98	23.22	197.68	404.71	2.21	1.51	3.67	3.67
Stillwater County	A11	RM 427.09	188179.7	10% - 10yr	1078.87	1121.71	1118.34	2.98	2.48	48.93	23.81	126.42	360.88	2.73	1.33	3.37	3.37
Stillwater County	A11	RM 427.00	187745.4	10% - 10yr	1078.87	1121.57	1117.71	2.61	2.12	38.55	25.39	142.65	374.07	2.55	1.69	3.86	3.86
Stillwater County	A11	RM 426.92	187309.3	10% - 10yr	1078.87	1121.35	1117.32	2.51	2.27	38.33	27.94	204.87	337.01	2.02	1.48	4.03	4.03
Stillwater County	A11	RM 426.86	186960.4	10% - 10yr	1078.87	1121.19	1116.77	2.33	2.18	32.58	27.93	209.99	286.85	2.14	1.84	4.42	4.42
Stillwater County	A11	RM 426.75	186401.3	10% - 10yr	1078.87	1120.9	1116.11	2.45	2.19	35.05	29.3	182.33	267.74	2.29	1.92	4.79	4.79
Stillwater County	A11	RM 426.67	185983.5	10% - 10yr	1078.87	1120.68	1115.84	2.58	2.56	35.61	30.49	138.91	206.8	3.01	2.58	4.84	4.84
Stillwater County	A11	RM 426.59	185580.4	10% - 10yr	1078.87	1120.35	1115.47	3.08	2.97	49.27	42.68	106	127.19	3.28	2.85	4.88	4.88
Stillwater County	A11	RM 426.52	185166.5	10% - 10yr	1078.87	1120.18	1115.54	2.99	2.99	46.17	46.17	107.3	107.3	3.36	3.36	4.64	4.64
Stillwater County	A11	RM 426.43	184738.3	10% - 10yr	1078.87	1120	1115.89	2.97	2.94	46.26	44.38	114.64	120.86	3.16	3.04	4.11	4.11
Stillwater County	A11	RM 426.32	184158.4	10% - 10yr	1078.87	1119.76	1116.39	2.83	2.83	43.4	43.38	133.27	133.32	2.86	2.86	3.37	3.37
Stillwater County	A11	RM 426.20	183517.2	10% - 10yr	1078.87	1119.43	1116.07	2.62	2.6	42.6	41.42	215.11	222.51	1.91	1.86	3.36	3.36
Stillwater County	A11	RM 426.11	183030.7	10% - 10yr	1078.87	1119.21	1115.37	2.26	2.23	28.36	27.49	269.9	301.89	1.76	1.71	3.84	3.84
Stillwater County	A11	RM 426.00	182442.5	10% - 10yr	1078.87	1118.95	1115.74	2.18	2.02	29.07	26.85	237.39	322.04	1.99	1.84	3.21	3.21
Stillwater County	A11	RM 425.89	181895	10% - 10yr	1078.87	1118.66	1115.1	2.35	2.29	31.57	26.03	185.44	264.33	2.46	2.03	3.56	3.56
Stillwater County	A11	RM 425.72	181043.5	10% - 10yr	1078.87	1118.22	1113.77	2.64	2.58	38.64	30.1	149.7	223.26	2.72	2.12	4.45	4.45
Stillwater County	A11	RM 425.58	180310.5	10% - 10yr	1078.87	1117.73	1112.19	3.14	2.99	50.17	35.02	98.64	159.34	3.46	2.42	5.54	5.54
Stillwater County	A11	RM 425.46	179669.9	10% - 10yr	1078.87	1117.32	1112.78	3.4	3.1	60.32	41.77	94.84	186.72	3.24	2.24	4.54	4.54
Stillwater County	A11	RM 425.34	179022.4	10% - 10yr	1078.87	1117.24	1113.64	2.43	2.2	32.22	24.35	136.17	233.71	2.78	2.1	3.6	3.6
Stillwater County	A11	RM 425.24	178485.9	10% - 10yr	1078.87	1116.96	1114.19	2.59	2.27	39.65	29.81	126.45	380.32	2.19	1.65	2.82	2.82
Stillwater County	A11	RM 425.18	178205.8	10% - 10yr	1078.87	1116.7	1113.81	2.8	2.58	47.21	39.54	126.94	235.46	2.11	1.77	3.39	3.39
Stillwater County	A11	RM 425.11	177826.8	10% - 10yr	1078.87	1116.39	1113.29	2.66	2.73	42.38	34.19	120.72	231.3	2.11	1.71	4.1	4.1
Stillwater County	A11	RM 425.04	177454.7	10% - 10yr	1078.87	1116.23	1112.86	2.63	2.36	39.26	30.63	106.76	234.09	2.51	1.96	3.76	3.76
Stillwater County	A11	RM 424.97	177098.9	10% - 10yr	1078.87	1115.9	1113.11	2.96	2.71	51.46	40.72	106.81	219.97	2.28	1.81	2.89	2.89
Stillwater County	A11	RM 424.89	176675.9	10% - 10yr	1078.87	1115.76	1112.27	2.22	2.1	29.58	23.89	136.62	357.31	2.13	1.73	4.96	4.96
Stillwater County	A11	RM 424.81	176242.8	10% - 10yr	1078.87	1115.33	1112.25	2.7	2.66	46.95	44.72	131.43	307.73	1.69	1.61	3.33	3.33
Stillwater County	A11	RM 424.70	175789.3	10% - 10yr	1078.87	1115.2	1111.91	2.17	2.02	27.63	23.23	161.26	403.74	2.29	1.93	3.29	3.29

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	10% - 10yr	1078.87	1114.9	1111.34	2.43	2.15	34.85	26.39	130.72	341.11	2.21	1.67	3.56	3.56
Stillwater County	A11	RM 424.51	174723.2	10% - 10yr	1078.87	1114.71	1110.93	2.24	2.05	31.57	24.02	140.84	433.99	1.84	1.41	3.77	3.77
Stillwater County	A11	RM 424.38	174051	10% - 10yr	1078.87	1114.34	1110.98	2.39	2.11	35.49	20.45	134.35	483.95	1.93	1.11	3.36	3.36
Stillwater County	A11	RM 424.30	173607.9	10% - 10yr	1078.87	1114.05	1110.75	2.61	2.09	44.81	25.1	158.98	591.2	1.59	0.89	3.3	3.3
Stillwater County	A11	RM 424.21	173153.7	10% - 10yr	1078.87	1113.77	1110.74	2.15	1.87	29.83	16.16	188.1	663.03	1.69	0.91	3.03	3.03
Stillwater County	A11	RM 424.13	172713.5	10% - 10yr	1078.87	1113.52	1110.43	2.35	1.6	34.86	17.78	95.29	721.01	1.83	0.93	3.17	3.17
Stillwater County	A11	RM 424.05	172309.3	10% - 10yr	1078.87	1113.31	1110.18	1.83	1.48	22.13	12.87	155.29	778.59	1.61	0.94	3.13	3.13
Stillwater County	A11	RM 423.98	171892.1	10% - 10yr	1078.87	1113.22	1110.15	1.62	1.28	15.97	9.47	252.43	702.92	2.02	1.2	3.07	3.07
Stillwater County	A11	RM 423.90	171454.2	10% - 10yr	1078.87	1112.99	1109.55	2.24	1.68	29.66	14.01	156.57	612.18	2.24	1.05	3.44	3.44
Stillwater County	A11	RM 423.84	171147.5	10% - 10yr	1078.87	1112.86	1109.08	2.3	1.61	29.39	10.93	126.81	684.3	2.65	0.98	3.78	3.78
Stillwater County	A11	RM 423.74	170686.3	10% - 10yr	1078.87	1112.82	1108.91	1.7	1.16	15.82	7.81	124.33	670.43	2.83	1.39	3.91	3.91
Stillwater County	A11	RM 423.69	170436.3	10% - 10yr	1078.87	1112.64	1108.49	2.34	1.63	29.65	13.53	88.65	500.34	2.93	1.32	4.15	4.15
Stillwater County	A11	RM 423.57	169782.9	10% - 10yr	1078.87	1112.37	1108.2	2.28	2.01	28.14	15.06	158.96	436.27	2.87	1.53	4.17	4.17
Stillwater County	A11	RM 423.47	169296.5	10% - 10yr	1078.87	1111.98	1107.67	2.95	2.79	46.46	22.06	120.55	361.46	3.02	1.43	4.31	4.31
Stillwater County	A11	RM 423.39	168860.7	10% - 10yr	1078.87	1111.63	1107.7	3.31	3.13	58.12	27.57	105.89	295.74	3.06	1.45	3.93	3.93
Stillwater County	A11	RM 423.27	168178	10% - 10yr	1078.87	1111.16	1107.36	3.36	3.3	62.42	38.53	118.25	195.94	2.71	1.67	3.8	3.8
Stillwater County	A12	RM 423.17	167687.7	10% - 10yr	1078.87	1110.97	1107.46	2.79	2.58	44.44	26.25	153.49	296.32	2.47	1.46	3.51	3.51
Stillwater County	A12	RM 423.08	167239.6	10% - 10yr	1078.87	1110.73	1107.21	2.86	2.46	46.75	28.73	129.19	344.12	2.44	1.5	3.52	3.52
Stillwater County	A12	RM 423.01	166844.5	10% - 10yr	1078.87	1110.47	1106.84	2.79	2.47	47.41	30.6	143.46	363.08	2.03	1.31	3.63	3.63
Stillwater County	A12	RM 422.91	166338	10% - 10yr	1078.87	1110.14	1106.54	2.88	2.47	46.43	26.9	111.13	316.86	2.61	1.51	3.6	3.6
Stillwater County	A12	RM 422.80	165757.6	10% - 10yr	1078.87	1109.83	1106.83	2.72	2.5	42.8	29.64	145.84	330.68	2.34	1.62	3	3
Stillwater County	A12	RM 422.70	165279.2	10% - 10yr	1078.87	1109.72	1105.79	2.13	1.8	26.99	18.26	202.14	447.11	2.17	1.47	3.93	3.93
Stillwater County	A12	RM 422.63	164895.4	10% - 10yr	1078.87	1109.59	1105.43	2.08	1.67	25.87	15	178.99	519.02	2.16	1.25	4.16	4.16
Stillwater County	A12	RM 422.53	164348.1	10% - 10yr	1078.87	1109.34	1104.76	2.23	1.89	28.86	15.01	167.27	475.7	2.32	1.2	4.58	4.58
Stillwater County	A12	RM 422.39	163609.2	10% - 10yr	1078.87	1108.92	1104.22	2.66	2.4	38.11	16.05	132.24	362.61	2.95	1.24	4.7	4.7
Stillwater County	A12	RM 422.30	163120.4	10% - 10yr	1078.87	1108.56	1104.18	3.09	2.99	50.2	39.04	108.88	175.6	3.18	2.47	4.38	4.38
Stillwater County	A12	RM 422.19	162534.3	10% - 10yr	1078.87	1108.36	1103.72	2.76	2.7	40	25.86	122.1	194.07	3.19	2.06	4.64	4.64
Stillwater County	A12	RM 422.08	161934.5	10% - 10yr	1078.87	1107.88	1104.18	3.31	3.28	59.24	37.47	111.94	179.18	2.91	1.84	3.7	3.7
Stillwater County	A12	RM 421.98	161402.1	10% - 10yr	1078.87	1107.77	1103.86	2.59	2.55	36.1	29.12	142.02	178.92	2.93	2.36	3.91	3.91
Stillwater County	A12	RM 421.90	161037.7	10% - 10yr	1078.87	1107.63	1103.14	2.52	2.52	35.87	35.87	167.16	167.16	2.56	2.56	4.49	4.49
Stillwater County	A12	RM 421.86	160799.3	10% - 10yr	1078.87	1107.52	1102.54	2.51	2.51	37.27	37.15	193.19	193.8	2.22	2.22	4.98	4.98
Stillwater County	A12	RM 421.81	160535.9	10% - 10yr	1078.87	1107.39	1102.38	2.45	2.45	36.65	36.65	219.94	219.94	2	2	5.01	5.01
Stillwater County	A12	RM 421.77	160279.4	10% - 10yr	1078.87	1107.19	1102.41	2.66	2.56	42.59	35.93	181.79	237.65	2.1	1.77	4.77	4.77
Stillwater County	A12	RM 421.69	159875.5	10% - 10yr	1078.87	1107.05	1102.56	2.46	2.2	31.67	13.85	130.04	351.14	3.21	1.4	4.49	4.49
Stillwater County	A12	RM 421.60	159411.4	10% - 10yr	1078.87	1106.73	1103.26	2.95	2.65	48.77	27.17	131.13	283.75	2.57	1.44	3.47	3.47
Stillwater County	A12	RM 421.53	159038	10% - 10yr	1078.87	1106.36	1102.81	3.27	3.03	62.66	41.52	132.9	236.01	2.28	1.51	3.55	3.55
Stillwater County	A12	RM 421.45	158590.5	10% - 10yr	1078.87	1106.2	1103.26	2.59	2.33	39.5	27.69	154.09	303.5	2.26	1.58	2.94	2.94
Stillwater County	A12	RM 421.32	157930.2	10% - 10yr	1078.87	1105.81	1102.82	2.63	2.42	43.87	36.16	96.95	302.8	1.77	1.47	2.98	2.98
Stillwater County	A12	RM 421.24	157513	10% - 10yr	1078.87	1105.5	1103.05	2.45	2.29	40.6	33.78	126.23	379.97	1.48	1.24	3.02	3.02
Stillwater County	A12	RM 421.13	156951.5	10% - 10yr	1078.87	1105.28	1100.38	2.19	1.93	29.8	22.95	118.8	383.48	1.9	1.46	4.9	4.9
Stillwater County	A12	RM 421.05	156536.5	10% - 10yr	1078.87	1105.16	1102.11	1.84	1.71	21.26	17.36	103.06	435.28	1.86	1.51	3.05	3.05
Stillwater County	A12	RM 420.94	155960.1	10% - 10yr	1078.87	1104.92	1101.68	1.92	1.82	20.57	18.12	213.29	281.26	2.59	2.28	3.24	3.24
Stillwater County	A12	RM 420.85	155473.6	10% - 10yr	1078.87	1104.3	1100.98	3.42	2.72	69.27	38.39	134.25	340.85	2.19	1.21	3.32	3.32
Stillwater County	A12	RM 420.75	154957.2	10% - 10yr	1078.87	1104.11	1099.95	2.61	2.11	39.19	17.8	155.88	465.77	2.42	1.1	4.16	4.16
Stillwater County	A12	RM 420.66	154483	10% - 10yr	1078.87	1103.96	1099.89	2.31	1.78	29.65	15.97	164.94	432.92	2.64	1.42	4.07	4.07
Stillwater County	A12	RM 420.58	154037.5	10% - 10yr	1078.87	1103.6	1100.13	2.92	2.23	46.68	23.35	122.25	345.3	2.8	1.4	3.47	3.47
Stillwater County	A12	RM 420.52	153691.5	10% - 10yr	1078.87	1103.43	1099.7	2.86	2.26	45.51	25.14	131.23	327.42	2.64	1.46	3.73	3.73
Stillwater County	A12	RM 420.46	153398	10% - 10yr	1078.87	1103.23	1099.36	2.95	2.47	48.97	31.33	133.39	264.28	2.58	1.65	3.87	3.87
Stillwater County	A12	RM 420.38	152998.3	10% - 10yr	1078.87	1103.08	1099.19	2.53	2.05	37.56	19.24	175.09	454.11	2.27	1.16	3.89	3.89
Stillwater County	A12	RM 420.30	152566.4	10% - 10yr	1078.87	1103	1099.43	1.95	1.52	22.53	12.95	229.16	566.62	2.17	1.25	3.57	3.57
Stillwater County	A12	RM 420.21	152106.2	10% - 10yr	1078.87	1102.79	1098.69	2.1	1.72	27.62	18.74	238.31	490.21	1.88	1.28	4.1	4.1
Stillwater County	A12	RM 420.15	151738.6	10% - 10yr	1078.87	1102.66	1098.38	1.99	1.84	18.81	12.35	260.32	436.21	2.05	1.34	4.28	4.28
Stillwater County	A12	RM 420.08	151399.3	10% - 10yr	1078.87	1102.54	1097.97	2.11	2	24.98	16.04	195.99	325.06	2.58	1.66	4.56	4.56
Stillwater County	A12	RM 420.03	151123.2	10% - 10yr	1078.87	1102.38	1097.96	2.4	2.08	30.46	15.12	142.51	342.12	3.07	1.52	4.42	4.42
Stillwater County	A12	RM 419.96	150779.4	10% - 10yr	1078.87	1102.13	1098.1	2.84	2.35	43.76	17.97	128.1	390.15	2.87	1.18	4.03	4.03
Stillwater County	A12	RM 419.91	150511.3	10% - 10yr	1078.87	1101.9	1097.83	3.13	2.72	51.02	21.78	102.77	314.63	3.28	1.39	4.07	4.07
Stillwater County	A12	RM 419.85	150192.4	10% - 10yr	1078.87	1101.54	1097.85	3.56	3.14	69.12	31.51	106.13	293.78	2.82	1.28	3.69	3.69
Stillwater County	A12	RM 419.78	149807.6	10% - 10yr	1078.87	1101.43	1097.13	3.08	2.41	49.45	19.48	104.41	352.77	3.23	1.27	4.3	4.3
Stillwater County	A12	RM 419.70	149371.5	10% - 10yr	1078.87	1101.2	1097.73	3.02	2.66	51.31	26.35	137.18	308.69	2.56	1.31	3.47	3.47
Stillwater County	A12	RM 419.63	149047.6	10% - 10yr	1078.87	1101.09	1097.92	2.63	2.4	39.65	23.38	167.49	314.96	2.42	1.43	3.17	3.17

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	10% - 10yr	1078.87	1100.71	1097.22	2.96	2.45	53.22	33.77	135.67	341.16	2.03	1.29	3.49	3.49
Stillwater County	A12	RM 419.46	148117.9	10% - 10yr	1078.87	1100.49	1097.34	2.59	2.19	40.68	23.87	133.45	409.69	2.05	1.2	3.41	3.41
Stillwater County	A12	RM 419.38	147728.5	10% - 10yr	1078.87	1100.28	1097.36	2.27	1.95	32.44	24.43	149.03	400.28	1.83	1.38	2.92	2.92
Stillwater County	A12	RM 419.31	147342.9	10% - 10yr	1078.87	1100.19	1096.9	1.8	1.66	18.55	14.6	114.45	338.07	2.44	1.93	3.29	3.29
Stillwater County	A12	RM 419.19	146720.3	10% - 10yr	1078.87	1100.07	1096.42	1.54	1.69	13.41	14.56	106.51	244.78	2.53	2.76	5.67	5.67
Stillwater County	A12	RM 419.10	146243.9	10% - 10yr	1078.87	1099.96	1095.09	1.92	1.79	18.66	12.15	156.37	288.13	3.54	2.3	4.87	4.87
Stillwater County	A12	RM 419.03	145859.8	10% - 10yr	1078.87	1099.68	1095.88	2.63	2.55	39.7	28.78	169.7	259.48	2.41	1.74	3.8	3.8
Stillwater County	A12	RM 418.95	145435.3	10% - 10yr	1078.87	1099.47	1095.15	2.5	2.37	37.74	26.03	205.76	328.44	2.07	1.42	4.32	4.32
Stillwater County	A12	RM 418.84	144864	10% - 10yr	1078.87	1099.11	1094.92	2.53	2.3	40.1	25.17	222.59	410.74	1.87	1.17	4.19	4.19
Stillwater County	A12	RM 418.69	144066	10% - 10yr	1078.87	1098.55	1095.29	2.72	2.28	45.16	26.18	168.55	430.21	2.02	1.17	3.26	3.26
Stillwater County	A12	RM 418.57	143452.8	10% - 10yr	1078.87	1098.09	1095.1	2.86	2.46	49.28	25.02	134.74	422.32	2.06	1.05	2.99	2.99
Stillwater County	A12	RM 418.49	143008.1	10% - 10yr	1078.87	1098	1094.94	2.06	1.52	25	11.8	169.36	745.37	2.24	1.06	3.06	3.06
Stillwater County	A12	RM 418.35	142310.9	10% - 10yr	1078.87	1097.53	1093.15	2.81	2.03	47.3	21.74	126.9	548.28	2.11	0.97	4.38	4.38
Stillwater County	A12	RM 418.25	141740.8	10% - 10yr	1078.87	1097.29	1093.71	2.11	1.61	28.04	20.35	176.93	561.71	1.8	1.31	3.58	3.58
Stillwater County	A12	RM 418.08	140894.8	10% - 10yr	1078.87	1096.96	1092.65	2.14	1.84	26.61	16.38	139.46	414.59	2.31	1.42	4.31	4.31
Stillwater County	A12	RM 417.89	139893.7	10% - 10yr	1078.87	1096.23	1092.75	3.08	2.73	53.5	30.89	128.08	351.5	2.55	1.47	3.48	3.48
Stillwater County	A12	RM 417.79	139376.4	10% - 10yr	1078.87	1095.96	1091.64	2.89	2.39	48	28.65	127.73	316.05	2.39	1.43	4.32	4.32
Stillwater County	A12	RM 417.65	138633.4	10% - 10yr	1078.87	1095.46	1091.57	3.16	2.69	54.11	28.4	97.11	283.51	2.86	1.5	3.89	3.89
Stillwater County	A12	RM 417.54	138089.5	10% - 10yr	1078.87	1094.95	1091.15	3.59	3.11	69.43	41.76	85.88	196.44	2.94	1.77	3.8	3.8
Stillwater County	A12	RM 417.40	137321.3	10% - 10yr	1223.29	1094.64	1091.71	2.72	2.34	43.99	29.51	127.59	360.24	2.2	1.47	2.93	2.93
Stillwater County	A12	RM 417.30	136818.2	10% - 10yr	1223.29	1094.3	1091.51	2.64	2.48	42.33	34.22	200.21	323.83	2.04	1.65	2.79	2.79
Stillwater County	A12	RM 417.20	136304	10% - 10yr	1223.29	1094.21	1091.27	1.81	1.74	19.36	17.66	203.04	370.08	2.18	1.99	2.94	2.94
Stillwater County	A13	RM 417.09	135706	10% - 10yr	1223.29	1093.62	1090.35	3.02	2.75	54.74	38.02	188.64	303.7	2.11	1.47	3.27	3.27
Stillwater County	A13	RM 417.01	135303.6	10% - 10yr	1223.29	1093.49	1090	2.33	2.21	32.84	29.14	249.11	342.54	2.07	1.84	3.49	3.49
Stillwater County	A13	RM 416.94	134899.8	10% - 10yr	1223.29	1093.09	1089.69	2.91	2.74	44.67	38.96	214.44	290.87	1.94	1.69	3.4	3.4
Stillwater County	A13	RM 416.85	134457.6	10% - 10yr	1223.29	1092.92	1089.62	2.52	2.25	35.66	22.96	184.96	328.43	2.57	1.65	3.3	3.3
Stillwater County	A13	RM 416.73	133843.5	10% - 10yr	1223.29	1092.49	1089.6	2.81	2.55	48.06	32.22	213.53	356.71	2	1.34	2.89	2.89
Stillwater County	A13	RM 416.63	133286.1	10% - 10yr	1223.29	1092.12	1089.3	2.77	2.49	47.53	38.38	128.66	318.5	1.9	1.54	2.82	2.82
Stillwater County	A13	RM 416.52	132717.9	10% - 10yr	1223.29	1091.83	1089.09	2.5	1.95	39.77	27.05	104.23	518.35	1.77	1.21	2.74	2.74
Stillwater County	A13	RM 416.43	132250.3	10% - 10yr	1223.29	1091.48	1088.74	2.36	2.03	36.19	24.94	113.63	536.58	1.66	1.15	2.74	2.74
Stillwater County	A13	RM 416.33	131707.5	10% - 10yr	1223.29	1091.22	1088.02	2.16	1.87	29.72	23.44	131.5	485.37	1.76	1.39	3.2	3.2
Stillwater County	A13	RM 416.22	131140.9	10% - 10yr	1223.29	1090.8	1087.56	2.92	2.27	48.95	30.83	84.28	355.4	2.44	1.54	3.24	3.24
Stillwater County	A13	RM 416.13	130626.3	10% - 10yr	1223.29	1090.47	1086.65	2.76	2.28	43.65	29.59	145.83	334.09	2.4	1.63	3.82	3.82
Stillwater County	A13	RM 416.04	130164.9	10% - 10yr	1223.29	1090.1	1085.03	3.1	2.29	54.25	28.93	122.62	394.48	2.56	1.36	5.07	5.07
Stillwater County	A13	RM 415.96	129734.7	10% - 10yr	1223.29	1090	1085.48	2.44	1.74	33.03	16.22	132.28	679.07	2.67	1.31	4.52	4.52
Stillwater County	A13	RM 415.90	129423.4	10% - 10yr	1223.29	1089.91	1085.77	2.01	1.46	23.11	12.19	159.11	794.24	2.42	1.27	4.14	4.14
Stillwater County	A13	RM 415.83	129071.6	10% - 10yr	1223.29	1089.82	1085.89	1.87	1.37	19.44	11.25	152.97	693.41	2.66	1.54	4.48	4.48
Stillwater County	A13	RM 415.74	128639.5	10% - 10yr	1223.29	1089.6	1084.72	2.34	1.66	28.82	14.1	152.06	662.25	3.16	1.54	4.88	4.88
Stillwater County	A13	RM 415.72	128521.2	10% - 10yr	1223.29	1089.48	1084.8	2.66	1.89	36.78	16.57	128.97	647.62	3.29	1.47	4.68	4.68
Stillwater County	A13	RM 415.65	128106.2	10% - 10yr	1223.29	1089.31	1083.7	2.65	2.04	39.87	25.16	170.19	689.34	2.5	1.58	5.61	5.61
Stillwater County	A13	RM 415.59	127828.3	10% - 10yr	1223.29	1089.07	1083.61	2.94	2.58	46.44	30.81	136.01	542.22	2.98	1.97	5.46	5.46
Stillwater County	A13	RM 415.55	127620.5	10% - 10yr	1223.29	1089.07	1082.84	2.24	2.24	24.2	23.54	132.97	262.4	4.11	4	6.22	6.22
Stillwater County			127503	10% - 10yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	10% - 10yr	1223.29	1088.65	1082.96	2.31	2.31	25.35	24.98	122.62	158.39	4.32	4.26	5.69	5.69
Stillwater County	A13	RM 415.50	127340.9	10% - 10yr	1223.29	1088.48	1083.14	2.67	2.67	37.74	37.74	148.59	150.59	3.08	3.08	5.33	5.33
Stillwater County	A13	RM 415.45	127087.4	10% - 10yr	1223.29	1088.14	1083.18	3.27	3.27	60.91	60.91	149.21	205.2	2.5	2.5	4.96	4.96
Stillwater County	A13	RM 415.39	126788	10% - 10yr	1223.29	1088.02	1084.07	2.93	2.93	48.31	47.14	162.04	346.08	2.57	2.51	3.95	3.95
Stillwater County	A13	RM 415.34	126499.1	10% - 10yr	1223.29	1087.88	1084.45	2.93	2.76	48.71	41.78	129.56	350.6	2.5	2.14	3.43	3.43
Stillwater County	A13	RM 415.25	126040.7	10% - 10yr	1223.29	1087.58	1082.42	3.01	2.83	50.1	39.33	123.48	340.84	2.7	2.12	5.16	5.16
Stillwater County	A13	RM 415.18	125663.1	10% - 10yr	1223.29	1087.44	1083.81	2.74	2.57	41.41	31.7	135.18	257.82	2.75	2.11	3.63	3.63
Stillwater County	A13	RM 415.10	125251.2	10% - 10yr	1223.29	1087.02	1083.01	3.35	3.09	61.8	47.41	108.91	199.54	2.77	2.12	4.01	4.01
Stillwater County	A13	RM 414.97	124585.1	10% - 10yr	1223.29	1086.61	1082.64	3.16	2.76	56.46	36.76	121.02	340.19	2.54	1.65	3.97	3.97
Stillwater County	A13	RM 414.88	124110.1	10% - 10yr	1223.29	1086.26	1083.02	3.19	2.81	57.84	39.5	123.96	311.06	2.51	1.71	3.24	3.24
Stillwater County	A13	RM 414.71	123222	10% - 10yr	1223.29	1085.79	1080.88	2.76	2.76	42.22	42.22	162.68	217.1	2.72	2.72	4.91	4.91
Stillwater County	A13	RM 414.57	122473.6	10% - 10yr	1223.29	1085.24	1081.21	3.16	3.03	55.49	35.96	146.23	278.69	2.64	1.71	4.03	4.03
Stillwater County	A13	RM 414.43	121696.6	10% - 10yr	1223.29	1084.78	1080.49	2.94	2.68	50	34.5	170.88	559.97	2.36	1.63	4.29	4.29
Stillwater County	A13	RM 414.21	120527.7	10% - 10yr	1223.29	1084.06	1080.81	2.62	2.43	43.06	32.19	219.09	487.63	1.84	1.38	3.24	3.24
Stillwater County	A13	RM 413.90	118914.7	10% - 10yr	1223.29	1082.69	1079.28	3.18	2.61	58.18	26.28	155.04	437.06	2.38	1.07	3.41	3.41
Stillwater County	A13	RM 413.65	117570.4	10% - 10yr	1223.29	1081.96	1078.15	2.82	1.76	44.17	20.94	140.22	553.5	2.65	1.25	3.81	3.81
Stillwater County	A14	RM 413.44	116446.3	10% - 10yr	1223.29	1081.28	1076.4	2.98	1.97	49.6	15.32	144.73	770.66	2.62	0.81	4.88	4.88

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	10% - 10yr	1223.29	1080.81	1077.8	2.73	1.73	44.98	20.57	176.34	748.5	2.07	0.95	3.01	3.01
Stillwater County	A14	RM 413.11	114697.4	10% - 10yr	1223.29	1080.2	1077.12	2.72	2.42	44.68	23.91	195.7	731.61	2.09	1.12	3.08	3.08
Stillwater County	A14	RM 412.99	114113.2	10% - 10yr	1223.29	1079.81	1076.41	2.8	1.98	47.82	21	184.64	769.59	2.03	0.89	3.39	3.39
Stillwater County	A14	RM 412.88	113533.6	10% - 10yr	1223.29	1079.44	1076.03	2.82	2.14	44.63	20.68	142.65	580.67	2.56	1.19	3.41	3.41
Stillwater County	A14	RM 412.73	112742.6	10% - 10yr	1223.29	1078.92	1074.72	2.91	2.15	50.65	26.61	171.09	572.14	2.16	1.13	4.2	4.2
Stillwater County	A14	RM 412.59	112005.5	10% - 10yr	1223.29	1078.41	1074.72	2.78	2.15	47.05	31.85	197.86	550.43	2.04	1.38	3.69	3.69
Stillwater County	A14	RM 412.49	111442.5	10% - 10yr	1223.29	1078.26	1074.54	2.14	1.82	26.45	16.41	189.08	595.34	2.37	1.48	3.72	3.72
Stillwater County	A14	RM 412.31	110522	10% - 10yr	1223.29	1077.91	1072.96	2.35	1.99	28.22	13.74	144.87	487.49	3.48	1.68	4.95	4.95
Stillwater County	A14	RM 412.19	109955.3	10% - 10yr	1223.29	1077.15	1071.57	3.86	3.58	79.7	41.19	103.6	220.44	3.03	1.55	5.58	5.58
Stillwater County	A14	RM 412.05	109175.2	10% - 10yr	1223.29	1076.74	1072.08	3.36	3.06	59.17	30.32	112.8	263.33	3.18	1.63	4.66	4.66
Stillwater County	A14	RM 411.92	108510.2	10% - 10yr	1223.29	1076.47	1072.88	2.93	2.93	46.25	45.38	142.76	145.56	2.92	2.87	3.59	3.59
Stillwater County	A14	RM 411.81	107950.5	10% - 10yr	1223.29	1076.01	1070.62	3.33	3.33	60.57	60.57	130.6	134.36	2.81	2.81	5.39	5.39
Stillwater County	A14	RM 411.71	107391.9	10% - 10yr	1223.29	1075.77	1070.83	3.05	3.04	47.82	46.59	119.26	136.42	3.36	3.28	4.94	4.94
Stillwater County	A14	RM 411.58	106721	10% - 10yr	1223.29	1075.49	1071.65	2.86	2.86	45.48	44.73	160.09	231.18	2.67	2.63	3.84	3.84
Stillwater County	A14	RM 411.47	106133.7	10% - 10yr	1223.29	1075.11	1071.87	3.01	2.67	51.31	28.97	156.42	327.12	2.52	1.42	3.24	3.24
Stillwater County	A14	RM 411.32	105338.4	10% - 10yr	1223.29	1074.59	1069.29	3.02	2.75	52.09	39.19	159.71	248.16	2.47	1.86	5.3	5.3
Stillwater County	A14	RM 411.14	104374.6	10% - 10yr	1223.29	1073.73	1067.92	3.57	2.91	68.31	31.51	111.92	309.1	2.96	1.36	5.81	5.81
Stillwater County	A14	RM 411.00	103638.4	10% - 10yr	1223.29	1073.33	1069.6	3.13	2.45	56.49	34.36	140.46	343.6	2.39	1.45	3.73	3.73
Stillwater County	A14	RM 410.85	102835.8	10% - 10yr	1223.29	1072.86	1069.92	2.61	2.18	43.37	29.48	83.64	467.93	1.77	1.21	2.94	2.94
Stillwater County	A14	RM 410.74	102286.3	10% - 10yr	1223.29	1072.41	1068.99	2.8	2.14	47.63	29.4	72.69	458.17	2.07	1.26	3.42	3.42
Stillwater County	A14	RM 410.63	101668.3	10% - 10yr	1223.29	1072.1	1068.37	2.55	1.83	37.7	20.07	83.56	641.7	2.38	1.26	3.73	3.73
Stillwater County	A14	RM 410.52	101115.7	10% - 10yr	1223.29	1071.76	1067.81	2.56	2.11	37.06	22.67	123.09	460.51	2.54	1.55	3.95	3.95
Stillwater County	A14	RM 410.42	100568.4	10% - 10yr	1223.29	1071.25	1066.66	2.82	2.87	50.09	48.51	149.32	241.39	1.86	1.8	4.59	4.59
Stillwater County	A14	RM 410.33	100099.2	10% - 10yr	1223.29	1071.04	1066.6	2.49	2.29	35.66	25.03	198.78	415.94	2.41	1.69	4.44	4.44
Stillwater County	A14	RM 410.22	99589.26	10% - 10yr	1223.29	1070.56	1066.94	3.14	2.76	55.79	31	150.91	632.24	2.5	1.39	3.62	3.62
Stillwater County	A14	RM 410.12	99057.4	10% - 10yr	1223.29	1070.2	1065.8	3.03	2.62	54.85	42.28	173.79	607.09	2.13	1.64	4.4	4.4
Stillwater County	A14	RM 410.03	98630.66	10% - 10yr	1223.29	1069.88	1065.33	2.87	2.53	50.93	40.68	205.5	456.06	1.92	1.54	4.55	4.55
Stillwater County	A14	RM 409.99	98385.41	10% - 10yr	1223.29	1069.64	1065.38	2.96	2.57	54.56	40.36	202.11	508.78	1.9	1.4	4.26	4.26
Stillwater County	A14	RM 409.94	98072.09	10% - 10yr	1223.29	1069.46	1065.51	2.68	2.2	42.89	25.16	200.54	684.98	2.13	1.25	3.95	3.95
Stillwater County	A14	RM 409.87	97717.24	10% - 10yr	1223.29	1069.42	1065.52	2.13	1.54	24.19	12.4	164.85	989.13	3.06	1.56	3.9	3.9
Stillwater County	A14	RM 409.76	97130.84	10% - 10yr	1223.29	1069.08	1065.37	2.75	2.08	41.68	17.58	146.7	671.31	2.7	1.14	3.72	3.72
Stillwater County	A14	RM 409.60	96278.7	10% - 10yr	1223.29	1068.14	1064.65	3.66	2.94	83.69	48.74	165.61	402.12	1.87	1.09	3.48	3.48
Stillwater County	A14	RM 409.43	95381.62	10% - 10yr	1223.29	1067.52	1063.55	2.93	2.1	48.72	22.7	132.25	755.81	2.51	1.17	3.97	3.97
Stillwater County	A14	RM 409.24	94405.29	10% - 10yr	1223.29	1066.83	1064.55	2.28	1.9	36.63	24.86	149.25	877.39	1.3	0.88	2.61	2.61
Stillwater County	A14	RM 409.15	93912.54	10% - 10yr	1223.29	1066.46	1064.27	1.86	1.77	23.58	16.9	166.45	678.24	1.42	1.02	4.39	4.39
Stillwater County	A14	RM 408.99	93008.08	10% - 10yr	1223.29	1065.62	1063.94	2.34	2.72	39.67	35.15	158.62	427.05	1.18	1.05	3.08	3.08
Stillwater County	A14	RM 408.84	92229.27	10% - 10yr	1223.29	1065.13	1062.1	2.6	2.52	44.66	33.12	149.37	416.09	1.56	1.17	3.03	3.03
Stillwater County	A14	RM 408.63	91072.98	10% - 10yr	1223.29	1064.42	1061.85	2.15	2.05	30.9	27.12	211.49	452.8	1.54	1.35	2.84	2.84
Stillwater County	A14	RM 408.41	89726.16	10% - 10yr	1223.29	1063.91	1059.04	2.37	2.04	28.9	17.67	105.33	288.91	3.41	2.08	4.87	4.87
Stillwater County	A14	RM 408.26	88966.66	10% - 10yr	1223.29	1063.62	1058.13	2.56	2.24	33.47	18.69	130.93	282.91	3.47	1.93	5.49	5.49
Stillwater County	A14	RM 408.10	88091.52	10% - 10yr	1223.29	1062.93	1057.78	3.52	3.33	62.84	48.22	98.48	136.73	3.49	2.69	5.15	5.15
Stillwater County	A14	RM 408.02	87720.33	10% - 10yr	1223.29	1062.85	1058.61	3.04	2.81	48.53	26.97	124.8	246.67	3.18	1.77	4.24	4.24
Stillwater County	A14	RM 407.83	86708.48	10% - 10yr	1223.29	1062.26	1058.65	2.87	2.7	51.55	37.21	157.4	337.54	1.85	1.34	3.61	3.61
Stillwater County	A14	RM 407.71	86078.99	10% - 10yr	1223.29	1061.85	1057.9	3.01	2.63	50.76	24.55	117.37	373.4	2.57	1.25	3.95	3.95
Stillwater County	A14	RM 407.61	85508.29	10% - 10yr	1223.29	1061.6	1058.36	2.5	2.29	38.76	26.39	170.41	409.35	1.92	1.31	3.24	3.24
Stillwater County	A14	RM 407.50	84909.3	10% - 10yr	1223.29	1061.31	1058.55	2.45	2.17	38.19	29.56	178.61	414.04	1.75	1.36	3.25	3.25
Stillwater County	A14	RM 407.41	84433.26	10% - 10yr	1223.29	1061.11	1057.85	2.43	1.92	35.52	22.1	122.26	484.75	2.11	1.31	3.45	3.45
Stillwater County	A14	RM 407.36	84180.66	10% - 10yr	1223.29	1060.92	1057.59	2.78	2.04	44.63	23.7	101.75	472.83	2.4	1.27	3.33	3.33
Stillwater County	A14	RM 407.29	83775.88	10% - 10yr	1223.29	1060.54	1057.08	2.37	2.51	35.47	28.63	153.57	335.21	1.8	1.46	3.72	3.72
Stillwater County	A14	RM 407.13	82954.84	10% - 10yr	1223.29	1060.17	1056.27	2.2	2.18	29.73	27.98	278.03	298.66	1.99	1.88	3.89	3.89
Stillwater County	A14	RM 406.98	82156.72	10% - 10yr	1223.29	1059.92	1056.37	2.07	2	23	19.52	198.71	246.84	2.94	2.5	3.55	3.55
Stillwater County	A14	RM 406.86	81532.92	10% - 10yr	1223.29	1059.21	1055.69	3.57	3.43	68.53	55.59	114.42	148.51	2.96	2.4	3.52	3.52
Stillwater County	A14	RM 406.77	81053.3	10% - 10yr	1223.29	1058.95	1053.84	3.36	3.02	59.56	37.41	112.01	206.09	3.14	1.97	5.11	5.11
Stillwater County	A14	RM 406.64	80405.13	10% - 10yr	1223.29	1058.72	1054.89	2.88	2.69	44.31	35.77	138.26	189.78	2.98	2.41	3.82	3.82
Stillwater County	A14	RM 406.48	79524.79	10% - 10yr	1223.29	1058.17	1054.8	2.96	2.48	51.79	31.01	197.92	427.43	1.93	1.15	3.37	3.37
Stillwater County	A14	RM 406.25	78337.26	10% - 10yr	1223.29	1057.45	1054.03	2.83	2.43	44.35	21.65	141.81	383.58	2.71	1.31	3.42	3.42
Stillwater County	A14	RM 406.08	77409.13	10% - 10yr	1223.29	1056.95	1052.87	2.92	2.25	47.32	16.99	131.8	604.04	2.69	0.96	4.08	4.08
Stillwater County	A14	RM 405.93	76624.91	10% - 10yr	1223.29	1056.29	1052.64	3.37	3.17	60.27	39.17	114.34	191.18	3.1	2.02	3.65	3.65
Stillwater County	A14	RM 405.81	75994.44	10% - 10yr	1223.29	1055.99	1051.93	3.06	2.95	50.72	46.28	133.87	196.07	2.91	2.66	4.06	4.06
Stillwater County	A15	RM 405.77	75764.36	10% - 10yr	1223.29	1055.73	1052.63	3.4	3.15	66.6	57.28	142.49	188.13	2.39	2.06	3.1	3.1

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	10% - 10yr	1223.29	1055.4	1052.06	3.01	2.58	51.63	38.73	82.19	255.63	2.46	1.86	3.34	3.34
Stillwater County	A15	RM 405.61	74883.52	10% - 10yr	1223.29	1055.19	1051.81	3.32	2.54	60.31	34.98	69.55	370.98	2.8	1.63	3.38	3.38
Stillwater County	A15	RM 405.52	74415.92	10% - 10yr	1223.29	1054.66	1051.43	3.93	2.82	85.11	43.76	52.24	433.76	2.76	1.42	3.23	3.23
Stillwater County	A15	RM 405.45	74031.34	10% - 10yr	1223.29	1054.62	1051.1	2.97	1.91	46.47	27.8	57.4	439.94	3.1	1.86	3.52	3.52
Stillwater County	A15	RM 405.34	73437.72	10% - 10yr	1223.29	1054.16	1050.67	3.05	2.59	50.14	29.86	116.05	420.98	2.91	1.74	3.49	3.49
Stillwater County	A15	RM 405.18	72616.33	10% - 10yr	1223.29	1053.65	1049.45	3.33	2.77	57.4	30.67	94.83	311.41	3.34	1.78	4.2	4.2
Stillwater County	A15	RM 405.09	72171.48	10% - 10yr	1223.29	1053.54	1049.09	2.76	2.47	39.53	27.29	115.98	294.77	3.25	2.25	4.45	4.45
Stillwater County	A15	RM 405.02	71774.52	10% - 10yr	1223.29	1053.14	1048.59	3.47	3.08	61.74	40.62	88.03	224.98	3.4	2.23	4.56	4.56
Stillwater County	A15	RM 404.97	71526.86	10% - 10yr	1223.29	1053.11	1048.35	2.97	2.71	45.85	36.56	105.86	361.39	3.28	2.62	4.77	4.77
Stillwater County	A15	RM 404.90	71150.58	10% - 10yr	1223.29	1052.97	1048.99	2.94	2.63	45	33.1	104.62	416.59	3.24	2.38	3.98	3.98
Stillwater County	A15	RM 404.84	70801.47	10% - 10yr	1223.29	1052.91	1049.19	2.56	2.28	34.34	19.85	118.04	683.37	3.2	1.84	3.72	3.72
Stillwater County	A15	RM 404.77	70415.17	10% - 10yr	1223.29	1052.68	1048.51	3.02	2.5	46.82	19.05	86.33	670.23	3.48	1.39	4.17	4.17
Stillwater County	A15	RM 404.71	70152.7	10% - 10yr	1223.29	1052.65	1048.14	2.57	2.29	33.47	16.45	86.12	725.71	3.58	1.73	4.51	4.51
Stillwater County	A15	RM 404.59	69477.61	10% - 10yr	1223.29	1052.01	1047.56	3.51	3.41	64.75	39.25	109.02	187.07	3.19	1.92	4.45	4.45
Stillwater County	A15	RM 404.54	69214.33	10% - 10yr	1223.29	1051.92	1047.65	3.21	3.04	55.16	33.78	125.63	221.3	3	1.82	4.27	4.27
Stillwater County	A15	RM 404.35	68254.38	10% - 10yr	1223.29	1051.42	1048.18	2.79	2.73	45.6	35.59	144.45	250.72	2.27	1.79	3.65	3.65
Stillwater County	A15	RM 404.23	67606.98	10% - 10yr	1223.29	1051.03	1047.77	2.87	2.83	47.32	45.14	132.49	213.85	2.39	2.3	3.26	3.26
Stillwater County	A15	RM 404.10	66934.17	10% - 10yr	1223.29	1050.67	1047.61	2.73	2.6	42.03	38.41	122.92	261.44	2.54	2.32	3.06	3.06
Stillwater County	A15	RM 403.94	66110.59	10% - 10yr	1223.29	1050.3	1045.27	2.77	2.36	42.16	26.39	113.06	456.36	2.78	1.73	5.03	5.03
Stillwater County	A15	RM 403.85	65604.39	10% - 10yr	1223.29	1049.87	1044.79	3.44	2.83	60.71	39.64	78.61	357.18	3.42	2.21	5.08	5.08
Stillwater County	A15	RM 403.75	65058.55	10% - 10yr	1223.29	1049.3	1046.13	3.84	3.41	83.31	59.9	100.99	211.28	2.53	1.81	3.17	3.17
Stillwater County	A15	RM 403.69	64721.22	10% - 10yr	1223.29	1049.22	1046.02	2.78	2.64	45.42	41.35	133.96	315.7	2.27	2.08	3.2	3.2
Stillwater County	A15	RM 403.62	64341.29	10% - 10yr	1223.29	1048.88	1045.75	3.11	2.94	60.35	54.87	91.68	297.47	1.87	1.71	3.13	3.13
Stillwater County	A15	RM 403.55	63997.04	10% - 10yr	1223.29	1048.7	1045.95	2.71	2.39	45.34	31.8	116.9	425.47	1.93	1.36	2.75	2.75
Stillwater County	A15	RM 403.38	62985.06	10% - 10yr	1223.29	1048.33	1043.43	2.15	1.94	26.35	20.45	194.58	326.86	2.48	1.93	4.9	4.9
Stillwater County	A15	RM 403.24	62260	10% - 10yr	1223.29	1048.01	1043.43	2.4	2.38	30.8	24.47	167.36	244.24	3.04	2.41	4.58	4.58
Stillwater County	A15	RM 403.15	61770.95	10% - 10yr	1223.29	1047.55	1042.51	3.2	3.1	55.43	41.03	130.41	192.79	2.92	2.15	5.04	5.04
Stillwater County	A15	RM 403.05	61263.44	10% - 10yr	1223.29	1047.28	1043.23	3.07	3.02	51.88	37.99	146.17	217.87	2.73	2	4.05	4.05
Stillwater County	A15	RM 402.97	60777.65	10% - 10yr	1223.29	1047.06	1043.89	2.75	2.7	43.78	38.06	187.76	248.13	2.36	2.05	3.17	3.17
Stillwater County	A15	RM 402.83	60113.9	10% - 10yr	1223.29	1046.5	1043.49	2.94	2.94	55.88	55.54	246.3	400.03	1.69	1.68	3.01	3.01
Stillwater County	A15	RM 402.68	59309.8	10% - 10yr	1223.29	1045.96	1042.55	2.54	2.36	39.19	27.72	233.75	641.75	2.03	1.44	3.41	3.41
Stillwater County	A15	RM 402.53	58529.61	10% - 10yr	1223.29	1045.62	1040.51	2.65	1.87	35.13	10.37	119.46	746.36	3.62	1.07	5.11	5.11
Stillwater County	A15	RM 402.37	57665.93	10% - 10yr	1223.29	1045.06	1041.09	3.09	2.48	61.03	33.58	211.75	603.64	1.75	0.96	3.97	3.97
Stillwater County	A15	RM 402.24	56987.42	10% - 10yr	1223.29	1044.89	1040.75	1.96	1.51	22.79	11.71	251.22	833.15	2.2	1.13	4.14	4.14
Stillwater County	A15	RM 402.07	56034.67	10% - 10yr	1223.29	1044.34	1041.1	2.62	2	41.44	25.3	204.04	483.74	2.07	1.26	3.24	3.24
Stillwater County	A15	RM 401.87	54972.92	10% - 10yr	1223.29	1043.63	1040.1	2.91	2.11	48.2	22.76	150.47	492.13	2.5	1.18	3.53	3.53
Stillwater County	A15	RM 401.69	54002.29	10% - 10yr	1223.29	1043.42	1038.43	1.9	1.68	20.85	11.96	248.14	533.68	2.38	1.36	4.99	4.99
Stillwater County	A15	RM 401.55	53267.48	10% - 10yr	1223.29	1042.67	1036.56	3.6	3.14	61.66	25.57	74.7	221.47	4.29	1.76	6.11	6.11
Stillwater County	A15	RM 401.41	52506.25	10% - 10yr	1223.29	1042.54	1037.91	2.71	2.32	39.25	24.26	136.71	330.01	2.97	1.83	4.63	4.63
Stillwater County	A15	RM 401.31	51997.63	10% - 10yr	1223.29	1042.14	1038.08	3.19	2.79	55.1	35.75	118.88	233.34	2.9	1.88	4.06	4.06
Stillwater County	A15	RM 401.17	51259.17	10% - 10yr	1223.29	1041.68	1037.38	3.09	2.96	52.96	37.94	145.22	215.93	2.7	1.94	4.3	4.3
Stillwater County	A15	RM 401.03	50507.04	10% - 10yr	1223.29	1041.3	1036.56	3.02	2.71	47.65	27.18	124.65	246.94	3.2	1.83	4.74	4.74
Stillwater County	A15	RM 400.90	49826.69	10% - 10yr	1223.29	1040.77	1036.25	3.35	3.1	63.72	48.97	144.41	217.68	2.49	1.92	4.52	4.52
Stillwater County	A15	RM 400.74	49002.09	10% - 10yr	1223.29	1040.23	1037.21	3.24	2.45	59.24	32.98	111.48	348.7	2.59	1.43	3.02	3.02
Stillwater County	A15	RM 400.61	48243.95	10% - 10yr	1223.29	1039.92	1035.99	2.48	2.13	35.68	24.84	144.65	353.3	2.35	1.63	3.93	3.93
Stillwater County	A15	RM 400.50	47710.55	10% - 10yr	1223.29	1039.6	1035.67	2.55	2.44	37.5	34.5	149.13	227.04	2.39	2.2	3.93	3.93
Stillwater County	A15	RM 400.42	47243.72	10% - 10yr	1223.29	1039.26	1034.87	2.96	2.75	47.5	33.08	103.84	219.94	2.92	2.02	4.39	4.39
Stillwater County	A15	RM 400.34	46832.6	10% - 10yr	1223.29	1039.09	1034.91	2.89	2.64	43.74	26.95	95.8	236.02	3.17	1.96	4.18	4.18
Stillwater County	A15	RM 400.25	46335.82	10% - 10yr	1223.29	1038.94	1035.01	2.67	2.34	38.03	20.62	107.64	314.39	3.08	1.66	3.93	3.93
Stillwater County	A15	RM 400.18	45999.89	10% - 10yr	1223.29	1038.78	1034.98	2.78	2.46	42	23.29	113.92	313.23	2.88	1.59	3.8	3.8
Stillwater County	A15	RM 400.13	45714.33	10% - 10yr	1223.29	1038.65	1035.2	2.76	2.34	41.18	24.34	122.23	305.46	2.91	1.71	3.45	3.45
Stillwater County	A15	RM 400.11	45623.77	10% - 10yr	1223.29	1038.55	1035.11	2.9	2.43	47.06	28.91	129.47	315.85	2.65	1.62	3.44	3.44
Stillwater County	A15	RM 400.09	45529.19	10% - 10yr	1223.29	1038.37	1035.05	3.26	2.81	61.56	40.7	128.18	282.88	2.37	1.56	3.32	3.32
Stillwater County	A15	RM 400.03	45177.97	10% - 10yr	1223.29	1038.15	1034.82	3.05	2.76	54.04	45.62	137.4	229.46	2.33	1.97	3.33	3.33
Stillwater County	A15	RM 399.95	44761.86	10% - 10yr	1223.29	1037.96	1033.69	2.72	2.72	39.7	39.51	149.86	171.2	3	2.98	4.27	4.27
Stillwater County	A16	RM 399.85	44225.61	10% - 10yr	1223.29	1037.54	1033.63	3.15	3.15	55.1	55.1	144.56	159.01	2.69	2.69	3.91	3.91
Stillwater County	A16	RM 399.74	43664.16	10% - 10yr	1223.29	1037.29	1033.48	2.73	2.73	43.16	43.01	188.33	190.66	2.38	2.37	3.81	3.81
Stillwater County	A16	RM 399.62	43026.17	10% - 10yr	1223.29	1036.92	1033.67	2.65	2.65	42.34	42.32	217.47	226.74	2.12	2.12	3.25	3.25
Stillwater County	A16	RM 399.50	42404.94	10% - 10yr	1223.29	1036.64	1031.89	2.56	2.56	35.59	35.53	167.47	226.23	2.86	2.85	4.74	4.74
Stillwater County	A16	RM 399.39	41801.43	10% - 10yr	1223.29	1036.3	1031.8	2.81	2.81	43.28	43.21	155.72	181.56	2.79	2.79	4.5	4.5

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

10% - 10yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	10% - 10yr	1223.29	1035.95	1031.14	3.05	2.88	51.73	39.71	145.25	217.18	2.69	2.06	4.81	4.81
Stillwater County	A16	RM 399.19	40736.83	10% - 10yr	1223.29	1035.38	1031.46	3.51	3.29	69.35	41.44	134.11	242.33	2.57	1.54	3.92	3.92
Stillwater County	A16	RM 399.09	40202.15	10% - 10yr	1223.29	1035.15	1031.09	3.06	2.72	50.31	31.03	128.82	247.45	2.96	1.82	4.05	4.05
Stillwater County	A16	RM 399.00	39710.39	10% - 10yr	1223.29	1034.97	1031.41	2.74	2.19	42.26	26.29	144.37	347.71	2.58	1.6	3.56	3.56
Stillwater County	A16	RM 398.91	39231.58	10% - 10yr	1223.29	1034.67	1031.73	2.74	2.27	47.34	30.22	180.43	463.26	1.82	1.17	2.94	2.94
Stillwater County	A16	RM 398.80	38666.26	10% - 10yr	1223.29	1034.25	1031.55	2.67	2.17	44.22	29.35	188.97	444.71	1.91	1.27	2.7	2.7
Stillwater County	A16	RM 398.73	38275.64	10% - 10yr	1223.29	1033.97	1030.78	2.63	2.19	36.43	24.28	212.1	469.52	1.79	1.19	3.19	3.19
Stillwater County	A16	RM 398.62	37715.08	10% - 10yr	1223.29	1033.64	1030.19	2.49	2.16	32.26	24.69	201.83	405.39	1.83	1.4	3.45	3.45
Stillwater County	A16	RM 398.51	37115.9	10% - 10yr	1223.29	1033.27	1030.68	2.51	2.25	38.92	25.48	212.05	430.53	1.95	1.28	2.61	2.61
Stillwater County	A16	RM 398.40	36522.49	10% - 10yr	1223.29	1033.08	1028.27	2.14	1.86	22.48	16.74	205.37	428.85	2.07	1.54	4.81	4.81
Stillwater County	A16	RM 398.29	35952.65	10% - 10yr	1223.29	1032.68	1027.62	2.53	2.35	40.31	29.12	260.97	394.5	1.83	1.32	5.05	5.05
Stillwater County	A16	RM 398.17	35320.39	10% - 10yr	1223.29	1032.47	1028.88	2.08	2.01	24.53	19.15	232.7	309.93	2.52	1.96	3.59	3.59
Stillwater County	A16	RM 398.04	34597.07	10% - 10yr	1223.29	1032.15	1027.24	2.23	2.17	35.35	28.68	255.14	354.75	2.14	1.74	4.91	4.91
Stillwater County	A16	RM 397.95	34133.39	10% - 10yr	1223.29	1031.76	1027.15	2.63	2.58	43.05	39.96	240.31	264.75	1.92	1.79	4.61	4.61
Stillwater County	A16	RM 397.81	33366.95	10% - 10yr	1223.29	1031.44	1027.05	2.21	2.15	28.61	24.07	237.58	308.66	2.31	1.94	4.39	4.39
Stillwater County	A16	RM 397.68	32754.86	10% - 10yr	1223.29	1031.21	1026.97	2.27	2.17	28.27	21.85	192.74	323.17	2.77	2.15	4.24	4.24
Stillwater County	A16	RM 397.56	32104.4	10% - 10yr	1223.29	1030.65	1026.76	3.2	3.08	56.11	48.55	134.6	300.13	2.8	2.44	3.89	3.89
Stillwater County	A16	RM 397.40	31237.31	10% - 10yr	1223.29	1030.17	1026.27	2.9	2.62	48.54	37.5	174.47	628.81	2.36	1.83	3.9	3.9
Stillwater County	A16	RM 397.17	30082.69	10% - 10yr	1223.29	1029.54	1025.84	2.39	1.94	36.02	22.22	266.01	919.36	1.8	1.11	3.7	3.7
Stillwater County	A16	RM 396.97	29050.44	10% - 10yr	1223.29	1029.1	1025.61	2.01	1.51	24.61	12.78	280.04	1019.47	2.02	1.05	3.49	3.49
Stillwater County	A16	RM 396.71	27639.86	10% - 10yr	1223.29	1028.4	1022.48	2.78	1.77	40.68	11.11	127.39	906.17	3.15	0.85	5.92	5.92
Stillwater County	A16	RM 396.62	27103.31	10% - 10yr	1223.29	1028.05	1022.36	3.14	2.18	49.38	12.38	99.61	683.36	3.7	0.91	5.69	5.69
Stillwater County	A16	RM 396.52	26616.35	10% - 10yr	1223.29	1027.8	1023.41	3.26	2.1	55.47	15.09	106.05	664.49	3.25	0.88	4.38	4.38
Stillwater County	A16	RM 396.29	25423.1	10% - 10yr	1223.29	1027.39	1023.53	2.4	1.73	33.36	14.21	187.62	717.21	2.33	0.99	3.86	3.86
Stillwater County	A16	RM 396.14	24635.78	10% - 10yr	1223.29	1026.65	1022.46	3.35	2.73	64.13	33.86	129.1	446.88	2.45	1.29	4.19	4.19
Stillwater County	A16	RM 396.03	24026.24	10% - 10yr	1223.29	1026.51	1024.1	2.21	1.81	29.65	17.35	186.48	624.61	2.04	1.19	2.41	2.41
Stillwater County	A16	RM 395.89	23301.08	10% - 10yr	1223.29	1026	1022.79	2.7	2.03	46.33	24.02	151.95	722.92	1.78	0.92	3.21	3.21
Stillwater County	A16	RM 395.73	22420.29	10% - 10yr	1223.29	1025.64	1022.66	1.53	1.31	14.8	9.54	185.94	946.25	1.79	1.15	2.98	2.98
Stillwater County	A16	RM 395.64	21923.33	10% - 10yr	1223.29	1025.4	1022.13	2.06	1.52	25.83	11.63	144.53	1041	2.01	0.9	3.58	3.58
Stillwater County	A16	RM 395.57	21526.11	10% - 10yr	1223.29	1024.97	1021.61	2.93	1.92	49.13	18.21	77.96	1006.96	2.44	0.9	3.36	3.36
Stillwater County	A16	RM 395.48	21053.74	10% - 10yr	1223.29	1024.59	1021.89	2.65	2.14	45.32	27.65	112.05	754.51	1.68	1.03	2.7	2.7
Stillwater County	A16	RM 395.36	20532.68	10% - 10yr	1223.29	1024.33	1021.53	2.21	1.84	30.05	16.64	131.87	805.32	1.98	1.09	2.8	2.8
Stillwater County	A16	RM 394.98	18666.37	10% - 10yr	1223.29	1023.7	1020.31	2.69	2.16	43.14	22.43	105.18	550.16	2.17	1.13	3.39	3.39
Stillwater County	A16	RM 394.80	17678.79	10% - 10yr	1223.29	1023.33	1019.23	2.51	2.15	39.39	24.17	140.63	497.64	1.88	1.15	4.1	4.1
Stillwater County	A16	RM 394.71	17254.4	10% - 10yr	1223.29	1023.13	1019.74	2.16	1.97	28.01	18.04	146.7	465.33	2.12	1.36	3.39	3.39
Stillwater County	A16	RM 394.65	16921.48	10% - 10yr	1223.29	1022.88	1019.93	2.24	2.16	31.54	24.67	163.39	472.62	1.83	1.43	3.88	3.88
Stillwater County	A16	RM 394.59	16622.61	10% - 10yr	1223.29	1022.5	1019.92	2.41	2.38	38.85	34.32	152.23	415.19	1.54	1.36	2.93	2.93
Stillwater County	A16	RM 394.53	16295.21	10% - 10yr	1223.29	1022.23	1019.83	2.27	2.16	34.72	29.53	156.72	459.99	1.48	1.26	3.22	3.22
Stillwater County	A16	RM 394.45	15858.14	10% - 10yr	1223.29	1021.75	1019.03	2.8	2.57	48.49	37.11	113.39	326.14	1.91	1.46	2.87	2.87
Stillwater County	A16	RM 394.20	14503.23	10% - 10yr	1223.29	1021.06	1016.38	2.61	2.23	39.42	25	149.53	368.82	2.34	1.49	4.68	4.68
Stillwater County	A16	RM 394.12	14088.57	10% - 10yr	1223.29	1020.68	1016.74	3.02	2.59	53.42	31.5	147.58	354.76	2.26	1.33	3.94	3.94
Stillwater County	A16	RM 393.99	13393.6	10% - 10yr	1223.29	1020.33	1017.11	2.52	2.01	38.76	23.58	119.73	500.43	2	1.22	3.22	3.22
Stillwater County	A16	RM 393.85	12650.05	10% - 10yr	1223.29	1019.83	1016.49	2.39	2.05	37.37	26.89	177.2	505.93	1.64	1.18	3.34	3.34
Stillwater County	A16	RM 393.59	11240.84	10% - 10yr	1223.29	1019.3	1015.45	1.75	1.45	18.72	10.75	272.77	736.74	1.99	1.14	3.85	3.85
Stillwater County	A16	RM 393.27	9813.245	10% - 10yr	1223.29	1018.27	1013.32	2.97	2.73	59.26	48.1	218.28	367.89	1.5	1.22	4.95	4.95
Stillwater County	A16	RM 393.10	8870.543	10% - 10yr	1223.29	1017.66	1013.34	2.04	1.92	28.26	24.4	338.95	503.84	1.47	1.26	4.32	4.32
Stillwater County	A16	RM 392.95	8114.595	10% - 10yr	1223.29	1016.83	1014.13	2.79	2.7	52.71	48.1	276.93	335	1.48	1.35	2.7	2.7
Stillwater County	A16	RM 392.69	6912.838	10% - 10yr	1223.29	1016.3	1012.43	1.93	1.72	22.55	16.05	190.62	655.26	2.05	1.46	3.87	3.87
Stillwater County	A16	RM 392.44	5710.825	10% - 10yr	1223.29	1015.73	1011.68	2.47	1.93	34.56	15.87	135.35	908.99	2.52	1.15	4.05	4.05
Stillwater County	A17	RM 392.20	4388.056	10% - 10yr	1223.29	1014.67	1010.8	3.14	2.54	61.29	31.41	195.23	497.28	1.89	0.97	3.87	3.87
Stillwater County	A17	RM 392.00	3345.174	10% - 10yr	1223.29	1014.08	1009.53	2.64	2.16	39.95	22.98	164.32	409.1	2.45	1.41	4.55	4.55
Stillwater County	A17	RM 391.84	2491.214	10% - 10yr	1223.29	1013.77	1010.51	2.19	1.83	29.42	16.7	154.33	596.08	1.97	1.12	3.35	3.35
Stillwater County	A17	RM 391.68	1656.536	10% - 10yr	1223.29	1013.44	1010.5	1.83	1.59	22.2	16.34	255.36	675.75	1.54	1.14	2.94	2.94
Stillwater County	A17	RM 391.58	1120.168	10% - 10yr	1223.29	1013.16	1009.55	1.92	1.6	24.68	16.15	363.03	758.72	1.54	1.01	3.61	3.61
Stillwater County	A17	RM 391.46	505.9	10% - 10yr	1223.29	1012.89	1009.4	1.94	1.48	23.66	13.05	297.18	812.33	1.85	1.02	3.49	3.49

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	10-yr	1223.29	1012.48	1008.74	2.29	1.64	30.84	12.93	208.46	785.12	2.26	0.95	3.74	3.74
Yellowstone County	A17	RM 391.14	149661.4	10-yr	1223.29	1012.05	1007.82	2.36	1.56	40.11	19.82	204.09	720.39	2.21	1.09	4.23	4.23
Yellowstone County	A17	RM 390.83	149168.3	10-yr	1223.29	1010.99	1007.89	2.44	2.05	41.17	26.36	257.01	594.7	1.69	1.08	3.1	3.1
Yellowstone County	A17	RM 390.51	148644.1	10-yr	1223.29	1010.23	1006	1.74	1.59	26.78	15.84	202.61	515.81	2.53	1.49	4.23	4.23
Yellowstone County	A17	RM 390.34	148387.5	10-yr	1223.29	1009.79	1005.26	2.4	2.02	48.1	29.51	155.06	384.16	2.57	1.57	4.52	4.52
Yellowstone County	A17	RM 390.13	148054.9	10-yr	1223.29	1009.16	1005.54	2.63	2.15	48.42	27.18	144.17	389.74	2.61	1.46	3.62	3.62
Yellowstone County	A17	RM 389.96	147776.4	10-yr	1223.29	1008.83	1004.81	2.08	1.88	28.03	20.32	175.46	385.98	2.33	1.69	4.02	4.02
Yellowstone County	A17	RM 389.76	147468.2	10-yr	1223.29	1008.58	1004.52	1.54	1.41	20.57	13.33	299.26	719.74	2.56	1.66	4.06	4.06
Yellowstone County	A17	RM 389.55	147162.3	10-yr	1223.29	1008.03	1003.2	2.07	2.07	54.66	54.66	318.97	318.97	1.85	1.85	4.83	4.83
Yellowstone County	A17	RM 389.31	146731.1	10-yr	1223.29	1007.3	1003.49	2.01	1.9	25.26	20.08	256.17	344.78	2.35	1.87	3.81	3.81
Yellowstone County	A17	RM 389.08	146349	10-yr	1223.29	1006.75	1001.61	1.81	1.62	45.76	32.95	304.57	555.93	1.89	1.35	5.14	5.14
Yellowstone County	A17	RM 388.92	146095.5	10-yr	1223.29	1006.33	1002.49	1.91	1.65	22.24	15.45	266.56	483.51	2.21	1.54	3.84	3.84
Yellowstone County	A17	RM 388.79	145883.6	10-yr	1223.29	1006.12	1002.14	2.07	1.47	24.52	10.42	163.45	619.08	3.19	1.34	3.98	3.98
Yellowstone County	A17	RM 388.61	145594.9	10-yr	1223.29	1005.67	1000.48	2.62	1.93	50.2	26.3	141.64	441.47	2.76	1.44	5.19	5.19
Yellowstone County	A17	RM 388.58	145547	10-yr	1223.29	1005.54	1000.28	2.59	2.02	62.27	28.73	153.37	477.71	2.76	1.27	5.26	5.26
Yellowstone County	A17	RM 388.36	145196.7	10-yr	1223.29	1004.96	1001.21	2.45	1.87	38.43	20.2	160.3	469.63	2.64	1.39	3.75	3.75
Yellowstone County	A17	RM 388.22	144960.1	10-yr	1223.29	1004.42	1000.23	2.89	2.28	56.33	30.7	161.71	533.15	1.93	1.06	4.19	4.19
Yellowstone County	A17	RM 388.09	144745.8	10-yr	1223.29	1003.82	999.87	2.56	2.17	46.3	32.34	229.95	541.6	1.55	1.09	3.95	3.95
Yellowstone County	A17	RM 387.91	144452	10-yr	1223.29	1003.15	999.77	1.57	1.75	23.97	22.29	363.58	620.92	1.24	1.16	3.38	3.38
Yellowstone County	A17	RM 387.79	144255.2	10-yr	1223.29	1003.05	999.17	1.2	1.12	6.61	5.78	483.76	858.1	1.5	1.31	3.88	3.88
Yellowstone County	A17	RM 387.59	143932.9	10-yr	1223.29	1002.77	998.1	1.14	1.13	34.86	32.51	915.6	1033.08	1.13	1.05	4.67	4.67
Yellowstone County	A17	RM 387.36	143562.1	10-yr	1223.29	1001.72	997.78	2.02	2	20.78	19.54	541.27	591.21	1.12	1.05	3.93	3.93
Yellowstone County	A17	RM 387.24	143353.9	10-yr	1223.29	1001.39	997.71	1.93	1.93	20.23	20.03	432.64	446.52	1.46	1.45	3.68	3.68
Yellowstone County	A17	RM 387.04	143026.2	10-yr	1223.29	1000.75	996.49	2.23	2.15	28.17	23.63	415.6	535.38	1.29	1.08	4.26	4.26
Yellowstone County	A17	RM 386.86	142750.4	10-yr	1223.29	1000.2	997.01	1.82	1.71	36.97	25.39	364.71	584.58	1.78	1.22	3.19	3.19
Yellowstone County	A17	RM 386.74	142538.5	10-yr	1223.29	999.8	996.31	1.85	1.78	29.04	23.79	349.36	468.32	1.79	1.47	3.49	3.49
Yellowstone County	A17	RM 386.61	142318.4	10-yr	1223.29	999.22	995.9	2.62	2.45	45.76	30.74	184.46	326.68	2.27	1.53	3.32	3.32
Yellowstone County	A17	RM 386.47	142095.8	10-yr	1223.29	998.87	995.18	2.46	2.03	37.38	20.98	167.12	442	2.42	1.36	3.69	3.69
Yellowstone County	A17	RM 386.33	141875.1	10-yr	1223.29	998.41	994.36	2.78	2.11	42.75	23.59	160.65	456.87	2.3	1.27	4.05	4.05
Yellowstone County	A17	RM 386.17	141622.7	10-yr	1223.29	997.92	993.9	2.59	2.31	44.85	28.99	195.52	379.59	2.15	1.39	4.02	4.02
Yellowstone County	A17	RM 386.08	141479.6	10-yr	1223.29	997.62	994.12	2.55	2.19	51.04	28.12	177.07	415.17	2.44	1.34	3.5	3.5
Yellowstone County	A17	RM 386.03	141389.2	10-yr	1223.29	997.47	993.82	2.42	2.18	34.61	24.95	216.01	364.13	2.14	1.54	3.65	3.65
Yellowstone County	A17	RM 385.96	141289.2	10-yr	1223.29	997.43	993.01	1.88	1.72	18.75	13.44	232.39	390.11	2.65	1.9	4.42	4.42
Yellowstone County	A17	RM 385.91	141204.9	10-yr	1223.29	997.36	992.33	1.89	1.89	19.37	19.31	259.83	406.25	2.49	2.49	5.03	5.03
Yellowstone County	A17	RM 385.84	141096	10-yr	1223.29	997.16	990.57	2.3	2.3	28.34	28.34	341.25	380.25	3.61	3.61	6.59	6.59
Yellowstone County		RM 342.71	141053	10-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	10-yr	1223.29	996.95	992.45	2.57	2.57	52.03	52.03	139.37	139.37	3.41	3.41	4.5	4.5
Yellowstone County	A17	RM 385.79	141006	10-yr	1223.29	996.93	992.48	2.43	2.43	27.83	27.83	159.41	245.92	3.16	3.16	4.45	4.45
Yellowstone County	A18	RM 385.69	140846.5	10-yr	1223.29	996.72	992.9	2.4	2.28	55.49	39.67	209.31	472.83	2.42	1.73	3.82	3.82
Yellowstone County	A18	RM 385.60	140705.5	10-yr	1223.29	996.35	992.71	2.57	2.39	51.85	35.15	201.91	403.88	2.33	1.58	3.64	3.64
Yellowstone County	A18	RM 385.50	140538.8	10-yr	1223.29	996.05	990.71	2.52	2.27	47.1	21.18	149.82	376.92	3.2	1.43	5.34	5.34
Yellowstone County	A18	RM 385.39	140367.1	10-yr	1223.29	995.79	992.41	2.56	2.28	34.41	20.25	202.39	396.38	2.3	1.35	3.38	3.38
Yellowstone County	A18	RM 385.30	140231.3	10-yr	1223.29	995.48	992.53	2.65	2.41	57.54	36.37	239.13	426.66	1.88	1.19	2.95	2.95
Yellowstone County	A18	RM 385.23	140108.3	10-yr	1223.29	995.22	992.01	2.29	2.07	43.3	33.13	225.87	407.17	1.9	1.45	3.21	3.21
Yellowstone County	A18	RM 385.12	139921.2	10-yr	1223.29	994.41	991.37	3.03	2.94	66.59	54.84	207.99	319.93	1.57	1.3	3.04	3.04
Yellowstone County	A18	RM 384.93	139688.7	10-yr	1223.29	994.08	991.06	2.09	1.91	25.43	19.66	233.28	435.1	1.9	1.47	3.02	3.02
Yellowstone County	A18	RM 384.75	139352.1	10-yr	1223.29	992.99	989.77	3.62	2.95	99.24	55.19	115.21	371.69	2.08	1.15	3.22	3.22
Yellowstone County	A18	RM 384.63	139146.9	10-yr	1223.29	992.66	989.58	1.86	1.71	24.49	21	182.78	733.37	1.46	1.25	3.08	3.08
Yellowstone County	A18	RM 384.48	138904.5	10-yr	1223.29	992.3	989.55	1.49	1.69	21.33	20.39	179.03	437.26	1.78	1.7	2.95	2.95
Yellowstone County	A18	RM 384.34	138682.4	10-yr	1223.29	992.01	988.23	1.66	1.71	38.03	17.51	166.38	677.74	2.41	1.11	3.78	3.78
Yellowstone County	A18	RM 384.26	138551.1	10-yr	1223.29	991.77	987.34	2.4	1.78	56.21	23.13	87.69	570.6	3	1.22	4.43	4.43
Yellowstone County	A18	RM 384.15	138370.3	10-yr	1223.29	990.91	987.39	3.69	3.11	102.55	48.95	78.03	333.72	2.49	1.18	3.52	3.52
Yellowstone County	A18	RM 384.06	138235.3	10-yr	1223.29	990.75	987.31	2.74	1.88	45.75	23.92	84.48	608.99	2.42	1.26	3.44	3.44
Yellowstone County	A18	RM 383.96	138072.3	10-yr	1223.29	990.32	987.67	2.51	2.24	45.1	35.98	137.59	492.94	1.39	1.11	2.65	2.65
Yellowstone County	A18	RM 383.86	137914.6	10-yr	1223.29	990.12	987.24	1.83	1.69	20.87	16.79	150.96	446.48	2.01	1.62	2.88	2.88
Yellowstone County	A18	RM 383.75	137749.9	10-yr	1223.29	989.83	986.55	1.69	1.95	24.92	21.18	195.44	494.45	1.5	1.27	3.35	3.35
Yellowstone County	A18	RM 383.62	137544.5	10-yr	1223.29	989.6	986.32	1.65	1.56	17.52	12.68	175.29	628.17	1.73	1.25	3.98	3.98
Yellowstone County	A18	RM 383.54	137415.7	10-yr	1223.29	989.51	984.41	1.49	1.34	13.37	9.71	392.45	749.56	2.01	1.46	5.1	5.1
Yellowstone County	B1	RM 383.39	137175.7	10-yr	1557.43	989.07	984.98	2.38	2.36	24.49	22.64	410.05	448.15	1.59	1.47	4.09	4.09
Yellowstone County	B1	RM 383.31	137040.5	10-yr	1557.43	988.89	984.86	2.14	1.89	23.2	18.84	479.9	693.22	1.47	1.19	4.03	4.03
Yellowstone County	B1	RM 383.16	136817.2	10-yr	1557.43	988.66	984.9	1.72	1.48	12.72	12	700.62	913.94	1.22	1.15	3.76	3.76

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	10-yr	1557.43	988.19	983.64	1.74	1.55	15.3	13.36	604.13	823.26	1.4	1.22	4.55	4.55
Yellowstone County	B1	RM 382.61	135921.1	10-yr	1557.43	987.65	982.68	2.26	1.81	28.6	12.71	196.01	596.81	3.25	1.44	4.97	4.97
Yellowstone County	B1	RM 382.44	135657.8	10-yr	1557.43	987.26	981.56	2.83	2	41.86	18.42	132.49	483.6	3.66	1.61	5.7	5.7
Yellowstone County	B1	RM 382.28	135389.1	10-yr	1557.43	987.1	981.45	2.31	1.7	30.63	13.44	139.32	529.34	3.96	1.73	5.65	5.65
Yellowstone County	B1	RM 382.11	135122	10-yr	1557.43	986.59	980.52	3	2.31	51.87	18.08	132.8	526.13	3.7	1.28	6.07	6.07
Yellowstone County	B1	RM 381.93	134829.3	10-yr	1557.43	986.19	981.3	2.57	2.37	60.73	32.5	182.96	381.29	3.23	1.72	4.89	4.89
Yellowstone County	B1	RM 381.79	134602.8	10-yr	1557.43	985.76	981.63	2.79	2.52	44.76	21.69	167.13	392.03	3.26	1.57	4.13	4.13
Yellowstone County	B1	RM 381.69	134426.2	10-yr	1557.43	985.7	981.06	2.06	1.88	27.63	18.67	207.55	348.78	3.52	2.38	4.64	4.64
Yellowstone County	B1	RM 381.58	134232.5	10-yr	1557.43	985.55	981.02	1.95	1.73	23.42	14.6	271.39	511.83	2.82	1.76	4.53	4.53
Yellowstone County	B1	RM 381.47	134047.3	10-yr	1557.43	985.36	980.95	1.76	1.63	41.29	25.61	333.31	612.24	2.52	1.56	4.41	4.41
Yellowstone County	B1	RM 381.35	133871.9	10-yr	1557.43	985.04	980.79	1.74	1.63	45.97	31.49	363.63	590.86	2.37	1.62	4.25	4.25
Yellowstone County	B1	RM 381.22	133659.2	10-yr	1557.43	984.47	979.74	1.89	1.88	61.05	58.45	429.18	450.42	1.92	1.84	4.73	4.73
Yellowstone County	B1	RM 381.11	133491.4	10-yr	1557.43	983.9	979.61	2.16	2.18	62.41	55.11	261.21	361.48	2.24	1.98	4.29	4.29
Yellowstone County	B1	RM 381.00	133302.9	10-yr	1557.43	983.32	978.23	2.85	2.65	44.28	27.79	185.03	361.88	2.6	1.63	5.09	5.09
Yellowstone County	B1	RM 380.92	133180	10-yr	1557.43	983.19	976.97	2.59	2.25	43.41	22.45	151.83	397.58	3.38	1.74	6.22	6.22
Yellowstone County	B1	RM 380.81	132986.3	10-yr	1557.43	982.88	978.55	2.66	2.39	42	22.69	193.02	433.83	2.79	1.5	4.33	4.33
Yellowstone County	B1	RM 380.69	132800.2	10-yr	1557.43	982.7	978.53	2.23	2	27.9	18.4	264.79	475.74	2.49	1.64	4.17	4.17
Yellowstone County	B1	RM 380.57	132628.6	10-yr	1557.43	982.49	978.7	2.12	2.02	37.29	23.19	228.88	452.85	2.74	1.71	3.79	3.79
Yellowstone County	B1	RM 380.48	132470	10-yr	1557.43	982.29	978.24	2.19	1.97	34.74	21.08	201.22	434.61	3	1.82	4.05	4.05
Yellowstone County	B1	RM 380.34	132222.4	10-yr	1557.43	981.89	977.37	2.55	2.15	36.98	23.78	205.99	429.69	2.61	1.68	4.52	4.52
Yellowstone County	B1	RM 380.22	132032.4	10-yr	1557.43	981.38	977.02	3.12	2.93	54.46	38.14	172.12	269.35	2.82	1.97	4.36	4.36
Yellowstone County	B1	RM 380.11	131847.7	10-yr	1557.43	981.15	976.29	2.69	2.37	46.65	29.54	181.17	467.18	2.61	1.66	4.86	4.86
Yellowstone County	B1	RM 380.01	131671.4	10-yr	1557.43	980.92	976.21	2.49	1.93	45.48	23.12	173.7	599.38	2.75	1.4	4.71	4.71
Yellowstone County	B1	RM 379.92	131538.8	10-yr	1557.43	980.64	976.69	2.69	2.13	40.5	20.41	191.66	598.8	2.42	1.22	3.95	3.95
Yellowstone County	B1	RM 379.84	131406.9	10-yr	1557.43	980.58	975.94	1.77	1.56	19.33	13.57	414.73	702.27	2.02	1.42	4.64	4.64
Yellowstone County	B1	RM 379.75	131265.1	10-yr	1557.43	980.4	974.98	1.88	1.69	26.25	17.13	375.27	666.43	2.13	1.39	5.42	5.42
Yellowstone County	B1	RM 379.65	131104.3	10-yr	1557.43	980.22	975.6	1.86	1.68	21.18	18.71	379.5	502.56	2.09	1.84	4.62	4.62
Yellowstone County	B1	RM 379.56	130964.3	10-yr	1557.43	980.1	975.94	1.75	1.58	18.95	12.7	313.71	1354.09	2.32	1.55	4.16	4.16
Yellowstone County	B1	RM 379.46	130794	10-yr	1557.43	979.91	974.74	1.92	1.62	21.27	11.88	292.55	1183.66	2.25	1.25	5.17	5.17
Yellowstone County	B1	RM 379.36	130642.3	10-yr	1557.43	979.83	975.71	1.66	1.14	21.99	10.46	246.55	1007.49	3.09	1.46	4.12	4.12
Yellowstone County	B1	RM 379.27	130496.2	10-yr	1557.43	979.49	974.66	2.63	1.65	60.37	25.85	164.4	772.32	2.86	1.22	4.83	4.83
Yellowstone County	B1	RM 379.17	130345.7	10-yr	1557.43	978.98	973.93	3.15	2.1	65.82	20.19	154.92	826.99	2.93	0.9	5.05	5.05
Yellowstone County	B1	RM 379.04	130142	10-yr	1557.43	978.72	974.79	2.6	1.69	38.42	16.09	203.31	888.39	2.48	1.04	3.93	3.93
Yellowstone County	B1	RM 378.97	130026.7	10-yr	1557.43	978.48	974.64	2.67	1.89	41.41	17.88	231.05	838.84	2.28	0.98	3.84	3.84
Yellowstone County	B1	RM 378.86	129850.9	10-yr	1557.43	978.1	974.4	2.73	1.98	48.43	21.77	246.16	821.06	2.13	0.96	3.7	3.7
Yellowstone County	B1	RM 378.76	129682.3	10-yr	1557.43	977.77	974.17	2.59	1.96	40.77	18.09	270.37	850.48	2.1	0.93	3.6	3.6
Yellowstone County	B1	RM 378.67	129541.3	10-yr	1557.43	977.52	973.97	2.56	1.77	35.05	18.37	261.4	838.98	2.06	1.08	3.55	3.55
Yellowstone County	B1	RM 378.61	129443.1	10-yr	1557.43	977.36	973.83	2.32	1.7	54.95	29.56	225.72	897.75	1.98	1.06	3.53	3.53
Yellowstone County	B1	RM 378.52	129297.7	10-yr	1557.43	977.12	973.62	1.88	1.61	20.43	16.28	550.54	883.24	1.42	1.13	3.5	3.5
Yellowstone County	B1	RM 378.46	129200.8	10-yr	1557.43	977.03	973.48	1.53	1.42	16.82	13.55	611.41	836.5	1.63	1.31	3.55	3.55
Yellowstone County	B1	RM 378.40	129112.2	10-yr	1557.43	976.89	973.41	1.55	1.48	42.08	33.01	605.33	827.07	1.63	1.28	3.48	3.48
Yellowstone County	B1	RM 378.29	128929.4	10-yr	1557.43	976.74	972.93	1.23	1.15	11.26	8.1	566.77	851.23	2.21	1.59	3.81	3.81
Yellowstone County	B1	RM 378.13	128673.7	10-yr	1557.43	976.44	971.4	1.96	1.95	16.31	14.35	412.03	624.52	1.92	1.69	5.04	5.04
Yellowstone County	B1	RM 378.07	128569	10-yr	1557.43	976.36	970.46	1.96	1.93	15.24	13.62	344.03	548.97	2.3	2.06	5.9	5.9
Yellowstone County	B1	RM 377.96	128380.3	10-yr	1557.43	975.95	968.85	2.74	2.74	54.26	54.26	109.61	109.61	5.18	5.18	7.1	7.1
Yellowstone County		RM 338.83	128364	10-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	10-yr	1557.43	975.92	967.19	2.57	2.57	51.99	51.99	108.5	108.5	5.59	5.59	8.73	8.73
Yellowstone County	B1	RM 377.87	128244.4	10-yr	1557.43	975.72	970.56	2.7	2.7	50.79	50.77	223.61	344.12	2.64	2.64	5.16	5.16
Yellowstone County	B1	RM 377.79	128118	10-yr	1557.43	975.52	970.94	2.53	2.53	31.76	31.73	328.91	534.37	1.87	1.87	4.58	4.58
Yellowstone County	B1	RM 377.69	127964.3	10-yr	1557.43	975.33	969.86	2.27	2.25	24.24	22.55	384.64	589.89	1.79	1.66	5.47	5.47
Yellowstone County	B1	RM 377.61	127824.8	10-yr	1557.43	974.87	970.53	2.99	2.97	46.32	44.37	257.25	338.96	2.02	1.94	4.34	4.34
Yellowstone County	B1	RM 377.55	127735.1	10-yr	1557.43	974.78	970.41	2.56	2.55	29.38	27.94	330.26	394.9	1.85	1.75	4.37	4.37
Yellowstone County	B1	RM 377.48	127618.1	10-yr	1557.43	974.6	970.26	2.42	2.42	27.7	27.7	400.54	503.02	1.61	1.61	4.34	4.34
Yellowstone County	B1	RM 377.39	127466.6	10-yr	1557.43	974.26	969.73	2.63	2.58	33.09	28.63	345.38	408.22	1.71	1.48	4.53	4.53
Yellowstone County	B1	RM 377.34	127391.5	10-yr	1557.43	974.01	969.95	2.76	2.71	81.69	70.8	287.97	341.05	1.95	1.69	4.06	4.06
Yellowstone County	B1	RM 377.25	127241.9	10-yr	1557.43	973.85	970.26	1.94	1.88	22.54	19.13	399.02	488.28	2	1.69	3.59	3.59
Yellowstone County	B1	RM 377.16	127097.7	10-yr	1557.43	973.67	969.82	1.91	1.83	24.3	21.28	409.4	552.42	1.75	1.54	3.85	3.85
Yellowstone County	B1	RM 377.08	126969	10-yr	1557.43	973.62	969	1.46	1.32	12.03	7.87	417.58	756.49	2.37	1.56	4.62	4.62
Yellowstone County	B1	RM 377.04	126900.8	10-yr	1557.43	973.51	968.6	1.67	1.59	50.71	40.91	563.02	741.66	1.63	1.32	4.91	4.91
Yellowstone County	B1	RM 376.98	126797.5	10-yr	1557.43	973.27	969.02	1.9	1.82	18.01	14.62	525.66	680.95	1.55	1.26	4.25	4.25
Yellowstone County	B1	RM 376.92	126710.1	10-yr	1557.43	973.18	969.01	1.59	1.51	37.84	29.75	503.25	685.39	1.92	1.51	4.17	4.17

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	10-yr	1557.43	973.07	967.73	1.33	1.27	15.46	12.82	448.02	661.53	2.23	1.85	5.34	5.34
Yellowstone County	B1	RM 376.75	126442.1	10-yr	1557.43	972.94	967.82	1.41	1.41	21.28	19.08	400.7	505.69	2.44	2.19	5.12	5.12
Yellowstone County	B1	RM 376.67	126309	10-yr	1557.43	972.73	967.23	1.73	1.73	36.66	30.23	332.9	456.14	2.4	1.98	5.5	5.5
Yellowstone County	B1	RM 376.58	126174.1	10-yr	1557.43	972.38	966.82	2.15	2.16	52.54	48.93	306.98	354.63	2.18	2.04	5.56	5.56
Yellowstone County	B1	RM 376.51	126058.2	10-yr	1557.43	972.06	966.77	2.44	2.44	43.07	43.07	263.44	263.44	2.42	2.42	5.29	5.29
Yellowstone County	B1	RM 376.42	125918.5	10-yr	1557.43	971.91	967.68	2.19	2.19	27.77	27.77	256.18	256.18	2.78	2.78	4.23	4.23
Yellowstone County	B1	RM 376.35	125809.8	10-yr	1557.43	971.82	966.71	2.16	2.16	24.77	24.71	225.05	225.45	3.21	3.2	5.11	5.11
Yellowstone County	B1	RM 376.28	125697	10-yr	1557.43	971.49	966.28	2.87	2.87	47.56	47.56	216.87	216.87	2.51	2.51	5.21	5.21
Yellowstone County	B1	RM 376.20	125565.9	10-yr	1557.43	971.27	966.16	2.69	2.69	44.29	44.27	251.57	251.68	2.3	2.3	5.11	5.11
Yellowstone County	B1	RM 376.10	125404.8	10-yr	1557.43	970.95	966.61	2.66	2.58	42.3	37.9	268.02	328.64	2.05	1.84	4.34	4.34
Yellowstone County	B1	RM 376.00	125250.5	10-yr	1557.43	970.66	967.42	2.59	2.28	42.77	27.9	241.54	561.49	2.28	1.49	3.24	3.24
Yellowstone County	B1	RM 375.88	125055.1	10-yr	1557.43	970.34	966.01	2.52	1.96	43.09	20.27	184.68	973.87	2.73	1.28	4.33	4.33
Yellowstone County	B1	RM 375.78	124897.3	10-yr	1557.43	970.16	965.37	2.28	1.73	34.43	17.87	186.58	768.31	2.62	1.36	4.79	4.79
Yellowstone County	B1	RM 375.67	124708.2	10-yr	1557.43	969.95	965.8	2.18	1.79	31	17.56	223.44	642.22	2.39	1.36	4.15	4.15
Yellowstone County	B1	RM 375.58	124564.2	10-yr	1557.43	969.71	966.54	2.37	1.99	36.06	20.48	224.2	588.49	2.34	1.33	3.17	3.17
Yellowstone County	B1	RM 375.23	124013.6	10-yr	1557.43	969.02	965.23	2.22	1.71	31.94	14.34	226.16	789.41	2.58	1.16	3.79	3.79
Yellowstone County	B1	RM 375.10	123799.5	10-yr	1557.43	968.4	963.88	3.26	2.29	73.48	24.61	126.05	644.19	3.16	1.05	4.52	4.52
Yellowstone County	B1	RM 374.97	123580.4	10-yr	1557.43	968.15	963.97	2.49	1.82	49.52	18.6	136.59	765.72	3.01	1.12	4.18	4.18
Yellowstone County	B1	RM 374.83	123365.5	10-yr	1557.43	967.89	963.52	2.21	1.63	30.81	13.62	130.92	768.02	2.82	1.24	4.37	4.37
Yellowstone County	B1	RM 374.73	123195.7	10-yr	1557.43	967.81	963.36	1.68	1.26	15.81	6.9	143.2	965.41	2.93	1.28	4.45	4.45
Yellowstone County	B1	RM 374.61	123010.3	10-yr	1557.43	967.57	963.49	2.13	1.71	34.6	14.59	159.65	744.14	2.92	1.23	4.08	4.08
Yellowstone County	B1	RM 374.53	122875.3	10-yr	1608.4	967.35	963.14	2.34	1.98	36.14	18.43	186.39	577.58	2.76	1.41	4.21	4.21
Yellowstone County	B1	RM 374.44	122726.7	10-yr	1608.4	967.02	963.04	2.84	2.19	56.13	21.37	124.73	575.41	3.37	1.28	3.98	3.98
Yellowstone County	B1	RM 374.32	122535.1	10-yr	1608.4	966.83	962.82	2.15	1.93	37.5	22.26	190.03	556.11	2.52	1.49	4.01	4.01
Yellowstone County	B1	RM 374.22	122379	10-yr	1608.4	966.63	960.92	2.36	1.62	33.2	12.1	134.27	823.85	3.29	1.2	5.71	5.71
Yellowstone County	B1	RM 374.13	122231.1	10-yr	1608.4	966.49	960.11	2.46	1.63	33.35	14.03	137.18	806.47	2.92	1.23	6.38	6.38
Yellowstone County	B1	RM 373.97	121972.4	10-yr	1608.4	966.3	958.8	1.91	1.61	22.48	11.89	223.18	644.14	2.95	1.55	7.5	7.5
Yellowstone County	B1	RM 373.88	121829.3	10-yr	1608.4	966.14	962.21	2.08	1.65	32.01	13.77	194.77	776.75	2.93	1.25	3.93	3.93
Yellowstone County	B1	RM 373.79	121688.7	10-yr	1608.4	966.01	961.66	1.94	1.46	30.39	14.46	188.88	780.89	2.97	1.41	4.35	4.35
Yellowstone County	B1	RM 373.69	121523.5	10-yr	1608.4	965.85	961.11	1.94	1.45	23.74	12.37	202.68	761.04	2.81	1.46	4.74	4.74
Yellowstone County	B1	RM 373.56	121314.3	10-yr	1608.4	965.28	959.37	2.92	2.66	54.94	37.01	203.78	349.13	2.58	1.73	5.91	5.91
Yellowstone County	B1	RM 373.39	121015.9	10-yr	1608.4	964.8	958.78	2.66	2.56	46.29	37.01	186.4	245.83	3.2	2.55	6.02	6.02
Yellowstone County	B1	RM 373.26	120802.3	10-yr	1608.4	964.7	960.81	1.8	1.71	20.88	16.96	355.66	575.05	2.46	2	3.89	3.89
Yellowstone County	B1	RM 373.09	120539.5	10-yr	1608.4	964.33	959.94	2.2	2.09	29.33	23.58	304.46	540.47	2.35	1.89	4.39	4.39
Yellowstone County	B1	RM 372.99	120365.2	10-yr	1608.4	964.1	959.69	2.06	1.89	37.53	27.37	329.28	507.7	2.29	1.67	4.41	4.41
Yellowstone County	B1	RM 372.82	120107.7	10-yr	1608.4	963.88	959.03	1.61	1.57	15.5	14.12	469.06	530.97	2.11	1.92	4.85	4.85
Yellowstone County	B1	RM 372.72	119922.5	10-yr	1608.4	963.66	958.92	1.77	1.76	29.95	27.74	442.03	481.81	2.05	1.9	4.74	4.74
Yellowstone County	B1	RM 372.65	119797.7	10-yr	1608.4	963.51	957.32	1.8	1.73	21.74	20.55	396.83	441.5	2.23	2.11	6.19	6.19
Yellowstone County	B1	RM 372.58	119676.6	10-yr	1608.4	963.43	958.2	1.57	1.54	15.5	14.08	441.45	500.71	2.3	2.08	5.23	5.23
Yellowstone County	B1	RM 372.41	119395.9	10-yr	1608.4	963.3	958.82	1.4	1.35	10.67	9.63	485.58	566.46	2.33	2.1	4.48	4.48
Yellowstone County	B1	RM 372.32	119268.8	10-yr	1608.4	963.19	957.24	1.42	1.38	31.24	26.29	533.77	661.26	2.1	1.76	5.95	5.95
Yellowstone County	B1	RM 372.20	119079.1	10-yr	1608.4	962.82	956.93	1.56	1.54	43.19	40.64	512.44	565.85	1.96	1.85	5.89	5.89
Yellowstone County	B1	RM 372.08	118886.4	10-yr	1608.4	962.33	956.2	1.72	1.68	49.27	42.32	466.13	1006.03	1.94	1.67	6.13	6.13
Yellowstone County	B1	RM 371.94	118669.8	10-yr	1608.4	961.67	957.58	2	2	52.75	52.58	432.43	628.88	1.86	1.86	4.09	4.09
Yellowstone County	B1	RM 371.83	118490.4	10-yr	1608.4	961.34	957.52	1.86	1.82	30.37	27.21	393.1	644.88	2.12	1.9	3.82	3.82
Yellowstone County	B1	RM 371.74	118350.7	10-yr	1608.4	961.13	957.48	1.93	1.85	25.43	19.19	386.04	682.46	2.05	1.55	3.65	3.65
Yellowstone County	B1	RM 371.62	118155.6	10-yr	1608.4	960.92	956.41	2.01	1.54	28.33	13.32	220.59	708.64	3.13	1.47	4.51	4.51
Yellowstone County	B1	RM 371.53	118001.4	10-yr	1608.4	960.68	955.99	2.32	1.83	32.87	15.93	234.67	674.66	2.69	1.3	4.69	4.69
Yellowstone County	B1	RM 371.43	117839.2	10-yr	1608.4	960.2	955.47	2.8	2.58	87.35	57.79	247.21	614.12	2.25	1.49	4.73	4.73
Yellowstone County	B1	RM 371.37	117745.1	10-yr	1608.4	960.06	955.72	2.44	2.08	29.11	16.6	291.95	706.59	2.18	1.24	4.34	4.34
Yellowstone County	B1	RM 371.32	117662.6	10-yr	1608.4	960.03	956.41	1.96	1.59	32.66	17.81	299.65	758.15	2.44	1.33	3.62	3.62
Yellowstone County	B1	RM 371.25	117560.3	10-yr	1608.4	959.92	955.99	1.83	1.53	21.18	12.96	372.8	825.08	2.23	1.36	3.93	3.93
Yellowstone County	B1	RM 371.21	117499	10-yr	1608.4	959.89	955.72	1.65	1.43	17.26	12.81	356.42	641.23	2.36	1.75	4.17	4.17
Yellowstone County	B1	RM 371.12	117353.9	10-yr	1608.4	959.74	955.54	1.78	1.78	19.51	19.51	386.24	386.24	2.34	2.34	4.2	4.2
Yellowstone County	B1	RM 371.04	117225.1	10-yr	1608.4	959.31	954.84	2.7	2.7	43.17	43.17	228.36	474.19	2.61	2.61	4.47	4.47
Yellowstone County		RM 335.51	117205	10-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	10-yr	1608.4	959.23	954.9	2.63	2.63	41.84	41.84	223.61	313.04	2.74	2.74	4.33	4.33
Yellowstone County	B1	RM 370.94	117054.9	10-yr	1608.4	959.07	955.57	2.43	2.38	41.52	35.09	242.3	866.61	2.72	2.3	3.5	3.5
Yellowstone County	B1	RM 370.85	116910.9	10-yr	1608.4	958.76	954.47	2.68	2.53	48.27	29.7	218.16	945.97	2.74	1.68	4.29	4.29
Yellowstone County	B1	RM 370.77	116793.6	10-yr	1608.4	958.51	953.84	2.81	2.47	43.5	23.91	222.28	955.88	2.53	1.39	4.67	4.67
Yellowstone County	B1	RM 370.72	116711.6	10-yr	1608.4	958.28	953.13	3.1	2.45	60.09	27.89	164.9	915.12	2.94	1.36	5.15	5.15

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	10-yr	1608.4	958.29	953.05	2.72	2.04	38.71	23.16	195.3	960.84	2.62	1.57	5.24	5.24
Yellowstone County	B1	RM 370.63	116558.9	10-yr	1608.4	958.11	953.42	2.62	2.15	55.27	19.28	179.45	1014.12	3.2	1.12	4.69	4.69
Yellowstone County	B1	RM 370.56	116440.6	10-yr	1608.4	958.04	953.34	2.33	1.69	25.32	8.43	178.29	970.91	3.57	1.18	4.7	4.7
Yellowstone County	B1	RM 370.44	116241.1	10-yr	1608.4	957.71	952.03	2.86	1.95	51.74	13.87	133.87	803.39	3.86	1.03	5.68	5.68
Yellowstone County	B1	RM 370.34	116071.6	10-yr	1608.4	957.46	949.79	2.92	2.03	56.54	12.43	118.14	845.47	4.31	0.94	7.67	7.67
Yellowstone County	B1	RM 370.24	115908.6	10-yr	1608.4	957.34	950.22	2.65	1.74	42.11	11.63	117.55	749.26	4.52	1.24	7.12	7.12
Yellowstone County	B1	RM 370.11	115705	10-yr	1608.4	957.12	952.12	2.59	1.92	44.4	17.61	160.2	617.45	3.43	1.36	5	5
Yellowstone County	B1	RM 370.00	115535.2	10-yr	1608.4	956.83	952.2	2.36	2.1	63.96	44.27	256.27	500.75	2.21	1.53	4.63	4.63
Yellowstone County	B1	RM 369.89	115356.1	10-yr	1608.4	956.49	953.15	2.2	2.04	23.88	19.67	404.29	556.03	1.72	1.42	3.34	3.34
Yellowstone County	B1	RM 369.77	115164.3	10-yr	1608.4	956.24	952.34	2.03	1.98	22.02	20.11	480.29	645.59	1.64	1.5	3.9	3.9
Yellowstone County	B1	RM 369.64	114965.6	10-yr	1608.4	955.94	951.9	1.98	1.88	28.98	23.12	501.25	769.05	1.56	1.24	4.04	4.04
Yellowstone County	B1	RM 369.54	114789.5	10-yr	1608.4	955.67	952.38	1.87	1.66	22.1	17.03	494.65	774.56	1.62	1.25	3.29	3.29
Yellowstone County	B1	RM 369.45	114650.1	10-yr	1608.4	955.53	951	1.68	1.56	19.84	16.87	464.89	663.33	1.84	1.56	4.53	4.53
Yellowstone County	B1	RM 369.32	114431.1	10-yr	1608.4	955.27	951.1	1.71	1.53	26.89	19.33	375.41	615.61	2.37	1.7	4.17	4.17
Yellowstone County	B1	RM 369.17	114210.5	10-yr	1608.4	954.93	949.85	2.1	2.05	39.67	31.79	194.98	349.37	2.8	2.24	5.08	5.08
Yellowstone County	B1	RM 369.06	114022.4	10-yr	1608.4	954.35	949.89	3.12	2.65	62.41	31.7	151.12	401.84	2.98	1.51	4.46	4.46
Yellowstone County	B1	RM 368.96	113871.2	10-yr	1608.4	954.19	949.68	2.58	2.15	42.34	24.97	168.47	418.39	3.03	1.79	4.51	4.51
Yellowstone County	B1	RM 368.88	113745.9	10-yr	1608.4	954.02	948.77	2.44	2.04	37.02	19.52	214.28	619.09	2.58	1.35	5.25	5.25
Yellowstone County	B1	RM 368.82	113641	10-yr	1608.4	953.83	948.47	2.38	2.08	46.25	30.23	295.25	606.64	1.95	1.27	5.36	5.36
Yellowstone County	B1	RM 368.72	113477.3	10-yr	1608.4	953.6	948.45	1.92	1.67	31.34	22.76	343.73	636.11	2.09	1.51	5.15	5.15
Yellowstone County	B1	RM 368.63	113328.9	10-yr	1608.4	953.41	947.82	1.88	1.6	28.11	18.02	301.75	683.03	2.29	1.47	5.59	5.59
Yellowstone County	B1	RM 368.54	113195.6	10-yr	1608.4	953.21	947.51	2.05	1.65	27.77	16.16	269.34	632.15	2.65	1.54	5.7	5.7
Yellowstone County	B1	RM 368.44	113035.8	10-yr	1608.4	952.9	947.4	2.31	1.95	61.88	41.87	255.6	502.37	2.42	1.64	5.5	5.5
Yellowstone County	B1	RM 368.35	112878.7	10-yr	1608.4	952.86	946.64	1.55	1.46	14.11	9.77	283.07	435.58	3.65	2.52	6.22	6.22
Yellowstone County	B1	RM 368.26	112737.6	10-yr	1608.4	952.56	946.23	2.36	2.36	85.44	85.25	226.94	227.39	3	3	6.33	6.33
Yellowstone County	B1	RM 368.18	112604.7	10-yr	1608.4	952.19	947.11	2.78	2.78	46.82	46.82	161.01	745.38	3.6	3.6	5.08	5.08
Yellowstone County	B2	RM 368.09	112456.7	10-yr	1608.4	951.9	947.7	2.95	2.95	60.89	60.89	154.76	154.76	3.52	3.52	4.2	4.2
Yellowstone County	B2	RM 368.00	112314.4	10-yr	1608.4	951.85	947.56	2.3	2.3	30.45	29.92	198.41	475.48	3.52	3.47	4.29	4.29
Yellowstone County	B2	RM 367.86	112104.7	10-yr	1608.4	951.46	946.1	2.8	2.8	55.2	55.2	173.83	173.83	3.31	3.31	5.36	5.36
Yellowstone County	B2	RM 367.79	111989.2	10-yr	1608.4	951.24	945.04	2.8	2.8	67.28	67.1	167.26	167.53	3.44	3.43	6.2	6.2
Yellowstone County	B2	RM 367.72	111876.5	10-yr	1608.4	951.1	945.45	2.72	2.58	40.85	31.95	149.5	290.98	3.84	3.01	5.65	5.65
Yellowstone County	B2	RM 367.64	111739.2	10-yr	1608.4	950.86	945.68	2.94	2.7	59.43	31.87	139.51	337.31	3.74	2	5.18	5.18
Yellowstone County	B2	RM 367.50	111519.9	10-yr	1608.4	950.46	945.21	3.09	2.69	60.27	25.29	126.29	358.58	4	1.66	5.25	5.25
Yellowstone County	B2	RM 367.40	111357.1	10-yr	1608.4	950.26	944.36	3.03	2.47	52.25	20.78	113.06	389.43	4.26	1.68	5.9	5.9
Yellowstone County	B2	RM 367.31	111214.8	10-yr	1608.4	950.1	945.36	2.88	2.34	41.96	18.05	144.65	443.16	3.62	1.55	4.74	4.74
Yellowstone County	B2	RM 367.19	110992.7	10-yr	1608.4	949.93	945.91	2.35	2.05	31.96	18.38	244.86	512.48	2.68	1.53	4.02	4.02
Yellowstone County	B2	RM 367.11	110813.5	10-yr	1608.4	949.72	945.17	2.24	1.89	30.93	20.75	295.2	545.59	2.33	1.56	4.55	4.55
Yellowstone County	B2	RM 367.03	110669.4	10-yr	1608.4	949.64	945.89	1.76	1.57	16.31	13.96	408.65	552.86	2.17	1.85	3.75	3.75
Yellowstone County	B2	RM 366.95	110543	10-yr	1608.4	949.58	945.34	1.27	1.21	20.45	19.33	560.16	644.93	2.17	2.06	4.24	4.24
Yellowstone County	B2	RM 366.84	110376	10-yr	1608.4	949.45	944.61	1.14	1.12	16.56	13.35	600.51	769.6	2.32	1.87	4.84	4.84
Yellowstone County	B2	RM 366.78	110300.8	10-yr	1608.4	949.38	943.84	1.22	1.15	19.24	14.19	562.05	905.89	2.33	1.71	5.54	5.54
Yellowstone County	B2	RM 366.73	110074.8	10-yr	1608.4	949.1	943.42	1.55	1.55	28.64	28.64	435.85	631.02	2.37	2.37	5.68	5.68
Yellowstone County	B2	RM 366.68	109931.6	10-yr	1608.4	948.84	942.77	1.9	1.9	39.92	38.77	309.98	319.34	2.73	2.65	6.07	6.07
Yellowstone County	B2	RM 366.53	109747.6	10-yr	1608.4	948.43	940.86	2.64	2.64	34.68	34.68	162.71	162.71	3.75	3.75	7.57	7.57
Yellowstone County	B2	RM 366.38	109510.8	10-yr	1608.4	948.05	941.55	3.01	3.01	60.27	60.27	114.8	114.8	4.66	4.66	6.5	6.5
Yellowstone County	B2	RM 366.27	109345.5	10-yr	1608.4	948.04	942.72	2.01	2.01	32.85	32.75	225.67	305.05	3.54	3.53	5.32	5.32
Yellowstone County	B2	RM 366.15	109158.9	10-yr	1608.4	947.77	941.59	2.06	2.06	55.69	55.69	291.56	296.43	2.68	2.68	6.18	6.18
Yellowstone County	B2	RM 366.04	108972.6	10-yr	1608.4	947.49	941.41	2.26	2.26	18.82	18.82	311.43	311.43	2.29	2.29	6.08	6.08
Yellowstone County	B2	RM 365.94	108818.8	10-yr	1608.4	947.41	940.93	2.01	2.01	15.38	15.38	359.72	359.72	2.23	2.23	6.48	6.48
Yellowstone County	B2	RM 365.83	108647.5	10-yr	1608.4	947.2	939.93	1.95	1.91	64.94	60.17	331.06	367.64	2.47	2.29	7.27	7.27
Yellowstone County	B2	RM 365.75	108521.3	10-yr	1608.4	946.9	941.33	1.98	1.94	57.12	47.66	263.83	369.29	2.69	2.24	5.57	5.57
Yellowstone County	B2	RM 365.71	108446.5	10-yr	1608.4	946.72	941.83	2.15	1.97	53.01	35.67	234.02	389.43	3.12	2.09	4.89	4.89
Yellowstone County	B2	RM 365.64	108343.5	10-yr	1608.4	946.54	942.19	2.06	1.89	49.86	36.15	303.7	465.28	2.52	1.83	4.35	4.35
Yellowstone County	B2	RM 365.57	108220.5	10-yr	1608.4	946.26	942.08	2.24	2.07	49.63	35.42	251.45	392.29	2.78	1.98	4.18	4.18
Yellowstone County	B2	RM 365.51	108118.9	10-yr	1608.4	946.05	941.87	2.24	2.08	59.13	40.82	265.35	424.3	2.65	1.83	4.18	4.18
Yellowstone County	B2	RM 365.46	108042.9	10-yr	1608.4	945.98	941.73	1.87	1.79	30.99	24.38	317.69	426.5	2.68	2.11	4.25	4.25
Yellowstone County	B2	RM 365.41	107956.5	10-yr	1608.4	945.9	941.46	1.75	1.7	27	22.65	326.34	402.31	2.8	2.35	4.44	4.44
Yellowstone County	B2	RM 365.37	107905.7	10-yr	1608.4	945.86	940.74	1.76	1.76	18.39	17.95	308.64	316.77	2.95	2.88	5.12	5.12
Yellowstone County	B2	RM 365.31	107792.4	10-yr	1608.4	945.73	939.27	2	1.95	22.33	19.87	257.08	297.64	3.11	2.77	6.46	6.46
Yellowstone County	B2	RM 365.27	107727.9	10-yr	1608.4	945.64	939.34	2.16	2.12	29.27	24.64	251.44	306.85	2.94	2.48	6.3	6.3
Yellowstone County	B2	RM 365.23	107674.2	10-yr	1608.4	945.54	939.52	2.33	2.29	26.32	22.19	230.94	282.25	2.98	2.51	6.02	6.02

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	10-yr	1608.4	945.51	939.93	2.13	2.11	31.11	28.2	240.03	267.96	3.14	2.84	5.58	5.58
Yellowstone County	B2	RM 365.15	107534.7	10-yr	1608.4	945.45	939.68	2.13	2.07	25	21.93	213.66	253.11	3.5	3.07	5.77	5.77
Yellowstone County	B2	RM 365.10	107466	10-yr	1608.4	945.35	938.61	2.3	2.29	28.94	26.65	186.92	204.68	3.74	3.44	6.74	6.74
Yellowstone County	B2	RM 365.06	107396.2	10-yr	1608.4	945.3	939.07	2.28	2.2	31.77	23.46	170.56	241.45	4.11	3.03	6.23	6.23
Yellowstone County	B2	RM 365.01	107325.8	10-yr	1608.4	945.27	939.22	2.07	2.03	42.65	31.49	174.94	242.65	4.43	3.26	6.05	6.05
Yellowstone County	B2	RM 364.99	107287.5	10-yr	1608.4	945.21	939.27	2.17	2.09	49.76	34.63	170.9	257.76	4.3	2.99	5.94	5.94
Yellowstone County	B2	RM 364.90	107128.3	10-yr	1608.4	944.96	937.97	2.5	2.36	29.82	25.36	148.11	185.96	4.3	3.66	6.99	6.99
Yellowstone County		RM 331.55	107100	10-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	10-yr	1608.4	944.85	938.58	2.48	2.37	29.21	25.35	150.5	181.4	4.29	3.74	6.27	6.27
Yellowstone County	B2	RM 364.81	106996.1	10-yr	1608.4	944.85	938.93	2.08	2.08	20.51	20.51	242.44	242.44	3.2	3.2	5.92	5.92
Yellowstone County	B2	RM 364.74	106893.3	10-yr	1608.4	944.71	938.94	2.33	2.24	36.87	33.62	164.71	261.54	4.16	3.82	5.77	5.77
Yellowstone County	B2	RM 364.64	106739.2	10-yr	1608.4	944.39	939.09	2.84	2.78	38.08	35.4	129.84	510.46	4.42	4.12	5.3	5.3
Yellowstone County		RM 331.32	106722	10-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	10-yr	1608.4	944.25	939.16	2.88	2.82	45.05	42.08	137.46	152.7	4.23	3.97	5.09	5.09
Yellowstone County	B2	RM 364.61	106686.8	10-yr	1608.4	944.26	939.21	2.62	2.62	33.6	33.6	156.99	414.59	3.91	3.91	5.05	5.05
Yellowstone County	B2	RM 364.60	106666.6	10-yr	1608.4	944.18	939.26	2.8	2.8	38.62	38.62	147.88	147.88	3.88	3.88	4.92	4.92
Yellowstone County		RM 331.14	106644	10-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	10-yr	1608.4	944.09	939.21	2.77	2.77	37.21	37.21	148.78	148.78	4.01	4.01	4.88	4.88
Yellowstone County	B2	RM 364.53	106558.4	10-yr	1608.4	944.06	939.11	2.6	2.6	33.11	33.11	158.28	158.28	3.91	3.91	4.94	4.94
Yellowstone County	B2	RM 364.49	106490.3	10-yr	1608.4	943.99	939.24	2.59	2.59	35.64	32.9	160.07	173.81	3.87	3.57	4.75	4.75
Yellowstone County	B2	RM 364.43	106394	10-yr	1608.4	943.9	939.13	2.58	2.54	36.09	31.09	159.28	187.62	3.91	3.37	4.77	4.77
Yellowstone County	B2	RM 364.37	106296.4	10-yr	1608.4	943.83	938.98	2.56	2.41	31.88	22.08	147.99	228.86	4.23	2.91	4.85	4.85
Yellowstone County	B2	RM 364.32	106215.1	10-yr	1608.4	943.75	938.52	2.55	2.39	51.19	35.2	153.47	241.96	4.06	2.78	5.23	5.23
Yellowstone County	B2	RM 364.29	106172.9	10-yr	1608.4	943.78	938.13	2	1.87	54.08	38.55	191	585	4.13	2.94	5.65	5.65
Yellowstone County	B2	RM 364.26	106126.6	10-yr	1608.4	943.54	937.7	2.7	2.4	55.71	38.13	143.25	243.22	4.03	2.76	5.84	5.84
Yellowstone County	B2	RM 364.22	106055.2	10-yr	1608.4	943.37	938.15	2.85	2.85	66.37	65.33	135.08	204.26	4.17	4.11	5.22	5.22
Yellowstone County	B2	RM 364.14	105927.3	10-yr	1608.4	943.03	938.12	3.22	2.9	77.39	49.24	123.13	221.34	3.96	2.51	4.91	4.91
Yellowstone County	B2	RM 364.06	105809.9	10-yr	1608.4	942.91	938.22	2.78	2.49	54.16	30.96	153.38	305.59	3.71	2.12	4.69	4.69
Yellowstone County	B2	RM 363.96	105648.3	10-yr	1608.4	942.79	938.28	2.2	2.11	36.24	31.35	247.73	372.23	2.93	2.53	4.51	4.51
Yellowstone County	B2	RM 363.85	105472.4	10-yr	1608.4	942.51	936.25	2.63	2.29	34.45	23.17	150.16	279.86	3.76	2.51	6.26	6.26
Yellowstone County	B2	RM 363.76	105316.8	10-yr	1608.4	942.38	937.03	2.47	2.23	42.42	26.75	146.64	291.37	3.93	2.47	5.35	5.35
Yellowstone County	B2	RM 363.63	105118.1	10-yr	1608.4	942.15	937.93	2.08	2.08	42.01	42.01	327.68	327.68	2.36	2.36	4.22	4.22
Yellowstone County	B2	RM 363.52	104943.9	10-yr	1608.4	941.83	937.54	1.96	1.88	44.4	36.43	372.38	476.66	2.18	1.79	4.29	4.29
Yellowstone County	B2	RM 363.46	104841.5	10-yr	1608.4	941.7	937.16	1.78	1.62	30.94	21.09	330.96	588.44	2.67	1.81	4.54	4.54
Yellowstone County	B2	RM 363.33	104622.9	10-yr	1608.4	941.38	936.36	1.86	1.49	44.02	25.04	299.67	796.69	2.51	1.42	5.02	5.02
Yellowstone County	B2	RM 363.20	104414.5	10-yr	1608.4	941.02	936.48	2.04	1.52	33.24	15.04	282.91	1004.5	2.54	1.15	4.54	4.54
Yellowstone County	B2	RM 363.10	104256.4	10-yr	1608.4	940.75	936.25	2.19	1.68	38.26	19.75	274.47	768.86	2.42	1.25	4.5	4.5
Yellowstone County	B2	RM 363.03	104144.8	10-yr	1608.4	940.6	936.22	2.13	1.61	31.1	14.2	284.51	897.21	2.44	1.11	4.38	4.38
Yellowstone County	B2	RM 362.86	103869.6	10-yr	1608.4	940.45	934.32	1.49	1.17	13.4	7.76	405.06	974.97	2.44	1.41	6.13	6.13
Yellowstone County	B2	RM 362.74	103671.4	10-yr	1608.4	940.22	934.52	1.95	1.54	23.69	13.51	370.91	887.81	2.07	1.18	5.7	5.7
Yellowstone County	B2	RM 362.63	103493.2	10-yr	1608.4	939.94	934.5	1.95	1.58	44.03	26.69	387.31	859.48	1.96	1.18	5.44	5.44
Yellowstone County	B2	RM 362.52	103330.7	10-yr	1608.4	939.52	934.5	1.95	1.72	49.71	31.93	434.61	800.69	1.82	1.17	5.02	5.02
Yellowstone County	B2	RM 362.43	103185.5	10-yr	1608.4	939.33	934.1	1.84	1.71	16.53	13.77	438.03	755.4	1.96	1.63	5.23	5.23
Yellowstone County	B2	RM 362.36	103070.8	10-yr	1608.4	939.21	932.98	1.94	1.89	15.88	14.61	404.29	500.53	2.05	1.88	6.23	6.23
Yellowstone County	B2	RM 362.27	102929.3	10-yr	1608.4	939.04	932.93	2.23	2.23	23.82	23.82	195.55	195.55	3.68	3.68	6.11	6.11
Yellowstone County	B2	RM 362.20	102813.3	10-yr	1608.4	938.51	933.37	3.51	3.51	63.47	63.47	111.24	111.24	4.12	4.12	5.14	5.14
Yellowstone County	B2	RM 362.13	102693.1	10-yr	1608.4	938.32	933.47	3.46	3.46	59.9	59.9	125.32	165.99	3.71	3.71	4.85	4.85
Yellowstone County	B3	RM 362.05	102570.9	10-yr	1608.4	938.25	933.85	2.93	2.91	44.5	40.37	180.84	200.24	3.04	2.76	4.4	4.4
Yellowstone County	B3	RM 362.00	102488.8	10-yr	1608.4	938.24	934.11	2.39	2.39	34.84	34.84	243.4	278.54	2.76	2.76	4.13	4.13
Yellowstone County	B3	RM 361.93	102368.8	10-yr	1608.4	938.13	934.31	2.14	2.14	26.62	26.56	367.77	368.51	2.34	2.33	3.82	3.82
Yellowstone County	B3	RM 361.86	102261.1	10-yr	1608.4	937.87	934.36	2.41	2.4	55.32	53.61	362.15	437.71	1.84	1.78	3.51	3.51
Yellowstone County	B3	RM 361.78	102138.9	10-yr	1608.4	937.75	933.72	1.91	1.9	20.52	19.38	406.55	463.47	2.07	1.95	4.03	4.03
Yellowstone County	B3	RM 361.68	101970.2	10-yr	1608.4	937.6	933.64	1.72	1.69	21.06	19.94	425.46	529.4	2.18	2.07	3.96	3.96
Yellowstone County	B3	RM 361.65	101918.4	10-yr	1608.4	937.58	933.71	1.56	1.55	18.07	16.8	403.7	607.29	2.55	2.37	3.87	3.87
Yellowstone County	B3	RM 361.61	101855.6	10-yr	1608.4	937.46	932.7	1.88	1.87	22.1	21.35	334.18	611.37	2.56	2.48	4.76	4.76
Yellowstone County	B3	RM 361.56	101767.4	10-yr	1608.4	937.37	930.29	1.98	1.97	21.97	20.81	267.33	605.68	3.03	2.88	7.08	7.08
Yellowstone County	B3	RM 361.48	101644.6	10-yr	1608.4	937.14	929.97	2.43	2.31	44.37	28.28	181.49	595.04	3.63	2.3	7.17	7.17
Yellowstone County	B3	RM 361.42	101546.2	10-yr	1608.4	936.91	932.36	2.8	2.57	38.13	24.76	186.41	1087.59	3.04	1.98	4.55	4.55
Yellowstone County	B3	RM 361.37	101468.9	10-yr	1608.4	936.87	932.21	2.57	2.22	33.97	18.85	171.32	1256.68	3.55	1.97	4.66	4.66
Yellowstone County	B3	RM 361.33	101409.4	10-yr	1608.4	936.71	932.02	2.91	2.48	45.27	23.15	162.29	1080.41	3.29	1.68	4.69	4.69
Yellowstone County	B3	RM 361.29	101346	10-yr	1608.4	936.44	930.51	3.36	2.97	60.02	30.11	139.07	493.16	3.35	1.68	5.93	5.93

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	10-yr	1608.4	936.07	928.42	3.99	3.55	80.77	49.55	110.5	696.83	3.54	2.16	7.65	7.65
Yellowstone County	B3	RM 361.21	101251.*	10-yr	1608.4	936.21	927.55	3.11	2.7	94.53	40.83	118.2	1015.27	4.2	1.8	8.66	8.66
Yellowstone County		RM 361.21	101217.5	10-yr	1608.4	936.26	926.68	2.67	2.21	35.64	15.17	114.36	1128.9	5.07	2.14	9.58	9.58
Yellowstone County	B3	RM 361.18	101167.2	10-yr	1608.4	936.24	928.03	2.54	2.16	36.44	19.64	135.37	1360.67	4.43	2.38	8.21	8.21
Yellowstone County	B3	RM 361.16	101134.2	10-yr	1608.4	936.28	928.92	2.15	1.89	28.45	21.33	206.87	1278	3.44	2.57	7.36	7.36
Yellowstone County	B3	RM 361.09	101028.7	10-yr	1608.4	936.17	931.28	2.1	2.1	25.42	24.63	357.88	1316.16	2.14	2.07	4.89	4.89
Yellowstone County	B3	RM 361.01	100891.3	10-yr	1608.4	935.98	931.55	2.15	2.15	28.92	28.64	362.54	1356.59	2.06	2.04	4.43	4.43
Yellowstone County	B3	RM 360.92	100756	10-yr	1608.4	935.81	931.05	1.79	1.79	36.04	35.49	454.51	1549.69	1.98	1.95	4.76	4.76
Yellowstone County	B3	RM 360.81	100570.1	10-yr	1608.4	935.42	929.52	1.83	1.82	39.71	37.32	477.92	1512.45	1.84	1.73	5.9	5.9
Yellowstone County	B3	RM 360.69	100383.5	10-yr	1608.4	935.17	930.6	1.71	1.59	25.41	18.68	340.51	1941.44	2.63	1.94	5.28	5.28
Yellowstone County	B3	RM 360.59	100227.2	10-yr	1608.4	934.92	930.53	2.18	1.8	27.81	16.09	269.12	1907.05	2.53	1.46	4.71	4.71
Yellowstone County	B3	RM 360.50	100081	10-yr	1608.4	934.65	930.55	2.48	2.21	40.27	25.19	213.99	1890.78	2.95	1.84	4.1	4.1
Yellowstone County	B3	RM 360.42	99970.7	10-yr	1608.4	934.44	929.97	2.69	2.32	43.22	28.1	189.54	1564.71	3.02	1.96	4.47	4.47
Yellowstone County	B3	RM 360.36	99862.66	10-yr	1608.4	934.34	929.68	2.42	2.12	31.63	21.76	242.5	1722.18	2.66	1.83	4.66	4.66
Yellowstone County	B3	RM 360.27	99717.18	10-yr	1608.4	934.05	929.52	2.84	2.32	45.41	28.99	149.73	1392.13	3.16	2.02	4.53	4.53
Yellowstone County	B3	RM 360.18	99578.06	10-yr	1608.4	933.68	929.32	3.17	2.74	64.5	34.66	135.03	1261.62	3.66	1.95	4.36	4.36
Yellowstone County	B3	RM 360.11	99458.59	10-yr	1608.4	933.72	929.38	2.37	1.84	30.2	18.54	148.51	1448.05	3.24	2	4.34	4.34
Yellowstone County	B3	RM 360.03	99328	10-yr	1622.56	933.63	929.58	2.12	1.69	33.84	19.26	168.97	1630.18	3.26	1.85	4.05	4.05
Yellowstone County	B3	RM 359.96	99226.54	10-yr	1622.56	933.48	929.2	2.33	1.72	34.07	16.18	163.81	1477.86	3.32	1.57	4.28	4.28
Yellowstone County	B3	RM 359.88	99098.18	10-yr	1622.56	933.29	927.78	2.58	1.91	36.57	15.94	144	1410.75	3.66	1.59	5.51	5.51
Yellowstone County	B3	RM 359.78	98940.52	10-yr	1622.56	933.13	928.1	2.55	1.85	45.73	18.63	149.66	1443.02	3.72	1.51	5.03	5.03
Yellowstone County	B3	RM 359.70	98813.18	10-yr	1622.56	932.42	928.32	3.87	3.27	99.94	43.43	122.37	954.98	3.24	1.4	4.1	4.1
Yellowstone County	B3	RM 359.61	98663.44	10-yr	1622.56	932.49	928.8	2.1	1.82	30.56	15.39	310.09	1223.08	2.4	1.21	3.69	3.69
Yellowstone County	B3	RM 359.50	98492.66	10-yr	1622.56	932.25	928.22	2.18	1.88	28.18	14.45	321.67	1414.89	2.21	1.13	4.03	4.03
Yellowstone County	B3	RM 359.38	98291.15	10-yr	1622.56	931.92	927.09	2.06	1.91	48.85	28.61	378.93	1362.62	1.82	1.06	4.83	4.83
Yellowstone County	B3	RM 359.26	98107.42	10-yr	1622.56	931.53	927.71	2.1	1.82	29.41	19.78	398.18	957.54	1.79	1.2	3.82	3.82
Yellowstone County	B3	RM 359.18	97966.53	10-yr	1622.56	931.37	927.28	2	1.54	24.66	11.72	299.78	1115.71	2.29	1.09	4.09	4.09
Yellowstone County	B3	RM 359.10	97841.82	10-yr	1622.56	931.23	926.69	1.93	1.57	23.77	14.96	374.65	1071.04	1.97	1.24	4.54	4.54
Yellowstone County	B3	RM 359.01	97692.75	10-yr	1622.56	931.04	925.91	1.88	1.37	32.34	20.3	329.94	1098.31	2.11	1.32	5.13	5.13
Yellowstone County	B3	RM 358.90	97524.59	10-yr	1622.56	930.52	926.77	2.72	1.98	52.63	22.21	222.15	808.79	2.41	1.01	3.75	3.75
Yellowstone County	B3	RM 358.81	97374.99	10-yr	1622.56	930.12	926.37	2.91	2.23	45.55	18.09	219.51	757.32	2.42	0.96	3.75	3.75
Yellowstone County	B3	RM 358.74	97267.71	10-yr	1622.56	929.9	925.53	3.02	1.84	72.73	27.86	165.83	1196.94	2.55	0.98	4.37	4.37
Yellowstone County	B3	RM 358.67	97155.8	10-yr	1622.56	929.85	925.59	2.02	1.59	24.6	14.69	275.95	1145.88	2.02	1.21	4.26	4.26
Yellowstone County	B3	RM 358.61	97062.24	10-yr	1622.56	929.76	925.74	1.63	1.45	22.38	12.96	389.1	1347.77	1.9	1.1	4.02	4.02
Yellowstone County	B3	RM 358.56	96985.92	10-yr	1622.56	929.69	926.2	1.49	1.34	16.85	9.6	424.91	1335.45	1.93	1.1	5.1	5.1
Yellowstone County	B3	RM 358.50	96888.4	10-yr	1622.56	929.62	925.64	1.38	1.21	13.12	8.88	531.72	1349.17	1.69	1.14	3.98	3.98
Yellowstone County	B3	RM 358.43	96788.43	10-yr	1622.56	929.58	925.27	1.03	0.94	10.94	8.47	650.58	1368.43	1.67	1.3	4.31	4.31
Yellowstone County	B3	RM 358.30	96638.82	10-yr	1622.56	929.53	924.7	0.93	0.81	7.4	5.43	685.99	1236.45	2.24	1.64	4.83	4.83
Yellowstone County	B3	RM 358.24	96561.93	10-yr	1622.56	929.5	923.57	1	0.86	7.97	6.2	644.55	1193.33	2.09	1.62	5.93	5.93
Yellowstone County	B3	RM 358.20	96500.79	10-yr	1622.56	929.43	922.99	1.28	1.2	11.94	9.24	617.5	900.47	1.95	1.51	6.44	6.44
Yellowstone County	B3	RM 358.14	96404.93	10-yr	1622.56	929.36	922.57	1.33	1.19	11.37	7.22	543.3	1099.71	2.11	1.34	6.79	6.79
Yellowstone County	B3	RM 358.12	96368.05	10-yr	1622.56	929.34	922.78	1.41	1.09	12.53	6.63	348.64	1142.86	2.71	1.43	6.56	6.56
Yellowstone County	B3	RM 358.04	96244.75	10-yr	1622.56	929.18	923.22	2.08	1.4	36.45	11.93	162.23	1012.47	3.51	1.14	5.96	5.96
Yellowstone County	B3	RM 358.00	96168.44	10-yr	1622.56	929	923.39	2.71	1.54	49.88	13.44	101.88	1063.69	3.73	0.99	5.61	5.61
Yellowstone County	B3	RM 357.93	96065.49	10-yr	1622.56	928.76	923.1	3.08	1.86	43.26	11.8	106.83	937.99	3.43	0.93	5.66	5.66
Yellowstone County	B3	RM 357.88	95975.44	10-yr	1622.56	928.82	923.91	2.05	1.37	26.46	8.7	153.56	1104.9	3.27	1.07	4.91	4.91
Yellowstone County	B3	RM 357.82	95884.99	10-yr	1622.56	928.76	924.01	1.89	1.53	22.3	10.71	193.1	764.15	3.28	1.57	4.75	4.75
Yellowstone County	B3	RM 357.78	95821.69	10-yr	1622.56	928.7	924.08	1.72	1.65	24.12	13.96	257.61	616.85	2.76	1.59	4.62	4.62
Yellowstone County	B3	RM 357.69	95683.91	10-yr	1622.56	928.52	923.81	2	1.88	21.87	12.24	302.26	585.35	2.64	1.47	4.71	4.71
Yellowstone County	B4	RM 357.62	95571.15	10-yr	1622.56	928.27	921.84	2.47	2.37	39.18	26.16	251.67	397.23	2.59	1.72	6.43	6.43
Yellowstone County	B4	RM 357.56	95469.4	10-yr	1622.56	928.22	918.46	2.08	1.98	29.21	15.21	225.69	496.52	3.42	1.77	9.76	9.76
Yellowstone County	B4	RM 357.48	95351.48	10-yr	1622.56	927.89	922.69	2.77	2.63	44.33	31.51	198.31	379.17	2.93	2.08	5.2	5.2
Yellowstone County	B4	RM 357.44	95275.91	10-yr	1622.56	927.75	922.22	2.82	2.72	48.14	32.16	195.69	305.51	2.93	1.95	5.53	5.53
Yellowstone County	B4	RM 357.34	95127.12	10-yr	1622.56	927.54	923.1	2.76	2.58	44.31	30.08	181.75	289.09	3.21	2.17	4.44	4.44
Yellowstone County	B4	RM 357.23	94939.75	10-yr	1622.56	927.31	920.81	2.72	2.39	45.34	24.93	142.92	308.95	4.02	2.2	6.5	6.5
Yellowstone County	B4	RM 357.13	94789.23	10-yr	1622.56	927.13	921.26	2.84	2.39	41.85	18.06	138.53	464.33	3.53	1.51	5.87	5.87
Yellowstone County	B4	RM 357.01	94595.53	10-yr	1622.56	927.03	921.72	2.26	1.71	25.36	13.54	185.07	496.32	3.58	1.91	5.31	5.31
Yellowstone County	B4	RM 356.90	94412.13	10-yr	1622.56	926.87	921.02	2.28	1.83	27.82	15.89	234.22	545.09	2.85	1.63	5.85	5.85
Yellowstone County	B4	RM 356.81	94272.48	10-yr	1622.56	926.73	919.95	2.26	1.77	30.1	18.78	233.74	540.04	2.72	1.69	6.78	6.78
Yellowstone County	B4	RM 356.73	94148.77	10-yr	1622.56	926.62	921.15	2.04	1.7	24.73	14.1	299.9	745.01	2.33	1.33	5.47	5.47
Yellowstone County	B4	RM 356.66	94030.68	10-yr	1622.56	926.51	921.75	1.97	1.61	21.81	9.97	300.18	903.71	2.49	1.14	4.76	4.76

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	10-yr	1622.56	926.43	921.88	1.85	1.42	23.49	8.55	252.57	1051.84	3.02	1.1	4.55	4.55
Yellowstone County	B4	RM 356.50	93782.14	10-yr	1622.56	926.26	921.75	2.22	1.57	34.13	9.72	153.48	1028.04	3.59	1.01	4.51	4.51
Yellowstone County	B4	RM 356.44	93670.16	10-yr	1622.56	926.08	921.33	2.55	1.82	32.68	8.64	135.34	974.46	3.52	0.92	4.75	4.75
Yellowstone County	B4	RM 356.35	93525.27	10-yr	1622.56	925.87	919.71	2.74	1.97	53.5	12.87	115.25	892.1	3.93	0.93	6.16	6.16
Yellowstone County	B4	RM 356.26	93386.36	10-yr	1622.56	925.76	919.77	2.57	1.74	28.6	9.61	125.06	710.92	4.11	1.38	5.99	5.99
Yellowstone County	B4	RM 356.18	93264.31	10-yr	1622.56	925.7	919.95	2.34	1.69	34.1	11.61	128.43	685.46	4.14	1.4	5.75	5.75
Yellowstone County	B4	RM 356.11	93150.71	10-yr	1622.56	925.63	920.24	2.02	1.49	34.77	13.7	179.34	724.42	3.84	1.5	5.39	5.39
Yellowstone County	B4	RM 356.04	93034.25	10-yr	1622.56	925.41	920.36	2.36	1.82	51.56	19.68	173.04	677.2	3.46	1.32	5.05	5.05
Yellowstone County	B4	RM 355.97	92927.46	10-yr	1622.56	925.16	920.09	2.7	2.02	53.61	19.23	153.49	675.92	3.33	1.19	5.07	5.07
Yellowstone County	B4	RM 355.91	92825.82	10-yr	1622.56	925.11	919.82	2.31	1.53	26.24	10.24	153.74	789.94	3.57	1.38	5.29	5.29
Yellowstone County	B4	RM 355.82	92688.73	10-yr	1622.56	925.03	919.51	2.1	1.39	26.8	11.63	155.48	880.87	3.68	1.59	5.52	5.52
Yellowstone County	B4	RM 355.69	92483.67	10-yr	1622.56	924.06	919.96	4.26	3.12	100.51	60.15	106	577.38	2.93	1.75	4.1	4.1
Yellowstone County	B4	RM 355.68	92480	10-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	10-yr	1622.56	924.06	919.92	3.49	2.59	63.53	37.93	123	609.5	3.21	1.91	4.14	4.14
Yellowstone County	B4	RM 355.66	92419.94	10-yr	1622.56	924.13	919.8	2.79	2.3	38.4	22.1	139.95	688.47	3.27	1.89	4.33	4.33
Yellowstone County	B4	RM 355.60	92333.48	10-yr	1622.56	924.04	919.42	2.71	2.25	38.22	21.36	148.04	674.69	3.26	1.83	4.62	4.62
Yellowstone County	B4	RM 355.49	92159.95	10-yr	1622.56	923.88	918.52	2.25	1.9	50.37	23.76	141.27	799.12	3.26	1.54	5.36	5.36
Yellowstone County	B4	RM 355.43	92061.2	10-yr	1622.56	923.73	918.67	2.22	1.87	47.64	19.92	134.53	885.34	3.56	1.49	5.06	5.06
Yellowstone County	B4	RM 355.41	92020.68	10-yr	1622.56	923.72	919.02	1.8	1.63	41.97	20.71	159.91	858.64	3.18	1.57	4.7	4.7
Yellowstone County	B4	RM 355.38	91976.12	10-yr	1622.56	923.64	919.25	2.14	1.64	36.58	15.78	125.74	938.45	3.62	1.55	4.39	4.39
Yellowstone County	B4	RM 355.35	91933.98	10-yr	1622.56	923.61	919.21	2.15	1.52	25.89	11.03	109.82	1079.16	3.9	1.65	4.4	4.4
Yellowstone County	B4	RM 355.32	91885.87	10-yr	1622.56	923.58	919.16	2.12	1.5	25.25	10.8	107.08	1081.96	3.84	1.63	4.42	4.42
Yellowstone County	B4	RM 355.29	91828.99	10-yr	1622.56	923.53	918.93	2.17	1.52	25.17	10.95	103.47	1041.29	3.89	1.67	5	5
Yellowstone County	B4	RM 355.23	91732.97	10-yr	1622.56	923.45	918.68	2.2	1.71	29.97	13.61	101.56	1146.39	4.02	1.81	5.01	5.01
Yellowstone County	B4	RM 355.14	91596.1	10-yr	1622.56	923.34	918.52	2.14	1.76	24.63	15.87	118.49	1249.18	3.95	2.53	4.82	4.82
Yellowstone County	B4	RM 354.94	91268.08	10-yr	1622.56	922.94	917.25	2.33	1.97	55.53	40.7	166.75	289.53	3.87	2.84	5.69	5.69
Yellowstone County	B4	RM 354.86	91153.59	10-yr	1622.56	922.66	917.03	2.75	2.23	61.96	33.88	125.07	300.23	4.44	2.43	5.63	5.63
Yellowstone County	B4	RM 354.80	91056.05	10-yr	1622.56	922.43	915.66	3.01	2.3	72.2	32.41	117.98	1647.39	4.26	1.9	6.77	6.77
Yellowstone County	B4	RM 354.70	90880.27	10-yr	1622.56	922.16	915.38	2.74	2.48	68.88	47.4	153.63	277.9	3.42	2.36	6.78	6.78
Yellowstone County	B4	RM 354.61	90744.35	10-yr	1622.56	922.03	917.13	2.37	2.21	27.04	23.77	215.25	287.18	2.88	2.55	4.9	4.9
Yellowstone County	B4	RM 354.53	90609.24	10-yr	1622.56	921.99	916.52	1.9	1.83	21.41	17.78	238.32	1272.23	3.42	2.85	5.47	5.47
Yellowstone County	B4	RM 354.45	90486.63	10-yr	1622.56	921.79	915.87	2.32	2.17	37.19	26.72	205.43	1286.58	3.21	2.3	5.92	5.92
Yellowstone County	B4	RM 354.39	90385.43	10-yr	1622.56	921.55	915.24	2.76	2.48	47.36	28.49	165.51	1431.17	3.33	1.99	6.31	6.31
Yellowstone County	B4	RM 354.33	90291.31	10-yr	1622.56	921.54	915.37	2.34	1.97	27.52	17.68	150.94	1432.96	3.58	2.29	6.17	6.17
Yellowstone County	B4	RM 354.23	90133.96	10-yr	1622.56	921.13	915.46	3.08	2.49	66.28	27.94	118.76	387.43	4	1.68	5.67	5.67
Yellowstone County	B4	RM 354.13	89983.48	10-yr	1622.56	920.9	914.94	2.86	2.4	67.42	27.57	134.11	405.67	4.08	1.67	5.96	5.96
Yellowstone County	B4	RM 354.00	89778.46	10-yr	1622.56	920.69	916.2	2.51	1.88	48.24	21.49	158.7	1813.67	3.44	1.53	4.49	4.49
Yellowstone County	B5	RM 353.90	89604.28	10-yr	1622.56	920.4	917.06	2.51	2.12	42.62	19.24	232.28	632.76	2.7	1.21	3.5	3.5
Yellowstone County	B5	RM 353.80	89446.75	10-yr	1713.17	920.17	916.36	2.26	1.98	46.35	26.77	301.86	1861.29	2.43	1.4	3.81	3.81
Yellowstone County	B5	RM 353.70	89288.94	10-yr	1713.17	919.94	915.92	1.85	1.6	38.54	24.23	391.61	1858.56	2.23	1.4	4.02	4.02
Yellowstone County	B5	RM 353.65	89204.58	10-yr	1713.17	919.71	915.49	2	1.98	51.79	48.2	403.63	437.42	2.12	1.97	4.22	4.22
Yellowstone County	B5	RM 353.56	89077.56	10-yr	1713.17	919.48	914.2	1.85	1.5	42.02	22.09	363.73	1554.37	2.31	1.21	5.28	5.28
Yellowstone County	B5	RM 353.50	88982.39	10-yr	1713.17	919.38	914.58	1.63	1.24	28.39	12.77	306.31	1428.65	2.97	1.33	4.8	4.8
Yellowstone County	B5	RM 353.41	88846.15	10-yr	1713.17	919.16	914.41	1.97	1.42	37.54	13.96	230.33	1316.43	2.89	1.07	4.75	4.75
Yellowstone County	B5	RM 353.32	88709.14	10-yr	1713.17	918.97	913.6	2.15	1.36	34.76	12.34	194.16	1166.46	3.06	1.08	5.37	5.37
Yellowstone County	B5	RM 353.25	88587.13	10-yr	1713.17	918.72	912.76	2.59	1.56	43.28	14.08	160.68	1090.98	3.11	1.01	5.96	5.96
Yellowstone County	B5	RM 353.15	88438.48	10-yr	1713.17	918.51	912.71	2.59	1.73	41.71	16.93	212.83	1062.4	2.3	0.93	5.8	5.8
Yellowstone County	B5	RM 353.08	88321.13	10-yr	1713.17	918.42	912.99	2.23	1.5	30.06	12.12	197.65	1063.07	2.67	1.08	5.43	5.43
Yellowstone County	B5	RM 353.01	88210.34	10-yr	1713.17	918.35	913.13	1.83	1.34	23.91	12.51	249.61	954.82	2.57	1.34	5.22	5.22
Yellowstone County	B5	RM 352.94	88090.6	10-yr	1713.17	918.29	912.5	1.62	1.24	18.01	8.69	175.48	848.92	3.39	1.63	5.79	5.79
Yellowstone County	B5	RM 352.86	87957.76	10-yr	1713.17	918.19	913.38	1.96	1.49	28.55	12.6	121.9	694.72	3.78	1.66	4.81	4.81
Yellowstone County	B5	RM 352.79	87857.09	10-yr	1713.17	918.08	913.06	1.94	1.7	34.08	17.32	104.7	547.3	3.67	1.85	5.02	5.02
Yellowstone County	B5	RM 352.72	87748.15	10-yr	1713.17	917.9	911.97	2.53	1.96	48.11	22.77	91.18	431.18	4.35	2.03	5.93	5.93
Yellowstone County	B5	RM 352.68	87677.1	10-yr	1713.17	917.72	912.27	2.38	2.38	80.32	80.32	334.75	334.75	2.15	2.15	5.45	5.45
Yellowstone County	B5	RM 352.64	87605.18	10-yr	1713.17	917.28	911.68	2.88	2.88	89.54	89.54	222.27	222.27	2.67	2.67	5.6	5.6
Yellowstone County	B5	RM 352.63	87594	10-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	10-yr	1713.17	917.18	911.45	2.75	2.75	64.46	64.46	203.85	203.85	3.05	3.05	5.73	5.73
Yellowstone County	B5	RM 352.54	87461.4	10-yr	1713.17	917.05	912.57	2.25	2.08	32.46	22.93	266.6	603.07	2.77	1.95	4.48	4.48
Yellowstone County	B5	RM 352.47	87340.46	10-yr	1713.17	916.94	912.2	2.21	1.72	30.55	18.21	230.76	1141.29	2.49	1.48	4.74	4.74
Yellowstone County	B5	RM 352.39	87216.99	10-yr	1713.17	916.56	912.01	2.99	2.36	53.15	27.43	183.54	1311.24	2.19	1.13	5.37	5.37
Yellowstone County	B5	RM 352.31	87079.16	10-yr	1713.17	916.1	910.66	3.26	2.57	80.39	42.1	181.61	899.32	2.03	1.06	5.44	5.44

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	10-yr	1713.17	915.84	911.35	2.36	2.28	39.08	34.48	247.29	984.79	1.57	1.38	4.49	4.49
Yellowstone County	B5	RM 352.18	86873.5	10-yr	1713.17	915.95	911.21	0.97	1.08	6.02	5.52	221.03	1180.24	2.21	2.03	4.74	4.74
Yellowstone County	B5	RM 352.09	86723.6	10-yr	1713.17	915.73	912.18	2.26	1.91	33.8	16.86	173.93	1132.22	2.38	1.18	3.55	3.55
Yellowstone County	B5	RM 351.99	86568.41	10-yr	1713.17	915.27	912.6	3.17	2.5	57.99	29.12	144.76	605.41	2.25	1.13	2.69	2.69
Yellowstone County	B5	RM 351.93	86466.74	10-yr	1713.17	915.16	911.69	2.6	1.93	42.66	23.85	170.58	1042.81	1.93	1.08	3.47	3.47
Yellowstone County	B5	RM 351.88	86386.8	10-yr	1713.17	915.1	911.38	1.78	1.41	26.2	20.33	189	1282.36	1.69	1.31	3.72	3.72
Yellowstone County	B5	RM 351.81	86277.68	10-yr	1713.17	915	910.99	1.55	1.24	18.21	15.69	237.28	1410.97	1.55	1.33	4.01	4.01
Yellowstone County	B5	RM 351.74	86159.62	10-yr	1713.17	914.67	911.37	1.6	1.58	22.05	19.25	254.5	1098.43	1.29	1.12	3.84	3.84
Yellowstone County	B5	RM 351.67	86034.59	10-yr	1713.17	914.4	911.31	1.84	1.61	27.16	19.67	199.39	907.69	1.68	1.21	4.02	4.02
Yellowstone County	B5	RM 351.58	85891.33	10-yr	1713.17	914.2	911.47	1.53	1.58	19.28	15.64	234.53	850.82	1.61	1.31	4.11	4.11
Yellowstone County	B5	RM 351.52	85811.35	10-yr	1713.17	914.05	911.37	1.86	1.74	22.3	17.77	248.9	811.16	1.56	1.25	3.33	3.33
Yellowstone County	B5	RM 351.47	85728.2	10-yr	1713.17	913.95	911.17	1.83	1.65	19.82	15.17	189.85	724.57	1.98	1.51	3.41	3.41
Yellowstone County	B5	RM 351.40	85601.48	10-yr	1713.17	913.82	910.26	1.95	1.62	23.23	14.81	150.52	1104.01	1.95	1.24	3.91	3.91
Yellowstone County	B5	RM 351.34	85482.66	10-yr	1713.17	913.71	909.98	1.41	1.45	27.81	15.17	144.28	1214.85	2.25	1.23	3.74	3.74
Yellowstone County	B5	RM 351.25	85342.53	10-yr	1713.17	913.59	909.91	1.44	1.28	16.23	11.84	260.74	1191.84	1.65	1.2	3.71	3.71
Yellowstone County	B5	RM 351.21	85257.19	10-yr	1713.17	913.5	909.48	1.7	1.3	20.31	11.94	196.14	1236.02	1.82	1.07	4.02	4.02
Yellowstone County	B5	RM 351.12	85127.55	10-yr	1713.17	913.42	909.49	1.7	1.31	18.53	11.17	171.62	1103.76	1.97	1.18	3.93	3.93
Yellowstone County	B5	RM 351.04	84988.05	10-yr	1713.17	913.29	908.79	2	1.39	24.5	11.43	125.21	990.32	2.7	1.25	4.5	4.5
Yellowstone County	B5	RM 350.90	84769.91	10-yr	1713.17	913.24	909.27	1.48	1.13	14.7	6.37	97.73	1129.16	3.16	1.35	3.97	3.97
Yellowstone County	B5	RM 350.75	84536.19	10-yr	1713.17	913.09	909.72	1.27	1.45	25.3	18.63	258.23	807.74	1.98	1.46	3.71	3.71
Yellowstone County	B5	RM 350.66	84383.33	10-yr	1713.17	912.88	909.32	1.74	1.67	33.27	17.67	164.71	814.04	2.37	1.26	3.56	3.56
Yellowstone County	B5	RM 350.57	84244.69	10-yr	1713.17	912.6	908.48	1.99	1.79	43.02	19.27	151.19	819.2	2.62	1.17	4.12	4.12
Yellowstone County	B5	RM 350.50	84128.62	10-yr	1713.17	912.35	908.49	2.18	1.94	46.92	21.78	155.62	781.45	2.45	1.13	3.86	3.86
Yellowstone County	B5	RM 350.40	83974.24	10-yr	1713.17	912.17	908.73	1.62	1.61	22.97	15.91	312.58	860.9	1.78	1.23	3.44	3.44
Yellowstone County	B5	RM 350.33	83868.06	10-yr	1713.17	912.05	908.17	1.63	1.52	19.29	13.99	326.5	867.18	1.79	1.3	3.88	3.88
Yellowstone County	B5	RM 350.23	83712.91	10-yr	1713.17	911.82	907.61	1.87	1.63	27.28	17.41	300.73	927.12	1.79	1.14	4.21	4.21
Yellowstone County	B5	RM 350.14	83563.43	10-yr	1713.17	911.64	907.94	1.68	1.47	23.09	14.14	300.48	1045.97	1.87	1.14	3.7	3.7
Yellowstone County	B5	RM 350.06	83419.86	10-yr	1713.17	911.43	907.84	1.58	1.42	24.75	14.9	343.74	1112.9	1.8	1.08	3.59	3.59
Yellowstone County	B5	RM 349.94	83229.4	10-yr	1713.17	911.19	906.93	1.69	1.42	24.24	13.18	275.98	1128	2.03	1.1	4.26	4.26
Yellowstone County	B5	RM 349.83	83071.99	10-yr	1713.17	911.07	907.36	1.57	1.17	13.6	5.83	370.02	1271.51	2.69	1.15	3.71	3.71
Yellowstone County	B5	RM 349.68	82904.73	10-yr	1713.17	910.86	906.92	2	1.49	30.98	15.14	345.25	1074	2.19	1.07	3.94	3.94
Yellowstone County	B5	RM 349.54	82632.78	10-yr	1713.17	910.48	906.29	1.94	1.69	25.42	15.37	449.31	896.66	1.87	1.13	4.19	4.19
Yellowstone County	B5	RM 349.33	82276.28	10-yr	1713.17	910.22	906.45	1.21	1.15	13.49	10.88	351.2	926.27	2	1.61	3.77	3.77
Yellowstone County	B5	RM 349.19	82046.53	10-yr	1713.17	909.91	905.16	1.96	1.4	24.04	12.06	282.11	1160.57	2.11	1.06	4.75	4.75
Yellowstone County	B5	RM 349.04	81800.47	10-yr	1809.45	909.74	904.5	1.54	1.22	15.22	8.72	345.54	1118.89	2.31	1.32	5.24	5.24
Yellowstone County	B5	RM 348.89	81574.02	10-yr	1809.45	909.63	904.75	1.2	1.05	15.72	9.13	550.23	1170.51	2.53	1.47	4.88	4.88
Yellowstone County	B5	RM 348.77	81370.46	10-yr	1809.45	909.41	905.09	1.52	1.5	27.85	24.02	461.33	544.32	2.57	2.22	4.32	4.32
Yellowstone County	B5	RM 348.64	81138.52	10-yr	1809.45	909.24	903.35	1.65	1.19	16.1	6.3	292.36	1200.96	3.25	1.27	5.89	5.89
Yellowstone County	B5	RM 348.52	80960.09	10-yr	1809.45	909.08	902.88	1.98	1.39	31.81	10.72	207.42	1070.61	3.64	1.22	6.2	6.2
Yellowstone County	B5	RM 348.38	80737.31	10-yr	1809.45	908.68	902.85	2.59	2.02	48.49	18.18	186.82	683.06	3.53	1.31	5.83	5.83
Yellowstone County	B5	RM 348.26	80551.51	10-yr	1809.45	908.44	902.73	2.52	1.95	53.19	20.43	167.9	653.19	3.73	1.42	5.71	5.71
Yellowstone County	B5	RM 348.09	80276.34	10-yr	1809.45	907.86	901.64	2.94	2.67	58.56	28	171.66	780.99	3.47	1.65	6.22	6.22
Yellowstone County	B5	RM 347.95	80055.79	10-yr	1809.45	907.7	902.96	2.5	2.02	30.94	14.42	165.09	729.41	3.75	1.75	4.74	4.74
Yellowstone County	B5	RM 347.82	79844.2	10-yr	1809.45	907.54	902.93	2.19	1.85	40.58	17.79	180.88	719.93	3.42	1.5	4.61	4.61
Yellowstone County	B5	RM 347.77	79751.93	10-yr	1809.45	907.41	902.38	2.27	1.75	45.23	16.87	178.59	866.52	3.43	1.28	5.03	5.03
Yellowstone County	B5	RM 347.70	79643.98	10-yr	1809.45	907.28	901.91	2.21	1.58	42.35	13.62	182.31	1068.18	3.34	1.07	5.37	5.37
Yellowstone County	B5	RM 347.61	79501.64	10-yr	1809.45	907.23	902.2	1.82	1.17	16.85	8.42	192.93	847.42	3.66	1.83	5.03	5.03
Yellowstone County	B5	RM 347.51	79347.38	10-yr	1809.45	906.86	900.54	2.96	1.95	41.18	15.71	112.36	553.62	4.42	1.68	6.32	6.32
Yellowstone County	B5	RM 347.42	79196.21	10-yr	1809.45	906.78	900.73	2.48	1.92	58.06	27.8	144.28	505.14	3.9	1.86	6.05	6.05
Yellowstone County	B5	RM 347.35	79079.87	10-yr	1809.45	906.84	900.77	1.24	1.23	7.22	7.04	498.37	515.53	2.92	2.84	6.07	6.07
Yellowstone County	B5	RM 347.23	78895.71	10-yr	1809.45	906.77	900.89	1.34	1.33	11.14	10.65	508.73	535.59	2.66	2.54	5.88	5.88
Yellowstone County	B5	RM 347.13	78732.21	10-yr	1809.45	906.65	900.98	1.46	1.43	24.43	17.91	440.57	618.47	2.81	2.05	5.67	5.67
Yellowstone County	B5	RM 346.93	78400.21	10-yr	1809.45	906.13	900.98	1.72	1.64	59.26	48.63	465	607.01	2.21	1.81	5.15	5.15
Yellowstone County	B5	RM 346.80	78193.27	10-yr	1809.45	905.51	900.02	1.94	1.69	54.85	38.05	454.23	788.5	1.96	1.35	5.49	5.49
Yellowstone County	B5	RM 346.64	77938.83	10-yr	1809.45	905.23	900.47	1.92	1.43	19.82	9.7	246.91	803.47	3.23	1.58	4.76	4.76
Yellowstone County	B5	RM 346.49	77706.6	10-yr	1809.45	904.97	900.21	2.39	1.64	35.14	12.24	176.48	955.65	3.4	1.17	4.76	4.76
Yellowstone County	B6	RM 346.35	77480.6	10-yr	1809.45	904.75	900.33	2.17	1.51	34.09	12.37	214.52	1032.33	3.28	1.18	4.42	4.42
Yellowstone County	B6	RM 346.23	77285.9	10-yr	1809.45	904.45	900.11	2.57	1.73	34.92	10.66	177.15	987.09	3.51	1.06	4.34	4.34
Yellowstone County	B6	RM 346.11	77095.33	10-yr	1809.45	904.25	899.75	2.48	1.8	44.31	19.81	182.13	738.18	3.47	1.55	4.5	4.5
Yellowstone County	B6	RM 346.00	76926.16	10-yr	1809.45	904.08	899.8	2.41	1.77	34.86	13.97	177.79	831.67	3.63	1.45	4.28	4.28
Yellowstone County	B6	RM 345.90	76766.95	10-yr	1809.45	903.81	899.51	2.66	1.94	48.12	21.23	179.39	692.83	3.42	1.5	4.3	4.3

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	10-yr	1809.45	903.67	899.04	2.35	1.77	33.28	14.44	198.11	773.66	3.49	1.51	4.77	4.77
Yellowstone County	B6	RM 345.73	76484.99	10-yr	1809.45	903.49	899.01	2.54	1.87	38.89	14.79	198.24	1037.26	3.14	1.19	4.59	4.59
Yellowstone County	B6	RM 345.67	76386.71	10-yr	1809.45	903.45	899.1	2.13	1.56	26.76	11.72	212.13	765.97	3.46	1.52	4.55	4.55
Yellowstone County	B6	RM 345.60	76268.76	10-yr	1809.45	903.36	899.22	2.07	1.55	29.24	15.94	235.37	688.42	3.11	1.69	4.46	4.46
Yellowstone County	B6	RM 345.50	76118.1	10-yr	1809.45	903.22	899.07	1.78	1.54	35.49	24.3	280.8	628.15	2.75	1.88	4.32	4.32
Yellowstone County	B6	RM 345.37	75909.53	10-yr	1809.45	902.8	897.51	2.2	2.08	39.9	28.13	316.61	478.84	2.58	1.81	5.29	5.29
Yellowstone County	B6	RM 345.27	75751.01	10-yr	1809.45	902.58	898.15	2.28	1.85	32.64	17.34	252.45	619.94	2.99	1.58	4.43	4.43
Yellowstone County	B6	RM 345.07	75427.56	10-yr	1809.45	902.32	897.07	2.09	1.84	24.05	13.51	241.2	503.49	3.48	1.95	5.25	5.25
Yellowstone County	B6	RM 344.90	75166.64	10-yr	1809.45	902.22	897.3	1.72	1.47	17.26	9.8	294.53	646.73	3.36	1.91	4.92	4.92
Yellowstone County	B6	RM 344.75	74927.69	10-yr	1809.45	901.99	896.02	2.06	1.73	34.16	17.25	234.77	593.85	3.51	1.76	5.97	5.97
Yellowstone County	B6	RM 344.64	74743.45	10-yr	1809.45	901.62	895.93	2.73	2.29	40.12	20.71	158.71	378.74	4.05	2.09	5.69	5.69
Yellowstone County	B6	RM 344.53	74576.12	10-yr	1809.45	901.45	895.39	2.62	2.11	59.25	29.45	162.09	463.27	3.74	1.85	6.06	6.06
Yellowstone County	B6	RM 344.43	74405.67	10-yr	1809.45	901.29	896.11	2.43	1.88	27.69	13.19	179.43	568.83	3.56	1.69	5.18	5.18
Yellowstone County	B6	RM 344.29	74192.79	10-yr	1809.45	901.13	895.87	2.32	1.97	32.59	20.84	179.75	384.53	3.74	2.39	5.26	5.26
Yellowstone County	B6	RM 344.13	73931.76	10-yr	1809.45	900.91	895.4	2.36	1.81	32.39	13.9	157.02	565.04	4.15	1.77	5.51	5.51
Yellowstone County	B6	RM 343.87	73520.95	10-yr	1809.45	900.68	895.23	1.88	1.6	18.75	13.26	287.43	503.77	3.18	2.25	5.45	5.45
Yellowstone County	B6	RM 343.80	73403.19	10-yr	1809.45	900.63	894.69	1.58	1.43	28.39	23.38	356.81	513.58	2.99	2.46	5.94	5.94
Yellowstone County	B6	RM 343.66	73173.16	10-yr	1809.45	900.32	894.63	1.69	1.64	43.99	39.16	395.4	461.91	2.68	2.39	5.69	5.69
Yellowstone County	B6	RM 343.55	72997.33	10-yr	1809.45	900.04	894.63	1.7	1.65	39.68	33.33	370.23	456.91	2.86	2.4	5.41	5.41
Yellowstone County	B6	RM 343.45	72840.49	10-yr	1809.45	899.81	894.78	1.75	1.75	35.28	34.35	401.52	413.24	2.57	2.5	5.03	5.03
Yellowstone County	B6	RM 343.37	72718.86	10-yr	1809.45	899.52	894.5	2.1	2.1	53.62	53.62	332.91	332.91	2.59	2.59	5.02	5.02
Yellowstone County	B6	RM 343.29	72586.22	10-yr	1809.45	899.29	894.28	2.09	1.95	43.37	34.43	279.59	386.46	3.02	2.4	5.01	5.01
Yellowstone County	B6	RM 343.21	72458.03	10-yr	1809.45	899.1	893.99	1.9	1.75	53.03	41.35	356.72	621.55	2.58	2.01	5.11	5.11
Yellowstone County	B6	RM 343.14	72328.78	10-yr	1809.45	898.8	893.94	1.84	1.67	56.91	44.14	432.41	805.55	2.18	1.68	4.86	4.86
Yellowstone County	B6	RM 343.04	72174.44	10-yr	1809.45	898.64	894.12	1.54	1.32	16.35	12.3	485.75	800.08	2.3	1.73	4.52	4.52
Yellowstone County	B6	RM 342.96	72046.7	10-yr	1809.45	898.51	894.17	1.49	1.31	34.59	25.8	506.4	856.1	2.16	1.61	4.34	4.34
Yellowstone County	B6	RM 342.87	71890.42	10-yr	1809.45	898.19	893.92	1.57	1.41	45.48	35.41	541.07	856.65	1.93	1.5	4.27	4.27
Yellowstone County	B6	RM 342.78	71759.64	10-yr	1809.45	898.03	893.85	1.55	1.39	13.45	10.84	524.66	837.94	1.92	1.55	4.18	4.18
Yellowstone County	B6	RM 342.71	71649.64	10-yr	1809.45	897.95	893.88	1.51	1.36	12.42	10.21	525.34	876.87	1.84	1.51	4.07	4.07
Yellowstone County	B6	RM 342.64	71534.72	10-yr	1809.45	897.83	893.45	1.39	1.32	32.1	28.11	689.36	1041.06	1.82	1.6	4.38	4.38
Yellowstone County	B6	RM 342.59	71441.82	10-yr	1809.45	897.63	893.13	1.46	1.46	37.74	37.73	689.44	1847.54	1.79	1.79	4.5	4.5
Yellowstone County	B6	RM 342.49	71299.94	10-yr	1809.45	897.45	892.73	1.25	1.25	22.08	22.08	659.46	2096.8	2.2	2.2	4.72	4.72
Yellowstone County	B6	RM 342.40	71182.23	10-yr	1809.45	897.37	892.4	1.09	1.09	16.39	16.37	592.01	2136.46	2.8	2.8	4.97	4.97
Yellowstone County	B6	RM 342.29	70973.95	10-yr	1809.45	897.16	891.26	1.46	1.45	25.06	24.99	478.41	1900.49	2.6	2.59	5.9	5.9
Yellowstone County	B6	RM 342.17	70788.09	10-yr	1809.45	896.74	891.21	2.14	2.14	58.31	58.31	378.85	1363.23	2.23	2.23	5.53	5.53
Yellowstone County	B6	RM 342.09	70668.79	10-yr	1809.45	896.53	892.22	1.86	1.85	40.33	38.6	377.81	397.62	2.57	2.46	4.31	4.31
Yellowstone County	B6	RM 341.96	70472.35	10-yr	1809.45	896.36	891.5	1.66	1.66	14.8	14.58	503.35	511.4	2.16	2.13	4.86	4.86
Yellowstone County	B6	RM 341.82	70207.79	10-yr	1809.45	896.2	890.89	1.33	1.33	17.68	17.6	579.41	581.74	2.35	2.34	5.31	5.31
Yellowstone County	B6	RM 341.68	69974.03	10-yr	1809.45	895.98	890.38	1.46	1.41	22.89	18.56	478.7	621.15	2.55	2.06	5.6	5.6
Yellowstone County	B6	RM 341.57	69788.71	10-yr	1809.45	895.72	889.58	1.97	1.97	17.3	17.3	429.95	429.95	2.14	2.14	6.14	6.14
Yellowstone County	B6	RM 341.47	69629.19	10-yr	1809.45	895.55	889.76	1.8	1.77	49.96	42.45	395.38	477.9	2.52	2.14	5.79	5.79
Yellowstone County	B6	RM 341.32	69391.37	10-yr	1809.45	895.06	890.36	1.83	1.74	47.3	33.88	400.9	605.81	2.4	1.72	4.7	4.7
Yellowstone County	B6	RM 341.24	69252.71	10-yr	1809.45	894.94	890.28	1.63	1.49	15.91	12.74	396.74	577.85	2.62	2.1	4.66	4.66
Yellowstone County	B6	RM 341.11	69044.61	10-yr	1809.45	894.67	890	2.07	1.71	34.18	20.29	324.52	707.35	2.53	1.5	4.67	4.67
Yellowstone County	B6	RM 340.94	68773.18	10-yr	1809.45	894.34	889.22	2.07	1.51	32.15	14.13	280.24	995.01	2.81	1.24	5.12	5.12
Yellowstone County	B6	RM 340.81	68556.42	10-yr	1809.45	894.22	889.05	1.52	1.08	19.97	10.25	315.44	1093.27	2.99	1.53	5.17	5.17
Yellowstone County	B6	RM 340.65	68325.7	10-yr	1809.45	894	888.87	2.06	1.28	20.78	8.39	204.11	980.06	3.58	1.44	5.13	5.13
Yellowstone County	B6	RM 340.52	68126.27	10-yr	1809.45	893.77	887.3	2.5	1.49	42.17	11.58	130.27	966.43	4.62	1.26	6.47	6.47
Yellowstone County	B6	RM 340.40	67936.51	10-yr	1809.45	893.65	886.73	2.12	1.38	37.69	14.05	170.6	853.76	4.14	1.53	6.92	6.92
Yellowstone County	B7	RM 340.26	67715.84	10-yr	1809.45	893.39	887.99	2	1.57	47.27	25.99	251.47	651.13	3.22	1.77	5.4	5.4
Yellowstone County	B7	RM 340.16	67550.99	10-yr	1809.45	893.11	888.43	1.93	1.61	56.87	35.72	313.33	662.93	2.71	1.69	4.68	4.68
Yellowstone County	B7	RM 340.06	67387.35	10-yr	1809.45	892.84	888.74	1.84	1.65	37.92	27.29	315.76	539.57	2.83	2.04	4.1	4.1
Yellowstone County	B7	RM 339.96	67234.59	10-yr	1809.45	892.58	888.85	2.1	2.01	26.35	17.04	359.91	586.35	2.38	1.53	3.73	3.73
Yellowstone County	B7	RM 339.88	67094.07	10-yr	1809.45	892.41	888.78	1.85	1.78	38.68	33.2	445.51	551.01	2.15	1.85	3.63	3.63
Yellowstone County	B7	RM 339.79	66960.51	10-yr	1809.45	892.09	888.98	2.14	2.14	31.84	31.84	501.71	501.71	1.69	1.69	3.11	3.11
Yellowstone County	B7	RM 339.72	66843.76	10-yr	1809.45	891.95	888.72	1.89	1.84	23.6	21.67	510.58	578.78	1.85	1.7	3.23	3.23
Yellowstone County	B7	RM 339.66	66753.41	10-yr	1809.45	891.89	887.9	1.63	1.57	16.79	14.27	523.73	645.72	2.1	1.78	3.99	3.99
Yellowstone County	B7	RM 339.52	66527.74	10-yr	1809.45	891.71	887.31	1.79	1.46	17.58	10.66	312.36	695.42	2.95	1.79	4.4	4.4
Yellowstone County	B7	RM 339.37	66324.85	10-yr	1809.45	891.51	887.17	2	1.55	39.55	19.73	232.31	737.12	3.18	1.58	4.34	4.34
Yellowstone County	B7	RM 339.24	66108.49	10-yr	1809.45	891.05	886.45	2.68	2.12	38.08	21.51	218.09	568.09	2.66	1.5	4.6	4.6
Yellowstone County	B7	RM 339.13	65940.41	10-yr	1809.45	890.82	885.31	2.74	1.92	47.52	23.82	143.31	583.13	3.25	1.62	5.51	5.51

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	10-yr	1809.45	890.48	886.09	2.78	2.21	41.32	20.4	184.67	575.63	2.88	1.42	4.39	4.39
Yellowstone County	B7	RM 338.94	65621.59	10-yr	1809.45	890.41	886.36	2.3	1.75	28.4	15.77	223.57	699.37	2.66	1.48	4.05	4.05
Yellowstone County	B7	RM 338.83	65433.26	10-yr	1809.45	890.22	886.37	2.07	1.66	32.05	17.03	223.71	771.67	2.7	1.43	4.2	4.2
Yellowstone County	B7	RM 338.72	65256.88	10-yr	1809.45	889.99	886.18	2.09	1.81	35.15	21.98	204.98	569.22	2.95	1.84	4.19	4.19
Yellowstone County	B7	RM 338.62	65095.08	10-yr	1809.45	889.66	886.28	2.63	2.15	38.67	21.23	178.19	586.83	2.8	1.54	4.04	4.04
Yellowstone County	B7	RM 338.49	64891.36	10-yr	1809.45	889.48	885.05	2.35	1.85	30.67	17.64	173.02	636.39	2.92	1.68	4.43	4.43
Yellowstone County	B7	RM 338.40	64742.15	10-yr	1809.45	889.46	884.28	1.64	1.35	14.35	9.77	165.58	883.23	3.05	2.07	5.18	5.18
Yellowstone County	B7	RM 338.29	64577.05	10-yr	1809.45	889.33	884.18	2.03	1.49	22.26	9.98	123.01	880.83	3.41	1.53	5.15	5.15
Yellowstone County	B7	RM 338.19	64384.71	10-yr	1809.45	889.27	885.23	1.38	1.15	12.25	8.51	393.33	943.44	2.44	1.7	4.04	4.04
Yellowstone County	B7	RM 338.06	64164.59	10-yr	1809.45	889.18	884.64	1.45	1.03	13.3	7.25	284.25	1119.16	2.96	1.61	4.54	4.54
Yellowstone County	B7	RM 337.91	63921.69	10-yr	1809.45	889	884.16	1.89	1.19	17.78	8.16	205.66	1139.91	3.24	1.49	4.84	4.84
Yellowstone County	B7	RM 337.83	63789.53	10-yr	1809.45	888.68	882.72	2.74	1.81	45.1	16.2	177.83	865.14	3.23	1.15	5.96	5.96
Yellowstone County	B7	RM 337.75	63667.96	10-yr	1809.45	888.34	881.69	3.22	2.12	55.96	19.38	142.8	716.9	3.46	1.19	6.65	6.65
Yellowstone County	B7	RM 337.68	63550.4	10-yr	1809.45	888.2	882.49	2.93	2.2	53.3	19.15	161.63	647.78	3.55	1.27	5.71	5.71
Yellowstone County	B7	RM 337.58	63396.62	10-yr	1809.45	887.98	883.62	2.9	2.16	44.48	18.28	189.34	688.28	2.96	1.22	4.36	4.36
Yellowstone County	B7	RM 337.47	63212.44	10-yr	1809.45	887.82	883.31	2.48	1.79	38.4	15.58	178.27	800.76	3.13	1.27	4.51	4.51
Yellowstone County	B7	RM 337.38	63064.58	10-yr	1809.45	887.58	883.29	2.68	1.78	37.11	14.76	174.98	858.53	3	1.19	4.29	4.29
Yellowstone County	B7	RM 337.27	62894.98	10-yr	1809.45	887.58	883.15	1.78	1.19	16.14	7.42	210.44	1101.22	3.01	1.38	4.43	4.43
Yellowstone County	B7	RM 337.16	62717.85	10-yr	1809.45	887.52	882.57	1.36	1.05	10.36	6.15	395.98	1101.87	2.64	1.56	4.95	4.95
Yellowstone County	B7	RM 337.04	62524.52	10-yr	1809.45	887.46	879.61	1.55	1.03	12.2	4.84	153.61	980.28	4.53	1.79	7.85	7.85
Yellowstone County	B7	RM 336.96	62390.64	10-yr	1809.45	887.38	880.21	1.7	1.21	21.29	9.29	185.46	877.55	3.94	1.7	7.17	7.17
Yellowstone County	B7	RM 336.87	62246.97	10-yr	1809.45	887.25	881.41	2.01	1.35	22.89	9.32	156.31	810.01	4.09	1.65	5.84	5.84
Yellowstone County	B7	RM 336.80	62131.42	10-yr	1809.45	887.19	881.33	1.93	1.34	30.42	13.57	162.29	867.44	3.73	1.65	5.86	5.86
Yellowstone County	B7	RM 336.72	62005.73	10-yr	1809.45	886.94	881.38	2.51	1.73	49.02	16.11	136.15	870.62	3.92	1.28	5.56	5.56
Yellowstone County	B7	RM 336.66	61902.64	10-yr	1809.45	886.44	881.45	3.53	2.67	86.29	27.5	115.78	586.84	3.65	1.15	4.99	4.99
Yellowstone County	B7	RM 336.59	61800.43	10-yr	1809.45	886.41	880.66	2.71	2.1	54.59	21.17	135.93	553.81	4.03	1.56	5.75	5.75
Yellowstone County	B7	RM 336.52	61689.55	10-yr	1809.45	886.27	881.76	2.66	1.98	45.5	19.43	145.49	626.38	3.41	1.46	4.51	4.51
Yellowstone County	B7	RM 336.46	61580.5	10-yr	1809.45	886.15	882.13	2.44	1.9	45.32	18.59	159.96	736.35	3.16	1.29	4.02	4.02
Yellowstone County	B7	RM 336.40	61491.01	10-yr	1809.45	886.01	882.03	2.47	1.81	46.06	16.06	162.53	895.83	3.22	1.12	3.98	3.98
Yellowstone County	B7	RM 336.34	61394.22	10-yr	1809.45	885.88	881.93	2.51	1.67	41.89	17.57	163.69	844.68	3.06	1.28	3.95	3.95
Yellowstone County	B7	RM 336.27	61278.9	10-yr	1809.45	885.74	881.67	2.39	1.55	37.97	15.61	169.92	925.92	3.07	1.26	4.07	4.07
Yellowstone County	B7	RM 336.19	61159.07	10-yr	1809.45	885.56	882.11	2.44	1.71	32.74	14.87	211.78	997.36	2.34	1.06	3.45	3.45
Yellowstone County	B7	RM 336.09	60993.57	10-yr	1809.45	885.43	882.16	1.84	1.31	22.08	12.66	319.78	1083.42	2.22	1.27	3.27	3.27
Yellowstone County	B7	RM 335.98	60812.26	10-yr	1809.45	885.27	881.93	1.37	1.24	24.26	18.62	436.59	1046.08	1.82	1.39	3.54	3.54
Yellowstone County	B7	RM 335.89	60669.74	10-yr	1809.45	885.1	880.16	1.58	1.43	14.01	12.1	704.2	968.97	1.51	1.31	4.94	4.94
Yellowstone County	B7	RM 335.77	60465.85	10-yr	1809.45	884.77	880.49	1.55	1.51	42.68	38.34	847.56	1030.4	1.3	1.17	4.28	4.28
Yellowstone County	B7	RM 335.68	60324.8	10-yr	1809.45	884.46	880.65	1.78	1.69	15.25	12.73	810.62	1367.22	1.23	1.02	3.81	3.81
Yellowstone County	B7	RM 335.59	60183.7	10-yr	1809.45	884.27	880.3	1.79	1.69	15.14	12.17	887.11	1462.03	1.13	0.9	3.97	3.97
Yellowstone County	B7	RM 335.51	60046.12	10-yr	1809.45	884.1	880.03	1.74	1.64	13.49	9.81	880.2	1573.24	1.17	0.85	4.07	4.07
Yellowstone County	B7	RM 335.41	59899.97	10-yr	1809.45	884.01	879.45	1.27	1.13	11.15	8.24	897.08	1453.32	1.5	1.11	4.56	4.56
Yellowstone County	B7	RM 335.36	59814.82	10-yr	1809.45	884.01	878.65	0.93	0.8	5.08	3.55	896.25	1838.27	2.05	1.43	5.36	5.36
Yellowstone County	B7	RM 335.12	59393.71	10-yr	1809.45	883.8	878.54	1.61	0.95	14.59	5.48	331.92	1921.66	2.65	0.99	5.26	5.26
Yellowstone County	B7	RM 335.03	59228.59	10-yr	1809.45	883.48	876.8	2.74	1.38	51	12.36	149.43	1734.8	3.13	0.76	6.68	6.68
Yellowstone County	B7	RM 334.91	59041.32	10-yr	1809.45	883.28	878.31	2.14	1.16	33.54	10.76	229.84	1873.72	2.59	0.83	4.97	4.97
Yellowstone County	B7	RM 334.85	58937.73	10-yr	1809.45	883.12	878.66	2.19	1.16	36.78	11.33	224.38	1925.19	2.62	0.81	4.46	4.46
Yellowstone County	B7	RM 334.73	58737.5	10-yr	1809.45	882.58	879.52	2.96	1.78	54.28	18.19	192.25	1203.5	2.53	0.85	3.2	3.2
Yellowstone County	B7	RM 334.63	58573.32	10-yr	1809.45	882.44	878.31	2.38	1.43	32.08	13.17	187.59	1219.36	2.53	1.04	4.13	4.13
Yellowstone County	B7	RM 334.54	58424.99	10-yr	1809.45	882.42	877.09	1.15	1.08	14.32	7.4	154.2	1168.25	2.78	1.43	5.33	5.33
Yellowstone County	B7	RM 334.22	57821.07	10-yr	1809.45	882.08	875.76	1.99	1.44	17.61	8.12	195.25	1033.4	3.73	1.72	6.32	6.32
Yellowstone County	B7	RM 334.09	57621.62	10-yr	1809.45	881.83	875.55	2.73	1.85	61.21	22.03	118.92	775.14	3.52	1.26	6.28	6.28
Yellowstone County	B7	RM 333.98	57440.64	10-yr	1809.45	881.71	875.46	2.27	1.64	26.44	11.49	140.01	582.66	4.37	1.9	6.25	6.25
Yellowstone County	B7	RM 333.83	57207.78	10-yr	1809.45	881.52	875.4	2.33	1.9	36.6	19.27	155.98	492.5	3.69	1.93	6.12	6.12
Yellowstone County	B7	RM 333.69	56989.22	10-yr	1809.45	881.3	873.45	1.82	1.74	35.8	25.94	337.33	527.58	2.92	2.11	7.85	7.85
Yellowstone County	B7	RM 333.54	56738.21	10-yr	1809.45	881.16	874.22	1.26	1.15	18.7	11.43	409.8	809.57	3.34	2.04	6.94	6.94
Yellowstone County	B7	RM 333.42	56552.03	10-yr	1809.45	880.99	873.42	1.45	1.36	27.58	18.82	425.79	702.55	2.79	1.9	7.57	7.57
Yellowstone County	B7	RM 333.30	56351.75	10-yr	1809.45	880.66	875.65	1.69	1.62	49.6	37.93	449.89	630.3	2.32	1.77	5.01	5.01
Yellowstone County	B7	RM 333.19	56177.76	10-yr	1809.45	880.26	875.72	1.95	1.87	41.44	33.45	387.11	514.74	2.33	1.88	4.54	4.54
Yellowstone County	B7	RM 333.09	56027.56	10-yr	1809.45	880.12	875.59	1.73	1.58	17.13	13.66	425.7	602.59	2.39	1.91	4.53	4.53
Yellowstone County	B7	RM 332.99	55855.76	10-yr	1809.45	879.92	873.86	1.81	1.56	42.99	29.42	384.17	700.06	2.42	1.65	6.06	6.06
Yellowstone County	B7	RM 332.88	55687.68	10-yr	1809.45	879.8	874.43	1.51	1.35	14.77	10.03	408.42	750.38	2.62	1.78	5.37	5.37
Yellowstone County	B7	RM 332.77	55504.73	10-yr	1809.45	879.74	875.49	1.31	1.11	9.94	6.26	376.01	824.33	3.16	1.99	4.25	4.25

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	10-yr	1809.45	879.66	874.96	1.43	1.15	14.69	8.99	334.63	808.84	3.18	1.95	4.7	4.7
Yellowstone County	B7	RM 332.56	55182.74	10-yr	1809.45	879.58	874.54	1.46	1.15	14.5	7.47	311.74	868.32	3.54	1.81	5.04	5.04
Yellowstone County	B7	RM 332.47	55059.84	10-yr	1809.45	879.55	873.95	1.35	1.01	13.22	5.96	281.38	1143.93	3.8	1.7	5.6	5.6
Yellowstone County	B7	RM 332.38	54913.1	10-yr	1809.45	879.35	873.16	2.12	1.35	30.3	7.71	159.71	1188.45	4.49	1.12	6.19	6.19
Yellowstone County	B7	RM 332.33	54822.67	10-yr	1809.45	879.33	872.5	1.82	1.21	34.16	10.47	187.9	1214.25	4.04	1.23	6.83	6.83
Yellowstone County	B7	RM 332.21	54626.48	10-yr	1809.45	879.14	873.4	1.97	1.47	32.45	10.06	176.48	1207.36	4.34	1.34	5.74	5.74
Yellowstone County	B7	RM 332.20	54613	10-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	10-yr	1809.45	878.98	873.19	2.1	1.69	39.02	11.35	190.11	1011.44	3.97	1.15	5.79	5.79
Yellowstone County	B7	RM 332.17	54575.38	10-yr	1809.45	878.94	872.76	2.15	1.45	34.57	8.06	145.13	1390.12	4.67	1.07	6.18	6.18
Yellowstone County	B7	RM 332.16	54558	10-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	10-yr	1809.45	878.79	872.47	2.4	1.56	31.09	6.36	130.77	1416.35	4.81	0.97	6.32	6.32
Yellowstone County	B7	RM 332.08	54422.01	10-yr	1809.45	878.7	873.77	2.25	1.65	33.47	7.57	154.85	1323.26	4.12	0.92	4.94	4.94
Yellowstone County	B7	RM 331.96	54224.76	10-yr	1809.45	878.52	873.18	2.04	1.62	41.06	11.45	205.19	1166.78	3.46	0.96	5.34	5.34
Yellowstone County	B7	RM 331.85	54057.19	10-yr	1809.45	878.28	873.16	2.03	1.64	55.35	17.15	249.69	1088.25	3.29	1.02	5.12	5.12
Yellowstone County	B7	RM 331.74	53882.8	10-yr	1809.45	877.73	872.62	3	2.43	58.39	16.72	148.96	671.38	3.91	1.11	5.11	5.11
Yellowstone County	B8	RM 331.66	53744.64	10-yr	1809.45	877.66	871.68	2.31	1.98	41.19	15.21	219.62	718.27	3.46	1.27	5.98	5.98
Yellowstone County	B8	RM 331.55	53575.67	10-yr	1809.45	877.49	872.61	2.31	1.85	37.77	13.32	194.85	832.18	3.36	1.18	4.87	4.87
Yellowstone County	B8	RM 331.41	53354.89	10-yr	1809.45	877.2	872.56	2.4	1.92	40.84	16.86	218.29	753.4	3.04	1.25	4.64	4.64
Yellowstone County	B8	RM 331.32	53209.79	10-yr	1809.45	877.01	871.92	2.19	1.68	35.62	17.66	275.35	889.45	2.45	1.21	5.09	5.09
Yellowstone County	B8	RM 331.23	53053.99	10-yr	1809.45	876.83	871.53	1.84	1.52	25.85	16.5	373.97	858.69	2.18	1.38	5.3	5.3
Yellowstone County	B8	RM 331.14	52919.44	10-yr	1809.45	876.74	871.72	1.54	1.34	18.6	13.6	309.55	713.23	2.6	1.89	5.02	5.02
Yellowstone County	B8	RM 331.08	52820.06	10-yr	1809.45	876.65	871.29	1.63	1.39	19.74	9.33	305.99	939.59	2.94	1.38	5.36	5.36
Yellowstone County	B8	RM 331.01	52700.37	10-yr	1809.45	876.56	871.8	1.65	1.36	20.97	11.86	299.73	812.28	2.91	1.64	4.76	4.76
Yellowstone County	B8	RM 330.93	52576.5	10-yr	1809.45	876.46	871.67	1.68	1.5	21.92	12.83	250.15	611.55	3.39	1.98	4.79	4.79
Yellowstone County	B8	RM 330.83	52418.21	10-yr	1809.45	876.23	870.75	2.34	1.91	30.37	14.55	141.52	472.81	4.21	2	5.48	5.48
Yellowstone County	B8	RM 330.77	52321.13	10-yr	1809.45	876.12	870.68	2.36	2.07	36.01	20.59	174.24	966.43	3.54	2.02	5.44	5.44
Yellowstone County	B8	RM 330.68	52174.9	10-yr	1809.45	875.78	870.33	3.01	2.36	48.34	20.81	129.2	457.21	3.91	1.68	5.45	5.45
Yellowstone County	B8	RM 330.58	52000.46	10-yr	1809.45	875.64	869.72	2.71	2.16	53.47	23.08	117.57	466.59	4.2	1.8	5.92	5.92
Yellowstone County	B8	RM 330.48	51852.83	10-yr	1809.45	875.45	868.81	2.8	2.06	52.69	20.81	105.41	499.45	4.55	1.77	6.64	6.64
Yellowstone County	B8	RM 330.39	51701.57	10-yr	1809.45	875.31	869.32	2.69	1.97	37.62	13.8	133.44	659.3	3.81	1.39	5.99	5.99
Yellowstone County	B8	RM 330.32	51592.04	10-yr	1809.45	875.19	869.57	2.7	1.94	36.04	10.03	135.54	931.01	3.93	1.09	5.62	5.62
Yellowstone County	B8	RM 330.25	51473.55	10-yr	1809.45	875.11	868.38	2.54	1.79	34.98	10.95	144.68	931.99	3.65	1.13	6.73	6.73
Yellowstone County	B8	RM 330.17	51344.77	10-yr	1809.45	874.97	869.9	2.54	1.85	35.89	11.68	151.55	866.42	3.5	1.13	5.07	5.07
Yellowstone County	B8	RM 330.10	51243.99	10-yr	1809.45	874.84	870.02	2.53	1.86	38.79	14.24	185.82	846.59	3.15	1.15	4.82	4.82
Yellowstone County	B8	RM 330.05	51150.67	10-yr	1809.45	874.82	869.94	1.88	1.44	22.68	11.95	298.47	949.38	2.52	1.32	4.88	4.88
Yellowstone County	B8	RM 329.95	50995.78	10-yr	1809.45	874.67	869.67	1.79	1.49	23.05	12.99	398.99	908.07	2.38	1.34	5	5
Yellowstone County	B8	RM 329.86	50853.11	10-yr	1809.45	874.54	869.99	1.59	1.35	23.54	14.27	442.67	982.52	2.26	1.37	4.55	4.55
Yellowstone County	B8	RM 329.75	50682.47	10-yr	1809.45	874.34	869.45	1.38	1.24	31.88	22.99	601.21	1059.17	1.92	1.38	4.89	4.89
Yellowstone County	B8	RM 329.66	50540.7	10-yr	1809.45	874.01	869.45	1.69	1.55	40.8	28.8	572.5	994.13	1.67	1.17	4.56	4.56
Yellowstone County	B8	RM 329.57	50390.78	10-yr	1809.45	873.77	869.17	1.73	1.5	18.54	13.74	531.44	912.84	1.78	1.32	4.6	4.6
Yellowstone County	B8	RM 329.49	50267.58	10-yr	1809.45	873.62	869.52	1.81	1.54	20.26	14.52	484.58	895	1.84	1.32	4.1	4.1
Yellowstone County	B8	RM 329.43	50165.22	10-yr	1809.45	873.58	869.82	1.41	1.26	12.24	8.29	543.15	929.25	2.28	1.54	3.76	3.76
Yellowstone County	B8	RM 329.37	50053.96	10-yr	1809.45	873.53	869.58	1.35	1.15	11.18	7.85	447.42	922.41	2.43	1.71	3.95	3.95
Yellowstone County	B8	RM 329.31	49969.13	10-yr	1809.45	873.47	869.66	1.47	1.19	16.72	10.95	378.18	977.94	2.37	1.55	3.81	3.81
Yellowstone County	B8	RM 329.26	49883.05	10-yr	1809.45	873.4	868.74	1.52	1.25	13.95	8.48	376.88	1005.77	2.37	1.44	4.66	4.66
Yellowstone County	B8	RM 329.20	49785.51	10-yr	1809.45	873.33	868.71	1.57	1.26	15.35	9.86	397.53	1007.42	2.23	1.43	4.62	4.62
Yellowstone County	B8	RM 329.15	49699.71	10-yr	1985.01	873.27	868.64	1.46	1.21	19.05	12.42	463.75	1046.52	2.41	1.57	4.63	4.63
Yellowstone County	B8	RM 329.08	49597.49	10-yr	1985.01	873.19	869.34	1.35	1.11	18.09	12.23	471.46	1093.93	2.41	1.63	3.85	3.85
Yellowstone County	B8	RM 328.96	49388.08	10-yr	1985.01	873.07	868.99	1.51	1.08	16.09	9.3	305.52	1160.15	2.75	1.59	4.08	4.08
Yellowstone County	B8	RM 328.85	49197.37	10-yr	1985.01	872.92	866.79	1.7	1.34	13.32	9.36	472.42	1080.83	1.95	1.37	6.13	6.13
Yellowstone County	B8	RM 328.75	49036.09	10-yr	1985.01	872.85	866.93	1.49	1.21	13.22	9.51	424.64	1054.18	2.17	1.55	5.92	5.92
Yellowstone County	B8	RM 328.68	48920.76	10-yr	1985.01	872.71	867.09	1.85	1.38	22.38	11.67	303.39	1040.48	2.65	1.38	5.62	5.62
Yellowstone County	B8	RM 328.60	48788.86	10-yr	1985.01	872.47	866.36	2.46	1.72	29.94	10.8	196.14	967.96	3.37	1.2	6.11	6.11
Yellowstone County	B8	RM 328.52	48664.7	10-yr	1985.01	872.52	867.75	1.58	1.21	13.67	7.46	167.5	975.12	3.12	1.69	4.77	4.77
Yellowstone County	B8	RM 328.44	48539.46	10-yr	1985.01	872.21	867.34	2.73	1.9	49.28	14.48	137.67	893.86	4.04	1.17	4.87	4.87
Yellowstone County	B8	RM 328.36	48405.85	10-yr	1985.01	871.98	867.12	3.05	2.04	44.43	14.3	131.83	812.26	3.79	1.2	4.86	4.86
Yellowstone County	B8	RM 328.28	48276.93	10-yr	1985.01	871.94	867.73	2.22	1.81	41.05	16.6	191.43	799.75	3.4	1.37	4.83	4.83
Yellowstone County	B8	RM 328.16	48097.58	10-yr	1985.01	871.73	866.7	2.09	1.74	38.76	18.23	224.09	859.37	2.83	1.33	5.03	5.03
Yellowstone County	B8	RM 328.05	47914.16	10-yr	1985.01	871.55	866.62	1.89	1.56	28.17	14.22	264.18	894.94	2.82	1.43	4.93	4.93
Yellowstone County	B8	RM 327.93	47729.4	10-yr	1985.01	871.31	865.67	2.18	1.76	25.93	12.54	299.74	884.43	2.63	1.27	5.64	5.64
Yellowstone County	B8	RM 327.88	47641.03	10-yr	1985.01	871.16	866	2.41	1.79	36.41	16.49	246.29	879.9	2.78	1.26	5.16	5.16

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	10-yr	1985.01	871.04	866.29	2.47	1.74	29.72	11.58	182.18	829.99	3.53	1.37	4.75	4.75
Yellowstone County	B8	RM 327.75	47432.57	10-yr	1985.01	870.75	865.09	3.15	2.14	44.79	13.49	135.8	770.43	4.03	1.21	5.66	5.66
Yellowstone County	B8	RM 327.69	47341.24	10-yr	1985.01	870.43	864.48	3.87	2.48	61.88	23.56	108.01	556.76	3.82	1.44	5.95	5.95
Yellowstone County	B8	RM 327.62	47227.31	10-yr	1985.01	870.53	863.86	2.73	1.8	37.12	14.62	128.47	754.46	3.75	1.47	6.67	6.67
Yellowstone County	B8	RM 327.56	47124.87	10-yr	1985.01	870.55	864.46	2.12	1.49	22.42	10.75	158.59	838.66	3.31	1.59	6.09	6.09
Yellowstone County	B8	RM 327.51	47053.82	10-yr	1985.01	870.48	865.84	2.01	1.59	23.75	16.23	309.96	860.47	2.12	1.45	4.64	4.64
Yellowstone County	B8	RM 327.44	46933.28	10-yr	1985.01	870.47	866.93	1.17	1.21	9.87	8.52	389.2	880.68	2.16	1.86	3.85	3.85
Yellowstone County	B8	RM 327.37	46817.72	10-yr	1985.01	870.35	866.26	1.74	1.46	21.27	12.6	342.21	950.12	2.41	1.43	4.09	4.09
Yellowstone County	B8	RM 327.29	46687.12	10-yr	1985.01	870.27	866.04	1.71	1.36	18.43	10.29	304.35	1019.49	2.56	1.43	4.23	4.23
Yellowstone County	B8	RM 327.23	46600.07	10-yr	1985.01	870.19	866.25	1.82	1.4	20.24	10.83	287.86	1047	2.53	1.35	4.34	4.34
Yellowstone County	B8	RM 327.16	46485.25	10-yr	1985.01	870.05	865.67	2.03	1.47	28.31	13.19	271.45	1115.61	2.6	1.21	4.38	4.38
Yellowstone County	B8	RM 327.08	46360.36	10-yr	1985.01	870	864.94	1.67	1.19	17.35	8.41	266.92	1136.64	3.02	1.46	5.06	5.06
Yellowstone County	B8	RM 327.00	46240.1	10-yr	1985.01	869.9	864.56	1.75	1.37	23.49	11.3	227.91	792.47	3.79	1.82	5.34	5.34
Yellowstone County	B8	RM 326.94	46091.8	10-yr	1985.01	869.82	864.04	1.84	1.39	16.76	8.43	223.67	749.8	3.8	1.91	5.78	5.78
Yellowstone County	B8	RM 326.88	46003.77	10-yr	1985.01	869.71	864.08	2.16	1.59	31.07	14.91	170.66	728.53	3.57	1.71	5.63	5.63
Yellowstone County	B8	RM 326.82	45901.15	10-yr	1985.01	869.63	864.18	2.14	1.59	29.04	17.59	201.73	747.78	2.76	1.67	5.45	5.45
Yellowstone County	B8	RM 326.78	45830.7	10-yr	1985.01	869.57	864.46	2.21	1.56	26.2	15.44	163.64	732.86	2.95	1.74	5.11	5.11
Yellowstone County	B8	RM 326.70	45707.6	10-yr	1985.01	869.5	864.66	1.91	1.44	17.44	12.75	264.01	763.15	2.47	1.8	4.84	4.84
Yellowstone County	B8	RM 326.64	45589.72	10-yr	1985.01	869.4	864.92	1.62	1.52	45.28	35.64	430.38	807.87	2.05	1.62	4.48	4.48
Yellowstone County	B8	RM 326.55	45430.24	10-yr	1985.01	869.18	864.83	1.88	1.63	20.7	13.06	350.63	740.26	2.61	1.65	4.35	4.35
Yellowstone County	B8	RM 326.45	45281.78	10-yr	1985.01	869.07	864.12	1.89	1.65	21.6	14.24	337.85	687.4	2.66	1.75	4.95	4.95
Yellowstone County	B8	RM 326.41	45207.36	10-yr	1985.01	869.05	864.32	1.56	1.41	14.48	10.9	432.08	737.04	2.54	1.91	4.73	4.73
Yellowstone County	B8	RM 326.35	45106.57	10-yr	1985.01	869.02	864.43	1.37	1.18	10.86	7.29	483.02	889.26	2.84	1.9	4.59	4.59
Yellowstone County	B8	RM 326.28	45022.31	10-yr	1985.01	869.03	864.61	0.96	0.85	4.88	3.34	548.28	1000.1	3.5	2.39	4.42	4.42
Yellowstone County	B8	RM 326.07	44588.61	10-yr	1985.01	868.82	862.39	1.69	1.51	10.31	7.27	710.84	1168.61	1.6	1.12	6.43	6.43
Yellowstone County	B8	RM 326.00	44481.07	10-yr	1985.01	868.76	861.24	1.62	1.47	9.43	6.89	749.88	1167.6	1.59	1.16	7.52	7.52
Yellowstone County	B8	RM 325.94	44379.11	10-yr	1985.01	868.69	861.85	1.29	1.19	30.02	22.38	815.16	1278.72	1.75	1.31	6.84	6.84
Yellowstone County	B8	RM 325.89	44304.17	10-yr	1985.01	868.57	863	1.24	1.17	28.94	23.41	839.47	1287.23	1.79	1.44	5.57	5.57
Yellowstone County	B8	RM 325.86	44262.16	10-yr	1985.01	868.53	863.76	1.27	1.16	7.39	5.97	815.1	1129.97	1.87	1.51	4.77	4.77
Yellowstone County	B8	RM 325.81	44176.46	10-yr	1985.01	868.49	863.1	1.27	1.13	7.47	6.35	846.47	1172.3	1.77	1.5	5.39	5.39
Yellowstone County	B8	RM 325.76	44089.5	10-yr	1985.01	868.44	862.66	1.14	1.05	23.09	18.19	843.21	1293.54	1.91	1.5	5.78	5.78
Yellowstone County	B8	RM 325.69	43989.97	10-yr	1985.01	868.37	862.55	1.25	1.01	8.03	4.86	624.87	1415.03	2.39	1.45	5.82	5.82
Yellowstone County	B8	RM 325.58	43809.68	10-yr	1985.01	868.28	862.61	1.24	0.99	23.96	13.06	476.8	1282.13	2.89	1.57	5.67	5.67
Yellowstone County	B8	RM 325.50	43680.96	10-yr	1985.01	868.13	862.6	1.42	1.17	29.35	14.93	434.18	1177.62	2.87	1.44	5.53	5.53
Yellowstone County	B8	RM 325.43	43556.76	10-yr	1985.01	868	860.89	1.44	1.17	31.42	15.97	386.58	1082.1	3.1	1.57	7.11	7.11
Yellowstone County	B8	RM 325.37	43461.41	10-yr	1985.01	867.92	861.36	1.37	1.12	27.75	13.75	344.38	1082.44	3.31	1.64	6.56	6.56
Yellowstone County	B8	RM 325.30	43343.13	10-yr	1985.01	867.78	861.56	1.68	1.27	25.95	11.11	266.4	1002	3.66	1.56	6.22	6.22
Yellowstone County	B8	RM 325.21	43210.67	10-yr	1985.01	867.64	861.34	2	1.45	25.63	10.19	203.88	821.91	4.22	1.66	6.3	6.3
Yellowstone County	B8	RM 325.13	43078.9	10-yr	1985.01	867.48	861.36	2.32	1.59	35.58	11.88	149.14	773.67	4.89	1.61	6.12	6.12
Yellowstone County	B8	RM 325.06	42966.54	10-yr	1985.01	867.12	860.78	3.15	2.23	63.36	17.16	122.62	709.93	4.67	1.25	6.34	6.34
Yellowstone County	B8	RM 324.99	42864.51	10-yr	1985.01	867.04	861.24	2.85	1.89	55.78	18.48	134.89	735.57	4.34	1.43	5.8	5.8
Yellowstone County	B8	RM 324.91	42729.7	10-yr	1985.01	866.85	860.76	2.85	1.91	56.95	18.72	132.51	693.44	4.58	1.5	6.09	6.09
Yellowstone County	B8	RM 324.81	42573.19	10-yr	1985.01	866.65	860.39	2.82	2.03	58.69	20.28	140.39	635.42	4.48	1.54	6.26	6.26
Yellowstone County	B8	RM 324.73	42451.12	10-yr	1985.01	866.55	861.59	2.52	1.86	42.06	18.15	179.41	644.91	3.86	1.66	4.96	4.96
Yellowstone County	B8	RM 324.65	42323.44	10-yr	1985.01	866.49	861.99	1.86	1.55	38.41	23.06	300.92	715.07	2.99	1.79	4.5	4.5
Yellowstone County	B8	RM 324.56	42178.25	10-yr	1985.01	866.35	861.76	1.88	1.51	15.71	12.04	404.18	785.1	2.19	1.67	4.59	4.59
Yellowstone County	B8	RM 324.48	42039.74	10-yr	1985.01	866.21	861.58	1.7	1.47	42.9	30.06	477.36	887.88	2.18	1.52	4.63	4.63
Yellowstone County	B8	RM 324.42	41946.09	10-yr	1985.01	866.1	861.04	1.43	1.23	27.57	17.82	478.13	948.68	2.64	1.71	5.06	5.06
Yellowstone County	B8	RM 324.34	41812.99	10-yr	1985.01	865.87	861.07	1.75	1.38	46.72	25.97	378.78	1016.29	2.55	1.42	4.8	4.8
Yellowstone County	B8	RM 324.28	41712.42	10-yr	1985.01	865.67	859.64	1.78	1.43	50	27.8	364.85	1031.54	2.42	1.34	6.03	6.03
Yellowstone County	B8	RM 324.20	41597.64	10-yr	1985.01	865.59	860.59	1.08	1	17.54	13.58	672.24	1044.94	2.45	1.89	5	5
Yellowstone County	B8	RM 324.16	41526.97	10-yr	1985.01	865.49	861.07	1.46	1.35	11.98	9.14	664.51	995.35	1.95	1.48	4.42	4.42
Yellowstone County	B8	RM 324.10	41434.55	10-yr	1985.01	865.43	860.81	1.27	1.2	22.86	15.98	690.5	1075.87	2.2	1.53	4.62	4.62
Yellowstone County	B8	RM 324.04	41346.42	10-yr	1985.01	865.37	860.39	1.17	1.1	15.06	9.81	628.5	1161.22	2.4	1.56	4.98	4.98
Yellowstone County	B8	RM 323.97	41219.29	10-yr	1985.01	865.29	860.64	1.11	1.04	13.71	9.46	573.41	1129.29	2.47	1.69	4.65	4.65
Yellowstone County	B8	RM 323.83	40977.08	10-yr	1985.01	865.18	860.31	1.22	0.97	10.94	6.19	453.45	1208.89	2.99	1.69	4.87	4.87
Yellowstone County	B8	RM 323.71	40786.71	10-yr	1985.01	864.99	858.49	1.96	1.32	23.8	8.89	220.91	1086.77	3.73	1.39	6.5	6.5
Yellowstone County	B8	RM 323.60	40615.85	10-yr	1985.01	864.98	858.06	1.52	1.08	14.21	5.35	121.59	1059.58	4.64	1.73	6.92	6.92
Yellowstone County	B8	RM 323.55	40536.83	10-yr	1985.01	864.58	857.58	3.13	1.88	62.87	18.38	114.27	877.31	4.15	1.2	7	7
Yellowstone County	B8	RM 323.49	40429.96	10-yr	1985.01	864.43	858.37	3.05	1.86	55.99	15.88	119.14	895.21	4.24	1.19	6.06	6.06
Yellowstone County	B8	RM 323.41	40309.21	10-yr	1985.01	864.31	859.41	2.79	1.84	57.87	16.93	135.74	976.87	3.8	1.11	4.9	4.9

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	10-yr	1985.01	864.24	859.58	2.29	1.51	29.81	11.15	175.88	1016.05	3.49	1.3	4.66	4.66
Yellowstone County	B8	RM 323.27	40082.34	10-yr	1985.01	864.12	859.66	2.32	1.52	34.5	13.85	188.89	971.82	3.37	1.35	4.46	4.46
Yellowstone County	B8	RM 323.21	39985.33	10-yr	1985.01	864.02	859.54	2.29	1.49	35.36	16.05	211.17	968.21	3.03	1.37	4.48	4.48
Yellowstone County	B8	RM 323.16	39899.29	10-yr	1985.01	863.97	859.55	1.75	1.27	30.69	17.12	276.01	1014.71	2.75	1.53	4.42	4.42
Yellowstone County	B8	RM 323.06	39735.77	10-yr	1985.01	863.69	858.56	1.7	1.53	37.93	18.36	311.52	1331.66	2.44	1.17	5.13	5.13
Yellowstone County	B8	RM 322.93	39531.81	10-yr	1985.01	863.46	859.35	1.61	1.3	25.67	12.12	322.23	1211.89	2.69	1.26	4.11	4.11
Yellowstone County	B8	RM 322.79	39301.41	10-yr	1985.01	863.23	858.62	1.91	1.33	24.63	10.54	220.82	1092.04	3.26	1.39	4.61	4.61
Yellowstone County	B8	RM 322.69	39142.64	10-yr	1985.01	863.11	857.47	2.04	1.37	21.02	9.12	200.75	1010.76	3.41	1.48	5.64	5.64
Yellowstone County	B8	RM 322.58	38982.22	10-yr	1985.01	862.59	856.56	3.49	2.56	75.46	25.53	115.46	659.22	3.5	1.18	6.03	6.03
Yellowstone County	B9	RM 322.51	38859.49	10-yr	1985.01	862.53	858.28	2.7	2.07	46.19	17.85	162.77	751.93	3.32	1.28	4.25	4.25
Yellowstone County	B9	RM 322.41	38696.02	10-yr	1985.01	862.42	857.62	1.6	1.6	31.91	21.67	454.4	873.84	2.17	1.47	4.81	4.81
Yellowstone County	B9	RM 322.34	38586.33	10-yr	1985.01	862.32	857.65	1.31	1.33	20.75	16.08	589.43	965.55	2.05	1.58	4.67	4.67
Yellowstone County	B9	RM 322.23	38396.25	10-yr	1985.01	862.17	857.13	1.02	1.05	16.65	13.37	754.09	1139.05	2.07	1.66	5.05	5.05
Yellowstone County	B9	RM 322.13	38239.27	10-yr	1985.01	862.04	857.1	0.92	1	17.83	15.79	880.23	1168.33	1.92	1.7	4.94	4.94
Yellowstone County	B9	RM 322.03	38090.48	10-yr	1985.01	861.74	856.15	1.15	1.29	40.35	39.15	967.17	1120.88	1.41	1.37	5.59	5.59
Yellowstone County	B9	RM 321.91	37898.13	10-yr	1985.01	861.49	856.85	1.6	1.6	9.01	9.01	896.71	896.71	1.39	1.39	4.64	4.64
Yellowstone County	B9	RM 321.82	37758.36	10-yr	1985.01	861.46	856.34	1.29	1.29	5.91	5.91	821.79	821.79	1.87	1.87	5.12	5.12
Yellowstone County	B9	RM 321.70	37567.01	10-yr	1985.01	861.37	855.27	1.15	1.15	20.75	19.54	809.33	870.36	2.11	1.99	6.1	6.1
Yellowstone County	B9	RM 321.60	37414.63	10-yr	1985.01	861.3	854.48	0.94	0.93	9.05	8.5	755.19	816.9	2.79	2.62	6.83	6.83
Yellowstone County	B9	RM 321.48	37188.51	10-yr	1985.01	861.14	855.03	1.33	1.27	20.28	16.69	546.12	719.29	2.65	2.17	6.12	6.12
Yellowstone County	B9	RM 321.38	37016.94	10-yr	1985.01	860.97	854.75	1.53	1.4	22.32	15.26	471.9	791.97	2.63	1.79	6.22	6.22
Yellowstone County	B9	RM 321.28	36857.57	10-yr	1985.01	860.92	855.3	1.25	1.07	10.75	6.82	459.37	901.32	3.26	2.06	5.62	5.62
Yellowstone County	B9	RM 321.13	36652.19	10-yr	1985.01	860.82	854.69	1.44	1.1	20.53	13.28	274.03	916.56	4.07	2.6	6.13	6.13
Yellowstone County	B9	RM 321.05	36531.25	10-yr	1985.01	860.62	855.36	2.05	1.56	34.27	15.67	190.29	613.7	4.6	2.08	5.26	5.26
Yellowstone County	B9	RM 321.00	36446.98	10-yr	1985.01	860.2	855.12	3.26	2.35	70.91	24.37	128.43	574.08	4.38	1.47	5.08	5.08
Yellowstone County	B9	RM 320.71	36404.1	10-yr	1985.01	860.12	855.12	3.3	2.4	51.16	18.21	131.28	561.27	4.22	1.47	5.01	5.01
Yellowstone County	B9	RM 320.62	36361.3	10-yr	1985.01	860.04	855.12	3.39	2.48	53.63	19.4	133.6	555.57	4.06	1.44	4.92	4.92
Yellowstone County	B9	RM 320.92	36318.56	10-yr	1985.01	859.91	855.12	3.52	2.64	96.29	35.09	135.97	544.67	3.85	1.38	4.79	4.79
Yellowstone County	B9	RM 320.44	36258.3	10-yr	1985.01	859.82	855.19	3.41	2.59	53.18	20.43	144.16	530.55	3.82	1.45	4.63	4.63
Yellowstone County	B9	RM 320.38	36198.1	10-yr	1985.01	859.78	855.26	3.2	2.44	47.43	20.1	150.56	503.4	3.87	1.62	4.52	4.52
Yellowstone County	B9	RM 320.80	36137.92	10-yr	1985.01	859.73	855.33	3.02	2.27	65.31	27.48	156.65	662.34	3.9	1.61	4.4	4.4
Yellowstone County	B9	RM 320.71	35990.21	10-yr	1985.01	859.76	854.38	1.82	1.57	28.65	14.33	275.47	1463.72	3.8	1.89	5.37	5.37
Yellowstone County	B9	RM 320.54	35839.45	10-yr	1985.01	859.64	853.99	1.8	1.52	23.62	12.49	324.02	1316.87	3.24	1.7	5.66	5.66
Yellowstone County	B9	RM 320.44	35717.45	10-yr	1985.01	859.57	854.32	1.75	1.37	18.5	9.47	334.82	1341.17	3.07	1.56	5.25	5.25
Yellowstone County	B9	RM 320.62	35556.9	10-yr	1985.01	859.47	854.17	1.7	1.27	31.62	14.16	262.26	1288.88	3.26	1.44	5.3	5.3
Yellowstone County	B9	RM 320.38	35461.42	10-yr	1985.01	859.37	854.17	1.88	1.27	23.83	9.1	198.35	1022.99	4.09	1.53	5.2	5.2
Yellowstone County	B9	RM 320.32	35359.13	10-yr	1985.01	859.21	854.57	2.4	1.57	43.71	13.37	140.01	967.87	4.36	1.3	4.65	4.65
Yellowstone County	B9	RM 320.25	35241.01	10-yr	1985.01	858.65	854.29	3.71	2.45	88.98	21.96	110.65	855.45	3.94	0.95	4.35	4.35
Yellowstone County	B9	RM 320.20	35163.52	10-yr	1985.01	858.53	854.2	3.35	2.39	91.1	29.01	133.89	782.34	3.41	1.06	4.33	4.33
Yellowstone County	B9	RM 320.14	35071.29	10-yr	1985.01	858.3	854.32	3.23	2.4	71.97	25.82	160.26	745.42	3.14	1.11	3.97	3.97
Yellowstone County	B9	RM 320.01	34865.89	10-yr	1985.01	857.9	854.42	2.76	2.67	38.23	28.99	122.19	608.4	2.47	1.87	3.54	3.54
Yellowstone County		RM 319.44	34790	10-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	10-yr	1985.01	857.87	854.66	1.47	1.76	14.87	12.51	143.54	734.7	2.59	2.16	4.29	4.29
Yellowstone County	B9	RM 319.86	34625.68	10-yr	1985.01	857.81	854.6	1.42	1.75	17.73	13.74	153.74	830.37	2.46	1.89	4.25	4.25
Yellowstone County	B9	RM 319.78	34508.06	10-yr	1985.01	857.68	854.51	2.21	1.97	34.41	19.82	111.02	813.78	2.88	1.64	4.16	4.16
Yellowstone County	B9	RM 319.73	34426.63	10-yr	1985.01	857.38	854.69	3.19	1.93	54.78	39.98	156.77	832.61	2.38	1.74	3.91	3.91
Yellowstone County	B9	RM 319.66	34314.84	10-yr	1985.01	857.33	854.51	2.2	1.8	25.21	17.08	158.66	891.47	2.31	1.56	3.9	3.9
Yellowstone County	B9	RM 319.57	34163.05	10-yr	1985.01	857.2	853.93	2.1	1.8	21.28	13.98	198.21	725.54	2.4	1.57	3.86	3.86
Yellowstone County	B9	RM 319.44	33955.96	10-yr	1985.01	857.1	853.14	1.93	1.71	25.19	16.72	153.57	666.52	2.69	1.76	3.96	3.96
Yellowstone County	B9	RM 319.39	33872.4	10-yr	1985.01	857.04	852.65	2.1	1.66	22.05	12.12	137.96	794.09	2.82	1.52	4.39	4.39
Yellowstone County	B9	RM 319.34	33786.83	10-yr	1985.01	857	852.83	1.94	1.49	18.37	11	178.14	799.71	2.81	1.67	4.17	4.17
Yellowstone County	B9	RM 319.22	33580.15	10-yr	1985.01	856.95	851.79	1.97	1.28	17.18	7.75	80.63	883.53	4.02	1.75	5.16	5.16
Yellowstone County	B9	RM 319.17	33497.33	10-yr	1985.01	856.94	851.64	1.53	1.24	12.78	6.81	121.71	1034.31	3.23	1.68	5.3	5.3
Yellowstone County	B9	RM 319.09	33368.53	10-yr	1985.01	856.69	851.25	2.43	2.06	46.84	15.7	134.59	812.19	3.66	1.2	5.44	5.44
Yellowstone County	B9	RM 319.04	33287.21	10-yr	1985.01	856.44	851.49	3.01	2.34	71.52	21.48	112.58	748.35	3.99	1.17	4.95	4.95
Yellowstone County	B9	RM 318.96	33153.16	10-yr	1985.01	856.23	851.64	2.8	2.3	58.65	22.21	155.92	690.71	3.57	1.34	4.59	4.59
Yellowstone County	B9	RM 318.91	33065.54	10-yr	1985.01	856.12	851.86	2.49	2.19	58.92	26.95	189.38	657.77	3.2	1.45	4.27	4.27
Yellowstone County	B9	RM 318.82	32939.33	10-yr	1985.01	855.84	851.86	2.9	2.31	40.73	17.64	157.65	569.26	3.53	1.51	3.99	3.99
Yellowstone County	B9	RM 318.74	32833.24	10-yr	1985.01	855.9	851.86	1.84	1.51	22.55	10.68	183.84	803.17	3.48	1.63	4.05	4.05
Yellowstone County	B9	RM 318.62	32649.76	10-yr	1985.01	855.73	850.67	1.76	1.65	31.02	18.74	316.37	776.8	2.61	1.57	5.07	5.07
Yellowstone County	B9	RM 318.42	32315.28	10-yr	1985.01	855.34	850.15	2	1.89	23.42	16.39	347.2	538.63	2.81	1.96	5.19	5.19

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	10-yr	1985.01	854.95	849.17	2.18	1.61	30.91	12.06	210.92	840.31	3.81	1.47	5.78	5.78
Yellowstone County	B9	RM 317.97	31551.39	10-yr	1985.01	854.65	848.35	2.33	1.94	23.48	10.55	236.67	662.33	3.49	1.55	6.3	6.3
Yellowstone County	B10	RM 317.87	31388.76	10-yr	1985.01	854.36	848.78	2.91	2.15	45.54	14.8	163.51	761.32	3.81	1.21	5.59	5.59
Yellowstone County	B10	RM 317.78	31248.07	10-yr	1985.01	854.35	848.75	2.36	1.57	29.45	9.86	143.48	861.17	4.48	1.47	5.61	5.61
Yellowstone County	B10	RM 317.70	31120.75	10-yr	1985.01	854.4	848.56	1.57	1.14	13.58	6.7	171.9	922.49	3.91	1.89	5.83	5.83
Yellowstone County	B10	RM 317.61	30982.56	10-yr	1985.01	854.29	848.29	1.9	1.36	18.21	8.36	194.68	891.92	3.63	1.64	6	6
Yellowstone County	B10	RM 317.53	30849.94	10-yr	1985.01	854.25	848.5	1.52	1.3	13.32	7.49	343.98	888.39	3.09	1.72	5.75	5.75
Yellowstone County	B10	RM 317.45	30723.4	10-yr	1985.01	854.17	848.47	1.61	1.36	16.66	9.97	369.17	965.29	2.63	1.56	5.7	5.7
Yellowstone County	B10	RM 317.37	30601.88	10-yr	1985.01	854.11	848.17	1.42	1.22	16.84	11.16	370.79	1187.46	2.59	1.7	5.94	5.94
Yellowstone County	B10	RM 317.30	30483.81	10-yr	1985.01	854.02	848.41	1.63	1.28	14.54	7.97	273.47	1228.23	3.29	1.78	5.61	5.61
Yellowstone County	B10	RM 317.19	30302.33	10-yr	1985.01	853.93	848.84	1.83	1.2	17.21	6.07	161.25	1117.08	4.62	1.6	5.1	5.1
Yellowstone County	B10	RM 317.05	30079.26	10-yr	1985.01	853.68	848.38	2.36	1.92	25.82	14.11	159.02	405.58	4.73	2.56	5.3	5.3
Yellowstone County	B10	RM 316.93	29889.26	10-yr	1985.01	853.41	847.25	2.77	2.32	44	22.89	150.42	590.86	4.62	2.36	6.16	6.16
Yellowstone County	B10	RM 316.79	29668.4	10-yr	1985.01	853.24	847.89	2.63	2.14	40.6	14.71	146.89	534.65	4.87	1.73	5.34	5.34
Yellowstone County	B10	RM 316.66	29466.39	10-yr	1985.01	853.08	847.86	2.52	2.11	34.46	16.21	162.74	433.91	4.67	2.17	5.22	5.22
Yellowstone County	B10	RM 316.58	29329.04	10-yr	1985.01	852.97	847.74	2.45	1.85	44.03	20.41	174.32	568.15	4.31	1.98	5.23	5.23
Yellowstone County	B10	RM 316.51	29227.18	10-yr	1985.01	852.83	847.41	2.57	1.92	42.2	19.42	183.91	585.7	3.89	1.77	5.42	5.42
Yellowstone County	B10	RM 316.43	29091.4	10-yr	1985.01	852.68	847.41	2.37	1.84	46.95	26.52	239.51	602.3	3.21	1.79	5.28	5.28
Yellowstone County	B10	RM 316.33	28935.99	10-yr	1985.01	852.42	847.74	2.31	1.9	52.51	34.29	285.56	579.05	2.77	1.8	4.68	4.68
Yellowstone County	B10	RM 316.24	28786.65	10-yr	1985.01	852.19	847.5	1.91	1.78	44.72	31.93	356.21	607.22	2.58	1.84	4.7	4.7
Yellowstone County	B10	RM 316.14	28628.02	10-yr	1985.01	851.97	846.92	1.87	1.63	32.37	20.53	330.46	629.48	3.07	1.93	5.06	5.06
Yellowstone County	B10	RM 316.05	28475.44	10-yr	1985.01	851.71	846.73	2.16	1.9	43.87	22.48	295.19	680.99	3.01	1.54	4.98	4.98
Yellowstone County	B10	RM 315.97	28355.68	10-yr	1985.01	851.6	846.43	2.09	1.78	20.52	11.82	302.3	657.87	2.96	1.7	5.17	5.17
Yellowstone County	B10	RM 315.84	28140.65	10-yr	1985.01	851.24	846.58	2.74	2.18	55.66	21.67	169.34	658.39	3.6	1.39	4.66	4.66
Yellowstone County	B10	RM 315.71	27926.69	10-yr	1985.01	850.99	846.34	2.65	1.98	30.58	11.07	203.51	993.25	3.09	1.11	4.65	4.65
Yellowstone County	B10	RM 315.58	27720.72	10-yr	1985.01	850.99	846.16	1.61	1.23	21.47	9.74	154.06	1024.83	3.55	1.58	4.84	4.84
Yellowstone County	B10	RM 315.44	27505.06	10-yr	1985.01	850.76	846.09	2.19	1.36	27.6	8.16	152.01	1198.92	4.18	1.21	4.66	4.66
Yellowstone County	B10	RM 315.30	27283.58	10-yr	1985.01	850.68	844.45	1.49	1.06	15.45	7.62	317.48	1395.35	2.75	1.34	6.23	6.23
Yellowstone County	B10	RM 315.18	27097.16	10-yr	1985.01	850.63	844.72	1.19	0.96	8.28	5.22	454.04	1437.86	2.31	1.44	5.91	5.91
Yellowstone County	B10	RM 315.01	26818.99	10-yr	1985.01	850.48	844.66	1.46	1.15	16.62	8.89	476.69	1330.24	2.44	1.3	5.82	5.82
Yellowstone County	B10	RM 314.85	26559.67	10-yr	1985.01	850.16	844.84	2.29	1.6	35.16	8.36	167.24	1246.02	4.29	0.99	5.32	5.32
Yellowstone County	B10	RM 314.69	26324.37	10-yr	1985.01	849.88	844.24	2.54	1.87	39.61	10.39	173.13	1025.15	4.04	1.04	5.65	5.65
Yellowstone County	B10	RM 314.57	26132.54	10-yr	1985.01	849.61	844.63	2.77	1.99	48.85	14.77	147.42	763.6	4.41	1.31	4.98	4.98
Yellowstone County	B10	RM 314.46	25963.96	10-yr	1985.01	849.5	844.48	2.35	1.84	38.75	11.89	201.18	942.72	3.79	1.15	5.02	5.02
Yellowstone County	B10	RM 314.35	25782.69	10-yr	1985.01	849.24	844.51	2.31	2.19	57.57	32.62	267.49	508.86	3.16	1.78	4.73	4.73
Yellowstone County	B10	RM 314.24	25607.48	10-yr	1985.01	849.07	844.14	2.25	2.05	19.53	9.34	279.34	659.4	3.12	1.47	4.93	4.93
Yellowstone County	B10	RM 314.15	25461.23	10-yr	1985.01	848.93	844.05	2.18	2.01	55.45	34.29	305.32	560.44	2.88	1.76	4.87	4.87
Yellowstone County	B10	RM 314.06	25326.45	10-yr	1985.01	848.89	843.63	1.59	1.46	11.64	6.23	455.22	967.26	2.72	1.45	5.26	5.26
Yellowstone County	B10	RM 313.98	25189.4	10-yr	1985.01	848.82	843.05	1.42	1.25	24.17	15.6	559.69	1046.99	2.36	1.52	5.77	5.77
Yellowstone County	B10	RM 313.83	24942.42	10-yr	1985.01	848.65	843.2	1.37	1.3	14.81	9.57	476.55	790.64	3.01	1.93	5.45	5.45
Yellowstone County	B10	RM 313.72	24768.08	10-yr	1985.01	848.53	842.35	1.61	1.33	16.2	7.44	330.48	927.63	3.52	1.6	6.18	6.18
Yellowstone County	B10	RM 313.66	24671.51	10-yr	1985.01	848.45	843.14	1.79	1.41	17.85	7.89	286.85	893.27	3.6	1.58	5.31	5.31
Yellowstone County	B10	RM 313.57	24513.04	10-yr	1985.01	848.37	842.47	1.77	1.41	18.45	9.18	303.74	831.6	3.43	1.69	5.9	5.9
Yellowstone County	B10	RM 313.47	24364.02	10-yr	1985.01	848.29	841.55	1.76	1.48	17.72	9.22	283.74	678.54	3.84	1.97	6.73	6.73
Yellowstone County	B10	RM 313.33	24143.26	10-yr	1985.01	847.99	842.65	2.4	1.95	46.19	19.5	185.05	569.45	4.28	1.79	5.34	5.34
Yellowstone County	B10	RM 313.18	23899.74	10-yr	1985.01	847.27	842.19	3.34	2.97	98.67	43.33	163.02	431.89	3.58	1.55	5.08	5.08
Yellowstone County	B10	RM 313.07	23728.15	10-yr	1985.01	847	842.62	3.08	2.82	51.61	28.09	161.94	331.76	3.93	2.12	4.38	4.38
Yellowstone County	B10	RM 312.98	23590.93	10-yr	1985.01	846.99	842.5	2.46	2.14	28.89	15.8	190.87	443.93	3.85	2.09	4.49	4.49
Yellowstone County	B10	RM 312.90	23455.11	10-yr	1985.01	846.92	842.38	2.19	1.98	36.35	21.53	201.73	447.67	3.81	2.24	4.54	4.54
Yellowstone County	B10	RM 312.75	23227.05	10-yr	1985.01	846.71	841.71	2.24	1.82	29.36	14.83	223.54	644.33	3.37	1.69	5	5
Yellowstone County	B10	RM 312.65	23058.61	10-yr	1985.01	846.6	841.61	1.98	1.65	25.18	14.29	273.22	723.44	2.95	1.66	4.99	4.99
Yellowstone County	B10	RM 312.53	22873.59	10-yr	1985.01	846.52	841.37	1.74	1.36	17.4	8.5	237.43	757.9	3.97	1.92	5.15	5.15
Yellowstone County	B10	RM 312.49	22797.96	10-yr	1985.01	846.43	841.34	2.07	1.54	23.61	10.57	202.64	733.82	3.96	1.76	5.09	5.09
Yellowstone County	B10	RM 312.39	22646.67	10-yr	1985.01	846.29	840.85	2.41	1.68	35.77	16.19	149.64	706.5	3.75	1.67	5.43	5.43
Yellowstone County	B10	RM 312.33	22536.68	10-yr	1985.01	846.11	840.82	2.69	1.84	44.28	18.05	139.06	694.11	3.89	1.56	5.29	5.29
Yellowstone County	B10	RM 312.22	22360.55	10-yr	1985.01	846.06	840.91	2.15	1.63	30.1	12.54	127.61	687.54	4.34	1.77	5.15	5.15
Yellowstone County	B10	RM 312.13	22230.65	10-yr	1985.01	846.02	840.94	1.59	1.37	17.6	11.15	350.5	705.26	3.25	2.05	5.08	5.08
Yellowstone County	B10	RM 312.04	22082.88	10-yr	1985.01	845.9	840.82	1.76	1.51	22.4	13.55	346.94	722.45	3.01	1.81	5.07	5.07
Yellowstone County	B10	RM 311.95	21934.61	10-yr	1985.01	845.77	840.79	1.81	1.55	22.78	13.58	350.23	712.78	3.02	1.79	4.97	4.97
Yellowstone County	B10	RM 311.89	21840.24	10-yr	1985.01	845.7	840.76	1.74	1.5	24.51	15.15	325.27	726.12	3.37	2.08	4.94	4.94
Yellowstone County	B10	RM 311.77	21651.91	10-yr	1985.01	845.56	840.18	1.86	1.56	23.05	12.03	226.28	810.3	4.49	2.32	5.38	5.38

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	10-yr	1985.01	845.37	839.85	2.44	1.86	37.22	16.79	150.72	929.52	4.89	2.16	5.52	5.52
Yellowstone County	B10	RM 311.58	21350.77	10-yr	1985.01	845.2	839.63	2.49	1.91	39.86	20.16	171.57	1037.21	4.23	2.12	5.56	5.56
Yellowstone County	B10	RM 311.48	21191.11	10-yr	1985.01	845.07	839.42	2.27	1.83	30.26	15.64	228.87	1090.16	3.58	1.84	5.66	5.66
Yellowstone County	B10	RM 311.37	21010.53	10-yr	1985.01	845.02	839.18	1.72	1.28	19.96	10.2	336.85	1176.92	3.04	1.54	5.84	5.84
Yellowstone County	B10	RM 311.27	20852.82	10-yr	1985.01	844.92	838.96	1.71	1.23	20.1	9.52	322.05	1163.41	3.14	1.47	5.95	5.95
Yellowstone County	B10	RM 311.19	20716.8	10-yr	1985.01	844.85	838.84	1.7	1.15	18.6	7.3	247.96	1128.1	4.05	1.56	6.01	6.01
Yellowstone County	B10	RM 311.09	20559.11	10-yr	1985.01	844.51	839.14	2.76	1.74	43.59	11.45	144.57	1003.48	4.44	1.14	5.36	5.36
Yellowstone County	B10	RM 310.97	20364.78	10-yr	1985.01	844.39	839.45	2.41	1.6	35.43	11.15	171.59	945.51	4.3	1.33	4.94	4.94
Yellowstone County	B10	RM 310.87	20211.96	10-yr	1985.01	844.26	839.02	2.36	1.66	33.87	10.55	190.23	981.6	4.08	1.25	5.24	5.24
Yellowstone County	B10	RM 310.76	20019.23	10-yr	1985.01	843.85	839.18	3.08	2.29	51.53	13.92	142.92	768.56	4.28	1.13	4.67	4.67
Yellowstone County	B11	RM 310.67	19877.9	10-yr	1985.01	843.75	839.11	2.66	1.95	56.58	16.71	174.84	904.22	3.87	1.13	4.63	4.63
Yellowstone County	B11	RM 310.57	19727.96	10-yr	1985.01	843.56	839.08	2.48	1.79	51.43	17.08	194.01	900.7	3.74	1.23	4.47	4.47
Yellowstone County	B11	RM 310.48	19578.86	10-yr	1985.01	843.39	838.96	2.35	1.65	39.79	13.26	209.31	1003.25	3.63	1.2	4.43	4.43
Yellowstone County	B11	RM 310.39	19437.53	10-yr	1985.01	843.34	838.54	1.98	1.42	17.85	7.91	262.25	951.4	3.34	1.47	4.81	4.81
Yellowstone County	B11	RM 310.31	19317.45	10-yr	1985.01	843.27	838.23	1.93	1.5	16.85	8.84	351.73	946.02	2.67	1.4	5.04	5.04
Yellowstone County	B11	RM 310.24	19187.47	10-yr	1985.01	843.2	838.23	1.54	1.31	36.45	21.92	461.89	1032.61	2.45	1.47	4.97	4.97
Yellowstone County	B11	RM 310.16	19069.04	10-yr	1985.01	843.02	837.93	1.44	1.33	34.28	25.55	564.93	887.69	2.27	1.69	5.1	5.1
Yellowstone County	B11	RM 310.09	18955.28	10-yr	1985.01	842.92	837.93	1.53	1.27	10.02	7.09	554.5	1014.04	2.19	1.54	4.99	4.99
Yellowstone County	B11	RM 309.97	18765.62	10-yr	1985.01	842.86	837.59	1.1	1	14.19	9.2	601.54	1069.7	2.88	1.86	5.27	5.27
Yellowstone County	B11	RM 309.90	18643.48	10-yr	1985.01	842.79	837.5	1.31	1.15	7.4	5.43	624.85	1009.16	2.34	1.72	5.29	5.29
Yellowstone County	B11	RM 309.82	18525.48	10-yr	1985.01	842.73	837.5	1.22	1.15	24.92	19.95	696.91	1006.01	2.16	1.72	5.23	5.23
Yellowstone County	B11	RM 309.73	18379.74	10-yr	1985.01	842.59	837.35	1.08	1.04	18.39	14.91	801.13	1036.8	2.26	1.83	5.25	5.25
Yellowstone County	B11	RM 309.65	18253.83	10-yr	1985.01	842.53	837.38	0.89	0.88	11.43	10.24	876.32	1009.41	2.51	2.24	5.15	5.15
Yellowstone County	B11	RM 309.52	18029.98	10-yr	1985.01	842.37	836.68	1.09	1.07	17.82	16.69	816.46	888.88	2.22	2.08	5.7	5.7
Yellowstone County	B11	RM 309.39	17824.11	10-yr	1985.01	842.28	836.74	0.89	0.89	9.25	9.25	763.52	763.52	2.92	2.92	5.55	5.55
Yellowstone County	B11	RM 309.22	17557.23	10-yr	1985.01	842.12	836.07	1.46	1.34	12.68	8.89	334.15	532.51	3.99	2.78	6.06	6.06
Yellowstone County	B11	RM 309.06	17331.95	10-yr	1985.01	841.89	835.79	2.09	1.72	48.75	21.3	191.29	582.65	4.63	1.99	6.09	6.09
Yellowstone County	B11	RM 308.94	17142.36	10-yr	1985.01	841.18	835.4	3.54	2.79	79.91	28.17	121.56	479.54	4.33	1.48	5.79	5.79
Yellowstone County	B11	RM 308.83	16971.41	10-yr	1985.01	841.16	836.04	2.51	1.99	44.08	18.97	158.59	516.51	4.56	1.93	5.13	5.13
Yellowstone County	B11	RM 308.71	16778.65	10-yr	1985.01	841.12	835.91	1.95	1.6	17.09	9.13	251.14	617.73	3.8	2.01	5.2	5.2
Yellowstone County	B11	RM 308.62	16631.4	10-yr	1985.01	841.03	835.85	1.81	1.47	43.92	24.98	300.08	741.27	3.23	1.82	5.18	5.18
Yellowstone County	B11	RM 308.55	16518.64	10-yr	1985.01	840.85	835.85	1.8	1.53	44.04	25.6	368.88	830.69	2.71	1.57	5	5
Yellowstone County	B11	RM 308.43	16328.3	10-yr	1985.01	840.56	834.51	1.62	1.39	40.23	24.48	420.4	901.42	2.62	1.58	6.05	6.05
Yellowstone County	B11	RM 308.35	16192.95	10-yr	1985.01	840.41	834.88	1.53	1.27	24.83	13.99	402.97	966.71	2.9	1.62	5.53	5.53
Yellowstone County	B11	RM 308.24	16015.46	10-yr	1985.01	840.31	834.63	1.44	1.11	13.72	7.77	363.15	956.02	3.32	1.87	5.68	5.68
Yellowstone County	B11	RM 308.12	15826.82	10-yr	1985.01	840.24	834.63	1.35	1.08	11.6	6.86	382.83	910.66	3.43	2.02	5.61	5.61
Yellowstone County	B11	RM 308.02	15675.58	10-yr	1985.01	840.18	834.76	1.46	1.16	10.47	4.99	303.76	861.27	4.22	1.99	5.42	5.42
Yellowstone County	B11	RM 307.88	15434.86	10-yr	1985.01	839.78	834.45	3.01	2.03	56.46	17.23	113.04	748.05	4.42	1.31	5.33	5.33
Yellowstone County	B11	RM 307.77	15261.75	10-yr	1985.01	839.4	834.45	3.25	2.56	75.75	27.22	128.12	573.39	3.85	1.35	4.95	4.95
Yellowstone County	B11	RM 307.68	15125.28	10-yr	1985.01	839.26	834.85	2.7	2.09	49.74	20.04	158.3	612.36	3.9	1.55	4.41	4.41
Yellowstone County	B11	RM 307.60	14980.1	10-yr	1985.01	839.23	834.36	1.89	1.68	20.36	11.5	273.05	559.33	3.76	2.11	4.87	4.87
Yellowstone County	B11	RM 307.52	14873.7	10-yr	1985.01	839.07	834.12	2.27	1.98	31.89	16.53	253.73	584.74	3.34	1.72	4.95	4.95
Yellowstone County	B11	RM 307.46	14779.11	10-yr	1985.01	838.94	833.6	2.24	1.99	60.51	36.93	312.4	604.05	2.72	1.65	5.34	5.34
Yellowstone County	B11	RM 307.39	14664.34	10-yr	1985.01	838.8	833.63	2.19	1.91	18.05	12.22	365.41	649	2.38	1.6	5.17	5.17
Yellowstone County	B11	RM 307.30	14517.89	10-yr	1985.01	838.63	833.81	2.08	1.89	54.54	39.48	407.06	674.11	2.16	1.56	4.82	4.82
Yellowstone County	B11	RM 307.22	14385.45	10-yr	1985.01	838.34	833.87	2.01	1.83	42.23	29.35	396.39	682.25	2.29	1.59	4.47	4.47
Yellowstone County	B11	RM 307.14	14262.57	10-yr	1985.01	838.19	833.51	1.89	1.67	29.56	17.43	334.95	711.22	2.85	1.67	4.68	4.68
Yellowstone County	B11	RM 307.08	14166.72	10-yr	1985.01	838.14	833.11	1.71	1.51	17.22	10.73	348.63	704.82	3.02	1.87	5.03	5.03
Yellowstone County	B11	RM 307.01	14050.92	10-yr	1985.01	838.06	832.65	1.77	1.57	15.03	10.12	372.89	713.84	2.65	1.77	5.4	5.4
Yellowstone County	B11	RM 306.95	13949.23	10-yr	1985.01	837.95	832.35	1.96	1.59	23.85	15.42	324.62	738.67	2.64	1.69	5.61	5.61
Yellowstone County	B11	RM 306.90	13869.87	10-yr	1985.01	837.87	832.56	1.98	1.62	26.76	19.17	348.39	661.24	2.61	1.86	5.31	5.31
Yellowstone County	B11	RM 306.82	13726.64	10-yr	1985.01	837.74	832.62	1.86	1.53	23.29	14.91	361.77	749.99	2.72	1.73	5.12	5.12
Yellowstone County	B11	RM 306.72	13574.53	10-yr	1985.01	837.59	831.8	2.12	1.55	27.73	12.43	222.2	866.83	3.35	1.48	5.79	5.79
Yellowstone County	B11	RM 306.62	13414.11	10-yr	1985.01	837.4	832.77	2.27	1.78	40.42	17.1	214.93	828	3.23	1.35	4.63	4.63
Yellowstone County	B11	RM 306.52	13251.36	10-yr	1985.01	836.99	832.87	3.03	2.23	48.66	15.07	148.37	772.5	3.79	1.15	4.12	4.12
Yellowstone County	B11	RM 306.42	13099.73	10-yr	1985.01	836.66	832.74	3.43	2.59	62.63	22.39	131.51	618.06	3.54	1.24	3.91	3.91
Yellowstone County	B11	RM 306.34	12958.96	10-yr	1985.01	836.64	832.84	2.29	1.86	34.66	15.32	236.52	818.68	3	1.32	3.8	3.8
Yellowstone County	B11	RM 306.25	12825.95	10-yr	1985.01	836.45	832.35	2.32	1.98	35.32	18.02	311.03	839.23	2.36	1.2	4.1	4.1
Yellowstone County	B11	RM 306.16	12673.7	10-yr	1985.01	836.25	832.41	2.26	1.94	31.35	16.43	298.92	782.25	2.51	1.31	3.84	3.84
Yellowstone County	B11	RM 306.11	12592.39	10-yr	1985.01	836.13	832.17	2.31	1.96	40.85	20.02	255.76	741.09	2.82	1.37	3.96	3.96
Yellowstone County	B11	RM 306.03	12457.47	10-yr	1985.01	835.99	831.25	2.05	1.75	27.43	15.83	353.37	889.49	2.23	1.28	4.74	4.74

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	10-yr	1985.01	835.75	831.25	2.24	2	34.8	24.13	337.88	684.82	2.1	1.45	4.5	4.5
Yellowstone County	B11	RM 305.84	12159.82	10-yr	1985.01	835.53	831.1	2.29	2.03	34.56	22.77	254.21	573.94	2.61	1.71	4.43	4.43
Yellowstone County	B11	RM 305.74	11989.73	10-yr	1985.01	835.26	830.64	2.47	2.09	42.59	19.21	193.12	630.14	3.39	1.51	4.62	4.62
Yellowstone County	B11	RM 305.67	11883.31	10-yr	1985.01	835.06	830.43	2.77	2.18	46.26	18.45	159.32	667.21	3.48	1.36	4.63	4.63
Yellowstone County	B11	RM 305.60	11764.11	10-yr	1985.01	835.11	830.18	1.6	1.45	14.51	8.01	150.57	826.82	3.08	1.66	4.93	4.93
Yellowstone County	B11	RM 305.52	11651.48	10-yr	1985.01	834.92	830.18	2.29	1.78	30.83	14.3	151.26	848.52	2.89	1.31	4.74	4.74
Yellowstone County	B11	RM 305.44	11514.64	10-yr	1985.01	834.86	830.43	1.84	1.35	15.85	9.8	156.61	790.51	3.05	1.87	4.43	4.43
Yellowstone County	B11	RM 305.40	11441.77	10-yr	1985.01	834.74	830.61	1.9	1.67	14.71	11.98	238.31	628.17	2.32	1.89	4.13	4.13
Yellowstone County	B11	RM 305.32	11312.15	10-yr	1985.01	834.66	830.61	2	1.54	24.97	10.47	150.71	1012.36	3.08	1.27	4.05	4.05
Yellowstone County	B11	RM 305.24	11186.22	10-yr	1985.01	834.65	830.43	1.2	0.99	10.41	5.9	156.5	1314.4	2.74	1.53	4.23	4.23
Yellowstone County	B11	RM 305.06	10905.09	10-yr	1985.01	834.57	830.15	1.2	0.92	7.02	5.32	302.98	1207.23	2.37	1.79	4.42	4.42
Yellowstone County	B11	RM 304.71	10460.6	10-yr	1985.01	834.44	828.96	1.27	1.16	10.93	8.16	393.71	898.06	2.58	1.91	5.47	5.47
Yellowstone County	B11	RM 304.62	10332.33	10-yr	1985.01	834.41	829.09	1.15	1.03	7.72	4.91	206.24	786.12	3.92	2.46	5.33	5.33
Yellowstone County	B11	RM 304.50	10132.63	10-yr	1985.01	834.15	829.09	2.33	2.04	45.86	20.25	122.43	520.02	4.35	1.88	5.06	5.06
Yellowstone County	B11	RM 304.42	10011.11	10-yr	1985.01	834.06	829.18	2	1.84	33.51	15.47	151.67	581.28	4.08	1.85	4.88	4.88
Yellowstone County	B11	RM 304.34	9873.393	10-yr	1985.01	833.95	828.78	1.98	1.8	19.52	10.24	263.04	566.51	3.74	1.95	5.17	5.17
Yellowstone County	B11	RM 304.25	9735.197	10-yr	1985.01	833.78	828.39	2.31	1.97	36.48	16.12	199.66	556.98	4.14	1.81	5.4	5.4
Yellowstone County	B11	RM 304.18	9615.178	10-yr	1985.01	833.69	828.54	2.29	1.98	23.73	11.35	215.78	540.25	3.91	1.85	5.16	5.16
Yellowstone County	B11	RM 304.09	9478.266	10-yr	1985.01	833.56	828.6	2.42	2.09	36.72	16.39	182.5	510.81	4.35	1.92	4.96	4.96
Yellowstone County	B11	RM 304.00	9326.206	10-yr	1985.01	833.46	828.39	2.24	1.81	34.05	12.63	190.79	750.3	4.43	1.62	5.08	5.08
Yellowstone County	B11	RM 303.91	9177.479	10-yr	1985.01	833.41	828.14	1.93	1.41	27.9	11.51	215.99	959.24	4.21	1.72	5.27	5.27
Yellowstone County	B11	RM 303.78	8973.508	10-yr	1985.01	833.14	827.93	2.44	1.75	34.91	10.1	159.67	858.52	4.68	1.32	5.21	5.21
Yellowstone County	B11	RM 303.65	8773.522	10-yr	1985.01	832.98	827.9	2.37	1.76	42.61	14.04	170.25	805.72	4.32	1.4	5.08	5.08
Yellowstone County	B11	RM 303.55	8608.195	10-yr	1985.01	832.88	827.65	2.15	1.7	20.78	7.7	248.16	935.2	3.49	1.28	5.22	5.22
Yellowstone County	B11	RM 303.43	8422.329	10-yr	1985.01	832.79	827.87	1.73	1.45	33.64	14.81	329.5	1026.38	3.05	1.33	4.92	4.92
Yellowstone County	B11	RM 303.34	8276.308	10-yr	1985.01	832.74	826.92	1.43	1.17	11.69	5.92	325.32	910.7	3.72	1.87	5.81	5.81
Yellowstone County	B11	RM 303.26	8138.725	10-yr	1985.01	832.55	826.98	1.95	1.76	42.96	17.77	304.03	850.7	3.24	1.33	5.57	5.57
Yellowstone County	B11	RM 303.18	8018.762	10-yr	1985.01	832.37	826.22	1.98	1.8	48.16	20.4	307.8	835.55	3.15	1.32	6.15	6.15
Yellowstone County	B11	RM 303.09	7876.674	10-yr	1985.01	832.14	825.43	1.95	1.79	45.93	21.28	336.78	824.45	2.93	1.34	6.71	6.71
Yellowstone County	B11	RM 302.99	7711.603	10-yr	1985.01	831.97	826.22	1.69	1.47	31.24	17.09	336.71	802.78	3.11	1.69	5.75	5.75
Yellowstone County	B11	RM 302.89	7556.419	10-yr	1985.01	831.75	825.73	1.92	1.71	36.38	20.72	289.58	609.35	3.39	1.91	6.02	6.02
Yellowstone County	B11	RM 302.81	7423.411	10-yr	1985.01	831.53	825.86	2.22	1.99	42.79	20.55	220.53	538.64	3.92	1.85	5.68	5.68
Yellowstone County	B11	RM 302.70	7257.14	10-yr	1985.01	831.41	826.01	2.18	1.89	26.36	11.37	184.02	515.16	4.78	2.04	5.4	5.4
Yellowstone County	B12	RM 302.56	7050.708	10-yr	1985.01	830.92	825.25	3.05	3.05	51.59	51.59	167.22	404.53	3.97	3.97	5.68	5.68
Yellowstone County		RM 300.55	7034	10-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	10-yr	1985.01	830.85	825.95	2.96	2.96	47	46.7	166.53	210.67	4.27	4.24	4.91	4.91
Yellowstone County	B12	RM 302.49	6918.549	10-yr	1985.01	830.76	825.92	2.83	2.73	45.98	33.1	169.87	374.43	4.12	2.95	4.85	4.85
Yellowstone County	B12	RM 302.41	6794.522	10-yr	1985.01	830.69	825.64	2.7	2.42	32.51	19.54	161.6	519.96	4.01	2.39	5.05	5.05
Yellowstone County	B12	RM 302.34	6674.634	10-yr	1985.01	830.59	825.76	2.53	2.22	46.04	26.71	213.18	600.93	3.36	1.94	4.82	4.82
Yellowstone County	B12	RM 302.22	6485.378	10-yr	1985.01	830.49	825.76	1.89	1.62	23.74	16.22	235.89	716.01	3.13	2.12	4.73	4.73
Yellowstone County	B12	RM 302.14	6360.047	10-yr	1985.01	830.25	825.76	2.53	1.99	41.78	19.43	178.07	628.95	3.44	1.58	4.48	4.48
Yellowstone County	B12	RM 302.08	6267.13	10-yr	1985.01	830.17	825.79	2.29	1.99	23.41	12.67	264.61	647.35	2.86	1.54	4.37	4.37
Yellowstone County	B12	RM 301.98	6100.949	10-yr	1985.01	830.11	825.34	1.85	1.63	23.93	11.69	256.99	719.03	3.51	1.7	4.77	4.77
Yellowstone County	B12	RM 301.88	5944.005	10-yr	1985.01	830	824.7	1.81	1.54	20.72	11.52	307.5	756.56	3.09	1.71	5.31	5.31
Yellowstone County	B12	RM 301.79	5801.18	10-yr	1985.01	829.94	824.36	1.67	1.47	13.25	9.22	369.92	682.34	2.86	1.98	5.58	5.58
Yellowstone County	B12	RM 301.72	5685.105	10-yr	1985.01	829.87	824.85	1.72	1.51	19.3	12.46	328.47	677.56	3.01	1.94	5.02	5.02
Yellowstone County	B12	RM 301.65	5569.191	10-yr	1985.01	829.74	824.61	1.94	1.69	26.75	16.11	311.48	692.46	2.82	1.69	5.14	5.14
Yellowstone County	B12	RM 301.59	5465.51	10-yr	1985.01	829.62	824.42	2	1.83	30.46	18.4	318.53	668.71	2.7	1.62	5.2	5.2
Yellowstone County	B12	RM 301.53	5366.723	10-yr	1985.01	829.52	824.12	1.81	1.72	34.12	23.09	362.78	664.17	2.58	1.74	5.4	5.4
Yellowstone County	B12	RM 301.47	5270.902	10-yr	1985.01	829.39	824.12	1.84	1.73	33.92	22.35	351.71	657.91	2.67	1.75	5.27	5.27
Yellowstone County	B12	RM 301.39	5140.04	10-yr	1985.01	829.33	824.36	1.45	1.3	18.94	13.08	345.85	707.2	3.14	2.16	4.96	4.96
Yellowstone County	B12	RM 301.33	5044.575	10-yr	1985.01	829.24	824.12	1.64	1.47	17.87	10.28	330.63	714.7	3.3	1.89	5.12	5.12
Yellowstone County	B12	RM 301.24	4906.408	10-yr	1985.01	829.13	823.87	1.81	1.61	19.84	11.61	312.86	669.54	3.16	1.84	5.25	5.25
Yellowstone County	B12	RM 301.18	4802.631	10-yr	1985.01	829.01	823.17	2.02	1.79	25.75	17.25	313.1	609.62	2.74	1.82	5.84	5.84
Yellowstone County	B12	RM 301.12	4698.913	10-yr	1985.01	828.87	823.81	2.12	1.95	27.58	17.72	308.45	554.99	2.93	1.87	5.06	5.06
Yellowstone County	B12	RM 301.07	4611.142	10-yr	1985.01	828.82	824	2	1.81	23.31	13.07	284.87	590.51	3.34	1.86	4.82	4.82
Yellowstone County	B12	RM 301.02	4531.484	10-yr	1985.01	828.75	823.81	2.1	1.89	19.37	10.69	260.47	551.17	3.46	1.9	4.93	4.93
Yellowstone County	B12	RM 300.97	4453.011	10-yr	1985.01	828.58	823.9	2.57	2.29	28.82	15.76	196.12	432.98	3.68	2	4.67	4.67
Yellowstone County	B12	RM 300.89	4332.618	10-yr	1985.01	828.44	823.66	2.63	2.4	46.54	26.41	198.89	424.61	3.44	1.95	4.78	4.78
Yellowstone County	B12	RM 300.83	4232.362	10-yr	1985.01	828.25	823.78	2.83	2.48	51.24	29.01	174.69	421.85	3.37	1.89	4.47	4.47
Yellowstone County	B12	RM 300.77	4151.049	10-yr	1985.01	828.16	823.75	2.6	2.34	49.16	32.2	175.6	369.28	3.55	2.3	4.41	4.41

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	10-yr	1985.01	828.08	823.63	2.22	1.85	23.74	12.93	205.68	535.86	3.72	2.01	4.45	4.45
Yellowstone County	B12	RM 300.55	3793.957	10-yr	1985.01	827.96	822.93	1.9	1.59	26.29	15.95	263.47	666.47	3.12	1.88	5.03	5.03
Yellowstone County	B12	RM 300.45	3633.035	10-yr	1985.01	827.81	822.53	1.53	1.51	30	21.06	335.99	711.76	2.63	1.84	5.28	5.28
Yellowstone County	B12	RM 300.35	3461.833	10-yr	1985.01	827.55	822.66	2.04	1.62	16.92	10.99	389.33	817.04	2.32	1.5	4.9	4.9
Yellowstone County	B12	RM 300.24	3286.175	10-yr	1985.01	827.35	822.47	1.95	1.7	47.96	33.88	421.27	757.62	2.19	1.54	4.88	4.88
Yellowstone County	B12	RM 300.15	3141.724	10-yr	1985.01	827.04	822.47	1.86	1.72	44.23	34.37	481.67	708.71	2.11	1.63	4.56	4.56
Yellowstone County	B12	RM 300.10	3054.752	10-yr	1985.01	826.92	822.35	1.98	1.71	14.13	11.35	458.97	727.52	1.99	1.6	4.56	4.56
Yellowstone County	B12	RM 300.00	2887.728	10-yr	1985.01	826.74	821.22	1.83	1.74	44.34	37.08	456.6	636.55	2.15	1.8	5.52	5.52
Yellowstone County	B12	RM 299.91	2736.431	10-yr	1985.01	826.57	821.5	1.76	1.67	20.7	15.17	350.2	647.84	2.52	1.84	5.07	5.07
Yellowstone County	B12	RM 299.83	2614.069	10-yr	1985.01	826.38	821.41	1.82	1.9	33.09	27.52	388.69	612.07	2.05	1.7	4.98	4.98
Yellowstone County	B12	RM 299.72	2484.158	10-yr	1985.01	826.22	820.89	1.85	1.76	29.19	19.66	408.17	650.83	2.59	1.74	5.33	5.33
Yellowstone County	B12	RM 299.59	2312.328	10-yr	1985.01	825.95	821.13	2.39	1.85	31.44	15.02	220.24	754.32	3.1	1.47	4.82	4.82
Yellowstone County	B12	RM 299.48	2160.343	10-yr	1985.01	825.7	821.13	2.9	1.99	37.98	14.05	138.95	747.01	3.67	1.33	4.57	4.57
Yellowstone County	B12	RM 299.38	1995.229	10-yr	1985.01	825.58	821.13	2.45	1.73	55.7	23.27	135.08	782.8	3.58	1.48	4.45	4.45
Yellowstone County	B12	RM 299.31	1874.433	10-yr	1985.01	825.29	821.22	2.86	2.06	38.41	14.52	141.58	744.99	3.47	1.29	4.07	4.07
Yellowstone County	B12	RM 299.22	1738.666	10-yr	1985.01	825.13	821.16	2.89	1.91	47.18	14.99	128.37	939.86	3.62	1.13	3.97	3.97
Yellowstone County	B12	RM 299.15	1613.992	10-yr	1985.01	825.09	820.95	2.24	1.3	28.25	10.45	154.73	1217.59	3.44	1.25	4.14	4.14
Yellowstone County	B12	RM 299.06	1473.748	10-yr	1985.01	825.04	820.64	1.96	1.17	26.01	8.96	116.53	1304.29	3.87	1.3	4.4	4.4
Yellowstone County	B12	RM 298.99	1360.532	10-yr	1985.01	824.96	820.46	1.97	1.28	30.37	10.1	101.74	1268.07	3.84	1.23	4.5	4.5
Yellowstone County	B12	RM 298.93	1269.876	10-yr	1985.01	824.89	820.46	1.88	1.28	30.82	10.51	108.32	1292.57	3.64	1.2	4.43	4.43
Yellowstone County	B12	RM 298.88	1195.725	10-yr	1985.01	824.82	820.43	1.93	1.28	29.72	10.47	118.8	1290.3	3.53	1.2	4.39	4.39
Yellowstone County	B12	RM 298.82	1096.849	10-yr	1985.01	824.62	820.58	2.54	1.52	34.81	13.6	153.64	1150.93	2.95	1.13	4.03	4.03
Yellowstone County	B12	RM 298.77	1018.392	10-yr	1985.01	824.54	820.4	2.27	1.45	31.03	13.04	184.21	1146.33	2.89	1.2	4.14	4.14
Yellowstone County	B12	RM 298.67	854.844	10-yr	1985.01	824.45	819.39	2.01	1.41	17.16	10.22	244.95	1053.84	2.28	1.34	5.06	5.06
Yellowstone County	B12	RM 298.59	724.135	10-yr	1985.01	824.36	819.55	1.7	1.45	21.07	11.9	271.36	1129.46	2.17	1.21	4.81	4.81
Yellowstone County	B12	RM 298.49	579.164	10-yr	1985.01	824.25	819.27	1.85	1.31	15.84	7.41	214.03	1169.21	2.81	1.29	4.98	4.98
Yellowstone County	B12	RM 298.42	469.573	10-yr	1985.01	824.17	819.27	1.93	1.33	27.09	10.58	176.57	1211.65	3.22	1.23	4.9	4.9
Yellowstone County	B12	RM 298.35	368.049	10-yr	1985.01	824.02	819.97	2.29	1.48	29.64	9.24	147.33	1181.27	3.72	1.14	4.04	4.04
Yellowstone County	B12	RM 298.30	290.003	10-yr	1985.01	824	819.82	1.96	1.24	18.28	8.09	197.73	1147.58	3.19	1.39	4.18	4.18
Yellowstone County	B12	RM 298.26	211.35	10-yr	1985.01	823.93	819.82	1.97	1.41	24.11	11.27	219.87	1073.7	2.84	1.31	4.11	4.11
Yellowstone County	B12	RM 298.19	83.499	10-yr	1985.01	823.78	819.49	2.24	1.65	23.29	11.32	182.89	877.35	2.86	1.38	4.29	4.29

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	10-yr	2007.7	823.64	820.43	1.69	1.33	15.53	7.84	197.15	1197.15	2.92	1.46	3.21	3.21
Treasure County	C1	RM 297.89	61639	10-yr	2007.7	823.47	820.07	1.63	1.4	15.23	11.67	361.86	824.81	2.31	1.76	3.41	3.41
Treasure County	C1	RM 297.76	61392	10-yr	2007.7	823.3	819.93	1.71	1.52	19.17	14.58	331	737.64	2.38	1.8	3.37	3.37
Treasure County	C1	RM 297.62	61179	10-yr	2007.7	823.22	819.69	1.47	1.25	11.16	7.52	290.46	1198.5	2.59	1.74	3.53	3.53
Treasure County	C1	RM 297.5	60985	10-yr	2007.7	822.99	819.39	2.27	1.66	26.79	12.75	159.01	1276.16	3.31	1.56	3.6	3.6
Treasure County	C1	RM 297.36	60767	10-yr	2007.7	822.82	819.14	2.17	1.55	24.74	9.83	169.82	1125.09	3.14	1.23	3.68	3.68
Treasure County	C1	RM 297.22	60535	10-yr	2007.7	822.68	819	1.96	1.49	20.13	8.65	149.14	1005.57	3.19	1.35	3.69	3.69
Treasure County	C1	RM 297.08	60314	10-yr	2007.7	822.54	818.76	1.95	1.41	19.82	8.49	194.31	1192.8	3.29	1.4	3.77	3.77
Treasure County	C1	RM 296.94	60093	10-yr	2007.7	822.36	818.42	2.13	1.52	23.8	9.72	177.08	1115.49	3.24	1.31	3.94	3.94
Treasure County	C1	RM 296.79	59847	10-yr	2007.7	822.29	817.97	1.49	1.26	11.66	7.03	246.81	871.06	3.14	1.88	4.32	4.32
Treasure County	C1	RM 296.64	59608	10-yr	2007.7	822.21	817.9	1.59	1.28	12.92	7.14	177.49	1041.15	3.36	1.83	4.31	4.31
Treasure County	C1	RM 296.51	59386	10-yr	2007.7	822.16	817.8	1.25	1.12	8.12	5.48	477.13	999.29	3.23	2.17	4.36	4.36
Treasure County	C1	RM 296.33	59113	10-yr	2007.7	822.06	817.52	1.43	1.21	9.96	5.72	335.57	939.26	3.98	2.27	4.54	4.54
Treasure County	C1	RM 296.16	58839	10-yr	2007.7	820.95	817.46	4.39	3.91	101.01	53.88	137.09	320.17	3.25	1.71	3.49	3.49
Treasure County	C1	RM 296.01	58583	10-yr	2007.7	820.9	817.45	2.57	2.4	35.73	19.77	259.31	611.72	2.98	1.64	3.45	3.45
Treasure County	C1	RM 295.83	58296	10-yr	2007.7	820.72	817.4	1.82	1.81	15.51	15.28	607.06	617.49	1.82	1.79	3.32	3.32
Treasure County	C1	RM 295.66	58032	10-yr	2007.7	820.38	817.27	2.14	2.14	19.52	19.52	540.37	540.37	1.74	1.74	3.12	3.12
Treasure County	C1	RM 295.52	57800	10-yr	2007.7	820.3	816.19	1.49	1.49	10.39	10.39	627.18	627.18	2.15	2.15	4.11	4.11
Treasure County	C1	RM 295.31	57474	10-yr	2007.7	820.19	815.61	1.31	1.26	7.81	6.86	554.38	687.81	2.64	2.32	4.58	4.58
Treasure County	C1	RM 295.13	57174	10-yr	2007.7	820.03	815.57	1.63	1.4	14.6	7.25	360.56	919.48	3.15	1.56	4.46	4.46
Treasure County	C1	RM 294.94	56877	10-yr	2007.7	819.59	815.46	2.72	2.24	36.43	14.25	189.58	659.32	3.51	1.36	4.14	4.14
Treasure County	C1	RM 294.76	56587	10-yr	2007.7	819.37	815.45	2.33	2.04	27.15	12.72	252.63	676.24	3.17	1.48	3.92	3.92
Treasure County	C1	RM 294.55	56261	10-yr	2007.7	819.14	815.36	2.24	1.82	25.9	11.85	192.21	728.07	3.38	1.53	3.78	3.78
Treasure County	C1	RM 294.38	55980	10-yr	2007.7	818.97	815.07	1.97	1.72	21.21	10.76	226.83	825.6	2.85	1.44	3.9	3.9
Treasure County	C1	RM 294.21	55714	10-yr	2007.7	818.69	814.88	2.36	1.87	28.71	11.03	200.11	1017.76	3.33	1.27	3.81	3.81
Treasure County	C1	RM 294.02	55401	10-yr	2007.7	818.46	814.59	2.19	1.83	22.95	9.43	231.83	1250.52	2.77	1.13	3.87	3.87
Treasure County	C1	RM 293.83	55100	10-yr	2007.7	818.29	814.3	1.94	1.56	17.31	7.67	274.8	1386.28	2.62	1.15	3.98	3.98
Treasure County	C1	RM 293.63	54777	10-yr	2007.7	818.15	813.55	1.64	1.35	12.57	4.14	325.66	1588.11	3.64	1.19	4.61	4.61
Treasure County	C1	RM 293.43	54432	10-yr	2007.7	817.86	813.29	2.32	1.44	26.54	6.34	201.31	1576.75	3.9	0.92	4.58	4.58
Treasure County	C1	RM 293.26	54152	10-yr	2007.7	817.68	813.24	2.3	1.25	24.93	7.48	247.33	1834.66	2.95	0.88	4.44	4.44
Treasure County	C1	RM 293.07	53839	10-yr	2007.7	817.44	813.24	2.2	1.13	26.25	8.53	241.79	1906.76	2.92	0.94	4.2	4.2
Treasure County	C1	RM 292.83	53458	10-yr	2007.7	817.34	813.1	1.37	0.91	9.97	3.83	380.97	2073.79	2.93	1.12	4.24	4.24
Treasure County	C1	RM 292.6	53082	10-yr	2007.7	817.13	812.6	1.87	1.39	17.23	6.23	238.91	1038.94	3.86	1.39	4.53	4.53
Treasure County	C2	RM 292.32	52612	10-yr	2007.7	816.93	811.76	1.98	1.28	17.57	5.73	207.17	1242.35	3.93	1.27	5.17	5.17
Treasure County	C2	RM 292.09	52256	10-yr	2007.7	816.8	811.6	2	1.43	17.8	6.06	174.28	1011.39	4.16	1.39	5.2	5.2
Treasure County	C2	RM 291.9	51956	10-yr	2007.7	816.65	811.55	1.91	1.37	18.63	6.9	240.72	1156.4	3.46	1.27	5.1	5.1
Treasure County	C2	RM 291.71	51639	10-yr	2007.7	816.07	811.5	2.88	2.42	64.22	45	242.2	465.57	2.56	1.78	4.57	4.57
Treasure County	C2	RM 291.52	51333	10-yr	2007.7	815.82	811.46	2.21	1.67	24.29	11.55	214.15	689.63	3.8	1.79	4.36	4.36
Treasure County	C2	RM 291.33	51042	10-yr	2007.7	815.57	811.46	2.33	2	28.18	14.34	231.23	603.2	3.3	1.67	4.11	4.11
Treasure County	C2	RM 291.15	50747	10-yr	2007.7	815.52	811.4	1.55	1.36	11.99	7.53	297.47	644.76	3.74	2.34	4.12	4.12
Treasure County	C2	RM 290.94	50437	10-yr	2007.7	815.35	811.31	1.87	1.38	18.35	9.84	259.99	863.4	3.17	1.69	4.03	4.03
Treasure County	C2	RM 290.78	50179	10-yr	2007.7	815.22	810.97	1.6	1.28	13	8.5	392.6	901.67	2.67	1.74	4.25	4.25
Treasure County	C2	RM 290.6	49891	10-yr	2007.7	815.14	810.54	1.29	1.19	8.64	6.89	473.72	656.35	3.22	2.57	4.6	4.6
Treasure County	C2	RM 290.43	49607	10-yr	2007.7	814.91	810.13	1.99	1.73	19.56	11.21	273.61	664.8	3.28	1.87	4.78	4.78
Treasure County	C2	RM 290.23	49287	10-yr	2007.7	814.35	810.07	3.04	2.53	45.22	18.09	153.29	503.32	4	1.58	4.28	4.28
Treasure County	C2	RM 290.04	48976	10-yr	2007.7	814.26	810.04	2.13	1.8	21.95	11.26	209.93	556.02	4.04	2.05	4.21	4.21
Treasure County	C2	RM 289.85	48667	10-yr	2007.7	814.14	809.87	1.67	1.46	14.7	10.76	359.02	732.41	2.95	2.16	4.27	4.27
Treasure County	C2	RM 289.67	48372	10-yr	2007.7	813.95	809.87	1.74	1.59	15.4	7.54	397.84	1059.55	2.83	1.38	4.08	4.08
Treasure County	C2	RM 289.46	48067	10-yr	2007.7	813.86	809.56	1.45	1.2	10.01	5.03	403.96	1057.93	3.16	1.58	4.29	4.29
Treasure County	C2	RM 289.27	47769	10-yr	2007.7	813.63	809.32	1.95	1.64	20.35	9.74	320.17	843.78	3.04	1.45	4.31	4.31
Treasure County	C2	RM 289.11	47515	10-yr	2007.7	813.47	809	2.02	1.59	19.66	6.68	228.59	917.74	4.1	1.38	4.46	4.46
Treasure County	C2	RM 288.94	47232	10-yr	2007.7	813.24	808.59	2.34	1.73	25.82	8.1	184.67	857.05	4.38	1.35	4.65	4.65
Treasure County	C2	RM 288.76	46939	10-yr	2007.7	813.12	808.33	2.07	1.38	20.99	7.63	217.33	1040.73	3.95	1.42	4.79	4.79
Treasure County	C2	RM 288.55	46613	10-yr	2007.7	812.7	808.24	2.66	2.17	36.99	11.7	223.76	912.44	3.25	1.01	4.45	4.45
Treasure County	C2	RM 288.36	46302	10-yr	2007.7	812.62	807.91	1.92	1.51	17.17	5.46	219.44	935.87	4.54	1.42	4.71	4.71
Treasure County	C2	RM 288.18	46008	10-yr	2007.7	812.45	807.77	2.07	1.66	21.54	6.87	243.12	1117.27	3.66	1.15	4.68	4.68
Treasure County	C2	RM 287.99	45713	10-yr	2007.7	812.31	807.58	1.94	1.49	17.55	6.18	237.34	1670	3.69	1.29	4.73	4.73
Treasure County	C2	RM 287.81	45421	10-yr	2007.7	812.21	807.25	1.77	1.42	15.42	6.75	229.88	844.13	3.88	1.68	4.96	4.96
Treasure County	C2	RM 287.62	45112	10-yr	2007.7	811.81	807.19	2.82	2.02	38.05	10.26	137.1	884.47	4.26	1.12	4.62	4.62
Treasure County	C2	RM 287.42	44789	10-yr	2007.7	811.51	807.15	2.76	2.03	37.24	12.64	158.8	759.25	3.96	1.33	4.37	4.37

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	10-yr	2007.7	811.44	806.81	1.66	1.51	15.16	9.67	420.05	753.36	2.79	1.77	4.63	4.63
Treasure County	C2	RM 287.06	44222	10-yr	2007.7	811.33	806.77	1.43	1.35	11.6	9.13	513.72	716.5	2.65	2.08	4.56	4.56
Treasure County	C2	RM 286.9	43958	10-yr	2007.7	811.15	806.52	1.79	1.58	15.72	8.01	277.29	644.91	3.89	1.97	4.63	4.63
Treasure County	C2	RM 286.72	43671	10-yr	2007.7	810.8	802.22	2.69	2.17	31.15	9.27	122.09	970.2	5.93	1.71	8.58	8.58
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	10-yr	2007.7	810.72	802.22	2.81	2.54	34.17	11.51	121.87	771.5	5.81	1.91	8.5	8.5
Treasure County	C3	RM 286.58	43448	10-yr	2007.7	810.6	806.32	2.69	2.15	35.06	17.19	175.22	955.62	4.03	1.96	4.29	4.29
Treasure County	C3	RM 286.51	43344	10-yr	2007.7	810.56	806.32	2.42	2.17	28.7	22.57	203.23	1120.06	3.93	3.08	4.24	4.24
Treasure County	C3	RM 286.46	43257	10-yr	2007.7	810.5	804.36	2.37	2.13	27.02	22.15	195.4	917.23	4.16	3.4	6.14	6.14
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	10-yr	2007.7	810.44	804.36	2.41	2.19	28.22	22.58	201.72	1028.21	4.05	3.24	6.08	6.08
Treasure County	C3	RM 286.37	43117	10-yr	2007.7	810.38	806.17	2.28	2.09	26.73	22.09	303.74	1403.6	3.36	2.77	4.21	4.21
Treasure County	C3	RM 286.26	42931	10-yr	2007.7	810.08	806.17	2.59	2.14	61.39	32.7	216.72	1340.67	3.05	1.61	3.91	3.91
Treasure County	C3	RM 286.06	42624	10-yr	2007.7	809.89	806.08	1.78	1.34	16.52	7.32	354.36	1711.24	2.96	1.3	3.81	3.81
Treasure County	C3	RM 285.81	42213	10-yr	2007.7	809.67	805.78	1.88	1.16	16.25	6.92	218.43	2516.19	2.39	1.01	3.89	3.89
Treasure County	C3	RM 285.56	41812	10-yr	2007.7	809.49	805.34	1.62	0.99	12.87	3.33	235.89	2752.58	3.92	1.01	4.16	4.16
Treasure County	C3	RM 285.23	41280	10-yr	2007.7	809.26	805.17	1.92	0.97	19.49	5.15	152.4	2842.06	3.17	0.82	4.1	4.1
Treasure County	C3	RM 284.69	40395	10-yr	2007.7	808.7	804.85	2.45	1.69	33.94	9.47	159.53	1696.73	2.55	0.7	3.85	3.85
Treasure County	C3	RM 284.26	39705	10-yr	2007.7	808.35	804.6	1.68	1.42	15.67	7.17	348.37	1126.69	2.77	1.27	3.75	3.75
Treasure County	C3	RM 283.96	39199	10-yr	2007.7	808.05	804.3	1.91	1.32	19.48	7.14	242.5	1706.44	2.99	1.08	3.75	3.75
Treasure County	C3	RM 283.69	38766	10-yr	2007.7	807.87	803.9	1.8	1.12	16.23	4.37	186.79	2174.16	3.64	0.97	3.97	3.97
Treasure County	C3	RM 283.35	38229	10-yr	2007.7	807.7	803.42	1.55	0.93	12.14	4.26	275.04	2155.03	3.23	1.12	4.28	4.28
Treasure County	C3	RM 283.05	37749	10-yr	2007.7	807.34	803.32	2.26	1.31	26.6	6.44	191.88	2100.56	3.27	0.78	4.02	4.02
Treasure County	C3	RM 282.78	37306	10-yr	2007.7	807.09	803.11	1.88	1.11	16.74	5.67	256.76	2081.45	2.83	0.95	3.98	3.98
Treasure County	C3	RM 282.56	36942	10-yr	2007.7	806.98	802.83	1.38	0.85	10.19	3.58	280.7	2582.38	2.79	0.97	4.15	4.15
Treasure County	C3	RM 282.31	36546	10-yr	2007.7	806.84	802.74	1.58	0.79	12.48	3.26	187.32	2814.32	3.68	0.94	4.11	4.11
Treasure County	C3	RM 282.09	36195	10-yr	2007.7	806.61	802.56	2.2	1.14	25.95	8.12	181.69	2425.56	3.01	0.93	4.05	4.05
Treasure County	C4	RM 281.73	35619	10-yr	2007.7	806.31	801.74	1.7	1.28	13.22	5.42	425.58	2048.95	2.45	1	4.57	4.57
Treasure County	C4	RM 281.35	35005	10-yr	2007.7	806.14	801.53	1.42	0.99	9.8	2.56	316.09	2338.69	4.09	1.06	4.61	4.61
Treasure County	C4	RM 281.03	34521	10-yr	2007.7	805.88	801.19	2.03	1.22	20.14	5.09	223.15	2063.77	3.91	0.98	4.69	4.69
Treasure County	C4	RM 280.73	34051	10-yr	2007.7	805.73	800.82	1.4	1.06	8.1	4.31	693.36	2270.28	1.89	1	4.92	4.92
Treasure County	C4	RM 280.5	33687	10-yr	2007.7	805.61	800.66	1.25	0.97	7.15	4.06	756.46	2211.88	1.94	1.1	4.94	4.94
Treasure County	C4	RM 280.27	33304	10-yr	2007.7	805.5	800.31	1.07	0.85	6.17	3.76	759.73	2101.8	2.22	1.35	5.19	5.19
Treasure County	C4	RM 279.95	32800	10-yr	2007.7	805.38	800.08	1.11	0.78	7.03	3.36	503.81	2258.36	3.09	1.47	5.3	5.3
Treasure County	C4	RM 279.6	32231	10-yr	2007.7	805.01	799.98	2.13	1.35	19.85	8.72	304.47	1265.89	2.74	1.19	5.03	5.03
Treasure County	C4	RM 279.33	31805	10-yr	2007.7	804.43	799.98	2.73	2.17	36.72	15.57	244.79	780.9	2.9	1.22	4.45	4.45
Treasure County	C4	RM 279.14	31495	10-yr	2007.7	804.28	799.96	2.11	1.61	20.76	8.09	236.9	930.96	3.54	1.37	4.33	4.33
Treasure County	C4	RM 278.96	31209	10-yr	2007.7	804.22	799.87	1.5	1.33	11.42	5.48	367.55	1072.09	3.43	1.64	4.36	4.36
Treasure County	C4	RM 278.76	30894	10-yr	2007.7	804.08	799.6	1.62	1.46	13.1	7	422.58	1121.21	2.73	1.45	4.48	4.48
Treasure County	C4	RM 278.56	30571	10-yr	2007.7	803.86	799.53	1.85	1.51	18.51	8.54	336.63	1211.72	2.94	1.35	4.34	4.34
Treasure County	C4	RM 278.37	30259	10-yr	2007.7	803.77	799.26	1.45	1.27	10.51	4.33	366.22	1291.38	3.68	1.51	4.51	4.51
Treasure County	C5	RM 278.16	29915	10-yr	2007.7	803.42	798.81	2.42	2.04	28.06	9.23	207.29	960.8	3.89	1.27	4.6	4.6
Treasure County	C5	RM 277.99	29648	10-yr	2007.7	803.11	798.77	2.71	2.36	36	12.94	189.49	700.96	3.83	1.36	4.34	4.34
Treasure County	C5	RM 277.8	29336	10-yr	2007.7	802.9	798.74	2.4	2.11	28.48	11.04	211.54	678.03	3.85	1.48	4.16	4.16
Treasure County	C5	RM 277.61	29041	10-yr	2007.7	802.68	798.72	2.37	2.02	27.85	13.06	215.15	605.7	3.81	1.78	3.96	3.96
Treasure County	C5	RM 277.43	28747	10-yr	2007.7	802.54	798.48	1.94	1.69	19.51	10.01	306.39	742.51	3.28	1.67	4.06	4.06
Treasure County	C5	RM 277.22	28415	10-yr	2007.7	802.27	798.47	2.06	2.01	18.64	15.28	423.8	564.8	2.29	1.87	3.81	3.81
Treasure County	C5	RM 277.04	28123	10-yr	2007.7	802.09	798.4	1.87	1.73	14.45	11.33	454.23	672.8	2.33	1.82	3.69	3.69
Treasure County	C5	RM 276.81	27791	10-yr	2007.7	801.99	797.8	1.47	1.28	10.95	4.8	376.57	1033.15	3.52	1.54	4.19	4.19
Treasure County	C5	RM 276.63	27499	10-yr	2007.7	801.73	797.4	2.18	1.66	24.06	8.66	234.28	958.55	3.57	1.28	4.33	4.33
Treasure County	C5	RM 276.4	27133	10-yr	2007.7	801.5	797.1	2.12	1.61	22.18	7.64	239.33	1012.08	3.65	1.25	4.4	4.4
Treasure County	C5	RM 276.19	26801	10-yr	2007.7	801.33	796.87	2.09	1.61	21.64	9.45	185.25	764.72	3.81	1.65	4.46	4.46
Treasure County	C5	RM 276.01	26502	10-yr	2007.7	801.13	796.74	2.25	1.79	24.58	7.68	156.31	897.9	4.12	1.26	4.39	4.39
Treasure County	C5	RM 275.81	26193	10-yr	2007.7	801.02	796.61	1.9	1.53	17.88	6.45	179.56	971.93	3.85	1.38	4.4	4.4
Treasure County	C5	RM 275.63	25896	10-yr	2007.7	800.85	796.49	2.17	1.55	22.85	6.67	134.65	1115.89	4.1	1.17	4.35	4.35
Treasure County	C5	RM 275.45	25606	10-yr	2007.7	800.77	796.37	1.68	1.39	14.23	5.71	153.92	1004.51	3.69	1.46	4.39	4.39
Treasure County	C5	RM 275.26	25299	10-yr	2007.7	800.56	796.16	1.89	1.76	17.18	8.76	251.91	828.17	4.16	2.11	4.4	4.4
Treasure County	C5	RM 275.09	25033	10-yr	2007.7	800.3	796.13	2.4	2.05	27.98	11.76	199.32	653.74	4.03	1.68	4.17	4.17
Treasure County	C6	RM 274.89	24716	10-yr	2007.7	800.13	796.04	2.14	1.54	22.87	8.89	227.64	1605.44	3.71	1.43	4.1	4.1
Treasure County	C6	RM 274.72	24440	10-yr	2007.7	799.59	796.04	3.06	2.51	50.62	24.89	214.5	1248.39	2.9	1.41	3.55	3.55

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	10-yr	2007.7	799.46	795.79	1.89	1.43	21.34	9.54	294.17	2243.45	2.53	1.13	3.66	3.66
Treasure County	C6	RM 274.38	23892	10-yr	2007.7	799.29	795.55	1.81	1.27	17.36	5.56	225.84	2542.4	3.09	0.98	3.74	3.74
Treasure County	C6	RM 274.13	23491	10-yr	2007.7	799.08	795.16	1.9	1.31	20.14	8.05	223.09	2283.64	2.67	1.06	3.93	3.93
Treasure County	C6	RM 273.83	22999	10-yr	2007.7	798.9	794.46	1.68	1.09	14.16	3.89	183.72	2689.21	3.65	0.99	4.44	4.44
Treasure County	C6	RM 273.58	22595	10-yr	2007.7	798.62	794.04	2.24	1.3	23.61	4.82	174.74	2840.73	3.42	0.68	4.59	4.59
Treasure County	C6	RM 273.35	22238	10-yr	2007.7	798.42	794.04	2	1.04	19.04	5.76	230.93	3358.65	2.62	0.78	4.39	4.39
Treasure County	C6	RM 273.15	21916	10-yr	2007.7	798.29	793.92	1.63	0.9	13.51	4.69	265.64	3406.55	2.65	0.91	4.37	4.37
Treasure County	C6	RM 272.83	21397	10-yr	2007.7	798.15	793.79	1.46	0.8	9.82	3.25	263.47	3540.03	3.08	1.01	4.36	4.36
Treasure County	C6	RM 272.5	20872	10-yr	2007.7	797.87	793.46	2.09	1.08	23.17	6.36	227.64	3593.73	2.71	0.73	4.41	4.41
Treasure County	C6	RM 272.19	20368	10-yr	2007.7	797.47	793.34	2.18	1.3	23.61	5.75	243.81	3091.42	3.19	0.77	4.14	4.14
Treasure County	C6	RM 271.91	19902	10-yr	2007.7	797.25	793.18	1.96	1.29	19.59	6.05	226.65	2275	3.52	1.08	4.07	4.07
Treasure County	C6	RM 271.68	19534	10-yr	2007.7	796.93	792.81	2.43	1.74	30.52	12.21	190.66	1448.38	3.31	1.32	4.12	4.12
Treasure County	C6	RM 271.41	19102	10-yr	2007.7	796.87	792.54	1.31	0.95	9.13	3.86	302	2477.17	3.01	1.26	4.33	4.33
Treasure County	C6	RM 271.06	18548	10-yr	2007.7	796.43	792.18	2.56	1.96	34.3	11.44	170.3	1185.84	3.21	1.05	4.26	4.26
Treasure County	C6	RM 270.64	17870	10-yr	2007.7	796.23	792.05	1.49	1.03	12.07	4.5	233.38	1917.68	2.91	1.07	4.18	4.18
Treasure County	C6	RM 270.05	16897	10-yr	2007.7	795.88	791.48	2.01	1.09	18.18	4.8	174.01	2296.17	3.27	0.85	4.4	4.4
Treasure County	C6	RM 269.75	16413	10-yr	2007.7	795.54	791.35	2.21	1.44	25.27	8.14	223.29	1355.46	3.3	1.05	4.19	4.19
Treasure County	C6	RM 269.47	15967	10-yr	2007.7	795.21	791.23	2.29	1.92	26.44	9.84	207.56	1164.03	3.57	1.32	3.97	3.97
Treasure County	C7	RM 269.27	15645	10-yr	2007.7	795.09	791.23	1.77	1.42	15.96	6.15	278.62	1773.32	3.28	1.25	3.86	3.86
Treasure County	C7	RM 269.06	15308	10-yr	2007.7	794.98	791.01	1.45	1.13	11.25	4	197.37	2114.89	2.98	1.04	3.97	3.97
Treasure County	C7	RM 268.83	14957	10-yr	2007.7	794.91	790.6	0.98	0.77	5.27	2.6	267.05	2159.38	2.73	1.33	4.31	4.31
Treasure County	C7	RM 268.55	14516	10-yr	2007.7	794.8	790.17	1.3	0.84	8.46	2.57	224.66	2593.35	3.69	1.1	4.63	4.63
Treasure County	C7	RM 268.2	13976	10-yr	2007.7	794.55	789.62	1.9	1.04	18.06	4.27	234.34	2688.99	3.74	0.87	4.93	4.93
Treasure County	C7	RM 267.87	13439	10-yr	2007.7	794.16	789.53	2.32	1.28	24.38	5.64	226.98	2172.81	3.41	0.78	4.63	4.63
Treasure County	C7	RM 267.53	12884	10-yr	2007.7	793.59	789.5	2.62	1.59	35.65	12.15	240.64	1349.97	2.78	0.94	4.09	4.09
Treasure County	C7	RM 267.14	12253	10-yr	2007.7	793.42	789.26	1.58	1.01	12.37	4.78	227.28	1608.2	3.23	1.23	4.16	4.16
Treasure County	C7	RM 266.8	11700	10-yr	2007.7	793.26	789.2	1.63	1.07	13.82	3.96	214.75	2019.09	3.31	0.94	4.06	4.06
Treasure County	C7	RM 266.41	11078	10-yr	2007.7	792.98	789.14	2.16	1.3	25.38	8.05	158.87	1888.72	2.93	0.91	3.85	3.85
Treasure County	C7	RM 266.11	10593	10-yr	2007.7	792.67	788.83	2.02	1.5	22.69	8.83	259.38	1568.46	2.72	1.05	3.84	3.84
Treasure County	C7	RM 265.92	10283	10-yr	2007.7	792.55	788.65	1.64	1.17	11.77	6.78	341.15	1383.24	2.17	1.24	3.9	3.9
Treasure County	C7	RM 265.68	9915	10-yr	2007.7	792.31	788.21	2.09	1.53	21.4	8.87	180	824.76	3.9	1.6	4.1	4.1
Treasure County	C7	RM 265.52	9650	10-yr	2007.7	792.16	788.07	2.16	1.52	24.44	8.78	158.94	1159.54	3.22	1.14	4.09	4.09
Treasure County	C7	RM 265.34	9362	10-yr	2007.7	791.93	788.07	2.09	1.53	24.21	9.02	178.56	1304.46	2.73	1.01	3.86	3.86
Treasure County	C7	RM 265.16	9071	10-yr	2007.7	791.74	787.95	1.68	1.48	16.97	7.76	294.36	1254.05	2.38	1.08	3.79	3.79
Treasure County	C7	RM 264.98	8775	10-yr	2007.7	791.51	787.59	1.93	1.62	13.28	8.72	439.02	1273.93	1.48	0.97	3.93	3.93
Treasure County	C7	RM 264.81	8508	10-yr	2007.7	791.42	787.35	1.15	1.11	9.96	6.38	634.79	1574.94	1.8	1.15	4.07	4.07
Treasure County	C7	RM 264.64	8216	10-yr	2007.7	791.3	787.22	1.22	1.14	9.2	6.26	650.67	1474.89	1.75	1.19	4.08	4.08
Treasure County	C7	RM 264.39	7803	10-yr	2007.7	791.06	786.86	1.64	1.46	15.85	8.23	343.32	1084.65	2.45	1.27	4.2	4.2
Treasure County	C7	RM 264.15	7406	10-yr	2007.7	790.95	786.6	1.37	1.07	10.01	4.97	202.21	1469.35	2.6	1.27	4.35	4.35
Treasure County	C7	RM 263.97	7116	10-yr	2007.7	790.84	786.49	1.57	1.18	12	5.56	179.12	936.59	3.97	1.81	4.35	4.35
Treasure County	C7	RM 263.79	6834	10-yr	2007.7	790.65	786.49	2.07	1.49	20.87	6.69	201.41	1409.35	3.03	0.96	4.16	4.16
Treasure County	C7	RM 263.6	6534	10-yr	2007.7	790.48	786.37	1.86	1.25	17.88	8.16	204.02	1086.8	3.4	1.53	4.12	4.12
Treasure County	C7	RM 263.39	6194	10-yr	2007.7	790.35	786.25	1.43	1.25	10.8	5.73	449.51	1251.24	2.85	1.51	4.1	4.1
Treasure County	C7	RM 263.19	5862	10-yr	2007.7	790.09	786	1.92	1.3	20.85	8.22	333.53	1566.94	2.51	0.98	4.09	4.09
Treasure County	C7	RM 262.95	5479	10-yr	2007.7	789.82	785.85	1.86	1.47	13.82	7.15	398.81	1087.45	2.44	1.26	3.97	3.97
Treasure County	C7	RM 262.78	5206	10-yr	2007.7	789.7	785.76	1.59	1.17	13.16	5.96	440.96	1744.48	2.19	0.98	3.94	3.94
Treasure County	C7	RM 262.58	4883	10-yr	2007.7	789.58	785.64	1.2	0.89	9.45	5.09	620.51	2015.39	2.23	1.19	3.93	3.93
Treasure County	C7	RM 262.42	4613	10-yr	2007.7	789.5	785.54	1.06	0.8	6.35	3.4	655.56	2111.49	2.31	1.23	3.96	3.96
Treasure County	C7	RM 262.24	4323	10-yr	2007.7	789.43	785.43	0.94	0.81	5.21	3.08	839.62	1932.15	2.45	1.44	4	4
Treasure County	C7	RM 261.95	3917	10-yr	2007.7	789.3	785.28	1.18	1.01	7.61	4.93	654.59	1230.51	2.52	1.63	4.02	4.02
Treasure County	C7	RM 261.7	3519	10-yr	2007.7	789.07	784.87	1.31	1.31	26.57	26.4	605.89	610.24	2.52	2.51	4.2	4.2
Treasure County	C7	RM 261.53	3256	10-yr	2007.7	788.68	784.51	1.54	1.47	36.05	32.08	620.78	758.24	2.06	1.83	4.17	4.17
Treasure County	C7	RM 261.35	2959	10-yr	2007.7	788.56	784.33	1.18	1.17	6.74	5.3	580.98	764.42	2.93	2.3	4.22	4.22
Treasure County	C7	RM 261.2	2720	10-yr	2007.7	788.43	784.14	1.37	1.37	27.02	22.73	545.92	684.73	2.67	2.25	4.28	4.28
Treasure County	C7	RM 261.03	2441	10-yr	2007.7	788.31	783.66	1.33	1.26	8.74	5.2	401.32	774.76	3.74	2.21	4.65	4.65
Treasure County	C7	RM 260.84	2142	10-yr	2007.7	788.19	783.41	1.55	1.38	12.09	5.97	341.22	809.34	3.74	1.84	4.78	4.78
Treasure County	C7	RM 260.66	1863	10-yr	2007.7	788.09	783.29	1.57	1.26	11.7	5.3	351.21	1046.36	3.46	1.56	4.8	4.8
Treasure County	C8	RM 259.9	634	10-yr	2007.7	786.97	782.46	3.15	2.55	48.29	19.48	151.91	497.15	4.02	1.6	4.51	4.51
Treasure County	C8	RM 259.72	347	10-yr	2007.7	786.71	782.45	2.8	2.3	38.74	15.92	178.64	554.08	3.87	1.57	4.26	4.26
Treasure County	C8	RM 259.55	68	10-yr	2007.7	786.64	782.2	1.91	1.91	14.88	14.87	398.57	398.9	2.64	2.64	4.44	4.44

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	10-yr	2007.7	786.64	782.19	2.21	2	22.38	17.56	221.77	320.05	4	3.13	4.45	4.45
Rosebud County	C8	RM 259.41	87598	10-yr	2007.7	786.43	781.96	2.28	2.27	27.11	23.2	209.02	245.22	4.22	3.61	4.47	4.47
Rosebud County	C8	RM 259.22	87292	10-yr	2007.7	786.31	781.55	1.99	1.75	18.71	14.49	233.09	355.84	4.19	3.23	4.76	4.76
Rosebud County	C8	RM 259.04	87004	10-yr	2007.7	786.14	781	2.13	1.95	24.35	13.37	209.07	452.85	4.27	2.31	5.14	5.14
Rosebud County	C8	RM 258.85	86696	10-yr	2007.7	785.95	780.9	2.1	1.89	18.75	11.57	288.74	541.55	3.2	1.96	5.05	5.05
Rosebud County	C8	RM 258.66	86399	10-yr	2007.7	785.76	780.78	2.23	1.97	23.07	7.4	183.29	684.15	4.73	1.49	4.98	4.98
Rosebud County	C8	RM 258.47	86098	10-yr	2007.7	785.57	780.65	2.34	1.98	25.97	10.09	202.13	697.19	3.86	1.48	4.92	4.92
Rosebud County	C8	RM 258.28	85798	10-yr	2007.7	785.41	780.53	2.12	1.64	21.06	11.32	222.43	643.33	3.57	1.9	4.88	4.88
Rosebud County	C8	RM 258.1	85498	10-yr	2007.7	785.22	780.14	2.19	1.78	22.43	9.61	180.25	739.36	4.58	1.93	5.08	5.08
Rosebud County	C8	RM 257.91	85200	10-yr	2007.7	785.06	780.14	2.14	1.75	23.29	10.55	224.35	881.48	3.52	1.58	4.92	4.92
Rosebud County	C8	RM 257.71	84875	10-yr	2007.7	784.79	780.14	2.31	1.75	28.48	12.74	219.86	857.5	3.07	1.36	4.65	4.65
Rosebud County	C8	RM 257.54	84597	10-yr	2007.7	784.61	780.17	2.13	1.53	21.56	9.27	209	897.64	3.59	1.52	4.44	4.44
Rosebud County	C8	RM 257.36	84298	10-yr	2007.7	784.46	780.05	2.03	1.38	20.17	8.08	188.65	1046.09	3.48	1.39	4.41	4.41
Rosebud County	C8	RM 257.16	83984	10-yr	2007.7	784.43	780	1.28	0.99	7.89	3.43	305.45	1116.84	4.17	1.81	4.43	4.43
Rosebud County	C8	RM 256.87	83608	10-yr	2007.7	784.05	779.89	2.56	1.95	31.74	11.14	181.39	777.99	3.81	1.32	4.16	4.16
Rosebud County	C8	RM 256.65	83257	10-yr	2007.7	784	779.82	1.68	1.31	13.97	5.07	171.34	1106.31	3.85	1.38	4.18	4.18
Rosebud County	C8	RM 256.45	82941	10-yr	2007.7	783.81	779.67	1.91	1.54	17.8	6.56	222.18	894.67	3.98	1.45	4.14	4.14
Rosebud County	C8	RM 256.26	82630	10-yr	2007.7	783.61	779.58	1.81	1.44	30.8	20.87	369.82	788.48	2.62	1.77	4.03	4.03
Rosebud County	C8	RM 256.1	82375	10-yr	2007.7	783.46	779.42	1.49	1.49	10.37	10.35	551.29	552.68	2.45	2.44	4.04	4.04
Rosebud County	C8	RM 255.91	82077	10-yr	2007.7	783.39	779.09	1.22	1.22	6.58	6.14	591.1	636.08	2.78	2.59	4.3	4.3
Rosebud County	C8	RM 255.7	81747	10-yr	2007.7	783.18	778.73	1.81	1.65	15.98	6.36	306.33	866.31	3.56	1.41	4.45	4.45
Rosebud County	C8	RM 255.51	81446	10-yr	2007.7	783	778.49	1.98	1.65	19.89	9.13	269.19	755.14	3.55	1.62	4.51	4.51
Rosebud County	C8	RM 255.31	81125	10-yr	2007.7	782.83	778.36	1.9	1.55	22.15	10.38	242.95	695.59	4.01	1.87	4.47	4.47
Rosebud County	C8	RM 255.14	80856	10-yr	2007.7	782.61	778.24	2.17	1.81	22.67	9.37	210.87	650.74	4.16	1.7	4.37	4.37
Rosebud County	C8	RM 254.95	80554	10-yr	2007.7	782.4	778.12	2.29	1.94	25.32	10.45	205.86	618.49	4.08	1.67	4.28	4.28
Rosebud County	C8	RM 254.76	80251	10-yr	2007.7	782.24	778	2.17	1.81	22.69	9.78	218.15	638.51	4.07	1.74	4.24	4.24
Rosebud County	C8	RM 254.58	79960	10-yr	2007.7	782.08	777.88	2.1	1.91	21.32	10.93	229.98	510.63	4.07	2.08	4.2	4.2
Rosebud County	C8	RM 254.39	79658	10-yr	2007.7	782.01	777.41	1.68	1.48	13.85	6.3	296.93	851.65	3.92	1.78	4.6	4.6
Rosebud County	C8	RM 254.2	79359	10-yr	2007.7	781.77	777.39	2.13	1.94	23.03	11.19	269.75	615.74	3.46	1.68	4.38	4.38
Rosebud County	C8	RM 254.01	79052	10-yr	2007.7	781.59	776.82	2.12	1.86	20.78	7.63	209.01	660.03	4.47	1.63	4.77	4.77
Rosebud County	C9	RM 253.82	78779	10-yr	2007.7	781.42	776.24	2.2	1.83	26.53	11.02	245.19	767.79	3.57	1.47	5.18	5.18
Rosebud County	C9	RM 253.63	78478	10-yr	2007.7	781.05	776.12	2.48	1.83	59.34	19.92	175.58	875.55	3.86	1.28	4.93	4.93
Rosebud County	C9	RM 253.45	78178	10-yr	2007.7	780.8	775.97	2.24	1.4	23.18	8.02	172.93	1149.5	3.69	1.26	4.83	4.83
Rosebud County	C9	RM 253.26	77879	10-yr	2007.7	780.72	775.72	1.7	1.04	11.59	4.16	240.93	1407.48	3.88	1.38	5	5
Rosebud County	C9	RM 253.07	77578	10-yr	2007.7	780.46	775.57	2.37	1.43	24.85	7.57	188.72	1306.88	3.6	1.08	4.89	4.89
Rosebud County	C9	RM 252.88	77278	10-yr	2007.7	780.34	775.45	1.91	1.33	18.72	6.43	221.89	1305.72	3.44	1.16	4.89	4.89
Rosebud County	C9	RM 252.69	76962	10-yr	2007.7	780.27	775.33	1.42	0.86	10.11	3.69	260.67	1912.5	3.65	1.31	4.94	4.94
Rosebud County	C9	RM 252.49	76646	10-yr	2007.7	779.95	775.36	2.53	1.43	29.37	5.92	159.11	2532.55	3.69	0.73	4.59	4.59
Rosebud County	C9	RM 252.24	76252	10-yr	2007.7	779.76	775.4	2.08	1.14	23.05	5.42	167.1	3041.83	3.34	0.77	4.36	4.36
Rosebud County	C9	RM 252.01	75885	10-yr	2007.7	779.59	775.39	1.7	1	21.69	5.8	252.1	2979.72	3.08	0.81	4.2	4.2
Rosebud County	C9	RM 251.7	75438	10-yr	2007.7	779.45	775.01	1.26	0.87	6.56	2.7	580.97	2763.81	2.22	0.91	4.44	4.44
Rosebud County	C9	RM 251.49	75098	10-yr	2007.7	779.33	775.02	1.28	0.87	9.15	4.77	714.38	3121.47	1.6	0.83	4.31	4.31
Rosebud County	C9	RM 251.23	74691	10-yr	2007.7	779.06	775.05	1.52	1.13	10.09	4.44	723.46	2616.94	1.63	0.72	4.01	4.01
Rosebud County	C9	RM 251.01	74322	10-yr	2007.7	778.91	774.84	1.4	0.93	7.14	2.74	571.53	2803.21	2.01	0.77	4.07	4.07
Rosebud County	C9	RM 250.79	73973	10-yr	2007.7	778.8	774.42	1.36	0.89	8.4	2.9	416.29	2544.61	2.66	0.91	4.38	4.38
Rosebud County	C9	RM 250.6	73678	10-yr	2007.7	778.66	774.17	1.51	1.03	20.44	7.55	376.03	2205.42	2.41	0.89	4.49	4.49
Rosebud County	C9	RM 250.37	73306	10-yr	2007.7	778.35	774.05	2.02	1.17	18.27	4.81	233.21	1904.27	3.44	0.9	4.3	4.3
Rosebud County	C9	RM 250.17	72982	10-yr	2007.7	778.14	773.93	2.27	1.18	26.38	8.71	214.36	1932.86	2.77	0.9	4.22	4.22
Rosebud County	C9	RM 249.95	72617	10-yr	2007.7	777.92	773.83	2.04	1.26	21.01	7.36	226.06	1365.45	3.36	1.17	4.09	4.09
Rosebud County	C9	RM 249.73	72253	10-yr	2007.7	777.71	773.71	1.99	1.25	20.08	7.3	273.96	1987.76	2.95	1.07	4	4
Rosebud County	C9	RM 249.53	71936	10-yr	2007.7	777.63	773.38	1.42	0.93	9.85	3.52	361.45	2167.19	3.27	1.16	4.25	4.25
Rosebud County	C9	RM 249.31	71579	10-yr	2007.7	777.4	773.14	1.83	1.34	20.02	7.93	363.38	2359	2.45	0.96	4.26	4.26
Rosebud County	C9	RM 249.13	71274	10-yr	2007.7	777.24	772.84	1.68	1.06	14.44	4.6	299.98	2441.49	3.37	1.06	4.4	4.4
Rosebud County	C9	RM 248.94	70978	10-yr	2007.7	776.97	772.56	2.29	1.29	25.85	6.23	197.86	2561.24	3.44	0.83	4.41	4.41
Rosebud County	C9	RM 248.76	70681	10-yr	2007.7	776.96	772.32	1.2	0.8	7.65	2.74	424.32	2329.32	3.24	1.15	4.64	4.64
Rosebud County	C9	RM 248.53	70312	10-yr	2007.7	776.9	772.17	1.26	0.63	7.33	2.25	162.53	3061.66	3.88	1.18	4.73	4.73
Rosebud County	C9	RM 248.31	69962	10-yr	2007.7	776.76	772.04	1.6	0.85	12.96	3.8	277.15	2530.97	3.19	0.93	4.72	4.72
Rosebud County	C9	RM 248.08	69603	10-yr	2007.7	776.58	771.92	1.9	0.88	15.71	3.51	211.49	2787.66	3.71	0.83	4.66	4.66
Rosebud County	C9	RM 247.88	69253	10-yr	2007.7	776.44	771.92	1.66	0.95	22.99	7.56	348.22	2724.51	2.37	0.77	4.52	4.52
Rosebud County	C9	RM 247.64	68836	10-yr	2007.7	776.15	771.95	1.67	1.08	15.07	4.57	415.45	2459.77	2.5	0.75	4.2	4.2

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	10-yr	2007.7	776.01	771.87	1.42	0.84	9.8	2.44	282.64	2807.66	3.71	0.92	4.14	4.14
Rosebud County	C9	RM 247.11	67963	10-yr	2007.7	775.72	771.45	2.37	1.37	28.83	8.15	199.91	1875.22	3.13	0.88	4.27	4.27
Rosebud County	C9	RM 246.83	67502	10-yr	2007.7	775.55	770.97	1.86	1.11	18.46	4.49	194.9	2344.95	3.99	0.96	4.58	4.58
Rosebud County	C9	RM 246.52	67019	10-yr	2007.7	775.41	770.61	1.64	1.07	12.89	3.14	225.63	2683.04	4.18	1.01	4.8	4.8
Rosebud County	C9	RM 246.22	66538	10-yr	2007.7	774.44	770.53	3.71	2.86	75.96	25.96	206.82	991.43	2.49	0.84	3.91	3.91
Rosebud County	C9	RM 245.94	66068	10-yr	2007.7	774.13	770.29	1.87	1.54	19.36	11.15	296.5	905	2.59	1.49	3.84	3.84
Rosebud County	C9	RM 245.66	65624	10-yr	2007.7	773.87	769.81	1.88	1.18	19.06	6.05	195.78	1653.01	3.86	1.21	4.63	4.63
Rosebud County	C9	RM 245.4	65205	10-yr	2007.7	773.68	769.59	1.74	1.51	14.55	6.94	331.81	1297.6	2.29	1.08	4.52	4.52
Rosebud County	C9	RM 245.15	64804	10-yr	2007.7	773.26	769.41	2.05	2.06	42.24	18.9	238.29	995.26	2.33	1.03	4.1	4.1
Rosebud County	C9	RM 244.89	64387	10-yr	2007.7	772.71	769.41	2.51	2.15	33.8	18.13	186.72	599.89	3.03	1.61	3.68	3.68
Rosebud County	C9	RM 244.7	64085	10-yr	2007.7	772.71	769.37	1.29	1.11	8.61	5.42	219.97	1106.89	2.78	1.75	3.8	3.8
Rosebud County	C9	RM 244.51	63776	10-yr	2007.7	772.64	769.35	1.13	0.98	7.84	4.28	263.76	1542.73	2.78	1.52	3.73	3.73
Rosebud County	C9	RM 244.33	63499	10-yr	2007.7	772.62	769.16	0.71	0.71	2.89	2.14	274.26	1704.09	2.6	1.92	4.19	4.19
Rosebud County	C9	RM 244.14	63224	10-yr	2007.7	772.59	768.52	0.97	0.75	4.88	2.45	208.4	2029.36	3.3	1.64	4.16	4.16
Rosebud County	C9	RM 243.96	62927	10-yr	2007.7	772.52	768.13	1.29	0.87	8.42	3.23	176.71	1834.57	3.52	1.34	4.39	4.39
Rosebud County	C9	RM 243.77	62617	10-yr	2007.7	772.5	767.57	0.83	0.59	3.24	1.54	160.76	1637.86	4.44	2.08	4.93	4.93
Rosebud County	C9	RM 243.59	62327	10-yr	2007.7	772.42	766.98	1.41	0.87	10.67	3	122.45	1706.41	5.03	1.37	5.44	5.44
Rosebud County	C9	RM 243.39	62012	10-yr	2007.7	772.19	766.86	2.11	1.33	21.09	4.17	156.08	1828.84	4.44	0.86	5.33	5.33
Rosebud County	C9	RM 243.21	61718	10-yr	2007.7	772.08	766.74	1.9	1.22	16.48	3.31	203.35	1725.38	4.82	0.95	5.34	5.34
Rosebud County	C10	RM 243.03	61422	10-yr	2007.7	771.71	766.73	2.76	1.71	37.66	8.65	173.42	1546.83	3.82	0.86	4.98	4.98
Rosebud County	C10	RM 242.84	61125	10-yr	2007.7	771.25	766.76	3.09	2.38	46.74	13.8	171.26	879.47	3.66	1.06	4.49	4.49
Rosebud County	C10	RM 242.65	60825	10-yr	2007.7	771.07	766.76	2.47	1.9	29.91	7.9	203.82	1052.07	3.85	1	4.31	4.31
Rosebud County	C10	RM 242.47	60527	10-yr	2007.7	770.94	766.77	2.04	1.56	20.27	6.2	241.01	1089.59	3.91	1.19	4.17	4.17
Rosebud County	C10	RM 242.29	60239	10-yr	2007.7	770.83	766.64	1.82	1.43	16.55	5.89	282.31	1060.5	3.74	1.32	4.19	4.19
Rosebud County	C10	RM 242.1	59939	10-yr	2007.7	770.61	766.29	2.07	1.6	22.85	8.94	280	1067.31	3.29	1.28	4.32	4.32
Rosebud County	C10	RM 241.9	59618	10-yr	2007.7	770.44	765.95	1.96	1.42	18.21	6.23	249.51	1248.98	3.88	1.32	4.49	4.49
Rosebud County	C10	RM 241.72	59324	10-yr	2007.7	770.37	765.5	1.62	1.2	12.56	4.24	289.97	1412.19	3.98	1.33	4.87	4.87
Rosebud County	C10	RM 241.53	59025	10-yr	2007.7	769.99	765.17	2.64	1.99	37.74	9.92	160	883.01	4.42	1.15	4.82	4.82
Rosebud County	C10	RM 241.34	58725	10-yr	2007.7	769.8	765.02	2.42	1.6	27.74	7.59	177.78	1106.83	4.2	1.13	4.78	4.78
Rosebud County	C10	RM 241.16	58424	10-yr	2007.7	769.72	764.97	1.9	1.2	17.19	5.26	171.92	1396.13	3.96	1.2	4.75	4.75
Rosebud County	C10	RM 240.97	58132	10-yr	2007.7	769.6	764.83	1.81	1.16	15.66	4.87	189.7	1350.84	4.17	1.28	4.77	4.77
Rosebud County	C10	RM 240.78	57818	10-yr	2007.7	769.56	764.56	1.42	0.85	9.27	3.1	159.68	1530.74	4.67	1.54	5	5
Rosebud County	C10	RM 240.56	57467	10-yr	2007.7	769.45	764.28	1.56	0.98	16.45	5.73	212.38	1547.36	4.26	1.47	5.17	5.17
Rosebud County	C10	RM 240.41	57228	10-yr	2007.7	769.37	763.91	1.45	1.02	11.92	4.61	216.4	1390.16	4.79	1.83	5.46	5.46
Rosebud County	C10	RM 240.22	56944	10-yr	2007.7	769.13	763.51	2.2	1.5	22.24	8.27	157.35	1092.76	5.3	1.91	5.62	5.62
Rosebud County	C10	RM 240.09	56741	10-yr	2007.7	768.68	763.47	3.28	2.37	39.56	14.92	120.66	929.08	4.81	1.77	5.21	5.21
Rosebud County	C10	RM 239.97	56546	10-yr	2007.7	768.6	763.47	2.74	2.44	44.96	26.67	155.75	723.66	4.61	2.71	5.13	5.13
Rosebud County	C10	RM 239.86	56371	10-yr	2007.7	768.56	760.88	2.07	2.07	20.93	20.42	205.85	291.59	4.7	4.59	7.68	7.68
Rosebud County			56353	10-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	10-yr	2007.7	768.54	760.88	2.04	2.04	14.9	14.54	202.33	293.83	4.85	4.74	7.66	7.66
Rosebud County	C10	RM 239.68	56093	10-yr	2007.7	768.14	763.02	2.91	2.77	30.87	24.96	172.44	226.92	3.97	3.19	5.12	5.12
Rosebud County	C10	RM 239.56	55888	10-yr	2007.7	768.01	757.33	2.86	2.7	28.26	14.89	117.89	244.62	5.92	3.04	10.68	10.68
Rosebud County			55879	10-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	10-yr	2007.7	767.97	757.33	2.93	2.78	29.25	14.77	111.07	239.46	6.15	3.02	10.64	10.64
Rosebud County	C10	RM 239.41	55655	10-yr	2007.7	767.62	763.17	3.4	3.31	44.7	24.17	143.23	276.64	4.12	2.19	4.45	4.45
Rosebud County	C10	RM 239.25	55398	10-yr	2007.7	767.39	763.17	3.16	2.96	39.24	26.65	163.67	261.27	3.86	2.6	4.22	4.22
Rosebud County	C10	RM 239.07	55108	10-yr	2007.7	767.36	763.2	2.24	2.06	19.71	15.19	219.55	330.83	3.84	2.95	4.16	4.16
Rosebud County	C10	RM 238.89	54826	10-yr	2007.7	767.13	763.23	2.54	2.11	25.61	15.92	191.74	411.04	3.75	2.31	3.9	3.9
Rosebud County	C10	RM 238.73	54570	10-yr	2007.7	766.96	763.38	2.4	2.16	23.66	14.63	242.11	444.76	3.39	2.09	3.58	3.58
Rosebud County	C10	RM 238.51	54223	10-yr	2007.7	766.84	762.88	1.7	1.7	14.67	14.12	435.42	454.02	2.7	2.6	3.96	3.96
Rosebud County	C10	RM 238.33	53926	10-yr	2007.7	766.66	762.37	1.82	1.71	16.46	10.29	306.34	527.68	3.58	2.23	4.29	4.29
Rosebud County	C10	RM 238.14	53626	10-yr	2007.7	766.36	762.25	2.39	1.91	28.43	12.07	214.01	664.39	3.74	1.58	4.11	4.11
Rosebud County	C10	RM 237.95	53321	10-yr	2007.7	766.08	762.09	2.56	2.01	32.54	12.48	189.31	820.69	3.75	1.43	3.99	3.99
Rosebud County	C10	RM 237.77	53027	10-yr	2007.7	766.03	761.85	1.72	1.42	14.77	6.09	294.75	972.7	3.68	1.51	4.18	4.18
Rosebud County	C10	RM 237.56	52703	10-yr	2007.7	765.92	761.46	1.56	1.24	12.12	5.66	410.62	1167.2	3	1.39	4.45	4.45
Rosebud County	C10	RM 237.36	52386	10-yr	2007.7	765.83	761.22	1.35	0.99	9.12	4.19	443.16	1424.09	3.11	1.42	4.61	4.61
Rosebud County	C10	RM 237.15	52029	10-yr	2007.7	765.73	760.88	1.35	0.99	9.24	3.9	385.86	1367.23	3.55	1.49	4.85	4.85
Rosebud County	C10	RM 236.99	51756	10-yr	2007.7	765.48	760.22	2.2	1.58	17.46	4.6	177.1	1137.87	4.95	1.28	5.26	5.26
Rosebud County	C10	RM 236.83	51500	10-yr	2007.7	765.2	760.07	2.75	2.16	28.92	8.71	167.82	1026.88	4.25	1.26	5.13	5.13
Rosebud County	C10	RM 236.66	51221	10-yr	2007.7	765.14	760.07	2.23	1.9	18.46	9.75	187.57	628.5	4.63	2.41	5.07	5.07

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	10-yr	2007.7	765.03	759.94	2.16	1.95	17.14	8.68	193.41	432.68	4.74	2.38	5.09	5.09
Rosebud County	C11	RM 236.29	50623	10-yr	2007.7	764.93	760	2.09	1.87	16.3	9.62	211.22	408.07	4.48	2.63	4.93	4.93
Rosebud County	C11	RM 236.1	50327	10-yr	2007.7	764.73	760	2.36	2.14	21.58	12.97	206.87	400.59	4.04	2.41	4.73	4.73
Rosebud County	C11	RM 235.91	50024	10-yr	2007.7	764.39	760	2.81	2.41	38.22	17.69	170.49	460.52	4.09	1.87	4.39	4.39
Rosebud County	C11	RM 235.73	49726	10-yr	2007.7	764.33	760.15	1.97	1.79	19.06	15.71	243.73	386.84	3.65	3	4.18	4.18
Rosebud County	C11	RM 235.57	49480	10-yr	2007.7	764.23	760.02	1.73	1.73	14.98	14.84	318.23	337.46	3.65	3.62	4.21	4.21
Rosebud County	C11	RM 235.36	49133	10-yr	2007.7	764.04	759.74	1.83	1.81	13.38	13.07	424.97	463.57	2.56	2.5	4.3	4.3
Rosebud County	C11	RM 235.17	48830	10-yr	2007.7	763.88	759.55	1.8	1.77	14.18	12.81	455.72	531.23	2.44	2.21	4.33	4.33
Rosebud County	C11	RM 235	48571	10-yr	2007.7	763.77	759.29	1.69	1.58	13.7	9.81	320.56	520.1	3.68	2.62	4.48	4.48
Rosebud County	C11	RM 234.82	48271	10-yr	2007.7	763.24	759.21	3	2.57	46.07	21.62	190.08	500.26	3.42	1.59	4.03	4.03
Rosebud County	C11	RM 234.63	47978	10-yr	2007.7	763.06	759.21	2.31	1.91	26.7	13.99	237.61	605.55	3.37	1.76	3.85	3.85
Rosebud County	C11	RM 234.45	47692	10-yr	2007.7	762.88	759.12	2.09	1.85	22.04	13.34	283.79	563.79	3.17	1.92	3.76	3.76
Rosebud County	C11	RM 234.2	47305	10-yr	2007.7	762.74	758.6	1.59	1.41	10.58	8.16	459.62	747.63	2.48	1.9	4.14	4.14
Rosebud County	C11	RM 234.01	47006	10-yr	2007.7	762.68	758.27	1.14	1.03	5.09	4.79	818.93	993.61	2.08	1.95	4.41	4.41
Rosebud County	C11	RM 233.84	46737	10-yr	2007.7	762.58	758.12	1.27	1.16	8.26	6.46	560.51	807.95	2.74	2.15	4.46	4.46
Rosebud County	C11	RM 233.61	46365	10-yr	2007.7	762.46	757.67	1.44	1.27	9.76	5.71	302.81	604.65	4.47	2.62	4.79	4.79
Rosebud County	C11	RM 233.35	45943	10-yr	2007.7	762.22	757.03	2.07	1.52	20.9	7.06	214.65	989.4	3.99	1.33	5.19	5.19
Rosebud County	C11	RM 233.13	45584	10-yr	2007.7	762.03	756.45	2.06	1.85	19.55	6.19	206.27	740.66	4.67	1.46	5.58	5.58
Rosebud County	C11	RM 232.94	45281	10-yr	2007.7	761.78	756.15	2.44	2.18	27.51	9.9	169.36	544.76	4.78	1.69	5.63	5.63
Rosebud County	C11	RM 232.75	44978	10-yr	2007.7	761.72	756.03	1.96	1.71	17.49	7.39	203.83	574.44	4.92	2.05	5.69	5.69
Rosebud County	C11	RM 232.56	44674	10-yr	2007.7	761.59	755.79	1.97	1.85	18.66	9.39	240.89	519.74	4.19	2.09	5.8	5.8
Rosebud County	C11	RM 232.37	44366	10-yr	2007.7	761.37	755.72	2.25	1.72	24.8	9.62	206.42	849.7	3.99	1.52	5.65	5.65
Rosebud County	C11	RM 232.19	44074	10-yr	2007.7	761.21	755.67	2.16	1.75	22.07	8.79	203.8	666.5	4.37	1.72	5.54	5.54
Rosebud County	C11	RM 232.01	43791	10-yr	2007.7	761.04	755.65	2.18	1.82	23.41	8.28	232.14	821.38	3.84	1.34	5.39	5.39
Rosebud County	C11	RM 231.81	43473	10-yr	2007.7	760.8	755.6	2.37	1.59	27.08	11.17	201.18	837.72	3.7	1.51	5.2	5.2
Rosebud County	C11	RM 231.62	43160	10-yr	2007.7	760.56	755.57	2.37	1.83	22.83	10.8	227.99	686.42	3.42	1.6	4.99	4.99
Rosebud County	C11	RM 231.42	42835	10-yr	2007.7	760.53	755.45	1.65	1.17	12.66	4.64	229.33	1007.41	4.69	1.7	5.08	5.08
Rosebud County	C11	RM 231.22	42522	10-yr	2007.7	760.38	755.45	1.99	1.29	17.78	6.49	204	1050.44	4.12	1.48	4.93	4.93
Rosebud County	C11	RM 230.99	42160	10-yr	2007.7	759.83	755.45	3.1	2.03	48.06	13.48	153.97	958.72	3.76	1.03	4.38	4.38
Rosebud County	C11	RM 230.79	41841	10-yr	2007.7	759.69	755.43	2.28	1.66	25.46	8.72	202.2	899.94	3.98	1.35	4.26	4.26
Rosebud County	C11	RM 230.53	41415	10-yr	2007.7	759.58	755.17	1.57	1.32	12.56	7.21	299.36	891.62	3	1.71	4.41	4.41
Rosebud County	C11	RM 230.29	41045	10-yr	2007.7	759.37	755.15	1.91	1.5	17.53	9.13	234.27	924.65	3.41	1.76	4.22	4.22
Rosebud County	C11	RM 230.06	40676	10-yr	2007.7	759.17	754.81	1.81	1.52	17.8	9.87	287.02	824.47	2.91	1.6	4.36	4.36
Rosebud County	C11	RM 229.81	40276	10-yr	2007.7	759.02	754.74	1.55	1.14	12.23	4.96	320.68	1670.1	3.46	1.39	4.28	4.28
Rosebud County	C11	RM 229.6	39937	10-yr	2007.7	758.79	754.58	1.94	1.33	15.97	7.33	403.13	1733.77	2.26	1.03	4.21	4.21
Rosebud County	C11	RM 229.4	39596	10-yr	2007.7	758.65	754.34	1.7	1.31	14.79	5.34	283.63	1355.81	3.65	1.31	4.31	4.31
Rosebud County	C11	RM 229.2	39273	10-yr	2007.7	758.28	754.15	2.56	1.99	34.39	13.2	214.46	957.13	3.15	1.2	4.13	4.13
Rosebud County	C11	RM 229.02	38994	10-yr	2007.7	758.06	754.12	2.4	1.65	30.02	11.45	211.31	1082.73	3.24	1.22	3.94	3.94
Rosebud County	C11	RM 228.82	38676	10-yr	2007.7	757.88	753.8	1.96	1.48	20.11	9.72	270.18	915.13	3.23	1.55	4.08	4.08
Rosebud County	C11	RM 228.64	38383	10-yr	2007.7	757.75	753.73	1.86	1.28	17.89	8.12	224.38	1082.53	3.29	1.48	4.06	4.06
Rosebud County	C11	RM 228.46	38093	10-yr	2007.7	757.68	753.53	1.41	0.97	10.26	5.15	301.72	1306.18	3.36	1.67	4.15	4.15
Rosebud County	C11	RM 228.26	37771	10-yr	2007.7	757.62	753.35	1.28	0.77	8.31	3.79	273.91	1660.74	3.51	1.58	4.27	4.27
Rosebud County	C11	RM 228.03	37408	10-yr	2007.7	757.48	753.16	1.65	0.89	13.76	4.78	233.4	1873.49	3.63	1.25	4.32	4.32
Rosebud County	C11	RM 227.74	36949	10-yr	2007.7	757.28	752.95	1.93	1.22	18.46	4.64	167.04	1737.88	3.85	0.95	4.33	4.33
Rosebud County	C11	RM 227.49	36537	10-yr	2007.7	757.13	752.83	1.89	1.11	17.69	5.29	175.55	1617.89	3.8	1.12	4.3	4.3
Rosebud County	C11	RM 227.2	36062	10-yr	2007.7	756.99	752.41	1.76	1.16	15.52	5.29	180.83	1400.93	3.71	1.25	4.58	4.58
Rosebud County	C11	RM 226.98	35709	10-yr	2007.7	756.57	752.31	2.57	1.64	34.35	12.21	211.99	1085.91	3.24	1.14	4.26	4.26
Rosebud County	C11	RM 226.79	35400	10-yr	2007.7	756.42	752.25	1.91	1.38	20.43	9.89	268.83	916	3.35	1.61	4.17	4.17
Rosebud County	C11	RM 226.56	35065	10-yr	2007.7	756.29	751.83	1.54	1.2	14.02	9.17	338.41	756.96	3.39	2.21	4.46	4.46
Rosebud County	C11	RM 226.36	34743	10-yr	2007.7	756.03	751.68	1.98	1.73	21.97	15.31	301.31	511.38	3.27	2.27	4.35	4.35
Rosebud County	C11	RM 226.2	34476	10-yr	2007.7	755.94	751.25	1.53	1.4	11.8	9.89	424.72	901.57	3	2.51	4.69	4.69
Rosebud County	C11	RM 226.01	34177	10-yr	2007.7	755.76	750.81	1.72	1.49	24.53	12.6	283.74	1267.15	3.94	2.01	4.95	4.95
Rosebud County	C11	RM 225.83	33884	10-yr	2007.7	755.44	750.59	2.47	1.67	29.09	14.58	159.74	1035.11	4.27	2.11	4.85	4.85
Rosebud County	C11	RM 225.64	33580	10-yr	2007.7	755.33	750.56	1.87	1.52	17.78	8.74	293.96	1221.35	3.48	1.7	4.77	4.77
Rosebud County	C11	RM 225.45	33275	10-yr	2007.7	755.23	750.31	1.59	1.49	12.51	6.56	332.17	1230.33	3.78	1.97	4.92	4.92
Rosebud County	C11	RM 225.26	32969	10-yr	2007.7	755.08	750.25	1.78	1.67	15.73	9.81	291.78	1214.21	3.83	2.37	4.83	4.83
Rosebud County	C11	RM 225.16	32805	10-yr	2007.7	754.92	750.19	2.13	2.03	21.96	15.36	224.54	754.66	4.17	2.9	4.73	4.73
Rosebud County	C11	RM 225.06	32646	10-yr	2007.7	754.7	747.9	2.56	2.52	28.72	23.41	168.92	366.24	4.64	3.77	6.8	6.8
Rosebud County			32620	10-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	10-yr	2007.7	754.61	747.9	2.59	2.58	31.19	28.42	169.8	353.39	4.57	4.16	6.71	6.71

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	10-yr	2007.7	754.54	750.09	1.98	1.94	19.03	14.84	249.97	596.17	4.04	3.14	4.45	4.45
Rosebud County	C12	RM 224.71	32083	10-yr	2007.7	754.39	750.04	1.94	1.91	16.27	12.5	391.51	520.02	2.64	2.03	4.35	4.35
Rosebud County	C12	RM 224.53	31796	10-yr	2007.7	754.21	749.96	1.95	1.94	14.43	13.83	401.44	598.39	2.57	2.46	4.25	4.25
Rosebud County	C12	RM 224.34	31486	10-yr	2007.7	754.03	750.03	1.76	1.69	17.6	13.94	472.34	816.78	2.22	1.75	4	4
Rosebud County	C12	RM 224.16	31195	10-yr	2007.7	753.87	749.78	1.74	1.53	14.53	6.69	263.29	1133.07	3.51	1.6	4.19	4.19
Rosebud County	C12	RM 223.96	30878	10-yr	2007.7	753.69	749.48	2.04	1.62	20.5	6.8	179.51	1134.75	3.85	1.27	4.31	4.31
Rosebud County	C12	RM 223.76	30567	10-yr	2007.7	753.48	749.18	2.27	1.83	26.63	8.8	162.95	1166.86	3.39	1.11	4.3	4.3
Rosebud County	C12	RM 223.55	30235	10-yr	2007.7	753.33	748.87	1.92	1.57	17.71	5.9	229.9	1051	4.17	1.38	4.46	4.46
Rosebud County	C12	RM 223.37	29952	10-yr	2007.7	753.12	748.72	2.23	1.75	23.88	6.99	208.3	975.76	4.15	1.2	4.4	4.4
Rosebud County	C12	RM 223.2	29681	10-yr	2007.7	752.97	748.51	2.16	1.69	22.28	6.31	209.66	999.78	4.27	1.19	4.46	4.46
Rosebud County	C12	RM 223.02	29391	10-yr	2007.7	752.87	748.51	1.86	1.42	17.18	5.87	265.78	1102.55	3.82	1.29	4.36	4.36
Rosebud County	C12	RM 222.82	29071	10-yr	2007.7	752.73	748.5	1.83	1.32	16.5	4.84	268.11	1458.71	3.83	1.11	4.23	4.23
Rosebud County	C12	RM 222.64	28787	10-yr	2007.7	752.58	748.46	1.97	1.31	19.11	6.71	236.97	1210.83	3.87	1.35	4.12	4.12
Rosebud County	C12	RM 222.45	28479	10-yr	2007.7	752.44	748.44	1.83	1.21	17.23	7.19	281.49	1174.18	3.42	1.42	4	4
Rosebud County	C12	RM 222.22	28128	10-yr	2007.7	752.3	748.15	1.75	1.17	15.03	5.77	258.76	1149.92	3.9	1.49	4.15	4.15
Rosebud County	C12	RM 222.01	27784	10-yr	2007.7	752.22	747.57	1.37	1.01	9.53	4.45	372.22	1195.43	3.58	1.66	4.65	4.65
Rosebud County	C12	RM 221.77	27401	10-yr	2007.7	752.17	747.18	0.93	0.79	5.29	3.71	725.95	1321.54	2.73	1.91	4.99	4.99
Rosebud County	C12	RM 221.55	27042	10-yr	2007.7	752.1	747.07	0.88	0.77	5.29	3.88	807.88	1328.54	2.67	1.95	5.03	5.03
Rosebud County	C12	RM 221.34	26708	10-yr	2007.7	752.04	746.94	0.93	0.76	4.61	3.1	648.68	1471.55	2.95	1.97	5.1	5.1
Rosebud County	C12	RM 221.15	26406	10-yr	2007.7	751.93	746.7	1.42	1.05	9.29	3.76	265.14	1140.3	4.79	1.91	5.23	5.23
Rosebud County	C12	RM 220.96	26081	10-yr	2007.7	751.35	746.66	3.27	2.33	51.89	14.52	138.14	775.47	4.07	1.11	4.69	4.69
Rosebud County	C12	RM 220.77	25779	10-yr	2007.7	750.98	746.73	3.1	2.87	47.25	23	163.4	370.34	3.91	1.89	4.25	4.25
Rosebud County	C12	RM 220.6	25513	10-yr	2007.7	751	746.72	1.89	1.7	17.41	8.67	254.25	589.06	4.04	2	4.28	4.28
Rosebud County	C12	RM 220.4	25183	10-yr	2007.7	750.83	746.88	1.9	1.7	16.13	8.76	392.28	835.73	2.63	1.42	3.95	3.95
Rosebud County	C12	RM 220.23	24914	10-yr	2007.7	750.76	746.8	1.4	1.32	7.71	6.14	639.77	872.92	2.2	1.75	3.96	3.96
Rosebud County	C12	RM 220.02	24578	10-yr	2007.7	750.64	746.54	1.3	1.24	7.62	6.84	792.77	931.77	1.93	1.73	4.1	4.1
Rosebud County	C12	RM 219.83	24268	10-yr	2007.7	750.57	746.18	1.08	1.03	5.56	4.91	775.68	930.61	2.37	2.09	4.39	4.39
Rosebud County	C12	RM 219.63	23947	10-yr	2007.7	750.43	745.79	1.36	1.27	9.32	7.49	587.54	804.94	2.46	1.97	4.64	4.64
Rosebud County	C12	RM 219.47	23683	10-yr	2007.7	750.33	745.56	1.43	1.24	10.34	5.84	379.85	811.18	3.56	2	4.77	4.77
Rosebud County	C12	RM 219.29	23386	10-yr	2007.7	750.04	745.27	2.29	1.7	25.78	10.03	208.04	786.97	3.9	1.5	4.77	4.77
Rosebud County	C12	RM 219.11	23085	10-yr	2007.7	749.86	745.15	2.28	1.65	25.46	10.25	176.7	793.72	3.91	1.56	4.71	4.71
Rosebud County	C12	RM 218.92	22783	10-yr	2007.7	749.72	745.15	1.97	1.42	19.25	8.86	229.91	917.05	3.37	1.54	4.57	4.57
Rosebud County	C12	RM 218.73	22473	10-yr	2007.7	749.56	745.06	1.9	1.34	17.38	7.05	226.8	895.63	4.16	1.67	4.5	4.5
Rosebud County	C12	RM 218.54	22180	10-yr	2007.7	749.44	744.99	1.8	1.37	15.9	8.11	274.48	754.27	3.81	1.94	4.45	4.45
Rosebud County	C12	RM 218.38	21902	10-yr	2007.7	749.34	744.43	1.79	1.32	15.16	6.98	234.82	759.31	4.37	2	4.91	4.91
Rosebud County	C12	RM 218.18	21580	10-yr	2007.7	749.09	743.9	2.3	1.49	25.18	9.43	182.74	852.94	4.26	1.58	5.19	5.19
Rosebud County	C12	RM 217.99	21276	10-yr	2007.7	748.92	743.66	2.22	1.57	24.31	9.82	211.96	845.01	3.83	1.53	5.26	5.26
Rosebud County	C12	RM 217.81	20981	10-yr	2007.7	748.88	743.51	1.55	1.36	10.85	3.14	293.45	1193.77	4.37	1.25	5.37	5.37
Rosebud County	C12	RM 217.64	20702	10-yr	2007.7	748.55	743.41	2.55	1.96	30.99	9.71	176.29	777.57	4.26	1.31	5.14	5.14
Rosebud County	C12	RM 217.45	20392	10-yr	2007.7	748.34	743.29	2.49	1.72	30.35	9.29	184.69	983.46	3.95	1.19	5.05	5.05
Rosebud County	C12	RM 217.25	20070	10-yr	2007.7	748.27	743.29	1.89	1.23	16.57	4.7	191.77	1266.85	4.6	1.29	4.98	4.98
Rosebud County	C12	RM 217	19662	10-yr	2007.7	747.98	743.25	2.3	1.55	25.39	6.42	192.47	1254.26	4.14	1.03	4.73	4.73
Rosebud County	C12	RM 216.77	19300	10-yr	2007.7	747.75	743.25	2.3	1.54	26.81	8.22	217.02	1230.57	3.5	1.06	4.5	4.5
Rosebud County	C12	RM 216.53	18912	10-yr	2007.7	747.58	743.3	1.84	1.12	17.36	6.3	273.63	1537.86	3.39	1.22	4.28	4.28
Rosebud County	C12	RM 216.27	18500	10-yr	2007.7	747.43	743.24	1.57	1.03	12.91	5.5	358.07	1463.59	3.14	1.33	4.19	4.19
Rosebud County	C12	RM 215.98	18038	10-yr	2007.7	747.3	743.12	1.41	0.9	10.23	4.77	273.73	1414.92	3.4	1.59	4.18	4.18
Rosebud County	C12	RM 215.68	17550	10-yr	2007.7	747.16	742.31	1.48	1.02	10.22	3.64	269.37	1210.43	4.56	1.62	4.85	4.85
Rosebud County	C12	RM 215.41	17101	10-yr	2007.7	746.93	741.82	1.98	1.47	18.6	7.18	218.48	842.33	4.26	1.63	5.11	5.11
Rosebud County	C12	RM 215.21	16781	10-yr	2007.7	746.54	741.65	2.8	2	37.96	12.09	159.7	848.07	4.08	1.28	4.89	4.89
Rosebud County	C12	RM 215.02	16479	10-yr	2007.7	746.2	741.68	2.98	2.3	42.84	15.94	146.57	577.16	4.16	1.52	4.52	4.52
Rosebud County	C13	RM 214.86	16220	10-yr	2007.7	746.23	741.64	1.77	1.52	14.83	7.15	252.91	637.23	4.38	2.09	4.59	4.59
Rosebud County	C13	RM 214.65	15883	10-yr	2007.7	746.08	741.6	1.78	1.75	14.05	11.3	399.8	514.72	2.81	2.25	4.48	4.48
Rosebud County	C13	RM 214.46	15577	10-yr	2007.7	745.94	741.6	1.73	1.5	10.98	6.46	454.18	1043.8	2.48	1.45	4.34	4.34
Rosebud County	C13	RM 214.27	15282	10-yr	2007.7	745.83	741.59	1.57	1.38	9.89	5.14	496.92	1134.98	2.47	1.28	4.24	4.24
Rosebud County	C13	RM 214.07	14957	10-yr	2007.7	745.72	741.54	1.37	1.13	12.79	6.8	425.03	1146.07	3.2	1.69	4.18	4.18
Rosebud County	C13	RM 213.9	14672	10-yr	2007.7	745.56	741.37	1.6	1.46	13.15	8.92	362.73	623.27	3.3	2.23	4.19	4.19
Rosebud County	C13	RM 213.7	14343	10-yr	2007.7	745.3	740.88	2.1	1.92	21.29	10.42	232.58	1055.25	4.07	1.98	4.42	4.42
Rosebud County	C13	RM 213.54	14083	10-yr	2007.7	745.02	740.59	2.56	2.2	31.99	10.91	191.86	1488.86	4.01	1.35	4.42	4.42
Rosebud County	C13	RM 213.36	13792	10-yr	2007.7	744.88	740.39	2.16	1.86	23.21	11.68	238.62	1547.62	3.71	1.85	4.49	4.49
Rosebud County	C13	RM 213.16	13475	10-yr	2007.7	744.72	740.27	2.05	1.62	21.34	9.72	208.58	1517.05	3.52	1.59	4.45	4.45

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	10-yr	2007.7	744.54	740.31	2.11	1.74	20.02	9.66	212.05	1447.6	3.25	1.55	4.23	4.23
Rosebud County	C13	RM 212.79	12880	10-yr	2007.7	744.36	740.19	2.13	1.42	22.22	6.46	178.07	1799.63	3.97	1.14	4.17	4.17
Rosebud County	C13	RM 212.6	12572	10-yr	2007.7	744.22	739.79	1.88	1.27	16.94	4.69	240.96	1983.13	4.11	1.13	4.43	4.43
Rosebud County	C13	RM 212.42	12284	10-yr	2007.7	744	739.58	2.26	1.48	25.58	6.77	209.41	1765.01	3.79	0.99	4.42	4.42
Rosebud County	C13	RM 212.23	11983	10-yr	2007.7	743.87	739.17	1.94	1.34	18.87	5.2	257.51	1930.22	3.65	1	4.7	4.7
Rosebud County	C13	RM 212.05	11688	10-yr	2007.7	743.7	738.83	2.01	1.5	19.3	4.75	226.74	1678.92	4.2	1.02	4.87	4.87
Rosebud County	C13	RM 211.85	11386	10-yr	2007.7	743.5	738.79	2.15	1.66	23.3	7.33	248.99	1250.44	3.59	1.12	4.71	4.71
Rosebud County	C13	RM 211.65	11066	10-yr	2007.7	743.31	738.58	2.09	1.53	21.77	7.09	248.86	1156.24	3.63	1.17	4.73	4.73
Rosebud County	C13	RM 211.44	10724	10-yr	2007.7	743.15	738.38	2.05	1.24	20.55	8.62	199.53	1034.48	3.89	1.62	4.77	4.77
Rosebud County	C13	RM 211.21	10353	10-yr	2007.7	743.04	737.87	1.81	1.17	14.29	6.02	207.36	1073.31	3.9	1.63	5.17	5.17
Rosebud County	C13	RM 210.96	9946	10-yr	2007.7	742.73	737.72	2.43	1.52	29.17	12.05	169.56	838.09	3.86	1.57	5.01	5.01
Rosebud County	C13	RM 210.75	9612	10-yr	2007.7	742.64	737.48	1.9	1.28	17.24	7.13	191.27	908.75	4.23	1.73	5.16	5.16
Rosebud County	C13	RM 210.57	9317	10-yr	2007.7	742.56	737.5	1.67	1.21	13.28	5.24	244	1010.16	4.2	1.64	5.06	5.06
Rosebud County	C13	RM 210.36	8986	10-yr	2007.7	742.24	737.54	2.42	1.68	28.98	10.84	194.77	842.86	3.82	1.42	4.7	4.7
Rosebud County	C13	RM 210.16	8674	10-yr	2007.7	742.02	737.53	2.17	1.83	24.94	11.64	287.81	796.18	3.11	1.45	4.49	4.49
Rosebud County	C13	RM 209.98	8382	10-yr	2007.7	742.01	737.25	1.39	1.11	9.34	4.32	306.42	1014.93	4.09	1.88	4.76	4.76
Rosebud County	C13	RM 209.8	8091	10-yr	2007.7	741.92	736.96	1.57	1.1	11.34	4.63	218.68	1016.33	4.82	1.95	4.96	4.96
Rosebud County	C13	RM 209.6	7774	10-yr	2007.7	741.73	736.72	2.06	1.17	19.67	5.98	179.37	1434.87	4.61	1.38	5.01	5.01
Rosebud County	C13	RM 209.41	7482	10-yr	2007.7	741.65	736.53	1.74	1.1	14.65	5.42	238.58	1337.05	4.11	1.5	5.12	5.12
Rosebud County	C13	RM 209.21	7161	10-yr	2007.7	741.41	736.29	2.2	1.56	23.27	7.57	197.21	977.01	4.18	1.34	5.12	5.12
Rosebud County	C13	RM 209.03	6871	10-yr	2007.7	741.23	736.14	2.27	1.53	24.75	8.29	185.65	989.99	4.24	1.4	5.09	5.09
Rosebud County	C13	RM 208.85	6571	10-yr	2007.7	741.15	736.03	1.84	1.29	16.12	6.71	229.12	938.05	4.25	1.75	5.12	5.12
Rosebud County	C13	RM 208.65	6257	10-yr	2007.7	741.05	735.74	1.79	1.3	15.68	8.71	218.15	939.98	4.01	2.2	5.31	5.31
Rosebud County	C13	RM 208.46	5945	10-yr	2007.7	740.8	735.69	2.23	1.88	23.91	17.12	204.11	663.65	3.46	2.46	5.11	5.11
Rosebud County	C13	RM 208.29	5682	10-yr	2007.7	740.17	735.63	3.44	3.06	57.72	40.01	116.29	261.76	4.06	2.77	4.54	4.54
Rosebud County	C14	RM 208.1	5374	10-yr	2007.7	740.07	735.61	2.32	2.14	25.65	14.98	201.37	433	4.25	2.46	4.46	4.46
Rosebud County	C14	RM 207.91	5064	10-yr	2007.7	739.91	735.56	2.06	1.68	21.41	10.79	293.26	759.82	3.15	1.57	4.35	4.35
Rosebud County	C14	RM 207.72	4766	10-yr	2007.7	739.72	735.52	1.9	1.6	16.88	9.32	404.67	1071.24	2.46	1.35	4.2	4.2
Rosebud County	C14	RM 207.53	4450	10-yr	2007.7	739.63	735.35	1.35	1.09	10.19	5.61	467.13	1266.81	2.84	1.56	4.28	4.28
Rosebud County	C14	RM 207.33	4123	10-yr	2007.7	739.47	735.27	1.65	1.15	13.8	5.96	282.48	1140.28	3.58	1.54	4.2	4.2
Rosebud County	C14	RM 207.15	3851	10-yr	2007.7	739.4	735.14	1.47	1.03	10.71	4.14	313.22	1493.8	3.64	1.4	4.26	4.26
Rosebud County	C14	RM 206.99	3599	10-yr	2007.7	739.35	734.95	1.34	0.87	9.11	3.79	327.09	1669.73	3.45	1.43	4.4	4.4
Rosebud County	C14	RM 206.81	3315	10-yr	2007.7	739.29	734.49	1.34	0.82	8.77	3.42	257.4	1600.72	3.97	1.53	4.8	4.8
Rosebud County	C14	RM 206.61	2997	10-yr	2007.7	739.17	733.91	1.65	0.97	12.8	4.82	197.48	1227	4.52	1.68	5.26	5.26
Rosebud County	C14	RM 206.43	2701	10-yr	2007.7	739.1	733.52	1.56	1.01	12.15	6.32	244.31	1578.34	3.74	1.93	5.58	5.58
Rosebud County	C14	RM 206.21	2350	10-yr	2007.7	739.01	733.38	1.48	1.07	10.99	5.55	253.17	1704.49	3.98	1.99	5.63	5.63
Rosebud County	C14	RM 205.97	1963	10-yr	2007.7	738.88	732.73	1.6	1.26	11.28	5.6	223.85	1480.28	5.37	2.63	6.15	6.15
Rosebud County	C14	RM 205.72	1563	10-yr	2007.7	738.06	732.73	3.88	2.61	93.79	27.48	107.15	826.4	4.37	1.24	5.33	5.33
Rosebud County	C14	RM 205.49	1198	10-yr	2007.7	737.87	732.63	2.42	1.83	36.98	14.61	192.62	864.1	4.05	1.59	5.24	5.24
Rosebud County	C14	RM 205.3	907	10-yr	2007.7	737.55	732.76	2.53	2.01	34.01	17.36	246.92	784.75	3.05	1.54	4.79	4.79
Rosebud County	C14	RM 205.11	594	10-yr	2007.7	737.32	732.8	2.34	1.82	26.47	11.46	192	876.98	4.13	1.77	4.52	4.52
Rosebud County	C14	RM 204.9	243	10-yr	2007.7	737.04	732.63	2.41	2.04	29.3	12.45	224.67	897.6	3.58	1.51	4.41	4.41

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	10-yr	2007.7	737.04	732.67	2.26	1.41	25.89	11.56	191.86	911.86	3.52	1.56	4.37	4.37
Custer County	C14	RM 204.43	73135	10-yr	2007.7	736.89	732.44	1.92	1.26	18.72	7.81	266.74	1106.39	3.49	1.44	4.45	4.45
Custer County	C14	RM 204.22	72808	10-yr	2007.7	736.67	732.3	2.08	1.41	22.76	9.85	262.16	1034.88	3.18	1.37	4.37	4.37
Custer County	C14	RM 204	72454	10-yr	2007.7	736.55	731.9	1.67	1.17	13.31	4.94	261.19	1104.3	4.21	1.55	4.65	4.65
Custer County	C14	RM 203.82	72156	10-yr	2007.7	736.29	731.14	2.34	1.52	26.89	10.36	197.43	879.42	3.94	1.5	5.15	5.15
Custer County	C14	RM 203.65	71895	10-yr	2007.7	736.11	730.95	2.47	1.35	29.73	12.36	162.5	912.57	3.99	1.63	5.16	5.16
Custer County	C14	RM 203.5	71641	10-yr	2007.7	736.03	730.78	1.98	1.21	19.13	8.2	195.78	991.71	3.95	1.67	5.25	5.25
Custer County	C14	RM 203.3	71324	10-yr	2007.7	736	730.79	1.48	0.91	10.37	4.71	161.79	1136.76	4.36	1.94	5.21	5.21
Custer County	C14	RM 203.1	71035	10-yr	2007.7	735.69	730.79	2.41	1.43	29.16	10.21	184.4	1275.98	3.71	1.28	4.9	4.9
Custer County	C14	RM 202.9	70718	10-yr	2007.7	735.52	730.67	2.11	1.5	24.71	11.87	248.47	1123.79	2.73	1.3	4.85	4.85
Custer County	C14	RM 202.71	70415	10-yr	2007.7	735.24	730.64	2.22	1.56	25.4	11.61	230.89	847.55	3.35	1.52	4.6	4.6
Custer County	C14	RM 202.51	70088	10-yr	2007.7	734.85	730.68	2.72	1.84	36.95	12.59	152.2	869.88	3.74	1.26	4.17	4.17
Custer County	C14	RM 202.34	69815	10-yr	2007.7	734.73	730.63	1.85	1.37	18.27	7.4	321.87	1189.59	3.06	1.23	4.1	4.1
Custer County	C14	RM 202.13	69483	10-yr	2007.7	734.56	730.54	1.8	1.23	16.42	7.49	282.19	1158.98	3.56	1.61	4.02	4.02
Custer County	C14	RM 201.97	69219	10-yr	2007.7	734.4	730.01	1.94	1.52	19.06	9.77	264.21	741.26	3.51	1.79	4.39	4.39
Custer County	C14	RM 201.75	68884	10-yr	2007.7	734.35	729.45	1.4	1.22	9.2	4.11	306.87	823.06	4.52	2	4.9	4.9
Custer County	C14	RM 201.57	68612	10-yr	2007.7	734.2	729.37	1.79	1.42	17.5	9.84	362.67	887.52	2.84	1.59	4.83	4.83
Custer County	C14	RM 201.38	68299	10-yr	2007.7	733.8	729.23	2.33	1.94	31.49	16.46	350.19	857.07	2.33	1.21	4.58	4.58
Custer County	C14	RM 201.23	68055	10-yr	2007.7	733.58	729.13	2.01	1.53	23.08	13.07	369.58	941.63	2.47	1.39	4.45	4.45
Custer County	C14	RM 201.06	67778	10-yr	2007.7	733.56	729.03	1.24	1.01	8.06	4.8	262.3	1119.45	3.2	1.89	4.53	4.53
Custer County	C14	RM 200.85	67439	10-yr	2007.7	733.04	729.05	3.18	2.64	50.51	19.5	113.99	543.01	3.79	1.42	3.99	3.99
Custer County	C14	RM 200.64	67103	10-yr	2007.7	732.97	728.97	1.94	1.55	18.56	9.21	215.84	699.86	3.86	1.9	4	4
Custer County	C14	RM 200.48	66842	10-yr	2007.7	732.9	728.8	1.5	1.35	11.78	8.34	307.33	659.01	3.21	2.26	4.1	4.1
Custer County	C14	RM 200.27	66515	10-yr	2007.7	732.75	728.63	1.6	1.36	13.12	8.71	359.69	662.19	3.37	2.23	4.12	4.12
Custer County	C14	RM 200.05	66162	10-yr	2007.7	732.55	728.3	1.76	1.58	16.43	13.21	387.97	555.43	2.85	2.29	4.25	4.25
Custer County	C14	RM 199.9	65916	10-yr	2007.7	732.48	727.78	1.46	1.44	10.67	10.2	381.62	405.28	3.61	3.45	4.7	4.7
Custer County	C14	RM 199.71	65614	10-yr	2007.7	732.19	727.34	2.25	2.16	21.43	16.86	260.08	347.05	3.42	2.67	4.85	4.85
Custer County	C14	RM 199.53	65326	10-yr	2007.7	732.12	727.34	1.76	1.76	14.61	14.48	259.36	328.34	4.4	4.36	4.78	4.78
Custer County	C14	RM 199.38	65076	10-yr	2007.7	732	727.34	1.82	1.82	15.76	15.57	364.29	513.48	3.02	2.98	4.66	4.66
Custer County	C14	RM 199.18	64754	10-yr	2007.7	731.78	727.64	1.91	1.85	17.34	13.1	438.02	888.71	2.38	1.79	4.14	4.14
Custer County	C14	RM 199.04	64535	10-yr	2007.7	731.69	727.64	1.63	1.51	12.85	7.78	419.11	889.36	2.9	1.75	4.05	4.05
Custer County	C14	RM 198.77	64102	10-yr	2007.7	731.48	727.28	1.76	1.6	15.29	8.11	294.95	663.73	3.79	2	4.2	4.2
Custer County	C14	RM 198.57	63773	10-yr	2007.7	731.11	726.99	2.5	2.35	30.76	12.29	204.81	554.94	3.89	1.54	4.12	4.12
Custer County	C14	RM 198.4	63505	10-yr	2007.7	730.91	726.86	2.48	2.07	30.55	14.22	199.72	573.59	3.77	1.74	4.05	4.05
Custer County	C14	RM 198.22	63215	10-yr	2007.7	730.66	726.57	2.53	1.84	32.02	16.62	190.38	585.12	3.65	1.88	4.09	4.09
Custer County	C14	RM 198.04	62923	10-yr	2007.7	730.5	726.32	2.13	1.73	22.64	11.34	227.09	634.83	3.7	1.84	4.18	4.18
Custer County	C14	RM 197.84	62611	10-yr	2007.7	730.41	726.04	1.58	1.5	12.91	6.42	351.59	811.05	3.35	1.66	4.37	4.37
Custer County	C14	RM 197.65	62306	10-yr	2007.7	730.26	725.69	1.8	1.45	13.96	4.98	309.87	1230.59	3.18	1.12	4.57	4.57
Custer County	C14	RM 197.47	62013	10-yr	2007.7	730.24	725.29	1.26	0.9	7.29	2.19	295.69	1581.12	4.76	1.41	4.95	4.95
Custer County	C14	RM 197.27	61686	10-yr	2007.7	730.13	724.81	1.74	0.96	14.55	4.93	211.29	1564.1	4.07	1.37	5.32	5.32
Custer County	C14	RM 197.07	61373	10-yr	2007.7	730.02	724.81	1.81	1.19	15.73	4.97	204.24	1303.55	4.18	1.3	5.21	5.21
Custer County	C14	RM 196.91	61115	10-yr	2007.7	730.01	724.81	1.32	0.71	8.31	3.88	222.34	1449	4.21	1.94	5.2	5.2
Custer County	C14	RM 196.73	60815	10-yr	2007.7	729.96	724.76	1.32	0.74	8.2	4.1	240.99	1249.21	4.36	2.17	5.2	5.2
Custer County	C14	RM 196.54	60518	10-yr	2007.7	729.88	724.67	1.46	0.92	10.46	5.6	270.26	1214.74	3.83	2.03	5.21	5.21
Custer County	C14	RM 196.33	60178	10-yr	2007.7	729.8	724.57	1.44	1.03	9.64	4.7	247.23	1460.52	4.56	2.21	5.23	5.23
Custer County	C14	RM 196.17	59915	10-yr	2007.7	729.75	724.51	1.48	1.2	10.13	5.87	191.57	1261.86	4.71	2.71	5.24	5.24
Custer County	C15	RM 195.98	59615	10-yr	2007.7	728.58	724.52	4.42	4.34	100.58	82.58	132.07	175.71	3.43	2.81	4.06	4.06
Custer County	C15	RM 195.81	59337	10-yr	2007.7	728.47	724.33	2.99	2.96	43.59	39.82	168.62	202.27	3.98	3.63	4.14	4.14
Custer County	C15	RM 195.61	59020	10-yr	2007.7	728.35	724.24	2.2	2.18	23.67	19.3	230.07	333.22	3.96	3.22	4.11	4.11
Custer County	C15	RM 195.43	58727	10-yr	2007.7	728.15	724.22	2.16	2.09	24.95	18.16	305.61	493.49	3.02	2.2	3.93	3.93
Custer County	C15	RM 195.23	58415	10-yr	2007.7	728.01	723.93	1.7	1.69	15.28	13.41	391.06	518.83	3.01	2.64	4.08	4.08
Custer County	C15	RM 195.04	58114	10-yr	2007.7	727.78	723.54	2.03	1.88	21.42	16.44	269.46	422.23	3.3	2.53	4.24	4.24
Custer County	C15	RM 194.86	57824	10-yr	2007.7	727.58	722.93	2.15	1.8	22.93	12.98	209.54	615.38	3.83	2.15	4.65	4.65
Custer County	C15	RM 194.67	57521	10-yr	2007.7	727.41	722.75	2.05	1.93	19.78	8.52	217.41	742.77	4.46	1.9	4.66	4.66
Custer County	C15	RM 194.49	57231	10-yr	2007.7	727.31	722.53	1.91	1.67	17.15	7.86	232.49	730.58	4.39	2	4.78	4.78
Custer County	C15	RM 194.32	56946	10-yr	2007.7	727.11	722.5	2.17	1.89	21.58	10.66	259.82	627.77	3.46	1.7	4.61	4.61
Custer County	C15	RM 194.13	56643	10-yr	2007.7	726.88	722.5	2.22	2.08	25.02	15.18	250.93	454.39	3.56	2.15	4.38	4.38
Custer County	C15	RM 193.93	56331	10-yr	2007.7	726.74	722.31	1.96	1.84	18.59	13.05	247.7	392.63	4.07	2.85	4.43	4.43
Custer County	C15	RM 193.74	56024	10-yr	2007.7	726.57	722.23	2.07	1.92	20.56	10.59	228.83	585.06	4.18	2.14	4.34	4.34
Custer County	C15	RM 193.55	55708	10-yr	2007.7	726.36	722.13	2.23	2	24.07	11.65	216.02	518.38	4.07	1.95	4.23	4.23

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	10-yr	2007.7	726.14	722.13	2.34	2.06	27.09	11.4	219.51	611.26	3.82	1.6	4.01	4.01
Custer County	C15	RM 193.2	55158	10-yr	2007.7	726.06	722.13	1.83	1.58	16.51	8.32	279.61	676.76	3.8	1.9	3.93	3.93
Custer County	C15	RM 193	54825	10-yr	2007.7	725.91	721.84	1.83	1.56	16.66	8.62	281.95	671.68	3.77	1.94	4.07	4.07
Custer County	C15	RM 192.81	54525	10-yr	2007.7	725.74	721.37	2.04	1.59	19.98	8.59	207.4	708.21	4.21	1.79	4.37	4.37
Custer County	C15	RM 192.63	54247	10-yr	2007.7	725.58	721.01	2.1	1.76	20.89	9.65	216.13	577.48	4.31	1.97	4.57	4.57
Custer County	C15	RM 192.44	53935	10-yr	2007.7	725.48	721.01	1.81	1.51	15.78	8.48	240.88	662.57	4.13	2.21	4.47	4.47
Custer County	C16	RM 192.26	53653	10-yr	2007.7	725.27	721.01	2.11	1.97	21.46	15.6	227.53	391.65	4.12	2.98	4.26	4.26
Custer County	C16	RM 192.05	53309	10-yr	2007.7	724.67	721.11	3.15	3	51.2	39.78	186.81	289.51	3.38	2.62	3.57	3.57
Custer County	C16	RM 191.74	52809	10-yr	2007.7	724.41	721.1	1.81	1.81	17.54	17.54	429.03	479.37	2.58	2.58	3.31	3.31
Custer County	C16	RM 191.35	52181	10-yr	2007.7	723.92	721.02	1.76	1.74	16.82	16.04	570.3	608.42	1.99	1.9	2.9	2.9
Custer County	C16	RM 191.12	51812	10-yr	2007.7	723.72	720.51	1.44	1.44	10.1	10.09	680.87	681.67	2.05	2.05	3.21	3.21
Custer County	C16	RM 190.87	51406	10-yr	2007.7	723.55	719.89	1.28	1.28	8.41	7.92	788.89	841.56	1.98	1.87	3.66	3.66
Custer County	C16	RM 190.54	50885	10-yr	2007.7	723.41	719.15	0.99	0.97	6.01	4.99	789.25	971.71	2.57	2.14	4.26	4.26
Custer County	C16	RM 190.29	50477	10-yr	2007.7	722.85	718.45	2.81	2.43	38.78	16.82	179.6	500.53	3.9	1.67	4.4	4.4
Custer County	C16	RM 190.1	50176	10-yr	2007.7	722.58	718.43	2.58	2.41	34.01	21.79	225.67	631.29	3.42	2.19	4.15	4.15
Custer County	C16	RM 189.85	49765	10-yr	2007.7	722.38	718.13	1.85	1.79	17.97	16.75	334.91	823.42	3.17	2.96	4.25	4.25
Custer County	C16	RM 189.65	49458	10-yr	2007.7	722.19	713.92	1.91	1.91	16.46	15.95	334.25	1392.73	3.14	3.04	8.27	8.27
Custer County	C16		49425	10-yr	Bridge												
Custer County	C16	RM 189.62	49416	10-yr	2007.7	722.13	713.92	1.96	1.96	17.04	16.74	327.72	1102.12	3.12	3.06	8.21	8.21
Custer County	C16	RM 189.43	49103	10-yr	2007.7	721.69	718.09	2.58	2.57	36.2	35.17	269.4	568.89	2.88	2.8	3.6	3.6
Custer County	C16	RM 189.22	48763	10-yr	2007.7	721.7	717.93	1.28	1.28	8.39	7.79	452.03	993.38	3.46	3.21	3.77	3.77
Custer County	C16	RM 188.91	48267	10-yr	2007.7	721.51	717.54	1.53	1.5	11.17	9.1	472.67	1190.16	2.77	2.25	3.97	3.97
Custer County	C16	RM 188.66	47869	10-yr	2007.7	721.09	716.75	2.45	2.25	28.75	10.98	195.06	1097.93	4.17	1.57	4.34	4.34
Custer County	C16	RM 188.51	47622	10-yr	2007.7	720.92	716.72	2.39	2.04	28.26	11.13	217.17	946.77	3.78	1.47	4.21	4.21
Custer County	C16	RM 188.32	47314	10-yr	2007.7	720.84	716.79	1.8	1.53	16.95	9.76	151.54	640.88	3.61	2.05	4.05	4.05
Custer County	C16	RM 188.14	47024	10-yr	2007.7	720.67	716.93	1.38	1.52	7.36	7.86	429.13	906.43	1.36	1.46	3.74	3.74
Custer County	C16	RM 187.98	46768	10-yr	2007.7	720.58	716.91	1.58	1.26	12.95	7.13	222.26	869.94	3.35	1.83	3.67	3.67
Custer County	C16	RM 187.78	46440	10-yr	2007.7	720.49	716.69	1.37	1.18	10.02	5.92	251.06	929.77	3.13	1.84	3.8	3.8
Custer County	C16	RM 187.55	46083	10-yr	2007.7	720.22	716.04	2.07	1.39	21.29	7.64	224.37	1074.08	3.76	1.34	4.18	4.18
Custer County	C16	RM 187.35	45750	10-yr	2007.7	719.74	715.34	2.83	2.25	39.68	12.27	182.27	777.47	3.78	1.15	4.4	4.4
Custer County	C16	RM 187.14	45421	10-yr	2007.7	719.62	715.3	2.05	1.6	21.18	10.26	259	791.31	3.59	1.73	4.32	4.32
Custer County	C16	RM 187.01	45211	10-yr	2007.7	719.56	715.3	1.73	1.41	14.8	6.48	300.38	1035.31	3.74	1.63	4.26	4.26
Custer County	C16	RM 186.84	44930	10-yr	2007.7	719.38	715.03	1.93	1.7	19.07	11.54	294.67	947.08	3.45	2.07	4.35	4.35
Custer County	C16	RM 186.62	44553	10-yr	2007.7	719.17	712.45	2.06	2.06	18.87	18.6	188.38	190.81	5.18	5.12	6.72	6.72
Custer County	C16		44545	10-yr	Bridge												
Custer County	C16	RM 186.61	44538	10-yr	2007.7	719.15	712.45	2.06	2.06	19.02	18.76	188.38	355.22	5.16	5.1	6.7	6.7
Custer County	C16	RM 186.46	44311	10-yr	2007.7	718.76	714.53	2.86	2.7	40.62	28.26	185.71	562.46	3.76	2.6	4.23	4.23
Custer County	C16	RM 186.26	43996	10-yr	2007.7	718.51	714.27	2.55	2.46	32.22	24.47	205.3	352.46	3.82	2.89	4.24	4.24
Custer County	C16	RM 186.1	43730	10-yr	2007.7	718.43	713.9	1.92	1.92	18.49	18.49	291.97	351.93	3.59	3.59	4.53	4.53
Custer County	C16	RM 185.91	43424	10-yr	2017.9	718.24	713.84	1.95	1.95	17.13	16.36	387.86	461.99	2.66	2.54	4.4	4.4
Custer County	C16	RM 185.71	43110	10-yr	2017.9	717.6	713.84	3.08	3.03	38.7	32.02	295.84	365.3	2.21	1.82	3.76	3.76
Custer County	C16	RM 185.52	42808	10-yr	2017.9	717.59	713.71	1.67	1.58	14.51	11.03	365.01	512.23	3.28	2.49	3.88	3.88
Custer County	C16	RM 185.34	42508	10-yr	2017.9	717.35	713.28	1.98	1.97	17.22	16.18	458.38	557.18	2.22	2.09	4.07	4.07
Custer County	C16	RM 185.16	42219	10-yr	2017.9	717.27	712.93	1.46	1.44	11.12	9.34	419.95	1172.96	3.28	2.75	4.34	4.34
Custer County	C17	RM 184.95	41881	10-yr	2017.9	717.05	712.72	1.87	1.66	18.52	11.47	288.51	921.38	3.66	2.26	4.33	4.33
Custer County	C17	RM 184.78	41621	10-yr	2017.9	716.78	712.51	2.38	2.1	27.89	16.51	214.01	419.61	3.89	2.29	4.27	4.27
Custer County	C17	RM 184.59	41311	10-yr	2017.9	716.52	711.96	2.48	2.3	29.53	22.95	194.15	273.17	4.14	3.21	4.56	4.56
Custer County	C17	RM 184.4	41010	10-yr	2017.9	716.45	711.62	1.9	1.89	17.12	16.45	242.39	253.91	4.37	4.2	4.83	4.83
Custer County	C17	RM 184.23	40728	10-yr	2017.9	716.23	711.31	2.22	2.2	24.36	22.77	236.8	256.28	3.83	3.58	4.92	4.92
Custer County	C17	RM 184.1	40517	10-yr	2017.9	716.07	710.39	2.3	2.2	25.18	20.25	203.14	265.76	4.28	3.45	5.68	5.68
Custer County	C17		40500	10-yr	Bridge												
Custer County	C17	RM 184.08	40496	10-yr	2017.9	716.04	710.39	2.32	2.22	25.63	20.59	203.14	265.6	4.25	3.42	5.65	5.65
Custer County	C17	RM 184.03	40407	10-yr	2017.9	716	711.49	2.19	2.16	23.18	21.09	222.37	249.11	4.13	3.75	4.51	4.51
Custer County	C17	RM 183.83	40098	10-yr	2017.9	715.85	711.42	2.07	2.06	20.6	19.05	232.58	254.02	4.18	3.86	4.43	4.43
Custer County	C17	RM 183.65	39806	10-yr	2017.9	715.67	711.39	2.18	2.18	22.82	22.56	223.56	226.34	4.14	4.1	4.28	4.28
Custer County	C17	RM 183.47	39513	10-yr	2017.9	715.4	711.39	2.48	2.48	30.12	30.12	209.14	209.14	3.9	3.9	4.01	4.01
Custer County	C17	RM 183.28	39210	10-yr	2017.9	715.29	711.31	1.97	1.96	18.98	18.41	263.88	273.53	3.89	3.77	3.98	3.98
Custer County	C17	RM 183.09	38909	10-yr	2017.9	715.05	711.04	2.24	2.24	24.83	24.83	237.94	237.94	3.79	3.79	4.01	4.01
Custer County	C17	RM 182.94	38660	10-yr	2017.9	714.94	710.66	2	2	19.2	19.2	244.9	244.9	4.13	4.13	4.28	4.28
Custer County	C17	RM 182.72	38316	10-yr	2017.9	714.75	710.1	2.06	2	20.92	19.42	250.1	279.39	3.88	3.61	4.65	4.65

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	10-yr	2017.9	714.31	710.12	2.89	2.62	40.9	30.09	173.67	266.13	3.95	2.89	4.19	4.19
Custer County	C17	RM 182.34	37706	10-yr	2017.9	714.12	710.27	2.31	2.14	27.31	18.26	240.92	409.43	3.45	2.3	3.85	3.85
Custer County	C17	RM 182.15	37402	10-yr	2017.9	713.91	710.26	2.2	2.08	24.55	17.76	252.37	384.47	3.5	2.53	3.65	3.65
Custer County	C17	RM 181.97	37127	10-yr	2017.9	713.74	710.26	2.02	1.95	21.11	16.94	289.89	384.79	3.35	2.69	3.48	3.48
Custer County	C17	RM 181.78	36815	10-yr	2017.9	713.49	710.09	2.14	2.04	23.45	18.1	321.05	455.85	2.82	2.17	3.4	3.4
Custer County	C17	RM 181.59	36505	10-yr	2017.9	713.14	709.76	2.34	2.22	25.1	20.6	352.06	460.77	2.41	1.97	3.38	3.38
Custer County	C17	RM 181.37	36155	10-yr	2017.9	712.85	709.37	2.19	1.91	25.16	16.64	276.44	507.08	3.15	2.08	3.48	3.48
Custer County	C17	RM 181.23	35925	10-yr	2017.9	712.55	709.36	2.54	2.32	34.77	25.61	247.19	401.7	2.94	2.17	3.19	3.19
Custer County	C17	RM 181.03	35607	10-yr	2019	712.38	709.02	1.85	1.82	18.27	16.48	353.36	438.31	3.03	2.74	3.36	3.36
Custer County	C17	RM 180.83	35292	10-yr	2019	712.24	708.68	1.65	1.53	14.69	10.94	362.09	622.29	2.95	2.19	3.56	3.56
Custer County	C17	RM 180.66	35006	10-yr	2019	712.04	708.22	1.83	1.76	17.58	14.95	342.47	422.43	3.19	2.72	3.82	3.82
Custer County	C18	RM 180.46	34700	10-yr	2019	711.86	708.05	1.93	1.78	18.58	13.51	281.53	425.95	3.67	2.67	3.81	3.81
Custer County	C18	RM 180.29	34421	10-yr	2019	711.57	707.79	2.37	2.15	29	15.09	243.73	544.33	3.33	1.73	3.78	3.78
Custer County	C18	RM 180.08	34086	10-yr	2019	711.38	707.53	2.06	1.89	21.2	13.23	253.09	463.76	3.71	2.31	3.85	3.85
Custer County	C18	RM 179.9	33807	10-yr	2019	711.22	707.32	2.02	1.87	20.57	16.19	265.73	423.96	3.53	2.78	3.9	3.9
Custer County	C18	RM 179.73	33525	10-yr	2019	710.93	706.89	2.35	2.23	28.54	23.65	256.8	345.7	3.3	2.74	4.04	4.04
Custer County	C18	RM 179.54	33218	10-yr	2019	710.64	706.7	2.3	2.27	28.47	26.62	311.68	348.84	2.82	2.63	3.94	3.94
Custer County	C18	RM 179.35	32914	10-yr	2019	710.46	706.45	1.97	1.91	19.76	16.19	292.41	416.34	3.48	2.85	4.01	4.01
Custer County	C18	RM 179.16	32611	10-yr	2019	710.2	706.29	2.24	2.22	25.43	21.42	237.48	285.69	3.79	3.19	3.92	3.92
Custer County	C18	RM 178.99	32337	10-yr	2019	710.05	706.07	2.09	2.05	21.66	18.41	254.29	312.17	3.79	3.21	3.98	3.98
Custer County	C18	RM 178.79	32025	10-yr	2019	709.84	705.9	2.17	2.11	23.47	21.18	251.59	288.62	3.68	3.32	3.94	3.94
Custer County	C18	RM 178.61	31730	10-yr	2019	709.67	705.59	2.09	2.08	21.82	20.49	259.81	397.35	3.71	3.48	4.08	4.08
Custer County	C18	RM 178.43	31434	10-yr	2019	709.5	705.25	2.08	2.08	21.15	20.97	249.19	255.99	3.9	3.87	4.25	4.25
Custer County	C18	RM 178.23	31114	10-yr	2019	709.31	704.7	2.08	2.08	21.32	21.01	248.79	264.65	3.89	3.84	4.61	4.61
Custer County	C18	RM 178.06	30848	10-yr	2019	709.14	704.57	2.2	2.13	23.28	17.67	219.45	301.64	4.16	3.15	4.57	4.57
Custer County	C18	RM 177.88	30549	10-yr	2019	708.93	704.57	2.28	2.2	25.52	20.36	229.01	298.41	3.86	3.07	4.36	4.36
Custer County	C18	RM 177.66	30211	10-yr	2041.6	708.45	704.57	2.89	2.83	41.88	35.06	191.66	235.18	3.67	3.07	3.88	3.88
Custer County	C18	RM 177.49	29932	10-yr	2041.6	708.29	704.47	2.34	2.34	27.53	26.52	236.7	246.01	3.68	3.54	3.82	3.82
Custer County	C19	RM 177.3	29625	10-yr	2041.6	708.13	704.46	2	2	20.51	20.27	302.03	308.35	3.38	3.35	3.67	3.67
Custer County	C19	RM 177.11	29314	10-yr	2041.6	707.79	704.46	2.36	2.35	27.55	24.32	314.12	359.07	2.75	2.42	3.33	3.33
Custer County	C19	RM 176.93	29040	10-yr	2041.6	707.64	704.42	1.89	1.83	17.89	15.53	382.06	458.65	2.82	2.44	3.22	3.22
Custer County	C19	RM 176.74	28720	10-yr	2041.6	707.47	704.21	1.74	1.66	16.17	12.98	341.35	555.28	2.95	2.37	3.26	3.26
Custer County	C19	RM 176.53	28384	10-yr	2041.6	707.19	703.63	1.97	1.9	22.39	20.72	344.61	479.91	2.41	2.24	3.56	3.56
Custer County	C19	RM 176.36	28109	10-yr	2041.6	706.97	703.08	1.97	1.93	20.22	17.15	323.77	389.79	3.2	2.71	3.89	3.89
Custer County	C19	RM 176.18	27824	10-yr	2041.6	706.34	702.71	3.19	3.09	53.2	41.44	199.69	283.44	3.19	2.48	3.63	3.63
Custer County	C19	RM 176	27527	10-yr	2041.6	706.15	702.51	2.32	2.23	27.92	23.84	259.98	343.39	3.32	2.83	3.64	3.64
Custer County	C19	RM 175.81	27227	10-yr	2041.6	705.92	702.24	2.18	2.13	25.03	21.92	297.33	348.85	3.13	2.74	3.68	3.68
Custer County	C19	RM 175.62	26928	10-yr	2041.6	705.64	701.81	2.37	2.17	28.67	21.68	234.72	366.88	3.44	2.59	3.83	3.83
Custer County	C19	RM 175.43	26622	10-yr	2041.6	705.26	701.81	2.67	2.07	37.8	29.12	214.93	414.26	3.11	2.38	3.45	3.45
Custer County	C19	RM 175.25	26325	10-yr	2041.6	704.91	701.72	2.57	2.38	35.14	29.51	212.23	348.85	3.04	2.55	3.19	3.19
Custer County	C19	RM 175.08	26048	10-yr	2041.6	704.69	701.63	2.05	2.05	23.06	22.57	357.35	366.25	2.78	2.72	3.06	3.06
Custer County	C19	RM 174.9	25768	10-yr	2041.6	704.38	701.31	2.24	2.24	27.89	27.87	336.73	336.86	2.7	2.7	3.07	3.07
Custer County	C19	RM 174.69	25444	10-yr	2041.6	704.01	700.82	2.29	2.28	29.52	28.95	350.81	369.17	2.54	2.5	3.19	3.19
Custer County	C19	RM 174.49	25112	10-yr	2041.6	703.61	700.04	2.4	2.39	30.48	29.61	279.46	298.85	3.05	2.96	3.57	3.57
Custer County	C19	RM 174.32	24844	10-yr	2041.6	703.23	699.39	2.71	2.7	37.82	35.45	222.49	246.21	3.38	3.17	3.84	3.84
Custer County	C19	RM 174.13	24549	10-yr	2041.6	703.11	698.84	2.08	2.08	21.04	20.75	244.59	269.49	4.01	3.95	4.27	4.27
Custer County	C19	RM 173.94	24238	10-yr	2041.6	702.85	698.14	2.33	2.32	27.07	26.62	238.74	276.46	3.67	3.61	4.71	4.71
Custer County	C19	RM 173.75	23939	10-yr	2041.6	702.44	697.92	2.86	2.81	39.22	32.23	172.39	332.75	4.13	3.39	4.52	4.52
Custer County	C19	RM 173.57	23651	10-yr	2041.6	702.32	697.83	2.32	2.31	25.55	24.26	208.5	247.04	4.23	4.01	4.49	4.49
Custer County	C19	RM 173.39	23352	10-yr	2041.6	701.99	697.83	2.67	2.67	35.25	35.25	201.38	220.4	3.8	3.8	4.16	4.16
Custer County	C19	RM 173.2	23054	10-yr	2041.6	701.74	697.72	2.53	2.51	32.33	30.5	226.21	282.29	3.56	3.36	4.02	4.02
Custer County	C19	RM 173.02	22756	10-yr	2041.6	701.52	697.29	2.31	2.25	26.83	19.55	244.03	345.54	3.61	2.63	4.23	4.23
Custer County	C19	RM 172.82	22437	10-yr	2041.6	701.35	696.82	1.86	1.85	19.18	18.28	414.44	437.2	2.65	2.53	4.53	4.53
Custer County	C19	RM 172.67	22200	10-yr	2041.6	701.12	696.52	2	1.99	22.87	22.33	421.85	435.19	2.42	2.36	4.6	4.6
Custer County	C19	RM 172.49	21903	10-yr	2041.6	700.89	696.23	1.9	1.89	19.43	18.98	365.62	376.56	2.94	2.87	4.66	4.66
Custer County	C19	RM 172.29	21585	10-yr	2041.6	700.64	695.79	2.16	2.11	22.33	17.19	226.44	430.24	4.17	3.2	4.85	4.85
Custer County	C19	RM 172.12	21325	10-yr	2041.6	700.06	695.81	3.14	3.13	52.38	50.41	215.62	224.51	3.02	2.91	4.25	4.25
Custer County	C19		21310	10-yr	Bridge												
Custer County	C19	RM 172.11	21300	10-yr	2041.6	699.9	695.81	3.32	3.32	59.64	58.65	215.19	218.92	2.86	2.81	4.09	4.09
Custer County	C19	RM 171.89	20942	10-yr	2041.6	699.62	695.57	2.35	2.32	27.24	23.54	228.36	267.48	3.8	3.28	4.05	4.05

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	10-yr	2041.6	699.29	695.49	2.57	2.53	33.83	29.77	231.98	268.44	3.42	3	3.8	3.8
Custer County	C19	RM 171.52	20341	10-yr	2041.6	699.09	695.3	2.28	2.26	26.2	23.96	249.92	276.72	3.58	3.27	3.79	3.79
Custer County	C19	RM 171.34	20043	10-yr	2041.6	698.8	695.11	2.42	2.41	29.89	28.63	244.86	256.38	3.44	3.3	3.69	3.69
Custer County	C19	RM 171.15	19745	10-yr	2041.6	698.58	694.86	2.3	2.3	26.83	26.66	249.04	250.68	3.56	3.54	3.72	3.72
Custer County	C19	RM 170.96	19437	10-yr	2041.6	698.36	694.67	2.22	2.22	24.91	24.59	261.39	264.98	3.52	3.48	3.69	3.69
Custer County	C19	RM 170.78	19143	10-yr	2041.6	698.12	694.2	2.3	2.28	26.49	22.73	245.88	289.63	3.61	3.1	3.92	3.92
Custer County	C19	RM 170.58	18838	10-yr	2041.6	697.81	693.91	2.47	2.44	31.53	28.73	245.35	274.3	3.35	3.05	3.9	3.9
Custer County	C19	RM 170.4	18543	10-yr	2041.6	697.64	693.9	2.13	2.13	22.9	22.51	269.24	274.37	3.56	3.5	3.74	3.74
Custer County	C19	RM 170.22	18257	10-yr	2041.6	697.46	693.7	2.08	2.08	21.79	21.24	272.95	280.57	3.59	3.5	3.76	3.76
Custer County	C19	RM 170.03	17941	10-yr	2041.6	697.18	693.31	2.34	2.33	27.2	27.03	236.74	238.26	3.69	3.67	3.87	3.87
Custer County	C19	RM 169.84	17641	10-yr	2041.6	696.94	692.78	2.39	2.39	27.87	27.84	214.06	214.29	3.99	3.98	4.16	4.16
Custer County	C19	RM 169.65	17341	10-yr	2041.6	696.69	692.47	2.5	2.5	30.46	30.22	203.49	205.13	4.01	3.98	4.22	4.22
Custer County	C19	RM 169.47	17041	10-yr	2041.6	696.39	692.17	2.65	2.58	34.7	29.99	199.81	239.77	3.82	3.3	4.22	4.22
Custer County	C19	RM 169.28	16732	10-yr	2041.6	696.16	692	2.45	2.4	29.6	23.89	214.83	273.9	3.86	3.11	4.16	4.16
Custer County	C19	RM 169.09	16441	10-yr	2041.6	695.93	691.96	2.43	2.43	29.4	28.87	225.9	246.42	3.72	3.66	3.97	3.97
Custer County	C19	RM 168.91	16152	10-yr	2041.6	695.67	691.93	2.47	2.47	30.87	30	230.07	237.16	3.59	3.49	3.74	3.74
Custer County	C19	RM 168.72	15846	10-yr	2041.6	695.51	691.82	2.06	2.06	21.55	21.48	278.84	279.71	3.55	3.54	3.69	3.69
Custer County	C19	RM 168.51	15500	10-yr	2041.6	695.28	691.6	2.06	2.03	21.92	20.37	296.39	324.94	3.33	3.09	3.68	3.68
Custer County	C19	RM 168.35	15241	10-yr	2041.6	695.02	691.48	2.33	2.25	28.29	23.85	268.9	333.29	3.24	2.73	3.54	3.54
Custer County	C19	RM 168.15	14931	10-yr	2041.6	694.64	691.2	2.6	2.51	35.04	27.27	239.65	321.64	3.26	2.53	3.44	3.44
Custer County	C19	RM 167.97	14639	10-yr	2041.6	694.43	690.59	2.28	2.28	26.02	26.02	247.29	247.36	3.63	3.63	3.84	3.84
Custer County	C19	RM 167.79	14340	10-yr	2041.6	694.21	690.5	2.27	2.27	25.97	25.51	249.29	340.32	3.61	3.54	3.71	3.71
Custer County	C19	RM 167.61	14054	10-yr	2041.6	693.89	690.42	2.53	2.52	33.15	31.62	244.55	257.65	3.3	3.15	3.47	3.47
Custer County	C19	RM 167.41	13735	10-yr	2041.6	693.62	690.14	2.33	2.21	28.09	19.11	264.94	415.09	3.27	2.23	3.48	3.48
Custer County	C19	RM 167.22	13433	10-yr	2041.6	693.42	689.79	2.12	2.1	22.93	19.97	276.96	321.79	3.47	3.02	3.63	3.63
Custer County	C19	RM 167.04	13143	10-yr	2041.6	693.25	689.14	2.08	2.01	21.31	18.04	256.62	315.29	3.81	3.23	4.11	4.11
Custer County	C19	RM 166.85	12847	10-yr	2041.6	692.89	688.98	2.57	2.47	34.41	27.29	240.01	318.88	3.27	2.59	3.91	3.91
Custer County	C19	RM 166.67	12552	10-yr	2041.6	692.67	688.84	2.29	2.29	26.69	25.55	252.35	264.4	3.52	3.37	3.83	3.83
Custer County	C19	RM 166.52	12319	10-yr	2041.6	692.58	688.64	1.94	1.93	18.6	17.7	278.87	293.7	3.78	3.6	3.94	3.94
Custer County	C19	RM 166.31	11978	10-yr	2041.6	692.33	688.02	2.2	2.17	22.81	19.65	249.27	292.35	3.73	3.21	4.31	4.31
Custer County	C20	RM 166.2	11806	10-yr	2047.3	692.2	687.4	2.26	2.23	25	19.57	229.93	299.6	3.93	3.07	4.8	4.8
Custer County	C20	RM 166.06	11569	10-yr	2047.3	691.96	687.38	2.46	2.45	30.9	27.52	239.23	270.37	3.47	3.09	4.58	4.58
Custer County	C20	RM 165.92	11350	10-yr	2047.3	691.7	687.38	2.62	2.6	35.19	30.24	229.38	269.51	3.41	2.92	4.32	4.32
Custer County	C20	RM 165.73	11039	10-yr	2047.3	691.51	687.26	2.19	2.18	24.31	22.82	264.5	283.08	3.53	3.32	4.25	4.25
Custer County	C20	RM 165.55	10750	10-yr	2047.3	691.31	687.11	2.16	2.14	23.68	22.19	269.21	289.76	3.52	3.3	4.2	4.2
Custer County	C20	RM 165.35	10440	10-yr	2047.3	691.09	686.75	2.16	2.14	24	21.34	278.12	317.07	3.4	3.02	4.34	4.34
Custer County	C20	RM 165.17	10140	10-yr	2047.3	690.89	686.41	2.15	2.06	22.89	20.03	247.1	301.88	3.77	3.3	4.48	4.48
Custer County	C20	RM 165.01	9883	10-yr	2047.3	690.72	686.16	2.16	2.13	23.38	19.43	262.27	319.96	3.62	3	4.56	4.56
Custer County	C20	RM 164.81	9577	10-yr	2047.3	690.53	686.04	2.08	2.02	22.17	17.85	284.18	366.65	3.44	2.76	4.49	4.49
Custer County	C20	RM 164.61	9252	10-yr	2047.3	690.38	685.8	1.82	1.73	13.9	10.9	373.74	512.14	2.96	2.32	4.58	4.58
Custer County	C20	RM 164.42	8945	10-yr	2047.3	690.22	685.78	1.85	1.85	13.87	13.76	416.56	422.4	2.66	2.64	4.44	4.44
Custer County	C20	RM 164.23	8641	10-yr	2047.3	690.07	685.85	1.67	1.67	15.66	15.55	452.11	460.46	2.71	2.69	4.22	4.22
Custer County	C20	RM 164.06	8372	10-yr	2047.3	689.94	685.64	1.69	1.62	13.85	10.28	294.56	419.12	4.08	3.02	4.3	4.3
Custer County	C20	RM 163.85	8031	10-yr	2047.3	689.78	685	1.85	1.85	16.72	16.58	277.99	280.1	3.98	3.95	4.78	4.78
Custer County	C20	RM 163.67	7743	10-yr	2047.3	689.57	684.45	2.2	2.2	22.19	21.74	191.77	196.25	4.85	4.75	5.12	5.12
Custer County	C20	RM 163.48	7449	10-yr	2047.3	689.29	684.13	2.62	2.61	31.41	30.29	162.28	168.93	4.81	4.64	5.16	5.16
Custer County	C20	RM 163.3	7150	10-yr	2047.3	689.19	684.13	2.19	2.16	22.37	20.48	204.93	227.67	4.55	4.17	5.06	5.06
Custer County	C20	RM 163.12	6859	10-yr	2047.3	689.11	683.91	1.83	1.77	16.05	13.33	267.05	336.08	4.16	3.45	5.2	5.2
Custer County	C20	RM 162.94	6583	10-yr	2047.3	688.92	683.78	2.16	2.06	21.7	14.96	204.74	314.86	4.6	3.15	5.14	5.14
Custer County	C20	RM 162.74	6254	10-yr	2047.3	688.53	683.77	2.77	2.7	37.05	23.95	177.33	285.43	4.15	2.66	4.76	4.76
Custer County	C20	RM 162.55	5957	10-yr	2047.3	688.3	683.96	2.49	2.48	32.49	31	231.24	243	3.55	3.39	4.34	4.34
Custer County	C20	RM 162.34	5620	10-yr	2047.3	688.17	683.92	1.88	1.87	17.94	16.37	304.55	337.93	3.56	3.25	4.25	4.25
Custer County	C20	RM 162.18	5352	10-yr	2047.3	688.03	683.41	1.7	1.7	23.77	23.37	354.23	361.3	3.39	3.33	4.62	4.62
Custer County	C20	RM 162.03	5111	10-yr	2047.3	687.93	683.26	1.58	1.58	12.12	12	322.26	339.81	4.02	3.98	4.67	4.67
Custer County	C20	RM 161.81	4770	10-yr	2047.3	687.52	682.63	2.63	2.61	32.61	30.27	174.77	190.62	4.44	4.12	4.89	4.89
Custer County	C20	RM 161.62	4470	10-yr	2047.3	687.19	682.53	2.86	2.86	39.53	39.08	174.2	289.93	4.11	4.06	4.66	4.66
Custer County	C20	RM 161.43	4159	10-yr	2047.3	686.99	682.63	2.5	2.47	30.44	25.87	206.33	246.76	3.97	3.37	4.36	4.36
Custer County	C20	RM 161.24	3859	10-yr	2047.3	686.69	682.51	2.65	2.55	34.6	28.23	199.39	256.43	3.84	3.13	4.18	4.18
Custer County	C20	RM 161.06	3559	10-yr	2047.3	686.48	682.38	2.41	2.36	28.65	20.72	218.97	311.51	3.87	2.79	4.1	4.1
Custer County	C20	RM 160.87	3258	10-yr	2047.3	686.11	682.24	2.73	2.71	37.41	32.35	204.8	239.58	3.66	3.16	3.87	3.87

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	10-yr	2047.3	685.95	682.11	2.21	2.2	24.32	23.25	252.04	264.26	3.68	3.52	3.84	3.84
Custer County	C20	RM 160.5	2662	10-yr	2047.3	685.75	681.85	2.13	2.13	23.73	23.55	302.52	304.89	3.18	3.16	3.9	3.9
Custer County	C20	RM 160.31	2364	10-yr	2047.3	685.55	681.58	2.02	1.99	21.55	18.92	321.4	372.16	3.14	2.76	3.97	3.97
Custer County	C20	RM 160.12	2063	10-yr	2047.3	685.36	681.02	2	1.94	19.97	17.43	277.19	329.81	3.66	3.2	4.34	4.34
Custer County	C20	RM 159.93	1758	10-yr	2047.3	685.06	680.9	2.34	2.31	29.23	26.75	292.18	324.02	2.99	2.74	4.16	4.16
Custer County	C20	RM 159.75	1459	10-yr	2047.3	684.8	680.88	2.28	2.27	26.34	24.76	251.96	270.04	3.56	3.34	3.92	3.92
Custer County	C20	RM 159.55	1151	10-yr	2047.3	684.6	680.74	2.18	2.17	23.82	22.72	261.92	276.03	3.59	3.42	3.86	3.86
Custer County	C20	RM 159.38	876	10-yr	2047.3	684.36	680.37	2.35	2.3	27.28	23.7	229.23	271.18	3.78	3.29	3.99	3.99
Custer County	C20	RM 159.19	566	10-yr	2047.3	684.17	679.77	2.21	2.21	24.44	24.21	236.17	238.52	3.92	3.88	4.4	4.4
Custer County	C20	RM 158.98	229	10-yr	2047.3	683.9	679.44	2.37	2.35	27.48	25.61	217.13	235.92	3.97	3.69	4.46	4.46

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	10-yr	2053	683.9	679.22	2.32	2.29	25.96	21.97	214.16	257.37	4.12	3.48	4.68	4.68
Prairie County	C21	RM 158.55	61087	10-yr	2053	683.78	678.98	2.01	2.01	18.86	18.57	226.29	230.15	4.52	4.45	4.8	4.8
Prairie County	C21	RM 158.36	60787	10-yr	2053	683.66	678.83	1.95	1.94	18.07	17.58	249.23	278.48	4.23	4.12	4.83	4.83
Prairie County	C21	RM 158.17	60481	10-yr	2053	683.5	678.35	2.01	1.99	21.42	19.42	253.18	283.49	4.02	3.64	5.15	5.15
Prairie County	C21	RM 157.98	60173	10-yr	2053	683.2	678.22	2.41	2.38	29.01	25.29	231.17	269.6	3.68	3.2	4.98	4.98
Prairie County	C21	RM 157.78	59862	10-yr	2053	682.95	678.23	2.45	2.36	28.98	21.47	201.99	287.02	4.11	3.04	4.72	4.72
Prairie County	C21	RM 157.6	59561	10-yr	2053	682.84	678.14	2.03	1.98	19.54	15.61	233.85	301.24	4.31	3.44	4.7	4.7
Prairie County	C21	RM 157.38	59209	10-yr	2053	682.69	677.81	1.9	1.8	18.13	15.25	288.08	375.17	3.62	3.04	4.88	4.88
Prairie County	C21	RM 157.18	58885	10-yr	2053	682.54	677.42	1.92	1.7	17.5	10.1	235.66	504.88	4.29	2.46	5.12	5.12
Prairie County	C21	RM 156.99	58595	10-yr	2053	682.28	677.32	2.42	2.01	27.79	14.54	173.83	448.86	4.39	2.27	4.96	4.96
Prairie County	C21	RM 156.8	58287	10-yr	2053	681.84	677.32	3.08	2.55	46.28	27.37	149.83	343.97	4.01	2.34	4.52	4.52
Prairie County	C21	RM 156.62	57990	10-yr	2053	681.75	677.29	2.21	2.12	23.66	19.97	207.6	283.29	4.06	3.42	4.46	4.46
Prairie County	C21	RM 156.42	57683	10-yr	2053	681.62	677.21	1.9	1.85	17.69	14.51	271.12	342.61	3.97	3.24	4.41	4.41
Prairie County	C21	RM 156.24	57378	10-yr	2053	681.35	676.91	2.31	2.24	26.8	22.63	245.34	301.3	3.61	3.04	4.44	4.44
Prairie County	C21	RM 156.04	57069	10-yr	2053	681.2	676.56	2.08	2.03	20.47	17.08	225.91	279.24	4.35	3.62	4.64	4.64
Prairie County	C21	RM 155.85	56762	10-yr	2053	680.95	676.11	2.37	2.28	26.96	19.82	203.94	291.24	4.22	3.09	4.84	4.84
Prairie County	C21	RM 155.66	56455	10-yr	2053	680.57	675.96	2.84	2.66	39.28	25.46	176.7	297.13	4.05	2.6	4.61	4.61
Prairie County	C21	RM 155.47	56151	10-yr	2053	680.44	675.89	2.19	2.1	24.05	19.04	257.44	341.1	3.62	2.86	4.55	4.55
Prairie County	C21	RM 155.27	55835	10-yr	2053	680.23	675.92	2.05	2.04	22.01	21.7	317.77	322.69	3.16	3.11	4.31	4.31
Prairie County	C21	RM 155.08	55530	10-yr	2053	680	675.95	2.11	2.11	23.23	22.19	296.49	311.36	3.27	3.13	4.05	4.05
Prairie County	C21	RM 154.88	55209	10-yr	2053	679.8	675.64	2	2	19.91	19.78	300.68	302.55	3.41	3.39	4.16	4.16
Prairie County	C21	RM 154.69	54901	10-yr	2053	679.49	675.39	2.35	2.33	28.56	27.12	264.93	280.8	3.3	3.13	4.1	4.1
Prairie County	C21	RM 154.5	54588	10-yr	2053	679.24	675.02	2.29	2.27	26.65	25.56	257.32	275.24	3.48	3.34	4.22	4.22
Prairie County	C21	RM 154.3	54273	10-yr	2053	679.03	674.8	2.14	2.13	23.41	22.94	277.5	283.78	3.45	3.39	4.23	4.23
Prairie County	C21	RM 154.1	53959	10-yr	2053	678.77	674.67	2.26	2.24	26.23	24.42	269.5	291.57	3.37	3.14	4.1	4.1
Prairie County	C21	RM 153.91	53650	10-yr	2053	678.59	674.51	2.07	2.06	21.11	20.24	260.55	273	3.81	3.65	4.08	4.08
Prairie County	C21	RM 153.72	53338	10-yr	2053	678.35	674.06	2.26	2.18	24.93	17.7	225.99	339.39	3.99	2.82	4.29	4.29
Prairie County	C21	RM 153.52	53023	10-yr	2053	677.96	673.78	2.76	2.56	38.78	31.33	206.24	286.86	3.46	2.79	4.18	4.18
Prairie County	C21	RM 153.32	52704	10-yr	2053	677.65	673.64	2.49	2.49	32.01	30.73	249.02	259.68	3.31	3.18	4.01	4.01
Prairie County	C21	RM 153.12	52380	10-yr	2053	677.46	673.43	2.1	2.09	22.19	21.2	270.43	304.47	3.61	3.45	4.03	4.03
Prairie County	C21	RM 152.92	52065	10-yr	2053	677.28	672.88	2.07	2.07	20.82	20.37	270.16	343.84	3.67	3.59	4.4	4.4
Prairie County	C21	RM 152.73	51762	10-yr	2053	677.09	672.27	2.1	2.1	21.92	19.53	271.58	306.15	3.59	3.2	4.82	4.82
Prairie County	C21	RM 152.54	51463	10-yr	2053	676.89	671.85	2.14	2.14	22.45	22.29	251.98	276.18	3.81	3.78	5.04	5.04
Prairie County	C21	RM 152.35	51157	10-yr	2053	676.74	671.41	2.03	2.03	19.56	19.12	229.65	235.37	4.4	4.3	5.33	5.33
Prairie County	C21	RM 152.16	50852	10-yr	2053	676.6	671.23	1.97	1.95	19.07	17	268.26	305.02	3.88	3.45	5.37	5.37
Prairie County	C21	RM 151.97	50546	10-yr	2053	676.47	670.99	1.91	1.79	14.83	12.42	284.09	373.66	3.67	3.06	5.48	5.48
Prairie County	C21	RM 151.77	50227	10-yr	2053	676.37	670.87	1.87	1.66	15.95	10.25	204.89	392.76	4.93	3.14	5.5	5.5
Prairie County	C21	RM 151.59	49936	10-yr	2053	676.04	670.75	2.68	2.44	33.63	21.54	152.18	288.66	4.62	2.92	5.29	5.29
Prairie County	C21	RM 151.38	49599	10-yr	2053	675.89	670.9	2.24	2.13	23.57	18.95	199.41	281.99	4.51	3.61	4.99	4.99
Prairie County	C21	RM 151.19	49287	10-yr	2053	675.76	670.96	2.02	2.01	19.08	16.85	226.6	258.5	4.49	3.96	4.8	4.8
Prairie County	C21	RM 151.01	49012	10-yr	2053	675.65	670.91	1.88	1.88	18.12	17.89	288.33	306.42	3.79	3.75	4.75	4.75
Prairie County	C21	RM 150.81	48683	10-yr	2053	675.55	670.79	1.59	1.59	10.84	10.74	427.55	432.27	3.02	2.99	4.76	4.76
Prairie County	C21	RM 150.63	48400	10-yr	2367.3	675.44	670.45	1.64	1.62	12.32	11.75	393.5	418.84	3.66	3.49	4.99	4.99
Prairie County	C21	RM 150.44	48094	10-yr	2367.3	675.24	669.86	2.03	1.95	18.96	16.6	273.64	330.57	4.19	3.67	5.38	5.38
Prairie County	C21	RM 150.25	47780	10-yr	2367.3	674.76	669.38	3	2.91	48.32	37.28	166.06	226.02	4.72	3.62	5.38	5.38
Prairie County	C21	RM 150.05	47474	10-yr	2367.3	674.66	669.21	2.35	2.34	25.01	23.64	204.16	216.84	4.94	4.67	5.45	5.45
Prairie County	C21	RM 149.87	47178	10-yr	2367.3	674.52	669.02	2.18	2.15	23.15	19.86	269.57	320.1	4.02	3.44	5.5	5.5
Prairie County	C21	RM 149.66	46846	10-yr	2367.3	674.39	668.97	1.88	1.85	15.24	13.75	331.18	374.7	3.8	3.42	5.42	5.42
Prairie County	C21	RM 149.48	46551	10-yr	2367.3	674.09	668.91	2.43	2.37	29.49	25.61	261.52	399.36	3.7	3.22	5.18	5.18
Prairie County	C21	RM 149.27	46219	10-yr	2367.3	673.87	668.94	2.41	2.09	27.7	14.9	208.49	639.33	4.06	2.16	4.93	4.93
Prairie County	D1	RM 149.08	45914	10-yr	2367.3	673.67	668.95	2.25	2.19	24.36	18.59	254.75	345	4.12	3.13	4.72	4.72
Prairie County	D1	RM 148.89	45608	10-yr	2367.3	673.58	668.96	1.83	1.82	16.07	15.61	314.73	414.34	4.12	4	4.62	4.62
Prairie County	D1	RM 148.7	45301	10-yr	2367.3	673.43	668.73	1.88	1.87	17.54	16.59	347.94	371.03	3.61	3.41	4.7	4.7
Prairie County	D1	RM 148.5	44987	10-yr	2367.3	673.18	668.42	2.25	2.07	23.97	18.01	235.13	349.99	4.36	3.27	4.76	4.76
Prairie County	D1	RM 148.3	44667	10-yr	2367.3	672.85	668.01	2.69	2.48	33.92	23.42	193.35	311.07	4.47	3.07	4.84	4.84
Prairie County	D1	RM 148.11	44353	10-yr	2367.3	672.71	667.73	2.31	2.22	25.04	21.17	230.09	287.27	4.42	3.73	4.98	4.98
Prairie County	D1	RM 147.93	44062	10-yr	2367.3	672.59	667.4	2.01	2	19.83	19.24	306.12	316.7	3.85	3.74	5.19	5.19
Prairie County	D1	RM 147.74	43761	10-yr	2367.3	672.44	667.21	2.02	1.86	20.5	16.02	251.8	395.22	4.14	3.22	5.23	5.23
Prairie County	D1	RM 147.55	43454	10-yr	2367.3	672.24	666.79	2.27	2.05	23.81	17.56	196.58	338.5	4.66	3.41	5.45	5.45
Prairie County	D1	RM 147.34	43128	10-yr	2367.3	672.02	666.46	2.47	2.2	28.05	18.94	173.62	334.89	4.82	3.22	5.56	5.56

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	10-yr	2367.3	671.81	666.42	2.55	2.27	30.42	21.07	178.57	336.45	4.51	3.1	5.39	5.39
Prairie County	D1	RM 146.96	42505	10-yr	2367.3	671.54	666.49	2.63	2.56	31.79	27.09	187.33	227.43	4.77	4.06	5.05	5.05
Prairie County	D1	RM 146.77	42199	10-yr	2367.3	671.42	666.48	2.27	2.27	23.85	23.69	224.43	225.75	4.65	4.63	4.94	4.94
Prairie County	D1	RM 146.58	41899	10-yr	2367.3	671.34	666.59	1.85	1.85	16.37	16.23	296.32	299.08	4.31	4.27	4.75	4.75
Prairie County	D1	RM 146.32	41487	10-yr	2367.3	671.1	666.62	2.07	2.06	20.34	19.35	325.06	343.39	3.52	3.35	4.48	4.48
Prairie County	D1	RM 146	40968	10-yr	2367.3	670.76	666.48	2.17	2.16	24.09	23.18	277.27	289.58	3.93	3.79	4.28	4.28
Prairie County	D1	RM 145.65	40420	10-yr	2367.3	670.37	665.52	2.29	2.28	26.63	24.07	247.14	275.28	4.18	3.78	4.85	4.85
Prairie County	D1	RM 145.36	39958	10-yr	2367.3	670.11	664.91	2.15	2.12	23.76	22.21	264.9	288.34	4.14	3.87	5.2	5.2
Prairie County	D1	RM 145.13	39579	10-yr	2367.3	669.93	664.58	2.02	2	20.22	18.81	266.31	288.29	4.41	4.1	5.35	5.35
Prairie County	D1	RM 144.92	39251	10-yr	2367.3	669.77	664.24	2	1.99	20.63	19	272.39	297.53	4.35	4	5.53	5.53
Prairie County	D1	RM 144.73	38942	10-yr	2367.3	669.58	663.99	2.11	2.07	22.95	19.77	264.25	314.48	4.23	3.63	5.59	5.59
Prairie County	D1	RM 144.56	38672	10-yr	2367.3	669.39	663.14	2.23	2.19	24.35	21.65	265.15	305.48	3.98	3.53	6.25	6.25
Prairie County	D1		38642.5	10-yr	Bridge												
Prairie County	D1	RM 144.52	38613	10-yr	2367.3	669.3	663.14	2.29	2.25	25.66	23.18	265.15	298.9	3.89	3.51	6.16	6.16
Prairie County	D1	RM 144.33	38305	10-yr	2367.3	669.1	664.19	2.31	2.23	25.09	19.85	232.15	306.86	4.39	3.46	4.91	4.91
Prairie County	D1	RM 144.13	37987	10-yr	2367.3	669	664.33	1.97	1.93	18.19	16.31	271.37	308.9	4.42	3.97	4.67	4.67
Prairie County	D1	RM 143.91	37637	10-yr	2367.3	668.88	663.96	1.83	1.71	15.91	11.64	299.48	446.79	4.24	3.09	4.92	4.92
Prairie County	D1	RM 143.71	37320	10-yr	2367.3	668.53	663.43	2.6	2.44	31.2	21.63	191.45	300.54	4.68	3.23	5.1	5.1
Prairie County	D1	RM 143.45	36908	10-yr	2367.3	668.08	663.01	2.95	2.86	40.96	32.77	179.26	233.46	4.44	3.55	5.07	5.07
Prairie County	D1	RM 143.21	36511	10-yr	2367.3	667.92	662.92	2.3	2.29	24.71	23.26	224.58	240.19	4.57	4.3	5	5
Prairie County	D1	RM 142.97	36139	10-yr	2367.3	667.75	662.7	2.18	2.16	21.85	20.66	232.06	246.95	4.69	4.43	5.05	5.05
Prairie County	D1	RM 142.71	35717	10-yr	2367.3	667.26	662.52	2.9	2.9	39.92	39.85	190.96	191.28	4.28	4.27	4.74	4.74
Prairie County	D1	RM 142.46	35322	10-yr	2367.3	667.11	662.36	2.18	2.17	22.76	20	254.79	291.91	4.25	3.73	4.75	4.75
Prairie County	D1	RM 142.23	34952	10-yr	2367.3	666.86	662.21	2.3	2.27	25.18	22.06	237.35	275.78	4.32	3.78	4.65	4.65
Prairie County	D1	RM 142.02	34614	10-yr	2367.3	666.64	662.21	2.31	2.21	26.94	23.11	269.68	348.67	3.58	3.07	4.43	4.43
Prairie County	D1	RM 141.8	34258	10-yr	2367.3	666.53	662.01	1.66	1.66	13.69	13.5	393.92	400.16	3.61	3.56	4.52	4.52
Prairie County	D1	RM 141.6	33942	10-yr	2367.3	666.29	661.72	2.09	2.09	19.4	19.3	351.46	353.41	3.22	3.2	4.57	4.57
Prairie County	D1	RM 141.42	33642	10-yr	2367.3	666.21	661.32	1.65	1.65	10.99	10.89	436.56	440.87	3.29	3.26	4.89	4.89
Prairie County	D1	RM 141.22	33325	10-yr	2367.3	666.09	660.91	1.72	1.71	14.06	13.9	326.47	330.29	4.23	4.18	5.18	5.18
Prairie County	D1	RM 141.02	33011	10-yr	2367.3	665.77	660.58	2.5	2.49	28.54	27.18	194.42	204.81	4.87	4.64	5.19	5.19
Prairie County	D1	RM 140.84	32709	10-yr	2367.3	665.65	660.35	2.17	2.17	22.01	21.72	241.98	245.26	4.51	4.45	5.3	5.3
Prairie County	D1	RM 140.64	32394	10-yr	2367.3	665.55	660.07	1.97	1.96	17.32	16.56	239.32	251.58	5.02	4.8	5.48	5.48
Prairie County	D1	RM 140.44	32074	10-yr	2367.3	665.34	659.63	2.27	2.26	23.61	22.25	225.88	240.97	4.62	4.35	5.71	5.71
Prairie County	D1	RM 140.23	31738	10-yr	2367.3	665.03	659.62	2.62	2.6	31.86	30.45	207.01	217.22	4.37	4.18	5.41	5.41
Prairie County	D1	RM 140.03	31420	10-yr	2367.3	664.93	659.59	2.11	2.11	20.81	20.61	253.77	256.06	4.41	4.38	5.34	5.34
Prairie County	D1	RM 139.84	31118	10-yr	2367.3	664.82	659.19	1.9	1.87	17.54	16.37	309.19	337.3	4.02	3.75	5.63	5.63
Prairie County	D1	RM 139.64	30801	10-yr	2367.3	664.65	658.96	2.06	1.96	19.09	14.32	222.13	316.67	5.11	3.82	5.69	5.69
Prairie County	D1	RM 139.44	30466	10-yr	2367.3	664.53	658.72	2	1.94	18.5	14.83	250.57	326.14	4.69	3.75	5.81	5.81
Prairie County	D1	RM 139.23	30138	10-yr	2367.3	664.38	658.34	2.05	2.05	21.63	20.98	219.78	227.11	5.25	5.1	6.04	6.04
Prairie County	D1	RM 139.02	29799	10-yr	2367.3	664.02	658.14	2.66	2.63	38.95	34.83	179.74	203.83	4.94	4.41	5.88	5.88
Prairie County	D1	RM 138.81	29470	10-yr	2367.3	663.96	658.11	1.95	1.92	19.18	17.58	219.94	244.03	5.51	5.05	5.85	5.85
Prairie County	D1	RM 138.62	29157	10-yr	2367.3	663.82	657.94	2.06	2.01	18.82	16.62	216.79	253.16	5.27	4.64	5.88	5.88
Prairie County	D1	RM 138.41	28823	10-yr	2367.3	663.61	657.82	2.33	2.28	27	24.5	202.45	229.25	5	4.53	5.79	5.79
Prairie County	D1	RM 138.22	28519	10-yr	2367.3	663.45	657.8	2.34	2.31	24.48	22.22	198.68	221.37	5.09	4.62	5.65	5.65
Prairie County	D1	RM 138.02	28200	10-yr	2367.3	663.41	657.74	1.76	1.75	14.64	13.99	246.99	260.7	5.44	5.2	5.67	5.67
Prairie County	D1	RM 137.82	27874	10-yr	2367.3	663.29	656.95	1.87	1.85	17.28	15.65	263.32	294.35	4.79	4.34	6.34	6.34
Prairie County	D1	RM 137.62	27552	10-yr	2367.3	663.09	656.75	2.12	2.09	22.64	20.63	234.81	451.56	4.74	4.32	6.34	6.34
Prairie County	D1	RM 137.42	27247	10-yr	2367.3	662.88	656.66	2.33	2.33	26.97	26.11	204.7	233.37	4.96	4.8	6.22	6.22
Prairie County	D1	RM 137.24	26944	10-yr	2367.3	662.72	656.66	2.28	2.27	26.58	24.95	205.46	232.96	5.04	4.73	6.06	6.06
Prairie County	D1	RM 137.04	26627	10-yr	2378.6	662.55	655.41	2.26	2.26	25.6	24.86	208.71	215.38	5.04	4.9	7.14	7.14
Prairie County	D1		26616.5	10-yr	Bridge												
Prairie County	D1	RM 137.02	26606	10-yr	2378.6	662.52	655.41	2.28	2.27	25.97	25.25	208.58	215.05	5.01	4.87	7.11	7.11
Prairie County	D2	RM 136.84	26475	10-yr	2378.6	662.48	656.46	2.12	2.11	21.13	21.01	207.19	208.36	5.43	5.4	6.02	6.02
Prairie County	D2		26471.5	10-yr	Bridge												
Prairie County	D2	RM 136.65	26468	10-yr	2378.6	662.46	656.45	2.11	2.1	21.33	20.71	207.2	213.68	5.44	5.29	6.01	6.01
Prairie County	D2	RM 136.44	26317	10-yr	2378.6	662.43	656.37	1.9	1.9	17.69	17.23	228.7	235.18	5.47	5.32	6.06	6.06
Prairie County	D2	RM 136.23	26001	10-yr	2378.6	662.27	656.19	2.06	2.05	19.72	17.77	246.47	275.12	4.68	4.21	6.08	6.08
Prairie County	D2	RM 136.04	25673	10-yr	2378.6	662.12	656.01	2.12	2.11	19.33	18.01	211.82	229.01	5.28	4.92	6.11	6.11
Prairie County	D2	RM 135.85	25337	10-yr	2378.6	661.89	655.93	2.45	2.44	26.72	26.3	186.08	188.88	5.22	5.15	5.96	5.96
Prairie County	D2	RM 135.66	25033	10-yr	2378.6	661.77	655.91	2.26	2.26	22.9	22.24	202.14	213.32	5.2	5.05	5.86	5.86

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	10-yr	2378.6	661.61	655.86	2.28	2.26	27.76	25.17	199.11	221.23	5.24	4.75	5.75	5.75
Prairie County	D2	RM 135.24	24417	10-yr	2378.6	661.54	655.68	1.88	1.88	18.54	17.5	229.44	243.74	5.5	5.19	5.86	5.86
Prairie County	D2	RM 135	24090	10-yr	2378.6	661.38	655.56	2.02	2.01	20.73	19.13	246.98	269.79	4.77	4.4	5.82	5.82
Prairie County	D2	RM 134.78	23742	10-yr	2378.6	661.23	655.36	2.02	2.01	20.54	19.47	223.84	239.83	5.26	4.99	5.87	5.87
Prairie County	D2	RM 134.58	23351	10-yr	2378.6	660.93	655.29	2.43	2.41	31.52	29.93	189.75	210.94	5.16	4.9	5.64	5.64
Prairie County	D2	RM 134.39	23000	10-yr	2378.6	660.73	655.24	2.32	2.28	28.92	26.17	216.99	244.75	4.72	4.26	5.49	5.49
Prairie County	D2	RM 134.19	22682	10-yr	2378.6	660.59	655.11	2.08	2.01	20.58	17.74	263.97	580.02	4.29	3.7	5.48	5.48
Prairie County	D2	RM 133.99	22372	10-yr	2378.6	660.46	654.97	2	1.97	18.07	15.74	264.94	309.59	4.48	3.9	5.49	5.49
Prairie County	D2	RM 133.79	22053	10-yr	2378.6	660.24	655	2.29	2.22	24.44	19.34	226.1	296.82	4.57	3.61	5.24	5.24
Prairie County	D2	RM 133.59	21733	10-yr	2378.6	660.09	654.96	2.16	2.14	21.85	20.3	247	267.99	4.46	4.14	5.13	5.13
Prairie County	D2	RM 133.41	21417	10-yr	2378.6	659.96	654.78	2.01	1.99	18.81	16.76	254.87	289.87	4.62	4.12	5.18	5.18
Prairie County	D2	RM 133.21	21104	10-yr	2378.6	659.78	654.64	2.21	2.16	22.62	19.75	229.84	272.71	4.66	4.06	5.14	5.14
Prairie County	D2	RM 133.02	20811	10-yr	2378.6	659.64	654.53	2.13	2.1	21.15	18.56	246.2	288.33	4.53	3.97	5.11	5.11
Prairie County	D2	RM 132.83	20491	10-yr	2378.6	659.49	654.29	2.11	2.05	21.16	17.69	262.67	327.04	4.26	3.56	5.2	5.2
Prairie County	D2	RM 132.63	20184	10-yr	2378.6	659.35	654.04	2.06	1.92	20.22	14.81	254.86	395.44	4.29	3.13	5.31	5.31
Prairie County	D2	RM 132.42	19875	10-yr	2378.6	659.16	653.98	2.22	2.11	22.62	18.3	221.68	295.45	4.72	3.81	5.18	5.18
Prairie County	D2	RM 132.23	19553	10-yr	2378.6	659.07	653.88	1.88	1.79	16.11	12.99	257.21	344.08	4.8	3.86	5.19	5.19
Prairie County	D2	RM 132.02	19225	10-yr	2378.6	658.85	653.63	2.21	2.16	23.04	18.99	246.02	307.17	4.37	3.59	5.22	5.22
Prairie County	D2	RM 131.81	18910	10-yr	2378.6	658.63	653.37	2.36	2.3	26.27	20.84	226.33	294.64	4.43	3.51	5.26	5.26
Prairie County	D2	RM 131.58	18573	10-yr	2378.6	658.53	653.02	1.99	1.95	17.87	15.39	238.03	297.75	5.01	4.31	5.51	5.51
Prairie County	D2	RM 131.38	18237	10-yr	2378.6	658.37	652.75	2.12	2.03	20.29	17.91	212.37	263.42	5.04	4.46	5.62	5.62
Prairie County	D2	RM 131.18	17875	10-yr	2378.6	658.11	652.49	2.41	2.39	26.87	24	209.79	237.23	4.69	4.19	5.62	5.62
Prairie County	D2	RM 130.98	17548	10-yr	2378.6	657.91	652.34	2.45	2.39	27.33	24.16	197.09	230.68	4.9	4.32	5.57	5.57
Prairie County	D2	RM 130.78	17227	10-yr	2378.6	657.78	652.27	2.24	2.17	22.78	16.92	216.24	310.09	4.9	3.63	5.51	5.51
Prairie County	D2	RM 130.59	16914	10-yr	2378.6	657.7	652.16	1.92	1.88	16.52	13.93	239.07	291.43	5.16	4.34	5.54	5.54
Prairie County	D2	RM 130.39	16588	10-yr	2378.6	657.51	651.95	2.2	2.2	21.74	21.51	212.42	214.59	5.09	5.04	5.56	5.56
Prairie County	D2	RM 130.19	16280	10-yr	2378.6	657.34	651.81	2.29	2.29	24.14	23.97	219.77	221.46	4.73	4.7	5.53	5.53
Prairie County	D2	RM 130	15965	10-yr	2378.6	657.24	651.57	2.03	2.03	18.9	18.78	243.98	253.23	4.8	4.77	5.67	5.67
Prairie County	D2	RM 129.81	15649	10-yr	2378.6	657.13	651.47	1.96	1.94	17.17	16.41	235.14	254.79	5.16	4.93	5.66	5.66
Prairie County	D2	RM 129.62	15337	10-yr	2378.6	656.94	651.34	2.23	2.15	22.54	16.2	216.64	315.72	4.91	3.51	5.6	5.6
Prairie County	D2	RM 129.43	15031	10-yr	2378.6	656.83	651.21	2.07	2.06	19.27	18	227.37	245.25	5.05	4.72	5.62	5.62
Prairie County	D2	RM 129.24	14724	10-yr	2418.3	656.63	651.06	2.31	2.3	24.62	23.11	222.31	252.46	4.71	4.42	5.57	5.57
Prairie County	D2	RM 129.04	14417	10-yr	2418.3	656.42	651.06	2.45	2.42	27.61	25.56	209.54	269.42	4.71	4.37	5.36	5.36
Prairie County	D2	RM 128.82	14112	10-yr	2418.3	656.23	651.05	2.47	2.45	28.07	26.97	209.12	271.43	4.69	4.51	5.18	5.18
Prairie County	D2	RM 128.62	13798	10-yr	2418.3	656.09	651.08	2.22	2.22	22.64	22.26	228.13	323.98	4.77	4.7	5.01	5.01
Prairie County	D2	RM 128.41	13446	10-yr	2418.3	655.94	651.07	2.11	2.09	20.73	18.65	255.09	285.92	4.5	4.05	4.87	4.87
Prairie County	D2	RM 128.21	13125	10-yr	2418.3	655.77	650.98	2.16	2.08	21.9	16.68	246.55	339.23	4.5	3.42	4.79	4.79
Prairie County	D2	RM 127.98	12790	10-yr	2418.3	655.62	650.84	2.12	2.12	20.88	20.64	250.67	262.69	4.56	4.51	4.78	4.78
Prairie County	D2	RM 127.75	12473	10-yr	2418.3	655.5	650.59	1.92	1.92	17.38	17.23	287.96	290.38	4.38	4.35	4.91	4.91
Prairie County	D2	RM 127.55	12112	10-yr	2418.3	655.36	650.35	1.91	1.88	17.15	14.64	287.38	342.67	4.4	3.75	5.01	5.01
Prairie County	D2	RM 127.27	11729	10-yr	2418.3	655.2	649.95	1.93	1.92	17.28	16.27	277.2	295.92	4.53	4.26	5.25	5.25
Prairie County	D2	RM 126.97	11415	10-yr	2418.3	654.98	649.68	2.28	2.26	23.94	21.84	226.77	251.01	4.68	4.27	5.3	5.3
Prairie County	D2	RM 126.71	10962	10-yr	2418.3	654.75	649.49	2.26	2.26	23.28	22.59	218.29	235.53	4.9	4.76	5.26	5.26
Prairie County	D2	RM 126.43	10478	10-yr	2418.3	654.62	649.32	1.83	1.82	15.31	14.92	275.96	283.55	4.79	4.68	5.3	5.3
Prairie County	D2	RM 126.42	10074	10-yr	2418.3	654.38	649.05	2.16	2.14	21.86	19.64	249.83	281.12	4.47	4.02	5.33	5.33
Prairie County	D2	RM 126.41	9625	10-yr	2418.3	654.13	648.27	2.26	2.21	23.28	18.13	220.07	289.97	4.84	3.77	5.85	5.85
Prairie County	D2		9598.5	10-yr	Bridge												
Prairie County	D2	RM 126.4	9572	10-yr	2418.3	654.07	648.27	2.29	2.24	23.93	18.65	220.07	288.87	4.79	3.73	5.8	5.8
Prairie County	D3	RM 126.38	9533	10-yr	2418.3	654.05	648.27	2.3	2.26	24.21	18.88	220.07	288.39	4.76	3.71	5.78	5.78
Prairie County	D3		9523	10-yr	Bridge												
Prairie County	D3	RM 126.36	9513	10-yr	2418.3	654.02	648.27	2.31	2.27	24.52	19.12	220.07	287.89	4.74	3.69	5.75	5.75
Prairie County	D3	RM 126.22	9286	10-yr	2418.3	653.94	648.8	2.07	2.07	19.63	19.52	246.57	252.99	4.75	4.72	5.14	5.14
Prairie County	D3	RM 126.03	8974	10-yr	2418.3	653.83	648.71	1.94	1.93	17.53	16.93	269.32	280.92	4.61	4.46	5.12	5.12
Prairie County	D3	RM 125.82	8648	10-yr	2418.3	653.7	648.36	1.96	1.95	18.09	17.88	282.4	290.47	4.38	4.33	5.34	5.34
Prairie County	D3	RM 125.63	8335	10-yr	2418.3	653.58	648.12	1.92	1.9	16.81	15.83	259.94	279.63	4.84	4.56	5.46	5.46
Prairie County	D3	RM 125.43	8020	10-yr	2418.3	653.41	647.8	2.14	2.04	20.54	16.64	217.06	284.85	5.14	4.15	5.61	5.61
Prairie County	D3	RM 125.24	7711	10-yr	2418.3	653.33	647.26	1.95	1.89	16.46	13.22	226.37	292.81	5.46	4.37	6.07	6.07
Prairie County	D3	RM 125.05	7403	10-yr	2418.3	653.19	647.23	2.1	2.02	19.28	14.43	209.96	292.98	5.47	4.08	5.96	5.96
Prairie County	D3	RM 124.83	7059	10-yr	2418.3	653.09	647.25	1.96	1.92	17.05	15.38	237.41	280.74	5.2	4.69	5.84	5.84
Prairie County	D3	RM 124.62	6712	10-yr	2418.3	652.97	647.25	1.94	1.92	17.16	15.78	257.84	282.74	4.83	4.45	5.72	5.72

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	10-yr	2418.3	652.73	647.27	2.3	2.23	24.33	13.73	221.62	525.1	4.73	2.65	5.46	5.46
Prairie County	D3	RM 124.15	5960	10-yr	2418.3	652.48	647.27	2.36	2.3	26.4	19.42	232.47	401.07	4.38	3.21	5.21	5.21
Prairie County	D3	RM 123.94	5627	10-yr	2418.3	652.12	647.27	2.77	2.59	36.35	20.78	199.91	378.82	4.33	2.46	4.85	4.85
Prairie County	D3	RM 123.74	5312	10-yr	2418.3	651.87	647.25	2.69	2.56	34.31	22.23	206.88	339.42	4.32	2.79	4.62	4.62
Prairie County	D3	RM 123.56	5014	10-yr	2418.3	651.88	647.24	1.71	1.63	13.59	9.72	311.23	459.78	4.52	3.23	4.64	4.64
Prairie County	D3	RM 123.24	4500	10-yr	2418.3	651.7	647.19	1.18	1.18	17.64	17.58	898.7	901.64	2.28	2.28	4.51	4.51
Prairie County	D3	RM 122.99	4116	10-yr	2418.3	651.52	646.67	1.33	1.31	8.3	7.78	527.26	576.9	3.42	3.21	4.85	4.85
Prairie County	D3	RM 122.76	3746	10-yr	2418.3	651.37	646.22	1.59	1.58	12.07	11.54	362.48	379.93	4.2	4.02	5.15	5.15
Prairie County	D3	RM 122.55	3414	10-yr	2418.3	651.16	645.7	2.07	2.07	19.62	19.22	242.74	248.19	4.81	4.72	5.46	5.46
Prairie County	D3	RM 122.3	3012	10-yr	2418.3	650.87	645.57	2.42	2.41	27.19	25.38	214.39	230.8	4.65	4.34	5.3	5.3
Prairie County	D3	RM 122.08	2651	10-yr	2418.3	650.68	645.49	2.28	2.27	24.22	22.83	240.65	257.55	4.39	4.14	5.19	5.19
Prairie County	D3	RM 121.88	2338	10-yr	2418.3	650.53	645.42	2.18	2.16	21.73	20.21	244.44	266.16	4.53	4.21	5.11	5.11
Prairie County	D3	RM 121.66	1982	10-yr	2418.3	650.31	645.3	2.32	2.3	24.62	22.85	226.93	246.9	4.59	4.25	5.01	5.01
Prairie County	D3	RM 121.46	1651	10-yr	2418.3	650.13	645.06	2.26	2.24	24.15	22.89	243.93	260.82	4.37	4.14	5.07	5.07
Prairie County	D3	RM 121.24	1304	10-yr	2418.3	649.9	644.99	2.34	2.26	26.15	23.23	247.35	289.85	4.16	3.69	4.91	4.91
Prairie County	D3	RM 121.02	957	10-yr	2418.3	649.72	644.88	2.18	2.11	22.92	21.19	259.65	323.17	4.23	3.91	4.84	4.84
Prairie County	D3	RM 120.84	660	10-yr	2418.3	649.55	644.78	2.17	2.16	24.7	23.63	255.32	267.86	4.37	4.18	4.77	4.77
Prairie County	D3	RM 120.64	350	10-yr	2418.3	649.4	644.42	2.14	2.13	21.13	20.73	244.23	249.1	4.63	4.55	4.98	4.98

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	10-yr	2418.58	649.38	643.94	2.05	1.96	19.57	17.63	254.01	332	4.52	4.07	5.44	5.44
Dawson County	D3	RM 120.28	90838.07	10-yr	2418.58	649.31	643.78	2.09	2.01	20.16	15.73	233.12	327.39	4.73	3.68	5.53	5.53
Dawson County	D3	RM 120.18	90675.23	10-yr	2418.58	649.23	643.7	2.12	2.03	20.23	17.65	213.48	270.4	5.02	4.4	5.53	5.53
Dawson County	D3	RM 120.00	90388.96	10-yr	2418.58	649.13	643.56	2.04	1.99	18.65	17.09	226.64	255.42	5.18	4.76	5.56	5.56
Dawson County	D3	RM 119.84	90136.35	10-yr	2418.58	648.99	643.44	2.18	2.14	21.31	18.8	213.73	247.61	5.16	4.55	5.55	5.55
Dawson County	D3	RM 119.68	89873.82	10-yr	2418.58	648.81	643.31	2.44	2.37	26.57	23.48	189.21	222.73	5.19	4.59	5.49	5.49
Dawson County	D3	RM 119.53	89627.16	10-yr	2418.58	648.71	643.2	2.28	2.27	23.08	22.07	204.32	214.5	5.2	4.98	5.51	5.51
Dawson County	D3	RM 119.39	89404.11	10-yr	2418.58	648.65	643.09	2.06	2.03	19.11	18.13	231.36	247.97	5.05	4.81	5.56	5.56
Dawson County	D3	RM 119.26	89201.38	10-yr	2418.58	648.58	642.99	1.96	1.91	17.71	15.87	263.7	303.13	4.66	4.17	5.6	5.6
Dawson County	D3	RM 119.12	88969.13	10-yr	2418.58	648.38	642.87	2.39	2.24	25.59	17.87	193.4	349.88	5.14	3.58	5.51	5.51
Dawson County	D3	RM 119.00	88780.83	10-yr	2418.58	648.3	642.78	2.31	2.2	24.09	18.39	199.46	283.86	5.08	3.88	5.52	5.52
Dawson County	D3	RM 118.85	88537.07	10-yr	2418.58	648.23	642.66	2.02	1.94	18.65	15.73	241.51	309.81	4.8	4.05	5.57	5.57
Dawson County	D3	RM 118.72	88336.12	10-yr	2418.58	648.19	642.56	1.86	1.75	15.33	12.21	237.19	336.23	5.23	4.18	5.62	5.62
Dawson County	D3	RM 118.60	88130.39	10-yr	2418.58	648.06	642.46	2.1	2.02	19.85	16.24	220.72	286.46	5.08	4.17	5.6	5.6
Dawson County	D3	RM 118.47	87924.15	10-yr	2418.58	647.91	642.37	2.33	2.22	25.15	19.86	211.72	294.99	4.67	3.69	5.55	5.55
Dawson County	D3	RM 118.34	87719.85	10-yr	2418.58	647.69	642.27	2.64	2.56	33.87	28.94	214.06	271.4	4.06	3.48	5.42	5.42
Dawson County	D3	RM 118.21	87507.02	10-yr	2418.58	647.56	642.16	2.51	2.37	28.26	18.62	175.82	298.43	5.22	3.42	5.4	5.4
Dawson County	D3	RM 118.07	87276.02	10-yr	2438.4	647.52	642.05	1.99	1.98	19.05	18.26	297.49	311.91	4.12	3.95	5.47	5.47
Dawson County	D4	RM 117.90	87004.77	10-yr	2438.4	647.45	641.92	1.83	1.65	15.54	12.45	234.19	396.93	4.68	3.73	5.53	5.53
Dawson County	D4	RM 117.77	86795.88	10-yr	2438.4	647.38	641.81	1.81	1.55	15.19	10.42	217.15	505.14	4.59	3.12	5.57	5.57
Dawson County	D4	RM 117.62	86560.03	10-yr	2438.4	647.31	641.7	1.75	1.58	13.92	9.17	247.32	478.96	4.95	3.26	5.61	5.61
Dawson County	D4	RM 117.46	86294.2	10-yr	2438.4	647.1	641.57	2.33	2.07	24.67	16.56	183	359.21	4.93	3.29	5.52	5.52
Dawson County	D4	RM 117.33	86073.88	10-yr	2438.4	646.83	641.46	2.83	2.47	35.92	21.18	137.01	321.85	5.3	3.06	5.37	5.37
Dawson County	D4	RM 117.16	85808.16	10-yr	2438.4	646.78	641.33	2.21	2	21.76	14.83	182.25	344.32	5.22	3.54	5.45	5.45
Dawson County	D4	RM 117.03	85604.68	10-yr	2438.4	646.73	641.3	1.9	1.82	16.73	14.38	243.69	349	4.59	3.95	5.43	5.43
Dawson County	D4	RM 116.87	85336.88	10-yr	2438.4	646.67	641.29	1.76	1.5	14.23	8.73	238.63	561.5	4.71	2.89	5.38	5.38
Dawson County	D4	RM 116.69	85043.25	10-yr	2438.4	646.53	641.44	1.88	1.67	17.14	11	279.08	560.29	4.07	2.6	5.09	5.09
Dawson County	D4	RM 116.56	84823.15	10-yr	2438.4	646.37	641.34	2.16	1.88	22.6	13.67	234.35	532.34	4.05	2.44	5.03	5.03
Dawson County	D4	RM 116.39	84558.58	10-yr	2438.4	646.29	641.21	1.79	1.63	15.06	10.87	269.92	472.33	4.4	3.17	5.08	5.08
Dawson County	D4	RM 116.22	84287.19	10-yr	2438.4	646.15	641	1.93	1.76	17.04	10.43	259.34	476.76	4.75	2.91	5.15	5.15
Dawson County	D4	RM 116.05	84007.59	10-yr	2438.4	645.97	640.84	2.25	1.9	23.26	11.71	213.93	535.26	4.77	2.4	5.13	5.13
Dawson County	D4	RM 115.87	83722.29	10-yr	2438.4	645.78	640.8	2.38	2.01	26.64	14.76	214.27	492.97	4.44	2.46	4.98	4.98
Dawson County	D4	RM 115.73	83500.35	10-yr	2438.4	645.7	640.69	2.01	1.73	20.28	12.22	310.77	651.41	3.6	2.17	5.01	5.01
Dawson County	D4	RM 115.61	83294.37	10-yr	2438.4	645.65	640.59	1.62	1.51	13.07	9.39	385.01	598.17	3.76	2.71	5.06	5.06
Dawson County	D4	RM 115.45	83034.82	10-yr	2438.4	645.56	640.37	1.6	1.43	13.12	9.38	407.6	690.62	3.45	2.46	5.2	5.2
Dawson County	D4	RM 115.29	82782.88	10-yr	2438.4	645.42	640.34	1.81	1.73	15.97	12.73	319.39	441.89	4.01	3.2	5.07	5.07
Dawson County	D4	RM 115.09	82480.02	10-yr	2438.4	645.35	640.2	1.58	1.47	11.53	6.52	324	633.92	4.61	2.61	5.15	5.15
Dawson County	D4	RM 114.96	82177.99	10-yr	2438.4	645.19	640	1.92	1.78	17.12	10.23	260.73	496.25	4.68	2.79	5.19	5.19
Dawson County	D4	RM 114.74	81836.48	10-yr	2438.4	644.75	639.98	2.88	2.59	38.5	24.44	179.76	324.91	4.59	2.9	4.77	4.77
Dawson County	D4	RM 114.58	81577.9	10-yr	2438.4	644.74	639.46	2.06	1.94	19.35	16.98	195.77	350.93	4.9	4.28	5.28	5.28
Dawson County	D4	RM 114.42	81309.47	10-yr	2438.4	644.6	639.33	2.09	2.05	20.36	17.32	257.79	310.45	4.51	3.83	5.27	5.27
Dawson County	D4	RM 114.28	81078.59	10-yr	2438.4	644.4	639.21	2.41	2.34	26.61	21.39	213.07	274.08	4.74	3.81	5.19	5.19
Dawson County	D4	RM 114.11	80813.63	10-yr	2438.4	644.21	639.2	2.51	2.45	29.33	22.82	210.21	278.88	4.6	3.58	5.01	5.01
Dawson County	D4	RM 113.97	80580.15	10-yr	2438.4	644.03	639.45	2.55	2.46	31.02	22.54	225.76	323.55	4.22	3.06	4.58	4.58
Dawson County	D4	RM 113.79	80292.13	10-yr	2438.4	643.89	639.45	2.35	2.04	26.53	18.63	201.08	413.41	4.11	2.89	4.44	4.44
Dawson County	D4	RM 113.60	79987.05	10-yr	2438.4	643.87	639.2	1.56	1.39	11.44	9.14	179.84	495.19	4.52	3.59	4.67	4.67
Dawson County	D4	RM 113.43	79712.89	10-yr	2438.4	643.73	638.73	1.9	1.65	16.49	10.49	173.8	481.42	4.87	3.07	5	5
Dawson County	D4	RM 113.24	79405.49	10-yr	2438.4	643.42	638.43	2.66	2.31	32.33	21.01	130.78	336.57	4.87	3.13	4.98	4.98
Dawson County	D4	RM 113.08	79152.39	10-yr	2438.4	643.26	638.37	2.51	2.24	28.98	21.53	138.2	310.07	4.78	3.51	4.89	4.89
Dawson County	D4	RM 112.94	78925.1	10-yr	2438.4	643.23	638.26	1.83	1.7	15.63	13.41	194.62	367.11	4.59	3.9	4.97	4.97
Dawson County	D4	RM 112.74	78585.88	10-yr	2438.4	643.04	638.09	2.04	1.92	19.94	16.25	237.95	371.21	4.21	3.43	4.95	4.95
Dawson County	D4	RM 112.59	78355.25	10-yr	2438.4	642.89	637.98	2.15	1.96	22.98	19.36	271.99	387.92	3.81	3.2	4.91	4.91
Dawson County	D4	RM 112.37	78008.78	10-yr	2438.4	642.85	637.88	1.52	1.39	10.9	8.87	206.92	551.75	4.49	3.62	4.97	4.97
Dawson County	D4	RM 112.19	77721.27	10-yr	2438.4	642.69	637.59	1.9	1.79	16.82	13.57	213.8	370.93	4.56	3.68	5.09	5.09
Dawson County	D4	RM 111.89	77240.22	10-yr	2438.4	642.39	637.16	2.21	2.17	22.63	18.87	235.68	289.12	4.66	3.88	5.23	5.23
Dawson County	D4	RM 111.42	76486.24	10-yr	2438.4	642.1	636.91	1.91	1.87	17.09	14.81	287.11	339.78	4.44	3.85	5.19	5.19
Dawson County	D4	RM 111.26	76213.83	10-yr	2438.4	642.01	636.66	1.75	1.72	14.7	13	329.26	381.9	4.2	3.72	5.35	5.35
Dawson County	D4	RM 111.09	75911.9	10-yr	2438.4	641.74	636.51	2.33	2.32	25.73	23.51	240.23	301.19	4.35	3.97	5.23	5.23
Dawson County	D4	RM 110.95	75678.54	10-yr	2438.4	641.52	636.4	2.59	2.55	30.74	26.81	194.97	227.76	4.81	4.19	5.12	5.12
Dawson County	D4	RM 110.78	75415.61	10-yr	2438.4	641.27	636.27	2.79	2.78	35.82	34.27	186.03	194.87	4.7	4.51	5	5
Dawson County	D4	RM 110.55	75040.65	10-yr	2438.4	641.13	636.09	2.24	2.23	23.38	22.6	240.69	249.79	4.52	4.39	5.04	5.04

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	10-yr	2438.4	641.06	635.96	1.89	1.85	16.8	14.88	293.1	339.38	4.38	3.88	5.1	5.1
Dawson County	D4	RM 110.17	74428.56	10-yr	2438.4	640.85	635.79	2.06	2.01	21.33	19.25	321.63	369.13	3.64	3.29	5.06	5.06
Dawson County	D4	RM 109.95	74074.87	10-yr	2438.4	640.71	635.62	1.88	1.84	16.72	14.04	297.98	365.19	4.33	3.64	5.09	5.09
Dawson County	D4	RM 109.75	73741.09	10-yr	2438.4	640.54	635.46	2.01	1.96	18.95	16.59	272.8	321.64	4.42	3.87	5.08	5.08
Dawson County	D4	RM 109.54	73418.83	10-yr	2438.4	640.42	635.3	1.9	1.73	17.12	10.41	287.56	532.07	4.38	2.65	5.12	5.12
Dawson County	D4	RM 109.37	73150.54	10-yr	2438.4	640.25	635.17	2.19	1.92	22.14	14.12	224.7	431.99	4.62	2.95	5.08	5.08
Dawson County	D4	RM 109.19	72864.56	10-yr	2438.4	640.09	635.03	2.18	2.08	22.04	16.85	238.65	332.01	4.62	3.53	5.06	5.06
Dawson County	D4	RM 109.04	72628	10-yr	2438.4	639.82	634.92	2.67	2.55	32.86	23.22	194.23	290.47	4.66	3.29	4.91	4.91
Dawson County	D4	RM 108.86	72339.73	10-yr	2438.4	639.79	634.77	1.89	1.85	17.17	15.48	287.17	351.83	4.16	3.76	5.02	5.02
Dawson County	D4	RM 108.70	72072.36	10-yr	2438.4	639.71	634.65	1.75	1.71	14.58	13.64	291.61	353.32	4.32	4.05	5.06	5.06
Dawson County	D4	RM 108.55	71827.97	10-yr	2438.4	639.62	634.53	1.71	1.71	14.05	13.86	343.64	348.42	4.15	4.1	5.1	5.1
Dawson County	D4	RM 108.40	71587.18	10-yr	2438.4	639.45	634.41	2.07	2.06	16.27	16.05	363.68	369.27	3.24	3.2	5.04	5.04
Dawson County	D4	RM 108.25	71345.86	10-yr	2438.4	639.34	634.29	1.95	1.95	16.36	16	361.89	371.31	3.45	3.38	5.05	5.05
Dawson County	D4	RM 108.12	71131.88	10-yr	2438.4	639.25	634.19	1.91	1.87	17.31	14.73	289.42	349.9	4.37	3.73	5.07	5.07
Dawson County	D4	RM 107.98	70905.01	10-yr	2438.4	639.08	634.08	2.21	2.18	23.02	20.47	245.46	279.93	4.48	3.99	5	5
Dawson County	D4	RM 107.82	70651.22	10-yr	2438.4	638.88	633.95	2.39	2.33	27.03	21.13	231.93	306.47	4.37	3.42	4.93	4.93
Dawson County	D4	RM 107.68	70418.24	10-yr	2438.4	638.72	633.84	2.46	2.37	28.54	23.34	219.72	282.26	4.44	3.65	4.88	4.88
Dawson County	D4	RM 107.50	70132.11	10-yr	2438.4	638.57	633.17	2.27	2.15	24.26	18.66	239.71	334.87	4.38	3.39	5.4	5.4
Dawson County	D4	RM 107.31	69834.56	10-yr	2438.4	638.38	633.23	2.31	2.24	25.9	22.38	264.38	316.49	3.96	3.44	5.15	5.15
Dawson County	D4	RM 107.13	69541.52	10-yr	2438.4	638.2	633.98	2.15	2.08	23.54	21.26	322.33	374.61	3.46	3.13	4.22	4.22
Dawson County	D5	RM 106.98	69305.02	10-yr	2446.9	638.12	634.16	1.75	1.71	15.98	15.29	421.85	461.97	3.23	3.11	3.96	3.96
Dawson County	D5	RM 106.85	69065.27	10-yr	2446.9	638.01	633.6	1.69	1.66	14.92	14.17	412.29	484.09	3.2	3.05	4.41	4.41
Dawson County	D5	RM 106.65	68764.02	10-yr	2446.9	637.78	632.98	2.01	1.96	18.7	17.79	360.27	428.08	3.05	2.91	4.8	4.8
Dawson County	D5	RM 106.47	68475.87	10-yr	2446.9	637.61	632.51	2.04	1.73	21.08	13.01	307.26	657.95	3.49	2.15	5.1	5.1
Dawson County	D5	RM 106.28	68173.97	10-yr	2446.9	637.26	631.71	2.6	2.19	32.3	19.97	204.05	433.01	4.16	2.58	5.55	5.55
Dawson County	D5	RM 106.10	67879.83	10-yr	2446.9	637.06	631.29	2.51	2.01	30.87	18.62	206.53	524.53	3.83	2.32	5.77	5.77
Dawson County	D5	RM 105.89	67550.49	10-yr	2446.9	636.86	631.76	2.23	1.88	24.67	16.09	226.74	536.54	3.71	2.43	5.1	5.1
Dawson County	D5	RM 105.74	67300.35	10-yr	2446.9	636.72	632.3	2.13	1.56	22.5	13.12	203.14	717.73	3.73	2.18	4.42	4.42
Dawson County	D5	RM 105.54	66973.54	10-yr	2446.9	636.43	632.17	2.47	1.92	30.76	17.43	147.79	647.98	3.58	2.03	4.26	4.26
Dawson County	D5	RM 105.30	66609.03	10-yr	2446.9	636.28	632.29	1.59	1.4	13.6	10.81	219.79	757.77	2.9	2.31	4.16	4.16
Dawson County	D5	RM 105.06	66212.24	10-yr	2446.9	636.13	631.19	1.75	1.65	16.61	14.25	181.11	868.76	2.9	2.49	4.94	4.94
Dawson County	D5	RM 104.89	65945.5	10-yr	2446.9	635.92	631.5	1.93	1.72	20.74	17.46	205.87	837.88	2.61	2.2	4.5	4.5
Dawson County	D5	RM 104.77	65742.33	10-yr	2446.9	635.78	631.67	2.02	1.63	20.81	11.78	125.62	895.35	3.46	1.96	5.07	5.07
Dawson County	D5	RM 104.64	65530.83	10-yr	2446.9	635.71	632.1	1.7	1.4	15.09	9.55	172.34	1024.49	3.22	2.02	4.75	4.75
Dawson County	D5	RM 104.43	65180.62	10-yr	2446.9	635.63	631.56	1.19	1.04	8.14	6.32	361.11	1256.99	2.4	1.87	4.84	4.84
Dawson County	D5	RM 104.26	64906.83	10-yr	2446.9	635.54	631.59	1.13	0.99	6.92	5.37	218.58	1124.16	2.82	2.19	4.9	4.9
Dawson County	D5	RM 104.10	64643.2	10-yr	2446.9	635.43	630.81	1.42	1.26	10.25	5.12	150.64	1137.56	3.4	1.7	4.99	4.99
Dawson County	D5	RM 103.95	64410.06	10-yr	2446.9	635.38	631.24	1.51	1.13	11.89	5.18	185.01	1557.38	3.18	1.39	5.56	5.56
Dawson County	D5	RM 103.68	63957.56	10-yr	2446.9	635.27	629.68	1.61	1	13.09	4.94	188.7	1803.21	3.57	1.35	5.83	5.83
Dawson County	D5	RM 103.48	63615.6	10-yr	2446.9	635.18	630.4	1.76	1.16	15.19	4.86	152.55	1685.19	3.94	1.25	5.67	5.67
Dawson County	D5	RM 103.26	63259.44	10-yr	2446.9	635.11	630.13	1.61	1.07	12.55	4.67	173.17	1537.7	4	1.48	5.7	5.7
Dawson County	D5	RM 102.58	62131.5	10-yr	2446.9	634.92	629.72	1.46	1.18	10.29	5.77	178.73	925.38	3.99	2.24	5.24	5.24
Dawson County	D5	RM 102.44	61920.83	10-yr	2446.9	634.79	629.74	1.88	1.55	17.2	8.35	255.44	823.61	3.95	1.92	5.05	5.05
Dawson County	D5	RM 102.31	61720.14	10-yr	2446.9	634.64	629.03	2.23	1.72	24.1	11.33	200.53	754.65	4.01	1.89	5.61	5.61
Dawson County	D5	RM 102.15	61456.58	10-yr	2446.9	634.52	629.39	2.11	1.71	21.28	10.63	201.3	678.56	4.2	2.11	5.13	5.13
Dawson County	D5	RM 102.00	61217.89	10-yr	2446.9	634.43	629.48	1.84	1.55	16.9	9.91	267.9	727.04	3.68	2.17	4.95	4.95
Dawson County	D5	RM 101.84	60967.97	10-yr	2446.9	634.36	629.23	1.66	1.16	13.57	8.06	155.67	920.88	3.84	2.28	5.13	5.13
Dawson County	D5	RM 101.60	60582.61	10-yr	2446.9	634.22	628.87	1.48	1.35	10.92	8.94	336.08	606.37	3.74	3.07	5.35	5.35
Dawson County	D5	RM 101.45	60336.09	10-yr	2446.9	634.02	629.16	2.05	1.82	19.86	11.76	251.39	532.29	4.26	2.53	4.86	4.86
Dawson County	D5	RM 101.25	60019.5	10-yr	2446.9	633.8	627.81	2.32	2.11	25.2	12.86	209.15	507.55	4.46	2.28	5.99	5.99
Dawson County	D5	RM 101.09	59759.25	10-yr	2446.9	633.67	627.99	2.24	1.88	23.78	9.24	216.65	774.68	4.31	1.68	5.68	5.68
Dawson County	D5	RM 100.88	59426.42	10-yr	2446.9	633.53	627.86	2.12	1.72	20.89	10.77	196.58	612.73	4.5	2.33	5.67	5.67
Dawson County	D5	RM 100.67	59075.4	10-yr	2446.9	633.33	627.1	2.39	1.74	25.79	9.83	151.88	740.8	4.98	1.9	6.23	6.23
Dawson County	D5	RM 100.46	58743.44	10-yr	2446.9	633.27	627.92	1.77	1.28	14.56	6.77	202.94	912.95	4.48	2.09	5.35	5.35
Dawson County	D5	RM 100.25	58401.49	10-yr	2446.9	633.04	627.57	2.17	1.71	22.03	10.83	196.17	680.19	4.48	2.21	5.47	5.47
Dawson County	D5	RM 100.05	58077.55	10-yr	2446.9	632.9	626.86	2.11	1.77	20.77	12.69	176.97	497.12	4.55	2.78	6.04	6.04
Dawson County	D5	RM 99.87	57778.81	10-yr	2446.9	632.68	626.4	2.18	2.15	23.63	21.31	301.61	339.1	3.71	3.35	6.28	6.28
Dawson County	D5	RM 99.68	57474.16	10-yr	2446.9	632.52	626.29	2.12	1.98	20.97	14.74	246.92	386.11	4.54	3.2	6.23	6.23
Dawson County	D5	RM 99.49	57160.47	10-yr	2446.9	632.27	626.53	2.46	2.23	28.22	16.22	218.38	427.61	4.45	2.56	5.74	5.74
Dawson County	D5	RM 99.30	56863.46	10-yr	2446.9	632.13	627.26	2.18	1.96	22.87	12.33	267.93	574.75	4.11	2.22	4.87	4.87
Dawson County	D5	RM 99.13	56566.63	10-yr	2446.9	632.01	626.77	1.98	1.69	18.9	10.26	293.66	661.55	4.04	2.19	5.24	5.24

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	10-yr	2446.9	631.86	626.63	1.89	1.73	17.9	10.8	339.1	636.27	3.67	2.23	5.23	5.23
Dawson County	D5	RM 98.71	55911.87	10-yr	2446.9	631.65	626.34	2.05	1.78	21.24	9.64	322.21	859.15	3.53	1.6	5.31	5.31
Dawson County	D5	RM 98.57	55680.2	10-yr	2446.9	631.52	626.1	2.01	1.46	20.28	8.56	297.01	1097.61	3.62	1.53	5.42	5.42
Dawson County	D5	RM 98.35	55325.95	10-yr	2446.9	631.23	625.91	2.33	1.73	25.53	8.81	216.82	937.24	4.38	1.51	5.32	5.32
Dawson County	D5	RM 98.19	55066.09	10-yr	2446.9	631.04	624.42	2.48	1.82	27.86	8.36	184	922.18	4.86	1.46	6.62	6.62
Dawson County	D5	RM 97.99	54752.97	10-yr	2446.9	630.85	625.04	2.41	2.06	27.75	16.57	236.53	479.82	4.14	2.47	5.81	5.81
Dawson County	D5	RM 97.84	54493.48	10-yr	2446.9	630.73	625.39	2.11	1.92	21.79	12.84	292.51	554	3.9	2.3	5.34	5.34
Dawson County	D5	RM 97.68	54241.32	10-yr	2446.9	630.58	624.99	2.07	1.76	22.27	15.49	340.05	616.26	3.28	2.28	5.59	5.59
Dawson County	D5	RM 97.48	53918.21	10-yr	2446.9	630.39	624.81	1.92	1.6	15.22	10.06	385.01	1168.41	2.34	1.55	5.58	5.58
Dawson County	D5	RM 97.28	53585.68	10-yr	2446.9	630.19	625.86	1.82	1.5	17.36	8.75	328.8	1187.07	3.15	1.59	4.74	4.74
Dawson County	D5	RM 97.08	53263.89	10-yr	2446.9	629.91	625.27	2.27	1.97	25.32	13.06	209.17	632.98	3.8	1.96	4.64	4.64
Dawson County	D5	RM 96.94	53030.11	10-yr	2446.9	629.71	623.97	2.47	2.02	30.36	13.11	199.17	763.17	3.66	1.59	5.74	5.74
Dawson County	D5	RM 96.77	52762.2	10-yr	2446.9	629.51	623.51	2.35	2.03	27.68	14.25	202.34	715.05	3.63	1.87	6	6
Dawson County	D5	RM 96.55	52403.59	10-yr	2446.9	629.24	624.57	2.54	1.75	31.33	11.98	160.42	976.33	3.93	1.51	4.67	4.67
Dawson County	D5	RM 96.35	52079.12	10-yr	2446.9	629.24	625.39	1.08	1.12	6.38	6.31	290.07	1164.93	2.7	2.68	5.77	5.77
Dawson County	D5	RM 96.17	51777.74	10-yr	2446.9	629.01	624.71	2.03	1.84	21.17	14.63	130.42	641.51	3.38	2.35	4.63	4.63
Dawson County	D5	RM 96.00	51500.38	10-yr	2446.9	628.84	624.3	2.01	1.76	20.57	11.17	122.42	742.19	3.5	1.9	4.54	4.54
Dawson County	D5	RM 95.79	51156.87	10-yr	2446.9	628.74	624.35	1.41	1.25	10.74	5.6	284.94	1172.49	3.2	1.67	4.49	4.49
Dawson County	D5	RM 95.60	50859.75	10-yr	2446.9	628.64	622.97	1.46	1.13	11.01	5.95	251.15	1197.17	3.36	1.82	5.67	5.67
Dawson County	D5	RM 95.40	50547.92	10-yr	2446.9	628.56	623.13	1.32	1.02	8.62	4.76	377.96	1159.52	3.75	2.08	5.43	5.43
Dawson County	D5	RM 95.21	50245.97	10-yr	2446.9	628.46	622.21	1.65	1	12.66	5.12	217.6	1322.77	4.56	1.84	6.25	6.25
Dawson County	D5	RM 95.04	49971.19	10-yr	2446.9	628.35	621.68	1.98	1.14	18.58	7.1	174.46	1328.62	4.25	1.62	6.67	6.67
Dawson County	D5	RM 94.88	49717.07	10-yr	2446.9	628.28	621.44	1.8	0.95	15.05	6.94	152.89	1369.25	4.56	2.1	6.84	6.84
Dawson County	D5	RM 94.71	49446.9	10-yr	2446.9	628.24	621.69	1.3	1.03	8	5.43	234.28	1367.42	4.22	2.86	6.55	6.55
Dawson County	D5	RM 94.58	49286.95	10-yr	2446.9	628.23	618.6	0.9	0.9	3.44	3.44	456.42	1305.14	5.98	5.98	9.63	9.63
Dawson County	D5	RM 94.57	49255.56	10-yr	2446.9	628.19	618.63	1.18	1.18	6.03	5.87	360.59	918.24	5.73	5.59	9.56	9.56
Dawson County		RM 94.55	49216.94	10-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	10-yr	2446.9	627.87	620.63	2.07	1.99	19.61	14.96	256.42	772.35	4.57	3.48	7.24	7.24
Dawson County	D5	RM 94.52	49157.18	10-yr	2446.9	627.88	620.89	1.89	1.88	16.64	15.61	287.23	880.46	4.51	4.23	6.99	6.99
Dawson County	D6	RM 94.42	48998.19	10-yr	2446.9	627.69	621.76	2.41	2.09	27.3	13.75	219.93	738.53	4.42	2.22	5.93	5.93
Dawson County	D6	RM 94.30	48806.79	10-yr	2458.51	627.59	621.22	2.24	1.95	25.36	13.49	295.07	708.3	3.56	1.89	6.37	6.37
Dawson County	D6	RM 94.20	48653.06	10-yr	2458.51	627.5	621.41	2.16	1.76	22.76	10.75	261.89	758.73	4.08	1.92	6.09	6.09
Dawson County	D6	RM 94.08	48445.46	10-yr	2458.51	627.48	622.37	1.65	1.47	12.85	7.04	338.75	721.43	4.31	2.36	5.11	5.11
Dawson County	D6	RM 93.96	48246.42	10-yr	2458.51	627.37	621.88	1.84	1.65	16.59	10.05	331.74	627.07	3.93	2.38	5.49	5.49
Dawson County	D6	RM 93.83	48030.25	10-yr	2458.51	627.19	620.28	2.21	1.91	22.84	12.4	237.8	525.31	4.52	2.45	6.91	6.91
Dawson County	D6	RM 93.68	47782.89	10-yr	2458.51	626.95	620.19	2.58	2.2	30.46	15.63	191.53	453.55	4.8	2.46	6.76	6.76
Dawson County	D6	RM 93.57	47606.95	10-yr	2458.51	626.74	620.08	2.86	2.47	37.99	21.56	184.03	385.41	4.56	2.58	6.65	6.65
Dawson County	D6	RM 93.53	47552.11	10-yr	2458.51	626.71	620.21	2.76	2.44	34.78	21.92	184.33	336.12	4.74	2.99	6.49	6.49
Dawson County			47536.14	10-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	10-yr	2458.51	626.55	620.33	2.83	2.51	36.64	21.97	180.48	345.06	4.73	2.84	6.22	6.22
Dawson County	D6	RM 93.47	47460.74	10-yr	2458.51	626.51	618.63	2.75	2.46	34.85	21.26	189.97	353.9	4.64	2.83	7.88	7.88
Dawson County	D6	RM 93.43	47382.46	10-yr	2458.51	626.47	619.44	2.61	2.36	31.07	18.84	191.32	354.35	4.85	2.94	7.03	7.03
Dawson County		RM 93.415	47357.71	10-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	10-yr	2458.51	626.39	620.19	2.52	2.33	28.97	19.62	200.23	366.47	4.82	3.26	6.2	6.2
Dawson County	D6	RM 93.36	47287.92	10-yr	2458.51	626.38	620.47	2.34	2.08	24.83	15.47	213.34	391.12	4.85	3.02	5.91	5.91
Dawson County	D6	RM 93.25	47111.44	10-yr	2458.51	626.24	621.12	2.47	2.19	33.45	18.97	228.84	479	4.15	2.35	5.12	5.12
Dawson County	D6	RM 93.05	46807.77	10-yr	2458.51	626.13	621.74	1.96	1.66	18.51	9.39	283.11	836.26	4.07	2.06	4.39	4.39
Dawson County	D6	RM 92.93	46606.31	10-yr	2458.51	625.98	621.34	2.12	1.84	22.39	11.42	305.87	949.9	3.68	1.87	4.64	4.64
Dawson County	D6	RM 92.83	46460.06	10-yr	2458.51	625.88	621.02	2.13	1.93	20.53	13.97	357.35	869.44	3.13	2.13	4.86	4.86
Dawson County	D6	RM 92.71	46261.84	10-yr	2458.51	625.78	620.37	2	1.83	18.1	13.15	359.38	943.24	3.28	2.38	5.41	5.41
Dawson County	D6	RM 92.59	46079.79	10-yr	2458.51	625.69	620.95	1.92	1.89	18.67	12.63	321.05	827.35	3.96	2.67	4.74	4.74
Dawson County	D6	RM 92.50	45933.81	10-yr	2458.51	625.58	620.75	2.06	2.05	21.08	18.34	325.45	674.42	3.67	3.2	4.83	4.83
Dawson County	D6	RM 92.39	45753.94	10-yr	2458.51	625.49	620.58	2.05	1.96	20.41	14.67	299.01	620.84	3.95	2.84	4.91	4.91
Dawson County	D6	RM 92.29	45591.17	10-yr	2458.51	625.41	620.64	2.02	1.93	19.76	16.92	295.77	833.84	4.01	3.43	4.77	4.77
Dawson County	D6	RM 92.18	45414.13	10-yr	2458.51	625.35	620.23	1.72	1.64	14.37	11.26	358.66	827.91	3.92	3.08	5.12	5.12
Dawson County		RM 92.14	45354.08	10-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	10-yr	2458.51	625.1	620.04	1.74	1.65	14.98	10.99	367.04	915.8	3.8	2.79	5.06	5.06
Dawson County	D6	RM 92.06	45238.47	10-yr	2458.51	625.04	620.12	1.9	1.77	18.18	15.61	354.46	782.35	3.56	3.06	4.92	4.92
Dawson County	D6	RM 91.99	45117.89	10-yr	2458.51	625.02	619.81	1.59	1.56	13.17	12.51	390.42	884.84	3.26	3.1	5.21	5.21
Dawson County	D6	RM 91.85	44886.16	10-yr	2458.51	624.96	619.7	1.49	1.31	12.34	8.21	238.98	911.75	3.98	2.65	5.26	5.26
Dawson County	D6	RM 91.77	44752.88	10-yr	2458.51	624.91	619.28	1.51	1.3	14.67	10.37	224.91	769.7	3.7	2.62	5.63	5.63

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	10-yr	2458.51	624.75	619	1.88	1.57	16.4	11.3	148.19	975.43	4.58	3.16	5.75	5.75
Dawson County	D6	RM 91.45	44219.47	10-yr	2458.51	624.62	618.66	1.93	1.83	18.34	15.67	189.07	772.26	4.43	3.79	5.96	5.96
Dawson County	D6	RM 91.31	43987.79	10-yr	2458.51	624.42	618.98	2.23	2.22	23.9	23.25	271.16	809.36	4.07	3.96	5.44	5.44
Dawson County	D6	RM 91.11	43666.49	10-yr	2458.51	624.19	618.54	2.37	2.3	25.86	21.71	219.42	663.23	4.7	3.96	5.65	5.65
Dawson County	D6	RM 90.97	43442.55	10-yr	2458.51	624.05	618.3	2.43	2.18	27.69	12.51	224.14	724.22	4.43	2.01	5.75	5.75
Dawson County	D6	RM 90.76	43114.74	10-yr	2458.51	623.85	618.97	2.24	1.84	30.34	10.08	268.72	1181.56	3.97	1.32	4.88	4.88
Dawson County	D6	RM 90.59	42823.65	10-yr	2458.51	623.8	618.64	1.74	1.19	14.48	5.71	232.7	1353.76	4.13	1.63	5.16	5.16
Dawson County	D6	RM 90.43	42564.46	10-yr	2458.51	623.45	618.18	2.59	2.05	32.63	11.4	208.77	866.34	3.95	1.38	5.27	5.27
Dawson County	D6	RM 90.29	42331.05	10-yr	2458.51	623.34	618.21	2.23	1.67	23.75	7.9	236.08	1066.27	4.15	1.38	5.13	5.13
Dawson County	D6	RM 90.16	42118.24	10-yr	2458.51	623.21	618.54	2.27	1.75	24.68	8.95	229.61	954.08	4.14	1.51	4.67	4.67
Dawson County	D6	RM 89.96	41795.66	10-yr	2458.51	623.08	618.08	1.86	1.62	17.28	8.48	346.39	919.72	3.69	1.81	5	5
Dawson County	D6	RM 89.83	41589.45	10-yr	2458.51	622.75	617.17	2.68	2.24	34.45	15.45	211.95	588.24	4.14	1.87	5.58	5.58
Dawson County	D6	RM 89.65	41302.33	10-yr	2458.51	622.54	618.15	2.51	2.24	31.13	15.22	251.93	592.63	3.77	1.85	4.39	4.39
Dawson County	D6	RM 89.46	41003.8	10-yr	2458.51	622.38	617.56	2.26	2.07	23.95	13.34	236.74	475.76	4.49	2.5	4.82	4.82
Dawson County	D6	RM 89.29	40732.3	10-yr	2458.51	622.36	617.42	1.69	1.46	13.63	9.84	253.25	577.72	4.27	3.08	4.94	4.94
Dawson County	D6	RM 89.13	40476.68	10-yr	2458.51	622.16	617.29	2.13	1.94	21.37	14.57	231.92	425.69	4.37	2.97	4.87	4.87
Dawson County	D6	RM 88.96	40193.97	10-yr	2469.56	622.03	617.14	2.13	1.92	20.8	13.88	186.73	402.54	4.82	3.2	4.89	4.89
Dawson County	D7	RM 88.77	39887.75	10-yr	2469.56	621.84	616.98	2.2	1.98	23.38	14.5	260.04	548.9	4.11	2.54	4.86	4.86
Dawson County	D7	RM 88.58	39581.56	10-yr	2469.56	621.52	616.82	2.67	2.24	33.2	14.04	185.88	574.62	4.63	1.93	4.7	4.7
Dawson County	D7	RM 88.44	39345.29	10-yr	2469.56	621.33	616.7	2.71	2.4	34.22	19.63	181.67	430.61	4.63	2.62	4.63	4.63
Dawson County	D7	RM 88.25	39047.22	10-yr	2469.56	621.21	616.54	2.29	2.04	25.08	16.99	221.53	439.28	4.18	2.82	4.66	4.66
Dawson County	D7	RM 88.06	38736.32	10-yr	2469.56	621.06	616.38	2.02	1.92	19.87	14.79	305.89	471.88	3.93	2.93	4.68	4.68
Dawson County	D7	RM 87.87	38426.68	10-yr	2469.56	620.96	616.22	1.64	1.49	14.09	11.29	429.53	675.03	3.24	2.6	4.74	4.74
Dawson County	D7	RM 87.70	38161.81	10-yr	2469.56	620.88	616.08	1.69	1.28	13.09	6.31	181.73	901.45	4.79	2.26	4.8	4.8
Dawson County	D7	RM 87.52	37862.82	10-yr	2469.56	620.83	615.92	1.39	1.26	9.59	7.26	308.23	714.88	3.7	2.79	4.91	4.91
Dawson County	D7	RM 87.34	37574.69	10-yr	2469.56	620.61	615.85	2.07	1.78	21.31	12.07	253.88	650.24	3.8	2.14	4.77	4.77
Dawson County	D7	RM 87.17	37307.08	10-yr	2469.56	620.4	615.82	2.41	2.03	27.26	15.13	162.99	491.63	4.5	2.47	4.58	4.58
Dawson County	D7	RM 87.00	37023.47	10-yr	2469.56	620.26	615.79	2.08	1.96	21.53	16.12	241.45	447.1	3.78	2.82	4.47	4.47
Dawson County	D7	RM 86.82	36748.51	10-yr	2469.56	620.09	615.76	2.16	2	22.94	18.13	210.89	400.68	3.91	3.08	4.33	4.33
Dawson County	D7	RM 86.67	36501.76	10-yr	2469.56	619.84	615.73	2.66	2.27	34.54	22.25	151.27	421.15	4.1	2.59	4.11	4.11
Dawson County	D7	RM 86.52	36253.46	10-yr	2469.56	619.74	615.7	2.01	1.74	19.97	12.74	250.55	588.09	3.78	2.41	4.04	4.04
Dawson County	D7	RM 86.39	36046.31	10-yr	2469.56	619.6	615.59	2.19	1.73	23.98	14.87	147.45	621.75	3.76	2.3	4.02	4.02
Dawson County	D7	RM 86.24	35796.38	10-yr	2469.56	619.56	615.46	1.41	1.3	9.72	8.31	166.41	559.26	4.03	3.39	4.1	4.1
Dawson County	D7	RM 86.08	35541.56	10-yr	2469.56	619.22	615.48	2.53	2.3	32.73	22.3	160.1	457.55	3.49	2.35	3.74	3.74
Dawson County	D7	RM 85.91	35282.1	10-yr	2469.56	619.05	615.5	2.21	1.92	24.99	14.71	191.42	633.39	3.46	2.03	3.55	3.55
Dawson County	D7	RM 85.78	35075.01	10-yr	2469.56	619.06	614.9	1.28	1.22	8.49	7.66	288.53	991.31	3.24	2.92	4.16	4.16
Dawson County	D7	RM 85.59	34774.5	10-yr	2469.56	618.99	614.32	1.53	1.21	10.82	6.06	184.84	789.92	4.64	2.58	4.67	4.67
Dawson County	D7	RM 85.39	34449.3	10-yr	2469.56	618.78	614.15	2.08	1.8	20.69	11.45	219.47	589.73	4.23	2.33	4.63	4.63
Dawson County	D7	RM 85.23	34186.4	10-yr	2469.56	618.52	614.01	2.68	2.17	33.71	15.49	157.48	559.14	4.5	2.04	4.5	4.5
Dawson County	D7	RM 85.04	33863.7	10-yr	2469.56	618.44	613.84	1.91	1.65	18.23	12.63	265.03	582.25	3.74	2.57	4.6	4.6
Dawson County	D7	RM 84.89	33626.36	10-yr	2469.56	618.35	613.92	1.66	1.6	13.88	12.69	413.04	473.69	3.56	3.27	4.43	4.43
Dawson County	D7	RM 84.72	33349.5	10-yr	2469.56	618.2	613.77	1.84	1.83	16.81	16.46	353.9	363.72	3.78	3.71	4.42	4.42
Dawson County	D7	RM 84.57	33104.21	10-yr	2469.56	618.04	613.45	2.01	1.99	19.42	18.59	294.82	311.1	4.15	3.98	4.6	4.6
Dawson County	D7	RM 84.41	32856.7	10-yr	2469.56	617.93	613.32	1.96	1.92	18.69	17.37	312.69	345.45	3.99	3.72	4.62	4.62
Dawson County	D7	RM 84.22	32552.24	10-yr	2469.56	617.82	613.16	1.87	1.68	16.87	11.95	261.68	541.64	4.04	2.84	4.66	4.66
Dawson County	D7	RM 84.05	32270.74	10-yr	2469.56	617.65	613.14	2.08	1.84	20.6	12.36	206.16	520.4	4.3	2.58	4.52	4.52
Dawson County	D7	RM 83.89	32017.88	10-yr	2469.56	617.45	613.11	2.33	1.98	25.71	13.3	191.2	566.81	4.27	2.2	4.35	4.35
Dawson County	D7	RM 83.73	31759.16	10-yr	2469.56	617.36	613.07	1.96	1.65	18.92	11.74	240.43	634.13	3.88	2.39	4.28	4.28
Dawson County	D7	RM 83.53	31426.04	10-yr	2469.56	617.28	613.01	1.51	1.33	11.19	6.94	304.34	767.49	3.9	2.41	4.27	4.27
Dawson County	D7	RM 83.39	31213.34	10-yr	2469.56	617.2	612.95	1.7	1.43	14.01	8.23	189.12	733	4.05	2.35	4.25	4.25
Dawson County	D7	RM 83.21	30910.79	10-yr	2469.56	617.12	612.91	1.55	1.29	11.56	7.49	170.07	717.92	4.18	2.67	4.34	4.34
Dawson County	D7	RM 83.05	30660.14	10-yr	2469.56	617.05	612.78	1.43	1.24	9.9	6.28	229.1	764.42	4.08	2.6	4.59	4.59
Dawson County	D7	RM 82.94	30491.79	10-yr	2469.56	616.99	612.69	1.48	1.29	10.57	6.31	219.21	794.47	4.04	2.41	4.6	4.6
Dawson County	D7	RM 82.81	30280.45	10-yr	2469.56	616.89	612.58	1.63	1.4	13.12	7.25	178.49	824.64	3.89	2.14	4.74	4.74
Dawson County	D7	RM 82.68	30058.39	10-yr	2469.56	616.82	612.34	1.75	1.35	14.36	6.3	152.77	942.82	4.47	1.94	4.72	4.72
Dawson County	D7	RM 82.51	29786.14	10-yr	2469.56	616.8	612.1	1.27	1.02	7.62	3.47	229.35	1229.07	4.37	1.96	4.95	4.95
Dawson County	D7	RM 82.33	29497.12	10-yr	2469.56	616.75	611.87	1.33	0.91	8.35	3.74	246.87	1372.27	4.52	1.99	5	5
Dawson County	D7	RM 82.22	29323.27	10-yr	2469.56	616.68	611.66	1.59	0.94	11.64	4.55	193.52	1459.46	4.66	1.81	5.02	5.02
Dawson County	D7	RM 82.06	29049.94	10-yr	2469.56	616.64	611.37	1.45	0.89	9.58	3.46	202.97	1594.58	4.93	1.75	5.27	5.27
Dawson County	D7	RM 81.91	28820.21	10-yr	2469.56	616.6	611.21	1.47	0.88	9.58	2.87	191.58	1802.44	5.27	1.55	5.39	5.39
Dawson County	D7	RM 81.71	28446.75	10-yr	2469.56	616.55	611.02	1.23	0.86	6.64	1.85	220.81	1948.68	5.34	1.47	5.53	5.53

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	10-yr	2469.56	616.3	610.8	2.25	1.53	22.31	5.44	165.37	1913.42	5.49	1.31	5.5	5.5
Dawson County	D7	RM 81.31	27735.46	10-yr	2475.22	615.5	610.65	3.87	3.5	69.32	22.96	131.98	457.02	4.78	1.55	4.85	4.85
Dawson County	D8	RM 81.10	27398.33	10-yr	2475.22	615.25	610.47	3.21	2.62	47.58	16.73	160.09	581.2	4.68	1.62	4.78	4.78
Dawson County	D8	RM 80.94	27148.21	10-yr	2475.22	615.22	610.34	2.35	2.14	25.54	10.49	225.85	612.73	4.62	1.89	4.88	4.88
Dawson County	D8	RM 80.76	26855.69	10-yr	2475.22	615.19	610.19	1.84	1.38	15.46	4.76	181.68	1212.87	5	1.5	5	5
Dawson County	D8	RM 80.64	26669.58	10-yr	2475.22	615.1	610.09	1.94	1.53	17.25	4.94	209.02	1235.21	4.77	1.35	5	5
Dawson County	D8	RM 80.45	26373.01	10-yr	2475.22	615.11	609.94	1.34	0.96	8.14	2.84	122.91	1746.58	5.03	1.69	5.17	5.17
Dawson County	D8	RM 80.17	25926.88	10-yr	2475.22	614.96	609.71	1.92	1.33	16.45	5.19	146.98	1160.41	5.25	1.6	5.25	5.25
Dawson County	D8	RM 79.91	25496.94	10-yr	2475.22	614.86	609.42	1.46	1.21	9.87	3.31	362.06	1352.46	4.54	1.51	5.44	5.44
Dawson County	D8	RM 79.43	24626.85	10-yr	2475.22	614.61	609.14	1.69	1.45	12.87	5.33	289.02	858.38	4.97	2.05	5.46	5.46
Dawson County	D8	RM 79.23	24229.4	10-yr	2475.22	614.16	608.87	2.79	2.64	35.37	15.23	173.46	439.42	5.09	2.14	5.29	5.29
Dawson County	D8	RM 78.27	22640.58	10-yr	2475.22	613.36	608.6	2.1	1.59	21.07	10.05	226.68	781.89	4.23	1.99	4.75	4.75
Dawson County	D8	RM 78.12	22398.86	10-yr	2475.22	613.29	608.48	1.91	1.57	17.38	8.44	222.94	768.31	4.26	2.06	4.81	4.81
Dawson County	D8	RM 77.97	22135.34	10-yr	2475.22	613.16	608.34	2.02	1.63	19.03	8.68	214.67	727.4	4.6	2.08	4.82	4.82
Dawson County	D8	RM 77.79	21831.85	10-yr	2475.22	613.08	608.18	1.72	1.54	14.96	10.46	332.54	652.75	3.53	2.47	4.89	4.89
Dawson County	D8	RM 77.57	21474.71	10-yr	2475.22	612.86	608	2.02	1.85	19.05	11.43	250.08	498.4	4.48	2.69	4.87	4.87
Dawson County	D8	RM 77.38	21170.35	10-yr	2475.22	612.66	607.84	2.28	2	24.13	12.26	215.18	536.12	4.55	2.31	4.82	4.82
Dawson County	D8	RM 77.13	20780.17	10-yr	2475.22	612.63	607.63	1.63	1.34	12.36	7.3	188.55	686.71	4.62	2.7	4.99	4.99
Dawson County	D8	RM 77.00	20442.34	10-yr	2475.22	612.5	607.46	1.96	1.49	17.55	8.79	131.83	685.87	5.04	2.43	5.05	5.05
Dawson County	D8	RM 76.90	20124.49	10-yr	2475.22	612.43	607.29	1.8	1.52	14.72	9.04	153.24	530.17	5.12	3.07	5.13	5.13
Dawson County	D8	RM 76.76	19785.25	10-yr	2475.22	612.38	607.12	1.45	1.32	9.61	6.12	269.03	620	4.82	3.06	5.26	5.26
Dawson County	D8	RM 76.63	19501.04	10-yr	2475.22	612.29	606.97	1.59	1.45	12.04	6.99	246.86	684.89	4.35	2.5	5.32	5.32
Dawson County	D8	RM 76.37	19137.53	10-yr	2475.22	612.12	606.78	1.84	1.65	15.49	7.92	272.76	605.73	4.85	2.47	5.34	5.34
Dawson County	D8	RM 76.22	18884.28	10-yr	2475.22	612.01	606.65	1.93	1.7	16.76	7.14	253.7	688.29	4.98	2.12	5.37	5.37
Dawson County	D8	RM 76.00	18519.22	10-yr	2475.22	611.79	606.61	2.25	1.95	23.29	7.97	225.2	781.03	4.78	1.62	5.18	5.18
Dawson County	D8	RM 75.75	18119.45	10-yr	2475.22	611.5	606.58	2.49	2.15	28.82	11.66	209.51	620.12	4.63	1.86	4.92	4.92
Dawson County	D8	RM 75.56	17818.36	10-yr	2475.22	611.4	606.75	2.02	1.73	19.98	8.14	303.99	896.67	3.93	1.59	4.65	4.65
Dawson County	D8	RM 75.31	17411.3	10-yr	2475.22	611.24	606.34	1.91	1.62	17.15	6.15	263.12	964.34	4.43	1.58	4.9	4.9
Dawson County	D8	RM 75.13	17092.44	10-yr	2475.22	611.12	606.17	1.82	1.47	15.8	6.12	306.22	1026.04	4.25	1.64	4.95	4.95
Dawson County	D8	RM 74.90	16719.46	10-yr	2475.22	610.79	605.98	2.46	1.95	28.7	9.02	224.87	946.99	4.3	1.34	4.81	4.81
Dawson County	D8	RM 74.65	16308.2	10-yr	2475.22	610.66	605.91	1.92	1.52	17.5	5.9	267.86	1134.18	4.27	1.43	4.75	4.75
Dawson County	D8	RM 74.37	15846.14	10-yr	2475.22	610.41	605.85	2.16	1.76	22.81	10.56	221.55	776.69	3.93	1.81	4.56	4.56
Dawson County	D8	RM 74.13	15464.97	10-yr	2475.22	610.24	605.82	1.9	1.61	17.58	9.01	235.57	750.75	4.04	2.06	4.42	4.42
Dawson County	D8	RM 73.91	15098.01	10-yr	2475.22	610.12	605.99	1.64	1.35	13.38	6.43	283.69	1033.86	3.69	1.78	4.13	4.13
Dawson County	D8	RM 73.71	14783.86	10-yr	2475.22	610.01	605.87	1.57	1.34	12.17	5.55	292.2	1118.73	3.76	1.71	4.14	4.14
Dawson County	D8	RM 73.53	14496.67	10-yr	2475.22	609.92	605.72	1.58	1.24	12.22	4.41	249.62	1859.61	3.93	1.41	4.2	4.2
Dawson County	D8	RM 73.29	14096.19	10-yr	2475.22	609.5	605.51	2.63	2.17	33.85	14.12	198.62	768.21	3.89	1.62	3.99	3.99
Dawson County	D8	RM 73.07	13729.79	10-yr	2475.22	609.11	605.52	2.78	2.37	39.06	18.75	196.15	635.69	3.52	1.69	3.86	3.86
Dawson County	D8	RM 72.97	13573.93	10-yr	2475.22	608.84	605.5	3.01	2.6	47	23.87	199.11	648.35	3.28	1.66	3.67	3.67
Dawson County	D8	RM 72.91	13479.91	10-yr	2475.22	608.71	605.45	2.93	2.63	45.13	27.08	221.07	654.97	3.13	1.88	3.54	3.54
Dawson County		RM 72.905	13470.04	10-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	10-yr	2475.22	608.32	605.31	3.38	3.13	61.54	40.72	208.91	459.21	2.9	1.92	3.15	3.15
Dawson County	D8	RM 72.83	13354.45	10-yr	2475.22	608.35	604.9	2.4	2.17	30.05	18.65	264.25	599.47	3.21	1.99	3.45	3.45
Dawson County	D8	RM 72.62	13000.82	10-yr	2475.22	608.08	604.4	2.18	1.98	24.14	15.98	295.23	577.98	3.45	2.29	3.69	3.69
Dawson County	D8	RM 72.37	12609.05	10-yr	2475.22	607.75	603.89	2.39	1.99	28.46	16.27	228.58	618.85	3.66	2.09	3.86	3.86
Dawson County	D8	RM 72.16	12261.75	10-yr	2475.22	607.48	603.69	2.28	2.06	26.32	17.03	286.3	587.96	3.51	2.28	3.8	3.8
Dawson County	D8	RM 71.92	11875.08	10-yr	2475.22	607.3	603.18	1.86	1.74	17.35	12.73	345.16	562.35	3.59	2.63	4.12	4.12
Dawson County	D8	RM 71.69	11512.65	10-yr	2475.22	607.08	602.95	2.01	1.82	20.03	12.36	303.44	611.3	3.74	2.31	4.14	4.14
Dawson County	D8	RM 71.49	11192.6	10-yr	2475.22	606.9	602.03	2.11	1.81	20.64	9.94	237.66	648.11	4.54	2.18	4.87	4.87
Dawson County	D8	RM 71.31	10913.3	10-yr	2475.22	606.77	601.99	2.09	1.74	20.47	9.46	244.59	727.09	4.4	2.03	4.79	4.79
Dawson County	D9	RM 71.10	10567.75	10-yr	2480.88	606.68	602.11	1.77	1.52	15.2	9.16	197.48	695.81	4.05	2.42	4.57	4.57
Dawson County	D9	RM 70.91	10267.7	10-yr	2480.88	606.51	602.05	2.08	1.68	20.46	8.95	126.11	844.9	4.39	1.89	4.46	4.46
Dawson County	D9	RM 70.72	9968.939	10-yr	2480.88	606.38	601.91	2.06	1.58	20.08	7.49	153.19	1097.88	4.46	1.61	4.47	4.47
Dawson County	D9	RM 70.50	9603.574	10-yr	2480.88	606.26	601.9	1.77	1.54	15.22	10.13	251.24	633.57	3.97	2.63	4.36	4.36
Dawson County	D9	RM 70.27	9238.535	10-yr	2480.88	605.96	601.31	2.3	2.07	25.07	14.03	236.79	521.28	4.33	2.42	4.64	4.64
Dawson County	D9	RM 70.08	8928.013	10-yr	2480.88	605.81	600.85	2.17	1.83	22.03	10.25	234.44	670.87	4.47	2.07	4.96	4.96
Dawson County	D9	RM 69.79	8464.726	10-yr	2480.88	605.67	600.61	1.87	1.5	16.23	7.23	248.41	830.86	4.59	2.04	5.06	5.06
Dawson County	D9	RM 69.50	7983.226	10-yr	2480.88	605.52	600.56	1.84	1.4	15.96	5.68	237.14	1156.49	4.45	1.57	4.96	4.96
Dawson County	D9	RM 69.26	7575.04	10-yr	2480.88	605.37	600.35	1.87	1.35	16.27	5.73	245.78	1178.03	4.57	1.6	5.03	5.03
Dawson County	D9	RM 69.03	7206.967	10-yr	2480.88	605.28	599.95	1.72	1.28	13.4	5.85	236.36	925.01	4.97	2.16	5.33	5.33
Dawson County	D9	RM 68.82	6851.789	10-yr	2480.88	605.07	599.77	2.11	1.73	20.61	9.01	217.59	746	4.74	2.05	5.3	5.3

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

10-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	10-yr	2480.88	604.75	599.59	2.55	2.36	29.48	18.68	189.13	340.12	5.04	3.17	5.16	5.16
Dawson County	D9	RM 68.39	6158.879	10-yr	2480.88	604.6	599.51	2.26	2.14	23.91	17.83	241.73	356.03	4.47	3.33	5.09	5.09
Dawson County	D9	RM 68.11	5709.195	10-yr	2480.88	604.38	599.37	2.13	2.03	21.37	16.92	262.72	393.38	4.37	3.47	5.01	5.01
Dawson County	D9	RM 67.86	5308.187	10-yr	2480.88	604.18	599.17	2.29	2	24.13	16.64	130.41	387.27	4.85	3.27	5.02	5.02
Dawson County	D10	RM 67.57	4859.184	10-yr	2495.04	603.99	598.93	2.02	1.87	18.83	14.6	240.29	365.48	4.71	3.65	5.06	5.06
Dawson County	D10	RM 67.37	4523.862	10-yr	2495.04	603.88	598.75	1.93	1.69	17.21	10.74	224.36	513.35	4.71	2.93	5.12	5.12
Dawson County	D10	RM 67.15	4175.103	10-yr	2495.04	603.51	598.47	2.76	2.29	34.83	15.59	158.11	509.35	4.83	2.14	5.04	5.04
Dawson County	D10	RM 66.95	3842.803	10-yr	2495.04	603.41	598.2	2.16	1.64	22.06	9.55	211.57	815.76	4.35	1.87	5.21	5.21
Dawson County	D10	RM 66.74	3505.323	10-yr	2495.04	603.24	598.12	2.18	1.74	21.64	10.96	189.78	574.08	4.98	2.49	5.11	5.11
Dawson County	D10	RM 66.52	3142.889	10-yr	2495.04	603.04	598.26	2.17	1.98	22.05	12.73	249	551.51	4.46	2.57	4.78	4.78
Dawson County	D10	RM 66.28	2774.58	10-yr	2495.04	602.66	598.21	2.72	2.44	35.4	23.69	206.17	403.18	4.2	2.81	4.45	4.45
Dawson County	D10	RM 66.11	2492.331	10-yr	2495.04	602.54	597.8	2.22	2.06	24	17.81	269.84	451.84	4	2.97	4.74	4.74
Dawson County	D10	RM 65.90	2160.839	10-yr	2495.04	602.42	597.33	2.01	1.73	18.91	10.58	227.64	607.98	4.49	2.49	5.09	5.09
Dawson County	D10	RM 65.75	1926.044	10-yr	2495.04	602.31	597.2	2	1.75	19.39	14.49	203.78	527.88	4.04	3	5.1	5.1
Dawson County	D10	RM 65.60	1669.095	10-yr	2495.04	602.14	597.07	2.28	1.73	23.88	10.45	140.14	715.11	4.84	2.08	5.07	5.07
Dawson County	D10	RM 65.42	1386.836	10-yr	2495.04	602.07	596.92	1.72	1.51	13.74	8.49	247.82	580.05	4.69	2.88	5.15	5.15
Dawson County	D10	RM 65.23	1090.639	10-yr	2495.04	601.94	596.91	1.88	1.56	17.72	8.9	263.18	915.72	3.67	1.83	5.04	5.04
Dawson County	D10	RM 64.96	634.963	10-yr	2495.04	601.8	597.09	1.65	1.16	12.97	5.58	270.22	1489.34	4.18	1.8	4.71	4.71

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	10-yr	2494.7	601.65	596.42	1.3	0.98	8.44	3.23	398.12	1815.96	3.69	1.4	5.23	5.23
Richland/McKenzie County	D10	RM 64.32	103200	10-yr	2494.7	601.55	596.33	1.68	0.97	13.27	4	232.97	1975.56	4.37	1.31	5.22	5.22
Richland/McKenzie County	D10	RM 64.12	102900	10-yr	2494.7	601.5	596.18	1.38	0.97	9.25	3.39	281.09	1790.94	3.96	1.44	5.32	5.32
Richland/McKenzie County	D10	RM 63.92	102601	10-yr	2494.7	601.45	596.08	1.33	0.82	8.7	3.45	273.38	2014.65	3.83	1.5	5.37	5.37
Richland/McKenzie County	D10	RM 63.74	102302	10-yr	2494.7	601.39	595.94	1.4	0.9	9.41	3.25	254.65	1909.6	4.24	1.45	5.45	5.45
Richland/McKenzie County	D10	RM 63.55	101998	10-yr	2494.7	601.33	595.79	1.48	0.86	9.87	3	210.56	1901.29	5.07	1.53	5.54	5.54
Richland/McKenzie County	D10	RM 63.34	101671	10-yr	2494.7	601.27	595.21	1.48	0.84	10.43	4.02	241.49	1927.5	4.32	1.65	6.06	6.06
Richland/McKenzie County	D10	RM 63.08	101293	10-yr	2494.7	600.8	595.12	2.94	1.55	40.47	10.74	159.68	1453.06	4.52	1.18	5.68	5.68
Richland/McKenzie County	D10	RM 62.96	101094	10-yr	2494.7	600.62	595.12	2.94	1.72	49.98	13.98	149.74	1083.85	4.88	1.34	5.5	5.5
Richland/McKenzie County	D10	RM 62.83	100882	10-yr	2494.7	600.46	595.12	2.76	1.76	38.81	10.97	161.51	1015.85	5.02	1.39	5.34	5.34
Richland/McKenzie County	D10	RM 62.64	100582	10-yr	2494.7	600.35	595.12	2.36	1.58	25.25	8.57	189.94	951.02	4.95	1.66	5.23	5.23
Richland/McKenzie County	D10	RM 62.46	100282	10-yr	2494.7	599.91	595.1	3.16	2.36	46.99	19.98	160.67	563.72	4.48	1.87	4.81	4.81
Richland/McKenzie County	D10	RM 62.27	99977	10-yr	2494.7	599.96	594.91	1.75	1.48	14.42	7.83	303.29	712.64	4.41	2.37	5.05	5.05
Richland/McKenzie County	D10	RM 62.1	99691	10-yr	2494.7	599.87	594.75	1.62	1.32	12.46	6.69	274.06	982.87	3.6	1.92	5.12	5.12
Richland/McKenzie County	D10	RM 61.91	99377	10-yr	2494.7	599.72	594.51	1.85	1.31	15.8	7.4	164.84	1032.74	4	1.85	5.21	5.21
Richland/McKenzie County	D10	RM 61.72	99082	10-yr	2494.7	599.56	594.36	1.96	1.5	17.89	7.27	127.17	911.31	4.58	1.82	5.2	5.2
Richland/McKenzie County	D10	RM 61.54	98782	10-yr	2494.7	599.3	594.36	2.26	2	23.17	11.93	230.57	550.42	4.43	2.26	4.94	4.94
Richland/McKenzie County	D10	RM 61.35	98482	10-yr	2494.7	599.14	594.26	2.29	1.94	24.71	12.09	215	603.54	4.44	2.15	4.88	4.88
Richland/McKenzie County	D10	RM 61.16	98182	10-yr	2494.7	599.08	594.17	1.73	1.38	14.42	8.79	248.77	953.34	4.07	2.47	4.91	4.91
Richland/McKenzie County	D10	RM 60.99	97906	10-yr	2494.7	598.95	594.02	1.88	1.4	16.59	5.71	216.72	1160.13	4.51	1.54	4.93	4.93
Richland/McKenzie County	D10	RM 60.79	97582	10-yr	2494.7	598.82	593.78	1.93	1.32	18.42	7	224.25	1334.25	3.79	1.43	5.04	5.04
Richland/McKenzie County	D10	RM 60.64	97339	10-yr	2494.7	598.81	593.58	1.21	0.92	7.35	3.71	266.2	1532.7	3.59	1.79	5.23	5.23
Richland/McKenzie County	D10	RM 60.42	96982	10-yr	2494.7	598.67	593.38	1.65	1.25	12.66	4.39	215.62	1371.44	4.36	1.49	5.29	5.29
Richland/McKenzie County	D10	RM 60.25	96700	10-yr	2494.7	598.52	593.24	2.11	1.44	22.29	7.22	192.38	1447.38	3.74	1.19	5.28	5.28
Richland/McKenzie County	D10	RM 60.04	96365	10-yr	2494.7	598.35	593.14	2.04	1.43	21.98	7.52	227.05	1623.55	3.18	1.08	5.21	5.21
Richland/McKenzie County	D10	RM 59.86	96088	10-yr	2494.7	598.26	592.99	1.9	1.06	16.55	3.97	171.48	2085.17	4.81	1.13	5.27	5.27
Richland/McKenzie County	D10	RM 59.65	95769	10-yr	2494.7	598.23	592.85	1.48	0.85	10.34	3.29	207.22	2170.96	4.33	1.35	5.38	5.38
Richland/McKenzie County	D10	RM 59.5	95530	10-yr	2494.7	598.13	592.75	1.64	1.06	13.15	3.98	206.9	1988.97	3.96	1.18	5.38	5.38
Richland/McKenzie County	D10	RM 59.29	95183	10-yr	2494.7	598.04	592.55	1.51	1.07	11.04	3.26	232.08	1977.2	4.05	1.18	5.49	5.49
Richland/McKenzie County	D10	RM 59.07	94797	10-yr	2494.7	597.95	592.36	1.36	1.03	9.82	3.21	408.43	2049.16	3.83	1.24	5.59	5.59
Richland/McKenzie County	D10	RM 58.93	94582	10-yr	2494.7	597.82	592.31	1.72	1.21	14.33	4.12	328.36	1992.82	4.09	1.16	5.51	5.51
Richland/McKenzie County	D10	RM 58.75	94282	10-yr	2494.7	597.7	592.28	1.85	1.31	15.17	3.91	264.72	1890.18	4.77	1.22	5.42	5.42
Richland/McKenzie County	D10	RM 58.56	93982	10-yr	2494.7	597.18	592.22	3.19	2.4	47.13	12.83	157.23	828.53	4.69	1.25	4.96	4.96
Richland/McKenzie County	D10	RM 58.37	93682	10-yr	2494.7	596.93	592.22	2.94	2.55	40.76	12.92	186.39	704.11	4.44	1.39	4.71	4.71
Richland/McKenzie County	D10	RM 58.19	93382	10-yr	2494.7	596.89	592.22	2.08	1.75	20.2	8.75	254.64	842.44	4.51	1.94	4.67	4.67
Richland/McKenzie County	D10	RM 58.01	93086	10-yr	2494.7	596.66	592.14	2.39	2.19	27.16	19.08	236.03	380.78	4.27	2.99	4.52	4.52
Richland/McKenzie County	D10	RM 57.82	92782	10-yr	2494.7	596.59	592.11	1.77	1.64	15.82	11.72	308.1	642.45	3.54	2.62	4.48	4.48
Richland/McKenzie County	D10	RM 57.63	92482	10-yr	2494.7	596.39	592.11	2.27	1.74	25.15	11.31	160.84	809.24	3.98	1.77	4.28	4.28
Richland/McKenzie County	D10	RM 57.46	92205	10-yr	2494.7	596.3	591.95	1.68	1.23	13.7	6.51	192.28	1054.32	4.07	1.92	4.35	4.35
Richland/McKenzie County	D10	RM 57.26	91882	10-yr	2494.7	596.01	591.9	2.19	1.91	24.71	14.96	136.34	638.47	3.44	2.06	4.11	4.11
Richland/McKenzie County	D10	RM 57.07	91583	10-yr	2494.7	595.93	591.73	1.8	1.45	15.84	9.23	137.19	945.13	3.96	2.27	4.2	4.2
Richland/McKenzie County	D10	RM 56.87	91253	10-yr	2494.7	595.77	591.49	1.56	1.34	12.43	9.57	186.15	699.85	3.47	2.66	4.34	4.34
Richland/McKenzie County	D10	RM 56.68	90943	10-yr	2494.7	595.7	591.12	1.31	1.27	8.94	7.47	299.58	726.15	3.25	2.71	4.58	4.58
Richland/McKenzie County	D10	RM 56.54	90682	10-yr	2503.2	595.47	590.76	1.68	1.95	16.22	16.7	216.66	450.1	2.77	2.85	4.75	4.75
Richland/McKenzie County	D10	RM 56.35	90387	10-yr	2503.2	595.36	590.46	1.72	1.74	15	15.01	174.85	407	3.55	3.53	4.9	4.9
Richland/McKenzie County	D11	RM 56.16	90086	10-yr	2503.2	595.01	590.11	2.54	2.52	30.27	24.65	220.03	273.38	4.48	3.64	4.9	4.9
Richland/McKenzie County	D11	RM 55.96	89768	10-yr	2503.2	594.83	589.96	2.37	2.17	26.09	17.68	222.74	405.28	4.62	3.13	4.87	4.87
Richland/McKenzie County	D11	RM 55.78	89479	10-yr	2503.2	594.74	589.96	2.13	1.69	21.32	11.07	216.81	653.6	4.46	2.31	4.78	4.78
Richland/McKenzie County	D11	RM 55.61	89193	10-yr	2503.2	594.58	589.98	2.16	1.76	21.98	10.42	222.22	710.53	4.38	2.06	4.6	4.6
Richland/McKenzie County	D11	RM 55.41	88882	10-yr	2503.2	594.41	589.76	2.19	1.62	23.2	10.54	203.81	969.41	4.13	1.86	4.65	4.65
Richland/McKenzie County	D11	RM 55.23	88582	10-yr	2503.2	594.28	589.53	1.99	1.53	18.44	8.95	238.9	821.18	4.54	2.19	4.75	4.75
Richland/McKenzie County	D11	RM 55.04	88282	10-yr	2503.2	594.1	589.39	2.16	1.66	22.69	12.82	252.08	703.12	4.05	2.28	4.71	4.71
Richland/McKenzie County	D11	RM 54.86	87996	10-yr	2503.2	593.75	589.33	2.72	2.27	37.72	21.08	222.76	592.93	3.5	1.95	4.42	4.42
Richland/McKenzie County	D11	RM 54.69	87715	10-yr	2503.2	593.7	589.23	1.87	1.56	17.31	11.93	188.11	667.34	3.83	2.62	4.47	4.47
Richland/McKenzie County	D11	RM 54.48	87382	10-yr	2503.2	593.58	589.15	1.68	1.24	13.74	7.19	179.29	1175.47	3.94	2.04	4.43	4.43
Richland/McKenzie County	D11	RM 54.32	87122	10-yr	2503.2	593.48	589	1.75	1.17	14.54	5.84	159.94	1714.78	4.33	1.71	4.48	4.48
Richland/McKenzie County	D11	RM 54.1	86783	10-yr	2503.2	593.38	588.83	1.56	1.21	11.5	5.89	202.18	1165.15	4.39	2.22	4.55	4.55
Richland/McKenzie County	D11	RM 53.92	86482	10-yr	2503.2	593.31	588.68	1.43	1.11	10.11	4.78	255.08	1404.58	3.91	1.83	4.63	4.63
Richland/McKenzie County	D11	RM 53.73	86182	10-yr	2503.2	593.21	588.51	1.67	1.2	13.1	5.31	196.75	1929.24	4.48	1.79	4.7	4.7
Richland/McKenzie County	D11	RM 53.55	85882	10-yr	2503.2	593.09	588.37	1.69	1.29	13.47	4.94	181.72	1387.59	4.37	1.58	4.72	4.72
Richland/McKenzie County	D11	RM 53.36	85582	10-yr	2503.2	592.92	588.01	1.84	1.43	16.76	4.98	166.55	1594.06	3.86	1.13	4.91	4.91

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 53.17	85290	10-yr	2503.2	592.62	587.56	2.5	1.79	29.11	6.76	205.11	1320.63	4.6	1.06	5.06	5.06
Richland/McKenzie County	D11	RM 52.98	84982	10-yr	2503.2	592.25	587.56	2.85	1.9	43.55	13.63	271.44	2146.81	2.97	0.92	4.69	4.69
Richland/McKenzie County	D11	RM 52.79	84682	10-yr	2503.2	592	587.56	2.17	1.53	26.09	10.97	386.79	2056.54	2.73	1.14	4.44	4.44
Richland/McKenzie County	D11	RM 52.61	84390	10-yr	2503.2	591.9	587.43	1.59	1.41	12.99	6.11	450.01	1838.48	3.39	1.59	4.47	4.47
Richland/McKenzie County	D11	RM 52.42	84082	10-yr	2503.2	591.81	587.28	1.46	1.1	11.48	5.38	409.93	2121.89	2.97	1.38	4.53	4.53
Richland/McKenzie County	D11	RM 52.24	83798	10-yr	2503.2	591.72	587.28	1.57	0.91	12.37	5.21	227.41	2788.04	3.64	1.51	4.44	4.44
Richland/McKenzie County	D11	RM 52.01	83423	10-yr	2503.2	591.5	587.23	2.04	1.39	20.25	5.33	124.91	2279.87	4.06	1.04	4.27	4.27
Richland/McKenzie County	D11	RM 51.87	83182	10-yr	2503.2	591.4	587.16	1.61	1.11	14.1	5.03	156.7	2705.86	2.85	1	4.24	4.24
Richland/McKenzie County	D11	RM 51.69	82882	10-yr	2503.2	591.29	587.16	1.47	0.94	10.84	3.53	149.65	2805.65	3.37	1.08	4.13	4.13
Richland/McKenzie County	D11	RM 51.51	82585	10-yr	2503.2	591.2	587.16	1.63	1.17	14.23	5.47	149.84	2269.64	3.03	1.15	4.04	4.04
Richland/McKenzie County	D11	RM 51.32	82274	10-yr	2503.2	591.14	587.16	1.42	0.98	10.79	4.03	173.83	2807.53	2.97	1.09	3.98	3.98
Richland/McKenzie County	D11	RM 51.13	81982	10-yr	2503.2	591.08	587.13	1.46	0.97	10.53	2.93	164.42	2505.93	3.77	1.03	3.97	3.97
Richland/McKenzie County	D11	RM 50.95	81682	10-yr	2503.2	591	587.08	1.34	0.8	8.96	2.34	144.96	3312.16	3.7	0.95	3.92	3.92
Richland/McKenzie County	D11	RM 50.76	81378	10-yr	2503.2	590.94	586.89	1.25	0.66	7.89	2.65	174.41	3255.83	3.55	1.17	4.05	4.05
Richland/McKenzie County	D11	RM 50.56	81065	10-yr	2503.2	590.75	586.37	1.67	0.99	13.32	2.98	171.61	2780.77	4.25	0.94	4.38	4.38
Richland/McKenzie County	D11	RM 50.39	80787	10-yr	2503.2	590.7	585.7	1.52	0.89	10.5	2.32	196.96	2643.21	4.89	1.06	5	5
Richland/McKenzie County	D11	RM 50.21	80482	10-yr	2503.2	590.61	585.55	1.45	1	9.89	2.75	234.94	2095.06	4.34	1.2	5.06	5.06
Richland/McKenzie County	D11	RM 50.02	80182	10-yr	2508.9	590.46	585.55	1.79	1.33	15.26	4.8	197.51	1436.33	4.26	1.31	4.91	4.91
Richland/McKenzie County	D12	RM 49.82	79860	10-yr	2508.9	590.07	585.55	2.64	2.18	33.11	12.52	211.05	715.63	4.3	1.61	4.52	4.52
Richland/McKenzie County	D12	RM 49.65	79582	10-yr	2508.9	589.79	585.55	2.79	2.37	37.97	18.52	213.94	552.67	3.99	1.94	4.24	4.24
Richland/McKenzie County	D12	RM 49.5	79348	10-yr	2508.9	589.89	585.49	1.39	1.24	9.21	4.36	355.87	1101.93	4.31	2.04	4.44	4.44
Richland/McKenzie County	D12	RM 49.26	78981	10-yr	2508.9	589.8	585.29	1.68	1.24	13.42	6.22	137.44	1057.78	4.29	1.96	4.51	4.51
Richland/McKenzie County	D12	RM 49.08	78682	10-yr	2508.9	589.66	585.11	1.82	1.36	15.7	7.3	156.64	954.23	4.29	1.97	4.62	4.62
Richland/McKenzie County	D12	RM 48.87	78351	10-yr	2508.9	589.55	584.96	1.78	1.49	15.03	5.29	209.35	1480.06	4.31	1.51	4.59	4.59
Richland/McKenzie County	D12	RM 48.7	78082	10-yr	2508.9	589.46	584.86	1.69	1.41	14.5	5.46	252.25	1429.61	3.56	1.32	4.6	4.6
Richland/McKenzie County	D12	RM 48.52	77782	10-yr	2508.9	589.45	584.74	1.08	0.93	5.97	3.05	473.03	1509.47	3.5	1.78	4.71	4.71
Richland/McKenzie County	D12	RM 48.33	77482	10-yr	2508.9	589.39	584.51	1.17	0.98	7.3	4.4	513.28	1468.47	2.9	1.74	4.88	4.88
Richland/McKenzie County	D12	RM 48.15	77182	10-yr	2508.9	589.28	584.24	1.43	0.93	9.18	4.93	497.96	1697.79	2.99	1.6	5.04	5.04
Richland/McKenzie County	D12	RM 47.97	76887	10-yr	2508.9	589.25	584.09	1.1	0.86	4.68	3.06	601.73	2144.16	2.66	1.73	5.16	5.16
Richland/McKenzie County	D12	RM 47.76	76570	10-yr	2508.9	589.2	583.86	1.02	0.9	4.76	3.02	565.5	1981.35	2.99	1.89	5.34	5.34
Richland/McKenzie County	D12	RM 47.59	76293	10-yr	2508.9	589.14	583.71	1.16	0.97	6.31	2.88	391.27	2004.43	3.71	1.68	5.43	5.43
Richland/McKenzie County	D12	RM 47.4	75982	10-yr	2508.9	589.04	583.42	1.53	1.04	10.69	3.7	196.88	1941.93	4.55	1.56	5.62	5.62
Richland/McKenzie County	D12	RM 47.12	75521	10-yr	2508.9	588.84	583.04	1.83	1.3	14.64	3.62	234.72	1736.91	5.54	1.35	5.8	5.8
Richland/McKenzie County	D12	RM 47	75323	10-yr	2508.9	588.41	583.04	3.1	2.26	44.22	9.79	162.2	1298.6	4.79	1.05	5.37	5.37
Richland/McKenzie County	D12	RM 46.85	75082	10-yr	2508.9	588.27	583.04	2.77	2.19	35.19	9.1	184.53	1044.2	4.77	1.22	5.23	5.23
Richland/McKenzie County	D12	RM 46.67	74782	10-yr	2508.9	588.05	583.04	2.74	2.38	34.33	11.68	185.83	727.73	4.85	1.63	5.01	5.01
Richland/McKenzie County	D12	RM 46.47	74459	10-yr	2508.9	588.03	583.04	1.83	1.72	15.9	7.56	312.11	748.36	4.35	2.05	4.99	4.99
Richland/McKenzie County	D12	RM 46.3	74186	10-yr	2508.9	587.9	583.04	1.91	1.77	15.27	8.26	421.1	857.65	3.07	1.65	4.86	4.86
Richland/McKenzie County	D12	RM 46.14	73920	10-yr	2508.9	587.8	583.04	1.72	1.59	12.56	7.91	454.55	794.89	3.17	1.99	4.76	4.76
Richland/McKenzie County	D12	RM 45.9	73546	10-yr	2508.9	587.66	582.97	1.72	1.39	14.4	6.73	339.6	1015.6	3.82	1.78	4.69	4.69
Richland/McKenzie County	D12	RM 45.75	73307	10-yr	2508.9	587.48	582.88	2.03	1.67	19.1	8.6	351.5	1048.11	3.2	1.43	4.6	4.6
Richland/McKenzie County	D12	RM 45.54	72980	10-yr	2508.9	587.39	582.55	1.59	1.36	12.53	5.7	382.5	1067.24	3.84	1.73	4.84	4.84
Richland/McKenzie County	D12	RM 45.29	72680	10-yr	2508.9	587.26	582.25	1.75	1.42	15.1	6.96	347.33	1017.11	3.79	1.73	5.01	5.01
Richland/McKenzie County	D12	RM 45.09	72380	10-yr	2508.9	587.14	582.08	1.81	1.43	15.15	5.34	267.36	1074.05	4.66	1.63	5.06	5.06
Richland/McKenzie County	D12	RM 44.91	72080	10-yr	2508.9	587.05	582.01	1.74	1.34	14.14	6.38	283.48	938.94	4.44	1.99	5.04	5.04
Richland/McKenzie County	D12	RM 44.72	71783	10-yr	2508.9	586.84	581.97	2.23	1.58	23.15	9.98	208.81	816.72	4.56	1.95	4.87	4.87
Richland/McKenzie County	D12	RM 44.53	71483	10-yr	2508.9	586.6	581.82	2.56	1.76	31.11	12.55	177.29	824.82	4.33	1.73	4.78	4.78
Richland/McKenzie County	D12	RM 44.34	71183	10-yr	2508.9	586.31	581.8	2.72	2	36.82	15.49	198.51	859.68	3.72	1.55	4.51	4.51
Richland/McKenzie County	D12	RM 44.17	70899	10-yr	2508.9	586.33	581.79	1.5	1.23	10.58	5.01	301.73	1278.09	4.46	2.1	4.54	4.54
Richland/McKenzie County	D12	RM 43.97	70594	10-yr	2508.9	586.26	581.73	1.41	1.18	10.02	4.67	326.68	1937.3	3.67	1.7	4.53	4.53
Richland/McKenzie County	D12	RM 43.74	70230	10-yr	2508.9	586.11	581.66	1.6	1.49	12.96	7.48	163.71	1144.71	3.5	2	4.45	4.45
Richland/McKenzie County	D12	RM 43.59	69983	10-yr	2508.9	586.02	581.56	1.49	0.96	10.8	3.73	143.76	2322.51	3.59	1.21	4.46	4.46
Richland/McKenzie County	D12	RM 43.4	69684	10-yr	2508.9	585.93	581.49	1.46	0.97	10.55	3.63	150.64	2462.13	3.79	1.28	4.44	4.44
Richland/McKenzie County	D12	RM 43.03	69084	10-yr	2508.9	585.81	581.37	1.47	0.88	10.97	3.33	131.62	3330.82	3.55	1.06	4.44	4.44
Richland/McKenzie County	D12	RM 42.66	68489	10-yr	2508.9	585.71	581.18	1.58	0.92	12.28	3.52	115.82	3178.74	3.89	1.09	4.53	4.53
Richland/McKenzie County	D12	RM 42.29	67889	10-yr	2508.9	585.65	580.87	1.15	0.77	6.34	1.99	281.47	3210.22	4.19	1.3	4.78	4.78
Richland/McKenzie County	D12	RM 42.08	67558	10-yr	2508.9	585.6	580.61	1.34	0.76	8.32	2.44	180.64	2918.09	4.74	1.37	4.99	4.99
Richland/McKenzie County	D12	RM 41.89	67260	10-yr	2508.9	585.52	580.31	1.43	0.87	9.52	2.72	292.42	2570.89	4.62	1.31	5.21	5.21
Richland/McKenzie County	D12	RM 41.75	67037	10-yr	2508.9	585.43	579.99	1.56	1.04	11.89	3.27	337.38	2503.93	3.94	1.07	5.44	5.44
Richland/McKenzie County	D12	RM 41.54	66695	10-yr	2508.9	585.27	579.72	1.93	1.05	16.65	4.07	196.39	1893.03	5.24	1.26	5.55	5.55
Richland/McKenzie County	D12	RM 41.34	66361	10-yr	2508.9	585.13	579.43	2.02	1.23	19.3	5.68	218.95	1615.52	4.33	1.26	5.7	5.7

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 41.18	66116	10-yr	2508.9	585	579.08	2.08	1.27	19.81	5.36	195.81	1513.19	4.9	1.3	5.92	5.92
Richland/McKenzie County	D12	RM 40.99	65802	10-yr	2508.9	584.9	578.99	1.95	1.12	17.57	4.44	203.5	1893.68	4.76	1.18	5.91	5.91
Richland/McKenzie County	D12	RM 40.8	65502	10-yr	2508.9	584.76	578.97	1.91	1.45	17.45	5.44	273.63	1436.88	4.22	1.3	5.79	5.79
Richland/McKenzie County	D12	RM 40.62	65205	10-yr	2508.9	584.7	578.92	1.45	1.05	10.52	3.59	375.4	2369.12	3.74	1.26	5.78	5.78
Richland/McKenzie County	D12	RM 40.24	64602	10-yr	2508.9	584.53	578.6	1.38	0.93	8.97	3.16	507.11	2451.88	3.18	1.11	5.93	5.93
Richland/McKenzie County	D12	RM 40	64219	10-yr	2508.9	584.37	578.56	1.71	1.06	13.97	3.55	309.03	2238.4	4.21	1.06	5.81	5.81
Richland/McKenzie County	D12	RM 39.87	64002	10-yr	2508.9	584.23	578.55	2.03	1.16	18.76	4.26	222	1961.77	4.93	1.1	5.68	5.68
Richland/McKenzie County	D12	RM 39.68	63702	10-yr	2508.9	584.11	578.45	2.05	1.32	20.04	5.15	241.95	1764.26	4.32	1.1	5.66	5.66
Richland/McKenzie County	D12	RM 39.5	63402	10-yr	2508.9	583.96	578.35	2.18	1.36	22.95	6.22	226.39	1952.12	4.11	1.1	5.61	5.61
Richland/McKenzie County	D12	RM 39.31	63102	10-yr	2508.9	583.87	578.31	1.9	1.24	16.88	6.32	227.2	1401.86	4.39	1.63	5.56	5.56
Richland/McKenzie County	D12	RM 39.13	62802	10-yr	2508.9	583.75	578.2	1.86	1.27	16.77	6.12	286.04	1568.26	4.01	1.45	5.55	5.55
Richland/McKenzie County	D12	RM 38.94	62501	10-yr	2508.9	583.66	578.12	1.74	1.08	14.3	4.69	264.15	1812.77	4.32	1.4	5.54	5.54
Richland/McKenzie County	D12	RM 38.76	62201	10-yr	2508.9	583.57	578.03	1.7	1.07	13.13	3.71	245.72	1877.87	4.88	1.36	5.54	5.54
Richland/McKenzie County	D12	RM 38.57	61901	10-yr	2508.9	583.47	577.87	1.84	1.06	16.56	6.02	236.46	1839.74	3.99	1.43	5.6	5.6
Richland/McKenzie County	D12	RM 38.38	61601	10-yr	2508.9	583.46	577.84	1.07	0.65	5.56	2.6	268.55	2222.18	4.06	1.88	5.62	5.62
Richland/McKenzie County	D12	RM 38.2	61301	10-yr	2508.9	583.4	577.82	1.24	0.73	7.04	2.72	244.45	2193.29	4.88	1.86	5.58	5.58
Richland/McKenzie County	D12	RM 38.01	61008	10-yr	2508.9	583.36	577.81	1.29	0.87	8.21	4.48	307.49	1405.59	3.77	2.04	5.55	5.55
Richland/McKenzie County	D12	RM 37.84	60708	10-yr	2508.9	583.27	577.71	1.45	1.1	11.3	5.68	335.25	1215.69	3.78	1.88	5.56	5.56
Richland/McKenzie County	D12	RM 37.65	60408	10-yr	2508.9	583.25	577.66	0.97	0.79	4.67	3.28	565.42	1218.43	3.7	2.59	5.59	5.59
Richland/McKenzie County	D12	RM 37.5	60107	10-yr	2508.9	583.21	577.54	0.96	0.9	4.71	3.78	561.58	1102.31	3.23	2.6	5.67	5.67
Richland/McKenzie County	D12	RM 37.35	59808	10-yr	2508.9	583.12	577.37	1.1	0.94	6.97	4.08	427.63	1268.1	3.59	2.09	5.75	5.75
Richland/McKenzie County	D12	RM 37.16	59508	10-yr	2508.9	583	577.24	1.6	1.16	12	6.69	280.03	1038.02	3.76	2.08	5.76	5.76
Richland/McKenzie County	D12	RM 36.97	59208	10-yr	2508.9	582.9	576.96	1.77	1.29	13.9	8.03	222.26	934.42	3.64	2.08	5.94	5.94
Richland/McKenzie County	D12	RM 36.78	58908	10-yr	2508.9	582.82	576.87	1.64	1.24	11.92	7	217.29	769.95	4.51	2.63	5.95	5.95
Richland/McKenzie County	D12	RM 36.6	58608	10-yr	2508.9	582.73	576.66	1.71	1.39	12.88	7.75	182.19	726.68	5.43	3.21	6.07	6.07
Richland/McKenzie County	D12	RM 36.38	58263	10-yr	2522.7	582.61	576.49	1.72	1.72	13.34	12.99	290.42	622.75	5.05	4.92	6.12	6.12
Richland/McKenzie County	D13	RM 36.23	58011	10-yr	2522.7	582.41	576.43	2.25	2.03	22.2	11.64	198.85	660.5	5.55	2.87	5.98	5.98
Richland/McKenzie County	D13	RM 36.04	57708	10-yr	2522.7	582.2	576.42	2.54	1.9	29.57	13.07	193.94	775.34	4.8	2.09	5.78	5.78
Richland/McKenzie County	D13	RM 35.85	57408	10-yr	2522.7	582.11	576.41	2.13	1.62	19.64	11.54	277.98	808.04	3.9	2.27	5.69	5.69
Richland/McKenzie County	D13	RM 35.66	57108	10-yr	2522.7	582.09	576.36	1.49	1.22	9.84	5.67	327.66	1010.1	4.56	2.62	5.73	5.73
Richland/McKenzie County	D13	RM 35.48	56810	10-yr	2522.7	581.9	576.3	2.13	1.53	20.76	8.36	189.87	1120.79	4.9	1.95	5.6	5.6
Richland/McKenzie County	D13	RM 35.29	56508	10-yr	2522.7	581.78	576.19	2.08	1.57	20.7	10.44	216.77	921.7	4.17	2.08	5.59	5.59
Richland/McKenzie County	D13	RM 35.1	56208	10-yr	2522.7	581.67	576.07	1.86	1.46	15.55	7.39	244.46	790.76	5.11	2.39	5.6	5.6
Richland/McKenzie County	D13	RM 34.92	55908	10-yr	2522.7	581.54	576.09	1.95	1.49	20.08	9.63	254.13	873.64	4.59	2.19	5.45	5.45
Richland/McKenzie County	D13	RM 34.73	55605	10-yr	2522.7	581.47	575.89	1.54	1.37	10.86	7.22	414.63	741.58	3.77	2.5	5.58	5.58
Richland/McKenzie County	D13	RM 34.54	55297	10-yr	2522.7	581.37	575.79	1.57	1.38	11.79	8.54	394.66	789.32	3.21	2.32	5.58	5.58
Richland/McKenzie County	D13	RM 34.36	55008	10-yr	2522.7	581.32	575.75	1.35	1.07	7.99	4.21	323.48	950.19	4.74	2.48	5.57	5.57
Richland/McKenzie County	D13	RM 34.17	54708	10-yr	2522.7	581.29	575.49	1.21	0.93	7.03	3.89	380.95	1182.29	4.23	2.33	5.8	5.8
Richland/McKenzie County	D13	RM 33.94	54408	10-yr	2522.7	581.26	575.34	1.12	0.86	5.61	3.14	374.48	1226.24	4.35	2.42	5.92	5.92
Richland/McKenzie County	D13	RM 33.76	54079	10-yr	2522.7	581.2	575.12	1.26	1.01	7.48	4.4	286.39	1018.84	4.52	2.62	6.08	6.08
Richland/McKenzie County	D13	RM 33.6	53799	10-yr	2522.7	581.16	574.88	1.2	0.96	7.29	4.77	376.74	974.79	4.15	2.69	6.28	6.28
Richland/McKenzie County	D13	RM 33.42	53508	10-yr	2522.7	581.11	574.61	1.32	0.99	7.43	3.88	262.09	939.07	5.32	2.74	6.5	6.5
Richland/McKenzie County	D13	RM 33.23	53208	10-yr	2522.7	581.08	574.45	1.28	0.99	7.05	3.87	209.05	806.09	5.84	3.17	6.63	6.63
Richland/McKenzie County	D13	RM 33.04	52908	10-yr	2522.7	581	574.3	1.53	1.15	9.84	4.46	193.34	1058.36	6.36	2.85	6.7	6.7
Richland/McKenzie County	D13	RM 32.86	52608	10-yr	2522.7	580.87	574.18	1.85	1.25	14.78	6.12	209.27	1053.52	5.87	2.39	6.69	6.69
Richland/McKenzie County	D13	RM 32.67	52308	10-yr	2522.7	580.8	574.18	1.88	1.07	15.38	6.2	188.53	1299.15	5.66	2.24	6.62	6.62
Richland/McKenzie County	D13	RM 32.48	52008	10-yr	2522.7	580.68	574.04	2.02	1.17	18.12	6.37	196.91	1218.31	5.35	1.84	6.64	6.64
Richland/McKenzie County	D13	RM 32.29	51709	10-yr	2522.7	580.63	574.04	1.67	1.02	12.18	5.03	224.23	1115.52	5.59	2.28	6.59	6.59
Richland/McKenzie County	D13	RM 32.11	51423	10-yr	2522.7	580.58	573.94	1.62	1.18	11.19	3.9	220.08	1052.73	5.89	2.03	6.64	6.64
Richland/McKenzie County	D13	RM 31.92	51108	10-yr	2522.7	580.53	573.85	1.56	1.03	10.92	4.45	211.85	1183.18	5.13	2.06	6.68	6.68
Richland/McKenzie County	D13	RM 31.73	50809	10-yr	2522.7	580.49	573.72	1.33	0.91	7.95	3.27	261.37	1152.62	5.93	2.41	6.77	6.77
Richland/McKenzie County	D13	RM 31.51	50462	10-yr	2522.7	580.29	573.24	2.13	1.35	18.25	6.51	162.22	902.32	5.94	2.08	7.05	7.05
Richland/McKenzie County	D13	RM 31.35	50208	10-yr	2522.7	580.17	573.24	2.29	1.59	23.54	10.33	169.04	714.65	5.17	2.22	6.93	6.93
Richland/McKenzie County	D13	RM 31.22	50009	10-yr	2522.7	580.01	573.24	2.52	1.8	27.7	12.73	149.68	545.52	5.7	2.57	6.77	6.77
Richland/McKenzie County	D13	RM 31.12	49859	10-yr	2522.7	579.96	570.86	2.08	2.05	25.22	23.53	196.27	213.58	6.17	5.75	9.1	9.1
Richland/McKenzie County	D13	Highway 23	49844	10-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	10-yr	2522.7	579.93	570.86	2.1	2.08	24.99	23.15	192.51	211.45	6.21	5.75	9.07	9.07
Richland/McKenzie County	D13	RM 30.97	49608	10-yr	2522.7	579.89	573.24	1.79	1.73	13.44	9.28	225.84	588.5	6.23	4.28	6.65	6.65
Richland/McKenzie County	D13	RM 30.79	49308	10-yr	2522.7	579.7	573.24	2.26	1.97	22.45	10.94	199.27	671.88	5.5	2.65	6.46	6.46
Richland/McKenzie County	D13	RM 30.6	49009	10-yr	2522.7	579.52	573.24	2.45	1.86	26.72	11.76	187.26	762.35	5.25	2.28	6.28	6.28
Richland/McKenzie County	D13	RM 30.41	48706	10-yr	2522.7	579.43	573.15	2.15	1.65	20.36	8.73	212.3	803.74	5.16	2.19	6.28	6.28

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 30.22	48403	10-yr	2522.7	579.33	573.15	2.09	1.57	19	6.11	199.03	1191.73	5.71	1.81	6.18	6.18
Richland/McKenzie County	D13	RM 30.03	48102	10-yr	2522.7	579.34	573.15	1.37	1.04	8.23	3.61	315.48	1138.78	5.49	2.35	6.19	6.19
Richland/McKenzie County	D13	RM 29.85	47809	10-yr	2522.7	579.31	573.15	1.26	0.95	7.23	3.25	376.84	1217.41	4.95	2.19	6.16	6.16
Richland/McKenzie County	D13	RM 29.66	47508	10-yr	2522.7	579.21	573.11	1.52	1.08	8.9	4.08	393.01	1321.57	3.91	1.77	6.1	6.1
Richland/McKenzie County	D13	RM 29.48	47209	10-yr	2522.7	579.16	573.11	1.39	1.01	8.21	3.75	346.87	1151.06	4.79	2.16	6.05	6.05
Richland/McKenzie County	D13	RM 29.28	46894	10-yr	2522.7	579.12	572.98	1.23	1.01	7.13	4.61	401.07	877.97	4.4	2.84	6.14	6.14
Richland/McKenzie County	D13	RM 29.1	46608	10-yr	2522.7	579.06	572.94	1.56	1.04	10.95	6.89	169.86	757.39	5.15	3.21	6.12	6.12
Richland/McKenzie County	D13	RM 28.92	46308	10-yr	2522.7	578.97	572.85	1.68	1.2	12.3	5.35	146.69	868.03	5.65	2.41	6.12	6.12
Richland/McKenzie County	D13	RM 28.73	46008	10-yr	2522.7	578.94	572.67	1.48	1.01	9.64	4.78	152.03	971.77	5.39	2.63	6.27	6.27
Richland/McKenzie County	D13	RM 28.54	45708	10-yr	2522.7	578.9	572.67	1.39	0.96	8.32	4.34	201.29	1059.88	4.97	2.56	6.23	6.23
Richland/McKenzie County	D13	RM 28.36	45419	10-yr	2522.7	578.86	572.48	1.27	0.92	7.16	3.76	233.95	1088.26	5.39	2.8	6.38	6.38
Richland/McKenzie County	D13	RM 28.15	45071	10-yr	2522.7	578.81	572.25	1.15	1.03	5.88	4.14	429.8	816.49	5.01	3.51	6.56	6.56
Richland/McKenzie County	D13	RM 27.98	44808	10-yr	2522.7	578.67	572.04	1.77	1.48	13.42	6.49	236.34	634.51	5.86	2.81	6.63	6.63
Richland/McKenzie County	D13	RM 27.8	44508	10-yr	2522.7	578.62	571.87	1.67	1.4	11.52	5.42	226.85	596.7	6.49	3.02	6.75	6.75
Richland/McKenzie County	D14	RM 27.61	44208	10-yr	2522.7	578.56	571.87	1.67	1.39	11.87	4.79	246.37	771.96	5.95	2.37	6.69	6.69
Richland/McKenzie County	D14	RM 27.43	43916	10-yr	2522.7	578.53	571.87	1.47	1.17	9.11	3.11	261.74	1197.42	6.29	2.12	6.66	6.66
Richland/McKenzie County	D14	RM 27.23	43608	10-yr	2522.7	578.52	571.87	1.18	0.91	5.81	2.02	310.87	1231.63	6.53	2.25	6.65	6.65
Richland/McKenzie County	D14	RM 27.04	43305	10-yr	2522.7	578.45	571.87	1.42	1.02	8.63	2.82	277.5	1296.64	5.98	1.91	6.58	6.58
Richland/McKenzie County	D14	RM 26.86	43008	10-yr	2522.7	578.37	571.87	1.65	1.12	11.43	3.21	229.41	1309.46	6.21	1.71	6.5	6.5
Richland/McKenzie County	D14	RM 26.67	42708	10-yr	2522.7	578.33	571.87	1.5	1.04	9.41	2.62	252.42	1416.7	6.2	1.7	6.46	6.46
Richland/McKenzie County	D14	RM 26.48	42408	10-yr	2522.7	578.21	571.87	1.86	1.27	14.67	4.21	209.83	1163.32	6.04	1.7	6.34	6.34
Richland/McKenzie County	D14	RM 26.29	42108	10-yr	2522.7	578.12	571.87	1.92	1.41	15.67	5.12	205.84	935.36	5.95	1.92	6.25	6.25
Richland/McKenzie County	D14	RM 26.11	41808	10-yr	2522.7	578.09	571.87	1.63	1.34	11.42	4.25	249.58	863.22	5.92	2.18	6.22	6.22
Richland/McKenzie County	D14	RM 25.92	41508	10-yr	2522.7	578.06	571.87	1.38	1.22	8.14	3.3	305.76	987.36	5.9	2.37	6.19	6.19
Richland/McKenzie County	D14	RM 25.73	41208	10-yr	2522.7	578.02	571.74	1.34	1.32	7.64	5.62	309.7	852.16	6.06	4.45	6.28	6.28
Richland/McKenzie County	D14	RM 25.55	40918	10-yr	2522.7	577.96	571.74	1.45	1.41	9.53	5.95	346.01	977.91	5	3.11	6.22	6.22
Richland/McKenzie County	D14	RM 25.37	40619	10-yr	2522.7	577.89	571.74	1.47	1.41	9.98	6.09	353.9	933.28	4.81	2.93	6.15	6.15
Richland/McKenzie County	D14	RM 25.17	40310	10-yr	2522.7	577.8	571.74	1.59	1.45	11.22	6.38	361.09	879.64	4.33	2.45	6.06	6.06
Richland/McKenzie County	D14	RM 24.99	40008	10-yr	2522.7	577.78	571.74	1.27	1.12	7.03	4.09	384.4	783.15	5.08	2.94	6.04	6.04
Richland/McKenzie County	D14	RM 24.8	39703	10-yr	2522.7	577.75	571.71	1.09	1.03	5.6	3.39	400.02	707.11	5.75	3.48	6.04	6.04
Richland/McKenzie County	D14	RM 24.62	39408	10-yr	2522.7	577.66	571.64	1.52	1.38	10.25	6.33	278.78	554.02	5.36	3.29	6.02	6.02
Richland/McKenzie County	D14	RM 24.45	39139	10-yr	2522.7	577.52	571.64	1.85	1.79	14.91	10.38	239.98	360.22	5.65	3.92	5.88	5.88
Richland/McKenzie County	D14	RM 24.24	38801	10-yr	2522.7	577.43	571.58	1.85	1.69	14.79	9.71	237.24	404.68	5.65	3.7	5.85	5.85
Richland/McKenzie County	D14	RM 24.05	38506	10-yr	2522.7	577.38	571.48	1.68	1.63	12.26	9.05	264.93	373.09	5.65	4.15	5.9	5.9
Richland/McKenzie County	D14	RM 23.87	38210	10-yr	2522.7	577.38	571.28	1.28	1.25	6.97	5.44	334.4	438.37	5.9	4.59	6.1	6.1
Richland/McKenzie County	D14	RM 23.66	37912	10-yr	2522.7	577.36	571.21	1.05	1.03	4.82	3.75	442.5	580.63	5.43	4.21	6.15	6.15
Richland/McKenzie County	D14	RM 23.48	37610	10-yr	2522.7	577.33	571.12	1.14	1.07	6.08	4.31	347.97	719.1	4.61	3.27	6.21	6.21
Richland/McKenzie County	D14	RM 23.29	37312	10-yr	2522.7	577.27	570.86	1.28	1.13	7.61	4.46	313.75	867.4	4.51	2.62	6.41	6.41
Richland/McKenzie County	D14	RM 23.1	37006	10-yr	2522.7	577.23	570.82	1.28	1.02	7.53	3.84	254.67	989.8	5.29	2.67	6.41	6.41
Richland/McKenzie County	D14	RM 22.92	36721	10-yr	2522.7	577.18	570.8	1.4	1.05	8.69	3.56	214.08	1237.58	5.21	2.1	6.38	6.38
Richland/McKenzie County	D14	RM 22.72	36402	10-yr	2522.7	577.08	570.81	1.74	1.17	12.98	4.58	178.19	1066.41	5.88	2.04	6.27	6.27
Richland/McKenzie County	D14	RM 22.54	36108	10-yr	2522.7	577.03	570.76	1.49	1.12	9.67	3.87	276.8	1007.19	5.71	2.26	6.27	6.27
Richland/McKenzie County	D14	RM 22.35	35808	10-yr	2522.7	576.99	570.74	1.39	1.1	8.47	4.1	308.52	888.12	5.51	2.64	6.25	6.25
Richland/McKenzie County	D14	RM 22.17	35508	10-yr	2522.7	576.95	570.68	1.33	1.11	7.51	3.53	303.06	828.25	6.07	2.84	6.27	6.27
Richland/McKenzie County	D14	RM 22.02	35264	10-yr	2522.7	576.94	570.68	1.14	1.01	5.46	3.02	354.21	745.11	6.14	3.37	6.26	6.26
Richland/McKenzie County	D14	RM 21.8	34901	10-yr	2522.7	576.88	570.69	1.26	1.14	7.21	5.02	400.8	653.23	4.91	3.4	6.19	6.19
Richland/McKenzie County	D14	RM 21.61	34626	10-yr	2522.7	576.84	570.67	1.23	1.18	7.22	5.53	468.94	647.9	4.33	3.31	6.17	6.17
Richland/McKenzie County	D14	RM 21.34	34140	10-yr	2522.7	576.81	570.67	1.08	0.9	5.1	3.06	289.64	864.53	5.47	3.26	6.14	6.14
Richland/McKenzie County	D14	RM 21.25	33973	10-yr	2522.7	576.77	570.67	1.36	1.03	8.26	4.19	204.29	985.48	4.95	2.48	6.1	6.1
Richland/McKenzie County	D14	RM 21.06	33672	10-yr	2522.7	576.75	570.6	1.13	0.88	5.7	2.86	267.5	1136.36	5.06	2.52	6.15	6.15
Richland/McKenzie County	D14	RM 20.9	33400	10-yr	2522.7	576.72	570.58	1.21	0.95	6.86	3.4	251.38	1179.96	4.57	2.24	6.14	6.14
Richland/McKenzie County	D14	RM 20.71	33101	10-yr	2522.7	576.65	570.53	1.44	1.06	9.6	4.36	247.47	1104.15	4.8	2.17	6.12	6.12
Richland/McKenzie County	D14	RM 20.52	32800	10-yr	2522.7	576.62	570.52	1.27	0.97	7.22	2.96	280.27	1221.4	5.21	2.12	6.1	6.1
Richland/McKenzie County	D14	RM 20.34	32500	10-yr	2522.7	576.58	570.52	1.31	1.01	7.58	3.34	256.92	1081.17	5.31	2.32	6.06	6.06
Richland/McKenzie County	D14	RM 20.15	32200	10-yr	2522.7	576.52	570.52	1.43	1.11	10.53	3.71	231.21	1190.7	5.46	1.9	6	6
Richland/McKenzie County	D14	RM 19.96	31900	10-yr	2522.7	576.26	570.52	2.28	1.61	22.81	6.96	189.46	964.15	5.44	1.63	5.74	5.74
Richland/McKenzie County	D14	RM 19.77	31600	10-yr	2522.7	576.3	570.5	1.38	1.09	8.33	3.02	332.93	1298.38	5.27	1.89	5.8	5.8
Richland/McKenzie County	D14	RM 19.59	31297	10-yr	2522.7	576.26	570.45	1.31	0.98	7.65	2.93	334.34	1470.03	4.97	1.89	5.81	5.81
Richland/McKenzie County	D14	RM 19.4	30995	10-yr	2522.7	576.19	570.45	1.47	0.98	9.94	3.62	284.81	1632.61	4.75	1.71	5.74	5.74
Richland/McKenzie County	D14	RM 19.21	30710	10-yr	2522.7	576.18	570.38	1.03	0.74	4.69	2.06	380.6	1626.04	5.37	2.34	5.8	5.8
Richland/McKenzie County	D14	RM 19.03	30402	10-yr	2522.7	576.15	570.38	1.06	0.8	4.9	2.37	428.38	1636.5	4.72	2.26	5.77	5.77

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 18.83	30086	10-yr	2522.7	576.11	570.38	1.07	0.78	4.9	2.59	505.09	1999.78	3.8	1.99	5.73	5.73
Richland/McKenzie County	D14	RM 18.66	29802	10-yr	2522.7	576.08	570.38	1.12	0.8	5.82	3.29	455.27	2018.73	3.79	2.12	5.7	5.7
Richland/McKenzie County	D14	RM 18.47	29499	10-yr	2522.7	575.98	570.36	1.52	1.07	10.97	5.07	299.05	1831.81	4.28	1.95	5.62	5.62
Richland/McKenzie County	D14	RM 18.28	29197	10-yr	2522.7	575.86	570.36	1.65	1.38	12.4	4.5	299.23	1341.08	4.94	1.78	5.5	5.5
Richland/McKenzie County	D14	RM 17.89	28624	10-yr	2522.7	575.85	570.33	0.98	0.86	4.16	1.87	468.41	1875.4	5.39	2.41	5.52	5.52
Richland/McKenzie County	D14	RM 17.56	27975	10-yr	2522.7	575.73	570.29	1.32	1.23	7.48	5.99	460.6	843.27	4.08	3.26	5.44	5.44
Richland/McKenzie County	D14	RM 17.36	27539	10-yr	2522.7	575.48	570.31	2.03	2.01	18.76	15.01	254.84	442.14	4.87	3.89	5.17	5.17
Richland/McKenzie County	D14	RM 17.1	27113	10-yr	2522.7	575.37	570.28	1.73	1.67	13.66	9.44	298.39	485.33	4.87	3.36	5.09	5.09
Richland/McKenzie County	D14	RM 16.74	26537	10-yr	2522.7	575.31	570.14	1.27	1.18	7.23	4.42	406.78	736.98	4.82	2.94	5.17	5.17
Richland/McKenzie County	D14	RM 16.35	25925	10-yr	2522.7	575.23	569.46	1.23	1.03	6.61	3.27	345.19	914.01	5.57	2.73	5.77	5.77
Richland/McKenzie County	D14	RM 16.17	25629	10-yr	2522.7	575.2	569.2	1.15	0.91	5.95	3.25	377.41	937.84	5.52	3	6	6
Richland/McKenzie County	D14	RM 15.95	25324	10-yr	2522.7	575.19	568.99	0.89	0.78	3.36	2.31	457.34	799.2	6	4.12	6.2	6.2
Richland/McKenzie County	D14	RM 15.75	25032	10-yr	2522.7	575.16	568.85	0.98	0.94	4.22	3.65	462.46	585.24	5.44	4.7	6.31	6.31
Richland/McKenzie County	D14	RM 15.56	24777	10-yr	2522.7	575.05	568.85	1.55	1.55	10.43	9.98	291.53	316.9	5.57	5.33	6.2	6.2
Richland/McKenzie County	D14	RM 15.34	24438	10-yr	2522.7	574.97	568.79	1.62	1.56	11.15	7.94	261.89	388.59	5.94	4.21	6.18	6.18
Richland/McKenzie County	D14	RM 15.16	24144	10-yr	2522.7	574.92	568.75	1.58	1.49	10.68	7.36	267.44	426.84	5.93	4.05	6.17	6.17
Richland/McKenzie County	D14	RM 14.98	23841	10-yr	2522.7	574.84	568.76	1.67	1.52	13.41	8.84	254.68	437.71	5.84	3.82	6.08	6.08
Richland/McKenzie County	D14	RM 14.79	23543	10-yr	2522.7	574.78	568.72	1.63	1.49	11.32	7.82	285.7	468.52	5.28	3.62	6.06	6.06
Richland/McKenzie County	D14	RM 14.61	23241	10-yr	2522.7	574.73	568.7	1.56	1.42	10.5	6.73	274.36	485.19	5.75	3.66	6.03	6.03
Richland/McKenzie County	D14	RM 14.42	22940	10-yr	2522.7	574.71	568.69	1.3	1.21	7.25	4.99	328.42	523.19	5.81	3.99	6.02	6.02
Richland/McKenzie County	D14	RM 14.23	22647	10-yr	2522.7	574.7	568.67	0.99	0.93	4.25	3.16	444.61	644.03	5.67	4.2	6.03	6.03
Richland/McKenzie County	D14	RM 14.05	22341	10-yr	2522.7	574.69	568.68	0.86	0.82	4.58	3.75	601.92	792.94	4.83	3.95	6.01	6.01
Richland/McKenzie County	D14	RM 13.88	22040	10-yr	2522.7	574.64	568.67	0.96	0.94	4.53	3.87	682.22	825.02	3.82	3.26	5.97	5.97
Richland/McKenzie County	D14	RM 13.7	21728	10-yr	2522.7	574.57	568.65	1.2	1.2	6.09	6.01	502.19	509.43	4.18	4.13	5.92	5.92
Richland/McKenzie County	D14	RM 13.51	21429	10-yr	2522.7	574.53	568.63	1.2	1.18	6.25	5.81	409.72	449.61	5.11	4.75	5.9	5.9
Richland/McKenzie County	D15	RM 13.31	21145	10-yr	2522.7	574.51	568.51	1.07	1.07	5.09	4.95	457.14	471.69	5.14	5	6	6
Richland/McKenzie County	D15	RM 13.12	20858	10-yr	2522.7	574.45	568.39	1.27	1.27	6.99	6.89	344.8	350.14	5.74	5.66	6.06	6.06
Richland/McKenzie County	D15	RM 12.9	20507	10-yr	2522.7	574.37	568.39	1.47	1.46	9.33	9.05	303.98	314.25	5.65	5.48	5.98	5.98
Richland/McKenzie County	D15	RM 12.73	20241	10-yr	2522.7	574.32	568.35	1.47	1.47	9.33	9.28	297.97	299.59	5.76	5.73	5.97	5.97
Richland/McKenzie County	D15	RM 12.56	19961	10-yr	2522.7	574.3	568.34	1.29	1.29	7.16	6.48	337.44	374.3	5.79	5.24	5.96	5.96
Richland/McKenzie County	D15	RM 12.38	19686	10-yr	2522.7	574.29	568.23	1.05	1.03	4.77	3.82	425.18	555.6	5.66	4.51	6.06	6.06
Richland/McKenzie County	D15	RM 12.21	19384	10-yr	2522.7	574.26	568.17	1.1	1.02	5.09	4.23	513.25	726.39	4.41	3.67	6.09	6.09
Richland/McKenzie County	D15	RM 11.99	19084	10-yr	2522.7	574.22	568.16	1.05	1	4.72	3.58	592.13	826.39	4.05	3.07	6.06	6.06
Richland/McKenzie County	D15	RM 11.53	18484	10-yr	2522.7	574.14	568.11	1.15	0.99	5	3.55	529.02	907.22	3.96	2.8	6.03	6.03
Richland/McKenzie County	D15	RM 11.34	18216	10-yr	2522.7	574.08	568.06	1.06	0.98	18.16	14.76	636.94	933.81	3.39	2.75	6.02	6.02
Richland/McKenzie County	D15	RM 11.17	17885	10-yr	2522.7	573.85	567.88	1.23	1.18	22.42	20.48	639.33	749.82	3.13	2.86	5.97	5.97
Richland/McKenzie County	D15	RM 10.97	17584	10-yr	2522.7	573.77	567.8	1.13	1.09	5.37	4.86	583.98	680.14	3.75	3.4	5.97	5.97
Richland/McKenzie County	D15	RM 10.75	17284	10-yr	2522.7	573.75	567.79	1.01	0.97	3.54	3.23	695.44	798.76	3.55	3.24	5.96	5.96
Richland/McKenzie County	D15	RM 10.53	16964	10-yr	2522.7	573.69	567.73	1.18	1.13	5.13	4.47	590.73	716.64	3.59	3.12	5.96	5.96
Richland/McKenzie County	D15	RM 10.35	16670	10-yr	2522.7	573.63	567.73	1.24	1.13	6.68	5.42	517.24	740.62	3.83	3.1	5.9	5.9
Richland/McKenzie County	D15	RM 10.15	16384	10-yr	2522.7	573.59	567.73	1.27	0.98	7.08	4.12	251.85	804.97	5.56	3.21	5.86	5.86
Richland/McKenzie County	D15	RM 9.94	16084	10-yr	2522.7	573.57	567.73	1.03	0.85	4.71	3.27	272.39	807.36	5.37	3.71	5.84	5.84
Richland/McKenzie County	D15	RM 9.76	15797	10-yr	2522.7	573.53	567.65	1.15	0.92	5.62	3.78	352.04	880.43	4.99	3.35	5.88	5.88
Richland/McKenzie County	D15	RM 9.57	15487	10-yr	2522.7	573.47	567.58	1.33	1	7.61	3.92	245.67	907.84	5.68	2.91	5.89	5.89
Richland/McKenzie County	D15	RM 9.37	15187	10-yr	2522.7	573.4	567.58	1.52	1.17	10.08	6.39	203.96	608.67	5.61	3.54	5.82	5.82
Richland/McKenzie County	D15	RM 9.24	14963	10-yr	2522.7	573.25	564.5	1.81	1.77	14.11	12.16	234.33	280.38	5.91	5.09	8.75	8.75
Richland/McKenzie County	D15	RR/Walkway	14952	10-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	10-yr	2522.7	573.22	564.5	1.82	1.78	14.29	12.26	234.33	282.48	5.88	5.03	8.72	8.72
Richland/McKenzie County	D15	RM 9.1	14741	10-yr	2522.7	573.08	567.39	2.11	2.06	20.01	18.13	231.83	299.94	5.15	4.66	5.69	5.69
Richland/McKenzie County	D15	RM 9.03	14639	10-yr	2522.7	573.07	565.46	1.87	1.83	15.41	13.46	248.61	292.39	5.4	4.72	7.61	7.61
Richland/McKenzie County	D15	Highway 68	14629	10-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	10-yr	2522.7	573.04	565.46	1.88	1.84	15.61	13.7	248.61	290.89	5.37	4.71	7.58	7.58
Richland/McKenzie County	D15	RM 8.82	14300	10-yr	2522.7	573.02	567.41	1.28	1.24	7.35	4.91	381.12	623.55	5.14	3.42	5.61	5.61
Richland/McKenzie County	D15	RM 8.61	13963	10-yr	2522.7	572.95	567.39	1.43	1.22	9.13	4.83	313.8	848.85	5.05	2.66	5.56	5.56
Richland/McKenzie County	D15	RM 8.44	13687	10-yr	2522.7	572.88	567.32	1.57	1.21	10.89	5.22	258.5	879.92	5.31	2.53	5.56	5.56
Richland/McKenzie County	D15	RM 8.24	13387	10-yr	2522.7	572.8	567.32	1.67	1.17	12.29	6.16	229.73	818.82	5.33	2.64	5.48	5.48
Richland/McKenzie County	D15	RM 8.05	13080	10-yr	2522.7	572.74	567.05	1.54	1.2	10.45	5.38	266.23	754.94	5.44	2.78	5.69	5.69
Richland/McKenzie County	D15	RM 7.87	12786	10-yr	2522.7	572.65	567.05	1.73	1.33	13.27	7.26	229.92	683.63	5.35	2.91	5.6	5.6
Richland/McKenzie County	D15	RM 7.69	12506	10-yr	2522.7	572.6	567.05	1.56	1.3	10.82	7.06	266.56	558.81	5.33	3.47	5.55	5.55
Richland/McKenzie County	D15	RM 7.48	12179	10-yr	2522.7	572.57	566.95	1.28	1.27	7.12	6.99	361.54	368.74	5.47	5.38	5.62	5.62
Richland/McKenzie County	D16	RM 7.3	11891	10-yr	2522.7	572.5	566.76	1.43	1.43	8.89	8.86	336.37	337.63	5.25	5.23	5.74	5.74

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 7.14	11639	10-yr	2522.7	572.45	566.76	1.5	1.44	10.3	8.99	324.06	413.56	4.86	4.25	5.69	5.69
Richland/McKenzie County	D16	RM 6.94	11319	10-yr	2522.7	572.39	566.76	1.45	1.28	9.18	6.34	297.15	525.87	5.44	3.75	5.63	5.63
Richland/McKenzie County	D16	RM 6.77	11043	10-yr	2522.7	572.37	566.76	1.27	1.1	7.21	4.78	349.25	675.78	5.13	3.39	5.61	5.61
Richland/McKenzie County	D16	RM 6.58	10733	10-yr	2522.7	572.33	566.59	1.22	1	6.52	3.71	342.3	835.72	5.36	3.03	5.74	5.74
Richland/McKenzie County	D16	RM 6.38	10417	10-yr	2522.7	572.18	566.59	1.94	1.28	16.59	6.13	182.43	1010.87	5.36	1.95	5.59	5.59
Richland/McKenzie County	D16	RM 6.21	10138	10-yr	2522.7	572.12	566.44	1.7	1.07	12.66	5.15	217.11	1078.23	5.42	2.18	5.68	5.68
Richland/McKenzie County	D16	RM 6.01	9825	10-yr	2522.7	572.12	566.17	1.11	0.86	5.48	2.9	412.46	1086.61	5.15	2.71	5.95	5.95
Richland/McKenzie County	D16	RM 5.83	9551	10-yr	2522.7	572.11	565.96	0.91	0.73	3.62	1.98	480.72	1169.59	5.44	2.96	6.15	6.15
Richland/McKenzie County	D16	RM 5.67	9297	10-yr	2522.7	572.08	565.96	1.08	0.8	5.13	2.49	341.81	1322.94	5.34	2.56	6.12	6.12
Richland/McKenzie County	D16	RM 5.43	8926	10-yr	2522.7	572	565.96	1.39	1.09	8.86	4.91	269.15	1073.88	4.73	2.6	6.04	6.04
Richland/McKenzie County	D16	RM 5.25	8623	10-yr	2522.7	571.79	565.96	2.05	1.58	18.43	7.49	206.77	740.82	5.55	2.23	5.83	5.83
Richland/McKenzie County	D16	RM 5.06	8331	10-yr	2522.7	571.78	565.82	1.48	1.22	9.63	6.6	289.25	621.95	5.51	3.76	5.96	5.96
Richland/McKenzie County	D16	RM 4.87	8029	10-yr	2522.7	571.76	565.67	1.23	1.09	6.71	4.85	335.53	677.96	5.22	3.75	6.09	6.09
Richland/McKenzie County	D16	RM 4.71	7757	10-yr	2522.7	571.71	565.54	1.4	1.14	8.46	5.15	252.25	698.15	5.78	3.49	6.17	6.17
Richland/McKenzie County	D16	RM 4.53	7456	10-yr	2522.7	571.59	565.54	1.81	1.34	14.12	6.85	199	675.7	5.8	2.78	6.05	6.05
Richland/McKenzie County	D16	RM 4.34	7156	10-yr	2522.7	571.54	565.54	1.67	1.27	13.78	7.55	215.78	644.06	5.69	3.08	6	6
Richland/McKenzie County	D16	RM 4.17	6884	10-yr	2522.7	571.46	565.54	1.68	1.29	12.25	6.2	225.24	701.22	5.68	2.84	5.92	5.92
Richland/McKenzie County	D16	RM 3.96	6550	10-yr	2522.7	571.44	565.54	1.33	1.04	7.65	4.2	216.6	788.3	5.63	3.07	5.9	5.9
Richland/McKenzie County	D16	RM 3.78	6249	10-yr	2522.7	571.39	565.54	1.49	1.1	9.98	5.02	196.52	909.03	5.06	2.52	5.85	5.85
Richland/McKenzie County	D16	RM 3.55	5904	10-yr	2522.7	571.33	565.54	1.4	1.1	8.6	4.77	206.04	745.79	5.6	3.08	5.79	5.79
Richland/McKenzie County	D16	RM 3.38	5657	10-yr	2522.7	571.24	565.53	1.73	1.34	13.22	6.66	171.27	696.42	5.46	2.71	5.71	5.71
Richland/McKenzie County	D16	RM 3.2	5363	10-yr	2522.7	571.15	565.54	1.82	1.54	15.31	9	168.06	593.48	4.74	2.75	5.61	5.61
Richland/McKenzie County	D16	RM 3.01	5062	10-yr	2522.7	571.09	565.54	1.58	1.32	11.31	6.72	310	660.95	4.92	2.89	5.55	5.55
Richland/McKenzie County	D16	RM 2.82	4763	10-yr	2522.7	571.03	565.46	1.43	1.27	9.85	7.08	423.69	682.46	4.07	2.91	5.57	5.57

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	20% - 5yr	815.53	1281.54	1278.12	2.45	2.16	32.41	20.85	107.51	203.03	2.94	1.88	3.42	3.42
Sweet Grass County	A1	RM 478.10	225378	20% - 5yr	815.53	1281.08	1277.66	3.19	2.88	59.94	43.78	103.82	186.89	2.23	1.63	3.42	3.42
Sweet Grass County	A1	RM 478.00	224862	20% - 5yr	815.53	1280.63	1277.97	3.03	2.84	58.82	49.67	137.06	230.84	1.76	1.49	2.66	2.66
Sweet Grass County	A1	RM 477.91	224362	20% - 5yr	815.53	1280.06	1277.65	3.44	2.88	65.91	45.39	84.63	247.26	2.08	1.43	2.4	2.4
Sweet Grass County	A1	RM 477.81	223862	20% - 5yr	815.53	1279.7	1276.96	2.95	2.54	39.02	30.86	119.06	248.18	1.78	1.41	2.74	2.74
Sweet Grass County	A1	RM 477.72	223354	20% - 5yr	815.53	1279.29	1276.32	2.59	2.38	46.25	33.79	177.91	343.67	1.4	1.02	2.97	2.97
Sweet Grass County	A1	RM 477.63	222892	20% - 5yr	815.53	1279.21	1275.76	1.5	1.43	14.27	11.17	245.89	465.43	1.81	1.41	3.44	3.44
Sweet Grass County	A1	RM 477.49	222220	20% - 5yr	815.53	1279.01	1276.07	1.58	1.5	13.83	10.4	256.97	653.26	1.5	1.12	2.94	2.94
Sweet Grass County	A1	RM 477.40	221702	20% - 5yr	815.53	1278.95	1275.47	1.21	0.94	8.59	5.05	242.4	839.76	2.23	1.31	3.49	3.49
Sweet Grass County	A1	RM 477.31	221259	20% - 5yr	815.53	1278.54	1275.74	2.73	1.92	43.73	15.07	121.75	682.16	2.29	0.78	2.79	2.79
Sweet Grass County	A1	RM 477.21	220767	20% - 5yr	815.53	1278.36	1275.28	2.38	1.73	31.96	11.13	126.43	705.6	2.56	0.89	3.08	3.08
Sweet Grass County	A1	RM 477.11	220252	20% - 5yr	815.53	1278.02	1274.86	2.7	1.88	45.73	19.65	147.4	720.41	1.87	0.8	3.15	3.15
Sweet Grass County	A1	RM 477.04	219860	20% - 5yr	815.53	1277.73	1275.13	2.75	1.83	46.05	18.56	131.95	722.52	2.01	0.81	2.6	2.6
Sweet Grass County	A1	RM 476.95	219422	20% - 5yr	815.53	1277.24	1274.55	3.03	2.28	60.25	33.12	153.32	514.75	1.62	0.89	2.69	2.69
Sweet Grass County	A1	RM 476.84	218828	20% - 5yr	815.53	1276.88	1273.95	2.49	2.01	38.48	20	134.66	467	1.94	1	2.94	2.94
Sweet Grass County	A1	RM 476.75	218345	20% - 5yr	815.53	1276.62	1273.54	2.35	1.94	30.53	17.26	172.55	539.62	1.9	1.07	3.08	3.08
Sweet Grass County	A1	RM 476.66	217855	20% - 5yr	815.53	1276.3	1273.45	2.56	1.95	36.29	15.87	160.17	743.01	1.88	0.82	2.85	2.85
Sweet Grass County	A1	RM 476.57	217396	20% - 5yr	815.53	1275.86	1273.09	3.11	2.03	56.46	21.63	98.93	791.29	2.3	0.88	2.77	2.77
Sweet Grass County	A1	RM 476.47	216861	20% - 5yr	815.53	1275.43	1273.04	2.99	2.37	55.62	30.05	126.17	482.83	1.88	1.02	2.4	2.4
Sweet Grass County	A1	RM 476.38	216362	20% - 5yr	815.53	1275.2	1272.1	2.53	1.88	36.81	17.27	105.41	601.24	2.39	1.12	3.11	3.11
Sweet Grass County	A1	RM 476.28	215816	20% - 5yr	815.53	1274.61	1271.85	3.3	2.95	65.57	46.98	100.29	245.69	2.12	1.51	2.75	2.75
Sweet Grass County	A1	RM 476.15	215126	20% - 5yr	815.53	1274	1271.76	2.98	2.59	57.56	43.31	133.16	271.76	1.68	1.27	2.24	2.24
Sweet Grass County	A1	RM 476.01	214437	20% - 5yr	815.53	1273.64	1270.96	2.32	2.18	32.24	27.59	139.41	250.33	2.14	1.83	2.69	2.69
Sweet Grass County	A1	RM 475.91	213787	20% - 5yr	815.53	1273.24	1270.35	2.5	2.35	37.58	31.5	150.05	193.81	2.13	1.79	2.89	2.89
Sweet Grass County	A1	RM 475.76	213072	20% - 5yr	815.53	1272.65	1270.22	2.87	2.61	51.57	34.84	146.41	272.63	1.89	1.27	2.43	2.43
Sweet Grass County	A1	RM 475.63	212347	20% - 5yr	815.53	1272.34	1269.34	2.19	1.96	28.91	20.31	173.18	281.8	2.1	1.47	3	3
Sweet Grass County	A1	RM 475.47	211539	20% - 5yr	815.53	1271.85	1268.97	2.62	2.45	39.57	33.64	128.96	164.41	2.37	2.03	2.87	2.87
Sweet Grass County	A1	RM 475.35	210875	20% - 5yr	815.53	1271.16	1268.88	3.28	3.26	64.84	60.3	118.27	127.96	2.1	1.95	2.28	2.28
Sweet Grass County	A1	RM 475.24	210333	20% - 5yr	815.53	1271.17	1267.53	2.11	1.97	23.23	15.24	118.14	246.07	3.24	2.11	3.64	3.64
Sweet Grass County	A2	RM 475.12	209673	20% - 5yr	815.53	1270.13	1267.9	4.15	3.88	109.69	100.84	108.78	128.98	1.77	1.63	2.23	2.23
Sweet Grass County	A2	RM 475.00	209034	20% - 5yr	815.53	1269.62	1266.93	2.86	2.86	51.52	51.52	154.66	154.66	1.84	1.84	2.69	2.69
Sweet Grass County	A2	RM 474.87	208359	20% - 5yr	815.53	1269.44	1266.75	2.16	1.93	26.26	21.6	78.88	203.73	2.62	2.11	2.69	2.69
Sweet Grass County	A2	RM 474.76	207797	20% - 5yr	815.53	1268.9	1266.42	3.19	2.61	59.71	36.5	77.04	224.84	2.32	1.39	2.49	2.49
Sweet Grass County	A2	RM 474.67	207305	20% - 5yr	815.53	1268.43	1266.29	3.31	2.76	66.57	47.63	65.84	208.22	2.1	1.47	2.13	2.13
Sweet Grass County	A2	RM 474.54	206635	20% - 5yr	815.53	1268.14	1264.92	2.32	2.08	31.05	22.25	128.41	228.14	2.41	1.72	3.22	3.22
Sweet Grass County	A2	RM 474.43	205945	20% - 5yr	815.53	1267.8	1265.16	2.6	2.19	38.92	22.5	89.64	266.7	2.45	1.4	2.63	2.63
Sweet Grass County	A2	RM 474.30	205321	20% - 5yr	815.53	1267.53	1264.46	2.35	1.8	31.29	12.76	131.9	448.03	2.49	1.01	3.07	3.07
Sweet Grass County	A2	RM 474.21	204877	20% - 5yr	815.53	1267.11	1264.22	3.02	2.41	51.81	18.35	102.84	385.78	2.53	0.89	2.89	2.89
Sweet Grass County	A2	RM 474.12	204378	20% - 5yr	815.53	1266.99	1263.24	2.33	1.73	31.52	13.81	140.42	461.34	2.35	1.02	3.74	3.74
Sweet Grass County	A2	RM 474.01	203787	20% - 5yr	815.53	1266.52	1263.55	2.83	2.27	49.19	24.51	138.78	363.11	1.99	0.99	2.97	2.97
Sweet Grass County	A2	RM 473.87	203072	20% - 5yr	815.53	1266.07	1263.52	2.8	2.27	44.63	18.86	99.55	403.41	2.23	0.94	2.55	2.55
Sweet Grass County	A2	RM 473.74	202395	20% - 5yr	815.53	1265.81	1263.06	2.29	1.77	30.51	11.46	120.62	663.36	2.3	0.86	2.75	2.75
Sweet Grass County	A2	RM 473.62	201781	20% - 5yr	815.53	1265.27	1262.63	2.85	2.33	51.22	18.32	148.72	533.44	1.84	0.66	2.64	2.64
Sweet Grass County	A2	RM 473.50	201110	20% - 5yr	815.53	1264.82	1261.83	2.49	2.36	38.99	22.41	174.78	326.12	1.86	1.06	2.99	2.99
Sweet Grass County	A2	RM 473.36	200362	20% - 5yr	815.53	1264.55	1261.08	2.22	2.12	27.24	15.62	132.7	245.91	2.74	1.57	3.47	3.47
Sweet Grass County	A2	RM 473.27	199862	20% - 5yr	815.53	1264.16	1260.81	2.85	2.73	45.91	25.69	112.62	217.62	2.53	1.41	3.36	3.36
Sweet Grass County	A2	RM 473.17	199362	20% - 5yr	815.53	1264	1260.56	2.54	2.49	34.28	21.93	102.94	165.89	3.11	1.98	3.44	3.44
Sweet Grass County	A2	RM 473.08	198879	20% - 5yr	815.53	1263.62	1260.56	3.07	2.99	52.75	37.62	102.05	147.68	2.6	1.85	3.05	3.05
Sweet Grass County	A2	RM 472.98	198340	20% - 5yr	815.53	1263.44	1260.21	2.56	2.42	36.73	24.69	120.55	192.1	2.61	1.75	3.23	3.23
Sweet Grass County	A2	RM 472.89	197862	20% - 5yr	815.53	1262.96	1260.5	3.27	2.68	63.18	38.74	102.5	222.98	2.23	1.36	2.46	2.46
Sweet Grass County	A2	RM 472.79	197362	20% - 5yr	815.53	1262.68	1259.98	2.69	2.34	43.6	28.27	136.27	258.2	2.08	1.35	2.7	2.7
Sweet Grass County	A2	RM 472.70	196862	20% - 5yr	815.53	1262.17	1259.35	3.11	2.51	59.46	34.56	123.16	282.72	1.98	1.15	2.83	2.83
Sweet Grass County	A2	RM 472.60	196360	20% - 5yr	815.53	1261.99	1259.01	2.21	1.99	30.92	24.79	181.89	361.92	1.79	1.44	2.97	2.97
Sweet Grass County	A2	RM 472.50	195816	20% - 5yr	815.53	1261.63	1258.53	2.38	2.05	36.41	26.16	177.8	317.73	1.75	1.25	3.1	3.1
Sweet Grass County	A2	RM 472.41	195349	20% - 5yr	815.53	1261.32	1258.52	2.35	2.08	35.57	28.93	188.11	278.85	1.73	1.41	2.8	2.8
Sweet Grass County	A2	RM 472.31	194860	20% - 5yr	815.53	1261.11	1258.34	2.21	1.87	28.22	17.99	148.21	298.95	2.36	1.5	2.77	2.77
Sweet Grass County	A2	RM 472.22	194356	20% - 5yr	815.53	1260.91	1257.3	2.34	1.91	27.37	11.37	115.58	373.82	2.8	1.14	3.61	3.61
Sweet Grass County	A2	RM 472.09	193660	20% - 5yr	815.53	1260.07	1257.45	3.76	3.33	82.74	46.17	87.53	190.3	2.36	1.29	2.62	2.62
Sweet Grass County	A2	RM 471.95	192935	20% - 5yr	815.53	1260.04	1256.05	2.26	1.7	26.73	11.12	103.53	361.73	3.24	1.33	3.99	3.99
Sweet Grass County	A2	RM 471.86	192442	20% - 5yr	815.53	1259.56	1256.23	3.32	2.41	60.4	27.76	76.5	262.24	2.86	1.29	3.32	3.32

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.75	191870	20% - 5yr	815.53	1259.42	1256.47	2.37	1.9	32.35	19.24	134.52	299.93	2.41	1.43	2.95	2.95
Sweet Grass County	A2	RM 471.65	191367	20% - 5yr	815.53	1258.77	1256.54	3.36	2.85	70.48	37.47	124.48	284.55	1.89	1	2.23	2.23
Sweet Grass County	A2	RM 471.52	190686	20% - 5yr	815.53	1258.58	1255.75	2.28	1.73	29.75	13.03	127.76	439.91	2.46	1.07	2.84	2.84
Sweet Grass County	A2	RM 471.38	189910	20% - 5yr	815.53	1257.85	1255.44	3.13	2.59	66.84	37.88	149.43	390.13	1.42	0.81	2.41	2.41
Sweet Grass County	A2	RM 471.28	189362	20% - 5yr	815.53	1257.29	1254.65	2.39	2.09	41.63	30.73	225.88	455.69	1.18	0.87	2.64	2.64
Sweet Grass County	A2	RM 471.18	188875	20% - 5yr	815.53	1256.91	1254.2	2.41	1.95	30.97	19.88	155.2	431.23	1.53	0.98	2.71	2.71
Sweet Grass County	A2	RM 471.06	188150	20% - 5yr	815.53	1256.51	1253.95	2.22	1.59	32.29	16.69	140.54	618.82	1.61	0.83	2.56	2.56
Sweet Grass County	A2	RM 470.94	187526	20% - 5yr	815.53	1256.07	1253.58	2.55	1.97	37.67	18.9	105.91	434.88	1.99	1	2.5	2.5
Sweet Grass County	A2	RM 470.84	186938	20% - 5yr	815.53	1255.75	1252.88	2.35	1.82	36.01	21.46	157.11	477.84	1.67	0.99	2.87	2.87
Sweet Grass County	A2	RM 470.73	186362	20% - 5yr	815.53	1255.53	1253.49	1.68	1.66	19.35	16.22	188.97	430.86	1.4	1.17	2.46	2.46
Sweet Grass County	A2	RM 470.65	185977	20% - 5yr	815.53	1255.27	1252.18	2.09	1.91	27.03	17.84	198.32	361.87	1.93	1.27	3.09	3.09
Sweet Grass County	A2	RM 470.56	185491	20% - 5yr	815.53	1255.05	1252.52	2.13	1.86	28.02	14.88	189.32	575.05	1.94	1.02	2.54	2.54
Sweet Grass County	A2	RM 470.44	184875	20% - 5yr	815.53	1254.94	1251.39	1.73	1.43	16.41	8.93	158.35	374.66	2.82	1.52	3.55	3.55
Sweet Grass County	A2	RM 470.35	184363	20% - 5yr	815.53	1254.17	1251.52	3.62	3.4	80.58	51.61	113.84	191.59	1.96	1.25	2.65	2.65
Sweet Grass County	A2	RM 470.23	183828	20% - 5yr	815.53	1253.88	1251.51	2.57	2.32	42.48	32.43	180.8	268.76	1.7	1.31	2.37	2.37
Sweet Grass County	A2	RM 470.13	183304	20% - 5yr	815.53	1253.57	1249.86	2.33	2.09	34.42	25.86	162.28	284.21	1.84	1.37	3.72	3.72
Sweet Grass County	A2	RM 470.05	182914	20% - 5yr	815.53	1253.41	1250.59	2.06	1.84	26.59	20.14	175.23	315.14	1.86	1.41	2.82	2.82
Sweet Grass County	A2	RM 469.93	182267	20% - 5yr	815.53	1252.71	1249.62	3.17	2.92	58.94	42.19	105.41	172.21	2.27	1.62	3.09	3.09
Sweet Grass County	A2	RM 469.85	181860	20% - 5yr	815.53	1252.33	1249.59	3.32	2.88	63.62	30.49	95.74	249.81	2.38	1.14	2.74	2.74
Sweet Grass County	A2	RM 469.75	181348	20% - 5yr	815.53	1252.31	1248.77	2.13	1.81	25.13	11.16	116.21	372.86	2.75	1.21	3.55	3.55
Sweet Grass County	A2	RM 469.68	180952	20% - 5yr	815.53	1252.07	1249.31	2.47	2.07	35.5	16.82	135.73	396.9	2.35	1.11	2.75	2.75
Sweet Grass County	A2	RM 469.58	180427	20% - 5yr	815.53	1252.04	1247.94	1.76	1.46	16.09	9.51	130.56	379.36	3.34	1.96	4.1	4.1
Sweet Grass County	A2	RM 469.47	179860	20% - 5yr	815.53	1251.69	1247.85	2.61	2.34	33.39	28.95	89.24	312.13	3.32	2.88	3.84	3.84
Sweet Grass County			179808	20% - 5yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	20% - 5yr	815.53	1251.65	1247.84	2.34	2.33	28.89	27.71	112.89	341.19	3.09	2.97	3.81	3.81
Sweet Grass County	A2	RM 469.39	179400	20% - 5yr	815.53	1251.27	1248.45	3.04	2.87	54.36	41.74	117.06	278.06	2.26	1.73	2.82	2.82
Sweet Grass County	A2	RM 469.30	178975	20% - 5yr	815.53	1251.25	1247.55	2.25	1.91	26.54	15.3	106.16	314.49	3.24	1.84	3.7	3.7
Sweet Grass County	A2	RM 469.21	178467	20% - 5yr	815.53	1250.51	1248.31	3.75	3.25	86.51	49.37	105.42	231.51	1.96	1.12	2.2	2.2
Sweet Grass County	A2	RM 469.09	177862	20% - 5yr	815.53	1250.4	1247.12	2.03	1.57	24.45	13.6	118.23	488.42	2.2	1.22	3.28	3.28
Sweet Grass County	A2	RM 469.00	177350	20% - 5yr	815.53	1249.81	1247.58	3.3	2.41	68.24	28.44	89.39	440.31	1.88	0.78	2.24	2.24
Sweet Grass County	A2	RM 468.90	176865	20% - 5yr	815.53	1249.32	1246.48	2.27	1.95	26.69	16.32	157.25	376.2	1.85	1.12	2.85	2.85
Sweet Grass County	A2	RM 468.80	176341	20% - 5yr	815.53	1249.06	1246.11	2.36	1.97	33.75	18.73	135.88	373.06	2.05	1.13	2.95	2.95
Sweet Grass County	A2	RM 468.71	175823	20% - 5yr	815.53	1248.66	1246.41	2.64	2.34	46.88	33.76	145.04	367.75	1.52	1.1	2.25	2.25
Sweet Grass County	A2	RM 468.57	175192	20% - 5yr	815.53	1248.46	1245.17	1.76	1.58	19.04	10.4	178.05	673.35	2.01	1.09	3.29	3.29
Sweet Grass County	A2	RM 468.42	174099	20% - 5yr	815.53	1247.77	1244.97	2.61	2.31	43.28	30.6	168.48	389.04	1.78	1.25	2.81	2.81
Sweet Grass County	A3	RM 468.25	173324	20% - 5yr	815.53	1247.62	1242.97	1.89	1.48	18.7	7.54	128.37	546.15	3.21	1.28	4.65	4.65
Sweet Grass County	A3	RM 468.16	172855	20% - 5yr	815.53	1247.44	1243.58	2.28	1.7	29.01	13.12	119.05	542.02	2.65	1.19	3.86	3.86
Sweet Grass County	A3	RM 468.07	172364	20% - 5yr	815.53	1247.38	1243.89	1.8	1.37	18.15	9.18	136.65	601.66	2.64	1.33	3.49	3.49
Sweet Grass County	A3	RM 467.97	171839	20% - 5yr	815.53	1246.69	1244.32	3.66	2.86	84.25	42.59	92.44	390.74	1.88	0.93	2.38	2.38
Sweet Grass County	A3	RM 467.87	171312	20% - 5yr	815.53	1246.41	1243.46	2.2	2.04	29.08	19.13	159.56	397.26	2.11	1.39	2.95	2.95
Sweet Grass County	A3	RM 467.78	170840	20% - 5yr	815.53	1245.92	1243.74	3.03	2.7	58.07	39.32	100.58	244.83	1.82	1.23	2.19	2.19
Sweet Grass County	A3	RM 467.69	170376	20% - 5yr	815.53	1245.65	1242.96	2.54	2.2	39.09	23.58	113.66	299.65	2.07	1.23	2.7	2.7
Sweet Grass County	A3	RM 467.55	169614	20% - 5yr	815.53	1245.24	1242.1	2.22	1.95	31.65	21.31	133.82	363.94	1.72	1.15	3.14	3.14
Sweet Grass County	A3	RM 467.41	168870	20% - 5yr	815.53	1245.07	1241.15	1.79	1.3	17.49	7.04	132.75	564.09	2.86	1.14	3.92	3.92
Sweet Grass County	A3	RM 467.30	168362	20% - 5yr	815.53	1244.34	1242.15	3.75	2.95	85.12	31.96	89.78	360.25	2.06	0.77	2.19	2.19
Sweet Grass County	A3	RM 467.16	167641	20% - 5yr	815.53	1244.13	1240.78	1.96	1.46	22.54	7.87	158.78	739.93	2.28	0.79	3.35	3.35
Sweet Grass County	A3	RM 467.00	166780	20% - 5yr	815.53	1243.6	1240.48	2.64	1.99	43.06	16.96	139.75	546.33	1.95	0.76	3.13	3.13
Sweet Grass County	A3	RM 466.83	165902	20% - 5yr	815.53	1243.12	1239.84	2.56	1.79	37.32	14.3	111.13	484.35	2.5	0.95	3.28	3.28
Sweet Grass County	A3	RM 466.73	165364	20% - 5yr	815.53	1242.86	1239.81	2.57	1.95	37.73	14.21	115.43	454.73	2.48	0.93	3.05	3.05
Sweet Grass County	A3	RM 466.64	164858	20% - 5yr	815.53	1242.37	1239.36	3.25	2.55	56.57	20.47	89.37	408.27	2.49	0.89	3.01	3.01
Sweet Grass County	A3	RM 466.49	164108	20% - 5yr	815.53	1241.98	1239.67	2.72	1.82	44.52	19.68	107.44	583.13	2.07	0.92	2.31	2.31
Sweet Grass County	A3	RM 466.25	162845	20% - 5yr	815.53	1240.78	1238.71	3.3	2.72	66.83	34.23	78.03	291.59	2.06	1.03	2.08	2.08
Sweet Grass County	A3	RM 465.79	160351	20% - 5yr	815.53	1239.62	1236.48	2.21	1.31	27.92	10.47	106.24	683.32	2.5	0.91	3.14	3.14
Sweet Grass County	A3	RM 465.01	155919	20% - 5yr	815.53	1237.46	1234.44	2.84	2.53	47.82	32.87	127.52	213.3	2.2	1.51	3.01	3.01
Sweet Grass County	A3	RM 464.68	154254	20% - 5yr	815.53	1236.5	1233.35	2.39	2.13	35.18	19.66	170.74	364.95	1.95	1.09	3.16	3.16
Sweet Grass County	A3	RM 464.48	153160	20% - 5yr	815.53	1235.94	1232.71	2.2	1.82	30.46	16.95	183.52	464.66	1.85	1.03	3.24	3.24
Sweet Grass County	A3	RM 464.33	152378	20% - 5yr	815.53	1235.55	1232.61	2.17	1.76	29.37	16.45	182.84	433.87	1.91	1.07	2.94	2.94
Sweet Grass County	A3	RM 464.16	151621	20% - 5yr	815.53	1235.08	1232.45	2.44	1.96	37.04	19.64	157.54	410.56	1.92	1.01	2.63	2.63
Sweet Grass County	A3	RM 464.04	150961	20% - 5yr	815.53	1234.89	1231.48	2.12	1.49	24.4	10.21	118.08	464.13	2.92	1.21	3.4	3.4
Sweet Grass County	A3	RM 463.88	150174	20% - 5yr	815.53	1234.22	1231.85	3.13	2.65	61.8	31.68	133.39	395.97	1.84	0.94	2.37	2.37

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.78	149616	20% - 5yr	815.53	1233.89	1230.54	2.54	2.11	39.23	24.84	149.14	427.37	2.05	1.29	3.36	3.36
Sweet Grass County	A3	RM 463.67	149069	20% - 5yr	815.53	1233.53	1230.86	2.67	2.01	43.87	25.86	135.99	472.17	1.98	1.17	2.67	2.67
Sweet Grass County	A3	RM 463.59	148630	20% - 5yr	815.53	1233.32	1230.39	2.43	1.8	34.39	19.08	134.71	596.8	2.31	1.28	2.93	2.93
Sweet Grass County	A3	RM 463.49	148111	20% - 5yr	815.53	1232.67	1229.73	3.34	2.87	68.22	36.94	118.04	501.67	2.01	1.09	2.94	2.94
Sweet Grass County	A3	RM 463.34	147326	20% - 5yr	815.53	1232.23	1229.72	2.36	1.82	35.92	20.23	178.42	931.93	1.71	0.96	2.51	2.51
Sweet Grass County	A3	RM 463.20	146616	20% - 5yr	815.53	1231.85	1228.95	2.26	1.58	31.9	16.96	108.88	1308.7	1.92	1	2.89	2.89
Sweet Grass County	A3	RM 463.06	145881	20% - 5yr	815.53	1231.55	1228.89	1.9	1.1	23.51	12.23	147.76	1478.78	1.67	0.87	2.65	2.65
Sweet Grass County	A4	RM 462.79	144435	20% - 5yr	815.53	1231.36	1228.25	1.21	0.64	8.48	5.04	133.61	1414.98	2.4	1.4	3.11	3.11
Sweet Grass County	A4	RM 462.16	141146	20% - 5yr	815.53	1229.16	1226.15	2.99	2.13	54.33	22.25	107.96	479.06	2.08	0.84	3.01	3.01
Sweet Grass County		RM 461.97	140135	20% - 5yr	815.53	1228.62	1226.06	2.32	1.42	34.01	17.45	120.82	725.44	1.81	0.93	2.56	2.56
Sweet Grass County	A4	RM 461.71	138705	20% - 5yr	815.53	1227.05	1224.75	3.54	2.97	84.19	60.11	99.8	301.8	1.51	1.08	2.3	2.3
Sweet Grass County	A4	RM 461.52	137683	20% - 5yr	815.53	1226.53	1222.31	2.16	1.67	23.7	10.69	77.33	303.52	3.72	1.61	4.22	4.22
Sweet Grass County	A4	RM 461.33	136718	20% - 5yr	815.53	1226.29	1223.38	2.01	1.57	24.54	12.86	125.5	591.19	2.07	1.08	2.91	2.91
Sweet Grass County	A4	RM 461.14	135736	20% - 5yr	815.53	1225.51	1222.44	2.95	2.58	50.8	22.27	115.22	312.05	2.34	1.02	3.07	3.07
Sweet Grass County	A4	RM 460.99	134951	20% - 5yr	815.53	1225.05	1221.98	2.77	2.37	44.35	27.27	121.6	237.54	2.36	1.45	3.06	3.06
Sweet Grass County	A4	RM 460.85	134214	20% - 5yr	815.53	1224.65	1222.07	2.6	2.28	38.44	19.35	144.31	335.75	2.12	1.07	2.58	2.58
Sweet Grass County	A4	RM 460.74	133616	20% - 5yr	815.53	1224.62	1220.27	1.79	1.56	16.28	9.26	124.31	437.64	3.57	2.02	4.35	4.35
Sweet Grass County	A4	RM 460.63	133067	20% - 5yr	815.53	1224.6	1218.9	1.44	1.39	9.31	7.63	106.22	428.11	5.29	4.3	5.7	5.7
Sweet Grass County			132957	20% - 5yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	20% - 5yr	815.53	1223.92	1221.09	3.2	3.17	60.32	56.33	112.66	394.15	2.26	2.11	2.83	2.83
Sweet Grass County	A4	RM 460.50	132281	20% - 5yr	815.53	1223.21	1221.12	3.42	3.41	76.84	75.21	149.55	307.01	1.6	1.56	2.09	2.09
Sweet Grass County	A4	RM 460.38	131785	20% - 5yr	815.53	1222.87	1220.5	2.61	2.41	40.34	32.66	138.38	352.89	1.66	1.34	2.38	2.38
Sweet Grass County	A4	RM 460.29	131287	20% - 5yr	815.53	1222.41	1219.97	2.72	2.67	48.37	45.95	133.1	194.27	1.66	1.57	2.44	2.44
Sweet Grass County	A4	RM 460.19	130793	20% - 5yr	815.53	1222.11	1219.38	2.49	2.3	37.61	28.31	116.19	260.77	2.05	1.55	2.73	2.73
Sweet Grass County	A4	RM 460.08	130210	20% - 5yr	815.53	1221.75	1218.23	2.57	2.55	37.57	33.96	128.66	143.39	2.47	2.23	3.53	3.53
Sweet Grass County	A4	RM 459.99	129763	20% - 5yr	815.53	1221.46	1218.01	2.81	2.8	43.09	37.82	103.49	119.14	2.81	2.46	3.45	3.45
Sweet Grass County	A4	RM 459.90	129246	20% - 5yr	815.53	1221.31	1217.62	2.52	2.47	33.67	24.29	105.62	181.53	3.06	2.2	3.69	3.69
Sweet Grass County	A4	RM 459.81	128792	20% - 5yr	815.53	1220.73	1218.15	3.49	3.47	70.59	63.67	99.44	126.83	2.35	2.12	2.58	2.58
Sweet Grass County	A4	RM 459.72	128310	20% - 5yr	891.98	1220.59	1217.31	2.69	2.43	40.67	22.7	126.75	263.3	2.57	1.43	3.28	3.28
Sweet Grass County	A4	RM 459.62	127798	20% - 5yr	891.98	1220.32	1217.46	2.74	2.42	44.27	29.95	128.42	244.69	2.22	1.51	2.86	2.86
Sweet Grass County	A5	RM 459.53	127324	20% - 5yr	891.98	1219.7	1217.26	3.28	3.28	68.36	68.36	153.26	153.26	1.78	1.78	2.44	2.44
Sweet Grass County	A5	RM 459.44	126881	20% - 5yr	891.98	1219.42	1216.93	2.63	2.62	43.42	40.59	182.38	196.15	1.86	1.74	2.49	2.49
Sweet Grass County	A5	RM 459.31	126192	20% - 5yr	891.98	1219.02	1215.66	2.54	2.45	37.41	34.81	147.71	196.94	2.36	2.2	3.35	3.35
Sweet Grass County	A5	RM 459.24	125848	20% - 5yr	891.98	1218.74	1215.69	2.79	2.7	46.32	41.04	145.52	272.46	2.18	1.93	3.05	3.05
Sweet Grass County	A5	RM 459.16	125420	20% - 5yr	891.98	1218.16	1215.82	3.32	3.32	70.91	70.91	157.72	163.09	1.71	1.71	2.34	2.34
Sweet Grass County	A5	RM 459.02	124624	20% - 5yr	891.98	1217.8	1214.8	2.22	2.21	29.95	27.36	199.3	244.55	2.02	1.84	3	3
Sweet Grass County	A5	RM 458.79	123371	20% - 5yr	891.98	1216.99	1214.02	2.71	2.71	43.26	41.26	148.33	155.63	2.22	2.12	2.98	2.98
Sweet Grass County	A5	RM 458.48	121727	20% - 5yr	891.98	1215.93	1213.35	2.46	2.35	39.6	36.58	153.17	262.52	1.64	1.51	2.58	2.58
Sweet Grass County	A5	RM 458.36	121100	20% - 5yr	891.98	1214.86	1212.73	3.76	3.44	92.47	71.35	113.6	204.47	1.64	1.27	2.13	2.13
Sweet Grass County	A5	RM 458.25	120543	20% - 5yr	891.98	1214.6	1211.35	2.32	2.04	30.84	22.78	122.03	238.33	2.49	1.83	3.26	3.26
Sweet Grass County	A5	RM 458.13	119849	20% - 5yr	891.98	1214.19	1211.21	2.63	2.34	40.98	30.46	130.49	234.85	2.2	1.62	2.98	2.98
Sweet Grass County	A5	RM 458.03	119256	20% - 5yr	891.98	1214.03	1210.09	2.18	2.02	24.75	18.42	119.55	183.5	3.24	2.41	3.95	3.95
Sweet Grass County	A5	RM 457.87	118444	20% - 5yr	891.98	1213.84	1209.57	2.21	2.19	24.16	20.93	104.9	122.61	3.84	3.33	4.27	4.27
Sweet Grass County	A5	RM 457.76	117858	20% - 5yr	891.98	1213.62	1210.24	2.44	2.44	33.21	31.09	136.22	145.97	2.68	2.51	3.38	3.38
Sweet Grass County	A5	RM 457.66	117350	20% - 5yr	891.98	1213.36	1210.03	2.6	2.59	38.09	33.87	132.58	150.23	2.58	2.3	3.33	3.33
Sweet Grass County	A5	RM 457.54	116694	20% - 5yr	891.98	1212.99	1209.93	2.75	2.69	42.98	32.92	131.05	175.32	2.47	1.89	3.05	3.05
Sweet Grass County	A5	RM 457.35	115703	20% - 5yr	891.98	1211.69	1209.69	3.77	3.77	94.76	94.76	153.4	153.4	1.54	1.54	2	2
Sweet Grass County	A5	RM 457.20	114921	20% - 5yr	891.98	1211.45	1208.7	2.13	2.13	27.02	27.02	195.26	195.26	2.15	2.15	2.75	2.75
Sweet Grass County	A5	RM 457.02	113974	20% - 5yr	891.98	1210.62	1208.04	3.27	2.93	63.67	44.37	102.78	201.66	2.17	1.51	2.58	2.58
Sweet Grass County	A5	RM 456.84	113009	20% - 5yr	891.98	1210.2	1206.55	2.54	2.53	34.6	32.38	116.82	125.3	3	2.81	3.65	3.65
Sweet Grass County	A5	RM 456.68	112164	20% - 5yr	891.98	1209.52	1206.59	3.28	3.28	62.12	60.45	113.3	116.57	2.4	2.33	2.93	2.93
Sweet Grass County	A5	RM 456.55	111455	20% - 5yr	891.98	1209.19	1206.19	2.66	2.65	40.63	39.57	139.86	143.81	2.4	2.34	3.01	3.01
Sweet Grass County	A5	RM 456.43	110857	20% - 5yr	891.98	1208.95	1205.33	2.58	2.58	35.1	33.44	108.5	114.2	3.18	3.03	3.62	3.62
Sweet Grass County	A6	RM 456.29	110121	20% - 5yr	891.98	1208.54	1205.45	2.92	2.89	44.28	36.95	117.36	142.56	2.6	2.17	3.08	3.08
Sweet Grass County	A6	RM 456.18	109508	20% - 5yr	891.98	1208.14	1205.45	2.96	2.96	52.26	50.51	138.64	143.47	2.17	2.1	2.68	2.68
Sweet Grass County	A6	RM 456.03	108721	20% - 5yr	891.98	1207.57	1204.59	2.73	2.73	46.94	44.57	175.61	195	1.86	1.76	2.98	2.98
Sweet Grass County	A6	RM 455.84	107742	20% - 5yr	891.98	1207.05	1204.05	2.37	2.37	31.19	31.19	182.44	205.34	2.07	2.07	3	3
Sweet Grass County	A6	RM 455.70	106976	20% - 5yr	891.98	1206.8	1203.14	2.25	2.25	25.75	25.75	136.64	219.71	2.91	2.91	3.66	3.66
Sweet Grass County	A6	RM 455.56	106256	20% - 5yr	891.98	1206.38	1203.35	2.79	2.74	41.57	36.9	119.56	243.63	2.65	2.36	3.04	3.04
Sweet Grass County	A6	RM 455.39	105360	20% - 5yr	891.98	1206.15	1202.74	2.19	2.11	26.51	18.75	151.06	310.9	2.68	1.89	3.41	3.41

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 455.26	104667	20% - 5yr	891.98	1205.04	1202.83	4.11	4.02	105.91	83.96	119.34	170.66	1.81	1.44	2.21	2.21
Sweet Grass County	A6	RM 455.09	103771	20% - 5yr	891.98	1204.86	1201.58	2.06	1.9	23.44	17.89	157.17	227.73	2.71	2.06	3.27	3.27
Sweet Grass County	A6	RM 454.95	103072	20% - 5yr	891.98	1204.23	1201.94	3.04	2.95	62.26	60.02	178.9	208.45	1.5	1.45	2.29	2.29
Sweet Grass County	A6	RM 454.82	102364	20% - 5yr	891.98	1203.77	1200.61	2.31	2.23	33.73	31.33	177.69	232.09	1.86	1.73	3.17	3.17
Sweet Grass County	A6	RM 454.72	101863	20% - 5yr	891.98	1203.17	1200.47	3.03	3.03	51.67	51.67	180.72	180.72	1.63	1.63	2.7	2.7
Sweet Grass County	A6	RM 454.64	101419	20% - 5yr	891.98	1203.01	1199.69	2.35	2.35	31.31	31.31	172.88	172.88	2.2	2.2	3.32	3.32
Sweet Grass County	A6	RM 454.53	100846	20% - 5yr	891.98	1202.59	1199.59	2.85	2.85	44.24	44.24	119.65	140.68	2.62	2.62	3	3
Sweet Grass County	A6	RM 454.43	100338	20% - 5yr	891.98	1202.33	1199	2.82	2.82	43.73	43.73	114.08	145.75	2.77	2.77	3.34	3.34
Sweet Grass County	A6	RM 454.29	99597	20% - 5yr	891.98	1201.99	1198.71	2.77	2.77	41.91	41.91	112.84	171.13	2.85	2.85	3.27	3.27
Sweet Grass County	A6	RM 454.15	98861	20% - 5yr	891.98	1201.69	1198.68	2.57	2.55	35.51	30.39	135.86	160.49	2.55	2.18	3.02	3.02
Sweet Grass County	A6	RM 454.00	98105	20% - 5yr	891.98	1201.28	1198.53	2.66	2.66	37.16	37.16	176.01	176.01	1.91	1.91	2.75	2.75
Sweet Grass County	A6	RM 453.89	97523	20% - 5yr	891.98	1200.87	1198.31	2.74	2.68	42.69	40.51	176.4	192.65	1.82	1.73	2.57	2.57
Sweet Grass County	A6	RM 453.78	96929	20% - 5yr	891.98	1200.74	1197.07	2.08	2.08	23.63	22.51	152.77	160.53	2.81	2.67	3.66	3.66
Sweet Grass County	A6	RM 453.67	96361	20% - 5yr	891.98	1200.22	1197.77	3.04	2.94	54.56	40.45	151.58	214.03	1.91	1.42	2.45	2.45
Sweet Grass County	A6	RM 453.58	95863	20% - 5yr	891.98	1200.2	1196.37	2.01	2.01	20.86	20.44	182.6	186.7	2.85	2.79	3.83	3.83
Sweet Grass County	A6	RM 453.48	95355	20% - 5yr	891.98	1199.68	1196.86	3.14	3.14	54.82	51.99	117.79	124.37	2.41	2.28	2.82	2.82
Sweet Grass County	A6	RM 453.35	94633	20% - 5yr	891.98	1199.18	1196.43	3.05	3.02	51.71	47.01	133.91	166.63	2.19	1.99	2.74	2.74
Sweet Grass County	A7	RM 453.23	93994	20% - 5yr	891.98	1198.7	1196.41	3.04	2.8	52.74	46.9	112.27	198.04	1.81	1.61	2.28	2.28
Sweet Grass County	A7	RM 453.11	93361	20% - 5yr	891.98	1198.44	1195.68	2.27	2.24	28.66	27.56	179.11	194.18	2.13	2.05	2.76	2.76
Sweet Grass County	A7	RM 453.01	92863	20% - 5yr	891.98	1197.94	1195.38	3.06	2.93	53.22	46.97	136.91	169.25	2.04	1.8	2.56	2.56
Sweet Grass County	A7	RM 452.91	92363	20% - 5yr	891.98	1197.77	1194.85	2.53	2.31	33.48	27.24	116.07	212.75	2.24	1.82	2.92	2.92
Sweet Grass County	A7	RM 452.82	91863	20% - 5yr	891.98	1197.53	1194.65	2.46	2.32	35.04	31.52	111.14	180.45	2.37	2.13	2.88	2.88
Sweet Grass County	A7	RM 452.72	91363	20% - 5yr	891.98	1197.48	1193.29	1.84	1.82	17.52	15.26	144.32	168.65	3.35	2.91	4.19	4.19
Sweet Grass County	A7	RM 452.64	90932	20% - 5yr	891.98	1197.24	1194.02	2.46	2.12	33.71	22.5	133.5	276.74	2.61	1.74	3.22	3.22
Sweet Grass County	A7	RM 452.53	90362	20% - 5yr	891.98	1196.78	1193.87	3.06	2.84	51.08	38.65	110.98	165.25	2.51	1.9	2.91	2.91
Sweet Grass County	A7	RM 452.43	89864	20% - 5yr	891.98	1196.47	1193.52	3.03	2.84	49.99	38.73	109.51	159.56	2.55	1.97	2.95	2.95
Sweet Grass County	A7	RM 452.33	89331	20% - 5yr	891.98	1196.18	1193.16	2.87	2.8	43.43	37.26	134.44	161.89	2.3	1.97	3.01	3.01
Sweet Grass County	A7	RM 452.25	88863	20% - 5yr	891.98	1195.92	1192.91	2.78	2.73	41.49	38.37	138.6	153.22	2.31	2.13	3.01	3.01
Sweet Grass County	A7	RM 452.16	88399	20% - 5yr	891.98	1195.6	1192.68	2.96	2.66	47.94	32.35	119.78	202.17	2.45	1.66	2.93	2.93
Sweet Grass County	A7	RM 452.06	87882	20% - 5yr	891.98	1195.37	1192.4	2.72	2.44	41.17	28.02	119.91	202.59	2.66	1.8	2.97	2.97
Sweet Grass County	A7	RM 451.96	87394	20% - 5yr	891.98	1195.02	1191.9	2.95	2.67	50.51	32.96	124.36	217.54	2.35	1.54	3.13	3.13
Sweet Grass County	A7	RM 451.86	86835	20% - 5yr	891.98	1194.75	1191.79	2.76	2.37	40.52	25.9	120.67	232.93	2.53	1.62	2.96	2.96
Sweet Grass County	A7	RM 451.75	86230	20% - 5yr	891.98	1194.48	1191.43	2.6	2.6	36.89	36.89	131.16	131.16	2.61	2.61	3.05	3.05
Sweet Grass County	A7	RM 451.61	85483	20% - 5yr	891.98	1194.17	1190.7	2.48	2.48	35.31	35.3	149.26	149.3	2.41	2.41	3.46	3.46
Sweet Grass County	A7	RM 451.49	84861	20% - 5yr	891.98	1193.56	1191.07	3.23	3.12	58.17	53.68	120.98	137.39	2.25	2.08	2.49	2.49
Sweet Grass County	A7	RM 451.34	84113	20% - 5yr	891.98	1193.48	1190.06	2.01	2.01	21.91	21.03	150.96	157.7	2.93	2.82	3.42	3.42
Sweet Grass County	A7	RM 451.20	83363	20% - 5yr	891.98	1192.91	1189.8	3.09	3.09	52.31	51.23	103.86	106.02	2.78	2.73	3.11	3.11
Sweet Grass County	A7	RM 451.10	82863	20% - 5yr	891.98	1192.74	1189.79	2.63	2.63	38.82	37.94	133.83	136.98	2.53	2.47	2.95	2.95
Sweet Grass County	A7	RM 451.00	82325	20% - 5yr	891.98	1192.52	1189.55	2.53	2.35	36.36	31.06	118.3	180.13	2.47	2.11	2.98	2.98
Sweet Grass County	A7	RM 450.86	81602	20% - 5yr	891.98	1192.31	1188.29	2.07	1.89	43.43	27.51	89.77	194.82	3.94	2.43	4.01	4.01
Sweet Grass County	A7	RM 450.73	80923	20% - 5yr	891.98	1191.43	1188.46	3.63	3.42	74.36	58.11	92.2	129.35	2.6	2.02	2.97	2.97
Sweet Grass County	A7	RM 450.63	80374	20% - 5yr	891.98	1191.16	1188.16	2.92	2.9	49.6	47.5	130.67	137.52	2.33	2.24	3	3
Sweet Grass County	A7	RM 450.53	79863	20% - 5yr	891.98	1190.92	1187.88	2.62	2.61	36.8	35.67	148.43	153.36	2.3	2.23	3.05	3.05
Sweet Grass County	A7	RM 450.43	79300	20% - 5yr	891.98	1190.66	1187.72	2.61	2.45	36.17	31.76	128.11	188.76	2.2	1.93	2.94	2.94
Sweet Grass County	A7	RM 450.34	78849	20% - 5yr	934.46	1190.3	1188.05	2.85	2.64	48.51	42.32	123.51	213.31	1.9	1.66	2.25	2.25
Sweet Grass County	A7	RM 450.23	78298	20% - 5yr	934.46	1190.19	1186.92	1.94	1.91	20.99	16.59	194.84	250.47	2.47	1.95	3.26	3.26
Sweet Grass County	A7	RM 450.14	77822	20% - 5yr	934.46	1189.9	1186.4	2.46	2.38	34.54	23.33	151.75	235.82	2.49	1.67	3.5	3.5
Sweet Grass County	A7	RM 450.05	77362	20% - 5yr	934.46	1189.31	1187.2	3.34	3.32	68.38	58.75	138.69	164.26	2.01	1.73	2.11	2.11
Sweet Grass County	A7	RM 449.96	76841	20% - 5yr	934.46	1189.08	1186.28	2.74	2.56	41.94	29.12	126.56	241.79	2.66	1.84	2.79	2.79
Sweet Grass County	A7	RM 449.86	76356	20% - 5yr	934.46	1188.83	1185.58	2.82	2.52	42.5	22.99	107.66	247.73	3.03	1.63	3.24	3.24
Sweet Grass County	A7	RM 449.77	75860	20% - 5yr	934.46	1188.52	1185.68	2.95	2.64	43.57	39.45	166.15	215.11	1.82	1.65	2.84	2.84
Sweet Grass County	A7	RM 449.68	75373	20% - 5yr	934.46	1188.16	1185.9	2.68	2.55	47.39	43.79	213.73	247.45	1.6	1.48	2.25	2.25
Sweet Grass County	A7	RM 449.59	74904	20% - 5yr	934.46	1188.09	1184.15	2.1	1.87	22.45	12.4	110.99	259.76	3.54	1.92	3.94	3.94
Sweet Grass County	A7	RM 449.48	74351	20% - 5yr	934.46	1187.69	1184.86	2.99	2.59	54.24	34.41	117.04	279.72	2.04	1.29	2.84	2.84
Sweet Grass County	A7	RM 449.37	73741	20% - 5yr	934.46	1187.58	1184.73	1.77	1.67	19.14	13.52	210.25	481.36	2.03	1.43	2.85	2.85
Sweet Grass County	A7	RM 449.26	73165	20% - 5yr	934.46	1187.49	1184.33	1.7	1.08	14.8	7.79	128.66	821.78	2.6	1.35	3.16	3.16
Sweet Grass County	A7	RM 449.10	72364	20% - 5yr	934.46	1186.61	1183.97	3.8	2.38	82.28	25.43	86.26	725.07	2.54	0.76	2.64	2.64
Sweet Grass County	A7	RM 449.00	71858	20% - 5yr	934.46	1186	1183.97	3.63	2.57	84.29	44.74	110.4	415.1	1.77	0.93	2.03	2.03
Sweet Grass County	A7	RM 448.88	71223	20% - 5yr	934.46	1185.49	1183.11	2.28	2.1	34.86	25.96	227.9	429.03	1.52	1.13	2.38	2.38
Sweet Grass County	A7	RM 448.76	70537	20% - 5yr	934.46	1185.4	1182.01	1.25	1.2	10.14	9.64	312	486.42	1.68	1.6	3.39	3.39

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A7	RM 448.55	69424	20% - 5yr	934.46	1185.16	1181.8	1.69	1.54	15.5	10.33	154.14	315.89	2.89	1.92	3.36	3.36
Sweet Grass County	A7	RM 448.41	68815	20% - 5yr	934.46	1184.56	1181.16	3.22	3.11	46.26	36.71	108.05	143.84	2.66	2.09	3.4	3.4
Sweet Grass County	A7	RM 448.32	68353	20% - 5yr	934.46	1184.73	1179.91	1.7	1.69	13.75	12.29	126.03	180.42	4.37	3.89	4.81	4.81
Sweet Grass County	A7	RM 448.23	67851	20% - 5yr	934.46	1184.56	1179.82	2.1	2.08	21.1	18.63	105.4	171.85	4.23	3.72	4.74	4.74
Sweet Grass County			67792	20% - 5yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	20% - 5yr	934.46	1183.98	1180.89	3.4	3.4	65.31	65.24	107.22	173.38	2.56	2.56	3.1	3.1
Sweet Grass County	A7	RM 448.07	67043	20% - 5yr	934.46	1183.64	1180.7	2.68	2.59	41.55	30.79	146.97	288.28	2.36	1.75	2.94	2.94
Sweet Grass County	A7	RM 447.94	66348	20% - 5yr	934.46	1183.31	1180.22	2.67	2.56	38.68	20.99	122.74	338.65	2.85	1.54	3.1	3.1
Sweet Grass County	A7	RM 447.85	65863	20% - 5yr	934.46	1182.9	1180.39	3.13	2.76	57.86	32.49	131.04	272.41	2.22	1.24	2.51	2.51
Sweet Grass County	A7	RM 447.75	65363	20% - 5yr	934.46	1182.84	1179.55	2.26	1.98	25.34	12.16	143.01	345.97	2.85	1.36	3.29	3.29
Sweet Grass County	A7	RM 447.66	64865	20% - 5yr	934.46	1182.54	1179.59	2.7	2.24	40.11	15.31	121.32	394.65	2.78	1.06	2.95	2.95
Sweet Grass County	A7	RM 447.56	64365	20% - 5yr	934.46	1182.08	1179.67	3.21	2.46	63.09	31.17	135.88	383.65	2.01	0.99	2.41	2.41
Sweet Grass County	A7	RM 447.49	64001	20% - 5yr	934.46	1181.96	1179.82	2.41	1.98	35.24	20.72	193.72	425.38	1.89	1.11	2.14	2.14
Sweet Grass County	A7	RM 447.39	63473	20% - 5yr	934.46	1181.35	1178.85	3.48	2.55	68.75	27.16	90.4	418.43	2.23	0.87	2.5	2.5
Sweet Grass County	A7	RM 447.27	62880	20% - 5yr	934.46	1181.03	1178.26	2.84	2.18	47.86	21.31	102.7	440.23	2.22	0.97	2.77	2.77
Sweet Grass County	A7	RM 447.17	62358	20% - 5yr	934.46	1180.71	1177.92	2.75	1.83	45.59	20.57	110.58	537.31	2.12	0.95	2.79	2.79
Sweet Grass County	A7	RM 447.08	61863	20% - 5yr	934.46	1180.29	1177.91	2.91	1.9	54.74	30.03	100.18	534.81	1.69	0.92	2.38	2.38
Sweet Grass County	A7	RM 446.98	61358	20% - 5yr	934.46	1179.78	1177.28	3.02	2.04	51.94	21.51	94.49	506.22	2.2	0.91	2.5	2.5
Sweet Grass County	A7	RM 446.89	60841	20% - 5yr	934.46	1179.35	1176.94	3.27	2.17	63.81	27.67	78.46	457.38	2.18	0.94	2.41	2.41
Sweet Grass County	A7	RM 446.80	60396	20% - 5yr	934.46	1179.2	1175.92	2.46	1.71	34.5	16.99	94.59	494.2	2.51	1.22	3.28	3.28
Sweet Grass County	A7	RM 446.70	59903	20% - 5yr	934.46	1178.86	1176.22	3.12	2.15	55.53	26.11	65.84	404.24	2.6	1.18	2.64	2.64
Sweet Grass County	A7	RM 446.60	59371	20% - 5yr	934.46	1178.47	1175.91	3.12	2.34	53.83	25.48	76.61	385.91	2.32	1.08	2.57	2.57
Sweet Grass County	A7	RM 446.51	58868	20% - 5yr	934.46	1178.25	1175.24	2.62	2.26	40.37	24.76	117.11	306.24	2.27	1.38	3	3
Sweet Grass County	A7	RM 446.41	58363	20% - 5yr	934.46	1178.06	1174.39	2.24	1.96	26.64	17.3	141.71	290.66	2.54	1.65	3.67	3.67
Sweet Grass County	A7	RM 446.30	57762	20% - 5yr	934.46	1177.69	1174.85	2.72	2.5	40.51	29.48	123.97	221.46	2.31	1.69	2.85	2.85
Sweet Grass County	A7	RM 446.22	57365	20% - 5yr	934.46	1177.27	1174.39	3.13	3.12	55.24	51.47	127.52	137.54	2.34	2.18	2.87	2.87
Sweet Grass County	A7	RM 446.12	56852	20% - 5yr	934.46	1177.01	1174.04	2.81	2.79	42.77	37.68	139.97	159.9	2.38	2.1	2.97	2.97
Sweet Grass County	A7	RM 446.02	56303	20% - 5yr	934.46	1176.83	1173.3	2.58	2.39	34.23	21.46	97.88	352.18	3.47	2.14	3.54	3.54
Sweet Grass County	A7	RM 445.94	55871	20% - 5yr	934.46	1176.18	1173.6	3.84	3.6	86.4	70.32	93.95	156.76	2.3	1.87	2.58	2.58
Sweet Grass County	A7	RM 445.82	55236	20% - 5yr	934.46	1175.98	1173.05	2.31	2.21	32.98	27.85	206.81	259.25	1.93	1.63	2.94	2.94
Sweet Grass County	A7	RM 445.71	54753	20% - 5yr	934.46	1175.82	1172.38	2.09	2.05	21.89	20.42	207.29	231.96	2.15	2	3.44	3.44
Sweet Grass County	A7	RM 445.60	54202	20% - 5yr	934.46	1175.62	1172.32	2.16	2.11	24.78	23.02	188.74	234.36	2.26	2.11	3.3	3.3
Sweet Grass County	A7	RM 445.46	53453	20% - 5yr	934.46	1175.09	1171.04	2.92	2.76	43.51	32.09	129.97	198.58	2.41	1.77	4.05	4.05
Sweet Grass County	A7	RM 445.36	52888	20% - 5yr	934.46	1174.87	1170.25	2.72	2.3	40.16	22.75	104.62	257.78	2.93	1.65	4.62	4.62
Sweet Grass County	A7	RM 445.26	52344	20% - 5yr	934.46	1174.31	1171.35	3.39	3.14	65.62	46.89	105.15	171.76	2.49	1.78	2.97	2.97
Sweet Grass County	A7	RM 445.17	51873	20% - 5yr	934.46	1173.7	1171.83	3.67	3.52	85.67	74.22	135.15	174.02	1.79	1.55	1.86	1.86
Sweet Grass County	A7	RM 445.07	51376	20% - 5yr	934.46	1173.68	1170.28	2.15	2.08	26.78	19.89	181.57	295.78	2.36	1.75	3.4	3.4
Sweet Grass County	A7	RM 444.97	50844	20% - 5yr	934.46	1173.22	1170.19	2.87	2.84	45.11	38.58	146.8	181.7	2.22	1.89	3.03	3.03
Sweet Grass County	A7	RM 444.88	50352	20% - 5yr	934.46	1172.97	1170.05	2.71	2.59	40.59	31.45	143.22	195.79	2.39	1.85	2.92	2.92
Sweet Grass County	A7	RM 444.79	49860	20% - 5yr	934.46	1172.61	1169.94	2.96	2.6	50.73	31.62	131.07	247.97	2.34	1.46	2.66	2.66
Sweet Grass County	A7	RM 444.69	49316	20% - 5yr	934.46	1172.26	1169.55	2.92	2.57	49	30.75	125.77	237.54	2.44	1.53	2.71	2.71
Sweet Grass County	A7	RM 444.60	48863	20% - 5yr	934.46	1172.26	1167.23	2.2	1.89	22.69	11.63	87.39	282.59	4.71	2.34	5.03	5.03
Sweet Grass County	A7	RM 444.50	48367	20% - 5yr	934.46	1171.94	1168.66	3	2.4	50.3	30.42	102.71	479.06	2.66	1.6	3.27	3.27
Sweet Grass County	A7	RM 444.41	47863	20% - 5yr	934.46	1171.84	1168.6	2.28	2.16	27.39	24.17	129.86	555.76	2.68	2.37	3.25	3.25
Sweet Grass County	A7	RM 444.30	47336	20% - 5yr	934.46	1171.74	1168.26	1.94	1.77	19.74	12.25	167.8	669.7	2.83	1.75	3.48	3.48
Sweet Grass County	A7	RM 444.20	46789	20% - 5yr	934.46	1170.99	1167.97	3.65	3.52	76.47	51.73	104.85	311.62	2.44	1.64	3.02	3.02
Sweet Grass County	A7	RM 444.12	46346	20% - 5yr	934.46	1170.71	1167.62	3.31	3.06	60.35	40.16	99.43	169.83	2.8	1.85	3.09	3.09
Sweet Grass County	A7	RM 444.02	45829	20% - 5yr	934.46	1170.53	1167.57	2.74	2.6	37.34	25.8	143.97	220.62	2.36	1.63	2.96	2.96
Sweet Grass County	A7	RM 443.91	45243	20% - 5yr	934.46	1170.22	1167.08	2.71	2.54	43.05	23.06	151.5	306.59	2.25	1.2	3.14	3.14
Sweet Grass County	A7	RM 443.84	44853	20% - 5yr	934.46	1169.63	1167.23	3.39	3.38	75.75	67.58	173.5	195.18	1.59	1.42	2.4	2.4
Sweet Grass County	A7	RM 443.75	44415	20% - 5yr	934.46	1169.43	1166.67	2.5	2.49	38.03	36.09	183.53	255.14	2.04	1.93	2.76	2.76
Sweet Grass County	A7	RM 443.64	43870	20% - 5yr	934.46	1169.15	1166.09	2.61	2.09	39.43	18.08	110.6	559.33	2.39	1.09	3.06	3.06
Sweet Grass County	A7	RM 443.53	43290	20% - 5yr	934.46	1168.98	1165.72	2.35	2.02	29.81	15.38	87.52	610.44	2.97	1.51	3.26	3.26
Sweet Grass County	A8	RM 443.45	42860	20% - 5yr	934.46	1168.58	1165.25	2.89	2.86	46.05	41.38	134.2	363.1	2.41	2.17	3.33	3.33
Sweet Grass County	A8	RM 443.35	42363	20% - 5yr	934.46	1167.97	1164.95	3.6	3.37	74.03	51.2	101.6	290.3	2.48	1.7	3.02	3.02
Sweet Grass County	A8	RM 443.25	41863	20% - 5yr	934.46	1167.84	1165.05	2.67	2.34	41.1	25.02	127.8	406.98	2.39	1.45	2.79	2.79
Sweet Grass County	A8	RM 443.16	41342	20% - 5yr	934.46	1167.58	1165.43	2.48	1.96	38.98	24.55	151.9	505.75	1.79	1.13	2.15	2.15
Sweet Grass County	A8	RM 443.07	40863	20% - 5yr	934.46	1167.17	1164.49	2.74	2.02	46.86	22.86	139	600.66	1.89	0.92	2.68	2.68
Sweet Grass County	A8	RM 442.97	40345	20% - 5yr	934.46	1166.88	1164.28	2.37	1.71	31.27	20.64	160.6	513.37	1.84	1.21	2.61	2.61
Sweet Grass County	A8	RM 442.88	39863	20% - 5yr	934.46	1166.69	1164.06	2.01	1.63	24.44	18.06	177.36	536.88	1.76	1.3	2.64	2.64

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.78	39363	20% - 5yr	934.46	1165.96	1164.18	3.31	3	75.44	50.31	131.56	393.61	1.39	0.93	2.1	2.1
Sweet Grass County	A8	RM 442.68	38840	20% - 5yr	934.46	1165.59	1162.8	2.49	1.96	30.89	16.9	117.57	455.3	1.96	1.07	2.79	2.79
Sweet Grass County	A8	RM 442.60	38390	20% - 5yr	934.46	1165.52	1162.57	1.69	1.47	17.14	11.63	157.4	447.9	2.13	1.45	2.95	2.95
Sweet Grass County	A8	RM 442.50	37863	20% - 5yr	934.46	1165.11	1162.29	2.87	2.27	42.44	23.38	93.85	333.75	2.28	1.26	2.83	2.83
Sweet Grass County	A8	RM 442.42	37461	20% - 5yr	934.46	1164.87	1162.07	2.89	2.26	38.33	21.31	121.06	419.38	1.82	1	2.8	2.8
Sweet Grass County	A8	RM 442.32	36914	20% - 5yr	934.46	1164.53	1161.85	2.83	2.21	47.96	26.39	105.33	369.5	2.15	1.18	2.69	2.69
Sweet Grass County	A8	RM 442.24	36451	20% - 5yr	934.46	1164.27	1161.75	2.56	2.3	35.05	27.31	123.68	285.29	1.83	1.42	2.52	2.52
Sweet Grass County	A8	RM 442.12	35820	20% - 5yr	934.46	1163.99	1161.12	2.46	2.11	30.65	21.68	121.48	315.98	2.07	1.46	2.87	2.87
Sweet Grass County	A8	RM 442.03	35367	20% - 5yr	934.46	1163.72	1161.18	2.53	2.25	39.68	27.22	123.16	323.47	1.92	1.32	2.54	2.54
Sweet Grass County	A8	RM 441.95	34945	20% - 5yr	934.46	1163.64	1160.28	1.93	1.55	21.31	11.99	133.63	482.24	2.49	1.38	3.36	3.36
Sweet Grass County	A8	RM 441.84	34360	20% - 5yr	934.46	1163.18	1160.33	2.71	2.24	38.03	20.84	186.27	436.69	1.74	0.96	2.85	2.85
Sweet Grass County	A8	RM 441.74	33863	20% - 5yr	934.46	1162.85	1160.06	2.7	2.18	39.65	20.12	171.23	443.97	1.9	0.97	2.79	2.79
Sweet Grass County	A8	RM 441.65	33357	20% - 5yr	934.46	1162.72	1159.78	2.1	1.57	24.68	10.57	173.52	638.66	2.36	1	2.94	2.94
Sweet Grass County	A8	RM 441.53	32732	20% - 5yr	934.46	1162.35	1159.44	2.56	1.92	38.58	16.36	151.91	517.16	2.23	0.94	2.91	2.91
Sweet Grass County	A8	RM 441.47	32366	20% - 5yr	934.46	1162.25	1158.95	2.27	1.57	28.79	11.33	138.98	597.51	2.66	1.04	3.3	3.3
Sweet Grass County	A8	RM 441.38	31928	20% - 5yr	934.46	1162.26	1158.24	1.51	0.97	12.32	5.97	153.74	904.75	2.95	1.42	4.02	4.02
Sweet Grass County	A8	RM 441.27	31350	20% - 5yr	934.46	1161.58	1158.76	3.56	2.7	74.04	26.49	95.77	463.19	2.33	0.83	2.83	2.83
Sweet Grass County	A8	RM 441.18	30882	20% - 5yr	934.46	1161.51	1158.5	2.44	1.6	31.97	9.72	126.17	856.79	2.38	0.72	3.01	3.01
Sweet Grass County	A8	RM 441.07	30295	20% - 5yr	934.46	1161.34	1158.19	2.14	1.45	26.25	8.61	149.54	858.92	2.45	0.8	3.15	3.15
Sweet Grass County	A8	RM 441.00	29913	20% - 5yr	934.46	1161.25	1157.63	2.04	1.34	23.71	8.65	146.59	882.9	2.46	0.89	3.62	3.62
Sweet Grass County	A8	RM 440.80	28852	20% - 5yr	934.46	1160.27	1157.49	3.61	3.16	71.11	38.11	103.86	237.9	2.32	1.24	2.78	2.78
Sweet Grass County	A8	RM 440.60	27841	20% - 5yr	934.46	1159.46	1157.2	3.02	2.55	56.97	28.89	121.05	400.47	1.88	0.95	2.25	2.25
Sweet Grass County	A8	RM 440.51	27361	20% - 5yr	934.46	1159.02	1156.41	3	2.4	54.55	34.22	109.89	303.78	2.06	1.28	2.61	2.61
Sweet Grass County	A8	RM 440.42	26862	20% - 5yr	934.46	1158.37	1156.26	3.53	2.85	79.34	46.75	88.6	311.95	1.78	1.05	2.1	2.1
Sweet Grass County	A8	RM 440.30	26223	20% - 5yr	934.46	1158.29	1155.63	1.76	1.42	18.94	12.09	96.69	513.46	2.02	1.28	2.66	2.66
Sweet Grass County	A8	RM 440.17	25466	20% - 5yr	934.46	1158	1154.7	2.45	1.71	33.47	17.04	64.56	403.89	2.76	1.36	3.3	3.3
Sweet Grass County	A8	RM 440.06	24863	20% - 5yr	934.46	1157.75	1153.97	2.24	1.9	27.35	15.75	130.36	304.35	2.83	1.62	3.78	3.78
Sweet Grass County	A8	RM 439.96	24366	20% - 5yr	934.46	1157.5	1154.18	2.64	2.21	37.31	19.9	95.61	277.6	2.99	1.59	3.32	3.32
Sweet Grass County	A8	RM 439.87	23863	20% - 5yr	934.46	1157.26	1153.59	2.68	2.32	35.61	20.84	103.39	234.14	3.29	1.93	3.67	3.67
Sweet Grass County	A8	RM 439.77	23365	20% - 5yr	934.46	1157.05	1153.6	2.71	2.62	37.57	29.07	124.68	195.32	2.75	2.13	3.45	3.45
Sweet Grass County	A8	RM 439.68	22863	20% - 5yr	934.46	1156.78	1153.45	2.83	2.77	40.06	30.91	134.86	198.24	2.45	1.89	3.33	3.33
Sweet Grass County	A8	RM 439.58	22363	20% - 5yr	934.46	1156.67	1153.39	2.3	1.95	28.23	11.57	150.28	466.51	2.62	1.07	3.28	3.28
Sweet Grass County	A8	RM 439.49	21863	20% - 5yr	934.46	1156.53	1152.86	2.29	1.84	26.88	8.16	116.13	517.03	3.39	1.02	3.67	3.67
Sweet Grass County	A8	RM 439.39	21363	20% - 5yr	934.46	1156.36	1153.06	2.4	2.01	30.9	10.41	131.98	521.24	2.85	0.95	3.3	3.3
Sweet Grass County	A8	RM 439.30	20863	20% - 5yr	934.46	1155.94	1152.92	3.06	2.61	50.65	20.87	110.38	360.72	2.65	1.09	3.03	3.03
Sweet Grass County	A8	RM 439.20	20353	20% - 5yr	934.46	1155.29	1152.64	3.71	3.65	74.76	64.47	111.19	146.51	2.25	1.94	2.65	2.65
Sweet Grass County	A8	RM 439.11	19864	20% - 5yr	934.46	1155.26	1152.34	2.57	2.15	36.71	19.33	98.01	368.78	2.65	1.39	2.92	2.92
Sweet Grass County	A8	RM 439.01	19360	20% - 5yr	934.46	1154.66	1152.4	3.33	3.1	63.13	39.35	124.89	272.73	1.81	1.13	2.26	2.26
Sweet Grass County	A8	RM 438.91	18848	20% - 5yr	934.46	1154.45	1151.92	2.57	2.18	36.61	21.08	121.85	353.92	2.1	1.21	2.54	2.54
Sweet Grass County	A8	RM 438.82	18363	20% - 5yr	934.46	1154.19	1151.23	2.56	2.22	38.33	26.14	117.07	299.06	2.29	1.56	2.96	2.96
Sweet Grass County	A8	RM 438.73	17853	20% - 5yr	934.46	1153.76	1151.37	2.93	2.5	46.42	30.8	124.01	330.6	1.71	1.13	2.38	2.38
Sweet Grass County	A8	RM 438.63	17363	20% - 5yr	934.46	1153.61	1150.74	2.28	1.81	29.7	18.51	100.37	341.21	2.43	1.51	2.87	2.87
Sweet Grass County	A8	RM 438.54	16863	20% - 5yr	934.46	1153.47	1150.59	2.11	1.81	24.94	18.38	104.03	263.5	2.7	1.96	2.88	2.88
Sweet Grass County	A8	RM 438.43	16307	20% - 5yr	934.46	1153.29	1149.52	2.05	2.05	22.81	22.81	158.7	193.47	2.87	2.87	3.77	3.77
Sweet Grass County	A9	RM 438.36	15889	20% - 5yr	934.46	1153.16	1149.4	2.11	2.08	20.07	18.7	187.56	205.62	2.35	2.19	3.76	3.76
Sweet Grass County	A9	RM 438.26	15363	20% - 5yr	934.46	1152.66	1149.84	3.17	2.85	55.43	38.85	114.6	192.58	2.42	1.7	2.82	2.82
Sweet Grass County	A9	RM 438.16	14863	20% - 5yr	934.46	1152.45	1149.31	2.79	2.31	40.72	17.08	119.38	361.65	2.69	1.13	3.13	3.13
Sweet Grass County	A9	RM 438.07	14394	20% - 5yr	934.46	1152.19	1149.19	2.85	2.18	46.88	18.94	127.5	452.77	2.41	0.97	2.99	2.99
Sweet Grass County	A9	RM 437.96	13827	20% - 5yr	934.46	1151.95	1149.19	2.62	1.86	40.43	15.51	119.49	609.56	2.22	0.85	2.76	2.76
Sweet Grass County	A9	RM 437.88	13363	20% - 5yr	934.46	1151.68	1148.94	2.8	1.93	41.46	15.08	106.43	639.01	2.17	0.78	2.74	2.74
Sweet Grass County	A9	RM 437.78	12844	20% - 5yr	934.46	1151.39	1148.72	2.83	1.98	44.13	17.25	99.4	579.42	2.25	0.87	2.67	2.67
Sweet Grass County	A9	RM 437.69	12354	20% - 5yr	934.46	1151.25	1148.45	2.06	1.59	25.93	13.94	146.78	561.55	2.01	1.08	2.8	2.8
Sweet Grass County	A9	RM 437.59	11863	20% - 5yr	934.46	1150.94	1148.76	2.35	1.92	36.71	20.39	150.89	564.39	1.56	0.86	2.53	2.53
Sweet Grass County	A9	RM 437.50	11362	20% - 5yr	934.46	1150.73	1148.29	1.99	1.64	25.32	15.57	189.23	534.24	1.73	1.07	2.44	2.44
Sweet Grass County	A9	RM 437.41	10902	20% - 5yr	934.46	1150.44	1148.26	2.29	1.84	34.45	19.55	175.96	560.72	1.59	0.9	2.18	2.18
Sweet Grass County	A9	RM 437.31	10361	20% - 5yr	934.46	1150.05	1147.37	2.51	1.88	39.46	18.67	147.9	560.71	1.87	0.89	2.68	2.68
Sweet Grass County	A9	RM 437.20	9764	20% - 5yr	934.46	1149.7	1147.02	2.65	1.82	37.67	16.35	107.97	563.33	2.1	0.91	2.68	2.68
Sweet Grass County	A9	RM 437.08	9128	20% - 5yr	934.46	1149.28	1146.9	2.53	2.06	37.79	20.53	188.59	503.26	1.66	0.9	2.38	2.38
Sweet Grass County	A9	RM 436.95	8363	20% - 5yr	934.46	1149.1	1145.32	2.13	1.39	17.44	8.23	106.1	623.95	2.37	1.09	3.78	3.78
Sweet Grass County	A9	RM 436.83	7805	20% - 5yr	934.46	1148.98	1145.93	1.57	1.28	16.08	9.55	154.6	751.38	1.64	0.97	3.05	3.05

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.75	6857	20% - 5yr	934.46	1148.43	1145.61	3.11	1.77	56.99	16.11	66.9	831.34	2.28	0.63	2.82	2.82
Sweet Grass County	A9	RM 436.66	6193	20% - 5yr	934.46	1147.97	1145.68	2.76	1.85	46.68	17.01	97.51	735.26	1.94	0.71	2.29	2.29
Sweet Grass County	A9	RM 436.56	5280	20% - 5yr	934.46	1147.47	1144.44	3.08	1.82	46.86	16.08	57.26	604.46	2.63	0.85	3.03	3.03
Sweet Grass County	A9	RM 436.40	4576	20% - 5yr	934.46	1147.27	1144.05	2.41	1.52	32.35	12.58	57.78	647.45	2.8	1.04	3.23	3.23
Sweet Grass County	A9	RM 436.29	3787	20% - 5yr	934.46	1146.76	1144.44	2.78	2.33	48.43	33.08	98.9	485.11	1.88	1.28	2.32	2.32
Sweet Grass County	A9	RM 436.16	3087	20% - 5yr	934.46	1146.07	1143.57	3.03	2.51	57.14	34.84	107.65	428.79	1.89	1.15	2.5	2.5
Sweet Grass County	A9	RM 436.07	2676	20% - 5yr	934.46	1145.85	1143.09	2.56	2.02	35.84	22.4	102.06	655.5	1.92	1.19	2.76	2.76
Sweet Grass County	A9	RM 435.98	2200	20% - 5yr	934.46	1145.5	1142.85	2.85	2.17	49.05	25.22	71.95	595.18	2.12	1.07	2.66	2.66
Sweet Grass County	A9	RM 435.88	1580	20% - 5yr	934.46	1145.06	1142.56	2.34	2.07	38.15	28.06	82.89	489.31	1.38	1.01	2.5	2.5
Sweet Grass County	A9	RM 435.73	890	20% - 5yr	934.46	1144.73	1141.99	2.15	1.79	27.9	18.85	76.85	432.39	2.13	1.4	2.73	2.73
Sweet Grass County	A9	RM 435.62	104	20% - 5yr	934.46	1144.17	1141.54	2.74	2.23	47.8	33.55	126.92	355.25	1.78	1.24	2.63	2.63

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	20% - 5yr	934.6	1143.99	1140.73	1.49	1.37	13.58	10.8	150.07	435.38	2.01	1.61	3.3	3.3
Stillwater County	A9	RM 435.38	231282.1	20% - 5yr	934.6	1143.76	1139.61	1.65	1.51	15.46	8.17	196.87	471.63	2.54	1.34	4.15	4.15
Stillwater County	A9	RM 435.25	230611.3	20% - 5yr	934.6	1143.19	1138.48	3.01	2.9	50.45	33.69	115.51	181.18	2.67	1.78	4.71	4.71
Stillwater County	A9	RM 435.16	230122.9	20% - 5yr	934.6	1142.92	1138.39	2.97	2.7	49.2	25.02	117.05	257.93	2.65	1.34	4.53	4.53
Stillwater County	A9	RM 435.07	229649	20% - 5yr	934.6	1142.68	1137.85	2.95	2.54	46.56	17.07	103.44	338.71	2.97	1.08	4.83	4.83
Stillwater County	A9	RM 434.97	229153	20% - 5yr	934.6	1142.41	1137.87	2.99	2.67	48.48	27.92	103.92	211.83	2.87	1.65	4.54	4.54
Stillwater County	A9	RM 434.84	228443.5	20% - 5yr	934.6	1142.08	1137	2.91	2.65	45.18	29.68	100.6	177.44	3.03	1.99	5.08	5.08
Stillwater County	A9	RM 434.73	227855.5	20% - 5yr	934.6	1141.82	1135.61	2.94	2.74	42.84	23.62	82.12	169.74	3.84	2.1	6.21	6.21
Stillwater County	A9	RM 434.63	227328.2	20% - 5yr	934.6	1141.64	1135.42	2.87	2.87	41.52	41.52	90.13	133.57	3.61	3.61	6.22	6.22
Stillwater County	A9	RM 434.57	227011.2	20% - 5yr	934.6	1141.51	1136.35	2.88	2.88	43.64	43.64	103.58	114.31	3.14	3.14	5.16	5.16
Stillwater County	A9	RM 434.53	226817.6	20% - 5yr	934.6	1141.39	1136.73	2.96	2.96	48.6	48.32	118.35	125.63	2.67	2.66	4.66	4.66
Stillwater County	A10	RM 434.49	226573.3	20% - 5yr	934.6	1141.31	1137.23	2.68	2.68	39.44	39.44	124.68	204.27	2.79	2.79	4.08	4.08
Stillwater County			226533.4	20% - 5yr	Bridge												
Stillwater County	A10	RM 434.47	226483	20% - 5yr	934.6	1141.19	1137.49	2.67	2.67	40.09	40.09	135.02	277.47	2.59	2.59	3.7	3.7
Stillwater County	A10	RM 434.42	226233.2	20% - 5yr	934.6	1141.05	1137.1	2.7	2.7	41.44	39.42	137.96	216.12	2.51	2.39	3.95	3.95
Stillwater County	A10	RM 434.37	225940.2	20% - 5yr	934.6	1140.83	1136.51	2.91	2.91	47.48	46.87	123.02	148.19	2.61	2.58	4.32	4.32
Stillwater County	A10	RM 434.24	225278.2	20% - 5yr	934.6	1140.55	1136.56	2.69	2.57	39.93	36.11	114.98	149.45	2.74	2.48	3.99	3.99
Stillwater County	A10	RM 434.15	224819.6	20% - 5yr	934.6	1140.35	1137.06	2.55	2.34	38.37	30.16	155.85	229.31	2.22	1.75	3.28	3.28
Stillwater County	A10	RM 434.07	224366.5	20% - 5yr	934.6	1139.92	1136.55	3.07	2.72	57.21	45.83	112.29	208.99	2.04	1.64	3.52	3.52
Stillwater County	A10	RM 433.98	223883.5	20% - 5yr	934.6	1139.76	1136.28	2.23	2.16	30.06	27.19	136.71	231.71	2.07	1.88	3.48	3.48
Stillwater County	A10	RM 433.87	223309.3	20% - 5yr	934.6	1139.51	1135.82	2.4	2.22	32.63	28.18	107.22	228.96	2.55	2.2	3.69	3.69
Stillwater County	A10	RM 433.78	222850	20% - 5yr	934.6	1139.26	1135.54	2.43	2.42	34.83	33.72	174.14	358.43	2.21	2.14	3.72	3.72
Stillwater County	A10	RM 433.66	222201.9	20% - 5yr	934.6	1138.89	1135.16	2.62	2.6	39.01	33.2	142.02	281.98	2.51	2.13	3.73	3.73
Stillwater County	A10	RM 433.54	221596.6	20% - 5yr	934.6	1138.51	1135.33	2.83	2.78	45.41	38.72	131.97	205.48	2.49	2.13	3.18	3.18
Stillwater County	A10	RM 433.42	220956.2	20% - 5yr	934.6	1138.09	1134.88	2.95	2.92	49.35	43.34	127.06	212.97	2.49	2.19	3.21	3.21
Stillwater County	A10	RM 433.31	220362.5	20% - 5yr	934.6	1137.8	1134.67	2.48	2.41	38.72	30.65	202.58	340	1.84	1.46	3.13	3.13
Stillwater County	A10	RM 433.20	219758.6	20% - 5yr	934.6	1137.61	1134.17	1.95	1.61	23.31	16.36	148.63	487.83	2	1.4	3.44	3.44
Stillwater County	A10	RM 433.09	219185.2	20% - 5yr	934.6	1137.31	1133.45	2.21	2.2	28.13	25.55	178.52	283.86	2.37	2.15	3.86	3.86
Stillwater County	A10	RM 432.97	218599.7	20% - 5yr	934.6	1136.97	1133.57	2.56	2.49	37.63	34.51	148.75	227.62	2.41	2.21	3.4	3.4
Stillwater County	A10	RM 432.84	217905.9	20% - 5yr	934.6	1136.7	1132.7	2.44	2.29	33.09	23.48	136.5	230.85	2.69	1.91	4	4
Stillwater County	A10	RM 432.69	217146.9	20% - 5yr	934.6	1136.22	1131.51	2.99	2.78	45.98	28.23	89.72	160.93	3.42	2.09	4.71	4.71
Stillwater County	A10	RM 432.60	216656.8	20% - 5yr	934.6	1136.05	1132.1	2.82	2.65	41.77	29.25	101.98	164.64	3.22	2.24	3.95	3.95
Stillwater County	A10	RM 432.45	215889.7	20% - 5yr	934.6	1135.74	1132.07	2.67	2.63	39.99	32.16	134.8	228.39	2.59	2.08	3.67	3.67
Stillwater County	A10	RM 432.35	215361.3	20% - 5yr	934.6	1135.54	1132.33	2.42	2.28	33.63	18.06	157.67	374.91	2.43	1.3	3.21	3.21
Stillwater County	A10	RM 432.20	214585.3	20% - 5yr	962.9	1134.98	1131.29	2.98	2.93	49.69	38.77	124.46	170.05	2.59	2.03	3.69	3.69
Stillwater County	A10	RM 432.10	214039.1	20% - 5yr	962.9	1134.73	1130.7	2.77	2.37	42.69	24.72	124.1	378.77	2.67	1.55	4.03	4.03
Stillwater County	A10	RM 432.02	213606.1	20% - 5yr	962.9	1134.63	1130.52	2.27	2.12	29.48	18.77	160.98	378.01	2.47	1.58	4.11	4.11
Stillwater County	A10	RM 431.87	212811.5	20% - 5yr	962.9	1134.25	1129.24	2.37	2.22	35.01	26.42	201.11	362.69	1.9	1.44	5.01	5.01
Stillwater County	A10	RM 431.74	212127.4	20% - 5yr	962.9	1134.07	1129.66	1.99	1.38	22.18	15.41	161.11	401.08	2.57	1.78	4.41	4.41
Stillwater County	A10	RM 431.60	211373.6	20% - 5yr	962.9	1133.57	1129.96	2.76	2.7	42.76	37.63	133.48	165.37	2.59	2.28	3.61	3.61
Stillwater County	A10	RM 431.49	210820.2	20% - 5yr	962.9	1133.3	1129.62	2.71	2.63	40.9	32.69	131.28	187.45	2.68	2.14	3.68	3.68
Stillwater County	A10	RM 431.41	210365.9	20% - 5yr	962.9	1133.01	1129.57	2.89	2.85	46.98	38.86	129.47	159.38	2.57	2.12	3.43	3.43
Stillwater County	A10	RM 431.28	209716.5	20% - 5yr	962.9	1132.67	1129.79	2.67	2.61	42.19	32.46	163.65	218.8	2.2	1.69	2.88	2.88
Stillwater County	A10	RM 431.14	208918.5	20% - 5yr	962.9	1132.29	1129.82	2.17	2.35	29.5	30.46	130.54	212.76	1.85	1.92	3.54	3.54
Stillwater County	A10	RM 431.03	208358.8	20% - 5yr	962.9	1131.91	1128.56	2.48	2.61	39.89	42.58	126.38	205.03	1.68	1.8	3.35	3.35
Stillwater County	A10	RM 430.93	207821.9	20% - 5yr	962.9	1131.66	1128.76	2.33	2.1	33.72	26.12	126.38	335.76	1.89	1.47	2.9	2.9
Stillwater County	A10	RM 430.83	207325.6	20% - 5yr	962.9	1131.4	1127.66	2.33	2.19	32.31	29.42	158.19	222.33	2.16	1.97	3.74	3.74
Stillwater County	A10	RM 430.70	206629.1	20% - 5yr	962.9	1131.27	1126.9	1.79	1.7	17.58	14.26	150.14	268.86	2.8	2.29	4.37	4.37
Stillwater County	A10	RM 430.59	206064.9	20% - 5yr	962.9	1131.12	1127.2	2.02	1.86	21.79	14.1	134.54	336.22	3.01	1.95	3.92	3.92
Stillwater County	A10	RM 430.51	205629.5	20% - 5yr	962.9	1130.78	1126.28	2.79	2.62	41.47	25.98	105.78	193.72	3.05	1.91	4.5	4.5
Stillwater County	A10	RM 430.43	205204.2	20% - 5yr	962.9	1130.54	1126.08	2.94	2.79	45.21	33.62	97.84	178.67	3.19	2.37	4.46	4.46
Stillwater County	A10	RM 430.34	204728.4	20% - 5yr	962.9	1130.27	1126.07	3.05	2.84	49.82	29.01	101.37	278.34	3	1.75	4.2	4.2
Stillwater County	A11	RM 430.23	204119.7	20% - 5yr	962.9	1130.17	1126.63	2.22	2.07	27.87	17.02	168.39	554.17	2.54	1.55	3.54	3.54
Stillwater County	A11	RM 430.12	203479.6	20% - 5yr	962.9	1129.9	1126.96	2.5	2.29	36	19.52	110.33	501.05	2.39	1.3	3.37	3.37
Stillwater County	A11	RM 430.04	202968.2	20% - 5yr	962.9	1129.64	1127.24	2.52	2.43	37.94	29.72	112.1	300.39	2.17	1.69	3	3
Stillwater County	A11	RM 429.95	202589.5	20% - 5yr	962.9	1129.43	1126.33	2.32	2.27	33.19	24.62	141.44	354.97	1.94	1.44	3.1	3.1
Stillwater County	A11	RM 429.88	202224.7	20% - 5yr	962.9	1129.26	1125.62	2.36	2.15	32.86	16.57	123.96	472.48	2.24	1.13	3.64	3.64
Stillwater County	A11	RM 429.78	201933.6	20% - 5yr	962.9	1128.96	1123.72	2.8	2.41	43.27	18.82	90.13	401.76	2.74	1.18	5.23	5.23
Stillwater County	A11	RM 429.69	201539.9	20% - 5yr	962.9	1128.57	1123.39	3.2	2.63	57.96	35.74	89.57	246.74	2.55	1.56	5.18	5.18
Stillwater County	A11	RM 429.58	200961.9	20% - 5yr	962.9	1128.31	1124.69	2.63	1.94	40.66	22.03	116.91	428.09	2.14	1.16	3.62	3.62

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	20% - 5yr	962.9	1127.86	1125.15	2.07	1.8	26.79	16.85	184.18	461.32	1.84	1.16	3.43	3.43
Stillwater County	A11	RM 429.28	199644.1	20% - 5yr	962.9	1127.57	1123.59	2.24	1.91	30.44	16.96	147.86	440.35	2.06	1.15	3.98	3.98
Stillwater County	A11	RM 429.18	199152	20% - 5yr	962.9	1127.36	1124.66	1.92	1.79	23.44	16.21	144.04	441.54	1.76	1.22	3.45	3.45
Stillwater County	A11	RM 429.10	198708.6	20% - 5yr	962.9	1126.99	1124.26	2.45	2.33	37.53	24.6	87.07	338.12	1.86	1.22	3.41	3.41
Stillwater County	A11	RM 429.00	198203.8	20% - 5yr	962.9	1126.77	1123.47	2.08	1.98	28.35	21.24	124	395.95	1.63	1.23	3.3	3.3
Stillwater County	A11	RM 428.89	197650.5	20% - 5yr	962.9	1126.57	1121.26	2.21	1.87	27.44	16.2	150.21	338.96	2.57	1.52	5.31	5.31
Stillwater County	A11	RM 428.81	197194.1	20% - 5yr	962.9	1126.37	1121.47	2.5	1.95	33.32	15.53	98.51	354.27	3	1.4	4.9	4.9
Stillwater County	A11	RM 428.66	196404.4	20% - 5yr	962.9	1126.17	1122.31	1.97	1.83	23.22	12.96	204.39	554.9	2.13	1.19	3.86	3.86
Stillwater County	A11	RM 428.52	195702.6	20% - 5yr	962.9	1125.8	1122.1	2.3	2.25	32.07	19.68	205.98	573.05	2.03	1.24	3.7	3.7
Stillwater County	A11	RM 428.44	195293.8	20% - 5yr	962.9	1125.55	1121.18	2.52	2.42	35.57	21.64	146.38	469.01	2.59	1.57	4.37	4.37
Stillwater County	A11	RM 428.39	195075.5	20% - 5yr	962.9	1125.34	1120.72	2.87	2.76	45.41	24.27	122.37	436.13	2.72	1.45	4.62	4.62
Stillwater County	A11	RM 428.33	194724.6	20% - 5yr	962.9	1125.21	1121.22	2.69	2.6	40.29	25.74	135.36	490.87	2.63	1.68	3.99	3.99
Stillwater County	A11	RM 428.28	194450.8	20% - 5yr	962.9	1125.09	1121.2	2.6	2.54	38.23	29.1	144.19	498.45	2.55	1.94	3.89	3.89
Stillwater County	A11	RM 428.23	194235.2	20% - 5yr	962.9	1125.02	1120.74	2.51	2.45	35	28.75	142.77	531.8	2.67	2.19	4.27	4.27
Stillwater County	A11	RM 428.20	194033.4	20% - 5yr	962.9	1124.96	1120.37	2.43	2.3	31.24	25.84	120.76	493.76	3.07	2.54	4.59	4.59
Stillwater County			193969.6	20% - 5yr	Bridge												
Stillwater County	A11	RM 428.17	193915	20% - 5yr	962.9	1124.7	1120.32	2.57	2.42	35.06	29.64	114.58	396.53	3.04	2.57	4.38	4.38
Stillwater County			193871.1	20% - 5yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	20% - 5yr	962.9	1124.56	1120.23	2.6	2.4	36.37	28.81	114.51	386.12	2.93	2.31	4.33	4.33
Stillwater County	A11	RM 428.11	193602.7	20% - 5yr	962.9	1124.52	1119.42	2.39	2.22	31.75	25.22	130.14	350.04	2.73	2.15	5.1	5.1
Stillwater County	A11	RM 428.09	193436.6	20% - 5yr	962.9	1124.39	1119.9	2.59	2.42	37.54	32.4	118.71	414.01	2.66	2.29	4.49	4.49
Stillwater County	A11	RM 428.05	193246.1	20% - 5yr	962.9	1124.3	1120.1	2.6	2.35	38.21	29.36	125.05	410.75	2.55	1.95	4.2	4.2
Stillwater County	A11	RM 428.00	192989.8	20% - 5yr	962.9	1124.21	1120.28	2.5	2.19	34.9	23.82	127.19	473.98	2.64	1.8	3.93	3.93
Stillwater County	A11	RM 427.95	192728.8	20% - 5yr	962.9	1124.12	1119.57	2.39	2.12	31.54	17.8	132.46	535.37	2.74	1.54	4.55	4.55
Stillwater County	A11	RM 427.88	192333.2	20% - 5yr	962.9	1123.86	1119.27	2.79	2.43	41.82	22.11	104.18	412.54	2.97	1.56	4.59	4.59
Stillwater County	A11	RM 427.83	192088.8	20% - 5yr	962.9	1123.75	1119.18	2.8	2.52	41.98	23.05	104.17	491.1	2.99	1.64	4.57	4.57
Stillwater County	A11	RM 427.76	191724.1	20% - 5yr	962.9	1123.63	1119.07	2.66	2.41	37.04	27.47	101.84	243.78	3.19	2.36	4.56	4.56
Stillwater County			191581.1	20% - 5yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	20% - 5yr	962.9	1123.16	1118.71	2.98	2.9	48.59	42.07	113.67	139.99	2.81	2.43	4.45	4.45
Stillwater County	A11	RM 427.65	191155.9	20% - 5yr	962.9	1123.11	1118.58	2.31	2.26	28.53	22.9	139.89	640.65	2.97	2.39	4.53	4.53
Stillwater County	A11	RM 427.53	190509.6	20% - 5yr	962.9	1122.73	1117.37	2.88	2.83	42.51	35.02	96.25	344.15	3.46	2.84	5.36	5.36
Stillwater County	A11	RM 427.41	189886.1	20% - 5yr	962.9	1122.53	1118.73	2.67	2.67	37.53	36.14	115.29	239.08	3.13	3.01	3.8	3.8
Stillwater County	A11	RM 427.29	189253.3	20% - 5yr	962.9	1122.23	1119.12	2.65	2.62	42.29	40.58	175.21	258.13	2.07	1.99	3.11	3.11
Stillwater County	A11	RM 427.17	188639.5	20% - 5yr	962.9	1121.94	1118.44	2.34	2.16	33.17	24.43	197.68	355.11	2.03	1.5	3.5	3.5
Stillwater County	A11	RM 427.09	188179.7	20% - 5yr	962.9	1121.56	1118.34	2.83	2.46	45.09	26.08	125.84	283.82	2.6	1.5	3.22	3.22
Stillwater County	A11	RM 427.00	187745.4	20% - 5yr	962.9	1121.42	1117.71	2.5	2.07	35.71	23.71	141.12	343.66	2.43	1.62	3.71	3.71
Stillwater County	A11	RM 426.92	187309.3	20% - 5yr	962.9	1121.18	1117.32	2.46	2.28	37.88	30.21	203.26	292.27	1.87	1.49	3.86	3.86
Stillwater County	A11	RM 426.86	186960.4	20% - 5yr	962.9	1121.01	1116.77	2.28	2.16	32.14	28.71	209.51	266.1	1.96	1.76	4.24	4.24
Stillwater County	A11	RM 426.75	186401.3	20% - 5yr	962.9	1120.68	1116.11	2.45	2.21	36.13	30.01	181.1	258.76	2.08	1.73	4.57	4.57
Stillwater County	A11	RM 426.67	185983.5	20% - 5yr	962.9	1120.47	1115.84	2.47	2.47	33.51	31.89	138.91	185.79	2.8	2.67	4.63	4.63
Stillwater County	A11	RM 426.59	185580.4	20% - 5yr	962.9	1120.18	1115.47	2.91	2.83	44.85	39.18	105.59	124.68	3.11	2.73	4.71	4.71
Stillwater County	A11	RM 426.52	185166.5	20% - 5yr	962.9	1120.02	1115.54	2.81	2.81	41.22	41.22	106.42	106.42	3.22	3.22	4.48	4.48
Stillwater County	A11	RM 426.43	184738.3	20% - 5yr	962.9	1119.85	1115.89	2.78	2.76	41.27	39.86	113.77	118.95	3.03	2.93	3.96	3.96
Stillwater County	A11	RM 426.32	184158.4	20% - 5yr	962.9	1119.62	1116.39	2.65	2.65	38.67	38.67	132.74	132.74	2.74	2.74	3.23	3.23
Stillwater County	A11	RM 426.20	183517.2	20% - 5yr	962.9	1119.29	1116.07	2.53	2.52	40.91	39.92	214.5	220.8	1.77	1.73	3.21	3.21
Stillwater County	A11	RM 426.11	183030.7	20% - 5yr	962.9	1119.03	1115.37	2.25	2.22	28.24	27.25	265.64	297.21	1.61	1.55	3.66	3.66
Stillwater County	A11	RM 426.00	182442.5	20% - 5yr	962.9	1118.75	1115.74	2.16	2.02	29.17	26.69	225.05	296.32	1.89	1.74	3.01	3.01
Stillwater County	A11	RM 425.89	181895	20% - 5yr	962.9	1118.46	1115.1	2.29	2.26	30.79	26.53	184.91	228.88	2.27	1.96	3.36	3.36
Stillwater County	A11	RM 425.72	181043.5	20% - 5yr	962.9	1118.01	1113.77	2.56	2.53	37.12	32.89	148.57	182.79	2.53	2.24	4.24	4.24
Stillwater County	A11	RM 425.58	180310.5	20% - 5yr	962.9	1117.57	1112.19	2.95	2.85	45.11	33.83	98.64	144.31	3.29	2.47	5.38	5.38
Stillwater County	A11	RM 425.46	179669.9	20% - 5yr	962.9	1117.2	1112.78	3.16	2.91	52.73	40.02	94.4	163.75	3.13	2.38	4.42	4.42
Stillwater County	A11	RM 425.34	179022.4	20% - 5yr	962.9	1117.11	1113.64	2.28	2.09	29	22.28	135.46	225.29	2.67	2.05	3.47	3.47
Stillwater County	A11	RM 425.24	178485.9	20% - 5yr	962.9	1116.81	1114.19	2.54	2.22	39.19	28.79	126.45	365.87	2.04	1.5	2.67	2.67
Stillwater County	A11	RM 425.18	178205.8	20% - 5yr	962.9	1116.55	1113.81	2.73	2.51	45.7	38.13	125.98	231.41	1.99	1.66	3.24	3.24
Stillwater County	A11	RM 425.11	177826.8	20% - 5yr	962.9	1116.24	1113.29	2.52	2.66	39.21	36.16	120.63	199.52	1.96	1.81	3.95	3.95
Stillwater County	A11	RM 425.04	177454.7	20% - 5yr	962.9	1116.09	1112.86	2.5	2.26	36.11	30.93	106.63	210.37	2.37	2.03	3.62	3.62
Stillwater County	A11	RM 424.97	177098.9	20% - 5yr	962.9	1115.76	1113.11	2.85	2.61	48.41	39.76	106.81	208.94	2.14	1.77	2.75	2.75
Stillwater County	A11	RM 424.89	176675.9	20% - 5yr	962.9	1115.61	1112.27	2.13	2.05	27.76	22.67	136.62	339.28	1.99	1.63	4.81	4.81
Stillwater County	A11	RM 424.81	176242.8	20% - 5yr	962.9	1115.2	1112.25	2.65	2.58	45.12	42.01	119.27	261.45	1.71	1.6	3.2	3.2
Stillwater County	A11	RM 424.70	175789.3	20% - 5yr	962.9	1115.07	1111.91	2.08	1.93	25.75	21.78	161.26	373.77	2.16	1.83	3.16	3.16

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	20% - 5yr	962.9	1114.78	1111.34	2.32	2.07	32.37	25.18	129.7	312.03	2.1	1.64	3.44	3.44
Stillwater County	A11	RM 424.51	174723.2	20% - 5yr	962.9	1114.57	1110.93	2.17	2.02	30.43	22.9	140.84	421.61	1.71	1.29	3.64	3.64
Stillwater County	A11	RM 424.38	174051	20% - 5yr	962.9	1114.17	1110.98	2.41	2.18	36.19	22.71	125.93	373	1.89	1.18	3.19	3.19
Stillwater County	A11	RM 424.30	173607.9	20% - 5yr	962.9	1113.93	1110.75	2.26	2.14	34.44	20.42	158.84	552	1.47	0.87	3.18	3.18
Stillwater County	A11	RM 424.21	173153.7	20% - 5yr	962.9	1113.67	1110.74	2.06	1.87	28.03	15.84	187.79	585.31	1.59	0.9	2.93	2.93
Stillwater County	A11	RM 424.13	172713.5	20% - 5yr	962.9	1113.4	1110.43	2.34	1.63	34.87	17.38	91.8	665.9	1.78	0.89	3.05	3.05
Stillwater County	A11	RM 424.05	172309.3	20% - 5yr	962.9	1113.16	1110.18	1.84	1.56	23.08	13.48	155.04	722.46	1.46	0.86	2.98	2.98
Stillwater County	A11	RM 423.98	171892.1	20% - 5yr	962.9	1113.07	1110.15	1.59	1.3	15.87	9.73	251.38	643.17	1.88	1.15	2.92	2.92
Stillwater County	A11	RM 423.90	171454.2	20% - 5yr	962.9	1112.81	1109.55	2.26	1.77	30.97	15.63	156.12	524.38	2.07	1.04	3.26	3.26
Stillwater County	A11	RM 423.84	171147.5	20% - 5yr	962.9	1112.66	1109.08	2.33	1.76	31.03	13.47	126.56	582.67	2.46	1.06	3.58	3.58
Stillwater County	A11	RM 423.74	170686.3	20% - 5yr	962.9	1112.62	1108.91	1.72	1.21	16.61	7.72	124.17	654.84	2.63	1.22	3.71	3.71
Stillwater County	A11	RM 423.69	170436.3	20% - 5yr	962.9	1112.41	1108.49	2.42	1.75	32.35	14.22	87.22	461.13	2.74	1.19	3.92	3.92
Stillwater County	A11	RM 423.57	169782.9	20% - 5yr	962.9	1112.15	1108.2	2.22	2.06	27.55	18.06	158.68	268.86	2.65	1.74	3.95	3.95
Stillwater County	A11	RM 423.47	169296.5	20% - 5yr	962.9	1111.79	1107.67	2.82	2.77	43.39	32.21	120.05	242.19	2.84	2.11	4.12	4.12
Stillwater County	A11	RM 423.39	168860.7	20% - 5yr	962.9	1111.46	1107.7	3.13	3.06	52.84	42.98	104.44	184.01	2.94	2.39	3.76	3.76
Stillwater County	A11	RM 423.27	168178	20% - 5yr	962.9	1111.03	1107.36	3.15	3.13	55.54	47.54	117.98	138.6	2.59	2.22	3.67	3.67
Stillwater County	A12	RM 423.17	167687.7	20% - 5yr	962.9	1110.84	1107.46	2.65	2.52	40.83	26	153.09	256.14	2.35	1.49	3.38	3.38
Stillwater County	A12	RM 423.08	167239.6	20% - 5yr	962.9	1110.59	1107.21	2.77	2.42	44.66	27.65	128.81	285.51	2.31	1.43	3.38	3.38
Stillwater County	A12	RM 423.01	166844.5	20% - 5yr	962.9	1110.3	1106.84	2.77	2.5	47.46	31.29	138.85	317.81	1.93	1.27	3.46	3.46
Stillwater County	A12	RM 422.91	166338	20% - 5yr	962.9	1109.99	1106.54	2.76	2.43	43.38	25.77	110.49	287.9	2.48	1.47	3.45	3.45
Stillwater County	A12	RM 422.80	165757.6	20% - 5yr	962.9	1109.69	1106.83	2.59	2.43	39.76	31.59	144.92	267.33	2.22	1.76	2.86	2.86
Stillwater County	A12	RM 422.70	165279.2	20% - 5yr	962.9	1109.56	1105.79	2.08	1.8	26.23	18.26	200.7	378.6	2.03	1.42	3.77	3.77
Stillwater County	A12	RM 422.63	164895.4	20% - 5yr	962.9	1109.42	1105.43	2.08	1.72	26.44	15.55	178.36	476.88	1.99	1.17	3.98	3.98
Stillwater County	A12	RM 422.53	164348.1	20% - 5yr	962.9	1109.13	1104.76	2.26	2.01	30.67	18.53	166.37	375.41	2.12	1.27	4.36	4.36
Stillwater County	A12	RM 422.39	163609.2	20% - 5yr	962.9	1108.7	1104.22	2.61	2.5	37.4	25.91	131.34	220.67	2.75	1.9	4.48	4.48
Stillwater County	A12	RM 422.30	163120.4	20% - 5yr	962.9	1108.36	1104.18	2.95	2.88	46.44	38.72	108.55	159.67	3	2.5	4.18	4.18
Stillwater County	A12	RM 422.19	162534.3	20% - 5yr	962.9	1108.18	1103.72	2.62	2.61	36.75	33.71	121.28	133.1	3.02	2.77	4.46	4.46
Stillwater County	A12	RM 422.08	161934.5	20% - 5yr	962.9	1107.74	1104.18	3.11	3.11	53.07	52.02	111.22	113.48	2.78	2.73	3.56	3.56
Stillwater County	A12	RM 421.98	161402.1	20% - 5yr	962.9	1107.62	1103.86	2.44	2.43	32.58	28.42	142.02	163.67	2.78	2.42	3.76	3.76
Stillwater County	A12	RM 421.90	161037.7	20% - 5yr	962.9	1107.49	1103.14	2.39	2.39	32.7	32.7	166.55	166.55	2.42	2.42	4.35	4.35
Stillwater County	A12	RM 421.86	160799.3	20% - 5yr	962.9	1107.37	1102.54	2.4	2.4	34.89	34.87	192.8	192.88	2.08	2.08	4.83	4.83
Stillwater County	A12	RM 421.81	160535.9	20% - 5yr	962.9	1107.23	1102.38	2.37	2.37	35.31	35.31	218.88	218.88	1.85	1.85	4.85	4.85
Stillwater County	A12	RM 421.77	160279.4	20% - 5yr	962.9	1107.02	1102.41	2.59	2.52	41.51	37.01	181.22	221.49	1.93	1.73	4.61	4.61
Stillwater County	A12	RM 421.69	159875.5	20% - 5yr	962.9	1106.88	1102.56	2.34	2.19	29.12	16.32	129.73	257.83	3.05	1.71	4.32	4.32
Stillwater County	A12	RM 421.60	159411.4	20% - 5yr	962.9	1106.58	1103.26	2.81	2.6	45.31	32.4	130.87	212.53	2.43	1.74	3.32	3.32
Stillwater County	A12	RM 421.53	159038	20% - 5yr	962.9	1106.26	1102.81	3.05	2.88	55.17	43.73	132.29	192.62	2.19	1.73	3.45	3.45
Stillwater County	A12	RM 421.45	158590.5	20% - 5yr	962.9	1106.09	1103.26	2.47	2.23	36.42	26.27	152.77	281.32	2.16	1.56	2.83	2.83
Stillwater County	A12	RM 421.32	157930.2	20% - 5yr	962.9	1105.7	1102.82	2.52	2.33	41.22	34.64	96.37	291.71	1.68	1.42	2.88	2.88
Stillwater County	A12	RM 421.24	157513	20% - 5yr	962.9	1105.38	1103.05	2.37	2.27	38.9	32.75	126.02	368.64	1.36	1.15	2.9	2.9
Stillwater County	A12	RM 421.13	156951.5	20% - 5yr	962.9	1105.13	1100.38	2.18	1.91	30.47	23.9	118.24	366.6	1.76	1.38	4.75	4.75
Stillwater County	A12	RM 421.05	156536.5	20% - 5yr	962.9	1104.99	1102.11	1.86	1.71	22.1	17.75	100.29	403.97	1.74	1.39	2.88	2.88
Stillwater County	A12	RM 420.94	155960.1	20% - 5yr	962.9	1104.77	1101.68	1.82	1.75	19.05	17.18	213.29	264.86	2.43	2.19	3.09	3.09
Stillwater County	A12	RM 420.85	155473.6	20% - 5yr	962.9	1104.14	1100.98	3.35	2.79	68.18	38.48	132.69	306.64	2.05	1.16	3.16	3.16
Stillwater County	A12	RM 420.75	154957.2	20% - 5yr	962.9	1103.93	1099.95	2.55	2.2	38.04	20.25	153.44	360.1	2.28	1.21	3.98	3.98
Stillwater County	A12	RM 420.66	154483	20% - 5yr	962.9	1103.77	1099.89	2.26	1.82	28.75	15.06	158.61	400.78	2.56	1.33	3.88	3.88
Stillwater County	A12	RM 420.58	154037.5	20% - 5yr	962.9	1103.44	1100.13	2.82	2.24	44.16	23.75	122.02	302.97	2.64	1.42	3.31	3.31
Stillwater County	A12	RM 420.52	153691.5	20% - 5yr	962.9	1103.27	1099.7	2.74	2.23	42.45	27.73	127.61	259.39	2.55	1.67	3.57	3.57
Stillwater County	A12	RM 420.46	153398	20% - 5yr	962.9	1103.08	1099.36	2.81	2.4	45.03	32.36	130.83	225.16	2.48	1.79	3.72	3.72
Stillwater County	A12	RM 420.38	152998.3	20% - 5yr	962.9	1102.94	1099.19	2.44	2.06	35.46	22.94	173.49	338.6	2.14	1.38	3.75	3.75
Stillwater County	A12	RM 420.30	152566.4	20% - 5yr	962.9	1102.83	1099.43	1.91	1.55	22.18	13.9	228.28	490.32	2.02	1.26	3.4	3.4
Stillwater County	A12	RM 420.21	152106.2	20% - 5yr	962.9	1102.6	1098.69	2.12	1.78	28.87	22.44	236.31	407.1	1.7	1.33	3.91	3.91
Stillwater County	A12	RM 420.15	151738.6	20% - 5yr	962.9	1102.45	1098.38	1.99	1.92	18.18	13.3	259.86	371.24	1.85	1.35	4.07	4.07
Stillwater County	A12	RM 420.08	151399.3	20% - 5yr	962.9	1102.34	1097.97	2.05	2	24.2	19.93	195.27	244.71	2.39	1.97	4.37	4.37
Stillwater County	A12	RM 420.03	151123.2	20% - 5yr	962.9	1102.19	1097.96	2.3	2.09	28.8	17.31	142.25	266.55	2.88	1.73	4.23	4.23
Stillwater County	A12	RM 419.96	150779.4	20% - 5yr	962.9	1101.92	1098.1	2.78	2.5	43.02	20.01	128.1	311.72	2.66	1.24	3.82	3.82
Stillwater County	A12	RM 419.91	150511.3	20% - 5yr	962.9	1101.72	1097.83	2.98	2.72	46.97	23.56	102.51	248.95	3.12	1.55	3.89	3.89
Stillwater County	A12	RM 419.85	150192.4	20% - 5yr	962.9	1101.41	1097.85	3.35	3.09	62.05	34.12	105.49	234.92	2.7	1.48	3.56	3.56
Stillwater County	A12	RM 419.78	149807.6	20% - 5yr	962.9	1101.3	1097.13	2.89	2.38	44.23	18.95	103.93	303.82	3.12	1.33	4.17	4.17
Stillwater County	A12	RM 419.70	149371.5	20% - 5yr	962.9	1101.08	1097.73	2.84	2.59	45.82	25.28	135.69	272.87	2.47	1.36	3.35	3.35
Stillwater County	A12	RM 419.63	149047.6	20% - 5yr	962.9	1100.98	1097.92	2.46	2.31	35.32	22.7	166.78	279.72	2.32	1.49	3.06	3.06

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	20% - 5yr	962.9	1100.59	1097.22	2.88	2.41	51.46	32.96	135.49	325.78	1.91	1.22	3.37	3.37
Stillwater County	A12	RM 419.46	148117.9	20% - 5yr	962.9	1100.35	1097.34	2.51	2.19	39.03	24.4	133.27	366.77	1.91	1.2	3.27	3.27
Stillwater County	A12	RM 419.38	147728.5	20% - 5yr	962.9	1100.11	1097.36	2.28	1.97	33.86	25.33	148.89	390.21	1.67	1.25	2.75	2.75
Stillwater County	A12	RM 419.31	147342.9	20% - 5yr	962.9	1100.02	1096.9	1.74	1.62	17.69	14.53	114.45	318.23	2.27	1.87	3.12	3.12
Stillwater County	A12	RM 419.19	146720.3	20% - 5yr	962.9	1099.91	1096.42	1.45	1.6	12.08	13.85	106.51	227.1	2.37	2.73	5.51	5.51
Stillwater County	A12	RM 419.10	146243.9	20% - 5yr	962.9	1099.81	1095.09	1.8	1.71	16.6	11.26	156.37	261.32	3.39	2.3	4.72	4.72
Stillwater County	A12	RM 419.03	145859.8	20% - 5yr	962.9	1099.55	1095.88	2.48	2.44	35.93	28.61	167.63	227.35	2.31	1.84	3.67	3.67
Stillwater County	A12	RM 418.95	145435.3	20% - 5yr	962.9	1099.35	1095.15	2.39	2.3	35.21	26.64	204.32	290.6	1.96	1.48	4.2	4.2
Stillwater County	A12	RM 418.84	144864	20% - 5yr	962.9	1098.98	1094.92	2.45	2.29	38.33	26.15	218.74	356.53	1.77	1.21	4.06	4.06
Stillwater County	A12	RM 418.69	144066	20% - 5yr	962.9	1098.43	1095.29	2.6	2.26	41.87	26.74	165.88	368.45	1.93	1.23	3.14	3.14
Stillwater County	A12	RM 418.57	143452.8	20% - 5yr	962.9	1097.97	1095.1	2.75	2.45	46.43	27.26	133.33	343.68	1.96	1.16	2.87	2.87
Stillwater County	A12	RM 418.49	143008.1	20% - 5yr	962.9	1097.88	1094.94	1.98	1.54	23.55	11.04	169.36	683.35	2.12	0.99	2.93	2.93
Stillwater County	A12	RM 418.35	142310.9	20% - 5yr	962.9	1097.41	1093.15	2.7	2.05	44.54	21.13	126.32	494.72	2	0.95	4.26	4.26
Stillwater County	A12	RM 418.25	141740.8	20% - 5yr	962.9	1097.15	1093.71	2.06	1.6	27.45	20.34	176.32	533.43	1.68	1.24	3.44	3.44
Stillwater County	A12	RM 418.08	140894.8	20% - 5yr	962.9	1096.8	1092.65	2.1	1.81	26.43	18.98	139.46	343.55	2.15	1.55	4.15	4.15
Stillwater County	A12	RM 417.89	139893.7	20% - 5yr	962.9	1096.08	1092.75	2.95	2.68	50.17	31.75	128.08	287.52	2.41	1.53	3.33	3.33
Stillwater County	A12	RM 417.79	139376.4	20% - 5yr	962.9	1095.8	1091.64	2.84	2.41	47.36	28.44	125.93	294.85	2.26	1.35	4.16	4.16
Stillwater County	A12	RM 417.65	138633.4	20% - 5yr	962.9	1095.28	1091.57	3.08	2.7	52.63	29.13	96.47	252.52	2.7	1.49	3.71	3.71
Stillwater County	A12	RM 417.54	138089.5	20% - 5yr	962.9	1094.83	1091.15	3.39	2.96	62.49	40.78	85.3	175.39	2.84	1.85	3.68	3.68
Stillwater County	A12	RM 417.40	137321.3	20% - 5yr	1090.3	1094.5	1091.71	2.68	2.31	43.16	29.57	123.91	327.63	2.11	1.44	2.78	2.78
Stillwater County	A12	RM 417.30	136818.2	20% - 5yr	1090.3	1094.16	1091.51	2.55	2.4	40.29	35.19	199.44	293.46	1.9	1.66	2.65	2.65
Stillwater County	A12	RM 417.20	136304	20% - 5yr	1090.3	1094.06	1091.27	1.74	1.67	18.29	17.1	202.09	341.01	2.04	1.91	2.79	2.79
Stillwater County	A13	RM 417.09	135706	20% - 5yr	1090.3	1093.47	1090.35	2.95	2.9	53.17	45.94	186.4	268.78	1.98	1.71	3.12	3.12
Stillwater County	A13	RM 417.01	135303.6	20% - 5yr	1090.3	1093.34	1090	2.25	2.14	31.25	28.75	247.3	312.62	1.93	1.78	3.34	3.34
Stillwater County	A13	RM 416.94	134899.8	20% - 5yr	1090.3	1092.94	1089.69	2.8	2.66	42.03	37.51	209.82	272.31	1.83	1.64	3.25	3.25
Stillwater County	A13	RM 416.85	134457.6	20% - 5yr	1090.3	1092.79	1089.62	2.38	2.17	32.34	22.62	184	293.15	2.45	1.71	3.17	3.17
Stillwater County	A13	RM 416.73	133843.5	20% - 5yr	1090.3	1092.37	1089.6	2.67	2.48	44.3	32.03	211.72	319.9	1.9	1.38	2.77	2.77
Stillwater County	A13	RM 416.63	133286.1	20% - 5yr	1090.3	1092.02	1089.3	2.64	2.37	43.62	34.8	124.12	306.95	1.87	1.5	2.72	2.72
Stillwater County	A13	RM 416.52	132717.9	20% - 5yr	1090.3	1091.72	1089.09	2.43	1.91	38.43	26.79	104.23	491.51	1.66	1.16	2.63	2.63
Stillwater County	A13	RM 416.43	132250.3	20% - 5yr	1090.3	1091.35	1088.74	2.29	2.03	35.04	25.04	112.92	491.56	1.54	1.1	2.6	2.6
Stillwater County	A13	RM 416.33	131707.5	20% - 5yr	1090.3	1091.07	1088.02	2.12	1.87	29.57	23.45	130.82	455.36	1.62	1.29	3.05	3.05
Stillwater County	A13	RM 416.22	131140.9	20% - 5yr	1090.3	1090.64	1087.56	2.84	2.25	47.41	30.24	84.28	333.5	2.28	1.45	3.08	3.08
Stillwater County	A13	RM 416.13	130626.3	20% - 5yr	1090.3	1090.32	1086.65	2.65	2.23	41.27	28.85	144.34	307.03	2.27	1.59	3.67	3.67
Stillwater County	A13	RM 416.04	130164.9	20% - 5yr	1090.3	1089.92	1085.03	3.05	2.31	53.39	29.89	121.4	349.64	2.41	1.35	4.89	4.89
Stillwater County	A13	RM 415.96	129734.7	20% - 5yr	1090.3	1089.79	1085.48	2.47	1.81	34.83	19.38	130.71	495.67	2.49	1.38	4.31	4.31
Stillwater County	A13	RM 415.90	129423.4	20% - 5yr	1090.3	1089.69	1085.77	2.02	1.55	24.17	13.46	158.68	707.51	2.21	1.23	3.92	3.92
Stillwater County	A13	RM 415.83	129071.6	20% - 5yr	1090.3	1089.59	1085.89	1.86	1.43	19.78	11.39	152.97	613.41	2.43	1.4	4.26	4.26
Stillwater County	A13	RM 415.74	128639.5	20% - 5yr	1090.3	1089.36	1084.72	2.31	1.74	28.72	13.92	149.37	556.95	2.97	1.44	4.64	4.64
Stillwater County	A13	RM 415.72	128521.2	20% - 5yr	1090.3	1089.25	1084.8	2.6	1.96	35.76	17.72	128.23	505.02	3.08	1.52	4.45	4.45
Stillwater County	A13	RM 415.65	128106.2	20% - 5yr	1090.3	1089.07	1083.7	2.64	2.12	39.15	23.56	149.56	515.81	2.59	1.56	5.37	5.37
Stillwater County	A13	RM 415.59	127828.3	20% - 5yr	1090.3	1088.86	1083.61	2.85	2.57	44.52	29.39	136.01	405.02	2.77	1.82	5.25	5.25
Stillwater County	A13	RM 415.55	127620.5	20% - 5yr	1090.3	1088.86	1082.84	2.1	2.1	21.69	21.55	132.96	173.89	3.9	3.88	6.01	6.01
Stillwater County			127503	20% - 5yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	20% - 5yr	1090.3	1088.45	1082.96	2.16	2.16	22.45	22.19	122.3	144.87	4.13	4.09	5.49	5.49
Stillwater County	A13	RM 415.50	127340.9	20% - 5yr	1090.3	1088.28	1083.14	2.54	2.54	34.86	34.86	147.22	147.22	2.91	2.91	5.14	5.14
Stillwater County	A13	RM 415.45	127087.4	20% - 5yr	1090.3	1087.97	1083.18	3.12	3.12	54.91	54.91	135.72	162.26	2.57	2.57	4.79	4.79
Stillwater County	A13	RM 415.39	126788	20% - 5yr	1090.3	1087.85	1084.07	2.79	2.79	44.79	44.34	162.04	257.97	2.41	2.39	3.78	3.78
Stillwater County	A13	RM 415.34	126499.1	20% - 5yr	1090.3	1087.7	1084.45	2.84	2.68	46.79	40.7	129.21	291.58	2.32	2.02	3.25	3.25
Stillwater County	A13	RM 415.25	126040.7	20% - 5yr	1090.3	1087.41	1082.42	2.89	2.73	47.25	40.35	122.03	272.15	2.55	2.18	4.99	4.99
Stillwater County	A13	RM 415.18	125663.1	20% - 5yr	1090.3	1087.26	1083.81	2.64	2.49	39.07	32.77	134.24	200.73	2.59	2.18	3.45	3.45
Stillwater County	A13	RM 415.10	125251.2	20% - 5yr	1090.3	1086.86	1083.01	3.22	2.96	57.94	47.75	107.76	176.03	2.64	2.17	3.85	3.85
Stillwater County	A13	RM 414.97	124585.1	20% - 5yr	1090.3	1086.41	1082.64	3.1	2.77	55.85	40.44	121.02	297.15	2.34	1.7	3.77	3.77
Stillwater County	A13	RM 414.88	124110.1	20% - 5yr	1090.3	1086.08	1083.02	3.05	2.78	53.91	43.54	123.16	237.74	2.34	1.89	3.06	3.06
Stillwater County	A13	RM 414.71	123222	20% - 5yr	1090.3	1085.61	1080.88	2.64	2.64	39.12	39.12	161.21	177.4	2.57	2.57	4.73	4.73
Stillwater County	A13	RM 414.57	122473.6	20% - 5yr	1090.3	1085.09	1081.21	2.99	2.93	50.53	38.37	144.84	224.19	2.51	1.91	3.88	3.88
Stillwater County	A13	RM 414.43	121696.6	20% - 5yr	1090.3	1084.65	1080.49	2.78	2.59	45.58	34.9	169.33	497.79	2.25	1.73	4.16	4.16
Stillwater County	A13	RM 414.21	120527.7	20% - 5yr	1090.3	1083.94	1080.81	2.5	2.36	39.87	31.86	217.56	407.17	1.74	1.39	3.13	3.13
Stillwater County	A13	RM 413.90	118914.7	20% - 5yr	1090.3	1082.55	1079.28	3.1	2.99	56.49	40.83	153.13	350.14	2.26	1.64	3.26	3.26
Stillwater County	A13	RM 413.65	117570.4	20% - 5yr	1090.3	1081.89	1078.15	2.6	1.65	37.98	17.93	139.72	538.84	2.59	1.22	3.74	3.74
Stillwater County	A14	RM 413.44	116446.3	20% - 5yr	1090.3	1081.15	1076.4	2.98	2.67	50.17	23.16	141.23	654.63	2.56	1.18	4.75	4.75

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	20% - 5yr	1090.3	1080.68	1077.8	2.67	1.76	43.93	21.4	175.58	650.91	1.95	0.95	2.88	2.88
Stillwater County	A14	RM 413.11	114697.4	20% - 5yr	1090.3	1080.16	1077.12	2.48	2.23	37.17	21.05	195.3	691.7	2.06	1.16	3.04	3.04
Stillwater County	A14	RM 412.99	114113.2	20% - 5yr	1090.3	1079.66	1076.41	2.87	2.47	51.26	27.92	182.97	694.13	1.91	1.04	3.25	3.25
Stillwater County	A14	RM 412.88	113533.6	20% - 5yr	1090.3	1079.31	1076.03	2.75	2.31	43.28	22.65	141.57	503.44	2.44	1.28	3.28	3.28
Stillwater County	A14	RM 412.73	112742.6	20% - 5yr	1090.3	1078.79	1074.72	2.83	2.17	48.75	24.9	170.11	546.39	2.04	1.04	4.07	4.07
Stillwater County	A14	RM 412.59	112005.5	20% - 5yr	1090.3	1078.22	1074.72	2.79	2.21	48.52	32.07	194.89	466.43	1.88	1.24	3.5	3.5
Stillwater County	A14	RM 412.49	111442.5	20% - 5yr	1090.3	1078.03	1074.54	2.17	1.9	28.19	19.36	189.08	515.62	2.14	1.47	3.49	3.49
Stillwater County	A14	RM 412.31	110522	20% - 5yr	1090.3	1077.68	1072.96	2.29	2.05	27.29	13.84	144.87	412.02	3.24	1.63	4.72	4.72
Stillwater County	A14	RM 412.19	109955.3	20% - 5yr	1090.3	1076.95	1071.57	3.7	3.6	74.91	49.33	103.1	162.59	2.85	1.86	5.38	5.38
Stillwater County	A14	RM 412.05	109175.2	20% - 5yr	1090.3	1076.54	1072.08	3.21	3.05	55.15	36.85	111.99	178.43	3.01	2	4.46	4.46
Stillwater County	A14	RM 411.92	108510.2	20% - 5yr	1090.3	1076.27	1072.88	2.81	2.81	43.35	43	141.3	142.46	2.75	2.73	3.39	3.39
Stillwater County	A14	RM 411.81	107950.5	20% - 5yr	1090.3	1075.83	1070.62	3.17	3.17	56.05	56.05	129.09	129.09	2.66	2.66	5.21	5.21
Stillwater County	A14	RM 411.71	107391.9	20% - 5yr	1090.3	1075.61	1070.83	2.86	2.85	42.61	41.78	118.46	132.11	3.22	3.16	4.78	4.78
Stillwater County	A14	RM 411.58	106721	20% - 5yr	1090.3	1075.33	1071.65	2.71	2.71	41.44	41.44	158.64	205.05	2.54	2.54	3.68	3.68
Stillwater County	A14	RM 411.47	106133.7	20% - 5yr	1090.3	1074.93	1071.87	2.94	2.71	49.89	31.23	154.95	275.37	2.36	1.47	3.06	3.06
Stillwater County	A14	RM 411.32	105338.4	20% - 5yr	1090.3	1074.39	1069.29	2.94	2.72	50.33	42.25	157.65	214.03	2.31	1.94	5.1	5.1
Stillwater County	A14	RM 411.14	104374.6	20% - 5yr	1090.3	1073.59	1067.92	3.36	2.86	61.44	32.19	110.46	255.26	2.86	1.49	5.67	5.67
Stillwater County	A14	RM 411.00	103638.4	20% - 5yr	1090.3	1073.2	1069.6	2.98	2.38	51.95	34.44	139.32	303.05	2.28	1.51	3.6	3.6
Stillwater County	A14	RM 410.85	102835.8	20% - 5yr	1090.3	1072.72	1069.92	2.46	2.18	39.55	28.16	83.64	429.71	1.64	1.16	2.8	2.8
Stillwater County	A14	RM 410.74	102286.3	20% - 5yr	1090.3	1072.28	1068.99	2.69	2.11	44.69	28.82	71.49	409.13	1.98	1.26	3.29	3.29
Stillwater County	A14	RM 410.63	101668.3	20% - 5yr	1090.3	1071.94	1068.37	2.59	1.87	39.72	20.33	83.29	550.64	2.22	1.13	3.57	3.57
Stillwater County	A14	RM 410.52	101115.7	20% - 5yr	1090.3	1071.6	1067.81	2.49	2.09	35.76	21.91	123.09	384.37	2.39	1.46	3.79	3.79
Stillwater County	A14	RM 410.42	100568.4	20% - 5yr	1090.3	1071.1	1066.66	2.73	2.79	48.13	49.38	147.93	221.6	1.72	1.76	4.44	4.44
Stillwater County	A14	RM 410.33	100099.2	20% - 5yr	1090.3	1070.88	1066.6	2.39	2.23	33.48	25.97	198.78	337.63	2.25	1.75	4.28	4.28
Stillwater County	A14	RM 410.22	99589.26	20% - 5yr	1090.3	1070.42	1066.94	2.98	2.7	51.32	32.64	149.92	458	2.38	1.51	3.48	3.48
Stillwater County	A14	RM 410.12	99057.4	20% - 5yr	1090.3	1070.07	1065.8	2.9	2.54	51.39	41.56	172.66	389.54	2.01	1.63	4.27	4.27
Stillwater County	A14	RM 410.03	98630.66	20% - 5yr	1090.3	1069.73	1065.33	2.79	2.49	49.44	40.77	203.82	343.16	1.78	1.47	4.4	4.4
Stillwater County	A14	RM 409.99	98385.41	20% - 5yr	1090.3	1069.49	1065.38	2.87	2.55	52.45	41.61	199.96	354.91	1.77	1.4	4.11	4.11
Stillwater County	A14	RM 409.94	98072.09	20% - 5yr	1090.3	1069.29	1065.51	2.64	2.26	42.53	27.08	195.16	511.76	2.01	1.28	3.77	3.77
Stillwater County	A14	RM 409.87	97717.24	20% - 5yr	1090.3	1069.27	1065.52	1.98	1.51	21.04	11.84	163.43	783.01	2.93	1.65	3.75	3.75
Stillwater County	A14	RM 409.76	97130.84	20% - 5yr	1090.3	1068.93	1065.37	2.63	2.1	38.95	19.23	146.2	527.4	2.56	1.26	3.57	3.57
Stillwater County	A14	RM 409.60	96278.7	20% - 5yr	1090.3	1068.02	1064.65	3.51	2.93	78.64	48.02	163.89	361.67	1.76	1.08	3.36	3.36
Stillwater County	A14	RM 409.43	95381.62	20% - 5yr	1090.3	1067.42	1063.55	2.79	2.04	44.44	20.11	131.13	739.38	2.43	1.1	3.87	3.87
Stillwater County	A14	RM 409.24	94405.29	20% - 5yr	1090.3	1066.7	1064.55	2.31	1.96	37.95	24.27	139.88	814.38	1.26	0.8	2.49	2.49
Stillwater County	A14	RM 409.15	93912.54	20% - 5yr	1090.3	1066.33	1064.27	1.78	1.8	22.07	15.27	160.54	651.51	1.34	0.93	4.26	4.26
Stillwater County	A14	RM 408.99	93008.08	20% - 5yr	1090.3	1065.49	1063.94	2.24	2.74	37.62	37.93	153.21	359.88	1.09	1.11	2.95	2.95
Stillwater County	A14	RM 408.84	92229.27	20% - 5yr	1090.3	1065.03	1062.1	2.47	2.43	41.03	33.65	146.04	361.42	1.5	1.24	2.93	2.93
Stillwater County	A14	RM 408.63	91072.98	20% - 5yr	1090.3	1064.22	1061.85	2.19	2.14	33.37	30.12	208.98	428.5	1.36	1.22	2.64	2.64
Stillwater County	A14	RM 408.41	89726.16	20% - 5yr	1090.3	1063.69	1059.04	2.3	2.02	27.75	19.06	105.09	247.08	3.2	2.19	4.65	4.65
Stillwater County	A14	RM 408.26	88966.66	20% - 5yr	1090.3	1063.4	1058.13	2.48	2.23	31.93	19.46	130.83	246.83	3.25	1.98	5.27	5.27
Stillwater County	A14	RM 408.10	88091.52	20% - 5yr	1090.3	1062.8	1057.78	3.27	3.11	54.89	48.49	98.14	117.19	3.36	2.99	5.02	5.02
Stillwater County	A14	RM 408.02	87720.33	20% - 5yr	1090.3	1062.71	1058.61	2.84	2.7	42.84	27.31	123.52	205.81	3.08	1.96	4.1	4.1
Stillwater County	A14	RM 407.83	86708.48	20% - 5yr	1090.3	1062.13	1058.65	2.76	2.66	48.85	39.73	156.48	291.11	1.73	1.41	3.48	3.48
Stillwater County	A14	RM 407.71	86078.99	20% - 5yr	1090.3	1061.73	1057.9	2.83	2.56	45.81	26.63	117	296.7	2.46	1.44	3.83	3.83
Stillwater County	A14	RM 407.61	85508.29	20% - 5yr	1090.3	1061.49	1058.36	2.39	2.24	36.04	24.86	170.24	392.06	1.8	1.24	3.13	3.13
Stillwater County	A14	RM 407.50	84909.3	20% - 5yr	1090.3	1061.18	1058.55	2.39	2.14	37.26	28.93	178.22	402.76	1.62	1.27	3.12	3.12
Stillwater County	A14	RM 407.41	84433.26	20% - 5yr	1090.3	1060.95	1057.85	2.43	1.94	36.5	22.75	122.26	461.71	1.95	1.22	3.29	3.29
Stillwater County	A14	RM 407.36	84180.66	20% - 5yr	1090.3	1060.74	1057.59	2.79	2.1	46.05	25.86	100.78	414.43	2.24	1.26	3.15	3.15
Stillwater County	A14	RM 407.29	83775.88	20% - 5yr	1090.3	1060.35	1057.08	2.39	2.54	35.89	29.43	133.84	280.86	1.86	1.53	3.53	3.53
Stillwater County	A14	RM 407.13	82954.84	20% - 5yr	1090.3	1059.95	1056.27	2.2	2.19	30.81	29.99	276.78	286.15	1.79	1.74	3.68	3.68
Stillwater County	A14	RM 406.98	82156.72	20% - 5yr	1090.3	1059.7	1056.37	2	1.95	22.07	20.37	197.71	221.71	2.73	2.52	3.33	3.33
Stillwater County	A14	RM 406.86	81532.92	20% - 5yr	1090.3	1059.04	1055.69	3.37	3.27	62.23	55.25	113.74	133.33	2.81	2.5	3.35	3.35
Stillwater County	A14	RM 406.77	81053.3	20% - 5yr	1090.3	1058.8	1053.84	3.16	2.91	53.38	34.77	111.35	191.82	3	1.95	4.96	4.96
Stillwater County	A14	RM 406.64	80405.13	20% - 5yr	1090.3	1058.57	1054.89	2.71	2.55	40.04	32.14	137.58	186.8	2.85	2.29	3.68	3.68
Stillwater County	A14	RM 406.48	79524.79	20% - 5yr	1090.3	1058.02	1054.8	2.86	2.53	50.09	32.22	191.86	366.15	1.84	1.18	3.22	3.22
Stillwater County	A14	RM 406.25	78337.26	20% - 5yr	1090.3	1057.3	1054.03	2.71	2.42	41.42	22.96	140.03	315.88	2.59	1.43	3.27	3.27
Stillwater County	A14	RM 406.08	77409.13	20% - 5yr	1090.3	1056.72	1052.87	2.95	2.49	49.79	23.09	130.38	384.17	2.49	1.15	3.85	3.85
Stillwater County	A14	RM 405.93	76624.91	20% - 5yr	1090.3	1056.13	1052.64	3.18	3.03	54.34	43.39	114.34	152.58	2.95	2.36	3.49	3.49
Stillwater County	A14	RM 405.81	75994.44	20% - 5yr	1090.3	1055.86	1051.93	2.87	2.77	45.36	41.27	133.87	177.45	2.77	2.53	3.93	3.93
Stillwater County	A15	RM 405.77	75764.36	20% - 5yr	1090.3	1055.62	1052.63	3.19	2.97	59.42	51.45	142.49	185.53	2.28	1.98	2.99	2.99

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	20% - 5yr	1090.3	1055.29	1052.06	2.87	2.45	47.66	35.54	82.19	253.21	2.35	1.76	3.23	3.23
Stillwater County	A15	RM 405.61	74883.52	20% - 5yr	1090.3	1055.06	1051.81	3.23	2.45	57.78	33.43	69.55	359.93	2.67	1.55	3.25	3.25
Stillwater County	A15	RM 405.52	74415.92	20% - 5yr	1090.3	1054.49	1051.43	3.9	2.86	85.36	41.79	52.24	412.49	2.6	1.27	3.07	3.07
Stillwater County	A15	RM 405.45	74031.34	20% - 5yr	1090.3	1054.44	1051.1	2.93	1.88	46.15	27.25	57.4	395.96	2.93	1.73	3.35	3.35
Stillwater County	A15	RM 405.34	73437.72	20% - 5yr	1090.3	1054	1050.67	2.94	2.53	47.34	28.53	116.05	349.02	2.75	1.66	3.33	3.33
Stillwater County	A15	RM 405.18	72616.33	20% - 5yr	1090.3	1053.43	1049.45	3.31	2.8	57.8	29.8	94.83	283.34	3.13	1.6	3.98	3.98
Stillwater County	A15	RM 405.09	72171.48	20% - 5yr	1090.3	1053.32	1049.09	2.68	2.42	38.32	28.17	115.98	240.81	3.04	2.24	4.24	4.24
Stillwater County	A15	RM 405.02	71774.52	20% - 5yr	1090.3	1052.96	1048.59	3.32	2.98	57.85	40.52	88.03	190.02	3.22	2.25	4.37	4.37
Stillwater County	A15	RM 404.97	71526.86	20% - 5yr	1090.3	1052.92	1048.35	2.85	2.6	42.93	34.26	105.86	278.01	3.09	2.47	4.58	4.58
Stillwater County	A15	RM 404.90	71150.58	20% - 5yr	1090.3	1052.77	1048.99	2.84	2.55	43.02	31.84	104.62	302.92	3.04	2.25	3.78	3.78
Stillwater County	A15	RM 404.84	70801.47	20% - 5yr	1090.3	1052.7	1049.19	2.49	2.28	33.08	20.42	117.94	446.46	2.99	1.84	3.51	3.51
Stillwater County	A15	RM 404.77	70415.17	20% - 5yr	1090.3	1052.44	1048.51	2.99	2.63	47.01	22.62	86.31	449.74	3.23	1.53	3.93	3.93
Stillwater County	A15	RM 404.71	70152.7	20% - 5yr	1090.3	1052.41	1048.14	2.5	2.3	32.39	21.93	85.48	486.63	3.37	2.25	4.28	4.28
Stillwater County	A15	RM 404.59	69477.61	20% - 5yr	1090.3	1051.84	1047.56	3.3	3.28	58.26	46.96	108.43	136.07	3.04	2.44	4.28	4.28
Stillwater County	A15	RM 404.54	69214.33	20% - 5yr	1090.3	1051.75	1047.65	3.04	2.94	50.24	37.17	123.23	174.17	2.89	2.13	4.1	4.1
Stillwater County	A15	RM 404.35	68254.38	20% - 5yr	1090.3	1051.24	1048.18	2.69	2.7	43.43	35.02	142.02	233.61	2.13	1.73	3.47	3.47
Stillwater County	A15	RM 404.23	67606.98	20% - 5yr	1090.3	1050.87	1047.77	2.74	2.71	44.12	42.47	131.61	203.71	2.25	2.18	3.1	3.1
Stillwater County	A15	RM 404.10	66934.17	20% - 5yr	1090.3	1050.51	1047.61	2.61	2.49	39.35	35.94	122.24	228.64	2.4	2.19	2.9	2.9
Stillwater County	A15	RM 403.94	66110.59	20% - 5yr	1090.3	1050.12	1045.27	2.7	2.33	41.1	28.11	113.06	360.87	2.6	1.77	4.85	4.85
Stillwater County	A15	RM 403.85	65604.39	20% - 5yr	1090.3	1049.7	1044.79	3.33	2.73	57.69	36.59	78.06	323.81	3.27	2.06	4.91	4.91
Stillwater County	A15	RM 403.75	65058.55	20% - 5yr	1090.3	1049.18	1046.13	3.62	3.25	75.23	53.65	100.86	202.04	2.42	1.72	3.05	3.05
Stillwater County	A15	RM 403.69	64721.22	20% - 5yr	1090.3	1049.1	1046.02	2.65	2.51	41.8	37.87	133.32	289.57	2.16	1.96	3.08	3.08
Stillwater County	A15	RM 403.62	64341.29	20% - 5yr	1090.3	1048.76	1045.75	2.98	2.82	56.86	51.78	91.15	277.97	1.76	1.61	3.01	3.01
Stillwater County	A15	RM 403.55	63997.04	20% - 5yr	1090.3	1048.53	1045.95	2.67	2.41	45.25	31.55	116.52	396.2	1.78	1.24	2.58	2.58
Stillwater County	A15	RM 403.38	62985.06	20% - 5yr	1090.3	1048.12	1043.43	2.16	1.95	27.47	20.76	194.31	325.9	2.27	1.71	4.68	4.68
Stillwater County	A15	RM 403.24	62260	20% - 5yr	1090.3	1047.81	1043.43	2.29	2.29	28.49	27.62	165.32	178.32	2.88	2.79	4.38	4.38
Stillwater County	A15	RM 403.15	61770.95	20% - 5yr	1090.3	1047.4	1042.51	3.02	2.96	50.29	41.36	130.31	164.26	2.76	2.27	4.89	4.89
Stillwater County	A15	RM 403.05	61263.44	20% - 5yr	1090.3	1047.14	1043.23	2.89	2.87	46.55	41.26	144.3	169.76	2.62	2.32	3.91	3.91
Stillwater County	A15	RM 402.97	60777.65	20% - 5yr	1090.3	1046.93	1043.89	2.6	2.57	39.4	35.33	182.48	213.82	2.3	2.06	3.04	3.04
Stillwater County	A15	RM 402.83	60113.9	20% - 5yr	1090.3	1046.37	1043.49	2.83	2.83	53.21	53.11	245.88	372.96	1.57	1.56	2.88	2.88
Stillwater County	A15	RM 402.68	59309.8	20% - 5yr	1090.3	1045.81	1042.55	2.45	2.33	37.53	31.19	232.57	523.08	1.89	1.57	3.25	3.25
Stillwater County	A15	RM 402.53	58529.61	20% - 5yr	1090.3	1045.5	1040.51	2.48	1.87	31.12	9.46	117.78	658.75	3.55	1.08	4.99	4.99
Stillwater County	A15	RM 402.37	57665.93	20% - 5yr	1090.3	1044.94	1041.09	3	2.5	59.04	35.72	210.93	515.84	1.63	0.99	3.85	3.85
Stillwater County	A15	RM 402.24	56987.42	20% - 5yr	1090.3	1044.74	1040.75	1.93	1.55	22.57	11.93	251.08	748.47	2.05	1.08	3.99	3.99
Stillwater County	A15	RM 402.07	56034.67	20% - 5yr	1090.3	1044.19	1041.1	2.5	2	38.77	25.65	203.71	426.95	1.93	1.28	3.09	3.09
Stillwater County	A15	RM 401.87	54972.92	20% - 5yr	1090.3	1043.4	1040.1	2.93	2.27	49.88	26.66	146.8	385.63	2.33	1.24	3.3	3.3
Stillwater County	A15	RM 401.69	54002.29	20% - 5yr	1090.3	1043.16	1038.43	1.93	1.79	21.59	13.85	225.02	403.12	2.35	1.51	4.73	4.73
Stillwater County	A15	RM 401.55	53267.48	20% - 5yr	1090.3	1042.5	1036.56	3.38	3.07	55.07	26.08	74.39	183.13	4.14	1.94	5.94	5.94
Stillwater County	A15	RM 401.41	52506.25	20% - 5yr	1090.3	1042.34	1037.91	2.63	2.31	37.69	23.77	132.65	301.5	2.87	1.8	4.43	4.43
Stillwater County	A15	RM 401.31	51997.63	20% - 5yr	1090.3	1041.94	1038.08	3.12	2.77	53.7	34.18	118.53	228.1	2.71	1.73	3.86	3.86
Stillwater County	A15	RM 401.17	51259.17	20% - 5yr	1090.3	1041.49	1037.38	2.97	2.88	49.87	43.57	144.72	171.11	2.52	2.21	4.11	4.11
Stillwater County	A15	RM 401.03	50507.04	20% - 5yr	1090.3	1041.13	1036.56	2.85	2.64	43.14	30.19	124.19	193.77	3.04	2.13	4.57	4.57
Stillwater County	A15	RM 400.90	49826.69	20% - 5yr	1090.3	1040.62	1036.25	3.18	2.99	58.47	45.45	142.21	203.75	2.38	1.86	4.37	4.37
Stillwater County	A15	RM 400.74	49002.09	20% - 5yr	1090.3	1040.09	1037.21	3.09	2.4	54.74	33.37	110.94	304.06	2.46	1.49	2.88	2.88
Stillwater County	A15	RM 400.61	48243.95	20% - 5yr	1090.3	1039.74	1035.99	2.49	2.14	36.96	25.83	144.53	338.52	2.16	1.5	3.74	3.74
Stillwater County	A15	RM 400.50	47710.55	20% - 5yr	1090.3	1039.42	1035.67	2.46	2.37	35.74	33.56	149.07	220.91	2.21	2.08	3.75	3.75
Stillwater County	A15	RM 400.42	47243.72	20% - 5yr	1090.3	1039.09	1034.87	2.83	2.67	44.09	32.27	103.79	203.56	2.74	2	4.22	4.22
Stillwater County	A15	RM 400.34	46832.6	20% - 5yr	1090.3	1038.93	1034.91	2.74	2.54	39.9	31.24	95.28	180.4	3.03	2.38	4.02	4.02
Stillwater County	A15	RM 400.25	46335.82	20% - 5yr	1090.3	1038.78	1035.01	2.55	2.3	35.02	21.31	106.75	265.77	2.93	1.78	3.77	3.77
Stillwater County	A15	RM 400.18	45999.89	20% - 5yr	1090.3	1038.61	1034.98	2.67	2.44	39.29	22.4	113.04	287.92	2.74	1.55	3.63	3.63
Stillwater County	A15	RM 400.13	45714.33	20% - 5yr	1090.3	1038.49	1035.2	2.65	2.3	38.83	23.43	122.23	287.27	2.74	1.65	3.29	3.29
Stillwater County	A15	RM 400.11	45623.77	20% - 5yr	1090.3	1038.38	1035.11	2.82	2.42	45.35	28.11	129.4	299.21	2.48	1.53	3.27	3.27
Stillwater County	A15	RM 400.09	45529.19	20% - 5yr	1090.3	1038.19	1035.05	3.22	2.82	61.54	42.28	127.05	257.41	2.2	1.51	3.14	3.14
Stillwater County	A15	RM 400.03	45177.97	20% - 5yr	1090.3	1037.94	1034.82	3.04	2.75	55.36	46.43	135.64	220.05	2.14	1.8	3.12	3.12
Stillwater County	A15	RM 399.95	44761.86	20% - 5yr	1090.3	1037.76	1033.69	2.6	2.6	36.99	36.92	149.69	164.44	2.8	2.8	4.07	4.07
Stillwater County	A16	RM 399.85	44225.61	20% - 5yr	1090.3	1037.35	1033.63	3.02	3.02	52	52	144.07	156.94	2.5	2.5	3.72	3.72
Stillwater County	A16	RM 399.74	43664.16	20% - 5yr	1090.3	1037.1	1033.48	2.64	2.64	40.04	39.96	169.98	170.28	2.43	2.43	3.62	3.62
Stillwater County	A16	RM 399.62	43026.17	20% - 5yr	1090.3	1036.73	1033.67	2.6	2.6	41.88	41.88	216.73	216.73	1.93	1.93	3.06	3.06
Stillwater County	A16	RM 399.50	42404.94	20% - 5yr	1090.3	1036.45	1031.89	2.44	2.44	33.12	33.12	166.41	211.29	2.68	2.68	4.55	4.55
Stillwater County	A16	RM 399.39	41801.43	20% - 5yr	1090.3	1036.12	1031.8	2.67	2.67	39.91	39.91	154.77	174.85	2.64	2.64	4.32	4.32

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

20% - 5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	20% - 5yr	1090.3	1035.78	1031.14	2.93	2.8	48.73	39.96	144.36	198.06	2.53	2.07	4.64	4.64
Stillwater County	A16	RM 399.19	40736.83	20% - 5yr	1090.3	1035.25	1031.46	3.31	3.18	62.79	43.97	133.68	200.04	2.45	1.71	3.79	3.79
Stillwater County	A16	RM 399.09	40202.15	20% - 5yr	1090.3	1035.03	1031.09	2.86	2.58	44.55	29.13	128.42	227.14	2.85	1.86	3.94	3.94
Stillwater County	A16	RM 399.00	39710.39	20% - 5yr	1090.3	1034.85	1031.41	2.59	2.11	38.35	24.14	143.91	333.16	2.47	1.55	3.44	3.44
Stillwater County	A16	RM 398.91	39231.58	20% - 5yr	1090.3	1034.55	1031.73	2.64	2.24	44.92	28.81	179.83	442.48	1.71	1.1	2.82	2.82
Stillwater County	A16	RM 398.80	38666.26	20% - 5yr	1090.3	1034.13	1031.55	2.58	2.13	42.15	28.83	188.28	416.11	1.79	1.23	2.58	2.58
Stillwater County	A16	RM 398.73	38275.64	20% - 5yr	1090.3	1033.83	1030.78	2.57	2.19	36.99	25.98	199.3	403.77	1.76	1.23	3.05	3.05
Stillwater County	A16	RM 398.62	37715.08	20% - 5yr	1090.3	1033.51	1030.19	2.41	2.13	33.21	24.39	181.48	370.51	1.88	1.38	3.32	3.32
Stillwater County	A16	RM 398.51	37115.9	20% - 5yr	1090.3	1033.11	1030.68	2.47	2.28	38.72	27.43	211.99	377.7	1.79	1.27	2.45	2.45
Stillwater County	A16	RM 398.40	36522.49	20% - 5yr	1090.3	1032.9	1028.27	2.1	1.86	24.09	17.2	183.79	387.77	2.12	1.51	4.63	4.63
Stillwater County	A16	RM 398.29	35952.65	20% - 5yr	1090.3	1032.5	1027.62	2.5	2.39	39.01	28.05	232.17	339.52	1.87	1.34	4.88	4.88
Stillwater County	A16	RM 398.17	35320.39	20% - 5yr	1090.3	1032.31	1028.88	1.98	1.94	22.73	19.02	231.5	283.32	2.37	1.98	3.43	3.43
Stillwater County	A16	RM 398.04	34597.07	20% - 5yr	1090.3	1031.99	1027.24	2.16	2.13	33.65	29.71	254.53	314.58	1.98	1.75	4.75	4.75
Stillwater County	A16	RM 397.95	34133.39	20% - 5yr	1090.3	1031.59	1027.15	2.58	2.55	42.09	39.61	230.94	249.38	1.82	1.72	4.44	4.44
Stillwater County	A16	RM 397.81	33366.95	20% - 5yr	1090.3	1031.25	1027.05	2.16	2.11	27.98	25.64	236.93	279.63	2.12	1.94	4.2	4.2
Stillwater County	A16	RM 397.68	32754.86	20% - 5yr	1090.3	1031.02	1026.97	2.18	2.11	26.6	22.91	191.13	260.87	2.6	2.25	4.05	4.05
Stillwater County	A16	RM 397.56	32104.4	20% - 5yr	1090.3	1030.51	1026.76	3.01	2.9	50.35	47.07	133.97	196.26	2.67	2.52	3.75	3.75
Stillwater County	A16	RM 397.40	31237.31	20% - 5yr	1090.3	1030.05	1026.27	2.73	2.5	43.9	34.37	173.54	608.84	2.25	1.77	3.78	3.78
Stillwater County	A16	RM 397.17	30082.69	20% - 5yr	1090.3	1029.42	1025.84	2.32	1.94	34.48	21.85	258.69	845.09	1.73	1.09	3.58	3.58
Stillwater County	A16	RM 396.97	29050.44	20% - 5yr	1090.3	1028.95	1025.61	1.97	1.55	24.27	12.96	278.77	938.12	1.88	1	3.34	3.34
Stillwater County	A16	RM 396.71	27639.86	20% - 5yr	1090.3	1028.26	1022.48	2.64	1.83	37.28	12.35	127.32	669.9	3.02	0.99	5.78	5.78
Stillwater County	A16	RM 396.62	27103.31	20% - 5yr	1090.3	1027.86	1022.36	3.12	3.1	49.71	43.84	99.55	407.26	3.5	3.08	5.5	5.5
Stillwater County	A16	RM 396.52	26616.35	20% - 5yr	1090.3	1027.65	1023.41	3.12	2.2	51.26	15.68	104.65	518.4	3.15	0.95	4.24	4.24
Stillwater County	A16	RM 396.29	25423.1	20% - 5yr	1090.3	1027.23	1023.53	2.34	1.81	32.48	16.07	184.21	551.64	2.2	1.09	3.7	3.7
Stillwater County	A16	RM 396.14	24635.78	20% - 5yr	1090.3	1026.56	1022.46	3.12	2.61	56.31	31.2	128.78	400.6	2.37	1.31	4.1	4.1
Stillwater County	A16	RM 396.03	24026.24	20% - 5yr	1090.3	1026.4	1024.1	2.1	1.77	27.3	16.47	186.13	579.46	1.94	1.17	2.3	2.3
Stillwater County	A16	RM 395.89	23301.08	20% - 5yr	1090.3	1025.89	1022.79	2.66	2.05	45.47	24.54	148.2	639.64	1.71	0.92	3.1	3.1
Stillwater County	A16	RM 395.73	22420.29	20% - 5yr	1090.3	1025.53	1022.66	1.46	1.29	13.77	9.63	184.46	843.67	1.7	1.18	2.87	2.87
Stillwater County	A16	RM 395.64	21923.33	20% - 5yr	1090.3	1025.28	1022.13	1.97	1.53	24.26	11.93	144.43	904.79	1.9	0.93	3.46	3.46
Stillwater County	A16	RM 395.57	21526.11	20% - 5yr	1090.3	1024.86	1021.61	2.85	1.93	47.18	18.96	77.54	877.21	2.34	0.94	3.25	3.25
Stillwater County	A16	RM 395.48	21053.74	20% - 5yr	1090.3	1024.48	1021.89	2.6	2.14	44.47	28.01	110.65	685.32	1.59	1	2.59	2.59
Stillwater County	A16	RM 395.36	20532.68	20% - 5yr	1090.3	1024.2	1021.53	2.14	1.84	28.67	18.22	131.78	667.36	1.86	1.18	2.67	2.67
Stillwater County	A16	RM 394.98	18666.37	20% - 5yr	1090.3	1023.57	1020.31	2.62	2.14	41.09	23.6	100.57	423.6	2.14	1.23	3.26	3.26
Stillwater County	A16	RM 394.80	17678.79	20% - 5yr	1090.3	1023.19	1019.23	2.46	2.15	38.59	26.65	139.94	419.93	1.75	1.21	3.96	3.96
Stillwater County	A16	RM 394.71	17254.4	20% - 5yr	1090.3	1023	1019.74	2.06	1.94	26.12	18.85	146.7	395.46	1.98	1.43	3.26	3.26
Stillwater County	A16	RM 394.65	16921.48	20% - 5yr	1090.3	1022.75	1019.93	2.18	2.11	30.22	26.16	155.89	351.46	1.78	1.54	3.75	3.75
Stillwater County	A16	RM 394.59	16622.61	20% - 5yr	1090.3	1022.37	1019.92	2.41	2.34	38.57	33.53	139.49	350.8	1.55	1.34	2.8	2.8
Stillwater County	A16	RM 394.53	16295.21	20% - 5yr	1090.3	1022.09	1019.83	2.28	2.14	35.45	30.66	145.05	411.61	1.46	1.26	3.08	3.08
Stillwater County	A16	RM 394.45	15858.14	20% - 5yr	1090.3	1021.63	1019.03	2.69	2.49	45.88	36	112.61	310.02	1.8	1.41	2.75	2.75
Stillwater County	A16	RM 394.20	14503.23	20% - 5yr	1090.3	1020.92	1016.38	2.53	2.19	37.81	24.88	149.53	343.96	2.2	1.45	4.54	4.54
Stillwater County	A16	RM 394.12	14088.57	20% - 5yr	1090.3	1020.56	1016.74	2.88	2.51	49.3	32.47	145.12	302.53	2.18	1.44	3.82	3.82
Stillwater County	A16	RM 393.99	13393.6	20% - 5yr	1090.3	1020.2	1017.11	2.47	1.99	37.68	23.58	116.27	453.77	1.93	1.21	3.09	3.09
Stillwater County	A16	RM 393.85	12650.05	20% - 5yr	1090.3	1019.71	1016.49	2.28	2.03	34.7	25.44	176.11	479.16	1.53	1.12	3.22	3.22
Stillwater County	A16	RM 393.59	11240.84	20% - 5yr	1090.3	1019.18	1015.45	1.68	1.44	17.7	10.54	271.75	675.59	1.88	1.12	3.73	3.73
Stillwater County	A16	RM 393.27	9813.245	20% - 5yr	1090.3	1018.14	1013.32	2.96	2.69	58.47	46.82	196.64	329.61	1.53	1.23	4.82	4.82
Stillwater County	A16	RM 393.10	8870.543	20% - 5yr	1090.3	1017.53	1013.34	2.01	1.9	27.92	24.17	323.8	473.52	1.4	1.21	4.19	4.19
Stillwater County	A16	RM 392.95	8114.595	20% - 5yr	1090.3	1016.71	1014.13	2.7	2.62	50.01	46.49	266.4	313.98	1.42	1.32	2.58	2.58
Stillwater County	A16	RM 392.69	6912.838	20% - 5yr	1090.3	1016.16	1012.43	1.88	1.69	21.92	16.43	189.67	543	1.91	1.43	3.73	3.73
Stillwater County	A16	RM 392.44	5710.825	20% - 5yr	1090.3	1015.59	1011.68	2.38	1.94	32.71	16.27	135.14	820.28	2.38	1.18	3.91	3.91
Stillwater County	A17	RM 392.20	4388.056	20% - 5yr	1090.3	1014.53	1010.8	3.07	2.62	59.28	32.95	185.48	406.81	1.84	1.02	3.73	3.73
Stillwater County	A17	RM 392.00	3345.174	20% - 5yr	1090.3	1013.96	1009.53	2.51	2.09	36.38	21.9	162.87	367.67	2.36	1.42	4.43	4.43
Stillwater County	A17	RM 391.84	2491.214	20% - 5yr	1090.3	1013.66	1010.51	2.08	1.8	27.06	15.82	153.64	552.21	1.87	1.09	3.24	3.24
Stillwater County	A17	RM 391.68	1656.536	20% - 5yr	1090.3	1013.33	1010.5	1.75	1.57	20.9	16.07	255.36	631.81	1.43	1.1	2.83	2.83
Stillwater County	A17	RM 391.58	1120.168	20% - 5yr	1090.3	1013.05	1009.55	1.86	1.6	23.68	15.65	360.26	716.32	1.44	0.95	3.5	3.5
Stillwater County	A17	RM 391.46	505.9	20% - 5yr	1090.3	1012.77	1009.4	1.88	1.49	22.67	12.84	297.18	748.65	1.73	0.98	3.37	3.37

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	5-yr	1090.2	1012.37	1008.74	2.19	1.65	28.54	12.46	207.69	701.68	2.16	0.94	3.63	3.63
Yellowstone County	A17	RM 391.14	149661.4	5-yr	1090.2	1011.95	1007.82	2.25	1.52	36.8	18.15	203.75	687.43	2.11	1.04	4.13	4.13
Yellowstone County	A17	RM 390.83	149168.3	5-yr	1090.2	1010.85	1007.89	2.42	2.08	41.43	27.61	253.49	538.39	1.57	1.04	2.96	2.96
Yellowstone County	A17	RM 390.51	148644.1	5-yr	1090.2	1010.07	1006	1.66	1.57	24.88	15.99	202.03	454.47	2.38	1.53	4.07	4.07
Yellowstone County	A17	RM 390.34	148387.5	5-yr	1090.2	1009.64	1005.26	2.32	1.99	45.53	27.22	154.57	378.01	2.43	1.45	4.38	4.38
Yellowstone County	A17	RM 390.13	148054.9	5-yr	1090.2	1009.01	1005.54	2.54	2.12	45.37	25.39	143.76	372.36	2.47	1.38	3.47	3.47
Yellowstone County	A17	RM 389.96	147776.4	5-yr	1090.2	1008.68	1004.81	2.01	1.83	26.48	20.33	174.66	354.37	2.19	1.68	3.87	3.87
Yellowstone County	A17	RM 389.76	147468.2	5-yr	1090.2	1008.43	1004.52	1.48	1.39	19.33	12.95	298.43	486.4	2.42	1.61	3.91	3.91
Yellowstone County	A17	RM 389.55	147162.3	5-yr	1090.2	1007.89	1003.2	2.01	2.01	53.09	53.09	306.34	306.34	1.77	1.77	4.68	4.68
Yellowstone County	A17	RM 389.31	146731.1	5-yr	1090.2	1007.17	1003.49	1.9	1.82	23.02	18.09	256.17	343.37	2.22	1.74	3.68	3.68
Yellowstone County	A17	RM 389.08	146349	5-yr	1090.2	1006.59	1001.61	1.81	1.63	46.29	32.76	294.14	528.08	1.8	1.27	4.98	4.98
Yellowstone County	A17	RM 388.92	146095.5	5-yr	1090.2	1006.16	1002.49	1.87	1.64	21.85	15.98	266.21	444.13	2.05	1.5	3.67	3.67
Yellowstone County	A17	RM 388.79	145883.6	5-yr	1090.2	1005.96	1002.14	1.97	1.48	22.51	10.44	163.12	528.4	3.04	1.4	3.82	3.82
Yellowstone County	A17	RM 388.61	145594.9	5-yr	1090.2	1005.51	1000.48	2.56	1.94	46.96	23.77	139.45	424.6	2.64	1.33	5.02	5.02
Yellowstone County	A17	RM 388.58	145547	5-yr	1090.2	1005.39	1000.28	2.5	2.02	57.35	27.96	151.32	419.27	2.65	1.29	5.11	5.11
Yellowstone County	A17	RM 388.36	145196.7	5-yr	1090.2	1004.85	1001.21	2.32	1.81	34.65	18.11	159.2	450.67	2.54	1.33	3.64	3.64
Yellowstone County	A17	RM 388.22	144960.1	5-yr	1090.2	1004.31	1000.23	2.79	2.25	53.33	28.87	161.14	510.33	1.83	1	4.08	4.08
Yellowstone County	A17	RM 388.09	144745.8	5-yr	1090.2	1003.71	999.87	2.46	2.13	43.74	33.88	229.15	475.43	1.45	1.12	3.84	3.84
Yellowstone County	A17	RM 387.91	144452	5-yr	1090.2	1003.02	999.77	1.52	1.73	22.57	24.26	350.71	518.63	1.16	1.25	3.25	3.25
Yellowstone County	A17	RM 387.79	144255.2	5-yr	1090.2	1002.93	999.17	1.17	1.09	6.48	5.46	440.11	797.16	1.52	1.28	3.76	3.76
Yellowstone County	A17	RM 387.59	143932.9	5-yr	1090.2	1002.65	998.1	1.14	1.13	34.09	31.91	857.25	971.77	1.08	1.01	4.55	4.55
Yellowstone County	A17	RM 387.36	143562.1	5-yr	1090.2	1001.59	997.78	2.01	2.01	22.51	21.72	451.49	478.92	1.2	1.16	3.8	3.8
Yellowstone County	A17	RM 387.24	143353.9	5-yr	1090.2	1001.26	997.71	1.87	1.87	19.67	19.5	405.06	417.15	1.44	1.42	3.55	3.55
Yellowstone County	A17	RM 387.04	143026.2	5-yr	1090.2	1000.59	996.49	2.26	2.21	30.44	27.3	364.55	431.35	1.3	1.16	4.1	4.1
Yellowstone County	A17	RM 386.86	142750.4	5-yr	1090.2	1000.05	997.01	1.79	1.72	33.24	26.12	349.54	473.6	1.71	1.34	3.04	3.04
Yellowstone County	A17	RM 386.74	142538.5	5-yr	1090.2	999.65	996.31	1.81	1.76	28.5	25.25	348.16	425.38	1.64	1.46	3.34	3.34
Yellowstone County	A17	RM 386.61	142318.4	5-yr	1090.2	999.08	995.9	2.52	2.39	42.57	32.71	183.09	288.67	2.14	1.65	3.18	3.18
Yellowstone County	A17	RM 386.47	142095.8	5-yr	1090.2	998.71	995.18	2.39	2.04	35.79	20.36	165.46	409.95	2.29	1.3	3.53	3.53
Yellowstone County	A17	RM 386.33	141875.1	5-yr	1090.2	998.24	994.36	2.75	2.16	43.33	21.6	144.69	426.46	2.37	1.18	3.88	3.88
Yellowstone County	A17	RM 386.17	141622.7	5-yr	1090.2	997.75	993.9	2.55	2.32	44.13	31.78	192.16	322.47	2.02	1.46	3.85	3.85
Yellowstone County	A17	RM 386.08	141479.6	5-yr	1090.2	997.43	994.12	2.52	2.25	50.5	30.89	176.05	350.69	2.26	1.38	3.31	3.31
Yellowstone County	A17	RM 386.03	141389.2	5-yr	1090.2	997.24	993.82	2.45	2.25	37.5	27.68	208.09	328.9	1.99	1.47	3.42	3.42
Yellowstone County	A17	RM 385.96	141289.2	5-yr	1090.2	997.21	993.01	1.85	1.73	18.82	13.58	226.93	350.79	2.49	1.8	4.2	4.2
Yellowstone County	A17	RM 385.91	141204.9	5-yr	1090.2	997.14	992.33	1.84	1.84	18.79	18.79	257.33	333.71	2.3	2.3	4.81	4.81
Yellowstone County	A17	RM 385.84	141096	5-yr	1090.2	996.96	990.57	2.16	2.16	25.57	25.57	339.75	358.41	3.41	3.41	6.39	6.39
Yellowstone County		RM 342.71	141053	5-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	5-yr	1090.2	996.78	992.45	2.41	2.41	45	45	137.74	137.74	3.29	3.29	4.33	4.33
Yellowstone County	A17	RM 385.79	141006	5-yr	1090.2	996.77	992.48	2.28	2.28	25.15	25.15	155.75	220.09	3.07	3.07	4.29	4.29
Yellowstone County	A18	RM 385.69	140846.5	5-yr	1090.2	996.55	992.9	2.3	2.24	51.06	35.83	207.72	420.53	2.28	1.6	3.65	3.65
Yellowstone County	A18	RM 385.60	140705.5	5-yr	1090.2	996.19	992.71	2.47	2.35	48.38	34.2	198.33	362.42	2.21	1.56	3.48	3.48
Yellowstone County	A18	RM 385.50	140538.8	5-yr	1090.2	995.92	990.71	2.36	2.21	41.89	22.22	149.28	304.33	3.07	1.62	5.21	5.21
Yellowstone County	A18	RM 385.39	140367.1	5-yr	1090.2	995.66	992.41	2.44	2.23	31.29	19.86	200.75	351.12	2.19	1.39	3.25	3.25
Yellowstone County	A18	RM 385.30	140231.3	5-yr	1090.2	995.35	992.53	2.56	2.4	53.82	37.24	237.14	372.34	1.76	1.22	2.82	2.82
Yellowstone County	A18	RM 385.23	140108.3	5-yr	1090.2	995.08	992.01	2.2	2.03	40.81	32.17	225.34	385.45	1.76	1.39	3.07	3.07
Yellowstone County	A18	RM 385.12	139921.2	5-yr	1090.2	994.26	991.37	3.01	2.93	65.41	56.63	189.9	273.26	1.57	1.36	2.89	2.89
Yellowstone County	A18	RM 384.93	139688.7	5-yr	1090.2	993.91	991.06	2.06	1.91	26.93	21.89	213.02	368.82	1.91	1.55	2.85	2.85
Yellowstone County	A18	RM 384.75	139352.1	5-yr	1090.2	992.91	989.77	3.33	2.83	84.83	49.63	114.16	339.84	2.01	1.18	3.14	3.14
Yellowstone County	A18	RM 384.63	139146.9	5-yr	1090.2	992.53	989.58	1.85	1.69	24.74	21.06	177.11	681.17	1.37	1.17	2.95	2.95
Yellowstone County	A18	RM 384.48	138904.5	5-yr	1090.2	992.16	989.55	1.46	1.64	20.25	19.49	176.25	425.64	1.67	1.6	2.81	2.81
Yellowstone County	A18	RM 384.34	138682.4	5-yr	1090.2	991.84	988.23	1.64	1.78	37.08	19.28	164.42	519.97	2.26	1.18	3.61	3.61
Yellowstone County	A18	RM 384.26	138551.1	5-yr	1090.2	991.6	987.34	2.37	1.82	53.4	21.7	86.08	515.24	2.89	1.16	4.26	4.26
Yellowstone County	A18	RM 384.15	138370.3	5-yr	1090.2	990.8	987.39	3.52	3.03	93.95	48.99	77.58	289.96	2.4	1.24	3.41	3.41
Yellowstone County	A18	RM 384.06	138235.3	5-yr	1090.2	990.64	987.31	2.63	1.83	42.67	22.22	83.82	577.05	2.33	1.21	3.33	3.33
Yellowstone County	A18	RM 383.96	138072.3	5-yr	1090.2	990.19	987.67	2.45	2.26	44.25	36.08	136.65	467.24	1.27	1.03	2.52	2.52
Yellowstone County	A18	RM 383.86	137914.6	5-yr	1090.2	989.99	987.24	1.76	1.64	19.54	16.31	149.64	420.19	1.9	1.59	2.75	2.75
Yellowstone County	A18	RM 383.75	137749.9	5-yr	1090.2	989.68	986.55	1.64	1.95	24.02	22.55	190.6	430.15	1.39	1.3	3.2	3.2
Yellowstone County	A18	RM 383.62	137544.5	5-yr	1090.2	989.45	986.32	1.61	1.57	17.03	13.74	170.33	531.41	1.62	1.3	3.83	3.83
Yellowstone County	A18	RM 383.54	137415.7	5-yr	1090.2	989.35	984.41	1.45	1.34	13.07	9.57	392.44	724.44	1.85	1.35	4.95	4.95
Yellowstone County	B1	RM 383.39	137175.7	5-yr	1379.03	988.92	984.98	2.3	2.29	26.91	25.51	329.26	348.99	1.82	1.73	3.94	3.94
Yellowstone County	B1	RM 383.31	137040.5	5-yr	1379.03	988.74	984.86	2.11	1.89	25.73	19.44	395.38	597.42	1.62	1.22	3.88	3.88
Yellowstone County	B1	RM 383.16	136817.2	5-yr	1379.03	988.49	984.9	1.77	1.53	12.84	11.67	625.89	838.82	1.19	1.08	3.59	3.59

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	5-yr	1379.03	987.97	983.64	1.84	1.66	16.97	13.85	512.52	726.96	1.4	1.14	4.33	4.33
Yellowstone County	B1	RM 382.61	135921.1	5-yr	1379.03	987.43	982.68	2.2	1.87	27.57	12.86	196.01	521.41	3.03	1.41	4.75	4.75
Yellowstone County	B1	RM 382.44	135657.8	5-yr	1379.03	987.05	981.56	2.69	2.02	38.47	17.38	131.94	436.11	3.47	1.57	5.49	5.49
Yellowstone County	B1	RM 382.28	135389.1	5-yr	1379.03	986.87	981.45	2.27	1.72	30.13	12.58	139.32	514.51	3.74	1.56	5.42	5.42
Yellowstone County	B1	RM 382.11	135122	5-yr	1379.03	986.39	980.52	2.88	2.4	48.22	17.73	132.31	447.34	3.51	1.29	5.87	5.87
Yellowstone County	B1	RM 381.93	134829.3	5-yr	1379.03	985.99	981.3	2.46	2.35	56.94	37.57	182.82	294.77	3.03	1.99	4.69	4.69
Yellowstone County	B1	RM 381.79	134602.8	5-yr	1379.03	985.56	981.63	2.67	2.54	41.51	21.5	166.88	342.32	3.08	1.59	3.93	3.93
Yellowstone County	B1	RM 381.69	134426.2	5-yr	1379.03	985.5	981.06	1.95	1.81	25.17	17.04	207.32	338.41	3.33	2.25	4.44	4.44
Yellowstone County	B1	RM 381.58	134232.5	5-yr	1379.03	985.35	981.02	1.88	1.71	22.24	15.37	271.16	443.61	2.63	1.81	4.33	4.33
Yellowstone County	B1	RM 381.47	134047.3	5-yr	1379.03	985.15	980.95	1.73	1.63	40.11	32.1	330.23	452.94	2.33	1.86	4.2	4.2
Yellowstone County	B1	RM 381.35	133871.9	5-yr	1379.03	984.8	980.79	1.74	1.66	46.87	39.5	359.35	458.53	2.15	1.81	4.01	4.01
Yellowstone County	B1	RM 381.22	133659.2	5-yr	1379.03	984.16	979.74	1.98	1.98	60.91	60.91	384.48	384.48	1.81	1.81	4.42	4.42
Yellowstone County	B1	RM 381.11	133491.4	5-yr	1379.03	983.64	979.61	2.28	2.2	52.86	44.63	224.32	319	2.33	1.97	4.02	4.02
Yellowstone County	B1	RM 381.00	133302.9	5-yr	1379.03	983.13	978.23	2.76	2.62	42.68	33.2	182.43	277.99	2.44	1.9	4.9	4.9
Yellowstone County	B1	RM 380.92	133180	5-yr	1379.03	982.99	976.97	2.5	2.22	40.25	23.34	150.18	333.7	3.22	1.86	6.02	6.02
Yellowstone County	B1	RM 380.81	132986.3	5-yr	1379.03	982.69	978.55	2.55	2.37	38.57	24.53	191.87	349.06	2.63	1.67	4.14	4.14
Yellowstone County	B1	RM 380.69	132800.2	5-yr	1379.03	982.51	978.53	2.16	1.98	26.44	19.91	263.74	401.58	2.31	1.74	3.98	3.98
Yellowstone County	B1	RM 380.57	132628.6	5-yr	1379.03	982.3	978.7	2.03	1.98	34.68	27.48	228.21	343.35	2.56	2.03	3.6	3.6
Yellowstone County	B1	RM 380.48	132470	5-yr	1379.03	982.1	978.24	2.1	1.92	32.02	21.54	200.11	376.26	2.83	1.91	3.86	3.86
Yellowstone County	B1	RM 380.34	132222.4	5-yr	1379.03	981.71	977.37	2.47	2.13	35.32	23.49	204.07	395.57	2.45	1.63	4.34	4.34
Yellowstone County	B1	RM 380.22	132032.4	5-yr	1379.03	981.23	977.02	2.94	2.8	49.23	34.35	171.86	263.68	2.68	1.87	4.21	4.21
Yellowstone County	B1	RM 380.11	131847.7	5-yr	1379.03	980.99	976.29	2.61	2.32	44.3	28.48	180.68	444.26	2.46	1.58	4.7	4.7
Yellowstone County	B1	RM 380.01	131671.4	5-yr	1379.03	980.74	976.21	2.49	1.94	41.78	20.84	165	537.9	2.71	1.35	4.53	4.53
Yellowstone County	B1	RM 379.92	131538.8	5-yr	1379.03	980.49	976.69	2.6	2.13	38.58	20.77	190.65	525.67	2.28	1.23	3.8	3.8
Yellowstone County	B1	RM 379.84	131406.9	5-yr	1379.03	980.42	975.94	1.71	1.55	18.46	13.13	413.34	667.92	1.88	1.33	4.48	4.48
Yellowstone County	B1	RM 379.75	131265.1	5-yr	1379.03	980.25	974.98	1.81	1.66	23.67	16.71	370.47	587.11	2	1.41	5.27	5.27
Yellowstone County	B1	RM 379.65	131104.3	5-yr	1379.03	980.07	975.6	1.78	1.62	19.84	17.48	379.36	498.94	1.94	1.71	4.47	4.47
Yellowstone County	B1	RM 379.56	130964.3	5-yr	1379.03	979.96	975.94	1.66	1.54	17.52	11.9	313.71	1268.1	2.17	1.47	4.02	4.02
Yellowstone County	B1	RM 379.46	130794	5-yr	1379.03	979.76	974.74	1.84	1.61	19.91	10.9	291.28	1132.76	2.11	1.15	5.02	5.02
Yellowstone County	B1	RM 379.36	130642.3	5-yr	1379.03	979.69	975.71	1.6	1.13	20.57	9.31	245.78	982.01	2.95	1.33	3.98	3.98
Yellowstone County	B1	RM 379.27	130496.2	5-yr	1379.03	979.33	974.66	2.59	1.68	59.44	24.08	164.19	751.13	2.71	1.09	4.67	4.67
Yellowstone County	B1	RM 379.17	130345.7	5-yr	1379.03	978.85	973.93	3	2.16	60.58	17.47	154.84	790.24	2.81	0.81	4.92	4.92
Yellowstone County	B1	RM 379.04	130142	5-yr	1379.03	978.57	974.79	2.55	1.74	37.32	14.86	203.31	853.82	2.33	0.93	3.78	3.78
Yellowstone County	B1	RM 378.97	130026.7	5-yr	1379.03	978.34	974.64	2.57	1.92	38.92	18.22	230.5	713.93	2.14	1	3.7	3.7
Yellowstone County	B1	RM 378.86	129850.9	5-yr	1379.03	977.97	974.4	2.62	2.03	46.14	20.52	242.08	752.48	2.03	0.9	3.57	3.57
Yellowstone County	B1	RM 378.76	129682.3	5-yr	1379.03	977.61	974.17	2.53	2.05	39.44	17.82	265.27	747.08	1.99	0.9	3.44	3.44
Yellowstone County	B1	RM 378.67	129541.3	5-yr	1379.03	977.35	973.97	2.55	1.86	36.34	18.08	248.29	768.81	1.99	0.99	3.38	3.38
Yellowstone County	B1	RM 378.61	129443.1	5-yr	1379.03	977.15	973.83	2.54	1.83	50.2	26.88	203.34	740.2	1.98	1.06	3.32	3.32
Yellowstone County	B1	RM 378.52	129297.7	5-yr	1379.03	976.94	973.62	1.91	1.67	20.64	17.83	525.58	758.89	1.31	1.13	3.32	3.32
Yellowstone County	B1	RM 378.46	129200.8	5-yr	1379.03	976.85	973.48	1.54	1.46	16.58	13.84	596.86	767.73	1.48	1.23	3.37	3.37
Yellowstone County	B1	RM 378.40	129112.2	5-yr	1379.03	976.68	973.41	1.59	1.55	45.87	40.05	600.76	716.73	1.43	1.24	3.27	3.27
Yellowstone County	B1	RM 378.29	128929.4	5-yr	1379.03	976.5	972.93	1.23	1.18	11.49	9.48	564.28	713.75	1.98	1.63	3.57	3.57
Yellowstone County	B1	RM 378.13	128673.7	5-yr	1379.03	976.17	971.4	2.01	2	16.86	16.28	364.3	478.25	1.89	1.82	4.77	4.77
Yellowstone County	B1	RM 378.07	128569	5-yr	1379.03	976.1	970.46	1.95	1.94	15.75	14.48	304.21	449.57	2.32	2.13	5.64	5.64
Yellowstone County	B1	RM 377.96	128380.3	5-yr	1379.03	975.78	968.85	2.51	2.51	45.12	45.12	108.79	108.79	5.04	5.04	6.93	6.93
Yellowstone County		RM 338.83	128364	5-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	5-yr	1379.03	975.75	967.19	2.34	2.34	42.46	42.46	107.53	107.53	5.48	5.48	8.56	8.56
Yellowstone County	B1	RM 377.87	128244.4	5-yr	1379.03	975.55	970.56	2.55	2.55	46.64	46.63	223.61	328.58	2.47	2.47	4.99	4.99
Yellowstone County	B1	RM 377.79	128118	5-yr	1379.03	975.33	970.94	2.5	2.5	30.26	30.26	317.61	445.5	1.74	1.74	4.39	4.39
Yellowstone County	B1	RM 377.69	127964.3	5-yr	1379.03	975.13	969.86	2.23	2.23	26.16	24.81	321.27	445.72	1.92	1.82	5.27	5.27
Yellowstone County	B1	RM 377.61	127824.8	5-yr	1379.03	974.7	970.53	2.88	2.86	45.26	43.6	238.97	304.63	2.01	1.93	4.17	4.17
Yellowstone County	B1	RM 377.55	127735.1	5-yr	1379.03	974.6	970.41	2.48	2.48	31.54	30.91	276.78	311.96	2.01	1.97	4.19	4.19
Yellowstone County	B1	RM 377.48	127618.1	5-yr	1379.03	974.41	970.26	2.41	2.41	30.8	30.8	335.07	360.79	1.71	1.71	4.15	4.15
Yellowstone County	B1	RM 377.39	127466.6	5-yr	1379.03	974.04	969.73	2.64	2.62	37.55	35.37	289.5	310.65	1.8	1.7	4.31	4.31
Yellowstone County	B1	RM 377.34	127391.5	5-yr	1379.03	973.83	969.95	2.69	2.65	64.56	58.91	262.95	292.5	1.95	1.78	3.88	3.88
Yellowstone County	B1	RM 377.25	127241.9	5-yr	1379.03	973.69	970.26	1.87	1.83	21.4	18.83	389.21	453.54	1.89	1.66	3.43	3.43
Yellowstone County	B1	RM 377.16	127097.7	5-yr	1379.03	973.5	969.82	1.9	1.83	24.72	22.01	405.91	531.43	1.59	1.42	3.68	3.68
Yellowstone County	B1	RM 377.08	126969	5-yr	1379.03	973.44	969	1.41	1.31	11.27	8.2	415.75	652.58	2.2	1.61	4.44	4.44
Yellowstone County	B1	RM 377.04	126900.8	5-yr	1379.03	973.32	968.6	1.68	1.64	51.06	42.36	526.17	655.72	1.55	1.28	4.72	4.72
Yellowstone County	B1	RM 376.98	126797.5	5-yr	1379.03	973.07	969.02	1.94	1.91	17.35	15.14	491.56	575.64	1.44	1.26	4.05	4.05
Yellowstone County	B1	RM 376.92	126710.1	5-yr	1379.03	972.97	969.01	1.59	1.54	38.78	31.54	494	630.69	1.74	1.42	3.96	3.96

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	5-yr	1379.03	972.84	967.73	1.31	1.28	15.52	13.26	446.91	627.17	2	1.71	5.11	5.11
Yellowstone County	B1	RM 376.75	126442.1	5-yr	1379.03	972.71	967.82	1.38	1.39	20.81	19.48	398.58	477.2	2.22	2.08	4.89	4.89
Yellowstone County	B1	RM 376.67	126309	5-yr	1379.03	972.49	967.23	1.72	1.73	34.14	29.55	307.84	393.81	2.34	2.03	5.26	5.26
Yellowstone County	B1	RM 376.58	126174.1	5-yr	1379.03	972.16	966.82	2.12	2.11	47.09	46.07	282.91	309.83	2.15	2.1	5.34	5.34
Yellowstone County	B1	RM 376.51	126058.2	5-yr	1379.03	971.87	966.77	2.34	2.34	40.44	40.44	261.13	261.13	2.25	2.25	5.1	5.1
Yellowstone County	B1	RM 376.42	125918.5	5-yr	1379.03	971.73	967.68	2.08	2.08	25.48	25.48	255.27	255.27	2.6	2.6	4.05	4.05
Yellowstone County	B1	RM 376.35	125809.8	5-yr	1379.03	971.64	966.71	2.02	2.02	22.21	22.18	224.73	224.93	3.03	3.03	4.93	4.93
Yellowstone County	B1	RM 376.28	125697	5-yr	1379.03	971.33	966.28	2.7	2.7	42.67	42.67	211.97	211.97	2.41	2.41	5.05	5.05
Yellowstone County	B1	RM 376.20	125565.9	5-yr	1379.03	971.12	966.16	2.54	2.54	40.31	40.31	250.67	250.67	2.16	2.16	4.96	4.96
Yellowstone County	B1	RM 376.10	125404.8	5-yr	1379.03	970.8	966.61	2.54	2.48	39.62	36.82	265.43	311.56	1.92	1.79	4.19	4.19
Yellowstone County	B1	RM 376.00	125250.5	5-yr	1379.03	970.5	967.42	2.49	2.24	40.02	27.22	240.87	519.67	2.14	1.45	3.08	3.08
Yellowstone County	B1	RM 375.88	125055.1	5-yr	1379.03	970.19	966.01	2.42	1.96	40.01	19.07	183.53	878.96	2.59	1.24	4.18	4.18
Yellowstone County	B1	RM 375.78	124897.3	5-yr	1379.03	970.01	965.37	2.2	1.72	32.45	16.78	185	716.34	2.49	1.29	4.64	4.64
Yellowstone County	B1	RM 375.67	124708.2	5-yr	1379.03	969.8	965.8	2.11	1.77	29.62	19.01	222.48	538.99	2.24	1.44	4	4
Yellowstone County	B1	RM 375.58	124564.2	5-yr	1379.03	969.55	966.54	2.3	1.98	34.34	23.11	223.33	472.78	2.19	1.47	3.01	3.01
Yellowstone County	B1	RM 375.23	124013.6	5-yr	1379.03	968.85	965.23	2.21	1.76	29.66	14.21	220.96	665.09	2.46	1.18	3.62	3.62
Yellowstone County	B1	RM 375.10	123799.5	5-yr	1379.03	968.26	963.88	3.14	2.33	68.72	23.93	125.89	564.37	3.02	1.05	4.38	4.38
Yellowstone County	B1	RM 374.97	123580.4	5-yr	1379.03	967.98	963.97	2.45	1.88	48.55	18.9	135.46	666.51	2.87	1.1	4.01	4.01
Yellowstone County	B1	RM 374.83	123365.5	5-yr	1379.03	967.72	963.52	2.16	1.64	29.86	14.71	128.41	629.59	2.71	1.33	4.2	4.2
Yellowstone County	B1	RM 374.73	123195.7	5-yr	1379.03	967.63	963.36	1.65	1.28	15.43	7.22	142.92	834.81	2.76	1.29	4.27	4.27
Yellowstone County	B1	RM 374.61	123010.3	5-yr	1379.03	967.39	963.49	2.1	1.72	33.27	17.09	157.55	561.43	2.78	1.43	3.9	3.9
Yellowstone County	B1	RM 374.53	122875.3	5-yr	1427.17	967.18	963.14	2.27	1.96	34.19	21.36	185.41	446.46	2.61	1.63	4.04	4.04
Yellowstone County	B1	RM 374.44	122726.7	5-yr	1427.17	966.87	963.04	2.72	2.18	51.66	22.28	124.24	472.03	3.23	1.39	3.83	3.83
Yellowstone County	B1	RM 374.32	122535.1	5-yr	1427.17	966.67	962.82	2.09	1.9	35.63	22.87	188.89	491.63	2.37	1.52	3.85	3.85
Yellowstone County	B1	RM 374.22	122379	5-yr	1427.17	966.46	960.92	2.33	1.66	32.78	13.02	134.27	693.02	3.12	1.24	5.54	5.54
Yellowstone County	B1	RM 374.13	122231.1	5-yr	1427.17	966.3	960.11	2.44	1.69	33.27	13.44	134.05	749.09	2.8	1.13	6.19	6.19
Yellowstone County	B1	RM 373.97	121972.4	5-yr	1427.17	966.11	958.8	1.84	1.59	21.13	13.07	222.72	524.04	2.78	1.71	7.31	7.31
Yellowstone County	B1	RM 373.88	121829.3	5-yr	1427.17	965.95	962.21	2.05	1.7	30.54	14.35	190.65	639.32	2.8	1.31	3.74	3.74
Yellowstone County	B1	RM 373.79	121688.7	5-yr	1427.17	965.81	961.66	1.92	1.49	30.31	14.46	188.62	721.58	2.78	1.32	4.15	4.15
Yellowstone County	B1	RM 373.69	121523.5	5-yr	1427.17	965.64	961.11	1.9	1.48	23.37	12.23	202.1	704.86	2.61	1.36	4.53	4.53
Yellowstone County	B1	RM 373.56	121314.3	5-yr	1427.17	965.1	959.37	2.82	2.61	51.58	39.68	199.97	291.57	2.44	1.87	5.73	5.73
Yellowstone County	B1	RM 373.39	121015.9	5-yr	1427.17	964.65	958.78	2.49	2.42	40.94	33.79	186.17	235.09	3.05	2.51	5.87	5.87
Yellowstone County	B1	RM 373.26	120802.3	5-yr	1427.17	964.53	960.81	1.72	1.65	19.25	16.13	355.66	505.96	2.29	1.92	3.72	3.72
Yellowstone County	B1	RM 373.09	120539.5	5-yr	1427.17	964.18	959.94	2.1	2.01	27.17	22.25	301.7	495.97	2.22	1.82	4.24	4.24
Yellowstone County	B1	RM 372.99	120365.2	5-yr	1427.17	963.95	959.69	1.98	1.85	35.42	25.78	328.62	494.52	2.14	1.56	4.26	4.26
Yellowstone County	B1	RM 372.82	120107.7	5-yr	1427.17	963.72	959.03	1.55	1.52	14.28	13.07	468.06	523.12	1.96	1.79	4.69	4.69
Yellowstone County	B1	RM 372.72	119922.5	5-yr	1427.17	963.5	958.92	1.71	1.7	28.54	26.66	442.03	474.66	1.89	1.77	4.58	4.58
Yellowstone County	B1	RM 372.65	119797.7	5-yr	1427.17	963.35	957.32	1.72	1.66	20.2	19.12	396.52	438.38	2.07	1.96	6.03	6.03
Yellowstone County	B1	RM 372.58	119676.6	5-yr	1427.17	963.27	958.2	1.51	1.48	14.25	13.04	441.25	493.52	2.14	1.95	5.07	5.07
Yellowstone County	B1	RM 372.41	119395.9	5-yr	1427.17	963.14	958.82	1.34	1.3	9.63	8.62	485.38	566.03	2.17	1.94	4.32	4.32
Yellowstone County	B1	RM 372.32	119268.8	5-yr	1427.17	963.03	957.24	1.36	1.34	29.75	26.11	533.59	626.03	1.94	1.7	5.79	5.79
Yellowstone County	B1	RM 372.20	119079.1	5-yr	1427.17	962.64	956.93	1.53	1.52	42.83	40.42	512.44	560.71	1.78	1.68	5.71	5.71
Yellowstone County	B1	RM 372.08	118886.4	5-yr	1427.17	962.12	956.2	1.73	1.69	48.53	43.85	426.76	843.96	1.9	1.71	5.92	5.92
Yellowstone County	B1	RM 371.94	118669.8	5-yr	1427.17	961.5	957.58	1.95	1.95	47.12	47.12	398.82	549.82	1.84	1.84	3.92	3.92
Yellowstone County	B1	RM 371.83	118490.4	5-yr	1427.17	961.17	957.52	1.79	1.76	29.04	27.03	392.37	591.88	1.95	1.82	3.65	3.65
Yellowstone County	B1	RM 371.74	118350.7	5-yr	1427.17	960.95	957.48	1.89	1.85	25.08	20.26	385.48	629.15	1.87	1.51	3.47	3.47
Yellowstone County	B1	RM 371.62	118155.6	5-yr	1427.17	960.73	956.41	1.96	1.56	27.41	13.87	220.59	615.34	2.93	1.49	4.32	4.32
Yellowstone County	B1	RM 371.53	118001.4	5-yr	1427.17	960.48	955.99	2.28	1.91	32.31	16.52	234.1	587.4	2.49	1.27	4.49	4.49
Yellowstone County	B1	RM 371.43	117839.2	5-yr	1427.17	960.01	955.47	2.71	2.57	78.93	63.68	233.46	451.02	2.19	1.76	4.54	4.54
Yellowstone County	B1	RM 371.37	117745.1	5-yr	1427.17	959.86	955.72	2.41	2.16	27.51	18.16	290.83	556.83	1.98	1.31	4.14	4.14
Yellowstone County	B1	RM 371.32	117662.6	5-yr	1427.17	959.82	956.41	1.94	1.66	33.16	19.53	299.65	654.13	2.22	1.31	3.41	3.41
Yellowstone County	B1	RM 371.25	117560.3	5-yr	1427.17	959.69	955.99	1.85	1.62	22.25	14.35	371.38	727.37	2.01	1.3	3.7	3.7
Yellowstone County	B1	RM 371.21	117499	5-yr	1427.17	959.66	955.72	1.65	1.46	17.89	13.5	355.13	607.05	2.13	1.61	3.94	3.94
Yellowstone County	B1	RM 371.12	117353.9	5-yr	1427.17	959.5	955.54	1.75	1.75	19.14	19.14	358.54	358.54	2.28	2.28	3.96	3.96
Yellowstone County	B1	RM 371.04	117225.1	5-yr	1427.17	959.11	954.84	2.6	2.6	39.83	39.83	215.89	392.57	2.55	2.55	4.27	4.27
Yellowstone County		RM 335.51	117205	5-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	5-yr	1427.17	959.04	954.9	2.51	2.51	38.59	38.59	220.58	276.32	2.58	2.58	4.14	4.14
Yellowstone County	B1	RM 370.94	117054.9	5-yr	1427.17	958.87	955.57	2.33	2.3	38.31	34.3	240.9	787.88	2.54	2.27	3.3	3.3
Yellowstone County	B1	RM 370.85	116910.9	5-yr	1427.17	958.57	954.47	2.56	2.5	44.44	32.5	216.97	866.45	2.57	1.87	4.1	4.1
Yellowstone County	B1	RM 370.77	116793.6	5-yr	1427.17	958.31	953.84	2.72	2.51	41.77	26.62	219.14	831.11	2.37	1.51	4.47	4.47
Yellowstone County	B1	RM 370.72	116711.6	5-yr	1427.17	958.09	953.13	3	2.49	56.53	30.48	162.79	801.67	2.78	1.5	4.96	4.96

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	5-yr	1427.17	958.08	953.05	2.69	2.08	38.54	23.49	191.35	911.06	2.46	1.5	5.03	5.03
Yellowstone County	B1	RM 370.63	116558.9	5-yr	1427.17	957.91	953.42	2.52	2.22	51.53	26.42	178.55	902.12	3.02	1.55	4.49	4.49
Yellowstone County	B1	RM 370.56	116440.6	5-yr	1427.17	957.83	953.34	2.25	1.78	23.69	8.88	177.89	787.49	3.37	1.26	4.49	4.49
Yellowstone County	B1	RM 370.44	116241.1	5-yr	1427.17	957.53	952.03	2.71	2.04	47.16	17.76	133.67	633.63	3.68	1.38	5.5	5.5
Yellowstone County	B1	RM 370.34	116071.6	5-yr	1427.17	957.27	949.79	2.8	2.2	52.45	12.13	118.14	688.71	4.13	0.94	7.48	7.48
Yellowstone County	B1	RM 370.24	115908.6	5-yr	1427.17	957.15	950.22	2.56	1.81	39.92	10.61	117.48	691.95	4.33	1.14	6.93	6.93
Yellowstone County	B1	RM 370.11	115705	5-yr	1427.17	956.94	952.12	2.48	1.93	40.17	16.99	157.76	528.79	3.31	1.4	4.82	4.82
Yellowstone County	B1	RM 370.00	115535.2	5-yr	1427.17	956.67	952.2	2.28	2.07	56.63	41.25	246.95	444.8	2.13	1.55	4.47	4.47
Yellowstone County	B1	RM 369.89	115356.1	5-yr	1427.17	956.35	953.15	2.13	2	22.18	19.01	388.69	505.99	1.65	1.41	3.2	3.2
Yellowstone County	B1	RM 369.77	115164.3	5-yr	1427.17	956.11	952.34	1.95	1.92	20.79	19.41	454.95	565.85	1.6	1.5	3.77	3.77
Yellowstone County	B1	RM 369.64	114965.6	5-yr	1427.17	955.8	951.9	1.92	1.87	27.99	23.82	497.47	705.46	1.43	1.22	3.9	3.9
Yellowstone County	B1	RM 369.54	114789.5	5-yr	1427.17	955.51	952.38	1.86	1.69	22.85	17.83	486.39	729.13	1.48	1.16	3.13	3.13
Yellowstone County	B1	RM 369.45	114650.1	5-yr	1427.17	955.35	951	1.65	1.56	19.97	17.72	463.98	623.32	1.66	1.47	4.35	4.35
Yellowstone County	B1	RM 369.32	114431.1	5-yr	1427.17	955.07	951.1	1.68	1.55	26.41	18.96	374.27	593.05	2.17	1.56	3.97	3.97
Yellowstone County	B1	RM 369.17	114210.5	5-yr	1427.17	954.72	949.85	2.07	2.02	38.35	30.31	190.63	339.2	2.64	2.09	4.87	4.87
Yellowstone County	B1	RM 369.06	114022.4	5-yr	1427.17	954.16	949.89	3.02	2.64	54.82	31.36	140.26	312.74	3.02	1.73	4.27	4.27
Yellowstone County	B1	RM 368.96	113871.2	5-yr	1427.17	954.04	949.68	2.45	2.08	38.06	24.86	167.48	363.7	2.89	1.89	4.36	4.36
Yellowstone County	B1	RM 368.88	113745.9	5-yr	1427.17	953.87	948.77	2.33	2.04	34.33	18.92	213.92	535.65	2.43	1.33	5.1	5.1
Yellowstone County	B1	RM 368.82	113641	5-yr	1427.17	953.65	948.47	2.37	2.14	46.09	30.09	287.79	562.14	1.82	1.19	5.18	5.18
Yellowstone County	B1	RM 368.72	113477.3	5-yr	1427.17	953.39	948.45	1.93	1.72	32.49	23.3	332.39	598.32	1.94	1.39	4.94	4.94
Yellowstone County	B1	RM 368.63	113328.9	5-yr	1427.17	953.18	947.82	1.92	1.68	27.04	17.27	291.31	622.95	2.14	1.36	5.36	5.36
Yellowstone County	B1	RM 368.54	113195.6	5-yr	1427.17	952.98	947.51	2.04	1.72	27.96	16.23	267.76	590	2.43	1.41	5.47	5.47
Yellowstone County	B1	RM 368.44	113035.8	5-yr	1427.17	952.59	947.4	2.43	2.12	71.42	49.06	255.06	464.19	2.11	1.45	5.19	5.19
Yellowstone County	B1	RM 368.35	112878.7	5-yr	1427.17	952.56	946.64	1.5	1.46	13.69	10.66	283.07	374.36	3.35	2.61	5.92	5.92
Yellowstone County	B1	RM 368.26	112737.6	5-yr	1427.17	952.26	946.23	2.32	2.32	78.09	78.09	212.33	212.34	2.9	2.9	6.03	6.03
Yellowstone County	B1	RM 368.18	112604.7	5-yr	1427.17	951.92	947.11	2.66	2.66	43.65	43.65	159.86	511.71	3.35	3.35	4.81	4.81
Yellowstone County	B2	RM 368.09	112456.7	5-yr	1427.17	951.64	947.7	2.83	2.83	55.28	55.28	153.03	153.03	3.3	3.3	3.94	3.94
Yellowstone County	B2	RM 368.00	112314.4	5-yr	1427.17	951.59	947.56	2.21	2.21	27.79	27.64	196.67	468.55	3.29	3.27	4.03	4.03
Yellowstone County	B2	RM 367.86	112104.7	5-yr	1427.17	951.22	946.1	2.67	2.67	48.93	48.93	170.61	170.61	3.13	3.13	5.12	5.12
Yellowstone County	B2	RM 367.79	111989.2	5-yr	1427.17	951.02	945.04	2.66	2.66	60.52	60.46	166.46	166.56	3.23	3.22	5.98	5.98
Yellowstone County	B2	RM 367.72	111876.5	5-yr	1427.17	950.88	945.45	2.58	2.47	37.49	31.19	149.5	210.85	3.62	3.01	5.43	5.43
Yellowstone County	B2	RM 367.64	111739.2	5-yr	1427.17	950.63	945.68	2.81	2.65	54.3	37.79	138.3	252.13	3.55	2.47	4.95	4.95
Yellowstone County	B2	RM 367.50	111519.9	5-yr	1427.17	950.27	945.21	2.91	2.66	53.58	26.72	125.44	282.44	3.84	1.9	5.06	5.06
Yellowstone County	B2	RM 367.40	111357.1	5-yr	1427.17	950.08	944.36	2.86	2.42	46.81	22.04	112.39	307.8	4.11	1.92	5.72	5.72
Yellowstone County	B2	RM 367.31	111214.8	5-yr	1427.17	949.93	945.36	2.73	2.32	37.94	16.54	144.6	410.22	3.46	1.5	4.57	4.57
Yellowstone County	B2	RM 367.19	110992.7	5-yr	1427.17	949.75	945.91	2.27	2.04	30.22	19.15	244.05	442.65	2.51	1.58	3.84	3.84
Yellowstone County	B2	RM 367.11	110813.5	5-yr	1427.17	949.52	945.17	2.2	1.92	30.94	20.2	295.2	535.51	2.13	1.39	4.35	4.35
Yellowstone County	B2	RM 367.03	110669.4	5-yr	1427.17	949.43	945.89	1.73	1.57	16.48	13.7	387.68	530.42	2.07	1.72	3.54	3.54
Yellowstone County	B2	RM 366.95	110543	5-yr	1427.17	949.36	945.34	1.26	1.21	20.78	19.54	557.9	641.79	1.96	1.84	4.02	4.02
Yellowstone County	B2	RM 366.84	110376	5-yr	1427.17	949.21	944.61	1.14	1.13	17.01	14.8	598.25	694.22	2.09	1.82	4.6	4.6
Yellowstone County	B2	RM 366.78	110300.8	5-yr	1427.17	949.14	943.84	1.21	1.18	19.89	16.38	557.02	781.39	2.1	1.73	5.3	5.3
Yellowstone County	B2	RM 366.73	110074.8	5-yr	1427.17	948.82	943.42	1.57	1.57	29.57	29.57	428.12	519.32	2.13	2.13	5.4	5.4
Yellowstone County	B2	RM 366.68	109931.6	5-yr	1427.17	948.55	942.77	1.88	1.88	36.83	36.83	289.19	289.19	2.63	2.63	5.78	5.78
Yellowstone County	B2	RM 366.53	109747.6	5-yr	1427.17	948.18	940.86	2.51	2.51	31.94	31.94	161.24	161.24	3.53	3.53	7.32	7.32
Yellowstone County	B2	RM 366.38	109510.8	5-yr	1427.17	947.85	941.55	2.78	2.78	51.14	51.14	114.14	114.14	4.49	4.49	6.3	6.3
Yellowstone County	B2	RM 366.27	109345.5	5-yr	1427.17	947.83	942.72	1.9	1.9	29.27	29.27	224.68	224.68	3.35	3.35	5.11	5.11
Yellowstone County	B2	RM 366.15	109158.9	5-yr	1427.17	947.56	941.59	1.98	1.98	52.61	52.61	290.81	290.81	2.48	2.48	5.97	5.97
Yellowstone County	B2	RM 366.04	108972.6	5-yr	1427.17	947.28	941.41	2.2	2.2	16.99	16.99	300.16	300.16	2.16	2.16	5.87	5.87
Yellowstone County	B2	RM 365.94	108818.8	5-yr	1427.17	947.2	940.93	1.96	1.96	13.47	13.47	358.13	358.13	2.03	2.03	6.27	6.27
Yellowstone County	B2	RM 365.83	108647.5	5-yr	1427.17	947	939.93	1.9	1.87	63.04	58.22	330.7	365.73	2.27	2.09	7.07	7.07
Yellowstone County	B2	RM 365.75	108521.3	5-yr	1427.17	946.67	941.33	1.95	1.93	56.8	47.67	263.44	359.82	2.46	2.06	5.34	5.34
Yellowstone County	B2	RM 365.71	108446.5	5-yr	1427.17	946.49	941.83	2.07	1.96	50.1	34.89	233.75	361.95	2.89	2.01	4.66	4.66
Yellowstone County	B2	RM 365.64	108343.5	5-yr	1427.17	946.3	942.19	2.02	1.91	46.6	38.47	290.38	379.27	2.39	1.98	4.11	4.11
Yellowstone County	B2	RM 365.57	108220.5	5-yr	1427.17	946.02	942.08	2.2	2.08	48.4	36.24	250.68	359.99	2.55	1.91	3.94	3.94
Yellowstone County	B2	RM 365.51	108118.9	5-yr	1427.17	945.78	941.87	2.23	2.14	59.89	46.05	263.51	362.55	2.4	1.84	3.91	3.91
Yellowstone County	B2	RM 365.46	108042.9	5-yr	1427.17	945.7	941.73	1.86	1.82	31.99	27.14	317.69	385.59	2.4	2.04	3.97	3.97
Yellowstone County	B2	RM 365.41	107956.5	5-yr	1427.17	945.61	941.46	1.73	1.71	26.2	22.95	317.9	368.46	2.58	2.26	4.15	4.15
Yellowstone County	B2	RM 365.37	107905.7	5-yr	1427.17	945.56	940.74	1.74	1.74	18.29	18.12	307.19	310.07	2.68	2.65	4.82	4.82
Yellowstone County	B2	RM 365.31	107792.4	5-yr	1427.17	945.43	939.27	1.97	1.94	22.35	20.32	256.95	287.88	2.81	2.56	6.16	6.16
Yellowstone County	B2	RM 365.27	107727.9	5-yr	1427.17	945.33	939.34	2.15	2.14	30.19	26.95	251.44	284.61	2.63	2.35	5.99	5.99
Yellowstone County	B2	RM 365.23	107674.2	5-yr	1427.17	945.22	939.52	2.32	2.31	25.97	24.13	230.94	250.37	2.66	2.47	5.7	5.7

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	5-yr	1427.17	945.18	939.93	2.11	2.11	31.59	29.85	239.41	253.68	2.82	2.66	5.25	5.25
Yellowstone County	B2	RM 365.15	107534.7	5-yr	1427.17	945.12	939.68	2.09	2.05	24.9	22.05	213.38	247.18	3.18	2.81	5.44	5.44
Yellowstone County	B2	RM 365.10	107466	5-yr	1427.17	945.03	938.61	2.24	2.24	28.13	26.79	186.65	196.28	3.42	3.25	6.42	6.42
Yellowstone County	B2	RM 365.06	107396.2	5-yr	1427.17	944.97	939.07	2.21	2.18	30.77	23.31	170.56	228.95	3.78	2.86	5.9	5.9
Yellowstone County	B2	RM 365.01	107325.8	5-yr	1427.17	944.94	939.22	1.99	1.97	40.34	35.8	174.48	198.53	4.11	3.64	5.72	5.72
Yellowstone County	B2	RM 364.99	107287.5	5-yr	1427.17	944.87	939.27	2.1	2.06	47.86	40.14	170.9	208.28	3.96	3.32	5.6	5.6
Yellowstone County	B2	RM 364.90	107128.3	5-yr	1427.17	944.63	937.97	2.41	2.29	28.23	25.3	146.67	172.73	4.01	3.6	6.66	6.66
Yellowstone County		RM 331.55	107100	5-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	5-yr	1427.17	944.52	938.58	2.38	2.3	27.41	24.71	147.2	169.16	4.06	3.67	5.94	5.94
Yellowstone County	B2	RM 364.81	106996.1	5-yr	1427.17	944.52	938.93	2.04	2.04	21.81	21.81	221	221	3.16	3.16	5.59	5.59
Yellowstone County	B2	RM 364.74	106893.3	5-yr	1427.17	944.39	938.94	2.24	2.17	35.24	32.07	164.71	244.89	3.84	3.51	5.45	5.45
Yellowstone County	B2	RM 364.64	106739.2	5-yr	1427.17	944.09	939.09	2.71	2.66	35.42	33.07	127.74	376.73	4.13	3.87	5	5
Yellowstone County		RM 331.32	106722	5-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	5-yr	1427.17	943.96	939.16	2.74	2.7	39.08	36.6	134.53	146.39	3.97	3.74	4.8	4.8
Yellowstone County	B2	RM 364.61	106686.8	5-yr	1427.17	943.97	939.21	2.51	2.51	31.09	31.09	148.91	327.82	3.82	3.82	4.76	4.76
Yellowstone County	B2	RM 364.60	106666.6	5-yr	1427.17	943.89	939.26	2.69	2.69	35.98	35.98	142.87	142.87	3.72	3.72	4.63	4.63
Yellowstone County		RM 331.14	106644	5-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	5-yr	1427.17	943.81	939.21	2.64	2.64	34.6	34.6	146.61	146.61	3.77	3.77	4.6	4.6
Yellowstone County	B2	RM 364.53	106558.4	5-yr	1427.17	943.77	939.11	2.49	2.49	30.7	30.7	153.41	153.41	3.74	3.74	4.66	4.66
Yellowstone County	B2	RM 364.49	106490.3	5-yr	1427.17	943.71	939.24	2.48	2.48	31.5	31.5	158.34	158.34	3.63	3.63	4.47	4.47
Yellowstone County	B2	RM 364.43	106394	5-yr	1427.17	943.63	939.13	2.46	2.45	31.91	29.48	157.57	171.17	3.68	3.4	4.5	4.5
Yellowstone County	B2	RM 364.37	106296.4	5-yr	1427.17	943.55	938.98	2.43	2.36	29.48	20.84	147.09	216.09	3.98	2.8	4.57	4.57
Yellowstone County	B2	RM 364.32	106215.1	5-yr	1427.17	943.47	938.52	2.44	2.34	47.31	33.95	153.1	224.34	3.8	2.72	4.95	4.95
Yellowstone County	B2	RM 364.29	106172.9	5-yr	1427.17	943.5	938.13	1.92	1.84	50.8	36.16	190.23	575.24	3.86	2.74	5.37	5.37
Yellowstone County	B2	RM 364.26	106126.6	5-yr	1427.17	943.27	937.7	2.59	2.35	49.92	34.46	141.69	231.08	3.81	2.63	5.57	5.57
Yellowstone County	B2	RM 364.22	106055.2	5-yr	1427.17	943.14	938.15	2.68	2.68	57.07	57.07	133.18	196.26	4	4	4.99	4.99
Yellowstone County	B2	RM 364.14	105927.3	5-yr	1427.17	942.82	938.12	3.03	2.79	66.96	45.46	122.05	199.79	3.79	2.56	4.7	4.7
Yellowstone County	B2	RM 364.06	105809.9	5-yr	1427.17	942.72	938.22	2.62	2.43	47.93	28.54	152.21	279.62	3.54	2.1	4.5	4.5
Yellowstone County	B2	RM 363.96	105648.3	5-yr	1427.17	942.59	938.28	2.1	2.04	33.17	28.41	245.98	369	2.75	2.35	4.31	4.31
Yellowstone County	B2	RM 363.85	105472.4	5-yr	1427.17	942.33	936.25	2.47	2.18	30.93	21.11	150.07	269.13	3.58	2.43	6.08	6.08
Yellowstone County	B2	RM 363.76	105316.8	5-yr	1427.17	942.22	937.03	2.31	2.11	37.32	26.16	146.12	255.8	3.77	2.64	5.19	5.19
Yellowstone County	B2	RM 363.63	105118.1	5-yr	1427.17	942	937.93	1.98	1.98	37.62	37.62	324.3	324.3	2.23	2.23	4.07	4.07
Yellowstone County	B2	RM 363.52	104943.9	5-yr	1427.17	941.68	937.54	1.88	1.82	41.62	33.85	372.13	472.82	2.03	1.65	4.14	4.14
Yellowstone County	B2	RM 363.46	104841.5	5-yr	1427.17	941.55	937.16	1.69	1.57	28.28	19.3	330.96	563.9	2.52	1.71	4.39	4.39
Yellowstone County	B2	RM 363.33	104622.9	5-yr	1427.17	941.23	936.36	1.79	1.48	41.51	22.99	298.99	768.76	2.37	1.31	4.87	4.87
Yellowstone County	B2	RM 363.20	104414.5	5-yr	1427.17	940.87	936.48	1.97	1.55	31.65	13.99	282.91	950.51	2.39	1.05	4.39	4.39
Yellowstone County	B2	RM 363.10	104256.4	5-yr	1427.17	940.61	936.25	2.1	1.67	35.4	19.18	273.32	689.51	2.28	1.24	4.36	4.36
Yellowstone County	B2	RM 363.03	104144.8	5-yr	1427.17	940.46	936.22	2.04	1.62	28.84	13.58	281.26	802.57	2.33	1.09	4.24	4.24
Yellowstone County	B2	RM 362.86	103869.6	5-yr	1427.17	940.31	934.32	1.43	1.15	12.43	6.98	405.06	960.45	2.3	1.29	5.99	5.99
Yellowstone County	B2	RM 362.74	103671.4	5-yr	1427.17	940.08	934.52	1.89	1.56	22.82	12.3	370.79	885.17	1.93	1.04	5.56	5.56
Yellowstone County	B2	RM 362.63	103493.2	5-yr	1427.17	939.76	934.5	1.95	1.64	44.95	26.66	385.76	820.75	1.79	1.06	5.26	5.26
Yellowstone County	B2	RM 362.52	103330.7	5-yr	1427.17	939.27	934.5	2.05	1.91	53.18	36.48	407.4	649.82	1.68	1.15	4.77	4.77
Yellowstone County	B2	RM 362.43	103185.5	5-yr	1427.17	939.04	934.1	1.93	1.83	16.38	13.25	437.76	649.46	1.68	1.35	4.94	4.94
Yellowstone County	B2	RM 362.36	103070.8	5-yr	1427.17	938.92	932.98	2	1.98	16.22	14.83	376.11	459.84	1.89	1.73	5.94	5.94
Yellowstone County	B2	RM 362.27	102929.3	5-yr	1427.17	938.78	932.93	2.13	2.13	21.64	21.64	194.9	194.9	3.44	3.44	5.85	5.85
Yellowstone County	B2	RM 362.20	102813.3	5-yr	1427.17	938.33	933.37	3.25	3.25	54.94	54.94	110.77	110.77	3.96	3.96	4.96	4.96
Yellowstone County	B2	RM 362.13	102693.1	5-yr	1427.17	938.16	933.47	3.21	3.21	52.21	52.21	125.05	164.85	3.56	3.56	4.69	4.69
Yellowstone County	B3	RM 362.05	102570.9	5-yr	1427.17	938.08	933.85	2.75	2.75	39.78	39.78	180.1	180.1	2.88	2.88	4.23	4.23
Yellowstone County	B3	RM 362.00	102488.8	5-yr	1427.17	938.06	934.11	2.27	2.27	31.76	31.76	242.23	259.85	2.6	2.6	3.95	3.95
Yellowstone County	B3	RM 361.93	102368.8	5-yr	1427.17	937.94	934.31	2.06	2.06	25.56	25.53	367.24	367.62	2.15	2.15	3.63	3.63
Yellowstone County	B3	RM 361.86	102261.1	5-yr	1427.17	937.66	934.36	2.41	2.41	51.77	51.17	341.53	379.56	1.73	1.71	3.3	3.3
Yellowstone County	B3	RM 361.78	102138.9	5-yr	1427.17	937.53	933.72	1.9	1.9	19.9	19.41	400.42	437.53	1.88	1.83	3.81	3.81
Yellowstone County	B3	RM 361.68	101970.2	5-yr	1427.17	937.36	933.64	1.72	1.7	21.95	21.14	425.28	488.32	1.94	1.87	3.72	3.72
Yellowstone County	B3	RM 361.65	101918.4	5-yr	1427.17	937.33	933.71	1.53	1.52	18.16	17.48	403.7	547.97	2.3	2.22	3.62	3.62
Yellowstone County	B3	RM 361.61	101855.6	5-yr	1427.17	937.22	932.7	1.84	1.84	22.06	21.45	331.66	506.89	2.34	2.27	4.52	4.52
Yellowstone County	B3	RM 361.56	101767.4	5-yr	1427.17	937.13	930.29	1.91	1.91	20.92	20.18	267.33	493.8	2.79	2.69	6.84	6.84
Yellowstone County	B3	RM 361.48	101644.6	5-yr	1427.17	936.92	929.97	2.31	2.26	39.88	28.2	180.7	448.37	3.42	2.41	6.95	6.95
Yellowstone County	B3	RM 361.42	101546.2	5-yr	1427.17	936.69	932.36	2.69	2.55	36.26	25.66	182.02	882.42	2.89	2.05	4.33	4.33
Yellowstone County	B3	RM 361.37	101468.9	5-yr	1427.17	936.65	932.21	2.47	2.22	31.91	18.33	171.32	1003.07	3.32	1.91	4.44	4.44
Yellowstone County	B3	RM 361.33	101409.4	5-yr	1427.17	936.48	932.02	2.8	2.51	42.42	24.86	158.49	825.03	3.14	1.84	4.46	4.46
Yellowstone County	B3	RM 361.29	101346	5-yr	1427.17	936.25	930.51	3.19	2.93	54.53	33.4	137.59	371.47	3.2	1.96	5.74	5.74

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	5-yr	1427.17	935.97	928.42	3.65	3.29	68.12	46.6	109.63	649.57	3.47	2.36	7.55	7.55
Yellowstone County	B3	RM 361.21	101251.*	5-yr	991.98	935.66	927.55	2.27	2.18	52.15	32.1	113.34	588.84	3.82	2.34	8.12	8.12
Yellowstone County		RM 361.21	101217.5	5-yr	1427.17	936.12	926.68	2.46	2.09	30.57	13.17	114.04	1003.39	4.94	2.11	9.44	9.44
Yellowstone County	B3	RM 361.18	101167.2	5-yr	1427.17	936.1	928.03	2.36	2.04	30.99	16.5	133.98	1245.86	4.33	2.3	8.07	8.07
Yellowstone County	B3	RM 361.16	101134.2	5-yr	1427.17	936.13	928.92	2	1.78	24.62	18.67	206.47	1227.21	3.3	2.5	7.21	7.21
Yellowstone County	B3	RM 361.09	101028.7	5-yr	1427.17	936.02	931.28	2.01	2.01	23.84	23.64	351.69	1194.27	2.02	2.01	4.74	4.74
Yellowstone County	B3	RM 361.01	100891.3	5-yr	1427.17	935.83	931.55	2.05	2.05	27.07	26.91	355.29	1232.3	1.95	1.94	4.28	4.28
Yellowstone County	B3	RM 360.92	100756	5-yr	1427.17	935.65	931.05	1.73	1.73	34.15	34.15	453.03	1417.31	1.83	1.83	4.6	4.6
Yellowstone County	B3	RM 360.81	100570.1	5-yr	1427.17	935.23	929.52	1.81	1.81	39.84	39.23	475.47	1329.84	1.66	1.63	5.71	5.71
Yellowstone County	B3	RM 360.69	100383.5	5-yr	1427.17	934.97	930.6	1.66	1.58	24.62	18.24	340.51	1713.33	2.42	1.8	5.08	5.08
Yellowstone County	B3	RM 360.59	100227.2	5-yr	1427.17	934.7	930.53	2.15	1.86	27.5	17.32	268.43	1722.92	2.31	1.45	4.49	4.49
Yellowstone County	B3	RM 360.50	100081	5-yr	1427.17	934.44	930.55	2.39	2.2	37.84	24.73	205.9	1613.95	2.85	1.85	3.89	3.89
Yellowstone County	B3	RM 360.42	99970.7	5-yr	1427.17	934.23	929.97	2.59	2.28	40.7	26.51	186.69	1346.96	2.87	1.86	4.26	4.26
Yellowstone County	B3	RM 360.36	99862.66	5-yr	1427.17	934.13	929.68	2.36	2.13	30.43	20.91	238.4	1290.15	2.49	1.71	4.45	4.45
Yellowstone County	B3	RM 360.27	99717.18	5-yr	1427.17	933.85	929.52	2.75	2.29	43.45	27.22	149.73	1141.82	2.95	1.85	4.33	4.33
Yellowstone County	B3	RM 360.18	99578.06	5-yr	1427.17	933.52	929.32	2.97	2.64	56.91	32.46	134.75	1035.06	3.5	1.98	4.2	4.2
Yellowstone County	B3	RM 360.11	99458.59	5-yr	1427.17	933.53	929.38	2.28	1.8	28.55	17.59	148.51	1344.08	3.06	1.89	4.15	4.15
Yellowstone County	B3	RM 360.03	99328	5-yr	1441.33	933.43	929.58	2.05	1.68	32.29	17.73	168.97	1555.77	3.07	1.68	3.85	3.85
Yellowstone County	B3	RM 359.96	99226.54	5-yr	1441.33	933.29	929.2	2.26	1.74	32.67	14.73	163.81	1457.58	3.12	1.41	4.09	4.09
Yellowstone County	B3	RM 359.88	99098.18	5-yr	1441.33	933.11	927.78	2.47	1.91	34.05	14.65	144	1377.68	3.47	1.49	5.33	5.33
Yellowstone County	B3	RM 359.78	98940.52	5-yr	1441.33	932.93	928.1	2.48	1.88	43.56	16.82	149.27	1409.51	3.53	1.36	4.83	4.83
Yellowstone County	B3	RM 359.70	98813.18	5-yr	1441.33	932.32	928.32	3.6	3.12	86.09	37.49	121.86	867.83	3.15	1.37	4	4
Yellowstone County	B3	RM 359.61	98663.44	5-yr	1441.33	932.35	928.8	2.01	1.81	28.5	15.04	310.01	997.86	2.26	1.19	3.55	3.55
Yellowstone County	B3	RM 359.50	98492.66	5-yr	1441.33	932.11	928.22	2.1	1.89	26.61	14.26	310.36	1217.21	2.14	1.15	3.89	3.89
Yellowstone County	B3	RM 359.38	98291.15	5-yr	1441.33	931.78	927.09	2.02	1.93	46.28	31.88	369.99	1023.24	1.72	1.18	4.69	4.69
Yellowstone County	B3	RM 359.26	98107.42	5-yr	1441.33	931.39	927.71	2.05	1.82	28.7	20.71	386.35	782.75	1.69	1.22	3.68	3.68
Yellowstone County	B3	RM 359.18	97966.53	5-yr	1441.33	931.21	927.28	1.96	1.58	24.18	12.78	299.78	928.44	2.13	1.13	3.93	3.93
Yellowstone County	B3	RM 359.10	97841.82	5-yr	1441.33	931.06	926.69	1.9	1.61	23.58	15.7	372.04	961.4	1.81	1.21	4.37	4.37
Yellowstone County	B3	RM 359.01	97692.75	5-yr	1441.33	930.86	925.91	1.84	1.4	31.44	20.27	328.3	1022.95	1.94	1.25	4.95	4.95
Yellowstone County	B3	RM 358.90	97524.59	5-yr	1441.33	930.31	926.77	2.73	2.16	49.78	19.69	198.26	681.7	2.48	0.98	3.54	3.54
Yellowstone County	B3	RM 358.81	97374.99	5-yr	1441.33	929.99	926.37	2.77	2.26	42.82	17.91	212.64	643.36	2.37	0.99	3.62	3.62
Yellowstone County	B3	RM 358.74	97267.71	5-yr	1441.33	929.76	925.53	2.94	1.9	69.6	26.61	165.27	984.59	2.42	0.92	4.23	4.23
Yellowstone County	B3	RM 358.67	97155.8	5-yr	1441.33	929.7	925.59	1.95	1.59	23.43	14.78	274.71	905.05	1.89	1.19	4.11	4.11
Yellowstone County	B3	RM 358.61	97062.24	5-yr	1441.33	929.61	925.74	1.58	1.48	21.28	13.49	387.72	1136.99	1.76	1.11	3.87	3.87
Yellowstone County	B3	RM 358.56	96985.92	5-yr	1441.33	929.54	926.2	1.45	1.37	15.99	9.86	396.18	1086.87	1.91	1.18	4.95	4.95
Yellowstone County	B3	RM 358.50	96888.4	5-yr	1441.33	929.46	925.64	1.36	1.24	12.98	8.87	522.37	1262.85	1.56	1.07	3.82	3.82
Yellowstone County	B3	RM 358.43	96788.43	5-yr	1441.33	929.42	925.27	1.02	0.95	11.11	8.58	624.4	1275.61	1.58	1.22	4.15	4.15
Yellowstone County	B3	RM 358.30	96638.82	5-yr	1441.33	929.36	924.7	0.9	0.79	7.14	5.22	685.83	1204.23	2.08	1.52	4.66	4.66
Yellowstone County	B3	RM 358.24	96561.93	5-yr	1441.33	929.33	923.57	0.98	0.85	7.88	6.06	644.46	1171.06	1.92	1.48	5.76	5.76
Yellowstone County	B3	RM 358.20	96500.79	5-yr	1441.33	929.26	922.99	1.25	1.19	11.78	9.2	617.07	868.62	1.78	1.39	6.27	6.27
Yellowstone County	B3	RM 358.14	96404.93	5-yr	1441.33	929.2	922.57	1.3	1.19	11.08	8.16	543.14	901.57	1.94	1.43	6.63	6.63
Yellowstone County	B3	RM 358.12	96368.05	5-yr	1441.33	929.17	922.78	1.37	1.1	12.16	6.2	348.37	1093.2	2.54	1.29	6.39	6.39
Yellowstone County	B3	RM 358.04	96244.75	5-yr	1441.33	929	923.22	2.03	1.47	35.43	11.62	162.23	905.09	3.33	1.09	5.78	5.78
Yellowstone County	B3	RM 358.00	96168.44	5-yr	1441.33	928.79	923.39	2.74	1.69	51.79	14.92	101.88	849.83	3.52	1	5.4	5.4
Yellowstone County	B3	RM 357.93	96065.49	5-yr	1441.33	928.55	923.1	3.07	2.09	42.85	12.84	106.83	720.67	3.21	0.96	5.45	5.45
Yellowstone County	B3	RM 357.88	95975.44	5-yr	1441.33	928.6	923.91	2.05	1.51	27.17	9.49	153.32	898.5	3.06	1.06	4.69	4.69
Yellowstone County	B3	RM 357.82	95884.99	5-yr	1441.33	928.54	924.01	1.83	1.54	21.34	11.58	193.1	622.83	3.07	1.67	4.53	4.53
Yellowstone County	B3	RM 357.78	95821.69	5-yr	1441.33	928.48	924.08	1.68	1.68	23.67	15.4	257.39	520.87	2.54	1.65	4.4	4.4
Yellowstone County	B3	RM 357.69	95683.91	5-yr	1441.33	928.3	923.81	1.96	1.91	21.51	14.65	300.54	454.79	2.44	1.66	4.49	4.49
Yellowstone County	B4	RM 357.62	95571.15	5-yr	1441.33	928.05	921.84	2.41	2.38	38.09	30.95	250.7	313.99	2.38	1.93	6.21	6.21
Yellowstone County	B4	RM 357.56	95469.4	5-yr	1441.33	928	918.46	1.99	1.95	27.1	21.36	225.69	293.4	3.21	2.52	9.54	9.54
Yellowstone County	B4	RM 357.48	95351.48	5-yr	1441.33	927.69	922.69	2.65	2.58	41.39	31.24	197.99	276.64	2.74	2.06	5	5
Yellowstone County	B4	RM 357.44	95275.91	5-yr	1441.33	927.56	922.22	2.69	2.66	44.54	36.51	195.29	241.87	2.74	2.24	5.34	5.34
Yellowstone County	B4	RM 357.34	95127.12	5-yr	1441.33	927.35	923.1	2.61	2.49	39.55	28.81	180.61	260.89	3.05	2.22	4.25	4.25
Yellowstone County	B4	RM 357.23	94939.75	5-yr	1441.33	927.15	920.81	2.54	2.29	40.2	22.95	142.75	287.36	3.86	2.19	6.34	6.34
Yellowstone County	B4	RM 357.13	94789.23	5-yr	1441.33	926.95	921.26	2.72	2.39	38.82	17.29	138.23	420.12	3.36	1.49	5.69	5.69
Yellowstone County	B4	RM 357.01	94595.53	5-yr	1441.33	926.87	921.72	2.14	1.67	22.9	12.15	184.27	476.66	3.42	1.81	5.15	5.15
Yellowstone County	B4	RM 356.90	94412.13	5-yr	1441.33	926.7	921.02	2.19	1.81	25.99	14.48	234.02	531.99	2.69	1.49	5.68	5.68
Yellowstone County	B4	RM 356.81	94272.48	5-yr	1441.33	926.56	919.95	2.17	1.75	28.31	17.91	233.32	511.23	2.55	1.61	6.61	6.61
Yellowstone County	B4	RM 356.73	94148.77	5-yr	1441.33	926.44	921.15	1.99	1.72	24.15	15.89	299.9	604.87	2.15	1.42	5.29	5.29
Yellowstone County	B4	RM 356.66	94030.68	5-yr	1441.33	926.33	921.75	1.9	1.65	20.85	12.64	300.14	637.95	2.31	1.4	4.58	4.58

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	5-yr	1441.33	926.24	921.88	1.81	1.5	22.88	10.28	252.57	766.17	2.83	1.27	4.36	4.36
Yellowstone County	B4	RM 356.50	93782.14	5-yr	1441.33	926.07	921.75	2.15	1.7	32.61	10.55	153.48	785.56	3.4	1.09	4.32	4.32
Yellowstone County	B4	RM 356.44	93670.16	5-yr	1441.33	925.9	921.33	2.44	1.96	30.45	10.69	135.34	638.8	3.34	1.17	4.57	4.57
Yellowstone County	B4	RM 356.35	93525.27	5-yr	1441.33	925.69	919.71	2.65	2.1	50.53	15.91	114.92	595.38	3.76	1.17	5.98	5.98
Yellowstone County	B4	RM 356.26	93386.36	5-yr	1441.33	925.58	919.77	2.46	1.76	26.16	8.7	125.06	643.41	3.93	1.3	5.81	5.81
Yellowstone County	B4	RM 356.18	93264.31	5-yr	1441.33	925.52	919.95	2.26	1.72	32.3	10.24	128.26	670.26	3.97	1.25	5.57	5.57
Yellowstone County	B4	RM 356.11	93150.71	5-yr	1441.33	925.44	920.24	1.96	1.5	33.36	12.6	179.18	698.53	3.66	1.37	5.2	5.2
Yellowstone County	B4	RM 356.04	93034.25	5-yr	1441.33	925.23	920.36	2.3	1.87	50.01	19.56	172.8	603.7	3.28	1.28	4.87	4.87
Yellowstone County	B4	RM 355.97	92927.46	5-yr	1441.33	924.96	920.09	2.68	2.13	53.47	19.64	153.29	589.29	3.14	1.15	4.87	4.87
Yellowstone County	B4	RM 355.91	92825.82	5-yr	1441.33	924.91	919.82	2.3	1.59	26.44	9.62	153.59	742.22	3.37	1.22	5.09	5.09
Yellowstone County	B4	RM 355.82	92688.73	5-yr	1441.33	924.82	919.51	2.11	1.43	27.57	11.01	155.48	837.27	3.47	1.38	5.31	5.31
Yellowstone County	B4	RM 355.69	92483.67	5-yr	1441.33	923.88	919.96	4.14	3.08	95.9	59.14	104.9	350.99	2.78	1.71	3.92	3.92
Yellowstone County	B4	RM 355.68	92480	5-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	5-yr	1441.33	923.87	919.92	3.35	2.54	59.93	36.46	122.66	384.79	3.04	1.84	3.95	3.95
Yellowstone County	B4	RM 355.66	92419.94	5-yr	1441.33	923.93	919.8	2.7	2.27	36.18	21.58	139.95	496.23	3.08	1.84	4.13	4.13
Yellowstone County	B4	RM 355.60	92333.48	5-yr	1441.33	923.84	919.42	2.62	2.21	35.5	21.77	148.04	526.84	3.07	1.89	4.42	4.42
Yellowstone County	B4	RM 355.49	92159.95	5-yr	1441.33	923.66	918.52	2.24	1.95	51.16	26.42	141.27	555.03	3.04	1.57	5.14	5.14
Yellowstone County	B4	RM 355.43	92061.2	5-yr	1441.33	923.51	918.67	2.18	1.94	46.95	20.32	134.53	676.16	3.34	1.44	4.84	4.84
Yellowstone County	B4	RM 355.41	92020.68	5-yr	1441.33	923.49	919.02	1.81	1.69	43.43	20.69	159.91	789.44	2.95	1.4	4.47	4.47
Yellowstone County	B4	RM 355.38	91976.12	5-yr	1441.33	923.39	919.25	2.17	1.72	38.37	15.89	125.74	788.07	3.37	1.39	4.14	4.14
Yellowstone County	B4	RM 355.35	91933.98	5-yr	1441.33	923.36	919.21	2.18	1.58	27.04	10.88	109.82	731.9	3.65	1.46	4.15	4.15
Yellowstone County	B4	RM 355.32	91885.87	5-yr	1441.33	923.33	919.16	2.14	1.57	26.25	10.5	107.08	775.14	3.59	1.43	4.17	4.17
Yellowstone County	B4	RM 355.29	91828.99	5-yr	1441.33	923.28	918.93	2.16	1.58	25.27	10.74	103.02	884.86	3.66	1.54	4.75	4.75
Yellowstone County	B4	RM 355.23	91732.97	5-yr	1441.33	923.2	918.68	2.17	1.76	29.7	12.43	101.56	1102.24	3.77	1.56	4.76	4.76
Yellowstone County	B4	RM 355.14	91596.1	5-yr	1441.33	923.1	918.52	2.06	1.73	23.42	14.62	118.49	1194.64	3.71	2.3	4.58	4.58
Yellowstone County	B4	RM 354.94	91268.08	5-yr	1441.33	922.71	917.25	2.23	1.91	51.06	36.69	166.23	287.78	3.65	2.63	5.46	5.46
Yellowstone County	B4	RM 354.86	91153.59	5-yr	1441.33	922.45	917.03	2.6	2.16	56.36	29.94	125.07	296.7	4.24	2.25	5.42	5.42
Yellowstone County	B4	RM 354.80	91056.05	5-yr	1441.33	922.23	915.66	2.87	2.29	66.96	28.41	117.98	367.63	4.06	1.71	6.57	6.57
Yellowstone County	B4	RM 354.70	90880.27	5-yr	1441.33	921.96	915.38	2.62	2.4	63.19	44.61	152.61	262.11	3.25	2.29	6.58	6.58
Yellowstone County	B4	RM 354.61	90744.35	5-yr	1441.33	921.83	917.13	2.27	2.13	24.53	21.61	215.25	283.93	2.69	2.38	4.7	4.7
Yellowstone County	B4	RM 354.53	90609.24	5-yr	1441.33	921.79	916.52	1.8	1.75	19.68	16.76	238.32	1229.17	3.22	2.75	5.27	5.27
Yellowstone County	B4	RM 354.45	90486.63	5-yr	1441.33	921.6	915.87	2.23	2.11	34.99	25.02	205.3	1273.31	3.02	2.15	5.73	5.73
Yellowstone County	B4	RM 354.39	90385.43	5-yr	1441.33	921.35	915.24	2.67	2.44	45.38	26.76	165.51	1394.68	3.13	1.84	6.11	6.11
Yellowstone County	B4	RM 354.33	90291.31	5-yr	1441.33	921.33	915.37	2.27	1.93	26.62	16.75	150.94	1424.76	3.37	2.11	5.96	5.96
Yellowstone County	B4	RM 354.23	90133.96	5-yr	1441.33	920.96	915.46	2.91	2.46	60.18	24.9	118.76	370.62	3.83	1.58	5.5	5.5
Yellowstone County	B4	RM 354.13	89983.48	5-yr	1441.33	920.76	914.94	2.67	2.33	59.11	24.83	134.11	374.14	3.93	1.65	5.82	5.82
Yellowstone County	B4	RM 354.00	89778.46	5-yr	1441.33	920.54	916.2	2.39	1.85	44.34	19.16	158.7	549.72	3.29	1.42	4.34	4.34
Yellowstone County	B5	RM 353.90	89604.28	5-yr	1441.33	920.26	917.06	2.38	2.11	38.81	17.26	232.1	600.15	2.57	1.14	3.36	3.36
Yellowstone County	B5	RM 353.80	89446.75	5-yr	1520.62	920.03	916.36	2.15	1.94	42.99	24.09	301.73	610.93	2.29	1.28	3.67	3.67
Yellowstone County	B5	RM 353.70	89288.94	5-yr	1520.62	919.79	915.92	1.79	1.59	36.64	22.28	391.46	1841.85	2.08	1.26	3.87	3.87
Yellowstone County	B5	RM 353.65	89204.58	5-yr	1520.62	919.58	915.49	1.89	1.88	47.26	44.65	403.57	428.83	1.99	1.88	4.09	4.09
Yellowstone County	B5	RM 353.56	89077.56	5-yr	1520.62	919.33	914.2	1.8	1.51	40.49	20.96	363.36	1512.03	2.17	1.12	5.13	5.13
Yellowstone County	B5	RM 353.50	88982.39	5-yr	1520.62	919.24	914.58	1.57	1.23	26.52	11.63	305.45	1387.55	2.84	1.24	4.66	4.66
Yellowstone County	B5	RM 353.41	88846.15	5-yr	1520.62	919.02	914.41	1.92	1.44	36.4	14.85	229.95	1132.24	2.75	1.11	4.61	4.61
Yellowstone County	B5	RM 353.32	88709.14	5-yr	1520.62	918.82	913.6	2.12	1.39	34.19	11.61	194.16	1107.45	2.91	0.98	5.22	5.22
Yellowstone County	B5	RM 353.25	88587.13	5-yr	1520.62	918.57	912.76	2.53	1.63	42.09	12.98	160.68	1029.55	2.96	0.91	5.81	5.81
Yellowstone County	B5	RM 353.15	88438.48	5-yr	1520.62	918.33	912.71	2.6	1.87	42.71	19	208.07	845.73	2.16	0.96	5.62	5.62
Yellowstone County	B5	RM 353.08	88321.13	5-yr	1520.62	918.2	912.99	2.3	1.64	33.06	14.14	197.65	885.06	2.45	1.05	5.21	5.21
Yellowstone County	B5	RM 353.01	88210.34	5-yr	1520.62	918.1	913.13	1.94	1.45	27.99	13.66	249.61	927.31	2.32	1.13	4.97	4.97
Yellowstone County	B5	RM 352.94	88090.6	5-yr	1520.62	918.04	912.5	1.68	1.29	19.67	9.43	175.18	783.74	3.14	1.5	5.54	5.54
Yellowstone County	B5	RM 352.86	87957.76	5-yr	1520.62	917.92	913.38	1.99	1.56	29.55	12.95	121.09	630.84	3.54	1.54	4.54	4.54
Yellowstone County	B5	RM 352.79	87857.09	5-yr	1520.62	917.8	913.06	1.99	1.77	36.31	17.01	103.57	539.44	3.42	1.59	4.74	4.74
Yellowstone County	B5	RM 352.72	87748.15	5-yr	1520.62	917.6	911.97	2.59	2.04	51.41	22.6	90.79	422.97	4.06	1.76	5.63	5.63
Yellowstone County	B5	RM 352.68	87677.1	5-yr	1520.62	917.39	912.27	2.48	2.48	82.31	82.31	303.42	303.42	2.02	2.02	5.12	5.12
Yellowstone County	B5	RM 352.64	87605.18	5-yr	1520.62	917.07	911.68	2.75	2.75	64.47	64.47	191.84	191.84	2.88	2.88	5.39	5.39
Yellowstone County	B5	RM 352.63	87594	5-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	5-yr	1520.62	917.01	911.45	2.58	2.58	51.46	51.46	191.07	191.07	3.09	3.09	5.56	5.56
Yellowstone County	B5	RM 352.54	87461.4	5-yr	1520.62	916.9	912.57	2.12	2	29.16	21.37	265.85	576.85	2.63	1.92	4.33	4.33
Yellowstone County	B5	RM 352.47	87340.46	5-yr	1520.62	916.77	912.2	2.14	1.72	29.22	17.07	230.23	1110.32	2.33	1.36	4.57	4.57
Yellowstone County	B5	RM 352.39	87216.99	5-yr	1520.62	916.4	912.01	2.9	2.4	50.96	30.99	179.37	905.76	2.07	1.26	5.2	5.2
Yellowstone County	B5	RM 352.31	87079.16	5-yr	1520.62	915.95	910.66	3.14	2.63	75.51	42.34	171.38	745.6	1.99	1.11	5.29	5.29

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	5-yr	1520.62	915.71	911.35	2.24	2.23	35.45	32.43	235.51	921.39	1.51	1.38	4.36	4.36
Yellowstone County	B5	RM 352.18	86873.5	5-yr	1520.62	915.81	911.21	0.91	1.02	5.33	5.89	218	971.8	2.11	2.33	4.6	4.6
Yellowstone County	B5	RM 352.09	86723.6	5-yr	1520.62	915.6	912.18	2.17	1.88	31.81	18.38	173	939.06	2.26	1.3	3.42	3.42
Yellowstone County	B5	RM 351.99	86568.41	5-yr	1520.62	915.16	912.6	3.03	2.45	53.82	27.97	143.77	554.02	2.16	1.12	2.58	2.58
Yellowstone County	B5	RM 351.93	86466.74	5-yr	1520.62	915.05	911.69	2.5	1.9	39.99	23.12	169.02	930.74	1.84	1.06	3.36	3.36
Yellowstone County	B5	RM 351.88	86386.8	5-yr	1520.62	914.98	911.38	1.74	1.38	25.24	19.37	187.06	1068.56	1.59	1.22	3.6	3.6
Yellowstone County	B5	RM 351.81	86277.68	5-yr	1520.62	914.88	910.99	1.5	1.21	17.8	15.53	233.42	1226.54	1.45	1.26	3.89	3.89
Yellowstone County	B5	RM 351.74	86159.62	5-yr	1520.62	914.53	911.37	1.69	1.58	24.32	19.35	208.38	943.75	1.43	1.13	3.7	3.7
Yellowstone County	B5	RM 351.67	86034.59	5-yr	1520.62	914.27	911.31	1.77	1.6	26.01	19.07	198.34	862.67	1.55	1.14	3.89	3.89
Yellowstone County	B5	RM 351.58	85891.33	5-yr	1520.62	914.06	911.47	1.45	1.56	17.85	15.07	233.15	795.85	1.49	1.26	3.97	3.97
Yellowstone County	B5	RM 351.52	85811.35	5-yr	1520.62	913.91	911.37	1.79	1.74	21.21	17.43	247.22	762.76	1.43	1.18	3.19	3.19
Yellowstone County	B5	RM 351.47	85728.2	5-yr	1520.62	913.82	911.17	1.76	1.61	18.58	14.6	187.72	684.52	1.86	1.46	3.28	3.28
Yellowstone County	B5	RM 351.40	85601.48	5-yr	1520.62	913.68	910.26	1.95	1.61	23.14	15.12	136.24	884.44	2	1.31	3.76	3.76
Yellowstone County	B5	RM 351.34	85482.66	5-yr	1520.62	913.57	909.98	1.36	1.45	26.87	14.78	143.68	1023.14	2.11	1.16	3.6	3.6
Yellowstone County	B5	RM 351.25	85342.53	5-yr	1520.62	913.44	909.91	1.4	1.29	15.87	11.79	256.65	1062.73	1.53	1.13	3.56	3.56
Yellowstone County	B5	RM 351.21	85257.19	5-yr	1520.62	913.35	909.48	1.69	1.34	20.14	11.57	190.66	1152.3	1.72	0.98	3.87	3.87
Yellowstone County	B5	RM 351.12	85127.55	5-yr	1520.62	913.26	909.49	1.69	1.34	18.64	11.11	167.85	1031.17	1.85	1.1	3.77	3.77
Yellowstone County	B5	RM 351.04	84988.05	5-yr	1520.62	913.12	908.79	1.98	1.41	24.13	11.6	124.63	887.97	2.55	1.21	4.33	4.33
Yellowstone County	B5	RM 350.90	84769.91	5-yr	1520.62	913.07	909.27	1.46	1.13	14.42	6.68	97.36	978.04	3	1.37	3.8	3.8
Yellowstone County	B5	RM 350.75	84536.19	5-yr	1520.62	912.9	909.72	1.27	1.47	25.41	18.58	253.43	770.81	1.84	1.35	3.52	3.52
Yellowstone County	B5	RM 350.66	84383.33	5-yr	1520.62	912.69	909.32	1.98	1.72	31.12	16.38	144.29	670.12	2.5	1.32	3.37	3.37
Yellowstone County	B5	RM 350.57	84244.69	5-yr	1520.62	912.44	908.48	1.89	1.82	39.39	18.59	150.61	719.73	2.47	1.16	3.96	3.96
Yellowstone County	B5	RM 350.50	84128.62	5-yr	1520.62	912.21	908.49	2.1	1.96	42.65	20.7	153.34	687.24	2.34	1.13	3.72	3.72
Yellowstone County	B5	RM 350.40	83974.24	5-yr	1520.62	912.03	908.73	1.56	1.6	20.84	15.62	308.49	760.39	1.67	1.25	3.3	3.3
Yellowstone County	B5	RM 350.33	83868.06	5-yr	1520.62	911.92	908.17	1.56	1.5	17.77	12.89	324.73	837.67	1.67	1.21	3.75	3.75
Yellowstone County	B5	RM 350.23	83712.91	5-yr	1520.62	911.69	907.61	1.81	1.63	26.02	16.11	291.86	883.32	1.71	1.06	4.08	4.08
Yellowstone County	B5	RM 350.14	83563.43	5-yr	1520.62	911.5	907.94	1.62	1.47	21.49	13.03	298.36	986.56	1.75	1.06	3.56	3.56
Yellowstone County	B5	RM 350.06	83419.86	5-yr	1520.62	911.29	907.84	1.53	1.44	23.4	14.5	341.16	1019.83	1.67	1.04	3.45	3.45
Yellowstone County	B5	RM 349.94	83229.4	5-yr	1520.62	911.05	906.93	1.65	1.44	23.69	13.84	275.96	962.3	1.89	1.1	4.12	4.12
Yellowstone County	B5	RM 349.83	83071.99	5-yr	1520.62	910.93	907.36	1.5	1.17	12.57	5.38	370.02	1189.12	2.55	1.09	3.57	3.57
Yellowstone County	B5	RM 349.68	82904.73	5-yr	1520.62	910.72	906.92	1.95	1.51	29.34	15.04	343.11	952.95	2.07	1.06	3.8	3.8
Yellowstone County	B5	RM 349.54	82632.78	5-yr	1520.62	910.34	906.29	1.88	1.7	24.23	15.45	446.6	805.54	1.74	1.11	4.05	4.05
Yellowstone County	B5	RM 349.33	82276.28	5-yr	1520.62	910.07	906.45	1.15	1.12	12.46	10.95	350.58	835.59	1.86	1.63	3.62	3.62
Yellowstone County	B5	RM 349.19	82046.53	5-yr	1520.62	909.76	905.16	1.93	1.44	23.81	12.08	281.73	1061.58	1.96	0.99	4.6	4.6
Yellowstone County	B5	RM 349.04	81800.47	5-yr	1605.57	909.57	904.5	1.51	1.24	14.92	8.61	345.54	1050.02	2.14	1.23	5.07	5.07
Yellowstone County	B5	RM 348.89	81574.02	5-yr	1605.57	909.45	904.75	1.17	1.06	15.32	9.16	550.23	1080.11	2.36	1.41	4.7	4.7
Yellowstone County	B5	RM 348.77	81370.46	5-yr	1605.57	909.24	905.09	1.45	1.44	25.86	22.4	457.19	531.01	2.43	2.1	4.15	4.15
Yellowstone County	B5	RM 348.64	81138.52	5-yr	1605.57	909.05	903.35	1.64	1.24	16.08	5.97	291.59	1144.71	3.07	1.13	5.7	5.7
Yellowstone County	B5	RM 348.52	80960.09	5-yr	1605.57	908.86	902.88	2.02	1.5	32.99	9.99	205.53	1033.64	3.46	1.04	5.98	5.98
Yellowstone County	B5	RM 348.38	80737.31	5-yr	1605.57	908.47	902.85	2.5	2.1	46.32	18.43	186.63	582.14	3.33	1.32	5.62	5.62
Yellowstone County	B5	RM 348.26	80551.51	5-yr	1605.57	908.22	902.73	2.46	2.02	51.61	21.44	167.63	547.56	3.52	1.45	5.49	5.49
Yellowstone County	B5	RM 348.09	80276.34	5-yr	1605.57	907.68	901.64	2.78	2.59	53.09	34.78	171.66	632.66	3.29	2.15	6.04	6.04
Yellowstone County	B5	RM 347.95	80055.79	5-yr	1605.57	907.52	902.96	2.38	2	28.59	13.1	165.09	688.56	3.57	1.64	4.56	4.56
Yellowstone County	B5	RM 347.82	79844.2	5-yr	1605.57	907.36	902.93	2.09	1.83	37.84	19.38	180.88	589.26	3.24	1.66	4.43	4.43
Yellowstone County	B5	RM 347.77	79751.93	5-yr	1605.57	907.22	902.38	2.2	1.8	42.96	17.87	178.59	709.54	3.24	1.35	4.84	4.84
Yellowstone County	B5	RM 347.70	79643.98	5-yr	1605.57	907.08	901.91	2.17	1.67	41.46	17.32	182.31	736.43	3.14	1.31	5.17	5.17
Yellowstone County	B5	RM 347.61	79501.64	5-yr	1605.57	907.03	902.2	1.76	1.16	16.02	7.59	192.93	843.86	3.47	1.64	4.83	4.83
Yellowstone County	B5	RM 347.51	79347.38	5-yr	1605.57	906.7	900.54	2.79	1.92	37.13	13.3	112.32	552.91	4.26	1.52	6.16	6.16
Yellowstone County	B5	RM 347.42	79196.21	5-yr	1605.57	906.62	900.73	2.35	1.87	52.94	24.07	143.5	503.92	3.76	1.71	5.89	5.89
Yellowstone County	B5	RM 347.35	79079.87	5-yr	1605.57	906.68	900.77	1.17	1.16	6.28	6.13	497.98	513.67	2.75	2.69	5.91	5.91
Yellowstone County	B5	RM 347.23	78895.71	5-yr	1605.57	906.61	900.89	1.27	1.26	10.14	9.68	508.23	534.18	2.5	2.38	5.72	5.72
Yellowstone County	B5	RM 347.13	78732.21	5-yr	1605.57	906.5	900.98	1.37	1.36	22.05	20.12	440.15	489.39	2.65	2.42	5.52	5.52
Yellowstone County	B5	RM 346.93	78400.21	5-yr	1605.57	905.99	900.98	1.64	1.58	55.02	44.77	464.7	602.78	2.08	1.69	5.01	5.01
Yellowstone County	B5	RM 346.80	78193.27	5-yr	1605.57	905.33	900.02	1.91	1.73	54.98	37.96	454	758	1.78	1.23	5.31	5.31
Yellowstone County	B5	RM 346.64	77938.83	5-yr	1605.57	905.05	900.47	1.85	1.43	18.73	9.1	246.68	760.37	3.05	1.48	4.58	4.58
Yellowstone County	B5	RM 346.49	77706.6	5-yr	1605.57	904.78	900.21	2.32	1.72	33.6	11.51	176.33	870.06	3.22	1.09	4.57	4.57
Yellowstone County	B6	RM 346.35	77480.6	5-yr	1605.57	904.55	900.33	2.14	1.6	33.82	11.67	214.38	967.02	3.08	1.06	4.22	4.22
Yellowstone County	B6	RM 346.23	77285.9	5-yr	1605.57	904.25	900.11	2.5	1.86	33.46	10.35	176.97	847.66	3.31	1.02	4.14	4.14
Yellowstone County	B6	RM 346.11	77095.33	5-yr	1605.57	904.05	899.75	2.4	1.83	42.16	17.97	181.83	688.25	3.28	1.4	4.3	4.3
Yellowstone County	B6	RM 346.00	76926.16	5-yr	1605.57	903.88	899.8	2.31	1.8	32.74	14.07	177.66	633.4	3.44	1.47	4.08	4.08
Yellowstone County	B6	RM 345.90	76766.95	5-yr	1605.57	903.62	899.51	2.56	1.95	44.85	20.68	178.87	598.24	3.24	1.49	4.11	4.11

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	5-yr	1605.57	903.49	899.04	2.24	1.78	30.49	13.04	197.17	668.31	3.32	1.42	4.59	4.59
Yellowstone County	B6	RM 345.73	76484.99	5-yr	1605.57	903.3	899.01	2.47	1.97	37.41	13.63	197.33	808.53	2.96	1.08	4.4	4.4
Yellowstone County	B6	RM 345.67	76386.71	5-yr	1605.57	903.26	899.1	2.05	1.58	25.12	10.7	211.94	730.71	3.28	1.39	4.36	4.36
Yellowstone County	B6	RM 345.60	76268.76	5-yr	1605.57	903.17	899.22	2	1.56	27.85	14.39	235.37	686.1	2.92	1.5	4.27	4.27
Yellowstone County	B6	RM 345.50	76118.1	5-yr	1605.57	903.02	899.07	1.73	1.52	34.27	22.69	280.8	625.97	2.55	1.68	4.12	4.12
Yellowstone County	B6	RM 345.37	75909.53	5-yr	1605.57	902.6	897.51	2.12	2.06	38.09	28.91	315.12	429.34	2.39	1.81	5.09	5.09
Yellowstone County	B6	RM 345.27	75751.01	5-yr	1605.57	902.37	898.15	2.22	1.9	31.8	16.33	252.36	597.16	2.77	1.42	4.22	4.22
Yellowstone County	B6	RM 345.07	75427.56	5-yr	1605.57	902.1	897.07	2.01	1.84	22.73	12.43	241.2	490.1	3.26	1.78	5.03	5.03
Yellowstone County	B6	RM 344.90	75166.64	5-yr	1605.57	901.99	897.3	1.68	1.48	16.75	9.05	294.53	641.74	3.13	1.69	4.69	4.69
Yellowstone County	B6	RM 344.75	74927.69	5-yr	1605.57	901.75	896.02	2	1.76	32.45	17.04	233.51	529.52	3.29	1.72	5.73	5.73
Yellowstone County	B6	RM 344.64	74743.45	5-yr	1605.57	901.43	895.93	2.56	2.23	36.04	18.73	158.71	359.21	3.85	2	5.5	5.5
Yellowstone County	B6	RM 344.53	74576.12	5-yr	1605.57	901.25	895.39	2.51	2.08	55.1	29.84	162.09	403.9	3.54	1.91	5.86	5.86
Yellowstone County	B6	RM 344.43	74405.67	5-yr	1605.57	901.1	896.11	2.32	1.88	25.18	12.71	178.91	503.22	3.37	1.7	4.99	4.99
Yellowstone County	B6	RM 344.29	74192.79	5-yr	1605.57	900.94	895.87	2.2	1.89	29.72	18.62	179.35	380.08	3.56	2.23	5.07	5.07
Yellowstone County	B6	RM 344.13	73931.76	5-yr	1605.57	900.72	895.4	2.26	1.79	30.26	12.27	157.02	560.15	3.96	1.6	5.32	5.32
Yellowstone County	B6	RM 343.87	73520.95	5-yr	1605.57	900.5	895.23	1.79	1.54	17.29	12	287.43	500.33	3	2.08	5.27	5.27
Yellowstone County	B6	RM 343.80	73403.19	5-yr	1605.57	900.44	894.69	1.51	1.37	26.48	21.62	356.81	510.49	2.8	2.29	5.75	5.75
Yellowstone County	B6	RM 343.66	73173.16	5-yr	1605.57	900.13	894.63	1.61	1.58	41.26	36.53	395.16	459.93	2.5	2.21	5.5	5.5
Yellowstone County	B6	RM 343.55	72997.33	5-yr	1605.57	899.86	894.63	1.61	1.58	36.38	32.67	368.92	421.42	2.69	2.41	5.23	5.23
Yellowstone County	B6	RM 343.45	72840.49	5-yr	1605.57	899.63	894.78	1.67	1.67	32.83	32.32	401.39	407.94	2.39	2.36	4.85	4.85
Yellowstone County	B6	RM 343.37	72718.86	5-yr	1605.57	899.36	894.5	1.98	1.98	48.42	48.42	327.18	327.18	2.48	2.48	4.86	4.86
Yellowstone County	B6	RM 343.29	72586.22	5-yr	1605.57	899.15	894.28	1.96	1.84	38.69	30.41	279.29	384.83	2.88	2.26	4.87	4.87
Yellowstone County	B6	RM 343.21	72458.03	5-yr	1605.57	898.96	893.99	1.79	1.67	48.27	37.02	356.55	619.32	2.44	1.87	4.97	4.97
Yellowstone County	B6	RM 343.14	72328.78	5-yr	1605.57	898.66	893.94	1.76	1.61	53.19	40.44	432.23	770.59	2.04	1.55	4.72	4.72
Yellowstone County	B6	RM 343.04	72174.44	5-yr	1605.57	898.5	894.12	1.46	1.27	15.07	11.12	485.7	798.27	2.16	1.59	4.38	4.38
Yellowstone County	B6	RM 342.96	72046.7	5-yr	1605.57	898.37	894.17	1.43	1.27	32.76	23.87	506.21	855.91	2.03	1.47	4.2	4.2
Yellowstone County	B6	RM 342.87	71890.42	5-yr	1605.57	898.04	893.92	1.54	1.39	44.86	34.1	539.83	853.99	1.78	1.35	4.12	4.12
Yellowstone County	B6	RM 342.78	71759.64	5-yr	1605.57	897.88	893.85	1.51	1.37	12.59	10.2	513.93	800.84	1.81	1.47	4.03	4.03
Yellowstone County	B6	RM 342.71	71649.64	5-yr	1605.57	897.8	893.88	1.48	1.34	11.41	9.39	525.21	859.72	1.69	1.39	3.92	3.92
Yellowstone County	B6	RM 342.64	71534.72	5-yr	1605.57	897.67	893.45	1.36	1.3	31.55	27.59	689.25	1018.65	1.67	1.46	4.23	4.23
Yellowstone County	B6	RM 342.59	71441.82	5-yr	1605.57	897.46	893.13	1.44	1.44	37.53	37.53	689.15	1472.16	1.62	1.62	4.33	4.33
Yellowstone County	B6	RM 342.49	71299.94	5-yr	1605.57	897.26	892.73	1.21	1.21	21.33	21.33	658.83	1673.32	2.02	2.02	4.53	4.53
Yellowstone County	B6	RM 342.40	71182.23	5-yr	1605.57	897.18	892.4	1.04	1.04	15.14	15.13	591.64	1686.07	2.62	2.62	4.78	4.78
Yellowstone County	B6	RM 342.29	70973.95	5-yr	1605.57	896.98	891.26	1.39	1.39	23.33	23.28	478.12	1520.54	2.42	2.42	5.72	5.72
Yellowstone County	B6	RM 342.17	70788.09	5-yr	1605.57	896.56	891.21	2.06	2.06	55.48	55.48	378.2	948.68	2.06	2.06	5.35	5.35
Yellowstone County	B6	RM 342.09	70668.79	5-yr	1605.57	896.35	892.22	1.77	1.77	37.58	36.18	377.27	393.52	2.4	2.31	4.13	4.13
Yellowstone County	B6	RM 341.96	70472.35	5-yr	1605.57	896.17	891.5	1.61	1.61	13.34	13.34	498.71	498.71	2	2	4.67	4.67
Yellowstone County	B6	RM 341.82	70207.79	5-yr	1605.57	896.02	890.89	1.28	1.28	16.54	16.46	576.3	578.52	2.18	2.17	5.13	5.13
Yellowstone County	B6	RM 341.68	69974.03	5-yr	1605.57	895.8	890.38	1.4	1.37	21.51	17.45	476.95	608.19	2.37	1.92	5.42	5.42
Yellowstone County	B6	RM 341.57	69788.71	5-yr	1605.57	895.55	889.58	1.89	1.89	15.27	15.27	422.55	422.55	2.01	2.01	5.97	5.97
Yellowstone County	B6	RM 341.47	69629.19	5-yr	1605.57	895.39	889.76	1.71	1.69	46.2	41.12	391.88	447.83	2.38	2.12	5.63	5.63
Yellowstone County	B6	RM 341.32	69391.37	5-yr	1605.57	894.9	890.36	1.76	1.69	44.25	33.09	399.32	563.47	2.25	1.68	4.54	4.54
Yellowstone County	B6	RM 341.24	69252.71	5-yr	1605.57	894.79	890.28	1.55	1.43	14.73	11.64	396.74	576.78	2.46	1.94	4.51	4.51
Yellowstone County	B6	RM 341.11	69044.61	5-yr	1605.57	894.52	890	1.98	1.68	31.95	19.01	324.47	675.92	2.38	1.41	4.52	4.52
Yellowstone County	B6	RM 340.94	68773.18	5-yr	1605.57	894.18	889.22	2.01	1.54	30.94	12.67	280.24	982.54	2.65	1.08	4.96	4.96
Yellowstone County	B6	RM 340.81	68556.42	5-yr	1605.57	894.05	889.05	1.49	1.08	19.45	9.81	315.44	1051.19	2.82	1.42	5	5
Yellowstone County	B6	RM 340.65	68325.7	5-yr	1605.57	893.83	888.87	1.99	1.28	19.49	7.72	204.01	928.16	3.42	1.35	4.96	4.96
Yellowstone County	B6	RM 340.52	68126.27	5-yr	1605.57	893.6	887.3	2.43	1.53	40.3	9.93	130.17	963.9	4.45	1.09	6.3	6.3
Yellowstone County	B6	RM 340.40	67936.51	5-yr	1605.57	893.47	886.73	2.05	1.38	35.87	12.41	170.6	852.02	3.97	1.36	6.74	6.74
Yellowstone County	B7	RM 340.26	67715.84	5-yr	1605.57	893.23	887.99	1.92	1.54	44.1	23.33	251.06	645.91	3.06	1.62	5.24	5.24
Yellowstone County	B7	RM 340.16	67550.99	5-yr	1605.57	892.94	888.43	1.87	1.58	54.22	32.87	312.99	659.55	2.54	1.54	4.51	4.51
Yellowstone County	B7	RM 340.06	67387.35	5-yr	1605.57	892.68	888.74	1.74	1.57	34.58	28.95	315.76	456.41	2.68	2.24	3.94	3.94
Yellowstone County	B7	RM 339.96	67234.59	5-yr	1605.57	892.43	888.85	2	1.97	24.35	16.57	359.6	538.87	2.23	1.51	3.58	3.58
Yellowstone County	B7	RM 339.88	67094.07	5-yr	1605.57	892.26	888.78	1.78	1.72	36.57	31.3	445.51	545.89	2	1.71	3.48	3.48
Yellowstone County	B7	RM 339.79	66960.51	5-yr	1605.57	891.93	888.98	2.1	2.1	30.34	30.34	499.83	499.83	1.53	1.53	2.95	2.95
Yellowstone County	B7	RM 339.72	66843.76	5-yr	1605.57	891.77	888.72	1.86	1.82	22.77	20.95	509.15	570.94	1.68	1.55	3.05	3.05
Yellowstone County	B7	RM 339.66	66753.41	5-yr	1605.57	891.7	887.9	1.59	1.56	16.11	13.77	523.17	631.15	1.91	1.64	3.8	3.8
Yellowstone County	B7	RM 339.52	66527.74	5-yr	1605.57	891.53	887.31	1.71	1.44	16.39	9.86	312.36	671.75	2.77	1.66	4.22	4.22
Yellowstone County	B7	RM 339.37	66324.85	5-yr	1605.57	891.33	887.17	1.94	1.56	37.94	18.04	232.31	725.19	2.99	1.42	4.16	4.16
Yellowstone County	B7	RM 339.24	66108.49	5-yr	1605.57	890.88	886.45	2.58	2.12	35.46	20.66	217.38	521.35	2.49	1.45	4.43	4.43
Yellowstone County	B7	RM 339.13	65940.41	5-yr	1605.57	890.64	885.31	2.66	1.92	45.37	22.05	143.15	565.15	3.07	1.48	5.33	5.33

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	5-yr	1605.57	890.31	886.09	2.65	2.21	39.17	19.72	178.27	513.46	2.81	1.42	4.22	4.22
Yellowstone County	B7	RM 338.94	65621.59	5-yr	1605.57	890.23	886.36	2.22	1.76	26.64	14.37	223.57	679.4	2.48	1.34	3.87	3.87
Yellowstone County	B7	RM 338.83	65433.26	5-yr	1605.57	890.04	886.37	2	1.67	30.52	16.85	222.93	697.64	2.53	1.4	4.02	4.02
Yellowstone County	B7	RM 338.72	65256.88	5-yr	1605.57	889.81	886.18	1.99	1.77	32.53	19.98	204.23	551.47	2.78	1.71	4.01	4.01
Yellowstone County	B7	RM 338.62	65095.08	5-yr	1605.57	889.5	886.28	2.51	2.13	35.7	18.88	176.81	555.14	2.66	1.41	3.88	3.88
Yellowstone County	B7	RM 338.49	64891.36	5-yr	1605.57	889.32	885.05	2.27	1.82	28.97	15.98	172.33	603.2	2.77	1.53	4.27	4.27
Yellowstone County	B7	RM 338.40	64742.15	5-yr	1605.57	889.29	884.28	1.59	1.3	13.79	9.49	165.42	752.9	2.89	1.98	5.01	5.01
Yellowstone County	B7	RM 338.29	64577.05	5-yr	1605.57	889.16	884.18	1.98	1.48	21.49	9.63	123.01	763.2	3.25	1.45	4.98	4.98
Yellowstone County	B7	RM 338.19	64384.71	5-yr	1605.57	889.1	885.23	1.35	1.13	11.91	8.05	393.33	930.65	2.27	1.53	3.87	3.87
Yellowstone County	B7	RM 338.06	64164.59	5-yr	1605.57	889	884.64	1.42	1.03	12.99	7.09	284.25	1041.08	2.78	1.52	4.36	4.36
Yellowstone County	B7	RM 337.91	63921.69	5-yr	1605.57	888.82	884.16	1.85	1.21	17.1	7.45	205.66	1081.76	3.05	1.33	4.66	4.66
Yellowstone County	B7	RM 337.83	63789.53	5-yr	1605.57	888.48	882.72	2.7	1.92	44.52	15.83	177.61	779.12	3.04	1.08	5.76	5.76
Yellowstone County	B7	RM 337.75	63667.96	5-yr	1605.57	888.17	881.69	3.11	2.19	52.79	18.69	142.48	633.92	3.3	1.16	6.48	6.48
Yellowstone County	B7	RM 337.68	63550.4	5-yr	1605.57	888.04	882.49	2.79	2.22	48.94	17.8	161.63	589.7	3.39	1.23	5.55	5.55
Yellowstone County	B7	RM 337.58	63396.62	5-yr	1605.57	887.82	883.62	2.77	2.19	41.52	18.22	187.55	591.94	2.83	1.24	4.2	4.2
Yellowstone County	B7	RM 337.47	63212.44	5-yr	1605.57	887.65	883.31	2.4	1.79	36.3	17.13	177.9	639.65	2.97	1.4	4.34	4.34
Yellowstone County	B7	RM 337.38	63064.58	5-yr	1605.57	887.41	883.29	2.63	1.83	37.94	14.95	164.16	742.96	3.02	1.18	4.12	4.12
Yellowstone County	B7	RM 337.27	62894.98	5-yr	1605.57	887.4	883.15	1.76	1.21	16.16	6.91	206.47	1076.14	2.89	1.23	4.25	4.25
Yellowstone County	B7	RM 337.16	62717.85	5-yr	1605.57	887.34	882.57	1.35	1.06	10.42	5.87	395.23	1098.39	2.46	1.38	4.77	4.77
Yellowstone County	B7	RM 337.04	62524.52	5-yr	1605.57	887.27	879.61	1.5	1.02	11.6	4.3	153.17	979.34	4.35	1.61	7.66	7.66
Yellowstone County	B7	RM 336.96	62390.64	5-yr	1605.57	887.19	880.21	1.67	1.21	21.02	8.57	185.22	875.94	3.75	1.52	6.98	6.98
Yellowstone County	B7	RM 336.87	62246.97	5-yr	1605.57	887.06	881.41	1.98	1.36	22.39	8.46	156.14	809.07	3.9	1.46	5.65	5.65
Yellowstone County	B7	RM 336.80	62131.42	5-yr	1605.57	886.99	881.33	1.92	1.35	30.65	12.82	162.29	843.86	3.53	1.47	5.66	5.66
Yellowstone County	B7	RM 336.72	62005.73	5-yr	1605.57	886.74	881.38	2.46	1.79	47.87	16.99	136.15	724.6	3.72	1.31	5.36	5.36
Yellowstone County	B7	RM 336.66	61902.64	5-yr	1605.57	886.27	881.45	3.39	2.76	78.65	24.38	114.43	535.44	3.52	1.08	4.82	4.82
Yellowstone County	B7	RM 336.59	61800.43	5-yr	1605.57	886.25	880.66	2.56	2.06	48.86	18.75	135.62	524.1	3.88	1.49	5.59	5.59
Yellowstone County	B7	RM 336.52	61689.55	5-yr	1605.57	886.12	881.76	2.52	1.95	41.4	17.42	145.4	597.44	3.26	1.38	4.36	4.36
Yellowstone County	B7	RM 336.46	61580.5	5-yr	1605.57	886	882.13	2.36	1.9	39.94	15.45	155.42	706.14	3.1	1.2	3.87	3.87
Yellowstone County	B7	RM 336.40	61491.01	5-yr	1605.57	885.88	882.03	2.35	1.81	42.21	14.74	162.53	825.26	3.08	1.07	3.85	3.85
Yellowstone County	B7	RM 336.34	61394.22	5-yr	1605.57	885.75	881.93	2.39	1.65	38.57	15.61	163.61	822.34	2.94	1.19	3.82	3.82
Yellowstone County	B7	RM 336.27	61278.9	5-yr	1605.57	885.62	881.67	2.27	1.52	34.33	13.72	169.52	895.09	2.95	1.18	3.95	3.95
Yellowstone County	B7	RM 336.19	61159.07	5-yr	1605.57	885.44	882.11	2.35	1.72	30.62	13.15	211.78	985.32	2.21	0.95	3.33	3.33
Yellowstone County	B7	RM 336.09	60993.57	5-yr	1605.57	885.31	882.16	1.76	1.28	20.67	11.53	319.78	1066.91	2.1	1.17	3.15	3.15
Yellowstone County	B7	RM 335.98	60812.26	5-yr	1605.57	885.15	881.93	1.33	1.21	23.31	17.53	434.91	1039.78	1.7	1.28	3.42	3.42
Yellowstone County	B7	RM 335.89	60669.74	5-yr	1605.57	884.97	880.16	1.54	1.4	14.43	11.87	622.26	885.52	1.58	1.3	4.81	4.81
Yellowstone County	B7	RM 335.77	60465.85	5-yr	1605.57	884.65	880.49	1.54	1.49	39.6	35.04	795.09	969.98	1.26	1.11	4.16	4.16
Yellowstone County	B7	RM 335.68	60324.8	5-yr	1605.57	884.34	880.65	1.76	1.68	14.99	12.53	745.9	1171.48	1.21	1.01	3.69	3.69
Yellowstone County	B7	RM 335.59	60183.7	5-yr	1605.57	884.15	880.3	1.79	1.73	14.33	11.53	829.48	1313.94	1.08	0.87	3.85	3.85
Yellowstone County	B7	RM 335.51	60046.12	5-yr	1605.57	883.99	880.03	1.71	1.67	13.33	10.3	779.64	1254.67	1.2	0.92	3.96	3.96
Yellowstone County	B7	RM 335.41	59899.97	5-yr	1605.57	883.9	879.45	1.24	1.11	10.49	7.64	888.94	1415.76	1.4	1.02	4.45	4.45
Yellowstone County	B7	RM 335.36	59814.82	5-yr	1605.57	883.89	878.65	0.88	0.77	4.61	3.15	895.39	1828.87	1.94	1.32	5.24	5.24
Yellowstone County	B7	RM 335.12	59393.71	5-yr	1605.57	883.69	878.54	1.53	0.94	13.46	4.9	330.48	1837.85	2.55	0.93	5.15	5.15
Yellowstone County	B7	RM 335.03	59228.59	5-yr	1605.57	883.36	876.8	2.68	1.43	49.19	11.81	149.13	1552.58	3.02	0.72	6.56	6.56
Yellowstone County	B7	RM 334.91	59041.32	5-yr	1605.57	883.16	878.31	2.11	1.2	33	10.46	229.01	1706.44	2.48	0.79	4.85	4.85
Yellowstone County	B7	RM 334.85	58937.73	5-yr	1605.57	882.97	878.66	2.21	1.25	38.47	11.25	224.38	1772.16	2.48	0.72	4.31	4.31
Yellowstone County	B7	RM 334.73	58737.5	5-yr	1605.57	882.43	879.52	2.9	1.88	52.49	19.91	191.78	948.15	2.38	0.9	3.05	3.05
Yellowstone County	B7	RM 334.63	58573.32	5-yr	1605.57	882.24	878.31	2.43	1.54	34.25	14.92	187.59	1026.62	2.33	1.02	3.93	3.93
Yellowstone County	B7	RM 334.54	58424.99	5-yr	1605.57	882.23	877.09	1.17	1.1	15.32	8.57	146.85	967.32	2.72	1.52	5.14	5.14
Yellowstone County	B7	RM 334.22	57821.07	5-yr	1605.57	881.89	875.76	1.9	1.43	16.07	7.55	192.86	892.34	3.59	1.68	6.13	6.13
Yellowstone County	B7	RM 334.09	57621.62	5-yr	1605.57	881.6	875.55	2.77	1.97	62.47	23.93	117.12	638.8	3.35	1.28	6.05	6.05
Yellowstone County	B7	RM 333.98	57440.64	5-yr	1605.57	881.51	875.46	2.14	1.61	24.01	10.88	140.01	526.66	4.18	1.89	6.05	6.05
Yellowstone County	B7	RM 333.83	57207.78	5-yr	1605.57	881.33	875.4	2.22	1.86	32.08	17.58	152.38	440.94	3.59	1.96	5.93	5.93
Yellowstone County	B7	RM 333.69	56989.22	5-yr	1605.57	881.13	873.45	1.72	1.68	32.61	25.06	337.09	488.64	2.75	2.11	7.68	7.68
Yellowstone County	B7	RM 333.54	56738.21	5-yr	1605.57	880.99	874.22	1.2	1.11	17.1	10.69	409.8	762.11	3.17	1.98	6.77	6.77
Yellowstone County	B7	RM 333.42	56552.03	5-yr	1605.57	880.83	873.42	1.39	1.32	25.83	17.61	424.98	680.95	2.63	1.79	7.41	7.41
Yellowstone County	B7	RM 333.30	56351.75	5-yr	1605.57	880.49	875.65	1.64	1.59	48.24	36.28	449.89	625.28	2.15	1.61	4.84	4.84
Yellowstone County	B7	RM 333.19	56177.76	5-yr	1605.57	880.07	875.72	1.9	1.84	40.02	31.63	381.29	507.24	2.18	1.72	4.35	4.35
Yellowstone County	B7	RM 333.09	56027.56	5-yr	1605.57	879.93	875.59	1.67	1.54	16.42	13.31	417.73	570.16	2.25	1.82	4.34	4.34
Yellowstone County	B7	RM 332.99	55855.76	5-yr	1605.57	879.72	873.86	1.77	1.57	42.14	29.84	383.61	649.89	2.23	1.57	5.86	5.86
Yellowstone County	B7	RM 332.88	55687.68	5-yr	1605.57	879.59	874.43	1.49	1.36	14.39	9.41	408.1	747.08	2.42	1.58	5.16	5.16
Yellowstone County	B7	RM 332.77	55504.73	5-yr	1605.57	879.53	875.49	1.29	1.1	9.75	5.9	376.01	822.44	2.94	1.78	4.04	4.04

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	5-yr	1605.57	879.44	874.96	1.41	1.15	14.52	8.51	334.36	805.14	2.97	1.74	4.48	4.48
Yellowstone County	B7	RM 332.56	55182.74	5-yr	1605.57	879.37	874.54	1.41	1.15	13.73	6.77	311.49	851.56	3.33	1.63	4.83	4.83
Yellowstone County	B7	RM 332.47	55059.84	5-yr	1605.57	879.33	873.95	1.32	1.02	12.97	5.49	281.21	1056.12	3.59	1.51	5.38	5.38
Yellowstone County	B7	RM 332.38	54913.1	5-yr	1605.57	879.11	873.16	2.13	1.51	31.09	7.48	159.38	1050.81	4.26	1.01	5.95	5.95
Yellowstone County	B7	RM 332.33	54822.67	5-yr	1605.57	879.07	872.5	1.91	1.36	38.3	10.34	186.27	1155.95	3.81	1.02	6.57	6.57
Yellowstone County	B7	RM 332.21	54626.48	5-yr	1605.57	878.87	873.4	1.99	1.6	32.84	9.7	175.5	1043.57	4.1	1.2	5.47	5.47
Yellowstone County	B7	RM 332.20	54613	5-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	5-yr	1605.57	878.76	873.19	2.06	1.8	36.53	11.76	187.43	804.75	3.81	1.22	5.57	5.57
Yellowstone County	B7	RM 332.17	54575.38	5-yr	1605.57	878.72	872.76	2.16	1.63	35.18	7.3	145.03	1295.21	4.45	0.91	5.96	5.96
Yellowstone County	B7	RM 332.16	54558	5-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	5-yr	1605.57	878.59	872.47	2.34	1.74	29.99	5.73	130.75	1266.14	4.61	0.87	6.12	6.12
Yellowstone County	B7	RM 332.08	54422.01	5-yr	1605.57	878.51	873.77	2.2	1.8	31.94	11.95	154.18	735.02	3.94	1.46	4.74	4.74
Yellowstone County	B7	RM 331.96	54224.76	5-yr	1605.57	878.31	873.18	2.01	1.76	40.27	15.59	204.64	725.55	3.27	1.26	5.13	5.13
Yellowstone County	B7	RM 331.85	54057.19	5-yr	1605.57	878.06	873.16	2.02	1.8	56.2	21.3	249.45	769.52	3.07	1.16	4.9	4.9
Yellowstone County	B7	RM 331.74	53882.8	5-yr	1605.57	877.55	872.62	2.85	2.53	52.96	17.11	148.34	528.9	3.75	1.2	4.93	4.93
Yellowstone County	B8	RM 331.66	53744.64	5-yr	1605.57	877.48	871.68	2.19	2.01	37.61	17.97	219.18	511.32	3.29	1.57	5.8	5.8
Yellowstone County	B8	RM 331.55	53575.67	5-yr	1605.57	877.3	872.61	2.23	1.87	34.91	16.33	192.02	571.4	3.22	1.5	4.69	4.69
Yellowstone County	B8	RM 331.41	53354.89	5-yr	1605.57	877.02	872.56	2.32	1.97	39.04	18.25	218.19	612.27	2.85	1.33	4.46	4.46
Yellowstone County	B8	RM 331.32	53209.79	5-yr	1605.57	876.81	871.92	2.2	1.75	35.1	17.94	261.31	754.71	2.38	1.21	4.89	4.89
Yellowstone County	B8	RM 331.23	53053.99	5-yr	1605.57	876.62	871.53	1.85	1.59	26.56	17.09	370.98	796.31	1.98	1.27	5.09	5.09
Yellowstone County	B8	RM 331.14	52919.44	5-yr	1605.57	876.52	871.72	1.52	1.35	18.62	13.42	309.55	698.96	2.38	1.71	4.8	4.8
Yellowstone County	B8	RM 331.08	52820.06	5-yr	1605.57	876.42	871.29	1.59	1.44	19.18	11.3	305.99	697.62	2.72	1.59	5.13	5.13
Yellowstone County	B8	RM 331.01	52700.37	5-yr	1605.57	876.33	871.8	1.62	1.4	20.82	12.25	299.58	731.47	2.68	1.57	4.53	4.53
Yellowstone County	B8	RM 330.93	52576.5	5-yr	1605.57	876.22	871.67	1.63	1.5	21.04	12.2	249.41	584.39	3.16	1.83	4.55	4.55
Yellowstone County	B8	RM 330.83	52418.21	5-yr	1605.57	876.01	870.75	2.24	1.9	28.18	14.42	141.33	416.83	4	2.03	5.26	5.26
Yellowstone County	B8	RM 330.77	52321.13	5-yr	1605.57	875.9	870.68	2.28	2.05	33.12	18.54	171.38	947.14	3.37	1.89	5.22	5.22
Yellowstone County	B8	RM 330.68	52174.9	5-yr	1605.57	875.61	870.33	2.82	2.32	42.85	19.02	128.98	417.01	3.74	1.66	5.28	5.28
Yellowstone County	B8	RM 330.58	52000.46	5-yr	1605.57	875.45	869.72	2.63	2.12	50.49	23.09	117.14	413.47	4.03	1.83	5.73	5.73
Yellowstone County	B8	RM 330.48	51852.83	5-yr	1605.57	875.27	868.81	2.68	2.03	48.57	18.97	104.97	467.91	4.39	1.69	6.46	6.46
Yellowstone County	B8	RM 330.39	51701.57	5-yr	1605.57	875.13	869.32	2.56	1.99	34.28	13.15	132.93	579.49	3.65	1.4	5.81	5.81
Yellowstone County	B8	RM 330.32	51592.04	5-yr	1605.57	875.03	869.57	2.56	2	32.78	9.86	135.5	772.62	3.77	1.13	5.46	5.46
Yellowstone County	B8	RM 330.25	51473.55	5-yr	1605.57	874.94	868.38	2.48	1.89	33.81	9.72	143.67	885.09	3.49	1	6.56	6.56
Yellowstone County	B8	RM 330.17	51344.77	5-yr	1605.57	874.79	869.9	2.48	1.93	34.58	11.03	151.29	789.3	3.32	1.05	4.89	4.89
Yellowstone County	B8	RM 330.10	51243.99	5-yr	1605.57	874.67	870.02	2.44	1.91	36.74	14.09	185.53	737.3	2.98	1.14	4.65	4.65
Yellowstone County	B8	RM 330.05	51150.67	5-yr	1605.57	874.64	869.94	1.85	1.47	22.38	11.62	298.23	899.81	2.34	1.21	4.7	4.7
Yellowstone County	B8	RM 329.95	50995.78	5-yr	1605.57	874.48	869.67	1.76	1.53	22.93	12.57	398.21	872.54	2.2	1.2	4.81	4.81
Yellowstone County	B8	RM 329.86	50853.11	5-yr	1605.57	874.35	869.99	1.61	1.38	21.42	12.1	412.36	925.19	2.23	1.25	4.36	4.36
Yellowstone County	B8	RM 329.75	50682.47	5-yr	1605.57	874.16	869.45	1.4	1.26	30.92	21.26	556.71	988.51	1.88	1.29	4.71	4.71
Yellowstone County	B8	RM 329.66	50540.7	5-yr	1605.57	873.84	869.45	1.71	1.59	37.29	25.53	500.84	858.14	1.73	1.18	4.39	4.39
Yellowstone County	B8	RM 329.57	50390.78	5-yr	1605.57	873.62	869.17	1.69	1.5	18.59	13.63	506.02	851.37	1.72	1.26	4.45	4.45
Yellowstone County	B8	RM 329.49	50267.58	5-yr	1605.57	873.46	869.52	1.77	1.54	20.63	14.46	457.61	832.57	1.79	1.25	3.94	3.94
Yellowstone County	B8	RM 329.43	50165.22	5-yr	1605.57	873.42	869.82	1.35	1.24	11.48	8.06	539.35	861.18	2.14	1.5	3.6	3.6
Yellowstone County	B8	RM 329.37	50053.96	5-yr	1605.57	873.37	869.58	1.3	1.12	10.54	7.44	447.42	892	2.27	1.6	3.79	3.79
Yellowstone County	B8	RM 329.31	49969.13	5-yr	1605.57	873.31	869.66	1.42	1.18	15.92	10.13	378.18	968.26	2.21	1.4	3.65	3.65
Yellowstone County	B8	RM 329.26	49883.05	5-yr	1605.57	873.24	868.74	1.46	1.25	13.17	8.08	376.88	951.48	2.21	1.35	4.5	4.5
Yellowstone County	B8	RM 329.20	49785.51	5-yr	1605.57	873.17	868.71	1.52	1.26	14.84	9.13	397.53	1006.01	2.06	1.27	4.46	4.46
Yellowstone County	B8	RM 329.15	49699.71	5-yr	1761.31	873.1	868.64	1.42	1.2	18.29	11.67	463.75	1027.67	2.24	1.43	4.46	4.46
Yellowstone County	B8	RM 329.08	49597.49	5-yr	1761.31	873.02	869.34	1.31	1.1	17.47	11.44	471.27	1087.81	2.24	1.47	3.68	3.68
Yellowstone County	B8	RM 328.96	49388.08	5-yr	1761.31	872.89	868.99	1.48	1.08	15.79	8.73	305.27	1150.66	2.58	1.42	3.9	3.9
Yellowstone County	B8	RM 328.85	49197.37	5-yr	1761.31	872.73	866.79	1.72	1.38	12.43	8.43	472.19	1068.84	1.76	1.19	5.94	5.94
Yellowstone County	B8	RM 328.75	49036.09	5-yr	1761.31	872.66	866.93	1.48	1.22	12.53	8.67	417.79	1037.94	2.01	1.39	5.73	5.73
Yellowstone County	B8	RM 328.68	48920.76	5-yr	1761.31	872.52	867.09	1.82	1.43	22.21	11.16	303.39	1003.6	2.45	1.23	5.43	5.43
Yellowstone County	B8	RM 328.60	48788.86	5-yr	1761.31	872.28	866.36	2.38	1.8	28.38	10.22	195.79	864.56	3.18	1.13	5.92	5.92
Yellowstone County	B8	RM 328.52	48664.7	5-yr	1761.31	872.33	867.75	1.54	1.21	13.12	6.84	167.5	963.18	2.92	1.51	4.58	4.58
Yellowstone County	B8	RM 328.44	48539.46	5-yr	1761.31	872.02	867.34	2.65	2	46.98	13.9	137.59	784.55	3.85	1.12	4.68	4.68
Yellowstone County	B8	RM 328.36	48405.85	5-yr	1761.31	871.8	867.12	2.92	2.11	41.14	13.18	131.79	733.16	3.61	1.14	4.68	4.68
Yellowstone County	B8	RM 328.28	48276.93	5-yr	1761.31	871.76	867.73	2.12	1.84	37.72	15.26	190.98	734.44	3.23	1.3	4.65	4.65
Yellowstone County	B8	RM 328.16	48097.58	5-yr	1761.31	871.55	866.7	2.01	1.77	36.64	18.43	224.09	747.15	2.65	1.33	4.85	4.85
Yellowstone County	B8	RM 328.05	47914.16	5-yr	1761.31	871.36	866.62	1.82	1.58	26.95	14.2	264.18	802.9	2.63	1.39	4.74	4.74
Yellowstone County	B8	RM 327.93	47729.4	5-yr	1761.31	871.12	865.67	2.11	1.81	25.04	14.25	296.21	690.27	2.48	1.41	5.45	5.45
Yellowstone County	B8	RM 327.88	47641.03	5-yr	1761.31	870.97	866	2.36	1.86	35.86	18.06	246.29	728.81	2.58	1.3	4.97	4.97

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	5-yr	1761.31	870.85	866.29	2.38	1.78	27.84	11.23	181.77	732.56	3.35	1.35	4.56	4.56
Yellowstone County	B8	RM 327.75	47432.57	5-yr	1761.31	870.58	865.09	3	2.18	40.94	13.5	135.54	637.15	3.86	1.27	5.49	5.49
Yellowstone County	B8	RM 327.69	47341.24	5-yr	1761.31	870.3	864.48	3.63	2.41	54.42	20.89	107.9	520.92	3.69	1.4	5.82	5.82
Yellowstone County	B8	RM 327.62	47227.31	5-yr	1761.31	870.37	863.86	2.64	1.78	35.22	14.59	128.11	669.62	3.6	1.48	6.51	6.51
Yellowstone County	B8	RM 327.56	47124.87	5-yr	1761.31	870.39	864.46	2.04	1.47	21.17	10.39	156.85	768.57	3.19	1.56	5.93	5.93
Yellowstone County	B8	RM 327.51	47053.82	5-yr	1761.31	870.32	865.84	1.96	1.59	23.2	15.85	308.35	824.4	1.97	1.34	4.48	4.48
Yellowstone County	B8	RM 327.44	46933.28	5-yr	1761.31	870.3	866.93	1.12	1.18	9.14	7.85	388.51	872.41	1.99	1.71	3.68	3.68
Yellowstone County	B8	RM 327.37	46817.72	5-yr	1761.31	870.18	866.26	1.68	1.46	20.13	12.16	341.8	887.14	2.25	1.36	3.92	3.92
Yellowstone County	B8	RM 327.29	46687.12	5-yr	1761.31	870.1	866.04	1.65	1.37	17.34	9.72	303.69	960.2	2.4	1.34	4.06	4.06
Yellowstone County	B8	RM 327.23	46600.07	5-yr	1761.31	870.02	866.25	1.76	1.42	19.34	9.86	287.86	1031.07	2.36	1.21	4.17	4.17
Yellowstone County	B8	RM 327.16	46485.25	5-yr	1761.31	869.88	865.67	1.97	1.51	27.3	12.41	271.45	1054.08	2.43	1.1	4.21	4.21
Yellowstone County	B8	RM 327.08	46360.36	5-yr	1761.31	869.82	864.94	1.62	1.2	16.62	7.69	266.78	1112.25	2.84	1.32	4.88	4.88
Yellowstone County	B8	RM 327.00	46240.1	5-yr	1761.31	869.74	864.56	1.66	1.34	21.46	10.1	227.91	771.31	3.62	1.71	5.18	5.18
Yellowstone County	B8	RM 326.94	46091.8	5-yr	1761.31	869.66	864.04	1.73	1.34	15	7.54	223.67	719.56	3.64	1.83	5.62	5.62
Yellowstone County	B8	RM 326.88	46003.77	5-yr	1761.31	869.55	864.08	2.07	1.55	28.93	13.41	170.66	717.4	3.41	1.58	5.47	5.47
Yellowstone County	B8	RM 326.82	45901.15	5-yr	1761.31	869.47	864.18	2.07	1.56	27.93	16.45	201.73	738.63	2.59	1.53	5.29	5.29
Yellowstone County	B8	RM 326.78	45830.7	5-yr	1761.31	869.4	864.46	2.16	1.52	25.44	14.58	163.64	723.43	2.78	1.6	4.94	4.94
Yellowstone County	B8	RM 326.70	45707.6	5-yr	1761.31	869.33	864.66	1.86	1.41	16.23	11.71	263.83	752.7	2.31	1.66	4.67	4.67
Yellowstone County	B8	RM 326.64	45589.72	5-yr	1761.31	869.23	864.92	1.58	1.51	44.54	34.4	430.17	802.62	1.88	1.45	4.31	4.31
Yellowstone County	B8	RM 326.55	45430.24	5-yr	1761.31	869.01	864.83	1.8	1.6	19.3	12.53	350.63	692.14	2.45	1.59	4.18	4.18
Yellowstone County	B8	RM 326.45	45281.78	5-yr	1761.31	868.91	864.12	1.81	1.62	20.04	12.92	336.31	675.5	2.5	1.61	4.79	4.79
Yellowstone County	B8	RM 326.41	45207.36	5-yr	1761.31	868.88	864.32	1.49	1.37	13.65	10.13	432.08	730.91	2.37	1.76	4.56	4.56
Yellowstone County	B8	RM 326.35	45106.57	5-yr	1761.31	868.85	864.43	1.3	1.15	10.08	6.71	483.02	866.96	2.67	1.77	4.42	4.42
Yellowstone County	B8	RM 326.28	45022.31	5-yr	1761.31	868.86	864.61	0.91	0.82	4.41	2.95	548.28	986.76	3.33	2.22	4.25	4.25
Yellowstone County	B8	RM 326.07	44588.61	5-yr	1761.31	868.64	862.39	1.71	1.58	9.32	6.85	686.98	1033.69	1.47	1.08	6.25	6.25
Yellowstone County	B8	RM 326.00	44481.07	5-yr	1761.31	868.58	861.24	1.63	1.51	8.3	6.89	741.75	983.33	1.43	1.19	7.34	7.34
Yellowstone County	B8	RM 325.94	44379.11	5-yr	1761.31	868.52	861.85	1.3	1.21	30.24	21.85	765.44	1193.95	1.69	1.22	6.67	6.67
Yellowstone County	B8	RM 325.89	44304.17	5-yr	1761.31	868.38	863	1.25	1.18	29.47	23.15	797.49	1225.15	1.69	1.33	5.38	5.38
Yellowstone County	B8	RM 325.86	44262.16	5-yr	1761.31	868.35	863.76	1.26	1.17	6.67	5.25	801.53	1112.28	1.72	1.35	4.59	4.59
Yellowstone County	B8	RM 325.81	44176.46	5-yr	1761.31	868.32	863.1	1.26	1.13	6.69	5.56	837.89	1163.08	1.61	1.33	5.22	5.22
Yellowstone County	B8	RM 325.76	44089.5	5-yr	1761.31	868.27	862.66	1.14	1.06	22.87	17.24	803.96	1253.13	1.82	1.37	5.61	5.61
Yellowstone County	B8	RM 325.69	43989.97	5-yr	1761.31	868.19	862.55	1.22	1.02	7.44	4.31	624.61	1401.34	2.22	1.28	5.64	5.64
Yellowstone County	B8	RM 325.58	43809.68	5-yr	1761.31	868.1	862.61	1.21	0.99	23.56	12.44	476.8	1250.79	2.71	1.42	5.49	5.49
Yellowstone County	B8	RM 325.50	43680.96	5-yr	1761.31	867.94	862.6	1.4	1.19	29.07	14.28	434.18	1138.78	2.68	1.3	5.34	5.34
Yellowstone County	B8	RM 325.43	43556.76	5-yr	1761.31	867.8	860.89	1.42	1.18	31.22	15.09	386.41	1064.66	2.91	1.4	6.91	6.91
Yellowstone County	B8	RM 325.37	43461.41	5-yr	1761.31	867.72	861.36	1.36	1.13	28	13.15	343.98	1066.39	3.12	1.46	6.36	6.36
Yellowstone County	B8	RM 325.30	43343.13	5-yr	1761.31	867.57	861.56	1.67	1.3	26.03	10.46	266.15	981.72	3.46	1.38	6.01	6.01
Yellowstone County	B8	RM 325.21	43210.67	5-yr	1761.31	867.43	861.34	1.94	1.46	24.36	9.3	203.57	790.63	4.02	1.52	6.09	6.09
Yellowstone County	B8	RM 325.13	43078.9	5-yr	1761.31	867.28	861.36	2.26	1.61	33.99	10.42	148.94	767.02	4.69	1.42	5.92	5.92
Yellowstone County	B8	RM 325.06	42966.54	5-yr	1761.31	866.95	860.78	3.01	2.29	58.31	15.24	122.42	659.26	4.5	1.17	6.17	6.17
Yellowstone County	B8	RM 324.99	42864.51	5-yr	1761.31	866.85	861.24	2.77	1.93	53.28	16.38	134.67	719.07	4.16	1.27	5.61	5.61
Yellowstone County	B8	RM 324.91	42729.7	5-yr	1761.31	866.68	860.76	2.73	1.91	52.58	16.2	132.24	680.37	4.42	1.35	5.92	5.92
Yellowstone County	B8	RM 324.81	42573.19	5-yr	1761.31	866.5	860.39	2.67	1.99	52.35	17.2	138.75	617.37	4.38	1.43	6.11	6.11
Yellowstone County	B8	RM 324.73	42451.12	5-yr	1761.31	866.41	861.59	2.39	1.81	38.39	15.76	179.41	643	3.71	1.52	4.82	4.82
Yellowstone County	B8	RM 324.65	42323.44	5-yr	1761.31	866.34	861.99	1.78	1.5	35.91	20.85	300.92	713.48	2.84	1.65	4.35	4.35
Yellowstone County	B8	RM 324.56	42178.25	5-yr	1761.31	866.2	861.76	1.82	1.47	14	10.5	404.18	784.59	2.04	1.53	4.44	4.44
Yellowstone County	B8	RM 324.48	42039.74	5-yr	1761.31	866.06	861.58	1.65	1.44	41.58	28.29	477.36	886.31	2.03	1.38	4.48	4.48
Yellowstone County	B8	RM 324.42	41946.09	5-yr	1761.31	865.95	861.04	1.37	1.19	25.74	16.17	478.13	945.5	2.5	1.57	4.91	4.91
Yellowstone County	B8	RM 324.34	41812.99	5-yr	1761.31	865.72	861.07	1.7	1.36	44.93	24.47	378.78	987.89	2.4	1.31	4.65	4.65
Yellowstone County	B8	RM 324.28	41712.42	5-yr	1761.31	865.5	859.64	1.78	1.46	51.5	27.43	364.85	1012.86	2.25	1.2	5.86	5.86
Yellowstone County	B8	RM 324.20	41597.64	5-yr	1761.31	865.42	860.59	1.05	0.98	16.9	12.92	667.69	1028.24	2.29	1.75	4.83	4.83
Yellowstone County	B8	RM 324.16	41526.97	5-yr	1761.31	865.31	861.07	1.44	1.35	11.14	8.77	664.43	937.22	1.77	1.39	4.24	4.24
Yellowstone County	B8	RM 324.10	41434.55	5-yr	1761.31	865.25	860.81	1.24	1.2	22.59	16.62	690.24	987.58	2.02	1.48	4.44	4.44
Yellowstone County	B8	RM 324.04	41346.42	5-yr	1761.31	865.19	860.39	1.14	1.1	14.71	9.74	624.3	1088.1	2.23	1.47	4.8	4.8
Yellowstone County	B8	RM 323.97	41219.29	5-yr	1761.31	865.11	860.64	1.09	1.03	13.72	9.4	573.41	1095.7	2.28	1.55	4.46	4.46
Yellowstone County	B8	RM 323.83	40977.08	5-yr	1761.31	864.98	860.31	1.19	0.97	10.57	5.94	453.19	1156.03	2.8	1.57	4.67	4.67
Yellowstone County	B8	RM 323.71	40786.71	5-yr	1761.31	864.79	858.49	1.9	1.34	22.77	8.99	220.32	943.72	3.54	1.39	6.3	6.3
Yellowstone County	B8	RM 323.60	40615.85	5-yr	1761.31	864.79	858.06	1.46	1.08	13.27	5.19	121.36	948.34	4.46	1.72	6.73	6.73
Yellowstone County	B8	RM 323.55	40536.83	5-yr	1761.31	864.41	857.58	3.01	1.94	58.46	16.42	113.97	815.63	3.99	1.11	6.83	6.83
Yellowstone County	B8	RM 323.49	40429.96	5-yr	1761.31	864.27	858.37	2.92	1.9	51.81	14.96	118.76	792.64	4.08	1.17	5.9	5.9
Yellowstone County	B8	RM 323.41	40309.21	5-yr	1761.31	864.15	859.41	2.65	1.89	53.05	16.71	135.74	817.95	3.64	1.14	4.74	4.74

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	5-yr	1761.31	864.07	859.58	2.19	1.53	27.76	9.86	175.88	982.19	3.33	1.17	4.49	4.49
Yellowstone County	B8	RM 323.27	40082.34	5-yr	1761.31	863.96	859.66	2.22	1.53	32.35	12.46	188.89	937.72	3.21	1.23	4.3	4.3
Yellowstone County	B8	RM 323.21	39985.33	5-yr	1761.31	863.86	859.54	2.19	1.5	32.87	14.49	211	930.89	2.88	1.27	4.32	4.32
Yellowstone County	B8	RM 323.16	39899.29	5-yr	1761.31	863.8	859.55	1.7	1.27	29.72	15.75	276.01	1013.92	2.59	1.37	4.25	4.25
Yellowstone County	B8	RM 323.06	39735.77	5-yr	1761.31	863.52	858.56	1.67	1.56	36.23	20.62	304.91	1078.59	2.31	1.31	4.96	4.96
Yellowstone County	B8	RM 322.93	39531.81	5-yr	1761.31	863.28	859.35	1.57	1.33	24.98	12.25	322.23	1080.84	2.51	1.22	3.93	3.93
Yellowstone County	B8	RM 322.79	39301.41	5-yr	1761.31	863.05	858.62	1.85	1.35	23.58	9.68	220.82	1035.67	3.07	1.26	4.43	4.43
Yellowstone County	B8	RM 322.69	39142.64	5-yr	1761.31	862.94	857.47	1.96	1.38	19.71	8.63	200.75	902.88	3.23	1.42	5.47	5.47
Yellowstone County	B8	RM 322.58	38982.22	5-yr	1761.31	862.44	856.56	3.33	2.57	68.63	26.78	114.62	524.24	3.37	1.31	5.88	5.88
Yellowstone County	B9	RM 322.51	38859.49	5-yr	1761.31	862.38	858.28	2.56	2.05	41.61	17.59	161.77	638.16	3.19	1.34	4.1	4.1
Yellowstone County	B9	RM 322.41	38696.02	5-yr	1761.31	862.27	857.62	1.53	1.56	29.45	22.73	448.29	720.48	2.05	1.58	4.66	4.66
Yellowstone County	B9	RM 322.34	38586.33	5-yr	1761.31	862.17	857.65	1.26	1.29	19.32	15.86	584.19	887.34	1.92	1.57	4.52	4.52
Yellowstone County	B9	RM 322.23	38396.25	5-yr	1761.31	862.02	857.13	0.98	1.02	15.74	12.71	752.4	1109.38	1.92	1.55	4.9	4.9
Yellowstone County	B9	RM 322.13	38239.27	5-yr	1761.31	861.88	857.1	0.88	0.98	17.01	14.91	880.07	1166.02	1.77	1.55	4.78	4.78
Yellowstone County	B9	RM 322.03	38090.48	5-yr	1761.31	861.53	856.15	1.18	1.36	44.2	43.65	950.29	1078	1.22	1.21	5.38	5.38
Yellowstone County	B9	RM 321.91	37898.13	5-yr	1761.31	861.28	856.85	1.65	1.65	8.66	8.66	786.74	786.74	1.35	1.35	4.43	4.43
Yellowstone County	B9	RM 321.82	37758.36	5-yr	1761.31	861.26	856.34	1.28	1.28	5.61	5.61	755.48	755.48	1.82	1.82	4.92	4.92
Yellowstone County	B9	RM 321.70	37567.01	5-yr	1761.31	861.17	855.27	1.14	1.13	20.8	19.66	809.21	862.04	1.91	1.81	5.9	5.9
Yellowstone County	B9	RM 321.60	37414.63	5-yr	1761.31	861.1	854.48	0.9	0.89	8.56	8.1	755.04	807.03	2.58	2.44	6.62	6.62
Yellowstone County	B9	RM 321.48	37188.51	5-yr	1761.31	860.94	855.03	1.29	1.24	19.44	17.74	545.67	639.08	2.44	2.23	5.91	5.91
Yellowstone County	B9	RM 321.38	37016.94	5-yr	1761.31	860.75	854.75	1.5	1.4	22.08	16.61	471.9	696.31	2.41	1.81	6	6
Yellowstone County	B9	RM 321.28	36857.57	5-yr	1761.31	860.69	855.3	1.21	1.06	10.37	6.31	459.37	899.37	3.04	1.84	5.39	5.39
Yellowstone County	B9	RM 321.13	36652.19	5-yr	1761.31	860.6	854.69	1.39	1.07	19.38	12.14	274.03	915.06	3.85	2.38	5.91	5.91
Yellowstone County	B9	RM 321.05	36531.25	5-yr	1761.31	860.41	855.36	1.97	1.54	31.92	13.77	190.21	612.01	4.39	1.87	5.05	5.05
Yellowstone County	B9	RM 321.00	36446.98	5-yr	1761.31	860	855.12	3.12	2.4	66.23	20.9	127.99	565.37	4.2	1.3	4.88	4.88
Yellowstone County	B9	RM 320.71	36404.1	5-yr	1230.53	859.3	855.12	2.74	2.67	36.15	24.51	128.96	197.19	3.47	2.33	4.19	4.19
Yellowstone County	B9	RM 320.62	36361.3	5-yr	1230.53	859.23	855.12	2.81	2.76	38.01	23.91	129.06	211.82	3.38	2.11	4.12	4.12
Yellowstone County	B9	RM 320.92	36318.56	5-yr	1761.31	859.73	855.12	3.37	2.68	87.5	30.49	134.58	516.34	3.72	1.27	4.61	4.61
Yellowstone County	B9	RM 320.44	36258.3	5-yr	1230.53	859.1	855.19	2.72	2.59	36.85	20.31	133.44	257.51	3.38	1.84	3.92	3.92
Yellowstone County	B9	RM 320.38	36198.1	5-yr	1230.53	859.07	855.26	2.55	2.38	32.61	17.81	141.93	283.76	3.37	1.82	3.81	3.81
Yellowstone County	B9	RM 320.80	36137.92	5-yr	1761.31	859.58	855.33	2.83	2.22	58.21	25.21	156.52	602.4	3.75	1.6	4.25	4.25
Yellowstone County	B9	RM 320.71	35990.21	5-yr	1761.31	859.59	854.38	1.71	1.53	25.55	13.48	275.47	853.3	3.64	1.9	5.21	5.21
Yellowstone County	B9	RM 320.54	35839.45	5-yr	1761.31	859.49	853.99	1.7	1.48	21.52	11.82	324.02	1186.15	3.08	1.68	5.5	5.5
Yellowstone County	B9	RM 320.44	35717.45	5-yr	1761.31	859.41	854.32	1.69	1.36	17.47	8.5	334.82	1331.06	2.91	1.4	5.08	5.08
Yellowstone County	B9	RM 320.62	35556.9	5-yr	1761.31	859.3	854.17	1.68	1.28	31.37	13.13	262.01	1267.55	3.09	1.27	5.13	5.13
Yellowstone County	B9	RM 320.38	35461.42	5-yr	1761.31	859.21	854.17	1.81	1.25	22.11	8.19	198.03	981.69	3.93	1.43	5.04	5.04
Yellowstone County	B9	RM 320.32	35359.13	5-yr	1761.31	859.04	854.57	2.35	1.61	41.83	11.69	139.59	953.89	4.2	1.15	4.47	4.47
Yellowstone County	B9	RM 320.25	35241.01	5-yr	1761.31	858.47	854.29	3.63	2.63	86.13	22.32	110.38	704.31	3.78	0.95	4.18	4.18
Yellowstone County	B9	RM 320.20	35163.52	5-yr	1761.31	858.34	854.2	3.33	2.53	90.16	29.62	132.71	664.11	3.25	1.05	4.14	4.14
Yellowstone County	B9	RM 320.14	35071.29	5-yr	1761.31	858.11	854.32	3.19	2.54	70.86	26.22	159.31	640.56	2.96	1.08	3.78	3.78
Yellowstone County	B9	RM 320.01	34865.89	5-yr	1761.31	857.74	854.42	2.62	2.58	34.06	27.32	122.19	509.16	2.31	1.85	3.38	3.38
Yellowstone County		RM 319.44	34790	5-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	5-yr	1761.31	857.66	854.66	1.38	1.73	13.41	12.1	143.17	639.86	2.39	2.14	4.08	4.08
Yellowstone County	B9	RM 319.86	34625.68	5-yr	1761.31	857.59	854.6	1.35	1.74	16.41	13.18	153.45	756.39	2.25	1.79	4.03	4.03
Yellowstone County	B9	RM 319.78	34508.06	5-yr	1761.31	857.45	854.51	2.21	2.02	33.44	20.47	108.45	627.26	2.71	1.64	3.93	3.93
Yellowstone County	B9	RM 319.73	34426.63	5-yr	1761.31	857.23	854.69	2.93	1.87	46.75	36.31	156.47	704.34	2.23	1.73	3.76	3.76
Yellowstone County	B9	RM 319.66	34314.84	5-yr	1761.31	857.15	854.51	2.15	1.81	24.19	16.78	158.66	784.2	2.13	1.47	3.72	3.72
Yellowstone County	B9	RM 319.57	34163.05	5-yr	1761.31	857.01	853.93	2.05	1.81	20.2	13.07	198.21	704.15	2.21	1.42	3.67	3.67
Yellowstone County	B9	RM 319.44	33955.96	5-yr	1761.31	856.9	853.14	1.89	1.69	24.86	17.15	153.57	617.85	2.49	1.7	3.77	3.77
Yellowstone County	B9	RM 319.39	33872.4	5-yr	1761.31	856.83	852.65	2.08	1.68	21.6	11.96	137.96	740.12	2.62	1.43	4.19	4.19
Yellowstone County	B9	RM 319.34	33786.83	5-yr	1761.31	856.8	852.83	1.92	1.5	18.05	10.97	178.14	747.62	2.61	1.57	3.97	3.97
Yellowstone County	B9	RM 319.22	33580.15	5-yr	1761.31	856.74	851.79	1.94	1.29	16.85	7.37	80.63	848.49	3.81	1.61	4.95	4.95
Yellowstone County	B9	RM 319.17	33497.33	5-yr	1761.31	856.73	851.64	1.49	1.26	12.53	6.4	121.71	996.7	3.02	1.51	5.09	5.09
Yellowstone County	B9	RM 319.09	33368.53	5-yr	1761.31	856.46	851.25	2.37	2.17	44.46	19.41	134.03	556.49	3.45	1.47	5.22	5.22
Yellowstone County	B9	RM 319.04	33287.21	5-yr	1761.31	856.22	851.49	2.94	2.46	68.66	27.28	112.32	493.77	3.78	1.47	4.73	4.73
Yellowstone County	B9	RM 318.96	33153.16	5-yr	1761.31	856.03	851.64	2.67	2.34	54.11	26.57	155.44	483.22	3.38	1.64	4.38	4.38
Yellowstone County	B9	RM 318.91	33065.54	5-yr	1761.31	855.91	851.86	2.48	2.23	55.55	30.62	183.54	483.22	3.08	1.69	4.05	4.05
Yellowstone County	B9	RM 318.82	32939.33	5-yr	1761.31	855.65	851.86	2.8	2.31	38.83	19.41	155.27	454.84	3.38	1.68	3.79	3.79
Yellowstone County	B9	RM 318.74	32833.24	5-yr	1761.31	855.7	851.86	1.78	1.51	21.18	11.14	183.18	677.64	3.29	1.72	3.85	3.85
Yellowstone County	B9	RM 318.62	32649.76	5-yr	1761.31	855.52	850.67	1.73	1.68	30.68	19.28	316.37	707.28	2.4	1.5	4.85	4.85
Yellowstone County	B9	RM 318.42	32315.28	5-yr	1761.31	855.12	850.15	1.94	1.87	22.4	16.83	346.42	483.42	2.6	1.95	4.97	4.97

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	5-yr	1761.31	854.72	849.17	2.11	1.66	28.88	12.62	209.58	681.43	3.61	1.56	5.55	5.55
Yellowstone County	B9	RM 317.97	31551.39	5-yr	1761.31	854.45	848.35	2.22	1.95	21.43	10.33	232.36	563.17	3.35	1.6	6.1	6.1
Yellowstone County	B10	RM 317.87	31388.76	5-yr	1761.31	854.15	848.78	2.83	2.28	43.71	14.76	161.91	641.57	3.63	1.2	5.37	5.37
Yellowstone County	B10	RM 317.78	31248.07	5-yr	1761.31	854.14	848.75	2.28	1.62	27.95	8.76	143.48	827.23	4.26	1.31	5.39	5.39
Yellowstone County	B10	RM 317.70	31120.75	5-yr	1761.31	854.17	848.56	1.57	1.14	13.78	6.74	171.56	870.63	3.69	1.77	5.61	5.61
Yellowstone County	B10	RM 317.61	30982.56	5-yr	1761.31	854.06	848.29	1.88	1.39	18.29	8.73	194.43	792.01	3.4	1.6	5.77	5.77
Yellowstone County	B10	RM 317.53	30849.94	5-yr	1761.31	854.02	848.5	1.48	1.31	12.82	7.9	342.97	764.36	2.87	1.76	5.52	5.52
Yellowstone County	B10	RM 317.45	30723.4	5-yr	1761.31	853.93	848.47	1.6	1.42	17.01	10	368.86	888.65	2.39	1.4	5.46	5.46
Yellowstone County	B10	RM 317.37	30601.88	5-yr	1761.31	853.86	848.17	1.42	1.26	17.43	11.97	370.54	888.43	2.34	1.6	5.69	5.69
Yellowstone County	B10	RM 317.30	30483.81	5-yr	1761.31	853.77	848.41	1.61	1.32	14.58	7.97	273.27	985.73	3.04	1.64	5.35	5.35
Yellowstone County	B10	RM 317.19	30302.33	5-yr	1761.31	853.66	848.84	1.84	1.28	17.67	5.63	160.89	1044	4.36	1.36	4.83	4.83
Yellowstone County	B10	RM 317.05	30079.26	5-yr	1761.31	853.44	848.38	2.24	1.87	23.69	13.06	159.02	384.25	4.49	2.45	5.06	5.06
Yellowstone County	B10	RM 316.93	29889.26	5-yr	1761.31	853.2	847.25	2.6	2.27	39.46	19.67	150.19	361.84	4.41	2.16	5.94	5.94
Yellowstone County	B10	RM 316.79	29668.4	5-yr	1761.31	853.03	847.89	2.47	2.12	36.46	15.05	146.89	437.55	4.66	1.89	5.14	5.14
Yellowstone County	B10	RM 316.66	29466.39	5-yr	1761.31	852.89	847.86	2.36	2.04	30.4	14.41	162.43	409.66	4.49	2.1	5.03	5.03
Yellowstone County	B10	RM 316.58	29329.04	5-yr	1761.31	852.78	847.74	2.32	1.82	40.02	17.58	174.14	549.58	4.12	1.79	5.04	5.04
Yellowstone County	B10	RM 316.51	29227.18	5-yr	1761.31	852.64	847.41	2.44	1.89	38.46	17.16	183.55	567.9	3.71	1.64	5.24	5.24
Yellowstone County	B10	RM 316.43	29091.4	5-yr	1761.31	852.5	847.41	2.27	1.81	44.04	24.3	239.22	586.98	3.02	1.65	5.09	5.09
Yellowstone County	B10	RM 316.33	28935.99	5-yr	1761.31	852.23	847.74	2.24	1.88	50.29	32.95	284.96	554.22	2.59	1.69	4.49	4.49
Yellowstone County	B10	RM 316.24	28786.65	5-yr	1761.31	851.99	847.5	1.86	1.76	43.41	32.26	355.03	564.08	2.39	1.77	4.49	4.49
Yellowstone County	B10	RM 316.14	28628.02	5-yr	1761.31	851.77	846.92	1.8	1.61	30.38	19.58	328.47	591.45	2.88	1.85	4.85	4.85
Yellowstone County	B10	RM 316.05	28475.44	5-yr	1761.31	851.51	846.73	2.08	1.91	41.49	25.15	294.47	542.68	2.82	1.7	4.78	4.78
Yellowstone County	B10	RM 315.97	28355.68	5-yr	1761.31	851.4	846.43	2.02	1.78	18.93	11.56	300.09	586.51	2.78	1.69	4.97	4.97
Yellowstone County	B10	RM 315.84	28140.65	5-yr	1761.31	851.04	846.58	2.67	2.24	50.99	20.25	166.29	578.2	3.47	1.36	4.46	4.46
Yellowstone County	B10	RM 315.71	27926.69	5-yr	1761.31	850.8	846.34	2.58	2.1	28.77	10.88	201.12	805.9	2.93	1.1	4.46	4.46
Yellowstone County	B10	RM 315.58	27720.72	5-yr	1761.31	850.79	846.16	1.71	1.25	20.94	8.72	145.05	975.33	3.56	1.45	4.63	4.63
Yellowstone County	B10	RM 315.44	27505.06	5-yr	1761.31	850.57	846.09	2.13	1.43	26.2	7.12	151.55	1154.91	4.01	1.07	4.48	4.48
Yellowstone County	B10	RM 315.30	27283.58	5-yr	1761.31	850.49	844.45	1.47	1.1	15.52	7.26	317.48	1358.35	2.56	1.18	6.04	6.04
Yellowstone County	B10	RM 315.18	27097.16	5-yr	1761.31	850.43	844.72	1.18	0.98	8.39	5.28	453.91	1363.2	2.11	1.32	5.71	5.71
Yellowstone County	B10	RM 315.01	26818.99	5-yr	1761.31	850.26	844.66	1.46	1.21	16.98	9.84	474.51	1132.75	2.24	1.29	5.6	5.6
Yellowstone County	B10	RM 314.85	26559.67	5-yr	1761.31	849.93	844.84	2.24	1.78	34.06	9.74	166.69	869.77	4.08	1.14	5.08	5.08
Yellowstone County	B10	RM 314.69	26324.37	5-yr	1761.31	849.64	844.24	2.49	2.09	39.02	11.59	172.83	762.81	3.8	1.11	5.4	5.4
Yellowstone County	B10	RM 314.57	26132.54	5-yr	1761.31	849.37	844.63	2.71	2.13	46.14	14.09	145.04	650.09	4.23	1.27	4.74	4.74
Yellowstone County	B10	RM 314.46	25963.96	5-yr	1761.31	849.25	844.48	2.3	1.98	38	16.85	200.99	571.27	3.54	1.55	4.77	4.77
Yellowstone County	B10	RM 314.35	25782.69	5-yr	1761.31	849.01	844.51	2.23	2.17	49.89	37.17	254.61	354.3	3.09	2.29	4.5	4.5
Yellowstone County	B10	RM 314.24	25607.48	5-yr	1761.31	848.85	844.14	2.16	2.08	17.98	11.73	270.72	439.28	2.99	1.93	4.71	4.71
Yellowstone County	B10	RM 314.15	25461.23	5-yr	1761.31	848.7	844.05	2.14	2.03	54.78	36.1	304.48	499.42	2.66	1.74	4.65	4.65
Yellowstone County	B10	RM 314.06	25326.45	5-yr	1761.31	848.66	843.63	1.55	1.5	10.66	7.8	455.22	670.65	2.49	1.81	5.04	5.04
Yellowstone County	B10	RM 313.98	25189.4	5-yr	1761.31	848.58	843.05	1.44	1.32	25.76	16.27	559.69	1004.17	2.12	1.33	5.53	5.53
Yellowstone County	B10	RM 313.83	24942.42	5-yr	1761.31	848.39	843.2	1.34	1.31	14.6	11.11	475.61	641.36	2.75	2.09	5.19	5.19
Yellowstone County	B10	RM 313.72	24768.08	5-yr	1761.31	848.26	842.35	1.59	1.4	16.07	8.14	330.48	769.48	3.26	1.64	5.91	5.91
Yellowstone County	B10	RM 313.66	24671.51	5-yr	1761.31	848.18	843.14	1.76	1.48	17.78	8.89	286.85	719.24	3.33	1.65	5.04	5.04
Yellowstone County	B10	RM 313.57	24513.04	5-yr	1761.31	848.09	842.47	1.75	1.48	18.68	9.41	303.74	752.5	3.16	1.58	5.62	5.62
Yellowstone County	B10	RM 313.47	24364.02	5-yr	1761.31	848.01	841.55	1.71	1.53	17.27	8.84	283.74	641.91	3.56	1.8	6.45	6.45
Yellowstone County	B10	RM 313.33	24143.26	5-yr	1761.31	847.72	842.65	2.32	2.03	42.54	18.27	182.23	502.28	4.07	1.73	5.07	5.07
Yellowstone County	B10	RM 313.18	23899.74	5-yr	1761.31	847.04	842.19	3.2	3.04	89.67	49.57	160.72	312.48	3.4	1.86	4.85	4.85
Yellowstone County	B10	RM 313.07	23728.15	5-yr	1761.31	846.8	842.62	2.89	2.73	45.46	30.01	161.09	262.22	3.75	2.46	4.18	4.18
Yellowstone County	B10	RM 312.98	23590.93	5-yr	1761.31	846.78	842.5	2.34	2.1	26.46	15	190.27	407.75	3.65	2.06	4.28	4.28
Yellowstone County	B10	RM 312.90	23455.11	5-yr	1761.31	846.71	842.38	2.08	1.91	32.47	22.17	199.47	371.23	3.64	2.48	4.33	4.33
Yellowstone County	B10	RM 312.75	23227.05	5-yr	1761.31	846.5	841.71	2.16	1.83	27.54	14.84	222.85	566.17	3.17	1.7	4.79	4.79
Yellowstone County	B10	RM 312.65	23058.61	5-yr	1761.31	846.38	841.61	1.93	1.68	24.43	14.43	272.62	653.92	2.73	1.61	4.77	4.77
Yellowstone County	B10	RM 312.53	22873.59	5-yr	1761.31	846.31	841.37	1.67	1.36	16.19	7.8	237.08	720.73	3.76	1.8	4.94	4.94
Yellowstone County	B10	RM 312.49	22797.96	5-yr	1761.31	846.21	841.34	1.99	1.55	21.91	9.71	201.61	686.09	3.77	1.66	4.87	4.87
Yellowstone County	B10	RM 312.39	22646.67	5-yr	1761.31	846.06	840.85	2.36	1.72	34.2	15.15	148.83	663.23	3.54	1.55	5.21	5.21
Yellowstone County	B10	RM 312.33	22536.68	5-yr	1761.31	845.89	840.82	2.62	1.87	42.73	19.1	139.02	582.88	3.67	1.61	5.07	5.07
Yellowstone County	B10	RM 312.22	22360.55	5-yr	1761.31	845.83	840.91	2.1	1.64	28.59	13.09	126.8	578.5	4.14	1.86	4.92	4.92
Yellowstone County	B10	RM 312.13	22230.65	5-yr	1761.31	845.79	840.94	1.54	1.36	16.66	11.33	349.95	631.41	3.03	2.06	4.85	4.85
Yellowstone County	B10	RM 312.04	22082.88	5-yr	1761.31	845.67	840.82	1.7	1.52	21.3	14.63	346.17	606.72	2.79	1.91	4.85	4.85
Yellowstone County	B10	RM 311.95	21934.61	5-yr	1761.31	845.53	840.79	1.76	1.57	21.93	13.4	350.12	658.15	2.79	1.7	4.74	4.74
Yellowstone County	B10	RM 311.89	21840.24	5-yr	1761.31	845.47	840.76	1.68	1.5	23.41	14.78	325.27	614.63	3.14	1.98	4.71	4.71
Yellowstone County	B10	RM 311.77	21651.91	5-yr	1761.31	845.34	840.18	1.77	1.53	20.92	10.55	225.72	734.48	4.27	2.14	5.16	5.16

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	5-yr	1761.31	845.16	839.85	2.3	1.82	33.6	15.15	150.64	890.41	4.69	2.07	5.31	5.31
Yellowstone County	B10	RM 311.58	21350.77	5-yr	1761.31	845	839.63	2.33	1.86	35.48	18.37	171.57	863.86	4.04	2.07	5.37	5.37
Yellowstone County	B10	RM 311.48	21191.11	5-yr	1761.31	844.89	839.42	2.15	1.8	27.46	15.1	228.87	910.59	3.4	1.85	5.47	5.47
Yellowstone County	B10	RM 311.37	21010.53	5-yr	1761.31	844.81	839.18	1.69	1.31	19.74	9.46	336.55	1096.56	2.83	1.35	5.63	5.63
Yellowstone County	B10	RM 311.27	20852.82	5-yr	1761.31	844.7	838.96	1.7	1.28	20.21	8.81	321.49	1117.89	2.93	1.26	5.74	5.74
Yellowstone County	B10	RM 311.19	20716.8	5-yr	1761.31	844.63	838.84	1.66	1.18	18.18	6.61	247.96	1086.43	3.83	1.37	5.79	5.79
Yellowstone County	B10	RM 311.09	20559.11	5-yr	1761.31	844.29	839.14	2.67	1.89	41.46	10.38	144.57	898.07	4.23	1.04	5.15	5.15
Yellowstone County	B10	RM 310.97	20364.78	5-yr	1761.31	844.17	839.45	2.35	1.7	33.91	9.69	170.62	895.83	4.11	1.16	4.72	4.72
Yellowstone County	B10	RM 310.87	20211.96	5-yr	1761.31	844.04	839.02	2.28	1.77	31.94	9.93	189.66	837.54	3.87	1.19	5.02	5.02
Yellowstone County	B10	RM 310.76	20019.23	5-yr	1761.31	843.67	839.18	2.92	2.39	46.18	12.65	141.81	667.28	4.13	1.1	4.49	4.49
Yellowstone County	B11	RM 310.67	19877.9	5-yr	1761.31	843.56	839.11	2.55	2.02	52.27	18	174	692.52	3.71	1.26	4.45	4.45
Yellowstone County	B11	RM 310.57	19727.96	5-yr	1761.31	843.38	839.08	2.39	1.85	48	15.95	193.18	809.6	3.58	1.18	4.29	4.29
Yellowstone County	B11	RM 310.48	19578.86	5-yr	1761.31	843.22	838.96	2.25	1.7	36.72	12.78	208.82	868.64	3.46	1.2	4.26	4.26
Yellowstone County	B11	RM 310.39	19437.53	5-yr	1761.31	843.17	838.54	1.89	1.42	16.29	7.65	259.66	833.07	3.2	1.49	4.63	4.63
Yellowstone County	B11	RM 310.31	19317.45	5-yr	1761.31	843.1	838.23	1.86	1.51	15.36	8.24	350.75	868.95	2.51	1.34	4.87	4.87
Yellowstone County	B11	RM 310.24	19187.47	5-yr	1761.31	843.01	838.23	1.51	1.33	36.22	20.91	461.89	1018.71	2.27	1.3	4.78	4.78
Yellowstone County	B11	RM 310.16	19069.04	5-yr	1761.31	842.83	837.93	1.42	1.33	33.64	24.64	557.95	863.62	2.1	1.54	4.9	4.9
Yellowstone County	B11	RM 310.09	18955.28	5-yr	1761.31	842.73	837.93	1.51	1.29	9.02	6.27	548.41	979.73	2.02	1.4	4.8	4.8
Yellowstone County	B11	RM 309.97	18765.62	5-yr	1761.31	842.67	837.59	1.06	0.98	13.42	8.72	601.54	1027.75	2.69	1.74	5.08	5.08
Yellowstone County	B11	RM 309.90	18643.48	5-yr	1761.31	842.6	837.5	1.27	1.14	6.59	4.87	624.64	971.38	2.15	1.59	5.1	5.1
Yellowstone County	B11	RM 309.82	18525.48	5-yr	1761.31	842.54	837.5	1.21	1.14	25.31	20.36	696.6	977.41	1.96	1.58	5.04	5.04
Yellowstone County	B11	RM 309.73	18379.74	5-yr	1761.31	842.38	837.35	1.06	1.05	18.51	15.06	800.49	1008.64	2.06	1.67	5.04	5.04
Yellowstone County	B11	RM 309.65	18253.83	5-yr	1761.31	842.31	837.38	0.87	0.86	11.22	9.99	876.08	1003.97	2.29	2.04	4.94	4.94
Yellowstone County	B11	RM 309.52	18029.98	5-yr	1761.31	842.14	836.68	1.08	1.07	18.29	17.09	816.46	884.63	1.99	1.86	5.46	5.46
Yellowstone County	B11	RM 309.39	17824.11	5-yr	1761.31	842.04	836.74	0.86	0.86	8.89	8.89	762.76	762.76	2.68	2.68	5.31	5.31
Yellowstone County	B11	RM 309.22	17557.23	5-yr	1761.31	841.89	836.07	1.38	1.29	11.56	8.74	333.79	482.19	3.76	2.83	5.83	5.83
Yellowstone County	B11	RM 309.06	17331.95	5-yr	1761.31	841.67	835.79	1.99	1.68	44.52	23.22	191.01	462.15	4.42	2.27	5.87	5.87
Yellowstone County	B11	RM 308.94	17142.36	5-yr	1761.31	841.02	835.4	3.34	2.78	72.09	24.43	121.56	461.57	4.17	1.37	5.62	5.62
Yellowstone County	B11	RM 308.83	16971.41	5-yr	1761.31	840.99	836.04	2.37	1.94	39.98	16.29	158.28	515.54	4.39	1.77	4.96	4.96
Yellowstone County	B11	RM 308.71	16778.65	5-yr	1761.31	840.95	835.91	1.84	1.55	15.25	7.85	251.14	614.24	3.63	1.85	5.03	5.03
Yellowstone County	B11	RM 308.62	16631.4	5-yr	1761.31	840.86	835.85	1.74	1.44	41.57	22.68	300.08	739.38	3.05	1.66	5	5
Yellowstone County	B11	RM 308.55	16518.64	5-yr	1761.31	840.67	835.85	1.77	1.53	43.2	24.66	368.88	803.5	2.53	1.44	4.82	4.82
Yellowstone County	B11	RM 308.43	16328.3	5-yr	1761.31	840.36	834.51	1.61	1.42	40.42	23.32	412.45	881.65	2.46	1.41	5.84	5.84
Yellowstone County	B11	RM 308.35	16192.95	5-yr	1761.31	840.19	834.88	1.52	1.29	24.97	13.38	402.5	952.65	2.69	1.43	5.32	5.32
Yellowstone County	B11	RM 308.24	16015.46	5-yr	1761.31	840.09	834.63	1.41	1.12	13.37	7.27	363.15	942.35	3.1	1.68	5.46	5.46
Yellowstone County	B11	RM 308.12	15826.82	5-yr	1761.31	840.03	834.63	1.31	1.08	11.19	6.38	382.83	900.97	3.21	1.82	5.39	5.39
Yellowstone County	B11	RM 308.02	15675.58	5-yr	1761.31	839.96	834.76	1.39	1.15	9.67	4.37	303.62	854.72	4.01	1.79	5.21	5.21
Yellowstone County	B11	RM 307.88	15434.86	5-yr	1761.31	839.56	834.45	2.95	2.16	54.89	15.56	112.75	702.88	4.21	1.16	5.11	5.11
Yellowstone County	B11	RM 307.77	15261.75	5-yr	1761.31	839.21	834.45	3.1	2.62	69.67	26.43	127.91	494.47	3.67	1.36	4.76	4.76
Yellowstone County	B11	RM 307.68	15125.28	5-yr	1761.31	839.08	834.85	2.55	2.08	45.2	20.72	158.09	502.8	3.73	1.69	4.23	4.23
Yellowstone County	B11	RM 307.60	14980.1	5-yr	1761.31	839.06	834.36	1.77	1.62	17.91	10.23	270.36	527.53	3.62	2.06	4.7	4.7
Yellowstone County	B11	RM 307.52	14873.7	5-yr	1761.31	838.91	834.12	2.14	1.94	28.9	14.57	253.63	572	3.18	1.59	4.79	4.79
Yellowstone County	B11	RM 307.46	14779.11	5-yr	1761.31	838.77	833.6	2.15	1.96	56.53	33.68	311.78	592.23	2.57	1.52	5.18	5.18
Yellowstone County	B11	RM 307.39	14664.34	5-yr	1761.31	838.64	833.63	2.11	1.87	15.82	10.66	365	629.61	2.23	1.49	5.01	5.01
Yellowstone County	B11	RM 307.30	14517.89	5-yr	1761.31	838.47	833.81	2.03	1.87	53.41	39.18	406.71	645.03	2	1.46	4.66	4.66
Yellowstone County	B11	RM 307.22	14385.45	5-yr	1761.31	838.17	833.87	1.96	1.82	40.9	28.85	395.18	647.02	2.12	1.49	4.3	4.3
Yellowstone County	B11	RM 307.14	14262.57	5-yr	1761.31	838.01	833.51	1.83	1.65	28.35	16.56	334.95	685.17	2.68	1.55	4.5	4.5
Yellowstone County	B11	RM 307.08	14166.72	5-yr	1761.31	837.96	833.11	1.64	1.47	16.13	10.84	348.63	631.09	2.84	1.9	4.85	4.85
Yellowstone County	B11	RM 307.01	14050.92	5-yr	1761.31	837.88	832.65	1.7	1.54	13.83	9.67	372.19	664.01	2.48	1.72	5.23	5.23
Yellowstone County	B11	RM 306.95	13949.23	5-yr	1761.31	837.78	832.35	1.89	1.57	22.7	14.69	324.45	708.81	2.46	1.58	5.43	5.43
Yellowstone County	B11	RM 306.90	13869.87	5-yr	1761.31	837.69	832.56	1.91	1.58	25.02	17.96	345.83	636.44	2.45	1.75	5.13	5.13
Yellowstone County	B11	RM 306.82	13726.64	5-yr	1761.31	837.57	832.62	1.79	1.5	21.95	13.98	361.21	724.42	2.55	1.62	4.95	4.95
Yellowstone County	B11	RM 306.72	13574.53	5-yr	1761.31	837.4	831.8	2.07	1.56	26.8	11.82	222.2	817.92	3.17	1.38	5.6	5.6
Yellowstone County	B11	RM 306.62	13414.11	5-yr	1761.31	837.2	832.77	2.24	1.84	39.81	16.85	214.07	753.39	3.04	1.27	4.43	4.43
Yellowstone County	B11	RM 306.52	13251.36	5-yr	1761.31	836.82	832.87	2.88	2.28	44.5	15.39	147.79	623.58	3.64	1.24	3.96	3.96
Yellowstone County	B11	RM 306.42	13099.73	5-yr	1761.31	836.48	832.74	3.31	2.65	58.93	21.15	130.63	556.55	3.39	1.19	3.74	3.74
Yellowstone County	B11	RM 306.34	12958.96	5-yr	1761.31	836.46	832.84	2.21	1.88	32.75	16.19	235.87	678.6	2.83	1.39	3.63	3.63
Yellowstone County	B11	RM 306.25	12825.95	5-yr	1761.31	836.27	832.35	2.27	2.04	34.15	19.57	308.76	690.43	2.19	1.25	3.92	3.92
Yellowstone County	B11	RM 306.16	12673.7	5-yr	1761.31	836.06	832.41	2.2	1.97	29.68	18.69	290.46	596.65	2.4	1.5	3.65	3.65
Yellowstone County	B11	RM 306.11	12592.39	5-yr	1761.31	835.95	832.17	2.22	1.96	37.09	21.99	246.66	557.76	2.74	1.61	3.79	3.79
Yellowstone County	B11	RM 306.03	12457.47	5-yr	1761.31	835.81	831.25	2	1.77	26.38	17.29	350.5	736.39	2.07	1.35	4.56	4.56

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	5-yr	1761.31	835.56	831.25	2.24	2.04	34.36	25.37	325.71	595.46	1.98	1.45	4.31	4.31
Yellowstone County	B11	RM 305.84	12159.82	5-yr	1761.31	835.32	831.1	2.25	2.02	33.66	24.14	250.86	501.23	2.44	1.74	4.23	4.23
Yellowstone County	B11	RM 305.74	11989.73	5-yr	1761.31	835.06	830.64	2.38	2.09	39.54	21.91	191.28	476.02	3.23	1.77	4.42	4.42
Yellowstone County	B11	RM 305.67	11883.31	5-yr	1761.31	834.86	830.43	2.69	2.23	43.65	20.49	157.2	513.85	3.33	1.54	4.43	4.43
Yellowstone County	B11	RM 305.60	11764.11	5-yr	1761.31	834.91	830.18	1.54	1.44	13.67	8.59	148.62	681.07	2.91	1.8	4.73	4.73
Yellowstone County	B11	RM 305.52	11651.48	5-yr	1761.31	834.71	830.18	2.26	1.84	30.51	15.98	150.56	689.3	2.69	1.39	4.53	4.53
Yellowstone County	B11	RM 305.44	11514.64	5-yr	1761.31	834.65	830.43	1.78	1.33	14.66	9.45	155.69	723.43	2.86	1.82	4.23	4.23
Yellowstone County	B11	RM 305.40	11441.77	5-yr	1761.31	834.53	830.61	1.87	1.65	13.71	12.61	236.69	543.98	2.13	1.96	3.92	3.92
Yellowstone County	B11	RM 305.32	11312.15	5-yr	1761.31	834.43	830.61	2.05	1.63	25.9	11.35	141.59	822.93	3.05	1.32	3.82	3.82
Yellowstone County	B11	RM 305.24	11186.22	5-yr	1761.31	834.43	830.43	1.21	1.02	10.72	6.26	155.92	1191.03	2.52	1.45	4	4
Yellowstone County	B11	RM 305.06	10905.09	5-yr	1761.31	834.33	830.15	1.24	0.94	7.34	5.39	301.43	1192.9	2.15	1.57	4.18	4.18
Yellowstone County	B11	RM 304.71	10460.6	5-yr	1761.31	834.19	828.96	1.26	1.18	10.95	8.5	391.79	829.94	2.34	1.8	5.22	5.22
Yellowstone County	B11	RM 304.62	10332.33	5-yr	1761.31	834.16	829.09	1.11	1.01	7.32	4.6	205.94	761.96	3.67	2.28	5.08	5.08
Yellowstone County	B11	RM 304.50	10132.63	5-yr	1761.31	833.89	829.09	2.28	2.07	44.8	21.32	122.2	445.67	4.1	1.91	4.81	4.81
Yellowstone County	B11	RM 304.42	10011.11	5-yr	1761.31	833.8	829.18	1.94	1.87	32.18	18.95	151.35	422.27	3.83	2.23	4.63	4.63
Yellowstone County	B11	RM 304.34	9873.393	5-yr	1761.31	833.71	828.78	1.88	1.78	17.74	12.81	262.49	392.07	3.51	2.53	4.93	4.93
Yellowstone County	B11	RM 304.25	9735.197	5-yr	1761.31	833.55	828.39	2.21	2	33.83	15.5	199.47	497.51	3.91	1.77	5.16	5.16
Yellowstone County	B11	RM 304.18	9615.178	5-yr	1761.31	833.47	828.54	2.18	2	21.42	11.06	215.48	467.44	3.69	1.89	4.93	4.93
Yellowstone County	B11	RM 304.09	9478.266	5-yr	1761.31	833.35	828.6	2.28	2.08	33.16	16.11	182.27	425.25	4.14	1.99	4.75	4.75
Yellowstone County	B11	RM 304.00	9326.206	5-yr	1761.31	833.25	828.39	2.13	1.83	31.13	12.5	190.53	582.02	4.22	1.68	4.86	4.86
Yellowstone County	B11	RM 303.91	9177.479	5-yr	1761.31	833.18	828.14	1.87	1.44	26.45	10.03	213.89	857.49	4.03	1.51	5.04	5.04
Yellowstone County	B11	RM 303.78	8973.508	5-yr	1761.31	832.93	827.93	2.33	1.82	31.98	9.59	158.92	735.13	4.49	1.31	5	5
Yellowstone County	B11	RM 303.65	8773.522	5-yr	1761.31	832.78	827.9	2.28	1.78	39.95	16.82	170.04	578.07	4.12	1.71	4.88	4.88
Yellowstone County	B11	RM 303.55	8608.195	5-yr	1761.31	832.68	827.65	2.06	1.76	18.85	8.62	248.05	691.49	3.29	1.49	5.02	5.02
Yellowstone County	B11	RM 303.43	8422.329	5-yr	1761.31	832.57	827.87	1.74	1.54	34.99	15.07	329.24	947.79	2.83	1.21	4.7	4.7
Yellowstone County	B11	RM 303.34	8276.308	5-yr	1761.31	832.52	826.92	1.39	1.16	11.01	6.31	322.84	759.72	3.53	2.01	5.6	5.6
Yellowstone County	B11	RM 303.26	8138.725	5-yr	1761.31	832.34	826.98	1.89	1.8	41.43	22.02	303.56	611.19	3.03	1.6	5.36	5.36
Yellowstone County	B11	RM 303.18	8018.762	5-yr	1761.31	832.15	826.22	1.93	1.85	47.03	27.92	307.25	550.24	2.93	1.73	5.93	5.93
Yellowstone County	B11	RM 303.09	7876.674	5-yr	1761.31	831.9	825.43	1.93	1.88	46.18	31.29	336.33	517.92	2.69	1.81	6.47	6.47
Yellowstone County	B11	RM 302.99	7711.603	5-yr	1761.31	831.68	826.22	1.76	1.56	34.58	17.52	336.21	792.37	2.82	1.42	5.46	5.46
Yellowstone County	B11	RM 302.89	7556.419	5-yr	1761.31	831.45	825.73	1.92	1.79	36.7	20.12	283.89	574.65	3.15	1.71	5.72	5.72
Yellowstone County	B11	RM 302.81	7423.411	5-yr	1761.31	831.25	825.86	2.17	2.06	36.86	17.42	205.45	469.35	3.91	1.82	5.4	5.4
Yellowstone County	B11	RM 302.70	7257.14	5-yr	1761.31	831.14	826.01	2.09	1.91	24.63	10.88	184.02	466.08	4.52	1.97	5.13	5.13
Yellowstone County	B12	RM 302.56	7050.708	5-yr	1761.31	830.72	825.25	2.86	2.86	45.56	45.56	165.75	312.19	3.77	3.77	5.47	5.47
Yellowstone County		RM 300.55	7034	5-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	5-yr	1761.31	830.66	825.95	2.75	2.75	40	40	164.43	185.03	4.1	4.1	4.71	4.71
Yellowstone County	B12	RM 302.49	6918.549	5-yr	1761.31	830.58	825.92	2.63	2.59	40.12	29.81	169.33	295.65	3.94	2.92	4.66	4.66
Yellowstone County	B12	RM 302.41	6794.522	5-yr	1761.31	830.49	825.64	2.55	2.32	29.27	20.55	161.6	410.81	3.82	2.66	4.85	4.85
Yellowstone County	B12	RM 302.34	6674.634	5-yr	1761.31	830.4	825.76	2.39	2.17	41.58	26.62	212.51	515.94	3.18	2.03	4.63	4.63
Yellowstone County	B12	RM 302.22	6485.378	5-yr	1761.31	830.3	825.76	1.8	1.58	22.03	16.23	235.76	529.46	2.94	2.15	4.53	4.53
Yellowstone County	B12	RM 302.14	6360.047	5-yr	1761.31	830.05	825.76	2.45	1.98	39.35	21.46	177.34	505.25	3.25	1.76	4.28	4.28
Yellowstone County	B12	RM 302.08	6267.13	5-yr	1761.31	829.98	825.79	2.2	1.98	21.44	15.19	261.76	465.43	2.7	1.91	4.18	4.18
Yellowstone County	B12	RM 301.98	6100.949	5-yr	1761.31	829.92	825.34	1.76	1.6	21.92	12.37	256.34	590.3	3.32	1.86	4.58	4.58
Yellowstone County	B12	RM 301.88	5944.005	5-yr	1761.31	829.81	824.7	1.74	1.53	19.5	11.12	307.5	701.43	2.9	1.64	5.11	5.11
Yellowstone County	B12	RM 301.79	5801.18	5-yr	1761.31	829.75	824.36	1.61	1.44	12.16	8.41	369.92	665	2.67	1.84	5.39	5.39
Yellowstone County	B12	RM 301.72	5685.105	5-yr	1761.31	829.68	824.85	1.65	1.48	18.03	11.7	328.47	650.54	2.82	1.82	4.83	4.83
Yellowstone County	B12	RM 301.65	5569.191	5-yr	1761.31	829.55	824.61	1.87	1.69	25.39	15.21	311.48	663.53	2.63	1.57	4.95	4.95
Yellowstone County	B12	RM 301.59	5465.51	5-yr	1761.31	829.42	824.42	1.94	1.84	29.19	18.1	318.53	620.58	2.5	1.54	5	5
Yellowstone County	B12	RM 301.53	5366.723	5-yr	1761.31	829.31	824.12	1.76	1.72	32.94	22.52	362.04	630.7	2.39	1.62	5.2	5.2
Yellowstone County	B12	RM 301.47	5270.902	5-yr	1761.31	829.18	824.12	1.8	1.73	33.02	23.2	351.06	591.32	2.46	1.72	5.06	5.06
Yellowstone County	B12	RM 301.39	5140.04	5-yr	1761.31	829.11	824.36	1.4	1.28	18.15	12.76	345.61	671.83	2.93	2.05	4.75	4.75
Yellowstone County	B12	RM 301.33	5044.575	5-yr	1761.31	829.03	824.12	1.57	1.46	16.79	10.22	330.42	643.66	3.09	1.87	4.91	4.91
Yellowstone County	B12	RM 301.24	4906.408	5-yr	1761.31	828.92	823.87	1.75	1.6	18.77	11.8	312.55	594.07	2.96	1.85	5.04	5.04
Yellowstone County	B12	RM 301.18	4802.631	5-yr	1761.31	828.79	823.17	1.98	1.79	25.13	18.05	312.32	545.72	2.53	1.8	5.62	5.62
Yellowstone County	B12	RM 301.12	4698.913	5-yr	1761.31	828.66	823.81	2.04	1.94	26.18	18.3	308.22	479.18	2.72	1.89	4.85	4.85
Yellowstone County	B12	RM 301.07	4611.142	5-yr	1761.31	828.61	824	1.91	1.8	21.71	13.92	284.48	491.29	3.14	2	4.61	4.61
Yellowstone County	B12	RM 301.02	4531.484	5-yr	1761.31	828.54	823.81	1.99	1.86	17.36	11.63	260.11	434.89	3.26	2.18	4.73	4.73
Yellowstone County	B12	RM 300.97	4453.011	5-yr	1761.31	828.39	823.9	2.43	2.23	25.67	17.16	196.12	340.68	3.49	2.32	4.48	4.48
Yellowstone County	B12	RM 300.89	4332.618	5-yr	1761.31	828.26	823.66	2.49	2.35	42.38	25.49	198.89	384.36	3.26	1.95	4.6	4.6
Yellowstone County	B12	RM 300.83	4232.362	5-yr	1761.31	828.07	823.78	2.7	2.44	46.98	26.74	173.21	398.06	3.21	1.82	4.29	4.29
Yellowstone County	B12	RM 300.77	4151.049	5-yr	1761.31	827.99	823.75	2.45	2.24	44.41	29.18	175.32	357.47	3.38	2.2	4.24	4.24

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	5-yr	1761.31	827.91	823.63	2.09	1.79	21.28	11.53	205.49	514.34	3.56	1.91	4.28	4.28
Yellowstone County	B12	RM 300.55	3793.957	5-yr	1761.31	827.79	822.93	1.81	1.54	24.43	14.9	263.47	638.57	2.95	1.79	4.86	4.86
Yellowstone County	B12	RM 300.45	3633.035	5-yr	1761.31	827.64	822.53	1.47	1.48	28.11	20.14	335.99	677.82	2.46	1.76	5.1	5.1
Yellowstone County	B12	RM 300.35	3461.833	5-yr	1761.31	827.39	822.66	1.98	1.61	14.93	9.6	389.33	791.59	2.15	1.38	4.73	4.73
Yellowstone County	B12	RM 300.24	3286.175	5-yr	1761.31	827.19	822.47	1.9	1.68	46.73	33.13	421.27	730.87	2.03	1.43	4.72	4.72
Yellowstone County	B12	RM 300.15	3141.724	5-yr	1761.31	826.85	822.47	1.82	1.71	43.69	36.7	481.64	640.55	1.92	1.61	4.38	4.38
Yellowstone County	B12	RM 300.10	3054.752	5-yr	1761.31	826.73	822.35	1.96	1.72	13.28	10.53	435.73	681.64	1.9	1.51	4.37	4.37
Yellowstone County	B12	RM 300.00	2887.728	5-yr	1761.31	826.56	821.22	1.79	1.71	41.15	34.82	438.88	594.79	2.05	1.73	5.33	5.33
Yellowstone County	B12	RM 299.91	2736.431	5-yr	1761.31	826.38	821.5	1.7	1.64	19.71	15.43	350.09	590.76	2.34	1.82	4.89	4.89
Yellowstone County	B12	RM 299.83	2614.069	5-yr	1761.31	826.18	821.41	1.79	1.9	32.68	29.63	383.98	545.37	1.88	1.7	4.77	4.77
Yellowstone County	B12	RM 299.72	2484.158	5-yr	1761.31	826.03	820.89	1.78	1.71	25.64	21.32	392.94	495.7	2.5	2.07	5.14	5.14
Yellowstone County	B12	RM 299.59	2312.328	5-yr	1761.31	825.78	821.13	2.26	1.84	28.51	14.37	219.76	651.61	2.94	1.47	4.65	4.65
Yellowstone County	B12	RM 299.48	2160.343	5-yr	1761.31	825.53	821.13	2.8	2.02	35.42	12.99	138.95	691.73	3.49	1.26	4.39	4.39
Yellowstone County	B12	RM 299.38	1995.229	5-yr	1761.31	825.39	821.13	2.45	1.74	54.88	22.65	132.85	718.16	3.45	1.41	4.26	4.26
Yellowstone County	B12	RM 299.31	1874.433	5-yr	1761.31	825.14	821.22	2.74	2.06	35.93	15.09	139.07	612.36	3.37	1.4	3.91	3.91
Yellowstone County	B12	RM 299.22	1738.666	5-yr	1761.31	824.97	821.16	2.79	1.94	44.01	15.72	127.52	756.25	3.49	1.22	3.81	3.81
Yellowstone County	B12	RM 299.15	1613.992	5-yr	1761.31	824.93	820.95	2.18	1.32	27.11	9.79	154.73	1144.8	3.28	1.17	3.99	3.99
Yellowstone County	B12	RM 299.06	1473.748	5-yr	1761.31	824.88	820.64	1.94	1.19	25.46	8.63	116.25	1211.38	3.72	1.22	4.23	4.23
Yellowstone County	B12	RM 298.99	1360.532	5-yr	1761.31	824.79	820.46	1.99	1.31	30.48	9.97	101.17	1152.12	3.68	1.16	4.33	4.33
Yellowstone County	B12	RM 298.93	1269.876	5-yr	1761.31	824.72	820.46	1.89	1.32	30.71	10.08	107.13	1196.79	3.5	1.11	4.26	4.26
Yellowstone County	B12	RM 298.88	1195.725	5-yr	1761.31	824.64	820.43	1.89	1.32	28.54	9.68	118.64	1210.68	3.36	1.1	4.21	4.21
Yellowstone County	B12	RM 298.82	1096.849	5-yr	1761.31	824.44	820.58	2.49	1.58	33.92	13.3	152.03	1030.2	2.81	1.08	3.86	3.86
Yellowstone County	B12	RM 298.77	1018.392	5-yr	1761.31	824.37	820.4	2.2	1.48	29.24	12.63	183.86	1023.85	2.73	1.16	3.97	3.97
Yellowstone County	B12	RM 298.67	854.844	5-yr	1761.31	824.28	819.39	1.98	1.42	16.52	10.59	240.34	911.91	2.14	1.36	4.88	4.88
Yellowstone County	B12	RM 298.59	724.135	5-yr	1761.31	824.18	819.55	1.69	1.5	20.85	13.16	269.51	939.71	2	1.25	4.63	4.63
Yellowstone County	B12	RM 298.49	579.164	5-yr	1761.31	824.07	819.27	1.8	1.35	14.9	7.22	214.03	1043.42	2.63	1.25	4.8	4.8
Yellowstone County	B12	RM 298.42	469.573	5-yr	1761.31	823.98	819.27	1.89	1.38	26.52	10.32	176.57	1101.55	3.03	1.16	4.71	4.71
Yellowstone County	B12	RM 298.35	368.049	5-yr	1761.31	823.83	819.97	2.24	1.56	28.69	8.69	147.33	1074.31	3.53	1.05	3.85	3.85
Yellowstone County	B12	RM 298.30	290.003	5-yr	1761.31	823.81	819.82	1.92	1.27	17.69	7.2	197.73	1146	3	1.21	3.99	3.99
Yellowstone County	B12	RM 298.26	211.35	5-yr	1761.31	823.74	819.82	1.93	1.46	23.59	10.37	219.35	1045.36	2.65	1.15	3.92	3.92
Yellowstone County	B12	RM 298.19	83.499	5-yr	1761.31	823.59	819.49	2.18	1.69	22.27	10.57	179.99	818.38	2.71	1.27	4.1	4.1

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	5-yr	1744.3	823.45	820.43	1.62	1.31	14.54	8.09	194.8	1018.5	2.76	1.52	3.02	3.02
Treasure County	C1	RM 297.89	61639	5-yr	1744.3	823.28	820.07	1.57	1.36	14.41	10.96	358.64	791.92	2.14	1.62	3.22	3.22
Treasure County	C1	RM 297.76	61392	5-yr	1744.3	823.11	819.93	1.64	1.47	17.97	13.58	331	718.61	2.18	1.65	3.18	3.18
Treasure County	C1	RM 297.62	61179	5-yr	1744.3	823.02	819.69	1.41	1.23	10.33	7.87	290.46	1081.37	2.4	1.82	3.33	3.33
Treasure County	C1	RM 297.5	60985	5-yr	1744.3	822.8	819.39	2.17	1.64	24.9	11.39	159.01	1125.8	3.12	1.41	3.41	3.41
Treasure County	C1	RM 297.36	60767	5-yr	1744.3	822.62	819.14	2.11	1.64	23.92	12.96	169.82	1026.86	2.94	1.58	3.48	3.48
Treasure County	C1	RM 297.22	60535	5-yr	1744.3	822.46	819	1.94	1.63	20.26	13.19	149.14	917.78	2.97	1.91	3.47	3.47
Treasure County	C1	RM 297.08	60314	5-yr	1744.3	822.31	818.76	1.92	1.64	19.66	13.37	193.5	980.21	3.08	2.08	3.55	3.55
Treasure County	C1	RM 296.94	60093	5-yr	1744.3	822.07	818.42	2.24	1.91	26.95	15.08	177.08	957.3	2.95	1.64	3.65	3.65
Treasure County	C1	RM 296.79	59847	5-yr	1744.3	822.02	817.97	1.46	1.32	11.55	7.55	246.81	837.04	2.87	1.86	4.05	4.05
Treasure County	C1	RM 296.64	59608	5-yr	1744.3	821.93	817.9	1.57	1.37	12.84	7.71	174.87	935.87	3.12	1.86	4.03	4.03
Treasure County	C1	RM 296.51	59386	5-yr	1744.3	821.87	817.8	1.23	1.19	8.16	6.59	477.13	897.67	2.94	2.37	4.07	4.07
Treasure County	C1	RM 296.33	59113	5-yr	1744.3	821.77	817.52	1.4	1.35	9.84	7.77	335.4	877.47	3.69	2.9	4.25	4.25
Treasure County	C1	RM 296.16	58839	5-yr	1744.3	820.78	817.46	4.08	3.84	88.68	69.81	136.91	242.54	3.09	2.42	3.32	3.32
Treasure County	C1	RM 296.01	58583	5-yr	1744.3	820.69	817.45	2.43	2.43	32.59	32.52	258.81	488.46	2.78	2.77	3.24	3.24
Treasure County	C1	RM 295.83	58296	5-yr	1744.3	820.49	817.4	1.8	1.79	16.13	15.98	534.79	540.07	1.82	1.8	3.09	3.09
Treasure County	C1	RM 295.66	58032	5-yr	1744.3	820.13	817.27	2.16	2.16	20.13	20.13	474.47	474.47	1.71	1.71	2.86	2.86
Treasure County	C1	RM 295.52	57800	5-yr	1744.3	820.05	816.19	1.46	1.46	10.16	10.16	555.91	555.91	2.15	2.15	3.86	3.86
Treasure County	C1	RM 295.31	57474	5-yr	1744.3	819.95	815.61	1.26	1.22	6.99	6.12	539.52	662.45	2.47	2.16	4.34	4.34
Treasure County	C1	RM 295.13	57174	5-yr	1744.3	819.8	815.57	1.56	1.42	13.38	7.93	358.46	709.83	2.93	1.73	4.23	4.23
Treasure County	C1	RM 294.94	56877	5-yr	1744.3	819.39	815.46	2.55	2.25	32.63	14.93	188.69	514.79	3.32	1.51	3.93	3.93
Treasure County	C1	RM 294.76	56587	5-yr	1744.3	819.18	815.45	2.18	2	24.16	16.11	249.89	509.1	3.02	2.01	3.73	3.73
Treasure County	C1	RM 294.55	56261	5-yr	1744.3	818.96	815.36	2.11	1.78	23.38	13.66	191.81	571.11	3.21	1.86	3.6	3.6
Treasure County	C1	RM 294.38	55980	5-yr	1744.3	818.79	815.07	1.85	1.72	18.99	13.32	226.34	676.52	2.68	1.87	3.73	3.73
Treasure County	C1	RM 294.21	55714	5-yr	1744.3	818.55	814.88	2.17	1.8	24.59	12.79	199.03	732.21	3.21	1.66	3.67	3.67
Treasure County	C1	RM 294.02	55401	5-yr	1744.3	818.35	814.59	2	1.77	19.08	12.23	231.67	1026.29	2.66	1.69	3.76	3.76
Treasure County	C1	RM 293.83	55100	5-yr	1744.3	818.2	814.3	1.77	1.56	14.17	11.72	274.53	1195.67	2.54	2.1	3.9	3.9
Treasure County	C1	RM 293.63	54777	5-yr	1744.3	818.09	813.55	1.5	1.49	10.45	9.52	325	1451.8	3.59	3.26	4.54	4.54
Treasure County	C1	RM 293.43	54432	5-yr	1744.3	817.79	813.29	2.23	2.03	24.65	10.42	200.78	1475.25	3.84	1.61	4.5	4.5
Treasure County	C1	RM 293.26	54152	5-yr	1744.3	817.5	813.24	2.47	2.1	28.79	12.62	246.84	1611.48	2.78	1.21	4.27	4.27
Treasure County	C1	RM 293.07	53839	5-yr	1744.3	817.2	813.24	2.32	1.56	29.87	13.45	241.79	1587.92	2.68	1.2	3.97	3.97
Treasure County	C1	RM 292.83	53458	5-yr	1744.3	817.1	813.1	1.36	1.07	10.01	5.37	379.6	1707.54	2.7	1.45	4	4
Treasure County	C1	RM 292.6	53082	5-yr	1744.3	816.89	812.6	1.77	1.44	15.76	7.96	238.84	781.75	3.62	1.83	4.29	4.29
Treasure County	C2	RM 292.32	52612	5-yr	1744.3	816.69	811.76	1.89	1.29	15.9	7.62	207.17	769.59	3.7	1.75	4.93	4.93
Treasure County	C2	RM 292.09	52256	5-yr	1744.3	816.57	811.6	1.89	1.42	16.05	8.62	173.49	589.11	3.95	2.09	4.97	4.97
Treasure County	C2	RM 291.9	51956	5-yr	1744.3	816.4	811.55	1.91	1.56	19.02	11.08	238.08	885.34	3.24	1.87	4.85	4.85
Treasure County	C2	RM 291.71	51639	5-yr	1744.3	815.82	811.5	2.8	2.41	62.75	50.95	241.03	385.53	2.32	1.88	4.32	4.32
Treasure County	C2	RM 291.52	51333	5-yr	1744.3	815.56	811.46	2.11	1.67	22.52	12.28	213.1	556.67	3.56	1.93	4.1	4.1
Treasure County	C2	RM 291.33	51042	5-yr	1744.3	815.31	811.46	2.22	2	26.32	16.64	230.23	453.99	3.06	1.92	3.86	3.86
Treasure County	C2	RM 291.15	50747	5-yr	1744.3	815.26	811.4	1.47	1.32	11.01	7.95	294.96	533.17	3.51	2.52	3.86	3.86
Treasure County	C2	RM 290.94	50437	5-yr	1744.3	815.07	811.31	1.82	1.42	18	9.94	259.99	774.36	2.9	1.59	3.76	3.76
Treasure County	C2	RM 290.78	50179	5-yr	1744.3	814.94	810.97	1.58	1.32	12.57	8.71	389.17	797.37	2.41	1.66	3.97	3.97
Treasure County	C2	RM 290.6	49891	5-yr	1744.3	814.85	810.54	1.23	1.15	8.14	7	473.72	597.89	2.94	2.53	4.32	4.32
Treasure County	C2	RM 290.43	49607	5-yr	1744.3	814.63	810.13	1.92	1.75	18.38	11.53	273.61	570.26	3	1.87	4.5	4.5
Treasure County	C2	RM 290.23	49287	5-yr	1744.3	814.11	810.07	2.86	2.53	40.55	20.7	150.95	357.53	3.82	1.93	4.04	4.04
Treasure County	C2	RM 290.04	48976	5-yr	1744.3	814.02	810.04	1.99	1.75	19.53	10.92	209.37	476.68	3.81	2.11	3.97	3.97
Treasure County	C2	RM 289.85	48667	5-yr	1744.3	813.89	809.87	1.61	1.48	13.99	11.52	358.45	636.51	2.71	2.23	4.02	4.02
Treasure County	C2	RM 289.67	48372	5-yr	1744.3	813.7	809.87	1.69	1.64	14.29	10.88	396.89	628.25	2.58	1.96	3.83	3.83
Treasure County	C2	RM 289.46	48067	5-yr	1744.3	813.59	809.56	1.44	1.34	10.75	7.68	375.79	999.83	3.13	2.23	4.03	4.03
Treasure County	C2	RM 289.27	47769	5-yr	1744.3	813.36	809.32	1.92	1.72	20.1	10.9	318.38	685.28	2.79	1.51	4.04	4.04
Treasure County	C2	RM 289.11	47515	5-yr	1744.3	813.2	809	1.95	1.7	18.69	7.85	228.59	678.97	3.83	1.6	4.19	4.19
Treasure County	C2	RM 288.94	47232	5-yr	1744.3	812.99	808.59	2.21	1.81	23.49	8.36	182.19	654.79	4.19	1.47	4.4	4.4
Treasure County	C2	RM 288.76	46939	5-yr	1744.3	812.86	808.33	1.99	1.45	19.89	7.1	217.33	936.43	3.7	1.3	4.53	4.53
Treasure County	C2	RM 288.55	46613	5-yr	1744.3	812.44	808.24	2.56	2.34	35.17	18.71	223.5	470.24	3	1.58	4.2	4.2
Treasure County	C2	RM 288.36	46302	5-yr	1744.3	812.37	807.91	1.81	1.55	15.55	5.64	218.27	727.6	4.31	1.54	4.46	4.46
Treasure County	C2	RM 288.18	46008	5-yr	1744.3	812.2	807.77	1.97	1.7	19.86	8.72	242.43	717.27	3.42	1.49	4.44	4.44
Treasure County	C2	RM 287.99	45713	5-yr	1744.3	812.06	807.58	1.86	1.56	16.14	6.24	235.76	1373.53	3.47	1.33	4.48	4.48
Treasure County	C2	RM 287.81	45421	5-yr	1744.3	811.96	807.25	1.71	1.43	14.64	6.8	229.88	728.71	3.63	1.67	4.71	4.71
Treasure County	C2	RM 287.62	45112	5-yr	1744.3	811.55	807.19	2.74	2.22	36.57	10.19	136.4	713.99	4.03	1.1	4.36	4.36
Treasure County	C2	RM 287.42	44789	5-yr	1744.3	811.27	807.15	2.62	2.11	34.28	14.13	158.25	551.17	3.73	1.52	4.12	4.12

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	5-yr	1744.3	811.17	806.81	1.63	1.53	15.02	9.68	419.28	701.73	2.52	1.62	4.36	4.36
Treasure County	C2	RM 287.06	44222	5-yr	1744.3	811.05	806.77	1.41	1.35	11.46	8.91	512.68	701.15	2.37	1.84	4.28	4.28
Treasure County	C2	RM 286.9	43958	5-yr	1744.3	810.88	806.52	1.7	1.57	14.5	8.39	273.36	526.22	3.67	2.12	4.36	4.36
Treasure County	C2	RM 286.72	43671	5-yr	1744.3	810.56	802.22	2.49	2.36	27.11	12.7	121.79	552.32	5.71	2.62	8.34	8.34
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	5-yr	1744.3	810.53	802.22	2.55	2.49	28.36	16.51	121.63	525.44	5.62	3.22	8.31	8.31
Treasure County	C3	RM 286.58	43448	5-yr	1744.3	810.41	806.32	2.49	2.1	30.71	16.94	174.76	716.08	3.85	2.11	4.09	4.09
Treasure County	C3	RM 286.51	43344	5-yr	1744.3	810.38	806.32	2.22	2	24.45	19	201.61	787.99	3.77	2.92	4.06	4.06
Treasure County	C3	RM 286.46	43257	5-yr	1744.3	810.33	804.36	2.16	1.95	22.75	18.48	194.69	641.66	4	3.24	5.97	5.97
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	5-yr	1744.3	810.27	804.36	2.19	2.01	23.63	18.73	201.41	643.5	3.89	3.08	5.91	5.91
Treasure County	C3	RM 286.37	43117	5-yr	1744.3	810.22	806.17	2.08	1.92	22.66	18.8	299.7	1199.56	3.21	2.67	4.05	4.05
Treasure County	C3	RM 286.26	42931	5-yr	1744.3	809.95	806.17	2.38	2.01	51.8	28.27	215.25	971.42	2.94	1.59	3.79	3.79
Treasure County	C3	RM 286.06	42624	5-yr	1744.3	809.79	806.08	1.62	1.26	13.81	6.11	354.24	1458.05	2.86	1.26	3.71	3.71
Treasure County	C3	RM 285.81	42213	5-yr	1744.3	809.57	805.78	1.88	1.26	16.23	6.98	216.22	2181.36	2.31	0.98	3.78	3.78
Treasure County	C3	RM 285.56	41812	5-yr	1744.3	809.39	805.34	1.58	1.09	12.32	3.22	234.82	2415.4	3.83	0.99	4.05	4.05
Treasure County	C3	RM 285.23	41280	5-yr	1744.3	809.14	805.17	1.91	1.06	19.54	5.21	152.01	2522.85	3.06	0.8	3.97	3.97
Treasure County	C3	RM 284.69	40395	5-yr	1744.3	808.51	804.85	2.44	1.97	34.29	13.52	156.06	1059.86	2.41	0.94	3.66	3.66
Treasure County	C3	RM 284.26	39705	5-yr	1744.3	808.18	804.6	1.56	1.38	13.75	8.35	347.88	802.64	2.61	1.59	3.58	3.58
Treasure County	C3	RM 283.96	39199	5-yr	1744.3	807.9	804.3	1.81	1.34	17.95	6.46	241.13	1447.71	2.85	1.02	3.59	3.59
Treasure County	C3	RM 283.69	38766	5-yr	1744.3	807.72	803.9	1.71	1.13	14.88	4.45	184.07	1758.26	3.55	1.05	3.82	3.82
Treasure County	C3	RM 283.35	38229	5-yr	1744.3	807.56	803.42	1.48	0.92	11.19	3.93	274.36	1978.1	3.09	1.07	4.14	4.14
Treasure County	C3	RM 283.05	37749	5-yr	1744.3	807.19	803.32	2.21	1.4	25.63	5.72	189.24	1916.88	3.17	0.7	3.87	3.87
Treasure County	C3	RM 282.78	37306	5-yr	1744.3	806.93	803.11	1.84	1.15	15.9	5.22	256.33	1910.18	2.67	0.87	3.82	3.82
Treasure County	C3	RM 282.56	36942	5-yr	1744.3	806.82	802.83	1.35	0.88	9.8	3.47	280.25	2294.32	2.63	0.92	3.99	3.99
Treasure County	C3	RM 282.31	36546	5-yr	1744.3	806.67	802.74	1.52	0.81	11.87	3.26	187.32	2354.48	3.51	0.94	3.94	3.94
Treasure County	C3	RM 282.09	36195	5-yr	1744.3	806.42	802.56	2.2	1.22	26.45	8.46	181.69	2093.24	2.82	0.89	3.86	3.86
Treasure County	C4	RM 281.73	35619	5-yr	1744.3	806.1	801.74	1.66	1.37	12.44	5.8	422.88	1683.39	2.26	1.05	4.36	4.36
Treasure County	C4	RM 281.35	35005	5-yr	1744.3	805.93	801.53	1.37	1.06	9.09	2.25	309.74	2067.62	3.96	0.97	4.4	4.4
Treasure County	C4	RM 281.03	34521	5-yr	1744.3	805.67	801.19	1.97	1.34	19.03	4.29	209.45	1693	3.94	0.88	4.48	4.48
Treasure County	C4	RM 280.73	34051	5-yr	1744.3	805.51	800.82	1.44	1.17	7.4	3.74	690.35	2037.59	1.68	0.84	4.69	4.69
Treasure County	C4	RM 280.5	33687	5-yr	1744.3	805.38	800.66	1.28	1.06	6.59	3.46	756.46	2050.02	1.71	0.89	4.71	4.71
Treasure County	C4	RM 280.27	33304	5-yr	1744.3	805.27	800.31	1.08	0.89	5.79	3.31	759.73	1926.67	1.98	1.13	4.95	4.95
Treasure County	C4	RM 279.95	32800	5-yr	1744.3	805.14	800.08	1.1	0.81	6.77	3.05	503.81	2027	2.84	1.27	5.06	5.06
Treasure County	C4	RM 279.6	32231	5-yr	1744.3	804.75	799.98	2.13	1.48	18.61	8.16	304.29	1111.52	2.48	1.08	4.77	4.77
Treasure County	C4	RM 279.33	31805	5-yr	1744.3	804.18	799.98	2.64	2.3	34.33	17.38	244.79	589.13	2.64	1.33	4.2	4.2
Treasure County	C4	RM 279.14	31495	5-yr	1744.3	804.02	799.96	2.02	1.68	19.1	9.15	236.35	679.74	3.29	1.56	4.07	4.07
Treasure County	C4	RM 278.96	31209	5-yr	1744.3	803.96	799.87	1.43	1.34	10.24	6.26	367.47	700.85	3.17	1.93	4.1	4.1
Treasure County	C4	RM 278.76	30894	5-yr	1744.3	803.82	799.6	1.56	1.49	12.72	9.59	407.97	691.77	2.56	1.92	4.22	4.22
Treasure County	C4	RM 278.56	30571	5-yr	1744.3	803.59	799.53	1.81	1.6	18.28	11.59	336.43	897.55	2.67	1.68	4.06	4.06
Treasure County	C4	RM 278.37	30259	5-yr	1744.3	803.49	799.26	1.4	1.38	10.05	8.66	365.04	779.56	3.41	2.93	4.23	4.23
Treasure County	C5	RM 278.16	29915	5-yr	1744.3	803.15	798.81	2.3	2.16	25.46	15.68	206.88	533.1	3.63	2.22	4.33	4.33
Treasure County	C5	RM 277.99	29648	5-yr	1744.3	802.86	798.77	2.56	2.43	32.72	18.76	186.42	423.37	3.64	2.07	4.09	4.09
Treasure County	C5	RM 277.8	29336	5-yr	1744.3	802.65	798.74	2.27	2.16	25.83	15.62	209.33	430.94	3.65	2.2	3.91	3.91
Treasure County	C5	RM 277.61	29041	5-yr	1744.3	802.45	798.72	2.22	2	24.77	13.7	214.2	479.5	3.6	1.98	3.73	3.73
Treasure County	C5	RM 277.43	28747	5-yr	1744.3	802.31	798.48	1.84	1.7	18.02	11.27	305.1	577.07	3.06	1.9	3.83	3.83
Treasure County	C5	RM 277.22	28415	5-yr	1744.3	802.05	798.47	1.99	1.97	17.17	15.44	392.11	469.66	2.24	2.01	3.58	3.58
Treasure County	C5	RM 277.04	28123	5-yr	1744.3	801.87	798.4	1.79	1.68	14.24	11.74	401.14	536.7	2.41	1.98	3.47	3.47
Treasure County	C5	RM 276.81	27791	5-yr	1744.3	801.78	797.8	1.39	1.34	10.04	6.8	376.57	931.3	3.3	2.23	3.98	3.98
Treasure County	C5	RM 276.63	27499	5-yr	1744.3	801.49	797.4	2.16	1.84	24.19	9.48	234.28	804.59	3.33	1.3	4.09	4.09
Treasure County	C5	RM 276.4	27133	5-yr	1744.3	801.25	797.1	2.07	1.79	21.39	8.5	239.33	822	3.4	1.34	4.15	4.15
Treasure County	C5	RM 276.19	26801	5-yr	1744.3	801.08	796.87	2.03	1.73	20.89	10.72	183.82	663.45	3.59	1.82	4.21	4.21
Treasure County	C5	RM 276.01	26502	5-yr	1744.3	800.88	796.74	2.16	1.85	22.97	12.52	154.83	486.29	3.91	2.1	4.14	4.14
Treasure County	C5	RM 275.81	26193	5-yr	1744.3	800.76	796.61	1.83	1.61	16.97	8.33	179.56	684.28	3.6	1.75	4.15	4.15
Treasure County	C5	RM 275.63	25896	5-yr	1744.3	800.59	796.49	2.1	1.68	21.9	9.77	134.53	702.61	3.84	1.68	4.09	4.09
Treasure County	C5	RM 275.45	25606	5-yr	1744.3	800.5	796.37	1.64	1.44	13.87	10.86	153.92	564.8	3.42	2.65	4.13	4.13
Treasure County	C5	RM 275.26	25299	5-yr	1744.3	800.32	796.16	1.76	1.72	15.2	7.68	251.91	747.17	3.92	1.97	4.16	4.16
Treasure County	C5	RM 275.09	25033	5-yr	1744.3	800.08	796.13	2.25	2.04	25.05	10.72	199.32	549.33	3.81	1.62	3.95	3.95
Treasure County	C6	RM 274.89	24716	5-yr	1744.3	799.91	796.04	2.04	1.56	21.12	8.89	227.14	1448.26	3.49	1.46	3.87	3.87
Treasure County	C6	RM 274.72	24440	5-yr	1744.3	799.46	796.04	2.77	2.38	42.12	24.29	214.29	1106	2.77	1.59	3.42	3.42

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	5-yr	1744.3	799.3	795.79	1.8	1.41	19.59	9.92	293.71	1990.61	2.38	1.2	3.51	3.51
Treasure County	C6	RM 274.38	23892	5-yr	1744.3	799.13	795.55	1.73	1.28	16.08	5.94	223.53	2138.99	2.96	1.09	3.58	3.58
Treasure County	C6	RM 274.13	23491	5-yr	1744.3	798.93	795.16	1.82	1.31	18.85	7.84	220.61	2073.28	2.54	1.05	3.77	3.77
Treasure County	C6	RM 273.83	22999	5-yr	1744.3	798.76	794.46	1.58	1.09	12.73	4	183.28	2254.8	3.52	1.09	4.29	4.29
Treasure County	C6	RM 273.58	22595	5-yr	1744.3	798.49	794.04	2.13	1.37	21.52	4.62	172.47	2373.14	3.33	0.7	4.46	4.46
Treasure County	C6	RM 273.35	22238	5-yr	1744.3	798.29	794.04	1.98	1.09	18.51	5.27	230.93	3021.03	2.49	0.7	4.25	4.25
Treasure County	C6	RM 273.15	21916	5-yr	1744.3	798.15	793.92	1.61	0.92	13.2	4.43	263.78	3120.5	2.53	0.84	4.23	4.23
Treasure County	C6	RM 272.83	21397	5-yr	1744.3	798.01	793.79	1.43	0.81	9.45	2.86	258.76	3424.56	2.99	0.89	4.22	4.22
Treasure County	C6	RM 272.5	20872	5-yr	1744.3	797.69	793.46	2.13	1.22	24.13	6.58	225.93	3152.4	2.54	0.68	4.23	4.23
Treasure County	C6	RM 272.19	20368	5-yr	1744.3	797.27	793.34	2.13	1.45	22.96	6.93	241.67	2089.3	3.01	0.9	3.93	3.93
Treasure County	C6	RM 271.91	19902	5-yr	1744.3	797.04	793.18	1.87	1.34	18.03	7.11	226.09	1702.8	3.32	1.3	3.86	3.86
Treasure County	C6	RM 271.68	19534	5-yr	1744.3	796.73	792.81	2.3	1.73	27.87	13.48	188.34	1123.17	3.15	1.52	3.92	3.92
Treasure County	C6	RM 271.41	19102	5-yr	1744.3	796.67	792.54	1.25	0.97	8.5	3.86	299.59	1916.94	2.83	1.28	4.13	4.13
Treasure County	C6	RM 271.06	18548	5-yr	1744.3	796.25	792.18	2.41	2.01	30.87	11.85	167	803.11	3.09	1.17	4.07	4.07
Treasure County	C6	RM 270.64	17870	5-yr	1744.3	796.04	792.05	1.44	1.06	11.37	4.59	227.25	1517.4	2.8	1.12	3.99	3.99
Treasure County	C6	RM 270.05	16897	5-yr	1744.3	795.66	791.48	2.02	1.23	18.15	5.09	173.65	1715.36	3.06	0.84	4.18	4.18
Treasure County	C6	RM 269.75	16413	5-yr	1744.3	795.32	791.35	2.13	1.53	23.95	8.95	222.76	1018.42	3.09	1.14	3.97	3.97
Treasure County	C6	RM 269.47	15967	5-yr	1744.3	795.01	791.23	2.13	1.89	23.33	12.94	206.09	708.5	3.4	1.88	3.78	3.78
Treasure County	C7	RM 269.27	15645	5-yr	1744.3	794.9	791.23	1.67	1.43	14.69	6.35	270.5	1527.67	3.19	1.37	3.67	3.67
Treasure County	C7	RM 269.06	15308	5-yr	1744.3	794.79	791.01	1.39	1.19	10.61	4.61	196.17	1609.94	2.8	1.2	3.77	3.77
Treasure County	C7	RM 268.83	14957	5-yr	1744.3	794.71	790.6	0.94	0.79	5.06	2.75	266.11	1813.25	2.53	1.37	4.11	4.11
Treasure County	C7	RM 268.55	14516	5-yr	1744.3	794.6	790.17	1.25	0.9	7.99	2.43	224.17	2317.68	3.49	1.05	4.43	4.43
Treasure County	C7	RM 268.2	13976	5-yr	1744.3	794.34	789.62	1.86	1.16	17.53	4.12	234.34	2182.51	3.52	0.82	4.72	4.72
Treasure County	C7	RM 267.87	13439	5-yr	1744.3	793.97	789.53	2.2	1.43	22.24	5.6	221.17	1518.77	3.31	0.82	4.43	4.43
Treasure County	C7	RM 267.53	12884	5-yr	1744.3	793.43	789.5	2.46	1.62	31.9	12.45	238.54	1050.51	2.65	1.03	3.93	3.93
Treasure County	C7	RM 267.14	12253	5-yr	1744.3	793.25	789.26	1.5	1.07	11.15	5.54	227.14	1247.01	3.07	1.51	4	4
Treasure County	C7	RM 266.8	11700	5-yr	1744.3	793.11	789.2	1.52	1.08	12.23	4.22	214.75	1742.8	3.16	1.08	3.91	3.91
Treasure County	C7	RM 266.41	11078	5-yr	1744.3	792.83	789.14	2.1	1.35	24.2	8.01	156.93	1561.59	2.8	0.91	3.69	3.69
Treasure County	C7	RM 266.11	10593	5-yr	1744.3	792.54	788.83	1.89	1.47	20.11	8.77	259	1302.18	2.59	1.12	3.71	3.71
Treasure County	C7	RM 265.92	10283	5-yr	1744.3	792.35	788.65	1.83	1.52	13.89	9.89	340.01	1125.1	1.97	1.4	3.7	3.7
Treasure County	C7	RM 265.68	9915	5-yr	1744.3	792.12	788.21	2.04	1.66	20.79	11.27	179.74	648.58	3.71	1.99	3.91	3.91
Treasure County	C7	RM 265.52	9650	5-yr	1744.3	791.97	788.07	2.08	1.54	23.03	10.51	157.32	823.67	3.06	1.38	3.9	3.9
Treasure County	C7	RM 265.34	9362	5-yr	1744.3	791.72	788.07	2.02	1.61	23.04	10.15	175.91	967.83	2.57	1.12	3.65	3.65
Treasure County	C7	RM 265.16	9071	5-yr	1744.3	791.53	787.95	1.61	1.52	15.67	10.07	286.72	803.49	2.24	1.43	3.59	3.59
Treasure County	C7	RM 264.98	8775	5-yr	1744.3	791.3	787.59	1.97	1.71	14.6	10.91	339.86	817.29	1.67	1.25	3.71	3.71
Treasure County	C7	RM 264.81	8508	5-yr	1744.3	791.22	787.35	1.14	1.14	9.2	7.17	626.48	1210.57	1.62	1.26	3.87	3.87
Treasure County	C7	RM 264.64	8216	5-yr	1744.3	791.09	787.22	1.21	1.17	8.26	7.22	649.58	1101.77	1.55	1.35	3.87	3.87
Treasure County	C7	RM 264.39	7803	5-yr	1744.3	790.86	786.86	1.58	1.47	14.47	10.15	343.22	763.84	2.25	1.57	4	4
Treasure County	C7	RM 264.15	7406	5-yr	1744.3	790.74	786.6	1.35	1.1	9.62	5.43	202.21	1211.3	2.39	1.33	4.14	4.14
Treasure County	C7	RM 263.97	7116	5-yr	1744.3	790.64	786.49	1.5	1.15	11.16	6.42	176.47	737.86	3.82	2.17	4.15	4.15
Treasure County	C7	RM 263.79	6834	5-yr	1744.3	790.44	786.49	2.01	1.6	19.68	8.49	197.94	907.85	2.87	1.22	3.95	3.95
Treasure County	C7	RM 263.6	6534	5-yr	1744.3	790.28	786.37	1.79	1.25	16.85	7.62	203.59	983.14	3.2	1.43	3.91	3.91
Treasure County	C7	RM 263.39	6194	5-yr	1744.3	790.15	786.25	1.34	1.24	9.77	5.91	447.3	1046.76	2.66	1.61	3.9	3.9
Treasure County	C7	RM 263.19	5862	5-yr	1744.3	789.88	786	1.89	1.42	20.96	8.75	333.43	1290.46	2.3	0.95	3.87	3.87
Treasure County	C7	RM 262.95	5479	5-yr	1744.3	789.61	785.85	1.79	1.5	12.2	6.98	390.97	892.51	2.28	1.3	3.76	3.76
Treasure County	C7	RM 262.78	5206	5-yr	1744.3	789.48	785.76	1.58	1.27	12.54	6.59	440.96	1339.26	1.97	1.03	3.72	3.72
Treasure County	C7	RM 262.58	4883	5-yr	1744.3	789.34	785.64	1.2	0.95	9.62	5.17	619.93	1831.24	1.99	1.07	3.7	3.7
Treasure County	C7	RM 262.42	4613	5-yr	1744.3	789.25	785.54	1.06	0.86	6.14	3.31	655.56	1899.4	2.06	1.11	3.71	3.71
Treasure County	C7	RM 262.24	4323	5-yr	1744.3	789.18	785.43	0.93	0.85	5.17	3.11	839.62	1776.46	2.2	1.32	3.75	3.75
Treasure County	C7	RM 261.95	3917	5-yr	1744.3	789.04	785.28	1.15	1.03	7.02	4.72	654.59	1114.59	2.26	1.52	3.76	3.76
Treasure County	C7	RM 261.7	3519	5-yr	1744.3	788.81	784.87	1.27	1.27	25.49	25.36	599.85	603.29	2.29	2.28	3.94	3.94
Treasure County	C7	RM 261.53	3256	5-yr	1744.3	788.37	784.51	1.57	1.52	35.9	30.99	584.02	710.16	1.88	1.62	3.87	3.87
Treasure County	C7	RM 261.35	2959	5-yr	1744.3	788.26	784.33	1.14	1.14	6.14	6.14	580.76	586.37	2.64	2.64	3.93	3.93
Treasure County	C7	RM 261.2	2720	5-yr	1744.3	788.12	784.14	1.35	1.35	27.08	27.01	545.92	564.06	2.37	2.36	3.98	3.98
Treasure County	C7	RM 261.03	2441	5-yr	1744.3	788	783.66	1.26	1.24	7.91	6.27	400.41	544.67	3.44	2.72	4.34	4.34
Treasure County	C7	RM 260.84	2142	5-yr	1744.3	787.89	783.41	1.48	1.41	11.26	6.5	341.22	633.33	3.44	1.98	4.47	4.47
Treasure County	C7	RM 260.66	1863	5-yr	1744.3	787.78	783.29	1.55	1.35	11.22	5.21	348.79	901.45	3.17	1.46	4.49	4.49
Treasure County	C8	RM 259.9	634	5-yr	1744.3	786.67	782.46	3.01	2.64	44.87	22.19	147.91	352.99	3.82	1.88	4.21	4.21
Treasure County	C8	RM 259.72	347	5-yr	1744.3	786.43	782.45	2.64	2.36	34.94	18.13	174.52	389.91	3.68	1.89	3.98	3.98
Treasure County	C8	RM 259.55	68	5-yr	1744.3	786.34	782.2	1.87	1.87	13.53	13.53	385.61	385.66	2.43	2.42	4.14	4.14

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	5-yr	1747.1	786.34	782.19	2.08	1.92	20.33	17.02	217.85	288.97	3.77	3.15	4.15	4.15
Rosebud County	C8	RM 259.41	87598	5-yr	1747.1	786.15	781.96	2.12	2.12	23.95	23.95	207.43	207.43	3.97	3.97	4.19	4.19
Rosebud County	C8	RM 259.22	87292	5-yr	1747.1	786.03	781.55	1.87	1.66	16.79	12.8	233.07	353.95	3.91	2.97	4.48	4.48
Rosebud County	C8	RM 259.04	87004	5-yr	1747.1	785.86	781	2	1.91	21.78	13.61	208.15	371.43	4.01	2.48	4.86	4.86
Rosebud County	C8	RM 258.85	86696	5-yr	1747.1	785.68	780.9	2.01	1.88	16.73	12.48	288.58	427.25	2.92	2.17	4.78	4.78
Rosebud County	C8	RM 258.66	86399	5-yr	1747.1	785.5	780.78	2.09	2	20.46	10.34	182.9	423.26	4.49	2.24	4.72	4.72
Rosebud County	C8	RM 258.47	86098	5-yr	1747.1	785.32	780.65	2.21	2.02	23.58	12.26	201.54	471.57	3.62	1.87	4.67	4.67
Rosebud County	C8	RM 258.28	85798	5-yr	1747.1	785.16	780.53	2.01	1.62	19.25	12.01	222.27	524.93	3.32	2.06	4.63	4.63
Rosebud County	C8	RM 258.1	85498	5-yr	1747.1	784.99	780.14	2.04	1.76	19.83	11.36	179.41	562.43	4.37	2.48	4.85	4.85
Rosebud County	C8	RM 257.91	85200	5-yr	1747.1	784.82	780.14	2.05	1.84	21.89	11.94	222.18	645.87	3.31	1.79	4.68	4.68
Rosebud County	C8	RM 257.71	84875	5-yr	1747.1	784.54	780.14	2.25	1.88	27.73	16.79	219.31	644.18	2.82	1.7	4.4	4.4
Rosebud County	C8	RM 257.54	84597	5-yr	1747.1	784.35	780.17	2.06	1.62	20.48	9.95	208.83	734.13	3.33	1.6	4.18	4.18
Rosebud County	C8	RM 257.36	84298	5-yr	1747.1	784.19	780.05	1.99	1.47	19.69	8.54	188.65	876.38	3.21	1.39	4.14	4.14
Rosebud County	C8	RM 257.16	83984	5-yr	1747.1	784.16	780	1.23	1.01	7.39	3.81	305.21	886.28	3.9	2.01	4.16	4.16
Rosebud County	C8	RM 256.87	83608	5-yr	1747.1	783.8	779.89	2.43	2.01	29.06	14.42	178.9	488.85	3.61	1.78	3.91	3.91
Rosebud County	C8	RM 256.65	83257	5-yr	1747.1	783.74	779.82	1.63	1.38	13.34	5.91	171.34	808.19	3.58	1.57	3.92	3.92
Rosebud County	C8	RM 256.45	82941	5-yr	1747.1	783.56	779.67	1.82	1.59	16.59	7.27	222.18	676.85	3.73	1.62	3.89	3.89
Rosebud County	C8	RM 256.26	82630	5-yr	1747.1	783.34	779.58	1.81	1.48	29.93	19.36	356.59	753.58	2.44	1.57	3.76	3.76
Rosebud County	C8	RM 256.1	82375	5-yr	1747.1	783.19	779.42	1.45	1.45	9.98	9.97	530.81	531.39	2.27	2.27	3.77	3.77
Rosebud County	C8	RM 255.91	82077	5-yr	1747.1	783.12	779.09	1.18	1.18	6.16	6.15	567.82	568.82	2.61	2.61	4.03	4.03
Rosebud County	C8	RM 255.7	81747	5-yr	1747.1	782.92	778.73	1.72	1.66	14.59	12.62	306.33	427.99	3.3	2.86	4.19	4.19
Rosebud County	C8	RM 255.51	81446	5-yr	1747.1	782.72	778.49	1.94	1.81	19.39	12.64	257.81	590.46	3.42	2.22	4.23	4.23
Rosebud County	C8	RM 255.31	81125	5-yr	1747.1	782.55	778.36	1.86	1.62	21.05	10.31	240.12	647.85	3.78	1.84	4.19	4.19
Rosebud County	C8	RM 255.14	80856	5-yr	1747.1	782.36	778.24	2.06	1.84	20.83	11.71	210.26	477.23	3.91	2.18	4.12	4.12
Rosebud County	C8	RM 254.95	80554	5-yr	1747.1	782.16	778.12	2.16	1.96	23.02	12.67	205.86	473.03	3.84	2.1	4.04	4.04
Rosebud County	C8	RM 254.76	80251	5-yr	1747.1	781.99	778	2.05	1.82	20.66	10.66	217.96	516.41	3.83	1.96	3.99	3.99
Rosebud County	C8	RM 254.58	79960	5-yr	1747.1	781.85	777.88	1.95	1.84	18.74	13.9	229.98	372.75	3.84	2.84	3.97	3.97
Rosebud County	C8	RM 254.39	79658	5-yr	1747.1	781.77	777.41	1.58	1.48	12.39	8	295.49	627.95	3.71	2.39	4.36	4.36
Rosebud County	C8	RM 254.2	79359	5-yr	1747.1	781.55	777.39	1.99	1.92	20.54	14.17	269.75	465.55	3.25	2.24	4.16	4.16
Rosebud County	C8	RM 254.01	79052	5-yr	1747.1	781.4	776.82	1.94	1.84	17.81	9.65	207.43	524.2	4.31	2.33	4.58	4.58
Rosebud County	C9	RM 253.82	78779	5-yr	1747.1	781.23	776.24	2.06	1.84	23.12	13.17	242.95	658.15	3.42	1.93	4.99	4.99
Rosebud County	C9	RM 253.63	78478	5-yr	1747.1	780.89	776.12	2.37	1.94	51.84	22.53	170.36	727.72	3.81	1.64	4.77	4.77
Rosebud County	C9	RM 253.45	78178	5-yr	1747.1	780.6	775.97	2.34	1.72	25.25	9.76	172.4	995.22	3.49	1.33	4.63	4.63
Rosebud County	C9	RM 253.26	77879	5-yr	1747.1	780.55	775.72	1.61	1.07	10.36	3.76	239.37	1341.44	3.74	1.34	4.83	4.83
Rosebud County	C9	RM 253.07	77578	5-yr	1747.1	780.31	775.57	2.24	1.48	22.88	6.71	183.72	1218.83	3.54	1.02	4.74	4.74
Rosebud County	C9	RM 252.88	77278	5-yr	1747.1	780.19	775.45	1.81	1.32	16.99	6.16	221.89	1159.62	3.29	1.18	4.74	4.74
Rosebud County	C9	RM 252.69	76962	5-yr	1747.1	780.13	775.33	1.3	0.84	8.66	3.06	260.67	1744.73	3.5	1.22	4.8	4.8
Rosebud County	C9	RM 252.49	76646	5-yr	1747.1	779.85	775.36	2.33	1.43	25.29	5.24	156.93	2178.6	3.64	0.74	4.49	4.49
Rosebud County	C9	RM 252.24	76252	5-yr	1747.1	779.68	775.4	1.94	1.12	20.24	4.57	167.1	2792.78	3.25	0.72	4.28	4.28
Rosebud County	C9	RM 252.01	75885	5-yr	1747.1	779.48	775.39	1.71	1.07	22.29	5.6	252.1	2576.44	2.97	0.74	4.09	4.09
Rosebud County	C9	RM 251.7	75438	5-yr	1747.1	779.34	775.01	1.22	0.91	6.59	2.46	518.96	2545.1	2.37	0.88	4.33	4.33
Rosebud County	C9	RM 251.49	75098	5-yr	1747.1	779.2	775.02	1.34	0.95	9.64	4.84	695.33	2926.92	1.52	0.76	4.18	4.18
Rosebud County	C9	RM 251.23	74691	5-yr	1747.1	778.9	775.05	1.56	1.31	10.66	5.23	650.73	1991.41	1.65	0.81	3.85	3.85
Rosebud County	C9	RM 251.01	74322	5-yr	1747.1	778.75	774.84	1.39	1.04	6.76	3.13	548.01	2085.9	1.93	0.89	3.91	3.91
Rosebud County	C9	RM 250.79	73973	5-yr	1747.1	778.65	774.42	1.31	0.94	7.91	3.23	396.09	1940.96	2.64	1.07	4.23	4.23
Rosebud County	C9	RM 250.6	73678	5-yr	1747.1	778.49	774.17	1.49	1.1	20.29	10.81	375.34	1463.98	2.25	1.2	4.32	4.32
Rosebud County	C9	RM 250.37	73306	5-yr	1747.1	778.2	774.05	1.92	1.23	16.39	5.58	232.84	1342.67	3.29	1.11	4.15	4.15
Rosebud County	C9	RM 250.17	72982	5-yr	1747.1	777.97	773.93	2.26	1.29	26.27	11.77	213.71	1337.95	2.6	1.15	4.04	4.04
Rosebud County	C9	RM 249.95	72617	5-yr	1747.1	777.76	773.83	1.92	1.25	18.64	7.27	226.06	1130.55	3.21	1.24	3.93	3.93
Rosebud County	C9	RM 249.73	72253	5-yr	1747.1	777.56	773.71	1.86	1.24	17.79	7.2	273.96	1377.44	2.81	1.13	3.85	3.85
Rosebud County	C9	RM 249.53	71936	5-yr	1747.1	777.5	773.38	1.3	0.91	8.56	3.3	356.15	1710.08	3.18	1.23	4.12	4.12
Rosebud County	C9	RM 249.31	71579	5-yr	1747.1	777.29	773.14	1.7	1.31	17.4	7.27	361.71	2059.27	2.35	0.98	4.15	4.15
Rosebud County	C9	RM 249.13	71274	5-yr	1747.1	777.15	772.84	1.53	1	12.05	3.8	298.78	2290.34	3.29	1.03	4.31	4.31
Rosebud County	C9	RM 248.94	70978	5-yr	1747.1	776.94	772.56	2.03	1.16	20.21	4.83	197.34	2507.02	3.42	0.82	4.38	4.38
Rosebud County	C9	RM 248.76	70681	5-yr	1747.1	776.93	772.32	1.07	0.73	6.12	2.23	424.32	2259.5	3.21	1.16	4.61	4.61
Rosebud County	C9	RM 248.53	70312	5-yr	1747.1	776.88	772.17	1.17	0.61	6.24	2	162.15	3049.32	3.87	1.23	4.71	4.71
Rosebud County	C9	RM 248.31	69962	5-yr	1747.1	776.73	772.04	1.57	0.94	12.52	3.91	277.15	2518.38	3.16	0.98	4.69	4.69
Rosebud County	C9	RM 248.08	69603	5-yr	1747.1	776.54	771.92	1.87	1.01	15.23	3.62	211.49	2753.52	3.66	0.87	4.62	4.62
Rosebud County	C9	RM 247.88	69253	5-yr	1747.1	776.32	771.92	1.85	1.22	29.02	10.55	348.22	2569.41	2.26	0.81	4.4	4.4
Rosebud County	C9	RM 247.64	68836	5-yr	1747.1	775.99	771.95	1.69	1.33	15.36	6.35	413.29	2198.88	2.35	0.97	4.04	4.04

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	5-yr	1747.1	775.84	771.87	1.37	0.93	9.29	3.15	282.38	2495.81	3.54	1.2	3.97	3.97
Rosebud County	C9	RM 247.11	67963	5-yr	1747.1	775.53	771.45	2.37	1.53	29.34	8.47	199.91	1640.67	2.93	0.84	4.08	4.08
Rosebud County	C9	RM 246.83	67502	5-yr	1747.1	775.34	770.97	1.82	1.22	18.02	4.69	194.9	1883.17	3.78	0.98	4.37	4.37
Rosebud County	C9	RM 246.52	67019	5-yr	1747.1	775.19	770.61	1.6	1.21	12.46	3.31	225.63	2325.02	3.96	1.04	4.58	4.58
Rosebud County	C9	RM 246.22	66538	5-yr	1747.1	774.27	770.53	3.53	2.98	70.41	30.83	205.23	661.34	2.34	1.01	3.74	3.74
Rosebud County	C9	RM 245.94	66068	5-yr	1747.1	773.92	770.29	1.79	1.54	18.29	11.97	295.59	744.32	2.39	1.56	3.63	3.63
Rosebud County	C9	RM 245.66	65624	5-yr	1747.1	773.63	769.81	1.9	1.25	19.66	6.45	194.08	1421.1	3.65	1.18	4.39	4.39
Rosebud County	C9	RM 245.4	65205	5-yr	1747.1	773.42	769.59	1.71	1.64	14.03	9.02	321.59	818.91	2.1	1.34	4.26	4.26
Rosebud County	C9	RM 245.15	64804	5-yr	1747.1	772.95	769.41	2.14	2.27	39.16	27.32	212.68	490.67	2.29	1.59	3.79	3.79
Rosebud County	C9	RM 244.89	64387	5-yr	1747.1	772.49	769.41	2.37	2.11	30.75	22.33	184.01	402.25	2.85	2.06	3.46	3.46
Rosebud County	C9	RM 244.7	64085	5-yr	1747.1	772.47	769.37	1.25	1.11	8.16	5.71	216.67	869.52	2.59	1.81	3.56	3.56
Rosebud County	C9	RM 244.51	63776	5-yr	1747.1	772.4	769.35	1.08	1	7.4	4.53	263.26	1181.35	2.55	1.56	3.49	3.49
Rosebud County	C9	RM 244.33	63499	5-yr	1747.1	772.38	769.16	0.67	0.69	2.66	2.43	273.65	1253.2	2.36	2.16	3.95	3.95
Rosebud County	C9	RM 244.14	63224	5-yr	1747.1	772.35	768.52	0.95	0.76	4.77	2.67	208.4	1504.72	3.06	1.7	3.92	3.92
Rosebud County	C9	RM 243.96	62927	5-yr	1747.1	772.27	768.13	1.27	0.92	8.38	3.82	176.15	1489.68	3.28	1.49	4.14	4.14
Rosebud County	C9	RM 243.77	62617	5-yr	1747.1	772.25	767.57	0.81	0.58	3.13	1.63	160.76	1442.47	4.19	2.17	4.68	4.68
Rosebud County	C9	RM 243.59	62327	5-yr	1747.1	772.17	766.98	1.37	0.93	10.34	3.47	122.45	1500.47	4.78	1.56	5.19	5.19
Rosebud County	C9	RM 243.39	62012	5-yr	1747.1	771.94	766.86	2.06	1.54	20.38	6.85	154.93	976.4	4.23	1.4	5.08	5.08
Rosebud County	C9	RM 243.21	61718	5-yr	1747.1	771.82	766.74	1.84	1.49	15.74	4.65	203.35	1357.23	4.57	1.33	5.08	5.08
Rosebud County	C10	RM 243.03	61422	5-yr	1747.1	771.42	766.73	2.77	2.23	38.93	13.88	172.6	818.49	3.55	1.24	4.69	4.69
Rosebud County	C10	RM 242.84	61125	5-yr	1747.1	771	766.76	2.93	2.57	43.26	17.87	168.21	505.14	3.47	1.42	4.24	4.24
Rosebud County	C10	RM 242.65	60825	5-yr	1747.1	770.81	766.76	2.35	2.09	27.49	12.86	203.16	521.86	3.61	1.67	4.05	4.05
Rosebud County	C10	RM 242.47	60527	5-yr	1747.1	770.68	766.77	1.95	1.7	18.87	7.42	241.01	843.02	3.65	1.43	3.91	3.91
Rosebud County	C10	RM 242.29	60239	5-yr	1747.1	770.57	766.64	1.74	1.52	15.27	6.13	282.17	837.83	3.49	1.39	3.93	3.93
Rosebud County	C10	RM 242.1	59939	5-yr	1747.1	770.35	766.29	2.01	1.71	22.05	9.85	277.91	798.38	3.05	1.35	4.06	4.06
Rosebud County	C10	RM 241.9	59618	5-yr	1747.1	770.17	765.95	1.89	1.54	17.52	5.92	245.5	980.27	3.67	1.23	4.22	4.22
Rosebud County	C10	RM 241.72	59324	5-yr	1747.1	770.1	765.5	1.55	1.25	11.75	5.79	289.97	958.61	3.71	1.82	4.6	4.6
Rosebud County	C10	RM 241.53	59025	5-yr	1747.1	769.74	765.17	2.5	2.09	34.43	15.46	160	494.2	4.18	1.85	4.57	4.57
Rosebud County	C10	RM 241.34	58725	5-yr	1747.1	769.54	765.02	2.34	1.79	26.27	11.82	177.62	726.16	3.94	1.75	4.52	4.52
Rosebud County	C10	RM 241.16	58424	5-yr	1747.1	769.43	764.97	1.95	1.44	18.26	9.61	171.92	960.61	3.66	1.91	4.46	4.46
Rosebud County	C10	RM 240.97	58132	5-yr	1747.1	769.3	764.83	1.81	1.38	16.12	8.23	189.7	966.9	3.86	1.96	4.47	4.47
Rosebud County	C10	RM 240.78	57818	5-yr	1747.1	769.24	764.56	1.45	1.01	9.97	4.27	159.68	1399.67	4.35	1.84	4.68	4.68
Rosebud County	C10	RM 240.56	57467	5-yr	1747.1	769.09	764.28	1.65	1.21	18.97	6.59	212.38	1457.18	3.9	1.34	4.81	4.81
Rosebud County	C10	RM 240.41	57228	5-yr	1747.1	769.01	763.91	1.46	1.14	12.46	4.44	216.4	1378.48	4.43	1.56	5.1	5.1
Rosebud County	C10	RM 240.22	56944	5-yr	1747.1	768.77	763.51	2.15	1.61	21.79	7.05	157.35	1080.89	4.94	1.55	5.26	5.26
Rosebud County	C10	RM 240.09	56741	5-yr	1747.1	768.34	763.47	3.16	2.55	37.62	13.12	120.17	790.1	4.48	1.52	4.87	4.87
Rosebud County	C10	RM 239.97	56546	5-yr	1747.1	768.27	763.47	2.59	2.41	41.26	26.47	155.75	619.66	4.28	2.72	4.8	4.8
Rosebud County	C10	RM 239.86	56371	5-yr	1747.1	768.23	760.88	1.94	1.94	18.8	18.39	205.73	249.74	4.37	4.27	7.35	7.35
Rosebud County			56353	5-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	5-yr	1747.1	768.19	760.88	1.91	1.91	13.22	13.22	200.53	255.07	4.55	4.55	7.31	7.31
Rosebud County	C10	RM 239.68	56093	5-yr	1747.1	767.82	763.02	2.77	2.68	27.66	22.18	172.44	224.15	3.65	2.91	4.8	4.8
Rosebud County	C10	RM 239.56	55888	5-yr	1747.1	767.72	757.33	2.63	2.59	23.99	13.82	114.54	206.55	5.8	3.27	10.39	10.39
Rosebud County			55879	5-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	5-yr	1747.1	767.69	757.33	2.68	2.65	24.85	15.66	110.63	181.22	5.89	3.64	10.36	10.36
Rosebud County	C10	RM 239.41	55655	5-yr	1747.1	767.36	763.17	3.16	3.16	39.16	38.14	141.08	145.01	3.92	3.82	4.19	4.19
Rosebud County	C10	RM 239.25	55398	5-yr	1747.1	767.14	763.17	2.94	2.83	34.81	25.76	162.22	230.39	3.65	2.68	3.97	3.97
Rosebud County	C10	RM 239.07	55108	5-yr	1747.1	767.1	763.2	2.11	1.97	17.94	13.61	219.55	328.44	3.57	2.7	3.9	3.9
Rosebud County	C10	RM 238.89	54826	5-yr	1747.1	766.86	763.23	2.41	2.05	23.57	16.94	191.56	341.93	3.49	2.49	3.63	3.63
Rosebud County	C10	RM 238.73	54570	5-yr	1747.1	766.7	763.38	2.27	2.12	21.75	15.56	241.24	368.09	3.14	2.24	3.32	3.32
Rosebud County	C10	RM 238.51	54223	5-yr	1747.1	766.56	762.88	1.65	1.65	13.51	13.3	433.45	440.58	2.44	2.4	3.68	3.68
Rosebud County	C10	RM 238.33	53926	5-yr	1747.1	766.4	762.37	1.72	1.67	14.81	10.28	305.38	453.98	3.32	2.3	4.03	4.03
Rosebud County	C10	RM 238.14	53626	5-yr	1747.1	766.1	762.25	2.28	1.96	26.42	11.84	214.01	573.2	3.48	1.56	3.85	3.85
Rosebud County	C10	RM 237.95	53321	5-yr	1747.1	765.81	762.09	2.46	2.11	30.77	12.54	188.79	700.57	3.49	1.42	3.72	3.72
Rosebud County	C10	RM 237.77	53027	5-yr	1747.1	765.76	761.85	1.65	1.47	13.83	7.14	293.62	672.85	3.42	1.77	3.91	3.91
Rosebud County	C10	RM 237.56	52703	5-yr	1747.1	765.63	761.46	1.55	1.4	11.85	6.58	409.82	983.56	2.71	1.5	4.17	4.17
Rosebud County	C10	RM 237.36	52386	5-yr	1747.1	765.52	761.22	1.37	1.21	9.57	5.46	442.23	1293.57	2.81	1.6	4.3	4.3
Rosebud County	C10	RM 237.15	52029	5-yr	1747.1	765.4	760.88	1.38	1.23	9.89	5.63	383.2	1194.06	3.24	1.84	4.52	4.52
Rosebud County	C10	RM 236.99	51756	5-yr	1747.1	765.16	760.22	2.12	1.95	16.63	7.37	176.45	869.85	4.64	2.03	4.94	4.94
Rosebud County	C10	RM 236.83	51500	5-yr	1747.1	764.9	760.07	2.62	2.42	26.87	11.29	167.82	715.8	3.95	1.64	4.83	4.83
Rosebud County	C10	RM 236.66	51221	5-yr	1747.1	764.84	760.07	2.11	1.88	16.83	8.4	185.25	589.7	4.39	2.16	4.77	4.77

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	5-yr	1747.1	764.74	759.94	2.01	1.9	15.23	9.27	193.16	342.3	4.46	2.69	4.8	4.8
Rosebud County	C11	RM 236.29	50623	5-yr	1747.1	764.64	760	1.96	1.83	14.65	8.44	211.22	398.39	4.19	2.4	4.64	4.64
Rosebud County	C11	RM 236.1	50327	5-yr	1747.1	764.45	760	2.22	2.1	19.56	12.79	206.87	351.81	3.77	2.45	4.45	4.45
Rosebud County	C11	RM 235.91	50024	5-yr	1747.1	764.13	760	2.64	2.42	34.48	16.75	170	405.54	3.84	1.85	4.13	4.13
Rosebud County	C11	RM 235.73	49726	5-yr	1747.1	764.06	760.15	1.87	1.71	17.45	14.19	243.31	383.68	3.39	2.74	3.91	3.91
Rosebud County	C11	RM 235.57	49480	5-yr	1747.1	763.96	760.02	1.62	1.62	13.54	13.51	318.17	333.54	3.38	3.38	3.94	3.94
Rosebud County	C11	RM 235.36	49133	5-yr	1747.1	763.77	759.74	1.78	1.76	12.88	12.58	389.4	419.56	2.5	2.45	4.03	4.03
Rosebud County	C11	RM 235.17	48830	5-yr	1747.1	763.6	759.55	1.76	1.75	12.76	12.33	454.78	487.71	2.17	2.1	4.05	4.05
Rosebud County	C11	RM 235	48571	5-yr	1747.1	763.5	759.29	1.59	1.53	12.32	9.21	319.83	474	3.42	2.55	4.21	4.21
Rosebud County	C11	RM 234.82	48271	5-yr	1747.1	763	759.21	2.84	2.6	42.45	21.86	190.08	420.55	3.19	1.63	3.79	3.79
Rosebud County	C11	RM 234.63	47978	5-yr	1747.1	762.81	759.21	2.23	1.93	25.22	13.53	235.85	546.59	3.13	1.67	3.6	3.6
Rosebud County	C11	RM 234.45	47692	5-yr	1747.1	762.62	759.12	2	1.83	20.57	15.33	283.31	450.88	2.92	2.18	3.5	3.5
Rosebud County	C11	RM 234.2	47305	5-yr	1747.1	762.46	758.6	1.57	1.41	12.2	9.16	375.6	607.32	2.73	2.05	3.86	3.86
Rosebud County	C11	RM 234.01	47006	5-yr	1747.1	762.4	758.27	1.14	1.04	4.84	4.5	752.65	915.54	1.96	1.83	4.13	4.13
Rosebud County	C11	RM 233.84	46737	5-yr	1747.1	762.31	758.12	1.22	1.14	7.56	6.88	548.84	667.31	2.53	2.3	4.19	4.19
Rosebud County	C11	RM 233.61	46365	5-yr	1747.1	762.2	757.67	1.35	1.22	8.64	6.01	302.81	506.44	4.21	2.93	4.53	4.53
Rosebud County	C11	RM 233.35	45943	5-yr	1747.1	761.97	757.03	1.97	1.56	19.28	11.13	214.65	544.15	3.74	2.14	4.94	4.94
Rosebud County	C11	RM 233.13	45584	5-yr	1747.1	761.8	756.45	1.9	1.89	17.07	15.38	206.27	376.39	4.45	4.01	5.35	5.35
Rosebud County	C11	RM 232.94	45281	5-yr	1747.1	761.58	756.15	2.25	2.23	23.66	19.76	169.36	376.49	4.58	3.81	5.43	5.43
Rosebud County	C11	RM 232.75	44978	5-yr	1747.1	761.52	756.03	1.8	1.68	14.98	8.1	203.56	500.15	4.73	2.53	5.49	5.49
Rosebud County	C11	RM 232.56	44674	5-yr	1747.1	761.41	755.79	1.8	1.77	15.86	12.52	240.65	381.33	4.02	3.15	5.62	5.62
Rosebud County	C11	RM 232.37	44366	5-yr	1747.1	761.14	755.72	2.25	2.23	25.28	19.46	206.42	634.12	3.76	2.88	5.42	5.42
Rosebud County	C11	RM 232.19	44074	5-yr	1747.1	761	755.67	2.06	2.03	20.44	14.95	203.47	474.95	4.16	3.02	5.33	5.33
Rosebud County	C11	RM 232.01	43791	5-yr	1747.1	760.84	755.65	2.07	2.02	21.38	14.48	229.39	691.33	3.68	2.48	5.19	5.19
Rosebud County	C11	RM 231.81	43473	5-yr	1747.1	760.54	755.6	2.41	2.04	28.57	16.75	199.38	645.98	3.47	2.02	4.94	4.94
Rosebud County	C11	RM 231.62	43160	5-yr	1747.1	760.34	755.57	2.26	1.84	20.39	10.34	225.53	586.82	3.22	1.62	4.77	4.77
Rosebud County	C11	RM 231.42	42835	5-yr	1747.1	760.3	755.45	1.56	1.18	11.4	4.37	227.85	927.19	4.49	1.7	4.85	4.85
Rosebud County	C11	RM 231.22	42522	5-yr	1747.1	760.14	755.45	1.93	1.34	16.87	5.63	203.04	1021.21	3.9	1.28	4.69	4.69
Rosebud County	C11	RM 230.99	42160	5-yr	1747.1	759.63	755.45	2.95	2.14	44.06	14.39	153.52	713.4	3.56	1.14	4.18	4.18
Rosebud County	C11	RM 230.79	41841	5-yr	1747.1	759.5	755.43	2.11	1.63	22.19	10.6	202.14	597.08	3.79	1.79	4.07	4.07
Rosebud County	C11	RM 230.53	41415	5-yr	1747.1	759.39	755.17	1.47	1.29	11.16	6.84	295.86	784.11	2.84	1.73	4.22	4.22
Rosebud County	C11	RM 230.29	41045	5-yr	1747.1	759.2	755.15	1.79	1.44	15.37	7.93	233.97	848.76	3.24	1.66	4.05	4.05
Rosebud County	C11	RM 230.06	40676	5-yr	1747.1	759	754.81	1.72	1.59	16.34	11.47	286.43	694.38	2.75	1.92	4.19	4.19
Rosebud County	C11	RM 229.81	40276	5-yr	1747.1	758.85	754.74	1.51	1.35	11.84	6.3	320.68	1480.59	3.28	1.74	4.11	4.11
Rosebud County	C11	RM 229.6	39937	5-yr	1747.1	758.58	754.58	1.99	1.77	17.58	12.18	363.42	1545.49	2.28	1.57	4	4
Rosebud County	C11	RM 229.4	39596	5-yr	1747.1	758.44	754.34	1.62	1.42	13.68	8.95	283.63	1042.26	3.45	2.25	4.1	4.1
Rosebud County	C11	RM 229.2	39273	5-yr	1747.1	758.1	754.15	2.41	2.06	31.13	16.45	214.46	761.07	2.97	1.56	3.95	3.95
Rosebud County	C11	RM 229.02	38994	5-yr	1747.1	757.86	754.12	2.3	1.75	28.07	14	210.97	925.6	3.05	1.51	3.74	3.74
Rosebud County	C11	RM 228.82	38676	5-yr	1747.1	757.7	753.8	1.86	1.52	18.3	11.06	268.65	812.43	3.06	1.84	3.9	3.9
Rosebud County	C11	RM 228.64	38383	5-yr	1747.1	757.56	753.73	1.75	1.32	16.26	9.98	224.27	841.19	3.11	1.89	3.87	3.87
Rosebud County	C11	RM 228.46	38093	5-yr	1747.1	757.49	753.53	1.34	0.96	9.41	5.35	301.72	1152.46	3.17	1.79	3.96	3.96
Rosebud County	C11	RM 228.26	37771	5-yr	1747.1	757.43	753.35	1.23	0.81	7.89	4.26	273.91	1522.02	3.32	1.78	4.08	4.08
Rosebud County	C11	RM 228.03	37408	5-yr	1747.1	757.28	753.16	1.65	0.96	13.94	4.87	233.08	1700.49	3.43	1.19	4.12	4.12
Rosebud County	C11	RM 227.74	36949	5-yr	1747.1	757.07	752.95	1.89	1.33	17.92	4.64	167.04	1417.6	3.64	0.93	4.12	4.12
Rosebud County	C11	RM 227.49	36537	5-yr	1747.1	756.91	752.83	1.88	1.21	17.89	4.68	175.55	1570.79	3.57	0.92	4.08	4.08
Rosebud County	C11	RM 227.2	36062	5-yr	1747.1	756.75	752.41	1.73	1.25	15.33	4.79	180.83	1316.89	3.47	1.07	4.34	4.34
Rosebud County	C11	RM 226.98	35709	5-yr	1747.1	756.3	752.31	2.55	1.83	35.01	12.75	211.53	894.01	2.98	1.08	3.99	3.99
Rosebud County	C11	RM 226.79	35400	5-yr	1747.1	756.12	752.25	1.91	1.45	20.47	9.83	268.83	832.8	3.06	1.46	3.87	3.87
Rosebud County	C11	RM 226.56	35065	5-yr	1747.1	755.99	751.83	1.51	1.21	13.51	8.56	338.41	742.19	3.09	1.95	4.16	4.16
Rosebud County	C11	RM 226.36	34743	5-yr	1747.1	755.74	751.68	1.88	1.71	20.28	15.78	300.49	440.43	2.99	2.32	4.06	4.06
Rosebud County	C11	RM 226.2	34476	5-yr	1747.1	755.64	751.25	1.48	1.37	10.95	10.04	424.72	666.32	2.7	2.47	4.39	4.39
Rosebud County	C11	RM 226.01	34177	5-yr	1747.1	755.46	750.81	1.65	1.5	23.02	13.32	283.06	903.93	3.65	2.1	4.65	4.65
Rosebud County	C11	RM 225.83	33884	5-yr	1747.1	755.15	750.59	2.36	1.67	27.17	14.31	159.31	558.13	3.99	2.07	4.56	4.56
Rosebud County	C11	RM 225.64	33580	5-yr	1747.1	755.02	750.56	1.81	1.56	17.11	10.4	293.96	804.75	3.18	1.92	4.46	4.46
Rosebud County	C11	RM 225.45	33275	5-yr	1747.1	754.92	750.31	1.51	1.49	11.64	9.18	328.73	611.98	3.51	2.76	4.61	4.61
Rosebud County	C11	RM 225.26	32969	5-yr	1747.1	754.77	750.25	1.7	1.65	14.61	10.65	291.78	670.33	3.52	2.56	4.52	4.52
Rosebud County	C11	RM 225.16	32805	5-yr	1747.1	754.63	750.19	2	1.95	19.86	14.72	224.54	401.81	3.87	2.86	4.44	4.44
Rosebud County	C11	RM 225.06	32646	5-yr	1747.1	754.44	747.9	2.36	2.34	24.6	22.39	168.39	196.25	4.4	3.99	6.54	6.54
Rosebud County			32620	5-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	5-yr	1747.1	754.36	747.9	2.38	2.38	26.79	26.75	168.24	177.89	4.37	4.36	6.46	6.46

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	5-yr	1747.1	754.3	750.09	1.84	1.83	16.83	13.27	249.84	506.83	3.79	2.98	4.21	4.21
Rosebud County	C12	RM 224.71	32083	5-yr	1747.1	754.14	750.04	1.86	1.86	15.49	15.25	359.66	365.4	2.61	2.57	4.1	4.1
Rosebud County	C12	RM 224.53	31796	5-yr	1747.1	753.97	749.96	1.86	1.86	13.14	13.02	378	557.48	2.48	2.46	4.01	4.01
Rosebud County	C12	RM 224.34	31486	5-yr	1747.1	753.78	750.03	1.74	1.69	16.7	15.15	469.65	706.42	1.98	1.8	3.75	3.75
Rosebud County	C12	RM 224.16	31195	5-yr	1747.1	753.63	749.78	1.64	1.53	13.13	9.08	261.94	818.22	3.28	2.26	3.95	3.95
Rosebud County	C12	RM 223.96	30878	5-yr	1747.1	753.44	749.48	1.94	1.71	19	10.18	179.51	760.59	3.6	1.92	4.06	4.06
Rosebud County	C12	RM 223.76	30567	5-yr	1747.1	753.22	749.18	2.2	1.96	25.52	13.05	162.95	664.11	3.12	1.58	4.04	4.04
Rosebud County	C12	RM 223.55	30235	5-yr	1747.1	753.08	748.87	1.82	1.62	16.29	7.63	229.9	652.54	3.92	1.82	4.21	4.21
Rosebud County	C12	RM 223.37	29952	5-yr	1747.1	752.88	748.72	2.1	1.84	21.71	10.5	208.3	619.35	3.91	1.87	4.16	4.16
Rosebud County	C12	RM 223.2	29681	5-yr	1747.1	752.74	748.51	2.03	1.8	19.92	8.97	209.66	658.9	4.04	1.8	4.23	4.23
Rosebud County	C12	RM 223.02	29391	5-yr	1747.1	752.64	748.51	1.77	1.55	15.74	6.49	263.42	874.03	3.62	1.48	4.13	4.13
Rosebud County	C12	RM 222.82	29071	5-yr	1747.1	752.5	748.5	1.74	1.4	15.29	5.82	267.54	921.52	3.61	1.37	4	4
Rosebud County	C12	RM 222.64	28787	5-yr	1747.1	752.34	748.46	1.91	1.38	18.27	5.69	236.97	1188.83	3.63	1.12	3.88	3.88
Rosebud County	C12	RM 222.45	28479	5-yr	1747.1	752.19	748.44	1.81	1.28	17.12	6.34	278.46	1162.61	3.2	1.18	3.75	3.75
Rosebud County	C12	RM 222.22	28128	5-yr	1747.1	752.05	748.15	1.68	1.22	14.11	5.11	254.7	1073.09	3.71	1.33	3.9	3.9
Rosebud County	C12	RM 222.01	27784	5-yr	1747.1	751.97	747.57	1.32	1.04	9.01	3.86	372.22	1189.52	3.33	1.42	4.4	4.4
Rosebud County	C12	RM 221.77	27401	5-yr	1747.1	751.91	747.18	0.92	0.8	4.98	3.46	725.95	1278.79	2.47	1.71	4.73	4.73
Rosebud County	C12	RM 221.55	27042	5-yr	1747.1	751.84	747.07	0.87	0.78	4.91	3.46	807.88	1326.15	2.41	1.7	4.77	4.77
Rosebud County	C12	RM 221.34	26708	5-yr	1747.1	751.77	746.94	0.92	0.77	4.38	2.8	648.68	1465.47	2.68	1.71	4.83	4.83
Rosebud County	C12	RM 221.15	26406	5-yr	1747.1	751.67	746.7	1.36	1.06	8.69	3.22	265.14	1091.15	4.53	1.66	4.97	4.97
Rosebud County	C12	RM 220.96	26081	5-yr	1747.1	751.09	746.66	3.19	2.64	50.47	15.14	137.79	591.34	3.81	1.12	4.43	4.43
Rosebud County	C12	RM 220.77	25779	5-yr	1747.1	750.76	746.73	2.87	2.76	41.21	29.24	163.4	241.9	3.69	2.61	4.03	4.03
Rosebud County	C12	RM 220.6	25513	5-yr	1747.1	750.77	746.72	1.77	1.65	15.34	9.36	251.06	451.8	3.86	2.35	4.05	4.05
Rosebud County	C12	RM 220.4	25183	5-yr	1747.1	750.58	746.88	1.87	1.85	15.08	11.34	390.4	696.74	2.38	1.79	3.7	3.7
Rosebud County	C12	RM 220.23	24914	5-yr	1747.1	750.51	746.8	1.39	1.35	7.21	5.72	613.51	840.99	2.03	1.61	3.71	3.71
Rosebud County	C12	RM 220.02	24578	5-yr	1747.1	750.38	746.54	1.31	1.27	7.16	6.59	764.53	862.84	1.73	1.59	3.84	3.84
Rosebud County	C12	RM 219.83	24268	5-yr	1747.1	750.31	746.18	1.06	1.03	5.03	4.46	766.26	901.77	2.13	1.89	4.13	4.13
Rosebud County	C12	RM 219.63	23947	5-yr	1747.1	750.17	745.79	1.34	1.27	8.28	6.53	583.96	791.8	2.21	1.74	4.38	4.38
Rosebud County	C12	RM 219.47	23683	5-yr	1747.1	750.08	745.56	1.36	1.23	9.34	5.1	378.93	787.84	3.31	1.8	4.52	4.52
Rosebud County	C12	RM 219.29	23386	5-yr	1747.1	749.8	745.27	2.2	1.76	24.11	8.76	206	746.07	3.7	1.33	4.53	4.53
Rosebud County	C12	RM 219.11	23085	5-yr	1747.1	749.61	745.15	2.2	1.69	24.22	9.65	176.7	722.47	3.66	1.44	4.46	4.46
Rosebud County	C12	RM 218.92	22783	5-yr	1747.1	749.46	745.15	1.92	1.47	18.51	8.51	229.91	834.01	3.11	1.42	4.31	4.31
Rosebud County	C12	RM 218.73	22473	5-yr	1747.1	749.31	745.06	1.8	1.35	15.83	6.88	226.8	765.31	3.92	1.69	4.25	4.25
Rosebud County	C12	RM 218.54	22180	5-yr	1747.1	749.19	744.99	1.7	1.37	14.61	7.14	274.48	735.81	3.56	1.74	4.2	4.2
Rosebud County	C12	RM 218.38	21902	5-yr	1747.1	749.09	744.43	1.69	1.31	13.79	6.01	234.82	745.71	4.13	1.79	4.66	4.66
Rosebud County	C12	RM 218.18	21580	5-yr	1747.1	748.85	743.9	2.19	1.52	23.34	9.02	182.48	747.03	4.03	1.54	4.95	4.95
Rosebud County	C12	RM 217.99	21276	5-yr	1747.1	748.68	743.66	2.11	1.6	22.5	12.88	211.96	668.58	3.59	2.04	5.02	5.02
Rosebud County	C12	RM 217.81	20981	5-yr	1747.1	748.65	743.51	1.43	1.37	9.45	5.6	293.39	621.37	4.14	2.44	5.14	5.14
Rosebud County	C12	RM 217.64	20702	5-yr	1747.1	748.34	743.41	2.4	2.06	28.01	10.24	176.29	619.7	4.05	1.46	4.93	4.93
Rosebud County	C12	RM 217.45	20392	5-yr	1747.1	748.11	743.29	2.4	1.87	28.85	10.82	184.69	745.7	3.73	1.38	4.82	4.82
Rosebud County	C12	RM 217.25	20070	5-yr	1747.1	748.05	743.29	1.79	1.28	15.18	4.49	191.77	1073.6	4.38	1.27	4.76	4.76
Rosebud County	C12	RM 217	19662	5-yr	1747.1	747.78	743.25	2.17	1.64	22.96	6.58	191.31	951.58	3.96	1.12	4.53	4.53
Rosebud County	C12	RM 216.77	19300	5-yr	1747.1	747.53	743.25	2.22	1.62	25.56	8.81	217.02	959.84	3.28	1.12	4.28	4.28
Rosebud County	C12	RM 216.53	18912	5-yr	1747.1	747.35	743.3	1.79	1.18	16.9	6.31	273.31	1272.39	3.16	1.17	4.05	4.05
Rosebud County	C12	RM 216.27	18500	5-yr	1747.1	747.18	743.24	1.55	1.09	12.94	5.49	357.7	1309.65	2.89	1.22	3.94	3.94
Rosebud County	C12	RM 215.98	18038	5-yr	1747.1	747.04	743.12	1.38	0.92	10.08	5.03	273.73	1211.74	3.14	1.57	3.92	3.92
Rosebud County	C12	RM 215.68	17550	5-yr	1747.1	746.9	742.31	1.41	1.05	9.46	3.37	269.37	1088.79	4.3	1.53	4.59	4.59
Rosebud County	C12	RM 215.41	17101	5-yr	1747.1	746.67	741.82	1.9	1.52	17.51	6.19	217.93	821.73	4.01	1.4	4.85	4.85
Rosebud County	C12	RM 215.21	16781	5-yr	1747.1	746.28	741.65	2.71	2.15	36.32	12.47	159.38	635.54	3.82	1.29	4.63	4.63
Rosebud County	C12	RM 215.02	16479	5-yr	1747.1	745.96	741.68	2.8	2.31	38.6	16.8	146.57	450.28	3.93	1.68	4.28	4.28
Rosebud County	C13	RM 214.86	16220	5-yr	1747.1	745.99	741.64	1.64	1.48	13.01	7.02	252.91	532.59	4.14	2.22	4.35	4.35
Rosebud County	C13	RM 214.65	15883	5-yr	1747.1	745.85	741.6	1.7	1.7	12.17	12.17	398.27	448.74	2.58	2.58	4.25	4.25
Rosebud County	C13	RM 214.46	15577	5-yr	1747.1	745.7	741.6	1.7	1.67	11.4	8.84	394.02	780.49	2.6	2.01	4.1	4.1
Rosebud County	C13	RM 214.27	15282	5-yr	1747.1	745.59	741.59	1.57	1.57	9.97	9.96	466.67	704.94	2.38	2.38	4	4
Rosebud County	C13	RM 214.07	14957	5-yr	1747.1	745.46	741.54	1.39	1.32	13.43	9.6	424.96	1036.17	2.94	2.1	3.92	3.92
Rosebud County	C13	RM 213.9	14672	5-yr	1747.1	745.3	741.37	1.59	1.59	13.19	13.07	360.52	496.32	3.05	3.02	3.93	3.93
Rosebud County	C13	RM 213.7	14343	5-yr	1747.1	745.07	740.88	1.95	1.87	18.73	11.18	232.44	932.52	3.84	2.28	4.19	4.19
Rosebud County	C13	RM 213.54	14083	5-yr	1747.1	744.81	740.59	2.38	2.24	27.86	14.31	188.86	1019.47	3.87	1.97	4.22	4.22
Rosebud County	C13	RM 213.36	13792	5-yr	1747.1	744.67	740.39	2.03	1.96	20.98	18.52	238.26	1178.66	3.51	3.09	4.28	4.28
Rosebud County	C13	RM 213.16	13475	5-yr	1747.1	744.5	740.27	1.99	1.75	20.47	13.8	208.2	1208.24	3.31	2.21	4.23	4.23

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	5-yr	1747.1	744.34	740.31	2.02	1.69	18.18	12.16	208.76	1009.14	3.09	2.05	4.03	4.03
Rosebud County	C13	RM 212.79	12880	5-yr	1747.1	744.14	740.19	2.08	1.58	21.59	8.28	178.07	1387.05	3.75	1.42	3.95	3.95
Rosebud County	C13	RM 212.6	12572	5-yr	1747.1	744.01	739.79	1.79	1.41	15.7	5.04	239.87	1657.86	3.92	1.25	4.22	4.22
Rosebud County	C13	RM 212.42	12284	5-yr	1747.1	743.78	739.58	2.19	1.67	24.37	7.68	206.29	1484.97	3.63	1.13	4.2	4.2
Rosebud County	C13	RM 212.23	11983	5-yr	1747.1	743.62	739.17	1.94	1.63	19.25	5.76	256.76	1764.64	3.42	1.02	4.45	4.45
Rosebud County	C13	RM 212.05	11688	5-yr	1747.1	743.48	738.83	1.9	1.64	17.49	5.52	224.06	1220.21	4.03	1.26	4.65	4.65
Rosebud County	C13	RM 211.85	11386	5-yr	1747.1	743.29	738.79	2.04	1.81	21.2	9.44	244.28	821.04	3.45	1.53	4.5	4.5
Rosebud County	C13	RM 211.65	11066	5-yr	1747.1	743.1	738.58	2	1.66	20.2	9.26	248.65	731.72	3.42	1.56	4.52	4.52
Rosebud County	C13	RM 211.44	10724	5-yr	1747.1	742.9	738.38	2.08	1.52	21.75	9.47	199.53	972.45	3.64	1.57	4.52	4.52
Rosebud County	C13	RM 211.21	10353	5-yr	1747.1	742.79	737.87	1.76	1.28	13.46	5.76	207.36	999.62	3.64	1.55	4.92	4.92
Rosebud County	C13	RM 210.96	9946	5-yr	1747.1	742.48	737.72	2.35	1.56	27.83	11.77	169.56	744.82	3.61	1.51	4.76	4.76
Rosebud County	C13	RM 210.75	9612	5-yr	1747.1	742.39	737.48	1.81	1.28	16.06	7.87	191.27	707.92	3.98	1.93	4.91	4.91
Rosebud County	C13	RM 210.57	9317	5-yr	1747.1	742.31	737.5	1.6	1.23	12.32	5.03	243.51	888.43	3.96	1.6	4.81	4.81
Rosebud County	C13	RM 210.36	8986	5-yr	1747.1	742	737.54	2.31	1.74	26.99	10.63	194.77	717.95	3.58	1.4	4.46	4.46
Rosebud County	C13	RM 210.16	8674	5-yr	1747.1	741.78	737.53	2.06	1.85	23.13	14.64	287.32	521.02	2.88	1.82	4.25	4.25
Rosebud County	C13	RM 209.98	8382	5-yr	1747.1	741.76	737.25	1.32	1.15	8.6	4.58	305.3	864.82	3.86	2.05	4.51	4.51
Rosebud County	C13	RM 209.8	8091	5-yr	1747.1	741.67	736.96	1.48	1.09	10.25	4.04	218.68	925.39	4.58	1.79	4.71	4.71
Rosebud County	C13	RM 209.6	7774	5-yr	1747.1	741.48	736.72	1.99	1.24	18.81	5.17	179.37	1244.5	4.36	1.18	4.76	4.76
Rosebud County	C13	RM 209.41	7482	5-yr	1747.1	741.4	736.53	1.71	1.15	14.35	4.79	236.96	1240.89	3.88	1.28	4.87	4.87
Rosebud County	C13	RM 209.21	7161	5-yr	1747.1	741.15	736.29	2.16	1.68	22.7	6.7	194.65	912.71	3.97	1.15	4.86	4.86
Rosebud County	C13	RM 209.03	6871	5-yr	1747.1	740.96	736.14	2.24	1.65	24.44	7.44	185.35	920.17	3.97	1.19	4.82	4.82
Rosebud County	C13	RM 208.85	6571	5-yr	1747.1	740.87	736.03	1.79	1.33	15.6	6.04	229.12	889.98	3.97	1.52	4.84	4.84
Rosebud County	C13	RM 208.65	6257	5-yr	1747.1	740.76	735.74	1.74	1.3	15.18	8.07	217.82	758.61	3.73	1.96	5.02	5.02
Rosebud County	C13	RM 208.46	5945	5-yr	1747.1	740.51	735.69	2.16	1.85	22.48	15.72	203.82	463.84	3.18	2.2	4.82	4.82
Rosebud County	C13	RM 208.29	5682	5-yr	1747.1	739.95	735.63	3.2	2.89	50.85	34.55	116.21	235.36	3.85	2.57	4.32	4.32
Rosebud County	C14	RM 208.1	5374	5-yr	1747.1	739.85	735.61	2.13	2.04	22.14	13.7	200.86	350.9	4.05	2.48	4.24	4.24
Rosebud County	C14	RM 207.91	5064	5-yr	1747.1	739.69	735.56	1.97	1.69	19.51	9.38	292.29	735.84	2.94	1.4	4.13	4.13
Rosebud County	C14	RM 207.72	4766	5-yr	1747.1	739.5	735.52	1.85	1.63	16.21	9.66	373.19	832.38	2.44	1.44	3.98	3.98
Rosebud County	C14	RM 207.53	4450	5-yr	1747.1	739.4	735.35	1.32	1.1	9.98	5.41	465.05	1143.38	2.63	1.42	4.05	4.05
Rosebud County	C14	RM 207.33	4123	5-yr	1747.1	739.24	735.27	1.62	1.18	13.62	5.5	282.48	1106.33	3.34	1.34	3.97	3.97
Rosebud County	C14	RM 207.15	3851	5-yr	1747.1	739.16	735.14	1.45	1.09	10.51	4.7	310.55	1326.9	3.43	1.53	4.02	4.02
Rosebud County	C14	RM 206.99	3599	5-yr	1747.1	739.1	734.95	1.36	0.96	9.68	4.62	327.09	1545.19	3.2	1.52	4.15	4.15
Rosebud County	C14	RM 206.81	3315	5-yr	1747.1	739.02	734.49	1.39	0.94	9.61	3.75	257.4	1546.82	3.7	1.43	4.53	4.53
Rosebud County	C14	RM 206.61	2997	5-yr	1747.1	738.9	733.91	1.62	1.01	12.53	4.24	197.48	1222.19	4.25	1.42	4.99	4.99
Rosebud County	C14	RM 206.43	2701	5-yr	1747.1	738.83	733.52	1.54	1.02	12.04	5.82	244.31	1567.97	3.47	1.66	5.31	5.31
Rosebud County	C14	RM 206.21	2350	5-yr	1747.1	738.74	733.38	1.43	1.07	10.33	5.33	253.17	1599.55	3.7	1.9	5.36	5.36
Rosebud County	C14	RM 205.97	1963	5-yr	1747.1	738.62	732.73	1.48	1.21	9.86	4.64	223.85	1466.94	5.11	2.38	5.89	5.89
Rosebud County	C14	RM 205.72	1563	5-yr	1747.1	737.83	732.73	3.7	2.75	87.01	24.6	106.89	736.7	4.15	1.13	5.1	5.1
Rosebud County	C14	RM 205.49	1198	5-yr	1747.1	737.64	732.63	2.28	1.85	33.51	13.25	192.62	751.99	3.82	1.5	5.01	5.01
Rosebud County	C14	RM 205.3	907	5-yr	1747.1	737.31	732.76	2.42	2.04	32.14	17.75	246.47	619.3	2.82	1.55	4.55	4.55
Rosebud County	C14	RM 205.11	594	5-yr	1747.1	737.1	732.8	2.2	1.78	23.66	11.86	191.52	727.85	3.91	1.95	4.3	4.3
Rosebud County	C14	RM 204.9	243	5-yr	1747.1	736.83	732.63	2.26	2.02	26.21	14.58	224.67	694.41	3.37	1.86	4.2	4.2

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	5-yr	1747.1	736.83	732.67	2.17	1.42	24.5	10.96	191.32	838.53	3.32	1.47	4.16	4.16
Custer County	C14	RM 204.43	73135	5-yr	1747.1	736.68	732.44	1.84	1.27	17.56	7.55	266.74	983.34	3.27	1.4	4.24	4.24
Custer County	C14	RM 204.22	72808	5-yr	1747.1	736.45	732.3	2.01	1.44	21.62	10.53	262.16	845.74	2.96	1.44	4.15	4.15
Custer County	C14	RM 204	72454	5-yr	1747.1	736.34	731.9	1.55	1.16	11.74	4.73	261.19	936.74	4	1.6	4.44	4.44
Custer County	C14	RM 203.82	72156	5-yr	1747.1	736.09	731.14	2.2	1.51	24.06	9.12	197.43	822.66	3.75	1.4	4.95	4.95
Custer County	C14	RM 203.65	71895	5-yr	1747.1	735.91	730.95	2.37	1.34	27.81	10.69	162.5	911.03	3.79	1.43	4.96	4.96
Custer County	C14	RM 203.5	71641	5-yr	1747.1	735.83	730.78	1.9	1.21	18.07	7.18	195.78	989.7	3.74	1.46	5.05	5.05
Custer County	C14	RM 203.3	71324	5-yr	1747.1	735.8	730.79	1.4	0.88	9.48	4.45	161.79	1036.93	4.15	1.91	5	5
Custer County	C14	RM 203.1	71035	5-yr	1747.1	735.5	730.79	2.31	1.46	27.11	8.77	184.4	1242.11	3.52	1.12	4.71	4.71
Custer County	C14	RM 202.9	70718	5-yr	1747.1	735.3	730.67	2.09	1.56	24.77	11.2	248.15	1082.62	2.52	1.13	4.63	4.63
Custer County	C14	RM 202.71	70415	5-yr	1747.1	735.02	730.64	2.13	1.58	24.04	10.73	230.58	796.07	3.14	1.39	4.38	4.38
Custer County	C14	RM 202.51	70088	5-yr	1747.1	734.63	730.68	2.62	1.89	34.99	13.05	152.2	712.78	3.52	1.29	3.95	3.95
Custer County	C14	RM 202.34	69815	5-yr	1747.1	734.5	730.63	1.79	1.45	17.48	7.36	321.87	1021.77	2.83	1.18	3.87	3.87
Custer County	C14	RM 202.13	69483	5-yr	1747.1	734.33	730.54	1.72	1.25	15.37	6.61	282.19	1100.32	3.33	1.42	3.79	3.79
Custer County	C14	RM 201.97	69219	5-yr	1747.1	734.18	730.01	1.83	1.49	17.34	10.11	264.21	615.15	3.29	1.91	4.17	4.17
Custer County	C14	RM 201.75	68884	5-yr	1747.1	734.13	729.45	1.3	1.18	8.05	3.67	306.47	758.55	4.31	1.95	4.68	4.68
Custer County	C14	RM 201.57	68612	5-yr	1747.1	733.98	729.37	1.73	1.43	16.71	9.29	362.67	842.21	2.62	1.45	4.61	4.61
Custer County	C14	RM 201.38	68299	5-yr	1747.1	733.57	729.23	2.29	2.04	30.75	18.23	321.38	669.16	2.29	1.35	4.34	4.34
Custer County	C14	RM 201.23	68055	5-yr	1747.1	733.32	729.13	2.01	1.61	23.82	14.53	369.58	806.04	2.21	1.35	4.19	4.19
Custer County	C14	RM 201.06	67778	5-yr	1747.1	733.29	729.03	1.23	1.02	8.12	5	262.3	996.95	2.93	1.78	4.26	4.26
Custer County	C14	RM 200.85	67439	5-yr	1747.1	732.78	729.05	3.04	2.69	47.14	27.59	113.61	320.66	3.54	2.03	3.73	3.73
Custer County	C14	RM 200.64	67103	5-yr	1747.1	732.7	728.97	1.86	1.57	17.36	8.87	215.04	621.19	3.61	1.83	3.73	3.73
Custer County	C14	RM 200.48	66842	5-yr	1747.1	732.63	728.8	1.44	1.33	11.16	8.04	307.11	623.46	2.94	2.11	3.83	3.83
Custer County	C14	RM 200.27	66515	5-yr	1747.1	732.47	728.63	1.53	1.35	12.45	8.15	359.69	642.53	3.09	2.01	3.84	3.84
Custer County	C14	RM 200.05	66162	5-yr	1747.1	732.26	728.3	1.72	1.57	15.97	12.51	387.66	554.04	2.57	2	3.96	3.96
Custer County	C14	RM 199.9	65916	5-yr	1747.1	732.19	727.78	1.38	1.37	9.84	9.41	381.62	403.58	3.32	3.17	4.41	4.41
Custer County	C14	RM 199.71	65614	5-yr	1747.1	731.91	727.34	2.14	2.13	19.41	18.79	252.32	322.1	3.24	3.13	4.57	4.57
Custer County	C14	RM 199.53	65326	5-yr	1747.1	731.86	727.34	1.63	1.63	12.79	12.78	258.93	272.19	4.14	4.13	4.52	4.52
Custer County	C14	RM 199.38	65076	5-yr	1747.1	731.73	727.34	1.74	1.74	14.06	14.04	363.73	397.31	2.75	2.75	4.39	4.39
Custer County	C14	RM 199.18	64754	5-yr	1747.1	731.5	727.64	1.89	1.89	16.68	16.61	407.45	516.91	2.27	2.26	3.86	3.86
Custer County	C14	RM 199.04	64535	5-yr	1747.1	731.41	727.64	1.6	1.59	11.92	11.74	419.11	734.54	2.61	2.57	3.77	3.77
Custer County	C14	RM 198.77	64102	5-yr	1747.1	731.2	727.28	1.69	1.68	14.45	13.85	294.95	519.21	3.51	3.36	3.92	3.92
Custer County	C14	RM 198.57	63773	5-yr	1747.1	730.87	726.99	2.34	2.33	27.5	26.31	204.81	264.76	3.64	3.48	3.88	3.88
Custer County	C14	RM 198.4	63505	5-yr	1747.1	730.66	726.86	2.35	2.13	28.1	19.53	199.37	451.87	3.53	2.44	3.8	3.8
Custer County	C14	RM 198.22	63215	5-yr	1747.1	730.4	726.57	2.42	1.84	30.21	16.33	190.38	520.4	3.4	1.82	3.84	3.84
Custer County	C14	RM 198.04	62923	5-yr	1747.1	730.24	726.32	2.02	1.7	20.8	14.32	226.78	436.42	3.45	2.36	3.93	3.93
Custer County	C14	RM 197.84	62611	5-yr	1747.1	730.15	726.04	1.49	1.48	11.79	9.9	351.59	456.79	3.09	2.59	4.11	4.11
Custer County	C14	RM 197.65	62306	5-yr	1747.1	729.99	725.69	1.76	1.63	14.25	7.82	284.08	831.85	3.19	1.74	4.3	4.3
Custer County	C14	RM 197.47	62013	5-yr	1747.1	729.97	725.29	1.22	1.03	6.94	2.84	295.34	1346.97	4.49	1.83	4.68	4.68
Custer County	C14	RM 197.27	61686	5-yr	1747.1	729.82	724.81	1.82	1.23	16.48	6.62	210.89	1380.34	3.77	1.5	5.01	5.01
Custer County	C14	RM 197.07	61373	5-yr	1747.1	729.7	724.81	1.81	1.42	16.24	6.26	203.82	1070.81	3.87	1.47	4.89	4.89
Custer County	C14	RM 196.91	61115	5-yr	1747.1	729.66	724.81	1.48	0.96	10.78	5.72	222.1	1302.45	3.86	2.03	4.85	4.85
Custer County	C14	RM 196.73	60815	5-yr	1747.1	729.6	724.76	1.36	0.84	8.99	4.57	240.69	1227.4	4.01	2.03	4.84	4.84
Custer County	C14	RM 196.54	60518	5-yr	1747.1	729.52	724.67	1.46	0.97	10.95	5.61	270.26	1039.76	3.47	1.76	4.85	4.85
Custer County	C14	RM 196.33	60178	5-yr	1747.1	729.44	724.57	1.4	1.06	9.36	5.26	247.05	721.32	4.2	2.35	4.87	4.87
Custer County	C14	RM 196.17	59915	5-yr	1747.1	729.39	724.51	1.42	1.21	9.55	6.66	191.57	835.34	4.35	3.03	4.88	4.88
Custer County	C15	RM 195.98	59615	5-yr	1747.1	728.35	724.52	4.14	4.1	89.98	80.9	131.85	153.25	3.2	2.87	3.83	3.83
Custer County	C15	RM 195.81	59337	5-yr	1747.1	728.22	724.33	2.78	2.76	38.46	36.01	168.26	184.38	3.74	3.5	3.89	3.89
Custer County	C15	RM 195.61	59020	5-yr	1747.1	728.1	724.24	2.05	2.05	21	19.93	229.88	269.47	3.71	3.51	3.86	3.86
Custer County	C15	RM 195.43	58727	5-yr	1747.1	727.88	724.22	2.07	2.07	23.63	22.77	305.59	394.24	2.76	2.66	3.66	3.66
Custer County	C15	RM 195.23	58415	5-yr	1747.1	727.73	723.93	1.63	1.63	13.95	13.9	390.4	425.79	2.74	2.73	3.8	3.8
Custer County	C15	RM 195.04	58114	5-yr	1747.1	727.5	723.54	1.96	1.86	20.47	17.3	269.2	394.79	3.02	2.55	3.96	3.96
Custer County	C15	RM 194.86	57824	5-yr	1747.1	727.28	722.93	2.1	1.89	22.35	14.81	209.2	437.67	3.54	2.33	4.35	4.35
Custer County	C15	RM 194.67	57521	5-yr	1747.1	727.13	722.75	1.92	1.9	17.67	15.62	217.41	375.3	4.18	3.69	4.38	4.38
Custer County	C15	RM 194.49	57231	5-yr	1747.1	727.02	722.53	1.83	1.79	16.09	11.65	232.07	698.87	4.11	2.96	4.49	4.49
Custer County	C15	RM 194.32	56946	5-yr	1747.1	726.81	722.5	2.12	2.1	20.66	14.44	259.82	559.61	3.16	2.2	4.31	4.31
Custer County	C15	RM 194.13	56643	5-yr	1747.1	726.59	722.5	2.13	2.12	23.59	19.6	250.63	351.6	3.27	2.71	4.09	4.09
Custer County	C15	RM 193.93	56331	5-yr	1747.1	726.45	722.31	1.85	1.77	16.96	13.07	247.7	338.78	3.78	2.91	4.14	4.14
Custer County	C15	RM 193.74	56024	5-yr	1747.1	726.28	722.23	1.95	1.89	18.61	12.28	228.52	379.31	3.91	2.56	4.05	4.05
Custer County	C15	RM 193.55	55708	5-yr	1747.1	726.07	722.13	2.12	2	22.18	12.29	215.75	417.44	3.8	2.09	3.94	3.94

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	5-yr	1747.1	725.85	722.13	2.24	2.13	25.32	12.94	219.06	454.93	3.55	1.8	3.73	3.73
Custer County	C15	RM 193.2	55158	5-yr	1747.1	725.78	722.13	1.74	1.59	15.35	9.03	278.22	529.91	3.53	2.07	3.65	3.65
Custer County	C15	RM 193	54825	5-yr	1747.1	725.62	721.84	1.75	1.58	15.51	8.85	281.95	563	3.48	1.98	3.78	3.78
Custer County	C15	RM 192.81	54525	5-yr	1747.1	725.45	721.37	1.97	1.64	19.05	8.65	207.4	605.97	3.91	1.76	4.08	4.08
Custer County	C15	RM 192.63	54247	5-yr	1747.1	725.29	721.01	1.98	1.77	18.99	9.44	215.57	496.01	4.03	1.99	4.28	4.28
Custer County	C15	RM 192.44	53935	5-yr	1747.1	725.2	721.01	1.72	1.5	14.58	8.62	240.36	554	3.86	2.27	4.19	4.19
Custer County	C16	RM 192.26	53653	5-yr	1747.1	725.01	721.01	1.97	1.87	19.06	15.32	227.07	326.74	3.86	3.1	4	4
Custer County	C16	RM 192.05	53309	5-yr	1747.1	724.47	721.11	2.93	2.83	45.21	36.6	186.81	257.38	3.17	2.56	3.36	3.36
Custer County	C16	RM 191.74	52809	5-yr	1747.1	724.18	721.1	1.72	1.72	16.47	16.47	407.04	448.21	2.49	2.49	3.08	3.08
Custer County	C16	RM 191.35	52181	5-yr	1747.1	723.68	721.02	1.74	1.72	18.23	17.35	511.6	543.11	1.97	1.87	2.66	2.66
Custer County	C16	RM 191.12	51812	5-yr	1747.1	723.46	720.51	1.42	1.42	10.79	10.79	595.53	595.53	2.06	2.06	2.95	2.95
Custer County	C16	RM 190.87	51406	5-yr	1747.1	723.26	719.89	1.29	1.29	8.58	8.46	723.42	733.96	1.87	1.84	3.37	3.37
Custer County	C16	RM 190.54	50885	5-yr	1747.1	723.11	719.15	0.97	0.97	5.8	5.8	788.41	827.77	2.28	2.28	3.96	3.96
Custer County	C16	RM 190.29	50477	5-yr	1747.1	722.59	718.45	2.65	2.48	35.35	22.52	179.23	357.42	3.64	2.31	4.13	4.13
Custer County	C16	RM 190.1	50176	5-yr	1747.1	722.31	718.43	2.45	2.44	31.57	29.81	225.11	376.15	3.16	2.99	3.88	3.88
Custer County	C16	RM 189.85	49765	5-yr	1747.1	722.1	718.13	1.77	1.72	17.03	15.91	334.06	579.98	2.89	2.71	3.97	3.97
Custer County	C16	RM 189.65	49458	5-yr	1747.1	721.92	713.92	1.81	1.81	16.48	16.28	290.6	945.34	3.31	3.27	8	8
Custer County	C16		49425	5-yr	Bridge												
Custer County	C16	RM 189.62	49416	5-yr	1747.1	721.86	713.92	1.86	1.86	17.38	17.35	288.82	733.93	3.25	3.25	7.94	7.94
Custer County	C16	RM 189.43	49103	5-yr	1747.1	721.43	718.09	2.47	2.47	34.18	33.35	269.1	460.07	2.62	2.56	3.34	3.34
Custer County	C16	RM 189.22	48763	5-yr	1747.1	721.43	717.93	1.21	1.21	7.7	7.7	451.46	731.26	3.19	3.19	3.5	3.5
Custer County	C16	RM 188.91	48267	5-yr	1747.1	721.23	717.54	1.48	1.48	10.11	10.1	472.29	858.05	2.49	2.49	3.69	3.69
Custer County	C16	RM 188.66	47869	5-yr	1747.1	720.86	716.75	2.27	2.27	25.32	23.45	194.64	799.42	3.95	3.65	4.11	4.11
Custer County	C16	RM 188.51	47622	5-yr	1747.1	720.68	716.72	2.27	2.25	26.14	23.61	216.84	725.87	3.54	3.2	3.96	3.96
Custer County	C16	RM 188.32	47314	5-yr	1747.1	720.58	716.79	1.75	1.52	16.21	11.36	151.33	527.05	3.36	2.33	3.79	3.79
Custer County	C16	RM 188.14	47024	5-yr	1747.1	720.4	716.93	1.42	1.62	7.89	9.93	343.73	695.79	1.41	1.78	3.47	3.47
Custer County	C16	RM 187.98	46768	5-yr	1747.1	720.31	716.91	1.52	1.28	12.32	6.8	221.93	806.88	3.09	1.69	3.4	3.4
Custer County	C16	RM 187.78	46440	5-yr	1747.1	720.23	716.69	1.33	1.19	9.42	5.87	251.06	828.82	2.86	1.78	3.54	3.54
Custer County	C16	RM 187.55	46083	5-yr	1747.1	719.92	716.04	2.09	1.63	22.3	8.28	224.37	1022.85	3.46	1.28	3.88	3.88
Custer County	C16	RM 187.35	45750	5-yr	1747.1	719.46	715.34	2.71	2.46	37.38	14.98	180.18	515.69	3.54	1.4	4.12	4.12
Custer County	C16	RM 187.14	45421	5-yr	1747.1	719.31	715.3	2	1.68	20.81	9.95	258.28	676.49	3.29	1.56	4.01	4.01
Custer County	C16	RM 187.01	45211	5-yr	1747.1	719.24	715.3	1.67	1.48	14.31	7.37	299.45	705.17	3.44	1.76	3.95	3.95
Custer County	C16	RM 186.84	44930	5-yr	1747.1	719.06	715.03	1.88	1.74	18.65	11.72	294.03	698.15	3.13	1.96	4.03	4.03
Custer County	C16	RM 186.62	44553	5-yr	1747.1	718.88	712.45	1.9	1.9	16.32	16.24	188.38	189.18	4.89	4.87	6.43	6.43
Custer County	C16		44545	5-yr	Bridge												
Custer County	C16	RM 186.61	44538	5-yr	1747.1	718.87	712.45	1.9	1.9	16.45	16.37	188.38	320.22	4.88	4.86	6.42	6.42
Custer County	C16	RM 186.46	44311	5-yr	1747.1	718.51	714.53	2.67	2.59	36.37	26.88	184.79	462.58	3.53	2.59	3.98	3.98
Custer County	C16	RM 186.26	43996	5-yr	1747.1	718.26	714.27	2.38	2.33	28.58	22.58	205.3	317.21	3.57	2.81	3.99	3.99
Custer County	C16	RM 186.1	43730	5-yr	1747.1	718.18	713.9	1.79	1.79	16.51	16.51	290.61	321.4	3.36	3.36	4.28	4.28
Custer County	C16	RM 185.91	43424	5-yr	1774.3	717.98	713.84	1.9	1.9	15.9	15.9	381.44	415.57	2.44	2.44	4.14	4.14
Custer County	C16	RM 185.71	43110	5-yr	1774.3	717.34	713.84	3.04	3.04	43.23	43.23	243.38	258.07	2.4	2.4	3.5	3.5
Custer County	C16	RM 185.52	42808	5-yr	1774.3	717.32	713.71	1.61	1.56	13.86	11.09	364.48	474.14	3.01	2.4	3.61	3.61
Custer County	C16	RM 185.34	42508	5-yr	1774.3	717.05	713.28	2	2	17.22	17.06	430.58	479.12	2.06	2.04	3.77	3.77
Custer County	C16	RM 185.16	42219	5-yr	1774.3	716.97	712.93	1.42	1.41	10.8	9.87	419.95	1042.45	2.98	2.72	4.04	4.04
Custer County	C17	RM 184.95	41881	5-yr	1774.3	716.75	712.72	1.82	1.68	17.83	11.37	288.08	781.82	3.36	2.13	4.03	4.03
Custer County	C17	RM 184.78	41621	5-yr	1774.3	716.47	712.51	2.29	2.13	26.57	16.02	213.64	388.13	3.59	2.15	3.96	3.96
Custer County	C17	RM 184.59	41311	5-yr	1774.3	716.22	711.96	2.36	2.23	27.46	21.09	193.79	269.68	3.84	2.95	4.26	4.26
Custer County	C17	RM 184.4	41010	5-yr	1774.3	716.14	711.62	1.8	1.79	15.66	15.14	242.39	251.76	4.07	3.93	4.52	4.52
Custer County	C17	RM 184.23	40728	5-yr	1774.3	715.93	711.31	2.12	2.11	22.78	21.38	236.38	253.27	3.54	3.32	4.62	4.62
Custer County	C17	RM 184.1	40517	5-yr	1774.3	715.78	710.39	2.18	2.11	23.13	18.41	203.14	263.97	3.99	3.18	5.39	5.39
Custer County	C17		40500	5-yr	Bridge												
Custer County	C17	RM 184.08	40496	5-yr	1774.3	715.75	710.39	2.2	2.13	23.53	18.74	203.14	263.44	3.96	3.16	5.36	5.36
Custer County	C17	RM 184.03	40407	5-yr	1774.3	715.71	711.49	2.08	2.06	21.28	19.54	221.82	244.5	3.85	3.53	4.22	4.22
Custer County	C17	RM 183.83	40098	5-yr	1774.3	715.56	711.42	1.96	1.95	18.83	17.39	231.93	252.18	3.9	3.6	4.14	4.14
Custer County	C17	RM 183.65	39806	5-yr	1774.3	715.39	711.39	2.06	2.05	20.79	20.63	223.18	225.04	3.87	3.84	4	4
Custer County	C17	RM 183.47	39513	5-yr	1774.3	715.13	711.39	2.34	2.34	27.49	27.49	208.48	208.48	3.64	3.64	3.74	3.74
Custer County	C17	RM 183.28	39210	5-yr	1774.3	715.01	711.31	1.86	1.86	17.42	16.93	263.45	271.99	3.62	3.51	3.7	3.7
Custer County	C17	RM 183.09	38909	5-yr	1774.3	714.78	711.04	2.12	2.12	22.71	22.71	237.14	237.14	3.54	3.54	3.74	3.74
Custer County	C17	RM 182.94	38660	5-yr	1774.3	714.68	710.66	1.87	1.87	17.27	17.27	243.88	243.88	3.88	3.88	4.02	4.02
Custer County	C17	RM 182.72	38316	5-yr	1774.3	714.49	710.1	1.95	1.9	19.03	17.65	250.1	278.36	3.63	3.36	4.39	4.39

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	5-yr	1774.3	714.09	710.12	2.71	2.5	36.57	26.45	173.67	264.95	3.73	2.68	3.96	3.96
Custer County	C17	RM 182.34	37706	5-yr	1774.3	713.9	710.27	2.19	2.08	25.03	18.52	240.65	358.56	3.23	2.38	3.63	3.63
Custer County	C17	RM 182.15	37402	5-yr	1774.3	713.68	710.26	2.08	2.02	22.57	19.49	251.78	329.23	3.28	2.83	3.42	3.42
Custer County	C17	RM 181.97	37127	5-yr	1774.3	713.52	710.26	1.91	1.86	19.24	16.6	288.33	351.49	3.15	2.72	3.26	3.26
Custer County	C17	RM 181.78	36815	5-yr	1774.3	713.27	710.09	2.04	1.97	22.57	18.82	305.2	393.08	2.75	2.29	3.18	3.18
Custer County	C17	RM 181.59	36505	5-yr	1774.3	712.92	709.76	2.26	2.18	25.59	21.86	315.76	390.48	2.45	2.09	3.16	3.16
Custer County	C17	RM 181.37	36155	5-yr	1774.3	712.63	709.37	2.09	1.88	23.58	16.11	276.22	472.93	2.93	2	3.26	3.26
Custer County	C17	RM 181.23	35925	5-yr	1774.3	712.32	709.36	2.46	2.28	33.51	25.63	246.42	374.52	2.72	2.08	2.96	2.96
Custer County	C17	RM 181.03	35607	5-yr	1775.5	712.14	709.02	1.77	1.75	17.19	16.21	352.86	414.39	2.8	2.64	3.12	3.12
Custer County	C17	RM 180.83	35292	5-yr	1775.5	711.98	708.68	1.61	1.54	14.31	12.49	362.09	549.21	2.69	2.35	3.3	3.3
Custer County	C17	RM 180.66	35006	5-yr	1775.5	711.79	708.22	1.76	1.71	16.6	13.98	342.47	420.42	2.94	2.47	3.57	3.57
Custer County	C18	RM 180.46	34700	5-yr	1775.5	711.61	708.05	1.83	1.72	17.14	12.33	281.53	419.12	3.42	2.46	3.56	3.56
Custer County	C18	RM 180.29	34421	5-yr	1775.5	711.32	707.79	2.29	2.16	27.75	19.75	243.26	383.41	3.08	2.19	3.53	3.53
Custer County	C18	RM 180.08	34086	5-yr	1775.5	711.12	707.53	1.97	1.86	19.77	14.77	252.51	398.39	3.46	2.58	3.59	3.59
Custer County	C18	RM 179.9	33807	5-yr	1775.5	710.96	707.32	1.94	1.82	19.5	15.28	265.32	395.88	3.27	2.56	3.64	3.64
Custer County	C18	RM 179.73	33525	5-yr	1775.5	710.67	706.89	2.25	2.16	26.83	23.02	256.8	319.14	3.05	2.61	3.78	3.78
Custer County	C18	RM 179.54	33218	5-yr	1775.5	710.37	706.7	2.24	2.23	27.4	25.57	310.83	343.44	2.55	2.38	3.67	3.67
Custer County	C18	RM 179.35	32914	5-yr	1775.5	710.18	706.45	1.89	1.85	18.7	17.24	292.41	342.46	3.2	2.95	3.73	3.73
Custer County	C18	RM 179.16	32611	5-yr	1775.5	709.93	706.29	2.13	2.13	23.51	23.45	237.48	252.77	3.51	3.51	3.64	3.64
Custer County	C18	RM 178.99	32337	5-yr	1775.5	709.77	706.07	1.99	1.96	20.05	18.13	254.03	284.82	3.51	3.17	3.7	3.7
Custer County	C18	RM 178.79	32025	5-yr	1775.5	709.56	705.9	2.07	2.02	21.9	19.75	251.59	286.41	3.4	3.07	3.66	3.66
Custer County	C18	RM 178.61	31730	5-yr	1775.5	709.38	705.59	1.99	1.99	20.3	19.5	259.81	387.6	3.43	3.29	3.79	3.79
Custer County	C18	RM 178.43	31434	5-yr	1775.5	709.22	705.25	1.97	1.97	19.43	19.34	248.23	249.29	3.64	3.62	3.97	3.97
Custer County	C18	RM 178.23	31114	5-yr	1775.5	709.04	704.7	1.97	1.97	19.54	19.37	247.7	258.68	3.63	3.6	4.34	4.34
Custer County	C18	RM 178.06	30848	5-yr	1775.5	708.87	704.57	2.08	2.04	21.22	16.92	219.45	281.23	3.89	3.09	4.3	4.3
Custer County	C18	RM 177.88	30549	5-yr	1775.5	708.67	704.57	2.15	2.11	23.36	19.93	229.01	274.72	3.59	3.06	4.1	4.1
Custer County	C18	RM 177.66	30211	5-yr	1792.5	708.22	704.57	2.72	2.72	37.72	37.72	190.6	222.75	3.46	3.46	3.65	3.65
Custer County	C18	RM 177.49	29932	5-yr	1792.5	708.06	704.47	2.2	2.2	24.64	24.64	236.26	236.26	3.46	3.46	3.59	3.59
Custer County	C19	RM 177.3	29625	5-yr	1792.5	707.9	704.46	1.88	1.88	18.62	18.61	301.79	301.94	3.16	3.16	3.44	3.44
Custer County	C19	RM 177.11	29314	5-yr	1792.5	707.57	704.46	2.25	2.25	27.07	26.94	293.01	300.87	2.72	2.71	3.11	3.11
Custer County	C19	RM 176.93	29040	5-yr	1792.5	707.41	704.42	1.81	1.81	17.61	17.61	360.63	409.37	2.75	2.75	2.99	2.99
Custer County	C19	RM 176.74	28720	5-yr	1792.5	707.24	704.21	1.66	1.62	15.25	13.16	340.83	505.49	2.72	2.35	3.03	3.03
Custer County	C19	RM 176.53	28384	5-yr	1792.5	706.94	703.63	1.93	1.88	22.23	21.02	343.94	465.04	2.16	2.05	3.31	3.31
Custer County	C19	RM 176.36	28109	5-yr	1792.5	706.71	703.08	1.88	1.87	18.98	18.34	323.43	355.73	2.95	2.84	3.63	3.63
Custer County	C19	RM 176.18	27824	5-yr	1792.5	706.12	702.71	3.01	2.95	48.44	40.67	199.69	242.88	2.98	2.5	3.41	3.41
Custer County	C19	RM 176	27527	5-yr	1792.5	705.93	702.51	2.2	2.12	25.68	21.96	259.98	337.77	3.09	2.64	3.42	3.42
Custer County	C19	RM 175.81	27227	5-yr	1792.5	705.69	702.24	2.07	2.04	23.13	20.64	297.33	339	2.9	2.59	3.45	3.45
Custer County	C19	RM 175.62	26928	5-yr	1792.5	705.41	701.81	2.26	2.08	26.59	19.84	234.72	359.92	3.22	2.39	3.6	3.6
Custer County	C19	RM 175.43	26622	5-yr	1792.5	705.04	701.81	2.55	2	35.26	26.95	214.65	407.54	2.89	2.2	3.23	3.23
Custer County	C19	RM 175.25	26325	5-yr	1792.5	704.69	701.72	2.42	2.27	31.92	27.41	211.96	326.29	2.83	2.42	2.97	2.97
Custer County	C19	RM 175.08	26048	5-yr	1792.5	704.47	701.63	1.96	1.96	21.61	21.25	357.35	364.07	2.56	2.52	2.84	2.84
Custer County	C19	RM 174.9	25768	5-yr	1792.5	704.15	701.31	2.15	2.15	26.34	26.34	335.96	335.96	2.48	2.48	2.84	2.84
Custer County	C19	RM 174.69	25444	5-yr	1792.5	703.75	700.82	2.24	2.23	29.26	28.79	350.18	359.14	2.29	2.25	2.93	2.93
Custer County	C19	RM 174.49	25112	5-yr	1792.5	703.33	700.04	2.32	2.32	29.57	29.01	279.46	285.33	2.76	2.71	3.29	3.29
Custer County	C19	RM 174.32	24844	5-yr	1792.5	702.94	699.39	2.6	2.6	35.92	35.39	222.39	225.94	3.09	3.05	3.55	3.55
Custer County	C19	RM 174.13	24549	5-yr	1792.5	702.82	698.84	1.97	1.97	19.36	19.29	243.85	244.82	3.73	3.71	3.98	3.98
Custer County	C19	RM 173.94	24238	5-yr	1792.5	702.56	698.14	2.22	2.22	25.27	25.1	237.72	239.43	3.4	3.37	4.42	4.42
Custer County	C19	RM 173.75	23939	5-yr	1792.5	702.18	697.92	2.68	2.66	35.37	31.81	172.39	299.26	3.87	3.48	4.26	4.26
Custer County	C19	RM 173.57	23651	5-yr	1792.5	702.06	697.83	2.17	2.17	22.85	22.85	207.77	211.27	3.98	3.98	4.23	4.23
Custer County	C19	RM 173.39	23352	5-yr	1792.5	701.75	697.83	2.5	2.5	31.55	31.55	200.06	206.38	3.58	3.58	3.92	3.92
Custer County	C19	RM 173.2	23054	5-yr	1792.5	701.51	697.72	2.38	2.36	29.15	27.86	225.44	271.99	3.34	3.19	3.79	3.79
Custer County	C19	RM 173.02	22756	5-yr	1792.5	701.3	697.29	2.17	2.14	24.1	21.26	244.03	280.2	3.39	2.99	4.01	4.01
Custer County	C19	RM 172.82	22437	5-yr	1792.5	701.11	696.82	1.79	1.79	18.5	17.91	414.44	428.65	2.41	2.33	4.29	4.29
Custer County	C19	RM 172.67	22200	5-yr	1792.5	700.85	696.52	1.97	1.97	23.25	22.75	421.42	432.67	2.15	2.11	4.33	4.33
Custer County	C19	RM 172.49	21903	5-yr	1792.5	700.6	696.23	1.85	1.85	19.06	18.68	360.81	369.72	2.68	2.63	4.37	4.37
Custer County	C19	RM 172.29	21585	5-yr	1792.5	700.37	695.79	2.03	2.02	20.29	16.92	226.44	362.02	3.89	3.24	4.57	4.57
Custer County	C19	RM 172.12	21325	5-yr	1792.5	699.8	695.81	3.01	3.01	49.72	49.72	214.93	214.93	2.77	2.77	3.99	3.99
Custer County	C19		21310	5-yr	Bridge												
Custer County	C19	RM 172.11	21300	5-yr	1792.5	699.64	695.81	3.2	3.2	57.29	57.29	214.06	214.06	2.62	2.62	3.83	3.83
Custer County	C19	RM 171.89	20942	5-yr	1792.5	699.35	695.57	2.22	2.21	24.93	23.91	228.36	239.2	3.54	3.39	3.78	3.78

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	5-yr	1792.5	699.03	695.49	2.45	2.43	31.52	29.73	231.76	248.06	3.16	2.97	3.54	3.54
Custer County	C19	RM 171.52	20341	5-yr	1792.5	698.81	695.3	2.17	2.16	24.32	22.99	249.92	265.9	3.31	3.13	3.52	3.52
Custer County	C19	RM 171.34	20043	5-yr	1792.5	698.53	695.11	2.31	2.31	27.84	27.22	243.78	249.43	3.19	3.12	3.42	3.42
Custer County	C19	RM 171.15	19745	5-yr	1792.5	698.31	694.86	2.19	2.19	24.87	24.87	248.46	248.46	3.29	3.29	3.45	3.45
Custer County	C19	RM 170.96	19437	5-yr	1792.5	698.08	694.67	2.11	2.11	23.19	23.19	261	261.04	3.25	3.25	3.42	3.42
Custer County	C19	RM 170.78	19143	5-yr	1792.5	697.85	694.2	2.18	2.18	24.54	23.24	245.35	259.55	3.35	3.17	3.65	3.65
Custer County	C19	RM 170.58	18838	5-yr	1792.5	697.54	693.91	2.37	2.36	29.91	27.31	245.35	271.45	3.07	2.8	3.62	3.62
Custer County	C19	RM 170.4	18543	5-yr	1792.5	697.35	693.9	2.03	2.03	21.5	21.25	269.24	272.66	3.27	3.23	3.45	3.45
Custer County	C19	RM 170.22	18257	5-yr	1792.5	697.17	693.7	1.99	1.99	20.5	20.33	272.95	275.21	3.3	3.27	3.47	3.47
Custer County	C19	RM 170.03	17941	5-yr	1792.5	696.89	693.31	2.22	2.22	25.34	25.27	236.24	236.88	3.41	3.4	3.58	3.58
Custer County	C19	RM 169.84	17641	5-yr	1792.5	696.66	692.78	2.26	2.26	25.44	25.44	213.28	213.28	3.72	3.72	3.88	3.88
Custer County	C19	RM 169.65	17341	5-yr	1792.5	696.42	692.47	2.36	2.36	27.61	27.59	203.22	203.36	3.74	3.74	3.95	3.95
Custer County	C19	RM 169.47	17041	5-yr	1792.5	696.12	692.17	2.51	2.46	31.84	28.27	199.81	231.17	3.56	3.16	3.96	3.96
Custer County	C19	RM 169.28	16732	5-yr	1792.5	695.9	692	2.32	2.29	27.02	23.38	214.83	251.76	3.6	3.11	3.9	3.9
Custer County	C19	RM 169.09	16441	5-yr	1792.5	695.67	691.96	2.29	2.29	26.8	26.47	225.9	243.2	3.46	3.42	3.71	3.71
Custer County	C19	RM 168.91	16152	5-yr	1792.5	695.42	691.93	2.34	2.33	28.22	27.84	230.07	233.32	3.33	3.29	3.49	3.49
Custer County	C19	RM 168.72	15846	5-yr	1792.5	695.25	691.82	1.95	1.95	19.77	19.75	278.12	278.33	3.3	3.3	3.43	3.43
Custer County	C19	RM 168.51	15500	5-yr	1792.5	695.03	691.6	1.97	1.95	20.51	19.06	296.39	323.04	3.07	2.85	3.42	3.42
Custer County	C19	RM 168.35	15241	5-yr	1792.5	694.76	691.48	2.23	2.17	26.57	23.05	268.41	318.64	2.99	2.59	3.28	3.28
Custer County	C19	RM 168.15	14931	5-yr	1792.5	694.37	691.2	2.49	2.45	33.21	26.76	239.27	303.45	3	2.41	3.17	3.17
Custer County	C19	RM 167.97	14639	5-yr	1792.5	694.17	690.59	2.15	2.15	23.84	23.84	245.77	245.77	3.39	3.39	3.58	3.58
Custer County	C19	RM 167.79	14340	5-yr	1792.5	693.95	690.5	2.15	2.15	23.82	23.56	249.29	302.73	3.35	3.31	3.45	3.45
Custer County	C19	RM 167.61	14054	5-yr	1792.5	693.63	690.42	2.41	2.4	30.81	29.92	244.18	251.81	3.05	2.96	3.21	3.21
Custer County	C19	RM 167.41	13735	5-yr	1792.5	693.35	690.14	2.24	2.17	26.65	22.47	264.94	326.49	3	2.53	3.21	3.21
Custer County	C19	RM 167.22	13433	5-yr	1792.5	693.15	689.79	2.03	2.02	21.45	20.27	276.94	294.22	3.19	3.02	3.36	3.36
Custer County	C19	RM 167.04	13143	5-yr	1792.5	692.98	689.14	1.97	1.92	19.54	17.28	256.34	297.95	3.54	3.14	3.84	3.84
Custer County	C19	RM 166.85	12847	5-yr	1792.5	692.62	688.98	2.48	2.42	32.92	26.42	240.01	308.16	3	2.4	3.64	3.64
Custer County	C19	RM 166.67	12552	5-yr	1792.5	692.39	688.84	2.19	2.19	24.99	24.91	252.26	253.02	3.24	3.24	3.55	3.55
Custer County	C19	RM 166.52	12319	5-yr	1792.5	692.29	688.64	1.84	1.84	17.23	17.2	278.87	279.46	3.49	3.48	3.65	3.65
Custer County	C19	RM 166.31	11978	5-yr	1792.5	692.05	688.02	2.09	2.08	20.85	20.39	249.27	263.12	3.45	3.37	4.03	4.03
Custer County	C20	RM 166.2	11806	5-yr	1795.3	691.93	687.4	2.13	2.13	22.76	21.72	229.5	245.67	3.67	3.5	4.53	4.53
Custer County	C20	RM 166.06	11569	5-yr	1795.3	691.69	687.38	2.34	2.34	28.68	28.48	238.7	240.41	3.21	3.19	4.31	4.31
Custer County	C20	RM 165.92	11350	5-yr	1795.3	691.43	687.38	2.49	2.49	32.76	32.07	229.17	234.34	3.14	3.08	4.05	4.05
Custer County	C20	RM 165.73	11039	5-yr	1795.3	691.23	687.26	2.08	2.08	22.63	22.49	264.5	271.05	3.26	3.24	3.97	3.97
Custer County	C20	RM 165.55	10750	5-yr	1795.3	691.03	687.11	2.06	2.06	22.05	22.05	267.47	280.55	3.26	3.26	3.92	3.92
Custer County	C20	RM 165.35	10440	5-yr	1795.3	690.8	686.75	2.08	2.08	22.76	22.59	277.34	292.81	3.12	3.09	4.05	4.05
Custer County	C20	RM 165.17	10140	5-yr	1795.3	690.6	686.41	2.05	1.98	21.49	18.87	247.1	297.46	3.48	3.05	4.19	4.19
Custer County	C20	RM 165.01	9883	5-yr	1795.3	690.43	686.16	2.06	2.06	21.96	20.93	262.27	275.81	3.32	3.16	4.26	4.26
Custer County	C20	RM 164.81	9577	5-yr	1795.3	690.22	686.04	2.01	1.98	21.3	18.37	283.82	335.18	3.14	2.7	4.18	4.18
Custer County	C20	RM 164.61	9252	5-yr	1795.3	690.06	685.8	1.8	1.73	13.32	11.91	357.39	420.34	2.77	2.47	4.26	4.26
Custer County	C20	RM 164.42	8945	5-yr	1795.3	689.89	685.78	1.83	1.83	15.29	15.19	352.01	354.53	2.78	2.76	4.11	4.11
Custer County	C20	RM 164.23	8641	5-yr	1795.3	689.72	685.85	1.68	1.68	15.29	15.23	452.11	454.05	2.36	2.35	3.87	3.87
Custer County	C20	RM 164.06	8372	5-yr	1795.3	689.6	685.64	1.63	1.6	13.18	10.15	293.95	390.77	3.74	2.88	3.96	3.96
Custer County	C20	RM 163.85	8031	5-yr	1795.3	689.43	685	1.78	1.78	15.91	15.85	277.99	278.93	3.63	3.62	4.43	4.43
Custer County	C20	RM 163.67	7743	5-yr	1795.3	689.24	684.45	2.07	2.07	20.12	19.79	191.37	194.81	4.52	4.45	4.79	4.79
Custer County	C20	RM 163.48	7449	5-yr	1795.3	688.98	684.13	2.46	2.45	28.19	27.55	161.87	165.94	4.51	4.41	4.85	4.85
Custer County	C20	RM 163.3	7150	5-yr	1795.3	688.87	684.13	2.07	2.05	20.39	18.79	204.93	224.86	4.24	3.9	4.74	4.74
Custer County	C20	RM 163.12	6859	5-yr	1795.3	688.79	683.91	1.75	1.71	14.83	12.71	267.05	320.23	3.83	3.28	4.88	4.88
Custer County	C20	RM 162.94	6583	5-yr	1795.3	688.61	683.78	2.04	1.99	19.78	15.2	204.74	275	4.29	3.28	4.83	4.83
Custer County	C20	RM 162.74	6254	5-yr	1795.3	688.24	683.77	2.62	2.61	33.83	29.62	177.14	203.65	3.87	3.38	4.47	4.47
Custer County	C20	RM 162.55	5957	5-yr	1795.3	688.01	683.96	2.38	2.38	29.86	29.32	231.24	235.58	3.26	3.2	4.05	4.05
Custer County	C20	RM 162.34	5620	5-yr	1795.3	687.85	683.92	1.81	1.81	17.12	15.94	304.33	328.61	3.25	3.02	3.93	3.93
Custer County	C20	RM 162.18	5352	5-yr	1795.3	687.7	683.41	1.65	1.65	23.14	22.82	354.23	359.64	3.07	3.02	4.29	4.29
Custer County	C20	RM 162.03	5111	5-yr	1795.3	687.61	683.26	1.51	1.51	11.25	11.19	322.14	334.59	3.69	3.68	4.34	4.34
Custer County	C20	RM 161.81	4770	5-yr	1795.3	687.23	682.63	2.47	2.46	29.43	27.75	174.77	186.86	4.15	3.91	4.6	4.6
Custer County	C20	RM 161.62	4470	5-yr	1795.3	686.92	682.53	2.69	2.69	35.67	35.59	173.67	257.41	3.85	3.84	4.39	4.39
Custer County	C20	RM 161.43	4159	5-yr	1795.3	686.71	682.63	2.35	2.34	27.72	26.36	205.96	218.15	3.7	3.52	4.08	4.08
Custer County	C20	RM 161.24	3859	5-yr	1795.3	686.42	682.51	2.51	2.45	31.79	26.94	199.39	243.21	3.57	3.02	3.91	3.91
Custer County	C20	RM 161.06	3559	5-yr	1795.3	686.21	682.38	2.28	2.26	26.15	22.92	218.91	251.81	3.6	3.15	3.83	3.83
Custer County	C20	RM 160.87	3258	5-yr	1795.3	685.86	682.24	2.58	2.57	34.08	32.46	204.8	215.72	3.4	3.24	3.62	3.62

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	5-yr	1795.3	685.69	682.11	2.08	2.08	22.15	21.93	251.66	254.32	3.43	3.4	3.58	3.58
Custer County	C20	RM 160.5	2662	5-yr	1795.3	685.49	681.85	2.03	2.03	22.3	22.26	302.24	302.83	2.92	2.92	3.64	3.64
Custer County	C20	RM 160.31	2364	5-yr	1795.3	685.27	681.58	1.95	1.94	20.59	18.63	321.4	356.9	2.87	2.59	3.69	3.69
Custer County	C20	RM 160.12	2063	5-yr	1795.3	685.09	681.02	1.9	1.86	18.6	16.19	277.19	327.07	3.39	2.94	4.07	4.07
Custer County	C20	RM 159.93	1758	5-yr	1795.3	684.77	680.9	2.27	2.26	28.6	26.46	291.61	316.96	2.71	2.5	3.87	3.87
Custer County	C20	RM 159.75	1459	5-yr	1795.3	684.51	680.88	2.19	2.18	24.9	23.94	251.96	262.84	3.26	3.13	3.63	3.63
Custer County	C20	RM 159.55	1151	5-yr	1795.3	684.29	680.74	2.09	2.08	22.61	22.19	261.92	267.43	3.28	3.22	3.55	3.55
Custer County	C20	RM 159.38	876	5-yr	1795.3	684.05	680.37	2.25	2.21	25.68	24.03	229.23	249.94	3.47	3.25	3.68	3.68
Custer County	C20	RM 159.19	566	5-yr	1795.3	683.86	679.77	2.11	2.11	22.66	22.5	234.86	236.59	3.62	3.6	4.09	4.09
Custer County	C20	RM 158.98	229	5-yr	1795.3	683.59	679.44	2.26	2.25	25.56	24.54	216.66	227.43	3.66	3.52	4.15	4.15

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	5-yr	1798.1	683.59	679.22	2.2	2.19	23.84	21.27	214.16	241.05	3.82	3.41	4.37	4.37
Prairie County	C21	RM 158.55	61087	5-yr	1798.1	683.48	678.98	1.88	1.88	16.98	16.79	225.83	228.51	4.22	4.18	4.5	4.5
Prairie County	C21	RM 158.36	60787	5-yr	1798.1	683.36	678.83	1.83	1.83	16.43	16.36	248.87	249.97	3.94	3.92	4.53	4.53
Prairie County	C21	RM 158.17	60481	5-yr	1798.1	683.2	678.35	1.9	1.89	19.72	18.09	253.18	278.1	3.73	3.41	4.85	4.85
Prairie County	C21	RM 157.98	60173	5-yr	1798.1	682.9	678.22	2.29	2.29	27.08	24.39	231.17	258.05	3.39	3.05	4.68	4.68
Prairie County	C21	RM 157.78	59862	5-yr	1798.1	682.66	678.23	2.32	2.28	26.55	20	201.99	275.2	3.83	2.87	4.43	4.43
Prairie County	C21	RM 157.6	59561	5-yr	1798.1	682.55	678.14	1.91	1.89	17.71	15.2	233.85	275.7	4.02	3.45	4.41	4.41
Prairie County	C21	RM 157.38	59209	5-yr	1798.1	682.39	677.81	1.82	1.74	17.12	14.85	288.08	358.62	3.32	2.88	4.58	4.58
Prairie County	C21	RM 157.18	58885	5-yr	1798.1	682.24	677.42	1.83	1.69	16.3	9.24	235.66	483.72	3.99	2.25	4.82	4.82
Prairie County	C21	RM 156.99	58595	5-yr	1798.1	681.99	677.32	2.32	2.02	25.96	13.19	173.83	432.74	4.1	2.06	4.67	4.67
Prairie County	C21	RM 156.8	58287	5-yr	1798.1	681.55	677.32	2.96	2.54	43.89	25.15	149.83	336.04	3.72	2.11	4.23	4.23
Prairie County	C21	RM 156.62	57990	5-yr	1798.1	681.45	677.29	2.1	2.02	21.88	19.02	207.6	271.46	3.77	3.27	4.16	4.16
Prairie County	C21	RM 156.42	57683	5-yr	1798.1	681.33	677.21	1.8	1.78	16.36	13.68	271.12	329.97	3.67	3.06	4.12	4.12
Prairie County	C21	RM 156.24	57378	5-yr	1798.1	681.06	676.91	2.2	2.17	25.22	21.65	245.34	291.86	3.32	2.84	4.15	4.15
Prairie County	C21	RM 156.04	57069	5-yr	1798.1	680.91	676.56	1.96	1.93	18.5	16	225.22	265.14	4.08	3.52	4.35	4.35
Prairie County	C21	RM 155.85	56762	5-yr	1798.1	680.68	676.11	2.23	2.18	24.33	19.63	203.41	258.89	3.95	3.18	4.57	4.57
Prairie County	C21	RM 155.66	56455	5-yr	1798.1	680.32	675.96	2.67	2.56	35.28	24.31	176.19	269.17	3.81	2.61	4.36	4.36
Prairie County	C21	RM 155.47	56151	5-yr	1798.1	680.17	675.89	2.07	2.04	22.2	19.35	257.44	322.43	3.36	2.93	4.28	4.28
Prairie County	C21	RM 155.27	55835	5-yr	1798.1	679.97	675.92	1.96	1.96	20.77	20.6	317.77	320.38	2.89	2.87	4.05	4.05
Prairie County	C21	RM 155.08	55530	5-yr	1798.1	679.72	675.95	2.02	2.02	21.81	21.51	296.49	301	3	2.96	3.77	3.77
Prairie County	C21	RM 154.88	55209	5-yr	1798.1	679.53	675.64	1.91	1.91	18.38	18.33	300.68	301.51	3.13	3.13	3.89	3.89
Prairie County	C21	RM 154.69	54901	5-yr	1798.1	679.22	675.39	2.24	2.24	26.79	26.16	264.93	272.22	3.03	2.95	3.83	3.83
Prairie County	C21	RM 154.5	54588	5-yr	1798.1	678.97	675.02	2.18	2.17	24.81	24.01	257.32	270.98	3.21	3.1	3.94	3.94
Prairie County	C21	RM 154.3	54273	5-yr	1798.1	678.75	674.8	2.04	2.04	21.91	21.58	277.5	282.2	3.17	3.13	3.95	3.95
Prairie County	C21	RM 154.1	53959	5-yr	1798.1	678.48	674.67	2.16	2.16	24.8	24.06	269.5	278.69	3.08	2.99	3.81	3.81
Prairie County	C21	RM 153.91	53650	5-yr	1798.1	678.3	674.51	1.96	1.96	19.5	19.11	260.55	266.45	3.52	3.45	3.79	3.79
Prairie County	C21	RM 153.72	53338	5-yr	1798.1	678.07	674.06	2.14	2.09	22.87	18.9	225.99	282.52	3.7	3.05	4.01	4.01
Prairie County	C21	RM 153.52	53023	5-yr	1798.1	677.67	673.78	2.66	2.5	37.18	29.94	206.24	281.71	3.17	2.55	3.89	3.89
Prairie County	C21	RM 153.32	52704	5-yr	1798.1	677.35	673.64	2.4	2.4	30.62	30.62	245.94	245.94	3.05	3.05	3.71	3.71
Prairie County	C21	RM 153.12	52380	5-yr	1798.1	677.14	673.43	2.02	2.02	21.16	20.51	270.43	291.61	3.29	3.19	3.71	3.71
Prairie County	C21	RM 152.92	52065	5-yr	1798.1	676.95	672.88	1.99	1.99	19.62	19.62	269.4	320.91	3.35	3.35	4.07	4.07
Prairie County	C21	RM 152.73	51762	5-yr	1798.1	676.75	672.27	2.03	2.03	20.98	20.96	271.22	277.91	3.26	3.26	4.48	4.48
Prairie County	C21	RM 152.54	51463	5-yr	1798.1	676.55	671.85	2.06	2.06	21.22	21.16	251.75	252.38	3.47	3.46	4.7	4.7
Prairie County	C21	RM 152.35	51157	5-yr	1798.1	676.4	671.41	1.93	1.93	18.13	18.07	229.1	229.89	4.06	4.05	4.99	4.99
Prairie County	C21	RM 152.16	50852	5-yr	1798.1	676.25	671.23	1.9	1.89	18.29	17.62	267.84	279.33	3.53	3.4	5.02	5.02
Prairie County	C21	RM 151.97	50546	5-yr	1798.1	676.11	670.99	1.87	1.78	14.62	12.03	268.13	351.54	3.5	2.87	5.12	5.12
Prairie County	C21	RM 151.77	50227	5-yr	1798.1	676	670.87	1.82	1.65	15.38	9.57	204.89	387.46	4.56	2.81	5.13	5.13
Prairie County	C21	RM 151.59	49936	5-yr	1798.1	675.67	670.75	2.59	2.41	32.1	24.37	151.57	232.28	4.27	3.22	4.92	4.92
Prairie County	C21	RM 151.38	49599	5-yr	1798.1	675.52	670.9	2.15	2.07	22.3	18.66	199.41	254.04	4.14	3.45	4.62	4.62
Prairie County	C21	RM 151.19	49287	5-yr	1798.1	675.39	670.96	1.93	1.93	17.94	17.84	226.6	227.77	4.11	4.09	4.43	4.43
Prairie County	C21	RM 151.01	49012	5-yr	1798.1	675.27	670.91	1.83	1.83	17.56	17.56	287.48	296.28	3.42	3.42	4.36	4.36
Prairie County	C21	RM 150.81	48683	5-yr	1798.1	675.14	670.79	1.61	1.61	10.99	10.91	407.77	410.93	2.74	2.72	4.35	4.35
Prairie County	C21	RM 150.63	48400	5-yr	2030.3	675.04	670.45	1.57	1.56	12.42	11.82	362.06	384.05	3.56	3.39	4.59	4.59
Prairie County	C21	RM 150.44	48094	5-yr	2030.3	674.84	669.86	1.94	1.88	17.28	15.06	273.64	327.53	3.79	3.31	4.98	4.98
Prairie County	C21	RM 150.25	47780	5-yr	2030.3	674.4	669.38	2.8	2.76	43.04	32.94	166.05	220.99	4.37	3.32	5.02	5.02
Prairie County	C21	RM 150.05	47474	5-yr	2030.3	674.3	669.21	2.17	2.17	21.86	21.31	203.64	209.14	4.6	4.48	5.09	5.09
Prairie County	C21	RM 149.87	47178	5-yr	2030.3	674.16	669.02	2.05	2.05	21.21	19.82	269.57	289.69	3.67	3.42	5.14	5.14
Prairie County	C21	RM 149.66	46846	5-yr	2030.3	674.03	668.97	1.78	1.77	13.37	12.42	330.6	359.69	3.44	3.19	5.06	5.06
Prairie County	C21	RM 149.48	46551	5-yr	2030.3	673.75	668.91	2.3	2.27	27.38	25.02	261.52	379.35	3.36	3.07	4.84	4.84
Prairie County	C21	RM 149.27	46219	5-yr	2030.3	673.49	668.94	2.34	2.12	26.6	17.65	208.49	497.21	3.69	2.43	4.55	4.55
Prairie County	D1	RM 149.08	45914	5-yr	2030.3	673.3	668.95	2.12	2.11	22.42	18.71	254.75	307.88	3.75	3.12	4.35	4.35
Prairie County	D1	RM 148.89	45608	5-yr	2030.3	673.21	668.96	1.72	1.72	14.75	14.68	314.5	354.47	3.75	3.74	4.25	4.25
Prairie County	D1	RM 148.7	45301	5-yr	2030.3	673.05	668.73	1.8	1.8	16.26	15.77	347.91	359.83	3.23	3.13	4.32	4.32
Prairie County	D1	RM 148.5	44987	5-yr	2030.3	672.81	668.42	2.14	2	22.22	16.32	235.13	347.01	3.98	2.92	4.39	4.39
Prairie County	D1	RM 148.3	44667	5-yr	2030.3	672.5	668.01	2.52	2.39	30.65	23.28	193.35	272.62	4.12	3.12	4.49	4.49
Prairie County	D1	RM 148.11	44353	5-yr	2030.3	672.35	667.73	2.16	2.11	22.55	19.69	230.09	271.89	4.06	3.55	4.62	4.62
Prairie County	D1	RM 147.93	44062	5-yr	2030.3	672.22	667.4	1.9	1.9	18.41	18.12	306.12	311.47	3.49	3.43	4.82	4.82
Prairie County	D1	RM 147.74	43761	5-yr	2030.3	672.06	667.21	1.95	1.8	19.83	15.36	251.8	387.42	3.76	2.9	4.85	4.85
Prairie County	D1	RM 147.55	43454	5-yr	2030.3	671.86	666.79	2.17	1.97	22.27	16.3	194.28	326.87	4.33	3.15	5.07	5.07
Prairie County	D1	RM 147.34	43128	5-yr	2030.3	671.64	666.46	2.36	2.12	26.26	18.8	173.31	303.33	4.45	3.15	5.18	5.18

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	5-yr	2030.3	671.42	666.42	2.46	2.23	29.27	20.63	178.57	317.07	4.12	2.88	5	5
Prairie County	D1	RM 146.96	42505	5-yr	2030.3	671.18	666.49	2.45	2.41	28.25	24.68	187.33	218.93	4.41	3.85	4.69	4.69
Prairie County	D1	RM 146.77	42199	5-yr	2030.3	671.06	666.48	2.11	2.11	21.15	21.05	223.61	224.47	4.31	4.29	4.58	4.58
Prairie County	D1	RM 146.58	41899	5-yr	2030.3	670.98	666.59	1.74	1.74	14.83	14.78	296.2	297.07	3.94	3.93	4.39	4.39
Prairie County	D1	RM 146.32	41487	5-yr	2030.3	670.72	666.62	1.99	1.98	18.68	18.28	325.06	332.42	3.14	3.08	4.1	4.1
Prairie County	D1	RM 146	40968	5-yr	2030.3	670.38	666.48	2.06	2.05	22.41	21.85	277.27	285.01	3.56	3.47	3.9	3.9
Prairie County	D1	RM 145.65	40420	5-yr	2030.3	670	665.52	2.16	2.16	24.41	24.2	247.14	249.39	3.81	3.77	4.48	4.48
Prairie County	D1	RM 145.36	39958	5-yr	2030.3	669.73	664.91	2.03	2.01	21.97	20.9	264.9	281.87	3.76	3.57	4.82	4.82
Prairie County	D1	RM 145.13	39579	5-yr	2030.3	669.54	664.58	1.89	1.89	18.43	18.07	266.31	271.82	4.02	3.95	4.96	4.96
Prairie County	D1	RM 144.92	39251	5-yr	2030.3	669.39	664.24	1.88	1.88	18.76	18.54	271.89	275.19	3.97	3.93	5.15	5.15
Prairie County	D1	RM 144.73	38942	5-yr	2030.3	669.2	663.99	2	1.98	21.11	19.13	263.74	294.01	3.85	3.48	5.21	5.21
Prairie County	D1	RM 144.56	38672	5-yr	2030.3	669	663.14	2.13	2.11	22.95	20.52	265.15	299.86	3.59	3.2	5.86	5.86
Prairie County	D1		38642.5	5-yr	Bridge												
Prairie County	D1	RM 144.52	38613	5-yr	2030.3	668.91	663.14	2.18	2.17	24.26	22.43	265.15	289	3.5	3.24	5.77	5.77
Prairie County	D1	RM 144.33	38305	5-yr	2030.3	668.71	664.19	2.18	2.15	23.23	18.83	232.15	292.17	3.99	3.23	4.52	4.52
Prairie County	D1	RM 144.13	37987	5-yr	2030.3	668.6	664.33	1.86	1.84	16.74	15.36	271.37	299.09	4.02	3.7	4.27	4.27
Prairie County	D1	RM 143.91	37637	5-yr	2030.3	668.47	663.96	1.76	1.7	15.25	11.23	299.48	441.4	3.83	2.82	4.51	4.51
Prairie County	D1	RM 143.71	37320	5-yr	2030.3	668.13	663.43	2.46	2.42	28.9	24.27	191.12	272.2	4.3	3.6	4.7	4.7
Prairie County	D1	RM 143.45	36908	5-yr	2030.3	667.7	663.01	2.78	2.74	37.52	31.24	179.26	219.8	4.06	3.37	4.69	4.69
Prairie County	D1	RM 143.21	36511	5-yr	2030.3	667.53	662.92	2.16	2.16	22.42	21.67	224.58	232.79	4.18	4.04	4.61	4.61
Prairie County	D1	RM 142.97	36139	5-yr	2030.3	667.36	662.7	2.04	2.03	19.72	19.05	232.06	240.67	4.29	4.15	4.66	4.66
Prairie County	D1	RM 142.71	35717	5-yr	2030.3	666.9	662.52	2.71	2.71	35.85	35.85	188.99	188.99	3.97	3.97	4.38	4.38
Prairie County	D1	RM 142.46	35322	5-yr	2030.3	666.73	662.36	2.05	2.05	20.74	20.48	254.71	258.29	3.88	3.83	4.37	4.37
Prairie County	D1	RM 142.23	34952	5-yr	2030.3	666.5	662.21	2.16	2.16	22.84	22.52	237.19	263.3	3.96	3.9	4.29	4.29
Prairie County	D1	RM 142.02	34614	5-yr	2030.3	666.25	662.21	2.24	2.17	26.35	23.48	269.68	330.02	3.19	2.84	4.04	4.04
Prairie County	D1	RM 141.8	34258	5-yr	2030.3	666.12	662.01	1.61	1.61	13.32	13.19	393.92	397.81	3.19	3.17	4.11	4.11
Prairie County	D1	RM 141.6	33942	5-yr	2030.3	665.86	661.72	2.06	2.06	20.28	20.24	323.18	323.87	3.05	3.04	4.14	4.14
Prairie County	D1	RM 141.42	33642	5-yr	2030.3	665.77	661.32	1.62	1.62	11.84	11.76	381.6	384.2	3.28	3.26	4.45	4.45
Prairie County	D1	RM 141.22	33325	5-yr	2030.3	665.65	660.91	1.65	1.64	13.42	13.34	326.47	328.48	3.78	3.76	4.74	4.74
Prairie County	D1	RM 141.02	33011	5-yr	2030.3	665.34	660.58	2.35	2.35	25.98	25.62	194.42	197.2	4.44	4.38	4.76	4.76
Prairie County	D1	RM 140.84	32709	5-yr	2030.3	665.22	660.35	2.06	2.06	20.51	20.45	241.69	242.34	4.08	4.07	4.87	4.87
Prairie County	D1	RM 140.64	32394	5-yr	2030.3	665.11	660.07	1.85	1.85	15.64	15.13	238.73	246.99	4.6	4.45	5.04	5.04
Prairie County	D1	RM 140.44	32074	5-yr	2030.3	664.91	659.63	2.15	2.15	21.69	21.24	225.88	230.82	4.19	4.1	5.28	5.28
Prairie County	D1	RM 140.23	31738	5-yr	2030.3	664.6	659.62	2.49	2.49	29.55	28.99	207.01	210.98	3.94	3.87	4.98	4.98
Prairie County	D1	RM 140.03	31420	5-yr	2030.3	664.48	659.59	2.02	2.02	19.49	19.45	253.77	254.3	3.97	3.96	4.89	4.89
Prairie County	D1	RM 139.84	31118	5-yr	2030.3	664.35	659.19	1.84	1.83	17.22	16.47	309.19	327.08	3.55	3.4	5.16	5.16
Prairie County	D1	RM 139.64	30801	5-yr	2030.3	664.19	658.96	1.95	1.89	17.68	14.59	222.13	280.85	4.65	3.83	5.23	5.23
Prairie County	D1	RM 139.44	30466	5-yr	2030.3	664.06	658.72	1.91	1.88	17.49	15.96	250.57	281.02	4.22	3.85	5.34	5.34
Prairie County	D1	RM 139.23	30138	5-yr	2030.3	663.91	658.34	1.93	1.93	19.74	19.42	219.78	223.54	4.79	4.71	5.57	5.57
Prairie County	D1	RM 139.02	29799	5-yr	2030.3	663.57	658.14	2.51	2.51	35.9	33.53	179.74	193.17	4.49	4.19	5.43	5.43
Prairie County	D1	RM 138.81	29470	5-yr	2030.3	663.51	658.11	1.82	1.81	17.3	15.9	219.25	240.74	5.07	4.65	5.4	5.4
Prairie County	D1	RM 138.62	29157	5-yr	2030.3	663.37	657.94	1.94	1.91	17.05	15.37	216.79	245.2	4.81	4.33	5.43	5.43
Prairie County	D1	RM 138.41	28823	5-yr	2030.3	663.16	657.82	2.2	2.17	24.87	22.88	202.45	224.12	4.55	4.18	5.34	5.34
Prairie County	D1	RM 138.22	28519	5-yr	2030.3	663	657.8	2.2	2.19	22.22	21.24	198.68	208.86	4.64	4.44	5.2	5.2
Prairie County	D1	RM 138.02	28200	5-yr	2030.3	662.96	657.74	1.65	1.64	13.23	12.77	246.99	256.9	4.99	4.82	5.22	5.22
Prairie County	D1	RM 137.82	27874	5-yr	2030.3	662.83	656.95	1.78	1.77	16.11	15.22	263.32	279.87	4.33	4.09	5.88	5.88
Prairie County	D1	RM 137.62	27552	5-yr	2030.3	662.64	656.75	2.02	2	21.21	19.45	234.81	441.55	4.29	3.93	5.89	5.89
Prairie County	D1	RM 137.42	27247	5-yr	2030.3	662.43	656.66	2.2	2.2	24.63	24.39	204.14	206.21	4.52	4.48	5.77	5.77
Prairie County	D1	RM 137.24	26944	5-yr	2030.3	662.27	656.66	2.15	2.15	24.41	23.26	205.46	216.37	4.59	4.37	5.61	5.61
Prairie County	D1	RM 137.04	26627	5-yr	2038.8	662.1	655.41	2.13	2.13	23.41	23.07	207.35	210.59	4.62	4.55	6.69	6.69
Prairie County	D1		26616.5	5-yr	Bridge												
Prairie County	D1	RM 137.02	26606	5-yr	2038.8	662.07	655.41	2.14	2.14	23.78	23.45	207.29	210.31	4.59	4.52	6.66	6.66
Prairie County	D2	RM 136.84	26475	5-yr	2038.8	662.02	656.46	1.98	1.98	18.83	18.83	205.9	205.9	5.01	5.01	5.56	5.56
Prairie County	D2		26471.5	5-yr	Bridge												
Prairie County	D2	RM 136.65	26468	5-yr	2038.8	662.01	656.45	1.97	1.97	19.17	18.88	207.2	210.46	4.99	4.92	5.56	5.56
Prairie County	D2	RM 136.44	26317	5-yr	2038.8	661.97	656.37	1.78	1.78	15.87	15.77	228.51	230.06	5.02	4.99	5.6	5.6
Prairie County	D2	RM 136.23	26001	5-yr	2038.8	661.82	656.19	1.96	1.96	17.89	17.73	246.47	248.79	4.22	4.19	5.63	5.63
Prairie County	D2	RM 136.04	25673	5-yr	2038.8	661.68	656.01	1.99	1.99	17.2	16.57	211.7	220.3	4.84	4.66	5.67	5.67
Prairie County	D2	RM 135.85	25337	5-yr	2038.8	661.46	655.93	2.28	2.28	23.96	23.77	186.08	187.52	4.8	4.76	5.53	5.53
Prairie County	D2	RM 135.66	25033	5-yr	2038.8	661.34	655.91	2.12	2.11	20.57	20.27	202.14	205.27	4.77	4.7	5.43	5.43

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	5-yr	2038.8	661.18	655.86	2.12	2.12	24.86	24.34	199.11	203.41	4.82	4.72	5.32	5.32
Prairie County	D2	RM 135.24	24417	5-yr	2038.8	661.11	655.68	1.75	1.75	16.45	16.3	229.44	231.46	5.08	5.04	5.43	5.43
Prairie County	D2	RM 135	24090	5-yr	2038.8	660.95	655.56	1.9	1.9	18.98	18.38	246.98	255.45	4.34	4.2	5.39	5.39
Prairie County	D2	RM 134.78	23742	5-yr	2038.8	660.81	655.36	1.88	1.88	18.35	17.93	223.84	229.29	4.84	4.73	5.45	5.45
Prairie County	D2	RM 134.58	23351	5-yr	2038.8	660.53	655.29	2.26	2.25	27.99	27.08	189.75	199.73	4.76	4.61	5.24	5.24
Prairie County	D2	RM 134.39	23000	5-yr	2038.8	660.33	655.24	2.17	2.15	26.22	24.32	216.99	236.82	4.32	4	5.09	5.09
Prairie County	D2	RM 134.19	22682	5-yr	2038.8	660.18	655.11	1.98	1.94	19.31	16.41	263.97	503.59	3.88	3.29	5.07	5.07
Prairie County	D2	RM 133.99	22372	5-yr	2038.8	660.05	654.97	1.89	1.88	16.35	15.32	264.94	284.53	4.07	3.81	5.08	5.08
Prairie County	D2	RM 133.79	22053	5-yr	2038.8	659.83	655	2.16	2.13	22.42	19.63	226.1	262.96	4.16	3.64	4.83	4.83
Prairie County	D2	RM 133.59	21733	5-yr	2038.8	659.68	654.96	2.04	2.03	20.12	19.68	247	253.34	4.05	3.96	4.72	4.72
Prairie County	D2	RM 133.41	21417	5-yr	2038.8	659.55	654.78	1.9	1.89	17.22	16.44	254.87	268.17	4.21	4.02	4.77	4.77
Prairie County	D2	RM 133.21	21104	5-yr	2038.8	659.37	654.64	2.08	2.05	20.64	18.98	229.84	254.3	4.25	3.91	4.73	4.73
Prairie County	D2	RM 133.02	20811	5-yr	2038.8	659.23	654.53	2.01	2	19.43	18.46	246.2	260.37	4.12	3.91	4.7	4.7
Prairie County	D2	RM 132.83	20491	5-yr	2038.8	659.07	654.29	2.01	1.98	19.99	17.13	262.67	313.19	3.84	3.29	4.78	4.78
Prairie County	D2	RM 132.63	20184	5-yr	2038.8	658.91	654.04	1.99	1.9	19.59	15.32	254.86	356.58	3.85	3.01	4.87	4.87
Prairie County	D2	RM 132.42	19875	5-yr	2038.8	658.73	653.98	2.09	2.02	20.79	18.53	221.68	263.44	4.29	3.82	4.75	4.75
Prairie County	D2	RM 132.23	19553	5-yr	2038.8	658.64	653.88	1.77	1.71	14.88	13.19	257.21	307.52	4.37	3.87	4.76	4.76
Prairie County	D2	RM 132.02	19225	5-yr	2038.8	658.42	653.63	2.1	2.09	21.63	18.91	245.44	282.82	3.95	3.45	4.79	4.79
Prairie County	D2	RM 131.81	18910	5-yr	2038.8	658.2	653.37	2.25	2.23	24.65	21.6	226.33	260.57	4	3.5	4.83	4.83
Prairie County	D2	RM 131.58	18573	5-yr	2038.8	658.09	653.02	1.87	1.85	16.3	14.8	238.03	276.7	4.57	4.15	5.07	5.07
Prairie County	D2	RM 131.38	18237	5-yr	2038.8	657.94	652.75	2	1.92	18.62	16.54	212.37	258.78	4.61	4.1	5.19	5.19
Prairie County	D2	RM 131.18	17875	5-yr	2038.8	657.68	652.49	2.28	2.28	24.74	24.32	209.79	213.6	4.26	4.19	5.19	5.19
Prairie County	D2	RM 130.98	17548	5-yr	2038.8	657.48	652.34	2.3	2.26	24.94	23.06	197.09	218.32	4.47	4.13	5.14	5.14
Prairie County	D2	RM 130.78	17227	5-yr	2038.8	657.35	652.27	2.11	2.09	20.89	18.21	216.24	250.91	4.47	3.88	5.08	5.08
Prairie County	D2	RM 130.59	16914	5-yr	2038.8	657.26	652.16	1.8	1.79	15	13.35	239.07	271.63	4.72	4.2	5.1	5.1
Prairie County	D2	RM 130.39	16588	5-yr	2038.8	657.09	651.95	2.06	2.06	19.59	19.54	212.42	213	4.67	4.65	5.14	5.14
Prairie County	D2	RM 130.19	16280	5-yr	2038.8	656.92	651.81	2.16	2.16	22.08	22.06	219.21	219.43	4.32	4.31	5.11	5.11
Prairie County	D2	RM 130	15965	5-yr	2038.8	656.8	651.57	1.91	1.91	17.25	17.21	242.9	243.44	4.39	4.38	5.23	5.23
Prairie County	D2	RM 129.81	15649	5-yr	2038.8	656.7	651.47	1.83	1.82	15.46	14.98	235.14	243.76	4.73	4.59	5.23	5.23
Prairie County	D2	RM 129.62	15337	5-yr	2038.8	656.52	651.34	2.1	2.08	20.59	18.99	216.64	270.65	4.48	4.13	5.18	5.18
Prairie County	D2	RM 129.43	15031	5-yr	2038.8	656.41	651.21	1.94	1.93	17.38	16.84	227.37	235.28	4.63	4.49	5.2	5.2
Prairie County	D2	RM 129.24	14724	5-yr	2067.1	656.21	651.06	2.17	2.16	22.35	21.46	222.31	240.48	4.29	4.12	5.15	5.15
Prairie County	D2	RM 129.04	14417	5-yr	2067.1	656.01	651.06	2.29	2.28	25	23.68	209.54	252.18	4.3	4.08	4.95	4.95
Prairie County	D2	RM 128.82	14112	5-yr	2067.1	655.82	651.05	2.31	2.3	25.38	24.73	209.12	261.27	4.28	4.18	4.77	4.77
Prairie County	D2	RM 128.62	13798	5-yr	2067.1	655.68	651.08	2.08	2.08	20.4	20.24	228.13	300.77	4.36	4.33	4.6	4.6
Prairie County	D2	RM 128.41	13446	5-yr	2067.1	655.53	651.07	1.98	1.98	18.99	18.47	255.09	262.56	4.09	3.97	4.46	4.46
Prairie County	D2	RM 128.21	13125	5-yr	2067.1	655.35	650.98	2.05	2.03	20.25	18.95	246.55	295.16	4.09	3.82	4.37	4.37
Prairie County	D2	RM 127.98	12790	5-yr	2067.1	655.2	650.84	1.99	1.99	19.1	19.04	250.67	251.51	4.14	4.12	4.36	4.36
Prairie County	D2	RM 127.75	12473	5-yr	2067.1	655.08	650.59	1.81	1.81	16.12	16.05	287.96	288.98	3.96	3.94	4.49	4.49
Prairie County	D2	RM 127.55	12112	5-yr	2067.1	654.93	650.35	1.81	1.81	16.01	15.84	287.38	310.12	3.97	3.93	4.58	4.58
Prairie County	D2	RM 127.27	11729	5-yr	2067.1	654.77	649.95	1.82	1.82	15.98	15.58	277.2	284.6	4.1	3.99	4.82	4.82
Prairie County	D2	RM 126.97	11415	5-yr	2067.1	654.55	649.68	2.14	2.14	21.86	21.01	226.77	236.47	4.26	4.09	4.87	4.87
Prairie County	D2	RM 126.71	10962	5-yr	2067.1	654.33	649.49	2.12	2.11	20.99	20.64	218.29	228.06	4.48	4.41	4.84	4.84
Prairie County	D2	RM 126.43	10478	5-yr	2067.1	654.19	649.32	1.72	1.71	13.92	13.73	275.96	279.88	4.36	4.31	4.87	4.87
Prairie County	D2	RM 126.42	10074	5-yr	2067.1	653.96	649.05	2.04	2.04	20.21	19.08	249.83	265.05	4.05	3.83	4.91	4.91
Prairie County	D2	RM 126.41	9625	5-yr	2067.1	653.71	648.27	2.12	2.1	21.09	19.69	220.07	237.79	4.42	4.13	5.44	5.44
Prairie County	D2		9598.5	5-yr	Bridge												
Prairie County	D2	RM 126.4	9572	5-yr	2067.1	653.66	648.27	2.15	2.13	21.72	20.33	220.07	237.03	4.37	4.09	5.38	5.38
Prairie County	D3	RM 126.38	9533	5-yr	2067.1	653.63	648.27	2.16	2.14	21.99	20.6	220.07	236.71	4.35	4.07	5.36	5.36
Prairie County	D3		9523	5-yr	Bridge												
Prairie County	D3	RM 126.36	9513	5-yr	2067.1	653.61	648.27	2.17	2.16	22.28	20.9	220.07	236.36	4.32	4.05	5.33	5.33
Prairie County	D3	RM 126.22	9286	5-yr	2067.1	653.53	648.8	1.94	1.94	17.75	17.73	245.24	245.52	4.35	4.35	4.73	4.73
Prairie County	D3	RM 126.03	8974	5-yr	2067.1	653.41	648.71	1.83	1.82	16.04	15.59	269.32	278.29	4.19	4.08	4.7	4.7
Prairie County	D3	RM 125.82	8648	5-yr	2067.1	653.27	648.36	1.85	1.85	16.76	16.67	281.89	283.48	3.96	3.94	4.91	4.91
Prairie County	D3	RM 125.63	8335	5-yr	2067.1	653.15	648.12	1.8	1.79	15.26	14.41	259.94	277.46	4.41	4.17	5.03	5.03
Prairie County	D3	RM 125.43	8020	5-yr	2067.1	652.99	647.8	2	1.93	18.41	15.47	217.06	269.56	4.73	3.97	5.19	5.19
Prairie County	D3	RM 125.24	7711	5-yr	2067.1	652.91	647.26	1.81	1.78	14.45	13.15	226.37	272.84	5.04	4.59	5.65	5.65
Prairie County	D3	RM 125.05	7403	5-yr	2067.1	652.79	647.23	1.94	1.91	16.92	15.32	209.96	255.95	5.07	4.58	5.56	5.56
Prairie County	D3	RM 124.83	7059	5-yr	2067.1	652.69	647.25	1.81	1.8	15.04	14.1	237.41	255.95	4.8	4.5	5.44	5.44
Prairie County	D3	RM 124.62	6712	5-yr	2067.1	652.57	647.25	1.81	1.8	15.32	14.72	257.84	269.4	4.44	4.26	5.32	5.32

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	5-yr	2067.1	652.35	647.27	2.14	2.13	21.73	19.69	221.62	326.93	4.35	3.94	5.08	5.08
Prairie County	D3	RM 124.15	5960	5-yr	2067.1	652.1	647.27	2.22	2.21	23.98	22.07	232.47	318.03	4	3.68	4.83	4.83
Prairie County	D3	RM 123.94	5627	5-yr	2067.1	651.75	647.27	2.61	2.6	33.33	31.36	199.91	263.98	3.96	3.72	4.48	4.48
Prairie County	D3	RM 123.74	5312	5-yr	2067.1	651.5	647.25	2.53	2.53	31.26	31.22	206.74	251.53	3.95	3.95	4.25	4.25
Prairie County	D3	RM 123.56	5014	5-yr	2067.1	651.49	647.24	1.61	1.6	12.4	12.04	311.23	380.54	4.14	4.01	4.25	4.25
Prairie County	D3	RM 123.24	4500	5-yr	2067.1	651.28	647.19	1.22	1.22	19.29	19.25	819.98	822.14	2.06	2.06	4.08	4.08
Prairie County	D3	RM 122.99	4116	5-yr	2067.1	651.09	646.67	1.31	1.29	7.9	7.41	527.26	570.96	2.99	2.8	4.41	4.41
Prairie County	D3	RM 122.76	3746	5-yr	2067.1	650.94	646.22	1.51	1.51	11.34	11.28	361.9	364.19	3.78	3.76	4.72	4.72
Prairie County	D3	RM 122.55	3414	5-yr	2067.1	650.74	645.7	1.94	1.94	17.71	17.49	242.74	245.81	4.4	4.35	5.04	5.04
Prairie County	D3	RM 122.3	3012	5-yr	2067.1	650.47	645.57	2.27	2.27	24.55	24.03	214.39	219.25	4.25	4.16	4.9	4.9
Prairie County	D3	RM 122.08	2651	5-yr	2067.1	650.27	645.49	2.15	2.15	22.11	21.34	240.65	250.34	3.99	3.85	4.78	4.78
Prairie County	D3	RM 121.88	2338	5-yr	2067.1	650.12	645.42	2.05	2.04	19.61	18.39	244.44	262.37	4.12	3.87	4.7	4.7
Prairie County	D3	RM 121.66	1982	5-yr	2067.1	649.91	645.3	2.18	2.17	22.11	21.15	226.93	238.11	4.19	4	4.61	4.61
Prairie County	D3	RM 121.46	1651	5-yr	2067.1	649.73	645.06	2.13	2.12	22.1	21	243.18	257.99	3.99	3.79	4.67	4.67
Prairie County	D3	RM 121.24	1304	5-yr	2067.1	649.5	644.99	2.22	2.17	24.18	22.05	247.35	278.97	3.75	3.42	4.51	4.51
Prairie County	D3	RM 121.02	957	5-yr	2067.1	649.31	644.88	2.07	2.01	21.1	19.63	259.65	289.45	3.82	3.55	4.43	4.43
Prairie County	D3	RM 120.84	660	5-yr	2067.1	649.14	644.78	2.05	2.04	22.79	22.43	255.32	259.69	3.96	3.9	4.36	4.36
Prairie County	D3	RM 120.64	350	5-yr	2067.1	648.98	644.42	2.01	2.01	19.23	19.1	244.23	245.83	4.22	4.19	4.56	4.56

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	5-yr	2067.4	648.95	643.94	1.95	1.87	18.37	16.41	254.01	329.3	4.09	3.65	5	5
Dawson County	D3	RM 120.28	90838.07	5-yr	2067.4	648.88	643.78	1.99	1.93	18.79	16.25	233.12	288.88	4.29	3.71	5.09	5.09
Dawson County	D3	RM 120.18	90675.23	5-yr	2067.4	648.8	643.7	2	1.92	18.51	16.38	213.48	263.4	4.59	4.08	5.1	5.1
Dawson County	D3	RM 120.00	90388.96	5-yr	2067.4	648.7	643.56	1.91	1.87	16.73	15.44	226.64	251.86	4.76	4.39	5.13	5.13
Dawson County	D3	RM 119.84	90136.35	5-yr	2067.4	648.57	643.44	2.04	2.01	19.06	17.9	213.73	230.8	4.74	4.45	5.13	5.13
Dawson County	D3	RM 119.68	89873.82	5-yr	2067.4	648.4	643.31	2.27	2.22	23.73	20.94	189.21	220.8	4.77	4.21	5.08	5.08
Dawson County	D3	RM 119.53	89627.16	5-yr	2067.4	648.3	643.2	2.11	2.11	20.42	19.85	204.32	210.37	4.79	4.66	5.11	5.11
Dawson County	D3	RM 119.39	89404.11	5-yr	2067.4	648.24	643.09	1.92	1.89	17.04	16.29	231.36	245.37	4.64	4.45	5.15	5.15
Dawson County	D3	RM 119.26	89201.38	5-yr	2067.4	648.17	642.99	1.84	1.81	16.12	14.92	263.7	291.06	4.24	3.93	5.18	5.18
Dawson County	D3	RM 119.12	88969.13	5-yr	2067.4	647.98	642.87	2.22	2.12	22.72	19.76	193.4	269.83	4.74	4.13	5.11	5.11
Dawson County	D3	RM 119.00	88780.83	5-yr	2067.4	647.9	642.78	2.16	2.08	21.56	17.8	199.46	257.19	4.68	3.87	5.12	5.12
Dawson County	D3	RM 118.85	88537.07	5-yr	2067.4	647.84	642.66	1.89	1.84	16.91	14.9	241.51	290.17	4.4	3.88	5.17	5.17
Dawson County	D3	RM 118.72	88336.12	5-yr	2067.4	647.79	642.56	1.73	1.65	13.71	11.43	237.19	310.96	4.83	4.04	5.22	5.22
Dawson County	D3	RM 118.60	88130.39	5-yr	2067.4	647.67	642.46	1.96	1.9	17.66	15.14	220.72	269.2	4.7	4.04	5.21	5.21
Dawson County	D3	RM 118.47	87924.15	5-yr	2067.4	647.53	642.37	2.19	2.11	22.89	18.65	211.72	279.93	4.28	3.5	5.16	5.16
Dawson County	D3	RM 118.34	87719.85	5-yr	2067.4	647.3	642.27	2.51	2.45	31.57	28.77	214.06	250.77	3.68	3.37	5.04	5.04
Dawson County	D3	RM 118.21	87507.02	5-yr	2067.4	647.19	642.16	2.33	2.25	24.97	20.03	175.82	236.73	4.85	3.88	5.03	5.03
Dawson County	D3	RM 118.07	87276.02	5-yr	2081.56	647.13	642.05	1.87	1.87	17.48	17.15	297.49	303.77	3.73	3.67	5.08	5.08
Dawson County	D4	RM 117.90	87004.77	5-yr	2081.56	647.05	641.92	1.74	1.57	14.38	11.65	234.19	383.84	4.28	3.46	5.14	5.14
Dawson County	D4	RM 117.77	86795.88	5-yr	2081.56	646.98	641.81	1.74	1.51	14.6	9.66	217.15	500.5	4.19	2.75	5.17	5.17
Dawson County	D4	RM 117.62	86560.03	5-yr	2081.56	646.91	641.7	1.66	1.53	12.85	9.21	247.32	419.38	4.55	3.26	5.21	5.21
Dawson County	D4	RM 117.46	86294.2	5-yr	2081.56	646.71	641.57	2.2	1.98	22.54	16.36	183	319.84	4.55	3.28	5.14	5.14
Dawson County	D4	RM 117.33	86073.88	5-yr	2081.56	646.47	641.46	2.64	2.37	32.03	20.81	137.01	278.41	4.94	3.15	5.01	5.01
Dawson County	D4	RM 117.16	85808.16	5-yr	2081.56	646.42	641.33	2.06	1.89	19.33	13.94	182.25	315.54	4.86	3.49	5.08	5.08
Dawson County	D4	RM 117.03	85604.68	5-yr	2081.56	646.37	641.3	1.77	1.71	14.99	13.18	243.69	327.38	4.23	3.72	5.07	5.07
Dawson County	D4	RM 116.87	85336.88	5-yr	2081.56	646.29	641.29	1.67	1.47	13.26	7.93	238.63	546.45	4.34	2.59	5.01	5.01
Dawson County	D4	RM 116.69	85043.25	5-yr	2081.56	646.16	641.44	1.79	1.64	16.09	12.32	279.08	450.3	3.69	2.83	4.72	4.72
Dawson County	D4	RM 116.56	84823.15	5-yr	2081.56	645.99	641.34	2.07	1.88	21.41	14.06	234.35	459.94	3.67	2.41	4.65	4.65
Dawson County	D4	RM 116.39	84558.58	5-yr	2081.56	645.91	641.21	1.69	1.57	13.92	10.57	269.92	435.89	4.02	3.05	4.7	4.7
Dawson County	D4	RM 116.22	84287.19	5-yr	2081.56	645.78	641	1.8	1.7	15.31	10.84	259.34	393.59	4.38	3.11	4.78	4.78
Dawson County	D4	RM 116.05	84007.59	5-yr	2081.56	645.6	640.84	2.12	1.89	21.19	11.33	213.93	467.75	4.4	2.36	4.76	4.76
Dawson County	D4	RM 115.87	83722.29	5-yr	2081.56	645.42	640.8	2.26	2	24.6	14.33	214.27	438.89	4.08	2.37	4.62	4.62
Dawson County	D4	RM 115.73	83500.35	5-yr	2081.56	645.32	640.69	1.96	1.77	20.16	12.63	310.77	583.77	3.21	2.01	4.62	4.62
Dawson County	D4	RM 115.61	83294.37	5-yr	2081.56	645.26	640.59	1.56	1.49	12.52	10.25	385.01	505.71	3.37	2.77	4.67	4.67
Dawson County	D4	RM 115.45	83034.82	5-yr	2081.56	645.15	640.37	1.58	1.45	13.38	10.14	407.6	621.83	3.04	2.3	4.79	4.79
Dawson County	D4	RM 115.29	82782.88	5-yr	2081.56	645.01	640.34	1.73	1.67	15.19	13.21	319.39	397.25	3.6	3.14	4.67	4.67
Dawson County	D4	RM 115.09	82480.02	5-yr	2081.56	644.94	640.2	1.49	1.44	10.64	8.44	324	430.83	4.2	3.34	4.74	4.74
Dawson County	D4	RM 114.96	82177.99	5-yr	2081.56	644.79	640	1.82	1.74	15.73	12.3	260.73	357.34	4.28	3.34	4.78	4.78
Dawson County	D4	RM 114.74	81836.48	5-yr	2081.56	644.37	639.98	2.71	2.52	35.07	23.94	179.76	288.69	4.21	2.87	4.39	4.39
Dawson County	D4	RM 114.58	81577.9	5-yr	2081.56	644.35	639.46	1.94	1.82	17.63	15.32	195.77	348.32	4.51	3.9	4.9	4.9
Dawson County	D4	RM 114.42	81309.47	5-yr	2081.56	644.22	639.33	1.96	1.94	18.42	16.42	257.79	291.81	4.12	3.67	4.89	4.89
Dawson County	D4	RM 114.28	81078.59	5-yr	2081.56	644.04	639.21	2.23	2.19	23.49	20.37	213.07	250.18	4.37	3.79	4.82	4.82
Dawson County	D4	RM 114.11	80813.63	5-yr	2081.56	643.85	639.2	2.33	2.29	25.82	23.9	210.21	230.95	4.25	3.94	4.65	4.65
Dawson County	D4	RM 113.97	80580.15	5-yr	2081.56	643.68	639.45	2.38	2.34	27.84	24.29	225.76	263.46	3.87	3.38	4.23	4.23
Dawson County	D4	RM 113.79	80292.13	5-yr	2081.56	643.5	639.45	2.3	2.01	26.28	17.97	201.08	406.55	3.72	2.55	4.05	4.05
Dawson County	D4	RM 113.60	79987.05	5-yr	2081.56	643.48	639.2	1.51	1.34	10.91	8.53	179.84	491.68	4.13	3.2	4.28	4.28
Dawson County	D4	RM 113.43	79712.89	5-yr	2081.56	643.34	638.73	1.82	1.6	15.61	11.36	173.8	401.92	4.48	3.24	4.61	4.61
Dawson County	D4	RM 113.24	79405.49	5-yr	2081.56	643.03	638.43	2.54	2.23	30.44	21.4	130.78	298.76	4.49	3.12	4.6	4.6
Dawson County	D4	RM 113.08	79152.39	5-yr	2081.56	642.87	638.37	2.39	2.14	27	20.53	138.2	294.25	4.39	3.31	4.5	4.5
Dawson County	D4	RM 112.94	78925.1	5-yr	2081.56	642.84	638.26	1.74	1.61	14.53	12.58	194.62	358.37	4.19	3.6	4.58	4.58
Dawson County	D4	RM 112.74	78585.88	5-yr	2081.56	642.65	638.09	1.96	1.84	18.92	16.03	237.95	349.99	3.82	3.23	4.56	4.56
Dawson County	D4	RM 112.59	78355.25	5-yr	2081.56	642.48	637.98	2.09	1.92	22.41	19	271.99	377.67	3.4	2.87	4.5	4.5
Dawson County	D4	RM 112.37	78008.78	5-yr	2081.56	642.43	637.88	1.48	1.34	10.56	8.72	206.92	522.61	4.07	3.33	4.55	4.55
Dawson County	D4	RM 112.19	77721.27	5-yr	2081.56	642.27	637.59	1.8	1.71	15.63	13.27	213.8	345.57	4.14	3.52	4.67	4.67
Dawson County	D4	RM 111.89	77240.22	5-yr	2081.56	641.98	637.16	2.07	2.06	20.44	19.22	235.68	253.01	4.26	4	4.82	4.82
Dawson County	D4	RM 111.42	76486.24	5-yr	2081.56	641.69	636.91	1.8	1.78	15.67	14.24	287.11	319.97	4.03	3.66	4.78	4.78
Dawson County	D4	RM 111.26	76213.83	5-yr	2081.56	641.6	636.66	1.67	1.65	13.73	12.64	329.26	362.6	3.79	3.48	4.94	4.94
Dawson County	D4	RM 111.09	75911.9	5-yr	2081.56	641.34	636.51	2.19	2.19	23.51	23.44	240.17	258.59	3.95	3.94	4.83	4.83
Dawson County	D4	RM 110.95	75678.54	5-yr	2081.56	641.14	636.4	2.41	2.39	27.25	25.84	194.97	207.34	4.43	4.2	4.74	4.74
Dawson County	D4	RM 110.78	75415.61	5-yr	2081.56	640.91	636.27	2.58	2.57	31.5	31.02	186.03	188.86	4.34	4.28	4.64	4.64
Dawson County	D4	RM 110.55	75040.65	5-yr	2081.56	640.76	636.09	2.08	2.07	20.81	20.21	240.69	248.17	4.15	4.04	4.67	4.67

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	5-yr	2081.56	640.69	635.96	1.77	1.75	15.17	13.64	293.1	331.02	4.01	3.6	4.72	4.72
Dawson County	D4	RM 110.17	74428.56	5-yr	2081.56	640.47	635.79	1.97	1.94	20.3	18.63	321.63	358.89	3.26	2.99	4.68	4.68
Dawson County	D4	RM 109.95	74074.87	5-yr	2081.56	640.32	635.62	1.77	1.75	15.25	13.76	297.98	334.75	3.94	3.56	4.7	4.7
Dawson County	D4	RM 109.75	73741.09	5-yr	2081.56	640.16	635.46	1.88	1.85	17.19	15.22	272.8	314.49	4.04	3.58	4.7	4.7
Dawson County	D4	RM 109.54	73418.83	5-yr	2081.56	640.03	635.3	1.8	1.71	15.79	10.22	287.56	471.42	3.99	2.58	4.73	4.73
Dawson County	D4	RM 109.37	73150.54	5-yr	2081.56	639.86	635.17	2.06	1.87	20.25	13.87	224.7	383.8	4.24	2.9	4.69	4.69
Dawson County	D4	RM 109.19	72864.56	5-yr	2081.56	639.72	635.03	2.04	1.98	19.74	16.01	238.65	305.72	4.25	3.45	4.69	4.69
Dawson County	D4	RM 109.04	72628	5-yr	2081.56	639.48	634.92	2.47	2.41	28.91	23.31	194.23	248.23	4.32	3.48	4.56	4.56
Dawson County	D4	RM 108.86	72339.73	5-yr	2081.56	639.43	634.77	1.78	1.74	15.64	14.69	287.17	335.38	3.8	3.57	4.66	4.66
Dawson County	D4	RM 108.70	72072.36	5-yr	2081.56	639.34	634.65	1.64	1.6	13.2	12.36	291.61	351.34	3.95	3.7	4.7	4.7
Dawson County	D4	RM 108.55	71827.97	5-yr	2081.56	639.26	634.53	1.6	1.6	12.68	12.54	343.64	347.43	3.79	3.75	4.74	4.74
Dawson County	D4	RM 108.40	71587.18	5-yr	2081.56	639.09	634.41	1.98	1.97	16.2	16	318.65	322.83	3.3	3.27	4.68	4.68
Dawson County	D4	RM 108.25	71345.86	5-yr	2081.56	638.98	634.29	1.86	1.86	14.66	14.45	357.79	363.6	3.12	3.08	4.69	4.69
Dawson County	D4	RM 108.12	71131.88	5-yr	2081.56	638.9	634.19	1.78	1.76	15.44	13.74	289.42	330.3	4.02	3.58	4.71	4.71
Dawson County	D4	RM 107.98	70905.01	5-yr	2081.56	638.74	634.08	2.05	2.03	20.15	19.05	245.46	261.53	4.14	3.92	4.67	4.67
Dawson County	D4	RM 107.82	70651.22	5-yr	2081.56	638.56	633.95	2.21	2.17	23.64	21.04	231.93	265.23	4.05	3.61	4.61	4.61
Dawson County	D4	RM 107.68	70418.24	5-yr	2081.56	638.41	633.84	2.27	2.2	24.76	21.78	219.72	259.06	4.13	3.65	4.57	4.57
Dawson County	D4	RM 107.50	70132.11	5-yr	2081.56	638.27	633.17	2.09	2	21.06	17.8	239.71	299.95	4.08	3.47	5.1	5.1
Dawson County	D4	RM 107.31	69834.56	5-yr	2081.56	638.09	633.23	2.13	2.08	22.62	19.85	264.38	308.56	3.67	3.24	4.86	4.86
Dawson County	D4	RM 107.13	69541.52	5-yr	2081.56	637.92	633.98	2.01	1.95	21.07	19.51	322.33	362.74	3.17	2.95	3.94	3.94
Dawson County	D5	RM 106.98	69305.02	5-yr	2087.23	637.83	634.16	1.64	1.6	14.48	14.05	421.85	454.45	2.94	2.86	3.67	3.67
Dawson County	D5	RM 106.85	69065.27	5-yr	2087.23	637.72	633.6	1.59	1.57	13.67	13.06	412.29	479.3	2.9	2.78	4.12	4.12
Dawson County	D5	RM 106.65	68764.02	5-yr	2087.23	637.49	632.98	1.91	1.86	16.54	15.79	360.15	424.75	2.76	2.65	4.51	4.51
Dawson County	D5	RM 106.47	68475.87	5-yr	2087.23	637.32	632.51	1.93	1.71	19.48	11.51	307.26	646.59	3.2	1.89	4.81	4.81
Dawson County	D5	RM 106.28	68173.97	5-yr	2087.23	637.01	631.71	2.4	2.07	28.07	17.58	204.05	411.98	3.91	2.45	5.3	5.3
Dawson County	D5	RM 106.10	67879.83	5-yr	2087.23	636.81	631.29	2.34	1.92	27.44	16.55	206.53	502.22	3.58	2.17	5.52	5.52
Dawson County	D5	RM 105.89	67550.49	5-yr	2087.23	636.62	631.76	2.09	1.78	22.23	14.2	226.74	528.14	3.46	2.22	4.86	4.86
Dawson County	D5	RM 105.74	67300.35	5-yr	2087.23	636.47	632.3	2.01	1.5	20.43	11.8	203.14	690.29	3.49	2.02	4.17	4.17
Dawson County	D5	RM 105.54	66973.54	5-yr	2087.23	636.19	632.17	2.37	1.86	28.95	16.46	147.79	608.13	3.33	1.9	4.01	4.01
Dawson County	D5	RM 105.30	66609.03	5-yr	2087.23	636.03	632.29	1.53	1.34	12.96	10.14	219.79	751.8	2.65	2.07	3.91	3.91
Dawson County	D5	RM 105.06	66212.24	5-yr	2087.23	635.88	631.19	1.66	1.56	15.3	13.18	181.11	843.51	2.65	2.29	4.69	4.69
Dawson County	D5	RM 104.89	65945.5	5-yr	2087.23	635.66	631.5	1.87	1.67	20.25	16.95	205.87	779.55	2.34	1.97	4.24	4.24
Dawson County	D5	RM 104.77	65742.33	5-yr	2087.23	635.51	631.67	1.92	1.6	19.22	11.28	125.62	812.35	3.18	1.87	4.8	4.8
Dawson County	D5	RM 104.64	65530.83	5-yr	2087.23	635.43	632.1	1.61	1.39	14.03	8.61	172.34	960.92	2.94	1.79	4.47	4.47
Dawson County	D5	RM 104.43	65180.62	5-yr	2087.23	635.34	631.56	1.17	1.05	8.21	6.31	361.11	1223.33	2.11	1.63	4.55	4.55
Dawson County	D5	RM 104.26	64906.83	5-yr	2087.23	635.24	631.59	1.09	0.98	6.67	5.22	218.58	1080.22	2.52	1.97	4.6	4.6
Dawson County	D5	RM 104.10	64643.2	5-yr	2087.23	635.13	630.81	1.32	1.26	9.22	6.02	150.64	812.99	3.1	2.03	4.69	4.69
Dawson County	D5	RM 103.95	64410.06	5-yr	2087.23	635.08	631.24	1.45	1.21	11.3	5.5	185.01	1233.32	2.88	1.4	5.26	5.26
Dawson County	D5	RM 103.68	63957.56	5-yr	2087.23	634.96	629.68	1.58	1.1	12.93	4.66	188.7	1608.92	3.26	1.18	5.52	5.52
Dawson County	D5	RM 103.48	63615.6	5-yr	2087.23	634.85	630.4	1.72	1.28	14.93	5.58	152.55	1209.98	3.62	1.34	5.34	5.34
Dawson County	D5	RM 103.26	63259.44	5-yr	2087.23	634.78	630.13	1.56	1.15	12.13	4.7	173.17	1283.39	3.67	1.41	5.37	5.37
Dawson County	D5	RM 102.58	62131.5	5-yr	2087.23	634.59	629.72	1.39	1.18	9.69	5.09	178.73	918.51	3.66	1.93	4.91	4.91
Dawson County	D5	RM 102.44	61920.83	5-yr	2087.23	634.46	629.74	1.79	1.58	16.09	7.94	255.44	737.34	3.62	1.79	4.72	4.72
Dawson County	D5	RM 102.31	61720.14	5-yr	2087.23	634.31	629.03	2.15	1.78	23.09	10.2	200.53	722.2	3.67	1.63	5.28	5.28
Dawson County	D5	RM 102.15	61456.58	5-yr	2087.23	634.19	629.39	2	1.7	19.69	12.32	201.3	505.29	3.87	2.43	4.8	4.8
Dawson County	D5	RM 102.00	61217.89	5-yr	2087.23	634.09	629.48	1.76	1.55	15.92	10.28	267.9	619.4	3.34	2.17	4.61	4.61
Dawson County	D5	RM 101.84	60967.97	5-yr	2087.23	634.01	629.23	1.65	1.17	13.89	7.69	155.67	919.38	3.49	1.93	4.78	4.78
Dawson County	D5	RM 101.60	60582.61	5-yr	2087.23	633.87	628.87	1.43	1.3	10.47	8.55	336.08	585.16	3.38	2.77	5	5
Dawson County	D5	RM 101.45	60336.09	5-yr	2087.23	633.68	629.16	1.93	1.77	18.2	12.14	251.39	450.49	3.91	2.61	4.52	4.52
Dawson County	D5	RM 101.25	60019.5	5-yr	2087.23	633.46	627.81	2.16	2.04	22.42	16.91	209.15	328.46	4.12	3.12	5.65	5.65
Dawson County	D5	RM 101.09	59759.25	5-yr	2087.23	633.33	627.99	2.12	1.95	21.81	11.39	216.65	514.52	3.97	2.08	5.34	5.34
Dawson County	D5	RM 100.88	59426.42	5-yr	2087.23	633.19	627.86	2.01	1.68	19.34	11.34	196.58	506.63	4.16	2.45	5.33	5.33
Dawson County	D5	RM 100.67	59075.4	5-yr	2087.23	632.98	627.1	2.29	1.77	24.22	10.58	151.88	582.86	4.63	2.03	5.88	5.88
Dawson County	D5	RM 100.46	58743.44	5-yr	2087.23	632.91	627.92	1.72	1.32	14.16	6.36	202.94	853.75	4.13	1.85	4.99	4.99
Dawson County	D5	RM 100.25	58401.49	5-yr	2087.23	632.7	627.57	2.05	1.71	20.23	10.48	196.17	568.08	4.14	2.14	5.13	5.13
Dawson County	D5	RM 100.05	58077.55	5-yr	2087.23	632.56	626.86	1.99	1.72	18.95	12.62	176.97	435.13	4.2	2.8	5.7	5.7
Dawson County	D5	RM 99.87	57778.81	5-yr	2087.23	632.35	626.4	2.05	2.03	21.45	20.47	301.61	318.21	3.38	3.23	5.95	5.95
Dawson County	D5	RM 99.68	57474.16	5-yr	2087.23	632.2	626.29	1.97	1.86	18.41	14.15	246.92	344.48	4.21	3.25	5.91	5.91
Dawson County	D5	RM 99.49	57160.47	5-yr	2087.23	631.96	626.53	2.27	2.14	24.73	16.09	218.38	360.14	4.15	2.71	5.43	5.43
Dawson County	D5	RM 99.30	56863.46	5-yr	2087.23	631.83	627.26	2.03	1.91	20.19	12.92	267.93	456.45	3.81	2.45	4.57	4.57
Dawson County	D5	RM 99.13	56566.63	5-yr	2087.23	631.71	626.77	1.85	1.66	17	9.38	293.66	608.47	3.73	2.06	4.94	4.94

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	5-yr	2087.23	631.56	626.63	1.77	1.66	16.15	11.95	339.1	500.61	3.37	2.51	4.93	4.93
Dawson County	D5	RM 98.71	55911.87	5-yr	2087.23	631.34	626.34	1.94	1.79	19.7	11.98	322.21	591.98	3.23	1.97	5	5
Dawson County	D5	RM 98.57	55680.2	5-yr	2087.23	631.2	626.1	1.98	1.61	20.26	9.12	297.01	979.21	3.3	1.48	5.1	5.1
Dawson County	D5	RM 98.35	55325.95	5-yr	2087.23	630.93	625.91	2.2	1.79	23.29	9.22	216.82	724	4.08	1.61	5.02	5.02
Dawson County	D5	RM 98.19	55066.09	5-yr	2087.23	630.76	624.42	2.3	1.87	24.53	8.67	184	689.56	4.57	1.62	6.34	6.34
Dawson County	D5	RM 97.99	54752.97	5-yr	2087.23	630.58	625.04	2.22	1.96	24.19	14.7	236.53	451.81	3.87	2.35	5.54	5.54
Dawson County	D5	RM 97.84	54493.48	5-yr	2087.23	630.47	625.39	1.95	1.83	18.95	12.12	292.51	489.63	3.64	2.32	5.08	5.08
Dawson County	D5	RM 97.68	54241.32	5-yr	2087.23	630.33	624.99	1.94	1.69	20.02	14.08	340.05	586.59	3.02	2.13	5.34	5.34
Dawson County	D5	RM 97.48	53918.21	5-yr	2087.23	630.1	624.81	1.95	1.66	17.45	10.74	328.58	952.86	2.43	1.49	5.29	5.29
Dawson County	D5	RM 97.28	53585.68	5-yr	2087.23	629.89	625.86	1.74	1.55	16.49	8.65	328.8	1013.39	2.85	1.5	4.44	4.44
Dawson County	D5	RM 97.08	53263.89	5-yr	2087.23	629.63	625.27	2.13	1.92	22.89	14.12	209.17	500.52	3.52	2.18	4.36	4.36
Dawson County	D5	RM 96.94	53030.11	5-yr	2087.23	629.42	623.97	2.34	2.04	28.03	15.03	199.17	562.8	3.38	1.82	5.45	5.45
Dawson County	D5	RM 96.77	52762.2	5-yr	2087.23	629.23	623.51	2.21	2	25.15	16.41	202.34	476.48	3.35	2.19	5.72	5.72
Dawson County	D5	RM 96.55	52403.59	5-yr	2087.23	628.93	624.57	2.48	1.83	30.81	13.49	160.42	716.47	3.62	1.59	4.36	4.36
Dawson County	D5	RM 96.35	52079.12	5-yr	2087.23	628.92	625.39	1.02	1.08	6	6.22	290.07	841.2	2.38	2.48	5.45	5.45
Dawson County	D5	RM 96.17	51777.74	5-yr	2087.23	628.69	624.71	1.93	1.8	19.79	14.72	130.42	506.7	3.07	2.3	4.31	4.31
Dawson County	D5	RM 96.00	51500.38	5-yr	2087.23	628.51	624.3	1.95	1.74	19.97	15.59	122.42	483.83	3.18	2.48	4.21	4.21
Dawson County	D5	RM 95.79	51156.87	5-yr	2087.23	628.4	624.35	1.35	1.31	10.17	6.21	284.94	910.92	2.86	1.75	4.15	4.15
Dawson County	D5	RM 95.60	50859.75	5-yr	2087.23	628.29	622.97	1.42	1.17	10.69	5.94	251.15	1062.98	3.01	1.67	5.32	5.32
Dawson County	D5	RM 95.40	50547.92	5-yr	2087.23	628.21	623.13	1.28	1.04	8.4	4.49	377.96	1099.41	3.39	1.82	5.08	5.08
Dawson County	D5	RM 95.21	50245.97	5-yr	2087.23	628.1	622.21	1.6	1.06	12.23	4.61	217.6	1247.68	4.2	1.58	5.89	5.89
Dawson County	D5	RM 95.04	49971.19	5-yr	2087.23	627.97	621.68	1.99	1.27	19.51	6.57	174.46	1270.56	3.86	1.3	6.28	6.28
Dawson County	D5	RM 94.88	49717.07	5-yr	2087.23	627.89	621.44	1.82	1	15.86	6.52	152.89	1365.03	4.17	1.71	6.44	6.44
Dawson County	D5	RM 94.71	49446.9	5-yr	2087.23	627.84	621.69	1.29	1.02	8.24	5.32	234.28	1364.65	3.81	2.46	6.15	6.15
Dawson County	D5	RM 94.58	49286.95	5-yr	2087.23	627.83	618.6	0.82	0.82	2.94	2.94	456.42	1173.48	5.58	5.58	9.24	9.24
Dawson County	D5	RM 94.57	49255.56	5-yr	2087.23	627.8	618.63	1.08	1.08	5.17	5.08	360.59	823.56	5.34	5.26	9.17	9.17
Dawson County		RM 94.55	49216.94	5-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	5-yr	2087.23	627.52	620.63	1.92	1.89	17.34	12.91	256.42	727.5	4.22	3.13	6.89	6.89
Dawson County	D5	RM 94.52	49157.18	5-yr	2087.23	627.53	620.89	1.75	1.75	14.67	14.1	287.23	755.8	4.15	3.99	6.63	6.63
Dawson County	D6	RM 94.42	48998.19	5-yr	2087.23	627.33	621.76	2.29	2.09	25.3	13.45	219.93	540.54	4.07	2.16	5.57	5.57
Dawson County	D6	RM 94.30	48806.79	5-yr	2096.86	627.21	621.22	2.19	2.03	24.98	14.48	291.26	577.3	3.23	1.87	5.99	5.99
Dawson County	D6	RM 94.20	48653.06	5-yr	2096.86	627.13	621.41	2.09	1.83	22	11.97	261.89	592.81	3.7	2.01	5.72	5.72
Dawson County	D6	RM 94.08	48445.46	5-yr	2096.86	627.1	622.37	1.56	1.47	11.89	7.45	338.75	584.85	3.93	2.46	4.73	4.73
Dawson County	D6	RM 93.96	48246.42	5-yr	2096.86	626.99	621.88	1.77	1.67	15.74	9.63	331.74	580.23	3.55	2.17	5.11	5.11
Dawson County	D6	RM 93.83	48030.25	5-yr	2096.86	626.81	620.28	2.1	1.92	21.17	11.19	237.8	499.56	4.14	2.19	6.53	6.53
Dawson County	D6	RM 93.68	47782.89	5-yr	2096.86	626.6	620.19	2.42	2.18	27.33	15.45	191.53	383.16	4.44	2.51	6.41	6.41
Dawson County	D6	RM 93.57	47606.95	5-yr	2096.86	626.4	620.08	2.66	2.41	33.79	19.93	184.03	349.86	4.22	2.49	6.32	6.32
Dawson County	D6	RM 93.53	47552.11	5-yr	2096.86	626.37	620.21	2.55	2.34	30.51	19.65	184.33	315.41	4.41	2.84	6.16	6.16
Dawson County			47536.14	5-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	5-yr	2096.86	626.21	620.33	2.61	2.41	32.12	20.78	180.48	305.38	4.4	2.84	5.89	5.89
Dawson County	D6	RM 93.47	47460.74	5-yr	2096.86	626.18	618.63	2.55	2.37	30.71	18.27	189.97	345.57	4.3	2.56	7.55	7.55
Dawson County	D6	RM 93.43	47382.46	5-yr	2096.86	626.14	619.44	2.41	2.27	27.06	16.08	191.32	344.75	4.52	2.68	6.7	6.7
Dawson County		RM 93.415	47357.71	5-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	5-yr	2096.86	626.07	620.19	2.31	2.2	24.97	16.89	200.23	348.56	4.5	3.04	5.88	5.88
Dawson County	D6	RM 93.36	47287.92	5-yr	2096.86	626.06	620.47	2.15	1.98	21.52	12.92	213.34	388.98	4.53	2.72	5.59	5.59
Dawson County	D6	RM 93.25	47111.44	5-yr	2096.86	625.91	621.12	2.34	2.16	30.91	16.74	228.84	468.91	3.82	2.07	4.79	4.79
Dawson County	D6	RM 93.05	46807.77	5-yr	2096.86	625.79	621.74	1.87	1.65	17.32	10.66	283.11	654.56	3.73	2.29	4.05	4.05
Dawson County	D6	RM 92.93	46606.31	5-yr	2096.86	625.64	621.34	2.03	1.86	21.18	13.16	305.87	751.33	3.34	2.07	4.3	4.3
Dawson County	D6	RM 92.83	46460.06	5-yr	2096.86	625.53	621.02	2.07	1.96	19.25	13.04	354.89	795.71	2.8	1.89	4.51	4.51
Dawson County	D6	RM 92.71	46261.84	5-yr	2096.86	625.43	620.37	1.92	1.79	16.48	14.2	359.28	663.13	2.93	2.52	5.06	5.06
Dawson County	D6	RM 92.59	46079.79	5-yr	2096.86	625.35	620.95	1.8	1.79	16.85	15.99	320.6	522.58	3.62	3.43	4.4	4.4
Dawson County	D6	RM 92.50	45933.81	5-yr	2096.86	625.24	620.75	1.93	1.93	19.28	19.28	325.13	492.42	3.33	3.33	4.49	4.49
Dawson County	D6	RM 92.39	45753.94	5-yr	2096.86	625.14	620.58	1.93	1.88	18.7	15.47	299.01	509.24	3.6	2.98	4.56	4.56
Dawson County	D6	RM 92.29	45591.17	5-yr	2096.86	625.06	620.64	1.9	1.83	18.06	15.29	295.47	650.44	3.67	3.1	4.42	4.42
Dawson County	D6	RM 92.18	45414.13	5-yr	2096.86	625	620.23	1.62	1.57	13.18	10.8	358.66	623.6	3.57	2.93	4.77	4.77
Dawson County		RM 92.14	45354.08	5-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	5-yr	2096.86	624.75	620.04	1.65	1.6	13.84	10.27	367.04	828.76	3.45	2.56	4.71	4.71
Dawson County	D6	RM 92.06	45238.47	5-yr	2096.86	624.69	620.12	1.81	1.71	17.05	14.51	354.46	665.35	3.21	2.74	4.57	4.57
Dawson County	D6	RM 91.99	45117.89	5-yr	2096.86	624.67	619.81	1.53	1.5	12.7	12.07	390.42	762.82	2.91	2.76	4.86	4.86
Dawson County	D6	RM 91.85	44886.16	5-yr	2096.86	624.6	619.7	1.42	1.29	11.57	7.82	238.98	835.89	3.62	2.45	4.9	4.9
Dawson County	D6	RM 91.77	44752.88	5-yr	2096.86	624.54	619.28	1.45	1.29	14.17	9.61	224.91	734.99	3.33	2.27	5.26	5.26

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	5-yr	2096.86	624.39	619	1.78	1.5	15.1	10.47	148.19	570.98	4.22	2.93	5.39	5.39
Dawson County	D6	RM 91.45	44219.47	5-yr	2096.86	624.27	618.66	1.81	1.72	16.52	14.26	189.07	453.77	4.08	3.52	5.61	5.61
Dawson County	D6	RM 91.31	43987.79	5-yr	2096.86	624.08	618.98	2.07	2.06	21.26	20.77	271.16	449.58	3.73	3.65	5.1	5.1
Dawson County	D6	RM 91.11	43666.49	5-yr	2096.86	623.88	618.54	2.17	2.12	22.11	19.85	219.42	538.93	4.39	3.95	5.34	5.34
Dawson County	D6	RM 90.97	43442.55	5-yr	2096.86	623.74	618.3	2.25	2.12	24.19	15.45	224.14	511.08	4.13	2.64	5.44	5.44
Dawson County	D6	RM 90.76	43114.74	5-yr	2096.86	623.54	618.97	2.12	1.99	28.05	12.13	268.72	695.74	3.65	1.58	4.57	4.57
Dawson County	D6	RM 90.59	42823.65	5-yr	2096.86	623.43	618.64	1.82	1.4	16.36	7.14	232.7	1120.21	3.77	1.65	4.79	4.79
Dawson County	D6	RM 90.43	42564.46	5-yr	2096.86	623.11	618.18	2.48	2.17	30.85	15.94	208.77	515.81	3.61	1.87	4.93	4.93
Dawson County	D6	RM 90.29	42331.05	5-yr	2096.86	622.99	618.21	2.14	1.81	22.52	9.21	236.08	745.22	3.8	1.55	4.78	4.78
Dawson County	D6	RM 90.16	42118.24	5-yr	2096.86	622.85	618.54	2.18	1.84	23.38	11.75	229.61	607.91	3.79	1.91	4.31	4.31
Dawson County	D6	RM 89.96	41795.66	5-yr	2096.86	622.72	618.08	1.79	1.66	16.5	10.88	346.39	614.89	3.32	2.2	4.64	4.64
Dawson County	D6	RM 89.83	41589.45	5-yr	2096.86	622.41	617.17	2.54	2.26	31.79	17.82	211.95	434.49	3.8	2.14	5.24	5.24
Dawson County	D6	RM 89.65	41302.33	5-yr	2096.86	622.19	618.15	2.39	2.25	29.19	21.19	251.93	373.37	3.41	2.49	4.04	4.04
Dawson County	D6	RM 89.46	41003.8	5-yr	2096.86	622.03	617.56	2.11	2	21.36	15.81	236.74	342.23	4.14	3.07	4.47	4.47
Dawson County	D6	RM 89.29	40732.3	5-yr	2096.86	621.99	617.42	1.63	1.42	13.07	9.1	253.25	547.43	3.9	2.71	4.57	4.57
Dawson County	D6	RM 89.13	40476.68	5-yr	2096.86	621.8	617.29	1.99	1.86	19.28	14.64	231.92	370.29	4.02	3.04	4.52	4.52
Dawson County	D6	RM 88.96	40193.97	5-yr	2101.39	621.68	617.14	1.99	1.81	18.62	14.23	186.73	341.38	4.47	3.4	4.54	4.54
Dawson County	D7	RM 88.77	39887.75	5-yr	2101.39	621.49	616.98	2.07	1.93	21.19	15.08	260.04	428.72	3.76	2.68	4.51	4.51
Dawson County	D7	RM 88.58	39581.56	5-yr	2101.39	621.19	616.82	2.49	2.24	29.67	16.84	185.88	390.73	4.3	2.42	4.37	4.37
Dawson County	D7	RM 88.44	39345.29	5-yr	2101.39	621.02	616.7	2.51	2.29	29.96	19.95	181.67	357.03	4.32	2.85	4.32	4.32
Dawson County	D7	RM 88.25	39047.22	5-yr	2101.39	620.89	616.54	2.15	1.94	22.85	16.57	221.53	391.45	3.87	2.79	4.34	4.34
Dawson County	D7	RM 88.06	38736.32	5-yr	2101.39	620.75	616.38	1.87	1.81	17.61	14.95	305.89	393.61	3.62	3.08	4.37	4.37
Dawson County	D7	RM 87.87	38426.68	5-yr	2101.39	620.64	616.22	1.56	1.44	13.1	11.18	429.53	613.98	2.92	2.49	4.42	4.42
Dawson County	D7	RM 87.70	38161.81	5-yr	2101.39	620.55	616.08	1.64	1.26	12.63	6.76	181.73	744.32	4.46	2.34	4.47	4.47
Dawson County	D7	RM 87.52	37862.82	5-yr	2101.39	620.5	615.92	1.31	1.21	8.85	7.14	308.23	647.35	3.37	2.71	4.57	4.57
Dawson County	D7	RM 87.34	37574.69	5-yr	2101.39	620.29	615.85	1.96	1.75	19.67	12.6	253.88	541.41	3.47	2.21	4.44	4.44
Dawson County	D7	RM 87.17	37307.08	5-yr	2101.39	620.09	615.82	2.24	1.95	24.18	15.27	162.99	410.44	4.19	2.62	4.27	4.27
Dawson County	D7	RM 87.00	37023.47	5-yr	2101.39	619.95	615.79	1.95	1.86	19.39	15.66	241.45	404.6	3.47	2.8	4.17	4.17
Dawson County	D7	RM 86.82	36748.51	5-yr	2101.39	619.79	615.76	2.02	1.89	20.68	16.91	210.89	379.5	3.61	2.94	4.03	4.03
Dawson County	D7	RM 86.67	36501.76	5-yr	2101.39	619.53	615.73	2.55	2.17	32.35	21.62	151.27	388.92	3.8	2.49	3.81	3.81
Dawson County	D7	RM 86.52	36253.46	5-yr	2101.39	619.42	615.7	1.91	1.69	18.6	12.48	250.55	533.43	3.47	2.33	3.73	3.73
Dawson County	D7	RM 86.39	36046.31	5-yr	2101.39	619.28	615.59	2.15	1.71	23.8	14.86	147.45	583.51	3.43	2.11	3.69	3.69
Dawson County	D7	RM 86.24	35796.38	5-yr	2101.39	619.23	615.46	1.34	1.22	8.93	7.59	166.41	553.96	3.7	3.1	3.77	3.77
Dawson County	D7	RM 86.08	35541.56	5-yr	2101.39	618.9	615.48	2.41	2.25	30.6	22.52	160.1	405.47	3.17	2.31	3.42	3.42
Dawson County	D7	RM 85.91	35282.1	5-yr	2101.39	618.72	615.5	2.13	1.93	23.96	15.54	191.42	538.86	3.12	2.02	3.21	3.21
Dawson County	D7	RM 85.78	35075.01	5-yr	2101.39	618.72	614.9	1.23	1.17	8.21	7.34	288.53	952.91	2.9	2.59	3.82	3.82
Dawson County	D7	RM 85.59	34774.5	5-yr	2101.39	618.64	614.32	1.47	1.18	10.29	5.99	184.84	715.01	4.29	2.48	4.32	4.32
Dawson County	D7	RM 85.39	34449.3	5-yr	2101.39	618.44	614.15	1.98	1.77	19.18	12.04	219.47	489.66	3.89	2.43	4.29	4.29
Dawson County	D7	RM 85.23	34186.4	5-yr	2101.39	618.17	614.01	2.57	2.17	31.77	17.73	157.48	422.21	4.16	2.29	4.16	4.16
Dawson County	D7	RM 85.04	33863.7	5-yr	2101.39	618.08	613.84	1.84	1.62	17.53	12.14	265.03	556.37	3.38	2.32	4.24	4.24
Dawson County	D7	RM 84.89	33626.36	5-yr	2101.39	617.99	613.92	1.58	1.53	12.99	11.95	413.04	466.67	3.2	2.95	4.07	4.07
Dawson County	D7	RM 84.72	33349.5	5-yr	2101.39	617.84	613.77	1.73	1.72	15.38	15.09	353.9	362.44	3.42	3.36	4.06	4.06
Dawson County	D7	RM 84.57	33104.21	5-yr	2101.39	617.7	613.45	1.87	1.86	17.27	16.73	294.82	306.53	3.81	3.69	4.25	4.25
Dawson County	D7	RM 84.41	32856.7	5-yr	2101.39	617.58	613.32	1.83	1.8	16.84	15.66	312.69	343.03	3.65	3.39	4.27	4.27
Dawson County	D7	RM 84.22	32552.24	5-yr	2101.39	617.46	613.16	1.78	1.62	15.93	12.58	261.68	448.46	3.68	2.89	4.3	4.3
Dawson County	D7	RM 84.05	32270.74	5-yr	2101.39	617.3	613.14	1.98	1.77	19.17	14.76	206.16	391.11	3.95	3.04	4.16	4.16
Dawson County	D7	RM 83.89	32017.88	5-yr	2101.39	617.1	613.11	2.2	1.94	23.67	15	191.2	437.09	3.91	2.48	3.99	3.99
Dawson County	D7	RM 83.73	31759.16	5-yr	2101.39	616.99	613.07	1.89	1.64	18.13	12.22	240.43	545.02	3.51	2.36	3.92	3.92
Dawson County	D7	RM 83.53	31426.04	5-yr	2101.39	616.91	613.01	1.46	1.32	10.82	7.75	304.34	631.15	3.53	2.52	3.89	3.89
Dawson County	D7	RM 83.39	31213.34	5-yr	2101.39	616.82	612.95	1.65	1.43	13.57	9.22	189.12	597.44	3.66	2.47	3.87	3.87
Dawson County	D7	RM 83.21	30910.79	5-yr	2101.39	616.73	612.91	1.51	1.28	11.32	7.2	170.07	689.99	3.78	2.38	3.95	3.95
Dawson County	D7	RM 83.05	30660.14	5-yr	2101.39	616.65	612.78	1.38	1.23	9.54	6.54	229.1	672.2	3.68	2.54	4.19	4.19
Dawson County	D7	RM 82.94	30491.79	5-yr	2101.39	616.59	612.69	1.41	1.29	10.02	6.68	219.21	670.76	3.65	2.42	4.2	4.2
Dawson County	D7	RM 82.81	30280.45	5-yr	2101.39	616.49	612.58	1.57	1.44	12.63	7.8	178.49	681.77	3.48	2.14	4.33	4.33
Dawson County	D7	RM 82.68	30058.39	5-yr	2101.39	616.4	612.34	1.69	1.41	13.86	7.46	152.77	690.54	4.06	2.16	4.3	4.3
Dawson County	D7	RM 82.51	29786.14	5-yr	2101.39	616.38	612.1	1.22	1.07	7.31	4.04	229.35	909.21	3.95	2.16	4.53	4.53
Dawson County	D7	RM 82.33	29497.12	5-yr	2101.39	616.33	611.87	1.29	0.96	8.12	3.64	246.87	1207.25	4.1	1.8	4.58	4.58
Dawson County	D7	RM 82.22	29323.27	5-yr	2101.39	616.25	611.66	1.58	1.02	11.91	4.68	193.52	1254.86	4.23	1.65	4.59	4.59
Dawson County	D7	RM 82.06	29049.94	5-yr	2101.39	616.2	611.37	1.45	0.97	9.83	3.75	202.97	1295.5	4.49	1.68	4.83	4.83
Dawson County	D7	RM 81.91	28820.21	5-yr	2101.39	616.16	611.21	1.44	0.99	9.56	3.29	191.58	1295.79	4.83	1.64	4.95	4.95
Dawson County	D7	RM 81.71	28446.75	5-yr	2101.39	616.11	611.02	1.19	0.95	6.47	3.25	220.81	908.45	4.89	2.45	5.09	5.09

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	5-yr	2101.39	615.84	610.8	2.23	1.83	22.44	7.93	165.37	670.6	5.03	1.75	5.04	5.04
Dawson County	D7	RM 81.31	27735.46	5-yr	2104.22	615.16	610.65	3.57	3.44	60.47	42.59	131.98	197.56	4.43	3.1	4.51	4.51
Dawson County	D8	RM 81.10	27398.33	5-yr	2104.22	614.89	610.47	2.99	2.69	42.43	23.31	160.09	331.19	4.32	2.36	4.42	4.42
Dawson County	D8	RM 80.94	27148.21	5-yr	2104.22	614.85	610.34	2.18	2.13	22.73	15.5	225.85	340.8	4.25	2.9	4.51	4.51
Dawson County	D8	RM 80.76	26855.69	5-yr	2104.22	614.81	610.19	1.76	1.44	14.54	7.03	181.68	674.46	4.61	2.19	4.62	4.62
Dawson County	D8	RM 80.64	26669.58	5-yr	2104.22	614.71	610.09	1.85	1.64	16.08	7.63	209.02	623.5	4.39	2.07	4.62	4.62
Dawson County	D8	RM 80.45	26373.01	5-yr	2104.22	614.71	609.94	1.33	1.01	8.31	3.76	122.91	1209.4	4.63	2.02	4.77	4.77
Dawson County	D8	RM 80.17	25926.88	5-yr	2104.22	614.56	609.71	1.85	1.4	15.82	7.02	146.98	718.13	4.84	2.09	4.85	4.85
Dawson County	D8	RM 79.91	25496.94	5-yr	2104.22	614.46	609.42	1.39	1.28	9.26	4.76	362.06	772.66	4.14	2.12	5.04	5.04
Dawson County	D8	RM 79.43	24626.85	5-yr	2104.22	614.21	609.14	1.57	1.46	11.53	6.92	289.02	550.28	4.58	2.74	5.07	5.07
Dawson County	D8	RM 79.23	24229.4	5-yr	2104.22	613.83	608.87	2.55	2.53	30.11	23.94	173.46	222	4.76	3.75	4.96	4.96
Dawson County	D8	RM 78.27	22640.58	5-yr	2104.22	613	608.6	2.01	1.61	19.95	10.68	226.68	635.97	3.88	2.05	4.4	4.4
Dawson County	D8	RM 78.12	22398.86	5-yr	2104.22	612.92	608.48	1.84	1.56	16.69	10.53	222.94	549.76	3.9	2.45	4.44	4.44
Dawson County	D8	RM 77.97	22135.34	5-yr	2104.22	612.8	608.34	1.92	1.64	17.65	9.34	214.67	574.05	4.24	2.23	4.46	4.46
Dawson County	D8	RM 77.79	21831.85	5-yr	2104.22	612.7	608.18	1.67	1.52	14.58	11.32	332.54	565.89	3.16	2.45	4.52	4.52
Dawson County	D8	RM 77.57	21474.71	5-yr	2104.22	612.5	608	1.9	1.78	17.32	12.87	250.08	386.47	4.12	3.06	4.5	4.5
Dawson County	D8	RM 77.38	21170.35	5-yr	2104.22	612.3	607.84	2.14	1.98	21.91	13.62	215.18	408.08	4.2	2.6	4.47	4.47
Dawson County	D8	RM 77.13	20780.17	5-yr	2104.22	612.25	607.63	1.57	1.31	11.76	7.13	188.55	630.63	4.25	2.55	4.62	4.62
Dawson County	D8	RM 77.00	20442.34	5-yr	2104.22	612.12	607.46	1.9	1.49	16.85	8.53	131.83	623.95	4.65	2.27	4.67	4.67
Dawson County	D8	RM 76.90	20124.49	5-yr	2104.22	612.05	607.29	1.71	1.46	13.63	8.83	153.24	480.09	4.74	2.99	4.75	4.75
Dawson County	D8	RM 76.76	19785.25	5-yr	2104.22	612	607.12	1.36	1.26	8.68	6.36	269.03	515.78	4.44	3.24	4.88	4.88
Dawson County	D8	RM 76.63	19501.04	5-yr	2104.22	611.91	606.97	1.51	1.41	11.1	8.67	246.86	483.84	3.97	3.08	4.94	4.94
Dawson County	D8	RM 76.37	19137.53	5-yr	2104.22	611.76	606.78	1.71	1.6	13.61	9.16	272.76	436.2	4.49	3.02	4.98	4.98
Dawson County	D8	RM 76.22	18884.28	5-yr	2104.22	611.66	606.65	1.78	1.68	14.63	7.77	253.7	509.78	4.63	2.45	5.01	5.01
Dawson County	D8	RM 76.00	18519.22	5-yr	2104.22	611.46	606.61	2.08	1.95	20.3	12.49	225.2	396.94	4.45	2.73	4.84	4.84
Dawson County	D8	RM 75.75	18119.45	5-yr	2104.22	611.19	606.58	2.3	2.12	25.04	14.16	209.51	409.22	4.32	2.43	4.61	4.61
Dawson County	D8	RM 75.56	17818.36	5-yr	2104.22	611.08	606.75	1.91	1.79	18.26	9.16	303.99	651.08	3.61	1.8	4.33	4.33
Dawson County	D8	RM 75.31	17411.3	5-yr	2104.22	610.92	606.34	1.78	1.67	15.33	6.96	263.12	677.23	4.11	1.86	4.58	4.58
Dawson County	D8	RM 75.13	17092.44	5-yr	2104.22	610.8	606.17	1.71	1.5	14.26	6.63	306.22	768.96	3.93	1.82	4.63	4.63
Dawson County	D8	RM 74.90	16719.46	5-yr	2104.22	610.5	605.98	2.28	2.01	25.3	11.17	224.87	593.76	4.01	1.76	4.52	4.52
Dawson County	D8	RM 74.65	16308.2	5-yr	2104.22	610.37	605.91	1.79	1.55	15.53	7.78	267.86	683.72	3.98	1.99	4.46	4.46
Dawson County	D8	RM 74.37	15846.14	5-yr	2104.22	610.12	605.85	2.05	1.73	21.05	13.09	221.55	540.42	3.64	2.26	4.27	4.27
Dawson County	D8	RM 74.13	15464.97	5-yr	2104.22	609.95	605.82	1.79	1.56	15.85	9.78	235.57	583.14	3.75	2.31	4.13	4.13
Dawson County	D8	RM 73.91	15098.01	5-yr	2104.22	609.83	605.99	1.54	1.34	12.2	7.18	283.69	785.71	3.4	2	3.84	3.84
Dawson County	D8	RM 73.71	14783.86	5-yr	2104.22	609.72	605.87	1.47	1.32	10.97	6.77	292.2	780.75	3.47	2.13	3.85	3.85
Dawson County	D8	RM 73.53	14496.67	5-yr	2104.22	609.63	605.72	1.5	1.28	11.24	4.97	249.62	1472.87	3.64	1.6	3.91	3.91
Dawson County	D8	RM 73.29	14096.19	5-yr	2104.22	609.25	605.51	2.44	2.13	29.98	16.1	198.62	556.24	3.64	1.95	3.73	3.73
Dawson County	D8	RM 73.07	13729.79	5-yr	2104.22	608.88	605.52	2.55	2.29	33.8	19.48	196.15	484.05	3.3	1.9	3.63	3.63
Dawson County	D8	RM 72.97	13573.93	5-yr	2104.22	608.66	605.5	2.74	2.44	39.66	24.17	199.11	462.18	3.09	1.89	3.49	3.49
Dawson County	D8	RM 72.91	13479.91	5-yr	2104.22	608.55	605.45	2.64	2.43	37.44	25.97	221.07	555.28	2.97	2.06	3.38	3.38
Dawson County		RM 72.905	13470.04	5-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	5-yr	2104.22	608.03	605.31	3.21	3.06	57.82	48.41	208.91	359.76	2.6	2.19	2.86	2.86
Dawson County	D8	RM 72.83	13354.45	5-yr	2104.22	608.04	604.9	2.28	2.15	28.14	20.21	264.25	494.98	2.9	2.08	3.14	3.14
Dawson County	D8	RM 72.62	13000.82	5-yr	2104.22	607.77	604.4	2.07	1.93	22.46	16.05	295.23	515.14	3.13	2.24	3.37	3.37
Dawson County	D8	RM 72.37	12609.05	5-yr	2104.22	607.42	603.89	2.29	1.99	27.06	16.82	228.58	535.09	3.33	2.07	3.53	3.53
Dawson County	D8	RM 72.16	12261.75	5-yr	2104.22	607.14	603.69	2.18	2.03	24.95	18.34	286.3	497.45	3.17	2.33	3.45	3.45
Dawson County	D8	RM 71.92	11875.08	5-yr	2104.22	606.95	603.18	1.77	1.68	16.26	13.5	345.16	485.38	3.23	2.69	3.77	3.77
Dawson County	D8	RM 71.69	11512.65	5-yr	2104.22	606.72	602.95	1.92	1.8	18.93	14.06	303.44	487.57	3.38	2.51	3.77	3.77
Dawson County	D8	RM 71.49	11192.6	5-yr	2104.22	606.55	602.03	1.97	1.8	18.54	11.12	237.66	488.35	4.19	2.51	4.52	4.52
Dawson County	D8	RM 71.31	10913.3	5-yr	2104.22	606.42	601.99	1.96	1.75	18.62	9.92	244.59	581.5	4.05	2.15	4.43	4.43
Dawson County	D9	RM 71.10	10567.75	5-yr	2107.05	606.31	602.11	1.71	1.5	14.56	10.49	197.48	553.7	3.69	2.64	4.2	4.2
Dawson County	D9	RM 70.91	10267.7	5-yr	2107.05	606.13	602.05	2	1.73	19.56	11.05	126.11	572.14	4.01	2.24	4.08	4.08
Dawson County	D9	RM 70.72	9968.939	5-yr	2107.05	606	601.91	1.98	1.67	19.12	9.95	153.19	677.5	4.08	2.07	4.09	4.09
Dawson County	D9	RM 70.50	9603.574	5-yr	2107.05	605.87	601.9	1.71	1.53	14.67	10.18	251.24	579.73	3.58	2.48	3.97	3.97
Dawson County	D9	RM 70.27	9238.535	5-yr	2107.05	605.58	601.31	2.17	2.04	23.05	15.78	236.79	407.81	3.95	2.71	4.27	4.27
Dawson County	D9	RM 70.08	8928.013	5-yr	2107.05	605.43	600.85	2.04	1.85	20.19	11.92	234.44	486.37	4.09	2.4	4.58	4.58
Dawson County	D9	RM 69.79	8464.726	5-yr	2107.05	605.28	600.61	1.77	1.51	15.03	9.41	248.41	550.06	4.2	2.63	4.67	4.67
Dawson County	D9	RM 69.50	7983.226	5-yr	2107.05	605.11	600.56	1.78	1.48	15.43	7.62	237.14	737.45	4.05	1.98	4.56	4.56
Dawson County	D9	RM 69.26	7575.04	5-yr	2107.05	604.96	600.35	1.8	1.46	15.58	7.16	245.78	761.48	4.15	1.9	4.61	4.61
Dawson County	D9	RM 69.03	7206.967	5-yr	2107.05	604.86	599.95	1.66	1.31	12.8	6.4	236.36	711.93	4.55	2.26	4.91	4.91
Dawson County	D9	RM 68.82	6851.789	5-yr	2107.05	604.66	599.77	2	1.77	19.07	10.98	217.59	494.83	4.33	2.47	4.89	4.89

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	5-yr	2107.05	604.38	599.59	2.36	2.24	25.81	19.78	189.13	272.31	4.66	3.56	4.79	4.79
Dawson County	D9	RM 68.39	6158.879	5-yr	2107.05	604.22	599.51	2.1	2.04	21.33	17.4	241.73	317.25	4.1	3.34	4.72	4.72
Dawson County	D9	RM 68.11	5709.195	5-yr	2107.05	604.01	599.37	1.98	1.91	19.04	16.89	262.72	344.2	4	3.56	4.64	4.64
Dawson County	D9	RM 67.86	5308.187	5-yr	2107.05	603.81	599.17	2.16	1.92	22.1	15.13	130.41	373.1	4.47	3	4.64	4.64
Dawson County	D10	RM 67.57	4859.184	5-yr	2115.55	603.62	598.93	1.88	1.75	16.7	13.44	240.29	344.8	4.34	3.5	4.69	4.69
Dawson County	D10	RM 67.37	4523.862	5-yr	2115.55	603.5	598.75	1.83	1.63	15.89	10.67	224.36	447.49	4.34	2.9	4.75	4.75
Dawson County	D10	RM 67.15	4175.103	5-yr	2115.55	603.17	598.47	2.58	2.27	31.25	17.67	158.11	371.26	4.48	2.51	4.69	4.69
Dawson County	D10	RM 66.95	3842.803	5-yr	2115.55	603.04	598.2	2.06	1.67	20.78	11.41	211.57	583.21	3.98	2.17	4.84	4.84
Dawson County	D10	RM 66.74	3505.323	5-yr	2115.55	602.88	598.12	2.05	1.7	19.53	10.52	189.78	503.61	4.63	2.47	4.76	4.76
Dawson County	D10	RM 66.52	3142.889	5-yr	2115.55	602.7	598.26	2	1.88	19.28	14.92	249	393.33	4.12	3.19	4.45	4.45
Dawson County	D10	RM 66.28	2774.58	5-yr	2115.55	602.36	598.21	2.5	2.3	30.73	22.75	206.17	343.1	3.9	2.89	4.15	4.15
Dawson County	D10	RM 66.11	2492.331	5-yr	2115.55	602.24	597.8	2.05	1.93	20.93	16.67	269.84	398.01	3.7	2.95	4.44	4.44
Dawson County	D10	RM 65.90	2160.839	5-yr	2115.55	602.11	597.33	1.87	1.66	16.79	9.6	227.64	558.9	4.19	2.37	4.79	4.79
Dawson County	D10	RM 65.75	1926.044	5-yr	2115.55	602.01	597.2	1.88	1.65	17.6	13.09	203.78	498.15	3.75	2.77	4.81	4.81
Dawson County	D10	RM 65.60	1669.095	5-yr	2115.55	601.85	597.07	2.13	1.68	21.3	10.61	140.14	570.67	4.54	2.23	4.78	4.78
Dawson County	D10	RM 65.42	1386.836	5-yr	2115.55	601.79	596.92	1.58	1.41	11.81	8.05	247.82	508.04	4.41	2.99	4.87	4.87
Dawson County	D10	RM 65.23	1090.639	5-yr	2115.55	601.65	596.91	1.77	1.54	16.16	9.67	263.18	713.39	3.38	2.01	4.75	4.75
Dawson County	D10	RM 64.96	634.963	5-yr	2115.55	601.52	597.09	1.54	1.15	11.59	5.53	270.22	1200.62	3.9	1.86	4.43	4.43

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	5-yr	2115.3	601.36	596.42	1.25	1.05	7.97	3.99	398.12	1322.41	3.39	1.7	4.94	4.94
Richland/McKenzie County	D10	RM 64.32	103200	5-yr	2115.3	601.24	596.33	1.67	1.11	13.47	3.86	232.97	1794.64	4.06	1.15	4.91	4.91
Richland/McKenzie County	D10	RM 64.12	102900	5-yr	2115.3	601.19	596.18	1.33	1.06	8.81	3.97	281.09	1339.31	3.65	1.63	5.01	5.01
Richland/McKenzie County	D10	RM 63.92	102601	5-yr	2115.3	601.14	596.08	1.29	0.9	8.5	3.35	273.38	1779.73	3.52	1.37	5.06	5.06
Richland/McKenzie County	D10	RM 63.74	102302	5-yr	2115.3	601.07	595.94	1.36	0.99	9.1	3.56	254.65	1471.96	3.92	1.52	5.13	5.13
Richland/McKenzie County	D10	RM 63.55	101998	5-yr	2115.3	601	595.79	1.44	0.95	9.54	3.02	210.56	1563.62	4.75	1.49	5.21	5.21
Richland/McKenzie County	D10	RM 63.34	101671	5-yr	2115.3	600.94	595.21	1.45	0.88	10.2	3.62	241.49	1817.56	3.99	1.41	5.73	5.73
Richland/McKenzie County	D10	RM 63.08	101293	5-yr	2115.3	600.46	595.12	2.86	1.8	39.42	10.35	159.68	1129.39	4.18	1.08	5.34	5.34
Richland/McKenzie County	D10	RM 62.96	101094	5-yr	2115.3	600.26	595.12	2.85	1.94	48.24	13.16	149.66	900.65	4.53	1.21	5.14	5.14
Richland/McKenzie County	D10	RM 62.83	100882	5-yr	2115.3	600.13	595.12	2.58	1.9	34.71	11.38	161.51	734.69	4.69	1.51	5.01	5.01
Richland/McKenzie County	D10	RM 62.64	100582	5-yr	2115.3	600.01	595.12	2.21	1.63	22.65	8.82	189.94	732.39	4.61	1.77	4.89	4.89
Richland/McKenzie County	D10	RM 62.46	100282	5-yr	2115.3	599.62	595.1	2.92	2.33	41.01	20.19	160.01	444.66	4.2	2.04	4.52	4.52
Richland/McKenzie County	D10	RM 62.27	99977	5-yr	2115.3	599.65	594.91	1.61	1.42	12.55	7.99	302.77	575.07	4.11	2.59	4.74	4.74
Richland/McKenzie County	D10	RM 62.1	99691	5-yr	2115.3	599.56	594.75	1.54	1.32	11.45	6.76	274.06	827.51	3.29	1.93	4.81	4.81
Richland/McKenzie County	D10	RM 61.91	99377	5-yr	2115.3	599.4	594.51	1.78	1.32	14.98	7.35	164.84	897.87	3.68	1.78	4.89	4.89
Richland/McKenzie County	D10	RM 61.72	99082	5-yr	2115.3	599.25	594.36	1.85	1.51	16.31	7.48	127.17	728.34	4.26	1.92	4.89	4.89
Richland/McKenzie County	D10	RM 61.54	98782	5-yr	2115.3	599.03	594.36	2.07	1.9	19.7	13.14	230.57	404.77	4.15	2.75	4.67	4.67
Richland/McKenzie County	D10	RM 61.35	98482	5-yr	2115.3	598.87	594.26	2.11	1.84	21.42	12.87	215	461.56	4.18	2.49	4.61	4.61
Richland/McKenzie County	D10	RM 61.16	98182	5-yr	2115.3	598.81	594.17	1.63	1.31	13.06	8.37	248.77	724.62	3.8	2.43	4.64	4.64
Richland/McKenzie County	D10	RM 60.99	97906	5-yr	2115.3	598.69	594.02	1.75	1.42	14.6	5.24	216.72	986.25	4.25	1.51	4.67	4.67
Richland/McKenzie County	D10	RM 60.79	97582	5-yr	2115.3	598.55	593.78	1.86	1.37	17.54	6.8	224.25	1168.1	3.51	1.35	4.77	4.77
Richland/McKenzie County	D10	RM 60.64	97339	5-yr	2115.3	598.54	593.58	1.14	0.92	6.79	4.24	265.84	1275.42	3.32	2.05	4.96	4.96
Richland/McKenzie County	D10	RM 60.42	96982	5-yr	2115.3	598.41	593.38	1.52	1.25	10.91	5.13	215.62	935.26	4.1	1.91	5.03	5.03
Richland/McKenzie County	D10	RM 60.25	96700	5-yr	2115.3	598.27	593.24	1.98	1.52	20.07	8.93	192.38	971.51	3.49	1.53	5.03	5.03
Richland/McKenzie County	D10	RM 60.04	96365	5-yr	2115.3	598.08	593.14	1.99	1.63	21.36	12.18	226.75	1095.96	2.92	1.65	4.94	4.94
Richland/McKenzie County	D10	RM 59.86	96088	5-yr	2115.3	597.97	592.99	1.94	1.39	17.67	6.35	170.94	1633.95	4.53	1.6	4.98	4.98
Richland/McKenzie County	D10	RM 59.65	95769	5-yr	2115.3	597.91	592.85	1.65	1.23	13.27	5.13	207.22	1997.71	4.01	1.53	5.06	5.06
Richland/McKenzie County	D10	RM 59.5	95530	5-yr	2115.3	597.82	592.75	1.65	1.31	13.59	8.3	206.9	1522.19	3.65	2.21	5.07	5.07
Richland/McKenzie County	D10	RM 59.29	95183	5-yr	2115.3	597.71	592.55	1.51	1.33	11.35	7.17	232.08	1432.25	3.72	2.33	5.16	5.16
Richland/McKenzie County	D10	RM 59.07	94797	5-yr	2115.3	597.61	592.36	1.34	1.23	9.86	6.69	408.43	1447.61	3.49	2.36	5.25	5.25
Richland/McKenzie County	D10	RM 58.93	94582	5-yr	2115.3	597.48	592.31	1.69	1.5	14.23	7.19	327.92	1410.6	3.75	1.88	5.17	5.17
Richland/McKenzie County	D10	RM 58.75	94282	5-yr	2115.3	597.36	592.28	1.77	1.58	14.09	6.16	264.72	1166.83	4.43	1.92	5.08	5.08
Richland/McKenzie County	D10	RM 58.56	93982	5-yr	2115.3	596.88	592.22	2.99	2.56	42.22	22.15	157.23	447.65	4.39	2.27	4.66	4.66
Richland/McKenzie County	D10	RM 58.37	93682	5-yr	2115.3	596.65	592.22	2.72	2.65	35.66	30.65	186.39	306.22	4.15	3.56	4.43	4.43
Richland/McKenzie County	D10	RM 58.19	93382	5-yr	2115.3	596.59	592.22	1.98	1.98	18.76	18.37	254.62	629.88	4.2	4.11	4.37	4.37
Richland/McKenzie County	D10	RM 58.01	93086	5-yr	2115.3	596.36	592.14	2.25	2.25	24.72	24.72	235.13	341.75	3.99	3.99	4.22	4.22
Richland/McKenzie County	D10	RM 57.82	92782	5-yr	2115.3	596.28	592.11	1.68	1.6	14.74	13.4	307.79	499.6	3.24	2.95	4.17	4.17
Richland/McKenzie County	D10	RM 57.63	92482	5-yr	2115.3	596.07	592.11	2.2	1.82	24.32	14.77	160.84	592.21	3.66	2.21	3.96	3.96
Richland/McKenzie County	D10	RM 57.46	92205	5-yr	2115.3	595.96	591.95	1.69	1.36	14.26	7.2	192.28	948.67	3.73	1.87	4.01	4.01
Richland/McKenzie County	D10	RM 57.26	91882	5-yr	2115.3	595.67	591.9	2.1	1.89	23.34	17.15	136.34	495.96	3.09	2.25	3.77	3.77
Richland/McKenzie County	D10	RM 57.07	91583	5-yr	2115.3	595.58	591.73	1.75	1.45	15.45	8.82	136.63	797.31	3.62	2.04	3.85	3.85
Richland/McKenzie County	D10	RM 56.87	91253	5-yr	2115.3	595.4	591.49	1.52	1.31	12.15	9.36	186.15	676.5	3.1	2.38	3.97	3.97
Richland/McKenzie County	D10	RM 56.68	90943	5-yr	2115.3	595.32	591.12	1.24	1.23	8.32	7.56	299.58	655.99	2.88	2.62	4.2	4.2
Richland/McKenzie County	D10	RM 56.54	90682	5-yr	2118.1	595.11	590.76	1.57	1.88	14.16	16.04	216.66	413.58	2.41	2.72	4.39	4.39
Richland/McKenzie County	D10	RM 56.35	90387	5-yr	2118.1	594.99	590.46	1.59	1.64	13.36	13.61	174.85	400.06	3.19	3.22	4.53	4.53
Richland/McKenzie County	D11	RM 56.16	90086	5-yr	2118.1	594.7	590.11	2.31	2.31	25.6	24.87	219.3	225.92	4.19	4.07	4.59	4.59
Richland/McKenzie County	D11	RM 55.96	89768	5-yr	2118.1	594.54	589.96	2.15	2.02	21.99	16.66	222.25	345.23	4.34	3.28	4.58	4.58
Richland/McKenzie County	D11	RM 55.78	89479	5-yr	2118.1	594.43	589.96	1.98	1.64	18.85	10.14	216.81	589.19	4.16	2.23	4.47	4.47
Richland/McKenzie County	D11	RM 55.61	89193	5-yr	2118.1	594.29	589.98	2	1.71	19.25	10.1	222.22	589.73	4.09	2.13	4.31	4.31
Richland/McKenzie County	D11	RM 55.41	88882	5-yr	2118.1	594.12	589.76	2.09	1.61	21.63	10.32	203.81	751.67	3.83	1.82	4.36	4.36
Richland/McKenzie County	D11	RM 55.23	88582	5-yr	2118.1	594	589.53	1.83	1.46	15.96	9.15	238.02	622.33	4.28	2.43	4.47	4.47
Richland/McKenzie County	D11	RM 55.04	88282	5-yr	2118.1	593.83	589.39	2	1.58	19.87	11.66	252.08	621.16	3.78	2.21	4.44	4.44
Richland/McKenzie County	D11	RM 54.86	87996	5-yr	2118.1	593.51	589.33	2.52	2.16	33.07	21.07	222.46	483.89	3.27	2.07	4.18	4.18
Richland/McKenzie County	D11	RM 54.69	87715	5-yr	2118.1	593.45	589.23	1.74	1.45	15.26	10.82	187.89	603	3.59	2.52	4.22	4.22
Richland/McKenzie County	D11	RM 54.48	87382	5-yr	2118.1	593.34	589.15	1.57	1.18	12.4	7.03	179.29	1011.21	3.7	2.07	4.19	4.19
Richland/McKenzie County	D11	RM 54.32	87122	5-yr	2118.1	593.22	589	1.72	1.24	14.42	6.48	159.94	1211.97	4.07	1.8	4.22	4.22
Richland/McKenzie County	D11	RM 54.1	86783	5-yr	2118.1	593.13	588.83	1.45	1.16	10.1	6.1	201.55	976.26	4.16	2.48	4.3	4.3
Richland/McKenzie County	D11	RM 53.92	86482	5-yr	2118.1	593.06	588.68	1.35	1.16	9.11	5.83	255.08	1185.66	3.67	2.32	4.38	4.38
Richland/McKenzie County	D11	RM 53.73	86182	5-yr	2118.1	592.97	588.51	1.53	1.15	11.21	5.28	196.75	1498.2	4.25	1.97	4.46	4.46
Richland/McKenzie County	D11	RM 53.55	85882	5-yr	2118.1	592.86	588.37	1.55	1.33	11.61	8.42	181.72	1057.1	4.14	2.98	4.49	4.49
Richland/McKenzie County	D11	RM 53.36	85582	5-yr	2118.1	592.71	588.01	1.69	1.62	14.34	10.76	166.55	1177.15	3.65	2.73	4.7	4.7

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 53.17	85290	5-yr	2118.1	592.46	587.56	2.27	2.05	24.19	11.79	204.79	958.17	4.44	2.17	4.9	4.9
Richland/McKenzie County	D11	RM 52.98	84982	5-yr	2118.1	592.08	587.56	2.71	2.5	40.23	33.27	271.36	1722.54	2.8	2.33	4.52	4.52
Richland/McKenzie County	D11	RM 52.79	84682	5-yr	2118.1	591.78	587.56	2.18	2.15	27.01	24.61	386.56	1780.64	2.51	2.28	4.22	4.22
Richland/McKenzie County	D11	RM 52.61	84390	5-yr	2118.1	591.71	587.43	1.44	1.38	10.87	9.23	449.97	1559.12	3.2	2.72	4.28	4.28
Richland/McKenzie County	D11	RM 52.42	84082	5-yr	2118.1	591.61	587.28	1.44	1.26	11.44	8.25	409.61	1876.43	2.77	1.99	4.33	4.33
Richland/McKenzie County	D11	RM 52.24	83798	5-yr	2118.1	591.46	587.28	1.79	1.24	16.41	8.71	227.41	2451.34	3.38	1.78	4.18	4.18
Richland/McKenzie County	D11	RM 52.01	83423	5-yr	2118.1	591.24	587.23	1.94	1.6	18.68	7.95	124.91	1464.53	3.8	1.58	4.01	4.01
Richland/McKenzie County	D11	RM 51.87	83182	5-yr	2118.1	591.15	587.16	1.52	1.21	13.07	7.01	156.7	1629.64	2.6	1.37	3.99	3.99
Richland/McKenzie County	D11	RM 51.69	82882	5-yr	2118.1	591.03	587.16	1.44	1.05	10.56	4.45	148.79	1872.87	3.13	1.3	3.87	3.87
Richland/McKenzie County	D11	RM 51.51	82585	5-yr	2118.1	590.94	587.16	1.55	1.24	13.21	6.28	149.67	1622.26	2.78	1.3	3.78	3.78
Richland/McKenzie County	D11	RM 51.32	82274	5-yr	2118.1	590.88	587.16	1.36	1.05	10.24	4.7	172.63	2175.51	2.73	1.23	3.72	3.72
Richland/McKenzie County	D11	RM 51.13	81982	5-yr	2118.1	590.81	587.13	1.47	1.2	11.01	4.71	163.91	1646.6	3.51	1.48	3.7	3.7
Richland/McKenzie County	D11	RM 50.95	81682	5-yr	2118.1	590.72	587.08	1.33	1.01	9.04	3.35	144.96	2348.76	3.42	1.25	3.64	3.64
Richland/McKenzie County	D11	RM 50.76	81378	5-yr	2118.1	590.65	586.89	1.25	0.79	8.23	3.32	174.25	2651.44	3.26	1.29	3.76	3.76
Richland/McKenzie County	D11	RM 50.56	81065	5-yr	2118.1	590.42	586.37	1.68	1.33	13.82	4.73	171.61	1899.2	3.93	1.32	4.05	4.05
Richland/McKenzie County	D11	RM 50.39	80787	5-yr	2118.1	590.37	585.7	1.51	1.2	10.65	3.4	196.96	2039.1	4.57	1.44	4.67	4.67
Richland/McKenzie County	D11	RM 50.21	80482	5-yr	2118.1	590.28	585.55	1.42	1.24	9.84	5.87	234.94	1367.84	4.01	2.39	4.73	4.73
Richland/McKenzie County	D11	RM 50.02	80182	5-yr	2120.9	590.12	585.55	1.75	1.64	15.07	12.03	197.51	956.08	3.92	3.1	4.57	4.57
Richland/McKenzie County	D12	RM 49.82	79860	5-yr	2120.9	589.75	585.55	2.5	2.35	30.5	20.15	210.54	428.48	3.99	2.62	4.2	4.2
Richland/McKenzie County	D12	RM 49.65	79582	5-yr	2120.9	589.47	585.55	2.64	2.44	34.85	27.72	213.94	360.55	3.68	2.92	3.92	3.92
Richland/McKenzie County	D12	RM 49.5	79348	5-yr	2120.9	589.56	585.49	1.31	1.24	8.29	5.91	355.37	699.07	3.98	2.84	4.11	4.11
Richland/McKenzie County	D12	RM 49.26	78981	5-yr	2120.9	589.46	585.29	1.65	1.32	13.41	7.24	137.44	879.21	3.94	2.1	4.17	4.17
Richland/McKenzie County	D12	RM 49.08	78682	5-yr	2120.9	589.29	585.11	1.84	1.53	16.65	9.23	156.28	762.47	3.92	2.16	4.25	4.25
Richland/McKenzie County	D12	RM 48.87	78351	5-yr	2120.9	589.18	584.96	1.68	1.5	13.76	8.38	209.35	586.84	3.95	2.4	4.22	4.22
Richland/McKenzie County	D12	RM 48.7	78082	5-yr	2120.9	589.08	584.86	1.62	1.51	13.77	9.7	252.22	658.24	3.19	2.22	4.22	4.22
Richland/McKenzie County	D12	RM 48.52	77782	5-yr	2120.9	589.07	584.74	1.03	0.97	5.64	3.45	473.03	1147.51	3.12	1.9	4.33	4.33
Richland/McKenzie County	D12	RM 48.33	77482	5-yr	2120.9	589.01	584.51	1.16	1.03	7.15	4.72	485.01	1167.72	2.68	1.76	4.5	4.5
Richland/McKenzie County	D12	RM 48.15	77182	5-yr	2120.9	588.9	584.24	1.38	1	8.69	4.63	467.43	1430.65	2.79	1.48	4.66	4.66
Richland/McKenzie County	D12	RM 47.97	76887	5-yr	2120.9	588.87	584.09	1.11	0.91	4.3	2.96	584.65	1848.14	2.34	1.61	4.78	4.78
Richland/McKenzie County	D12	RM 47.76	76570	5-yr	2120.9	588.82	583.86	1	0.94	4.27	2.78	565.5	1789.66	2.6	1.69	4.96	4.96
Richland/McKenzie County	D12	RM 47.59	76293	5-yr	2120.9	588.75	583.71	1.12	1.03	5.82	3.12	391.27	1609.21	3.32	1.77	5.04	5.04
Richland/McKenzie County	D12	RM 47.4	75982	5-yr	2120.9	588.65	583.42	1.51	1.16	10.52	3.73	196.88	1567.91	4.16	1.46	5.23	5.23
Richland/McKenzie County	D12	RM 47.12	75521	5-yr	2120.9	588.46	583.04	1.72	1.47	13.26	4.28	234.72	1291.95	5.16	1.65	5.42	5.42
Richland/McKenzie County	D12	RM 47	75323	5-yr	2120.9	588.07	583.04	2.9	2.51	39.44	13.24	162.2	751.06	4.45	1.48	5.03	5.03
Richland/McKenzie County	D12	RM 46.85	75082	5-yr	2120.9	587.94	583.04	2.56	2.28	30.76	13.42	184.53	568.63	4.44	1.92	4.9	4.9
Richland/McKenzie County	D12	RM 46.67	74782	5-yr	2120.9	587.75	583.04	2.49	2.34	29.04	19.35	185.83	337.67	4.54	3.01	4.71	4.71
Richland/McKenzie County	D12	RM 46.47	74459	5-yr	2120.9	587.71	583.04	1.68	1.64	13.7	11.99	311.93	386.22	4.03	3.53	4.67	4.67
Richland/McKenzie County	D12	RM 46.3	74186	5-yr	2120.9	587.57	583.04	1.83	1.81	13.66	10.53	407.37	562.27	2.84	2.19	4.53	4.53
Richland/McKenzie County	D12	RM 46.14	73920	5-yr	2120.9	587.48	583.04	1.63	1.57	11.24	8.24	440.96	646.31	2.94	2.14	4.44	4.44
Richland/McKenzie County	D12	RM 45.9	73546	5-yr	2120.9	587.35	582.97	1.61	1.38	12.8	8.37	339.6	671.2	3.5	2.29	4.38	4.38
Richland/McKenzie County	D12	RM 45.75	73307	5-yr	2120.9	587.16	582.88	1.96	1.74	17	10.96	351.5	658.19	2.88	1.85	4.28	4.28
Richland/McKenzie County	D12	RM 45.54	72980	5-yr	2120.9	587.07	582.55	1.49	1.36	11.31	6.96	382.5	722.93	3.52	2.15	4.52	4.52
Richland/McKenzie County	D12	RM 45.29	72680	5-yr	2120.9	586.94	582.25	1.65	1.44	13.84	7.25	347.33	815.06	3.47	1.81	4.69	4.69
Richland/McKenzie County	D12	RM 45.09	72380	5-yr	2120.9	586.83	582.08	1.68	1.43	13.38	6.15	267.36	746.04	4.36	1.99	4.75	4.75
Richland/McKenzie County	D12	RM 44.91	72080	5-yr	2120.9	586.75	582.01	1.62	1.32	12.56	6.45	283.48	762.63	4.14	2.11	4.74	4.74
Richland/McKenzie County	D12	RM 44.72	71783	5-yr	2120.9	586.55	581.97	2.06	1.54	20.3	9.14	208.81	720.77	4.27	1.91	4.58	4.58
Richland/McKenzie County	D12	RM 44.53	71483	5-yr	2120.9	586.32	581.82	2.4	1.73	27.85	13.19	177.29	645.3	4.06	1.9	4.5	4.5
Richland/McKenzie County	D12	RM 44.34	71183	5-yr	2120.9	586.03	581.8	2.57	2	33.89	16.82	198.13	639.93	3.45	1.7	4.23	4.23
Richland/McKenzie County	D12	RM 44.17	70899	5-yr	2120.9	586.06	581.79	1.38	1.17	9.18	5.62	301.73	944.39	4.19	2.56	4.27	4.27
Richland/McKenzie County	D12	RM 43.97	70594	5-yr	2120.9	585.99	581.73	1.32	1.16	8.9	6.19	326.68	1369.89	3.4	2.36	4.26	4.26
Richland/McKenzie County	D12	RM 43.74	70230	5-yr	2120.9	585.85	581.66	1.46	1.42	11.14	8.7	162.21	892.65	3.27	2.54	4.19	4.19
Richland/McKenzie County	D12	RM 43.59	69983	5-yr	2120.9	585.74	581.56	1.45	1.15	10.32	4.34	143.59	1884.16	3.31	1.37	4.18	4.18
Richland/McKenzie County	D12	RM 43.4	69684	5-yr	2120.9	585.65	581.49	1.4	1.1	9.82	3.99	150.64	1731.67	3.52	1.41	4.16	4.16
Richland/McKenzie County	D12	RM 43.03	69084	5-yr	2120.9	585.53	581.37	1.44	0.99	10.84	3.1	131.62	2318.61	3.27	0.92	4.16	4.16
Richland/McKenzie County	D12	RM 42.66	68489	5-yr	2120.9	585.43	581.18	1.51	1.02	11.54	3.38	115.82	2014.28	3.61	1.03	4.25	4.25
Richland/McKenzie County	D12	RM 42.29	67889	5-yr	2120.9	585.37	580.87	1.08	0.8	5.73	2.1	281.47	1865.36	3.91	1.42	4.5	4.5
Richland/McKenzie County	D12	RM 42.08	67558	5-yr	2120.9	585.32	580.61	1.28	0.8	7.76	2.37	180.64	1985.18	4.46	1.34	4.71	4.71
Richland/McKenzie County	D12	RM 41.89	67260	5-yr	2120.9	585.24	580.31	1.35	0.9	8.65	2.7	292.42	1753.14	4.35	1.34	4.93	4.93
Richland/McKenzie County	D12	RM 41.75	67037	5-yr	2120.9	585.16	579.99	1.46	1.11	10.75	4.06	337.2	1574.93	3.67	1.37	5.17	5.17
Richland/McKenzie County	D12	RM 41.54	66695	5-yr	2120.9	585	579.72	1.83	1.15	15.13	3.75	196.39	1653.75	4.97	1.21	5.28	5.28
Richland/McKenzie County	D12	RM 41.34	66361	5-yr	2120.9	584.87	579.43	1.89	1.32	17.21	5.94	218.95	1307.37	4.08	1.39	5.44	5.44

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 41.18	66116	5-yr	2120.9	584.76	579.08	1.94	1.39	17.49	4.9	195.81	1398.46	4.65	1.28	5.68	5.68
Richland/McKenzie County	D12	RM 40.99	65802	5-yr	2120.9	584.65	578.99	1.85	1.23	15.94	5.5	203.5	1567.46	4.52	1.54	5.66	5.66
Richland/McKenzie County	D12	RM 40.8	65502	5-yr	2120.9	584.53	578.97	1.78	1.57	15.35	8.69	273.63	1022.74	3.99	2.25	5.56	5.56
Richland/McKenzie County	D12	RM 40.62	65205	5-yr	2120.9	584.47	578.92	1.38	1.21	9.65	5.77	375.4	2019.07	3.5	2.08	5.55	5.55
Richland/McKenzie County	D12	RM 40.24	64602	5-yr	2120.9	584.27	578.6	1.42	1.34	9.27	6.04	507.11	2017.09	2.92	1.9	5.67	5.67
Richland/McKenzie County	D12	RM 40	64219	5-yr	2120.9	584.08	578.56	1.73	1.55	14.65	6.56	309.03	1726.68	3.92	1.74	5.52	5.52
Richland/McKenzie County	D12	RM 39.87	64002	5-yr	2120.9	583.93	578.55	2.04	1.78	19.29	6.77	221.79	1564.52	4.62	1.61	5.38	5.38
Richland/McKenzie County	D12	RM 39.68	63702	5-yr	2120.9	583.8	578.45	2.01	1.62	19.56	7.54	241.61	1249.82	4.02	1.53	5.35	5.35
Richland/McKenzie County	D12	RM 39.5	63402	5-yr	2120.9	583.63	578.35	2.15	1.6	22.87	7.25	226.17	1274.65	3.79	1.19	5.28	5.28
Richland/McKenzie County	D12	RM 39.31	63102	5-yr	2120.9	583.54	578.31	1.84	1.33	16.12	6.66	227.2	1083.64	4.06	1.66	5.23	5.23
Richland/McKenzie County	D12	RM 39.13	62802	5-yr	2120.9	583.42	578.2	1.76	1.34	15.5	7.37	285.59	998.82	3.69	1.74	5.22	5.22
Richland/McKenzie County	D12	RM 38.94	62501	5-yr	2120.9	583.33	578.12	1.64	1.16	13.12	5.13	263.19	1292.21	4.01	1.55	5.21	5.21
Richland/McKenzie County	D12	RM 38.76	62201	5-yr	2120.9	583.24	578.03	1.61	1.17	12.1	3.99	245.72	1280.72	4.55	1.49	5.21	5.21
Richland/McKenzie County	D12	RM 38.57	61901	5-yr	2120.9	583.12	577.87	1.84	1.19	16.95	6.52	236.46	1373.11	3.63	1.38	5.25	5.25
Richland/McKenzie County	D12	RM 38.38	61601	5-yr	2120.9	583.1	577.84	1.11	0.77	6.06	2.98	268.55	1853.49	3.7	1.8	5.26	5.26
Richland/McKenzie County	D12	RM 38.2	61301	5-yr	2120.9	583.04	577.82	1.24	0.8	7.2	3.12	244.45	1910.35	4.52	1.94	5.21	5.21
Richland/McKenzie County	D12	RM 38.01	61008	5-yr	2120.9	582.98	577.81	1.3	0.94	8.66	5.93	307.49	1199.24	3.39	2.31	5.17	5.17
Richland/McKenzie County	D12	RM 37.84	60708	5-yr	2120.9	582.88	577.71	1.47	1.22	11.75	6.95	335.25	1022.89	3.39	1.99	5.17	5.17
Richland/McKenzie County	D12	RM 37.65	60408	5-yr	2120.9	582.86	577.66	0.96	0.82	4.73	3.79	564.39	1117.07	3.31	2.64	5.2	5.2
Richland/McKenzie County	D12	RM 37.5	60107	5-yr	2120.9	582.81	577.54	0.94	0.89	4.54	3.66	561.58	1041.05	2.83	2.28	5.27	5.27
Richland/McKenzie County	D12	RM 37.35	59808	5-yr	2120.9	582.72	577.37	1.06	0.99	6.52	3.71	427.63	1190.61	3.19	1.8	5.35	5.35
Richland/McKenzie County	D12	RM 37.16	59508	5-yr	2120.9	582.59	577.24	1.57	1.21	11.16	5.93	280.03	988.08	3.36	1.77	5.35	5.35
Richland/McKenzie County	D12	RM 36.97	59208	5-yr	2120.9	582.49	576.96	1.73	1.36	12.89	6.85	221.99	916.98	3.23	1.7	5.53	5.53
Richland/McKenzie County	D12	RM 36.78	58908	5-yr	2120.9	582.41	576.87	1.57	1.24	10.82	5.93	217.29	765.83	4.1	2.23	5.54	5.54
Richland/McKenzie County	D12	RM 36.6	58608	5-yr	2120.9	582.33	576.66	1.58	1.35	11.35	6.47	182.19	559.13	5.03	2.82	5.67	5.67
Richland/McKenzie County	D12	RM 36.38	58263	5-yr	2127.4	582.23	576.49	1.57	1.57	11.41	11.33	290.42	304.68	4.67	4.63	5.74	5.74
Richland/McKenzie County	D13	RM 36.23	58011	5-yr	2127.4	582.05	576.43	2.05	1.94	18.82	10.29	197.98	399.5	5.21	2.82	5.62	5.62
Richland/McKenzie County	D13	RM 36.04	57708	5-yr	2127.4	581.83	576.42	2.4	1.94	27.06	11.29	193.59	601.65	4.44	1.82	5.41	5.41
Richland/McKenzie County	D13	RM 35.85	57408	5-yr	2127.4	581.72	576.41	2.06	1.64	18.15	10.43	277.56	648.01	3.52	2.01	5.31	5.31
Richland/McKenzie County	D13	RM 35.66	57108	5-yr	2127.4	581.7	576.36	1.4	1.19	8.79	5.3	327.66	711.46	4.17	2.51	5.34	5.34
Richland/McKenzie County	D13	RM 35.48	56810	5-yr	2127.4	581.51	576.3	2.05	1.58	19.59	8.51	189.64	738	4.52	1.94	5.21	5.21
Richland/McKenzie County	D13	RM 35.29	56508	5-yr	2127.4	581.38	576.19	2.02	1.61	20.2	10.67	216.44	668.21	3.78	1.97	5.19	5.19
Richland/McKenzie County	D13	RM 35.1	56208	5-yr	2127.4	581.28	576.07	1.73	1.44	13.83	7.32	244.46	599.45	4.72	2.46	5.21	5.21
Richland/McKenzie County	D13	RM 34.92	55908	5-yr	2127.4	581.14	576.09	1.86	1.52	18.5	9.38	254.13	662.06	4.19	2.12	5.05	5.05
Richland/McKenzie County	D13	RM 34.73	55605	5-yr	2127.4	581.07	575.89	1.47	1.36	10.11	7.59	414.63	620.25	3.37	2.53	5.18	5.18
Richland/McKenzie County	D13	RM 34.54	55297	5-yr	2127.4	580.95	575.79	1.56	1.4	11.08	8.26	394.66	728.72	2.8	2.08	5.16	5.16
Richland/McKenzie County	D13	RM 34.36	55008	5-yr	2127.4	580.91	575.75	1.28	1.07	7.31	4.11	323.48	820.69	4.32	2.42	5.16	5.16
Richland/McKenzie County	D13	RM 34.17	54708	5-yr	2127.4	580.87	575.49	1.17	0.95	6.82	3.67	380.95	1096.04	3.81	2.04	5.38	5.38
Richland/McKenzie County	D13	RM 33.94	54408	5-yr	2127.4	580.83	575.34	1.08	0.86	5.3	3.48	374.48	998.97	3.93	2.57	5.49	5.49
Richland/McKenzie County	D13	RM 33.76	54079	5-yr	2127.4	580.78	575.12	1.21	1.02	7.1	4	286.39	979.82	4.09	2.27	5.66	5.66
Richland/McKenzie County	D13	RM 33.6	53799	5-yr	2127.4	580.74	574.88	1.15	0.96	6.81	4.65	376.14	880.9	3.73	2.53	5.86	5.86
Richland/McKenzie County	D13	RM 33.42	53508	5-yr	2127.4	580.69	574.61	1.23	0.98	6.66	3.65	262.09	827.15	4.9	2.65	6.08	6.08
Richland/McKenzie County	D13	RM 33.23	53208	5-yr	2127.4	580.65	574.45	1.21	0.96	6.44	3.52	209.05	759.36	5.42	2.93	6.2	6.2
Richland/McKenzie County	D13	RM 33.04	52908	5-yr	2127.4	580.59	574.3	1.43	1.13	8.74	4.04	193.34	708.05	5.95	2.71	6.29	6.29
Richland/McKenzie County	D13	RM 32.86	52608	5-yr	2127.4	580.47	574.18	1.73	1.26	13.22	5.64	209.27	749.08	5.46	2.29	6.29	6.29
Richland/McKenzie County	D13	RM 32.67	52308	5-yr	2127.4	580.39	574.18	1.82	1.1	14.69	5.8	188.53	957.19	5.24	2.04	6.21	6.21
Richland/McKenzie County	D13	RM 32.48	52008	5-yr	2127.4	580.26	574.04	1.95	1.26	17.25	6	196.91	1014.48	4.94	1.68	6.22	6.22
Richland/McKenzie County	D13	RM 32.29	51709	5-yr	2127.4	580.21	574.04	1.6	1.05	11.45	4.78	224.23	976.55	5.17	2.13	6.17	6.17
Richland/McKenzie County	D13	RM 32.11	51423	5-yr	2127.4	580.16	573.94	1.52	1.22	10.18	4.14	220.08	813.73	5.47	2.21	6.22	6.22
Richland/McKenzie County	D13	RM 31.92	51108	5-yr	2127.4	580.09	573.85	1.6	1.15	11.86	4.69	211.85	1141.88	4.7	1.83	6.24	6.24
Richland/McKenzie County	D13	RM 31.73	50809	5-yr	2127.4	580.05	573.72	1.29	0.94	7.54	2.8	261.37	1129.99	5.5	2.02	6.33	6.33
Richland/McKenzie County	D13	RM 31.51	50462	5-yr	2127.4	579.84	573.24	2.12	1.45	18.39	5.72	162.22	877.55	5.49	1.67	6.6	6.6
Richland/McKenzie County	D13	RM 31.35	50208	5-yr	2127.4	579.69	573.24	2.34	1.71	25.5	9.78	169.04	706.8	4.68	1.76	6.45	6.45
Richland/McKenzie County	D13	RM 31.22	50009	5-yr	2127.4	579.54	573.24	2.46	1.85	27.03	11.12	149.68	543.62	5.23	2.11	6.3	6.3
Richland/McKenzie County	D13	RM 31.12	49859	5-yr	2127.4	579.52	570.86	1.89	1.87	21.43	20.15	196.27	210.95	5.72	5.38	8.66	8.66
Richland/McKenzie County	D13	Highway 23	49844	5-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	5-yr	2127.4	579.49	570.86	1.91	1.89	21.16	19.84	192.51	207.7	5.78	5.41	8.63	8.63
Richland/McKenzie County	D13	RM 30.97	49608	5-yr	2127.4	579.46	573.24	1.62	1.61	11.38	9.41	225.84	351.87	5.79	4.78	6.22	6.22
Richland/McKenzie County	D13	RM 30.79	49308	5-yr	2127.4	579.28	573.24	2.09	1.96	19.68	10.71	199.27	420.89	5.08	2.74	6.04	6.04
Richland/McKenzie County	D13	RM 30.6	49009	5-yr	2127.4	579.09	573.24	2.31	1.93	24.48	10.01	187.26	695.09	4.82	1.94	5.85	5.85
Richland/McKenzie County	D13	RM 30.41	48706	5-yr	2127.4	578.99	573.15	2.06	1.74	18.83	7.68	212.3	689.16	4.71	1.9	5.84	5.84

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 30.22	48403	5-yr	2127.4	578.89	573.15	1.97	1.64	17.23	7.47	199.03	887.05	5.27	2.26	5.74	5.74
Richland/McKenzie County	D13	RM 30.03	48102	5-yr	2127.4	578.9	573.15	1.3	1.11	7.71	4.02	315.48	981.31	5.04	2.57	5.75	5.75
Richland/McKenzie County	D13	RM 29.85	47809	5-yr	2127.4	578.86	573.15	1.22	1.04	6.95	3.67	376.84	982.42	4.5	2.35	5.71	5.71
Richland/McKenzie County	D13	RM 29.66	47508	5-yr	2127.4	578.75	573.11	1.52	1.22	8.33	3.57	393.01	1199.26	3.45	1.46	5.64	5.64
Richland/McKenzie County	D13	RM 29.48	47209	5-yr	2127.4	578.7	573.11	1.36	1.09	7.83	3.43	346.87	1054.68	4.33	1.87	5.59	5.59
Richland/McKenzie County	D13	RM 29.28	46894	5-yr	2127.4	578.66	572.98	1.2	1.02	6.98	4.24	401.07	875.44	3.94	2.38	5.68	5.68
Richland/McKenzie County	D13	RM 29.1	46608	5-yr	2127.4	578.59	572.94	1.5	1.03	10.46	6.27	169.86	747.44	4.69	2.78	5.65	5.65
Richland/McKenzie County	D13	RM 28.92	46308	5-yr	2127.4	578.5	572.85	1.62	1.23	11.78	6.17	146.69	647.35	5.18	2.67	5.65	5.65
Richland/McKenzie County	D13	RM 28.73	46008	5-yr	2127.4	578.46	572.67	1.44	1.03	9.46	4.6	152.03	873.23	4.91	2.36	5.79	5.79
Richland/McKenzie County	D13	RM 28.54	45708	5-yr	2127.4	578.42	572.67	1.38	0.99	8.39	4.41	201.29	927.77	4.49	2.33	5.75	5.75
Richland/McKenzie County	D13	RM 28.36	45419	5-yr	2127.4	578.37	572.48	1.22	0.93	6.8	3.44	233.95	931.96	4.91	2.46	5.9	5.9
Richland/McKenzie County	D13	RM 28.15	45071	5-yr	2127.4	578.33	572.25	1.08	1.01	5.4	3.7	429.4	687	4.54	3.09	6.08	6.08
Richland/McKenzie County	D13	RM 27.98	44808	5-yr	2127.4	578.2	572.04	1.64	1.47	11.93	6.49	236.34	499.85	5.39	2.91	6.16	6.16
Richland/McKenzie County	D13	RM 27.8	44508	5-yr	2127.4	578.15	571.87	1.53	1.37	10.01	5.45	226.85	498.09	6.03	3.25	6.28	6.28
Richland/McKenzie County	D14	RM 27.61	44208	5-yr	2127.4	578.09	571.87	1.55	1.39	10.54	6.28	246.37	473.55	5.49	3.24	6.22	6.22
Richland/McKenzie County	D14	RM 27.43	43916	5-yr	2127.4	578.06	571.87	1.37	1.2	8.08	4.19	261.74	772.27	5.82	2.99	6.19	6.19
Richland/McKenzie County	D14	RM 27.23	43608	5-yr	2127.4	578.05	571.87	1.11	0.96	5.22	2.54	310.85	938.7	6.07	2.92	6.18	6.18
Richland/McKenzie County	D14	RM 27.04	43305	5-yr	2127.4	577.98	571.87	1.35	1.12	8.06	3.88	277.5	964.19	5.51	2.6	6.11	6.11
Richland/McKenzie County	D14	RM 26.86	43008	5-yr	2127.4	577.9	571.87	1.56	1.23	10.5	4.59	229.41	872.59	5.75	2.48	6.03	6.03
Richland/McKenzie County	D14	RM 26.67	42708	5-yr	2127.4	577.87	571.87	1.42	1.16	8.75	4.3	252.42	867.24	5.73	2.79	6	6
Richland/McKenzie County	D14	RM 26.48	42408	5-yr	2127.4	577.75	571.87	1.75	1.43	13.44	6.87	209.58	732.05	5.58	2.82	5.88	5.88
Richland/McKenzie County	D14	RM 26.29	42108	5-yr	2127.4	577.66	571.87	1.83	1.55	14.63	8.88	205.84	607.26	5.49	3.3	5.79	5.79
Richland/McKenzie County	D14	RM 26.11	41808	5-yr	2127.4	577.62	571.87	1.55	1.43	10.5	5.39	249.58	674.51	5.45	2.77	5.75	5.75
Richland/McKenzie County	D14	RM 25.92	41508	5-yr	2127.4	577.6	571.87	1.28	1.26	7.2	5.74	305.76	533.89	5.43	4.32	5.73	5.73
Richland/McKenzie County	D14	RM 25.73	41208	5-yr	2127.4	577.56	571.74	1.23	1.22	6.54	6.09	309.7	532.21	5.6	5.21	5.82	5.82
Richland/McKenzie County	D14	RM 25.55	40918	5-yr	2127.4	577.5	571.74	1.35	1.35	8.54	8.27	346.01	660.15	4.54	4.4	5.76	5.76
Richland/McKenzie County	D14	RM 25.37	40619	5-yr	2127.4	577.43	571.74	1.38	1.37	9.01	8.34	353.9	447.68	4.35	4.03	5.69	5.69
Richland/McKenzie County	D14	RM 25.17	40310	5-yr	2127.4	577.34	571.74	1.52	1.46	9.92	8.46	361.09	488.41	3.86	3.29	5.6	5.6
Richland/McKenzie County	D14	RM 24.99	40008	5-yr	2127.4	577.31	571.74	1.19	1.12	6.17	4.77	384.4	611.8	4.62	3.56	5.57	5.57
Richland/McKenzie County	D14	RM 24.8	39703	5-yr	2127.4	577.29	571.71	1	0.97	4.84	4.26	399.26	471.1	5.3	4.67	5.58	5.58
Richland/McKenzie County	D14	RM 24.62	39408	5-yr	2127.4	577.21	571.64	1.41	1.34	9.12	6.47	278.78	458.14	4.9	3.48	5.57	5.57
Richland/McKenzie County	D14	RM 24.45	39139	5-yr	2127.4	577.09	571.64	1.7	1.68	12.84	11.38	239.98	274.03	5.22	4.62	5.45	5.45
Richland/McKenzie County	D14	RM 24.24	38801	5-yr	2127.4	577.01	571.58	1.7	1.59	12.8	9.5	237.24	345.14	5.22	3.87	5.43	5.43
Richland/McKenzie County	D14	RM 24.05	38506	5-yr	2127.4	576.96	571.48	1.54	1.52	10.52	8.5	264.93	332.52	5.22	4.21	5.48	5.48
Richland/McKenzie County	D14	RM 23.87	38210	5-yr	2127.4	576.95	571.28	1.16	1.16	5.93	5.48	334.4	364.48	5.47	5.05	5.67	5.67
Richland/McKenzie County	D14	RM 23.66	37912	5-yr	2127.4	576.93	571.21	0.96	0.96	4.17	3.8	442.5	486.71	5	4.56	5.72	5.72
Richland/McKenzie County	D14	RM 23.48	37610	5-yr	2127.4	576.89	571.12	1.08	1.04	5.53	5.04	347.97	610.89	4.17	3.8	5.77	5.77
Richland/McKenzie County	D14	RM 23.29	37312	5-yr	2127.4	576.84	570.86	1.22	1.13	6.97	5.4	313.75	704.88	4.07	3.15	5.98	5.98
Richland/McKenzie County	D14	RM 23.1	37006	5-yr	2127.4	576.8	570.82	1.22	1.02	6.91	4.22	254.67	775.38	4.86	2.94	5.98	5.98
Richland/McKenzie County	D14	RM 22.92	36721	5-yr	2127.4	576.74	570.8	1.37	1.1	8.42	4.64	213.06	878.75	4.79	2.61	5.94	5.94
Richland/McKenzie County	D14	RM 22.72	36402	5-yr	2127.4	576.63	570.81	1.7	1.25	12.76	5.47	178.19	850.35	5.44	2.3	5.82	5.82
Richland/McKenzie County	D14	RM 22.54	36108	5-yr	2127.4	576.59	570.76	1.4	1.15	8.67	4.75	276.8	728.11	5.26	2.87	5.83	5.83
Richland/McKenzie County	D14	RM 22.35	35808	5-yr	2127.4	576.55	570.74	1.31	1.11	7.68	4.55	308.52	707.38	5.07	2.99	5.81	5.81
Richland/McKenzie County	D14	RM 22.17	35508	5-yr	2127.4	576.51	570.68	1.23	1.09	6.53	3.75	303.06	625.04	5.64	3.21	5.83	5.83
Richland/McKenzie County	D14	RM 22.02	35264	5-yr	2127.4	576.5	570.68	1.04	0.96	4.69	3.17	354.21	606.29	5.71	3.85	5.82	5.82
Richland/McKenzie County	D14	RM 21.8	34901	5-yr	2127.4	576.45	570.69	1.17	1.09	6.45	4.71	400.38	598.52	4.48	3.26	5.76	5.76
Richland/McKenzie County	D14	RM 21.61	34626	5-yr	2127.4	576.4	570.67	1.16	1.13	6.6	5.78	468.94	552.26	3.89	3.41	5.73	5.73
Richland/McKenzie County	D14	RM 21.34	34140	5-yr	2127.4	576.36	570.67	1.03	0.87	4.79	3.18	288.95	768.89	5.04	3.33	5.69	5.69
Richland/McKenzie County	D14	RM 21.25	33973	5-yr	2127.4	576.32	570.67	1.35	1.05	8.28	4.84	203.7	808.03	4.52	2.61	5.65	5.65
Richland/McKenzie County	D14	RM 21.06	33672	5-yr	2127.4	576.3	570.6	1.09	0.89	5.54	3.08	267.5	939.91	4.61	2.55	5.7	5.7
Richland/McKenzie County	D14	RM 20.9	33400	5-yr	2127.4	576.26	570.58	1.21	1	7.08	4.35	250.7	955.82	4.12	2.52	5.68	5.68
Richland/McKenzie County	D14	RM 20.71	33101	5-yr	2127.4	576.19	570.53	1.41	1.12	9.49	5.36	247.47	883.88	4.34	2.44	5.66	5.66
Richland/McKenzie County	D14	RM 20.52	32800	5-yr	2127.4	576.16	570.52	1.21	1.04	6.75	3.84	280.27	882.7	4.75	2.69	5.64	5.64
Richland/McKenzie County	D14	RM 20.34	32500	5-yr	2127.4	576.12	570.52	1.25	1.06	7.14	4.55	256.92	848.37	4.84	3.07	5.6	5.6
Richland/McKenzie County	D14	RM 20.15	32200	5-yr	2127.4	576.05	570.52	1.37	1.24	9.88	6.24	231.21	836.49	4.99	3.13	5.53	5.53
Richland/McKenzie County	D14	RM 19.96	31900	5-yr	2127.4	575.8	570.52	2.18	1.84	21.62	13.03	189.46	600.1	4.98	2.97	5.28	5.28
Richland/McKenzie County	D14	RM 19.77	31600	5-yr	2127.4	575.83	570.5	1.32	1.23	7.77	4.5	332.93	953.33	4.8	2.76	5.33	5.33
Richland/McKenzie County	D14	RM 19.59	31297	5-yr	2127.4	575.79	570.45	1.27	1.11	7.3	3.85	334.34	1067.59	4.5	2.36	5.34	5.34
Richland/McKenzie County	D14	RM 19.4	30995	5-yr	2127.4	575.71	570.45	1.45	1.11	10.01	4.62	284.81	1147.12	4.27	1.96	5.26	5.26
Richland/McKenzie County	D14	RM 19.21	30710	5-yr	2127.4	575.7	570.38	0.99	0.77	4.5	2.39	380.6	1231.26	4.89	2.58	5.32	5.32
Richland/McKenzie County	D14	RM 19.03	30402	5-yr	2127.4	575.67	570.38	1.03	0.86	4.75	2.77	428.38	1197.66	4.24	2.45	5.29	5.29

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 18.83	30086	5-yr	2127.4	575.62	570.38	1.08	0.89	4.97	3.13	504.5	1362.84	3.31	2.07	5.24	5.24
Richland/McKenzie County	D14	RM 18.66	29802	5-yr	2127.4	575.57	570.38	1.14	0.9	6.02	3.91	455.27	1362.5	3.29	2.12	5.19	5.19
Richland/McKenzie County	D14	RM 18.47	29499	5-yr	2127.4	575.46	570.36	1.53	1.18	11.61	6.2	299.05	927.66	3.76	1.99	5.1	5.1
Richland/McKenzie County	D14	RM 18.28	29197	5-yr	2127.4	575.35	570.36	1.59	1.46	11.69	7.5	299.23	532.27	4.43	2.83	4.99	4.99
Richland/McKenzie County	D14	RM 17.89	28624	5-yr	2127.4	575.33	570.33	0.93	0.91	3.9	2.39	468.41	804.51	4.87	2.97	5	5
Richland/McKenzie County	D14	RM 17.56	27975	5-yr	2127.4	575.21	570.29	1.29	1.22	6.93	5.89	460.6	576.28	3.56	3.02	4.92	4.92
Richland/McKenzie County	D14	RM 17.36	27539	5-yr	2127.4	574.97	570.31	1.91	1.91	17.24	16.91	254.84	260.14	4.37	4.29	4.66	4.66
Richland/McKenzie County	D14	RM 17.1	27113	5-yr	2127.4	574.86	570.28	1.64	1.63	12.68	11.41	298.39	354.42	4.35	3.92	4.58	4.58
Richland/McKenzie County	D14	RM 16.74	26537	5-yr	2127.4	574.78	570.14	1.21	1.18	6.84	5.14	405.78	556.69	4.3	3.23	4.64	4.64
Richland/McKenzie County	D14	RM 16.35	25925	5-yr	2127.4	574.7	569.46	1.18	1.06	6.21	3.42	344.55	732.43	5.05	2.77	5.24	5.24
Richland/McKenzie County	D14	RM 16.17	25629	5-yr	2127.4	574.67	569.2	1.1	0.93	5.62	3.01	377.19	867.5	4.99	2.66	5.47	5.47
Richland/McKenzie County	D14	RM 15.95	25324	5-yr	2127.4	574.66	568.99	0.83	0.76	3.05	2.08	457.34	761.69	5.47	3.72	5.67	5.67
Richland/McKenzie County	D14	RM 15.75	25032	5-yr	2127.4	574.63	568.85	0.92	0.89	3.88	3.31	462.22	572.52	4.91	4.18	5.78	5.78
Richland/McKenzie County	D14	RM 15.56	24777	5-yr	2127.4	574.53	568.85	1.45	1.45	9.31	9.24	291.53	296.34	5.05	5.01	5.68	5.68
Richland/McKenzie County	D14	RM 15.34	24438	5-yr	2127.4	574.46	568.79	1.5	1.49	9.86	8.05	261.89	324.29	5.42	4.42	5.67	5.67
Richland/McKenzie County	D14	RM 15.16	24144	5-yr	2127.4	574.41	568.75	1.47	1.43	9.5	6.66	266.91	394.48	5.42	3.78	5.66	5.66
Richland/McKenzie County	D14	RM 14.98	23841	5-yr	2127.4	574.33	568.76	1.56	1.48	12.06	7.98	254.68	411.05	5.32	3.5	5.57	5.57
Richland/McKenzie County	D14	RM 14.79	23543	5-yr	2127.4	574.26	568.72	1.55	1.46	10.31	7.1	285.17	446.67	4.77	3.26	5.54	5.54
Richland/McKenzie County	D14	RM 14.61	23241	5-yr	2127.4	574.21	568.7	1.47	1.39	9.6	6.23	274.36	454.05	5.23	3.37	5.51	5.51
Richland/McKenzie County	D14	RM 14.42	22940	5-yr	2127.4	574.19	568.69	1.22	1.17	6.58	4.39	328.42	515.63	5.29	3.52	5.49	5.49
Richland/McKenzie County	D14	RM 14.23	22647	5-yr	2127.4	574.18	568.67	0.93	0.9	3.85	2.87	444.61	620.88	5.14	3.82	5.51	5.51
Richland/McKenzie County	D14	RM 14.05	22341	5-yr	2127.4	574.16	568.68	0.82	0.79	4.3	3.7	601.92	726.48	4.3	3.7	5.48	5.48
Richland/McKenzie County	D14	RM 13.88	22040	5-yr	2127.4	574.11	568.67	0.95	0.93	4.19	3.83	682.22	758.19	3.29	3.01	5.44	5.44
Richland/McKenzie County	D14	RM 13.7	21728	5-yr	2127.4	574.04	568.65	1.16	1.16	5.43	5.38	502.19	507.65	3.65	3.61	5.39	5.39
Richland/McKenzie County	D14	RM 13.51	21429	5-yr	2127.4	574	568.63	1.13	1.12	5.66	5.28	409.72	444.55	4.58	4.28	5.37	5.37
Richland/McKenzie County	D15	RM 13.31	21145	5-yr	2127.4	573.98	568.51	1.01	1.01	4.6	4.51	457.14	467.4	4.61	4.51	5.47	5.47
Richland/McKenzie County	D15	RM 13.12	20858	5-yr	2127.4	573.92	568.39	1.18	1.18	6.22	6.19	344.76	346.45	5.22	5.19	5.53	5.53
Richland/McKenzie County	D15	RM 12.9	20507	5-yr	2127.4	573.85	568.39	1.36	1.36	8.31	8.22	303.98	307.36	5.13	5.08	5.46	5.46
Richland/McKenzie County	D15	RM 12.73	20241	5-yr	2127.4	573.81	568.35	1.36	1.36	8.25	8.25	296.85	296.85	5.26	5.26	5.46	5.46
Richland/McKenzie County	D15	RM 12.56	19961	5-yr	2127.4	573.78	568.34	1.2	1.2	6.34	6.32	337	337.98	5.28	5.27	5.44	5.44
Richland/McKenzie County	D15	RM 12.38	19686	5-yr	2127.4	573.77	568.23	0.97	0.97	4.26	4.01	424.61	462.79	5.14	4.84	5.54	5.54
Richland/McKenzie County	D15	RM 12.21	19384	5-yr	2127.4	573.73	568.17	1.05	1	4.54	4.16	512.82	650.83	3.89	3.57	5.56	5.56
Richland/McKenzie County	D15	RM 11.99	19084	5-yr	2127.4	573.7	568.16	1.02	1	4.26	3.56	592.13	720.4	3.52	2.94	5.54	5.54
Richland/McKenzie County	D15	RM 11.53	18484	5-yr	2127.4	573.6	568.11	1.14	1.03	5.18	3.31	479.57	854.33	3.81	2.42	5.49	5.49
Richland/McKenzie County	D15	RM 11.34	18216	5-yr	2127.4	573.55	568.06	1.1	1.01	12.59	8.89	459.31	741.92	4.06	2.85	5.49	5.49
Richland/McKenzie County	D15	RM 11.17	17885	5-yr	2127.4	573.38	567.88	1.23	1.18	20.73	18.36	570.3	678.61	3	2.65	5.5	5.5
Richland/McKenzie County	D15	RM 10.97	17584	5-yr	2127.4	573.31	567.8	1.09	1.06	5.08	4.52	552.44	645.96	3.49	3.1	5.51	5.51
Richland/McKenzie County	D15	RM 10.75	17284	5-yr	2127.4	573.28	567.79	0.97	0.94	4.14	3.58	514.31	615.53	4.25	3.67	5.49	5.49
Richland/McKenzie County	D15	RM 10.53	16964	5-yr	2127.4	573.22	567.73	1.13	1.1	5.23	4.7	509.01	588.95	3.66	3.29	5.49	5.49
Richland/McKenzie County	D15	RM 10.35	16670	5-yr	2127.4	573.17	567.73	1.2	1.11	6.28	5.15	501.76	671.91	3.48	2.85	5.44	5.44
Richland/McKenzie County	D15	RM 10.15	16384	5-yr	2127.4	573.13	567.73	1.21	0.95	6.56	4.1	251.85	705.49	5.09	3.17	5.4	5.4
Richland/McKenzie County	D15	RM 9.94	16084	5-yr	2127.4	573.11	567.73	1	0.82	4.54	3.02	272.39	795.3	4.9	3.25	5.38	5.38
Richland/McKenzie County	D15	RM 9.76	15797	5-yr	2127.4	573.06	567.65	1.09	0.9	5.2	3.33	352.04	841.89	4.52	2.89	5.41	5.41
Richland/McKenzie County	D15	RM 9.57	15487	5-yr	2127.4	573	567.58	1.26	1	7.04	3.71	245.67	819.82	5.21	2.73	5.42	5.42
Richland/McKenzie County	D15	RM 9.37	15187	5-yr	2127.4	572.94	567.58	1.43	1.14	9.2	5.52	203.5	607.26	5.16	3.08	5.36	5.36
Richland/McKenzie County	D15	RM 9.24	14963	5-yr	2127.4	572.81	564.5	1.65	1.63	12.05	10.53	234.33	273.27	5.48	4.78	8.31	8.31
Richland/McKenzie County	D15	RR/Walkway	14952	5-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	5-yr	2127.4	572.79	564.5	1.66	1.64	12.2	10.63	234.33	274.45	5.45	4.74	8.29	8.29
Richland/McKenzie County	D15	RM 9.1	14741	5-yr	2127.4	572.66	567.39	1.94	1.91	17.3	15.81	231.83	287.62	4.73	4.32	5.27	5.27
Richland/McKenzie County	D15	RM 9.03	14639	5-yr	2127.4	572.65	565.46	1.72	1.69	13.27	12.03	248.61	279.04	4.98	4.51	7.19	7.19
Richland/McKenzie County	D15	Highway 68	14629	5-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	5-yr	2127.4	572.62	565.46	1.72	1.7	13.43	12.2	248.61	278.38	4.95	4.5	7.16	7.16
Richland/McKenzie County	D15	RM 8.82	14300	5-yr	2127.4	572.6	567.41	1.18	1.18	6.43	5.68	381.12	434.51	4.72	4.16	5.19	5.19
Richland/McKenzie County	D15	RM 8.61	13963	5-yr	2127.4	572.53	567.39	1.34	1.21	8.23	4.77	313.34	656.41	4.63	2.68	5.14	5.14
Richland/McKenzie County	D15	RM 8.44	13687	5-yr	2127.4	572.46	567.32	1.48	1.23	10.02	5.44	258.5	760.23	4.89	2.64	5.14	5.14
Richland/McKenzie County	D15	RM 8.24	13387	5-yr	2127.4	572.38	567.32	1.59	1.19	11.51	6.06	229.51	797.03	4.91	2.56	5.06	5.06
Richland/McKenzie County	D15	RM 8.05	13080	5-yr	2127.4	572.32	567.05	1.45	1.19	9.48	4.5	266.23	752.56	5.02	2.37	5.27	5.27
Richland/McKenzie County	D15	RM 7.87	12786	5-yr	2127.4	572.23	567.05	1.63	1.31	12.08	6.16	229.92	679.46	4.94	2.5	5.18	5.18
Richland/McKenzie County	D15	RM 7.69	12506	5-yr	2127.4	572.19	567.05	1.46	1.25	9.64	6.03	266.56	557.08	4.91	3.06	5.14	5.14
Richland/McKenzie County	D15	RM 7.48	12179	5-yr	2127.4	572.16	566.95	1.16	1.16	6.08	5.99	361.54	367.24	5.06	4.98	5.21	5.21
Richland/McKenzie County	D16	RM 7.3	11891	5-yr	2127.4	572.1	566.76	1.31	1.31	7.58	7.57	336.01	336.43	4.85	4.84	5.34	5.34

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 7.14	11639	5-yr	2127.4	572.04	566.76	1.4	1.34	9.19	7.95	324.06	412.13	4.46	3.86	5.28	5.28
Richland/McKenzie County	D16	RM 6.94	11319	5-yr	2127.4	571.99	566.76	1.34	1.21	8.05	5.39	297.15	523.09	5.04	3.36	5.23	5.23
Richland/McKenzie County	D16	RM 6.77	11043	5-yr	2127.4	571.96	566.76	1.18	1.05	6.45	4.21	349.25	657.15	4.73	3.08	5.2	5.2
Richland/McKenzie County	D16	RM 6.58	10733	5-yr	2127.4	571.92	566.59	1.14	0.97	5.92	3.22	342.3	819.65	4.96	2.68	5.33	5.33
Richland/McKenzie County	D16	RM 6.38	10417	5-yr	2127.4	571.76	566.59	1.92	1.37	16.77	5.64	182.43	950.81	4.94	1.63	5.17	5.17
Richland/McKenzie County	D16	RM 6.21	10138	5-yr	2127.4	571.7	566.44	1.65	1.12	12.28	4.58	217.11	1033.17	4.99	1.84	5.26	5.26
Richland/McKenzie County	D16	RM 6.01	9825	5-yr	2127.4	571.7	566.17	1.04	0.85	5.02	2.53	412.46	1051.47	4.73	2.38	5.53	5.53
Richland/McKenzie County	D16	RM 5.83	9551	5-yr	2127.4	571.69	565.96	0.85	0.71	3.23	1.81	480.72	1071.35	5.02	2.8	5.73	5.73
Richland/McKenzie County	D16	RM 5.67	9297	5-yr	2127.4	571.66	565.96	1	0.8	4.59	2.32	341.56	1107.8	4.92	2.45	5.7	5.7
Richland/McKenzie County	D16	RM 5.43	8926	5-yr	2127.4	571.58	565.96	1.3	1.08	8.07	4.83	268.89	819.03	4.31	2.56	5.62	5.62
Richland/McKenzie County	D16	RM 5.25	8623	5-yr	2127.4	571.39	565.96	1.9	1.56	16.21	9.02	206.77	485.35	5.16	2.85	5.43	5.43
Richland/McKenzie County	D16	RM 5.06	8331	5-yr	2127.4	571.38	565.82	1.37	1.15	8.41	5.59	289.25	566.41	5.12	3.38	5.56	5.56
Richland/McKenzie County	D16	RM 4.87	8029	5-yr	2127.4	571.36	565.67	1.15	1.03	6.07	4.24	334.67	658.71	4.83	3.35	5.69	5.69
Richland/McKenzie County	D16	RM 4.71	7757	5-yr	2127.4	571.31	565.54	1.3	1.09	7.51	4.44	251.42	638.47	5.4	3.17	5.77	5.77
Richland/McKenzie County	D16	RM 4.53	7456	5-yr	2127.4	571.2	565.54	1.69	1.31	12.68	6.14	198.94	627.03	5.41	2.59	5.66	5.66
Richland/McKenzie County	D16	RM 4.34	7156	5-yr	2127.4	571.14	565.54	1.57	1.23	12.39	6.36	215.07	642.35	5.31	2.69	5.6	5.6
Richland/McKenzie County	D16	RM 4.17	6884	5-yr	2127.4	571.08	565.54	1.57	1.26	10.92	5.12	224.61	688.24	5.31	2.46	5.54	5.54
Richland/McKenzie County	D16	RM 3.96	6550	5-yr	2127.4	571.05	565.54	1.23	1.01	6.78	3.5	216.6	786.22	5.24	2.68	5.51	5.51
Richland/McKenzie County	D16	RM 3.78	6249	5-yr	2127.4	571	565.54	1.41	1.1	9.18	4.31	196.52	893.63	4.67	2.17	5.46	5.46
Richland/McKenzie County	D16	RM 3.55	5904	5-yr	2127.4	570.94	565.54	1.31	1.06	7.6	4.22	206.04	699.94	5.21	2.87	5.4	5.4
Richland/McKenzie County	D16	RM 3.38	5657	5-yr	2127.4	570.86	565.53	1.61	1.31	11.72	5.59	171.27	680.15	5.08	2.39	5.33	5.33
Richland/McKenzie County	D16	RM 3.2	5363	5-yr	2127.4	570.78	565.54	1.69	1.5	13.49	7.95	167.5	555.49	4.38	2.55	5.24	5.24
Richland/McKenzie County	D16	RM 3.01	5062	5-yr	2127.4	570.72	565.54	1.46	1.28	10.01	5.8	310	639.24	4.55	2.61	5.18	5.18
Richland/McKenzie County	D16	RM 2.82	4763	5-yr	2127.4	570.66	565.46	1.34	1.23	8.95	6.29	423.69	669.72	3.7	2.59	5.2	5.2

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	50% - 2yr	648.46	1281.26	1278.12	2.18	1.99	26.49	18.83	105.55	169.96	2.71	1.92	3.14	3.14
Sweet Grass County	A1	RM 478.10	225378	50% - 2yr	648.46	1280.84	1277.66	2.92	2.67	51.03	35.89	96.93	166.17	2.15	1.51	3.18	3.18
Sweet Grass County	A1	RM 478.00	224862	50% - 2yr	648.46	1280.4	1277.97	2.83	2.66	53.41	44.3	136.43	191.67	1.54	1.28	2.44	2.44
Sweet Grass County	A1	RM 477.91	224362	50% - 2yr	648.46	1279.82	1277.65	3.21	2.71	59.04	41.05	83.58	206.86	1.87	1.3	2.17	2.17
Sweet Grass County	A1	RM 477.81	223862	50% - 2yr	648.46	1279.48	1276.96	2.78	2.38	37.36	27.96	104.91	214.24	1.78	1.33	2.52	2.52
Sweet Grass County	A1	RM 477.72	223354	50% - 2yr	648.46	1279.02	1276.32	2.63	2.5	48.77	36.36	155.82	271.96	1.31	0.97	2.7	2.7
Sweet Grass County	A1	RM 477.63	222892	50% - 2yr	648.46	1278.95	1275.76	1.41	1.36	12.97	11.3	231.35	337.1	1.65	1.44	3.18	3.18
Sweet Grass County	A1	RM 477.49	222220	50% - 2yr	648.46	1278.72	1276.07	1.58	1.52	13.52	13.36	254.06	451.1	1.22	1.2	2.65	2.65
Sweet Grass County	A1	RM 477.40	221702	50% - 2yr	648.46	1278.66	1275.47	1.13	0.95	7.9	5.09	242.4	711.04	1.94	1.25	3.19	3.19
Sweet Grass County	A1	RM 477.31	221259	50% - 2yr	648.46	1278.3	1275.74	2.47	2.03	37.04	18.07	121.1	410.42	2.06	1	2.55	2.55
Sweet Grass County	A1	RM 477.21	220767	50% - 2yr	648.46	1278.14	1275.28	2.12	1.73	26.15	12.52	126.43	455.26	2.33	1.11	2.85	2.85
Sweet Grass County	A1	RM 477.11	220252	50% - 2yr	648.46	1277.8	1274.86	2.48	1.96	39.95	19.6	145.25	513.15	1.68	0.82	2.94	2.94
Sweet Grass County	A1	RM 477.04	219860	50% - 2yr	648.46	1277.49	1275.13	2.59	1.97	42.83	20.05	131.72	511.95	1.77	0.83	2.35	2.35
Sweet Grass County	A1	RM 476.95	219422	50% - 2yr	648.46	1277.01	1274.55	2.86	2.33	54.31	33.43	137.25	346.17	1.57	0.97	2.46	2.46
Sweet Grass County	A1	RM 476.84	218828	50% - 2yr	648.46	1276.65	1273.95	2.33	1.99	35.06	23.58	133.93	310.39	1.72	1.15	2.7	2.7
Sweet Grass County	A1	RM 476.75	218345	50% - 2yr	648.46	1276.37	1273.54	2.22	1.95	27.16	16.51	172.12	401.64	1.66	1	2.84	2.84
Sweet Grass County	A1	RM 476.66	217855	50% - 2yr	648.46	1276.06	1273.45	2.39	2.06	32.28	18.93	157.91	465.72	1.66	0.97	2.6	2.6
Sweet Grass County	A1	RM 476.57	217396	50% - 2yr	648.46	1275.64	1273.09	2.86	2.1	49.48	20.47	98.93	606.48	2.08	0.86	2.55	2.55
Sweet Grass County	A1	RM 476.47	216861	50% - 2yr	648.46	1275.19	1273.04	2.84	2.37	52.63	35.12	125.38	324.49	1.64	1.1	2.15	2.15
Sweet Grass County	A1	RM 476.38	216362	50% - 2yr	648.46	1274.94	1272.1	2.37	1.87	33.7	18.38	104.71	380.18	2.14	1.16	2.84	2.84
Sweet Grass County	A1	RM 476.28	215816	50% - 2yr	648.46	1274.4	1271.85	3.01	2.69	55.97	40.17	99.49	211.64	1.93	1.38	2.55	2.55
Sweet Grass County	A1	RM 476.15	215126	50% - 2yr	648.46	1273.73	1271.76	2.88	2.58	56.51	44.8	131.34	239.1	1.43	1.14	1.97	1.97
Sweet Grass County	A1	RM 476.01	214437	50% - 2yr	648.46	1273.36	1270.96	2.16	2.04	29.13	25.69	134.38	227.34	1.92	1.7	2.4	2.4
Sweet Grass County	A1	RM 475.91	213787	50% - 2yr	648.46	1272.98	1270.35	2.28	2.18	32.42	27.91	148.77	182.77	1.89	1.63	2.63	2.63
Sweet Grass County	A1	RM 475.76	213072	50% - 2yr	648.46	1272.37	1270.22	2.69	2.55	47.48	39.11	144.64	214.17	1.63	1.35	2.16	2.16
Sweet Grass County	A1	RM 475.63	212347	50% - 2yr	648.46	1272.01	1269.34	2.09	1.96	27.67	21.98	171.26	232.28	1.79	1.42	2.67	2.67
Sweet Grass County	A1	RM 475.47	211539	50% - 2yr	648.46	1271.52	1268.97	2.42	2.31	35.59	32.51	128.49	149.17	2.05	1.88	2.54	2.54
Sweet Grass County	A1	RM 475.35	210875	50% - 2yr	648.46	1270.81	1268.88	3.13	3.13	61.49	61.49	111.82	111.82	1.85	1.85	1.92	1.92
Sweet Grass County	A1	RM 475.24	210333	50% - 2yr	648.46	1270.81	1267.53	1.9	1.85	19.39	14.87	115.41	187.87	2.96	2.26	3.28	3.28
Sweet Grass County	A2	RM 475.12	209673	50% - 2yr	648.46	1269.88	1267.9	3.87	3.65	99.39	91.79	105.67	123.18	1.56	1.44	1.97	1.97
Sweet Grass County	A2	RM 475.00	209034	50% - 2yr	648.46	1269.36	1266.93	2.63	2.63	44.89	44.89	146.62	146.62	1.68	1.68	2.43	2.43
Sweet Grass County	A2	RM 474.87	208359	50% - 2yr	648.46	1269.17	1266.75	1.99	1.76	23.08	18.44	78.03	197.52	2.38	1.87	2.42	2.42
Sweet Grass County	A2	RM 474.76	207797	50% - 2yr	648.46	1268.7	1266.42	2.88	2.42	49.86	30.86	75.51	204.43	2.15	1.31	2.28	2.28
Sweet Grass County	A2	RM 474.67	207305	50% - 2yr	648.46	1268.17	1266.29	3.22	2.65	65.61	44.93	65.84	200.68	1.84	1.24	1.88	1.88
Sweet Grass County	A2	RM 474.54	206635	50% - 2yr	648.46	1267.87	1264.92	2.17	1.96	28.19	19.6	127.79	222.61	2.14	1.49	2.95	2.95
Sweet Grass County	A2	RM 474.43	205945	50% - 2yr	648.46	1267.5	1265.16	2.49	2.12	37.21	25.33	89.64	210.18	2.15	1.45	2.34	2.34
Sweet Grass County	A2	RM 474.30	205321	50% - 2yr	648.46	1267.22	1264.46	2.2	1.94	28.78	13.35	130.25	326.54	2.21	1.02	2.76	2.76
Sweet Grass County	A2	RM 474.21	204877	50% - 2yr	648.46	1266.85	1264.22	2.75	2.54	44.46	19.97	102.12	254.58	2.28	1.02	2.63	2.63
Sweet Grass County	A2	RM 474.12	204378	50% - 2yr	648.46	1266.71	1263.24	2.16	1.8	27.73	13.53	133.73	340.12	2.18	1.06	3.47	3.47
Sweet Grass County	A2	RM 474.01	203787	50% - 2yr	648.46	1266.3	1263.55	2.56	2.25	41.89	24.4	138.78	280.58	1.77	1.03	2.75	2.75
Sweet Grass County	A2	RM 473.87	203072	50% - 2yr	648.46	1265.83	1263.52	2.64	2.27	40.99	25.42	98.21	230.05	2.02	1.25	2.31	2.31
Sweet Grass County	A2	RM 473.74	202395	50% - 2yr	648.46	1265.54	1263.06	2.22	1.99	29.42	11.44	113.93	430.18	2.15	0.84	2.48	2.48
Sweet Grass County	A2	RM 473.62	201781	50% - 2yr	648.46	1265.01	1262.63	2.71	2.58	47.71	30.63	141.49	234.3	1.67	1.07	2.39	2.39
Sweet Grass County	A2	RM 473.50	201110	50% - 2yr	648.46	1264.46	1261.83	2.47	2.45	41.28	37.79	174.5	192.53	1.5	1.37	2.63	2.63
Sweet Grass County	A2	RM 473.36	200362	50% - 2yr	648.46	1264.18	1261.08	2.05	2.01	24.18	21.93	130.02	146.6	2.42	2.2	3.1	3.1
Sweet Grass County	A2	RM 473.27	199862	50% - 2yr	648.46	1263.81	1260.81	2.64	2.64	41.23	41.23	110.04	110.04	2.23	2.23	3	3
Sweet Grass County	A2	RM 473.17	199362	50% - 2yr	648.46	1263.67	1260.56	2.27	2.27	28.19	28.19	101.03	101.03	2.83	2.83	3.11	3.11
Sweet Grass County	A2	RM 473.08	198879	50% - 2yr	648.46	1263.33	1260.56	2.74	2.73	43.52	38.9	100.21	112.61	2.36	2.11	2.77	2.77
Sweet Grass County	A2	RM 472.98	198340	50% - 2yr	648.46	1263.16	1260.21	2.3	2.25	30.46	23.97	118.55	154.63	2.38	1.87	2.95	2.95
Sweet Grass County	A2	RM 472.89	197862	50% - 2yr	648.46	1262.7	1260.5	3.01	2.59	55.26	36.64	100.43	187.73	2.02	1.34	2.2	2.2
Sweet Grass County	A2	RM 472.79	197362	50% - 2yr	648.46	1262.41	1259.98	2.52	2.29	39.93	29.08	134.38	212.84	1.83	1.33	2.42	2.42
Sweet Grass County	A2	RM 472.70	196862	50% - 2yr	648.46	1261.93	1259.35	2.87	2.44	51.17	32.68	112.35	217.17	1.92	1.23	2.58	2.58
Sweet Grass County	A2	RM 472.60	196360	50% - 2yr	648.46	1261.73	1259.01	2.09	1.91	28.92	25.48	177.34	293.07	1.57	1.38	2.71	2.71
Sweet Grass County	A2	RM 472.50	195816	50% - 2yr	648.46	1261.33	1258.53	2.35	2.08	35.72	25.67	151.67	253.46	1.72	1.23	2.8	2.8
Sweet Grass County	A2	RM 472.41	195349	50% - 2yr	648.46	1261	1258.52	2.32	2.1	36.57	30.73	179.41	247.31	1.48	1.25	2.48	2.48
Sweet Grass County	A2	RM 472.31	194860	50% - 2yr	648.46	1260.76	1258.34	2.1	1.86	26.76	20.02	146.49	228.63	2.04	1.52	2.42	2.42
Sweet Grass County	A2	RM 472.22	194356	50% - 2yr	648.46	1260.56	1257.3	2.21	1.99	24.74	14.89	115.09	223.62	2.45	1.46	3.26	3.26
Sweet Grass County	A2	RM 472.09	193660	50% - 2yr	648.46	1259.74	1257.45	3.57	3.37	76.76	52.41	82.72	133	2.15	1.45	2.29	2.29
Sweet Grass County	A2	RM 471.95	192935	50% - 2yr	648.46	1259.7	1256.05	2.06	1.73	23.08	12.4	103.44	242.35	2.91	1.54	3.65	3.65
Sweet Grass County	A2	RM 471.86	192442	50% - 2yr	648.46	1259.29	1256.23	2.98	2.33	48.88	25.89	71.11	190.1	2.81	1.46	3.06	3.06
Sweet Grass County	A2	RM 471.75	191870	50% - 2yr	648.46	1259.14	1256.47	2.18	1.85	28.47	16.63	134.52	280.91	2.13	1.25	2.68	2.68

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	50% - 2yr	648.46	1258.55	1256.54	3.07	2.82	61.36	39.03	124.33	216.18	1.68	1.06	2.01	2.01
Sweet Grass County	A2	RM 471.52	190686	50% - 2yr	648.46	1258.34	1255.75	2.08	1.7	25.57	13.7	127.54	321.32	2.22	1.18	2.6	2.6
Sweet Grass County	A2	RM 471.38	189910	50% - 2yr	648.46	1257.69	1255.44	2.78	2.52	54.79	33.7	146.86	325.35	1.29	0.79	2.25	2.25
Sweet Grass County	A2	RM 471.28	189362	50% - 2yr	648.46	1257.08	1254.65	2.42	2.13	43.13	31.44	193.63	368.09	1.14	0.83	2.43	2.43
Sweet Grass County	A2	RM 471.18	188875	50% - 2yr	648.46	1256.7	1254.2	2.29	1.91	27.51	18.93	151.13	360.5	1.37	0.94	2.5	2.5
Sweet Grass County	A2	RM 471.06	188150	50% - 2yr	648.46	1256.29	1253.95	2.12	1.66	30.6	16.41	134.12	500.85	1.46	0.78	2.34	2.34
Sweet Grass County	A2	RM 470.94	187526	50% - 2yr	648.46	1255.87	1253.58	2.36	1.91	32.92	18.57	104.68	332.85	1.81	1.02	2.29	2.29
Sweet Grass County	A2	RM 470.84	186938	50% - 2yr	648.46	1255.53	1252.88	2.24	1.82	34.25	21.59	156.05	398.13	1.46	0.92	2.65	2.65
Sweet Grass County	A2	RM 470.73	186362	50% - 2yr	648.46	1255.24	1253.49	1.6	1.7	18.94	17.26	188.3	378.4	1.12	1.02	2.18	2.18
Sweet Grass County	A2	RM 470.65	185977	50% - 2yr	648.46	1255.01	1252.18	1.94	1.85	24.36	19.32	197.53	282.9	1.68	1.33	2.83	2.83
Sweet Grass County	A2	RM 470.56	185491	50% - 2yr	648.46	1254.73	1252.52	2.1	2.03	29.02	18.62	188.76	351.11	1.63	1.04	2.22	2.22
Sweet Grass County	A2	RM 470.44	184875	50% - 2yr	648.46	1254.61	1251.39	1.61	1.45	14.86	7.45	158.35	362.59	2.49	1.24	3.22	3.22
Sweet Grass County	A2	RM 470.35	184363	50% - 2yr	648.46	1253.99	1251.52	3.19	3.11	64.27	46.88	112.06	158.36	1.81	1.32	2.47	2.47
Sweet Grass County	A2	RM 470.23	183828	50% - 2yr	648.46	1253.66	1251.51	2.36	2.2	37.54	29.01	178.23	251.49	1.51	1.17	2.15	2.15
Sweet Grass County	A2	RM 470.13	183304	50% - 2yr	648.46	1253.32	1249.86	2.24	2.04	33.43	24.03	162.15	280.51	1.59	1.13	3.46	3.46
Sweet Grass County	A2	RM 470.05	182914	50% - 2yr	648.46	1253.1	1250.59	2.08	1.88	28.71	21.11	174.98	303.17	1.55	1.14	2.5	2.5
Sweet Grass County	A2	RM 469.93	182267	50% - 2yr	648.46	1252.42	1249.62	2.92	2.77	52.09	42.38	103.59	142.88	2.02	1.64	2.8	2.8
Sweet Grass County	A2	RM 469.85	181860	50% - 2yr	648.46	1252.01	1249.59	3.13	2.91	58.84	41.17	92.81	149.77	2.13	1.49	2.42	2.42
Sweet Grass County	A2	RM 469.75	181348	50% - 2yr	648.46	1251.96	1248.77	2.01	1.88	23.39	15.61	116.21	217.01	2.4	1.59	3.19	3.19
Sweet Grass County	A2	RM 469.68	180952	50% - 2yr	648.46	1251.68	1249.31	2.43	2.33	36.35	23.72	135.3	234.15	1.96	1.28	2.36	2.36
Sweet Grass County	A2	RM 469.58	180427	50% - 2yr	648.46	1251.65	1247.94	1.63	1.43	14.32	8.76	130	340.48	2.97	1.8	3.71	3.71
Sweet Grass County	A2	RM 469.47	179860	50% - 2yr	648.46	1251.37	1247.85	2.31	2.09	26.67	22.79	88.61	259.69	3.03	2.58	3.52	3.52
Sweet Grass County			179808	50% - 2yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	50% - 2yr	648.46	1251.34	1247.84	2.07	2.07	23.4	23.23	112.09	320.01	2.8	2.78	3.5	3.5
Sweet Grass County	A2	RM 469.39	179400	50% - 2yr	648.46	1250.98	1248.45	2.79	2.72	47.45	36.12	113.8	231.83	2.04	1.55	2.53	2.53
Sweet Grass County	A2	RM 469.30	178975	50% - 2yr	648.46	1250.95	1247.55	2.02	1.8	22.11	12.58	106.11	295.63	2.94	1.65	3.4	3.4
Sweet Grass County	A2	RM 469.21	178467	50% - 2yr	648.46	1250.25	1248.31	3.51	3.24	78.73	50.69	102.52	177.11	1.76	1.13	1.94	1.94
Sweet Grass County	A2	RM 469.09	177862	50% - 2yr	648.46	1250.23	1247.12	1.83	1.45	20.33	10.64	118.23	482.55	2.04	1.06	3.11	3.11
Sweet Grass County	A2	RM 469.00	177350	50% - 2yr	648.46	1249.56	1247.58	3.34	2.73	73.52	36.41	89.36	318.73	1.62	0.8	1.98	1.98
Sweet Grass County	A2	RM 468.90	176865	50% - 2yr	648.46	1249.09	1246.48	2.12	1.88	23.35	17.12	153.7	287.12	1.65	1.21	2.61	2.61
Sweet Grass County	A2	RM 468.80	176341	50% - 2yr	648.46	1248.86	1246.11	2.12	1.87	28.17	18.2	134.79	296.53	1.86	1.2	2.75	2.75
Sweet Grass County	A2	RM 468.71	175823	50% - 2yr	648.46	1248.41	1246.41	2.58	2.31	47.09	39.37	142.3	278.74	1.31	1.09	2.01	2.01
Sweet Grass County	A2	RM 468.57	175192	50% - 2yr	648.46	1248.2	1245.17	1.64	1.56	17.06	12.71	173.69	441.19	1.8	1.34	3.03	3.03
Sweet Grass County	A2	RM 468.42	174099	50% - 2yr	648.46	1247.5	1244.97	2.49	2.29	41.65	33.02	167.16	283.47	1.51	1.2	2.53	2.53
Sweet Grass County	A3	RM 468.25	173324	50% - 2yr	648.46	1247.38	1242.97	1.66	1.42	14.71	6.58	127.35	457.04	2.99	1.32	4.4	4.4
Sweet Grass County	A3	RM 468.16	172855	50% - 2yr	648.46	1247.21	1243.58	2.05	1.65	24.26	11.16	119.05	487.69	2.43	1.11	3.63	3.63
Sweet Grass County	A3	RM 468.07	172364	50% - 2yr	648.46	1247.14	1243.89	1.69	1.33	16.46	7.79	136.54	557.8	2.4	1.13	3.25	3.25
Sweet Grass County	A3	RM 467.97	171839	50% - 2yr	648.46	1246.5	1244.32	3.41	2.81	74.75	40.5	88.73	299.79	1.75	0.94	2.18	2.18
Sweet Grass County	A3	RM 467.87	171312	50% - 2yr	648.46	1246.17	1243.46	2.01	1.93	25.15	20.12	157.22	288.3	1.9	1.52	2.7	2.7
Sweet Grass County	A3	RM 467.78	170840	50% - 2yr	648.46	1245.72	1243.74	2.77	2.51	50.1	39.91	99.97	198.7	1.63	1.3	1.98	1.98
Sweet Grass County	A3	RM 467.69	170376	50% - 2yr	648.46	1245.44	1242.96	2.34	2.07	34.3	23.61	112.93	244.99	1.87	1.28	2.49	2.49
Sweet Grass County	A3	RM 467.55	169614	50% - 2yr	648.46	1244.97	1242.1	2.2	1.98	32.98	25.82	132.53	287.58	1.46	1.14	2.86	2.86
Sweet Grass County	A3	RM 467.41	168870	50% - 2yr	648.46	1244.79	1241.15	1.67	1.36	15.49	5.85	129.56	483.17	2.65	0.99	3.65	3.65
Sweet Grass County	A3	RM 467.30	168362	50% - 2yr	648.46	1244.03	1242.15	3.69	3.29	87.02	51.79	88.89	187.79	1.77	1.05	1.88	1.88
Sweet Grass County	A3	RM 467.16	167641	50% - 2yr	648.46	1243.87	1240.78	1.83	1.58	20.29	9.11	154.74	447.89	2.09	0.93	3.09	3.09
Sweet Grass County	A3	RM 467.00	166780	50% - 2yr	648.46	1243.34	1240.48	2.53	2.22	40.88	19.89	132.92	344.68	1.77	0.85	2.86	2.86
Sweet Grass County	A3	RM 466.83	165902	50% - 2yr	648.46	1242.84	1239.84	2.43	1.91	34.92	14.86	110.86	362.62	2.22	0.94	2.99	2.99
Sweet Grass County	A3	RM 466.73	165364	50% - 2yr	648.46	1242.58	1239.81	2.38	2.06	33.4	15.69	114.99	304	2.21	1.04	2.77	2.77
Sweet Grass County	A3	RM 466.64	164858	50% - 2yr	648.46	1242.16	1239.36	2.92	2.5	47.05	22.11	86.51	272.01	2.35	1.1	2.8	2.8
Sweet Grass County	A3	RM 466.49	164108	50% - 2yr	648.46	1241.73	1239.67	2.61	1.91	42.77	20.46	106.88	464.56	1.84	0.88	2.07	2.07
Sweet Grass County	A3	RM 466.25	162845	50% - 2yr	648.46	1240.6	1238.71	3.01	2.59	57.03	37.48	78.03	207.87	1.87	1.21	1.89	1.89
Sweet Grass County	A3	RM 465.79	160351	50% - 2yr	648.46	1239.34	1236.48	2.14	1.44	27.31	10.71	104.27	521.9	2.26	0.86	2.85	2.85
Sweet Grass County	A3	RM 465.01	155919	50% - 2yr	648.46	1237.18	1234.44	2.6	2.42	41.36	30.05	122.09	183.25	2.02	1.46	2.74	2.74
Sweet Grass County	A3	RM 464.68	154254	50% - 2yr	648.46	1236.27	1233.35	2.18	2.07	30.24	19.72	165.45	272.49	1.78	1.16	2.93	2.93
Sweet Grass County	A3	RM 464.48	153160	50% - 2yr	648.46	1235.71	1232.71	2.07	1.82	28	17.34	179.52	374.04	1.65	1.02	3	3
Sweet Grass County	A3	RM 464.33	152378	50% - 2yr	648.46	1235.32	1232.61	2	1.71	25.94	19.24	181.73	303.52	1.69	1.25	2.71	2.71
Sweet Grass County	A3	RM 464.16	151621	50% - 2yr	648.46	1234.78	1232.45	2.4	2.08	37.5	23.43	155.59	304.6	1.64	1.02	2.33	2.33
Sweet Grass County	A3	RM 464.04	150961	50% - 2yr	648.46	1234.59	1231.48	1.97	1.53	21.45	9.48	114.47	360.81	2.71	1.19	3.11	3.11
Sweet Grass County	A3	RM 463.88	150174	50% - 2yr	648.46	1233.98	1231.85	2.91	2.65	55.05	39.66	129.06	205.12	1.66	1.19	2.13	2.13
Sweet Grass County	A3	RM 463.78	149616	50% - 2yr	648.46	1233.65	1230.54	2.34	2.06	34.64	22.29	147.36	394.56	1.83	1.17	3.11	3.11
Sweet Grass County	A3	RM 463.67	149069	50% - 2yr	648.46	1233.23	1230.86	2.6	2.11	43.35	26.14	131.42	409.21	1.74	1.05	2.36	2.36

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	50% - 2yr	648.46	1233	1230.39	2.31	1.88	32.38	18.21	132.28	404.13	2.03	1.14	2.61	2.61
Sweet Grass County	A3	RM 463.49	148111	50% - 2yr	648.46	1232.46	1229.73	2.98	2.71	54.28	36.88	107.34	282.57	1.99	1.35	2.74	2.74
Sweet Grass County	A3	RM 463.34	147326	50% - 2yr	648.46	1232.05	1229.72	2.16	1.75	31.05	18.52	175.43	708.59	1.55	0.92	2.33	2.33
Sweet Grass County	A3	RM 463.20	146616	50% - 2yr	648.46	1231.67	1228.95	2.13	1.51	28.75	14.58	104.07	1012.27	1.83	0.91	2.72	2.72
Sweet Grass County	A3	RM 463.06	145881	50% - 2yr	648.46	1231.31	1228.89	1.95	1.18	25.87	12.31	147.21	1326.18	1.45	0.69	2.42	2.42
Sweet Grass County	A4	RM 462.79	144435	50% - 2yr	648.46	1231.08	1228.25	1.22	0.64	8.97	4.83	133.61	1409.56	2.11	1.12	2.82	2.82
Sweet Grass County	A4	RM 462.16	141146	50% - 2yr	648.46	1229.04	1226.15	2.62	1.95	42.4	18.02	107.55	416.79	1.97	0.83	2.89	2.89
Sweet Grass County		RM 461.97	140135	50% - 2yr	648.46	1228.45	1226.06	2.29	1.54	34.35	16.29	120.82	704.83	1.64	0.78	2.39	2.39
Sweet Grass County	A4	RM 461.71	138705	50% - 2yr	648.46	1226.91	1224.75	3.25	2.71	72.99	50.76	97.48	291.25	1.41	0.97	2.16	2.16
Sweet Grass County	A4	RM 461.52	137683	50% - 2yr	648.46	1226.25	1222.31	1.95	1.57	19.46	9.39	74.91	249.76	3.56	1.65	3.94	3.94
Sweet Grass County	A4	RM 461.33	136718	50% - 2yr	648.46	1225.96	1223.38	2.04	1.77	26.31	12.48	121.98	505.51	1.79	0.85	2.58	2.58
Sweet Grass County	A4	RM 461.14	135736	50% - 2yr	648.46	1225.21	1222.44	2.72	2.58	44.62	33.09	111.65	160.83	2.11	1.56	2.77	2.77
Sweet Grass County	A4	RM 460.99	134951	50% - 2yr	648.46	1224.73	1221.98	2.57	2.37	40.23	27.11	121.6	199.4	2.04	1.37	2.75	2.75
Sweet Grass County	A4	RM 460.85	134214	50% - 2yr	648.46	1224.25	1222.07	2.57	2.45	39.94	29.83	136.07	192.19	1.85	1.38	2.18	2.18
Sweet Grass County	A4	RM 460.74	133616	50% - 2yr	648.46	1224.24	1220.27	1.62	1.5	13.65	8.52	122.92	308.71	3.23	2	3.97	3.97
Sweet Grass County	A4	RM 460.63	133067	50% - 2yr	648.46	1224.22	1218.9	1.24	1.21	7.01	5.63	105.51	313.36	4.95	3.95	5.33	5.33
Sweet Grass County			132957	50% - 2yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	50% - 2yr	648.46	1223.68	1221.09	2.86	2.86	49.84	46.44	112.06	258.76	2.02	1.88	2.59	2.59
Sweet Grass County	A4	RM 460.50	132281	50% - 2yr	648.46	1223.04	1221.12	3.04	3.04	63.13	63.13	148.22	263.47	1.44	1.44	1.92	1.92
Sweet Grass County	A4	RM 460.38	131785	50% - 2yr	648.46	1222.64	1220.5	2.48	2.3	37.06	30.73	137.78	264.63	1.44	1.19	2.14	2.14
Sweet Grass County	A4	RM 460.29	131287	50% - 2yr	648.46	1222.12	1219.97	2.65	2.58	48.38	46.26	128.83	185.4	1.42	1.35	2.15	2.15
Sweet Grass County	A4	RM 460.19	130793	50% - 2yr	648.46	1221.71	1219.38	2.52	2.38	40.89	36.04	113.17	210.78	1.7	1.5	2.33	2.33
Sweet Grass County	A4	RM 460.08	130210	50% - 2yr	648.46	1221.37	1218.23	2.41	2.41	34.16	34.16	120.82	120.82	2.23	2.23	3.14	3.14
Sweet Grass County	A4	RM 459.99	129763	50% - 2yr	648.46	1221.12	1218.01	2.54	2.54	36.59	36.59	101.42	101.42	2.52	2.52	3.11	3.11
Sweet Grass County	A4	RM 459.90	129246	50% - 2yr	648.46	1220.98	1217.62	2.23	2.22	26.8	24.83	99.18	114.2	2.93	2.71	3.37	3.37
Sweet Grass County	A4	RM 459.81	128792	50% - 2yr	648.46	1220.56	1218.15	3	2.99	53.21	51	98.3	102.79	2.2	2.11	2.41	2.41
Sweet Grass County	A4	RM 459.72	128310	50% - 2yr	710.75	1220.42	1217.31	2.34	2.34	31.42	30.34	126	222.22	2.41	2.33	3.11	3.11
Sweet Grass County	A4	RM 459.62	127798	50% - 2yr	710.75	1220	1217.46	2.84	2.72	50.09	41.15	128.42	229.19	1.9	1.56	2.53	2.53
Sweet Grass County	A5	RM 459.53	127324	50% - 2yr	710.75	1219.46	1217.26	3	3	59.75	59.75	151.25	151.25	1.57	1.57	2.2	2.2
Sweet Grass County	A5	RM 459.44	126881	50% - 2yr	710.75	1219.13	1216.93	2.48	2.48	40.51	40.23	180.99	182.26	1.59	1.58	2.21	2.21
Sweet Grass County	A5	RM 459.31	126192	50% - 2yr	710.75	1218.74	1215.66	2.29	2.23	31.78	30.16	146.84	173.41	2.09	1.99	3.08	3.08
Sweet Grass County	A5	RM 459.24	125848	50% - 2yr	710.75	1218.49	1215.69	2.52	2.46	39.27	36.75	143.94	158.57	1.95	1.82	2.8	2.8
Sweet Grass County	A5	RM 459.16	125420	50% - 2yr	710.75	1217.93	1215.82	3.06	3.06	63.44	63.44	156.5	156.5	1.48	1.48	2.11	2.11
Sweet Grass County	A5	RM 459.02	124624	50% - 2yr	710.75	1217.5	1214.8	2.07	2.07	27.52	27.52	196.8	209.7	1.74	1.74	2.7	2.7
Sweet Grass County	A5	RM 458.79	123371	50% - 2yr	710.75	1216.74	1214.02	2.44	2.44	36.29	36.29	145.96	145.96	2	2	2.72	2.72
Sweet Grass County	A5	RM 458.48	121727	50% - 2yr	710.75	1215.68	1213.35	2.38	2.22	37.56	33.14	138.39	239.57	1.55	1.37	2.33	2.33
Sweet Grass County	A5	RM 458.36	121100	50% - 2yr	710.75	1214.65	1212.73	3.53	3.25	84.94	67.01	112.19	190.45	1.46	1.15	1.92	1.92
Sweet Grass County	A5	RM 458.25	120543	50% - 2yr	710.75	1214.29	1211.35	2.24	1.95	29.35	20.12	114.23	228.17	2.34	1.59	2.94	2.94
Sweet Grass County	A5	RM 458.13	119849	50% - 2yr	710.75	1213.76	1211.21	2.75	2.51	48.29	36.75	129.49	210.1	1.78	1.35	2.55	2.55
Sweet Grass County	A5	RM 458.03	119256	50% - 2yr	710.75	1213.65	1210.09	1.98	1.89	20.68	16.76	109.53	148.57	3.13	2.53	3.56	3.56
Sweet Grass County	A5	RM 457.87	118444	50% - 2yr	710.75	1213.5	1209.57	1.93	1.93	18.87	18.35	102.59	105.64	3.59	3.49	3.93	3.93
Sweet Grass County	A5	RM 457.76	117858	50% - 2yr	710.75	1213.29	1210.24	2.21	2.21	28.21	28.21	133.91	133.91	2.4	2.4	3.05	3.05
Sweet Grass County	A5	RM 457.66	117350	50% - 2yr	710.75	1213.05	1210.03	2.35	2.35	32.16	32.16	131.09	131.09	2.31	2.31	3.03	3.03
Sweet Grass County	A5	RM 457.54	116694	50% - 2yr	710.75	1212.71	1209.93	2.46	2.46	35.91	34.15	130.89	137.86	2.2	2.1	2.78	2.78
Sweet Grass County	A5	RM 457.35	115703	50% - 2yr	710.75	1211.47	1209.69	3.51	3.51	86.42	86.42	151.87	151.87	1.33	1.33	1.78	1.78
Sweet Grass County	A5	RM 457.20	114921	50% - 2yr	710.75	1211.2	1208.7	1.92	1.92	22.88	22.88	194.16	194.16	1.91	1.91	2.5	2.5
Sweet Grass County	A5	RM 457.02	113974	50% - 2yr	710.75	1210.22	1208.04	3.41	3.07	73.04	54.57	98.99	168.79	1.84	1.37	2.17	2.17
Sweet Grass County	A5	RM 456.84	113009	50% - 2yr	710.75	1209.84	1206.55	2.3	2.3	29.42	29.42	114.12	114.12	2.7	2.7	3.29	3.29
Sweet Grass County	A5	RM 456.68	112164	50% - 2yr	710.75	1209.2	1206.59	3.02	3.02	54.84	54.84	111.28	111.28	2.11	2.11	2.61	2.61
Sweet Grass County	A5	RM 456.55	111455	50% - 2yr	710.75	1208.81	1206.19	2.52	2.52	38.47	38.47	138.13	138.13	2.04	2.04	2.63	2.63
Sweet Grass County	A5	RM 456.43	110857	50% - 2yr	710.75	1208.59	1205.33	2.31	2.31	28.98	28.98	104.92	104.92	2.93	2.93	3.26	3.26
Sweet Grass County	A6	RM 456.29	110121	50% - 2yr	710.75	1208.21	1205.45	2.65	2.65	38.23	37.67	112.53	114.24	2.38	2.35	2.76	2.76
Sweet Grass County	A6	RM 456.18	109508	50% - 2yr	710.75	1207.82	1205.45	2.75	2.75	46.07	46.07	127.72	127.72	2.02	2.02	2.37	2.37
Sweet Grass County	A6	RM 456.03	108721	50% - 2yr	710.75	1207.26	1204.59	2.6	2.6	43.44	43.44	158.43	158.43	1.73	1.73	2.67	2.67
Sweet Grass County	A6	RM 455.84	107742	50% - 2yr	710.75	1206.66	1204.05	2.32	2.32	31.04	31.04	177.97	195.68	1.72	1.72	2.61	2.61
Sweet Grass County	A6	RM 455.70	106976	50% - 2yr	710.75	1206.43	1203.14	2.04	2.04	21.67	21.67	125.97	192.19	2.76	2.76	3.29	3.29
Sweet Grass County	A6	RM 455.56	106256	50% - 2yr	710.75	1206.06	1203.35	2.55	2.53	35.74	32.93	118.91	207.22	2.34	2.16	2.71	2.71
Sweet Grass County	A6	RM 455.39	105360	50% - 2yr	710.75	1205.81	1202.74	2	2	23.11	21.59	147.81	230.31	2.4	2.24	3.07	3.07
Sweet Grass County	A6	RM 455.26	104667	50% - 2yr	710.75	1204.76	1202.83	3.88	3.87	98.92	93.92	117.32	138.52	1.56	1.48	1.93	1.93
Sweet Grass County	A6	RM 455.09	103771	50% - 2yr	710.75	1204.6	1201.58	1.82	1.71	18.88	15.49	155.25	204.04	2.49	2.04	3.02	3.02
Sweet Grass County	A6	RM 454.95	103072	50% - 2yr	710.75	1204.01	1201.94	2.84	2.77	57.29	55.58	177.41	204.36	1.29	1.26	2.07	2.07

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	50% - 2yr	710.75	1203.47	1200.61	2.18	2.14	31.73	30.5	176.82	220.69	1.57	1.51	2.87	2.87
Sweet Grass County	A6	RM 454.72	101863	50% - 2yr	710.75	1202.77	1200.47	3.1	3.1	58.12	58.12	141.13	141.13	1.62	1.62	2.3	2.3
Sweet Grass County	A6	RM 454.64	101419	50% - 2yr	710.75	1202.62	1199.69	2.25	2.25	29.57	29.57	159.54	159.54	1.98	1.98	2.93	2.93
Sweet Grass County	A6	RM 454.53	100846	50% - 2yr	710.75	1202.24	1199.59	2.62	2.62	38.82	38.82	118.59	138.79	2.29	2.29	2.65	2.65
Sweet Grass County	A6	RM 454.43	100338	50% - 2yr	710.75	1202	1199	2.55	2.55	36.86	36.86	111.3	127.87	2.51	2.51	3	3
Sweet Grass County	A6	RM 454.29	99597	50% - 2yr	710.75	1201.69	1198.71	2.46	2.46	34.22	34.22	111.98	157.65	2.58	2.58	2.98	2.98
Sweet Grass County	A6	RM 454.15	98861	50% - 2yr	710.75	1201.42	1198.68	2.3	2.3	29.19	28.16	134.63	139.83	2.29	2.21	2.74	2.74
Sweet Grass County	A6	RM 454.00	98105	50% - 2yr	710.75	1201.01	1198.53	2.45	2.45	32.22	32.22	168.98	168.98	1.71	1.71	2.48	2.48
Sweet Grass County	A6	RM 453.89	97523	50% - 2yr	710.75	1200.53	1198.31	2.69	2.65	42.22	40.22	174.23	187.67	1.5	1.43	2.23	2.23
Sweet Grass County	A6	RM 453.78	96929	50% - 2yr	710.75	1200.42	1197.07	1.87	1.87	19.63	19.63	148.92	148.92	2.56	2.56	3.35	3.35
Sweet Grass County	A6	RM 453.67	96361	50% - 2yr	710.75	1199.86	1197.77	2.99	2.95	55.47	53.04	151.32	161.7	1.55	1.49	2.1	2.1
Sweet Grass County	A6	RM 453.58	95863	50% - 2yr	710.75	1199.85	1196.37	1.83	1.83	17.72	17.49	181.89	184.02	2.51	2.48	3.48	3.48
Sweet Grass County	A6	RM 453.48	95355	50% - 2yr	710.75	1199.41	1196.86	2.82	2.82	45.56	45.56	116.42	116.42	2.16	2.16	2.55	2.55
Sweet Grass County	A6	RM 453.35	94633	50% - 2yr	710.75	1198.96	1196.43	2.7	2.7	41.6	39.87	133.54	139.52	1.97	1.89	2.52	2.52
Sweet Grass County	A7	RM 453.23	93994	50% - 2yr	710.75	1198.4	1196.41	3	2.72	53.42	45.97	107.99	192	1.58	1.36	1.99	1.99
Sweet Grass County	A7	RM 453.11	93361	50% - 2yr	710.75	1198.14	1195.68	2.1	2.07	25.77	25.11	170.06	181.12	1.94	1.89	2.46	2.46
Sweet Grass County	A7	RM 453.01	92863	50% - 2yr	710.75	1197.65	1195.38	2.88	2.78	49.85	42.8	130.14	161.62	1.85	1.58	2.27	2.27
Sweet Grass County	A7	RM 452.91	92363	50% - 2yr	710.75	1197.42	1194.85	2.47	2.25	32.69	26.59	112.68	198.89	1.96	1.59	2.58	2.58
Sweet Grass County	A7	RM 452.82	91863	50% - 2yr	710.75	1197.17	1194.65	2.38	2.22	34.17	29.93	105.96	173.39	2.11	1.85	2.52	2.52
Sweet Grass County	A7	RM 452.72	91363	50% - 2yr	710.75	1197.14	1193.29	1.64	1.63	14.26	13.37	141.65	151.86	3.06	2.87	3.84	3.84
Sweet Grass County	A7	RM 452.64	90932	50% - 2yr	710.75	1196.9	1194.02	2.29	2.08	30.64	21.82	133.5	211.38	2.27	1.62	2.88	2.88
Sweet Grass County	A7	RM 452.53	90362	50% - 2yr	710.75	1196.46	1193.87	2.82	2.69	45.01	35.84	108.99	148.26	2.24	1.79	2.6	2.6
Sweet Grass County	A7	RM 452.43	89864	50% - 2yr	710.75	1196.16	1193.52	2.81	2.67	44.57	34.88	107.75	149.77	2.27	1.77	2.63	2.63
Sweet Grass County	A7	RM 452.33	89331	50% - 2yr	710.75	1195.86	1193.16	2.66	2.62	38.3	35.65	133.11	145.76	2	1.86	2.69	2.69
Sweet Grass County	A7	RM 452.25	88863	50% - 2yr	710.75	1195.6	1192.91	2.58	2.55	36.75	34.69	134.75	144.59	2.04	1.93	2.69	2.69
Sweet Grass County	A7	RM 452.16	88399	50% - 2yr	710.75	1195.29	1192.68	2.73	2.56	42.19	32.08	117.29	166.42	2.19	1.67	2.61	2.61
Sweet Grass County	A7	RM 452.06	87882	50% - 2yr	710.75	1195.06	1192.4	2.48	2.32	35.73	26.05	118.92	177.7	2.37	1.72	2.66	2.66
Sweet Grass County	A7	RM 451.96	87394	50% - 2yr	710.75	1194.7	1191.9	2.77	2.6	46.18	36.36	121.66	166.48	2.08	1.64	2.8	2.8
Sweet Grass County	A7	RM 451.86	86835	50% - 2yr	710.75	1194.4	1191.79	2.6	2.35	37.48	27.79	118.19	182.74	2.24	1.66	2.61	2.61
Sweet Grass County	A7	RM 451.75	86230	50% - 2yr	710.75	1194.15	1191.43	2.38	2.38	31.89	31.89	129.65	129.65	2.31	2.31	2.71	2.71
Sweet Grass County	A7	RM 451.61	85483	50% - 2yr	710.75	1193.82	1190.7	2.3	2.3	31.87	31.87	146.82	146.82	2.1	2.1	3.12	3.12
Sweet Grass County	A7	RM 451.49	84861	50% - 2yr	710.75	1193.19	1191.07	3.09	3	55.52	52.09	118.36	130.72	1.93	1.81	2.12	2.12
Sweet Grass County	A7	RM 451.34	84113	50% - 2yr	710.75	1193.09	1190.06	1.85	1.85	19.41	19.41	150.23	150.23	2.55	2.55	3.03	3.03
Sweet Grass County	A7	RM 451.20	83363	50% - 2yr	710.75	1192.59	1189.8	2.78	2.78	44.16	44.16	102.82	102.82	2.48	2.48	2.79	2.79
Sweet Grass County	A7	RM 451.10	82863	50% - 2yr	710.75	1192.39	1189.79	2.42	2.42	34.21	34.21	130.98	130.98	2.24	2.24	2.61	2.61
Sweet Grass County	A7	RM 451.00	82325	50% - 2yr	710.75	1192.14	1189.55	2.42	2.27	35.3	30.57	117.54	172.12	2.11	1.82	2.59	2.59
Sweet Grass County	A7	RM 450.86	81602	50% - 2yr	710.75	1191.91	1188.29	1.94	1.79	39.31	25.12	88.99	179.02	3.57	2.22	3.61	3.61
Sweet Grass County	A7	RM 450.73	80923	50% - 2yr	710.75	1191.14	1188.46	3.28	3.14	62.65	51.68	90.35	116.51	2.36	1.94	2.68	2.68
Sweet Grass County	A7	RM 450.63	80374	50% - 2yr	710.75	1190.88	1188.16	2.64	2.63	41.83	40.53	126.61	131.15	2.12	2.06	2.72	2.72
Sweet Grass County	A7	RM 450.53	79863	50% - 2yr	710.75	1190.66	1187.88	2.36	2.36	30.51	30.51	146.51	146.51	2.06	2.06	2.78	2.78
Sweet Grass County	A7	RM 450.43	79300	50% - 2yr	710.75	1190.4	1187.72	2.41	2.25	31.39	27.72	125.27	180.41	1.99	1.75	2.67	2.67
Sweet Grass County	A7	RM 450.34	78849	50% - 2yr	744.73	1189.97	1188.05	2.83	2.62	50.43	44.03	121.74	204.21	1.6	1.39	1.92	1.92
Sweet Grass County	A7	RM 450.23	78298	50% - 2yr	744.73	1189.85	1186.92	1.79	1.79	18.58	18.51	193.67	194.37	2.15	2.14	2.93	2.93
Sweet Grass County	A7	RM 450.14	77822	50% - 2yr	744.73	1189.58	1186.4	2.25	2.24	30.24	27.42	151.06	167.93	2.19	1.98	3.18	3.18
Sweet Grass County	A7	RM 450.05	77362	50% - 2yr	744.73	1189.01	1187.2	3.12	3.12	62.64	62.64	137.8	137.8	1.73	1.73	1.82	1.82
Sweet Grass County	A7	RM 449.96	76841	50% - 2yr	744.73	1188.78	1186.28	2.47	2.38	35.36	28.05	125.73	188.72	2.38	1.88	2.5	2.5
Sweet Grass County	A7	RM 449.86	76356	50% - 2yr	744.73	1188.59	1185.58	2.45	2.3	32.84	22.33	106.89	181.21	2.81	1.91	3.01	3.01
Sweet Grass County	A7	RM 449.77	75860	50% - 2yr	744.73	1188.28	1185.68	2.72	2.45	36.89	34.23	160.76	200.6	1.63	1.51	2.59	2.59
Sweet Grass County	A7	RM 449.68	75373	50% - 2yr	744.73	1187.86	1185.9	2.63	2.52	48.03	45.37	207.04	231.47	1.35	1.28	1.96	1.96
Sweet Grass County	A7	RM 449.59	74904	50% - 2yr	744.73	1187.82	1184.15	1.84	1.69	17.67	12.58	108.8	187.5	3.35	2.36	3.68	3.68
Sweet Grass County	A7	RM 449.48	74351	50% - 2yr	744.73	1187.41	1184.86	2.92	2.56	52.36	34.96	104.44	219.49	1.99	1.32	2.55	2.55
Sweet Grass County	A7	RM 449.37	73741	50% - 2yr	744.73	1187.3	1184.73	1.65	1.62	17.44	15.31	209.86	367.2	1.75	1.53	2.56	2.56
Sweet Grass County	A7	RM 449.26	73165	50% - 2yr	744.73	1187.17	1184.33	1.71	1.12	15.02	6.88	127.28	716.59	2.31	1.04	2.84	2.84
Sweet Grass County	A7	RM 449.10	72364	50% - 2yr	744.73	1186.34	1183.97	3.52	2.64	73.01	29.38	84.85	502.36	2.32	0.91	2.38	2.38
Sweet Grass County	A7	RM 449.00	71858	50% - 2yr	744.73	1185.74	1183.97	3.61	2.67	84.04	46.73	97.61	307.99	1.74	0.95	1.78	1.78
Sweet Grass County	A7	RM 448.88	71223	50% - 2yr	744.73	1185.18	1183.11	2.35	2.22	38.82	32.78	212.59	334.49	1.3	1.1	2.07	2.07
Sweet Grass County	A7	RM 448.76	70537	50% - 2yr	744.73	1185	1182.01	1.35	1.28	12.76	11.69	294.86	468.95	1.36	1.24	2.98	2.98
Sweet Grass County	A7	RM 448.55	69424	50% - 2yr	744.73	1184.71	1181.8	1.64	1.54	15.37	12.99	153.76	233.88	2.45	2.07	2.91	2.91
Sweet Grass County	A7	RM 448.41	68815	50% - 2yr	744.73	1184.12	1181.16	3.09	3.06	44.8	40.39	97.86	110.46	2.46	2.21	2.96	2.96
Sweet Grass County	A7	RM 448.32	68353	50% - 2yr	744.73	1184.29	1179.91	1.5	1.5	11.14	11.08	125.82	137.06	3.94	3.92	4.38	4.38
Sweet Grass County	A7	RM 448.23	67851	50% - 2yr	744.73	1184.16	1179.82	1.85	1.85	16.78	16.78	103.43	106.42	3.9	3.9	4.34	4.34

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	50% - 2yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	50% - 2yr	744.73	1183.67	1180.89	3.07	3.07	54.95	54.95	103.1	133.68	2.35	2.35	2.79	2.79
Sweet Grass County	A7	RM 448.07	67043	50% - 2yr	744.73	1183.34	1180.7	2.46	2.45	36.21	32.64	142.06	196.12	2.13	1.92	2.63	2.63
Sweet Grass County	A7	RM 447.94	66348	50% - 2yr	744.73	1183.05	1180.22	2.35	2.35	30.82	30.82	121.34	235.28	2.61	2.61	2.83	2.83
Sweet Grass County	A7	RM 447.85	65863	50% - 2yr	744.73	1182.62	1180.39	2.92	2.89	52.3	48.41	129.56	181.38	1.97	1.82	2.24	2.24
Sweet Grass County	A7	RM 447.75	65363	50% - 2yr	744.73	1182.58	1179.55	2.01	2.01	20.56	20.56	140.5	236.01	2.64	2.64	3.03	3.03
Sweet Grass County	A7	RM 447.66	64865	50% - 2yr	744.73	1182.34	1179.59	2.38	2.3	31.85	19.28	121.31	286.12	2.58	1.55	2.74	2.74
Sweet Grass County	A7	RM 447.56	64365	50% - 2yr	744.73	1181.87	1179.67	3	2.72	56.39	37.42	132.56	286.94	1.84	1.22	2.2	2.2
Sweet Grass County	A7	RM 447.49	64001	50% - 2yr	744.73	1181.71	1179.82	2.31	2.13	33.68	23.02	193.39	335.41	1.65	1.13	1.89	1.89
Sweet Grass County	A7	RM 447.39	63473	50% - 2yr	744.73	1181.13	1178.85	3.21	2.53	60.27	31.6	89.26	276.14	2.04	1.06	2.28	2.28
Sweet Grass County	A7	RM 447.27	62880	50% - 2yr	744.73	1180.83	1178.26	2.58	2.11	40.3	20.45	100.28	337.65	2.08	1.04	2.58	2.58
Sweet Grass County	A7	RM 447.17	62358	50% - 2yr	744.73	1180.52	1177.92	2.58	1.81	41.19	17.58	109.29	496.77	1.96	0.83	2.6	2.6
Sweet Grass County	A7	RM 447.08	61863	50% - 2yr	744.73	1180.06	1177.91	2.86	1.97	55.27	31.39	98.77	452.66	1.48	0.84	2.14	2.14
Sweet Grass County	A7	RM 446.98	61358	50% - 2yr	744.73	1179.56	1177.28	2.82	2.08	46.69	22.09	93.27	379.81	2.01	0.94	2.28	2.28
Sweet Grass County	A7	RM 446.89	60841	50% - 2yr	744.73	1179.13	1176.94	3.07	2.16	58.08	29.91	77.72	337.97	1.98	1.02	2.19	2.19
Sweet Grass County	A7	RM 446.80	60396	50% - 2yr	744.73	1178.98	1175.92	2.29	1.63	30.59	15.77	91.8	391.41	2.37	1.21	3.06	3.06
Sweet Grass County	A7	RM 446.70	59903	50% - 2yr	744.73	1178.63	1176.22	3	2.1	52.52	25.11	65.84	342.17	2.37	1.1	2.41	2.41
Sweet Grass County	A7	RM 446.60	59371	50% - 2yr	744.73	1178.18	1175.91	3.1	2.43	55.07	30.07	76.01	278.31	2.04	1.1	2.27	2.27
Sweet Grass County	A7	RM 446.51	58868	50% - 2yr	744.73	1177.91	1175.24	2.57	2.26	40.62	30.44	114.79	227.36	1.98	1.48	2.67	2.67
Sweet Grass County	A7	RM 446.41	58363	50% - 2yr	744.73	1177.72	1174.39	2.13	1.93	24.73	17.03	137.23	245.56	2.27	1.57	3.33	3.33
Sweet Grass County	A7	RM 446.30	57762	50% - 2yr	744.73	1177.33	1174.85	2.64	2.47	39.54	33.75	123.97	180.92	1.95	1.67	2.49	2.49
Sweet Grass County	A7	RM 446.22	57365	50% - 2yr	744.73	1176.95	1174.39	2.89	2.89	48.69	48.17	126.1	127.48	2.04	2.02	2.55	2.55
Sweet Grass County	A7	RM 446.12	56852	50% - 2yr	744.73	1176.67	1174.04	2.61	2.61	38.3	37.89	139.14	140.61	2.05	2.03	2.63	2.63
Sweet Grass County	A7	RM 446.02	56303	50% - 2yr	744.73	1176.51	1173.3	2.28	2.18	27.66	23.32	97.65	178.19	3.15	2.64	3.22	3.22
Sweet Grass County	A7	RM 445.94	55871	50% - 2yr	744.73	1175.96	1173.6	3.43	3.22	70.97	60.87	93.73	133.15	2.09	1.79	2.36	2.36
Sweet Grass County	A7	RM 445.82	55236	50% - 2yr	744.73	1175.66	1173.05	2.23	2.18	32.54	28.83	204.71	237.56	1.62	1.44	2.61	2.61
Sweet Grass County	A7	RM 445.71	54753	50% - 2yr	744.73	1175.48	1172.38	1.98	1.96	19.48	18.84	206.46	216.52	1.81	1.76	3.1	3.1
Sweet Grass County	A7	RM 445.60	54202	50% - 2yr	744.73	1175.27	1172.32	2.06	2.06	22.8	22.17	184.33	199.69	1.96	1.91	2.95	2.95
Sweet Grass County	A7	RM 445.46	53453	50% - 2yr	744.73	1174.76	1171.04	2.72	2.65	37.63	31.27	128.18	165.93	2.12	1.76	3.72	3.72
Sweet Grass County	A7	RM 445.36	52888	50% - 2yr	744.73	1174.53	1170.25	2.55	2.26	36.18	21.54	99.95	209.65	2.72	1.61	4.28	4.28
Sweet Grass County	A7	RM 445.26	52344	50% - 2yr	744.73	1174.09	1171.35	3.01	2.84	53.2	40.07	104.27	155.79	2.28	1.72	2.74	2.74
Sweet Grass County	A7	RM 445.17	51873	50% - 2yr	744.73	1173.41	1171.83	3.52	3.42	83.1	74.04	134.02	160.75	1.52	1.35	1.57	1.57
Sweet Grass County	A7	RM 445.07	51376	50% - 2yr	744.73	1173.35	1170.28	2	1.98	24.49	22.04	181.07	221.57	2.03	1.83	3.07	3.07
Sweet Grass County	A7	RM 444.97	50844	50% - 2yr	744.73	1172.92	1170.19	2.65	2.65	39.73	39.45	145.08	146.13	1.94	1.92	2.73	2.73
Sweet Grass County	A7	RM 444.88	50352	50% - 2yr	744.73	1172.66	1170.05	2.49	2.44	35.58	30.39	141.83	170.03	2.1	1.79	2.61	2.61
Sweet Grass County	A7	RM 444.79	49860	50% - 2yr	744.73	1172.28	1169.94	2.77	2.58	46.75	35.2	129.83	188.4	2.03	1.53	2.34	2.34
Sweet Grass County	A7	RM 444.69	49316	50% - 2yr	744.73	1171.91	1169.55	2.76	2.54	45.57	37.29	124.07	168.99	2.12	1.74	2.36	2.36
Sweet Grass County	A7	RM 444.60	48863	50% - 2yr	744.73	1171.94	1167.23	1.9	1.71	17.29	10.61	86.2	190.93	4.45	2.66	4.7	4.7
Sweet Grass County	A7	RM 444.50	48367	50% - 2yr	744.73	1171.56	1168.66	2.94	2.44	50.55	31.94	101.93	216.03	2.3	1.45	2.89	2.89
Sweet Grass County	A7	RM 444.41	47863	50% - 2yr	744.73	1171.45	1168.6	2.17	2.05	25.72	23.05	129.63	234.98	2.3	2.06	2.86	2.86
Sweet Grass County	A7	RM 444.30	47336	50% - 2yr	744.73	1171.34	1168.26	1.82	1.77	18.07	13.91	163.77	526.52	2.49	1.91	3.08	3.08
Sweet Grass County	A7	RM 444.20	46789	50% - 2yr	744.73	1170.69	1167.97	3.32	3.31	65.72	60.42	102.84	116.74	2.18	2	2.72	2.72
Sweet Grass County	A7	RM 444.12	46346	50% - 2yr	744.73	1170.45	1167.62	2.92	2.8	48.39	39.09	98.41	131.77	2.57	2.07	2.82	2.82
Sweet Grass County	A7	RM 444.02	45829	50% - 2yr	744.73	1170.26	1167.57	2.47	2.43	30.85	24.47	141.31	180.99	2.13	1.69	2.7	2.7
Sweet Grass County	A7	RM 443.91	45243	50% - 2yr	744.73	1169.97	1167.08	2.45	2.42	36.53	27.74	150.43	200.99	2.02	1.53	2.89	2.89
Sweet Grass County	A7	RM 443.84	44853	50% - 2yr	744.73	1169.39	1167.23	3.18	3.18	70.44	70.44	172.26	172.26	1.36	1.36	2.16	2.16
Sweet Grass County	A7	RM 443.75	44415	50% - 2yr	744.73	1169.16	1166.67	2.3	2.3	33.57	33.57	182.39	214.38	1.78	1.78	2.49	2.49
Sweet Grass County	A7	RM 443.64	43870	50% - 2yr	744.73	1168.78	1166.09	2.63	2.27	42.05	27.04	110.01	279.34	2.03	1.3	2.69	2.69
Sweet Grass County	A7	RM 443.53	43290	50% - 2yr	744.73	1168.61	1165.72	2.2	1.96	27.19	20.36	87.2	227.59	2.61	1.94	2.89	2.89
Sweet Grass County	A8	RM 443.45	42860	50% - 2yr	744.73	1168.27	1165.25	2.64	2.63	39.68	38.9	125.03	137.81	2.26	2.22	3.02	3.02
Sweet Grass County	A8	RM 443.35	42363	50% - 2yr	744.73	1167.79	1164.95	3.14	3	57.78	41.4	101.53	196.71	2.3	1.64	2.84	2.84
Sweet Grass County	A8	RM 443.25	41863	50% - 2yr	744.73	1167.64	1165.05	2.39	2.13	33.79	22.87	127.52	316.02	2.2	1.49	2.59	2.59
Sweet Grass County	A8	RM 443.16	41342	50% - 2yr	744.73	1167.39	1165.43	2.28	1.86	34.24	23.95	150.81	406.45	1.61	1.13	1.95	1.95
Sweet Grass County	A8	RM 443.07	40863	50% - 2yr	744.73	1166.96	1164.49	2.58	2.01	42.94	23.86	139	395.71	1.69	0.94	2.47	2.47
Sweet Grass County	A8	RM 442.97	40345	50% - 2yr	744.73	1166.68	1164.28	2.18	1.62	26.81	17.67	159.73	463.88	1.65	1.08	2.41	2.41
Sweet Grass County	A8	RM 442.88	39863	50% - 2yr	744.73	1166.49	1164.06	1.84	1.52	21.11	15.57	177.05	484.41	1.57	1.16	2.44	2.44
Sweet Grass County	A8	RM 442.78	39363	50% - 2yr	744.73	1165.76	1164.18	3.17	2.96	70.74	50.37	121.89	314.95	1.3	0.93	1.91	1.91
Sweet Grass County	A8	RM 442.68	38840	50% - 2yr	744.73	1165.48	1162.8	2.18	1.74	23.45	13.38	117.57	409.5	1.85	1.05	2.68	2.68
Sweet Grass County	A8	RM 442.60	38390	50% - 2yr	744.73	1165.43	1162.57	1.43	1.25	12.41	8.57	157.4	430.84	2.04	1.41	2.86	2.86
Sweet Grass County	A8	RM 442.50	37863	50% - 2yr	744.73	1164.99	1162.29	2.8	2.36	41.44	28.28	90.93	273.25	2.23	1.52	2.7	2.7
Sweet Grass County	A8	RM 442.42	37461	50% - 2yr	744.73	1164.64	1162.07	3.12	2.62	42.34	25.28	120.87	347.97	1.59	0.94	2.57	2.57

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	50% - 2yr	744.73	1164.28	1161.85	2.86	2.39	50.58	27.89	102.56	315.88	1.95	1.07	2.43	2.43
Sweet Grass County	A8	RM 442.24	36451	50% - 2yr	744.73	1164.03	1161.75	2.41	2.18	31.59	27	121.36	247.12	1.62	1.38	2.28	2.28
Sweet Grass County	A8	RM 442.12	35820	50% - 2yr	744.73	1163.74	1161.12	2.32	1.99	27.21	20.73	120.11	272.66	1.85	1.4	2.62	2.62
Sweet Grass County	A8	RM 442.03	35367	50% - 2yr	744.73	1163.45	1161.18	2.45	2.2	39.02	30.82	122.33	261.82	1.66	1.32	2.27	2.27
Sweet Grass County	A8	RM 441.95	34945	50% - 2yr	744.73	1163.39	1160.28	1.69	1.48	16.97	11.07	133.12	361.75	2.24	1.44	3.1	3.1
Sweet Grass County	A8	RM 441.84	34360	50% - 2yr	744.73	1162.93	1160.33	2.59	2.31	34.18	21.99	186.06	334.55	1.5	0.96	2.6	2.6
Sweet Grass County	A8	RM 441.74	33863	50% - 2yr	744.73	1162.6	1160.06	2.52	2.21	34.65	23.9	171.23	293.73	1.66	1.14	2.54	2.54
Sweet Grass County	A8	RM 441.65	33357	50% - 2yr	744.73	1162.45	1159.78	1.98	1.64	22.52	10.13	173.07	500.67	2.1	0.94	2.67	2.67
Sweet Grass County	A8	RM 441.53	32732	50% - 2yr	744.73	1162.11	1159.44	2.35	1.97	33.69	16.79	148.74	374.17	2.04	1.01	2.67	2.67
Sweet Grass County	A8	RM 441.47	32366	50% - 2yr	744.73	1162.01	1158.95	2.09	1.67	25.11	11.41	138.9	445.36	2.42	1.1	3.05	3.05
Sweet Grass County	A8	RM 441.38	31928	50% - 2yr	744.73	1162.01	1158.24	1.43	0.94	11.36	5.11	153.74	805.67	2.69	1.21	3.76	3.76
Sweet Grass County	A8	RM 441.27	31350	50% - 2yr	744.73	1161.4	1158.76	3.25	2.65	62.72	25.96	93.94	332.08	2.19	0.9	2.65	2.65
Sweet Grass County	A8	RM 441.18	30882	50% - 2yr	744.73	1161.3	1158.5	2.33	1.76	29.52	8.82	125.76	654.27	2.17	0.65	2.79	2.79
Sweet Grass County	A8	RM 441.07	30295	50% - 2yr	744.73	1161.09	1158.19	2.11	1.66	26.52	7.47	149.54	736.22	2.2	0.62	2.9	2.9
Sweet Grass County	A8	RM 441.00	29913	50% - 2yr	744.73	1160.96	1157.63	2.1	1.56	26.21	8.05	146.59	721.99	2.17	0.66	3.32	3.32
Sweet Grass County	A8	RM 440.80	28852	50% - 2yr	744.73	1160.07	1157.49	3.21	2.91	57.31	35.68	103.86	192.71	2.13	1.33	2.58	2.58
Sweet Grass County	A8	RM 440.60	27841	50% - 2yr	744.73	1159.24	1157.2	2.86	2.53	53.12	33.12	121.05	286.07	1.67	1.04	2.04	2.04
Sweet Grass County	A8	RM 440.51	27361	50% - 2yr	744.73	1158.83	1156.41	2.75	2.22	46.76	29.6	106.47	275.01	1.93	1.22	2.42	2.42
Sweet Grass County	A8	RM 440.42	26862	50% - 2yr	744.73	1158.19	1156.26	3.33	2.7	72.8	43.67	88.38	285.1	1.62	0.97	1.93	1.93
Sweet Grass County	A8	RM 440.30	26223	50% - 2yr	744.73	1158.03	1155.63	1.73	1.4	18.84	11.82	94.21	469.02	1.82	1.13	2.4	2.4
Sweet Grass County	A8	RM 440.17	25466	50% - 2yr	744.73	1157.62	1154.7	2.72	1.9	43.28	20.28	64.56	365.73	2.37	1.07	2.92	2.92
Sweet Grass County	A8	RM 440.06	24863	50% - 2yr	744.73	1157.37	1153.97	2.16	1.94	26.66	16.16	129.95	258.58	2.46	1.48	3.4	3.4
Sweet Grass County	A8	RM 439.96	24366	50% - 2yr	744.73	1157.1	1154.18	2.56	2.24	36.68	24.66	94.77	195.99	2.61	1.75	2.91	2.91
Sweet Grass County	A8	RM 439.87	23863	50% - 2yr	744.73	1156.92	1153.59	2.4	2.2	29.36	19.44	103.39	189.3	2.95	1.95	3.33	3.33
Sweet Grass County	A8	RM 439.77	23365	50% - 2yr	744.73	1156.71	1153.6	2.47	2.44	31.91	28.2	124.68	166.96	2.41	2.13	3.12	3.12
Sweet Grass County	A8	RM 439.68	22863	50% - 2yr	744.73	1156.46	1153.45	2.58	2.57	34.96	32.34	126.3	151.49	2.28	2.11	3.01	3.01
Sweet Grass County	A8	RM 439.58	22363	50% - 2yr	744.73	1156.33	1153.39	2.13	1.98	24.99	19.1	150.28	230.93	2.28	1.75	2.94	2.94
Sweet Grass County	A8	RM 439.49	21863	50% - 2yr	744.73	1156.2	1152.86	2.06	1.92	22.66	14.43	116.13	211.14	3.06	1.95	3.34	3.34
Sweet Grass County	A8	RM 439.39	21363	50% - 2yr	744.73	1156.01	1153.06	2.25	2.21	28.24	19	131.04	227.77	2.53	1.69	2.96	2.96
Sweet Grass County	A8	RM 439.30	20863	50% - 2yr	744.73	1155.59	1152.92	2.92	2.79	47.72	28.07	110.38	215.58	2.3	1.35	2.67	2.67
Sweet Grass County	A8	RM 439.20	20353	50% - 2yr	744.73	1155.08	1152.64	3.26	3.22	58.95	55.2	109.5	118.77	2.08	1.95	2.44	2.44
Sweet Grass County	A8	RM 439.11	19864	50% - 2yr	744.73	1154.99	1152.34	2.39	2.07	33.09	21.13	98.01	243.13	2.38	1.52	2.65	2.65
Sweet Grass County	A8	RM 439.01	19360	50% - 2yr	744.73	1154.46	1152.4	3.03	2.9	53.12	43.88	124.13	191.46	1.62	1.34	2.06	2.06
Sweet Grass County	A8	RM 438.91	18848	50% - 2yr	744.73	1154.21	1151.92	2.43	2.12	33.18	23.35	121.85	268.57	1.85	1.31	2.29	2.29
Sweet Grass County	A8	RM 438.82	18363	50% - 2yr	744.73	1153.97	1151.23	2.31	2.03	32.18	23.42	115.42	258.29	2.1	1.53	2.74	2.74
Sweet Grass County	A8	RM 438.73	17853	50% - 2yr	744.73	1153.49	1151.37	2.89	2.52	45.65	32.61	119.79	276.31	1.5	1.07	2.12	2.12
Sweet Grass County	A8	RM 438.63	17363	50% - 2yr	744.73	1153.27	1150.74	2.35	1.86	33.27	19.27	100.37	331.52	2.09	1.21	2.53	2.53
Sweet Grass County	A8	RM 438.54	16863	50% - 2yr	744.73	1153.12	1150.59	2.03	1.75	24.14	17.51	103.82	253.07	2.35	1.68	2.53	2.53
Sweet Grass County	A8	RM 438.43	16307	50% - 2yr	744.73	1152.97	1149.52	1.84	1.84	19	19	158	172.17	2.57	2.57	3.45	3.45
Sweet Grass County	A9	RM 438.36	15889	50% - 2yr	744.73	1152.84	1149.4	1.96	1.94	16.79	15.86	187.18	200.55	2.02	1.91	3.44	3.44
Sweet Grass County	A9	RM 438.26	15363	50% - 2yr	744.73	1152.41	1149.84	2.86	2.62	46.54	36.89	113.53	163.1	2.19	1.74	2.57	2.57
Sweet Grass County	A9	RM 438.16	14863	50% - 2yr	744.73	1152.22	1149.31	2.47	2.19	32.72	18.56	117.7	240.67	2.5	1.42	2.9	2.9
Sweet Grass County	A9	RM 438.07	14394	50% - 2yr	744.73	1151.98	1149.19	2.55	2.14	38.31	18.26	125.39	331.23	2.24	1.06	2.79	2.79
Sweet Grass County	A9	RM 437.96	13827	50% - 2yr	744.73	1151.73	1149.19	2.45	1.93	36.45	15.27	117.95	456.52	2.03	0.85	2.53	2.53
Sweet Grass County	A9	RM 437.88	13363	50% - 2yr	744.73	1151.44	1148.94	2.66	2.04	38.55	18.77	102.58	391.9	2.01	0.97	2.5	2.5
Sweet Grass County	A9	RM 437.78	12844	50% - 2yr	744.73	1151.18	1148.72	2.57	1.98	37.14	16.91	98.57	415.51	2.06	0.93	2.46	2.46
Sweet Grass County	A9	RM 437.69	12354	50% - 2yr	744.73	1151.05	1148.45	1.85	1.52	21.67	12.85	146.24	468.98	1.82	1.08	2.6	2.6
Sweet Grass County	A9	RM 437.59	11863	50% - 2yr	744.73	1150.75	1148.76	2.19	1.91	33.16	22.55	147.59	413.12	1.39	0.95	2.34	2.34
Sweet Grass County	A9	RM 437.50	11362	50% - 2yr	744.73	1150.54	1148.29	1.83	1.56	22.13	14.68	185.18	453.45	1.58	1.05	2.24	2.24
Sweet Grass County	A9	RM 437.41	10902	50% - 2yr	744.73	1150.24	1148.26	2.15	1.83	31.85	20.02	175.96	464.12	1.39	0.88	1.98	1.98
Sweet Grass County	A9	RM 437.31	10361	50% - 2yr	744.73	1149.84	1147.37	2.37	1.88	36.5	20.63	147.52	418.75	1.66	0.94	2.47	2.47
Sweet Grass County	A9	RM 437.20	9764	50% - 2yr	744.73	1149.47	1147.02	2.5	1.87	34.42	16.32	104.51	433.53	1.95	0.92	2.46	2.46
Sweet Grass County	A9	RM 437.08	9128	50% - 2yr	744.73	1149.08	1146.9	2.35	2.05	33.17	21.67	187.04	378	1.47	0.96	2.18	2.18
Sweet Grass County	A9	RM 436.95	8363	50% - 2yr	744.73	1148.9	1145.32	2	1.33	15.39	7.7	101.72	505.85	2.27	1.11	3.58	3.58
Sweet Grass County	A9	RM 436.83	7805	50% - 2yr	744.73	1148.76	1145.93	1.48	1.4	15.1	10.6	154.04	661.29	1.43	1	2.83	2.83
Sweet Grass County	A9	RM 436.75	6857	50% - 2yr	744.73	1148.24	1145.61	2.86	1.95	49.33	13.82	66.21	655.5	2.11	0.58	2.63	2.63
Sweet Grass County	A9	RM 436.66	6193	50% - 2yr	744.73	1147.8	1145.68	2.58	1.87	41.9	18.16	97.51	530.85	1.77	0.77	2.12	2.12
Sweet Grass County	A9	RM 436.56	5280	50% - 2yr	744.73	1147.27	1144.44	2.96	1.84	49.3	16.35	50.6	468.95	2.77	0.86	2.83	2.83
Sweet Grass County	A9	RM 436.40	4576	50% - 2yr	744.73	1147.04	1144.05	2.45	1.52	33.65	12.61	53.9	534.94	2.77	0.99	3	3
Sweet Grass County	A9	RM 436.29	3787	50% - 2yr	744.73	1146.59	1144.44	2.57	2.13	42.09	28.15	95.7	382.44	1.77	1.18	2.15	2.15
Sweet Grass County	A9	RM 436.16	3087	50% - 2yr	744.73	1145.88	1143.57	2.91	2.45	54.66	35.65	107.65	338.56	1.7	1.11	2.31	2.31

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	50% - 2yr	744.73	1145.63	1143.09	2.52	1.96	34.54	21.46	101.56	426.58	1.71	1.06	2.54	2.54
Sweet Grass County	A9	RM 435.98	2200	50% - 2yr	744.73	1145.29	1142.85	2.7	2.1	44.88	25.53	69.23	378.14	1.99	1.11	2.44	2.44
Sweet Grass County	A9	RM 435.88	1580	50% - 2yr	744.73	1144.78	1142.56	2.66	2.22	47.41	28.6	60.3	365.71	1.55	0.92	2.22	2.22
Sweet Grass County	A9	RM 435.73	890	50% - 2yr	744.73	1144.47	1141.99	2	1.73	25.2	18.15	75.84	340.68	1.9	1.33	2.47	2.47
Sweet Grass County	A9	RM 435.62	104	50% - 2yr	744.73	1143.87	1141.54	2.63	2.3	46.64	33.73	125.09	301.67	1.5	1.08	2.33	2.33

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	50% - 2yr	744.8	1143.6	1140.73	1.51	1.42	14.73	12.25	147.04	377.74	1.66	1.39	2.91	2.91
Stillwater County	A9	RM 435.38	231282.1	50% - 2yr	744.8	1143.33	1139.61	1.61	1.55	15.58	13.44	195.91	261.93	2.12	1.83	3.72	3.72
Stillwater County	A9	RM 435.25	230611.3	50% - 2yr	744.8	1142.79	1138.48	2.83	2.8	45.8	42.35	108.17	118.05	2.43	2.25	4.31	4.31
Stillwater County	A9	RM 435.16	230122.9	50% - 2yr	744.8	1142.52	1138.39	2.8	2.76	44.35	35.44	105.27	133.72	2.53	2.02	4.13	4.13
Stillwater County	A9	RM 435.07	229649	50% - 2yr	744.8	1142.28	1137.85	2.77	2.64	42.39	27.48	99.18	161.94	2.7	1.74	4.43	4.43
Stillwater County	A9	RM 434.97	229153	50% - 2yr	744.8	1142	1137.87	2.83	2.72	45.41	33.81	102.08	146.62	2.51	1.87	4.13	4.13
Stillwater County	A9	RM 434.84	228443.5	50% - 2yr	744.8	1141.64	1137	2.77	2.64	42.55	32.7	97.13	136.61	2.69	2.07	4.64	4.64
Stillwater County	A9	RM 434.73	227855.5	50% - 2yr	744.8	1141.44	1135.61	2.61	2.57	34.53	27.02	79.07	106.47	3.6	2.8	5.83	5.83
Stillwater County	A9	RM 434.63	227328.2	50% - 2yr	744.8	1141.29	1135.42	2.53	2.53	33.1	33.1	88.32	94.98	3.33	3.33	5.87	5.87
Stillwater County	A9	RM 434.57	227011.2	50% - 2yr	744.8	1141.17	1136.35	2.57	2.57	36.12	36.12	102.13	108.23	2.83	2.83	4.82	4.82
Stillwater County	A9	RM 434.53	226817.6	50% - 2yr	744.8	1141.04	1136.73	2.71	2.71	42.29	42.29	114.68	119.12	2.4	2.4	4.31	4.31
Stillwater County	A10	RM 434.49	226573.3	50% - 2yr	744.8	1140.95	1137.23	2.45	2.45	34.17	34.17	123.14	151.08	2.47	2.47	3.72	3.72
Stillwater County			226533.4	50% - 2yr	Bridge												
Stillwater County	A10	RM 434.47	226483	50% - 2yr	744.8	1140.85	1137.49	2.45	2.45	35.14	35.14	132.79	174.48	2.29	2.29	3.36	3.36
Stillwater County	A10	RM 434.42	226233.2	50% - 2yr	744.8	1140.71	1137.1	2.5	2.5	37.11	37.11	136.5	138.03	2.18	2.18	3.6	3.6
Stillwater County	A10	RM 434.37	225940.2	50% - 2yr	744.8	1140.51	1136.51	2.64	2.64	40.43	40.43	119.77	121	2.35	2.35	4	4
Stillwater County	A10	RM 434.24	225278.2	50% - 2yr	744.8	1140.23	1136.56	2.44	2.34	34.08	30.85	113.41	143.38	2.46	2.23	3.67	3.67
Stillwater County	A10	RM 434.15	224819.6	50% - 2yr	744.8	1139.99	1137.06	2.45	2.3	37.22	31.43	153.94	202.07	1.9	1.6	2.93	2.93
Stillwater County	A10	RM 434.07	224366.5	50% - 2yr	744.8	1139.61	1136.55	2.64	2.59	43.64	40.49	104.17	163.72	1.88	1.76	3.21	3.21
Stillwater County	A10	RM 433.98	223883.5	50% - 2yr	744.8	1139.43	1136.28	2.13	2.07	28.81	26.22	132.75	218.84	1.8	1.65	3.15	3.15
Stillwater County	A10	RM 433.87	223309.3	50% - 2yr	744.8	1139.18	1135.82	2.27	2.08	30.25	25.81	105.72	197.69	2.25	1.92	3.36	3.36
Stillwater County	A10	RM 433.78	222850	50% - 2yr	744.8	1138.92	1135.54	2.29	2.29	32.64	32.58	172.35	198.57	1.89	1.89	3.38	3.38
Stillwater County	A10	RM 433.66	222201.9	50% - 2yr	744.8	1138.56	1135.16	2.41	2.41	34.27	34.27	139.35	146.07	2.22	2.22	3.4	3.4
Stillwater County	A10	RM 433.54	221596.6	50% - 2yr	744.8	1138.2	1135.33	2.58	2.57	39.22	36.62	128.93	138.87	2.24	2.09	2.87	2.87
Stillwater County	A10	RM 433.42	220956.2	50% - 2yr	744.8	1137.84	1134.88	2.6	2.6	39.41	36.74	123	153.27	2.32	2.17	2.96	2.96
Stillwater County	A10	RM 433.31	220362.5	50% - 2yr	744.8	1137.54	1134.67	2.33	2.3	35.64	32.63	200.44	252.9	1.59	1.46	2.86	2.86
Stillwater County	A10	RM 433.20	219758.6	50% - 2yr	744.8	1137.25	1134.17	1.98	1.7	25.51	18.41	148.63	402.35	1.64	1.18	3.08	3.08
Stillwater County	A10	RM 433.09	219185.2	50% - 2yr	744.8	1136.95	1133.45	2.07	2.07	26.09	26.09	176.7	196.63	2.04	2.04	3.5	3.5
Stillwater County	A10	RM 432.97	218599.7	50% - 2yr	744.8	1136.59	1133.57	2.43	2.38	35.76	33.84	146.27	181.1	2.07	1.96	3.02	3.02
Stillwater County	A10	RM 432.84	217905.9	50% - 2yr	744.8	1136.28	1132.7	2.32	2.22	31.26	28.27	134.22	160.59	2.32	2.1	3.58	3.58
Stillwater County	A10	RM 432.69	217146.9	50% - 2yr	744.8	1135.87	1131.51	2.68	2.58	37.98	30.67	88.78	115.27	3.11	2.5	4.36	4.36
Stillwater County	A10	RM 432.60	216656.8	50% - 2yr	744.8	1135.71	1132.1	2.53	2.46	34.74	25.98	101.78	141.12	2.89	2.15	3.61	3.61
Stillwater County	A10	RM 432.45	215889.7	50% - 2yr	744.8	1135.4	1132.07	2.44	2.43	34.77	33.5	132.06	163.63	2.31	2.22	3.33	3.33
Stillwater County	A10	RM 432.35	215361.3	50% - 2yr	744.8	1135.19	1132.33	2.27	2.23	30.81	27.94	155.21	199.36	2.11	1.92	2.86	2.86
Stillwater County	A10	RM 432.20	214585.3	50% - 2yr	764.7	1134.68	1131.29	2.67	2.66	41.51	40.08	123.84	128.66	2.31	2.23	3.39	3.39
Stillwater County	A10	RM 432.10	214039.1	50% - 2yr	764.7	1134.44	1130.7	2.52	2.26	36.55	25.25	124.1	269.59	2.37	1.64	3.74	3.74
Stillwater County	A10	RM 432.02	213606.1	50% - 2yr	764.7	1134.32	1130.52	2.1	2	26.23	22.39	159.96	212.8	2.17	1.86	3.8	3.8
Stillwater County	A10	RM 431.87	212811.5	50% - 2yr	764.7	1133.9	1129.24	2.33	2.22	34.07	28.81	171.53	227.22	1.85	1.56	4.66	4.66
Stillwater County	A10	RM 431.74	212127.4	50% - 2yr	764.7	1133.7	1129.66	1.9	1.38	21.44	14.57	160.63	377	2.21	1.5	4.04	4.04
Stillwater County	A10	RM 431.60	211373.6	50% - 2yr	764.7	1133.24	1129.96	2.52	2.48	37.03	34.74	132.09	149.89	2.29	2.15	3.28	3.28
Stillwater County	A10	RM 431.49	210820.2	50% - 2yr	764.7	1132.99	1129.62	2.45	2.42	34.61	31.69	129.24	150.71	2.4	2.2	3.36	3.36
Stillwater County	A10	RM 431.41	210365.9	50% - 2yr	764.7	1132.73	1129.57	2.58	2.56	38.68	36.3	128.49	137.83	2.31	2.17	3.16	3.16
Stillwater County	A10	RM 431.28	209716.5	50% - 2yr	764.7	1132.39	1129.79	2.43	2.42	36.45	33.41	162.79	178.28	1.93	1.77	2.6	2.6
Stillwater County	A10	RM 431.14	208918.5	50% - 2yr	764.7	1132.01	1129.82	1.96	2.17	25.18	28	128.12	196.1	1.61	1.8	3.26	3.26
Stillwater County	A10	RM 431.03	208358.8	50% - 2yr	764.7	1131.63	1128.56	2.33	2.43	36.43	38.74	118.09	194.66	1.51	1.61	3.07	3.07
Stillwater County	A10	RM 430.93	207821.9	50% - 2yr	764.7	1131.31	1128.76	2.33	2.16	35.92	29.98	122.74	270.37	1.58	1.32	2.54	2.54
Stillwater County	A10	RM 430.83	207325.6	50% - 2yr	764.7	1131.01	1127.66	2.26	2.14	32.15	29.88	152.16	206.53	1.85	1.73	3.35	3.35
Stillwater County	A10	RM 430.70	206629.1	50% - 2yr	764.7	1130.87	1126.9	1.69	1.61	16.03	14.32	149.53	218.1	2.41	2.17	3.97	3.97
Stillwater County	A10	RM 430.59	206064.9	50% - 2yr	764.7	1130.71	1127.2	1.9	1.78	20.16	17.33	134.34	200.41	2.61	2.25	3.51	3.51
Stillwater County	A10	RM 430.51	205629.5	50% - 2yr	764.7	1130.41	1126.28	2.54	2.45	35.68	30.48	103.84	132.94	2.74	2.35	4.13	4.13
Stillwater County	A10	RM 430.43	205204.2	50% - 2yr	764.7	1130.22	1126.08	2.61	2.51	36.72	32.76	96.72	126.37	2.91	2.6	4.14	4.14
Stillwater County	A10	RM 430.34	204728.4	50% - 2yr	764.7	1130	1126.07	2.69	2.59	39.62	31.2	99.92	147.9	2.77	2.18	3.93	3.93
Stillwater County	A11	RM 430.23	204119.7	50% - 2yr	764.7	1129.88	1126.63	2.01	1.95	23.65	19.16	167.33	315.56	2.27	1.84	3.25	3.25
Stillwater County	A11	RM 430.12	203479.6	50% - 2yr	764.7	1129.62	1126.96	2.3	2.21	31.62	24.34	108.9	291.65	2.13	1.64	3.09	3.09
Stillwater County	A11	RM 430.04	202968.2	50% - 2yr	764.7	1129.36	1127.24	2.29	2.27	32.72	29.34	111.58	227.64	1.89	1.7	2.72	2.72
Stillwater County	A11	RM 429.95	202589.5	50% - 2yr	764.7	1129.13	1126.33	2.15	2.19	30.17	29.21	140	239.78	1.66	1.61	2.8	2.8
Stillwater County	A11	RM 429.88	202224.7	50% - 2yr	764.7	1128.93	1125.62	2.21	2.16	30.1	25.21	122.11	247.95	1.95	1.64	3.31	3.31
Stillwater County	A11	RM 429.78	201933.6	50% - 2yr	764.7	1128.66	1123.72	2.56	2.34	37.49	26.64	88.67	224.9	2.49	1.76	4.94	4.94
Stillwater County	A11	RM 429.69	201539.9	50% - 2yr	764.7	1128.34	1123.39	2.85	2.4	47.16	32.4	88.38	202.95	2.36	1.61	4.95	4.95
Stillwater County	A11	RM 429.58	200961.9	50% - 2yr	764.7	1128.07	1124.69	2.43	1.89	35.76	21.15	116.65	359.02	1.91	1.13	3.38	3.38

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	50% - 2yr	764.7	1127.61	1125.15	1.93	1.77	24.48	18.89	183.85	350.77	1.59	1.23	3.18	3.18
Stillwater County	A11	RM 429.28	199644.1	50% - 2yr	764.7	1127.31	1123.59	2.1	1.89	27.94	18.8	147.38	333.85	1.8	1.21	3.72	3.72
Stillwater County	A11	RM 429.18	199152	50% - 2yr	764.7	1127.07	1124.66	1.8	1.82	21.94	16.64	143.04	374.03	1.48	1.12	3.16	3.16
Stillwater County	A11	RM 429.10	198708.6	50% - 2yr	764.7	1126.72	1124.26	2.23	2.27	32.58	29.09	84.92	231.48	1.63	1.46	3.13	3.13
Stillwater County	A11	RM 429.00	198203.8	50% - 2yr	764.7	1126.45	1123.47	1.93	2.03	26.08	25.53	121.45	285.78	1.34	1.32	2.98	2.98
Stillwater County	A11	RM 428.89	197650.5	50% - 2yr	764.7	1126.25	1121.26	2.07	1.82	25.26	17.99	149.66	261.35	2.25	1.61	4.99	4.99
Stillwater County	A11	RM 428.81	197194.1	50% - 2yr	764.7	1126.03	1121.47	2.38	1.98	31.35	16.39	97.94	276.84	2.68	1.4	4.56	4.56
Stillwater County	A11	RM 428.66	196404.4	50% - 2yr	764.7	1125.82	1122.31	1.88	1.85	21.75	19.34	187.21	286.59	1.96	1.75	3.51	3.51
Stillwater County	A11	RM 428.52	195702.6	50% - 2yr	764.7	1125.42	1122.1	2.24	2.24	32.38	32.38	200.27	258.37	1.7	1.7	3.32	3.32
Stillwater County	A11	RM 428.44	195293.8	50% - 2yr	764.7	1125.18	1121.18	2.35	2.32	32.25	29.83	143.39	212.51	2.27	2.1	4	4
Stillwater County	A11	RM 428.39	195075.5	50% - 2yr	764.7	1125	1120.72	2.62	2.61	39.64	36.94	122.37	196.79	2.38	2.22	4.28	4.28
Stillwater County	A11	RM 428.33	194724.6	50% - 2yr	764.7	1124.86	1121.22	2.47	2.46	35.14	32.86	130.68	227.56	2.37	2.22	3.64	3.64
Stillwater County	A11	RM 428.28	194450.8	50% - 2yr	764.7	1124.74	1121.2	2.41	2.4	34.16	31.34	141.98	322.38	2.23	2.05	3.54	3.54
Stillwater County	A11	RM 428.23	194235.2	50% - 2yr	764.7	1124.66	1120.74	2.31	2.29	30.95	28.7	141.59	392.78	2.33	2.16	3.92	3.92
Stillwater County	A11	RM 428.20	194033.4	50% - 2yr	764.7	1124.61	1120.37	2.21	2.11	27	23	119.95	339.42	2.74	2.33	4.24	4.24
Stillwater County			193969.6	50% - 2yr	Bridge												
Stillwater County	A11	RM 428.17	193915	50% - 2yr	764.7	1124.34	1120.32	2.36	2.23	30.73	25.51	113.61	219.03	2.71	2.24	4.02	4.02
Stillwater County			193871.1	50% - 2yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	50% - 2yr	764.7	1124.22	1120.23	2.41	2.23	32.55	25.12	114.51	204.73	2.59	1.99	3.99	3.99
Stillwater County	A11	RM 428.11	193602.7	50% - 2yr	764.7	1124.17	1119.42	2.24	2.09	28.78	23.04	126.66	245.09	2.45	1.95	4.75	4.75
Stillwater County	A11	RM 428.09	193436.6	50% - 2yr	764.7	1124.06	1119.9	2.4	2.24	33.47	28.57	116.99	279.6	2.37	2.02	4.16	4.16
Stillwater County	A11	RM 428.05	193246.1	50% - 2yr	764.7	1123.93	1120.1	2.53	2.29	37.82	28.08	123.16	242.48	2.22	1.64	3.83	3.83
Stillwater County	A11	RM 428.00	192989.8	50% - 2yr	764.7	1123.83	1120.28	2.39	2.16	33.39	24.67	125.49	264.06	2.3	1.69	3.55	3.55
Stillwater County	A11	RM 427.95	192728.8	50% - 2yr	764.7	1123.72	1119.57	2.31	2.15	31.05	22.56	131.57	329.23	2.36	1.71	4.15	4.15
Stillwater County	A11	RM 427.88	192333.2	50% - 2yr	764.7	1123.48	1119.27	2.62	2.43	38.26	25.58	101.61	219.05	2.66	1.77	4.21	4.21
Stillwater County	A11	RM 427.83	192088.8	50% - 2yr	764.7	1123.37	1119.18	2.61	2.49	37.81	28.91	101.98	271.06	2.67	2.04	4.19	4.19
Stillwater County	A11	RM 427.76	191724.1	50% - 2yr	764.7	1123.24	1119.07	2.51	2.29	34.4	24.49	101.84	173.25	2.8	1.98	4.17	4.17
Stillwater County			191581.1	50% - 2yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	50% - 2yr	764.7	1122.78	1118.71	2.74	2.7	42.26	38.73	106.64	119.51	2.6	2.38	4.07	4.07
Stillwater County	A11	RM 427.65	191155.9	50% - 2yr	764.7	1122.73	1118.58	2.11	2.1	25.05	23.94	139.46	426.74	2.59	2.48	4.14	4.14
Stillwater County	A11	RM 427.53	190509.6	50% - 2yr	764.7	1122.42	1117.37	2.51	2.51	32.92	29.77	93.31	261.85	3.26	2.95	5.05	5.05
Stillwater County	A11	RM 427.41	189886.1	50% - 2yr	764.7	1122.26	1118.73	2.32	2.32	29.16	29.16	113.75	194	2.9	2.9	3.53	3.53
Stillwater County	A11	RM 427.29	189253.3	50% - 2yr	764.7	1121.95	1119.12	2.43	2.42	37.43	36.44	174.05	230.58	1.81	1.76	2.83	2.83
Stillwater County	A11	RM 427.17	188639.5	50% - 2yr	764.7	1121.6	1118.44	2.24	2.15	32.39	28.02	195.67	272.59	1.72	1.49	3.16	3.16
Stillwater County	A11	RM 427.09	188179.7	50% - 2yr	764.7	1121.26	1118.34	2.59	2.37	39.11	27.47	124.69	201.34	2.31	1.63	2.92	2.92
Stillwater County	A11	RM 427.00	187745.4	50% - 2yr	764.7	1121.11	1117.71	2.3	2	31.54	23.31	137.64	266.68	2.17	1.61	3.39	3.39
Stillwater County	A11	RM 426.92	187309.3	50% - 2yr	764.7	1120.81	1117.32	2.41	2.3	38.33	36.5	195.01	220.99	1.58	1.51	3.49	3.49
Stillwater County	A11	RM 426.86	186960.4	50% - 2yr	764.7	1120.62	1116.77	2.24	2.15	31.81	30.16	183.94	207.03	1.81	1.72	3.85	3.85
Stillwater County	A11	RM 426.75	186401.3	50% - 2yr	764.7	1120.27	1116.11	2.39	2.23	35.4	31.69	158.08	198.32	1.94	1.74	4.16	4.16
Stillwater County	A11	RM 426.67	185983.5	50% - 2yr	764.7	1120.09	1115.84	2.27	2.27	29.59	29.49	137.79	160.7	2.44	2.44	4.25	4.25
Stillwater County	A11	RM 426.59	185580.4	50% - 2yr	764.7	1119.85	1115.47	2.59	2.54	36.7	33.88	104.72	115.59	2.81	2.6	4.38	4.38
Stillwater County	A11	RM 426.52	185166.5	50% - 2yr	764.7	1119.71	1115.54	2.46	2.46	32.54	32.54	104.8	104.8	2.96	2.96	4.17	4.17
Stillwater County	A11	RM 426.43	184738.3	50% - 2yr	764.7	1119.57	1115.89	2.44	2.42	32.49	31.44	112.33	116.92	2.79	2.7	3.68	3.68
Stillwater County	A11	RM 426.32	184158.4	50% - 2yr	764.7	1119.37	1116.39	2.31	2.31	30.33	30.33	131.67	131.67	2.51	2.51	2.98	2.98
Stillwater County	A11	RM 426.20	183517.2	50% - 2yr	764.7	1119.03	1116.07	2.35	2.34	36.72	36.18	211.06	214.77	1.54	1.52	2.96	2.96
Stillwater County	A11	RM 426.11	183030.7	50% - 2yr	764.7	1118.73	1115.37	2.17	2.16	28.59	27.23	243.57	274.44	1.45	1.38	3.36	3.36
Stillwater County	A11	RM 426.00	182442.5	50% - 2yr	764.7	1118.4	1115.74	2.11	1.99	29.13	26.81	216.92	266.93	1.61	1.49	2.66	2.66
Stillwater County	A11	RM 425.89	181895	50% - 2yr	764.7	1118.1	1115.1	2.16	2.16	28.81	28.45	182.33	187.91	1.94	1.92	3	3
Stillwater County	A11	RM 425.72	181043.5	50% - 2yr	764.7	1117.65	1113.77	2.38	2.38	33.64	32.69	147.19	158.2	2.18	2.12	3.88	3.88
Stillwater County	A11	RM 425.58	180310.5	50% - 2yr	764.7	1117.29	1112.19	2.57	2.54	35.2	29.73	98.44	122.2	3.02	2.55	5.1	5.1
Stillwater County	A11	RM 425.46	179669.9	50% - 2yr	764.7	1116.95	1112.78	2.81	2.8	42.66	39.05	93.39	146.07	2.91	2.67	4.17	4.17
Stillwater County	A11	RM 425.34	179022.4	50% - 2yr	764.7	1116.86	1113.64	2.01	1.87	23.12	18.72	133.84	205.96	2.45	1.99	3.22	3.22
Stillwater County	A11	RM 425.24	178485.9	50% - 2yr	764.7	1116.53	1114.19	2.48	2.15	39.2	29.08	126.24	321.59	1.77	1.31	2.39	2.39
Stillwater County	A11	RM 425.18	178205.8	50% - 2yr	764.7	1116.26	1113.81	2.65	2.41	45.03	36.94	123.72	223.76	1.72	1.42	2.95	2.95
Stillwater County	A11	RM 425.11	177826.8	50% - 2yr	764.7	1115.97	1113.29	2.27	2.44	33.04	34.99	119.03	171.76	1.71	1.82	3.68	3.68
Stillwater County	A11	RM 425.04	177454.7	50% - 2yr	764.7	1115.83	1112.86	2.26	2.05	30.56	25.67	104.53	205.96	2.15	1.81	3.36	3.36
Stillwater County	A11	RM 424.97	177098.9	50% - 2yr	764.7	1115.52	1113.11	2.62	2.39	42.56	35.52	106.65	200.61	1.9	1.59	2.51	2.51
Stillwater County	A11	RM 424.89	176675.9	50% - 2yr	764.7	1115.35	1112.27	1.94	1.93	24.19	19.75	136.62	316.94	1.72	1.41	4.55	4.55
Stillwater County	A11	RM 424.81	176242.8	50% - 2yr	764.7	1114.95	1112.25	2.49	2.41	40.98	37.1	111.7	244.97	1.58	1.44	2.95	2.95
Stillwater County	A11	RM 424.70	175789.3	50% - 2yr	764.7	1114.82	1111.91	1.92	1.77	22.82	19.47	161.09	332.15	1.91	1.63	2.91	2.91

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	50% - 2yr	764.7	1114.56	1111.34	2.05	1.89	26.23	21.6	127.93	277.35	1.91	1.57	3.22	3.22
Stillwater County	A11	RM 424.51	174723.2	50% - 2yr	764.7	1114.34	1110.93	2.02	1.94	27.54	21.81	138.97	365.89	1.5	1.19	3.41	3.41
Stillwater County	A11	RM 424.38	174051	50% - 2yr	764.7	1113.98	1110.98	2.17	2	30.09	23.88	121.15	272.7	1.77	1.4	3	3
Stillwater County	A11	RM 424.30	173607.9	50% - 2yr	764.7	1113.7	1110.75	2.17	2.21	33.07	23.1	148.23	404.84	1.33	0.93	2.95	2.95
Stillwater County	A11	RM 424.21	173153.7	50% - 2yr	764.7	1113.42	1110.74	1.94	1.91	26.22	22.02	187.06	400.58	1.35	1.14	2.68	2.68
Stillwater County	A11	RM 424.13	172713.5	50% - 2yr	764.7	1113.14	1110.43	2.22	1.71	31.42	17.31	80.92	462.38	1.75	0.96	2.79	2.79
Stillwater County	A11	RM 424.05	172309.3	50% - 2yr	764.7	1112.89	1110.18	1.9	1.72	25.02	14.66	136.4	553.43	1.37	0.8	2.71	2.71
Stillwater County	A11	RM 423.98	171892.1	50% - 2yr	764.7	1112.79	1110.15	1.54	1.34	15.51	9.66	241.4	549.17	1.67	1.04	2.64	2.64
Stillwater County	A11	RM 423.90	171454.2	50% - 2yr	764.7	1112.48	1109.55	2.31	1.98	34.07	18	154.43	418.05	1.76	0.92	2.93	2.93
Stillwater County	A11	RM 423.84	171147.5	50% - 2yr	764.7	1112.29	1109.08	2.38	1.98	33.58	16.9	121.54	418.25	2.18	1.1	3.21	3.21
Stillwater County	A11	RM 423.74	170686.3	50% - 2yr	764.7	1112.22	1108.91	1.77	1.36	18.5	9.82	123.7	525.47	2.24	1.19	3.31	3.31
Stillwater County	A11	RM 423.69	170436.3	50% - 2yr	764.7	1111.98	1108.49	2.47	2.04	34.47	18.56	79.73	323.03	2.54	1.36	3.49	3.49
Stillwater County	A11	RM 423.57	169782.9	50% - 2yr	764.7	1111.73	1108.2	2.14	2.07	26.71	20.52	155.61	211.2	2.28	1.75	3.53	3.53
Stillwater County	A11	RM 423.47	169296.5	50% - 2yr	764.7	1111.42	1107.67	2.57	2.57	37.25	35.42	115.71	148.5	2.57	2.45	3.75	3.75
Stillwater County	A11	RM 423.39	168860.7	50% - 2yr	764.7	1111.15	1107.7	2.78	2.77	42.99	38.95	102.12	153.23	2.69	2.44	3.45	3.45
Stillwater County	A11	RM 423.27	168178	50% - 2yr	764.7	1110.78	1107.36	2.77	2.77	44.45	44.45	117.15	117.15	2.36	2.36	3.42	3.42
Stillwater County	A12	RM 423.17	167687.7	50% - 2yr	764.7	1110.58	1107.46	2.39	2.36	34.27	27.69	151.47	190.08	2.11	1.7	3.12	3.12
Stillwater County	A12	RM 423.08	167239.6	50% - 2yr	764.7	1110.32	1107.21	2.54	2.32	38.93	25.16	125.79	242.83	2.1	1.36	3.11	3.11
Stillwater County	A12	RM 423.01	166844.5	50% - 2yr	764.7	1110	1106.84	2.71	2.53	46.48	33.99	127.13	230.97	1.79	1.31	3.16	3.16
Stillwater County	A12	RM 422.91	166338	50% - 2yr	764.7	1109.72	1106.54	2.5	2.32	36.77	27.24	109.93	199.88	2.22	1.65	3.18	3.18
Stillwater County	A12	RM 422.80	165757.6	50% - 2yr	764.7	1109.44	1106.83	2.35	2.23	33.86	29.19	143.48	233.42	1.98	1.71	2.61	2.61
Stillwater County	A12	RM 422.70	165279.2	50% - 2yr	764.7	1109.28	1105.79	1.95	1.74	24.13	18.73	198.27	318.12	1.77	1.38	3.49	3.49
Stillwater County	A12	RM 422.63	164895.4	50% - 2yr	764.7	1109.1	1105.43	2.04	1.78	27	20.32	176.36	357.93	1.69	1.27	3.66	3.66
Stillwater County	A12	RM 422.53	164348.1	50% - 2yr	764.7	1108.72	1104.76	2.33	2.16	34.57	26.67	160.01	257.89	1.78	1.37	3.96	3.96
Stillwater County	A12	RM 422.39	163609.2	50% - 2yr	764.7	1108.29	1104.22	2.46	2.42	34.96	29.54	128.43	164.52	2.4	2.02	4.07	4.07
Stillwater County	A12	RM 422.30	163120.4	50% - 2yr	764.7	1107.99	1104.18	2.68	2.66	40.07	36.92	107.91	137.24	2.64	2.43	3.81	3.81
Stillwater County	A12	RM 422.19	162534.3	50% - 2yr	764.7	1107.82	1103.72	2.36	2.36	30.56	29.78	115.69	118.8	2.8	2.73	4.1	4.1
Stillwater County	A12	RM 422.08	161934.5	50% - 2yr	764.7	1107.46	1104.18	2.74	2.74	42	42	107.06	107.06	2.61	2.61	3.28	3.28
Stillwater County	A12	RM 421.98	161402.1	50% - 2yr	764.7	1107.35	1103.86	2.15	2.15	26.2	25.9	142.02	143.69	2.5	2.48	3.49	3.49
Stillwater County	A12	RM 421.90	161037.7	50% - 2yr	764.7	1107.22	1103.14	2.13	2.13	26.95	26.95	165.41	165.41	2.17	2.17	4.08	4.08
Stillwater County	A12	RM 421.86	160799.3	50% - 2yr	764.7	1107.1	1102.54	2.2	2.2	30.41	30.41	191.23	191.23	1.82	1.82	4.56	4.56
Stillwater County	A12	RM 421.81	160535.9	50% - 2yr	764.7	1106.94	1102.38	2.24	2.24	32.98	32.98	214.93	214.93	1.59	1.59	4.56	4.56
Stillwater County	A12	RM 421.77	160279.4	50% - 2yr	764.7	1106.69	1102.41	2.48	2.43	40.41	37.97	180.15	205.56	1.62	1.53	4.28	4.28
Stillwater County	A12	RM 421.69	159875.5	50% - 2yr	764.7	1106.59	1102.56	2.07	2	23.61	19.85	128.81	163.83	2.77	2.34	4.03	4.03
Stillwater County	A12	RM 421.60	159411.4	50% - 2yr	764.7	1106.31	1103.26	2.54	2.38	38.32	33.79	130.39	167.33	2.17	1.92	3.05	3.05
Stillwater County	A12	RM 421.53	159038	50% - 2yr	764.7	1106.04	1102.81	2.72	2.58	44.58	38.79	126.28	164.55	2.07	1.8	3.23	3.23
Stillwater County	A12	RM 421.45	158590.5	50% - 2yr	764.7	1105.86	1103.26	2.26	2.06	31.51	23.8	150.49	250.28	1.96	1.48	2.6	2.6
Stillwater County	A12	RM 421.32	157930.2	50% - 2yr	764.7	1105.5	1102.82	2.27	2.15	34.62	29.34	93.69	275.11	1.52	1.29	2.67	2.67
Stillwater County	A12	RM 421.24	157513	50% - 2yr	764.7	1105.14	1103.05	2.2	2.25	35.67	33.81	124.67	315.47	1.13	1.08	2.66	2.66
Stillwater County	A12	RM 421.13	156951.5	50% - 2yr	764.7	1104.85	1100.38	2.13	1.88	30.14	23.49	113.26	336.69	1.55	1.21	4.47	4.47
Stillwater County	A12	RM 421.05	156536.5	50% - 2yr	764.7	1104.67	1102.11	1.91	1.73	24.64	20.5	94.97	352.61	1.51	1.25	2.56	2.56
Stillwater County	A12	RM 420.94	155960.1	50% - 2yr	764.7	1104.45	1101.68	1.67	1.61	16.76	15.32	213.29	254.05	2.12	1.94	2.77	2.77
Stillwater County	A12	RM 420.85	155473.6	50% - 2yr	764.7	1103.82	1100.98	3.23	2.89	65.53	43.05	124.29	222.4	1.85	1.22	2.84	2.84
Stillwater County	A12	RM 420.75	154957.2	50% - 2yr	764.7	1103.6	1099.95	2.41	2.22	35.18	25.56	145.53	229.51	2.06	1.5	3.65	3.65
Stillwater County	A12	RM 420.66	154483	50% - 2yr	764.7	1103.43	1099.89	2.13	1.89	26.68	15.17	156.13	316.11	2.25	1.28	3.54	3.54
Stillwater County	A12	RM 420.58	154037.5	50% - 2yr	764.7	1103.11	1100.13	2.61	2.24	39.38	22.77	119.01	248.62	2.38	1.37	2.98	2.98
Stillwater County	A12	RM 420.52	153691.5	50% - 2yr	764.7	1102.95	1099.7	2.56	2.17	38.1	25.64	123.63	227.67	2.3	1.55	3.25	3.25
Stillwater County	A12	RM 420.46	153398	50% - 2yr	764.7	1102.78	1099.36	2.59	2.28	39.44	28.56	126.93	206.18	2.25	1.63	3.42	3.42
Stillwater County	A12	RM 420.38	152998.3	50% - 2yr	764.7	1102.62	1099.19	2.28	2.02	32.15	25.18	163.21	248.14	1.95	1.53	3.43	3.43
Stillwater County	A12	RM 420.30	152566.4	50% - 2yr	764.7	1102.47	1099.43	1.88	1.62	22.84	18.83	226.42	341.73	1.67	1.38	3.04	3.04
Stillwater County	A12	RM 420.21	152106.2	50% - 2yr	764.7	1102.19	1098.69	2.19	1.86	30.43	25.68	176.51	268.35	1.81	1.53	3.5	3.5
Stillwater County	A12	RM 420.15	151738.6	50% - 2yr	764.7	1102.05	1098.38	1.98	1.97	19.08	18.06	217.86	232.36	1.77	1.67	3.67	3.67
Stillwater County	A12	RM 420.08	151399.3	50% - 2yr	764.7	1101.94	1097.97	1.96	1.95	23.42	21.88	192.98	207.76	2.02	1.89	3.97	3.97
Stillwater County	A12	RM 420.03	151123.2	50% - 2yr	764.7	1101.8	1097.96	2.15	2.06	26.15	19.19	141.29	201.52	2.51	1.84	3.84	3.84
Stillwater County	A12	RM 419.96	150779.4	50% - 2yr	764.7	1101.54	1098.1	2.61	2.58	39.01	30.26	120.76	168.03	2.43	1.88	3.44	3.44
Stillwater County	A12	RM 419.91	150511.3	50% - 2yr	764.7	1101.39	1097.83	2.67	2.62	38.91	27.53	101.22	162.56	2.83	1.99	3.56	3.56
Stillwater County	A12	RM 419.85	150192.4	50% - 2yr	764.7	1101.13	1097.85	2.97	2.88	50.52	40.75	104.16	133.64	2.46	1.98	3.28	3.28
Stillwater County	A12	RM 419.78	149807.6	50% - 2yr	764.7	1101.03	1097.13	2.55	2.3	35.45	18.04	102.81	227.28	2.88	1.46	3.9	3.9
Stillwater County	A12	RM 419.70	149371.5	50% - 2yr	764.7	1100.84	1097.73	2.51	2.41	36.82	28.5	133.07	179.79	2.28	1.76	3.11	3.11
Stillwater County	A12	RM 419.63	149047.6	50% - 2yr	764.7	1100.74	1097.92	2.19	2.13	28.93	22.96	165.3	214.84	2.1	1.67	2.82	2.82

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	50% - 2yr	764.7	1100.34	1097.22	2.71	2.37	46.43	29.71	125.71	280.31	1.8	1.15	3.12	3.12
Stillwater County	A12	RM 419.46	148117.9	50% - 2yr	764.7	1100.09	1097.34	2.35	2.16	36.03	25.7	132.92	299.57	1.65	1.18	3.01	3.01
Stillwater County	A12	RM 419.38	147728.5	50% - 2yr	764.7	1099.77	1097.36	2.45	2.09	39.93	28.27	127.84	328.03	1.57	1.11	2.41	2.41
Stillwater County	A12	RM 419.31	147342.9	50% - 2yr	764.7	1099.7	1096.9	1.63	1.53	16.41	14.49	113.71	286.98	1.96	1.74	2.8	2.8
Stillwater County	A12	RM 419.19	146720.3	50% - 2yr	764.7	1099.6	1096.42	1.3	1.44	10.06	11.57	102.45	220.11	2.14	2.47	5.19	5.19
Stillwater County	A12	RM 419.10	146243.9	50% - 2yr	764.7	1099.52	1095.09	1.57	1.53	13.07	11.65	156.36	188.45	3.09	2.76	4.43	4.43
Stillwater County	A12	RM 419.03	145859.8	50% - 2yr	764.7	1099.29	1095.88	2.22	2.22	29.74	28.16	164.74	183.46	2.09	1.98	3.41	3.41
Stillwater County	A12	RM 418.95	145435.3	50% - 2yr	764.7	1099.08	1095.15	2.21	2.19	31.38	27.28	201.62	240.62	1.72	1.49	3.93	3.93
Stillwater County	A12	RM 418.84	144864	50% - 2yr	764.7	1098.71	1094.92	2.3	2.25	34.4	27.28	200.36	265.13	1.66	1.31	3.79	3.79
Stillwater County	A12	RM 418.69	144066	50% - 2yr	764.7	1098.19	1095.29	2.41	2.2	37.13	25.59	160.22	297.72	1.74	1.2	2.89	2.89
Stillwater County	A12	RM 418.57	143452.8	50% - 2yr	764.7	1097.75	1095.1	2.5	2.33	39.62	28.63	130.86	256.88	1.78	1.29	2.65	2.65
Stillwater County	A12	RM 418.49	143008.1	50% - 2yr	764.7	1097.63	1094.94	1.87	1.55	21.94	12.47	169.36	476.28	1.87	1.06	2.69	2.69
Stillwater County	A12	RM 418.35	142310.9	50% - 2yr	764.7	1097.18	1093.15	2.51	2.06	39.25	22.18	117.28	342.84	1.91	1.08	4.03	4.03
Stillwater County	A12	RM 418.25	141740.8	50% - 2yr	764.7	1096.9	1093.71	1.97	1.58	26.37	19.34	175.52	492.07	1.44	1.05	3.19	3.19
Stillwater County	A12	RM 418.08	140894.8	50% - 2yr	764.7	1096.51	1092.65	2.04	1.76	26	18.51	138.48	325.45	1.87	1.33	3.86	3.86
Stillwater County	A12	RM 417.89	139893.7	50% - 2yr	764.7	1095.81	1092.75	2.71	2.55	43.71	31.17	127.66	214.84	2.15	1.53	3.06	3.06
Stillwater County	A12	RM 417.79	139376.4	50% - 2yr	764.7	1095.47	1091.64	2.76	2.46	46.89	30.43	123.13	242.28	1.98	1.28	3.83	3.83
Stillwater County	A12	RM 417.65	138633.4	50% - 2yr	764.7	1094.95	1091.57	2.88	2.66	47.55	31.39	94.51	185.32	2.43	1.6	3.38	3.38
Stillwater County	A12	RM 417.54	138089.5	50% - 2yr	764.7	1094.59	1091.15	3.01	2.68	50.59	33.54	84.19	162.89	2.64	1.75	3.44	3.44
Stillwater County	A12	RM 417.40	137321.3	50% - 2yr	866.6	1094.23	1091.71	2.57	2.22	40.64	27.94	117.7	291.35	1.95	1.34	2.52	2.52
Stillwater County	A12	RM 417.30	136818.2	50% - 2yr	866.6	1093.89	1091.51	2.4	2.27	37.59	32.84	197.95	277.86	1.65	1.44	2.37	2.37
Stillwater County	A12	RM 417.20	136304	50% - 2yr	866.6	1093.76	1091.27	1.64	1.58	17.17	16.05	200.46	334.59	1.76	1.64	2.49	2.49
Stillwater County	A13	RM 417.09	135706	50% - 2yr	866.6	1093.23	1090.35	2.66	2.65	44.94	43.06	182.85	230.66	1.78	1.71	2.88	2.88
Stillwater County	A13	RM 417.01	135303.6	50% - 2yr	866.6	1093.06	1090	2.12	2.12	29.05	29.05	244.02	287.38	1.68	1.68	3.06	3.06
Stillwater County	A13	RM 416.94	134899.8	50% - 2yr	866.6	1092.67	1089.69	2.63	2.63	38.45	38.45	197.98	231.11	1.67	1.67	2.98	2.98
Stillwater County	A13	RM 416.85	134457.6	50% - 2yr	866.6	1092.54	1089.62	2.12	2	26.51	20.61	182.83	252	2.22	1.72	2.92	2.92
Stillwater County	A13	RM 416.73	133843.5	50% - 2yr	866.6	1092.16	1089.6	2.42	2.36	37.82	31.63	209.65	276.91	1.7	1.42	2.55	2.55
Stillwater County	A13	RM 416.63	133286.1	50% - 2yr	866.6	1091.82	1089.3	2.4	2.17	36.87	29.47	120.55	289.26	1.72	1.38	2.52	2.52
Stillwater County	A13	RM 416.52	132717.9	50% - 2yr	866.6	1091.51	1089.09	2.23	1.83	33.71	24.89	104.14	439.27	1.45	1.08	2.42	2.42
Stillwater County	A13	RM 416.43	132250.3	50% - 2yr	866.6	1091.12	1088.74	2.14	1.99	31.97	25.88	111.67	405.76	1.33	1.08	2.38	2.38
Stillwater County	A13	RM 416.33	131707.5	50% - 2yr	866.6	1090.8	1088.02	2.08	1.86	29.85	24.19	128.23	415.93	1.38	1.12	2.78	2.78
Stillwater County	A13	RM 416.22	131140.9	50% - 2yr	866.6	1090.34	1087.56	2.69	2.22	44.4	29.31	83.55	295.68	2	1.32	2.78	2.78
Stillwater County	A13	RM 416.13	130626.3	50% - 2yr	866.6	1090.03	1086.65	2.47	2.14	37.1	26.43	140.68	278.7	2.04	1.46	3.38	3.38
Stillwater County	A13	RM 416.04	130164.9	50% - 2yr	866.6	1089.59	1085.03	2.96	2.4	52.68	28.46	119.17	315.92	2.12	1.14	4.56	4.56
Stillwater County	A13	RM 415.96	129734.7	50% - 2yr	866.6	1089.41	1085.48	2.46	1.89	35.73	22.14	123.74	336.23	2.25	1.39	3.93	3.93
Stillwater County	A13	RM 415.90	129423.4	50% - 2yr	866.6	1089.28	1085.77	2.07	1.68	26.88	20.62	154.25	396.49	1.85	1.42	3.51	3.51
Stillwater County	A13	RM 415.83	129071.6	50% - 2yr	866.6	1089.15	1085.89	1.84	1.58	20.63	13.84	151.66	419.86	2.01	1.36	3.82	3.82
Stillwater County	A13	RM 415.74	128639.5	50% - 2yr	866.6	1088.95	1084.72	2.17	1.84	26.26	16.28	144.62	317.3	2.64	1.64	4.22	4.22
Stillwater County	A13	RM 415.72	128521.2	50% - 2yr	866.6	1088.84	1084.8	2.43	2.03	32.76	20.13	125.88	284.02	2.72	1.66	4.04	4.04
Stillwater County	A13	RM 415.65	128106.2	50% - 2yr	866.6	1088.65	1083.7	2.54	2.18	35.99	25.26	124.94	229.35	2.63	1.85	4.94	4.94
Stillwater County	A13	RM 415.59	127828.3	50% - 2yr	866.6	1088.48	1083.61	2.65	2.51	39.95	31.26	130.28	203.67	2.49	1.95	4.87	4.87
Stillwater County	A13	RM 415.55	127620.5	50% - 2yr	866.6	1088.48	1082.84	1.85	1.85	17.33	17.29	131.44	131.68	3.56	3.56	5.63	5.63
Stillwater County			127503	50% - 2yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	50% - 2yr	866.6	1088.08	1082.96	1.88	1.88	17.6	17.49	121.7	122.43	3.78	3.76	5.12	5.12
Stillwater County	A13	RM 415.50	127340.9	50% - 2yr	866.6	1087.92	1083.14	2.3	2.3	29.73	29.73	144.64	144.64	2.6	2.6	4.78	4.78
Stillwater County	A13	RM 415.45	127087.4	50% - 2yr	866.6	1087.66	1083.18	2.8	2.8	44.4	44.4	122.87	122.87	2.52	2.52	4.48	4.48
Stillwater County	A13	RM 415.39	126788	50% - 2yr	866.6	1087.54	1084.07	2.55	2.55	38.94	38.94	161.27	227.92	2.11	2.11	3.47	3.47
Stillwater County	A13	RM 415.34	126499.1	50% - 2yr	866.6	1087.36	1084.45	2.7	2.55	44.15	38.74	126.46	239.85	2.03	1.78	2.91	2.91
Stillwater County	A13	RM 415.25	126040.7	50% - 2yr	866.6	1087.07	1082.42	2.7	2.55	42.68	36.74	117.82	214.53	2.3	1.98	4.65	4.65
Stillwater County	A13	RM 415.18	125663.1	50% - 2yr	866.6	1086.91	1083.81	2.46	2.34	35.54	30.73	132.06	187.07	2.28	1.98	3.1	3.1
Stillwater County	A13	RM 415.10	125251.2	50% - 2yr	866.6	1086.52	1083.01	3.03	2.77	52.37	41.33	100.2	159.37	2.49	1.96	3.51	3.51
Stillwater County	A13	RM 414.97	124585.1	50% - 2yr	866.6	1086.09	1082.64	2.93	2.66	50.8	39.28	110.42	188.97	2.22	1.72	3.45	3.45
Stillwater County	A13	RM 414.88	124110.1	50% - 2yr	866.6	1085.74	1083.02	2.91	2.67	51.51	42.33	120.33	192.91	2.05	1.69	2.72	2.72
Stillwater County	A13	RM 414.71	123222	50% - 2yr	866.6	1085.28	1080.88	2.4	2.4	33.88	33.88	159.17	162.17	2.27	2.27	4.4	4.4
Stillwater County	A13	RM 414.57	122473.6	50% - 2yr	866.6	1084.82	1081.21	2.67	2.65	41.64	39.24	142.25	165.36	2.28	2.15	3.61	3.61
Stillwater County	A13	RM 414.43	121696.6	50% - 2yr	866.6	1084.41	1080.49	2.49	2.36	37.63	31.65	166.36	439.26	2.04	1.72	3.92	3.92
Stillwater County	A13	RM 414.21	120527.7	50% - 2yr	866.6	1083.62	1080.81	2.43	2.35	40.14	37.94	214.74	269.57	1.44	1.37	2.81	2.81
Stillwater County	A13	RM 413.90	118914.7	50% - 2yr	866.6	1082.39	1079.28	2.66	2.6	42.13	35.16	150.9	270.33	2.15	1.79	3.11	3.11
Stillwater County	A13	RM 413.65	117570.4	50% - 2yr	866.6	1081.54	1078.15	2.76	2.67	44.33	31.65	136.93	444.23	2.29	1.63	3.39	3.39
Stillwater County	A14	RM 413.44	116446.3	50% - 2yr	866.6	1080.97	1076.4	2.57	2.45	37.88	22.13	138.35	458.23	2.43	1.42	4.57	4.57

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	50% - 2yr	866.6	1080.41	1077.8	2.7	2.24	46.41	27.4	167.66	536.96	1.76	1.04	2.61	2.61
Stillwater County	A14	RM 413.11	114697.4	50% - 2yr	866.6	1079.91	1077.12	2.28	2.16	32.83	25.27	193.4	479.27	1.82	1.4	2.79	2.79
Stillwater County	A14	RM 412.99	114113.2	50% - 2yr	866.6	1079.41	1076.41	2.66	2.49	45.9	32.13	179.89	489.11	1.69	1.18	3	3
Stillwater County	A14	RM 412.88	113533.6	50% - 2yr	866.6	1079.06	1076.03	2.52	2.22	37.56	21.74	139.67	399.9	2.23	1.29	3.03	3.03
Stillwater County	A14	RM 412.73	112742.6	50% - 2yr	866.6	1078.56	1074.72	2.6	2.16	42.65	22.74	168.22	464.78	1.84	0.98	3.84	3.84
Stillwater County	A14	RM 412.59	112005.5	50% - 2yr	866.6	1077.91	1074.72	2.72	2.31	48.61	31.19	191.05	396.99	1.61	1.03	3.19	3.19
Stillwater County	A14	RM 412.49	111442.5	50% - 2yr	866.6	1077.59	1074.54	2.29	2.07	33.76	26.27	188.91	329.89	1.7	1.33	3.05	3.05
Stillwater County	A14	RM 412.31	110522	50% - 2yr	866.6	1077.23	1072.96	2.13	2.07	24.99	20.19	144.61	204.16	2.79	2.25	4.26	4.26
Stillwater County	A14	RM 412.19	109955.3	50% - 2yr	866.6	1076.58	1071.57	3.39	3.38	64.99	59.35	100.59	110.39	2.54	2.32	5.01	5.01
Stillwater County	A14	RM 412.05	109175.2	50% - 2yr	866.6	1076.17	1072.08	2.92	2.88	47.42	40.54	110.06	131.16	2.69	2.29	4.09	4.09
Stillwater County	A14	RM 411.92	108510.2	50% - 2yr	866.6	1075.89	1072.88	2.58	2.58	38.31	38.31	138.37	138.37	2.42	2.42	3.01	3.01
Stillwater County	A14	RM 411.81	107950.5	50% - 2yr	866.6	1075.48	1070.62	2.9	2.9	48.75	48.75	126.44	126.44	2.36	2.36	4.86	4.86
Stillwater County	A14	RM 411.71	107391.9	50% - 2yr	866.6	1075.28	1070.83	2.52	2.52	34.27	34.09	116.89	122.7	2.94	2.92	4.45	4.45
Stillwater County	A14	RM 411.58	106721	50% - 2yr	866.6	1075.02	1071.65	2.45	2.45	35.12	35.12	154.52	175.3	2.29	2.29	3.37	3.37
Stillwater County	A14	RM 411.47	106133.7	50% - 2yr	866.6	1074.6	1071.87	2.74	2.67	45.38	34.95	151.79	202.86	2.08	1.6	2.73	2.73
Stillwater County	A14	RM 411.32	105338.4	50% - 2yr	866.6	1074.02	1069.29	2.79	2.64	47.77	41.69	153.53	191.3	1.99	1.74	4.73	4.73
Stillwater County	A14	RM 411.14	104374.6	50% - 2yr	866.6	1073.34	1067.92	2.96	2.68	48.56	29.9	107.91	197.2	2.67	1.64	5.42	5.42
Stillwater County	A14	RM 411.00	103638.4	50% - 2yr	866.6	1072.98	1069.6	2.64	2.19	42.08	28.62	137.61	278.15	2.09	1.42	3.38	3.38
Stillwater County	A14	RM 410.85	102835.8	50% - 2yr	866.6	1072.49	1069.92	2.26	2.12	34.97	27.03	83.64	376.23	1.41	1.09	2.57	2.57
Stillwater County	A14	RM 410.74	102286.3	50% - 2yr	866.6	1072.07	1068.99	2.49	1.99	39.1	26.25	69.44	359.25	1.82	1.21	3.08	3.08
Stillwater County	A14	RM 410.63	101668.3	50% - 2yr	866.6	1071.64	1068.37	2.65	1.98	43.52	21.9	82.78	451.02	1.94	0.97	3.27	3.27
Stillwater County	A14	RM 410.52	101115.7	50% - 2yr	866.6	1071.32	1067.81	2.34	2.04	32.89	21.04	121.54	313.06	2.13	1.36	3.51	3.51
Stillwater County	A14	RM 410.42	100568.4	50% - 2yr	866.6	1070.82	1066.66	2.57	2.63	44.77	46.41	145.15	216.46	1.47	1.52	4.16	4.16
Stillwater County	A14	RM 410.33	100099.2	50% - 2yr	866.6	1070.58	1066.6	2.21	2.12	29.98	25.56	198.78	276.23	1.95	1.66	3.98	3.98
Stillwater County	A14	RM 410.22	99589.26	50% - 2yr	866.6	1070.18	1066.94	2.67	2.53	42.58	29.83	148.19	240.48	2.16	1.51	3.24	3.24
Stillwater County	A14	RM 410.12	99057.4	50% - 2yr	866.6	1069.82	1065.8	2.66	2.36	45.13	37.34	171.71	275.15	1.77	1.47	4.02	4.02
Stillwater County	A14	RM 410.03	98630.66	50% - 2yr	866.6	1069.47	1065.33	2.61	2.38	45.37	40.77	202.74	276.13	1.53	1.38	4.14	4.14
Stillwater County	A14	RM 409.99	98385.41	50% - 2yr	866.6	1069.2	1065.38	2.74	2.51	49.07	39.58	179.4	281.05	1.66	1.33	3.82	3.82
Stillwater County	A14	RM 409.94	98072.09	50% - 2yr	866.6	1068.98	1065.51	2.52	2.28	40.76	29.67	191.23	365.71	1.74	1.26	3.47	3.47
Stillwater County	A14	RM 409.87	97717.24	50% - 2yr	866.6	1068.97	1065.52	1.79	1.42	17.69	12.47	160.64	395.83	2.67	1.88	3.45	3.45
Stillwater County	A14	RM 409.76	97130.84	50% - 2yr	866.6	1068.67	1065.37	2.37	2	32.61	22.37	144.08	303.18	2.34	1.6	3.31	3.31
Stillwater County	A14	RM 409.60	96278.7	50% - 2yr	866.6	1067.76	1064.65	3.33	2.94	73.58	50.84	159.6	286.94	1.56	1.07	3.11	3.11
Stillwater County	A14	RM 409.43	95381.62	50% - 2yr	866.6	1067.21	1063.55	2.53	1.98	37.27	16.17	126.38	671.36	2.31	1	3.66	3.66
Stillwater County	A14	RM 409.24	94405.29	50% - 2yr	866.6	1066.44	1064.55	2.38	2.17	41.65	29.64	122.56	533.47	1.15	0.82	2.23	2.23
Stillwater County	A14	RM 409.15	93912.54	50% - 2yr	866.6	1066.02	1064.27	1.66	2.02	20.16	17.17	143.81	433.67	1.16	0.99	3.94	3.94
Stillwater County	A14	RM 408.99	93008.08	50% - 2yr	866.6	1065.27	1063.94	2.05	2.65	32.64	38.21	140.9	290.17	0.96	1.13	2.73	2.73
Stillwater County	A14	RM 408.84	92229.27	50% - 2yr	866.6	1064.89	1062.1	2.18	2.16	32.48	28.09	141.1	325.59	1.41	1.23	2.79	2.79
Stillwater County	A14	RM 408.63	91072.98	50% - 2yr	866.6	1063.85	1061.85	2.28	2.36	39.9	40.12	204.76	370.25	1.02	1.02	2.27	2.27
Stillwater County	A14	RM 408.41	89726.16	50% - 2yr	866.6	1063.26	1059.04	2.19	1.94	26.02	19.65	101.83	206.5	2.86	2.16	4.22	4.22
Stillwater County	A14	RM 408.26	88966.66	50% - 2yr	866.6	1062.99	1058.13	2.3	2.18	28.35	19.8	126.1	192.72	2.96	2.06	4.85	4.85
Stillwater County	A14	RM 408.10	88091.52	50% - 2yr	866.6	1062.52	1057.78	2.83	2.72	42.42	37.84	97.37	114.12	3.11	2.79	4.74	4.74
Stillwater County	A14	RM 408.02	87720.33	50% - 2yr	866.6	1062.44	1058.61	2.48	2.41	33.51	30.29	121.06	138.72	2.86	2.59	3.83	3.83
Stillwater County	A14	RM 407.83	86708.48	50% - 2yr	866.6	1061.87	1058.65	2.6	2.52	44.71	40.31	145.58	239.29	1.59	1.44	3.22	3.22
Stillwater County	A14	RM 407.71	86078.99	50% - 2yr	866.6	1061.52	1057.9	2.5	2.33	36.67	26.95	116.33	222.46	2.27	1.67	3.62	3.62
Stillwater County	A14	RM 407.61	85508.29	50% - 2yr	866.6	1061.27	1058.36	2.16	2.12	30.7	22.98	169.94	342.62	1.59	1.19	2.91	2.91
Stillwater County	A14	RM 407.50	84909.3	50% - 2yr	866.6	1060.96	1058.55	2.25	2.06	34.95	28.33	177.52	369.6	1.4	1.14	2.9	2.9
Stillwater County	A14	RM 407.41	84433.26	50% - 2yr	866.6	1060.68	1057.85	2.4	1.96	37.23	24.12	121.04	403.23	1.69	1.1	3.02	3.02
Stillwater County	A14	RM 407.36	84180.66	50% - 2yr	866.6	1060.42	1057.59	2.81	2.17	48.5	28.97	98.04	338.87	1.98	1.18	2.83	2.83
Stillwater County	A14	RM 407.29	83775.88	50% - 2yr	866.6	1060.07	1057.08	2.2	2.38	31.28	33.59	124.66	197.52	1.71	1.84	3.25	3.25
Stillwater County	A14	RM 407.13	82954.84	50% - 2yr	866.6	1059.58	1056.27	2.21	2.2	33.34	32.89	274.64	279.23	1.43	1.41	3.31	3.31
Stillwater County	A14	RM 406.98	82156.72	50% - 2yr	866.6	1059.3	1056.37	1.86	1.83	20.11	19.24	196.4	210.27	2.35	2.25	2.93	2.93
Stillwater County	A14	RM 406.86	81532.92	50% - 2yr	866.6	1058.74	1055.69	3.01	2.94	51.18	46.69	112.56	126.81	2.54	2.32	3.05	3.05
Stillwater County	A14	RM 406.77	81053.3	50% - 2yr	866.6	1058.52	1053.84	2.8	2.65	42.98	32.61	110.01	156.37	2.76	2.09	4.68	4.68
Stillwater County	A14	RM 406.64	80405.13	50% - 2yr	866.6	1058.32	1054.89	2.39	2.27	31.81	25.09	136.34	184.17	2.62	2.07	3.43	3.43
Stillwater County	A14	RM 406.48	79524.79	50% - 2yr	866.6	1057.73	1054.8	2.74	2.51	47.97	38.49	188.24	271.84	1.58	1.27	2.93	2.93
Stillwater County	A14	RM 406.25	78337.26	50% - 2yr	866.6	1056.95	1054.03	2.57	2.39	38.74	29.31	138.23	211.35	2.27	1.71	2.92	2.92
Stillwater County	A14	RM 406.08	77409.13	50% - 2yr	866.6	1056.32	1052.87	2.87	2.64	48.32	36.32	119.97	191.34	2.28	1.71	3.45	3.45
Stillwater County	A14	RM 405.93	76624.91	50% - 2yr	866.6	1055.85	1052.64	2.81	2.72	44.1	37.83	114.34	139.36	2.66	2.29	3.21	3.21
Stillwater County	A14	RM 405.81	75994.44	50% - 2yr	866.6	1055.6	1051.93	2.53	2.45	36.19	33.34	133.87	152.59	2.51	2.32	3.67	3.67
Stillwater County	A15	RM 405.77	75764.36	50% - 2yr	866.6	1055.38	1052.63	2.84	2.67	48.97	42.93	141.37	179.11	2.06	1.81	2.75	2.75

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	50% - 2yr	866.6	1055.03	1052.06	2.7	2.29	43.94	32.17	82.19	247.71	2.09	1.53	2.96	2.96
Stillwater County	A15	RM 405.61	74883.52	50% - 2yr	866.6	1054.82	1051.81	2.91	2.29	48.38	27.15	69.55	344.33	2.43	1.37	3.01	3.01
Stillwater County	A15	RM 405.52	74415.92	50% - 2yr	866.6	1054.19	1051.43	3.78	2.92	83.69	42.39	52.24	279.5	2.29	1.16	2.76	2.76
Stillwater County	A15	RM 405.45	74031.34	50% - 2yr	866.6	1054.1	1051.1	2.92	1.86	47.91	26.07	57.4	370.07	2.58	1.41	3	3
Stillwater County	A15	RM 405.34	73437.72	50% - 2yr	866.6	1053.66	1050.67	2.79	2.5	44.56	28.75	116.05	248.48	2.41	1.55	2.99	2.99
Stillwater County	A15	RM 405.18	72616.33	50% - 2yr	866.6	1053.05	1049.45	3.16	2.84	54.56	29.98	92.38	221.13	2.83	1.55	3.6	3.6
Stillwater County	A15	RM 405.09	72171.48	50% - 2yr	866.6	1052.93	1049.09	2.56	2.32	36.51	26.72	115.98	212.75	2.65	1.94	3.84	3.84
Stillwater County	A15	RM 405.02	71774.52	50% - 2yr	866.6	1052.6	1048.59	3.07	2.78	51.27	38.27	88.03	167.2	2.86	2.13	4.01	4.01
Stillwater County	A15	RM 404.97	71526.86	50% - 2yr	866.6	1052.56	1048.35	2.64	2.42	38.47	30.57	105.86	228.63	2.72	2.16	4.21	4.21
Stillwater County	A15	RM 404.90	71150.58	50% - 2yr	866.6	1052.37	1048.99	2.71	2.45	40.82	30.25	103.53	187.35	2.67	1.98	3.38	3.38
Stillwater County	A15	RM 404.84	70801.47	50% - 2yr	866.6	1052.29	1049.19	2.35	2.2	30.95	25.55	117.29	202.67	2.6	2.14	3.1	3.1
Stillwater County	A15	RM 404.77	70415.17	50% - 2yr	866.6	1052.02	1048.51	2.85	2.57	44.25	33.95	84.98	207.97	2.87	2.18	3.51	3.51
Stillwater County	A15	RM 404.71	70152.7	50% - 2yr	866.6	1052	1048.14	2.34	2.17	29.26	24.81	83.59	214.62	3.03	2.55	3.86	3.86
Stillwater County	A15	RM 404.59	69477.61	50% - 2yr	866.6	1051.54	1047.56	2.92	2.92	46.89	46.89	107.31	107.31	2.77	2.77	3.98	3.98
Stillwater County	A15	RM 404.54	69214.33	50% - 2yr	866.6	1051.44	1047.65	2.72	2.7	41.46	35.81	120.99	141.61	2.63	2.27	3.79	3.79
Stillwater County	A15	RM 404.35	68254.38	50% - 2yr	866.6	1050.93	1048.18	2.48	2.53	38.28	38.03	137.72	181.64	1.88	1.88	3.16	3.16
Stillwater County	A15	RM 404.23	67606.98	50% - 2yr	866.6	1050.57	1047.77	2.52	2.5	38.86	37.71	129.15	183.63	1.99	1.94	2.8	2.8
Stillwater County	A15	RM 404.10	66934.17	50% - 2yr	866.6	1050.19	1047.61	2.43	2.31	35.63	32.41	120.81	204.9	2.1	1.91	2.58	2.58
Stillwater County	A15	RM 403.94	66110.59	50% - 2yr	866.6	1049.75	1045.27	2.61	2.3	39.93	28.72	109.31	243.55	2.3	1.65	4.48	4.48
Stillwater County	A15	RM 403.85	65604.39	50% - 2yr	866.6	1049.41	1044.79	2.97	2.51	47.17	30.81	77.03	231.48	3.02	1.96	4.62	4.62
Stillwater County	A15	RM 403.75	65058.55	50% - 2yr	866.6	1048.96	1046.13	3.21	2.95	61.22	45.06	100.61	181.5	2.21	1.62	2.83	2.83
Stillwater County	A15	RM 403.69	64721.22	50% - 2yr	866.6	1048.86	1046.02	2.4	2.26	35.58	31.9	132.12	247.31	1.94	1.75	2.84	2.84
Stillwater County	A15	RM 403.62	64341.29	50% - 2yr	866.6	1048.52	1045.75	2.8	2.64	52.21	47.05	90.11	249.36	1.53	1.39	2.76	2.76
Stillwater County	A15	RM 403.55	63997.04	50% - 2yr	866.6	1048.17	1045.95	2.72	2.56	50.46	44.43	115.66	285	1.42	1.26	2.22	2.22
Stillwater County	A15	RM 403.38	62985.06	50% - 2yr	866.6	1047.7	1043.43	2.11	1.97	26.67	22.2	170.31	246.16	2.15	1.79	4.27	4.27
Stillwater County	A15	RM 403.24	62260	50% - 2yr	866.6	1047.45	1043.43	2.09	2.09	24.46	24.46	160.87	160.87	2.58	2.58	4.01	4.01
Stillwater County	A15	RM 403.15	61770.95	50% - 2yr	866.6	1047.09	1042.51	2.7	2.69	41.5	38.98	127.39	136.35	2.51	2.36	4.58	4.58
Stillwater County	A15	RM 403.05	61263.44	50% - 2yr	866.6	1046.86	1043.23	2.56	2.56	37.69	37.51	140.36	141.03	2.41	2.4	3.63	3.63
Stillwater County	A15	RM 402.97	60777.65	50% - 2yr	866.6	1046.67	1043.89	2.32	2.31	32.11	30.13	173.13	185.35	2.16	2.02	2.78	2.78
Stillwater County	A15	RM 402.83	60113.9	50% - 2yr	866.6	1046.13	1043.49	2.66	2.66	48.55	48.55	233.13	317.75	1.4	1.4	2.64	2.64
Stillwater County	A15	RM 402.68	59309.8	50% - 2yr	866.6	1045.51	1042.55	2.32	2.25	35.32	31.65	228.56	391.5	1.62	1.45	2.96	2.96
Stillwater County	A15	RM 402.53	58529.61	50% - 2yr	866.6	1045.26	1040.51	2.16	1.82	23.92	10.31	116.45	435.87	3.35	1.44	4.75	4.75
Stillwater County	A15	RM 402.37	57665.93	50% - 2yr	866.6	1044.72	1041.09	2.8	2.48	53.73	36.48	208.78	412.24	1.43	0.97	3.63	3.63
Stillwater County	A15	RM 402.24	56987.42	50% - 2yr	866.6	1044.49	1040.75	1.79	1.56	20.37	12.83	250.65	575.43	1.8	1.13	3.74	3.74
Stillwater County	A15	RM 402.07	56034.67	50% - 2yr	866.6	1043.94	1041.1	2.32	1.94	34.9	26.02	202.87	355.19	1.68	1.26	2.84	2.84
Stillwater County	A15	RM 401.87	54972.92	50% - 2yr	866.6	1042.97	1040.1	3	2.61	54.76	30.1	137.26	296.23	2.04	1.12	2.87	2.87
Stillwater County	A15	RM 401.69	54002.29	50% - 2yr	866.6	1042.7	1038.43	1.92	1.85	21.71	18.68	192.5	241.26	2.25	1.94	4.27	4.27
Stillwater County	A15	RM 401.55	53267.48	50% - 2yr	866.6	1042.19	1036.56	2.95	2.79	42.88	29.54	73.89	117.36	3.86	2.65	5.63	5.63
Stillwater County	A15	RM 401.41	52506.25	50% - 2yr	866.6	1042	1037.91	2.45	2.21	33.68	23.69	130.58	250.07	2.57	1.8	4.09	4.09
Stillwater County	A15	RM 401.31	51997.63	50% - 2yr	866.6	1041.6	1038.08	2.93	2.71	49.62	33.22	117.88	200.43	2.38	1.6	3.52	3.52
Stillwater County	A15	RM 401.17	51259.17	50% - 2yr	866.6	1041.15	1037.38	2.73	2.68	44.34	41.26	143.93	158	2.2	2.05	3.77	3.77
Stillwater County	A15	RM 401.03	50507.04	50% - 2yr	866.6	1040.82	1036.56	2.53	2.42	35.37	28.62	123.42	161.2	2.74	2.23	4.25	4.25
Stillwater County	A15	RM 400.90	49826.69	50% - 2yr	866.6	1040.36	1036.25	2.85	2.75	48.52	39.62	139.48	178.42	2.16	1.77	4.11	4.11
Stillwater County	A15	RM 400.74	49002.09	50% - 2yr	866.6	1039.84	1037.21	2.82	2.26	47.05	29.9	109.91	270.93	2.24	1.42	2.63	2.63
Stillwater County	A15	RM 400.61	48243.95	50% - 2yr	866.6	1039.4	1035.99	2.49	2.17	39.25	27.16	144	315.16	1.83	1.26	3.41	3.41
Stillwater County	A15	RM 400.50	47710.55	50% - 2yr	866.6	1039.08	1035.67	2.31	2.25	33.31	31.6	148.94	216.37	1.87	1.78	3.4	3.4
Stillwater County	A15	RM 400.42	47243.72	50% - 2yr	866.6	1038.76	1034.87	2.57	2.49	38.05	32.11	103.68	170.21	2.42	2.04	3.89	3.89
Stillwater County	A15	RM 400.34	46832.6	50% - 2yr	866.6	1038.62	1034.91	2.46	2.3	33.17	28.71	93.31	156.19	2.78	2.42	3.71	3.71
Stillwater County	A15	RM 400.25	46335.82	50% - 2yr	866.6	1038.48	1035.01	2.29	2.12	29.13	24.24	104.75	182.41	2.69	2.24	3.47	3.47
Stillwater County	A15	RM 400.18	45999.89	50% - 2yr	866.6	1038.32	1034.98	2.42	2.28	33.31	28	111.49	182.06	2.48	2.08	3.34	3.34
Stillwater County	A15	RM 400.13	45714.33	50% - 2yr	866.6	1038.2	1035.2	2.44	2.17	33.76	23.26	120.6	233.91	2.49	1.71	3	3
Stillwater County	A15	RM 400.11	45623.77	50% - 2yr	866.6	1038.09	1035.11	2.63	2.33	40.87	27.64	127.61	248.67	2.23	1.5	2.98	2.98
Stillwater County	A15	RM 400.09	45529.19	50% - 2yr	866.6	1037.89	1035.05	3.06	2.74	58.1	44	125.6	216.48	1.93	1.46	2.84	2.84
Stillwater County	A15	RM 400.03	45177.97	50% - 2yr	866.6	1037.57	1034.82	3.02	2.73	57.7	47.71	133.54	212	1.81	1.5	2.75	2.75
Stillwater County	A15	RM 399.95	44761.86	50% - 2yr	866.6	1037.42	1033.69	2.35	2.35	31.43	31.43	148.93	158.84	2.48	2.48	3.73	3.73
Stillwater County	A16	RM 399.85	44225.61	50% - 2yr	866.6	1037.05	1033.63	2.73	2.73	44.16	44.16	143.31	153.58	2.21	2.21	3.42	3.42
Stillwater County	A16	RM 399.74	43664.16	50% - 2yr	866.6	1036.81	1033.48	2.37	2.37	33.26	33.26	163.45	163.45	2.24	2.24	3.33	3.33
Stillwater County	A16	RM 399.62	43026.17	50% - 2yr	866.6	1036.38	1033.67	2.52	2.52	41.89	41.89	215.34	215.34	1.6	1.6	2.71	2.71
Stillwater County	A16	RM 399.50	42404.94	50% - 2yr	866.6	1036.09	1031.89	2.23	2.23	28.79	28.79	164	164	2.37	2.37	4.2	4.2
Stillwater County	A16	RM 399.39	41801.43	50% - 2yr	866.6	1035.79	1031.8	2.43	2.43	34.18	34.18	152.73	164.89	2.34	2.34	3.99	3.99

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

50% - 2yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	50% - 2yr	866.6	1035.45	1031.14	2.71	2.63	43.3	36.45	142.74	180.42	2.22	1.87	4.31	4.31
Stillwater County	A16	RM 399.19	40736.83	50% - 2yr	866.6	1035	1031.46	2.94	2.89	51.15	43.79	132.71	157.95	2.21	1.9	3.54	3.54
Stillwater County	A16	RM 399.09	40202.15	50% - 2yr	866.6	1034.8	1031.09	2.5	2.31	34.85	24.51	127.6	201.83	2.64	1.86	3.71	3.71
Stillwater County	A16	RM 399.00	39710.39	50% - 2yr	866.6	1034.65	1031.41	2.3	1.92	30.85	20.76	143.08	295.5	2.28	1.53	3.24	3.24
Stillwater County	A16	RM 398.91	39231.58	50% - 2yr	866.6	1034.33	1031.73	2.45	2.17	40.07	29.2	178.05	361.6	1.51	1.1	2.6	2.6
Stillwater County	A16	RM 398.80	38666.26	50% - 2yr	866.6	1033.89	1031.55	2.45	2.07	39.54	28.66	186.07	366.73	1.57	1.14	2.34	2.34
Stillwater County	A16	RM 398.73	38275.64	50% - 2yr	866.6	1033.58	1030.78	2.42	2.14	34.21	25.31	190.56	344.94	1.59	1.17	2.8	2.8
Stillwater County	A16	RM 398.62	37715.08	50% - 2yr	866.6	1033.26	1030.19	2.23	2.03	29.9	22.12	172.77	334.05	1.73	1.28	3.07	3.07
Stillwater County	A16	RM 398.51	37115.9	50% - 2yr	866.6	1032.83	1030.68	2.36	2.25	37.44	31.82	211.88	299.46	1.51	1.29	2.17	2.17
Stillwater County	A16	RM 398.40	36522.49	50% - 2yr	866.6	1032.6	1028.27	1.97	1.82	22.62	16.79	176.22	336.48	1.9	1.41	4.33	4.33
Stillwater County	A16	RM 398.29	35952.65	50% - 2yr	866.6	1032.2	1027.62	2.35	2.34	36.07	32.92	222.15	244.63	1.66	1.51	4.58	4.58
Stillwater County	A16	RM 398.17	35320.39	50% - 2yr	866.6	1032.02	1028.88	1.8	1.79	19.54	17.99	229.28	250.03	2.1	1.93	3.14	3.14
Stillwater County	A16	RM 398.04	34597.07	50% - 2yr	866.6	1031.68	1027.24	2.03	2.03	30.93	30.12	253.29	266.7	1.69	1.64	4.44	4.44
Stillwater County	A16	RM 397.95	34133.39	50% - 2yr	866.6	1031.28	1027.15	2.45	2.43	38.75	37.63	209.33	217.43	1.69	1.64	4.13	4.13
Stillwater County	A16	RM 397.81	33366.95	50% - 2yr	866.6	1030.9	1027.05	2.06	2.03	26.96	26.08	235.76	259.02	1.78	1.72	3.85	3.85
Stillwater County	A16	RM 397.68	32754.86	50% - 2yr	866.6	1030.67	1026.97	2.01	1.98	23.64	21.66	189.12	224.52	2.27	2.09	3.7	3.7
Stillwater County	A16	RM 397.56	32104.4	50% - 2yr	866.6	1030.23	1026.76	2.68	2.6	41.16	38.64	132.73	175.06	2.42	2.28	3.47	3.47
Stillwater County	A16	RM 397.40	31237.31	50% - 2yr	866.6	1029.8	1026.27	2.45	2.3	36.53	29.95	170.78	504.37	2.04	1.67	3.52	3.52
Stillwater County	A16	RM 397.17	30082.69	50% - 2yr	866.6	1029.16	1025.84	2.2	1.97	31.89	20.64	238.5	745.03	1.6	1.04	3.32	3.32
Stillwater County	A16	RM 396.97	29050.44	50% - 2yr	866.6	1028.63	1025.61	1.94	1.71	24.84	15.54	273.17	719.71	1.59	0.99	3.02	3.02
Stillwater County	A16	RM 396.71	27639.86	50% - 2yr	866.6	1027.87	1022.48	2.58	2.58	35.7	35.7	112.04	381.59	3	3	5.39	5.39
Stillwater County	A16	RM 396.62	27103.31	50% - 2yr	866.6	1027.66	1022.36	2.63	2.63	36.05	33.66	99.45	282.63	3.31	3.08	5.3	5.3
Stillwater County	A16	RM 396.52	26616.35	50% - 2yr	866.6	1027.4	1023.41	2.86	2.86	43.86	43.46	102.29	346.26	2.97	2.94	3.99	3.99
Stillwater County	A16	RM 396.29	25423.1	50% - 2yr	866.6	1026.95	1023.53	2.24	1.99	31.01	22.14	181.07	366.64	1.96	1.4	3.42	3.42
Stillwater County	A16	RM 396.14	24635.78	50% - 2yr	866.6	1026.45	1022.46	2.62	2.25	40.35	24.7	128.4	342.74	2.27	1.39	3.99	3.99
Stillwater County	A16	RM 396.03	24026.24	50% - 2yr	866.6	1026.19	1024.1	2.27	1.95	32.57	21.33	179.47	472.34	1.79	1.17	2.09	2.09
Stillwater County	A16	RM 395.89	23301.08	50% - 2yr	866.6	1025.66	1022.79	2.59	2.08	43.82	25.77	133.45	487.61	1.65	0.97	2.87	2.87
Stillwater County	A16	RM 395.73	22420.29	50% - 2yr	866.6	1025.31	1022.66	1.33	1.24	11.98	9.18	181.74	720.76	1.5	1.15	2.65	2.65
Stillwater County	A16	RM 395.64	21923.33	50% - 2yr	866.6	1025.06	1022.13	1.81	1.55	21.17	11.42	143.43	738.5	1.69	0.91	3.24	3.24
Stillwater County	A16	RM 395.57	21526.11	50% - 2yr	866.6	1024.65	1021.61	2.73	1.94	44.62	18.86	76.69	720.33	2.15	0.91	3.03	3.03
Stillwater County	A16	RM 395.48	21053.74	50% - 2yr	866.6	1024.22	1021.89	2.46	2.2	42.21	30.23	108.59	530.72	1.36	0.97	2.33	2.33
Stillwater County	A16	RM 395.36	20532.68	50% - 2yr	866.6	1023.95	1021.53	1.93	1.82	24.43	17.16	130.58	536.41	1.62	1.14	2.42	2.42
Stillwater County	A16	RM 394.98	18666.37	50% - 2yr	866.6	1023.29	1020.31	2.58	2.15	40.55	23.87	92.62	336.89	2.03	1.19	2.97	2.97
Stillwater County	A16	RM 394.80	17678.79	50% - 2yr	866.6	1022.92	1019.23	2.32	2.15	34.46	24.9	119.01	320.98	1.75	1.26	3.69	3.69
Stillwater County	A16	RM 394.71	17254.4	50% - 2yr	866.6	1022.74	1019.74	1.85	1.82	22.08	19.59	146.7	309.74	1.73	1.53	3	3
Stillwater County	A16	RM 394.65	16921.48	50% - 2yr	866.6	1022.51	1019.93	2.03	1.95	27.06	24.78	148.08	305.53	1.63	1.49	3.51	3.51
Stillwater County	A16	RM 394.59	16622.61	50% - 2yr	866.6	1022.15	1019.92	2.34	2.2	36.47	30.56	119.27	300.53	1.57	1.31	2.58	2.58
Stillwater County	A16	RM 394.53	16295.21	50% - 2yr	866.6	1021.86	1019.83	2.22	2.08	34.71	29.61	138.05	383.84	1.29	1.1	2.85	2.85
Stillwater County	A16	RM 394.45	15858.14	50% - 2yr	866.6	1021.41	1019.03	2.5	2.32	41.07	33.86	110.76	281.18	1.61	1.33	2.53	2.53
Stillwater County	A16	RM 394.20	14503.23	50% - 2yr	866.6	1020.66	1016.38	2.4	2.09	35.3	23.71	146.69	311.03	1.98	1.33	4.28	4.28
Stillwater County	A16	RM 394.12	14088.57	50% - 2yr	866.6	1020.36	1016.74	2.61	2.31	41.26	28.56	141.22	267.29	2.03	1.41	3.61	3.61
Stillwater County	A16	RM 393.99	13393.6	50% - 2yr	866.6	1019.99	1017.11	2.35	1.89	34.94	21.63	110.5	407.75	1.82	1.13	2.88	2.88
Stillwater County	A16	RM 393.85	12650.05	50% - 2yr	866.6	1019.49	1016.49	2.13	2	31.89	24.25	174.09	432.67	1.32	1	3	3
Stillwater County	A16	RM 393.59	11240.84	50% - 2yr	866.6	1018.93	1015.45	1.57	1.42	16.02	11.03	265.7	529.73	1.67	1.15	3.48	3.48
Stillwater County	A16	RM 393.27	9813.245	50% - 2yr	866.6	1017.87	1013.32	3	2.68	58.58	41.9	154.06	273.92	1.65	1.18	4.55	4.55
Stillwater County	A16	RM 393.10	8870.543	50% - 2yr	866.6	1017.28	1013.34	1.98	1.87	27.28	22.84	280.29	410.64	1.35	1.13	3.94	3.94
Stillwater County	A16	RM 392.95	8114.595	50% - 2yr	866.6	1016.51	1014.13	2.52	2.45	44.84	41.58	251.95	294.37	1.3	1.2	2.38	2.38
Stillwater County	A16	RM 392.69	6912.838	50% - 2yr	866.6	1015.88	1012.43	1.81	1.64	21.26	17.22	187.94	436.2	1.66	1.34	3.45	3.45
Stillwater County	A16	RM 392.44	5710.825	50% - 2yr	866.6	1015.29	1011.68	2.25	1.97	30.4	17.95	132.92	638.13	2.13	1.26	3.61	3.61
Stillwater County	A17	RM 392.20	4388.056	50% - 2yr	866.6	1014.25	1010.8	2.89	2.65	53.51	39.19	167.12	255.05	1.75	1.28	3.45	3.45
Stillwater County	A17	RM 392.00	3345.174	50% - 2yr	866.6	1013.74	1009.53	2.26	1.94	30.37	21.16	160.04	295.77	2.17	1.51	4.21	4.21
Stillwater County	A17	RM 391.84	2491.214	50% - 2yr	866.6	1013.44	1010.51	1.88	1.75	22.96	15.5	151.69	436.86	1.68	1.13	3.03	3.03
Stillwater County	A17	RM 391.68	1656.536	50% - 2yr	866.6	1013.09	1010.5	1.65	1.58	19.66	15.53	254.97	582.14	1.19	0.94	2.59	2.59
Stillwater County	A17	RM 391.58	1120.168	50% - 2yr	866.6	1012.8	1009.55	1.8	1.62	22.24	16.12	312.54	527.25	1.4	1.01	3.25	3.25
Stillwater County	A17	RM 391.46	505.9	50% - 2yr	866.6	1012.52	1009.4	1.79	1.54	21.32	12.97	286.04	601.69	1.54	0.94	3.12	3.12

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	2-yr	866.5	1012.14	1008.74	2	1.65	24.53	13.23	206.16	500.06	1.95	1.05	3.4	3.4
Yellowstone County	A17	RM 391.14	149661.4	2-yr	866.5	1011.74	1007.82	2.06	1.5	31.46	15.39	202.5	617.97	1.91	0.93	3.92	3.92
Yellowstone County	A17	RM 390.83	149168.3	2-yr	866.5	1010.58	1007.89	2.34	2.12	41.5	33.62	246.45	408.43	1.34	1.09	2.69	2.69
Yellowstone County	A17	RM 390.51	148644.1	2-yr	866.5	1009.78	1006	1.53	1.5	21.32	17.1	199.26	341.36	2.11	1.69	3.77	3.77
Yellowstone County	A17	RM 390.34	148387.5	2-yr	866.5	1009.36	1005.26	2.14	1.94	40.32	25.26	153.64	330.32	2.16	1.35	4.1	4.1
Yellowstone County	A17	RM 390.13	148054.9	2-yr	866.5	1008.73	1005.54	2.36	2.09	40.1	22.07	142.96	341.84	2.2	1.21	3.19	3.19
Yellowstone County	A17	RM 389.96	147776.4	2-yr	866.5	1008.37	1004.81	1.92	1.74	24.51	19.88	172.2	319.89	1.91	1.55	3.56	3.56
Yellowstone County	A17	RM 389.76	147468.2	2-yr	866.5	1008.11	1004.52	1.37	1.33	17.29	14.18	296.8	375.68	2.11	1.73	3.59	3.59
Yellowstone County	A17	RM 389.55	147162.3	2-yr	866.5	1007.58	1003.2	1.91	1.91	47.29	47.29	269.84	269.84	1.68	1.68	4.38	4.38
Yellowstone County	A17	RM 389.31	146731.1	2-yr	866.5	1006.93	1003.49	1.71	1.67	19.18	16.87	253.85	296.15	1.99	1.75	3.44	3.44
Yellowstone County	A17	RM 389.08	146349	2-yr	866.5	1006.32	1001.61	1.79	1.63	46.49	32.32	278.97	475.7	1.61	1.12	4.71	4.71
Yellowstone County	A17	RM 388.92	146095.5	2-yr	866.5	1005.82	1002.49	1.83	1.67	22.14	16.1	264.93	415.71	1.72	1.25	3.33	3.33
Yellowstone County	A17	RM 388.79	145883.6	2-yr	866.5	1005.62	1002.14	1.83	1.49	19.91	11	162.42	390.86	2.71	1.49	3.48	3.48
Yellowstone County	A17	RM 388.61	145594.9	2-yr	866.5	1005.17	1000.48	2.44	1.99	40.21	23.51	134.2	311.33	2.4	1.4	4.69	4.69
Yellowstone County	A17	RM 388.58	145547	2-yr	866.5	1005.08	1000.28	2.33	2.03	45.17	25.32	144.16	309.84	2.46	1.38	4.8	4.8
Yellowstone County	A17	RM 388.36	145196.7	2-yr	866.5	1004.6	1001.21	2.12	1.74	29.25	16.57	156.53	375.11	2.34	1.33	3.39	3.39
Yellowstone County	A17	RM 388.22	144960.1	2-yr	866.5	1004.07	1000.23	2.69	2.28	47.89	26.41	140.19	392.09	1.85	1.02	3.84	3.84
Yellowstone County	A17	RM 388.09	144745.8	2-yr	866.5	1003.51	999.87	2.3	2.02	39.56	34.24	227.68	410.9	1.26	1.09	3.64	3.64
Yellowstone County	A17	RM 387.91	144452	2-yr	866.5	1002.79	999.77	1.43	1.66	20.05	24.58	326.56	436.94	1	1.23	3.02	3.02
Yellowstone County	A17	RM 387.79	144255.2	2-yr	866.5	1002.7	999.17	1.09	1.04	6.41	5.12	350.31	644.39	1.65	1.32	3.53	3.53
Yellowstone County	A17	RM 387.59	143932.9	2-yr	866.5	1002.42	998.1	1.16	1.15	34.35	32.03	767.09	856.5	0.96	0.89	4.32	4.32
Yellowstone County	A17	RM 387.36	143562.1	2-yr	866.5	1001.34	997.78	1.95	1.95	22.53	22.3	355.66	367.24	1.25	1.23	3.56	3.56
Yellowstone County	A17	RM 387.24	143353.9	2-yr	866.5	1001.03	997.71	1.75	1.75	18.52	18.52	362.21	369.46	1.37	1.37	3.32	3.32
Yellowstone County	A17	RM 387.04	143026.2	2-yr	866.5	1000.24	996.49	2.39	2.36	36.16	33.96	294.45	319.44	1.22	1.15	3.75	3.75
Yellowstone County	A17	RM 386.86	142750.4	2-yr	866.5	999.73	997.01	1.75	1.72	25.68	22.8	309.19	358.14	1.59	1.41	2.72	2.72
Yellowstone County	A17	RM 386.74	142538.5	2-yr	866.5	999.35	996.31	1.78	1.74	27.18	25.19	326.77	374.53	1.44	1.33	3.04	3.04
Yellowstone County	A17	RM 386.61	142318.4	2-yr	866.5	998.79	995.9	2.33	2.25	37.43	32.11	180.7	239.03	1.89	1.62	2.89	2.89
Yellowstone County	A17	RM 386.47	142095.8	2-yr	866.5	998.41	995.18	2.26	2.04	32.7	22.44	160.83	302.05	2.05	1.41	3.23	3.23
Yellowstone County	A17	RM 386.33	141875.1	2-yr	866.5	997.95	994.36	2.58	2.18	39.18	21.05	134.12	326.45	2.26	1.22	3.59	3.59
Yellowstone County	A17	RM 386.17	141622.7	2-yr	866.5	997.46	993.9	2.42	2.26	41.31	31.11	186.49	284.68	1.79	1.35	3.56	3.56
Yellowstone County	A17	RM 386.08	141479.6	2-yr	866.5	997.11	994.12	2.41	2.25	46.81	32.57	174.4	281.27	1.97	1.37	2.99	2.99
Yellowstone County	A17	RM 386.03	141389.2	2-yr	866.5	996.83	993.82	2.56	2.43	44.11	33.57	201.45	286.01	1.64	1.25	3.01	3.01
Yellowstone County	A17	RM 385.96	141289.2	2-yr	866.5	996.8	993.01	1.78	1.72	18.58	15.52	219.65	279.48	2.15	1.8	3.79	3.79
Yellowstone County	A17	RM 385.91	141204.9	2-yr	866.5	996.72	992.33	1.78	1.78	18.4	18.4	248.71	284.63	1.95	1.95	4.39	4.39
Yellowstone County	A17	RM 385.84	141096	2-yr	866.5	996.6	990.57	1.93	1.93	21.06	21.06	335.4	335.4	3.05	3.05	6.03	6.03
Yellowstone County		RM 342.71	141053	2-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	2-yr	866.5	996.45	992.45	2.12	2.12	34.46	34.46	135.6	135.6	3.01	3.01	4	4
Yellowstone County	A17	RM 385.79	141006	2-yr	866.5	996.44	992.48	2.03	2.03	20.78	20.78	149.72	149.72	2.86	2.86	3.96	3.96
Yellowstone County	A18	RM 385.69	140846.5	2-yr	866.5	996.22	992.9	2.15	2.15	44.31	43.89	204.27	273.6	1.97	1.95	3.32	3.32
Yellowstone County	A18	RM 385.60	140705.5	2-yr	866.5	995.88	992.71	2.29	2.27	42.31	37.59	178.62	243.81	2.12	1.88	3.17	3.17
Yellowstone County	A18	RM 385.50	140538.8	2-yr	866.5	995.66	990.71	2.06	2.02	32.29	23.22	147.19	209.31	2.85	2.05	4.95	4.95
Yellowstone County	A18	RM 385.39	140367.1	2-yr	866.5	995.42	992.41	2.19	2.09	26.86	19.43	187.32	272.39	2.1	1.52	3.01	3.01
Yellowstone County	A18	RM 385.30	140231.3	2-yr	866.5	995.12	992.53	2.36	2.28	46	38.27	234.17	292.94	1.56	1.3	2.59	2.59
Yellowstone County	A18	RM 385.23	140108.3	2-yr	866.5	994.83	992.01	2.06	1.95	37.59	31.56	224.37	347.9	1.52	1.28	2.82	2.82
Yellowstone County	A18	RM 385.12	139921.2	2-yr	866.5	994.02	991.37	2.82	2.78	58.21	51.63	174.6	239.95	1.46	1.3	2.65	2.65
Yellowstone County	A18	RM 384.93	139688.7	2-yr	866.5	993.66	991.06	1.92	1.79	24.52	20.45	209.51	343.43	1.68	1.41	2.6	2.6
Yellowstone County	A18	RM 384.75	139352.1	2-yr	866.5	992.75	989.77	2.96	2.55	68.45	44.01	112.27	279.62	1.89	1.22	2.98	2.98
Yellowstone County	A18	RM 384.63	139146.9	2-yr	866.5	992.29	989.58	1.81	1.68	25.23	21.44	173.51	577.79	1.16	0.99	2.71	2.71
Yellowstone County	A18	RM 384.48	138904.5	2-yr	866.5	991.87	989.55	1.44	1.58	19.55	19.1	166.45	383.08	1.47	1.43	2.52	2.52
Yellowstone County	A18	RM 384.34	138682.4	2-yr	866.5	991.52	988.23	1.57	1.76	33.63	27.64	156.67	291.82	2.05	1.68	3.29	3.29
Yellowstone County	A18	RM 384.26	138551.1	2-yr	866.5	991.27	987.34	2.35	1.95	48.46	19.73	82.83	413.26	2.66	1.07	3.93	3.93
Yellowstone County	A18	RM 384.15	138370.3	2-yr	866.5	990.63	987.39	3.09	2.75	73.27	42.28	76.86	244.2	2.25	1.29	3.24	3.24
Yellowstone County	A18	RM 384.06	138235.3	2-yr	866.5	990.47	987.31	2.41	1.69	36.3	18.67	82.76	502.07	2.19	1.12	3.16	3.16
Yellowstone County	A18	RM 383.96	138072.3	2-yr	866.5	989.94	987.67	2.46	2.32	47.84	40.15	134.9	428.9	1.04	0.87	2.27	2.27
Yellowstone County	A18	RM 383.86	137914.6	2-yr	866.5	989.74	987.24	1.62	1.53	17.13	15.69	149.06	374.2	1.66	1.52	2.5	2.5
Yellowstone County	A18	RM 383.75	137749.9	2-yr	866.5	989.4	986.55	1.56	1.92	22.97	24.34	171.99	343.85	1.24	1.31	2.92	2.92
Yellowstone County	A18	RM 383.62	137544.5	2-yr	866.5	989.14	986.32	1.53	1.59	16.98	14.75	156.87	437.5	1.44	1.25	3.52	3.52
Yellowstone County	A18	RM 383.54	137415.7	2-yr	866.5	989.04	984.41	1.41	1.35	12.81	10.48	368.15	599.42	1.64	1.34	4.63	4.63
Yellowstone County	B1	RM 383.39	137175.7	2-yr	1090.2	988.65	984.98	2.1	2.1	25.35	25.19	267.09	268.87	1.94	1.93	3.67	3.67
Yellowstone County	B1	RM 383.31	137040.5	2-yr	1090.2	988.46	984.86	2.02	1.9	23.97	18.54	357.83	497.54	1.49	1.15	3.6	3.6
Yellowstone County	B1	RM 383.16	136817.2	2-yr	1090.2	988.17	984.9	1.86	1.64	14.83	11.87	451.67	657.26	1.26	1.01	3.27	3.27

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	2-yr	1090.2	987.55	983.64	1.98	1.89	21.67	17.69	373.97	492.08	1.44	1.17	3.91	3.91
Yellowstone County	B1	RM 382.61	135921.1	2-yr	1090.2	986.97	982.68	2.11	1.97	26.31	20.13	192.66	275.84	2.62	2	4.29	4.29
Yellowstone County	B1	RM 382.44	135657.8	2-yr	1090.2	986.57	981.56	2.59	2.12	36.57	20.58	126.82	293.25	3.11	1.75	5.01	5.01
Yellowstone County	B1	RM 382.28	135389.1	2-yr	1090.2	986.34	981.45	2.3	1.98	29.34	12.46	135.85	394.56	3.29	1.39	4.89	4.89
Yellowstone County	B1	RM 382.11	135122	2-yr	1090.2	985.9	980.52	2.71	2.61	44.18	30.85	130.18	195.46	3.07	2.14	5.38	5.38
Yellowstone County	B1	RM 381.93	134829.3	2-yr	1090.2	985.45	981.3	2.39	2.39	52.58	52.58	175.95	175.95	2.59	2.59	4.15	4.15
Yellowstone County	B1	RM 381.79	134602.8	2-yr	1090.2	984.94	981.63	2.65	2.65	42.85	42.85	163.33	163.33	2.52	2.52	3.31	3.31
Yellowstone County	B1	RM 381.69	134426.2	2-yr	1090.2	984.84	981.06	1.96	1.94	24.63	20.07	197.59	244.46	2.82	2.29	3.78	3.78
Yellowstone County	B1	RM 381.58	134232.5	2-yr	1090.2	984.54	981.02	2.21	2.18	33.45	29.93	266.71	302.17	1.85	1.65	3.52	3.52
Yellowstone County	B1	RM 381.47	134047.3	2-yr	1090.2	984.24	980.95	2.08	2.05	33.64	30.24	238.34	269.63	2.19	1.97	3.29	3.29
Yellowstone County	B1	RM 381.35	133871.9	2-yr	1090.2	983.96	980.79	2.08	2.05	33.78	31.88	248.63	266.82	2.11	1.99	3.17	3.17
Yellowstone County	B1	RM 381.22	133659.2	2-yr	1090.2	983.55	979.74	2.15	2.15	37.7	37.7	277.22	277.22	1.83	1.83	3.81	3.81
Yellowstone County	B1	RM 381.11	133491.4	2-yr	1090.2	983.22	979.61	2.21	2.14	40.93	36.15	189.56	249.82	2.31	2.04	3.61	3.61
Yellowstone County	B1	RM 381.00	133302.9	2-yr	1090.2	982.77	978.23	2.58	2.47	39.53	35.66	179.35	230.1	2.13	1.92	4.54	4.54
Yellowstone County	B1	RM 380.92	133180	2-yr	1090.2	982.63	976.97	2.33	2.11	34.99	23.52	147.13	264.34	2.92	1.96	5.66	5.66
Yellowstone County	B1	RM 380.81	132986.3	2-yr	1090.2	982.36	978.55	2.35	2.25	32.83	27.16	189.77	252.67	2.32	1.92	3.81	3.81
Yellowstone County	B1	RM 380.69	132800.2	2-yr	1090.2	982.16	978.53	2.03	1.92	23.86	20.26	261.44	339.28	1.97	1.68	3.63	3.63
Yellowstone County	B1	RM 380.57	132628.6	2-yr	1090.2	981.95	978.7	1.89	1.85	29.38	25.92	223.44	294.76	2.26	2	3.25	3.25
Yellowstone County	B1	RM 380.48	132470	2-yr	1090.2	981.76	978.24	1.93	1.82	27.17	19.99	196.89	320.51	2.53	1.87	3.52	3.52
Yellowstone County	B1	RM 380.34	132222.4	2-yr	1090.2	981.36	977.37	2.33	2.1	32.68	22.46	199.38	349.39	2.16	1.49	3.99	3.99
Yellowstone County	B1	RM 380.22	132032.4	2-yr	1090.2	980.97	977.02	2.6	2.54	39.63	31.9	171.4	219.89	2.42	1.95	3.95	3.95
Yellowstone County	B1	RM 380.11	131847.7	2-yr	1090.2	980.71	976.29	2.43	2.2	39.1	26.1	173.3	392.01	2.27	1.52	4.42	4.42
Yellowstone County	B1	RM 380.01	131671.4	2-yr	1090.2	980.45	976.21	2.35	1.91	36.74	18.57	161.38	458.24	2.48	1.25	4.24	4.24
Yellowstone County	B1	RM 379.92	131538.8	2-yr	1090.2	980.22	976.69	2.42	2.08	34.69	21.02	186.28	417.26	2.06	1.25	3.53	3.53
Yellowstone County	B1	RM 379.84	131406.9	2-yr	1090.2	980.14	975.94	1.61	1.5	16.89	13.65	394.58	535.02	1.68	1.36	4.2	4.2
Yellowstone County	B1	RM 379.75	131265.1	2-yr	1090.2	979.97	974.98	1.67	1.58	20.71	17.59	367.7	465.33	1.74	1.48	4.99	4.99
Yellowstone County	B1	RM 379.65	131104.3	2-yr	1090.2	979.79	975.6	1.66	1.53	18.13	16.16	378.52	482.01	1.66	1.48	4.19	4.19
Yellowstone County	B1	RM 379.56	130964.3	2-yr	1090.2	979.67	975.94	1.52	1.49	15.47	11.66	313.46	1008.16	1.88	1.42	3.73	3.73
Yellowstone County	B1	RM 379.46	130794	2-yr	1090.2	979.48	974.74	1.71	1.64	17.59	10.69	261	905.18	2.05	1.25	4.74	4.74
Yellowstone County	B1	RM 379.36	130642.3	2-yr	1090.2	979.35	975.71	1.7	1.7	23.47	23.47	242.64	242.64	2.65	2.65	3.64	3.64
Yellowstone County	B1	RM 379.27	130496.2	2-yr	1090.2	978.93	974.66	2.66	2.01	62.43	24.45	160.25	586.49	2.37	0.92	4.27	4.27
Yellowstone County	B1	RM 379.17	130345.7	2-yr	1090.2	978.58	973.93	2.72	2.32	45.03	17.66	149.42	482.9	2.63	1.03	4.65	4.65
Yellowstone County	B1	RM 379.04	130142	2-yr	1090.2	978.3	974.79	2.39	1.84	33.82	15.19	201.81	695.71	2.07	0.93	3.51	3.51
Yellowstone County	B1	RM 378.97	130026.7	2-yr	1090.2	978.08	974.64	2.4	1.97	35.38	19.06	226.71	535.74	1.91	1.03	3.44	3.44
Yellowstone County	B1	RM 378.86	129850.9	2-yr	1090.2	977.72	974.4	2.39	2.06	40.07	25.31	239.57	510.72	1.81	1.14	3.32	3.32
Yellowstone County	B1	RM 378.76	129682.3	2-yr	1090.2	977.38	974.17	2.31	2.1	34.34	18.38	261.95	575	1.78	0.95	3.21	3.21
Yellowstone County	B1	RM 378.67	129541.3	2-yr	1090.2	977.11	973.97	2.36	1.87	33.28	17.36	234.37	613.33	1.86	0.97	3.14	3.14
Yellowstone County	B1	RM 378.61	129443.1	2-yr	1090.2	976.88	973.83	2.53	1.91	48.05	25.25	196.92	636.85	1.77	0.93	3.05	3.05
Yellowstone County	B1	RM 378.52	129297.7	2-yr	1090.2	976.61	973.62	1.99	1.79	23.6	20.97	445.5	605.37	1.18	1.05	2.99	2.99
Yellowstone County	B1	RM 378.46	129200.8	2-yr	1090.2	976.49	973.48	1.59	1.55	18.35	16.46	510.94	588.52	1.33	1.19	3.01	3.01
Yellowstone County	B1	RM 378.40	129112.2	2-yr	1090.2	976.29	973.41	1.69	1.67	43.25	41.73	490.28	517.21	1.31	1.26	2.88	2.88
Yellowstone County	B1	RM 378.29	128929.4	2-yr	1090.2	976.08	972.93	1.23	1.21	12.19	11.58	542.19	580.78	1.63	1.55	3.15	3.15
Yellowstone County	B1	RM 378.13	128673.7	2-yr	1090.2	975.73	971.4	1.96	1.96	19.85	19.85	260.48	296.95	2.13	2.13	4.33	4.33
Yellowstone County	B1	RM 378.07	128569	2-yr	1090.2	975.66	970.46	1.85	1.85	16.7	16.7	224.64	298.81	2.62	2.62	5.2	5.2
Yellowstone County	B1	RM 377.96	128380.3	2-yr	1090.2	975.47	968.85	2.12	2.12	31.47	31.47	106.97	106.97	4.81	4.81	6.62	6.62
Yellowstone County		RM 338.83	128364	2-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	2-yr	1090.2	975.45	967.19	1.96	1.96	28.21	28.21	105.15	105.15	5.29	5.29	8.26	8.26
Yellowstone County	B1	RM 377.87	128244.4	2-yr	1090.2	975.25	970.56	2.3	2.3	39.5	39.48	223.61	246.13	2.16	2.16	4.69	4.69
Yellowstone County	B1	RM 377.79	128118	2-yr	1090.2	974.98	970.94	2.42	2.42	29.38	29.38	273.56	329.19	1.65	1.65	4.04	4.04
Yellowstone County	B1	RM 377.69	127964.3	2-yr	1090.2	974.79	969.86	2.1	2.1	25.61	25.61	271.19	347.26	1.92	1.92	4.93	4.93
Yellowstone County	B1	RM 377.61	127824.8	2-yr	1090.2	974.4	970.53	2.66	2.66	39.34	38.91	229.34	266.01	1.79	1.77	3.87	3.87
Yellowstone County	B1	RM 377.55	127735.1	2-yr	1090.2	974.3	970.41	2.28	2.28	28.69	28.69	249.8	265.98	1.92	1.92	3.89	3.89
Yellowstone County	B1	RM 377.48	127618.1	2-yr	1090.2	974.1	970.26	2.3	2.3	30.82	30.82	294.26	297.69	1.61	1.61	3.84	3.84
Yellowstone County	B1	RM 377.39	127466.6	2-yr	1090.2	973.71	969.73	2.53	2.52	37.71	36.85	259.42	266.11	1.66	1.62	3.98	3.98
Yellowstone County	B1	RM 377.34	127391.5	2-yr	1090.2	973.52	969.95	2.51	2.5	49.4	47.69	244.67	254.43	1.77	1.71	3.57	3.57
Yellowstone County	B1	RM 377.25	127241.9	2-yr	1090.2	973.37	970.26	1.78	1.77	20	18.65	363.09	391.98	1.69	1.57	3.11	3.11
Yellowstone County	B1	RM 377.16	127097.7	2-yr	1090.2	973.11	969.82	1.94	1.93	27.11	25.47	359.45	434.87	1.38	1.3	3.29	3.29
Yellowstone County	B1	RM 377.08	126969	2-yr	1090.2	973.06	969	1.35	1.31	10.9	9.43	395.05	499.67	1.93	1.67	4.06	4.06
Yellowstone County	B1	RM 377.04	126900.8	2-yr	1090.2	972.93	968.6	1.71	1.7	35.29	33.25	380.23	405.53	1.67	1.58	4.33	4.33
Yellowstone County	B1	RM 376.98	126797.5	2-yr	1090.2	972.7	969.02	2	1.99	18.57	18.2	368.59	377.71	1.48	1.45	3.68	3.68
Yellowstone County	B1	RM 376.92	126710.1	2-yr	1090.2	972.58	969.01	1.62	1.61	41.01	38.89	467.22	495	1.44	1.37	3.57	3.57

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	2-yr	1090.2	972.42	967.73	1.31	1.33	16.62	15.22	419.77	532.02	1.69	1.55	4.69	4.69
Yellowstone County	B1	RM 376.75	126442.1	2-yr	1090.2	972.27	967.82	1.36	1.38	19.33	18.94	366.44	416.01	1.94	1.91	4.45	4.45
Yellowstone County	B1	RM 376.67	126309	2-yr	1090.2	972.07	967.23	1.67	1.66	26.7	25.53	258.31	294.83	2.33	2.23	4.84	4.84
Yellowstone County	B1	RM 376.58	126174.1	2-yr	1090.2	971.8	966.82	2.03	2.01	39.59	38.54	257.53	282.51	1.97	1.92	4.98	4.98
Yellowstone County	B1	RM 376.51	126058.2	2-yr	1090.2	971.52	966.77	2.19	2.19	37.06	37.06	258.63	258.63	1.92	1.92	4.75	4.75
Yellowstone County	B1	RM 376.42	125918.5	2-yr	1090.2	971.37	967.68	1.9	1.9	22.23	22.23	253.54	253.54	2.26	2.26	3.69	3.69
Yellowstone County	B1	RM 376.35	125809.8	2-yr	1090.2	971.29	966.71	1.81	1.81	18.39	18.39	223.87	223.87	2.69	2.69	4.58	4.58
Yellowstone County	B1	RM 376.28	125697	2-yr	1090.2	971.02	966.28	2.44	2.44	35.67	35.67	201.81	201.81	2.21	2.21	4.74	4.74
Yellowstone County	B1	RM 376.20	125565.9	2-yr	1090.2	970.82	966.16	2.32	2.32	34.06	34.06	232.32	232.32	2.02	2.02	4.66	4.66
Yellowstone County	B1	RM 376.10	125404.8	2-yr	1090.2	970.51	966.61	2.35	2.3	35.25	34.41	247.47	274.52	1.76	1.72	3.9	3.9
Yellowstone County	B1	RM 376.00	125250.5	2-yr	1090.2	970.21	967.42	2.31	2.17	35.99	28.82	239.57	385.63	1.86	1.49	2.79	2.79
Yellowstone County	B1	RM 375.88	125055.1	2-yr	1090.2	969.89	966.01	2.25	1.95	34.62	20.15	180.43	585.12	2.34	1.36	3.88	3.88
Yellowstone County	B1	RM 375.78	124897.3	2-yr	1090.2	969.71	965.37	2.08	1.73	29.45	14.79	175.89	627.74	2.31	1.16	4.34	4.34
Yellowstone County	B1	RM 375.67	124708.2	2-yr	1090.2	969.49	965.8	2.01	1.74	27.63	19.53	220.61	454.11	1.96	1.38	3.69	3.69
Yellowstone County	B1	RM 375.58	124564.2	2-yr	1090.2	969.23	966.54	2.17	1.95	31.96	22.88	221.54	413.35	1.89	1.35	2.69	2.69
Yellowstone County	B1	RM 375.23	124013.6	2-yr	1090.2	968.5	965.23	2.17	1.85	27.66	14.13	191.11	470.34	2.46	1.26	3.27	3.27
Yellowstone County	B1	RM 375.10	123799.5	2-yr	1090.2	967.98	963.88	2.9	2.39	59.82	24.72	124.58	399.77	2.77	1.14	4.1	4.1
Yellowstone County	B1	RM 374.97	123580.4	2-yr	1090.2	967.68	963.97	2.36	1.93	46.53	20.13	128.79	488.05	2.7	1.16	3.71	3.71
Yellowstone County	B1	RM 374.83	123365.5	2-yr	1090.2	967.4	963.52	2.11	1.64	29.4	16.17	123.65	487.02	2.49	1.37	3.88	3.88
Yellowstone County	B1	RM 374.73	123195.7	2-yr	1090.2	967.3	963.36	1.6	1.31	15.07	7.72	142.03	665.05	2.44	1.25	3.94	3.94
Yellowstone County	B1	RM 374.61	123010.3	2-yr	1090.2	967.06	963.49	2.02	1.69	30.24	18.45	153.69	419.95	2.51	1.53	3.57	3.57
Yellowstone County	B1	RM 374.53	122875.3	2-yr	1129.84	966.86	963.14	2.15	1.89	30.51	21.13	182.7	372.32	2.32	1.61	3.72	3.72
Yellowstone County	B1	RM 374.44	122726.7	2-yr	1129.84	966.58	963.04	2.48	2.1	43.17	22.79	122.89	343.81	2.97	1.57	3.54	3.54
Yellowstone County	B1	RM 374.32	122535.1	2-yr	1129.84	966.36	962.82	2	1.85	33.13	23.22	186.45	414.72	2.1	1.47	3.54	3.54
Yellowstone County	B1	RM 374.22	122379	2-yr	1129.84	966.14	960.92	2.21	1.71	30.71	13.43	134.27	539.13	2.8	1.23	5.22	5.22
Yellowstone County	B1	RM 374.13	122231.1	2-yr	1129.84	965.94	960.11	2.44	1.83	33.71	15.12	122.82	515.5	2.68	1.2	5.83	5.83
Yellowstone County	B1	RM 373.97	121972.4	2-yr	1129.84	965.77	958.8	1.7	1.54	18.64	13.44	221.84	418.67	2.44	1.76	6.97	6.97
Yellowstone County	B1	RM 373.88	121829.3	2-yr	1129.84	965.59	962.21	1.95	1.74	28.49	16.78	189.77	449.59	2.45	1.44	3.38	3.38
Yellowstone County	B1	RM 373.79	121688.7	2-yr	1129.84	965.43	961.66	1.9	1.61	30.04	15.46	186	560.64	2.43	1.25	3.77	3.77
Yellowstone County	B1	RM 373.69	121523.5	2-yr	1129.84	965.24	961.11	1.85	1.59	23.3	14.01	197.47	523.59	2.27	1.36	4.13	4.13
Yellowstone County	B1	RM 373.56	121314.3	2-yr	1129.84	964.73	959.37	2.63	2.49	45.26	38.25	180.53	231.36	2.32	1.96	5.36	5.36
Yellowstone County	B1	RM 373.39	121015.9	2-yr	1129.84	964.35	958.78	2.19	2.15	32.17	28.6	183.86	211.65	2.79	2.48	5.57	5.57
Yellowstone County	B1	RM 373.26	120802.3	2-yr	1129.84	964.22	960.81	1.58	1.54	16.63	15.02	355.6	440.49	1.98	1.79	3.41	3.41
Yellowstone County	B1	RM 373.09	120539.5	2-yr	1129.84	963.88	959.94	1.93	1.89	23.87	21.08	300.09	394.72	1.93	1.71	3.94	3.94
Yellowstone County	B1	RM 372.99	120365.2	2-yr	1129.84	963.63	959.69	1.87	1.81	32.71	27.75	326.17	399.8	1.84	1.56	3.94	3.94
Yellowstone County	B1	RM 372.82	120107.7	2-yr	1129.84	963.37	959.03	1.5	1.49	13.43	12.83	452.2	476.92	1.66	1.59	4.34	4.34
Yellowstone County	B1	RM 372.72	119922.5	2-yr	1129.84	963.12	958.92	1.68	1.68	27.56	27.52	397.9	398.27	1.69	1.69	4.2	4.2
Yellowstone County	B1	RM 372.65	119797.7	2-yr	1129.84	962.94	957.32	1.7	1.66	20.46	19.3	395.72	433.81	1.67	1.57	5.62	5.62
Yellowstone County	B1	RM 372.58	119676.6	2-yr	1129.84	962.84	958.2	1.5	1.5	14.37	13.69	436.27	460.45	1.72	1.64	4.64	4.64
Yellowstone County	B1	RM 372.41	119395.9	2-yr	1129.84	962.66	958.82	1.36	1.34	9.98	9.28	452.39	496.41	1.83	1.7	3.84	3.84
Yellowstone County	B1	RM 372.32	119268.8	2-yr	1129.84	962.54	957.24	1.41	1.41	28.81	27.08	418.09	447.61	1.91	1.79	5.3	5.3
Yellowstone County	B1	RM 372.20	119079.1	2-yr	1129.84	962.14	956.93	1.65	1.63	43.74	42.35	378.16	398.45	1.79	1.74	5.21	5.21
Yellowstone County	B1	RM 372.08	118886.4	2-yr	1129.84	961.69	956.2	1.74	1.71	40.3	36.33	311.87	651.32	2.07	1.87	5.49	5.49
Yellowstone County	B1	RM 371.94	118669.8	2-yr	1129.84	961.19	957.58	1.84	1.84	40.24	40.24	367.45	469.9	1.67	1.67	3.61	3.61
Yellowstone County	B1	RM 371.83	118490.4	2-yr	1129.84	960.85	957.52	1.7	1.68	26.31	24.75	381.51	526.98	1.69	1.59	3.33	3.33
Yellowstone County	B1	RM 371.74	118350.7	2-yr	1129.84	960.59	957.48	1.85	1.85	25.08	24.39	378.96	517.49	1.54	1.5	3.11	3.11
Yellowstone County	B1	RM 371.62	118155.6	2-yr	1129.84	960.36	956.41	1.84	1.58	25.08	15.33	219.68	454.89	2.57	1.58	3.95	3.95
Yellowstone County	B1	RM 371.53	118001.4	2-yr	1129.84	960.08	955.99	2.21	2.02	31.47	20.78	231.81	399.05	2.12	1.4	4.09	4.09
Yellowstone County	B1	RM 371.43	117839.2	2-yr	1129.84	959.67	955.47	2.53	2.43	59.46	52.75	195.94	304.55	2.23	1.98	4.2	4.2
Yellowstone County	B1	RM 371.37	117745.1	2-yr	1129.84	959.52	955.72	2.33	2.2	25.14	20.1	269.04	386.38	1.78	1.43	3.8	3.8
Yellowstone County	B1	RM 371.32	117662.6	2-yr	1129.84	959.46	956.41	1.88	1.73	32.12	21.88	296.55	507.35	1.89	1.29	3.05	3.05
Yellowstone County	B1	RM 371.25	117560.3	2-yr	1129.84	959.29	955.99	1.84	1.73	23.95	19.34	368.95	533.81	1.63	1.31	3.3	3.3
Yellowstone County	B1	RM 371.21	117499	2-yr	1129.84	959.24	955.72	1.66	1.53	19.27	15.51	352.62	529.71	1.73	1.39	3.52	3.52
Yellowstone County	B1	RM 371.12	117353.9	2-yr	1129.84	959.07	955.54	1.7	1.7	18.52	18.52	344	344	1.94	1.94	3.53	3.53
Yellowstone County	B1	RM 371.04	117225.1	2-yr	1129.84	958.71	954.84	2.42	2.42	35.15	35.15	204.92	217.58	2.27	2.27	3.87	3.87
Yellowstone County		RM 335.51	117205	2-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	2-yr	1129.84	958.64	954.9	2.34	2.34	34.37	34.37	216.07	224.79	2.23	2.23	3.74	3.74
Yellowstone County	B1	RM 370.94	117054.9	2-yr	1129.84	958.46	955.57	2.19	2.19	34.5	34.04	238.04	689.79	2.16	2.13	2.89	2.89
Yellowstone County	B1	RM 370.85	116910.9	2-yr	1129.84	958.17	954.47	2.4	2.39	39.08	37.27	207.69	636.9	2.27	2.16	3.7	3.7
Yellowstone County	B1	RM 370.77	116793.6	2-yr	1129.84	957.85	953.84	2.68	2.63	43.28	38.03	211.54	594.37	1.99	1.75	4.01	4.01
Yellowstone County	B1	RM 370.72	116711.6	2-yr	1129.84	957.66	953.13	2.82	2.54	50.04	33.84	139.88	622.74	2.78	1.88	4.53	4.53

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	2-yr	1129.84	957.61	953.05	2.72	2.25	39.31	24.48	154.39	738.53	2.52	1.57	4.56	4.56
Yellowstone County	B1	RM 370.63	116558.9	2-yr	1129.84	957.47	953.42	2.41	2.3	47.2	33.22	175.12	608.31	2.63	1.85	4.05	4.05
Yellowstone County	B1	RM 370.56	116440.6	2-yr	1129.84	957.38	953.34	2.13	1.93	22.18	12.15	169.45	458	3.07	1.68	4.04	4.04
Yellowstone County	B1	RM 370.44	116241.1	2-yr	1129.84	957.09	952.03	2.53	2.13	42.14	22.27	132.71	413.6	3.27	1.72	5.06	5.06
Yellowstone County	B1	RM 370.34	116071.6	2-yr	1129.84	956.89	949.79	2.5	2.3	39.18	20.45	112.21	415.81	3.95	2.05	7.1	7.1
Yellowstone County	B1	RM 370.24	115908.6	2-yr	1129.84	956.76	950.22	2.37	2.02	34.82	10.44	116.82	473.15	3.97	1.18	6.54	6.54
Yellowstone County	B1	RM 370.11	115705	2-yr	1129.84	956.58	952.12	2.28	1.93	33.12	17.46	152.7	362.95	3.05	1.61	4.46	4.46
Yellowstone County	B1	RM 370.00	115535.2	2-yr	1129.84	956.34	952.2	2.23	2.01	40.5	30.54	214.87	355.29	2.1	1.58	4.14	4.14
Yellowstone County	B1	RM 369.89	115356.1	2-yr	1129.84	956.08	953.15	2.02	1.92	20.93	19.02	341.2	409.1	1.58	1.44	2.93	2.93
Yellowstone County	B1	RM 369.77	115164.3	2-yr	1129.84	955.84	952.34	1.84	1.82	20.61	19.62	391.35	442.97	1.56	1.49	3.5	3.5
Yellowstone County	B1	RM 369.64	114965.6	2-yr	1129.84	955.51	951.9	1.89	1.85	27.09	25.46	415.33	517.59	1.39	1.31	3.61	3.61
Yellowstone County	B1	RM 369.54	114789.5	2-yr	1129.84	955.19	952.38	1.87	1.77	23.92	20.15	410.62	539.42	1.4	1.18	2.81	2.81
Yellowstone County	B1	RM 369.45	114650.1	2-yr	1129.84	955.01	951	1.63	1.56	20.84	20.7	434.78	515.16	1.41	1.4	4.01	4.01
Yellowstone County	B1	RM 369.32	114431.1	2-yr	1129.84	954.69	951.1	1.6	1.55	24.45	21.21	371.55	465.35	1.81	1.57	3.59	3.59
Yellowstone County	B1	RM 369.17	114210.5	2-yr	1129.84	954.32	949.85	2.03	1.95	35.87	28.9	180.33	302.23	2.38	1.92	4.47	4.47
Yellowstone County	B1	RM 369.06	114022.4	2-yr	1129.84	953.85	949.89	2.73	2.46	43.36	30.59	133.01	226.84	2.86	2.02	3.96	3.96
Yellowstone County	B1	RM 368.96	113871.2	2-yr	1129.84	953.73	949.68	2.22	1.93	31.33	22.09	165.59	317.07	2.62	1.85	4.05	4.05
Yellowstone County	B1	RM 368.88	113745.9	2-yr	1129.84	953.57	948.77	2.14	1.98	30.22	22.69	213.23	356.57	2.13	1.6	4.8	4.8
Yellowstone County	B1	RM 368.82	113641	2-yr	1129.84	953.31	948.47	2.34	2.22	45.71	34.71	237.99	369.33	1.82	1.38	4.84	4.84
Yellowstone County	B1	RM 368.72	113477.3	2-yr	1129.84	953.02	948.45	1.91	1.78	33.63	24.65	294.34	478.73	1.81	1.33	4.57	4.57
Yellowstone County	B1	RM 368.63	113328.9	2-yr	1129.84	952.77	947.82	1.95	1.79	28.51	21.22	270.91	451.42	1.88	1.4	4.95	4.95
Yellowstone County	B1	RM 368.54	113195.6	2-yr	1129.84	952.55	947.51	2.01	1.83	27.9	19.22	264.35	440.33	2.03	1.4	5.04	5.04
Yellowstone County	B1	RM 368.44	113035.8	2-yr	1129.84	951.98	947.4	2.81	2.63	78.9	57.19	205.81	309.5	1.91	1.39	4.58	4.58
Yellowstone County	B1	RM 368.35	112878.7	2-yr	1129.84	952.02	946.64	1.42	1.42	12.54	12.16	278.82	287.7	2.86	2.77	5.38	5.38
Yellowstone County	B1	RM 368.26	112737.6	2-yr	1129.84	951.74	946.23	2.22	2.22	62.78	62.78	187.2	187.2	2.72	2.72	5.51	5.51
Yellowstone County	B1	RM 368.18	112604.7	2-yr	1129.84	951.44	947.11	2.46	2.46	38.37	38.37	157.79	218.74	2.91	2.91	4.33	4.33
Yellowstone County	B2	RM 368.09	112456.7	2-yr	1129.84	951.18	947.7	2.6	2.6	46.1	46.1	149.9	149.9	2.9	2.9	3.48	3.48
Yellowstone County	B2	RM 368.00	112314.4	2-yr	1129.84	951.1	947.56	2.05	2.05	24.75	24.7	195.71	434.67	2.81	2.81	3.54	3.54
Yellowstone County	B2	RM 367.86	112104.7	2-yr	1129.84	950.75	946.1	2.48	2.48	40.36	40.36	165.6	165.6	2.75	2.75	4.65	4.65
Yellowstone County	B2	RM 367.79	111989.2	2-yr	1129.84	950.56	945.04	2.45	2.45	50.87	50.87	164.43	164.43	2.81	2.81	5.52	5.52
Yellowstone County	B2	RM 367.72	111876.5	2-yr	1129.84	950.42	945.45	2.37	2.29	32.99	27.42	149.5	187.45	3.16	2.63	4.97	4.97
Yellowstone County	B2	RM 367.64	111739.2	2-yr	1129.84	950.19	945.68	2.59	2.49	46.49	36.22	135.85	201.24	3.16	2.46	4.51	4.51
Yellowstone County	B2	RM 367.50	111519.9	2-yr	1129.84	949.89	945.21	2.58	2.48	42.29	32.31	123.71	170.38	3.51	2.68	4.68	4.68
Yellowstone County	B2	RM 367.40	111357.1	2-yr	1129.84	949.71	944.36	2.58	2.3	38.01	20.19	111.01	245.51	3.79	2	5.35	5.35
Yellowstone County	B2	RM 367.31	111214.8	2-yr	1129.84	949.58	945.36	2.47	2.29	31.53	18.52	143.1	269.09	3.14	1.84	4.22	4.22
Yellowstone County	B2	RM 367.19	110992.7	2-yr	1129.84	949.37	945.91	2.14	2.02	28.38	22.82	242.3	324.79	2.14	1.72	3.46	3.46
Yellowstone County	B2	RM 367.11	110813.5	2-yr	1129.84	948.99	945.17	2.36	2.27	39.17	34.38	294.08	352.84	1.61	1.41	3.82	3.82
Yellowstone County	B2	RM 367.03	110669.4	2-yr	1129.84	948.79	945.89	1.96	1.86	24.1	20.72	332.52	413.28	1.71	1.47	2.9	2.9
Yellowstone County	B2	RM 366.95	110543	2-yr	1129.84	948.66	945.34	1.52	1.47	24.44	22.84	443.08	497.57	1.65	1.54	3.31	3.31
Yellowstone County	B2	RM 366.84	110376	2-yr	1129.84	948.44	944.61	1.4	1.4	19.77	19.77	499.78	499.78	1.62	1.62	3.83	3.83
Yellowstone County	B2	RM 366.78	110300.8	2-yr	1129.84	948.34	943.84	1.47	1.47	18.78	18.78	434.4	434.4	1.77	1.77	4.5	4.5
Yellowstone County	B2	RM 366.73	110074.8	2-yr	1129.84	948.05	943.42	1.74	1.74	21.5	21.5	288.48	288.48	2.25	2.25	4.63	4.63
Yellowstone County	B2	RM 366.68	109931.6	2-yr	1129.84	947.87	942.77	1.92	1.92	27.29	27.29	224.73	224.73	2.62	2.62	5.1	5.1
Yellowstone County	B2	RM 366.53	109747.6	2-yr	1129.84	947.58	940.86	2.37	2.37	28.89	28.89	142.38	142.38	3.35	3.35	6.72	6.72
Yellowstone County	B2	RM 366.38	109510.8	2-yr	1129.84	947.32	941.55	2.5	2.5	39.91	39.91	112.33	112.33	4.03	4.03	5.77	5.77
Yellowstone County	B2	RM 366.27	109345.5	2-yr	1129.84	947.26	942.72	1.81	1.81	25.78	25.78	220.62	220.62	2.84	2.84	4.54	4.54
Yellowstone County	B2	RM 366.15	109158.9	2-yr	1129.84	946.95	941.59	2.06	2.06	48.27	48.27	258.21	258.21	2.13	2.13	5.36	5.36
Yellowstone County	B2	RM 366.04	108972.6	2-yr	1129.84	946.65	941.41	2.24	2.24	24.56	24.56	172.88	172.88	2.91	2.91	5.24	5.24
Yellowstone County	B2	RM 365.94	108818.8	2-yr	1129.84	946.55	940.93	2.1	2.1	21.16	21.16	200.01	200.01	2.69	2.69	5.62	5.62
Yellowstone County	B2	RM 365.83	108647.5	2-yr	1129.84	946.34	939.93	2.05	2.05	46.86	46.54	237.26	238.93	2.33	2.31	6.41	6.41
Yellowstone County	B2	RM 365.75	108521.3	2-yr	1129.84	946.09	941.33	2.08	2.03	45.15	39.12	207.41	263.01	2.45	2.12	4.76	4.76
Yellowstone County	B2	RM 365.71	108446.5	2-yr	1129.84	945.99	941.83	1.98	1.94	35.9	32.19	204.48	235.69	2.76	2.48	4.16	4.16
Yellowstone County	B2	RM 365.64	108343.5	2-yr	1129.84	945.81	942.19	2.01	1.95	41.92	35.71	264.04	321.76	2.12	1.8	3.62	3.62
Yellowstone County	B2	RM 365.57	108220.5	2-yr	1129.84	945.48	942.08	2.22	2.18	51.13	45.24	247.4	286.51	2.04	1.81	3.4	3.4
Yellowstone County	B2	RM 365.51	108118.9	2-yr	1129.84	945.23	941.87	2.25	2.21	48.09	45.37	222.43	240.82	2.25	2.12	3.36	3.36
Yellowstone County	B2	RM 365.46	108042.9	2-yr	1129.84	945.18	941.73	1.85	1.83	23.44	22.71	269.83	281.4	2.26	2.19	3.45	3.45
Yellowstone County	B2	RM 365.41	107956.5	2-yr	1129.84	945.11	941.46	1.69	1.69	22.52	22.46	293.36	294.12	2.28	2.27	3.65	3.65
Yellowstone County	B2	RM 365.37	107905.7	2-yr	1129.84	945.06	940.74	1.69	1.69	18.18	18.18	301.08	301.08	2.22	2.22	4.32	4.32
Yellowstone County	B2	RM 365.31	107792.4	2-yr	1129.84	944.92	939.27	1.9	1.89	21.95	21.32	247.44	256.21	2.4	2.33	5.65	5.65
Yellowstone County	B2	RM 365.27	107727.9	2-yr	1129.84	944.78	939.34	2.15	2.15	31.99	31.85	247.2	248.35	2.13	2.12	5.44	5.44
Yellowstone County	B2	RM 365.23	107674.2	2-yr	1129.84	944.67	939.52	2.32	2.32	25.89	25.89	219.36	219.36	2.22	2.22	5.15	5.15

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	2-yr	1129.84	944.61	939.93	2.09	2.09	32.65	32.65	234.78	234.78	2.3	2.3	4.68	4.68
Yellowstone County	B2	RM 365.15	107534.7	2-yr	1129.84	944.54	939.68	2.04	2.03	25.08	23.73	212.89	225.57	2.6	2.46	4.86	4.86
Yellowstone County	B2	RM 365.10	107466	2-yr	1129.84	944.45	938.61	2.13	2.13	26.35	26.35	183.28	183.28	2.9	2.9	5.84	5.84
Yellowstone County	B2	RM 365.06	107396.2	2-yr	1129.84	944.39	939.07	2.07	2.07	28.32	28.27	169.59	169.83	3.22	3.22	5.32	5.32
Yellowstone County	B2	RM 365.01	107325.8	2-yr	1129.84	944.36	939.22	1.84	1.83	35.98	35.14	173.56	177.88	3.55	3.46	5.14	5.14
Yellowstone County	B2	RM 364.99	107287.5	2-yr	1129.84	944.29	939.27	1.96	1.95	43.96	40.99	170.87	183.59	3.38	3.15	5.02	5.02
Yellowstone County	B2	RM 364.90	107128.3	2-yr	1129.84	944.06	937.97	2.23	2.16	25.3	22.89	144.11	165.3	3.5	3.17	6.09	6.09
Yellowstone County		RM 331.55	107100	2-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	2-yr	1129.84	943.95	938.58	2.19	2.14	24.38	22.76	145.36	159.6	3.53	3.31	5.37	5.37
Yellowstone County	B2	RM 364.81	106996.1	2-yr	1129.84	943.93	938.93	1.97	1.97	21	21	210.07	210.07	2.73	2.73	5	5
Yellowstone County	B2	RM 364.74	106893.3	2-yr	1129.84	943.81	938.94	2.1	2.05	32.44	30.39	164.71	195.61	3.26	3.06	4.87	4.87
Yellowstone County	B2	RM 364.64	106739.2	2-yr	1129.84	943.55	939.09	2.47	2.44	30.64	28.81	125.47	227.96	3.64	3.43	4.46	4.46
Yellowstone County		RM 331.32	106722	2-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	2-yr	1129.84	943.44	939.16	2.5	2.47	31.56	29.69	129.61	138.92	3.55	3.35	4.28	4.28
Yellowstone County	B2	RM 364.61	106686.8	2-yr	1129.84	943.44	939.21	2.29	2.29	26.61	26.61	140.46	179.46	3.51	3.51	4.23	4.23
Yellowstone County	B2	RM 364.60	106666.6	2-yr	1129.84	943.37	939.26	2.46	2.46	31.32	31.32	136.77	136.77	3.35	3.35	4.11	4.11
Yellowstone County		RM 331.14	106644	2-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	2-yr	1129.84	943.3	939.21	2.41	2.41	29.65	29.65	139.41	139.41	3.44	3.44	4.09	4.09
Yellowstone County	B2	RM 364.53	106558.4	2-yr	1129.84	943.26	939.11	2.27	2.27	26.62	26.62	148.89	148.89	3.34	3.34	4.15	4.15
Yellowstone County	B2	RM 364.49	106490.3	2-yr	1129.84	943.2	939.24	2.28	2.28	27.36	27.36	155.82	155.82	3.17	3.17	3.96	3.96
Yellowstone County	B2	RM 364.43	106394	2-yr	1129.84	943.12	939.13	2.26	2.26	26.81	26.81	154.72	154.72	3.23	3.23	3.99	3.99
Yellowstone County	B2	RM 364.37	106296.4	2-yr	1129.84	943.05	938.98	2.21	2.21	24.92	23.6	145.62	154	3.51	3.32	4.07	4.07
Yellowstone County	B2	RM 364.32	106215.1	2-yr	1129.84	942.97	938.52	2.24	2.23	37.32	34.3	148.55	162	3.4	3.12	4.45	4.45
Yellowstone County	B2	RM 364.29	106172.9	2-yr	1129.84	942.98	938.13	1.77	1.75	44.14	37.57	187.99	515.17	3.39	2.89	4.85	4.85
Yellowstone County	B2	RM 364.26	106126.6	2-yr	1129.84	942.79	937.7	2.36	2.23	39.17	30.44	138.29	190.49	3.42	2.66	5.09	5.09
Yellowstone County	B2	RM 364.22	106055.2	2-yr	1129.84	942.7	938.15	2.38	2.38	42.81	42.81	129.89	181.25	3.65	3.65	4.55	4.55
Yellowstone County	B2	RM 364.14	105927.3	2-yr	1129.84	942.44	938.12	2.69	2.54	51.1	39.57	120.47	166.48	3.45	2.67	4.32	4.32
Yellowstone County	B2	RM 364.06	105809.9	2-yr	1129.84	942.34	938.22	2.33	2.27	37.62	28	149.05	206.42	3.24	2.41	4.12	4.12
Yellowstone County	B2	RM 363.96	105648.3	2-yr	1129.84	942.22	938.28	1.93	1.91	26.81	23.13	239.18	326.88	2.45	2.11	3.94	3.94
Yellowstone County	B2	RM 363.85	105472.4	2-yr	1129.84	942	936.25	2.2	1.99	25.18	18.03	149.89	244.88	3.26	2.32	5.75	5.75
Yellowstone County	B2	RM 363.76	105316.8	2-yr	1129.84	941.9	937.03	2.02	1.89	29.06	20.01	145.13	248.95	3.49	2.4	4.87	4.87
Yellowstone County	B2	RM 363.63	105118.1	2-yr	1129.84	941.7	937.93	1.8	1.8	31.26	31.26	319.12	319.12	1.96	1.96	3.77	3.77
Yellowstone County	B2	RM 363.52	104943.9	2-yr	1129.84	941.38	937.54	1.75	1.73	37.7	35.5	368.8	396.01	1.75	1.65	3.84	3.84
Yellowstone County	B2	RM 363.46	104841.5	2-yr	1129.84	941.24	937.16	1.53	1.49	24.41	18.59	330.87	476.72	2.21	1.68	4.08	4.08
Yellowstone County	B2	RM 363.33	104622.9	2-yr	1129.84	940.91	936.36	1.72	1.51	37.37	22.08	285.14	591.89	2.15	1.27	4.55	4.55
Yellowstone County	B2	RM 363.20	104414.5	2-yr	1129.84	940.55	936.48	1.85	1.64	28.83	16.8	280.61	621.92	2.09	1.22	4.07	4.07
Yellowstone County	B2	RM 363.10	104256.4	2-yr	1129.84	940.29	936.25	1.98	1.71	32.15	21.74	270.75	492.43	1.98	1.34	4.04	4.04
Yellowstone County	B2	RM 363.03	104144.8	2-yr	1129.84	940.13	936.22	1.92	1.7	25.75	14.19	258.35	547.7	2.2	1.21	3.91	3.91
Yellowstone County	B2	RM 362.86	103869.6	2-yr	1129.84	939.97	934.32	1.36	1.2	11.72	7.86	404.26	715.92	1.96	1.31	5.65	5.65
Yellowstone County	B2	RM 362.74	103671.4	2-yr	1129.84	939.7	934.52	1.91	1.78	24.36	16.98	340.01	538.09	1.69	1.18	5.18	5.18
Yellowstone County	B2	RM 362.63	103493.2	2-yr	1129.84	939.25	934.5	2.22	2.13	50.86	41.36	316.35	410.76	1.59	1.29	4.75	4.75
Yellowstone County	B2	RM 362.52	103330.7	2-yr	1129.84	938.78	934.5	2.19	2.16	43.02	38.88	295.92	332.55	1.74	1.57	4.28	4.28
Yellowstone County	B2	RM 362.43	103185.5	2-yr	1129.84	938.54	934.1	2.1	2.09	20.06	18.64	333.25	394.23	1.61	1.5	4.44	4.44
Yellowstone County	B2	RM 362.36	103070.8	2-yr	1129.84	938.43	932.98	2.02	2.02	19.6	19.42	273.79	310.07	2.04	2.02	5.44	5.44
Yellowstone County	B2	RM 362.27	102929.3	2-yr	1129.84	938.33	932.93	1.94	1.94	17.84	17.84	193.87	193.87	3	3	5.4	5.4
Yellowstone County	B2	RM 362.20	102813.3	2-yr	1129.84	938	933.37	2.81	2.81	41.23	41.23	109.37	109.37	3.68	3.68	4.63	4.63
Yellowstone County	B2	RM 362.13	102693.1	2-yr	1129.84	937.86	933.47	2.78	2.78	40.22	40.22	124.53	162.65	3.26	3.26	4.39	4.39
Yellowstone County	B3	RM 362.05	102570.9	2-yr	1129.84	937.77	933.85	2.44	2.44	32.16	32.16	178.73	178.73	2.59	2.59	3.92	3.92
Yellowstone County	B3	RM 362.00	102488.8	2-yr	1129.84	937.73	934.11	2.06	2.06	26.75	26.75	239.67	253.19	2.29	2.29	3.62	3.62
Yellowstone County	B3	RM 361.93	102368.8	2-yr	1129.84	937.59	934.31	1.96	1.96	24.47	24.47	360.5	360.5	1.79	1.79	3.28	3.28
Yellowstone County	B3	RM 361.86	102261.1	2-yr	1129.84	937.29	934.36	2.37	2.37	43.05	43.05	274.42	289.55	1.74	1.74	2.93	2.93
Yellowstone County	B3	RM 361.78	102138.9	2-yr	1129.84	937.16	933.72	1.86	1.86	19.66	19.66	362.86	373.07	1.68	1.68	3.44	3.44
Yellowstone County	B3	RM 361.68	101970.2	2-yr	1129.84	936.94	933.64	1.74	1.73	24.62	23.95	414.88	456.74	1.56	1.52	3.3	3.3
Yellowstone County	B3	RM 361.65	101918.4	2-yr	1129.84	936.9	933.71	1.5	1.49	18.88	18.57	403.16	435.09	1.87	1.84	3.19	3.19
Yellowstone County	B3	RM 361.61	101855.6	2-yr	1129.84	936.77	932.7	1.8	1.8	22.68	22.68	327.69	384.71	1.92	1.92	4.07	4.07
Yellowstone County	B3	RM 361.56	101767.4	2-yr	1129.84	936.69	930.29	1.8	1.8	19.51	19.47	265.13	329.47	2.37	2.37	6.4	6.4
Yellowstone County	B3	RM 361.48	101644.6	2-yr	1129.84	936.51	929.97	2.08	2.08	32.04	31.55	179.02	311.94	3.04	2.99	6.54	6.54
Yellowstone County	B3	RM 361.42	101546.2	2-yr	1129.84	936.29	932.36	2.48	2.44	32.28	26.99	175.44	743.84	2.59	2.17	3.93	3.93
Yellowstone County	B3	RM 361.37	101468.9	2-yr	1129.84	936.25	932.21	2.24	2.15	27.1	19.46	166.22	662.51	3.02	2.17	4.04	4.04
Yellowstone County	B3	RM 361.33	101409.4	2-yr	1129.84	936.1	932.02	2.56	2.44	36.08	24.54	152.02	589.27	2.89	1.96	4.08	4.08
Yellowstone County	B3	RM 361.29	101346	2-yr	1129.84	935.93	930.51	2.83	2.71	43.98	33.38	135.21	261.85	2.92	2.22	5.42	5.42

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	2-yr	1129.84	935.74	928.42	3.12	2.87	50.53	36.42	107.63	563.42	3.3	2.37	7.32	7.32
Yellowstone County	B3	RM 361.21	101251.*	2-yr	1129.84	935.81	927.55	2.48	2.32	61.59	34.48	115.12	645.31	3.91	2.18	8.26	8.26
Yellowstone County		RM 361.21	101217.5	2-yr	1129.84	935.85	926.68	2.09	1.88	22.21	11.21	113.44	795.27	4.7	2.35	9.17	9.17
Yellowstone County	B3	RM 361.18	101167.2	2-yr	1129.84	935.84	928.03	2.01	1.81	21.8	13.42	130.41	1014.51	4.19	2.57	7.81	7.81
Yellowstone County	B3	RM 361.16	101134.2	2-yr	1129.84	935.85	928.92	1.74	1.58	18.79	14.65	204.21	1004.2	3.05	2.38	6.93	6.93
Yellowstone County	B3	RM 361.09	101028.7	2-yr	1129.84	935.74	931.28	1.84	1.84	21.31	21.31	340.52	980.34	1.8	1.8	4.46	4.46
Yellowstone County	B3	RM 361.01	100891.3	2-yr	1129.84	935.55	931.55	1.89	1.89	23.69	23.69	335.01	943.21	1.79	1.79	4	4
Yellowstone County	B3	RM 360.92	100756	2-yr	1129.84	935.36	931.05	1.62	1.62	31.19	31.19	446.62	1275.02	1.56	1.56	4.31	4.31
Yellowstone County	B3	RM 360.81	100570.1	2-yr	1129.84	934.86	929.52	1.82	1.82	41.33	41.33	442.5	1013.46	1.4	1.4	5.34	5.34
Yellowstone County	B3	RM 360.69	100383.5	2-yr	1129.84	934.59	930.6	1.58	1.54	21.45	18.37	330.49	1312.16	2.11	1.81	4.7	4.7
Yellowstone County	B3	RM 360.59	100227.2	2-yr	1129.84	934.29	930.53	2.11	1.95	28.17	20.51	256.96	1416.24	2	1.45	4.08	4.08
Yellowstone County	B3	RM 360.50	100081	2-yr	1129.84	934.06	930.55	2.2	2.12	33.51	25.91	202.25	1120.95	2.52	1.94	3.51	3.51
Yellowstone County	B3	RM 360.42	99970.7	2-yr	1129.84	933.86	929.97	2.39	2.23	36.02	26.1	181.63	994.73	2.57	1.86	3.89	3.89
Yellowstone County	B3	RM 360.36	99862.66	2-yr	1129.84	933.73	929.68	2.24	2.13	28.25	21.78	231.52	830.93	2.17	1.67	4.05	4.05
Yellowstone County	B3	RM 360.27	99717.18	2-yr	1129.84	933.44	929.52	2.6	2.29	40.82	26.09	149.73	763.56	2.55	1.63	3.92	3.92
Yellowstone County	B3	RM 360.18	99578.06	2-yr	1129.84	933.2	929.32	2.6	2.43	44.45	30.94	134.21	709.74	3.2	2.22	3.88	3.88
Yellowstone County	B3	RM 360.11	99458.59	2-yr	1129.84	933.16	929.38	2.17	1.77	26.91	16	148.51	863.88	2.68	1.6	3.78	3.78
Yellowstone County	B3	RM 360.03	99328	2-yr	1141.17	933.05	929.58	1.94	1.69	29.93	17.3	168.49	1304.49	2.69	1.55	3.47	3.47
Yellowstone County	B3	RM 359.96	99226.54	2-yr	1141.17	932.9	929.2	2.12	1.81	30.15	16.77	163.67	1197.54	2.74	1.52	3.7	3.7
Yellowstone County	B3	RM 359.88	99098.18	2-yr	1141.17	932.73	927.78	2.29	1.94	29.26	14.8	142.5	1075.63	3.13	1.58	4.95	4.95
Yellowstone County	B3	RM 359.78	98940.52	2-yr	1141.17	932.55	928.1	2.31	1.96	37.83	16.61	147.11	1093.18	3.2	1.4	4.45	4.45
Yellowstone County	B3	RM 359.70	98813.18	2-yr	1141.17	932.08	928.32	3.17	2.95	66.48	31.77	120.61	536.3	2.94	1.4	3.76	3.76
Yellowstone County	B3	RM 359.61	98663.44	2-yr	1141.17	932.05	928.8	1.87	1.82	25.83	20.45	309.37	491.95	1.96	1.55	3.25	3.25
Yellowstone County	B3	RM 359.50	98492.66	2-yr	1141.17	931.81	928.22	1.96	1.9	23.64	17.86	286.4	573.03	2.01	1.52	3.59	3.59
Yellowstone County	B3	RM 359.38	98291.15	2-yr	1141.17	931.49	927.09	1.97	1.93	37.97	30.82	328.9	544.64	1.62	1.31	4.4	4.4
Yellowstone County	B3	RM 359.26	98107.42	2-yr	1141.17	931.11	927.71	1.95	1.8	26.89	22.17	371.55	584.26	1.48	1.22	3.4	3.4
Yellowstone County	B3	RM 359.18	97966.53	2-yr	1141.17	930.92	927.28	1.87	1.6	22.8	14.71	293.33	679.48	1.89	1.22	3.64	3.64
Yellowstone County	B3	RM 359.10	97841.82	2-yr	1141.17	930.75	926.69	1.85	1.64	23.47	17.98	362.42	698.54	1.54	1.18	4.05	4.05
Yellowstone County	B3	RM 359.01	97692.75	2-yr	1141.17	930.51	925.91	1.8	1.47	30.76	23.62	311.26	636.83	1.69	1.3	4.6	4.6
Yellowstone County	B3	RM 358.90	97524.59	2-yr	1141.17	930	926.77	2.55	2.27	41.77	23.11	187.26	393.96	2.31	1.28	3.23	3.23
Yellowstone County	B3	RM 358.81	97374.99	2-yr	1141.17	929.73	926.37	2.52	2.3	37.06	20.34	206.04	415.7	2.18	1.2	3.36	3.36
Yellowstone County	B3	RM 358.74	97267.71	2-yr	1141.17	929.49	925.53	2.72	2	60.48	26.67	161.34	667.24	2.2	0.97	3.96	3.96
Yellowstone County	B3	RM 358.67	97155.8	2-yr	1141.17	929.4	925.59	1.83	1.64	21.8	15.18	271.58	715.87	1.6	1.12	3.81	3.81
Yellowstone County	B3	RM 358.61	97062.24	2-yr	1141.17	929.28	925.74	1.51	1.53	20.2	17.2	383.83	763.28	1.45	1.23	3.54	3.54
Yellowstone County	B3	RM 358.56	96985.92	2-yr	1141.17	929.22	926.2	1.36	1.38	14.17	11.15	359.02	734.92	1.78	1.4	4.63	4.63
Yellowstone County	B3	RM 358.50	96888.4	2-yr	1141.17	929.15	925.64	1.35	1.29	12.25	8.88	384.4	860.18	1.75	1.27	3.51	3.51
Yellowstone County	B3	RM 358.43	96788.43	2-yr	1141.17	929.09	925.27	1.02	1	12.28	9.22	524.05	1024.9	1.53	1.15	3.82	3.82
Yellowstone County	B3	RM 358.30	96638.82	2-yr	1141.17	929.04	924.7	0.88	0.79	7.1	5.27	669.56	1080.52	1.8	1.34	4.34	4.34
Yellowstone County	B3	RM 358.24	96561.93	2-yr	1141.17	929	923.57	0.97	0.86	8.24	6.67	643.55	1036.69	1.59	1.29	5.43	5.43
Yellowstone County	B3	RM 358.20	96500.79	2-yr	1141.17	928.92	922.99	1.24	1.21	12.33	11.29	616.16	710.75	1.45	1.32	5.93	5.93
Yellowstone County	B3	RM 358.14	96404.93	2-yr	1141.17	928.84	922.57	1.28	1.23	11.41	9.46	542.42	718.29	1.59	1.32	6.27	6.27
Yellowstone County	B3	RM 358.12	96368.05	2-yr	1141.17	928.82	922.78	1.31	1.14	11.55	7.35	347.8	771.05	2.19	1.39	6.03	6.03
Yellowstone County	B3	RM 358.04	96244.75	2-yr	1141.17	928.63	923.22	1.95	1.59	33.85	14.76	161.74	556.04	2.97	1.29	5.41	5.41
Yellowstone County	B3	RM 358.00	96168.44	2-yr	1141.17	928.39	923.39	2.69	1.92	51.62	19.21	101.5	515.64	3.13	1.15	5	5
Yellowstone County	B3	RM 357.93	96065.49	2-yr	1141.17	928.16	923.1	2.96	2.31	40.18	20.54	104.13	335.58	2.9	1.48	5.06	5.06
Yellowstone County	B3	RM 357.88	95975.44	2-yr	1141.17	928.19	923.91	2.03	1.67	27.1	13.63	151.33	506.95	2.69	1.35	4.28	4.28
Yellowstone County	B3	RM 357.82	95884.99	2-yr	1141.17	928.14	924.01	1.73	1.56	19.84	12.57	192.85	475.41	2.68	1.69	4.13	4.13
Yellowstone County	B3	RM 357.78	95821.69	2-yr	1141.17	928.08	924.08	1.6	1.62	22.57	20.65	256.88	360.08	2.14	1.96	4	4
Yellowstone County	B3	RM 357.69	95683.91	2-yr	1141.17	927.88	923.81	1.88	1.88	21.1	21.1	294.66	294.66	2.06	2.06	4.07	4.07
Yellowstone County	B4	RM 357.62	95571.15	2-yr	1141.17	927.63	921.84	2.32	2.32	35.87	35.64	226.05	227.52	2.18	2.16	5.79	5.79
Yellowstone County	B4	RM 357.56	95469.4	2-yr	1141.17	927.59	918.46	1.81	1.8	23.36	21.86	219.66	236.11	2.87	2.68	9.13	9.13
Yellowstone County	B4	RM 357.48	95351.48	2-yr	1141.17	927.3	922.69	2.46	2.45	37.16	35.63	196.25	206.19	2.36	2.26	4.61	4.61
Yellowstone County	B4	RM 357.44	95275.91	2-yr	1141.17	927.16	922.22	2.49	2.49	38.96	38.38	193.4	196.41	2.37	2.33	4.94	4.94
Yellowstone County	B4	RM 357.34	95127.12	2-yr	1141.17	926.97	923.1	2.37	2.34	32.74	29.85	178.2	198.26	2.7	2.46	3.87	3.87
Yellowstone County	B4	RM 357.23	94939.75	2-yr	1141.17	926.79	920.81	2.26	2.14	31.52	20.38	141.18	233.62	3.54	2.28	5.98	5.98
Yellowstone County	B4	RM 357.13	94789.23	2-yr	1141.17	926.6	921.26	2.49	2.26	33.23	23.98	135.6	238.8	3.06	2.21	5.34	5.34
Yellowstone County	B4	RM 357.01	94595.53	2-yr	1141.17	926.51	921.72	1.94	1.62	19.62	10.52	181.47	421.96	3.12	1.67	4.79	4.79
Yellowstone County	B4	RM 356.90	94412.13	2-yr	1141.17	926.34	921.02	2.03	1.83	23.19	15.31	233.6	405.43	2.33	1.54	5.32	5.32
Yellowstone County	B4	RM 356.81	94272.48	2-yr	1141.17	926.19	919.95	2.06	1.75	26.46	19.04	231.11	411.08	2.21	1.59	6.24	6.24
Yellowstone County	B4	RM 356.73	94148.77	2-yr	1141.17	926.04	921.15	1.98	1.8	24.81	20.15	271.86	413.99	1.93	1.57	4.89	4.89
Yellowstone County	B4	RM 356.66	94030.68	2-yr	1141.17	925.91	921.75	1.85	1.72	20.78	16.02	290.96	447.22	1.96	1.51	4.16	4.16

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	2-yr	1141.17	925.82	921.88	1.7	1.55	19.76	13.87	246.77	429.2	2.47	1.74	3.94	3.94
Yellowstone County	B4	RM 356.50	93782.14	2-yr	1141.17	925.66	921.75	1.97	1.77	28.23	18.54	152.99	336.61	3	1.97	3.91	3.91
Yellowstone County	B4	RM 356.44	93670.16	2-yr	1141.17	925.5	921.33	2.24	2.03	26.83	16.96	134.87	308.43	2.94	1.87	4.17	4.17
Yellowstone County	B4	RM 356.35	93525.27	2-yr	1141.17	925.3	919.71	2.42	2.18	40.46	20.47	110.16	302.01	3.53	1.78	5.59	5.59
Yellowstone County	B4	RM 356.26	93386.36	2-yr	1141.17	925.22	919.77	2.23	1.8	22.1	10	121.35	389.48	3.68	1.67	5.45	5.45
Yellowstone County	B4	RM 356.18	93264.31	2-yr	1141.17	925.15	919.95	2.1	1.83	26.57	10.18	125.04	443.13	3.69	1.41	5.2	5.2
Yellowstone County	B4	RM 356.11	93150.71	2-yr	1141.17	925.08	920.24	1.86	1.59	29.92	10.67	176.46	603.65	3.35	1.19	4.84	4.84
Yellowstone County	B4	RM 356.04	93034.25	2-yr	1141.17	924.87	920.36	2.17	1.93	46.18	22.25	172.11	418.48	2.94	1.41	4.51	4.51
Yellowstone County	B4	RM 355.97	92927.46	2-yr	1141.17	924.59	920.09	2.58	2.28	47.98	22.02	149.31	385.77	2.84	1.3	4.5	4.5
Yellowstone County	B4	RM 355.91	92825.82	2-yr	1141.17	924.52	919.82	2.28	1.77	26.82	9.62	150.65	595.22	3.04	1.09	4.7	4.7
Yellowstone County	B4	RM 355.82	92688.73	2-yr	1141.17	924.41	919.51	2.16	1.59	28.63	9.56	153.04	704.11	3.11	1.03	4.9	4.9
Yellowstone County	B4	RM 355.69	92483.67	2-yr	1141.17	923.69	919.96	3.59	2.73	73.31	47.04	103.98	255.93	2.62	1.67	3.73	3.73
Yellowstone County	B4	RM 355.68	92480	2-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	2-yr	1141.17	923.5	919.92	3.15	2.48	54.97	34.19	121.79	275.77	2.69	1.67	3.58	3.58
Yellowstone County	B4	RM 355.66	92419.94	2-yr	1141.17	923.54	919.8	2.59	2.24	33.34	21.07	139.95	299.41	2.68	1.7	3.74	3.74
Yellowstone County	B4	RM 355.60	92333.48	2-yr	1141.17	923.44	919.42	2.49	2.18	31.61	20.8	148.04	385.11	2.67	1.76	4.02	4.02
Yellowstone County	B4	RM 355.49	92159.95	2-yr	1141.17	923.24	918.52	2.23	1.99	47.52	28.32	134.7	359.31	2.76	1.65	4.72	4.72
Yellowstone County	B4	RM 355.43	92061.2	2-yr	1141.17	923.08	918.67	2.06	2.02	43.72	26.17	134.53	398.96	2.91	1.74	4.41	4.41
Yellowstone County	B4	RM 355.41	92020.68	2-yr	1141.17	923.04	919.02	1.82	1.84	45.11	25.97	157.08	498.17	2.55	1.47	4.02	4.02
Yellowstone County	B4	RM 355.38	91976.12	2-yr	1141.17	922.93	919.25	2.21	1.9	41.8	20.77	125.74	415.51	2.91	1.44	3.68	3.68
Yellowstone County	B4	RM 355.35	91933.98	2-yr	1141.17	922.91	919.21	2.09	1.7	25.97	12.57	109.82	483.15	3.2	1.54	3.7	3.7
Yellowstone County	B4	RM 355.32	91885.87	2-yr	1141.17	922.87	919.16	2.05	1.69	24.9	12.86	106.6	429.08	3.15	1.62	3.71	3.71
Yellowstone County	B4	RM 355.29	91828.99	2-yr	1141.17	922.81	918.93	2.16	1.69	25.89	12.69	101.2	468.79	3.25	1.58	4.28	4.28
Yellowstone County	B4	RM 355.23	91732.97	2-yr	1141.17	922.72	918.68	2.1	1.89	28.85	16.31	100.96	513.03	3.31	1.86	4.28	4.28
Yellowstone County	B4	RM 355.14	91596.1	2-yr	1141.17	922.63	918.52	1.95	1.72	21.69	12.75	118.1	734.04	3.25	1.89	4.11	4.11
Yellowstone County	B4	RM 354.94	91268.08	2-yr	1141.17	922.25	917.25	2.07	1.83	44.86	30.63	165.18	284.54	3.21	2.19	5	5
Yellowstone County	B4	RM 354.86	91153.59	2-yr	1141.17	922.03	917.03	2.35	2.1	47.59	24.49	125.07	277.18	3.81	1.96	5	5
Yellowstone County	B4	RM 354.80	91056.05	2-yr	1141.17	921.81	915.66	2.63	2.37	58.04	25.54	117.98	303.02	3.64	1.59	6.15	6.15
Yellowstone County	B4	RM 354.70	90880.27	2-yr	1141.17	921.56	915.38	2.38	2.24	51.13	43.05	146.64	203.15	2.97	2.51	6.18	6.18
Yellowstone County	B4	RM 354.61	90744.35	2-yr	1141.17	921.43	917.13	2.11	2.01	22.02	20.68	200.23	244.15	2.46	2.33	4.3	4.3
Yellowstone County	B4	RM 354.53	90609.24	2-yr	1141.17	921.39	916.52	1.65	1.61	17.32	15.47	238.32	1164.57	2.82	2.52	4.87	4.87
Yellowstone County	B4	RM 354.45	90486.63	2-yr	1141.17	921.19	915.87	2.09	2.03	31.85	25.74	204.95	1212.59	2.61	2.11	5.32	5.32
Yellowstone County	B4	RM 354.39	90385.43	2-yr	1141.17	920.95	915.24	2.49	2.4	41.13	28.42	162.67	1259.6	2.78	1.91	5.71	5.71
Yellowstone County	B4	RM 354.33	90291.31	2-yr	1141.17	920.9	915.37	2.23	1.91	26.7	16.42	150.94	1386.21	2.94	1.8	5.53	5.53
Yellowstone County	B4	RM 354.23	90133.96	2-yr	1141.17	920.6	915.46	2.63	2.39	47.27	27.67	116.16	230.9	3.55	2.07	5.14	5.14
Yellowstone County	B4	RM 354.13	89983.48	2-yr	1141.17	920.45	914.94	2.33	2.19	44.28	23.76	131.82	263.7	3.68	1.98	5.51	5.51
Yellowstone County	B4	RM 354.00	89778.46	2-yr	1141.17	920.22	916.2	2.21	1.84	38.62	17.73	157.9	452.46	2.99	1.37	4.02	4.02
Yellowstone County	B5	RM 353.90	89604.28	2-yr	1141.17	919.98	917.06	2.15	2.11	32.48	21.94	231.53	350.94	2.29	1.54	3.08	3.08
Yellowstone County	B5	RM 353.80	89446.75	2-yr	1200.63	919.74	916.36	1.97	1.92	37.31	27.42	299.78	422.27	2.02	1.48	3.38	3.38
Yellowstone County	B5	RM 353.70	89288.94	2-yr	1200.63	919.5	915.92	1.68	1.59	31.92	23.32	377.7	1541.87	1.86	1.35	3.58	3.58
Yellowstone County	B5	RM 353.65	89204.58	2-yr	1200.63	919.31	915.49	1.73	1.73	40.61	40.61	396.64	396.64	1.75	1.75	3.82	3.82
Yellowstone County	B5	RM 353.56	89077.56	2-yr	1200.63	919.04	914.2	1.7	1.56	36.88	21.73	357.85	1297	1.91	1.12	4.84	4.84
Yellowstone County	B5	RM 353.50	88982.39	2-yr	1200.63	918.95	914.58	1.44	1.24	23.01	11.22	303.7	1169.17	2.56	1.25	4.37	4.37
Yellowstone County	B5	RM 353.41	88846.15	2-yr	1200.63	918.72	914.41	1.85	1.46	34.44	16.28	228.71	890.94	2.47	1.16	4.31	4.31
Yellowstone County	B5	RM 353.32	88709.14	2-yr	1200.63	918.5	913.6	2.06	1.55	33.6	13.32	193.97	755.35	2.59	1.02	4.9	4.9
Yellowstone County	B5	RM 353.25	88587.13	2-yr	1200.63	918.26	912.76	2.37	1.79	38.34	14.43	160.5	673.9	2.65	1	5.5	5.5
Yellowstone County	B5	RM 353.15	88438.48	2-yr	1200.63	917.99	912.71	2.56	2.03	41.52	23.68	182.01	491.65	2.11	1.2	5.28	5.28
Yellowstone County	B5	RM 353.08	88321.13	2-yr	1200.63	917.81	912.99	2.36	1.88	36.8	18.78	196.59	604.62	2.07	1.06	4.82	4.82
Yellowstone County	B5	RM 353.01	88210.34	2-yr	1200.63	917.68	913.13	1.96	1.68	30.33	18.02	249.43	633.42	1.9	1.13	4.55	4.55
Yellowstone County	B5	RM 352.94	88090.6	2-yr	1200.63	917.59	912.5	1.69	1.38	20.71	11.51	174.22	576.1	2.71	1.51	5.09	5.09
Yellowstone County	B5	RM 352.86	87957.76	2-yr	1200.63	917.44	913.38	2.08	1.66	30.35	16.13	114.99	421.16	3.24	1.72	4.06	4.06
Yellowstone County	B5	RM 352.79	87857.09	2-yr	1200.63	917.31	913.06	2.08	1.89	40.1	23.84	100.44	355.34	3.03	1.79	4.25	4.25
Yellowstone County	B5	RM 352.72	87748.15	2-yr	1200.63	917.04	911.97	2.76	2.22	56.84	26.62	87.72	320.63	3.63	1.68	5.07	5.07
Yellowstone County	B5	RM 352.68	87677.1	2-yr	1200.63	916.91	912.27	2.42	2.42	51.38	51.38	214.1	214.1	2.32	2.32	4.64	4.64
Yellowstone County	B5	RM 352.64	87605.18	2-yr	1200.63	916.77	911.68	2.42	2.42	44.61	44.61	179.57	179.57	2.77	2.77	5.09	5.09
Yellowstone County	B5	RM 352.63	87594	2-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	2-yr	1200.63	916.73	911.45	2.23	2.23	36.5	36.5	182.62	182.62	2.95	2.95	5.28	5.28
Yellowstone County	B5	RM 352.54	87461.4	2-yr	1200.63	916.63	912.57	1.88	1.81	23.17	20.26	264.49	419.13	2.38	2.07	4.06	4.06
Yellowstone County	B5	RM 352.47	87340.46	2-yr	1200.63	916.49	912.2	2.03	1.67	27.1	17.56	229.3	932.92	2.06	1.33	4.29	4.29
Yellowstone County	B5	RM 352.39	87216.99	2-yr	1200.63	916.15	912.01	2.65	2.3	43.7	30.54	177.47	670.96	1.85	1.29	4.96	4.96
Yellowstone County	B5	RM 352.31	87079.16	2-yr	1200.63	915.68	910.66	3	2.63	69.76	39.9	154.55	576.08	1.92	1.1	5.02	5.02

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	2-yr	1200.63	915.46	911.35	2.14	2.09	36.12	32.24	190.94	796.8	1.59	1.42	4.11	4.11
Yellowstone County	B5	RM 352.18	86873.5	2-yr	1200.63	915.55	911.21	0.81	0.91	4.25	4.86	214.49	906.44	1.88	2.15	4.34	4.34
Yellowstone County	B5	RM 352.09	86723.6	2-yr	1200.63	915.36	912.18	2	1.78	27.76	18.97	171.31	701.34	2.04	1.39	3.18	3.18
Yellowstone County	B5	RM 351.99	86568.41	2-yr	1200.63	914.97	912.6	2.72	2.29	44.77	24.87	142.05	472.36	1.99	1.11	2.39	2.39
Yellowstone County	B5	RM 351.93	86466.74	2-yr	1200.63	914.84	911.69	2.33	1.82	35.71	22.46	166.25	726.21	1.66	1.05	3.15	3.15
Yellowstone County	B5	RM 351.88	86386.8	2-yr	1200.63	914.76	911.38	1.67	1.31	23.61	18.18	181.2	904.96	1.42	1.1	3.38	3.38
Yellowstone County	B5	RM 351.81	86277.68	2-yr	1200.63	914.66	910.99	1.41	1.15	16.73	14.53	217.17	1003.87	1.32	1.15	3.67	3.67
Yellowstone County	B5	RM 351.74	86159.62	2-yr	1200.63	914.3	911.37	1.66	1.53	24.46	18.79	182.5	813.84	1.38	1.06	3.47	3.47
Yellowstone County	B5	RM 351.67	86034.59	2-yr	1200.63	914.02	911.31	1.66	1.59	24.18	19.09	196.4	741.33	1.32	1.04	3.64	3.64
Yellowstone County	B5	RM 351.58	85891.33	2-yr	1200.63	913.8	911.47	1.28	1.53	15.05	14.54	230.53	660.35	1.24	1.2	3.71	3.71
Yellowstone County	B5	RM 351.52	85811.35	2-yr	1200.63	913.64	911.37	1.68	1.74	20.04	17.67	231.01	638.28	1.25	1.1	2.92	2.92
Yellowstone County	B5	RM 351.47	85728.2	2-yr	1200.63	913.55	911.17	1.61	1.53	16.75	13.27	177.04	606.54	1.7	1.35	3.01	3.01
Yellowstone County	B5	RM 351.40	85601.48	2-yr	1200.63	913.41	910.26	1.92	1.54	22.2	14.17	115.04	656.56	2.09	1.33	3.5	3.5
Yellowstone County	B5	RM 351.34	85482.66	2-yr	1200.63	913.3	909.98	1.3	1.45	25.91	14.62	136.55	812.93	1.95	1.1	3.33	3.33
Yellowstone County	B5	RM 351.25	85342.53	2-yr	1200.63	913.16	909.91	1.34	1.32	15.21	11.38	240.12	903.53	1.34	1	3.28	3.28
Yellowstone County	B5	RM 351.21	85257.19	2-yr	1200.63	913.06	909.48	1.63	1.43	19.3	12.55	179.98	853.43	1.52	0.99	3.58	3.58
Yellowstone County	B5	RM 351.12	85127.55	2-yr	1200.63	912.97	909.49	1.67	1.38	18.05	10.58	137.93	772.95	1.93	1.12	3.48	3.48
Yellowstone County	B5	RM 351.04	84988.05	2-yr	1200.63	912.85	908.79	1.87	1.4	21.9	11.3	123.68	730.39	2.29	1.17	4.06	4.06
Yellowstone County	B5	RM 350.90	84769.91	2-yr	1200.63	912.79	909.27	1.38	1.09	12.99	6.56	96.77	803	2.74	1.37	3.52	3.52
Yellowstone County	B5	RM 350.75	84536.19	2-yr	1200.63	912.62	909.72	1.23	1.46	23.88	17.49	244.49	697.4	1.61	1.18	3.24	3.24
Yellowstone County	B5	RM 350.66	84383.33	2-yr	1200.63	912.41	909.32	1.85	1.69	27.76	16.13	143.05	544.77	2.24	1.3	3.09	3.09
Yellowstone County	B5	RM 350.57	84244.69	2-yr	1200.63	912.15	908.48	1.73	1.83	34.07	21.36	149.54	479.02	2.2	1.37	3.67	3.67
Yellowstone County	B5	RM 350.50	84128.62	2-yr	1200.63	911.93	908.49	1.91	1.94	35.61	21.36	150.92	492.3	2.1	1.26	3.44	3.44
Yellowstone County	B5	RM 350.40	83974.24	2-yr	1200.63	911.76	908.73	1.42	1.56	18.14	15.31	297.87	626.23	1.45	1.23	3.03	3.03
Yellowstone County	B5	RM 350.33	83868.06	2-yr	1200.63	911.65	908.17	1.45	1.49	15.6	13.11	318.58	672.4	1.43	1.2	3.48	3.48
Yellowstone County	B5	RM 350.23	83712.91	2-yr	1200.63	911.42	907.61	1.75	1.66	24.42	16.03	251.1	653.62	1.69	1.11	3.81	3.81
Yellowstone County	B5	RM 350.14	83563.43	2-yr	1200.63	911.24	907.94	1.53	1.51	18.7	12.26	284.48	784.6	1.56	1.02	3.3	3.3
Yellowstone County	B5	RM 350.06	83419.86	2-yr	1200.63	911.02	907.84	1.44	1.46	21.31	15.66	337.81	786.87	1.42	1.05	3.18	3.18
Yellowstone County	B5	RM 349.94	83229.4	2-yr	1200.63	910.76	906.93	1.66	1.48	22.59	13.28	250.49	778.82	1.78	1.04	3.83	3.83
Yellowstone County	B5	RM 349.83	83071.99	2-yr	1200.63	910.67	907.36	1.37	1.17	10.75	5.58	369.26	862.72	2.29	1.19	3.31	3.31
Yellowstone County	B5	RM 349.68	82904.73	2-yr	1200.63	910.46	906.92	1.85	1.55	26.87	14.44	337.1	786.51	1.84	0.99	3.54	3.54
Yellowstone County	B5	RM 349.54	82632.78	2-yr	1200.63	910.06	906.29	1.78	1.68	22.52	18.56	423.72	557.95	1.55	1.28	3.77	3.77
Yellowstone County	B5	RM 349.33	82276.28	2-yr	1200.63	909.78	906.45	1.05	1.06	10.81	9.94	339.48	759.73	1.62	1.49	3.33	3.33
Yellowstone County	B5	RM 349.19	82046.53	2-yr	1200.63	909.44	905.16	1.91	1.56	24.45	15.05	270.17	731.51	1.71	1.05	4.28	4.28
Yellowstone County	B5	RM 349.04	81800.47	2-yr	1271.43	909.21	904.5	1.47	1.32	14.96	10.06	344.2	799.33	1.79	1.2	4.71	4.71
Yellowstone County	B5	RM 348.89	81574.02	2-yr	1271.43	909.06	904.75	1.15	1.1	15.37	11.7	543.89	762.82	1.99	1.52	4.31	4.31
Yellowstone County	B5	RM 348.77	81370.46	2-yr	1271.43	908.84	905.09	1.36	1.36	22.9	22.9	429.11	429.11	2.18	2.18	3.75	3.75
Yellowstone County	B5	RM 348.64	81138.52	2-yr	1271.43	908.62	903.35	1.61	1.44	16.09	7.72	289.04	692.76	2.67	1.27	5.27	5.27
Yellowstone County	B5	RM 348.52	80960.09	2-yr	1271.43	908.4	902.88	2.01	1.81	32.43	14.12	200.99	528.24	3.07	1.33	5.52	5.52
Yellowstone County	B5	RM 348.38	80737.31	2-yr	1271.43	908.04	902.85	2.34	2.23	42.04	28.26	186.18	292.58	2.9	1.94	5.19	5.19
Yellowstone County	B5	RM 348.26	80551.51	2-yr	1271.43	907.77	902.73	2.36	2.1	44.65	27.24	160.79	311.6	3.2	1.94	5.04	5.04
Yellowstone County	B5	RM 348.09	80276.34	2-yr	1271.43	907.32	901.64	2.51	2.41	43.89	33.63	169.59	525.15	2.96	2.27	5.68	5.68
Yellowstone County	B5	RM 347.95	80055.79	2-yr	1271.43	907.14	902.96	2.19	1.92	24.97	16.05	165.09	435.6	3.2	2.06	4.18	4.18
Yellowstone County	B5	RM 347.82	79844.2	2-yr	1271.43	906.98	902.93	1.96	1.84	31.59	17.48	174.9	471.4	2.97	1.64	4.05	4.05
Yellowstone County	B5	RM 347.77	79751.93	2-yr	1271.43	906.86	902.38	2.04	1.83	37.91	19.54	177.56	502.79	2.89	1.49	4.48	4.48
Yellowstone County	B5	RM 347.70	79643.98	2-yr	1271.43	906.72	901.91	2.04	1.73	36.21	18.3	177.87	512.36	2.85	1.44	4.81	4.81
Yellowstone County	B5	RM 347.61	79501.64	2-yr	1271.43	906.66	902.2	1.66	1.18	14.59	6.33	192.93	802.58	3.09	1.34	4.46	4.46
Yellowstone County	B5	RM 347.51	79347.38	2-yr	1271.43	906.4	900.54	2.46	1.88	29.52	10.41	111.91	485.65	3.97	1.39	5.86	5.86
Yellowstone County	B5	RM 347.42	79196.21	2-yr	1271.43	906.31	900.73	2.12	1.79	43.74	18.49	139.7	473.12	3.55	1.5	5.58	5.58
Yellowstone County	B5	RM 347.35	79079.87	2-yr	1271.43	906.36	900.77	1.05	1.04	4.79	4.69	497.16	510.08	2.44	2.39	5.59	5.59
Yellowstone County	B5	RM 347.23	78895.71	2-yr	1271.43	906.3	900.89	1.14	1.14	8.46	8.42	505.34	508.2	2.2	2.19	5.41	5.41
Yellowstone County	B5	RM 347.13	78732.21	2-yr	1271.43	906.2	900.98	1.22	1.22	18.21	17.43	439.35	461.77	2.36	2.26	5.22	5.22
Yellowstone County	B5	RM 346.93	78400.21	2-yr	1271.43	905.71	900.98	1.52	1.5	49.41	40.84	462.96	571.71	1.8	1.49	4.72	4.72
Yellowstone County	B5	RM 346.80	78193.27	2-yr	1271.43	904.96	900.02	1.87	1.82	55.84	53.86	436.26	492.43	1.47	1.42	4.94	4.94
Yellowstone County	B5	RM 346.64	77938.83	2-yr	1271.43	904.65	900.47	1.73	1.49	17.15	9.77	246.18	563.55	2.67	1.52	4.18	4.18
Yellowstone County	B5	RM 346.49	77706.6	2-yr	1271.43	904.37	900.21	2.21	1.93	31.05	15.96	174.48	461.18	2.84	1.45	4.16	4.16
Yellowstone County	B6	RM 346.35	77480.6	2-yr	1271.43	904.13	900.33	2.04	1.87	31.14	15.55	211.01	516.27	2.7	1.35	3.8	3.8
Yellowstone County	B6	RM 346.23	77285.9	2-yr	1271.43	903.82	900.11	2.38	2.12	31.17	16.52	176.57	392.26	2.89	1.53	3.71	3.71
Yellowstone County	B6	RM 346.11	77095.33	2-yr	1271.43	903.61	899.75	2.3	1.99	38.89	20.31	177.61	427.87	2.91	1.52	3.86	3.86
Yellowstone County	B6	RM 346.00	76926.16	2-yr	1271.43	903.43	899.8	2.18	1.86	29.69	18.76	176.19	358.81	3.02	1.91	3.63	3.63
Yellowstone County	B6	RM 345.90	76766.95	2-yr	1271.43	903.18	899.51	2.39	2.05	39.63	26.05	177.01	333.84	2.83	1.86	3.67	3.67

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	2-yr	1271.43	903.06	899.04	2.06	1.83	25.91	18.83	193.98	323.67	2.94	2.15	4.16	4.16
Yellowstone County	B6	RM 345.73	76484.99	2-yr	1271.43	902.84	899.01	2.38	2.2	35.31	24.8	194.49	332.09	2.54	1.79	3.94	3.94
Yellowstone County	B6	RM 345.67	76386.71	2-yr	1271.43	902.79	899.1	1.95	1.75	23.53	12.29	210.1	488.7	2.83	1.48	3.89	3.89
Yellowstone County	B6	RM 345.60	76268.76	2-yr	1271.43	902.67	899.22	1.99	1.78	28.8	15.87	234.21	534.16	2.43	1.34	3.77	3.77
Yellowstone County	B6	RM 345.50	76118.1	2-yr	1271.43	902.53	899.07	1.82	1.64	24.21	17.01	229.9	432.03	2.56	1.79	3.63	3.63
Yellowstone County	B6	RM 345.37	75909.53	2-yr	1271.43	902.21	897.51	2.01	2.01	33.58	31.9	301.93	318.75	2.09	1.99	4.7	4.7
Yellowstone County	B6	RM 345.27	75751.01	2-yr	1271.43	901.95	898.15	2.12	2.01	30.23	20.98	251.95	388.19	2.36	1.63	3.8	3.8
Yellowstone County	B6	RM 345.07	75427.56	2-yr	1271.43	901.68	897.07	1.85	1.81	20.12	16.86	240.91	294.78	2.84	2.38	4.61	4.61
Yellowstone County	B6	RM 344.90	75166.64	2-yr	1271.43	901.54	897.3	1.58	1.49	15.46	13.02	293.78	374.61	2.69	2.27	4.24	4.24
Yellowstone County	B6	RM 344.75	74927.69	2-yr	1271.43	901.31	896.02	1.87	1.73	28.53	22.32	230.17	324.79	2.89	2.26	5.29	5.29
Yellowstone County	B6	RM 344.64	74743.45	2-yr	1271.43	901.04	895.93	2.27	2.11	29.01	21.33	157.85	234.52	3.49	2.57	5.11	5.11
Yellowstone County	B6	RM 344.53	74576.12	2-yr	1271.43	900.86	895.39	2.3	2.01	46.02	28.34	158.58	319.48	3.23	1.98	5.47	5.47
Yellowstone County	B6	RM 344.43	74405.67	2-yr	1271.43	900.72	896.11	2.13	1.85	21.13	12.45	173.07	377.23	3.1	1.83	4.61	4.61
Yellowstone County	B6	RM 344.29	74192.79	2-yr	1271.43	900.58	895.87	2	1.78	24.99	14.71	177.91	374.72	3.23	1.9	4.71	4.71
Yellowstone County	B6	RM 344.13	73931.76	2-yr	1271.43	900.37	895.4	2.07	1.81	26.02	9.93	157.02	512.52	3.61	1.37	4.97	4.97
Yellowstone County	B6	RM 343.87	73520.95	2-yr	1271.43	900.15	895.23	1.63	1.46	14.88	10	287.43	488.29	2.65	1.78	4.92	4.92
Yellowstone County	B6	RM 343.80	73403.19	2-yr	1271.43	900.09	894.69	1.39	1.28	23.41	18.96	356.81	499.13	2.45	1.99	5.4	5.4
Yellowstone County	B6	RM 343.66	73173.16	2-yr	1271.43	899.78	894.63	1.5	1.49	37.38	34.29	394.69	434.97	2.14	1.97	5.14	5.14
Yellowstone County	B6	RM 343.55	72997.33	2-yr	1271.43	899.51	894.63	1.47	1.46	30.9	28.25	358.57	396.27	2.4	2.2	4.88	4.88
Yellowstone County	B6	RM 343.45	72840.49	2-yr	1271.43	899.29	894.78	1.53	1.53	27.74	27.74	368.88	368.88	2.25	2.25	4.51	4.51
Yellowstone County	B6	RM 343.37	72718.86	2-yr	1271.43	899.06	894.5	1.78	1.78	40.31	40.31	323.09	323.09	2.21	2.21	4.56	4.56
Yellowstone County	B6	RM 343.29	72586.22	2-yr	1271.43	898.87	894.28	1.73	1.66	31.05	24.98	278.7	365.2	2.61	2.1	4.59	4.59
Yellowstone County	B6	RM 343.21	72458.03	2-yr	1271.43	898.69	893.99	1.62	1.54	40.7	30.73	356.09	570.2	2.18	1.64	4.7	4.7
Yellowstone County	B6	RM 343.14	72328.78	2-yr	1271.43	898.39	893.94	1.64	1.55	48.41	36.19	431.67	736.68	1.77	1.32	4.45	4.45
Yellowstone County	B6	RM 343.04	72174.44	2-yr	1271.43	898.22	894.12	1.36	1.22	13.6	9.61	485.55	786.99	1.88	1.33	4.1	4.1
Yellowstone County	B6	RM 342.96	72046.7	2-yr	1271.43	898.08	894.17	1.38	1.25	30.36	22.23	491.63	779.92	1.78	1.3	3.91	3.91
Yellowstone County	B6	RM 342.87	71890.42	2-yr	1271.43	897.69	893.92	1.57	1.47	46.51	35.42	508.5	747.68	1.52	1.16	3.77	3.77
Yellowstone County	B6	RM 342.78	71759.64	2-yr	1271.43	897.5	893.85	1.54	1.43	12.9	10.2	477.78	722.13	1.56	1.23	3.65	3.65
Yellowstone County	B6	RM 342.71	71649.64	2-yr	1271.43	897.39	893.88	1.59	1.47	11.89	10.68	477.84	680.58	1.41	1.27	3.51	3.51
Yellowstone County	B6	RM 342.64	71534.72	2-yr	1271.43	897.24	893.45	1.47	1.44	34.18	31.99	620.67	685.29	1.38	1.29	3.79	3.79
Yellowstone County	B6	RM 342.59	71441.82	2-yr	1271.43	896.95	893.13	1.62	1.62	41.08	41.08	572.15	849.5	1.37	1.37	3.82	3.82
Yellowstone County	B6	RM 342.49	71299.94	2-yr	1271.43	896.78	892.73	1.23	1.23	15.77	15.77	536.89	733.09	1.92	1.92	4.05	4.05
Yellowstone County	B6	RM 342.40	71182.23	2-yr	1271.43	896.73	892.4	0.99	0.99	11.7	11.7	516.7	678.48	2.5	2.5	4.33	4.33
Yellowstone County	B6	RM 342.29	70973.95	2-yr	1271.43	896.53	891.26	1.35	1.35	23.05	23.02	470.46	566.63	2.01	2	5.27	5.27
Yellowstone County	B6	RM 342.17	70788.09	2-yr	1271.43	896.07	891.21	2.11	2.11	49.09	49.09	317.48	346.23	1.9	1.9	4.86	4.86
Yellowstone County	B6	RM 342.09	70668.79	2-yr	1271.43	895.96	892.22	1.65	1.65	21.36	21.22	309.38	311.58	2.49	2.47	3.74	3.74
Yellowstone County	B6	RM 341.96	70472.35	2-yr	1271.43	895.82	891.5	1.54	1.54	11.43	11.43	468.74	468.74	1.76	1.76	4.32	4.32
Yellowstone County	B6	RM 341.82	70207.79	2-yr	1271.43	895.66	890.89	1.21	1.21	15.21	15.2	568.91	569.05	1.85	1.85	4.77	4.77
Yellowstone County	B6	RM 341.68	69974.03	2-yr	1271.43	895.43	890.38	1.33	1.31	19.8	18.76	467.54	498.54	2.05	1.94	5.05	5.05
Yellowstone County	B6	RM 341.57	69788.71	2-yr	1271.43	895.18	889.58	1.84	1.84	11.83	11.83	416.42	416.42	1.66	1.66	5.6	5.6
Yellowstone County	B6	RM 341.47	69629.19	2-yr	1271.43	895.03	889.76	1.6	1.6	42.23	42.11	373.56	374.63	2.13	2.12	5.27	5.27
Yellowstone County	B6	RM 341.32	69391.37	2-yr	1271.43	894.58	890.36	1.63	1.61	34.67	30.88	364.75	417.33	2.13	1.9	4.22	4.22
Yellowstone County	B6	RM 341.24	69252.71	2-yr	1271.43	894.47	890.28	1.44	1.35	13.15	10.3	396.74	559.86	2.14	1.68	4.19	4.19
Yellowstone County	B6	RM 341.11	69044.61	2-yr	1271.43	894.21	890	1.84	1.66	27.98	18.66	321.55	550.6	2.1	1.39	4.21	4.21
Yellowstone County	B6	RM 340.94	68773.18	2-yr	1271.43	893.86	889.22	1.88	1.62	27.5	13.25	277.77	701.1	2.36	1.14	4.64	4.64
Yellowstone County	B6	RM 340.81	68556.42	2-yr	1271.43	893.71	889.05	1.45	1.1	19.2	9.15	315	973.96	2.49	1.18	4.66	4.66
Yellowstone County	B6	RM 340.65	68325.7	2-yr	1271.43	893.49	888.87	1.87	1.34	17.31	6.17	203.52	862.81	3.08	1.1	4.62	4.62
Yellowstone County	B6	RM 340.52	68126.27	2-yr	1271.43	893.27	887.3	2.23	1.69	34.31	8.26	129.24	759.51	4.16	0.99	5.97	5.97
Yellowstone County	B6	RM 340.40	67936.51	2-yr	1271.43	893.15	886.73	1.91	1.43	32.15	9.35	170.6	843.57	3.64	1.05	6.42	6.42
Yellowstone County	B7	RM 340.26	67715.84	2-yr	1271.43	892.92	887.99	1.75	1.5	38.31	19.51	250.31	604.84	2.77	1.4	4.93	4.93
Yellowstone County	B7	RM 340.16	67550.99	2-yr	1271.43	892.63	888.43	1.75	1.57	49.03	27.47	309.42	642.33	2.26	1.26	4.2	4.2
Yellowstone County	B7	RM 340.06	67387.35	2-yr	1271.43	892.39	888.74	1.57	1.43	29.28	24.83	315.76	441.58	2.38	2.02	3.64	3.64
Yellowstone County	B7	RM 339.96	67234.59	2-yr	1271.43	892.15	888.85	1.81	1.81	20.68	20.68	357.82	357.82	1.97	1.97	3.3	3.3
Yellowstone County	B7	RM 339.88	67094.07	2-yr	1271.43	891.98	888.78	1.65	1.62	31.85	27.99	435.04	507.17	1.76	1.55	3.2	3.2
Yellowstone County	B7	RM 339.79	66960.51	2-yr	1271.43	891.62	888.98	2.06	2.06	30.91	30.91	440.09	440.09	1.4	1.4	2.64	2.64
Yellowstone County	B7	RM 339.72	66843.76	2-yr	1271.43	891.43	888.72	1.83	1.8	23.66	22.72	456.13	483.75	1.52	1.46	2.71	2.71
Yellowstone County	B7	RM 339.66	66753.41	2-yr	1271.43	891.36	887.9	1.54	1.53	16.19	14.88	485.05	530.12	1.7	1.57	3.46	3.46
Yellowstone County	B7	RM 339.52	66527.74	2-yr	1271.43	891.18	887.31	1.59	1.42	14.7	8.84	311.36	613.69	2.43	1.46	3.87	3.87
Yellowstone County	B7	RM 339.37	66324.85	2-yr	1271.43	890.97	887.17	1.83	1.6	34.18	17.84	228.9	568.39	2.68	1.4	3.8	3.8
Yellowstone County	B7	RM 339.24	66108.49	2-yr	1271.43	890.54	886.45	2.41	2.12	31.55	21.09	214.14	409.64	2.19	1.46	4.09	4.09
Yellowstone County	B7	RM 339.13	65940.41	2-yr	1271.43	890.28	885.31	2.51	1.93	41.53	21.9	142.85	461.01	2.72	1.43	4.97	4.97

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

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Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	2-yr	1271.43	890	886.09	2.38	2.13	32.66	22.22	174.15	340.56	2.57	1.75	3.91	3.91
Yellowstone County	B7	RM 338.94	65621.59	2-yr	1271.43	889.9	886.36	2.07	1.78	23.24	15.61	223.15	493.9	2.16	1.45	3.54	3.54
Yellowstone County	B7	RM 338.83	65433.26	2-yr	1271.43	889.7	886.37	1.9	1.68	27.97	17.3	220.69	552.96	2.21	1.37	3.68	3.68
Yellowstone County	B7	RM 338.72	65256.88	2-yr	1271.43	889.48	886.18	1.84	1.71	28.01	19	201.66	455.33	2.49	1.69	3.68	3.68
Yellowstone County	B7	RM 338.62	65095.08	2-yr	1271.43	889.19	886.28	2.27	2.1	30.35	18.57	173.58	417.32	2.4	1.47	3.58	3.58
Yellowstone County	B7	RM 338.49	64891.36	2-yr	1271.43	889	885.05	2.15	1.81	26.51	13.6	165.74	551.45	2.56	1.31	3.95	3.95
Yellowstone County	B7	RM 338.40	64742.15	2-yr	1271.43	888.97	884.28	1.54	1.23	13.44	8.75	165.12	638.54	2.57	1.67	4.69	4.69
Yellowstone County	B7	RM 338.29	64577.05	2-yr	1271.43	888.82	884.18	1.89	1.48	20.28	10.03	122.45	593.82	2.93	1.44	4.64	4.64
Yellowstone County	B7	RM 338.19	64384.71	2-yr	1271.43	888.75	885.23	1.31	1.15	11.86	7.73	389.38	871.45	1.94	1.26	3.52	3.52
Yellowstone County	B7	RM 338.06	64164.59	2-yr	1271.43	888.63	884.64	1.4	1.07	13.12	6.62	283.84	978.67	2.41	1.22	3.99	3.99
Yellowstone County	B7	RM 337.91	63921.69	2-yr	1271.43	888.43	884.16	1.8	1.33	16.98	6.77	200.98	890.76	2.73	1.09	4.27	4.27
Yellowstone County	B7	RM 337.83	63789.53	2-yr	1271.43	888.11	882.72	2.56	2.15	41.39	19.21	177.18	478.05	2.67	1.24	5.39	5.39
Yellowstone County	B7	RM 337.75	63667.96	2-yr	1271.43	887.84	881.69	2.84	2.28	45.07	19.75	141.02	426.26	3	1.31	6.15	6.15
Yellowstone County	B7	RM 337.68	63550.4	2-yr	1271.43	887.73	882.49	2.49	2.22	40.32	20.58	161.63	365.08	3.08	1.57	5.24	5.24
Yellowstone County	B7	RM 337.58	63396.62	2-yr	1271.43	887.52	883.62	2.52	2.17	35.57	21.59	183.53	373.22	2.58	1.57	3.9	3.9
Yellowstone County	B7	RM 337.47	63212.44	2-yr	1271.43	887.33	883.31	2.25	1.77	32.66	18.24	177.16	484.2	2.66	1.48	4.02	4.02
Yellowstone County	B7	RM 337.38	63064.58	2-yr	1271.43	887.09	883.29	2.47	1.91	35.17	15.67	160.2	543.37	2.76	1.23	3.8	3.8
Yellowstone County	B7	RM 337.27	62894.98	2-yr	1271.43	887.05	883.15	1.7	1.29	15.99	7.29	200.51	824.77	2.62	1.2	3.9	3.9
Yellowstone County	B7	RM 337.16	62717.85	2-yr	1271.43	886.97	882.57	1.35	1.13	10.93	5.62	393.22	1039.01	2.11	1.08	4.4	4.4
Yellowstone County	B7	RM 337.04	62524.52	2-yr	1271.43	886.91	879.61	1.43	1.04	10.66	3.41	152.28	954.05	4.01	1.28	7.3	7.3
Yellowstone County	B7	RM 336.96	62390.64	2-yr	1271.43	886.82	880.21	1.65	1.27	21.13	7.31	184.73	862.05	3.38	1.16	6.61	6.61
Yellowstone County	B7	RM 336.87	62246.97	2-yr	1271.43	886.67	881.41	1.94	1.46	22.23	6.84	155.78	807.15	3.52	1.08	5.26	5.26
Yellowstone County	B7	RM 336.80	62131.42	2-yr	1271.43	886.58	881.33	1.97	1.48	33.48	11.86	162.26	804.51	3.12	1.1	5.25	5.25
Yellowstone County	B7	RM 336.72	62005.73	2-yr	1271.43	886.32	881.38	2.38	2	46.21	16.61	135.42	552.95	3.33	1.19	4.94	4.94
Yellowstone County	B7	RM 336.66	61902.64	2-yr	1271.43	885.95	881.45	3.04	2.82	62.13	32.14	111.87	266.4	3.28	1.7	4.5	4.5
Yellowstone County	B7	RM 336.59	61800.43	2-yr	1271.43	885.94	880.66	2.27	2.01	38.53	17.25	134.03	390.52	3.62	1.62	5.28	5.28
Yellowstone County	B7	RM 336.52	61689.55	2-yr	1271.43	885.82	881.76	2.28	1.9	34.2	18.07	144.58	423.7	2.99	1.58	4.06	4.06
Yellowstone County	B7	RM 336.46	61580.5	2-yr	1271.43	885.71	882.13	2.12	1.91	32.49	15.82	153.79	481.52	2.85	1.39	3.58	3.58
Yellowstone County	B7	RM 336.40	61491.01	2-yr	1271.43	885.6	882.03	2.16	1.86	34.14	13.67	158.28	592.91	2.88	1.15	3.57	3.57
Yellowstone County	B7	RM 336.34	61394.22	2-yr	1271.43	885.49	881.93	2.19	1.65	32.77	13.58	162.45	691.97	2.69	1.11	3.56	3.56
Yellowstone County	B7	RM 336.27	61278.9	2-yr	1271.43	885.36	881.67	2.08	1.52	28.85	10.97	168.39	809.07	2.72	1.03	3.69	3.69
Yellowstone County	B7	RM 336.19	61159.07	2-yr	1271.43	885.19	882.11	2.19	1.7	27.55	15.79	206.23	902.65	2.02	1.16	3.08	3.08
Yellowstone County	B7	RM 336.09	60993.57	2-yr	1271.43	885.05	882.16	1.67	1.29	19.28	10.59	319.67	972.24	1.84	1.01	2.89	2.89
Yellowstone County	B7	RM 335.98	60812.26	2-yr	1271.43	884.86	881.93	1.37	1.23	23.24	15.83	397.76	979.8	1.55	1.06	3.13	3.13
Yellowstone County	B7	RM 335.89	60669.74	2-yr	1271.43	884.67	880.16	1.51	1.41	16.19	12.21	517.67	762.52	1.58	1.19	4.51	4.51
Yellowstone County	B7	RM 335.77	60465.85	2-yr	1271.43	884.35	880.49	1.6	1.55	28.76	24.45	613.61	751.73	1.28	1.09	3.86	3.86
Yellowstone County	B7	RM 335.68	60324.8	2-yr	1271.43	884.09	880.65	1.72	1.69	16.37	14.09	563.44	790.95	1.31	1.13	3.44	3.44
Yellowstone County	B7	RM 335.59	60183.7	2-yr	1271.43	883.88	880.3	1.8	1.79	15.74	15.11	602.09	705.02	1.17	1.12	3.58	3.58
Yellowstone County	B7	RM 335.51	60046.12	2-yr	1271.43	883.73	880.03	1.66	1.65	13.87	13.07	588.22	688.55	1.3	1.22	3.7	3.7
Yellowstone County	B7	RM 335.41	59899.97	2-yr	1271.43	883.64	879.45	1.21	1.15	9.85	8.21	834.46	1090.44	1.22	1.02	4.19	4.19
Yellowstone County	B7	RM 335.36	59814.82	2-yr	1271.43	883.63	878.65	0.82	0.75	4.17	2.85	870.49	1657.5	1.73	1.18	4.98	4.98
Yellowstone County	B7	RM 335.12	59393.71	2-yr	1271.43	883.43	878.54	1.46	1	12.52	4.67	314.24	1418.15	2.41	0.9	4.88	4.88
Yellowstone County	B7	RM 335.03	59228.59	2-yr	1271.43	883.11	876.8	2.5	1.59	43.22	12.25	148.47	1014.14	2.79	0.79	6.31	6.31
Yellowstone County	B7	RM 334.91	59041.32	2-yr	1271.43	882.86	878.31	2.13	1.42	35.41	12.78	226.02	1124.15	2.21	0.8	4.55	4.55
Yellowstone County	B7	RM 334.85	58937.73	2-yr	1271.43	882.68	878.66	2.11	1.47	36.92	13.7	223.81	1065.62	2.19	0.81	4.02	4.02
Yellowstone County	B7	RM 334.73	58737.5	2-yr	1271.43	882.13	879.52	2.74	2.01	47.82	24.51	188.02	579.21	2.13	1.09	2.75	2.75
Yellowstone County	B7	RM 334.63	58573.32	2-yr	1271.43	881.87	878.31	2.46	1.73	36.98	20.13	183.68	672.94	2	1.09	3.56	3.56
Yellowstone County	B7	RM 334.54	58424.99	2-yr	1271.43	881.84	877.09	1.22	1.12	17.81	10.23	136.47	783.26	2.53	1.45	4.75	4.75
Yellowstone County	B7	RM 334.22	57821.07	2-yr	1271.43	881.51	875.76	1.74	1.38	14.37	8.64	173.81	526.17	3.58	2.15	5.75	5.75
Yellowstone County	B7	RM 334.09	57621.62	2-yr	1271.43	881.16	875.55	2.85	2.16	57.96	26.83	107.73	401.82	3.18	1.47	5.61	5.61
Yellowstone County	B7	RM 333.98	57440.64	2-yr	1271.43	881.13	875.46	1.93	1.53	20.03	11.63	137.03	368.23	3.88	2.25	5.67	5.67
Yellowstone County	B7	RM 333.83	57207.78	2-yr	1271.43	880.97	875.4	1.99	1.75	25.65	17.12	149.83	331.83	3.28	2.19	5.57	5.57
Yellowstone County	B7	RM 333.69	56989.22	2-yr	1271.43	880.79	873.45	1.56	1.55	27.16	25.04	330.4	395.32	2.45	2.26	7.34	7.34
Yellowstone County	B7	RM 333.54	56738.21	2-yr	1271.43	880.66	874.22	1.08	1.04	13.71	9.82	399.09	613.04	2.91	2.08	6.44	6.44
Yellowstone County	B7	RM 333.42	56552.03	2-yr	1271.43	880.5	873.42	1.29	1.25	23.07	17.24	422.36	585.56	2.32	1.73	7.08	7.08
Yellowstone County	B7	RM 333.30	56351.75	2-yr	1271.43	880.16	875.65	1.55	1.54	44.53	43.07	442.62	461.61	1.85	1.79	4.51	4.51
Yellowstone County	B7	RM 333.19	56177.76	2-yr	1271.43	879.71	875.72	1.82	1.81	38.18	33.52	366.13	420.4	1.9	1.67	3.99	3.99
Yellowstone County	B7	RM 333.09	56027.56	2-yr	1271.43	879.55	875.59	1.6	1.52	16.46	13.67	382.14	488.86	2.06	1.71	3.96	3.96
Yellowstone County	B7	RM 332.99	55855.76	2-yr	1271.43	879.31	873.86	1.74	1.61	42.94	36.11	377.95	510.01	1.85	1.55	5.45	5.45
Yellowstone County	B7	RM 332.88	55687.68	2-yr	1271.43	879.13	874.43	1.5	1.48	14.76	11.32	399.05	560.06	2	1.54	4.7	4.7
Yellowstone County	B7	RM 332.77	55504.73	2-yr	1271.43	879.04	875.49	1.3	1.19	10.53	5.84	376.01	786.45	2.46	1.36	3.55	3.55

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	2-yr	1271.43	878.93	874.96	1.44	1.27	16.22	8.87	333.73	740.29	2.47	1.35	3.97	3.97
Yellowstone County	B7	RM 332.56	55182.74	2-yr	1271.43	878.85	874.54	1.37	1.27	13.61	8.01	310.48	606.7	2.82	1.66	4.31	4.31
Yellowstone County	B7	RM 332.47	55059.84	2-yr	1271.43	878.8	873.95	1.32	1.15	13.21	6.82	278.63	699.2	3.09	1.59	4.85	4.85
Yellowstone County	B7	RM 332.38	54913.1	2-yr	1271.43	878.57	873.16	2.07	1.88	30.43	13.81	158.65	402.96	3.74	1.68	5.41	5.41
Yellowstone County	B7	RM 332.33	54822.67	2-yr	1271.43	878.49	872.5	2.03	1.81	40.97	19.22	175.59	434.96	3.44	1.61	5.99	5.99
Yellowstone County	B7	RM 332.21	54626.48	2-yr	1271.43	878.29	873.4	1.95	1.91	31.07	25.1	172.82	251.22	3.58	2.9	4.89	4.89
Yellowstone County	B7	RM 332.20	54613	2-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	2-yr	1271.43	878.23	873.19	1.96	1.92	31.02	20.97	169.1	289.71	3.65	2.47	5.04	5.04
Yellowstone County	B7	RM 332.17	54575.38	2-yr	1271.43	878.16	872.76	2.12	1.98	34.5	15.25	138.39	419.68	4.1	1.79	5.4	5.4
Yellowstone County	B7	RM 332.16	54558	2-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	2-yr	1271.43	878.07	872.47	2.26	2.08	28.34	11.77	128.64	431.47	4.16	1.71	5.6	5.6
Yellowstone County	B7	RM 332.08	54422.01	2-yr	1271.43	877.97	873.77	2.17	1.94	30.87	14.8	151.78	429.98	3.47	1.65	4.2	4.2
Yellowstone County	B7	RM 331.96	54224.76	2-yr	1271.43	877.8	873.18	1.98	1.9	31.31	21.39	183.23	314.55	3.11	2.13	4.62	4.62
Yellowstone County	B7	RM 331.85	54057.19	2-yr	1271.43	877.58	873.16	1.95	1.91	48.73	38.4	231.93	301.61	2.8	2.21	4.42	4.42
Yellowstone County	B7	RM 331.74	53882.8	2-yr	1271.43	877.18	872.62	2.51	2.43	41.81	34.14	147.09	187.46	3.41	2.79	4.56	4.56
Yellowstone County	B8	RM 331.66	53744.64	2-yr	1271.43	877.1	871.68	1.98	1.93	31.34	25.06	217.5	280.92	2.93	2.35	5.42	5.42
Yellowstone County	B8	RM 331.55	53575.67	2-yr	1271.43	876.9	872.61	2.13	1.86	31.32	20.78	186.51	354.74	2.91	1.93	4.29	4.29
Yellowstone County	B8	RM 331.41	53354.89	2-yr	1271.43	876.6	872.56	2.21	2.04	37.12	25.35	217.54	372.45	2.45	1.67	4.04	4.04
Yellowstone County	B8	RM 331.32	53209.79	2-yr	1271.43	876.4	871.92	2.18	1.88	29.39	17.2	210.46	460.2	2.52	1.47	4.48	4.48
Yellowstone County	B8	RM 331.23	53053.99	2-yr	1271.43	876.21	871.53	1.9	1.74	28.66	22.39	353.03	567.43	1.66	1.29	4.68	4.68
Yellowstone County	B8	RM 331.14	52919.44	2-yr	1271.43	876.08	871.72	1.57	1.38	20.17	15.23	277	560.5	2.19	1.64	4.36	4.36
Yellowstone County	B8	RM 331.08	52820.06	2-yr	1271.43	875.99	871.29	1.51	1.46	18.25	14.72	303.79	468.69	2.3	1.85	4.7	4.7
Yellowstone County	B8	RM 331.01	52700.37	2-yr	1271.43	875.87	871.8	1.59	1.49	21.16	14.27	299.27	570.23	2.22	1.49	4.07	4.07
Yellowstone County	B8	RM 330.93	52576.5	2-yr	1271.43	875.76	871.67	1.56	1.52	19.71	14.42	244.82	416.18	2.75	2.01	4.09	4.09
Yellowstone County	B8	RM 330.83	52418.21	2-yr	1271.43	875.56	870.75	2.06	1.81	24.46	17.58	140.84	274.78	3.57	2.56	4.81	4.81
Yellowstone County	B8	RM 330.77	52321.13	2-yr	1271.43	875.45	870.68	2.15	2.03	27.79	19.52	157.7	281.53	3.2	2.25	4.77	4.77
Yellowstone County	B8	RM 330.68	52174.9	2-yr	1271.43	875.25	870.33	2.44	2.24	32.81	20.62	127.84	264.1	3.42	2.15	4.92	4.92
Yellowstone County	B8	RM 330.58	52000.46	2-yr	1271.43	875.08	869.72	2.44	2.07	43.13	21.43	115.43	335.03	3.72	1.84	5.36	5.36
Yellowstone County	B8	RM 330.48	51852.83	2-yr	1271.43	874.91	868.81	2.51	2	42.96	17.94	104.07	379.14	4.06	1.67	6.09	6.09
Yellowstone County	B8	RM 330.39	51701.57	2-yr	1271.43	874.78	869.32	2.35	2.01	29.18	13.41	131.14	411.92	3.34	1.53	5.46	5.46
Yellowstone County	B8	RM 330.32	51592.04	2-yr	1271.43	874.68	869.57	2.35	2.05	28.46	14.61	134.33	353.55	3.45	1.77	5.11	5.11
Yellowstone County	B8	RM 330.25	51473.55	2-yr	1271.43	874.58	868.38	2.33	1.99	30.34	15.15	137.96	405.35	3.28	1.63	6.2	6.2
Yellowstone County	B8	RM 330.17	51344.77	2-yr	1271.43	874.45	869.9	2.32	1.99	31.05	18.92	150.16	348.82	3	1.83	4.55	4.55
Yellowstone County	B8	RM 330.10	51243.99	2-yr	1271.43	874.33	870.02	2.26	1.97	32.39	20.28	183.36	384.02	2.68	1.68	4.31	4.31
Yellowstone County	B8	RM 330.05	51150.67	2-yr	1271.43	874.27	869.94	1.83	1.62	23.05	13.2	294.55	688.32	2	1.14	4.33	4.33
Yellowstone County	B8	RM 329.95	50995.78	2-yr	1271.43	874.1	869.67	1.73	1.66	22.58	15.36	350.47	539.26	2.09	1.42	4.43	4.43
Yellowstone County	B8	RM 329.86	50853.11	2-yr	1271.43	873.97	869.99	1.61	1.51	18.38	11.34	377.33	669.79	2.04	1.25	3.98	3.98
Yellowstone County	B8	RM 329.75	50682.47	2-yr	1271.43	873.78	869.45	1.45	1.36	28.38	17.82	473.74	826.16	1.8	1.13	4.33	4.33
Yellowstone County	B8	RM 329.66	50540.7	2-yr	1271.43	873.52	869.45	1.69	1.6	26.75	20.53	393.31	562.84	1.84	1.41	4.07	4.07
Yellowstone County	B8	RM 329.57	50390.78	2-yr	1271.43	873.33	869.17	1.64	1.5	18.27	14.16	474.01	711.65	1.54	1.19	4.16	4.16
Yellowstone County	B8	RM 329.49	50267.58	2-yr	1271.43	873.17	869.52	1.72	1.56	19.99	15.14	420.44	660.62	1.63	1.23	3.65	3.65
Yellowstone County	B8	RM 329.43	50165.22	2-yr	1271.43	873.13	869.82	1.25	1.19	10.08	8.42	526.12	674.94	1.9	1.59	3.31	3.31
Yellowstone County	B8	RM 329.37	50053.96	2-yr	1271.43	873.08	869.58	1.2	1.08	9.35	6.93	445.32	799.31	1.99	1.47	3.5	3.5
Yellowstone County	B8	RM 329.31	49969.13	2-yr	1271.43	873.01	869.66	1.33	1.17	13.99	9.25	372.51	848.18	1.94	1.28	3.35	3.35
Yellowstone County	B8	RM 329.26	49883.05	2-yr	1271.43	872.94	868.74	1.35	1.23	11.84	8.33	373.19	763.82	1.93	1.36	4.2	4.2
Yellowstone County	B8	RM 329.20	49785.51	2-yr	1271.43	872.86	868.71	1.44	1.3	14.04	9.16	397.53	858.28	1.76	1.14	4.15	4.15
Yellowstone County	B8	RM 329.15	49699.71	2-yr	1398.85	872.79	868.64	1.33	1.2	16.93	11.28	463.67	907.18	1.93	1.29	4.15	4.15
Yellowstone County	B8	RM 329.08	49597.49	2-yr	1398.85	872.7	869.34	1.25	1.11	16.68	10.8	470.91	1008.76	1.92	1.24	3.36	3.36
Yellowstone County	B8	RM 328.96	49388.08	2-yr	1398.85	872.55	868.99	1.45	1.12	15.84	8.3	304.52	1065.44	2.24	1.17	3.56	3.56
Yellowstone County	B8	RM 328.85	49197.37	2-yr	1398.85	872.36	866.79	1.78	1.56	11.06	7.81	447.04	866.18	1.46	1.03	5.57	5.57
Yellowstone County	B8	RM 328.75	49036.09	2-yr	1398.85	872.28	866.93	1.5	1.31	11.76	8.1	391.75	888.99	1.75	1.2	5.35	5.35
Yellowstone County	B8	RM 328.68	48920.76	2-yr	1398.85	872.13	867.09	1.79	1.57	22.56	12.9	302.03	749.47	2.08	1.19	5.04	5.04
Yellowstone County	B8	RM 328.60	48788.86	2-yr	1398.85	871.91	866.36	2.24	1.92	25.41	12.35	194	534.13	2.84	1.36	5.55	5.55
Yellowstone County	B8	RM 328.52	48664.7	2-yr	1398.85	871.93	867.75	1.47	1.28	12.55	7.02	165.62	772.86	2.56	1.42	4.18	4.18
Yellowstone County	B8	RM 328.44	48539.46	2-yr	1398.85	871.65	867.34	2.46	2.17	41.25	19.43	136.87	394.52	3.5	1.63	4.31	4.31
Yellowstone County	B8	RM 328.36	48405.85	2-yr	1398.85	871.45	867.12	2.67	2.21	34.76	15.44	131.73	440	3.27	1.44	4.33	4.33
Yellowstone County	B8	RM 328.28	48276.93	2-yr	1398.85	871.41	867.73	1.93	1.86	31.91	19.56	189.58	422.73	2.89	1.78	4.3	4.3
Yellowstone County	B8	RM 328.16	48097.58	2-yr	1398.85	871.2	866.7	1.91	1.8	32.22	21	217.72	503.32	2.37	1.54	4.5	4.5
Yellowstone County	B8	RM 328.05	47914.16	2-yr	1398.85	871.01	866.62	1.71	1.57	23.8	17.5	260.54	520.1	2.32	1.71	4.39	4.39
Yellowstone County	B8	RM 327.93	47729.4	2-yr	1398.85	870.77	865.67	1.98	1.81	23.09	16.65	294.76	500.6	2.14	1.55	5.1	5.1
Yellowstone County	B8	RM 327.88	47641.03	2-yr	1398.85	870.6	866	2.28	1.95	34.57	21.3	244.77	522.57	2.23	1.37	4.6	4.6

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	2-yr	1398.85	870.49	866.29	2.19	1.83	24.25	12.09	179.39	506.87	3.03	1.51	4.2	4.2
Yellowstone County	B8	RM 327.75	47432.57	2-yr	1398.85	870.27	865.09	2.68	2.18	33.41	13.51	133.29	440.68	3.62	1.46	5.18	5.18
Yellowstone County	B8	RM 327.69	47341.24	2-yr	1398.85	870.04	864.48	3.24	2.29	45.26	19.45	102.13	395.14	3.63	1.55	5.56	5.56
Yellowstone County	B8	RM 327.62	47227.31	2-yr	1398.85	870.08	863.86	2.41	1.73	30.08	12.61	127.69	584.37	3.32	1.38	6.22	6.22
Yellowstone County	B8	RM 327.56	47124.87	2-yr	1398.85	870.08	864.46	1.9	1.42	19.35	10.32	154	630.71	2.94	1.57	5.62	5.62
Yellowstone County	B8	RM 327.51	47053.82	2-yr	1398.85	870	865.84	1.89	1.6	22.54	17.37	295.61	655.35	1.73	1.33	4.16	4.16
Yellowstone County	B8	RM 327.44	46933.28	2-yr	1398.85	869.98	866.93	1	1.13	7.74	8.21	387.04	697.18	1.68	1.78	3.36	3.36
Yellowstone County	B8	RM 327.37	46817.72	2-yr	1398.85	869.87	866.26	1.56	1.48	17.76	11.81	337.5	727.46	1.96	1.3	3.61	3.61
Yellowstone County	B8	RM 327.29	46687.12	2-yr	1398.85	869.78	866.04	1.54	1.38	15.62	10.07	302.58	752.19	2.09	1.35	3.74	3.74
Yellowstone County	B8	RM 327.23	46600.07	2-yr	1398.85	869.7	866.25	1.64	1.5	17.19	9.06	282.85	848.4	2.08	1.1	3.85	3.85
Yellowstone County	B8	RM 327.16	46485.25	2-yr	1398.85	869.56	865.67	1.84	1.61	24.54	13.03	267.91	764.74	2.13	1.13	3.89	3.89
Yellowstone County	B8	RM 327.08	46360.36	2-yr	1398.85	869.49	864.94	1.53	1.25	15.71	6.81	259.32	993.11	2.59	1.12	4.55	4.55
Yellowstone County	B8	RM 327.00	46240.1	2-yr	1398.85	869.43	864.56	1.47	1.28	17.25	8.38	227.35	673.51	3.32	1.62	4.87	4.87
Yellowstone County	B8	RM 326.94	46091.8	2-yr	1398.85	869.37	864.04	1.53	1.25	12.12	6.33	223.67	637.91	3.35	1.75	5.33	5.33
Yellowstone County	B8	RM 326.88	46003.77	2-yr	1398.85	869.26	864.08	1.9	1.51	24.75	10.84	170.03	676.71	3.13	1.37	5.18	5.18
Yellowstone County	B8	RM 326.82	45901.15	2-yr	1398.85	869.16	864.18	1.97	1.54	26.15	14.29	201.73	723.66	2.29	1.25	4.98	4.98
Yellowstone County	B8	RM 326.78	45830.7	2-yr	1398.85	869.09	864.46	2.09	1.51	24.85	13.07	163.64	714.04	2.47	1.3	4.63	4.63
Yellowstone County	B8	RM 326.70	45707.6	2-yr	1398.85	869.01	864.66	1.79	1.37	16.17	11.4	237.13	654.95	2.22	1.56	4.35	4.35
Yellowstone County	B8	RM 326.64	45589.72	2-yr	1398.85	868.89	864.92	1.53	1.53	42.17	35.29	413.71	673.95	1.62	1.35	3.97	3.97
Yellowstone County	B8	RM 326.55	45430.24	2-yr	1398.85	868.69	864.83	1.67	1.55	17.43	13.35	347.22	548.55	2.14	1.64	3.86	3.86
Yellowstone County	B8	RM 326.45	45281.78	2-yr	1398.85	868.58	864.12	1.68	1.58	17.8	13.7	332.94	524.16	2.2	1.69	4.46	4.46
Yellowstone County	B8	RM 326.41	45207.36	2-yr	1398.85	868.55	864.32	1.41	1.33	12.73	10.26	432.08	644.04	2.03	1.64	4.23	4.23
Yellowstone County	B8	RM 326.35	45106.57	2-yr	1398.85	868.51	864.43	1.21	1.11	9	6.95	482.48	701.94	2.33	1.8	4.08	4.08
Yellowstone County	B8	RM 326.28	45022.31	2-yr	1398.85	868.52	864.61	0.82	0.76	3.7	2.58	548.28	879	2.99	2.09	3.91	3.91
Yellowstone County	B8	RM 326.07	44588.61	2-yr	1398.85	868.28	862.39	1.76	1.71	9.28	7.2	521.47	693.02	1.52	1.18	5.89	5.89
Yellowstone County	B8	RM 326.00	44481.07	2-yr	1398.85	868.23	861.24	1.7	1.65	7.75	6.23	589.86	760.71	1.39	1.11	6.99	6.99
Yellowstone County	B8	RM 325.94	44379.11	2-yr	1398.85	868.17	861.85	1.34	1.3	29.69	22.41	639.89	878.2	1.62	1.22	6.32	6.32
Yellowstone County	B8	RM 325.89	44304.17	2-yr	1398.85	868.02	863	1.29	1.26	31.6	25.36	714.92	948.89	1.5	1.21	5.02	5.02
Yellowstone County	B8	RM 325.86	44262.16	2-yr	1398.85	867.99	863.76	1.26	1.23	5.73	4.77	732.36	907.75	1.5	1.25	4.23	4.23
Yellowstone County	B8	RM 325.81	44176.46	2-yr	1398.85	867.95	863.1	1.3	1.22	6.12	4.75	717.32	1003.42	1.48	1.15	4.85	4.85
Yellowstone County	B8	RM 325.76	44089.5	2-yr	1398.85	867.91	862.66	1.14	1.09	21.29	16.72	680.37	949.68	1.76	1.38	5.25	5.25
Yellowstone County	B8	RM 325.69	43989.97	2-yr	1398.85	867.84	862.55	1.18	1.09	6.58	4.01	615.9	1159.6	1.89	1.15	5.29	5.29
Yellowstone County	B8	RM 325.58	43809.68	2-yr	1398.85	867.75	862.61	1.16	1.02	22.09	13.3	470.9	960.54	2.38	1.43	5.14	5.14
Yellowstone County	B8	RM 325.50	43680.96	2-yr	1398.85	867.57	862.6	1.35	1.28	28.37	17	434.18	795.06	2.31	1.37	4.97	4.97
Yellowstone County	B8	RM 325.43	43556.76	2-yr	1398.85	867.41	860.89	1.39	1.27	31.39	15.52	385.15	884.93	2.52	1.24	6.52	6.52
Yellowstone County	B8	RM 325.37	43461.41	2-yr	1398.85	867.31	861.36	1.32	1.21	27.76	14.63	342.47	808	2.72	1.43	5.95	5.95
Yellowstone County	B8	RM 325.30	43343.13	2-yr	1398.85	867.15	861.56	1.62	1.43	24.85	10.83	262.46	732.74	3.08	1.34	5.59	5.59
Yellowstone County	B8	RM 325.21	43210.67	2-yr	1398.85	867.02	861.34	1.82	1.57	22.15	8.25	202.93	663.98	3.62	1.34	5.68	5.68
Yellowstone County	B8	RM 325.13	43078.9	2-yr	1398.85	866.87	861.36	2.11	1.76	30.28	9.06	148.56	623.85	4.29	1.27	5.51	5.51
Yellowstone County	B8	RM 325.06	42966.54	2-yr	1398.85	866.62	860.78	2.67	2.38	45.3	15.55	120.91	407.48	4.23	1.44	5.84	5.84
Yellowstone County	B8	RM 324.99	42864.51	2-yr	1398.85	866.5	861.24	2.58	2.07	46.62	13.35	133.72	619.4	3.84	1.09	5.26	5.26
Yellowstone County	B8	RM 324.91	42729.7	2-yr	1398.85	866.37	860.76	2.45	1.95	43.42	12.52	131.73	605.85	4.13	1.18	5.61	5.61
Yellowstone County	B8	RM 324.81	42573.19	2-yr	1398.85	866.23	860.39	2.33	1.93	39.85	13.09	136.63	531.8	4.17	1.37	5.84	5.84
Yellowstone County	B8	RM 324.73	42451.12	2-yr	1398.85	866.14	861.59	2.15	1.74	31.55	11.5	178.85	640.52	3.45	1.25	4.55	4.55
Yellowstone County	B8	RM 324.65	42323.44	2-yr	1398.85	866.07	861.99	1.65	1.43	31.9	17.43	300.92	700.31	2.56	1.4	4.08	4.08
Yellowstone County	B8	RM 324.56	42178.25	2-yr	1398.85	865.93	861.76	1.72	1.41	11.5	8.28	389.81	749.44	1.84	1.32	4.17	4.17
Yellowstone County	B8	RM 324.48	42039.74	2-yr	1398.85	865.79	861.58	1.58	1.42	39.92	25.71	475.38	866.01	1.77	1.14	4.21	4.21
Yellowstone County	B8	RM 324.42	41946.09	2-yr	1398.85	865.68	861.04	1.26	1.14	22.82	13.92	478.13	904.06	2.22	1.36	4.64	4.64
Yellowstone County	B8	RM 324.34	41812.99	2-yr	1398.85	865.44	861.07	1.62	1.37	42.52	21.77	378.78	937.6	2.12	1.09	4.37	4.37
Yellowstone County	B8	RM 324.28	41712.42	2-yr	1398.85	865.17	859.64	1.79	1.56	53.23	28.48	358.09	857.56	1.95	1.04	5.53	5.53
Yellowstone County	B8	RM 324.20	41597.64	2-yr	1398.85	865.07	860.59	1.03	0.97	16.88	12.45	663.23	1001.78	1.96	1.44	4.48	4.48
Yellowstone County	B8	RM 324.16	41526.97	2-yr	1398.85	864.96	861.07	1.44	1.38	9.65	9.03	664.29	761.53	1.42	1.33	3.89	3.89
Yellowstone County	B8	RM 324.10	41434.55	2-yr	1398.85	864.9	860.81	1.21	1.21	21.5	20.04	652.68	704	1.76	1.64	4.09	4.09
Yellowstone County	B8	RM 324.04	41346.42	2-yr	1398.85	864.82	860.39	1.11	1.11	13.58	11.12	594.08	781.02	1.97	1.61	4.43	4.43
Yellowstone County	B8	RM 323.97	41219.29	2-yr	1398.85	864.73	860.64	1.1	1.06	13.96	10.13	546.79	910.93	2	1.45	4.09	4.09
Yellowstone County	B8	RM 323.83	40977.08	2-yr	1398.85	864.6	860.31	1.14	1.01	10.27	5.82	452.67	1013.95	2.42	1.37	4.29	4.29
Yellowstone County	B8	RM 323.71	40786.71	2-yr	1398.85	864.4	858.49	1.81	1.45	21.23	8.23	219.21	788.66	3.17	1.22	5.91	5.91
Yellowstone County	B8	RM 323.60	40615.85	2-yr	1398.85	864.39	858.06	1.36	1.07	11.8	5.09	120.89	746.22	4.08	1.75	6.33	6.33
Yellowstone County	B8	RM 323.55	40536.83	2-yr	1398.85	864.04	857.58	2.81	2.16	52.18	17.12	113.33	544.74	3.64	1.19	6.46	6.46
Yellowstone County	B8	RM 323.49	40429.96	2-yr	1398.85	863.92	858.37	2.66	2.03	43.49	14.29	117.72	557.65	3.77	1.23	5.55	5.55
Yellowstone County	B8	RM 323.41	40309.21	2-yr	1398.85	863.81	859.41	2.45	1.95	41.95	16.81	130.76	522.61	3.43	1.37	4.4	4.4

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	2-yr	1398.85	863.74	859.58	2.05	1.6	24.48	9.91	174.72	720.55	3.01	1.21	4.16	4.16
Yellowstone County	B8	RM 323.27	40082.34	2-yr	1398.85	863.63	859.66	2.07	1.6	28.49	11.37	188.09	757.98	2.9	1.15	3.97	3.97
Yellowstone County	B8	RM 323.21	39985.33	2-yr	1398.85	863.52	859.54	2.08	1.57	30.57	13.75	210.58	779.71	2.55	1.15	3.98	3.98
Yellowstone County	B8	RM 323.16	39899.29	2-yr	1398.85	863.45	859.55	1.67	1.34	29.83	14.79	275.28	937.01	2.24	1.11	3.9	3.9
Yellowstone County	B8	RM 323.06	39735.77	2-yr	1398.85	863.13	858.56	1.63	1.62	34.85	26.64	296.69	663.45	1.98	1.51	4.57	4.57
Yellowstone County	B8	RM 322.93	39531.81	2-yr	1398.85	862.89	859.35	1.56	1.43	22.25	13.39	295.95	702.22	2.32	1.39	3.54	3.54
Yellowstone County	B8	RM 322.79	39301.41	2-yr	1398.85	862.66	858.62	1.78	1.46	22.35	10.68	220.11	742.62	2.69	1.29	4.04	4.04
Yellowstone County	B8	RM 322.69	39142.64	2-yr	1398.85	862.54	857.47	1.88	1.46	18.73	9.14	200.75	693.39	2.83	1.38	5.07	5.07
Yellowstone County	B8	RM 322.58	38982.22	2-yr	1398.85	862.03	856.56	3.21	2.72	63.91	32.88	112.31	330.86	3.03	1.55	5.47	5.47
Yellowstone County	B9	RM 322.51	38859.49	2-yr	1398.85	861.96	858.28	2.48	2.16	37.75	21.63	157.01	395.76	2.86	1.64	3.68	3.68
Yellowstone County	B9	RM 322.41	38696.02	2-yr	1398.85	861.87	857.62	1.56	1.56	23.49	21.72	368.5	471.42	2.05	1.9	4.26	4.26
Yellowstone County	B9	RM 322.34	38586.33	2-yr	1398.85	861.78	857.65	1.28	1.32	16.98	14.78	507.87	689.62	1.78	1.55	4.13	4.13
Yellowstone County	B9	RM 322.23	38396.25	2-yr	1398.85	861.64	857.13	0.99	1.04	14.16	12.75	635.44	810.96	1.85	1.66	4.51	4.51
Yellowstone County	B9	RM 322.13	38239.27	2-yr	1398.85	861.5	857.1	0.9	1.01	15.94	14.79	745.8	907.34	1.65	1.53	4.4	4.4
Yellowstone County	B9	RM 322.03	38090.48	2-yr	1398.85	861.12	856.15	1.35	1.53	49.32	49.55	666.83	743.11	1.23	1.23	4.97	4.97
Yellowstone County	B9	RM 321.91	37898.13	2-yr	1398.85	860.88	856.85	1.74	1.74	9.77	9.77	501.22	501.22	1.6	1.6	4.02	4.02
Yellowstone County	B9	RM 321.82	37758.36	2-yr	1398.85	860.87	856.34	1.26	1.26	5.49	5.49	600.9	600.9	1.85	1.85	4.53	4.53
Yellowstone County	B9	RM 321.70	37567.01	2-yr	1398.85	860.77	855.27	1.14	1.14	21.42	21.42	773.16	773.16	1.59	1.59	5.5	5.5
Yellowstone County	B9	RM 321.60	37414.63	2-yr	1398.85	860.7	854.48	0.85	0.85	7.43	7.15	731.14	761.36	2.26	2.17	6.22	6.22
Yellowstone County	B9	RM 321.48	37188.51	2-yr	1398.85	860.53	855.03	1.24	1.2	19.09	17.35	543.39	628.26	2.05	1.86	5.51	5.51
Yellowstone County	B9	RM 321.38	37016.94	2-yr	1398.85	860.32	854.75	1.47	1.41	22.22	19.26	460.94	566.76	2.02	1.75	5.57	5.57
Yellowstone County	B9	RM 321.28	36857.57	2-yr	1398.85	860.25	855.3	1.16	1.1	9.96	6.24	457.36	780.74	2.6	1.62	4.95	4.95
Yellowstone County	B9	RM 321.13	36652.19	2-yr	1398.85	860.14	854.69	1.32	1.05	18.32	11.01	274.03	663.41	3.39	2.01	5.45	5.45
Yellowstone County	B9	RM 321.05	36531.25	2-yr	1398.85	859.96	855.36	1.83	1.6	28.48	11.04	189.41	576.45	3.96	1.52	4.6	4.6
Yellowstone County	B9	RM 321.00	36446.98	2-yr	1398.85	859.62	855.12	2.82	2.54	55.81	22.96	127.14	353.34	3.85	1.56	4.5	4.5
Yellowstone County	B9	RM 320.71	36404.1	2-yr	1398.85	859.54	855.12	2.9	2.67	40.09	15.69	129.57	369.14	3.69	1.42	4.42	4.42
Yellowstone County	B9	RM 320.62	36361.3	2-yr	1398.85	859.47	855.12	2.97	2.73	41.63	17.49	131.5	348.52	3.55	1.47	4.35	4.35
Yellowstone County	B9	RM 320.92	36318.56	2-yr	1398.85	859.37	855.12	3.06	2.8	68.09	30.52	129.31	323.72	3.5	1.54	4.25	4.25
Yellowstone County	B9	RM 320.44	36258.3	2-yr	1398.85	859.31	855.19	2.89	2.63	39.98	19.46	137.88	319.17	3.47	1.67	4.12	4.12
Yellowstone County	B9	RM 320.38	36198.1	2-yr	1398.85	859.28	855.26	2.7	2.39	35.27	15.95	145.89	377.18	3.48	1.55	4.02	4.02
Yellowstone County	B9	RM 320.80	36137.92	2-yr	1398.85	859.24	855.33	2.55	2.18	45.27	21.7	152.48	455	3.5	1.66	3.91	3.91
Yellowstone County	B9	RM 320.71	35990.21	2-yr	1398.85	859.25	854.38	1.52	1.44	20.7	13.58	273.88	588.47	3.31	2.16	4.86	4.86
Yellowstone County	B9	RM 320.54	35839.45	2-yr	1398.85	859.14	853.99	1.56	1.45	18.7	11.52	323.52	735.77	2.74	1.68	5.15	5.15
Yellowstone County	B9	RM 320.44	35717.45	2-yr	1398.85	859.05	854.32	1.6	1.44	16.54	7.67	334.82	1016.97	2.55	1.17	4.72	4.72
Yellowstone County	B9	RM 320.62	35556.9	2-yr	1398.85	858.91	854.17	1.71	1.41	30.03	11.83	244.2	876.47	2.91	1.13	4.74	4.74
Yellowstone County	B9	RM 320.38	35461.42	2-yr	1398.85	858.84	854.17	1.73	1.32	20.23	7.2	197.18	849.58	3.58	1.25	4.67	4.67
Yellowstone County	B9	RM 320.32	35359.13	2-yr	1398.85	858.65	854.57	2.3	1.84	39.71	12	138.48	669.34	3.84	1.14	4.08	4.08
Yellowstone County	B9	RM 320.25	35241.01	2-yr	1398.85	858.08	854.29	3.5	3.08	80.31	26.46	108.8	410.46	3.44	1.11	3.79	3.79
Yellowstone County	B9	RM 320.20	35163.52	2-yr	1398.85	857.94	854.2	3.32	2.91	76.1	29.35	120.47	401.45	3.17	1.2	3.73	3.73
Yellowstone County	B9	RM 320.14	35071.29	2-yr	1398.85	857.76	854.32	3.03	2.69	63.69	31.72	156.15	394.73	2.68	1.32	3.44	3.44
Yellowstone County	B9	RM 320.01	34865.89	2-yr	1398.85	857.44	854.42	2.37	2.41	27.43	25.97	121.19	334.15	2.03	1.93	3.09	3.09
Yellowstone County		RM 319.44	34790	2-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	2-yr	1398.85	857.3	854.66	1.23	1.61	10.9	12.46	139.63	422.62	2.09	2.37	3.72	3.72
Yellowstone County	B9	RM 319.86	34625.68	2-yr	1398.85	857.23	854.6	1.24	1.67	13.62	14.35	149.49	514.31	1.94	2.04	3.67	3.67
Yellowstone County	B9	RM 319.78	34508.06	2-yr	1398.85	857.07	854.51	2.12	1.99	30.23	23.69	105.71	423.71	2.41	1.87	3.55	3.55
Yellowstone County	B9	RM 319.73	34426.63	2-yr	1398.85	856.89	854.69	2.71	1.8	41.5	35.62	153.02	556.79	1.94	1.67	3.42	3.42
Yellowstone County	B9	RM 319.66	34314.84	2-yr	1398.85	856.78	854.51	1.86	1.83	18.6	15.14	152.76	581.01	1.84	1.49	3.35	3.35
Yellowstone County	B9	RM 319.57	34163.05	2-yr	1398.85	856.65	853.93	1.97	1.86	18.63	14.41	193.9	527.9	1.89	1.46	3.31	3.31
Yellowstone County	B9	RM 319.44	33955.96	2-yr	1398.85	856.53	853.14	1.87	1.71	25.33	17.87	153.23	558.5	2.12	1.48	3.39	3.39
Yellowstone County	B9	RM 319.39	33872.4	2-yr	1398.85	856.44	852.65	2.08	1.77	21.41	13.58	137.96	574.94	2.22	1.39	3.79	3.79
Yellowstone County	B9	RM 319.34	33786.83	2-yr	1398.85	856.39	852.83	1.94	1.58	18.45	11.07	178.14	674.4	2.2	1.31	3.56	3.56
Yellowstone County	B9	RM 319.22	33580.15	2-yr	1398.85	856.32	851.79	1.94	1.31	16.89	8.84	80.63	621.11	3.39	1.72	4.53	4.53
Yellowstone County	B9	RM 319.17	33497.33	2-yr	1398.85	856.3	851.64	1.49	1.31	12.51	8.56	119.94	640.67	2.63	1.77	4.66	4.66
Yellowstone County	B9	RM 319.09	33368.53	2-yr	1398.85	856.04	851.25	2.26	2.16	38.72	28.94	130.48	281.05	3.12	2.3	4.8	4.8
Yellowstone County	B9	RM 319.04	33287.21	2-yr	1398.85	855.81	851.49	2.83	2.46	62.1	36.86	110.06	284.19	3.44	2	4.32	4.32
Yellowstone County	B9	RM 318.96	33153.16	2-yr	1398.85	855.63	851.64	2.47	2.29	47.24	32.52	154.07	297.26	3.01	2.06	3.99	3.99
Yellowstone County	B9	RM 318.91	33065.54	2-yr	1398.85	855.51	851.86	2.35	2.19	45.21	31.61	171.91	318.6	2.88	2	3.65	3.65
Yellowstone County	B9	RM 318.82	32939.33	2-yr	1398.85	855.3	851.86	2.55	2.21	33.29	20.54	151.9	331.71	3.11	1.9	3.45	3.45
Yellowstone County	B9	RM 318.74	32833.24	2-yr	1398.85	855.33	851.86	1.67	1.48	18.86	11.93	180.45	508.43	2.97	1.86	3.48	3.48
Yellowstone County	B9	RM 318.62	32649.76	2-yr	1398.85	855.13	850.67	1.67	1.67	30.39	26.62	315.7	474.91	2.02	1.76	4.47	4.47
Yellowstone County	B9	RM 318.42	32315.28	2-yr	1398.85	854.7	850.15	1.85	1.83	21.15	19.3	339.6	376.24	2.23	2.03	4.55	4.55

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	2-yr	1398.85	854.29	849.17	1.98	1.7	24.95	13.99	206.2	457.48	3.23	1.79	5.12	5.12
Yellowstone County	B9	RM 317.97	31551.39	2-yr	1398.85	854.05	848.35	2.02	1.94	17.6	12.14	227.2	347.36	3.02	2.07	5.7	5.7
Yellowstone County	B10	RM 317.87	31388.76	2-yr	1398.85	853.78	848.78	2.58	2.37	36.93	18.08	152.34	352.07	3.47	1.68	5.01	5.01
Yellowstone County	B10	RM 317.78	31248.07	2-yr	1398.85	853.75	848.75	2.15	1.71	25.35	10.08	142.96	536.63	3.89	1.52	5	5
Yellowstone County	B10	RM 317.70	31120.75	2-yr	1398.85	853.76	848.56	1.59	1.16	14.4	6.76	170.93	793.01	3.3	1.52	5.2	5.2
Yellowstone County	B10	RM 317.61	30982.56	2-yr	1398.85	853.63	848.29	1.87	1.46	18.9	8.84	194.05	695.92	2.99	1.38	5.35	5.35
Yellowstone County	B10	RM 317.53	30849.94	2-yr	1398.85	853.6	848.5	1.4	1.32	12.04	9.06	341.52	576.35	2.46	1.84	5.1	5.1
Yellowstone County	B10	RM 317.45	30723.4	2-yr	1398.85	853.48	848.47	1.61	1.55	18.01	13.57	356.03	594.85	2.02	1.51	5.01	5.01
Yellowstone County	B10	RM 317.37	30601.88	2-yr	1398.85	853.38	848.17	1.47	1.42	20.15	12.91	347.44	777.06	1.99	1.27	5.21	5.21
Yellowstone County	B10	RM 317.30	30483.81	2-yr	1398.85	853.28	848.41	1.61	1.42	15.12	9.73	271.91	604.75	2.56	1.63	4.86	4.86
Yellowstone County	B10	RM 317.19	30302.33	2-yr	1398.85	853.15	848.84	1.82	1.49	17.85	7.53	159.54	581.3	3.88	1.61	4.31	4.31
Yellowstone County	B10	RM 317.05	30079.26	2-yr	1398.85	852.98	848.38	2.05	1.8	20.4	12.08	157.88	326.01	4.06	2.38	4.6	4.6
Yellowstone County	B10	RM 316.93	29889.26	2-yr	1398.85	852.77	847.25	2.32	2.19	31.89	18.68	149.07	275.62	4.01	2.32	5.52	5.52
Yellowstone County	B10	RM 316.79	29668.4	2-yr	1398.85	852.63	847.89	2.19	2.05	28.79	16.46	145.06	279.53	4.31	2.44	4.73	4.73
Yellowstone County	B10	RM 316.66	29466.39	2-yr	1398.85	852.52	847.86	2.06	1.92	23.65	15.19	161.82	276.23	4.13	2.64	4.65	4.65
Yellowstone County	B10	RM 316.58	29329.04	2-yr	1398.85	852.41	847.74	2.09	1.81	31.29	13.17	170.38	483.54	3.84	1.6	4.67	4.67
Yellowstone County	B10	RM 316.51	29227.18	2-yr	1398.85	852.29	847.41	2.21	1.9	31.34	13.56	180.65	504.1	3.42	1.46	4.89	4.89
Yellowstone County	B10	RM 316.43	29091.4	2-yr	1398.85	852.15	847.41	2.09	1.81	38.62	21.61	238.23	518.46	2.69	1.49	4.74	4.74
Yellowstone County	B10	RM 316.33	28935.99	2-yr	1398.85	851.86	847.74	2.13	1.9	47.03	30.68	280.98	503.29	2.25	1.46	4.12	4.12
Yellowstone County	B10	RM 316.24	28786.65	2-yr	1398.85	851.58	847.5	1.82	1.77	42.27	35.97	341.12	449.3	2.07	1.76	4.09	4.09
Yellowstone County	B10	RM 316.14	28628.02	2-yr	1398.85	851.36	846.92	1.68	1.58	26.5	20.68	316.18	441.85	2.58	2.01	4.45	4.45
Yellowstone County	B10	RM 316.05	28475.44	2-yr	1398.85	851.11	846.73	1.94	1.87	37.27	30.31	290.5	373.75	2.46	2	4.38	4.38
Yellowstone County	B10	RM 315.97	28355.68	2-yr	1398.85	851	846.43	1.9	1.78	16.62	12.6	293.5	426.55	2.43	1.84	4.57	4.57
Yellowstone County	B10	RM 315.84	28140.65	2-yr	1398.85	850.67	846.58	2.47	2.26	42.37	24.75	162.1	335.28	3.18	1.85	4.08	4.08
Yellowstone County	B10	RM 315.71	27926.69	2-yr	1398.85	850.43	846.34	2.4	2.16	25.63	15.9	189.26	382.77	2.74	1.69	4.1	4.1
Yellowstone County	B10	RM 315.58	27720.72	2-yr	1398.85	850.39	846.16	1.8	1.34	21.09	8.2	138.96	826.82	3.31	1.26	4.23	4.23
Yellowstone County	B10	RM 315.44	27505.06	2-yr	1398.85	850.2	846.09	2	1.59	23.28	8.23	150.04	689.09	3.67	1.28	4.1	4.1
Yellowstone County	B10	RM 315.30	27283.58	2-yr	1398.85	850.08	844.45	1.49	1.26	16.82	8.43	317.48	1038.78	2.15	1.07	5.63	5.63
Yellowstone County	B10	RM 315.18	27097.16	2-yr	1398.85	849.99	844.72	1.23	1.11	9.85	7.61	453.62	981.9	1.68	1.29	5.27	5.27
Yellowstone County	B10	RM 315.01	26818.99	2-yr	1398.85	849.75	844.66	1.57	1.42	19.37	15.29	458.81	699.67	1.79	1.41	5.09	5.09
Yellowstone County	B10	RM 314.85	26559.67	2-yr	1398.85	849.4	844.84	2.14	1.95	30.92	18.63	163.92	334	3.61	2.15	4.56	4.56
Yellowstone County	B10	RM 314.69	26324.37	2-yr	1398.85	849.11	844.24	2.37	2.27	35.32	29.03	169.03	224.42	3.35	2.75	4.88	4.88
Yellowstone County	B10	RM 314.57	26132.54	2-yr	1398.85	848.86	844.63	2.53	2.35	39.52	21.77	140.54	283.16	3.85	2.1	4.23	4.23
Yellowstone County	B10	RM 314.46	25963.96	2-yr	1398.85	848.71	844.48	2.25	2.12	37.58	23.83	199.45	345.69	3.03	1.91	4.23	4.23
Yellowstone County	B10	RM 314.35	25782.69	2-yr	1398.85	848.5	844.51	2.11	2.1	35.27	33.79	225.67	236.08	2.94	2.82	3.99	3.99
Yellowstone County	B10	RM 314.24	25607.48	2-yr	1398.85	848.36	844.14	2.03	2.03	18.18	17.09	221.93	237	3.11	2.91	4.22	4.22
Yellowstone County	B10	RM 314.15	25461.23	2-yr	1398.85	848.2	844.05	2.11	2.1	42.59	38.86	266.17	292.86	2.49	2.27	4.15	4.15
Yellowstone County	B10	RM 314.06	25326.45	2-yr	1398.85	848.17	843.63	1.52	1.51	10.76	10.31	389.94	426.9	2.36	2.26	4.54	4.54
Yellowstone County	B10	RM 313.98	25189.4	2-yr	1398.85	848.06	843.05	1.54	1.52	26.28	22.88	498.39	583.53	1.82	1.58	5.01	5.01
Yellowstone County	B10	RM 313.83	24942.42	2-yr	1398.85	847.85	843.2	1.33	1.33	14.15	13.87	455.57	465.33	2.31	2.27	4.65	4.65
Yellowstone County	B10	RM 313.72	24768.08	2-yr	1398.85	847.7	842.35	1.55	1.48	16.33	12.13	329.86	472	2.71	2	5.36	5.36
Yellowstone County	B10	RM 313.66	24671.51	2-yr	1398.85	847.61	843.14	1.74	1.64	18.17	12.89	284.69	434.19	2.78	1.97	4.47	4.47
Yellowstone County	B10	RM 313.57	24513.04	2-yr	1398.85	847.48	842.47	1.77	1.68	20.3	15.91	301.96	415.78	2.57	2.01	5.02	5.02
Yellowstone County	B10	RM 313.47	24364.02	2-yr	1398.85	847.39	841.55	1.67	1.66	17	14.73	279.86	325.9	2.98	2.58	5.84	5.84
Yellowstone County	B10	RM 313.33	24143.26	2-yr	1398.85	847.13	842.65	2.18	2.13	29.43	19.82	164.33	252.67	3.89	2.6	4.48	4.48
Yellowstone County	B10	RM 313.18	23899.74	2-yr	1398.85	846.62	842.19	2.92	2.9	67.01	60.35	151.85	170.18	3.15	2.84	4.42	4.42
Yellowstone County	B10	RM 313.07	23728.15	2-yr	1398.85	846.43	842.62	2.56	2.51	35.85	26.81	159.49	219.23	3.42	2.55	3.81	3.81
Yellowstone County	B10	RM 312.98	23590.93	2-yr	1398.85	846.39	842.5	2.12	1.99	22.3	17.48	189.16	275.02	3.28	2.56	3.89	3.89
Yellowstone County	B10	RM 312.90	23455.11	2-yr	1398.85	846.32	842.38	1.89	1.77	27.03	21.09	197.47	308.17	3.29	2.56	3.94	3.94
Yellowstone County	B10	RM 312.75	23227.05	2-yr	1398.85	846.1	841.71	2	1.83	24.66	16.41	221.2	412.13	2.8	1.85	4.4	4.4
Yellowstone County	B10	RM 312.65	23058.61	2-yr	1398.85	845.97	841.61	1.85	1.72	23.35	16.25	264.91	491.35	2.39	1.65	4.35	4.35
Yellowstone County	B10	RM 312.53	22873.59	2-yr	1398.85	845.89	841.37	1.54	1.36	14.2	7.81	236.42	559.3	3.36	1.84	4.52	4.52
Yellowstone County	B10	RM 312.49	22797.96	2-yr	1398.85	845.8	841.34	1.83	1.58	19.13	9.66	200.48	523.43	3.38	1.7	4.47	4.47
Yellowstone County	B10	RM 312.39	22646.67	2-yr	1398.85	845.64	840.85	2.26	1.79	31.5	15.95	147.29	495.12	3.15	1.58	4.79	4.79
Yellowstone County	B10	RM 312.33	22536.68	2-yr	1398.85	845.46	840.82	2.5	1.93	39.39	20	138.12	441.93	3.27	1.64	4.64	4.64
Yellowstone County	B10	RM 312.22	22360.55	2-yr	1398.85	845.39	840.91	2.01	1.63	26.26	13.72	125.24	444.95	3.75	1.93	4.48	4.48
Yellowstone County	B10	RM 312.13	22230.65	2-yr	1398.85	845.36	840.94	1.45	1.33	15.06	11.9	345.85	508.34	2.63	2.07	4.41	4.41
Yellowstone County	B10	RM 312.04	22082.88	2-yr	1398.85	845.22	840.82	1.62	1.51	20.13	16.84	342.35	467.37	2.38	1.98	4.4	4.4
Yellowstone County	B10	RM 311.95	21934.61	2-yr	1398.85	845.08	840.79	1.69	1.62	20.85	17.21	345.91	442.64	2.36	1.95	4.28	4.28
Yellowstone County	B10	RM 311.89	21840.24	2-yr	1398.85	845.01	840.76	1.58	1.49	20.81	16.41	318.52	436.59	2.74	2.16	4.25	4.25
Yellowstone County	B10	RM 311.77	21651.91	2-yr	1398.85	844.9	840.18	1.59	1.48	17.37	11.15	224.74	383.43	3.85	2.46	4.71	4.71

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

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Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	2-yr	1398.85	844.74	839.85	2.06	1.75	27.67	15.74	150.5	332.44	4.27	2.4	4.89	4.89
Yellowstone County	B10	RM 311.58	21350.77	2-yr	1398.85	844.6	839.63	2.11	1.77	30.11	19.07	171.57	500.32	3.63	2.28	4.96	4.96
Yellowstone County	B10	RM 311.48	21191.11	2-yr	1398.85	844.48	839.42	1.96	1.74	23.39	17.03	226.65	648.73	3.02	2.19	5.06	5.06
Yellowstone County	B10	RM 311.37	21010.53	2-yr	1398.85	844.37	839.18	1.66	1.45	19.74	12.03	333.68	668.68	2.42	1.47	5.19	5.19
Yellowstone County	B10	RM 311.27	20852.82	2-yr	1398.85	844.23	838.96	1.7	1.48	21.08	12.41	319.69	651.93	2.47	1.45	5.26	5.26
Yellowstone County	B10	RM 311.19	20716.8	2-yr	1398.85	844.15	838.84	1.61	1.35	17.54	8.12	247.36	674.7	3.36	1.54	5.31	5.31
Yellowstone County	B10	RM 311.09	20559.11	2-yr	1398.85	843.84	839.14	2.47	2.09	36.77	17.2	144.57	383.18	3.78	1.75	4.7	4.7
Yellowstone County	B10	RM 310.97	20364.78	2-yr	1398.85	843.71	839.45	2.19	1.92	28.93	12.41	167.58	462.16	3.72	1.58	4.26	4.26
Yellowstone County	B10	RM 310.87	20211.96	2-yr	1398.85	843.6	839.02	2.13	1.98	26.55	12.55	184.56	428.45	3.53	1.65	4.57	4.57
Yellowstone County	B10	RM 310.76	20019.23	2-yr	1398.85	843.3	839.18	2.6	2.45	36.52	18.7	139.63	295.7	3.83	1.93	4.13	4.13
Yellowstone County	B11	RM 310.67	19877.9	2-yr	1398.85	843.2	839.11	2.31	2.06	41.79	22.99	170.15	363.71	3.42	1.87	4.09	4.09
Yellowstone County	B11	RM 310.57	19727.96	2-yr	1398.85	843.03	839.08	2.17	1.92	40.42	19.41	191.62	470.17	3.26	1.55	3.95	3.95
Yellowstone County	B11	RM 310.48	19578.86	2-yr	1398.85	842.88	838.96	2.04	1.74	30.77	14.53	207.3	542.48	3.15	1.48	3.92	3.92
Yellowstone County	B11	RM 310.39	19437.53	2-yr	1398.85	842.83	838.54	1.72	1.4	13.75	7.62	252.81	616.74	2.94	1.62	4.3	4.3
Yellowstone County	B11	RM 310.31	19317.45	2-yr	1398.85	842.76	838.23	1.73	1.51	12.72	9.54	348.39	565.08	2.19	1.64	4.53	4.53
Yellowstone County	B11	RM 310.24	19187.47	2-yr	1398.85	842.66	838.23	1.47	1.39	35.98	25.15	460.41	748.53	1.93	1.34	4.43	4.43
Yellowstone County	B11	RM 310.16	19069.04	2-yr	1398.85	842.48	837.93	1.36	1.32	28.46	24.03	499.81	638.01	1.97	1.66	4.55	4.55
Yellowstone County	B11	RM 310.09	18955.28	2-yr	1398.85	842.38	837.93	1.46	1.31	7.41	5.95	517.03	751.03	1.78	1.42	4.45	4.45
Yellowstone County	B11	RM 309.97	18765.62	2-yr	1398.85	842.33	837.59	0.97	0.94	11.42	9.31	590.83	761.53	2.39	1.95	4.74	4.74
Yellowstone County	B11	RM 309.90	18643.48	2-yr	1398.85	842.26	837.5	1.22	1.14	5.19	4.2	617.26	831.94	1.83	1.48	4.76	4.76
Yellowstone County	B11	RM 309.82	18525.48	2-yr	1398.85	842.19	837.5	1.16	1.14	25.07	22.46	692.4	838.9	1.63	1.46	4.69	4.69
Yellowstone County	B11	RM 309.73	18379.74	2-yr	1398.85	842	837.35	1.04	1.04	18.79	18.5	793.81	807.35	1.69	1.66	4.66	4.66
Yellowstone County	B11	RM 309.65	18253.83	2-yr	1398.85	841.92	837.38	0.84	0.84	10.95	10.56	867.3	900.35	1.92	1.85	4.54	4.54
Yellowstone County	B11	RM 309.52	18029.98	2-yr	1398.85	841.69	836.68	1.11	1.11	20.86	20.85	813.88	814.3	1.55	1.55	5.02	5.02
Yellowstone County	B11	RM 309.39	17824.11	2-yr	1398.85	841.57	836.74	0.83	0.83	8.8	8.8	760.98	760.98	2.21	2.21	4.83	4.83
Yellowstone County	B11	RM 309.22	17557.23	2-yr	1398.85	841.43	836.07	1.26	1.22	10.08	8	333.05	440.03	3.31	2.62	5.36	5.36
Yellowstone County	B11	RM 309.06	17331.95	2-yr	1398.85	841.22	835.79	1.81	1.64	38.28	20.77	190.43	399.47	3.98	2.13	5.42	5.42
Yellowstone County	B11	RM 308.94	17142.36	2-yr	1398.85	840.67	835.4	2.98	2.76	57.1	28.89	120.24	264.22	3.86	1.92	5.27	5.27
Yellowstone County	B11	RM 308.83	16971.41	2-yr	1398.85	840.63	836.04	2.14	1.92	32.91	13.14	157.23	454.26	4.06	1.6	4.6	4.6
Yellowstone County	B11	RM 308.71	16778.65	2-yr	1398.85	840.59	835.91	1.68	1.52	12.57	6.28	249.62	564.82	3.29	1.63	4.67	4.67
Yellowstone County	B11	RM 308.62	16631.4	2-yr	1398.85	840.49	835.85	1.67	1.46	39.61	20.32	299.86	697.55	2.68	1.37	4.63	4.63
Yellowstone County	B11	RM 308.55	16518.64	2-yr	1398.85	840.28	835.85	1.73	1.62	40.43	25.31	350.78	615.63	2.25	1.41	4.43	4.43
Yellowstone County	B11	RM 308.43	16328.3	2-yr	1398.85	839.92	834.51	1.64	1.56	42.66	28.9	397.43	633.78	2.11	1.42	5.41	5.41
Yellowstone County	B11	RM 308.35	16192.95	2-yr	1398.85	839.74	834.88	1.53	1.43	23.55	14.13	373.31	676.27	2.42	1.44	4.86	4.86
Yellowstone County	B11	RM 308.24	16015.46	2-yr	1398.85	839.63	834.63	1.38	1.19	13.55	7.72	361.76	780.21	2.65	1.5	4.99	4.99
Yellowstone County	B11	RM 308.12	15826.82	2-yr	1398.85	839.55	834.63	1.28	1.12	11.07	7.01	381.24	720.59	2.74	1.73	4.92	4.92
Yellowstone County	B11	RM 308.02	15675.58	2-yr	1398.85	839.5	834.76	1.28	1.18	8.42	5.59	303.31	506.58	3.54	2.34	4.74	4.74
Yellowstone County	B11	RM 307.88	15434.86	2-yr	1398.85	839.09	834.45	2.8	2.35	48.73	28.67	110.79	270.76	3.81	2.2	4.64	4.64
Yellowstone County	B11	RM 307.77	15261.75	2-yr	1398.85	838.79	834.45	2.86	2.66	57.21	36.01	124.7	253.65	3.34	2.07	4.34	4.34
Yellowstone County	B11	RM 307.68	15125.28	2-yr	1398.85	838.67	834.85	2.36	2.08	39.33	21.03	157.07	380.81	3.34	1.77	3.82	3.82
Yellowstone County	B11	RM 307.60	14980.1	2-yr	1398.85	838.65	834.36	1.6	1.56	14.88	11.65	267.86	354.08	3.25	2.54	4.29	4.29
Yellowstone County	B11	RM 307.52	14873.7	2-yr	1398.85	838.51	834.12	1.98	1.95	25.13	18.74	251.87	345.54	2.8	2.08	4.39	4.39
Yellowstone County	B11	RM 307.46	14779.11	2-yr	1398.85	838.37	833.6	2.06	2.02	43.26	32.16	278.28	383.49	2.44	1.8	4.77	4.77
Yellowstone County	B11	RM 307.39	14664.34	2-yr	1398.85	838.24	833.63	2.05	1.95	15.88	10.72	296.4	467.73	2.29	1.53	4.62	4.62
Yellowstone County	B11	RM 307.30	14517.89	2-yr	1398.85	838.06	833.81	2.07	1.97	45.6	35.37	352.49	492.42	1.86	1.44	4.25	4.25
Yellowstone County	B11	RM 307.22	14385.45	2-yr	1398.85	837.81	833.87	1.92	1.83	33.43	27.4	350.9	465.63	2	1.64	3.94	3.94
Yellowstone County	B11	RM 307.14	14262.57	2-yr	1398.85	837.67	833.51	1.72	1.64	25.95	17.46	334.07	543.33	2.34	1.57	4.16	4.16
Yellowstone County	B11	RM 307.08	14166.72	2-yr	1398.85	837.61	833.11	1.53	1.41	14.67	10.22	348.47	573.57	2.49	1.73	4.5	4.5
Yellowstone County	B11	RM 307.01	14050.92	2-yr	1398.85	837.53	832.65	1.6	1.51	12.04	9.29	370.8	564.85	2.14	1.64	4.88	4.88
Yellowstone County	B11	RM 306.95	13949.23	2-yr	1398.85	837.42	832.35	1.81	1.58	21.69	14.37	323.59	634.84	2.11	1.39	5.07	5.07
Yellowstone County	B11	RM 306.90	13869.87	2-yr	1398.85	837.34	832.56	1.81	1.56	22.68	15.85	316.59	561.53	2.3	1.6	4.77	4.77
Yellowstone County	B11	RM 306.82	13726.64	2-yr	1398.85	837.21	832.62	1.7	1.51	20.32	12.79	343.39	638.21	2.31	1.45	4.59	4.59
Yellowstone County	B11	RM 306.72	13574.53	2-yr	1398.85	837.04	831.8	1.96	1.64	24.53	11.85	220.81	634.65	2.82	1.35	5.24	5.24
Yellowstone County	B11	RM 306.62	13414.11	2-yr	1398.85	836.81	832.77	2.18	1.96	38.15	18.74	211.19	545.48	2.69	1.31	4.04	4.04
Yellowstone County	B11	RM 306.52	13251.36	2-yr	1398.85	836.49	832.87	2.62	2.31	37.66	16.29	146.69	424.42	3.34	1.42	3.63	3.63
Yellowstone County	B11	RM 306.42	13099.73	2-yr	1398.85	836.19	832.74	2.99	2.59	49.23	24.8	129.69	348.54	3.12	1.55	3.45	3.45
Yellowstone County	B11	RM 306.34	12958.96	2-yr	1398.85	836.15	832.84	2.05	1.84	27.85	16.67	232.79	498.57	2.55	1.52	3.32	3.32
Yellowstone County	B11	RM 306.25	12825.95	2-yr	1398.85	835.95	832.35	2.15	2.04	31.47	25.25	305.01	452.38	1.9	1.52	3.6	3.6
Yellowstone County	B11	RM 306.16	12673.7	2-yr	1398.85	835.75	832.41	2.05	1.89	26.22	19.98	272.47	436.23	2.23	1.69	3.34	3.34
Yellowstone County	B11	RM 306.11	12592.39	2-yr	1398.85	835.65	832.17	2.03	1.84	30.52	22.01	233.3	408.43	2.59	1.86	3.49	3.49
Yellowstone County	B11	RM 306.03	12457.47	2-yr	1398.85	835.51	831.25	1.89	1.76	24.47	18.39	341.51	584.23	1.82	1.36	4.26	4.26

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	2-yr	1398.85	835.21	831.25	2.2	2.07	34.99	28.62	322.04	503.09	1.65	1.34	3.96	3.96
Yellowstone County	B11	RM 305.84	12159.82	2-yr	1398.85	834.94	831.1	2.21	2.02	32.76	25.42	243.87	423.95	2.12	1.63	3.84	3.84
Yellowstone County	B11	RM 305.74	11989.73	2-yr	1398.85	834.7	830.64	2.2	2.01	33.41	22.89	188.28	351.09	2.91	1.98	4.05	4.05
Yellowstone County	B11	RM 305.67	11883.31	2-yr	1398.85	834.5	830.43	2.53	2.17	38.91	23.62	154.92	356.06	3.01	1.81	4.07	4.07
Yellowstone County	B11	RM 305.60	11764.11	2-yr	1398.85	834.54	830.18	1.43	1.39	12.26	9.27	144.04	516.28	2.63	1.95	4.35	4.35
Yellowstone County	B11	RM 305.52	11651.48	2-yr	1398.85	834.32	830.18	2.24	1.91	31.16	20.28	143.19	470.41	2.42	1.55	4.14	4.14
Yellowstone County	B11	RM 305.44	11514.64	2-yr	1398.85	834.25	830.43	1.76	1.33	14.21	9.86	150.46	600.26	2.55	1.75	3.82	3.82
Yellowstone County	B11	RM 305.40	11441.77	2-yr	1398.85	834.13	830.61	1.86	1.62	13.43	12.75	211.72	466.85	1.95	1.85	3.52	3.52
Yellowstone County	B11	RM 305.32	11312.15	2-yr	1398.85	833.99	830.61	2.05	1.78	26.13	13.9	138.34	559.75	2.68	1.41	3.38	3.38
Yellowstone County	B11	RM 305.24	11186.22	2-yr	1398.85	833.98	830.43	1.33	1.11	13.1	7.44	130.34	896.68	2.52	1.4	3.56	3.56
Yellowstone County	B11	RM 305.06	10905.09	2-yr	1398.85	833.84	830.15	1.42	1.07	8.94	6.57	292.31	1047.47	1.71	1.25	3.69	3.69
Yellowstone County	B11	RM 304.71	10460.6	2-yr	1398.85	833.63	828.96	1.32	1.29	12.77	11.35	386.73	679.02	1.81	1.6	4.67	4.67
Yellowstone County	B11	RM 304.62	10332.33	2-yr	1398.85	833.61	829.09	1.07	1.03	7.22	5.61	205.28	564.89	3.13	2.41	4.52	4.52
Yellowstone County	B11	RM 304.50	10132.63	2-yr	1398.85	833.31	829.09	2.26	2.17	44.84	32.15	120.48	255.19	3.57	2.53	4.23	4.23
Yellowstone County	B11	RM 304.42	10011.11	2-yr	1398.85	833.22	829.18	1.97	1.92	29.4	20.21	141.62	306.31	3.49	2.37	4.04	4.04
Yellowstone County	B11	RM 304.34	9873.393	2-yr	1398.85	833.14	828.78	1.81	1.78	16.32	13.49	257.35	318.26	2.99	2.47	4.36	4.36
Yellowstone County	B11	RM 304.25	9735.197	2-yr	1398.85	832.98	828.39	2.09	2.06	31.48	25.13	198.24	254.63	3.36	2.67	4.59	4.59
Yellowstone County	B11	RM 304.18	9615.178	2-yr	1398.85	832.89	828.54	2.08	2.04	19.38	16.39	210.78	255.12	3.19	2.69	4.35	4.35
Yellowstone County	B11	RM 304.09	9478.266	2-yr	1398.85	832.77	828.6	2.13	2.08	28.81	23.82	179.14	224.21	3.63	2.99	4.18	4.18
Yellowstone County	B11	RM 304.00	9326.206	2-yr	1398.85	832.67	828.39	2.01	1.97	27.95	20.58	188.03	262.41	3.69	2.71	4.28	4.28
Yellowstone County	B11	RM 303.91	9177.479	2-yr	1398.85	832.57	828.14	1.88	1.72	26.82	13.1	210.09	481.6	3.48	1.69	4.43	4.43
Yellowstone County	B11	RM 303.78	8973.508	2-yr	1398.85	832.33	827.93	2.24	2.11	27.59	14.21	154.3	324.09	4.02	2.04	4.41	4.41
Yellowstone County	B11	RM 303.65	8773.522	2-yr	1398.85	832.15	827.9	2.29	2.05	38.33	19.56	163.93	372.46	3.63	1.83	4.25	4.25
Yellowstone County	B11	RM 303.55	8608.195	2-yr	1398.85	832.04	827.65	2.08	1.94	18.43	14.2	242.62	359.41	2.72	2.08	4.38	4.38
Yellowstone County	B11	RM 303.43	8422.329	2-yr	1398.85	831.9	827.87	1.88	1.82	31.59	27.58	267	326.63	2.7	2.36	4.03	4.03
Yellowstone County	B11	RM 303.34	8276.308	2-yr	1398.85	831.86	826.92	1.43	1.29	12.13	8.95	318.52	508.87	2.91	2.13	4.93	4.93
Yellowstone County	B11	RM 303.26	8138.725	2-yr	1398.85	831.68	826.98	1.91	1.91	28	27.52	223.43	227.51	3.27	3.22	4.69	4.69
Yellowstone County	B11	RM 303.18	8018.762	2-yr	1398.85	831.54	826.22	1.94	1.93	38.74	38.16	249.14	253.24	2.9	2.86	5.32	5.32
Yellowstone County	B11	RM 303.09	7876.674	2-yr	1398.85	831.36	825.43	1.88	1.88	32.39	32.39	258.87	258.87	2.87	2.87	5.93	5.93
Yellowstone County	B11	RM 302.99	7711.603	2-yr	1398.85	831.14	826.22	1.81	1.79	38.84	34.01	330.35	383.88	2.32	2.03	4.92	4.92
Yellowstone County	B11	RM 302.89	7556.419	2-yr	1398.85	830.9	825.73	1.86	1.83	34.3	32.38	270.21	294.8	2.74	2.59	5.16	5.16
Yellowstone County	B11	RM 302.81	7423.411	2-yr	1398.85	830.74	825.86	1.98	1.96	26.44	24.97	185.56	198.75	3.8	3.58	4.89	4.89
Yellowstone County	B11	RM 302.70	7257.14	2-yr	1398.85	830.65	826.01	1.88	1.85	20.35	16.35	182.96	232.91	4.05	3.25	4.65	4.65
Yellowstone County	B12	RM 302.56	7050.708	2-yr	1398.85	830.31	825.25	2.54	2.54	33.5	33.5	159.1	203.44	3.47	3.47	5.07	5.07
Yellowstone County		RM 300.55	7034	2-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	2-yr	1398.85	830.27	825.95	2.41	2.41	28.74	28.74	158.55	158.55	3.83	3.83	4.33	4.33
Yellowstone County	B12	RM 302.49	6918.549	2-yr	1398.85	830.21	825.92	2.31	2.31	30.1	28.46	165.82	209.19	3.65	3.45	4.29	4.29
Yellowstone County	B12	RM 302.41	6794.522	2-yr	1398.85	830.12	825.64	2.31	2.12	24.15	18.11	161.6	332.41	3.45	2.57	4.48	4.48
Yellowstone County	B12	RM 302.34	6674.634	2-yr	1398.85	830.03	825.76	2.19	2.04	33.57	27.17	207.4	351.18	2.89	2.33	4.26	4.26
Yellowstone County	B12	RM 302.22	6485.378	2-yr	1398.85	829.92	825.76	1.67	1.5	19.15	15.47	233.33	448.73	2.59	2.08	4.16	4.16
Yellowstone County	B12	RM 302.14	6360.047	2-yr	1398.85	829.69	825.76	2.28	1.93	34.41	22.07	175.46	389.96	2.92	1.86	3.92	3.92
Yellowstone County	B12	RM 302.08	6267.13	2-yr	1398.85	829.62	825.79	2.05	1.88	18.05	14.88	257.63	378.49	2.38	1.96	3.82	3.82
Yellowstone County	B12	RM 301.98	6100.949	2-yr	1398.85	829.56	825.34	1.6	1.5	17.67	13.82	250.97	393	3.04	2.37	4.23	4.23
Yellowstone County	B12	RM 301.88	5944.005	2-yr	1398.85	829.46	824.7	1.61	1.5	17.27	11.98	306.66	528.28	2.56	1.77	4.76	4.76
Yellowstone County	B12	RM 301.79	5801.18	2-yr	1398.85	829.4	824.36	1.49	1.4	10.3	7.89	367.27	562.03	2.34	1.78	5.03	5.03
Yellowstone County	B12	RM 301.72	5685.105	2-yr	1398.85	829.33	824.85	1.52	1.43	15.7	12.07	325.54	509.5	2.49	1.91	4.48	4.48
Yellowstone County	B12	RM 301.65	5569.191	2-yr	1398.85	829.2	824.61	1.73	1.67	22.19	17.29	308.83	467.52	2.3	1.79	4.6	4.6
Yellowstone County	B12	RM 301.59	5465.51	2-yr	1398.85	829.07	824.42	1.8	1.81	26.38	22.56	317.12	420.13	2.16	1.84	4.64	4.64
Yellowstone County	B12	RM 301.53	5366.723	2-yr	1398.85	828.94	824.12	1.68	1.71	30.98	26.95	360.84	466.96	2.02	1.75	4.82	4.82
Yellowstone County	B12	RM 301.47	5270.902	2-yr	1398.85	828.79	824.12	1.73	1.72	31.58	26.57	349.04	462.74	2.09	1.75	4.67	4.67
Yellowstone County	B12	RM 301.39	5140.04	2-yr	1398.85	828.72	824.36	1.33	1.23	16.85	13.4	343.23	561.61	2.55	2.02	4.36	4.36
Yellowstone County	B12	RM 301.33	5044.575	2-yr	1398.85	828.64	824.12	1.45	1.4	14.81	12.51	329.26	436.6	2.71	2.29	4.52	4.52
Yellowstone County	B12	RM 301.24	4906.408	2-yr	1398.85	828.53	823.87	1.63	1.56	16.88	13.29	310.71	442.97	2.58	2.03	4.65	4.65
Yellowstone County	B12	RM 301.18	4802.631	2-yr	1398.85	828.39	823.17	1.9	1.77	24.14	20.14	309.56	443.5	2.14	1.78	5.22	5.22
Yellowstone County	B12	RM 301.12	4698.913	2-yr	1398.85	828.26	823.81	1.91	1.87	24.14	21.52	307.78	361.78	2.33	2.07	4.45	4.45
Yellowstone County	B12	RM 301.07	4611.142	2-yr	1398.85	828.21	824	1.76	1.72	19.12	16.44	283.92	346.57	2.74	2.35	4.21	4.21
Yellowstone County	B12	RM 301.02	4531.484	2-yr	1398.85	828.15	823.81	1.81	1.75	14.11	12.17	259.31	322.08	2.88	2.49	4.34	4.34
Yellowstone County	B12	RM 300.97	4453.011	2-yr	1398.85	828.02	823.9	2.19	2.05	21.44	17.44	188.92	259.3	3.25	2.63	4.12	4.12
Yellowstone County	B12	RM 300.89	4332.618	2-yr	1398.85	827.9	823.66	2.24	2.19	35.81	30.61	198.89	257.25	2.9	2.48	4.24	4.24
Yellowstone County	B12	RM 300.83	4232.362	2-yr	1398.85	827.71	823.78	2.49	2.32	40.79	31.32	171.82	273.82	2.88	2.2	3.93	3.93
Yellowstone County	B12	RM 300.77	4151.049	2-yr	1398.85	827.64	823.75	2.22	2.09	36.28	25.67	172.66	309.44	3.08	2.16	3.89	3.89

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	2-yr	1398.85	827.57	823.63	1.87	1.69	17.4	11.46	204.45	390.96	3.23	2.12	3.94	3.94
Yellowstone County	B12	RM 300.55	3793.957	2-yr	1398.85	827.45	822.93	1.68	1.51	21.62	13.19	262.03	583.49	2.62	1.59	4.52	4.52
Yellowstone County	B12	RM 300.45	3633.035	2-yr	1398.85	827.28	822.53	1.37	1.45	26.01	21.21	335.99	564.73	2.1	1.71	4.75	4.75
Yellowstone County	B12	RM 300.35	3461.833	2-yr	1398.85	827.03	822.66	1.92	1.67	12.27	8.76	374.7	629.21	1.87	1.33	4.38	4.38
Yellowstone County	B12	RM 300.24	3286.175	2-yr	1398.85	826.83	822.47	1.89	1.75	45.96	34.05	401.41	617.05	1.76	1.3	4.35	4.35
Yellowstone County	B12	RM 300.15	3141.724	2-yr	1398.85	826.47	822.47	1.8	1.73	39.2	34.32	430.18	530.46	1.75	1.53	4	4
Yellowstone County	B12	RM 300.10	3054.752	2-yr	1398.85	826.35	822.35	1.94	1.74	14.86	11.5	323.07	492.38	2.12	1.64	3.99	3.99
Yellowstone County	B12	RM 300.00	2887.728	2-yr	1398.85	826.18	821.22	1.76	1.69	34.79	29.89	384.01	496.42	1.95	1.67	4.96	4.96
Yellowstone County	B12	RM 299.91	2736.431	2-yr	1398.85	826.01	821.5	1.63	1.61	19.01	16.65	348.54	505.35	1.97	1.72	4.51	4.51
Yellowstone County	B12	RM 299.83	2614.069	2-yr	1398.85	825.79	821.41	1.82	1.9	29.3	28.14	333.48	441.4	1.74	1.67	4.39	4.39
Yellowstone County	B12	RM 299.72	2484.158	2-yr	1398.85	825.67	820.89	1.65	1.62	20.12	18.12	367.88	417.81	2.3	2.07	4.78	4.78
Yellowstone County	B12	RM 299.59	2312.328	2-yr	1398.85	825.44	821.13	2.1	1.82	25.33	17.36	217.21	429.41	2.63	1.79	4.31	4.31
Yellowstone County	B12	RM 299.48	2160.343	2-yr	1398.85	825.2	821.13	2.58	2.02	30.26	14.5	137.7	456.87	3.2	1.51	4.07	4.07
Yellowstone County	B12	RM 299.38	1995.229	2-yr	1398.85	825.04	821.13	2.43	1.81	52.13	21.98	128.61	578.94	3.2	1.33	3.91	3.91
Yellowstone County	B12	RM 299.31	1874.433	2-yr	1398.85	824.85	821.22	2.49	1.98	30.21	15.45	136.56	444.17	3.14	1.59	3.63	3.63
Yellowstone County	B12	RM 299.22	1738.666	2-yr	1398.85	824.68	821.16	2.6	1.93	38.59	15.97	125.94	554.4	3.24	1.32	3.52	3.52
Yellowstone County	B12	RM 299.15	1613.992	2-yr	1398.85	824.63	820.95	2.07	1.36	24.31	9.35	153.99	902.63	2.99	1.14	3.69	3.69
Yellowstone County	B12	RM 299.06	1473.748	2-yr	1398.85	824.57	820.64	1.9	1.23	24.31	8.24	114.48	997.31	3.46	1.14	3.92	3.92
Yellowstone County	B12	RM 298.99	1360.532	2-yr	1398.85	824.46	820.46	2.05	1.39	30.62	10.87	98.87	851.58	3.44	1.18	4	4
Yellowstone County	B12	RM 298.93	1269.876	2-yr	1398.85	824.39	820.46	1.88	1.38	29.33	12.5	104.98	753.31	3.24	1.34	3.93	3.93
Yellowstone County	B12	RM 298.88	1195.725	2-yr	1398.85	824.32	820.43	1.81	1.38	25.51	10.62	116.75	810.22	3.09	1.25	3.89	3.89
Yellowstone County	B12	RM 298.82	1096.849	2-yr	1398.85	824.13	820.58	2.38	1.68	32.05	13.89	149.07	766.06	2.55	1.09	3.54	3.54
Yellowstone County	B12	RM 298.77	1018.392	2-yr	1398.85	824.05	820.4	2.1	1.55	27.1	12.95	183.29	788.8	2.42	1.14	3.65	3.65
Yellowstone County	B12	RM 298.67	854.844	2-yr	1398.85	823.94	819.39	1.96	1.45	15.97	10.82	222.2	734.16	1.97	1.32	4.55	4.55
Yellowstone County	B12	RM 298.59	724.135	2-yr	1398.85	823.83	819.55	1.69	1.54	21.57	18.24	261.49	637.78	1.7	1.43	4.28	4.28
Yellowstone County	B12	RM 298.49	579.164	2-yr	1398.85	823.72	819.27	1.74	1.37	13.39	9.38	212.57	643.98	2.29	1.58	4.44	4.44
Yellowstone County	B12	RM 298.42	469.573	2-yr	1398.85	823.62	819.27	1.8	1.49	25.07	12.18	175.81	734.57	2.68	1.28	4.34	4.34
Yellowstone County	B12	RM 298.35	368.049	2-yr	1398.85	823.48	819.97	2.07	1.64	25.2	11.99	146.34	566.85	3.21	1.51	3.51	3.51
Yellowstone County	B12	RM 298.30	290.003	2-yr	1398.85	823.45	819.82	1.85	1.42	16.45	6.2	197.28	1001.34	2.64	0.99	3.63	3.63
Yellowstone County	B12	RM 298.26	211.35	2-yr	1398.85	823.37	819.82	1.86	1.59	22.51	12.11	212.37	695.78	2.37	1.26	3.55	3.55
Yellowstone County	B12	RM 298.19	83.499	2-yr	1398.85	823.23	819.49	2.06	1.74	20.13	12.87	171.27	510.11	2.49	1.58	3.75	3.75

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	2-yr	1336.6	823.1	820.43	1.49	1.25	12.65	8.47	189.97	762.57	2.48	1.65	2.67	2.67
Treasure County	C1	RM 297.89	61639	2-yr	1336.6	822.92	820.07	1.48	1.32	13.8	10.33	349.56	737.02	1.83	1.37	2.86	2.86
Treasure County	C1	RM 297.76	61392	2-yr	1336.6	822.73	819.93	1.56	1.44	17.35	13.9	322.1	622.97	1.86	1.49	2.8	2.8
Treasure County	C1	RM 297.62	61179	2-yr	1336.6	822.63	819.69	1.32	1.17	9.85	8.25	273.24	672.38	2.14	1.79	2.94	2.94
Treasure County	C1	RM 297.5	60985	2-yr	1336.6	822.4	819.39	2.07	1.69	23.69	12.48	158.92	603.7	2.71	1.42	3.01	3.01
Treasure County	C1	RM 297.36	60767	2-yr	1336.6	822.18	819.14	2.03	1.71	23.52	12.73	169.82	615.18	2.5	1.34	3.04	3.04
Treasure County	C1	RM 297.22	60535	2-yr	1336.6	821.99	819	1.92	1.62	20.98	14.24	146.36	497.89	2.55	1.71	2.99	2.99
Treasure County	C1	RM 297.08	60314	2-yr	1336.6	821.83	818.76	1.78	1.61	17.63	13.09	191.14	451.42	2.64	1.94	3.07	3.07
Treasure County	C1	RM 296.94	60093	2-yr	1336.6	821.56	818.42	2.13	1.99	25.88	18.23	172.84	388.06	2.51	1.76	3.14	3.14
Treasure County	C1	RM 296.79	59847	2-yr	1336.6	821.49	817.97	1.39	1.36	11.23	9.09	243.96	532.66	2.37	1.91	3.52	3.52
Treasure County	C1	RM 296.64	59608	2-yr	1336.6	821.39	817.9	1.49	1.39	12.08	8.48	171.81	547.45	2.63	1.83	3.49	3.49
Treasure County	C1	RM 296.51	59386	2-yr	1336.6	821.33	817.8	1.17	1.16	7.85	7.11	475.34	594.63	2.41	2.17	3.52	3.52
Treasure County	C1	RM 296.33	59113	2-yr	1336.6	821.23	817.52	1.27	1.25	8.42	7.23	333.08	542.33	3.17	2.72	3.71	3.71
Treasure County	C1	RM 296.16	58839	2-yr	1336.6	820.46	817.46	3.51	3.38	67.76	52.19	136.57	221.37	2.78	2.13	3.01	3.01
Treasure County	C1	RM 296.01	58583	2-yr	1336.6	820.31	817.45	2.15	2.15	26.85	26.83	257.89	297.9	2.41	2.4	2.86	2.86
Treasure County	C1	RM 295.83	58296	2-yr	1336.6	820.05	817.4	1.77	1.77	17.43	17.43	446.82	446.82	1.69	1.69	2.65	2.65
Treasure County	C1	RM 295.66	58032	2-yr	1336.6	819.65	817.27	2.11	2.11	26.74	26.74	320.6	320.6	1.97	1.97	2.39	2.39
Treasure County	C1	RM 295.52	57800	2-yr	1336.6	819.57	816.19	1.37	1.37	10.68	10.68	428.17	428.17	2.27	2.27	3.38	3.38
Treasure County	C1	RM 295.31	57474	2-yr	1336.6	819.46	815.61	1.19	1.16	6.6	6.15	458.58	519.2	2.37	2.21	3.85	3.85
Treasure County	C1	RM 295.13	57174	2-yr	1336.6	819.32	815.57	1.45	1.39	11.44	9.54	350.71	459.5	2.51	2.09	3.75	3.75
Treasure County	C1	RM 294.94	56877	2-yr	1336.6	818.96	815.46	2.3	2.18	27.53	21.6	185.01	265.59	2.95	2.31	3.5	3.5
Treasure County	C1	RM 294.76	56587	2-yr	1336.6	818.76	815.45	1.97	1.87	21.25	17.52	233.36	319.66	2.79	2.3	3.3	3.3
Treasure County	C1	RM 294.55	56261	2-yr	1336.6	818.52	815.36	1.99	1.73	21.56	14.45	187.58	423.97	2.83	1.88	3.16	3.16
Treasure County	C1	RM 294.38	55980	2-yr	1336.6	818.33	815.07	1.73	1.67	17.49	15.18	217.48	409.27	2.32	2.01	3.27	3.27
Treasure County	C1	RM 294.21	55714	2-yr	1336.6	818.1	814.88	2	1.77	21.72	15.29	193.64	393.76	2.84	1.99	3.22	3.22
Treasure County	C1	RM 294.02	55401	2-yr	1336.6	817.87	814.59	1.91	1.79	18.74	14.95	209.54	397.32	2.42	1.92	3.28	3.28
Treasure County	C1	RM 293.83	55100	2-yr	1336.6	817.7	814.3	1.74	1.53	14.23	12.25	243.01	459.63	2.32	1.99	3.4	3.4
Treasure County	C1	RM 293.63	54777	2-yr	1336.6	817.61	813.55	1.32	1.32	8.4	8.4	319.74	479.77	3.16	3.16	4.06	4.06
Treasure County	C1	RM 293.43	54432	2-yr	1336.6	817.36	813.29	1.95	1.93	19.39	15.05	196.85	719.77	3.48	2.69	4.08	4.08
Treasure County	C1	RM 293.26	54152	2-yr	1336.6	817.08	813.24	2.26	2.16	26.02	15.6	219.8	887.03	2.68	1.6	3.84	3.84
Treasure County	C1	RM 293.07	53839	2-yr	1336.6	816.75	813.24	2.23	1.68	28.74	17.8	224.76	783.11	2.41	1.48	3.51	3.51
Treasure County	C1	RM 292.83	53458	2-yr	1336.6	816.61	813.1	1.33	1.13	9.69	6.47	366.6	892.55	2.3	1.53	3.51	3.51
Treasure County	C1	RM 292.6	53082	2-yr	1336.6	816.42	812.6	1.6	1.39	13.4	9.05	235.72	446.86	3.2	2.16	3.82	3.82
Treasure County	C2	RM 292.32	52612	2-yr	1336.6	816.22	811.76	1.74	1.28	13.34	7.81	205.83	554.83	3.24	1.88	4.46	4.46
Treasure County	C2	RM 292.09	52256	2-yr	1336.6	816.08	811.6	1.77	1.35	14.92	8.69	166.49	474.06	3.62	2.08	4.48	4.48
Treasure County	C2	RM 291.9	51956	2-yr	1336.6	815.92	811.55	1.78	1.52	17.44	13.77	234.71	399.47	2.8	2.2	4.37	4.37
Treasure County	C2	RM 291.71	51639	2-yr	1336.6	815.3	811.5	2.83	2.46	54.73	42.39	188.51	300.17	2.36	1.81	3.8	3.8
Treasure County	C2	RM 291.52	51333	2-yr	1336.6	815.1	811.46	1.91	1.61	19.3	12.31	210.19	417.24	3.15	2	3.64	3.64
Treasure County	C2	RM 291.33	51042	2-yr	1336.6	814.86	811.46	2.03	1.91	23.2	19.11	228.68	324.53	2.62	2.15	3.4	3.4
Treasure County	C2	RM 291.15	50747	2-yr	1336.6	814.79	811.4	1.34	1.22	9.53	7.38	293.81	465.11	3.05	2.36	3.39	3.39
Treasure County	C2	RM 290.94	50437	2-yr	1336.6	814.59	811.31	1.75	1.47	17.47	11.28	254.54	573.13	2.47	1.58	3.28	3.28
Treasure County	C2	RM 290.78	50179	2-yr	1336.6	814.42	810.97	1.57	1.4	13.27	9.93	351.79	605.89	2.11	1.57	3.45	3.45
Treasure County	C2	RM 290.6	49891	2-yr	1336.6	814.33	810.54	1.15	1.1	7.52	6.93	463.87	533.96	2.47	2.27	3.79	3.79
Treasure County	C2	RM 290.43	49607	2-yr	1336.6	814.09	810.13	1.83	1.75	16.74	14.36	271.51	389.6	2.48	2.13	3.96	3.96
Treasure County	C2	RM 290.23	49287	2-yr	1336.6	813.66	810.07	2.52	2.37	32.65	24.73	148.87	218.91	3.41	2.58	3.59	3.59
Treasure County	C2	RM 290.04	48976	2-yr	1336.6	813.55	810.04	1.77	1.66	16.07	11.48	207.24	336.22	3.38	2.4	3.51	3.51
Treasure County	C2	RM 289.85	48667	2-yr	1336.6	813.4	809.87	1.52	1.44	13.03	11	354.64	520.17	2.25	1.9	3.53	3.53
Treasure County	C2	RM 289.67	48372	2-yr	1336.6	813.2	809.87	1.62	1.62	12.19	12.19	394.55	421.46	2.1	2.1	3.33	3.33
Treasure County	C2	RM 289.46	48067	2-yr	1336.6	813.09	809.56	1.34	1.3	9.81	7.86	366.86	533.84	2.69	2.15	3.52	3.52
Treasure County	C2	RM 289.27	47769	2-yr	1336.6	812.83	809.32	1.84	1.8	19.85	15.63	313.88	417.35	2.3	1.81	3.52	3.52
Treasure County	C2	RM 289.11	47515	2-yr	1336.6	812.68	809	1.76	1.7	15.83	11.71	223.23	335.73	3.4	2.51	3.68	3.68
Treasure County	C2	RM 288.94	47232	2-yr	1336.6	812.49	808.59	1.96	1.85	19.23	11.04	179.64	338.26	3.75	2.14	3.91	3.91
Treasure County	C2	RM 288.76	46939	2-yr	1336.6	812.35	808.33	1.84	1.57	17.86	9.26	216.17	526.23	3.21	1.65	4.02	4.02
Treasure County	C2	RM 288.55	46613	2-yr	1336.6	811.95	808.24	2.37	2.32	31.82	28.35	221.62	255.78	2.53	2.26	3.71	3.71
Treasure County	C2	RM 288.36	46302	2-yr	1336.6	811.88	807.91	1.59	1.53	12.46	9.34	216.36	303.71	3.86	2.88	3.97	3.97
Treasure County	C2	RM 288.18	46008	2-yr	1336.6	811.7	807.77	1.83	1.7	18.07	12.02	241.03	420.46	2.94	1.95	3.94	3.94
Treasure County	C2	RM 287.99	45713	2-yr	1336.6	811.55	807.58	1.74	1.66	14.61	11.77	225.49	344.53	3.1	2.5	3.97	3.97
Treasure County	C2	RM 287.81	45421	2-yr	1336.6	811.44	807.25	1.61	1.42	13.48	9.22	221.98	428.74	3.23	2.2	4.19	4.19
Treasure County	C2	RM 287.62	45112	2-yr	1336.6	811.08	807.19	2.46	2.26	30.54	21.31	134.39	235.7	3.61	2.5	3.89	3.89
Treasure County	C2	RM 287.42	44789	2-yr	1336.6	810.82	807.15	2.34	2.08	28.07	17.04	152.67	312.15	3.41	2.06	3.68	3.68

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	2-yr	1336.6	810.68	806.81	1.56	1.55	14.85	14.29	417.42	438.76	2.04	1.97	3.87	3.87
Treasure County	C2	RM 287.06	44222	2-yr	1336.6	810.51	806.77	1.41	1.39	11.77	11.45	511.38	536.08	1.84	1.79	3.74	3.74
Treasure County	C2	RM 286.9	43958	2-yr	1336.6	810.35	806.52	1.54	1.51	12.5	11.46	268.42	299.38	3.2	2.95	3.83	3.83
Treasure County	C2	RM 286.72	43671	2-yr	1336.6	810.13	802.22	2.08	2.06	19.23	15	120.98	234.17	5.32	4.11	7.91	7.91
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	2-yr	1336.6	810.1	802.22	2.11	2.11	19.87	19.38	119.13	161.97	5.31	5.18	7.88	7.88
Treasure County	C3	RM 286.58	43448	2-yr	1336.6	810	806.32	2.15	1.96	23.65	16.09	173.79	321.48	3.46	2.35	3.68	3.68
Treasure County	C3	RM 286.51	43344	2-yr	1336.6	809.96	806.32	1.92	1.78	18.85	14.87	193.66	411.68	3.5	2.76	3.64	3.64
Treasure County	C3	RM 286.46	43257	2-yr	1336.6	809.92	804.36	1.86	1.71	17.48	13.85	193.01	412.41	3.62	2.87	5.56	5.56
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	2-yr	1336.6	809.89	804.36	1.89	1.76	18.02	13.86	196.23	400.95	3.55	2.73	5.53	5.53
Treasure County	C3	RM 286.37	43117	2-yr	1336.6	809.83	806.17	1.82	1.71	18.12	15.94	292.92	620.04	2.84	2.5	3.67	3.67
Treasure County	C3	RM 286.26	42931	2-yr	1336.6	809.6	806.17	2.15	1.91	35.64	20.85	199.05	469.98	2.8	1.63	3.43	3.43
Treasure County	C3	RM 286.06	42624	2-yr	1336.6	809.47	806.08	1.42	1.22	11.03	6.46	351.62	948.75	2.56	1.49	3.39	3.39
Treasure County	C3	RM 285.81	42213	2-yr	1336.6	809.23	805.78	1.81	1.34	17.81	7.98	179.28	1313.61	2.42	1.07	3.44	3.44
Treasure County	C3	RM 285.56	41812	2-yr	1336.6	809.07	805.34	1.41	1.15	10.02	3.09	232.27	1358.41	3.55	1.09	3.73	3.73
Treasure County	C3	RM 285.23	41280	2-yr	1336.6	808.8	805.17	1.88	1.26	19.15	5.24	139.41	1487.68	2.97	0.8	3.63	3.63
Treasure County	C3	RM 284.69	40395	2-yr	1336.6	808.15	804.85	2.37	2.01	32.19	21.21	133.08	443.59	2.44	1.59	3.3	3.3
Treasure County	C3	RM 284.26	39705	2-yr	1336.6	807.86	804.6	1.38	1.27	11.13	8.88	346.01	575.63	2.3	1.84	3.26	3.26
Treasure County	C3	RM 283.96	39199	2-yr	1336.6	807.58	804.3	1.67	1.4	15.78	7.2	239.23	883.92	2.55	1.16	3.28	3.28
Treasure County	C3	RM 283.69	38766	2-yr	1336.6	807.41	803.9	1.57	1.16	12.74	4.14	178.23	1185.16	3.35	1.07	3.51	3.51
Treasure County	C3	RM 283.35	38229	2-yr	1336.6	807.24	803.42	1.39	0.96	9.97	3.5	272.65	1622.74	2.8	0.97	3.82	3.82
Treasure County	C3	RM 283.05	37749	2-yr	1336.6	806.88	803.32	2.07	1.62	23.06	6.7	183.4	1052.21	2.95	0.85	3.56	3.56
Treasure County	C3	RM 282.78	37306	2-yr	1336.6	806.61	803.11	1.75	1.31	14.13	5.09	254.45	1298.51	2.37	0.85	3.5	3.5
Treasure County	C3	RM 282.56	36942	2-yr	1336.6	806.48	802.83	1.29	0.98	9.22	3.8	278.27	1494.88	2.31	0.94	3.65	3.65
Treasure County	C3	RM 282.31	36546	2-yr	1336.6	806.32	802.74	1.48	0.91	11.46	3.48	183.39	1547.7	3.23	0.96	3.58	3.58
Treasure County	C3	RM 282.09	36195	2-yr	1336.6	806.01	802.56	2.23	1.47	28.67	10.85	179.96	1373.16	2.43	0.91	3.45	3.45
Treasure County	C4	RM 281.73	35619	2-yr	1336.6	805.64	801.74	1.61	1.49	13.68	10.42	335.29	749.71	2.32	1.77	3.9	3.9
Treasure County	C4	RM 281.35	35005	2-yr	1336.6	805.48	801.53	1.22	1.16	7.47	4.9	303.16	839.98	3.59	2.35	3.95	3.95
Treasure County	C4	RM 281.03	34521	2-yr	1336.6	805.24	801.19	1.78	1.53	15.83	6.65	202.28	717.23	3.65	1.52	4.05	4.05
Treasure County	C4	RM 280.73	34051	2-yr	1336.6	805.07	800.82	1.51	1.4	7.35	5.73	509.63	769.7	1.71	1.33	4.25	4.25
Treasure County	C4	RM 280.5	33687	2-yr	1336.6	804.93	800.66	1.37	1.27	5.67	4.7	667.24	941.25	1.44	1.19	4.27	4.27
Treasure County	C4	RM 280.27	33304	2-yr	1336.6	804.81	800.31	1.12	1.05	5.47	4.04	679.96	1105.43	1.72	1.27	4.5	4.5
Treasure County	C4	RM 279.95	32800	2-yr	1336.6	804.67	800.08	1.08	0.93	6.28	2.96	496.67	1490.63	2.41	1.13	4.59	4.59
Treasure County	C4	RM 279.6	32231	2-yr	1336.6	804.25	799.98	2.13	1.84	17.34	9.13	274.33	645.5	2.21	1.16	4.27	4.27
Treasure County	C4	RM 279.33	31805	2-yr	1336.6	803.7	799.98	2.5	2.4	30.97	25.6	234.22	312.92	2.27	1.87	3.72	3.72
Treasure County	C4	RM 279.14	31495	2-yr	1336.6	803.53	799.96	1.86	1.68	16.97	12.25	227.41	393.53	2.91	2.1	3.57	3.57
Treasure County	C4	RM 278.96	31209	2-yr	1336.6	803.47	799.87	1.31	1.28	8.53	7.79	358.27	437.4	2.75	2.51	3.6	3.6
Treasure County	C4	RM 278.76	30894	2-yr	1336.6	803.31	799.6	1.49	1.46	12.65	11.76	375.72	455.26	2.25	2.09	3.71	3.71
Treasure County	C4	RM 278.56	30571	2-yr	1336.6	803.04	799.53	1.76	1.69	18.55	15.46	331.77	464.59	2.15	1.79	3.51	3.51
Treasure County	C4	RM 278.37	30259	2-yr	1336.6	802.93	799.26	1.28	1.28	8.98	8.78	363.22	424.46	2.86	2.8	3.67	3.67
Treasure County	C5	RM 278.16	29915	2-yr	1336.6	802.63	798.81	2.06	2.02	21.14	18.93	197.79	286.67	3.27	2.92	3.81	3.81
Treasure County	C5	RM 277.99	29648	2-yr	1336.6	802.37	798.77	2.27	2.26	26.51	23.31	183.66	255.31	3.2	2.81	3.6	3.6
Treasure County	C5	RM 277.8	29336	2-yr	1336.6	802.18	798.74	2.01	1.99	21.16	18.64	207.49	265.77	3.2	2.82	3.44	3.44
Treasure County	C5	RM 277.61	29041	2-yr	1336.6	801.98	798.72	1.98	1.91	20.66	15.18	212.85	322.91	3.15	2.31	3.26	3.26
Treasure County	C5	RM 277.43	28747	2-yr	1336.6	801.82	798.48	1.69	1.64	16.03	14.2	302.85	374.23	2.6	2.29	3.34	3.34
Treasure County	C5	RM 277.22	28415	2-yr	1336.6	801.54	798.47	1.91	1.91	18.88	18.55	292.81	307.53	2.39	2.35	3.07	3.07
Treasure County	C5	RM 277.04	28123	2-yr	1336.6	801.36	798.4	1.68	1.63	15.77	13.81	299.3	364.34	2.65	2.32	2.96	2.96
Treasure County	C5	RM 276.81	27791	2-yr	1336.6	801.26	797.8	1.27	1.25	8.74	8.37	370.85	408.27	2.84	2.72	3.46	3.46
Treasure County	C5	RM 276.63	27499	2-yr	1336.6	801.01	797.4	1.97	1.89	20.39	16.72	211.78	326.77	3.18	2.6	3.61	3.61
Treasure County	C5	RM 276.4	27133	2-yr	1336.6	800.79	797.1	1.87	1.76	17.9	13.97	232.53	369.51	3.03	2.35	3.69	3.69
Treasure County	C5	RM 276.19	26801	2-yr	1336.6	800.61	796.87	1.86	1.68	18.17	13.11	181.41	404.46	3.16	2.27	3.74	3.74
Treasure County	C5	RM 276.01	26502	2-yr	1336.6	800.42	796.74	1.95	1.75	19.46	12.18	152.93	373.1	3.5	2.17	3.69	3.69
Treasure County	C5	RM 275.81	26193	2-yr	1336.6	800.3	796.61	1.67	1.55	14.75	11.52	179.56	375.15	3.14	2.44	3.69	3.69
Treasure County	C5	RM 275.63	25896	2-yr	1336.6	800.12	796.49	1.93	1.65	19.21	11.38	133.28	425.99	3.41	1.99	3.63	3.63
Treasure County	C5	RM 275.45	25606	2-yr	1336.6	800.03	796.37	1.54	1.34	12.81	9.61	153.92	477.49	2.95	2.19	3.66	3.66
Treasure County	C5	RM 275.26	25299	2-yr	1336.6	799.89	796.16	1.52	1.52	11.65	11.65	246.49	261.22	3.57	3.57	3.73	3.73
Treasure County	C5	RM 275.09	25033	2-yr	1336.6	799.7	796.13	1.92	1.87	18.93	17.19	198.99	234.7	3.43	3.11	3.57	3.57
Treasure County	C6	RM 274.89	24716	2-yr	1336.6	799.54	796.04	1.8	1.51	17.05	9.35	226.4	1155.56	3.13	1.71	3.5	3.5
Treasure County	C6	RM 274.72	24440	2-yr	1336.6	799.18	796.04	2.38	2.14	32.2	25.92	213.12	708.16	2.51	2.01	3.14	3.14

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	2-yr	1336.6	798.99	795.79	1.65	1.41	16.9	10.06	291.39	1636.25	2.09	1.24	3.2	3.2
Treasure County	C6	RM 274.38	23892	2-yr	1336.6	798.83	795.55	1.59	1.28	13.98	5.85	219.2	1337.04	2.71	1.13	3.28	3.28
Treasure County	C6	RM 274.13	23491	2-yr	1336.6	798.62	795.16	1.69	1.34	16.74	8.06	214.13	1301.8	2.31	1.1	3.47	3.47
Treasure County	C6	RM 273.83	22999	2-yr	1336.6	798.46	794.46	1.42	1.09	10.41	3.73	179.18	1547.64	3.3	1.17	4	4
Treasure County	C6	RM 273.58	22595	2-yr	1336.6	798.23	794.04	1.89	1.45	17.5	5.39	167.99	1306.33	3.16	0.96	4.2	4.2
Treasure County	C6	RM 273.35	22238	2-yr	1336.6	798.02	794.04	1.94	1.28	17.84	4.95	225.17	2338.33	2.27	0.62	3.98	3.98
Treasure County	C6	RM 273.15	21916	2-yr	1336.6	797.87	793.92	1.58	1.02	13.3	3.77	253.57	2777.52	2.34	0.66	3.95	3.95
Treasure County	C6	RM 272.83	21397	2-yr	1336.6	797.7	793.79	1.4	0.92	9.29	2.34	249.55	3028.9	2.79	0.7	3.91	3.91
Treasure County	C6	RM 272.5	20872	2-yr	1336.6	797.31	793.46	2.16	1.56	24.94	9.56	222.31	1818.87	2.21	0.84	3.86	3.86
Treasure County	C6	RM 272.19	20368	2-yr	1336.6	796.88	793.34	1.97	1.55	20.36	10.93	237.38	1145.48	2.67	1.43	3.54	3.54
Treasure County	C6	RM 271.91	19902	2-yr	1336.6	796.65	793.18	1.7	1.33	15.45	8.53	223.3	1020.22	2.97	1.63	3.46	3.46
Treasure County	C6	RM 271.68	19534	2-yr	1336.6	796.35	792.81	2.1	1.69	24.18	14.41	184.41	665.42	2.83	1.69	3.54	3.54
Treasure County	C6	RM 271.41	19102	2-yr	1336.6	796.26	792.54	1.15	0.99	7.56	4.61	293.58	1010.37	2.48	1.5	3.73	3.73
Treasure County	C6	RM 271.06	18548	2-yr	1336.6	795.88	792.18	2.14	1.98	25.24	16.01	162.12	413.7	2.81	1.77	3.71	3.71
Treasure County	C6	RM 270.64	17870	2-yr	1336.6	795.66	792.05	1.36	1.13	10.45	4.78	211.43	1031.65	2.62	1.19	3.61	3.61
Treasure County	C6	RM 270.05	16897	2-yr	1336.6	795.23	791.48	1.99	1.48	19.73	7.46	153.57	820.77	3	1.12	3.76	3.76
Treasure County	C6	RM 269.75	16413	2-yr	1336.6	794.89	791.35	1.99	1.65	21.74	11.02	215.2	595.66	2.76	1.39	3.54	3.54
Treasure County	C6	RM 269.47	15967	2-yr	1336.6	794.6	791.23	1.9	1.77	19.37	13.61	203.42	400.11	3.03	2.12	3.37	3.37
Treasure County	C7	RM 269.27	15645	2-yr	1336.6	794.48	791.23	1.53	1.4	12.77	9.2	265.39	902.78	2.82	2.03	3.24	3.24
Treasure County	C7	RM 269.06	15308	2-yr	1336.6	794.35	791.01	1.31	1.22	9.81	7.58	190.93	859.49	2.43	1.86	3.34	3.34
Treasure County	C7	RM 268.83	14957	2-yr	1336.6	794.26	790.6	0.93	0.86	5.2	2.95	253.34	1322.94	2.2	1.23	3.66	3.66
Treasure County	C7	RM 268.55	14516	2-yr	1336.6	794.13	790.17	1.18	1.05	7.38	3.06	215.44	1038.87	3.16	1.3	3.96	3.96
Treasure County	C7	RM 268.2	13976	2-yr	1336.6	793.89	789.62	1.73	1.47	15.65	6.18	224.71	727.78	3.22	1.26	4.26	4.26
Treasure County	C7	RM 267.87	13439	2-yr	1336.6	793.57	789.53	1.93	1.52	17.9	9.63	198.57	502.64	3.27	1.74	4.04	4.04
Treasure County	C7	RM 267.53	12884	2-yr	1336.6	793.1	789.5	2.22	1.66	27.47	13.87	228.39	661.28	2.42	1.22	3.6	3.6
Treasure County	C7	RM 267.14	12253	2-yr	1336.6	792.91	789.26	1.35	1.02	9.22	5.44	224.47	955	2.76	1.62	3.65	3.65
Treasure County	C7	RM 266.8	11700	2-yr	1336.6	792.77	789.2	1.38	1.08	10.31	5.69	211.81	1018.7	2.86	1.56	3.57	3.57
Treasure County	C7	RM 266.41	11078	2-yr	1336.6	792.46	789.14	2.05	1.47	23.64	11.09	144.78	875.54	2.65	1.22	3.32	3.32
Treasure County	C7	RM 266.11	10593	2-yr	1336.6	792.16	788.83	1.75	1.54	18.04	10.65	254.04	850.37	2.26	1.33	3.33	3.33
Treasure County	C7	RM 265.92	10283	2-yr	1336.6	791.95	788.65	1.8	1.53	14.02	10.74	284.27	893.89	1.92	1.46	3.3	3.3
Treasure County	C7	RM 265.68	9915	2-yr	1336.6	791.77	788.21	1.77	1.5	16.23	10.47	178.43	525.24	3.39	2.17	3.56	3.56
Treasure County	C7	RM 265.52	9650	2-yr	1336.6	791.61	788.07	1.94	1.52	20.84	11.27	154.57	599.22	2.75	1.47	3.54	3.54
Treasure County	C7	RM 265.34	9362	2-yr	1336.6	791.35	788.07	1.9	1.66	21.21	13.34	171.05	570.69	2.27	1.41	3.28	3.28
Treasure County	C7	RM 265.16	9071	2-yr	1336.6	791.16	787.95	1.5	1.46	13.47	11.71	271.31	532.15	1.98	1.72	3.22	3.22
Treasure County	C7	RM 264.98	8775	2-yr	1336.6	790.94	787.59	1.91	1.67	17.3	13.79	216.5	462.62	2.18	1.73	3.35	3.35
Treasure County	C7	RM 264.81	8508	2-yr	1336.6	790.84	787.35	1.13	1.17	7.83	7.96	611.4	881.07	1.28	1.3	3.49	3.49
Treasure County	C7	RM 264.64	8216	2-yr	1336.6	790.71	787.22	1.24	1.2	6.61	6.98	647.56	903.93	1.17	1.23	3.49	3.49
Treasure County	C7	RM 264.39	7803	2-yr	1336.6	790.48	786.86	1.48	1.42	12.34	10.8	341.48	573.68	1.88	1.64	3.62	3.62
Treasure County	C7	RM 264.15	7406	2-yr	1336.6	790.34	786.6	1.34	1.12	9.5	6.5	191.28	833.24	2.11	1.43	3.74	3.74
Treasure County	C7	RM 263.97	7116	2-yr	1336.6	790.24	786.49	1.42	1.06	10.19	5.67	171.04	647.03	3.54	1.94	3.75	3.75
Treasure County	C7	RM 263.79	6834	2-yr	1336.6	790.04	786.49	1.89	1.6	17.18	11.56	194.96	498.58	2.52	1.68	3.55	3.55
Treasure County	C7	RM 263.6	6534	2-yr	1336.6	789.87	786.37	1.7	1.31	15.79	6.79	199.73	839.8	2.85	1.21	3.5	3.5
Treasure County	C7	RM 263.39	6194	2-yr	1336.6	789.75	786.25	1.21	1.18	8.42	7.32	439.25	615.92	2.31	2.01	3.5	3.5
Treasure County	C7	RM 263.19	5862	2-yr	1336.6	789.44	786	1.86	1.65	21.57	14.54	331.24	642.62	1.87	1.26	3.44	3.44
Treasure County	C7	RM 262.95	5479	2-yr	1336.6	789.17	785.85	1.71	1.56	13.11	9.52	280.47	451.43	2.62	1.9	3.31	3.31
Treasure County	C7	RM 262.78	5206	2-yr	1336.6	789.01	785.76	1.65	1.5	12.13	8.57	413.09	785.09	1.61	1.13	3.25	3.25
Treasure County	C7	RM 262.58	4883	2-yr	1336.6	788.81	785.64	1.3	1.23	10.93	7.57	581.14	1091.55	1.58	1.1	3.17	3.17
Treasure County	C7	RM 262.42	4613	2-yr	1336.6	788.69	785.54	1.14	1.07	6.95	5.62	593.15	976.62	1.68	1.36	3.15	3.15
Treasure County	C7	RM 262.24	4323	2-yr	1336.6	788.58	785.43	0.99	0.98	6.28	5.89	819.62	1029.94	1.64	1.54	3.16	3.16
Treasure County	C7	RM 261.95	3917	2-yr	1336.6	788.38	785.28	1.24	1.21	7.89	7.02	563.55	658	1.89	1.68	3.1	3.1
Treasure County	C7	RM 261.7	3519	2-yr	1336.6	788.14	784.87	1.32	1.32	18.59	18.54	441.29	442.37	2.3	2.29	3.27	3.27
Treasure County	C7	RM 261.53	3256	2-yr	1336.6	787.81	784.51	1.64	1.62	28.52	26.52	397.63	433.91	2.04	1.9	3.3	3.3
Treasure County	C7	RM 261.35	2959	2-yr	1336.6	787.71	784.33	1.09	1.09	5.88	5.88	516.11	516.11	2.37	2.37	3.38	3.38
Treasure County	C7	RM 261.2	2720	2-yr	1336.6	787.55	784.14	1.35	1.35	27.84	27.84	511.69	518.65	1.93	1.93	3.41	3.41
Treasure County	C7	RM 261.03	2441	2-yr	1336.6	787.43	783.66	1.16	1.16	6.67	6.49	396.86	421.87	2.9	2.82	3.77	3.77
Treasure County	C7	RM 260.84	2142	2-yr	1336.6	787.32	783.41	1.36	1.35	10.02	9.61	339.77	357.01	2.88	2.77	3.9	3.9
Treasure County	C7	RM 260.66	1863	2-yr	1336.6	787.19	783.29	1.48	1.46	10.26	8.27	335.04	431.6	2.69	2.17	3.9	3.9
Treasure County	C8	RM 259.9	634	2-yr	1336.6	786.14	782.46	2.7	2.54	37.51	27.75	144.82	211.23	3.38	2.49	3.69	3.69
Treasure County	C8	RM 259.72	347	2-yr	1336.6	785.9	782.45	2.38	2.25	29.59	25.06	170.97	217.59	3.22	2.73	3.45	3.45
Treasure County	C8	RM 259.55	68	2-yr	1336.6	785.79	782.2	1.77	1.77	15.11	15.11	267.8	267.8	2.81	2.81	3.59	3.59

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	2-yr	1339.4	785.79	782.19	1.86	1.76	17.84	15.4	203.32	254.87	3.47	2.99	3.6	3.6
Rosebud County	C8	RM 259.41	87598	2-yr	1339.4	785.62	781.96	1.88	1.88	19.37	19.37	204.53	204.53	3.49	3.49	3.66	3.66
Rosebud County	C8	RM 259.22	87292	2-yr	1339.4	785.5	781.55	1.68	1.55	13.96	10.44	231.96	341.49	3.39	2.53	3.95	3.95
Rosebud County	C8	RM 259.04	87004	2-yr	1339.4	785.34	781	1.78	1.73	17.88	16.15	207.04	244.52	3.51	3.17	4.34	4.34
Rosebud County	C8	RM 258.85	86696	2-yr	1339.4	785.15	780.9	1.89	1.81	15.17	13.41	255.36	306.77	2.73	2.41	4.25	4.25
Rosebud County	C8	RM 258.66	86399	2-yr	1339.4	785.02	780.78	1.81	1.77	15.89	14.54	181.62	205.19	4.03	3.68	4.24	4.24
Rosebud County	C8	RM 258.47	86098	2-yr	1339.4	784.83	780.65	1.99	1.88	20.06	16.37	196.49	275.72	3.23	2.63	4.18	4.18
Rosebud County	C8	RM 258.28	85798	2-yr	1339.4	784.67	780.53	1.86	1.57	17.47	12.21	210.71	410.14	2.99	2.09	4.14	4.14
Rosebud County	C8	RM 258.1	85498	2-yr	1339.4	784.53	780.14	1.78	1.59	15.3	10.12	171.32	332.15	4.11	2.7	4.39	4.39
Rosebud County	C8	RM 257.91	85200	2-yr	1339.4	784.38	780.14	1.84	1.77	18.35	14.82	219.6	372.74	2.9	2.34	4.24	4.24
Rosebud County	C8	RM 257.71	84875	2-yr	1339.4	784.06	780.14	2.15	1.9	26.66	18.69	215.68	450	2.39	1.66	3.92	3.92
Rosebud County	C8	RM 257.54	84597	2-yr	1339.4	783.85	780.17	1.96	1.68	20.1	12.51	198.24	459.15	2.99	1.85	3.68	3.68
Rosebud County	C8	RM 257.36	84298	2-yr	1339.4	783.65	780.05	1.94	1.59	19.53	12.82	185.95	479.82	2.71	1.78	3.6	3.6
Rosebud County	C8	RM 257.16	83984	2-yr	1339.4	783.62	780	1.13	1	6.56	4.45	304.37	598.82	3.37	2.29	3.62	3.62
Rosebud County	C8	RM 256.87	83608	2-yr	1339.4	783.28	779.89	2.24	1.97	26.09	18.37	175.14	306.42	3.16	2.22	3.39	3.39
Rosebud County	C8	RM 256.65	83257	2-yr	1339.4	783.18	779.82	1.57	1.39	12.8	10.14	169.22	399.94	3.06	2.41	3.36	3.36
Rosebud County	C8	RM 256.45	82941	2-yr	1339.4	783	779.67	1.69	1.61	15.09	12.63	222.18	314.69	3.17	2.65	3.33	3.33
Rosebud County	C8	RM 256.26	82630	2-yr	1339.4	782.77	779.58	1.86	1.62	21.18	14	286.47	521.67	2.4	1.58	3.19	3.19
Rosebud County	C8	RM 256.1	82375	2-yr	1339.4	782.63	779.42	1.44	1.44	10.83	10.83	456.39	456.39	2.05	2.05	3.21	3.21
Rosebud County	C8	RM 255.91	82077	2-yr	1339.4	782.55	779.09	1.13	1.13	6.47	6.47	476.68	476.68	2.49	2.49	3.46	3.46
Rosebud County	C8	RM 255.7	81747	2-yr	1339.4	782.37	778.73	1.59	1.57	13.22	12.13	299.78	333.66	2.81	2.58	3.64	3.64
Rosebud County	C8	RM 255.51	81446	2-yr	1339.4	782.17	778.49	1.79	1.73	17.21	14.98	248.13	326.01	2.99	2.6	3.68	3.68
Rosebud County	C8	RM 255.31	81125	2-yr	1339.4	782	778.36	1.7	1.62	17.49	12.55	231.01	373.77	3.36	2.41	3.64	3.64
Rosebud County	C8	RM 255.14	80856	2-yr	1339.4	781.82	778.24	1.87	1.78	17.89	12.54	208.1	328.55	3.41	2.38	3.58	3.58
Rosebud County	C8	RM 254.95	80554	2-yr	1339.4	781.63	778.12	1.95	1.89	19.69	14.96	205.16	282.25	3.32	2.52	3.51	3.51
Rosebud County	C8	RM 254.76	80251	2-yr	1339.4	781.47	778	1.85	1.78	17.64	12.95	215.78	317.12	3.34	2.44	3.47	3.47
Rosebud County	C8	RM 254.58	79960	2-yr	1339.4	781.33	777.88	1.75	1.7	15.82	12.83	229.85	297.79	3.32	2.68	3.45	3.45
Rosebud County	C8	RM 254.39	79658	2-yr	1339.4	781.24	777.41	1.42	1.39	10.52	9.03	292.53	372.24	3.21	2.76	3.83	3.83
Rosebud County	C8	RM 254.2	79359	2-yr	1339.4	781.03	777.39	1.82	1.81	18.22	17.59	267.46	284.53	2.75	2.65	3.64	3.64
Rosebud County	C8	RM 254.01	79052	2-yr	1339.4	780.9	776.82	1.7	1.68	14.14	12.64	205.09	231.21	3.85	3.44	4.07	4.07
Rosebud County	C9	RM 253.82	78779	2-yr	1339.4	780.72	776.24	1.88	1.82	19.66	16.09	239.22	312.04	2.96	2.42	4.48	4.48
Rosebud County	C9	RM 253.63	78478	2-yr	1339.4	780.43	776.12	2.19	1.95	32.69	15.57	149.09	468.35	3.87	1.82	4.31	4.31
Rosebud County	C9	RM 253.45	78178	2-yr	1339.4	780.22	775.97	2.11	1.71	20.62	10.66	168.3	705.31	3.2	1.64	4.25	4.25
Rosebud County	C9	RM 253.26	77879	2-yr	1339.4	780.18	775.72	1.44	1.09	9	3.21	214.63	1010.43	3.77	1.33	4.46	4.46
Rosebud County	C9	RM 253.07	77578	2-yr	1339.4	779.98	775.57	1.98	1.53	19.13	7.25	171.62	714.37	3.44	1.29	4.41	4.41
Rosebud County	C9	RM 252.88	77278	2-yr	1339.4	779.86	775.45	1.64	1.36	14.43	5.74	221.89	852.11	2.96	1.16	4.41	4.41
Rosebud County	C9	RM 252.69	76962	2-yr	1339.4	779.8	775.33	1.18	0.85	7.32	2.66	260.32	1384.51	3.18	1.14	4.47	4.47
Rosebud County	C9	RM 252.49	76646	2-yr	1339.4	779.58	775.36	2	1.43	19.42	7.13	151.21	1172.21	3.51	1.27	4.22	4.22
Rosebud County	C9	RM 252.24	76252	2-yr	1339.4	779.37	775.4	1.95	1.56	21.02	9.26	166.56	1499.25	2.95	1.29	3.97	3.97
Rosebud County	C9	RM 252.01	75885	2-yr	1339.4	779.13	775.39	1.76	1.52	22.7	9.88	240.81	1569.24	2.76	1.19	3.74	3.74
Rosebud County	C9	RM 251.7	75438	2-yr	1339.4	779	775.01	1.16	1.09	6.78	3.91	408.01	1461.93	2.64	1.52	3.99	3.99
Rosebud County	C9	RM 251.49	75098	2-yr	1339.4	778.81	775.02	1.52	1.3	11.65	6.92	538.86	1688.67	1.5	0.89	3.79	3.79
Rosebud County	C9	RM 251.23	74691	2-yr	1339.4	778.5	775.05	1.54	1.47	12.07	9.33	453.45	783.62	1.9	1.47	3.45	3.45
Rosebud County	C9	RM 251.01	74322	2-yr	1339.4	778.36	774.84	1.35	1.13	8.33	4.44	336.58	891.66	2.63	1.39	3.52	3.52
Rosebud County	C9	RM 250.79	73973	2-yr	1339.4	778.28	774.42	1.2	0.96	7.64	4.22	326.71	937.35	2.8	1.54	3.86	3.86
Rosebud County	C9	RM 250.6	73678	2-yr	1339.4	778.11	774.17	1.44	1.17	19.93	12.35	372.58	1021.2	1.89	1.17	3.94	3.94
Rosebud County	C9	RM 250.37	73306	2-yr	1339.4	777.84	774.05	1.74	1.28	13.43	5.78	225.41	867.96	3.03	1.3	3.79	3.79
Rosebud County	C9	RM 250.17	72982	2-yr	1339.4	777.62	773.93	2.07	1.31	23.27	12.93	202.31	876.09	2.39	1.32	3.69	3.69
Rosebud County	C9	RM 249.95	72617	2-yr	1339.4	777.41	773.83	1.74	1.23	15.82	8.45	225.3	721.24	2.87	1.52	3.58	3.58
Rosebud County	C9	RM 249.73	72253	2-yr	1339.4	777.21	773.71	1.7	1.25	15.57	8.07	266.1	821.16	2.54	1.31	3.5	3.5
Rosebud County	C9	RM 249.53	71936	2-yr	1339.4	777.15	773.38	1.17	0.9	7.22	3.63	344.12	1030.93	2.94	1.48	3.77	3.77
Rosebud County	C9	RM 249.31	71579	2-yr	1339.4	776.94	773.14	1.57	1.39	15.76	9.09	358.84	1167.76	2.02	1.16	3.8	3.8
Rosebud County	C9	RM 249.13	71274	2-yr	1339.4	776.81	772.84	1.37	1.05	10.01	3.84	294.72	1258.36	3	1.14	3.97	3.97
Rosebud County	C9	RM 248.94	70978	2-yr	1339.4	776.62	772.56	1.84	1.34	17.05	4.9	192.54	1472.7	3.18	0.91	4.06	4.06
Rosebud County	C9	RM 248.76	70681	2-yr	1339.4	776.61	772.32	0.97	0.75	5.04	1.93	424.18	1743.7	2.89	1.1	4.29	4.29
Rosebud County	C9	RM 248.53	70312	2-yr	1339.4	776.55	772.17	1.09	0.61	5.66	1.67	158.53	2671.68	3.63	1.06	4.38	4.38
Rosebud County	C9	RM 248.31	69962	2-yr	1339.4	776.41	772.04	1.47	1.04	11.05	3.09	274.46	2234.26	2.87	0.8	4.37	4.37
Rosebud County	C9	RM 248.08	69603	2-yr	1339.4	776.24	771.92	1.67	1.1	12.13	2.96	209.7	2224.51	3.4	0.83	4.32	4.32
Rosebud County	C9	RM 247.88	69253	2-yr	1339.4	775.98	771.92	1.86	1.45	31.03	12.57	344.54	1911.95	1.93	0.78	4.06	4.06
Rosebud County	C9	RM 247.64	68836	2-yr	1339.4	775.59	771.95	1.6	1.43	13.65	9.5	403.46	713.03	2.01	1.39	3.64	3.64

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	2-yr	1339.4	775.44	771.87	1.27	0.98	8.19	3.76	280.41	1185.35	3.16	1.45	3.57	3.57
Rosebud County	C9	RM 247.11	67963	2-yr	1339.4	775.12	771.45	2.24	1.82	27.9	12.63	188.05	699.43	2.69	1.22	3.67	3.67
Rosebud County	C9	RM 246.83	67502	2-yr	1339.4	774.91	770.97	1.7	1.29	16.16	7.12	194.1	768.53	3.37	1.48	3.94	3.94
Rosebud County	C9	RM 246.52	67019	2-yr	1339.4	774.77	770.61	1.44	1.21	10.47	6.12	224.93	596.38	3.55	2.07	4.16	4.16
Rosebud County	C9	RM 246.22	66538	2-yr	1339.4	773.99	770.53	3.14	2.92	58.27	36.98	201.37	390.35	2.09	1.32	3.46	3.46
Rosebud County	C9	RM 245.94	66068	2-yr	1339.4	773.55	770.29	1.66	1.5	16.58	12.67	293.67	591.44	2.04	1.55	3.26	3.26
Rosebud County	C9	RM 245.66	65624	2-yr	1339.4	773.17	769.81	1.95	1.47	21.44	6.71	191.87	1096.67	3.22	1	3.93	3.93
Rosebud County	C9	RM 245.4	65205	2-yr	1339.4	772.92	769.59	1.65	1.74	13.85	12.79	282.17	448.38	1.86	1.71	3.76	3.76
Rosebud County	C9	RM 245.15	64804	2-yr	1339.4	772.45	769.41	2.15	2.29	33.07	30.78	177.6	289.2	2.18	2.02	3.29	3.29
Rosebud County	C9	RM 244.89	64387	2-yr	1339.4	772.03	769.41	2.17	2	26.91	23.79	178.54	306.99	2.47	2.18	3	3
Rosebud County	C9	RM 244.7	64085	2-yr	1339.4	771.98	769.37	1.22	1.12	8.04	6.41	209.78	693.05	2.17	1.73	3.07	3.07
Rosebud County	C9	RM 244.51	63776	2-yr	1339.4	771.89	769.35	1.05	1.04	7.46	6.24	262.21	751.63	2.04	1.71	2.98	2.98
Rosebud County	C9	RM 244.33	63499	2-yr	1339.4	771.87	769.16	0.63	0.67	2.55	2.82	271.67	973.63	1.86	2.05	3.44	3.44
Rosebud County	C9	RM 244.14	63224	2-yr	1339.4	771.82	768.52	0.97	0.81	5.29	3.21	208.04	1086.23	2.54	1.52	3.39	3.39
Rosebud County	C9	RM 243.96	62927	2-yr	1339.4	771.72	768.13	1.28	1.06	9.02	4.49	174.49	933.17	2.75	1.37	3.59	3.59
Rosebud County	C9	RM 243.77	62617	2-yr	1339.4	771.69	767.57	0.81	0.59	3.34	1.71	160.76	1259.63	3.63	1.84	4.12	4.12
Rosebud County	C9	RM 243.59	62327	2-yr	1339.4	771.59	766.98	1.36	1.01	10.52	4.46	122.2	763.64	4.22	1.74	4.61	4.61
Rosebud County	C9	RM 243.39	62012	2-yr	1339.4	771.37	766.86	1.95	1.59	19.13	11.56	152.81	387.47	3.71	2.22	4.51	4.51
Rosebud County	C9	RM 243.21	61718	2-yr	1339.4	771.27	766.74	1.64	1.6	12.97	8.77	199.97	311.13	4.09	2.75	4.53	4.53
Rosebud County	C10	RM 243.03	61422	2-yr	1339.4	770.89	766.73	2.56	2.47	35	21.94	169.1	325.36	3.08	1.91	4.16	4.16
Rosebud County	C10	RM 242.84	61125	2-yr	1339.4	770.5	766.76	2.65	2.54	36.79	30.35	165.22	221.24	3.03	2.49	3.74	3.74
Rosebud County	C10	RM 242.65	60825	2-yr	1339.4	770.3	766.76	2.12	2.06	23.15	20.35	198.08	233.44	3.18	2.79	3.54	3.54
Rosebud County	C10	RM 242.47	60527	2-yr	1339.4	770.16	766.77	1.77	1.72	16.24	11.85	238.54	336.91	3.16	2.31	3.39	3.39
Rosebud County	C10	RM 242.29	60239	2-yr	1339.4	770.04	766.64	1.6	1.55	13.14	11.08	278.22	342.74	3	2.53	3.4	3.4
Rosebud County	C10	RM 242.1	59939	2-yr	1339.4	769.8	766.29	1.91	1.84	21.46	14.99	271.72	414.06	2.56	1.78	3.51	3.51
Rosebud County	C10	RM 241.9	59618	2-yr	1339.4	769.61	765.95	1.75	1.71	16.05	10.56	239.04	374.66	3.2	2.1	3.66	3.66
Rosebud County	C10	RM 241.72	59324	2-yr	1339.4	769.52	765.5	1.46	1.34	10.8	5.94	285.89	585.4	3.18	1.74	4.02	4.02
Rosebud County	C10	RM 241.53	59025	2-yr	1339.4	769.2	765.17	2.26	2.08	29.5	18.56	158.65	286.62	3.67	2.29	4.03	4.03
Rosebud County	C10	RM 241.34	58725	2-yr	1339.4	768.98	765.02	2.17	1.88	23.34	11.86	176.38	420.22	3.41	1.72	3.96	3.96
Rosebud County	C10	RM 241.16	58424	2-yr	1339.4	768.83	764.97	1.94	1.56	19.06	9.87	168.26	601.91	3.13	1.61	3.86	3.86
Rosebud County	C10	RM 240.97	58132	2-yr	1339.4	768.67	764.83	1.74	1.47	15.81	8.7	188.42	552.95	3.27	1.79	3.84	3.84
Rosebud County	C10	RM 240.78	57818	2-yr	1339.4	768.59	764.56	1.46	1.09	10.6	5.46	159.68	701.47	3.69	1.88	4.03	4.03
Rosebud County	C10	RM 240.56	57467	2-yr	1339.4	768.41	764.28	1.66	1.44	20.24	13.12	212.38	556.11	3.22	2.08	4.13	4.13
Rosebud County	C10	RM 240.41	57228	2-yr	1339.4	768.32	763.91	1.42	1.33	11.85	7.95	213.42	518.71	3.79	2.53	4.41	4.41
Rosebud County	C10	RM 240.22	56944	2-yr	1339.4	768.09	763.51	1.99	1.91	19.46	10.5	156.89	371.66	4.27	2.26	4.58	4.58
Rosebud County	C10	RM 240.09	56741	2-yr	1339.4	767.72	763.47	2.87	2.7	32.28	19.54	118.52	247.78	3.92	2.34	4.25	4.25
Rosebud County	C10	RM 239.97	56546	2-yr	1339.4	767.65	763.47	2.34	2.29	32.35	26.74	151.76	259.77	3.76	3.1	4.18	4.18
Rosebud County	C10	RM 239.86	56371	2-yr	1339.4	767.61	760.88	1.73	1.73	14.35	14.35	192.88	192.88	4.02	4.02	6.73	6.73
Rosebud County			56353	2-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	2-yr	1339.4	767.58	760.88	1.69	1.69	10.66	10.66	196.07	196.07	4.04	4.04	6.7	6.7
Rosebud County	C10	RM 239.68	56093	2-yr	1339.4	767.25	763.02	2.52	2.49	22.21	20.32	171.56	190	3.1	2.83	4.23	4.23
Rosebud County	C10	RM 239.56	55888	2-yr	1339.4	767.19	757.33	2.22	2.22	17.44	17.44	111.47	111.47	5.42	5.42	9.86	9.86
Rosebud County			55879	2-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	2-yr	1339.4	767.16	757.33	2.26	2.26	18	18	108.62	108.62	5.47	5.47	9.83	9.83
Rosebud County	C10	RM 239.41	55655	2-yr	1339.4	766.88	763.17	2.75	2.75	30.91	30.91	139.1	139.1	3.5	3.5	3.71	3.71
Rosebud County	C10	RM 239.25	55398	2-yr	1339.4	766.68	763.17	2.59	2.58	28.13	25.15	159.86	180.26	3.23	2.88	3.51	3.51
Rosebud County	C10	RM 239.07	55108	2-yr	1339.4	766.6	763.2	1.9	1.82	15.26	13	216.68	277.02	3.12	2.65	3.4	3.4
Rosebud County	C10	RM 238.89	54826	2-yr	1339.4	766.37	763.23	2.19	1.93	20.52	15.05	189.87	314.02	3.03	2.21	3.14	3.14
Rosebud County	C10	RM 238.73	54570	2-yr	1339.4	766.2	763.38	2.08	2	19.12	16.92	237.06	281.01	2.7	2.38	2.82	2.82
Rosebud County	C10	RM 238.51	54223	2-yr	1339.4	766.02	762.88	1.61	1.61	13.32	13.32	390.51	390.51	2.13	2.13	3.14	3.14
Rosebud County	C10	RM 238.33	53926	2-yr	1339.4	765.87	762.37	1.57	1.57	12.41	12.41	302.52	305.28	2.83	2.83	3.5	3.5
Rosebud County	C10	RM 238.14	53626	2-yr	1339.4	765.59	762.25	2.09	1.99	23.4	17.41	211.51	319.86	3	2.23	3.34	3.34
Rosebud County	C10	RM 237.95	53321	2-yr	1339.4	765.28	762.09	2.29	2.15	28.13	20.47	187.76	287.08	2.98	2.17	3.19	3.19
Rosebud County	C10	RM 237.77	53027	2-yr	1339.4	765.19	761.85	1.54	1.47	12.77	10.54	291.83	399.57	2.88	2.38	3.34	3.34
Rosebud County	C10	RM 237.56	52703	2-yr	1339.4	765.04	761.46	1.52	1.52	10.94	10.94	376.8	454.93	2.34	2.34	3.58	3.58
Rosebud County	C10	RM 237.36	52386	2-yr	1339.4	764.92	761.22	1.35	1.34	10.31	9.57	395.75	566.87	2.51	2.33	3.7	3.7
Rosebud County	C10	RM 237.15	52029	2-yr	1339.4	764.78	760.88	1.33	1.3	9.88	7.73	378.15	598.01	2.65	2.07	3.9	3.9
Rosebud County	C10	RM 236.99	51756	2-yr	1339.4	764.58	760.22	1.87	1.86	13.42	10.98	174.22	311.24	4.12	3.36	4.36	4.36
Rosebud County	C10	RM 236.83	51500	2-yr	1339.4	764.35	760.07	2.34	2.33	22.24	20.93	162.04	240.08	3.53	3.32	4.28	4.28
Rosebud County	C10	RM 236.66	51221	2-yr	1339.4	764.29	760.07	1.88	1.85	13.9	10.7	181.83	389.53	3.91	2.99	4.22	4.22

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	2-yr	1339.4	764.2	759.94	1.77	1.75	12.16	9.81	189.92	239.27	3.99	3.21	4.26	4.26
Rosebud County	C11	RM 236.29	50623	2-yr	1339.4	764.11	760	1.73	1.69	11.88	10.07	207.24	250.89	3.73	3.15	4.11	4.11
Rosebud County	C11	RM 236.1	50327	2-yr	1339.4	763.93	760	1.98	1.93	16.31	14.99	204.3	239.05	3.29	3.02	3.93	3.93
Rosebud County	C11	RM 235.91	50024	2-yr	1339.4	763.66	760	2.32	2.25	27.59	21.63	165.47	231.11	3.47	2.71	3.66	3.66
Rosebud County	C11	RM 235.73	49726	2-yr	1339.4	763.55	760.15	1.72	1.6	15.18	12.1	242.53	372.81	2.89	2.3	3.4	3.4
Rosebud County	C11	RM 235.57	49480	2-yr	1339.4	763.46	760.02	1.46	1.46	11.48	11.48	313.56	325.32	2.93	2.93	3.44	3.44
Rosebud County	C11	RM 235.36	49133	2-yr	1339.4	763.27	759.74	1.65	1.64	14.05	13.64	290.23	313.25	2.78	2.7	3.53	3.53
Rosebud County	C11	RM 235.17	48830	2-yr	1339.4	763.07	759.55	1.75	1.75	12.83	12.61	372.31	389.09	2.06	2.02	3.52	3.52
Rosebud County	C11	RM 235	48571	2-yr	1339.4	762.99	759.29	1.44	1.43	10.26	9.46	317.2	356.4	2.93	2.7	3.7	3.7
Rosebud County	C11	RM 234.82	48271	2-yr	1339.4	762.55	759.21	2.57	2.51	36.17	28.94	185.85	243.47	2.8	2.23	3.34	3.34
Rosebud County	C11	RM 234.63	47978	2-yr	1339.4	762.31	759.21	2.09	1.94	23.41	16.1	229.12	369.67	2.72	1.87	3.1	3.1
Rosebud County	C11	RM 234.45	47692	2-yr	1339.4	762.09	759.12	1.91	1.8	19.52	16.12	280.49	372.02	2.42	2	2.97	2.97
Rosebud County	C11	RM 234.2	47305	2-yr	1339.4	761.88	758.6	1.56	1.45	13.54	10.06	340.4	514.9	2.42	1.79	3.28	3.28
Rosebud County	C11	RM 234.01	47006	2-yr	1339.4	761.79	758.27	1.18	1.1	6.19	5.66	507.62	609.43	2.19	2	3.52	3.52
Rosebud County	C11	RM 233.84	46737	2-yr	1339.4	761.71	758.12	1.19	1.13	8.29	8	453.21	511.58	2.4	2.32	3.59	3.59
Rosebud County	C11	RM 233.61	46365	2-yr	1339.4	761.6	757.67	1.22	1.17	7.46	5.15	302.24	459.14	3.62	2.5	3.93	3.93
Rosebud County	C11	RM 233.35	45943	2-yr	1339.4	761.36	757.03	1.86	1.56	18.36	13.35	214.65	378.37	3.13	2.26	4.33	4.33
Rosebud County	C11	RM 233.13	45584	2-yr	1339.4	761.21	756.45	1.68	1.68	13.97	13.94	204.56	226.07	3.89	3.88	4.76	4.76
Rosebud County	C11	RM 232.94	45281	2-yr	1339.4	761.02	756.15	1.97	1.96	18.8	18.23	167.61	199.05	4.06	3.94	4.87	4.87
Rosebud County	C11	RM 232.75	44978	2-yr	1339.4	760.96	756.03	1.58	1.56	11.96	9.94	202.66	264.71	4.19	3.47	4.93	4.93
Rosebud County	C11	RM 232.56	44674	2-yr	1339.4	760.85	755.79	1.61	1.61	13.24	13.24	239.24	252.16	3.48	3.48	5.06	5.06
Rosebud County	C11	RM 232.37	44366	2-yr	1339.4	760.61	755.72	2.01	2.01	21.09	21.04	203.73	409.74	3.27	3.26	4.89	4.89
Rosebud County	C11	RM 232.19	44074	2-yr	1339.4	760.48	755.67	1.81	1.81	16.36	16.36	201.23	297.34	3.69	3.69	4.81	4.81
Rosebud County	C11	RM 232.01	43791	2-yr	1339.4	760.33	755.65	1.84	1.84	17.65	17.65	223.32	260.42	3.26	3.26	4.67	4.67
Rosebud County	C11	RM 231.81	43473	2-yr	1339.4	760.04	755.6	2.19	1.98	24.5	19.01	195.66	413.2	3.03	2.34	4.44	4.44
Rosebud County	C11	RM 231.62	43160	2-yr	1339.4	759.83	755.57	2.08	1.82	19.17	14.5	192.27	304.77	3.22	2.42	4.26	4.26
Rosebud County	C11	RM 231.42	42835	2-yr	1339.4	759.8	755.45	1.4	1.2	9.45	4.68	220.78	551.3	4.13	2.02	4.35	4.35
Rosebud County	C11	RM 231.22	42522	2-yr	1339.4	759.64	755.45	1.79	1.47	14.85	7.55	198.04	520.02	3.49	1.76	4.19	4.19
Rosebud County	C11	RM 230.99	42160	2-yr	1339.4	759.2	755.45	2.63	2.21	35.91	23.34	144.11	280.14	3.36	2.16	3.75	3.75
Rosebud County	C11	RM 230.79	41841	2-yr	1339.4	759.08	755.43	1.86	1.57	17.81	10.39	199.85	432.45	3.41	1.98	3.65	3.65
Rosebud County	C11	RM 230.53	41415	2-yr	1339.4	758.96	755.17	1.37	1.22	9.93	8.46	288.8	524.27	2.47	2.1	3.79	3.79
Rosebud County	C11	RM 230.29	41045	2-yr	1339.4	758.76	755.15	1.63	1.43	13.38	9.11	226.1	482.03	2.91	1.97	3.61	3.61
Rosebud County	C11	RM 230.06	40676	2-yr	1339.4	758.57	754.81	1.59	1.52	14.74	12.94	284.56	523.8	2.33	2.04	3.76	3.76
Rosebud County	C11	RM 229.81	40276	2-yr	1339.4	758.41	754.74	1.36	1.29	9.98	7.67	316.76	899.79	2.88	2.21	3.67	3.67
Rosebud County	C11	RM 229.6	39937	2-yr	1339.4	758.15	754.58	1.89	1.77	16.51	12.19	289.36	873.25	2.37	1.74	3.57	3.57
Rosebud County	C11	RM 229.4	39596	2-yr	1339.4	758.03	754.34	1.45	1.32	11.35	7.77	282.91	767.82	3.04	2.08	3.69	3.69
Rosebud County	C11	RM 229.2	39273	2-yr	1339.4	757.72	754.15	2.16	2.01	26.21	16.28	212.71	515.5	2.61	1.61	3.57	3.57
Rosebud County	C11	RM 229.02	38994	2-yr	1339.4	757.48	754.12	2.1	1.73	24.44	14.21	208.75	566.38	2.69	1.56	3.36	3.36
Rosebud County	C11	RM 228.82	38676	2-yr	1339.4	757.31	753.8	1.67	1.43	15.48	10.6	267.2	593.44	2.69	1.83	3.51	3.51
Rosebud County	C11	RM 228.64	38383	2-yr	1339.4	757.18	753.73	1.58	1.22	13.71	10.48	220.24	574.43	2.77	2.11	3.49	3.49
Rosebud County	C11	RM 228.46	38093	2-yr	1339.4	757.1	753.53	1.21	0.95	7.97	6.45	298.76	832.17	2.81	2.27	3.57	3.57
Rosebud County	C11	RM 228.26	37771	2-yr	1339.4	757.04	753.35	1.13	0.83	6.86	5.41	270.27	1160.24	2.97	2.33	3.69	3.69
Rosebud County	C11	RM 228.03	37408	2-yr	1339.4	756.87	753.16	1.59	1.08	13.52	6.79	229.97	1102.24	3.06	1.53	3.71	3.71
Rosebud County	C11	RM 227.74	36949	2-yr	1339.4	756.63	752.95	1.8	1.6	16.82	11.63	161.84	588.33	3.31	2.27	3.68	3.68
Rosebud County	C11	RM 227.49	36537	2-yr	1339.4	756.45	752.83	1.84	1.5	17.91	9.2	174.14	669.14	3.14	1.59	3.62	3.62
Rosebud County	C11	RM 227.2	36062	2-yr	1339.4	756.26	752.41	1.68	1.47	14.9	8.66	169.58	582.92	3.2	1.84	3.85	3.85
Rosebud County	C11	RM 226.98	35709	2-yr	1339.4	755.83	752.31	2.43	2.07	33.09	17.57	201.48	464.73	2.63	1.39	3.52	3.52
Rosebud County	C11	RM 226.79	35400	2-yr	1339.4	755.61	752.25	1.84	1.58	19.66	12.09	258.22	525.14	2.66	1.63	3.36	3.36
Rosebud County	C11	RM 226.56	35065	2-yr	1339.4	755.47	751.83	1.42	1.22	12.08	8.96	333.93	569.98	2.6	1.93	3.64	3.64
Rosebud County	C11	RM 226.36	34743	2-yr	1339.4	755.21	751.68	1.76	1.65	18.41	17.02	298.91	355.54	2.48	2.29	3.53	3.53
Rosebud County	C11	RM 226.2	34476	2-yr	1339.4	755.09	751.25	1.43	1.34	10.1	9.48	412.34	497.95	2.21	2.08	3.84	3.84
Rosebud County	C11	RM 226.01	34177	2-yr	1339.4	754.91	750.81	1.5	1.44	20.15	16.58	280.51	371.61	3.13	2.57	4.1	4.1
Rosebud County	C11	RM 225.83	33884	2-yr	1339.4	754.61	750.59	2.15	1.64	23.53	15.35	154.98	364.03	3.56	2.3	4.02	4.02
Rosebud County	C11	RM 225.64	33580	2-yr	1339.4	754.45	750.56	1.73	1.63	16.81	11.16	293.96	480.56	2.61	1.72	3.89	3.89
Rosebud County	C11	RM 225.45	33275	2-yr	1339.4	754.35	750.31	1.38	1.38	10.24	9.93	320.35	336.01	3.02	2.93	4.04	4.04
Rosebud County	C11	RM 225.26	32969	2-yr	1339.4	754.2	750.25	1.56	1.55	12.99	12.64	288.62	303.69	2.98	2.9	3.95	3.95
Rosebud County	C11	RM 225.16	32805	2-yr	1339.4	754.07	750.19	1.8	1.79	16.82	15.92	224.11	238.78	3.32	3.14	3.88	3.88
Rosebud County	C11	RM 225.06	32646	2-yr	1339.4	753.93	747.9	2.04	2.04	19.94	19.94	156.42	162.95	4.2	4.2	6.03	6.03
Rosebud County			32620	2-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	2-yr	1339.4	753.88	747.9	2.04	2.04	20.11	20.11	158.56	163.65	4.14	4.14	5.98	5.98

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	2-yr	1339.4	753.82	750.09	1.61	1.61	13.34	13.34	241.57	248.07	3.43	3.43	3.73	3.73
Rosebud County	C12	RM 224.71	32083	2-yr	1339.4	753.66	750.04	1.7	1.7	14.79	14.79	299.78	299.78	2.62	2.62	3.62	3.62
Rosebud County	C12	RM 224.53	31796	2-yr	1339.4	753.51	749.96	1.7	1.7	13.28	13.28	286.67	458.26	2.74	2.74	3.55	3.55
Rosebud County	C12	RM 224.34	31486	2-yr	1339.4	753.28	750.03	1.77	1.72	18.2	17.54	401.62	579.95	1.77	1.7	3.25	3.25
Rosebud County	C12	RM 224.16	31195	2-yr	1339.4	753.13	749.78	1.5	1.44	11.75	10.05	251.54	478.92	2.91	2.48	3.45	3.45
Rosebud County	C12	RM 223.96	30878	2-yr	1339.4	752.94	749.48	1.78	1.64	16.8	13.26	178.9	359.17	3.11	2.45	3.56	3.56
Rosebud County	C12	RM 223.76	30567	2-yr	1339.4	752.69	749.18	2.09	1.97	24.45	19.87	158.74	323.6	2.67	2.16	3.51	3.51
Rosebud County	C12	RM 223.55	30235	2-yr	1339.4	752.55	748.87	1.67	1.58	14.31	10.59	229.9	347.99	3.39	2.5	3.68	3.68
Rosebud County	C12	RM 223.37	29952	2-yr	1339.4	752.37	748.72	1.89	1.83	18.23	11.77	206.09	345.39	3.44	2.21	3.65	3.65
Rosebud County	C12	RM 223.2	29681	2-yr	1339.4	752.24	748.51	1.79	1.71	16.21	11.64	208.42	310.09	3.57	2.55	3.73	3.73
Rosebud County	C12	RM 223.02	29391	2-yr	1339.4	752.14	748.51	1.58	1.49	13.19	11.6	260.44	356.86	3.15	2.78	3.63	3.63
Rosebud County	C12	RM 222.82	29071	2-yr	1339.4	752	748.5	1.58	1.49	13.15	8.7	265.29	433.87	3.14	2.07	3.5	3.5
Rosebud County	C12	RM 222.64	28787	2-yr	1339.4	751.84	748.46	1.74	1.52	15.88	9.13	236.97	520.8	3.14	1.8	3.38	3.38
Rosebud County	C12	RM 222.45	28479	2-yr	1339.4	751.68	748.44	1.7	1.48	15.7	8.26	264.97	607.67	2.84	1.49	3.24	3.24
Rosebud County	C12	RM 222.22	28128	2-yr	1339.4	751.53	748.15	1.57	1.37	12.81	7.52	249.81	511.69	3.26	1.91	3.38	3.38
Rosebud County	C12	RM 222.01	27784	2-yr	1339.4	751.44	747.57	1.26	1.15	8.34	5.17	370.18	667.35	2.82	1.74	3.87	3.87
Rosebud County	C12	RM 221.77	27401	2-yr	1339.4	751.36	747.18	0.95	0.91	4.75	4.03	712.33	1088.37	1.96	1.66	4.18	4.18
Rosebud County	C12	RM 221.55	27042	2-yr	1339.4	751.27	747.07	0.9	0.88	4.49	4.09	806.15	1009.85	1.85	1.68	4.2	4.2
Rosebud County	C12	RM 221.34	26708	2-yr	1339.4	751.19	746.94	0.95	0.87	4.25	2.61	626.21	1273.57	2.18	1.33	4.25	4.25
Rosebud County	C12	RM 221.15	26406	2-yr	1339.4	751.09	746.7	1.26	1.19	7.76	3.9	264.07	590.32	3.97	1.98	4.39	4.39
Rosebud County	C12	RM 220.96	26081	2-yr	1339.4	750.6	746.66	2.86	2.65	42.48	30.46	137.17	212.07	3.34	2.38	3.94	3.94
Rosebud County	C12	RM 220.77	25779	2-yr	1339.4	750.31	746.73	2.51	2.47	32.68	29.35	159.25	181.5	3.33	2.99	3.58	3.58
Rosebud County	C12	RM 220.6	25513	2-yr	1339.4	750.29	746.72	1.56	1.52	12.42	10.57	247.32	302.2	3.44	2.92	3.57	3.57
Rosebud County	C12	RM 220.4	25183	2-yr	1339.4	750.09	746.88	1.8	1.8	14.56	14.56	328.51	328.51	2.27	2.27	3.21	3.21
Rosebud County	C12	RM 220.23	24914	2-yr	1339.4	750.01	746.8	1.34	1.34	9.2	9.2	391.82	393.94	2.56	2.56	3.21	3.21
Rosebud County	C12	RM 220.02	24578	2-yr	1339.4	749.86	746.54	1.38	1.36	7.74	7.26	545.32	590.81	1.78	1.66	3.32	3.32
Rosebud County	C12	RM 219.83	24268	2-yr	1339.4	749.79	746.18	1.05	1.04	5.03	4.66	626.58	686.96	2.03	1.88	3.61	3.61
Rosebud County	C12	RM 219.63	23947	2-yr	1339.4	749.65	745.79	1.34	1.32	7.29	6.64	528.14	588.27	1.89	1.72	3.86	3.86
Rosebud County	C12	RM 219.47	23683	2-yr	1339.4	749.57	745.56	1.25	1.23	8.05	6.8	359.85	435.51	2.97	2.5	4.01	4.01
Rosebud County	C12	RM 219.29	23386	2-yr	1339.4	749.32	745.27	1.99	1.86	20.42	13.67	199.22	324.22	3.33	2.22	4.05	4.05
Rosebud County	C12	RM 219.11	23085	2-yr	1339.4	749.12	745.15	2.04	1.75	21.88	12.93	173.9	403.89	3.23	1.89	3.97	3.97
Rosebud County	C12	RM 218.92	22783	2-yr	1339.4	748.94	745.15	1.82	1.59	17.24	11.4	226.39	484.71	2.64	1.74	3.79	3.79
Rosebud County	C12	RM 218.73	22473	2-yr	1339.4	748.8	745.06	1.63	1.36	13.59	7.73	222.83	500.57	3.47	1.96	3.74	3.74
Rosebud County	C12	RM 218.54	22180	2-yr	1339.4	748.68	744.99	1.57	1.4	13.02	7.51	274.48	542.26	3.05	1.76	3.69	3.69
Rosebud County	C12	RM 218.38	21902	2-yr	1339.4	748.58	744.43	1.54	1.34	11.85	6.21	233.22	524.79	3.64	1.9	4.15	4.15
Rosebud County	C12	RM 218.18	21580	2-yr	1339.4	748.35	743.9	2.01	1.65	20.32	7.85	174.94	576.77	3.69	1.41	4.45	4.45
Rosebud County	C12	RM 217.99	21276	2-yr	1339.4	748.17	743.66	1.97	1.63	20.65	11.03	211.73	503.91	3.08	1.63	4.51	4.51
Rosebud County	C12	RM 217.81	20981	2-yr	1339.4	748.15	743.51	1.25	1.25	7.38	6.86	285.43	311.85	3.75	3.48	4.64	4.64
Rosebud County	C12	RM 217.64	20702	2-yr	1339.4	747.9	743.41	2.09	2.03	21.9	16.07	172.26	274.5	3.7	2.7	4.49	4.49
Rosebud County	C12	RM 217.45	20392	2-yr	1339.4	747.67	743.29	2.16	1.93	24.38	12.24	184.69	470.73	3.29	1.63	4.38	4.38
Rosebud County	C12	RM 217.25	20070	2-yr	1339.4	747.6	743.29	1.61	1.32	12.76	5.4	191.61	616.25	3.94	1.65	4.31	4.31
Rosebud County	C12	RM 217	19662	2-yr	1339.4	747.37	743.25	1.91	1.67	18.23	9.05	186.09	444.75	3.66	1.8	4.12	4.12
Rosebud County	C12	RM 216.77	19300	2-yr	1339.4	747.12	743.25	2.04	1.72	22.49	11.63	215.85	525.41	2.89	1.48	3.87	3.87
Rosebud County	C12	RM 216.53	18912	2-yr	1339.4	746.9	743.3	1.71	1.35	16.26	6.66	272.68	893.64	2.72	1.11	3.6	3.6
Rosebud County	C12	RM 216.27	18500	2-yr	1339.4	746.68	743.24	1.53	1.32	13.51	6.28	356.94	915.15	2.39	1.11	3.44	3.44
Rosebud County	C12	RM 215.98	18038	2-yr	1339.4	746.48	743.12	1.38	1.05	10.66	5.5	273.29	959.52	2.58	1.33	3.36	3.36
Rosebud County	C12	RM 215.68	17550	2-yr	1339.4	746.34	742.31	1.29	1.13	8.25	4.18	267.59	622.49	3.77	1.91	4.03	4.03
Rosebud County	C12	RM 215.41	17101	2-yr	1339.4	746.12	741.82	1.75	1.64	15.68	9.67	216.78	383.71	3.48	2.13	4.3	4.3
Rosebud County	C12	RM 215.21	16781	2-yr	1339.4	745.74	741.65	2.49	2.31	32.28	21.53	157.96	263.84	3.32	2.2	4.09	4.09
Rosebud County	C12	RM 215.02	16479	2-yr	1339.4	745.47	741.68	2.47	2.24	31.25	23.16	144.7	233.44	3.48	2.56	3.79	3.79
Rosebud County	C13	RM 214.86	16220	2-yr	1339.4	745.48	741.64	1.45	1.38	10.5	8.24	249.42	337.93	3.68	2.88	3.84	3.84
Rosebud County	C13	RM 214.65	15883	2-yr	1339.4	745.32	741.6	1.64	1.64	9.76	9.76	391.44	391.44	2.09	2.09	3.72	3.72
Rosebud County	C13	RM 214.46	15577	2-yr	1339.4	745.18	741.6	1.58	1.58	11.83	11.83	304.16	409.21	2.78	2.78	3.58	3.58
Rosebud County	C13	RM 214.27	15282	2-yr	1339.4	745.06	741.59	1.49	1.49	11.13	11.13	342.47	468.02	2.63	2.63	3.47	3.47
Rosebud County	C13	RM 214.07	14957	2-yr	1339.4	744.93	741.54	1.31	1.31	12.44	11.83	413.63	520.97	2.47	2.35	3.39	3.39
Rosebud County	C13	RM 213.9	14672	2-yr	1339.4	744.76	741.37	1.48	1.48	12.02	12.02	356.33	441.12	2.54	2.54	3.39	3.39
Rosebud County	C13	RM 213.7	14343	2-yr	1339.4	744.56	740.88	1.72	1.7	15.09	14.06	221.53	510.1	3.5	3.27	3.68	3.68
Rosebud County	C13	RM 213.54	14083	2-yr	1339.4	744.34	740.59	2.08	2.06	22.12	20.22	186.06	399.42	3.46	3.16	3.75	3.75
Rosebud County	C13	RM 213.36	13792	2-yr	1339.4	744.2	740.39	1.81	1.76	17.44	16.08	237.44	467.81	3.05	2.81	3.81	3.81
Rosebud County	C13	RM 213.16	13475	2-yr	1339.4	744.01	740.27	1.88	1.68	19.16	13.89	204.03	610.93	2.88	2.07	3.74	3.74

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	2-yr	1339.4	743.81	740.31	1.99	1.7	19.26	12.45	186.89	637.31	2.9	1.86	3.5	3.5
Rosebud County	C13	RM 212.79	12880	2-yr	1339.4	743.61	740.19	1.97	1.66	20.23	11.51	176.29	489.3	3.24	1.83	3.42	3.42
Rosebud County	C13	RM 212.6	12572	2-yr	1339.4	743.48	739.79	1.64	1.57	13.7	7.77	233.65	524.18	3.48	1.97	3.69	3.69
Rosebud County	C13	RM 212.42	12284	2-yr	1339.4	743.26	739.58	2.02	1.78	21.11	13.44	192.03	374.68	3.36	2.13	3.68	3.68
Rosebud County	C13	RM 212.23	11983	2-yr	1339.4	743.1	739.17	1.78	1.69	16.98	13.81	252.31	530.86	2.96	2.4	3.94	3.94
Rosebud County	C13	RM 212.05	11688	2-yr	1339.4	742.98	738.83	1.67	1.59	13.96	10.82	212.18	291.6	3.74	2.88	4.15	4.15
Rosebud County	C13	RM 211.85	11386	2-yr	1339.4	742.81	738.79	1.82	1.74	17.18	12.91	224.17	338.78	3.26	2.45	4.02	4.02
Rosebud County	C13	RM 211.65	11066	2-yr	1339.4	742.64	738.58	1.78	1.65	16.91	12.73	242.92	400.94	3.04	2.28	4.06	4.06
Rosebud County	C13	RM 211.44	10724	2-yr	1339.4	742.42	738.38	1.93	1.57	19.51	10.74	199.53	673.1	3.16	1.73	4.04	4.04
Rosebud County	C13	RM 211.21	10353	2-yr	1339.4	742.31	737.87	1.6	1.3	12.17	7.18	181.94	563.48	3.63	2.14	4.44	4.44
Rosebud County	C13	RM 210.96	9946	2-yr	1339.4	741.99	737.72	2.22	1.67	26.05	12.56	167.27	532.02	3.17	1.51	4.27	4.27
Rosebud County	C13	RM 210.75	9612	2-yr	1339.4	741.89	737.48	1.68	1.25	14.36	8.37	190.85	532.51	3.49	2.01	4.41	4.41
Rosebud County	C13	RM 210.57	9317	2-yr	1339.4	741.81	737.5	1.46	1.26	10.68	6.05	242.16	542	3.48	1.96	4.31	4.31
Rosebud County	C13	RM 210.36	8986	2-yr	1339.4	741.52	737.54	2.11	1.84	23.63	13.11	194.4	425.45	3.11	1.71	3.98	3.98
Rosebud County	C13	RM 210.16	8674	2-yr	1339.4	741.28	737.53	1.92	1.82	21.21	18.18	282.27	353.53	2.43	2.08	3.75	3.75
Rosebud County	C13	RM 209.98	8382	2-yr	1339.4	741.25	737.25	1.21	1.11	7.48	5.7	301.64	532.71	3.39	2.58	4	4
Rosebud County	C13	RM 209.8	8091	2-yr	1339.4	741.17	736.96	1.35	1.11	8.79	3.9	218.48	676.74	4.07	1.79	4.21	4.21
Rosebud County	C13	RM 209.6	7774	2-yr	1339.4	740.98	736.72	1.86	1.44	16.92	6.28	176.83	647.65	3.91	1.43	4.26	4.26
Rosebud County	C13	RM 209.41	7482	2-yr	1339.4	740.88	736.53	1.62	1.33	13.57	5.75	235.49	711.75	3.39	1.42	4.35	4.35
Rosebud County	C13	RM 209.21	7161	2-yr	1339.4	740.65	736.29	1.96	1.87	19.2	13.01	184.27	292.72	3.69	2.48	4.36	4.36
Rosebud County	C13	RM 209.03	6871	2-yr	1339.4	740.46	736.14	2.06	1.93	21.64	10.94	184.8	403.61	3.49	1.75	4.32	4.32
Rosebud County	C13	RM 208.85	6571	2-yr	1339.4	740.37	736.03	1.64	1.43	13.8	7.04	229.1	541.4	3.46	1.75	4.34	4.34
Rosebud County	C13	RM 208.65	6257	2-yr	1339.4	740.24	735.74	1.64	1.33	14.11	7.77	217.22	574.13	3.22	1.76	4.5	4.5
Rosebud County	C13	RM 208.46	5945	2-yr	1339.4	739.98	735.69	2.07	1.86	20.9	14.57	199.7	384.06	2.7	1.87	4.29	4.29
Rosebud County	C13	RM 208.29	5682	2-yr	1339.4	739.51	735.63	2.83	2.61	40.81	32.4	111.6	183.85	3.56	2.79	3.88	3.88
Rosebud County	C14	RM 208.1	5374	2-yr	1339.4	739.43	735.61	1.84	1.82	16.93	14.16	198.97	241.51	3.66	3.05	3.82	3.82
Rosebud County	C14	RM 207.91	5064	2-yr	1339.4	739.26	735.56	1.81	1.75	16.09	9.85	289.08	493.66	2.55	1.55	3.7	3.7
Rosebud County	C14	RM 207.72	4766	2-yr	1339.4	739.08	735.52	1.73	1.65	15.64	10.88	314.72	482.41	2.44	1.68	3.56	3.56
Rosebud County	C14	RM 207.53	4450	2-yr	1339.4	738.96	735.35	1.28	1.18	9.82	5.49	449.07	901.7	2.27	1.26	3.61	3.61
Rosebud County	C14	RM 207.33	4123	2-yr	1339.4	738.77	735.27	1.55	1.32	12.99	6.21	281.19	734.73	2.89	1.38	3.5	3.5
Rosebud County	C14	RM 207.15	3851	2-yr	1339.4	738.68	735.14	1.39	1.18	9.82	4.7	308	797.3	2.98	1.42	3.54	3.54
Rosebud County	C14	RM 206.99	3599	2-yr	1339.4	738.6	734.95	1.38	1.09	10.56	4.45	325.89	1158.36	2.71	1.14	3.65	3.65
Rosebud County	C14	RM 206.81	3315	2-yr	1339.4	738.5	734.49	1.38	1.09	10.01	3.55	256.57	1256.64	3.19	1.12	4.01	4.01
Rosebud County	C14	RM 206.61	2997	2-yr	1339.4	738.38	733.91	1.55	1.17	11.97	3.82	196.56	970.94	3.74	1.18	4.47	4.47
Rosebud County	C14	RM 206.43	2701	2-yr	1339.4	738.28	733.52	1.51	1.14	12.31	5.55	243.47	1164.72	2.94	1.31	4.76	4.76
Rosebud County	C14	RM 206.21	2350	2-yr	1339.4	738.18	733.38	1.38	1.13	9.46	5.12	253.17	979.78	3.14	1.69	4.8	4.8
Rosebud County	C14	RM 205.97	1963	2-yr	1339.4	738.09	732.73	1.3	1.19	7.83	3.78	223.85	720.51	4.58	2.19	5.36	5.36
Rosebud County	C14	RM 205.72	1563	2-yr	1339.4	737.42	732.73	3.28	2.94	70.65	30.47	106.42	404.27	3.76	1.58	4.69	4.69
Rosebud County	C14	RM 205.49	1198	2-yr	1339.4	737.22	732.63	2.02	1.83	27.33	14.85	192.62	469.82	3.39	1.83	4.59	4.59
Rosebud County	C14	RM 205.3	907	2-yr	1339.4	736.87	732.76	2.24	2.06	28.9	19.86	243.38	425.26	2.42	1.65	4.11	4.11
Rosebud County	C14	RM 205.11	594	2-yr	1339.4	736.68	732.8	1.92	1.68	18.67	12.23	190.63	467.93	3.52	2.29	3.88	3.88
Rosebud County	C14	RM 204.9	243	2-yr	1339.4	736.44	732.63	1.99	1.89	21.1	14.36	221.92	546.51	3.01	2.04	3.81	3.81

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	2-yr	1339.4	736.44	732.67	1.87	1.42	18.83	9.94	190.33	613.7	2.94	1.54	3.77	3.77
Custer County	C14	RM 204.43	73135	2-yr	1339.4	736.28	732.44	1.69	1.34	15.44	6.43	265.63	838.13	2.88	1.19	3.84	3.84
Custer County	C14	RM 204.22	72808	2-yr	1339.4	736.03	732.3	1.89	1.5	20.04	9.93	260	703.79	2.56	1.27	3.73	3.73
Custer County	C14	RM 204	72454	2-yr	1339.4	735.94	731.9	1.36	1.13	9.36	4.67	260.1	661.33	3.6	1.79	4.04	4.04
Custer County	C14	RM 203.82	72156	2-yr	1339.4	735.72	731.14	1.94	1.53	19.33	7.6	195.07	660.78	3.42	1.33	4.58	4.58
Custer County	C14	RM 203.65	71895	2-yr	1339.4	735.52	730.95	2.19	1.4	24.56	8.43	161.08	826.16	3.43	1.16	4.57	4.57
Custer County	C14	RM 203.5	71641	2-yr	1339.4	735.42	730.78	1.78	1.22	16.45	7.29	194.71	749.13	3.36	1.47	4.64	4.64
Custer County	C14	RM 203.3	71324	2-yr	1339.4	735.4	730.79	1.26	0.83	7.91	3.98	161.48	867.09	3.76	1.86	4.61	4.61
Custer County	C14	RM 203.1	71035	2-yr	1339.4	735.13	730.79	2.07	1.54	22.67	9.12	183.46	863.74	3.17	1.26	4.34	4.34
Custer County	C14	RM 202.9	70718	2-yr	1339.4	734.88	730.67	2.05	1.69	25.17	16.52	246.23	661.59	2.12	1.38	4.21	4.21
Custer County	C14	RM 202.71	70415	2-yr	1339.4	734.61	730.64	1.96	1.63	21.25	11.55	226.7	550.74	2.77	1.5	3.97	3.97
Custer County	C14	RM 202.51	70088	2-yr	1339.4	734.22	730.68	2.43	1.99	31.34	13.68	151.85	500.57	3.12	1.34	3.54	3.54
Custer County	C14	RM 202.34	69815	2-yr	1339.4	734.08	730.63	1.67	1.57	16.04	9.46	320.3	601.01	2.41	1.42	3.45	3.45
Custer County	C14	RM 202.13	69483	2-yr	1339.4	733.9	730.54	1.58	1.31	13.47	6.94	281.38	768.18	2.91	1.49	3.36	3.36
Custer County	C14	RM 201.97	69219	2-yr	1339.4	733.76	730.01	1.64	1.38	14.6	11.58	262.78	424.26	2.88	2.28	3.75	3.75
Custer County	C14	RM 201.75	68884	2-yr	1339.4	733.72	729.45	1.12	1.11	6.14	4.21	304.22	452.34	3.93	2.68	4.27	4.27
Custer County	C14	RM 201.57	68612	2-yr	1339.4	733.56	729.37	1.64	1.49	15.89	9.45	362.48	687.82	2.2	1.31	4.19	4.19
Custer County	C14	RM 201.38	68299	2-yr	1339.4	733.15	729.23	2.16	2.04	27.79	21.56	278.82	385.89	2.2	1.7	3.92	3.92
Custer County	C14	RM 201.23	68055	2-yr	1339.4	732.86	729.13	1.97	1.72	24.14	17.54	341.59	561.32	1.91	1.38	3.73	3.73
Custer County	C14	RM 201.06	67778	2-yr	1339.4	732.8	729.03	1.22	1.02	8.58	6.36	261.1	749.03	2.45	1.8	3.77	3.77
Custer County	C14	RM 200.85	67439	2-yr	1339.4	732.33	729.05	2.76	2.5	40.44	31.95	111.88	219.33	3.14	2.44	3.28	3.28
Custer County	C14	RM 200.64	67103	2-yr	1339.4	732.23	728.97	1.69	1.53	15.06	9.44	213.22	444.62	3.16	1.97	3.26	3.26
Custer County	C14	RM 200.48	66842	2-yr	1339.4	732.14	728.8	1.33	1.29	10.17	8.82	306.71	490.44	2.46	2.12	3.34	3.34
Custer County	C14	RM 200.27	66515	2-yr	1339.4	731.98	728.63	1.42	1.33	11.33	8.23	359.69	536.01	2.6	1.88	3.35	3.35
Custer County	C14	RM 200.05	66162	2-yr	1339.4	731.73	728.3	1.68	1.63	16.6	13.41	367.44	474	2.16	1.74	3.43	3.43
Custer County	C14	RM 199.9	65916	2-yr	1339.4	731.65	727.78	1.26	1.26	8.77	8.49	381.62	395.66	2.78	2.69	3.87	3.87
Custer County	C14	RM 199.71	65614	2-yr	1339.4	731.41	727.34	1.92	1.92	17.09	17.09	221.96	221.96	3.15	3.15	4.07	4.07
Custer County	C14	RM 199.53	65326	2-yr	1339.4	731.35	727.34	1.42	1.42	10.12	10.12	256.96	261.45	3.67	3.67	4.02	4.02
Custer County	C14	RM 199.38	65076	2-yr	1339.4	731.23	727.34	1.62	1.62	12.72	12.72	326.78	326.78	2.53	2.53	3.89	3.89
Custer County	C14	RM 199.18	64754	2-yr	1339.4	730.97	727.64	1.87	1.87	14.61	14.61	374.95	380.6	1.91	1.91	3.33	3.33
Custer County	C14	RM 199.04	64535	2-yr	1339.4	730.89	727.64	1.5	1.5	11.63	11.63	359.08	363.27	2.49	2.49	3.25	3.25
Custer County	C14	RM 198.77	64102	2-yr	1339.4	730.69	727.28	1.52	1.51	12.28	12.12	294.95	308.92	3	2.96	3.41	3.41
Custer County	C14	RM 198.57	63773	2-yr	1339.4	730.4	726.99	2.06	2.06	22.23	21.92	204.12	214.12	3.19	3.14	3.41	3.41
Custer County	C14	RM 198.4	63505	2-yr	1339.4	730.19	726.86	2.12	2	23.9	17.68	198.28	314.62	3.07	2.27	3.33	3.33
Custer County	C14	RM 198.22	63215	2-yr	1339.4	729.9	726.57	2.29	1.89	28.44	16.68	190.05	419.99	2.89	1.69	3.33	3.33
Custer County	C14	RM 198.04	62923	2-yr	1339.4	729.73	726.32	1.86	1.6	18.52	14.95	224.9	350.39	2.96	2.38	3.41	3.41
Custer County	C14	RM 197.84	62611	2-yr	1339.4	729.62	726.04	1.38	1.38	10.77	10.71	350.33	381.12	2.56	2.55	3.58	3.58
Custer County	C14	RM 197.65	62306	2-yr	1339.4	729.45	725.69	1.62	1.57	13.48	11.66	253.41	337.11	3	2.59	3.76	3.76
Custer County	C14	RM 197.47	62013	2-yr	1339.4	729.43	725.29	1.09	1.03	5.8	3.79	294.65	562.7	3.96	2.58	4.14	4.14
Custer County	C14	RM 197.27	61686	2-yr	1339.4	729.26	724.81	1.75	1.38	15.95	7.69	210.17	841.94	3.22	1.55	4.45	4.45
Custer County	C14	RM 197.07	61373	2-yr	1339.4	729.13	724.81	1.68	1.53	14.68	8.99	202.67	469.89	3.32	2.02	4.32	4.32
Custer County	C14	RM 196.91	61115	2-yr	1339.4	729.08	724.81	1.4	1	10.24	5.95	221.7	1025.5	3.29	1.9	4.27	4.27
Custer County	C14	RM 196.73	60815	2-yr	1339.4	729	724.76	1.33	0.91	9.06	4.2	237.45	1052.7	3.46	1.6	4.24	4.24
Custer County	C14	RM 196.54	60518	2-yr	1339.4	728.9	724.67	1.47	1.11	11.7	5.51	269	906.61	2.87	1.34	4.23	4.23
Custer County	C14	RM 196.33	60178	2-yr	1339.4	728.82	724.57	1.3	1.1	8.47	4.96	245.83	591.55	3.59	2.1	4.25	4.25
Custer County	C14	RM 196.17	59915	2-yr	1339.4	728.76	724.51	1.29	1.16	8.31	5.81	190.91	457.12	3.74	2.6	4.25	4.25
Custer County	C15	RM 195.98	59615	2-yr	1339.4	727.91	724.52	3.67	3.67	74.42	72.46	131.24	134.94	2.78	2.7	3.39	3.39
Custer County	C15	RM 195.81	59337	2-yr	1339.4	727.75	724.33	2.43	2.43	30.71	30.71	167.08	167.08	3.3	3.3	3.42	3.42
Custer County	C15	RM 195.61	59020	2-yr	1339.4	727.63	724.24	1.8	1.8	16.86	16.86	227.47	229.62	3.27	3.27	3.39	3.39
Custer County	C15	RM 195.43	58727	2-yr	1339.4	727.39	724.22	1.93	1.93	21.88	21.88	302.68	306.59	2.29	2.29	3.17	3.17
Custer County	C15	RM 195.23	58415	2-yr	1339.4	727.22	723.93	1.53	1.53	12.51	12.51	368.35	383.47	2.38	2.38	3.29	3.29
Custer County	C15	RM 195.04	58114	2-yr	1339.4	726.97	723.54	1.85	1.78	19.38	16.91	268.46	355.87	2.5	2.18	3.43	3.43
Custer County	C15	RM 194.86	57824	2-yr	1339.4	726.72	722.93	1.98	1.86	21.03	16.64	208.58	329.61	2.99	2.36	3.79	3.79
Custer County	C15	RM 194.67	57521	2-yr	1339.4	726.59	722.75	1.69	1.69	14.33	13.99	216.02	221.42	3.67	3.58	3.84	3.84
Custer County	C15	RM 194.49	57231	2-yr	1339.4	726.49	722.53	1.61	1.6	13.04	12.19	228.56	265.27	3.64	3.4	3.96	3.96
Custer County	C15	RM 194.32	56946	2-yr	1339.4	726.28	722.5	1.96	1.96	17.21	17.14	259.52	304.39	2.64	2.63	3.78	3.78
Custer County	C15	RM 194.13	56643	2-yr	1339.4	726.06	722.5	1.95	1.95	20.87	20.87	249.13	268	2.76	2.76	3.56	3.56
Custer County	C15	RM 193.93	56331	2-yr	1339.4	725.91	722.31	1.66	1.64	14.43	12.4	247.7	292.39	3.25	2.79	3.6	3.6
Custer County	C15	RM 193.74	56024	2-yr	1339.4	725.76	722.23	1.73	1.73	15.37	14.73	226.67	244.46	3.41	3.27	3.53	3.53
Custer County	C15	RM 193.55	55708	2-yr	1339.4	725.56	722.13	1.89	1.88	18.48	16.66	214.92	240.06	3.3	2.97	3.44	3.44

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	2-yr	1339.4	725.36	722.13	2	1.99	21.2	20.56	216.43	224.36	3.09	3	3.23	3.23
Custer County	C15	RM 193.2	55158	2-yr	1339.4	725.26	722.13	1.58	1.53	13.29	10.56	275.83	362.77	3.04	2.41	3.13	3.13
Custer County	C15	RM 193	54825	2-yr	1339.4	725.11	721.84	1.58	1.53	13.37	11.06	276.93	348.95	3.03	2.5	3.27	3.27
Custer County	C15	RM 192.81	54525	2-yr	1339.4	724.94	721.37	1.79	1.62	16.46	11.28	207.4	355.9	3.4	2.32	3.57	3.57
Custer County	C15	RM 192.63	54247	2-yr	1339.4	724.81	721.01	1.74	1.69	15.31	11.92	214.21	286.29	3.57	2.78	3.8	3.8
Custer County	C15	RM 192.44	53935	2-yr	1339.4	724.71	721.01	1.54	1.42	12.23	8.42	239.48	406.35	3.38	2.32	3.7	3.7
Custer County	C16	RM 192.26	53653	2-yr	1339.4	724.56	721.01	1.71	1.66	15.04	13.83	226.2	261.32	3.42	3.15	3.55	3.55
Custer County	C16	RM 192.05	53309	2-yr	1339.4	724.11	721.11	2.54	2.51	35.4	30.81	186.81	218.41	2.81	2.45	3	3
Custer County	C16	RM 191.74	52809	2-yr	1339.4	723.81	721.1	1.55	1.55	13.4	13.4	399.97	425.97	2.16	2.16	2.71	2.71
Custer County	C16	RM 191.35	52181	2-yr	1339.4	723.27	721.02	1.67	1.67	18.01	17.59	486.27	498.8	1.65	1.61	2.25	2.25
Custer County	C16	RM 191.12	51812	2-yr	1339.4	723.01	720.51	1.38	1.38	10.81	10.81	527.99	527.99	1.84	1.84	2.5	2.5
Custer County	C16	RM 190.87	51406	2-yr	1339.4	722.78	719.89	1.3	1.3	9.41	9.41	599.61	599.61	1.72	1.72	2.89	2.89
Custer County	C16	RM 190.54	50885	2-yr	1339.4	722.59	719.15	0.96	0.96	5.76	5.76	752.94	759.96	1.85	1.85	3.44	3.44
Custer County	C16	RM 190.29	50477	2-yr	1339.4	722.12	718.45	2.34	2.29	28.79	23.77	178.57	225.35	3.19	2.63	3.67	3.67
Custer County	C16	RM 190.1	50176	2-yr	1339.4	721.86	718.43	2.2	2.2	26.73	26.14	224.14	241.17	2.72	2.66	3.42	3.42
Custer County	C16	RM 189.85	49765	2-yr	1339.4	721.59	718.13	1.66	1.62	15.83	14.81	332.54	372.94	2.4	2.25	3.46	3.46
Custer County	C16	RM 189.65	49458	2-yr	1339.4	721.42	713.92	1.63	1.63	14.05	14.05	275.44	500.6	2.98	2.98	7.5	7.5
Custer County	C16		49425	2-yr	Bridge												
Custer County	C16	RM 189.62	49416	2-yr	1339.4	721.38	713.92	1.67	1.67	14.78	14.78	271.97	355.76	2.95	2.95	7.46	7.46
Custer County	C16	RM 189.43	49103	2-yr	1339.4	720.94	718.09	2.33	2.33	32.3	32.3	266.07	311.52	2.16	2.16	2.85	2.85
Custer County	C16	RM 189.22	48763	2-yr	1339.4	720.91	717.93	1.11	1.11	6.82	6.82	450.26	472.23	2.68	2.68	2.98	2.98
Custer County	C16	RM 188.91	48267	2-yr	1339.4	720.7	717.54	1.44	1.44	9.11	9.11	438.6	531.65	2.12	2.12	3.16	3.16
Custer County	C16	RM 188.66	47869	2-yr	1339.4	720.4	716.75	1.97	1.97	19.82	19.82	193.09	302.65	3.51	3.51	3.65	3.65
Custer County	C16	RM 188.51	47622	2-yr	1339.4	720.23	716.72	1.99	1.99	21.02	20.23	214.71	345.41	3.13	3.01	3.52	3.52
Custer County	C16	RM 188.32	47314	2-yr	1339.4	720.1	716.79	1.67	1.47	15.55	10.4	150.94	492.37	2.88	1.9	3.31	3.31
Custer County	C16	RM 188.14	47024	2-yr	1339.4	719.9	716.93	1.52	1.63	8.81	11.69	230.92	442.82	1.46	1.95	2.97	2.97
Custer County	C16	RM 187.98	46768	2-yr	1339.4	719.79	716.91	1.44	1.33	11.64	7.72	221.28	591.75	2.57	1.7	2.88	2.88
Custer County	C16	RM 187.78	46440	2-yr	1339.4	719.69	716.69	1.3	1.23	8.76	6.68	250.63	612.71	2.33	1.77	3	3
Custer County	C16	RM 187.55	46083	2-yr	1339.4	719.38	716.04	1.99	1.78	21.25	13.49	223.09	410.34	2.93	1.86	3.34	3.34
Custer County	C16	RM 187.35	45750	2-yr	1339.4	718.97	715.34	2.43	2.41	31.32	26.31	176.38	212.99	3.12	2.61	3.63	3.63
Custer County	C16	RM 187.14	45421	2-yr	1339.4	718.77	715.3	1.88	1.83	19.33	12.36	253.81	411.17	2.8	1.78	3.47	3.47
Custer County	C16	RM 187.01	45211	2-yr	1339.4	718.7	715.3	1.54	1.51	12.87	10.21	295.96	385.58	2.92	2.32	3.4	3.4
Custer County	C16	RM 186.84	44930	2-yr	1339.4	718.5	715.03	1.77	1.76	17.7	15.59	291.74	355.8	2.59	2.28	3.47	3.47
Custer County	C16	RM 186.62	44553	2-yr	1339.4	718.34	712.45	1.63	1.63	12.56	12.56	187.06	187.06	4.38	4.38	5.89	5.89
Custer County	C16		44545	2-yr	Bridge												
Custer County	C16	RM 186.61	44538	2-yr	1339.4	718.33	712.45	1.64	1.64	12.64	12.64	187.02	203.03	4.37	4.37	5.88	5.88
Custer County	C16	RM 186.46	44311	2-yr	1339.4	718.02	714.53	2.38	2.37	30.05	27.41	181.22	261.6	3.1	2.83	3.49	3.49
Custer County	C16	RM 186.26	43996	2-yr	1339.4	717.79	714.27	2.11	2.11	23.44	22.83	203.32	233.85	3.13	3.05	3.52	3.52
Custer County	C16	RM 186.1	43730	2-yr	1339.4	717.69	713.9	1.61	1.61	13.95	13.95	287.74	295.58	2.9	2.9	3.79	3.79
Custer County	C16	RM 185.91	43424	2-yr	1363.7	717.48	713.84	1.79	1.79	15.68	15.68	311.96	324.84	2.44	2.44	3.64	3.64
Custer County	C16	RM 185.71	43110	2-yr	1363.7	716.88	713.84	2.84	2.84	39.68	39.68	221.02	221.02	2.17	2.17	3.04	3.04
Custer County	C16	RM 185.52	42808	2-yr	1363.7	716.83	713.71	1.49	1.48	12.45	11.68	358.62	384.64	2.56	2.4	3.12	3.12
Custer County	C16	RM 185.34	42508	2-yr	1363.7	716.5	713.28	2.05	2.05	17.86	17.86	372.92	372.92	1.78	1.78	3.22	3.22
Custer County	C16	RM 185.16	42219	2-yr	1363.7	716.4	712.93	1.35	1.35	10.39	10.39	417.11	831.41	2.43	2.43	3.47	3.47
Custer County	C17	RM 184.95	41881	2-yr	1363.7	716.17	712.72	1.7	1.68	16.33	13.58	287.27	517.48	2.79	2.32	3.45	3.45
Custer County	C17	RM 184.78	41621	2-yr	1363.7	715.91	712.51	2.1	2.04	23.47	20.84	212.02	246.49	3.05	2.71	3.4	3.4
Custer County	C17	RM 184.59	41311	2-yr	1363.7	715.66	711.96	2.14	2.1	23.66	18.99	193.13	246.17	3.3	2.64	3.7	3.7
Custer County	C17	RM 184.4	41010	2-yr	1363.7	715.57	711.62	1.61	1.61	13.13	12.86	241.8	247.1	3.51	3.43	3.95	3.95
Custer County	C17	RM 184.23	40728	2-yr	1363.7	715.37	711.31	1.94	1.94	20.04	20.04	233.6	233.6	3.02	3.02	4.06	4.06
Custer County	C17	RM 184.1	40517	2-yr	1363.7	715.23	710.39	1.95	1.94	19.46	18	203.14	220.29	3.44	3.18	4.84	4.84
Custer County	C17		40500	2-yr	Bridge												
Custer County	C17	RM 184.08	40496	2-yr	1363.7	715.2	710.39	1.97	1.96	19.79	18.31	203.14	220.05	3.41	3.16	4.81	4.81
Custer County	C17	RM 184.03	40407	2-yr	1363.7	715.16	711.49	1.86	1.86	17.9	17.55	218.02	222.47	3.36	3.29	3.67	3.67
Custer County	C17	RM 183.83	40098	2-yr	1363.7	715.02	711.42	1.75	1.75	15.66	15.66	228.57	228.57	3.41	3.41	3.6	3.6
Custer County	C17	RM 183.65	39806	2-yr	1363.7	714.86	711.39	1.83	1.83	17.31	17.3	222.47	222.59	3.35	3.35	3.47	3.47
Custer County	C17	RM 183.47	39513	2-yr	1363.7	714.61	711.39	2.09	2.09	23.04	23.04	207.21	207.21	3.15	3.15	3.22	3.22
Custer County	C17	RM 183.28	39210	2-yr	1363.7	714.49	711.31	1.67	1.67	14.8	14.8	262.37	262.37	3.11	3.11	3.18	3.18
Custer County	C17	RM 183.09	38909	2-yr	1363.7	714.27	711.04	1.9	1.9	19.19	19.19	235.44	235.44	3.05	3.05	3.23	3.23
Custer County	C17	RM 182.94	38660	2-yr	1363.7	714.17	710.66	1.66	1.66	14.06	14.06	242	242	3.4	3.4	3.51	3.51
Custer County	C17	RM 182.72	38316	2-yr	1363.7	714	710.1	1.74	1.71	15.95	14.75	249.99	275.94	3.13	2.89	3.89	3.89

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	2-yr	1363.7	713.65	710.12	2.36	2.26	28.98	25.52	173.51	208.19	3.3	2.9	3.53	3.53
Custer County	C17	RM 182.34	37706	2-yr	1363.7	713.45	710.27	1.97	1.91	21.22	18.77	239.2	287.85	2.8	2.48	3.18	3.18
Custer County	C17	RM 182.15	37402	2-yr	1363.7	713.25	710.26	1.86	1.81	18.73	17.59	250.5	295.93	2.86	2.69	2.99	2.99
Custer County	C17	RM 181.97	37127	2-yr	1363.7	713.09	710.26	1.72	1.68	16.2	14.85	285.25	321.45	2.75	2.52	2.83	2.83
Custer County	C17	RM 181.78	36815	2-yr	1363.7	712.85	710.09	1.86	1.82	19.4	17.74	279.86	321.32	2.55	2.33	2.76	2.76
Custer County	C17	RM 181.59	36505	2-yr	1363.7	712.51	709.76	2.08	2.04	22.94	20.87	295.91	334.79	2.2	2	2.75	2.75
Custer County	C17	RM 181.37	36155	2-yr	1363.7	712.21	709.37	1.92	1.81	20.82	14.4	275.8	434.49	2.52	1.74	2.84	2.84
Custer County	C17	RM 181.23	35925	2-yr	1363.7	711.89	709.36	2.29	2.17	30.45	25	241.42	326.56	2.35	1.93	2.53	2.53
Custer County	C17	RM 181.03	35607	2-yr	1364.9	711.69	709.02	1.62	1.61	15.25	14.86	349.23	376.23	2.37	2.32	2.67	2.67
Custer County	C17	RM 180.83	35292	2-yr	1364.9	711.5	708.68	1.52	1.47	13.64	12.17	361.18	467.73	2.22	1.98	2.82	2.82
Custer County	C17	RM 180.66	35006	2-yr	1364.9	711.31	708.22	1.62	1.6	14.95	14.3	342.4	362.31	2.46	2.35	3.09	3.09
Custer County	C18	RM 180.46	34700	2-yr	1364.9	711.13	708.05	1.64	1.62	14.53	12.33	280.46	336	2.96	2.51	3.08	3.08
Custer County	C18	RM 180.29	34421	2-yr	1364.9	710.85	707.79	2.11	2.06	24.74	21.19	238.15	290.36	2.67	2.28	3.06	3.06
Custer County	C18	RM 180.08	34086	2-yr	1364.9	710.65	707.53	1.78	1.73	16.88	14.07	251.45	315.97	3	2.5	3.12	3.12
Custer County	C18	RM 179.9	33807	2-yr	1364.9	710.48	707.32	1.79	1.72	17.46	13.39	264.57	370.54	2.8	2.15	3.16	3.16
Custer County	C18	RM 179.73	33525	2-yr	1364.9	710.21	706.89	2.04	2	23.26	21.57	249.93	277.68	2.66	2.46	3.32	3.32
Custer County	C18	RM 179.54	33218	2-yr	1364.9	709.85	706.7	2.16	2.16	25.91	25.76	301.12	305.02	2.1	2.09	3.15	3.15
Custer County	C18	RM 179.35	32914	2-yr	1364.9	709.64	706.45	1.75	1.73	16.93	15.86	288.64	323.14	2.7	2.53	3.19	3.19
Custer County	C18	RM 179.16	32611	2-yr	1364.9	709.41	706.29	1.92	1.92	20.01	20.01	235.9	235.9	3.01	3.01	3.12	3.12
Custer County	C18	RM 178.99	32337	2-yr	1364.9	709.25	706.07	1.8	1.8	17.26	16.65	251.88	261.69	3.01	2.91	3.18	3.18
Custer County	C18	RM 178.79	32025	2-yr	1364.9	709.04	705.9	1.88	1.86	19.01	17.53	245.91	269.51	2.95	2.72	3.14	3.14
Custer County	C18	RM 178.61	31730	2-yr	1364.9	708.85	705.59	1.81	1.81	17.77	17.7	259.43	372.36	2.9	2.89	3.26	3.26
Custer County	C18	RM 178.43	31434	2-yr	1364.9	708.69	705.25	1.77	1.77	16.49	16.49	245.57	245.68	3.14	3.14	3.44	3.44
Custer County	C18	RM 178.23	31114	2-yr	1364.9	708.51	704.7	1.77	1.77	16.48	16.48	243.69	243.69	3.16	3.16	3.81	3.81
Custer County	C18	RM 178.06	30848	2-yr	1364.9	708.36	704.57	1.84	1.84	17.37	17.12	217.72	220.95	3.41	3.36	3.79	3.79
Custer County	C18	RM 177.88	30549	2-yr	1364.9	708.16	704.57	1.93	1.92	19.67	18.28	228.51	247.64	3.1	2.88	3.59	3.59
Custer County	C18	RM 177.66	30211	2-yr	1373.4	707.78	704.57	2.38	2.38	30.27	30.27	188.78	189.48	3.05	3.05	3.21	3.21
Custer County	C18	RM 177.49	29932	2-yr	1373.4	707.62	704.47	1.93	1.93	19.79	19.79	234.4	234.4	3.04	3.04	3.15	3.15
Custer County	C19	RM 177.3	29625	2-yr	1373.4	707.46	704.46	1.67	1.67	15.37	15.37	297.66	297.66	2.76	2.76	3	3
Custer County	C19	RM 177.11	29314	2-yr	1373.4	707.16	704.46	2.03	2.03	23.44	23.44	283.19	283.19	2.39	2.39	2.7	2.7
Custer County	C19	RM 176.93	29040	2-yr	1373.4	706.98	704.42	1.64	1.64	15.42	15.42	349.79	378.21	2.4	2.4	2.56	2.56
Custer County	C19	RM 176.74	28720	2-yr	1373.4	706.79	704.21	1.54	1.5	13.77	13.02	339.49	448.81	2.29	2.16	2.58	2.58
Custer County	C19	RM 176.53	28384	2-yr	1373.4	706.46	703.63	1.9	1.84	22.09	21.13	290.12	385	2.02	1.94	2.83	2.83
Custer County	C19	RM 176.36	28109	2-yr	1373.4	706.24	703.08	1.72	1.71	16.75	16.5	322.79	327.92	2.48	2.44	3.16	3.16
Custer County	C19	RM 176.18	27824	2-yr	1373.4	705.72	702.71	2.66	2.66	39.83	37.68	198.57	210.3	2.6	2.46	3.01	3.01
Custer County	C19	RM 176	27527	2-yr	1373.4	705.51	702.51	1.97	1.93	21.49	18.66	259.39	318.22	2.68	2.32	3	3
Custer County	C19	RM 175.81	27227	2-yr	1373.4	705.28	702.24	1.86	1.85	19.59	18.83	297.33	310.36	2.49	2.39	3.04	3.04
Custer County	C19	RM 175.62	26928	2-yr	1373.4	705	701.81	2.03	1.92	22.45	16.68	234.31	343.74	2.81	2.08	3.19	3.19
Custer County	C19	RM 175.43	26622	2-yr	1373.4	704.64	701.81	2.33	1.87	30.76	23.24	213.55	390.56	2.5	1.88	2.83	2.83
Custer County	C19	RM 175.25	26325	2-yr	1373.4	704.3	701.72	2.16	2.06	26.72	24.31	210.82	299.3	2.45	2.22	2.58	2.58
Custer County	C19	RM 175.08	26048	2-yr	1373.4	704.06	701.63	1.79	1.79	19.02	18.99	357.35	357.77	2.15	2.15	2.43	2.43
Custer County	C19	RM 174.9	25768	2-yr	1373.4	703.73	701.31	1.99	1.99	23.83	23.83	334.07	334.07	2.07	2.07	2.42	2.42
Custer County	C19	RM 174.69	25444	2-yr	1373.4	703.27	700.82	2.15	2.14	28.25	28.02	322.44	325.05	1.99	1.97	2.45	2.45
Custer County	C19	RM 174.49	25112	2-yr	1373.4	702.8	700.04	2.19	2.19	28.29	28.27	277.82	278	2.25	2.25	2.76	2.76
Custer County	C19	RM 174.32	24844	2-yr	1373.4	702.4	699.39	2.42	2.42	32.84	32.84	218.91	218.91	2.59	2.59	3.01	3.01
Custer County	C19	RM 174.13	24549	2-yr	1373.4	702.26	698.84	1.77	1.77	16.43	16.43	240.07	240.07	3.23	3.23	3.42	3.42
Custer County	C19	RM 173.94	24238	2-yr	1373.4	702.01	698.14	2.03	2.03	22.34	22.34	235.21	235.21	2.88	2.88	3.87	3.87
Custer County	C19	RM 173.75	23939	2-yr	1373.4	701.68	697.92	2.37	2.36	28.68	27.31	169.83	224.79	3.42	3.25	3.76	3.76
Custer County	C19	RM 173.57	23651	2-yr	1373.4	701.55	697.83	1.9	1.9	18.26	18.26	204.93	204.93	3.53	3.53	3.72	3.72
Custer County	C19	RM 173.39	23352	2-yr	1373.4	701.29	697.83	2.2	2.2	25.44	25.44	197.5	197.5	3.16	3.16	3.46	3.46
Custer County	C19	RM 173.2	23054	2-yr	1373.4	701.06	697.72	2.1	2.1	23.86	23.4	221.93	258.49	2.94	2.88	3.34	3.34
Custer County	C19	RM 173.02	22756	2-yr	1373.4	700.86	697.29	1.91	1.9	19.52	18.97	241.82	249.81	2.98	2.89	3.57	3.57
Custer County	C19	RM 172.82	22437	2-yr	1373.4	700.64	696.82	1.7	1.7	17.64	17.64	397.5	397.5	2.03	2.03	3.82	3.82
Custer County	C19	RM 172.67	22200	2-yr	1373.4	700.31	696.52	1.99	1.99	25.2	25.18	389.2	389.55	1.77	1.77	3.79	3.79
Custer County	C19	RM 172.49	21903	2-yr	1373.4	700.06	696.23	1.74	1.74	17.2	16.99	309.96	314	2.54	2.51	3.83	3.83
Custer County	C19	RM 172.29	21585	2-yr	1373.4	699.86	695.79	1.79	1.79	16.5	16.36	226.44	287.98	3.39	3.36	4.07	4.07
Custer County	C19	RM 172.12	21325	2-yr	1373.4	699.33	695.81	2.78	2.78	44.78	44.78	212.46	212.46	2.33	2.33	3.52	3.52
Custer County	C19		21310	2-yr	Bridge												
Custer County	C19	RM 172.11	21300	2-yr	1373.4	699.16	695.81	3	3	53.48	53.48	211.06	211.06	2.17	2.17	3.35	3.35
Custer County	C19	RM 171.89	20942	2-yr	1373.4	698.85	695.57	1.98	1.98	20.83	20.56	228.36	231.45	3.04	3	3.28	3.28

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	2-yr	1373.4	698.54	695.49	2.22	2.22	27.5	26.66	230.7	238.59	2.68	2.59	3.05	3.05
Custer County	C19	RM 171.52	20341	2-yr	1373.4	698.31	695.3	1.96	1.96	21.04	20.86	249.42	251.64	2.81	2.78	3.01	3.01
Custer County	C19	RM 171.34	20043	2-yr	1373.4	698.03	695.11	2.1	2.1	24.17	24.17	238.95	238.95	2.74	2.74	2.92	2.92
Custer County	C19	RM 171.15	19745	2-yr	1373.4	697.8	694.86	1.98	1.98	21.44	21.44	245.52	245.52	2.82	2.82	2.94	2.94
Custer County	C19	RM 170.96	19437	2-yr	1373.4	697.57	694.67	1.92	1.92	20.1	20.1	256.17	256.17	2.8	2.8	2.9	2.9
Custer County	C19	RM 170.78	19143	2-yr	1373.4	697.34	694.2	1.97	1.97	20.89	20.89	240.56	240.56	2.9	2.9	3.14	3.14
Custer County	C19	RM 170.58	18838	2-yr	1373.4	697.02	693.91	2.18	2.18	26.76	26.76	241.95	241.95	2.6	2.6	3.11	3.11
Custer County	C19	RM 170.4	18543	2-yr	1373.4	696.82	693.9	1.86	1.86	19.05	19.03	267.91	268.21	2.75	2.75	2.92	2.92
Custer County	C19	RM 170.22	18257	2-yr	1373.4	696.63	693.7	1.82	1.82	18.17	18.17	269.63	269.63	2.8	2.8	2.92	2.92
Custer County	C19	RM 170.03	17941	2-yr	1373.4	696.35	693.31	2.02	2.02	22.11	22.11	234.44	234.44	2.9	2.9	3.04	3.04
Custer County	C19	RM 169.84	17641	2-yr	1373.4	696.14	692.78	2.01	2.01	21.21	21.21	211.4	211.4	3.23	3.23	3.36	3.36
Custer County	C19	RM 169.65	17341	2-yr	1373.4	695.91	692.47	2.09	2.09	22.62	22.62	201.18	201.18	3.27	3.27	3.44	3.44
Custer County	C19	RM 169.47	17041	2-yr	1373.4	695.63	692.17	2.24	2.22	26.68	24.69	199.81	218.15	3.06	2.83	3.46	3.46
Custer County	C19	RM 169.28	16732	2-yr	1373.4	695.41	692	2.06	2.05	22.33	21.63	214.64	222.12	3.11	3.01	3.41	3.41
Custer County	C19	RM 169.09	16441	2-yr	1373.4	695.19	691.96	2.04	2.04	22.22	22.21	225.26	236.53	2.99	2.99	3.23	3.23
Custer County	C19	RM 168.91	16152	2-yr	1373.4	694.95	691.93	2.08	2.08	23.54	23.54	229.6	229.69	2.87	2.87	3.02	3.02
Custer County	C19	RM 168.72	15846	2-yr	1373.4	694.78	691.82	1.75	1.75	16.57	16.57	275.74	275.74	2.85	2.85	2.96	2.96
Custer County	C19	RM 168.51	15500	2-yr	1373.4	694.55	691.6	1.79	1.78	17.9	17.52	294.75	301.85	2.61	2.55	2.95	2.95
Custer County	C19	RM 168.35	15241	2-yr	1373.4	694.28	691.48	2.04	2.02	23.52	22.36	267.51	284.03	2.52	2.39	2.8	2.8
Custer County	C19	RM 168.15	14931	2-yr	1373.4	693.89	691.2	2.28	2.28	29.4	29.4	237.49	237.49	2.54	2.54	2.69	2.69
Custer County	C19	RM 167.97	14639	2-yr	1373.4	693.68	690.59	1.92	1.92	19.93	19.93	242.89	242.89	2.94	2.94	3.09	3.09
Custer County	C19	RM 167.79	14340	2-yr	1373.4	693.47	690.5	1.92	1.92	20	20	248.99	286.72	2.88	2.88	2.97	2.97
Custer County	C19	RM 167.61	14054	2-yr	1373.4	693.17	690.42	2.18	2.18	26.62	26.62	242.54	242.54	2.6	2.6	2.75	2.75
Custer County	C19	RM 167.41	13735	2-yr	1373.4	692.86	690.14	2.07	2.04	24.16	21.97	264.94	295.35	2.5	2.28	2.72	2.72
Custer County	C19	RM 167.22	13433	2-yr	1373.4	692.64	689.79	1.85	1.85	18.87	18.87	274.8	274.8	2.7	2.7	2.85	2.85
Custer County	C19	RM 167.04	13143	2-yr	1373.4	692.46	689.14	1.76	1.74	16.55	15.7	255.55	273.25	3.04	2.89	3.32	3.32
Custer County	C19	RM 166.85	12847	2-yr	1373.4	692.11	688.98	2.3	2.3	29.97	29.13	237.04	244.01	2.52	2.45	3.13	3.13
Custer County	C19	RM 166.67	12552	2-yr	1373.4	691.86	688.84	2	2	21.8	21.8	245.31	245.31	2.8	2.8	3.02	3.02
Custer County	C19	RM 166.52	12319	2-yr	1373.4	691.76	688.64	1.66	1.66	14.81	14.81	276.38	276.38	2.99	2.99	3.12	3.12
Custer County	C19	RM 166.31	11978	2-yr	1373.4	691.53	688.02	1.88	1.88	17.66	17.64	245.04	245.34	2.98	2.98	3.51	3.51
Custer County	C20	RM 166.2	11806	2-yr	1376.2	691.42	687.4	1.89	1.89	18.72	18.72	224.64	224.64	3.24	3.24	4.02	4.02
Custer County	C20	RM 166.06	11569	2-yr	1376.2	691.2	687.38	2.12	2.12	24.64	24.64	233.01	233.01	2.79	2.79	3.82	3.82
Custer County	C20	RM 165.92	11350	2-yr	1376.2	690.94	687.38	2.26	2.26	28.41	28.41	225.56	225.56	2.7	2.7	3.56	3.56
Custer County	C20	RM 165.73	11039	2-yr	1376.2	690.72	687.26	1.89	1.89	19.69	19.69	262.5	262.5	2.77	2.77	3.46	3.46
Custer County	C20	RM 165.55	10750	2-yr	1376.2	690.52	687.11	1.87	1.87	19.19	19.19	264.28	264.28	2.78	2.78	3.41	3.41
Custer County	C20	RM 165.35	10440	2-yr	1376.2	690.28	686.75	1.9	1.9	20.02	20.02	266.74	266.74	2.71	2.71	3.53	3.53
Custer County	C20	RM 165.17	10140	2-yr	1376.2	690.08	686.41	1.87	1.83	18.84	16.55	247.1	290.65	2.95	2.59	3.67	3.67
Custer County	C20	RM 165.01	9883	2-yr	1376.2	689.9	686.16	1.88	1.88	19.24	19.24	259.41	259.41	2.83	2.83	3.74	3.74
Custer County	C20	RM 164.81	9577	2-yr	1376.2	689.67	686.04	1.87	1.86	19.63	19.07	283.17	292.61	2.6	2.52	3.63	3.63
Custer County	C20	RM 164.61	9252	2-yr	1376.2	689.49	685.8	1.73	1.69	12.34	11.58	315.36	345.38	2.51	2.36	3.69	3.69
Custer County	C20	RM 164.42	8945	2-yr	1376.2	689.31	685.78	1.74	1.74	15.44	15.44	306.98	306.98	2.58	2.58	3.53	3.53
Custer County	C20	RM 164.23	8641	2-yr	1376.2	689.09	685.85	1.76	1.76	15.35	15.34	428.88	429	1.83	1.83	3.24	3.24
Custer County	C20	RM 164.06	8372	2-yr	1376.2	688.97	685.64	1.5	1.5	11.83	11.66	289.52	293.95	3.17	3.12	3.33	3.33
Custer County	C20	RM 163.85	8031	2-yr	1376.2	688.8	685	1.65	1.65	14.61	14.61	276.41	276.41	3.01	3.01	3.8	3.8
Custer County	C20	RM 163.67	7743	2-yr	1376.2	688.62	684.45	1.84	1.84	16.56	16.56	190.61	190.61	3.93	3.93	4.17	4.17
Custer County	C20	RM 163.48	7449	2-yr	1376.2	688.4	684.13	2.16	2.16	22.73	22.64	161.12	161.74	3.96	3.94	4.27	4.27
Custer County	C20	RM 163.3	7150	2-yr	1376.2	688.29	684.13	1.84	1.83	16.92	16.39	203.7	211.03	3.68	3.56	4.16	4.16
Custer County	C20	RM 163.12	6859	2-yr	1376.2	688.19	683.91	1.59	1.57	12.6	12.03	266.17	282	3.25	3.1	4.28	4.28
Custer County	C20	RM 162.94	6583	2-yr	1376.2	688.04	683.78	1.81	1.8	16.19	15.21	201.62	215.56	3.78	3.55	4.26	4.26
Custer County	C20	RM 162.74	6254	2-yr	1376.2	687.72	683.77	2.32	2.32	27.76	27.76	175.35	175.35	3.38	3.38	3.95	3.95
Custer County	C20	RM 162.55	5957	2-yr	1376.2	687.47	683.96	2.18	2.18	25.24	25.24	229	229	2.75	2.75	3.51	3.51
Custer County	C20	RM 162.34	5620	2-yr	1376.2	687.29	683.92	1.68	1.68	15.59	15.59	301.68	301.68	2.72	2.72	3.37	3.37
Custer County	C20	RM 162.18	5352	2-yr	1376.2	687.11	683.41	1.57	1.57	22.45	22.39	354.23	355.23	2.47	2.47	3.7	3.7
Custer County	C20	RM 162.03	5111	2-yr	1376.2	687.01	683.26	1.38	1.38	9.74	9.74	320.1	320.1	3.12	3.12	3.75	3.75
Custer County	C20	RM 161.81	4770	2-yr	1376.2	686.69	682.63	2.18	2.18	24.02	23.29	174.77	180.45	3.61	3.5	4.06	4.06
Custer County	C20	RM 161.62	4470	2-yr	1376.2	686.41	682.53	2.37	2.37	29	29	171.01	225.76	3.39	3.39	3.88	3.88
Custer County	C20	RM 161.43	4159	2-yr	1376.2	686.2	682.63	2.09	2.09	22.98	22.33	204.77	210.94	3.21	3.12	3.57	3.57
Custer County	C20	RM 161.24	3859	2-yr	1376.2	685.92	682.51	2.25	2.23	26.83	24.08	199.39	224.22	3.07	2.75	3.41	3.41
Custer County	C20	RM 161.06	3559	2-yr	1376.2	685.71	682.38	2.02	2.02	21.5	21.24	215.42	218.14	3.16	3.12	3.33	3.33
Custer County	C20	RM 160.87	3258	2-yr	1376.2	685.4	682.24	2.28	2.28	27.98	27.98	203.2	203.2	2.97	2.97	3.16	3.16

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	2-yr	1376.2	685.23	682.11	1.84	1.84	18.18	18.18	250.46	250.46	2.98	2.98	3.12	3.12
Custer County	C20	RM 160.5	2662	2-yr	1376.2	685.02	681.85	1.85	1.85	19.65	19.65	301.14	301.14	2.46	2.46	3.17	3.17
Custer County	C20	RM 160.31	2364	2-yr	1376.2	684.79	681.58	1.8	1.8	18.66	18.6	319.65	320.74	2.39	2.39	3.21	3.21
Custer County	C20	RM 160.12	2063	2-yr	1376.2	684.6	681.02	1.71	1.7	15.84	15.03	277.19	294.83	2.9	2.75	3.58	3.58
Custer County	C20	RM 159.93	1758	2-yr	1376.2	684.25	680.9	2.15	2.15	27.39	27.39	290.03	290.03	2.21	2.21	3.35	3.35
Custer County	C20	RM 159.75	1459	2-yr	1376.2	683.97	680.88	2.01	2.01	22.2	22.2	249.98	249.98	2.74	2.74	3.09	3.09
Custer County	C20	RM 159.55	1151	2-yr	1376.2	683.74	680.74	1.92	1.92	20.34	20.27	259.02	259.84	2.76	2.75	3	3
Custer County	C20	RM 159.38	876	2-yr	1376.2	683.49	680.37	2.06	2.04	22.79	21.46	228.89	245.33	2.92	2.75	3.12	3.12
Custer County	C20	RM 159.19	566	2-yr	1376.2	683.29	679.77	1.91	1.91	19.44	19.38	232.08	232.68	3.1	3.09	3.52	3.52
Custer County	C20	RM 158.98	229	2-yr	1376.2	683.03	679.44	2.05	2.04	22.13	21.44	215.81	223.14	3.12	3.02	3.59	3.59

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	2-yr	1376.2	683.03	679.22	1.97	1.97	20.25	20.23	212.86	213.05	3.28	3.27	3.81	3.81
Prairie County	C21	RM 158.55	61087	2-yr	1376.2	682.92	678.98	1.66	1.66	13.87	13.84	224.85	225.41	3.68	3.67	3.94	3.94
Prairie County	C21	RM 158.36	60787	2-yr	1376.2	682.8	678.83	1.63	1.63	13.67	13.67	245.41	245.41	3.43	3.43	3.97	3.97
Prairie County	C21	RM 158.17	60481	2-yr	1376.2	682.64	678.35	1.71	1.71	16.68	16.67	251.88	252.01	3.19	3.18	4.29	4.29
Prairie County	C21	RM 157.98	60173	2-yr	1376.2	682.36	678.22	2.1	2.1	23.84	23.84	228.4	228.4	2.88	2.88	4.14	4.14
Prairie County	C21	RM 157.78	59862	2-yr	1376.2	682.12	678.23	2.07	2.06	22.28	20.78	200.99	216.85	3.3	3.08	3.89	3.89
Prairie County	C21	RM 157.6	59561	2-yr	1376.2	682.01	678.14	1.69	1.69	14.6	13.99	233.85	244.4	3.48	3.33	3.87	3.87
Prairie County	C21	RM 157.38	59209	2-yr	1376.2	681.83	677.81	1.69	1.64	15.54	14.06	283.01	328.95	2.82	2.55	4.02	4.02
Prairie County	C21	RM 157.18	58885	2-yr	1376.2	681.68	677.42	1.65	1.6	13.89	12.1	235.57	293.31	3.44	2.99	4.26	4.26
Prairie County	C21	RM 156.99	58595	2-yr	1376.2	681.45	677.32	2.1	1.96	22.25	15.6	173.25	281.93	3.57	2.49	4.13	4.13
Prairie County	C21	RM 156.8	58287	2-yr	1376.2	681.03	677.32	2.71	2.53	38.5	24.97	149.41	263.65	3.21	2.06	3.71	3.71
Prairie County	C21	RM 156.62	57990	2-yr	1376.2	680.91	677.29	1.9	1.85	18.81	17.02	206.71	254.37	3.24	2.93	3.62	3.62
Prairie County	C21	RM 156.42	57683	2-yr	1376.2	680.78	677.21	1.63	1.62	14	13.69	270.45	276.94	3.13	3.06	3.57	3.57
Prairie County	C21	RM 156.24	57378	2-yr	1376.2	680.51	676.91	2.02	2.02	22.53	21.78	244.86	253.92	2.78	2.68	3.6	3.6
Prairie County	C21	RM 156.04	57069	2-yr	1376.2	680.37	676.56	1.73	1.72	15.01	14.48	221.72	230.4	3.6	3.47	3.81	3.81
Prairie County	C21	RM 155.85	56762	2-yr	1376.2	680.17	676.11	1.96	1.95	19.5	18.53	198.74	210.68	3.53	3.35	4.06	4.06
Prairie County	C21	RM 155.66	56455	2-yr	1376.2	679.87	675.96	2.33	2.31	27.92	23.75	175.28	208.7	3.37	2.86	3.91	3.91
Prairie County	C21	RM 155.47	56151	2-yr	1376.2	679.71	675.89	1.84	1.84	18.42	17.9	257.1	278.78	2.9	2.82	3.82	3.82
Prairie County	C21	RM 155.27	55835	2-yr	1376.2	679.49	675.92	1.79	1.79	18.47	18.45	317.35	317.57	2.42	2.42	3.57	3.57
Prairie County	C21	RM 155.08	55530	2-yr	1376.2	679.24	675.95	1.84	1.84	19.25	19.2	296.4	297.18	2.52	2.51	3.29	3.29
Prairie County	C21	RM 154.88	55209	2-yr	1376.2	679.04	675.64	1.73	1.73	15.56	15.56	299.54	299.54	2.66	2.66	3.4	3.4
Prairie County	C21	RM 154.69	54901	2-yr	1376.2	678.74	675.39	2.04	2.04	23.54	23.34	264.4	266.79	2.55	2.53	3.35	3.35
Prairie County	C21	RM 154.5	54588	2-yr	1376.2	678.47	675.02	1.97	1.97	21.44	21.18	257.32	261.48	2.72	2.68	3.45	3.45
Prairie County	C21	RM 154.3	54273	2-yr	1376.2	678.25	674.8	1.86	1.86	19.23	19.09	277.5	279.52	2.67	2.65	3.44	3.44
Prairie County	C21	RM 154.1	53959	2-yr	1376.2	677.96	674.67	1.99	1.99	22.35	22.21	269.35	271.15	2.57	2.55	3.29	3.29
Prairie County	C21	RM 153.91	53650	2-yr	1376.2	677.77	674.51	1.76	1.76	16.65	16.53	259.76	261.78	3	2.98	3.26	3.26
Prairie County	C21	RM 153.72	53338	2-yr	1376.2	677.56	674.06	1.91	1.9	19.08	17.72	225.5	243.76	3.2	2.97	3.5	3.5
Prairie County	C21	RM 153.52	53023	2-yr	1376.2	677.15	673.78	2.47	2.37	33.87	29.14	205.2	253.38	2.67	2.29	3.37	3.37
Prairie County	C21	RM 153.32	52704	2-yr	1376.2	676.8	673.64	2.23	2.23	27.82	27.82	237.37	237.37	2.6	2.6	3.16	3.16
Prairie County	C21	RM 153.12	52380	2-yr	1376.2	676.58	673.43	1.87	1.87	19.08	19.08	263.66	264.78	2.8	2.8	3.15	3.15
Prairie County	C21	RM 152.92	52065	2-yr	1376.2	676.37	672.88	1.84	1.84	17.64	17.64	263.86	287.89	2.84	2.84	3.49	3.49
Prairie County	C21	RM 152.73	51762	2-yr	1376.2	676.14	672.27	1.91	1.91	19.6	19.6	266.85	266.85	2.71	2.71	3.87	3.87
Prairie County	C21	RM 152.54	51463	2-yr	1376.2	675.93	671.85	1.92	1.92	19.1	19.1	249.42	249.42	2.87	2.87	4.08	4.08
Prairie County	C21	RM 152.35	51157	2-yr	1376.2	675.78	671.41	1.74	1.74	15.53	15.53	225.84	225.84	3.5	3.5	4.37	4.37
Prairie County	C21	RM 152.16	50852	2-yr	1376.2	675.61	671.23	1.78	1.78	17.05	17.05	266.2	266.2	2.91	2.91	4.38	4.38
Prairie County	C21	RM 151.97	50546	2-yr	1376.2	675.45	670.99	1.77	1.72	13.78	12.04	245.02	291.64	3.14	2.74	4.46	4.46
Prairie County	C21	RM 151.77	50227	2-yr	1376.2	675.34	670.87	1.68	1.58	13.8	9.83	202.52	311.15	3.95	2.8	4.47	4.47
Prairie County	C21	RM 151.59	49936	2-yr	1376.2	675.04	670.75	2.37	2.24	28.19	23.56	148.44	198.38	3.72	3.09	4.29	4.29
Prairie County	C21	RM 151.38	49599	2-yr	1376.2	674.87	670.9	1.97	1.92	19.67	17.62	198.55	228.36	3.51	3.14	3.97	3.97
Prairie County	C21	RM 151.19	49287	2-yr	1376.2	674.73	670.96	1.75	1.75	15.62	15.62	222.53	222.53	3.53	3.53	3.77	3.77
Prairie County	C21	RM 151.01	49012	2-yr	1376.2	674.59	670.91	1.75	1.75	16.47	16.47	284.64	284.64	2.77	2.77	3.68	3.68
Prairie County	C21	RM 150.81	48683	2-yr	1376.2	674.43	670.79	1.58	1.58	13.49	13.49	306.63	306.63	2.83	2.83	3.64	3.64
Prairie County	C21	RM 150.63	48400	2-yr	1498	674.32	670.45	1.45	1.45	11.18	11.14	357.17	358.43	2.89	2.88	3.87	3.87
Prairie County	C21	RM 150.44	48094	2-yr	1498	674.12	669.86	1.77	1.75	14.3	13.26	273.64	299.82	3.08	2.85	4.26	4.26
Prairie County	C21	RM 150.25	47780	2-yr	1498	673.77	669.38	2.41	2.41	32.97	32.97	163.56	163.56	3.8	3.8	4.39	4.39
Prairie County	C21	RM 150.05	47474	2-yr	1498	673.68	669.21	1.85	1.85	16.6	16.6	199.94	199.94	4.05	4.05	4.47	4.47
Prairie County	C21	RM 149.87	47178	2-yr	1498	673.53	669.02	1.83	1.83	17.95	17.95	269.13	269.13	3.04	3.04	4.51	4.51
Prairie County	C21	RM 149.66	46846	2-yr	1498	673.4	668.97	1.61	1.61	10.45	10.45	315.43	315.43	2.94	2.94	4.43	4.43
Prairie County	C21	RM 149.48	46551	2-yr	1498	673.14	668.91	2.08	2.06	23.62	22.55	257.38	358.14	2.8	2.67	4.23	4.23
Prairie County	C21	RM 149.27	46219	2-yr	1498	672.85	668.94	2.19	2.02	24.41	19.04	205.48	409.68	3.09	2.4	3.91	3.91
Prairie County	D1	RM 149.08	45914	2-yr	1498	672.67	668.95	1.89	1.89	18.74	18.74	252.02	252.13	3.15	3.15	3.72	3.72
Prairie County	D1	RM 148.89	45608	2-yr	1500.8	672.56	668.96	1.54	1.54	12.55	12.53	313.26	313.63	3.11	3.11	3.6	3.6
Prairie County	D1	RM 148.7	45301	2-yr	1500.8	672.38	668.73	1.68	1.68	14.07	14.07	347.14	347.14	2.57	2.57	3.65	3.65
Prairie County	D1	RM 148.5	44987	2-yr	1500.8	672.16	668.42	1.91	1.88	18.82	16.32	235.13	276.62	3.33	2.89	3.74	3.74
Prairie County	D1	RM 148.3	44667	2-yr	1500.8	671.89	668.01	2.2	2.15	24.62	21.24	192.15	229.42	3.53	3.04	3.88	3.88
Prairie County	D1	RM 148.11	44353	2-yr	1500.8	671.74	667.73	1.89	1.86	18.19	16.96	230.09	250.39	3.45	3.21	4.01	4.01
Prairie County	D1	RM 147.93	44062	2-yr	1500.8	671.59	667.4	1.72	1.72	16	15.96	305.33	306.28	2.86	2.86	4.19	4.19
Prairie County	D1	RM 147.74	43761	2-yr	1500.8	671.4	667.21	1.84	1.72	18.59	13.93	250.59	374.72	3.11	2.32	4.19	4.19
Prairie County	D1	RM 147.55	43454	2-yr	1500.8	671.2	666.79	1.97	1.82	19.25	14.14	188.6	297.76	3.79	2.77	4.41	4.41
Prairie County	D1	RM 147.34	43128	2-yr	1500.8	670.99	666.46	2.14	1.97	22.6	15.7	170.67	286.73	3.86	2.66	4.53	4.53

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	2-yr	1500.8	670.74	666.42	2.28	2.11	26.62	19.81	178.15	279.69	3.45	2.55	4.32	4.32
Prairie County	D1	RM 146.96	42505	2-yr	1500.8	670.54	666.49	2.12	2.11	22.37	20.77	187.33	203.07	3.77	3.5	4.05	4.05
Prairie County	D1	RM 146.77	42199	2-yr	1500.8	670.42	666.48	1.83	1.83	16.73	16.73	222.15	222.21	3.69	3.69	3.94	3.94
Prairie County	D1	RM 146.58	41899	2-yr	1500.8	670.33	666.59	1.54	1.54	12.26	12.26	293.97	293.97	3.32	3.32	3.74	3.74
Prairie County	D1	RM 146.32	41487	2-yr	1500.8	670.07	666.62	1.86	1.86	15.87	15.87	320.41	320.41	2.52	2.52	3.45	3.45
Prairie County	D1	RM 146	40968	2-yr	1500.8	669.71	666.48	1.87	1.87	19.57	19.57	275.39	275.39	2.91	2.91	3.23	3.23
Prairie County	D1	RM 145.65	40420	2-yr	1500.8	669.34	665.52	1.93	1.93	20.25	20.25	241.2	241.2	3.23	3.23	3.82	3.82
Prairie County	D1	RM 145.36	39958	2-yr	1500.8	669.05	664.91	1.84	1.83	19.1	18.45	264.67	275.2	3.09	2.98	4.14	4.14
Prairie County	D1	RM 145.13	39579	2-yr	1500.8	668.87	664.58	1.68	1.68	15.33	15.33	264.24	264.24	3.37	3.37	4.28	4.28
Prairie County	D1	RM 144.92	39251	2-yr	1500.8	668.71	664.24	1.67	1.67	15.55	15.55	265.93	265.93	3.38	3.38	4.47	4.47
Prairie County	D1	RM 144.73	38942	2-yr	1500.8	668.53	663.99	1.79	1.79	17.92	17.91	262.66	262.88	3.19	3.19	4.54	4.54
Prairie County	D1	RM 144.56	38672	2-yr	1500.8	668.31	663.14	1.95	1.95	20.58	20.58	263.53	263.53	2.92	2.92	5.17	5.17
Prairie County	D1		38642.5	2-yr	Bridge												
Prairie County	D1	RM 144.52	38613	2-yr	1500.8	668.23	663.14	2.01	2.01	21.97	21.97	262.29	262.29	2.85	2.85	5.09	5.09
Prairie County	D1	RM 144.33	38305	2-yr	1500.8	668.02	664.19	1.96	1.96	19.77	19.76	229.16	229.3	3.35	3.34	3.83	3.83
Prairie County	D1	RM 144.13	37987	2-yr	1500.8	667.89	664.33	1.67	1.66	14.37	14.05	270.01	277.04	3.33	3.26	3.56	3.56
Prairie County	D1	RM 143.91	37637	2-yr	1500.8	667.74	663.96	1.61	1.6	13.68	12.88	298.84	320.24	3.12	2.93	3.78	3.78
Prairie County	D1	RM 143.71	37320	2-yr	1500.8	667.45	663.43	2.17	2.17	23.78	22.97	190.56	207.07	3.62	3.5	4.02	4.02
Prairie County	D1	RM 143.45	36908	2-yr	1500.8	667.04	663.01	2.46	2.46	31.1	31.1	178.54	178.54	3.42	3.42	4.03	4.03
Prairie County	D1	RM 143.21	36511	2-yr	1500.8	666.85	662.92	1.91	1.91	18.43	18.43	222.99	222.99	3.53	3.53	3.93	3.93
Prairie County	D1	RM 142.97	36139	2-yr	1500.8	666.69	662.7	1.78	1.78	15.97	15.97	230.4	230.4	3.65	3.65	3.99	3.99
Prairie County	D1	RM 142.71	35717	2-yr	1500.8	666.29	662.52	2.36	2.36	28.61	28.61	185.46	185.46	3.43	3.43	3.77	3.77
Prairie County	D1	RM 142.46	35322	2-yr	1500.8	666.11	662.36	1.81	1.81	17.03	17.03	253.5	253.5	3.27	3.27	3.75	3.75
Prairie County	D1	RM 142.23	34952	2-yr	1500.8	665.89	662.21	1.89	1.89	18.34	18.25	235.72	236.97	3.37	3.36	3.68	3.68
Prairie County	D1	RM 142.02	34614	2-yr	1500.8	665.6	662.21	2.11	2.06	25.14	23.3	268.92	309.32	2.55	2.36	3.39	3.39
Prairie County	D1	RM 141.8	34258	2-yr	1500.8	665.42	662.01	1.52	1.52	12.8	12.79	381.11	381.39	2.59	2.58	3.41	3.41
Prairie County	D1	RM 141.6	33942	2-yr	1500.8	665.13	661.72	1.96	1.96	20.62	20.62	292.93	292.93	2.61	2.61	3.42	3.42
Prairie County	D1	RM 141.42	33642	2-yr	1500.8	665.02	661.32	1.52	1.52	12.01	12	339.85	340.19	2.91	2.9	3.7	3.7
Prairie County	D1	RM 141.22	33325	2-yr	1500.8	664.88	660.91	1.52	1.52	12.42	12.41	326.24	326.41	3.02	3.02	3.97	3.97
Prairie County	D1	RM 141.02	33011	2-yr	1500.8	664.61	660.58	2.08	2.08	21.51	21.51	193.28	193.28	3.74	3.74	4.03	4.03
Prairie County	D1	RM 140.84	32709	2-yr	1500.8	664.47	660.35	1.86	1.86	17.88	17.88	239.43	239.43	3.37	3.37	4.12	4.12
Prairie County	D1	RM 140.64	32394	2-yr	1500.8	664.36	660.07	1.63	1.63	12.76	12.76	236.37	236.37	3.89	3.89	4.29	4.29
Prairie County	D1	RM 140.44	32074	2-yr	1500.8	664.17	659.63	1.92	1.92	18.41	18.41	222.86	222.86	3.5	3.5	4.54	4.54
Prairie County	D1	RM 140.23	31738	2-yr	1500.8	663.87	659.62	2.26	2.26	25.7	25.68	205.36	205.49	3.23	3.23	4.25	4.25
Prairie County	D1	RM 140.03	31420	2-yr	1500.8	663.72	659.59	1.85	1.85	17.39	17.39	250.36	250.36	3.25	3.25	4.13	4.13
Prairie County	D1	RM 139.84	31118	2-yr	1500.8	663.55	659.19	1.77	1.77	17.23	16.87	307.95	314.61	2.76	2.7	4.36	4.36
Prairie County	D1	RM 139.64	30801	2-yr	1500.8	663.39	658.96	1.76	1.75	15.22	13.61	221.02	249.25	3.86	3.45	4.43	4.43
Prairie County	D1	RM 139.44	30466	2-yr	1500.8	663.24	658.72	1.76	1.75	15.87	15.09	248.45	262.83	3.43	3.26	4.52	4.52
Prairie County	D1	RM 139.23	30138	2-yr	1500.8	663.09	658.34	1.72	1.72	16.47	16.47	217.09	217.09	4.02	4.02	4.75	4.75
Prairie County	D1	RM 139.02	29799	2-yr	1500.8	662.78	658.14	2.25	2.25	30.09	30.09	176.15	176.15	3.78	3.78	4.64	4.64
Prairie County	D1	RM 138.81	29470	2-yr	1500.8	662.7	658.11	1.6	1.6	14.13	14.03	217.97	219.52	4.29	4.26	4.59	4.59
Prairie County	D1	RM 138.62	29157	2-yr	1500.8	662.57	657.94	1.73	1.72	14.05	13.4	215.46	226.43	4.04	3.85	4.63	4.63
Prairie County	D1	RM 138.41	28823	2-yr	1500.8	662.37	657.82	1.97	1.97	21.36	20.16	202.45	215.43	3.75	3.54	4.55	4.55
Prairie County	D1	RM 138.22	28519	2-yr	1500.8	662.2	657.8	1.96	1.96	18.57	18.46	198.16	199.27	3.85	3.83	4.4	4.4
Prairie County	D1	RM 138.02	28200	2-yr	1500.8	662.15	657.74	1.45	1.45	10.93	10.77	246.99	250.79	4.18	4.12	4.41	4.41
Prairie County	D1	RM 137.82	27874	2-yr	1500.8	662.01	656.95	1.62	1.62	14.27	14.27	261.55	261.55	3.54	3.54	5.06	5.06
Prairie County	D1	RM 137.62	27552	2-yr	1500.8	661.82	656.75	1.84	1.84	18.91	18.85	233.84	403.63	3.48	3.47	5.07	5.07
Prairie County	D1	RM 137.42	27247	2-yr	1500.8	661.61	656.66	1.98	1.98	20.88	20.88	199.2	199.2	3.81	3.81	4.95	4.95
Prairie County	D1	RM 137.24	26944	2-yr	1500.8	661.45	656.66	1.93	1.93	20.44	20.44	201.25	201.25	3.86	3.86	4.79	4.79
Prairie County	D1	RM 137.04	26627	2-yr	1503.6	661.29	655.41	1.9	1.9	19.54	19.54	200.87	200.87	3.94	3.94	5.88	5.88
Prairie County	D1		26616.5	2-yr	Bridge												
Prairie County	D1	RM 137.02	26606	2-yr	1503.6	661.26	655.41	1.91	1.91	19.86	19.86	200.68	200.68	3.92	3.92	5.85	5.85
Prairie County	D2	RM 136.84	26475	2-yr	1503.6	661.22	656.46	1.74	1.74	15.05	15.05	202.41	202.41	4.28	4.28	4.76	4.76
Prairie County	D2		26471.5	2-yr	Bridge												
Prairie County	D2	RM 136.65	26468	2-yr	1503.6	661.21	656.45	1.73	1.73	15.51	15.51	205.96	205.96	4.22	4.22	4.76	4.76
Prairie County	D2	RM 136.44	26317	2-yr	1503.6	661.17	656.37	1.56	1.56	12.61	12.61	223.83	223.83	4.31	4.31	4.8	4.8
Prairie County	D2	RM 136.23	26001	2-yr	1503.6	661.01	656.19	1.78	1.78	14.84	14.84	243.26	243.26	3.47	3.47	4.82	4.82
Prairie County	D2	RM 136.04	25673	2-yr	1503.6	660.89	656.01	1.75	1.75	13.76	13.76	207.9	207.9	4.13	4.13	4.88	4.88
Prairie County	D2	RM 135.85	25337	2-yr	1503.6	660.7	655.93	2	2	19.46	19.46	184.85	184.85	4.06	4.06	4.77	4.77
Prairie County	D2	RM 135.66	25033	2-yr	1503.6	660.58	655.91	1.86	1.86	16.74	16.74	200.12	200.12	4.05	4.05	4.67	4.67

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	2-yr	1503.6	660.43	655.86	1.86	1.86	19.84	19.81	198.14	198.37	4.09	4.08	4.57	4.57
Prairie County	D2	RM 135.24	24417	2-yr	1503.6	660.36	655.68	1.52	1.52	12.76	12.76	227.57	227.57	4.36	4.36	4.68	4.68
Prairie County	D2	RM 135	24090	2-yr	1503.6	660.2	655.56	1.69	1.69	15.89	15.89	244.57	244.57	3.63	3.63	4.64	4.64
Prairie County	D2	RM 134.78	23742	2-yr	1503.6	660.07	655.36	1.64	1.64	14.65	14.65	222.31	222.31	4.13	4.13	4.71	4.71
Prairie County	D2	RM 134.58	23351	2-yr	1503.6	659.83	655.29	1.95	1.95	21.88	21.72	189.02	190.47	4.07	4.04	4.54	4.54
Prairie County	D2	RM 134.39	23000	2-yr	1503.6	659.63	655.24	1.91	1.91	21.55	21.4	215.76	217.32	3.64	3.62	4.39	4.39
Prairie County	D2	RM 134.19	22682	2-yr	1503.6	659.46	655.11	1.8	1.79	17.01	16.14	263.95	343.73	3.17	3	4.35	4.35
Prairie County	D2	RM 133.99	22372	2-yr	1503.6	659.33	654.97	1.69	1.69	13.41	13.41	261.88	261.88	3.39	3.39	4.36	4.36
Prairie County	D2	RM 133.79	22053	2-yr	1503.6	659.13	655	1.92	1.92	18.87	18.28	226.1	234.01	3.46	3.35	4.13	4.13
Prairie County	D2	RM 133.59	21733	2-yr	1503.6	658.97	654.96	1.82	1.82	16.98	16.82	241.9	244.43	3.41	3.38	4.01	4.01
Prairie County	D2	RM 133.41	21417	2-yr	1503.6	658.84	654.78	1.68	1.68	14.35	14.21	251.43	254.21	3.55	3.52	4.06	4.06
Prairie County	D2	RM 133.21	21104	2-yr	1503.6	658.67	654.64	1.84	1.84	17.19	16.33	229.84	243.13	3.55	3.37	4.03	4.03
Prairie County	D2	RM 133.02	20811	2-yr	1503.6	658.53	654.53	1.79	1.79	16.39	16.33	245.53	246.35	3.42	3.41	4	4
Prairie County	D2	RM 132.83	20491	2-yr	1503.6	658.35	654.29	1.83	1.82	17.71	17.2	261.9	271.21	3.13	3.04	4.06	4.06
Prairie County	D2	RM 132.63	20184	2-yr	1503.6	658.16	654.04	1.86	1.81	18.29	15.89	252.59	305.31	3.13	2.72	4.12	4.12
Prairie County	D2	RM 132.42	19875	2-yr	1503.6	657.99	653.98	1.88	1.84	17.79	16.22	217.43	247.46	3.62	3.3	4.01	4.01
Prairie County	D2	RM 132.23	19553	2-yr	1503.6	657.89	653.88	1.59	1.55	12.66	11.87	255.28	283.89	3.64	3.42	4.01	4.01
Prairie County	D2	RM 132.02	19225	2-yr	1503.6	657.67	653.63	1.91	1.91	19.12	19.12	242.41	242.41	3.24	3.24	4.04	4.04
Prairie County	D2	RM 131.81	18910	2-yr	1503.6	657.44	653.37	2.05	2.05	21.85	21.85	224.57	224.57	3.27	3.27	4.07	4.07
Prairie County	D2	RM 131.58	18573	2-yr	1503.6	657.32	653.02	1.66	1.66	13.63	13.26	237.3	251.47	3.82	3.71	4.3	4.3
Prairie County	D2	RM 131.38	18237	2-yr	1503.6	657.17	652.75	1.79	1.73	15.75	14.63	211.54	242.35	3.85	3.58	4.42	4.42
Prairie County	D2	RM 131.18	17875	2-yr	1503.6	656.93	652.49	2.04	2.04	21.02	20.97	206.3	206.78	3.57	3.57	4.44	4.44
Prairie County	D2	RM 130.98	17548	2-yr	1503.6	656.73	652.34	2.05	2.03	21.03	19.8	196.6	211.18	3.72	3.5	4.39	4.39
Prairie County	D2	RM 130.78	17227	2-yr	1503.6	656.58	652.27	1.88	1.88	17.54	17.54	214.32	214.32	3.74	3.74	4.31	4.31
Prairie County	D2	RM 130.59	16914	2-yr	1503.6	656.5	652.16	1.59	1.59	12.32	12.32	237.09	237.09	3.99	3.99	4.34	4.34
Prairie County	D2	RM 130.39	16588	2-yr	1503.6	656.34	651.95	1.81	1.81	15.93	15.93	209.73	209.73	3.97	3.97	4.39	4.39
Prairie County	D2	RM 130.19	16280	2-yr	1503.6	656.17	651.81	1.92	1.92	18.57	18.57	216.21	216.21	3.62	3.62	4.36	4.36
Prairie County	D2	RM 130	15965	2-yr	1503.6	656.05	651.57	1.7	1.7	14.46	14.46	239.8	239.8	3.69	3.69	4.48	4.48
Prairie County	D2	RM 129.81	15649	2-yr	1503.6	655.95	651.47	1.61	1.61	12.58	12.4	234.04	237.85	4	3.94	4.48	4.48
Prairie County	D2	RM 129.62	15337	2-yr	1503.6	655.78	651.34	1.85	1.85	17.11	16.69	216.64	222.29	3.74	3.65	4.44	4.44
Prairie County	D2	RM 129.43	15031	2-yr	1503.6	655.67	651.21	1.7	1.7	14.16	14.16	226.21	226.21	3.91	3.91	4.46	4.46
Prairie County	D2	RM 129.24	14724	2-yr	1520.6	655.49	651.06	1.92	1.92	18.45	18.45	217.29	217.29	3.65	3.65	4.43	4.43
Prairie County	D2	RM 129.04	14417	2-yr	1520.6	655.29	651.06	2.02	2.02	20.69	20.6	209.35	216.73	3.59	3.57	4.23	4.23
Prairie County	D2	RM 128.82	14112	2-yr	1520.6	655.11	651.05	2.04	2.04	20.96	20.87	208.15	248.43	3.59	3.57	4.06	4.06
Prairie County	D2	RM 128.62	13798	2-yr	1520.6	654.97	651.08	1.83	1.83	16.7	16.7	226.64	226.64	3.67	3.67	3.89	3.89
Prairie County	D2	RM 128.41	13446	2-yr	1520.6	654.81	651.07	1.77	1.77	16.07	16.07	252.35	252.35	3.41	3.41	3.74	3.74
Prairie County	D2	RM 128.21	13125	2-yr	1520.6	654.63	650.98	1.83	1.83	17.25	16.75	245.09	252.81	3.39	3.29	3.65	3.65
Prairie County	D2	RM 127.98	12790	2-yr	1520.6	654.47	650.84	1.78	1.78	16.11	16.11	248.08	248.08	3.45	3.45	3.63	3.63
Prairie County	D2	RM 127.75	12473	2-yr	1520.6	654.34	650.59	1.64	1.64	14.11	14.11	287.39	287.39	3.22	3.22	3.75	3.75
Prairie County	D2	RM 127.55	12112	2-yr	1520.6	654.18	650.35	1.64	1.64	14.09	14.09	285.68	285.68	3.24	3.24	3.83	3.83
Prairie County	D2	RM 127.27	11729	2-yr	1520.6	654.01	649.95	1.64	1.64	13.92	13.92	275.44	275.44	3.36	3.36	4.06	4.06
Prairie County	D2	RM 126.97	11415	2-yr	1520.6	653.81	649.68	1.91	1.91	18.42	18.42	223.29	223.29	3.57	3.57	4.13	4.13
Prairie County	D2	RM 126.71	10962	2-yr	1520.6	653.58	649.49	1.87	1.87	17.28	17.28	216.46	216.46	3.77	3.77	4.09	4.09
Prairie County	D2	RM 126.43	10478	2-yr	1520.6	653.43	649.32	1.53	1.53	11.73	11.73	275.26	275.26	3.62	3.62	4.11	4.11
Prairie County	D2	RM 126.42	10074	2-yr	1520.6	653.2	649.05	1.85	1.85	17.61	17.61	247.68	247.69	3.33	3.33	4.15	4.15
Prairie County	D2	RM 126.41	9625	2-yr	1520.6	652.96	648.27	1.88	1.88	17.59	17.27	219.26	223.5	3.69	3.62	4.69	4.69
Prairie County	D2		9598.5	2-yr	Bridge												
Prairie County	D2	RM 126.4	9572	2-yr	1520.6	652.91	648.27	1.91	1.9	18.17	17.89	219.14	222.75	3.64	3.58	4.64	4.64
Prairie County	D3	RM 126.38	9533	2-yr	1520.6	652.89	648.27	1.92	1.92	18.44	18.17	219.08	222.41	3.62	3.57	4.61	4.61
Prairie County	D3		9523	2-yr	Bridge												
Prairie County	D3	RM 126.36	9513	2-yr	1520.6	652.87	648.27	1.93	1.93	18.69	18.45	219.03	222.09	3.6	3.55	4.59	4.59
Prairie County	D3	RM 126.22	9286	2-yr	1520.6	652.78	648.8	1.72	1.72	14.77	14.77	241.68	241.68	3.66	3.66	3.98	3.98
Prairie County	D3	RM 126.03	8974	2-yr	1520.6	652.66	648.71	1.64	1.64	13.8	13.62	269.32	273.08	3.44	3.4	3.95	3.95
Prairie County	D3	RM 125.82	8648	2-yr	1520.6	652.5	648.36	1.69	1.69	14.92	14.92	279.24	279.24	3.22	3.22	4.14	4.14
Prairie County	D3	RM 125.63	8335	2-yr	1520.6	652.38	648.12	1.61	1.61	12.96	12.85	259.94	262.18	3.64	3.61	4.26	4.26
Prairie County	D3	RM 125.43	8020	2-yr	1520.6	652.23	647.8	1.76	1.74	15.12	13.77	216.7	241.99	3.98	3.62	4.43	4.43
Prairie County	D3	RM 125.24	7711	2-yr	1520.6	652.16	647.26	1.57	1.56	11.29	10.82	226.37	236.99	4.29	4.11	4.9	4.9
Prairie County	D3	RM 125.05	7403	2-yr	1520.6	652.05	647.23	1.67	1.67	13.28	12.66	209.96	221.49	4.33	4.12	4.82	4.82
Prairie County	D3	RM 124.83	7059	2-yr	1520.6	651.95	647.25	1.58	1.57	12.04	11.63	237.41	246.3	4.06	3.92	4.7	4.7
Prairie County	D3	RM 124.62	6712	2-yr	1520.6	651.83	647.25	1.59	1.59	12.66	12.57	256.45	258.24	3.72	3.7	4.58	4.58

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	2-yr	1520.6	651.63	647.27	1.89	1.89	17.98	17.91	221.17	240.66	3.63	3.62	4.36	4.36
Prairie County	D3	RM 124.15	5960	2-yr	1520.6	651.37	647.27	2	2	20.77	20.65	232.04	256.68	3.28	3.26	4.1	4.1
Prairie County	D3	RM 123.94	5627	2-yr	1520.6	651.03	647.27	2.35	2.35	28.57	28.57	196.32	208.64	3.3	3.3	3.76	3.76
Prairie County	D3	RM 123.74	5312	2-yr	1520.6	650.77	647.25	2.28	2.28	27.05	27.05	203.95	215.19	3.27	3.27	3.52	3.52
Prairie County	D3	RM 123.56	5014	2-yr	1520.6	650.73	647.24	1.45	1.45	10.81	10.77	310.43	332.71	3.38	3.37	3.49	3.49
Prairie County	D3	RM 123.24	4500	2-yr	1520.6	650.51	647.19	1.3	1.3	13.61	13.61	540.41	540.41	2.16	2.16	3.32	3.32
Prairie County	D3	RM 122.99	4116	2-yr	1520.6	650.35	646.67	1.26	1.26	8.3	8.15	454.41	463.87	2.65	2.6	3.68	3.68
Prairie County	D3	RM 122.76	3746	2-yr	1520.6	650.2	646.22	1.38	1.38	10.17	10.14	358.96	359.9	3.06	3.06	3.98	3.98
Prairie County	D3	RM 122.55	3414	2-yr	1520.6	650.03	645.7	1.7	1.7	14.49	14.49	241.06	241.06	3.71	3.71	4.33	4.33
Prairie County	D3	RM 122.3	3012	2-yr	1520.6	649.77	645.57	2	2	20.13	20.13	213.35	213.35	3.57	3.57	4.2	4.2
Prairie County	D3	RM 122.08	2651	2-yr	1520.6	649.57	645.49	1.92	1.92	18.54	18.47	239.91	240.75	3.3	3.28	4.08	4.08
Prairie County	D3	RM 121.88	2338	2-yr	1520.6	649.42	645.42	1.82	1.82	15.96	15.96	243.27	243.27	3.44	3.44	4	4
Prairie County	D3	RM 121.66	1982	2-yr	1520.6	649.22	645.3	1.92	1.92	18	17.93	225.54	226.35	3.52	3.51	3.92	3.92
Prairie County	D3	RM 121.46	1651	2-yr	1520.6	649.04	645.06	1.9	1.9	18.63	18.34	241.84	245.85	3.31	3.26	3.98	3.98
Prairie County	D3	RM 121.24	1304	2-yr	1520.6	648.79	644.99	2.02	2	21.01	19.5	245.04	266.53	3.07	2.85	3.8	3.8
Prairie County	D3	RM 121.02	957	2-yr	1520.6	648.59	644.88	1.88	1.85	18.06	16.77	258.04	283.66	3.12	2.89	3.71	3.71
Prairie County	D3	RM 120.84	660	2-yr	1520.6	648.41	644.78	1.84	1.84	19.68	19.68	254.4	254.4	3.24	3.24	3.63	3.63
Prairie County	D3	RM 120.64	350	2-yr	1520.6	648.25	644.42	1.78	1.78	16.12	16.12	241.54	241.54	3.53	3.53	3.83	3.83

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	2-yr	1520.82	648.19	643.94	1.78	1.74	16.44	14.39	254.01	325.4	3.33	2.91	4.25	4.25
Dawson County	D3	RM 120.28	90838.07	2-yr	1520.82	648.12	643.78	1.8	1.76	16.38	15.11	231.69	263.63	3.56	3.28	4.34	4.34
Dawson County	D3	RM 120.18	90675.23	2-yr	1520.82	648.05	643.7	1.78	1.73	15.66	14.17	213.48	252.59	3.84	3.48	4.35	4.35
Dawson County	D3	RM 120.00	90388.96	2-yr	1520.82	647.95	643.56	1.67	1.65	13.57	12.74	226.64	244.56	4.01	3.77	4.39	4.39
Dawson County	D3	RM 119.84	90136.35	2-yr	1520.82	647.84	643.44	1.78	1.77	15.36	14.73	213.73	224.25	4	3.84	4.39	4.39
Dawson County	D3	RM 119.68	89873.82	2-yr	1520.82	647.68	643.31	1.98	1.96	18.96	17.13	189.21	211.77	4.06	3.67	4.36	4.36
Dawson County	D3	RM 119.53	89627.16	2-yr	1520.82	647.59	643.2	1.82	1.82	16.09	16.03	204.32	205.02	4.08	4.07	4.39	4.39
Dawson County	D3	RM 119.39	89404.11	2-yr	1520.82	647.52	643.09	1.67	1.66	13.67	13.15	231.36	242.81	3.92	3.78	4.44	4.44
Dawson County	D3	RM 119.26	89201.38	2-yr	1520.82	647.45	642.99	1.63	1.62	13.54	12.77	263.7	281.85	3.52	3.33	4.46	4.46
Dawson County	D3	RM 119.12	88969.13	2-yr	1520.82	647.3	642.87	1.92	1.86	17.94	15.91	193.4	253.35	4.06	3.6	4.42	4.42
Dawson County	D3	RM 119.00	88780.83	2-yr	1520.82	647.22	642.78	1.89	1.84	17.33	15.14	199.46	236.14	4	3.49	4.44	4.44
Dawson County	D3	RM 118.85	88537.07	2-yr	1520.82	647.14	642.66	1.67	1.64	13.94	12.59	241.51	277.47	3.71	3.35	4.48	4.48
Dawson County	D3	RM 118.72	88336.12	2-yr	1520.82	647.09	642.56	1.51	1.45	10.99	9.41	237.19	294.82	4.14	3.55	4.53	4.53
Dawson County	D3	RM 118.60	88130.39	2-yr	1520.82	647	642.46	1.7	1.66	13.98	12.71	220.72	249.3	4.02	3.66	4.53	4.53
Dawson County	D3	RM 118.47	87924.15	2-yr	1520.82	646.86	642.37	1.94	1.89	18.89	16.96	211.72	247.91	3.61	3.25	4.49	4.49
Dawson County	D3	RM 118.34	87719.85	2-yr	1520.82	646.64	642.27	2.28	2.23	27.87	25.99	214.06	241.5	3.01	2.82	4.37	4.37
Dawson County	D3	RM 118.21	87507.02	2-yr	1520.82	646.54	642.16	2.01	1.96	19.38	17.24	175.82	208.29	4.19	3.73	4.37	4.37
Dawson County	D3	RM 118.07	87276.02	2-yr	1526.48	646.46	642.05	1.68	1.67	14.95	14.83	297.49	299.94	3.06	3.04	4.41	4.41
Dawson County	D4	RM 117.90	87004.77	2-yr	1526.48	646.37	641.92	1.57	1.43	12.5	9.76	234.19	380.6	3.6	2.8	4.45	4.45
Dawson County	D4	RM 117.77	86795.88	2-yr	1526.48	646.28	641.81	1.63	1.45	13.59	9.58	217.15	429.91	3.49	2.44	4.47	4.47
Dawson County	D4	RM 117.62	86560.03	2-yr	1526.48	646.22	641.7	1.48	1.39	10.79	8.68	247.32	353.54	3.86	3.1	4.51	4.51
Dawson County	D4	RM 117.46	86294.2	2-yr	1526.48	646.03	641.57	1.96	1.81	18.87	14.34	183	288.06	3.87	2.93	4.46	4.46
Dawson County	D4	RM 117.33	86073.88	2-yr	1526.48	645.84	641.46	2.29	2.13	25.26	19.07	137.01	223.19	4.31	3.21	4.37	4.37
Dawson County	D4	RM 117.16	85808.16	2-yr	1526.48	645.78	641.33	1.79	1.67	15.29	11.98	182.25	277.96	4.22	3.3	4.44	4.44
Dawson County	D4	RM 117.03	85604.68	2-yr	1526.48	645.72	641.3	1.55	1.51	12.13	11.13	243.69	307.81	3.58	3.29	4.42	4.42
Dawson County	D4	RM 116.87	85336.88	2-yr	1526.48	645.64	641.29	1.51	1.38	11.32	8.43	238.63	403.92	3.69	2.75	4.35	4.35
Dawson County	D4	RM 116.69	85043.25	2-yr	1526.48	645.5	641.44	1.64	1.54	14.38	11.3	279.08	414.68	3.04	2.39	4.06	4.06
Dawson County	D4	RM 116.56	84823.15	2-yr	1526.48	645.33	641.34	1.89	1.81	19.14	15.51	234.35	345.45	3.01	2.44	3.99	3.99
Dawson County	D4	RM 116.39	84558.58	2-yr	1526.48	645.24	641.21	1.52	1.45	11.98	9.62	269.92	390.88	3.35	2.69	4.03	4.03
Dawson County	D4	RM 116.22	84287.19	2-yr	1526.48	645.13	641	1.57	1.54	12.26	10.28	259.34	316.81	3.73	3.14	4.13	4.13
Dawson County	D4	RM 116.05	84007.59	2-yr	1526.48	644.97	640.84	1.85	1.77	16.91	12.82	213.93	300.67	3.77	2.87	4.13	4.13
Dawson County	D4	RM 115.87	83722.29	2-yr	1526.48	644.79	640.8	2	1.89	20.35	15.24	214.27	311.83	3.45	2.59	3.99	3.99
Dawson County	D4	RM 115.73	83500.35	2-yr	1526.48	644.66	640.69	1.86	1.8	19.46	15.47	310.77	417.57	2.55	2.03	3.96	3.96
Dawson County	D4	RM 115.61	83294.37	2-yr	1526.48	644.58	640.59	1.45	1.41	11.64	10.31	385.01	452.59	2.69	2.39	3.99	3.99
Dawson County	D4	RM 115.45	83034.82	2-yr	1526.48	644.44	640.37	1.55	1.49	13.54	10.88	363.91	485.67	2.62	2.11	4.08	4.08
Dawson County	D4	RM 115.29	82782.88	2-yr	1526.48	644.3	640.34	1.61	1.57	14.06	12.64	316.01	368.4	2.93	2.63	3.96	3.96
Dawson County	D4	RM 115.09	82480.02	2-yr	1526.48	644.22	640.2	1.34	1.31	9.07	8.24	324	366.91	3.48	3.17	4.02	4.02
Dawson County	D4	RM 114.96	82177.99	2-yr	1526.48	644.08	640	1.62	1.59	13.27	11.84	260.73	302.11	3.57	3.19	4.08	4.08
Dawson County	D4	RM 114.74	81836.48	2-yr	1526.48	643.72	639.98	2.38	2.33	28.63	22.77	179.76	232.23	3.56	2.83	3.74	3.74
Dawson County	D4	RM 114.58	81577.9	2-yr	1526.48	643.67	639.46	1.73	1.61	14.79	12.64	195.77	341.27	3.83	3.26	4.22	4.22
Dawson County	D4	RM 114.42	81309.47	2-yr	1526.48	643.55	639.33	1.71	1.71	14.89	14.89	253.96	253.96	3.51	3.51	4.22	4.22
Dawson County	D4	RM 114.28	81078.59	2-yr	1526.48	643.4	639.21	1.92	1.91	18.3	17.4	213.07	224.85	3.74	3.55	4.19	4.19
Dawson County	D4	RM 114.11	80813.63	2-yr	1526.48	643.24	639.2	2	1.98	19.99	19.24	209.09	219.17	3.65	3.52	4.04	4.04
Dawson County	D4	RM 113.97	80580.15	2-yr	1526.48	643.08	639.45	2.07	2.06	22.34	21.54	225.75	235.84	3.26	3.15	3.63	3.63
Dawson County	D4	RM 113.79	80292.13	2-yr	1526.48	642.85	639.45	2.17	1.97	24.9	17.25	201.08	364.97	3.07	2.13	3.4	3.4
Dawson County	D4	RM 113.60	79987.05	2-yr	1526.48	642.81	639.2	1.4	1.23	10.03	7.83	179.84	465.41	3.46	2.68	3.61	3.61
Dawson County	D4	RM 113.43	79712.89	2-yr	1526.48	642.67	638.73	1.68	1.46	13.95	10.3	173.8	374.61	3.81	2.79	3.94	3.94
Dawson County	D4	RM 113.24	79405.49	2-yr	1526.48	642.39	638.43	2.3	2.02	26.16	19.69	130.78	263.24	3.85	2.87	3.95	3.95
Dawson County	D4	RM 113.08	79152.39	2-yr	1526.48	642.23	638.37	2.16	1.93	23.25	18.05	138.2	274.37	3.75	2.88	3.86	3.86
Dawson County	D4	RM 112.94	78925.1	2-yr	1526.48	642.18	638.26	1.57	1.44	12.46	10.7	193.51	349.47	3.56	3.03	3.92	3.92
Dawson County	D4	RM 112.74	78585.88	2-yr	1526.48	641.98	638.09	1.79	1.69	16.95	14.51	237.95	335.39	3.15	2.7	3.89	3.89
Dawson County	D4	RM 112.59	78355.25	2-yr	1526.48	641.79	637.98	1.97	1.84	21.61	18.15	271.68	365.37	2.71	2.27	3.81	3.81
Dawson County	D4	RM 112.37	78008.78	2-yr	1526.48	641.7	637.88	1.4	1.25	10.12	8.19	206.92	495.78	3.34	2.68	3.82	3.82
Dawson County	D4	RM 112.19	77721.27	2-yr	1526.48	641.55	637.59	1.63	1.56	13.6	12.23	213.8	317.34	3.42	3.08	3.96	3.96
Dawson County	D4	RM 111.89	77240.22	2-yr	1526.48	641.29	637.16	1.82	1.82	16.7	16.34	235.68	241.42	3.56	3.48	4.13	4.13
Dawson County	D4	RM 111.42	76486.24	2-yr	1526.48	640.98	636.91	1.6	1.6	13.26	12.9	287.11	295.53	3.32	3.23	4.07	4.07
Dawson County	D4	RM 111.26	76213.83	2-yr	1526.48	640.88	636.66	1.51	1.51	12.14	11.91	329.26	336.23	3.07	3.01	4.22	4.22
Dawson County	D4	RM 111.09	75911.9	2-yr	1526.48	640.64	636.51	1.95	1.95	19.63	19.63	234.81	234.81	3.34	3.34	4.13	4.13
Dawson County	D4	RM 110.95	75678.54	2-yr	1526.48	640.47	636.4	2.08	2.07	21.47	20.98	194.97	199.97	3.76	3.68	4.07	4.07
Dawson County	D4	RM 110.78	75415.61	2-yr	1526.48	640.27	636.27	2.21	2.21	24.49	24.43	185.84	186.26	3.71	3.7	4	4
Dawson County	D4	RM 110.55	75040.65	2-yr	1526.48	640.12	636.09	1.81	1.8	16.56	16.39	240.69	243.29	3.51	3.48	4.03	4.03

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	2-yr	1526.48	640.04	635.96	1.55	1.55	12.39	11.93	293.1	304.85	3.36	3.23	4.07	4.07
Dawson County	D4	RM 110.17	74428.56	2-yr	1526.48	639.8	635.79	1.83	1.81	18.83	17.91	321.63	341.66	2.59	2.46	4.01	4.01
Dawson County	D4	RM 109.95	74074.87	2-yr	1526.48	639.64	635.62	1.57	1.57	12.8	12.19	297.98	313.21	3.27	3.11	4.02	4.02
Dawson County	D4	RM 109.75	73741.09	2-yr	1526.48	639.48	635.46	1.66	1.66	14.24	13.42	272.8	290.25	3.36	3.17	4.03	4.03
Dawson County	D4	RM 109.54	73418.83	2-yr	1526.48	639.35	635.3	1.6	1.59	13.24	12.66	287.56	303.68	3.31	3.17	4.05	4.05
Dawson County	D4	RM 109.37	73150.54	2-yr	1526.48	639.2	635.17	1.83	1.71	16.88	14	224.7	301.67	3.57	2.96	4.03	4.03
Dawson County	D4	RM 109.19	72864.56	2-yr	1526.48	639.06	635.03	1.78	1.76	15.89	14.41	238.65	266.47	3.59	3.26	4.04	4.04
Dawson County	D4	RM 109.04	72628	2-yr	1526.48	638.86	634.92	2.12	2.1	22.42	20.34	194.23	215.83	3.71	3.36	3.95	3.95
Dawson County	D4	RM 108.86	72339.73	2-yr	1526.48	638.79	634.77	1.59	1.55	13.21	12.47	287.17	330.27	3.16	2.98	4.02	4.02
Dawson County	D4	RM 108.70	72072.36	2-yr	1526.48	638.7	634.65	1.46	1.42	11.04	10.31	291.61	348.22	3.31	3.09	4.06	4.06
Dawson County	D4	RM 108.55	71827.97	2-yr	1526.48	638.62	634.53	1.41	1.41	10.54	10.48	343.64	345.32	3.14	3.13	4.09	4.09
Dawson County	D4	RM 108.40	71587.18	2-yr	1526.48	638.46	634.41	1.75	1.75	15.14	15.04	268.12	269.88	3.26	3.24	4.05	4.05
Dawson County	D4	RM 108.25	71345.86	2-yr	1526.48	638.35	634.29	1.69	1.69	12.94	12.84	318.92	321.43	2.83	2.81	4.06	4.06
Dawson County	D4	RM 108.12	71131.88	2-yr	1526.48	638.28	634.19	1.55	1.54	12.32	11.91	289.42	300.39	3.4	3.3	4.09	4.09
Dawson County	D4	RM 107.98	70905.01	2-yr	1526.48	638.15	634.08	1.75	1.75	15.57	15.07	245.46	254.01	3.55	3.44	4.07	4.07
Dawson County	D4	RM 107.82	70651.22	2-yr	1526.48	638	633.95	1.89	1.87	18.14	17.55	231.93	241.85	3.48	3.37	4.04	4.04
Dawson County	D4	RM 107.68	70418.24	2-yr	1526.48	637.86	633.84	1.93	1.89	18.71	16.99	219.72	247.43	3.59	3.26	4.03	4.03
Dawson County	D4	RM 107.50	70132.11	2-yr	1526.48	637.74	633.17	1.78	1.72	15.93	13.93	239.71	284.22	3.55	3.12	4.57	4.57
Dawson County	D4	RM 107.31	69834.56	2-yr	1526.48	637.58	633.23	1.82	1.8	17.34	16.44	264.38	282.5	3.16	3.01	4.35	4.35
Dawson County	D4	RM 107.13	69541.52	2-yr	1526.48	637.41	633.98	1.76	1.72	17.11	16.13	322.33	352.16	2.67	2.52	3.43	3.43
Dawson County	D5	RM 106.98	69305.02	2-yr	1529.31	637.31	634.16	1.46	1.43	12.25	11.98	421.85	449.09	2.42	2.37	3.15	3.15
Dawson County	D5	RM 106.85	69065.27	2-yr	1529.31	637.19	633.6	1.43	1.41	11.77	11.33	409.01	468.54	2.4	2.31	3.59	3.59
Dawson County	D5	RM 106.65	68764.02	2-yr	1529.31	636.98	632.98	1.71	1.66	15.12	14.22	313.36	371.58	2.62	2.47	4	4
Dawson County	D5	RM 106.47	68475.87	2-yr	1529.31	636.8	632.51	1.72	1.65	16.37	11.93	307.26	471.87	2.69	1.96	4.29	4.29
Dawson County	D5	RM 106.28	68173.97	2-yr	1529.31	636.56	631.71	2.03	1.84	21.05	13.87	204.05	365.61	3.45	2.28	4.85	4.85
Dawson County	D5	RM 106.10	67879.83	2-yr	1529.31	636.37	631.29	2.04	1.74	21.84	13.3	206.53	457.14	3.14	1.92	5.08	5.08
Dawson County	D5	RM 105.89	67550.49	2-yr	1529.31	636.19	631.76	1.84	1.61	18.09	11.33	226.74	498.44	3.03	1.9	4.43	4.43
Dawson County	D5	RM 105.74	67300.35	2-yr	1529.31	636.05	632.3	1.78	1.36	16.79	10.45	203.14	589.07	3.06	1.91	3.75	3.75
Dawson County	D5	RM 105.54	66973.54	2-yr	1529.31	635.75	632.17	2.2	1.74	26.06	14.4	147.79	551.79	2.9	1.61	3.58	3.58
Dawson County	D5	RM 105.30	66609.03	2-yr	1529.31	635.57	632.29	1.45	1.26	12.46	9.67	219.79	716.12	2.18	1.69	3.45	3.45
Dawson County	D5	RM 105.06	66212.24	2-yr	1529.31	635.41	631.19	1.51	1.43	13.57	12.26	181.11	737.03	2.18	1.97	4.22	4.22
Dawson County	D5	RM 104.89	65945.5	2-yr	1529.31	635.16	631.5	1.57	1.61	15.47	14.36	205.74	651.13	1.85	1.72	3.74	3.74
Dawson County	D5	RM 104.77	65742.33	2-yr	1529.31	635.02	631.67	1.72	1.56	16.35	9.6	125.62	664.89	2.69	1.58	4.31	4.31
Dawson County	D5	RM 104.64	65530.83	2-yr	1529.31	634.94	632.1	1.44	1.33	11.93	9	171.74	693.27	2.46	1.84	3.98	3.98
Dawson County	D5	RM 104.43	65180.62	2-yr	1529.31	634.81	631.56	1.15	1.1	8.77	7.67	361.11	1003.57	1.58	1.39	4.02	4.02
Dawson County	D5	RM 104.26	64906.83	2-yr	1529.31	634.69	631.59	1.04	0.98	6.58	5.4	218.58	966.84	1.97	1.61	4.05	4.05
Dawson County	D5	RM 104.10	64643.2	2-yr	1529.31	634.58	630.81	1.15	1.21	7.43	5.92	150.64	617.27	2.55	2.04	4.14	4.14
Dawson County	D5	RM 103.95	64410.06	2-yr	1529.31	634.5	631.24	1.3	1.32	9.78	5.95	185.01	825.62	2.3	1.41	4.68	4.68
Dawson County	D5	RM 103.68	63957.56	2-yr	1529.31	634.37	629.68	1.47	1.34	11.97	5.72	188.7	893.24	2.67	1.28	4.93	4.93
Dawson County	D5	RM 103.48	63615.6	2-yr	1529.31	634.27	630.4	1.58	1.37	13.31	7.37	152.39	665.25	3.04	1.68	4.76	4.76
Dawson County	D5	RM 103.26	63259.44	2-yr	1529.31	634.19	630.13	1.43	1.26	10.75	5.4	172.78	786.92	3.09	1.55	4.78	4.78
Dawson County	D5	RM 102.58	62131.5	2-yr	1529.31	634	629.72	1.26	1.16	8.4	6.04	178.73	595.88	3.07	2.21	4.32	4.32
Dawson County	D5	RM 102.44	61920.83	2-yr	1529.31	633.88	629.74	1.6	1.52	13.58	10.81	255.44	415.16	3.04	2.43	4.14	4.14
Dawson County	D5	RM 102.31	61720.14	2-yr	1529.31	633.73	629.03	1.94	1.79	19.93	14.04	200.53	389.21	3.09	2.19	4.7	4.7
Dawson County	D5	RM 102.15	61456.58	2-yr	1529.31	633.6	629.39	1.8	1.58	16.78	11.91	201.3	412.01	3.29	2.34	4.21	4.21
Dawson County	D5	RM 102.00	61217.89	2-yr	1529.31	633.5	629.48	1.6	1.48	14.01	11.11	267.9	470.58	2.75	2.19	4.02	4.02
Dawson County	D5	RM 101.84	60967.97	2-yr	1529.31	633.38	629.23	1.65	1.28	14.71	8.27	155.67	819.72	2.86	1.61	4.15	4.15
Dawson County	D5	RM 101.60	60582.61	2-yr	1529.31	633.21	628.87	1.36	1.24	10.21	8.07	336.08	570	2.73	2.16	4.34	4.34
Dawson County	D5	RM 101.45	60336.09	2-yr	1529.31	633.04	629.16	1.72	1.64	15.32	12.71	251.39	341.52	3.28	2.72	3.88	3.88
Dawson County	D5	RM 101.25	60019.5	2-yr	1529.31	632.85	627.81	1.89	1.82	18.09	15.28	209.15	283.24	3.51	2.97	5.04	5.04
Dawson County	D5	RM 101.09	59759.25	2-yr	1529.31	632.72	627.99	1.87	1.78	17.96	15.42	216.65	296.44	3.36	2.9	4.73	4.73
Dawson County	D5	RM 100.88	59426.42	2-yr	1529.31	632.57	627.86	1.83	1.61	16.92	11.25	196.58	402.97	3.54	2.35	4.71	4.71
Dawson County	D5	RM 100.67	59075.4	2-yr	1529.31	632.37	627.1	2.04	1.71	20.22	12.42	151.88	361.62	4.02	2.48	5.27	5.27
Dawson County	D5	RM 100.46	58743.44	2-yr	1529.31	632.27	627.92	1.61	1.35	13.21	7.89	202.94	542.13	3.48	2.08	4.35	4.35
Dawson County	D5	RM 100.25	58401.49	2-yr	1529.31	632.08	627.57	1.83	1.66	16.94	10.4	196.17	425.6	3.52	2.16	4.51	4.51
Dawson County	D5	RM 100.05	58077.55	2-yr	1529.31	631.94	626.86	1.78	1.59	15.92	11.52	176.97	372.42	3.58	2.59	5.08	5.08
Dawson County	D5	RM 99.87	57778.81	2-yr	1529.31	631.74	626.4	1.83	1.83	18.36	18.04	301.61	307.58	2.77	2.72	5.34	5.34
Dawson County	D5	RM 99.68	57474.16	2-yr	1529.31	631.6	626.29	1.7	1.65	14.42	12.55	246.92	294.2	3.61	3.16	5.31	5.31
Dawson County	D5	RM 99.49	57160.47	2-yr	1529.31	631.41	626.53	1.94	1.89	18.82	16.66	218.38	254.24	3.59	3.19	4.88	4.88
Dawson County	D5	RM 99.30	56863.46	2-yr	1529.31	631.28	627.26	1.75	1.73	15.87	12.92	267.93	332.26	3.26	2.66	4.02	4.02
Dawson County	D5	RM 99.13	56566.63	2-yr	1529.31	631.15	626.77	1.62	1.57	13.74	10.37	293.66	405.25	3.18	2.4	4.38	4.38

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	2-yr	1529.31	631.01	626.63	1.58	1.53	13.54	11.23	339.1	424.16	2.82	2.35	4.38	4.38
Dawson County	D5	RM 98.71	55911.87	2-yr	1529.31	630.79	626.34	1.75	1.7	16.92	14.7	322.21	385.95	2.67	2.33	4.45	4.45
Dawson County	D5	RM 98.57	55680.2	2-yr	1529.31	630.62	626.1	1.84	1.72	18.66	12.95	297.01	496.83	2.72	1.88	4.52	4.52
Dawson County	D5	RM 98.35	55325.95	2-yr	1529.31	630.38	625.91	1.94	1.83	18.96	10.93	216.82	412.39	3.53	2.03	4.47	4.47
Dawson County	D5	RM 98.19	55066.09	2-yr	1529.31	630.24	624.42	1.96	1.77	18.63	10.02	184	394.39	4.05	2.19	5.82	5.82
Dawson County	D5	RM 97.99	54752.97	2-yr	1529.31	630.08	625.04	1.91	1.82	18.66	11.06	236.53	421.8	3.37	2	5.04	5.04
Dawson County	D5	RM 97.84	54493.48	2-yr	1529.31	629.98	625.39	1.66	1.64	14.46	11.73	292.51	366.2	3.15	2.55	4.59	4.59
Dawson County	D5	RM 97.68	54241.32	2-yr	1529.31	629.83	624.99	1.73	1.59	16.95	12.38	340.05	523.42	2.53	1.84	4.84	4.84
Dawson County	D5	RM 97.48	53918.21	2-yr	1529.31	629.58	624.81	1.83	1.65	18.22	13.56	280.41	543.58	2.29	1.71	4.77	4.77
Dawson County	D5	RM 97.28	53585.68	2-yr	1529.31	629.35	625.86	1.58	1.56	14.65	13.26	328.8	479.68	2.3	2.09	3.9	3.9
Dawson County	D5	RM 97.08	53263.89	2-yr	1529.31	629.1	625.27	1.89	1.77	19.15	15.51	209.17	356.48	2.99	2.43	3.83	3.83
Dawson County	D5	RM 96.94	53030.11	2-yr	1529.31	628.89	623.97	2.11	1.96	24.13	18.27	199.17	360.74	2.85	2.16	4.92	4.92
Dawson County	D5	RM 96.77	52762.2	2-yr	1529.31	628.69	623.51	1.99	1.85	21.57	17.85	202.34	355.35	2.81	2.33	5.18	5.18
Dawson County	D5	RM 96.55	52403.59	2-yr	1529.31	628.39	624.57	2.21	1.87	25.87	14.24	160.42	482.26	3.08	1.7	3.82	3.82
Dawson County	D5	RM 96.35	52079.12	2-yr	1529.31	628.34	625.39	0.94	1.02	5.62	6.24	290.07	764.21	1.8	2.01	4.87	4.87
Dawson County	D5	RM 96.17	51777.74	2-yr	1529.31	628.1	624.71	1.77	1.7	17.88	15.99	130.42	402.94	2.48	2.23	3.72	3.72
Dawson County	D5	RM 96.00	51500.38	2-yr	1529.31	627.91	624.3	1.73	1.63	16.77	14.72	122.42	413.16	2.57	2.26	3.61	3.61
Dawson County	D5	RM 95.79	51156.87	2-yr	1529.31	627.77	624.35	1.24	1.29	9.16	9.21	284.94	526.4	2.23	2.25	3.52	3.52
Dawson County	D5	RM 95.60	50859.75	2-yr	1529.31	627.65	622.97	1.36	1.24	10.28	7.29	223.94	643.4	2.7	1.92	4.68	4.68
Dawson County	D5	RM 95.40	50547.92	2-yr	1529.31	627.56	623.13	1.17	1.09	7.54	5.36	377.96	713.58	2.74	1.96	4.43	4.43
Dawson County	D5	RM 95.21	50245.97	2-yr	1529.31	627.44	622.21	1.49	1.22	11.15	4.58	217.6	863.36	3.54	1.45	5.23	5.23
Dawson County	D5	RM 95.04	49971.19	2-yr	1529.31	627.28	621.68	1.93	1.61	19.16	8.64	165.94	629.94	3.35	1.51	5.59	5.59
Dawson County	D5	RM 94.88	49717.07	2-yr	1529.31	627.17	621.44	1.86	1.2	17.52	6.2	151.01	1067.49	3.49	1.23	5.72	5.72
Dawson County	D5	RM 94.71	49446.9	2-yr	1529.31	627.09	621.69	1.34	1.07	9.58	5.49	234.28	1199.31	3.07	1.76	5.41	5.41
Dawson County	D5	RM 94.58	49286.95	2-yr	1529.31	627.1	618.6	0.69	0.69	2.18	2.18	456.42	799.55	4.85	4.85	8.51	8.51
Dawson County	D5	RM 94.57	49255.56	2-yr	1529.31	627.08	618.63	0.92	0.92	3.89	3.87	360.5	407.43	4.62	4.61	8.45	8.45
Dawson County		RM 94.55	49216.94	2-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	2-yr	1529.31	626.86	620.63	1.67	1.67	13.83	13.83	253.83	383.35	3.6	3.6	6.23	6.23
Dawson County	D5	RM 94.52	49157.18	2-yr	1529.31	626.86	620.89	1.52	1.52	11.76	11.76	283.85	415.78	3.53	3.53	5.97	5.97
Dawson County	D6	RM 94.42	48998.19	2-yr	1529.31	626.69	621.76	2.03	2.02	21.02	19.77	219.93	239.46	3.43	3.22	4.93	4.93
Dawson County	D6	RM 94.30	48806.79	2-yr	1534.69	626.54	621.22	2.05	2.05	23.48	23.29	283.41	285.71	2.64	2.62	5.32	5.32
Dawson County	D6	RM 94.20	48653.06	2-yr	1534.69	626.44	621.41	1.94	1.9	20.33	15.05	261.89	362.11	3.01	2.23	5.03	5.03
Dawson County	D6	RM 94.08	48445.46	2-yr	1534.69	626.41	622.37	1.4	1.39	10.16	8.96	336.54	384.86	3.26	2.87	4.04	4.04
Dawson County	D6	RM 93.96	48246.42	2-yr	1534.69	626.29	621.88	1.62	1.61	14.25	13.33	330.28	354.93	2.86	2.68	4.41	4.41
Dawson County	D6	RM 93.83	48030.25	2-yr	1534.69	626.13	620.28	1.87	1.85	17.76	15.61	237.8	272.98	3.45	3.04	5.85	5.85
Dawson County	D6	RM 93.68	47782.89	2-yr	1534.69	625.94	620.19	2.11	2.06	22.08	16.04	191.53	270.87	3.78	2.75	5.75	5.75
Dawson County	D6	RM 93.57	47606.95	2-yr	1534.69	625.77	620.08	2.32	2.28	27.09	20.44	184.03	248.43	3.59	2.71	5.68	5.68
Dawson County	D6	RM 93.53	47552.11	2-yr	1534.69	625.74	620.21	2.2	2.14	23.93	17.98	184.33	252.15	3.78	2.84	5.53	5.53
Dawson County			47536.14	2-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	2-yr	1534.69	625.59	620.33	2.25	2.2	25.02	18.96	180.48	243.48	3.77	2.86	5.26	5.26
Dawson County	D6	RM 93.47	47460.74	2-yr	1534.69	625.55	618.63	2.19	2.16	23.96	20.83	189.97	221.84	3.68	3.2	6.92	6.92
Dawson County	D6	RM 93.43	47382.46	2-yr	1534.69	625.52	619.44	2.05	2.04	20.44	18.25	187.75	211.79	3.98	3.56	6.08	6.08
Dawson County		RM 93.415	47357.71	2-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	2-yr	1534.69	625.49	620.19	1.95	1.94	18.68	16.39	200.23	233.12	3.92	3.44	5.3	5.3
Dawson County	D6	RM 93.36	47287.92	2-yr	1534.69	625.48	620.47	1.82	1.81	16.19	12.96	213.34	268.66	3.95	3.16	5.01	5.01
Dawson County	D6	RM 93.25	47111.44	2-yr	1534.69	625.33	621.12	2.06	2.03	25.31	21.87	228.84	269.69	3.24	2.8	4.21	4.21
Dawson County	D6	RM 93.05	46807.77	2-yr	1534.69	625.19	621.74	1.68	1.58	14.95	10.97	282.71	476.44	3.13	2.3	3.45	3.45
Dawson County	D6	RM 92.93	46606.31	2-yr	1534.69	625.04	621.34	1.83	1.79	18.36	15.76	304.48	517.8	2.75	2.36	3.7	3.7
Dawson County	D6	RM 92.83	46460.06	2-yr	1534.69	624.92	621.02	1.93	1.9	18.36	17.36	314.44	454.26	2.51	2.38	3.9	3.9
Dawson County	D6	RM 92.71	46261.84	2-yr	1534.69	624.81	620.37	1.79	1.7	15.07	13.38	314.35	439.15	2.66	2.37	4.44	4.44
Dawson County	D6	RM 92.59	46079.79	2-yr	1534.69	624.74	620.95	1.59	1.58	13.86	13.44	319.56	377.61	3.02	2.93	3.78	3.78
Dawson County	D6	RM 92.50	45933.81	2-yr	1534.69	624.63	620.75	1.73	1.73	16.33	16.33	319.67	369.54	2.78	2.78	3.88	3.88
Dawson County	D6	RM 92.39	45753.94	2-yr	1534.69	624.53	620.58	1.71	1.71	15.67	14.08	298.76	362.1	3	2.69	3.95	3.95
Dawson County	D6	RM 92.29	45591.17	2-yr	1534.69	624.45	620.64	1.69	1.65	15.03	13.44	293.81	386.46	3.08	2.75	3.81	3.81
Dawson County	D6	RM 92.18	45414.13	2-yr	1534.69	624.38	620.23	1.44	1.43	11.17	10	357.23	451.22	2.97	2.66	4.15	4.15
Dawson County		RM 92.14	45354.08	2-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	2-yr	1534.69	624.13	620.04	1.48	1.47	11.86	11.2	364.47	526.32	2.85	2.69	4.09	4.09
Dawson County	D6	RM 92.06	45238.47	2-yr	1534.69	624.06	620.12	1.66	1.61	15.45	13.75	354.34	451.33	2.59	2.3	3.94	3.94
Dawson County	D6	RM 91.99	45117.89	2-yr	1534.69	624.02	619.81	1.47	1.43	12.42	11.69	369.8	567.97	2.39	2.25	4.21	4.21
Dawson County	D6	RM 91.85	44886.16	2-yr	1534.69	623.93	619.7	1.3	1.27	10.26	7.77	238.38	641.09	2.96	2.25	4.23	4.23
Dawson County	D6	RM 91.77	44752.88	2-yr	1534.69	623.86	619.28	1.36	1.32	13.44	9.26	224.91	634.14	2.66	1.84	4.58	4.58

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	2-yr	1534.69	623.72	619	1.62	1.42	13.24	8.87	148.19	454.66	3.55	2.38	4.72	4.72
Dawson County	D6	RM 91.45	44219.47	2-yr	1534.69	623.61	618.66	1.61	1.54	13.94	12.28	189.07	330.63	3.42	3.01	4.95	4.95
Dawson County	D6	RM 91.31	43987.79	2-yr	1534.69	623.44	618.98	1.83	1.83	17.7	17.45	271.16	277.11	3.09	3.05	4.46	4.46
Dawson County	D6	RM 91.11	43666.49	2-yr	1534.69	623.27	618.54	1.85	1.83	16.9	15.76	219.42	239.82	3.78	3.53	4.73	4.73
Dawson County	D6	RM 90.97	43442.55	2-yr	1534.69	623.14	618.3	1.93	1.89	18.91	16.12	224.14	286.57	3.53	3.02	4.84	4.84
Dawson County	D6	RM 90.76	43114.74	2-yr	1534.69	622.95	618.97	1.86	1.85	22.07	21.21	265.15	277.57	3.11	2.99	3.98	3.98
Dawson County	D6	RM 90.59	42823.65	2-yr	1534.69	622.8	618.64	1.75	1.5	16.06	9.08	232.7	743.52	3.13	1.77	4.16	4.16
Dawson County	D6	RM 90.43	42564.46	2-yr	1534.69	622.5	618.18	2.26	2.08	27.19	21.36	208.77	311.27	3	2.37	4.32	4.32
Dawson County	D6	RM 90.29	42331.05	2-yr	1534.69	622.37	618.21	1.91	1.81	19.13	14.63	236.08	347.77	3.19	2.44	4.16	4.16
Dawson County	D6	RM 90.16	42118.24	2-yr	1534.69	622.23	618.54	1.96	1.81	20.06	14.85	229.61	359.89	3.17	2.36	3.69	3.69
Dawson County	D6	RM 89.96	41795.66	2-yr	1534.69	622.07	618.08	1.64	1.62	14.98	13.25	346.39	407.5	2.68	2.37	3.99	3.99
Dawson County	D6	RM 89.83	41589.45	2-yr	1534.69	621.8	617.17	2.24	2.16	26.21	20.51	211.95	283.34	3.19	2.51	4.63	4.63
Dawson County	D6	RM 89.65	41302.33	2-yr	1534.69	621.56	618.15	2.16	2.11	25.43	23.12	251.93	285.49	2.79	2.55	3.41	3.41
Dawson County	D6	RM 89.46	41003.8	2-yr	1534.69	621.41	617.56	1.82	1.78	16.89	15.14	236.74	272.74	3.52	3.16	3.85	3.85
Dawson County	D6	RM 89.29	40732.3	2-yr	1534.69	621.34	617.42	1.53	1.35	12.24	8.74	253.25	491.25	3.24	2.31	3.91	3.91
Dawson County	D6	RM 89.13	40476.68	2-yr	1534.69	621.18	617.29	1.76	1.68	15.86	13.73	231.92	311.68	3.39	2.93	3.89	3.89
Dawson County	D6	RM 88.96	40193.97	2-yr	1534.98	621.06	617.14	1.75	1.6	15.18	12.01	186.73	315.45	3.85	3.03	3.91	3.91
Dawson County	D7	RM 88.77	39887.75	2-yr	1534.98	620.88	616.98	1.84	1.77	17.74	14.52	260.04	351.88	3.15	2.58	3.9	3.9
Dawson County	D7	RM 88.58	39581.56	2-yr	1534.98	620.63	616.82	2.14	2.02	22.9	16.72	185.88	279.94	3.74	2.71	3.81	3.81
Dawson County	D7	RM 88.44	39345.29	2-yr	1534.98	620.48	616.7	2.14	2.01	22.9	17.49	181.67	297.61	3.77	2.86	3.78	3.78
Dawson County	D7	RM 88.25	39047.22	2-yr	1534.98	620.33	616.54	1.92	1.75	19.15	14.04	221.26	362.03	3.31	2.42	3.79	3.79
Dawson County	D7	RM 88.06	38736.32	2-yr	1534.98	620.2	616.38	1.62	1.59	13.98	12.68	305.89	353.29	3.07	2.79	3.82	3.82
Dawson County	D7	RM 87.87	38426.68	2-yr	1534.98	620.07	616.22	1.42	1.33	11.59	10.39	411.03	537.23	2.47	2.21	3.85	3.85
Dawson County	D7	RM 87.70	38161.81	2-yr	1534.98	619.97	616.08	1.55	1.19	11.94	6.38	181.73	637.16	3.88	2.03	3.89	3.89
Dawson County	D7	RM 87.52	37862.82	2-yr	1534.98	619.92	615.92	1.18	1.1	7.63	6.89	308.23	553.84	2.79	2.51	3.99	3.99
Dawson County	D7	RM 87.34	37574.69	2-yr	1534.98	619.72	615.85	1.76	1.65	16.77	12.8	253.88	422.1	2.9	2.21	3.87	3.87
Dawson County	D7	RM 87.17	37307.08	2-yr	1534.98	619.55	615.82	1.95	1.76	19.07	13.86	162.99	332.32	3.65	2.63	3.73	3.73
Dawson County	D7	RM 87.00	37023.47	2-yr	1534.98	619.41	615.79	1.71	1.65	15.85	14.44	241.45	349.36	2.94	2.67	3.63	3.63
Dawson County	D7	RM 86.82	36748.51	2-yr	1534.98	619.26	615.76	1.79	1.67	17.01	14.39	210.89	355.67	3.08	2.59	3.5	3.5
Dawson County	D7	RM 86.67	36501.76	2-yr	1534.98	618.99	615.73	2.35	2	29.01	19.45	151.23	357.81	3.26	2.15	3.27	3.27
Dawson County	D7	RM 86.52	36253.46	2-yr	1534.98	618.87	615.7	1.75	1.58	16.48	12.05	250.55	456.21	2.92	2.13	3.17	3.17
Dawson County	D7	RM 86.39	36046.31	2-yr	1534.98	618.7	615.59	1.99	1.67	21.62	15.11	147.45	467.56	2.86	1.97	3.12	3.12
Dawson County	D7	RM 86.24	35796.38	2-yr	1534.98	618.65	615.46	1.21	1.1	7.77	6.51	166.41	542.57	3.12	2.58	3.19	3.19
Dawson County	D7	RM 86.08	35541.56	2-yr	1534.98	618.35	615.48	2.22	2.08	27.18	22.36	152.04	328.36	2.77	2.25	2.87	2.87
Dawson County	D7	RM 85.91	35282.1	2-yr	1534.98	618.13	615.5	1.97	1.87	21.91	18.53	191.42	383.53	2.54	2.14	2.63	2.63
Dawson County	D7	RM 85.78	35075.01	2-yr	1534.98	618.11	614.9	1.17	1.12	8.07	7.26	288.53	783.68	2.29	2.05	3.21	3.21
Dawson County	D7	RM 85.59	34774.5	2-yr	1534.98	618.02	614.32	1.38	1.12	9.55	5.97	184.84	598.68	3.67	2.28	3.7	3.7
Dawson County	D7	RM 85.39	34449.3	2-yr	1534.98	617.83	614.15	1.79	1.63	16.63	13.41	219.47	356.24	3.28	2.64	3.68	3.68
Dawson County	D7	RM 85.23	34186.4	2-yr	1534.98	617.6	614.01	2.23	1.99	25.14	18.02	157.48	303.04	3.59	2.55	3.59	3.59
Dawson County	D7	RM 85.04	33863.7	2-yr	1534.98	617.47	613.84	1.72	1.58	16.2	12.23	265.03	467.76	2.77	2.08	3.63	3.63
Dawson County	D7	RM 84.89	33626.36	2-yr	1534.98	617.37	613.92	1.43	1.4	11.51	10.92	413.04	446.58	2.58	2.45	3.45	3.45
Dawson County	D7	RM 84.72	33349.5	2-yr	1534.98	617.22	613.77	1.54	1.54	13.06	12.87	353.9	360.07	2.81	2.77	3.45	3.45
Dawson County	D7	RM 84.57	33104.21	2-yr	1534.98	617.09	613.45	1.62	1.62	13.79	13.52	294.82	301.64	3.2	3.15	3.65	3.65
Dawson County	D7	RM 84.41	32856.7	2-yr	1534.98	616.98	613.32	1.61	1.6	13.74	13.16	312.69	329.44	3.05	2.92	3.67	3.67
Dawson County	D7	RM 84.22	32552.24	2-yr	1534.98	616.84	613.16	1.65	1.5	14.43	11.12	261.68	436.03	3.06	2.35	3.69	3.69
Dawson County	D7	RM 84.05	32270.74	2-yr	1534.98	616.68	613.14	1.8	1.61	16.78	12.91	206.16	371.79	3.33	2.56	3.54	3.54
Dawson County	D7	RM 83.89	32017.88	2-yr	1534.98	616.49	613.11	1.96	1.81	19.93	15.17	191.2	337.41	3.31	2.52	3.39	3.39
Dawson County	D7	RM 83.73	31759.16	2-yr	1534.98	616.36	613.07	1.76	1.6	16.91	11.99	240.43	471.33	2.88	2.03	3.28	3.28
Dawson County	D7	RM 83.53	31426.04	2-yr	1534.98	616.25	613.01	1.38	1.26	10.3	8.47	304.2	516.66	2.87	2.35	3.23	3.23
Dawson County	D7	RM 83.39	31213.34	2-yr	1534.98	616.15	612.95	1.57	1.39	13.19	9.74	189.12	504.36	2.99	2.19	3.19	3.19
Dawson County	D7	RM 83.21	30910.79	2-yr	1534.98	616.03	612.91	1.45	1.27	11.14	8.14	170.07	543.17	3.09	2.23	3.25	3.25
Dawson County	D7	RM 83.05	30660.14	2-yr	1534.98	615.94	612.78	1.3	1.2	9.06	7.15	229.1	542.3	2.97	2.36	3.48	3.48
Dawson County	D7	RM 82.94	30491.79	2-yr	1534.98	615.88	612.69	1.3	1.26	9.18	7.87	219.21	485.8	2.93	2.51	3.49	3.49
Dawson County	D7	RM 82.81	30280.45	2-yr	1534.98	615.76	612.58	1.46	1.44	11.83	10.45	178.49	437.78	2.75	2.43	3.6	3.6
Dawson County	D7	RM 82.68	30058.39	2-yr	1534.98	615.66	612.34	1.57	1.43	12.84	9.06	152.77	462.41	3.32	2.32	3.56	3.56
Dawson County	D7	RM 82.51	29786.14	2-yr	1534.98	615.62	612.1	1.14	1.09	6.82	5.09	229.35	595.96	3.19	2.37	3.77	3.77
Dawson County	D7	RM 82.33	29497.12	2-yr	1534.98	615.56	611.87	1.22	1.11	7.7	3.9	246.73	836.47	3.33	1.66	3.81	3.81
Dawson County	D7	RM 82.22	29323.27	2-yr	1534.98	615.46	611.66	1.55	1.29	12.27	5.22	193.52	816.82	3.44	1.45	3.81	3.81
Dawson County	D7	RM 82.06	29049.94	2-yr	1534.98	615.4	611.37	1.41	1.16	9.95	4.91	202.97	737.05	3.69	1.79	4.03	4.03
Dawson County	D7	RM 81.91	28820.21	2-yr	1534.98	615.36	611.21	1.35	1.1	8.93	4.73	191.58	661.8	4.02	2.11	4.14	4.14
Dawson County	D7	RM 81.71	28446.75	2-yr	1534.98	615.3	611.02	1.11	0.95	5.9	3.6	220.81	646.73	4.08	2.49	4.28	4.28

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	2-yr	1534.98	615.05	610.8	2.04	1.82	19.87	13.8	165.37	287.51	4.24	2.93	4.25	4.25
Dawson County	D7	RM 81.31	27735.46	2-yr	1534.98	614.53	610.65	3.06	3.04	46.56	43.33	131.98	142.74	3.8	3.54	3.88	3.88
Dawson County	D8	RM 81.10	27398.33	2-yr	1534.98	614.25	610.47	2.59	2.48	33.65	26.59	160.09	213.45	3.68	2.9	3.78	3.78
Dawson County	D8	RM 80.94	27148.21	2-yr	1534.98	614.19	610.34	1.89	1.89	18.08	17.41	225.85	234.58	3.59	3.47	3.84	3.84
Dawson County	D8	RM 80.76	26855.69	2-yr	1534.98	614.11	610.19	1.61	1.41	12.74	7.81	181.68	459.33	3.92	2.37	3.92	3.92
Dawson County	D8	RM 80.64	26669.58	2-yr	1534.98	614.03	610.09	1.64	1.54	13.44	10.93	209.02	330.63	3.71	3.01	3.94	3.94
Dawson County	D8	RM 80.45	26373.01	2-yr	1534.98	613.99	609.94	1.33	1.02	8.73	4.91	122.9	883.68	3.92	2.14	4.06	4.06
Dawson County	D8	RM 80.17	25926.88	2-yr	1534.98	613.84	609.71	1.73	1.41	14.47	8.26	146.98	474.55	4.12	2.3	4.13	4.13
Dawson County	D8	RM 79.91	25496.94	2-yr	1534.98	613.74	609.42	1.24	1.23	7.87	6.98	362.06	410.33	3.42	3.04	4.32	4.32
Dawson County	D8	RM 79.43	24626.85	2-yr	1534.98	613.51	609.14	1.37	1.34	9.19	7.51	288.84	369.12	3.88	3.16	4.37	4.37
Dawson County	D8	RM 79.23	24229.4	2-yr	1534.98	613.22	608.87	2.13	2.13	22.05	21.94	172.73	173.59	4.17	4.15	4.35	4.35
Dawson County	D8	RM 78.27	22640.58	2-yr	1534.98	612.38	608.6	1.85	1.59	17.97	10.86	226.68	496.49	3.25	1.95	3.78	3.78
Dawson County	D8	RM 78.12	22398.86	2-yr	1534.98	612.28	608.48	1.74	1.5	15.85	10.49	222.94	478.07	3.25	2.14	3.8	3.8
Dawson County	D8	RM 77.97	22135.34	2-yr	1534.98	612.17	608.34	1.71	1.57	14.82	10.35	214.67	389.66	3.6	2.51	3.82	3.82
Dawson County	D8	RM 77.79	21831.85	2-yr	1534.98	612.04	608.18	1.6	1.49	14.39	11.24	321.49	510.51	2.58	2.02	3.86	3.86
Dawson County	D8	RM 77.57	21474.71	2-yr	1534.98	611.85	608	1.69	1.61	14.5	12.19	250.08	327.61	3.47	2.91	3.85	3.85
Dawson County	D8	RM 77.38	21170.35	2-yr	1534.98	611.67	607.84	1.89	1.79	18.08	14.94	215.18	291.38	3.56	2.94	3.83	3.83
Dawson County	D8	RM 77.13	20780.17	2-yr	1534.98	611.58	607.63	1.48	1.24	11.04	7.63	188.55	505.39	3.58	2.45	3.95	3.95
Dawson County	D8	RM 77.00	20442.34	2-yr	1534.98	611.44	607.46	1.79	1.48	15.86	9.71	131.82	441.76	3.97	2.35	3.98	3.98
Dawson County	D8	RM 76.90	20124.49	2-yr	1534.98	611.36	607.29	1.57	1.35	12.11	8.71	153.24	399.46	4.06	2.84	4.07	4.07
Dawson County	D8	RM 76.76	19785.25	2-yr	1534.98	611.31	607.12	1.21	1.13	7.25	6.2	269.03	423.81	3.75	3.2	4.19	4.19
Dawson County	D8	RM 76.63	19501.04	2-yr	1534.98	611.22	606.97	1.37	1.29	9.79	8.53	246.86	419.09	3.28	2.84	4.25	4.25
Dawson County	D8	RM 76.37	19137.53	2-yr	1534.98	611.09	606.78	1.47	1.46	10.72	8.69	272.76	340.17	3.82	3.1	4.31	4.31
Dawson County	D8	RM 76.22	18884.28	2-yr	1534.98	611	606.65	1.52	1.5	11.25	9.94	253.7	291.46	3.97	3.52	4.36	4.36
Dawson County	D8	RM 76.00	18519.22	2-yr	1534.98	610.83	606.61	1.78	1.74	15.62	12.89	225.2	280.07	3.82	3.15	4.22	4.22
Dawson County	D8	RM 75.75	18119.45	2-yr	1534.98	610.6	606.58	1.96	1.92	19.11	15.06	209.51	272.98	3.73	2.93	4.02	4.02
Dawson County	D8	RM 75.56	17818.36	2-yr	1534.98	610.48	606.75	1.68	1.67	15.03	13.58	303.99	338.29	3.01	2.72	3.73	3.73
Dawson County	D8	RM 75.31	17411.3	2-yr	1534.98	610.33	606.34	1.54	1.49	11.97	10.78	263.12	322.57	3.53	3.19	3.99	3.99
Dawson County	D8	RM 75.13	17092.44	2-yr	1534.98	610.22	606.17	1.49	1.43	11.43	8.79	306.22	416.13	3.35	2.57	4.05	4.05
Dawson County	D8	RM 74.90	16719.46	2-yr	1534.98	609.97	605.98	1.94	1.86	19.27	14.42	224.87	317.46	3.48	2.6	3.99	3.99
Dawson County	D8	RM 74.65	16308.2	2-yr	1534.98	609.84	605.91	1.54	1.41	12.16	8.71	267.86	441.8	3.45	2.47	3.93	3.93
Dawson County	D8	RM 74.37	15846.14	2-yr	1534.98	609.58	605.85	1.86	1.61	18.31	12.31	221.55	458.69	3.11	2.08	3.73	3.73
Dawson County	D8	RM 74.13	15464.97	2-yr	1534.98	609.42	605.82	1.58	1.42	13.1	9.62	235.57	458.07	3.22	2.36	3.6	3.6
Dawson County	D8	RM 73.91	15098.01	2-yr	1534.98	609.29	605.99	1.38	1.27	10.31	7.67	283.69	567.13	2.87	2.14	3.3	3.3
Dawson County	D8	RM 73.71	14783.86	2-yr	1534.98	609.19	605.87	1.3	1.22	9.15	7.44	292.2	550.46	2.93	2.38	3.32	3.32
Dawson County	D8	RM 73.53	14496.67	2-yr	1534.98	609.09	605.72	1.33	1.23	9.33	7.11	249.62	971.08	3.1	2.36	3.37	3.37
Dawson County	D8	RM 73.29	14096.19	2-yr	1534.98	608.77	605.51	2.13	1.95	23.79	16.47	198.62	368.28	3.16	2.18	3.26	3.26
Dawson County	D8	RM 73.07	13729.79	2-yr	1534.98	608.45	605.52	2.18	2.07	25.75	19.33	196.15	344.86	2.87	2.15	3.2	3.2
Dawson County	D8	RM 72.97	13573.93	2-yr	1534.98	608.26	605.5	2.32	2.19	29.87	22.14	199.11	349.56	2.7	2	3.09	3.09
Dawson County	D8	RM 72.91	13479.91	2-yr	1534.98	608.17	605.45	2.22	2.12	27.75	22.49	221.07	428.85	2.59	2.11	3	3
Dawson County		RM 72.905	13470.04	2-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	2-yr	1534.98	607.54	605.31	2.91	2.84	50.79	45.66	208.91	327.42	2.11	1.9	2.37	2.37
Dawson County	D8	RM 72.83	13354.45	2-yr	1534.98	607.51	604.9	2.06	1.99	24.37	22.24	264.12	376.7	2.37	2.17	2.61	2.61
Dawson County	D8	RM 72.62	13000.82	2-yr	1534.98	607.22	604.4	1.85	1.78	19.24	16.75	295.23	409.26	2.59	2.26	2.83	2.83
Dawson County	D8	RM 72.37	12609.05	2-yr	1534.98	606.85	603.89	2.1	1.91	24.24	18.08	228.58	411.12	2.77	2.06	2.96	2.96
Dawson County	D8	RM 72.16	12261.75	2-yr	1534.98	606.55	603.69	2.01	1.93	22.6	19.12	286.3	407.28	2.58	2.18	2.86	2.86
Dawson County	D8	RM 71.92	11875.08	2-yr	1534.98	606.32	603.18	1.61	1.57	14.47	12.84	338.88	432.77	2.66	2.36	3.14	3.14
Dawson County	D8	RM 71.69	11512.65	2-yr	1534.98	606.08	602.95	1.76	1.7	17.1	15.07	303.44	393.97	2.74	2.42	3.13	3.13
Dawson County	D8	RM 71.49	11192.6	2-yr	1534.98	605.92	602.03	1.72	1.65	14.88	12.12	237.66	341.73	3.56	2.9	3.89	3.89
Dawson County	D8	RM 71.31	10913.3	2-yr	1534.98	605.8	601.99	1.72	1.63	15.15	11.9	244.59	371.23	3.42	2.69	3.81	3.81
Dawson County	D9	RM 71.10	10567.75	2-yr	1534.98	605.66	602.11	1.6	1.42	13.74	10.65	197.48	482.63	3.04	2.34	3.56	3.56
Dawson County	D9	RM 70.91	10267.7	2-yr	1534.98	605.47	602.05	1.85	1.65	17.75	12.94	126.11	408.34	3.35	2.42	3.43	3.43
Dawson County	D9	RM 70.72	9968.939	2-yr	1534.98	605.34	601.91	1.8	1.6	16.65	12.13	153.16	411.84	3.42	2.44	3.43	3.43
Dawson County	D9	RM 70.50	9603.574	2-yr	1534.98	605.19	601.9	1.59	1.46	13.75	11.14	251.24	468.26	2.89	2.34	3.28	3.28
Dawson County	D9	RM 70.27	9238.535	2-yr	1534.98	604.92	601.31	1.91	1.86	18.89	16.86	236.79	280.94	3.29	2.94	3.61	3.61
Dawson County	D9	RM 70.08	8928.013	2-yr	1534.98	604.76	600.85	1.81	1.73	16.86	13.72	234.44	319.43	3.43	2.79	3.92	3.92
Dawson County	D9	RM 69.79	8464.726	2-yr	1534.98	604.6	600.61	1.59	1.42	12.75	9.36	248.41	416.78	3.53	2.59	3.99	3.99
Dawson County	D9	RM 69.50	7983.226	2-yr	1534.98	604.42	600.56	1.64	1.48	13.85	9.95	237.14	432.03	3.35	2.4	3.86	3.86
Dawson County	D9	RM 69.26	7575.04	2-yr	1534.98	604.25	600.35	1.66	1.51	14.05	8.22	245.78	506.71	3.44	2.01	3.9	3.9
Dawson County	D9	RM 69.03	7206.967	2-yr	1534.98	604.14	599.95	1.52	1.28	11.42	7.44	236.36	480.82	3.83	2.49	4.18	4.18
Dawson County	D9	RM 68.82	6851.789	2-yr	1534.98	603.95	599.77	1.8	1.69	16.27	12.58	217.59	327.16	3.62	2.79	4.18	4.18

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

2-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	2-yr	1534.98	603.72	599.59	2.02	1.97	19.86	16.69	189.13	238.6	4.01	3.36	4.13	4.13
Dawson County	D9	RM 68.39	6158.879	2-yr	1534.98	603.57	599.51	1.83	1.8	17.18	16.1	241.73	269.52	3.44	3.23	4.06	4.06
Dawson County	D9	RM 68.11	5709.195	2-yr	1534.98	603.36	599.37	1.73	1.69	15.45	14.29	262.72	309.46	3.35	3.1	3.98	3.98
Dawson County	D9	RM 67.86	5308.187	2-yr	1534.98	603.14	599.17	1.94	1.76	18.81	14.2	130.41	312.11	3.81	2.82	3.98	3.98
Dawson County	D10	RM 67.57	4859.184	2-yr	1534.98	602.97	598.93	1.64	1.55	13.41	11.04	240.29	325.12	3.69	3.04	4.04	4.04
Dawson County	D10	RM 67.37	4523.862	2-yr	1534.98	602.84	598.75	1.66	1.49	13.81	9.81	224.36	395.14	3.67	2.6	4.09	4.09
Dawson County	D10	RM 67.15	4175.103	2-yr	1534.98	602.55	598.47	2.26	2.06	25.23	18.86	158.11	260.04	3.86	2.87	4.07	4.07
Dawson County	D10	RM 66.95	3842.803	2-yr	1534.98	602.39	598.2	1.92	1.67	19.06	11.1	211.57	477.95	3.33	1.93	4.19	4.19
Dawson County	D10	RM 66.74	3505.323	2-yr	1534.98	602.24	598.12	1.81	1.59	16.09	10.24	189.78	384.78	3.98	2.51	4.11	4.11
Dawson County	D10	RM 66.52	3142.889	2-yr	1534.98	602.08	598.26	1.73	1.66	15.18	13.4	249	324.1	3.5	3.1	3.83	3.83
Dawson County	D10	RM 66.28	2774.58	2-yr	1534.98	601.78	598.21	2.16	2.04	24.15	20.11	206.17	278.34	3.32	2.77	3.57	3.57
Dawson County	D10	RM 66.11	2492.331	2-yr	1534.98	601.66	597.8	1.78	1.72	16.76	14.9	269.84	336.75	3.12	2.78	3.86	3.86
Dawson County	D10	RM 65.90	2160.839	2-yr	1534.98	601.52	597.33	1.65	1.51	13.74	10.18	227.64	393.58	3.6	2.65	4.2	4.2
Dawson County	D10	RM 65.75	1926.044	2-yr	1534.98	601.41	597.2	1.73	1.51	15.89	11.75	203.78	447.31	3.15	2.31	4.21	4.21
Dawson County	D10	RM 65.60	1669.095	2-yr	1534.98	601.25	597.07	1.91	1.59	17.86	10.35	140.14	430.77	3.95	2.27	4.19	4.19
Dawson County	D10	RM 65.42	1386.836	2-yr	1534.98	601.2	596.92	1.37	1.25	9.29	7.08	247.82	427.78	3.82	2.9	4.28	4.28
Dawson County	D10	RM 65.23	1090.639	2-yr	1534.98	601.06	596.91	1.63	1.49	14.54	11.37	263.18	494.89	2.78	2.17	4.15	4.15
Dawson County	D10	RM 64.96	634.963	2-yr	1534.98	600.9	597.09	1.41	1.17	10.27	5.57	270.22	867.79	3.29	1.78	3.81	3.81

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	2-yr	1534.8	600.73	596.42	1.14	1.04	7.14	5.55	398.12	715.39	2.77	2.15	4.32	4.32
Richland/McKenzie County	D10	RM 64.32	103200	2-yr	1534.8	600.6	596.33	1.53	1.32	12.03	6.09	232.97	707.04	3.43	1.72	4.27	4.27
Richland/McKenzie County	D10	RM 64.12	102900	2-yr	1534.8	600.55	596.18	1.21	1.09	7.78	5.23	280.44	733.8	3.02	2.02	4.37	4.37
Richland/McKenzie County	D10	RM 63.92	102601	2-yr	1534.8	600.49	596.08	1.2	0.97	7.86	4.64	272.78	968.01	2.88	1.69	4.41	4.41
Richland/McKenzie County	D10	RM 63.74	102302	2-yr	1534.8	600.43	595.94	1.24	1.04	7.96	5.04	254.65	750.74	3.27	2.06	4.49	4.49
Richland/McKenzie County	D10	RM 63.55	101998	2-yr	1534.8	600.36	595.79	1.29	1.08	8	3.29	209.6	888.23	4.13	1.68	4.57	4.57
Richland/McKenzie County	D10	RM 63.34	101671	2-yr	1534.8	600.28	595.21	1.39	1.06	10.03	4.43	241.12	989.18	3.33	1.46	5.07	5.07
Richland/McKenzie County	D10	RM 63.08	101293	2-yr	1534.8	599.81	595.12	2.62	2.18	35.03	15.64	159.68	486.22	3.53	1.56	4.69	4.69
Richland/McKenzie County	D10	RM 62.96	101094	2-yr	1534.8	599.62	595.12	2.56	2.2	39.87	19.68	146.49	359.32	3.97	1.94	4.5	4.5
Richland/McKenzie County	D10	RM 62.83	100882	2-yr	1534.8	599.49	595.12	2.25	1.9	27.56	15.54	160.82	355.29	4.07	2.27	4.37	4.37
Richland/McKenzie County	D10	RM 62.64	100582	2-yr	1534.8	599.37	595.12	1.93	1.6	18.09	11.51	189.02	380.29	3.99	2.52	4.25	4.25
Richland/McKenzie County	D10	RM 62.46	100282	2-yr	1534.8	599.05	595.1	2.52	2.14	31.88	21.66	157.85	288.1	3.69	2.48	3.95	3.95
Richland/McKenzie County	D10	RM 62.27	99977	2-yr	1534.8	599.05	594.91	1.39	1.27	9.76	8.08	300.64	412.52	3.54	2.92	4.14	4.14
Richland/McKenzie County	D10	RM 62.1	99691	2-yr	1534.8	598.95	594.75	1.41	1.31	9.88	7.63	273.51	567.09	2.69	2.07	4.2	4.2
Richland/McKenzie County	D10	RM 61.91	99377	2-yr	1534.8	598.77	594.51	1.69	1.36	13.9	8.61	164.08	597.75	3.07	1.88	4.26	4.26
Richland/McKenzie County	D10	RM 61.72	99082	2-yr	1534.8	598.64	594.36	1.65	1.42	13.63	9.49	127.15	432.63	3.65	2.5	4.28	4.28
Richland/McKenzie County	D10	RM 61.54	98782	2-yr	1534.8	598.46	594.36	1.78	1.68	15.22	11.58	226.04	329.34	3.66	2.77	4.1	4.1
Richland/McKenzie County	D10	RM 61.35	98482	2-yr	1534.8	598.32	594.26	1.85	1.66	17.11	11.64	212.62	373.43	3.66	2.48	4.06	4.06
Richland/McKenzie County	D10	RM 61.16	98182	2-yr	1534.8	598.23	594.17	1.52	1.24	12.1	7.31	248.77	640.66	3.22	1.93	4.06	4.06
Richland/McKenzie County	D10	RM 60.99	97906	2-yr	1534.8	598.13	594.02	1.53	1.36	11.7	7.06	216.05	506.82	3.7	2.22	4.11	4.11
Richland/McKenzie County	D10	RM 60.79	97582	2-yr	1534.8	597.96	593.78	1.78	1.5	17.16	8.78	224.25	693.13	2.92	1.49	4.18	4.18
Richland/McKenzie County	D10	RM 60.64	97339	2-yr	1534.8	597.93	593.58	1.1	0.93	6.69	4.13	265.06	1002.27	2.72	1.67	4.35	4.35
Richland/McKenzie County	D10	RM 60.42	96982	2-yr	1534.8	597.81	593.38	1.33	1.17	8.67	6.37	215.22	523.69	3.51	2.56	4.43	4.43
Richland/McKenzie County	D10	RM 60.25	96700	2-yr	1534.8	597.67	593.24	1.8	1.54	17.59	11.4	191.95	551.93	2.9	1.86	4.43	4.43
Richland/McKenzie County	D10	RM 60.04	96365	2-yr	1534.8	597.44	593.14	1.91	1.73	21.42	15.87	223.31	538.49	2.31	1.7	4.3	4.3
Richland/McKenzie County	D10	RM 59.86	96088	2-yr	1534.8	597.31	592.99	1.78	1.5	15.51	7.1	169.73	624.65	3.91	1.76	4.32	4.32
Richland/McKenzie County	D10	RM 59.65	95769	2-yr	1534.8	597.24	592.85	1.51	1.3	11.75	6.77	206.62	1169.45	3.35	1.91	4.39	4.39
Richland/McKenzie County	D10	RM 59.5	95530	2-yr	1534.8	597.15	592.75	1.53	1.28	12.56	8.59	206.9	622.4	2.98	2.02	4.4	4.4
Richland/McKenzie County	D10	RM 59.29	95183	2-yr	1534.8	597.01	592.55	1.42	1.3	10.79	8.04	231.74	544.89	3.03	2.24	4.46	4.46
Richland/McKenzie County	D10	RM 59.07	94797	2-yr	1534.8	596.89	592.36	1.27	1.2	9.47	7.77	407.23	582.94	2.78	2.27	4.53	4.53
Richland/McKenzie County	D10	RM 58.93	94582	2-yr	1534.8	596.76	592.31	1.54	1.51	12.63	10.6	326.89	419.83	3.04	2.55	4.45	4.45
Richland/McKenzie County	D10	RM 58.75	94282	2-yr	1534.8	596.66	592.28	1.55	1.51	10.98	8.55	263.81	375.12	3.74	2.91	4.38	4.38
Richland/McKenzie County	D10	RM 58.56	93982	2-yr	1534.8	596.28	592.22	2.56	2.41	32.56	22.43	156.87	266.88	3.79	2.59	4.06	4.06
Richland/McKenzie County	D10	RM 58.37	93682	2-yr	1534.8	596.08	592.22	2.3	2.27	26.61	24.08	184.78	236.23	3.61	3.26	3.86	3.86
Richland/McKenzie County	D10	RM 58.19	93382	2-yr	1534.8	596	592.22	1.67	1.67	13.94	13.94	253.05	457.89	3.64	3.64	3.78	3.78
Richland/McKenzie County	D10	RM 58.01	93086	2-yr	1534.8	595.83	592.14	1.88	1.88	18.04	18.04	231.43	312.97	3.52	3.52	3.69	3.69
Richland/McKenzie County	D10	RM 57.82	92782	2-yr	1534.8	595.73	592.11	1.5	1.43	12.56	11.38	306.8	478.93	2.69	2.44	3.62	3.62
Richland/McKenzie County	D10	RM 57.63	92482	2-yr	1534.8	595.51	592.11	1.99	1.73	20.92	14.93	160.66	435.77	3.1	2.2	3.4	3.4
Richland/McKenzie County	D10	RM 57.46	92205	2-yr	1534.8	595.38	591.95	1.57	1.34	12.93	7.95	191.05	680.26	3.17	1.94	3.43	3.43
Richland/McKenzie County	D10	RM 57.26	91882	2-yr	1534.8	595.09	591.9	1.93	1.78	21.11	17.8	132.9	398.09	2.58	2.17	3.19	3.19
Richland/McKenzie County	D10	RM 57.07	91583	2-yr	1534.8	594.97	591.73	1.66	1.41	14.66	10.08	135.69	532.82	3.03	2.07	3.24	3.24
Richland/McKenzie County	D10	RM 56.87	91253	2-yr	1534.8	594.76	591.49	1.46	1.3	12.2	8.91	186.15	660.49	2.46	1.79	3.33	3.33
Richland/McKenzie County	D10	RM 56.68	90943	2-yr	1534.8	594.67	591.12	1.12	1.19	7.44	6.99	299.58	621.08	2.22	2.08	3.55	3.55
Richland/McKenzie County	D10	RM 56.54	90682	2-yr	1534.8	594.46	590.76	1.42	1.76	10.91	14.29	212.54	371.39	1.79	2.34	3.74	3.74
Richland/McKenzie County	D10	RM 56.35	90387	2-yr	1534.8	594.34	590.46	1.4	1.49	11.04	11.46	174.85	394.67	2.53	2.61	3.88	3.88
Richland/McKenzie County	D11	RM 56.16	90086	2-yr	1534.8	594.11	590.11	1.94	1.94	19.05	19.05	217.71	217.71	3.63	3.63	4	4
Richland/McKenzie County	D11	RM 55.96	89768	2-yr	1534.8	593.97	589.96	1.81	1.73	16.16	13.36	218.66	296.34	3.84	3.18	4.01	4.01
Richland/McKenzie County	D11	RM 55.78	89479	2-yr	1534.8	593.86	589.96	1.73	1.53	15.03	8.87	215.69	475.79	3.61	2.13	3.9	3.9
Richland/McKenzie County	D11	RM 55.61	89193	2-yr	1534.8	593.74	589.98	1.72	1.57	15.07	10.84	221.9	385.25	3.54	2.54	3.76	3.76
Richland/McKenzie County	D11	RM 55.41	88882	2-yr	1534.8	593.54	589.76	1.96	1.62	19.98	11.11	203.81	529.05	3.25	1.8	3.78	3.78
Richland/McKenzie County	D11	RM 55.23	88582	2-yr	1534.8	593.44	589.53	1.59	1.35	12.59	7.37	235.2	531.97	3.76	2.19	3.9	3.9
Richland/McKenzie County	D11	RM 55.04	88282	2-yr	1534.8	593.29	589.39	1.74	1.47	15.77	10.2	252.08	506.71	3.24	2.09	3.9	3.9
Richland/McKenzie County	D11	RM 54.86	87996	2-yr	1534.8	592.98	589.33	2.27	2.03	28.52	20.53	221.78	388.56	2.75	1.97	3.65	3.65
Richland/McKenzie County	D11	RM 54.69	87715	2-yr	1534.8	592.89	589.23	1.6	1.33	13.67	9.91	187	537.08	3.04	2.19	3.66	3.66
Richland/McKenzie County	D11	RM 54.48	87382	2-yr	1534.8	592.75	589.15	1.53	1.18	12.44	6.76	178.7	802.29	3.12	1.68	3.6	3.6
Richland/McKenzie County	D11	RM 54.32	87122	2-yr	1534.8	592.62	589	1.64	1.27	13.73	6.6	158.98	824.11	3.49	1.65	3.62	3.62
Richland/McKenzie County	D11	RM 54.1	86783	2-yr	1534.8	592.53	588.83	1.33	1.09	8.93	5.48	200.01	800.18	3.59	2.18	3.7	3.7
Richland/McKenzie County	D11	RM 53.92	86482	2-yr	1534.8	592.45	588.68	1.25	1.1	8.32	5.76	252.12	791.05	3.1	2.12	3.77	3.77
Richland/McKenzie County	D11	RM 53.73	86182	2-yr	1534.8	592.36	588.51	1.38	1.14	9.57	5.23	196	785.15	3.66	1.97	3.85	3.85
Richland/McKenzie County	D11	RM 53.55	85882	2-yr	1534.8	592.26	588.37	1.39	1.19	9.79	7.04	181.72	606.41	3.55	2.53	3.89	3.89
Richland/McKenzie County	D11	RM 53.36	85582	2-yr	1534.8	592.14	588.01	1.44	1.42	11.05	10.73	166.55	435.19	3.08	3	4.13	4.13
Richland/McKenzie County	D11	RM 53.17	85290	2-yr	1534.8	591.96	587.56	1.86	1.75	16.85	14.75	203.81	357.39	3.96	3.5	4.4	4.4

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 52.98	84982	2-yr	1534.8	591.63	587.56	2.34	2.2	31.57	29.14	268.95	1232.83	2.38	2.21	4.07	4.07
Richland/McKenzie County	D11	RM 52.79	84682	2-yr	1534.8	591.31	587.56	1.95	1.95	23.17	22.71	386.08	1213.47	2.04	2	3.75	3.75
Richland/McKenzie County	D11	RM 52.61	84390	2-yr	1534.8	591.23	587.43	1.24	1.21	8.54	7.32	449.23	1144.05	2.73	2.33	3.8	3.8
Richland/McKenzie County	D11	RM 52.42	84082	2-yr	1534.8	591.1	587.28	1.36	1.21	10.89	7.6	408.82	1411.91	2.27	1.58	3.82	3.82
Richland/McKenzie County	D11	RM 52.24	83798	2-yr	1534.8	590.91	587.28	1.79	1.3	17.48	8.19	227.41	1796.16	2.83	1.31	3.63	3.63
Richland/McKenzie County	D11	RM 52.01	83423	2-yr	1534.8	590.69	587.23	1.72	1.6	15.41	8.83	123.63	795.82	3.29	1.84	3.46	3.46
Richland/McKenzie County	D11	RM 51.87	83182	2-yr	1534.8	590.58	587.16	1.39	1.33	11.77	7.8	154.53	871.66	2.06	1.35	3.42	3.42
Richland/McKenzie County	D11	RM 51.69	82882	2-yr	1534.8	590.43	587.16	1.46	1.19	11.04	6.26	146.2	933.88	2.58	1.44	3.27	3.27
Richland/McKenzie County	D11	RM 51.51	82585	2-yr	1534.8	590.32	587.16	1.49	1.41	13.13	8.86	146.57	755.23	2.2	1.47	3.16	3.16
Richland/McKenzie County	D11	RM 51.32	82274	2-yr	1534.8	590.24	587.16	1.33	1.24	10.63	6.8	169.2	937.5	2.14	1.35	3.08	3.08
Richland/McKenzie County	D11	RM 51.13	81982	2-yr	1534.8	590.17	587.13	1.37	1.22	10.22	7.23	162.36	750.18	2.9	2.03	3.06	3.06
Richland/McKenzie County	D11	RM 50.95	81682	2-yr	1534.8	590.06	587.08	1.25	1.14	8.62	5.4	142.64	805.98	2.8	1.74	2.98	2.98
Richland/McKenzie County	D11	RM 50.76	81378	2-yr	1534.8	589.97	586.89	1.23	0.94	8.54	4.63	173.09	1274.4	2.6	1.39	3.08	3.08
Richland/McKenzie County	D11	RM 50.56	81065	2-yr	1534.8	589.73	586.37	1.55	1.41	12.63	9.09	171.01	510.22	3.24	2.32	3.36	3.36
Richland/McKenzie County	D11	RM 50.39	80787	2-yr	1534.8	589.68	585.7	1.34	1.25	8.89	6.54	196.96	490.24	3.87	2.83	3.98	3.98
Richland/McKenzie County	D11	RM 50.21	80482	2-yr	1534.8	589.59	585.55	1.26	1.19	8.23	6.29	234.94	568.51	3.32	2.54	4.04	4.04
Richland/McKenzie County	D11	RM 50.02	80182	2-yr	1537.6	589.44	585.55	1.56	1.5	12.78	10.9	195.85	449.32	3.27	2.76	3.89	3.89
Richland/McKenzie County	D12	RM 49.82	79860	2-yr	1537.6	589.14	585.55	2.15	2.11	23.78	21.59	207.97	269.1	3.42	3.1	3.58	3.58
Richland/McKenzie County	D12	RM 49.65	79582	2-yr	1537.6	588.87	585.55	2.31	2.21	28.33	23.31	213.53	304.11	3.08	2.53	3.32	3.32
Richland/McKenzie County	D12	RM 49.5	79348	2-yr	1537.6	588.92	585.49	1.14	1.11	6.66	5.98	353.93	504.6	3.36	3.02	3.47	3.47
Richland/McKenzie County	D12	RM 49.26	78981	2-yr	1537.6	588.79	585.29	1.58	1.35	12.96	7.47	136.73	659.48	3.3	1.88	3.5	3.5
Richland/McKenzie County	D12	RM 49.08	78682	2-yr	1537.6	588.61	585.11	1.73	1.53	15.56	10.62	154.82	545.18	3.28	2.23	3.57	3.57
Richland/McKenzie County	D12	RM 48.87	78351	2-yr	1537.6	588.51	584.96	1.52	1.4	11.86	9.75	205.01	395.84	3.35	2.77	3.55	3.55
Richland/McKenzie County	D12	RM 48.7	78082	2-yr	1537.6	588.4	584.86	1.49	1.48	12.59	11.91	248.29	435.61	2.54	2.39	3.54	3.54
Richland/McKenzie County	D12	RM 48.52	77782	2-yr	1537.6	588.36	584.74	0.95	0.98	5.22	4.83	469.1	693.2	2.44	2.25	3.62	3.62
Richland/McKenzie County	D12	RM 48.33	77482	2-yr	1537.6	588.28	584.51	1.14	1.13	7.09	5.92	422.76	713.47	2.29	1.91	3.77	3.77
Richland/McKenzie County	D12	RM 48.15	77182	2-yr	1537.6	588.17	584.24	1.35	1.09	9.53	7.13	387	731.3	2.58	1.93	3.93	3.93
Richland/McKenzie County	D12	RM 47.97	76887	2-yr	1537.6	588.12	584.09	1.16	1.04	5.79	4.2	351.16	738.6	2.82	2.04	4.03	4.03
Richland/McKenzie County	D12	RM 47.76	76570	2-yr	1537.6	588.07	583.86	0.97	0.96	4.29	4.11	443.85	688.49	2.45	2.35	4.21	4.21
Richland/McKenzie County	D12	RM 47.59	76293	2-yr	1537.6	588.01	583.71	1.07	1.05	4.9	4.87	389.88	588.79	2.59	2.57	4.3	4.3
Richland/McKenzie County	D12	RM 47.4	75982	2-yr	1537.6	587.89	583.42	1.44	1.3	9.78	6.16	195.85	569.4	3.42	2.14	4.47	4.47
Richland/McKenzie County	D12	RM 47.12	75521	2-yr	1537.6	587.74	583.04	1.47	1.46	10.22	8.03	234.72	312.37	4.44	3.48	4.7	4.7
Richland/McKenzie County	D12	RM 47	75323	2-yr	1537.6	587.44	583.04	2.47	2.44	30.24	26.31	162.06	191.96	3.83	3.34	4.4	4.4
Richland/McKenzie County	D12	RM 46.85	75082	2-yr	1537.6	587.32	583.04	2.17	2.12	23.36	19.95	183.68	223.54	3.84	3.27	4.28	4.28
Richland/McKenzie County	D12	RM 46.67	74782	2-yr	1537.6	587.16	583.04	2.09	2.04	21.29	18.02	185.19	230.89	3.97	3.35	4.12	4.12
Richland/McKenzie County	D12	RM 46.47	74459	2-yr	1537.6	587.1	583.04	1.44	1.43	10.58	9.89	310.78	336.03	3.44	3.21	4.06	4.06
Richland/McKenzie County	D12	RM 46.3	74186	2-yr	1537.6	586.97	583.04	1.64	1.64	12.44	12.44	332.37	332.37	2.82	2.82	3.93	3.93
Richland/McKenzie County	D12	RM 46.14	73920	2-yr	1537.6	586.88	583.04	1.46	1.45	10.17	9.63	370.75	395.15	2.84	2.69	3.84	3.84
Richland/McKenzie County	D12	RM 45.9	73546	2-yr	1537.6	586.75	582.97	1.43	1.29	10.62	8.42	339.6	517.97	2.9	2.3	3.78	3.78
Richland/McKenzie County	D12	RM 45.75	73307	2-yr	1537.6	586.56	582.88	1.83	1.68	13.54	11.73	342.83	451.59	2.34	2.02	3.68	3.68
Richland/McKenzie County	D12	RM 45.54	72980	2-yr	1537.6	586.47	582.55	1.32	1.25	9.44	8.38	382.26	473.14	2.92	2.59	3.92	3.92
Richland/McKenzie County	D12	RM 45.29	72680	2-yr	1537.6	586.34	582.25	1.47	1.35	11.68	9.63	347.22	481.34	2.87	2.37	4.09	4.09
Richland/McKenzie County	D12	RM 45.09	72380	2-yr	1537.6	586.25	582.08	1.45	1.31	10.43	7.22	265.28	445.73	3.8	2.63	4.17	4.17
Richland/McKenzie County	D12	RM 44.91	72080	2-yr	1537.6	586.16	582.01	1.42	1.24	10.16	6.42	283.17	554.28	3.56	2.24	4.15	4.15
Richland/McKenzie County	D12	RM 44.72	71783	2-yr	1537.6	586	581.97	1.79	1.49	16.05	9.19	207.88	486.7	3.73	2.12	4.03	4.03
Richland/McKenzie County	D12	RM 44.53	71483	2-yr	1537.6	585.76	581.82	2.17	1.71	23.92	12.41	177.29	500.49	3.5	1.8	3.94	3.94
Richland/McKenzie County	D12	RM 44.34	71183	2-yr	1537.6	585.45	581.8	2.38	1.99	30.82	19.21	197.32	444.44	2.89	1.79	3.65	3.65
Richland/McKenzie County	D12	RM 44.17	70899	2-yr	1537.6	585.47	581.79	1.22	1.06	7.46	5.26	301.39	778.31	3.61	2.54	3.68	3.68
Richland/McKenzie County	D12	RM 43.97	70594	2-yr	1537.6	585.4	581.73	1.2	1.06	7.83	6.42	326.47	924.93	2.81	2.3	3.67	3.67
Richland/McKenzie County	D12	RM 43.74	70230	2-yr	1537.6	585.27	581.66	1.29	1.29	9.13	8.61	158.89	681.2	2.75	2.59	3.61	3.61
Richland/McKenzie County	D12	RM 43.59	69983	2-yr	1537.6	585.15	581.56	1.34	1.18	9.05	6.62	139.22	830.84	2.81	2.03	3.59	3.59
Richland/McKenzie County	D12	RM 43.4	69684	2-yr	1537.6	585.06	581.49	1.26	1.15	8.3	5.61	150.5	742.93	2.92	1.96	3.57	3.57
Richland/McKenzie County	D12	RM 43.03	69084	2-yr	1537.6	584.89	581.37	1.45	1.23	11.71	6.24	126.82	864.05	2.74	1.44	3.52	3.52
Richland/McKenzie County	D12	RM 42.66	68489	2-yr	1537.6	584.78	581.18	1.42	1.22	10.83	5.93	115.1	786.62	2.97	1.6	3.6	3.6
Richland/McKenzie County	D12	RM 42.29	67889	2-yr	1537.6	584.72	580.87	0.99	0.89	5.16	3.06	281.11	897.67	3.26	1.92	3.85	3.85
Richland/McKenzie County	D12	RM 42.08	67558	2-yr	1537.6	584.67	580.61	1.17	0.92	6.76	2.73	179.16	1094.28	3.84	1.53	4.06	4.06
Richland/McKenzie County	D12	RM 41.89	67260	2-yr	1537.6	584.59	580.31	1.24	1.05	7.69	3.33	291.4	914.67	3.71	1.6	4.28	4.28
Richland/McKenzie County	D12	RM 41.75	67037	2-yr	1537.6	584.51	579.99	1.35	1.25	9.66	5.52	333.86	729.61	3.05	1.73	4.52	4.52
Richland/McKenzie County	D12	RM 41.54	66695	2-yr	1537.6	584.36	579.72	1.62	1.41	12.49	4.6	195.59	708.4	4.35	1.59	4.64	4.64
Richland/McKenzie County	D12	RM 41.34	66361	2-yr	1537.6	584.22	579.43	1.75	1.46	15.68	7.44	218.95	666.01	3.43	1.61	4.79	4.79
Richland/McKenzie County	D12	RM 41.18	66116	2-yr	1537.6	584.12	579.08	1.72	1.51	14.35	7.54	195.81	520.03	4.02	2.09	5.04	5.04
Richland/McKenzie County	D12	RM 40.99	65802	2-yr	1537.6	584.02	578.99	1.67	1.39	13.8	5.27	203.5	778.7	3.88	1.46	5.03	5.03

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 40.8	65502	2-yr	1537.6	583.91	578.97	1.56	1.43	12.48	10.17	273.63	411.21	3.37	2.74	4.94	4.94
Richland/McKenzie County	D12	RM 40.62	65205	2-yr	1537.6	583.83	578.92	1.24	1.19	8.39	6.22	375.4	628.85	2.87	2.12	4.91	4.91
Richland/McKenzie County	D12	RM 40.24	64602	2-yr	1537.6	583.62	578.6	1.33	1.32	7.58	7.24	485.88	765.68	2.38	2.27	5.02	5.02
Richland/McKenzie County	D12	RM 40	64219	2-yr	1537.6	583.46	578.56	1.5	1.48	11.71	9.87	307.03	586.29	3.33	2.8	4.9	4.9
Richland/McKenzie County	D12	RM 39.87	64002	2-yr	1537.6	583.35	578.55	1.71	1.66	14.1	9.67	219.33	642.62	4.09	2.79	4.8	4.8
Richland/McKenzie County	D12	RM 39.68	63702	2-yr	1537.6	583.23	578.45	1.76	1.62	15.81	9.53	240.87	539.1	3.45	2.07	4.78	4.78
Richland/McKenzie County	D12	RM 39.5	63402	2-yr	1537.6	583.04	578.35	1.94	1.71	19.7	10.72	225.02	558.73	3.22	1.74	4.69	4.69
Richland/McKenzie County	D12	RM 39.31	63102	2-yr	1537.6	582.93	578.31	1.66	1.37	13.81	7.11	226.71	670.77	3.47	1.77	4.62	4.62
Richland/McKenzie County	D12	RM 39.13	62802	2-yr	1537.6	582.82	578.2	1.58	1.38	13.31	7.6	284.75	656.48	3.09	1.76	4.62	4.62
Richland/McKenzie County	D12	RM 38.94	62501	2-yr	1537.6	582.72	578.12	1.49	1.23	11.32	6.74	261.56	630.14	3.42	2.03	4.6	4.6
Richland/McKenzie County	D12	RM 38.76	62201	2-yr	1537.6	582.64	578.03	1.41	1.25	9.6	4.32	240.71	707.45	4.03	1.8	4.61	4.61
Richland/McKenzie County	D12	RM 38.57	61901	2-yr	1537.6	582.49	577.87	1.76	1.44	16.5	6.58	234.26	918.36	3.03	1.2	4.62	4.62
Richland/McKenzie County	D12	RM 38.38	61601	2-yr	1537.6	582.45	577.84	1.07	0.85	5.54	3.38	268.55	1628.43	3.05	1.85	4.61	4.61
Richland/McKenzie County	D12	RM 38.2	61301	2-yr	1537.6	582.39	577.82	1.18	0.83	6.84	3.29	243.72	1288.28	3.88	1.85	4.57	4.57
Richland/McKenzie County	D12	RM 38.01	61008	2-yr	1537.6	582.32	577.81	1.3	0.96	9.37	5.72	307.49	1022.3	2.73	1.65	4.51	4.51
Richland/McKenzie County	D12	RM 37.84	60708	2-yr	1537.6	582.19	577.71	1.42	1.27	11.29	7.73	335.25	705.54	2.7	1.84	4.48	4.48
Richland/McKenzie County	D12	RM 37.65	60408	2-yr	1537.6	582.16	577.66	0.92	0.81	4.77	3.56	562.58	1019.01	2.62	1.95	4.5	4.5
Richland/McKenzie County	D12	RM 37.5	60107	2-yr	1537.6	582.09	577.54	0.93	0.9	4.28	4.23	561.58	810.33	2.12	2.1	4.55	4.55
Richland/McKenzie County	D12	RM 37.35	59808	2-yr	1537.6	581.98	577.37	0.98	1.05	5.62	5.04	427.63	666.92	2.45	2.2	4.61	4.61
Richland/McKenzie County	D12	RM 37.16	59508	2-yr	1537.6	581.85	577.24	1.49	1.41	9.84	5.98	261.67	641.1	2.81	1.7	4.61	4.61
Richland/McKenzie County	D12	RM 36.97	59208	2-yr	1537.6	581.71	576.96	1.69	1.68	10.93	6.34	218.03	637.11	2.5	1.44	4.75	4.75
Richland/McKenzie County	D12	RM 36.78	58908	2-yr	1537.6	581.65	576.87	1.43	1.3	8.95	5.38	216	586.98	3.36	2.01	4.78	4.78
Richland/McKenzie County	D12	RM 36.6	58608	2-yr	1537.6	581.59	576.66	1.36	1.3	8.93	5.83	182.19	428.33	4.29	2.76	4.93	4.93
Richland/McKenzie County	D12	RM 36.38	58263	2-yr	1536.8	581.51	576.49	1.34	1.34	8.77	8.77	289.24	289.24	3.97	3.97	5.02	5.02
Richland/McKenzie County	D13	RM 36.23	58011	2-yr	1536.8	581.38	576.43	1.71	1.71	13.63	13.11	196	203.94	4.59	4.41	4.95	4.95
Richland/McKenzie County	D13	RM 36.04	57708	2-yr	1536.8	581.17	576.42	2.09	2	21.73	12.18	192.22	362.78	3.81	2.11	4.75	4.75
Richland/McKenzie County	D13	RM 35.85	57408	2-yr	1536.8	581.03	576.41	1.93	1.71	15.22	9.49	276.81	511.88	2.83	1.76	4.62	4.62
Richland/McKenzie County	D13	RM 35.66	57108	2-yr	1536.8	581.01	576.36	1.26	1.15	7.07	4.69	327.66	580.06	3.48	2.3	4.65	4.65
Richland/McKenzie County	D13	RM 35.48	56810	2-yr	1536.8	580.83	576.3	1.87	1.59	16.99	9.06	180.79	478.07	4.03	2.13	4.53	4.53
Richland/McKenzie County	D13	RM 35.29	56508	2-yr	1536.8	580.68	576.19	1.9	1.65	19.23	12.91	214.91	452.27	3.1	2.06	4.49	4.49
Richland/McKenzie County	D13	RM 35.1	56208	2-yr	1536.8	580.59	576.07	1.51	1.36	11.12	6.97	244.23	450.41	4.04	2.5	4.52	4.52
Richland/McKenzie County	D13	RM 34.92	55908	2-yr	1536.8	580.45	576.09	1.67	1.5	15.4	10.17	254.1	446.21	3.5	2.3	4.36	4.36
Richland/McKenzie County	D13	RM 34.73	55605	2-yr	1536.8	580.36	575.89	1.37	1.31	8.98	7.87	413.86	503.71	2.67	2.34	4.47	4.47
Richland/McKenzie County	D13	RM 34.54	55297	2-yr	1536.8	580.21	575.79	1.55	1.43	12.21	9.98	323.09	506.7	2.6	2.12	4.42	4.42
Richland/McKenzie County	D13	RM 34.36	55008	2-yr	1536.8	580.17	575.75	1.16	1.05	6.29	4.55	322.72	565.4	3.59	2.59	4.42	4.42
Richland/McKenzie County	D13	RM 34.17	54708	2-yr	1536.8	580.11	575.49	1.11	0.99	6.55	4.51	380.45	733.27	3.06	2.11	4.62	4.62
Richland/McKenzie County	D13	RM 33.94	54408	2-yr	1536.8	580.08	575.34	1.01	0.84	4.86	3.59	365.13	765.98	3.26	2.4	4.74	4.74
Richland/McKenzie County	D13	RM 33.76	54079	2-yr	1536.8	580.01	575.12	1.13	1.01	6.64	5.19	285.87	608.79	3.33	2.59	4.89	4.89
Richland/McKenzie County	D13	RM 33.6	53799	2-yr	1536.8	579.97	574.88	1.09	0.94	6.33	4.82	374.98	725.33	2.97	2.24	5.09	5.09
Richland/McKenzie County	D13	RM 33.42	53508	2-yr	1536.8	579.91	574.61	1.1	0.95	5.52	3.32	261.84	653.13	4.13	2.46	5.3	5.3
Richland/McKenzie County	D13	RM 33.23	53208	2-yr	1536.8	579.88	574.45	1.09	0.9	5.53	3.41	209.05	599.45	4.64	2.84	5.43	5.43
Richland/McKenzie County	D13	RM 33.04	52908	2-yr	1536.8	579.82	574.3	1.25	1.08	6.95	4.23	193.34	455.82	5.19	3.14	5.52	5.52
Richland/McKenzie County	D13	RM 32.86	52608	2-yr	1536.8	579.72	574.18	1.53	1.31	10.76	4.44	209.24	613.77	4.72	1.92	5.54	5.54
Richland/McKenzie County	D13	RM 32.67	52308	2-yr	1536.8	579.62	574.18	1.69	1.18	13.4	5.09	187.96	774.8	4.49	1.68	5.44	5.44
Richland/McKenzie County	D13	RM 32.48	52008	2-yr	1536.8	579.49	574.04	1.79	1.47	15.41	6.06	194.86	641.43	4.22	1.63	5.45	5.45
Richland/McKenzie County	D13	RM 32.29	51709	2-yr	1536.8	579.44	574.04	1.46	1.15	10.05	4.16	223.67	742.63	4.41	1.8	5.4	5.4
Richland/McKenzie County	D13	RM 32.11	51423	2-yr	1536.8	579.39	573.94	1.34	1.19	8.22	5.67	220.08	406.81	4.71	3.24	5.45	5.45
Richland/McKenzie County	D13	RM 31.92	51108	2-yr	1536.8	579.28	573.85	1.62	1.42	12.96	5.75	211.09	643.4	3.9	1.71	5.43	5.43
Richland/McKenzie County	D13	RM 31.73	50809	2-yr	1536.8	579.25	573.72	1.19	1.06	6.52	2.59	261.37	786.65	4.7	1.85	5.53	5.53
Richland/McKenzie County	D13	RM 31.51	50462	2-yr	1536.8	579.03	573.24	2.01	1.86	16.84	6.11	162.22	493.49	4.68	1.67	5.79	5.79
Richland/McKenzie County	D13	RM 31.35	50208	2-yr	1536.8	578.81	573.24	2.36	2.21	27.69	12.45	169.01	411.64	3.81	1.69	5.57	5.57
Richland/McKenzie County	D13	RM 31.22	50009	2-yr	1536.8	578.68	573.24	2.33	2.25	25.83	19.3	149.68	331.02	4.37	3.24	5.44	5.44
Richland/McKenzie County	D13	RM 31.12	49859	2-yr	1536.8	578.68	570.86	1.6	1.6	16.13	15.45	195.95	205.15	4.9	4.68	7.82	7.82
Richland/McKenzie County	D13	Highway 23	49844	2-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	2-yr	1536.8	578.66	570.86	1.61	1.61	15.71	15.05	192.45	201.56	4.95	4.74	7.8	7.8
Richland/McKenzie County	D13	RM 30.97	49608	2-yr	1536.8	578.63	573.24	1.37	1.37	8.49	8.49	224.14	224.14	5.01	5.01	5.39	5.39
Richland/McKenzie County	D13	RM 30.79	49308	2-yr	1536.8	578.48	573.24	1.8	1.77	15.4	13.65	198.73	228.12	4.3	3.8	5.24	5.24
Richland/McKenzie County	D13	RM 30.6	49009	2-yr	1536.8	578.3	573.24	2.04	2	20.17	16.1	186.53	238.89	4.04	3.21	5.06	5.06
Richland/McKenzie County	D13	RM 30.41	48706	2-yr	1536.8	578.19	573.15	1.84	1.78	15.07	11.8	208.55	280.99	3.99	3.11	5.04	5.04
Richland/McKenzie County	D13	RM 30.22	48403	2-yr	1536.8	578.1	573.15	1.71	1.64	13.76	9.12	197.99	322.3	4.51	2.97	4.95	4.95
Richland/McKenzie County	D13	RM 30.03	48102	2-yr	1536.8	578.09	573.15	1.15	1.12	6.33	4.49	315.01	586.65	4.24	2.97	4.94	4.94
Richland/McKenzie County	D13	RM 29.85	47809	2-yr	1536.8	578.05	573.15	1.09	1.05	6	4.26	376.03	660.18	3.7	2.61	4.9	4.9

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 29.66	47508	2-yr	1536.8	577.93	573.11	1.45	1.42	7.9	6.26	325.07	420.11	3.26	2.57	4.82	4.82
Richland/McKenzie County	D13	RM 29.48	47209	2-yr	1536.8	577.89	573.11	1.25	1.2	6.49	4.34	346.26	560.71	3.52	2.34	4.78	4.78
Richland/McKenzie County	D13	RM 29.28	46894	2-yr	1536.8	577.83	572.98	1.14	1.09	6.9	5.23	399.91	624.75	3.12	2.36	4.85	4.85
Richland/McKenzie County	D13	RM 29.1	46608	2-yr	1536.8	577.75	572.94	1.43	1.06	10.11	6.26	169.12	637.54	3.86	2.37	4.81	4.81
Richland/McKenzie County	D13	RM 28.92	46308	2-yr	1536.8	577.65	572.85	1.53	1.22	11.17	6.76	146.69	487.78	4.33	2.59	4.8	4.8
Richland/McKenzie County	D13	RM 28.73	46008	2-yr	1536.8	577.6	572.67	1.39	1.07	9.43	5.89	152.02	572.97	4.05	2.5	4.93	4.93
Richland/McKenzie County	D13	RM 28.54	45708	2-yr	1536.8	577.53	572.67	1.4	1.06	9.01	5.58	198.08	645.87	3.67	2.25	4.86	4.86
Richland/McKenzie County	D13	RM 28.36	45419	2-yr	1536.8	577.49	572.48	1.13	0.96	6.21	4.2	233.95	593.53	4.02	2.7	5.01	5.01
Richland/McKenzie County	D13	RM 28.15	45071	2-yr	1536.8	577.44	572.25	0.98	0.97	4.74	4.42	427.1	464	3.67	3.43	5.19	5.19
Richland/McKenzie County	D13	RM 27.98	44808	2-yr	1536.8	577.34	572.04	1.43	1.39	9.54	7.85	235.38	295.06	4.55	3.74	5.3	5.3
Richland/McKenzie County	D13	RM 27.8	44508	2-yr	1536.8	577.29	571.87	1.31	1.28	7.63	5.91	226.08	300.78	5.19	4	5.42	5.42
Richland/McKenzie County	D14	RM 27.61	44208	2-yr	1536.8	577.24	571.87	1.34	1.32	8.37	6.4	244.49	327.95	4.67	3.56	5.37	5.37
Richland/McKenzie County	D14	RM 27.43	43916	2-yr	1536.8	577.21	571.87	1.18	1.14	6.25	4.66	258.5	504.01	5.04	3.73	5.34	5.34
Richland/McKenzie County	D14	RM 27.23	43608	2-yr	1536.8	577.19	571.87	0.95	0.93	4	3.18	310.23	400.83	5.22	4.13	5.32	5.32
Richland/McKenzie County	D14	RM 27.04	43305	2-yr	1536.8	577.13	571.87	1.18	1.14	6.5	4.47	276.58	422.7	4.68	3.19	5.26	5.26
Richland/McKenzie County	D14	RM 26.86	43008	2-yr	1536.8	577.06	571.87	1.36	1.28	8.36	5.6	228.23	365.28	4.93	3.28	5.19	5.19
Richland/McKenzie County	D14	RM 26.67	42708	2-yr	1536.8	577.03	571.87	1.24	1.17	6.99	3.85	252.42	490.99	4.89	2.67	5.16	5.16
Richland/McKenzie County	D14	RM 26.48	42408	2-yr	1536.8	576.93	571.87	1.52	1.42	10.68	5.98	208.68	408.97	4.78	2.65	5.06	5.06
Richland/McKenzie County	D14	RM 26.29	42108	2-yr	1536.8	576.84	571.87	1.59	1.47	11.64	6.98	205.84	375.17	4.67	2.78	4.97	4.97
Richland/McKenzie County	D14	RM 26.11	41808	2-yr	1536.8	576.81	571.87	1.32	1.29	8.11	6.95	249.02	299.79	4.65	3.98	4.94	4.94
Richland/McKenzie County	D14	RM 25.92	41508	2-yr	1536.8	576.78	571.87	1.09	1.09	5.46	5.46	302.25	318.92	4.68	4.68	4.91	4.91
Richland/McKenzie County	D14	RM 25.73	41208	2-yr	1536.8	576.75	571.74	1.04	1.04	4.91	4.9	308.27	308.59	4.81	4.81	5.01	5.01
Richland/McKenzie County	D14	RM 25.55	40918	2-yr	1536.8	576.69	571.74	1.19	1.19	7.03	7.03	345.19	345.19	3.74	3.74	4.95	4.95
Richland/McKenzie County	D14	RM 25.37	40619	2-yr	1536.8	576.63	571.74	1.23	1.23	7.52	7.52	352.69	352.69	3.55	3.55	4.89	4.89
Richland/McKenzie County	D14	RM 25.17	40310	2-yr	1536.8	576.53	571.74	1.39	1.39	7.66	7.01	360.79	400.91	3.06	2.8	4.79	4.79
Richland/McKenzie County	D14	RM 24.99	40008	2-yr	1536.8	576.5	571.74	1.05	1.03	4.77	4.02	384.4	479.79	3.8	3.2	4.76	4.76
Richland/McKenzie County	D14	RM 24.8	39703	2-yr	1536.8	576.49	571.71	0.85	0.84	3.7	3.29	397.94	454.82	4.51	4.01	4.78	4.78
Richland/McKenzie County	D14	RM 24.62	39408	2-yr	1536.8	576.41	571.64	1.23	1.2	7.34	6.53	276.47	345.49	4.14	3.7	4.77	4.77
Richland/McKenzie County	D14	RM 24.45	39139	2-yr	1536.8	576.32	571.64	1.44	1.44	9.74	9.74	239.89	240.04	4.45	4.45	4.68	4.68
Richland/McKenzie County	D14	RM 24.24	38801	2-yr	1536.8	576.24	571.58	1.45	1.41	9.82	8.36	237.24	287.68	4.46	3.79	4.66	4.66
Richland/McKenzie County	D14	RM 24.05	38506	2-yr	1536.8	576.2	571.48	1.3	1.3	7.91	7.91	263.49	263.49	4.49	4.49	4.72	4.72
Richland/McKenzie County	D14	RM 23.87	38210	2-yr	1536.8	576.18	571.28	0.98	0.98	4.39	4.38	332.55	333.1	4.73	4.72	4.9	4.9
Richland/McKenzie County	D14	RM 23.66	37912	2-yr	1536.8	576.17	571.21	0.82	0.82	3.2	3.2	442.48	442.62	4.24	4.24	4.96	4.96
Richland/McKenzie County	D14	RM 23.48	37610	2-yr	1536.8	576.13	571.12	0.97	0.94	4.69	4.41	347.41	510.17	3.41	3.21	5.01	5.01
Richland/McKenzie County	D14	RM 23.29	37312	2-yr	1536.8	576.07	570.86	1.11	1.07	5.81	4.55	310.64	552.02	3.33	2.61	5.21	5.21
Richland/McKenzie County	D14	RM 23.1	37006	2-yr	1536.8	576.02	570.82	1.11	0.99	5.79	3.56	254.6	631.2	4.09	2.49	5.2	5.2
Richland/McKenzie County	D14	RM 22.92	36721	2-yr	1536.8	575.96	570.8	1.29	1.09	7.65	4.39	211.27	616.3	4.06	2.3	5.16	5.16
Richland/McKenzie County	D14	RM 22.72	36402	2-yr	1536.8	575.85	570.81	1.6	1.3	11.84	5.14	178.19	596.8	4.65	1.99	5.04	5.04
Richland/McKenzie County	D14	RM 22.54	36108	2-yr	1536.8	575.82	570.76	1.22	1.11	6.79	3.71	276.8	574.79	4.49	2.44	5.06	5.06
Richland/McKenzie County	D14	RM 22.35	35808	2-yr	1536.8	575.78	570.74	1.14	1.06	6.19	4.01	308.44	530.24	4.3	2.77	5.04	5.04
Richland/McKenzie County	D14	RM 22.17	35508	2-yr	1536.8	575.75	570.68	1.04	1.01	4.92	3.01	302.85	516.19	4.88	2.97	5.07	5.07
Richland/McKenzie County	D14	RM 22.02	35264	2-yr	1536.8	575.74	570.68	0.88	0.85	3.47	2.54	353.48	499.28	4.96	3.61	5.06	5.06
Richland/McKenzie County	D14	RM 21.8	34901	2-yr	1536.8	575.69	570.69	1.03	1.01	5.27	4.43	399.64	489.83	3.73	3.12	5	5
Richland/McKenzie County	D14	RM 21.61	34626	2-yr	1536.8	575.64	570.67	1.05	1.03	5.76	5.52	466.78	492.96	3.14	3.02	4.97	4.97
Richland/McKenzie County	D14	RM 21.34	34140	2-yr	1536.8	575.59	570.67	0.95	0.81	4.28	2.86	287.73	673.12	4.28	2.84	4.92	4.92
Richland/McKenzie County	D14	RM 21.25	33973	2-yr	1536.8	575.53	570.67	1.36	1.06	8.67	5.04	202.44	676.47	3.76	2.16	4.86	4.86
Richland/McKenzie County	D14	RM 21.06	33672	2-yr	1536.8	575.51	570.6	1.03	0.89	5.28	3.18	266.11	756.03	3.84	2.31	4.91	4.91
Richland/McKenzie County	D14	RM 20.9	33400	2-yr	1536.8	575.46	570.58	1.17	1.04	7.1	4.27	249.25	742.76	3.34	2	4.88	4.88
Richland/McKenzie County	D14	RM 20.71	33101	2-yr	1536.8	575.37	570.53	1.36	1.2	9.36	4.76	242.99	707.51	3.6	1.82	4.84	4.84
Richland/McKenzie County	D14	RM 20.52	32800	2-yr	1536.8	575.34	570.52	1.09	1.02	5.78	4.2	279.93	538.74	3.94	2.86	4.82	4.82
Richland/McKenzie County	D14	RM 20.34	32500	2-yr	1536.8	575.3	570.52	1.13	1.02	6.21	4.41	253.83	529.1	4.08	2.89	4.78	4.78
Richland/McKenzie County	D14	RM 20.15	32200	2-yr	1536.8	575.24	570.52	1.2	1.18	8.09	6.24	230.47	413.13	4.19	3.22	4.72	4.72
Richland/McKenzie County	D14	RM 19.96	31900	2-yr	1536.8	575.03	570.52	1.92	1.79	17.58	9.52	188.67	385.49	4.23	2.26	4.51	4.51
Richland/McKenzie County	D14	RM 19.77	31600	2-yr	1536.8	575.04	570.5	1.15	1.14	6.19	5.07	329.86	413.22	4.05	3.31	4.54	4.54
Richland/McKenzie County	D14	RM 19.59	31297	2-yr	1536.8	574.99	570.45	1.14	1.09	6.07	4.71	331.48	499.36	3.74	2.9	4.54	4.54
Richland/McKenzie County	D14	RM 19.4	30995	2-yr	1536.8	574.91	570.45	1.35	1.21	9.23	5.53	283.83	626.31	3.48	2.08	4.46	4.46
Richland/McKenzie County	D14	RM 19.21	30710	2-yr	1536.8	574.9	570.38	0.9	0.79	3.95	2.14	380.26	889.52	4.08	2.21	4.52	4.52
Richland/McKenzie County	D14	RM 19.03	30402	2-yr	1536.8	574.86	570.38	0.95	0.88	4.24	2.88	426.2	762.55	3.45	2.33	4.48	4.48
Richland/McKenzie County	D14	RM 18.83	30086	2-yr	1536.8	574.79	570.38	1.07	1	5.37	3.46	445.2	878.58	2.87	1.84	4.41	4.41
Richland/McKenzie County	D14	RM 18.66	29802	2-yr	1536.8	574.73	570.38	1.16	1.02	6.85	4.35	404.51	866.84	2.79	1.76	4.35	4.35
Richland/McKenzie County	D14	RM 18.47	29499	2-yr	1536.8	574.59	570.36	1.52	1.37	12.47	7.76	294.55	619.42	2.94	1.81	4.23	4.23
Richland/McKenzie County	D14	RM 18.28	29197	2-yr	1536.8	574.49	570.36	1.44	1.41	9.9	8.14	295.93	370.39	3.61	2.96	4.13	4.13

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 17.89	28624	2-yr	1536.8	574.46	570.33	0.82	0.82	3.22	3.22	465.6	472.08	4.03	4.03	4.13	4.13
Richland/McKenzie County	D14	RM 17.56	27975	2-yr	1536.8	574.34	570.29	1.22	1.19	6.44	6.07	416.81	455.01	3	2.83	4.05	4.05
Richland/McKenzie County	D14	RM 17.36	27539	2-yr	1536.8	574.12	570.31	1.71	1.71	14.9	14.86	253.96	254.54	3.53	3.52	3.81	3.81
Richland/McKenzie County	D14	RM 17.1	27113	2-yr	1536.8	573.99	570.28	1.48	1.48	11.13	11.13	297.04	297.08	3.5	3.5	3.71	3.71
Richland/McKenzie County	D14	RM 16.74	26537	2-yr	1536.8	573.89	570.14	1.11	1.11	6.11	5.89	401.77	417.5	3.45	3.33	3.75	3.75
Richland/McKenzie County	D14	RM 16.35	25925	2-yr	1536.8	573.8	569.46	1.06	1.03	5.34	4.62	343.48	414.5	4.16	3.59	4.34	4.34
Richland/McKenzie County	D14	RM 16.17	25629	2-yr	1536.8	573.76	569.2	0.99	0.96	4.84	3.36	376.36	566.47	4.1	2.84	4.56	4.56
Richland/McKenzie County	D14	RM 15.95	25324	2-yr	1536.8	573.75	568.99	0.73	0.7	2.49	1.85	456.55	646.72	4.57	3.38	4.76	4.76
Richland/McKenzie County	D14	RM 15.75	25032	2-yr	1536.8	573.73	568.85	0.83	0.81	3.32	2.99	460.78	522.05	4.02	3.61	4.88	4.88
Richland/McKenzie County	D14	RM 15.56	24777	2-yr	1536.8	573.64	568.85	1.27	1.27	7.54	7.54	289.3	289.3	4.19	4.19	4.79	4.79
Richland/McKenzie County	D14	RM 15.34	24438	2-yr	1536.8	573.58	568.79	1.29	1.29	7.73	7.73	258.77	258.77	4.61	4.61	4.79	4.79
Richland/McKenzie County	D14	RM 15.16	24144	2-yr	1536.8	573.53	568.75	1.27	1.27	7.45	7.45	263.15	263.15	4.61	4.61	4.78	4.78
Richland/McKenzie County	D14	RM 14.98	23841	2-yr	1536.8	573.46	568.76	1.35	1.35	9.57	9.27	253.34	262	4.48	4.33	4.7	4.7
Richland/McKenzie County	D14	RM 14.79	23543	2-yr	1536.8	573.39	568.72	1.38	1.38	8.34	8.01	282.54	294.43	3.93	3.77	4.67	4.67
Richland/McKenzie County	D14	RM 14.61	23241	2-yr	1536.8	573.34	568.7	1.28	1.28	7.78	7.75	272.32	273.58	4.39	4.37	4.64	4.64
Richland/McKenzie County	D14	RM 14.42	22940	2-yr	1536.8	573.31	568.69	1.06	1.06	5.27	5.27	326.23	326.23	4.45	4.45	4.62	4.62
Richland/McKenzie County	D14	RM 14.23	22647	2-yr	1536.8	573.3	568.67	0.81	0.81	3.13	2.94	444.48	473.19	4.27	4.01	4.63	4.63
Richland/McKenzie County	D14	RM 14.05	22341	2-yr	1536.8	573.28	568.68	0.74	0.73	3.23	3.07	561.65	599.23	3.69	3.5	4.6	4.6
Richland/McKenzie County	D14	RM 13.88	22040	2-yr	1536.8	573.23	568.67	0.93	0.93	3.76	3.7	631.02	642.58	2.61	2.57	4.56	4.56
Richland/McKenzie County	D14	RM 13.7	21728	2-yr	1536.8	573.16	568.65	1.11	1.11	4.56	4.55	467.57	467.86	2.97	2.97	4.51	4.51
Richland/McKenzie County	D14	RM 13.51	21429	2-yr	1536.8	573.13	568.63	1.01	1.01	4.65	4.52	407.36	419.32	3.73	3.63	4.5	4.5
Richland/McKenzie County	D15	RM 13.31	21145	2-yr	1536.8	573.1	568.51	0.9	0.9	3.8	3.8	456.08	456.08	3.74	3.74	4.59	4.59
Richland/McKenzie County	D15	RM 13.12	20858	2-yr	1536.8	573.05	568.39	1.02	1.02	4.95	4.95	342.09	342.09	4.39	4.39	4.66	4.66
Richland/McKenzie County	D15	RM 12.9	20507	2-yr	1536.8	572.99	568.39	1.18	1.18	6.59	6.59	297.87	297.87	4.37	4.37	4.6	4.6
Richland/McKenzie County	D15	RM 12.73	20241	2-yr	1536.8	572.95	568.35	1.17	1.17	6.48	6.48	293.6	293.6	4.46	4.46	4.6	4.6
Richland/McKenzie County	D15	RM 12.56	19961	2-yr	1536.8	572.92	568.34	1.03	1.03	4.98	4.98	335.03	335.03	4.45	4.45	4.58	4.58
Richland/McKenzie County	D15	RM 12.38	19686	2-yr	1536.8	572.91	568.23	0.85	0.85	3.39	3.39	422.1	430.79	4.31	4.31	4.68	4.68
Richland/McKenzie County	D15	RM 12.21	19384	2-yr	1536.8	572.86	568.17	0.98	0.98	4.01	4.01	470.25	569.44	3.32	3.32	4.69	4.69
Richland/McKenzie County	D15	RM 11.99	19084	2-yr	1536.8	572.83	568.16	0.97	0.97	3.8	3.8	522.97	525.64	3.03	3.03	4.67	4.67
Richland/McKenzie County	D15	RM 11.53	18484	2-yr	1536.8	572.73	568.11	1.07	1.05	5.1	4.44	405.36	475.43	3.54	3.08	4.62	4.62
Richland/McKenzie County	D15	RM 11.34	18216	2-yr	1536.8	572.69	568.06	1.02	1	6.98	5.75	369.68	480.14	4.06	3.33	4.63	4.63
Richland/McKenzie County	D15	RM 11.17	17885	2-yr	1536.8	572.57	567.88	1.18	1.17	16.47	15.17	475.55	520.33	2.74	2.52	4.69	4.69
Richland/McKenzie County	D15	RM 10.97	17584	2-yr	1536.8	572.5	567.8	1.03	1.03	4.54	4.08	506.3	566.68	2.94	2.64	4.7	4.7
Richland/McKenzie County	D15	RM 10.75	17284	2-yr	1536.8	572.47	567.79	0.87	0.86	3.33	3.09	500.13	540.5	3.55	3.29	4.68	4.68
Richland/McKenzie County	D15	RM 10.53	16964	2-yr	1536.8	572.42	567.73	1.04	1.03	4.63	4.24	456.5	503.39	3.24	2.97	4.69	4.69
Richland/McKenzie County	D15	RM 10.35	16670	2-yr	1536.8	572.36	567.73	1.12	1.1	6.08	4.85	442.97	571.26	3.08	2.45	4.63	4.63
Richland/McKenzie County	D15	RM 10.15	16384	2-yr	1536.8	572.32	567.73	1.1	0.92	5.77	3.23	251.85	698.43	4.28	2.38	4.59	4.59
Richland/McKenzie County	D15	RM 9.94	16084	2-yr	1536.8	572.29	567.73	0.94	0.79	4.24	2.65	272.39	765.07	4.08	2.54	4.56	4.56
Richland/McKenzie County	D15	RM 9.76	15797	2-yr	1536.8	572.24	567.65	1	0.91	4.56	2.73	349.2	779.87	3.73	2.23	4.59	4.59
Richland/McKenzie County	D15	RM 9.57	15487	2-yr	1536.8	572.19	567.58	1.13	1	6.05	3.38	244.75	659.24	4.41	2.46	4.61	4.61
Richland/McKenzie County	D15	RM 9.37	15187	2-yr	1536.8	572.12	567.58	1.28	1.1	7.75	4.51	202.2	548.11	4.38	2.54	4.54	4.54
Richland/McKenzie County	D15	RM 9.24	14963	2-yr	1536.8	572.04	564.5	1.39	1.39	9	8.79	234.33	240.21	4.7	4.6	7.54	7.54
Richland/McKenzie County	D15	RR/Walkway	14952	2-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	2-yr	1536.8	572.02	564.5	1.4	1.4	9.1	8.86	234.33	240.9	4.68	4.56	7.52	7.52
Richland/McKenzie County	D15	RM 9.1	14741	2-yr	1536.8	571.91	567.39	1.66	1.66	13.36	12.78	231.58	256.48	3.99	3.81	4.52	4.52
Richland/McKenzie County	D15	RM 9.03	14639	2-yr	1536.8	571.9	565.46	1.46	1.45	10.17	9.76	248.58	260.64	4.23	4.06	6.44	6.44
Richland/McKenzie County	D15	Highway 68	14629	2-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	2-yr	1536.8	571.88	565.46	1.47	1.46	10.27	9.86	248.51	260.33	4.21	4.04	6.42	6.42
Richland/McKenzie County	D15	RM 8.82	14300	2-yr	1536.8	571.85	567.41	1.02	1.02	5.02	5.02	379.3	379.3	3.99	3.99	4.44	4.44
Richland/McKenzie County	D15	RM 8.61	13963	2-yr	1536.8	571.79	567.39	1.18	1.13	6.64	4.88	308.46	469.1	3.96	2.9	4.4	4.4
Richland/McKenzie County	D15	RM 8.44	13687	2-yr	1536.8	571.72	567.32	1.31	1.2	8.29	4.99	258.15	513.95	4.15	2.49	4.4	4.4
Richland/McKenzie County	D15	RM 8.24	13387	2-yr	1536.8	571.64	567.32	1.43	1.19	9.84	4.91	228.81	627.8	4.18	2.06	4.32	4.32
Richland/McKenzie County	D15	RM 8.05	13080	2-yr	1536.8	571.58	567.05	1.27	1.18	7.63	4.66	265.4	497.1	4.3	2.62	4.53	4.53
Richland/McKenzie County	D15	RM 7.87	12786	2-yr	1536.8	571.5	567.05	1.45	1.3	10.02	5.23	229.9	566.06	4.2	2.18	4.45	4.45
Richland/McKenzie County	D15	RM 7.69	12506	2-yr	1536.8	571.45	567.05	1.28	1.18	7.8	4.76	265.93	512.44	4.19	2.55	4.4	4.4
Richland/McKenzie County	D15	RM 7.48	12179	2-yr	1536.8	571.43	566.95	0.98	0.98	4.57	4.57	361.29	361.39	4.33	4.33	4.48	4.48
Richland/McKenzie County	D16	RM 7.3	11891	2-yr	1536.8	571.38	566.76	1.11	1.11	5.73	5.73	332.48	332.48	4.17	4.17	4.62	4.62
Richland/McKenzie County	D16	RM 7.14	11639	2-yr	1536.8	571.32	566.76	1.23	1.19	7.46	6.54	323.45	394.85	3.75	3.28	4.56	4.56
Richland/McKenzie County	D16	RM 6.94	11319	2-yr	1536.8	571.27	566.76	1.15	1.1	6.3	4.52	297.15	450.93	4.32	3.09	4.51	4.51
Richland/McKenzie County	D16	RM 6.77	11043	2-yr	1536.8	571.24	566.76	1.04	0.97	5.26	3.71	349.25	559.77	4.01	2.82	4.48	4.48
Richland/McKenzie County	D16	RM 6.58	10733	2-yr	1536.8	571.2	566.59	1.01	0.93	4.89	2.95	342.1	650.95	4.24	2.54	4.61	4.61
Richland/McKenzie County	D16	RM 6.38	10417	2-yr	1536.8	571.03	566.59	1.82	1.57	15.83	6.37	181.54	580.78	4.23	1.68	4.44	4.44

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 6.21	10138	2-yr	1536.8	570.97	566.44	1.54	1.27	11.23	3.81	216.22	842.86	4.28	1.43	4.53	4.53
Richland/McKenzie County	D16	RM 6.01	9825	2-yr	1536.8	570.96	566.17	0.92	0.86	4.15	2.22	412.46	840.65	4	2.13	4.79	4.79
Richland/McKenzie County	D16	RM 5.83	9551	2-yr	1536.8	570.95	565.96	0.74	0.68	2.58	1.47	480.52	926.53	4.29	2.43	4.99	4.99
Richland/McKenzie County	D16	RM 5.67	9297	2-yr	1536.8	570.93	565.96	0.88	0.79	3.73	1.96	341.04	894.7	4.2	2.18	4.97	4.97
Richland/McKenzie County	D16	RM 5.43	8926	2-yr	1536.8	570.85	565.96	1.16	1.07	6.82	4.04	268.42	686.21	3.59	2.12	4.89	4.89
Richland/McKenzie County	D16	RM 5.25	8623	2-yr	1536.8	570.7	565.96	1.64	1.47	12.61	6.69	206.77	445.96	4.47	2.35	4.74	4.74
Richland/McKenzie County	D16	RM 5.06	8331	2-yr	1536.8	570.68	565.82	1.18	1.05	6.51	4.14	289.25	525.52	4.42	2.79	4.86	4.86
Richland/McKenzie County	D16	RM 4.87	8029	2-yr	1536.8	570.66	565.67	1.02	0.93	5	3.71	333.15	557.93	4.14	3.06	4.99	4.99
Richland/McKenzie County	D16	RM 4.71	7757	2-yr	1536.8	570.61	565.54	1.14	1	5.96	3.47	249.19	562.82	4.75	2.74	5.07	5.07
Richland/McKenzie County	D16	RM 4.53	7456	2-yr	1536.8	570.52	565.54	1.49	1.26	10.18	5.11	197.96	518.47	4.76	2.36	4.98	4.98
Richland/McKenzie County	D16	RM 4.34	7156	2-yr	1536.8	570.46	565.54	1.4	1.18	9.96	4.74	213.85	593.1	4.66	2.19	4.92	4.92
Richland/McKenzie County	D16	RM 4.17	6884	2-yr	1536.8	570.41	565.54	1.35	1.22	8.5	4.9	223.52	474.12	4.66	2.66	4.87	4.87
Richland/McKenzie County	D16	RM 3.96	6550	2-yr	1536.8	570.38	565.54	1.06	0.95	5.25	3.08	216.6	608.31	4.57	2.66	4.84	4.84
Richland/McKenzie County	D16	RM 3.78	6249	2-yr	1536.8	570.32	565.54	1.25	1.1	7.65	3.92	196.28	688.2	3.99	2.03	4.78	4.78
Richland/McKenzie County	D16	RM 3.55	5904	2-yr	1536.8	570.27	565.54	1.13	0.99	5.98	3.22	206.04	641.86	4.55	2.42	4.73	4.73
Richland/McKenzie County	D16	RM 3.38	5657	2-yr	1536.8	570.21	565.53	1.38	1.24	8.99	5.32	171.27	478.07	4.42	2.59	4.68	4.68
Richland/McKenzie County	D16	RM 3.2	5363	2-yr	1536.8	570.13	565.54	1.45	1.42	10.43	7.08	166.46	428.58	3.75	2.53	4.59	4.59
Richland/McKenzie County	D16	RM 3.01	5062	2-yr	1536.8	570.08	565.54	1.26	1.19	7.76	5.15	310	501.46	3.91	2.58	4.54	4.54
Richland/McKenzie County	D16	RM 2.82	4763	2-yr	1536.8	570.02	565.46	1.18	1.16	7.44	5.59	421.29	574.57	3.08	2.31	4.56	4.56

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	67% - 1.5yr	571.43	1281.12	1278.12	2.05	1.9	23.55	17.42	103.47	156.75	2.62	1.92	3	3
Sweet Grass County	A1	RM 478.10	225378	67% - 1.5yr	571.43	1280.73	1277.66	2.76	2.54	46	32.77	94.73	155.53	2.08	1.48	3.07	3.07
Sweet Grass County	A1	RM 478.00	224862	67% - 1.5yr	571.43	1280.29	1277.97	2.72	2.57	50.62	42.23	136.09	186.06	1.44	1.2	2.32	2.32
Sweet Grass County	A1	RM 477.91	224362	67% - 1.5yr	571.43	1279.7	1277.65	3.11	2.64	56.36	39.16	83	187.43	1.76	1.22	2.04	2.04
Sweet Grass County	A1	RM 477.81	223862	67% - 1.5yr	571.43	1279.31	1276.96	2.78	2.38	38.95	27.77	97.96	197.62	1.74	1.24	2.35	2.35
Sweet Grass County	A1	RM 477.72	223354	67% - 1.5yr	571.43	1278.83	1276.32	2.76	2.65	51.61	41.17	119.36	185.82	1.49	1.18	2.51	2.51
Sweet Grass County	A1	RM 477.63	222892	67% - 1.5yr	571.43	1278.8	1275.76	1.38	1.32	12.41	10.97	211.41	299.36	1.65	1.46	3.04	3.04
Sweet Grass County	A1	RM 477.49	222220	67% - 1.5yr	571.43	1278.56	1276.07	1.62	1.53	14.17	13.77	234.72	411.85	1.15	1.12	2.49	2.49
Sweet Grass County	A1	RM 477.40	221702	67% - 1.5yr	571.43	1278.5	1275.47	1.1	0.95	7.65	5.39	242.4	591.87	1.78	1.25	3.03	3.03
Sweet Grass County	A1	RM 477.31	221259	67% - 1.5yr	571.43	1278.16	1275.74	2.35	2.03	34.37	22.02	120.39	306.43	1.93	1.24	2.41	2.41
Sweet Grass County	A1	RM 477.21	220767	67% - 1.5yr	571.43	1278	1275.28	1.99	1.71	23.53	13.83	126.43	363.62	2.19	1.29	2.72	2.72
Sweet Grass County	A1	RM 477.11	220252	67% - 1.5yr	571.43	1277.65	1274.86	2.43	2.04	38.87	23.54	138.82	351.39	1.61	0.97	2.79	2.79
Sweet Grass County	A1	RM 477.04	219860	67% - 1.5yr	571.43	1277.35	1275.13	2.48	2.02	40.19	23.52	131.47	360.65	1.64	0.96	2.22	2.22
Sweet Grass County	A1	RM 476.95	219422	67% - 1.5yr	571.43	1276.88	1274.55	2.78	2.35	50.98	32.62	125.06	277.49	1.58	1.01	2.32	2.32
Sweet Grass County	A1	RM 476.84	218828	67% - 1.5yr	571.43	1276.51	1273.95	2.26	1.97	33.81	25.22	131.73	264.89	1.61	1.2	2.56	2.56
Sweet Grass County	A1	RM 476.75	218345	67% - 1.5yr	571.43	1276.23	1273.54	2.16	1.99	25.71	16.75	170.28	343.96	1.53	1	2.69	2.69
Sweet Grass County	A1	RM 476.66	217855	67% - 1.5yr	571.43	1275.89	1273.45	2.36	2.14	31.68	21.9	156.42	380.89	1.51	1.04	2.44	2.44
Sweet Grass County	A1	RM 476.57	217396	67% - 1.5yr	571.43	1275.48	1273.09	2.78	2.18	46.65	24.47	91.76	419.88	2.08	1.09	2.4	2.4
Sweet Grass County	A1	RM 476.47	216861	67% - 1.5yr	571.43	1275.06	1273.04	2.72	2.35	49.3	36.24	122.11	257.35	1.55	1.15	2.02	2.02
Sweet Grass County	A1	RM 476.38	216362	67% - 1.5yr	571.43	1274.8	1272.1	2.29	1.85	31.78	19.06	102.76	309.22	2.04	1.22	2.71	2.71
Sweet Grass County	A1	RM 476.28	215816	67% - 1.5yr	571.43	1274.29	1271.85	2.88	2.59	52.16	36.7	98.74	198.31	1.83	1.28	2.43	2.43
Sweet Grass County	A1	RM 476.15	215126	67% - 1.5yr	571.43	1273.59	1271.76	2.81	2.57	55.12	45.29	126.48	215.42	1.35	1.11	1.83	1.83
Sweet Grass County	A1	RM 476.01	214437	67% - 1.5yr	571.43	1273.21	1270.96	2.08	1.96	27.52	24.21	133.41	222.22	1.8	1.58	2.26	2.26
Sweet Grass County	A1	RM 475.91	213787	67% - 1.5yr	571.43	1272.84	1270.35	2.17	2.09	30.09	26.2	148.22	178.01	1.76	1.53	2.49	2.49
Sweet Grass County	A1	RM 475.76	213072	67% - 1.5yr	571.43	1272.24	1270.22	2.59	2.48	44.84	39.48	142.04	195	1.53	1.35	2.02	2.02
Sweet Grass County	A1	RM 475.63	212347	67% - 1.5yr	571.43	1271.85	1269.34	2.02	1.93	26.75	22.75	170.63	212.04	1.64	1.39	2.51	2.51
Sweet Grass County	A1	RM 475.47	211539	67% - 1.5yr	571.43	1271.36	1268.97	2.32	2.22	33.36	31.55	127.76	142.6	1.9	1.81	2.38	2.38
Sweet Grass County	A1	RM 475.35	210875	67% - 1.5yr	571.43	1270.62	1268.88	3.06	3.06	60.68	60.68	111.56	111.56	1.68	1.68	1.74	1.74
Sweet Grass County	A1	RM 475.24	210333	67% - 1.5yr	571.43	1270.63	1267.53	1.78	1.77	17.39	14.61	113.72	151.49	2.82	2.36	3.1	3.1
Sweet Grass County	A2	RM 475.12	209673	67% - 1.5yr	571.43	1269.76	1267.9	3.68	3.49	92.3	85.04	105.16	122.14	1.45	1.34	1.86	1.86
Sweet Grass County	A2	RM 475.00	209034	67% - 1.5yr	571.43	1269.23	1266.93	2.51	2.51	41.16	41.16	137.32	137.32	1.66	1.66	2.3	2.3
Sweet Grass County	A2	RM 474.87	208359	67% - 1.5yr	571.43	1269.04	1266.75	1.9	1.67	21.34	16.81	78.03	196.86	2.24	1.74	2.29	2.29
Sweet Grass County	A2	RM 474.76	207797	67% - 1.5yr	571.43	1268.6	1266.42	2.72	2.3	44.9	28.03	74.93	195.13	2.07	1.28	2.18	2.18
Sweet Grass County	A2	RM 474.67	207305	67% - 1.5yr	571.43	1268.04	1266.29	3.21	2.62	66.86	44.36	65.84	196.86	1.71	1.12	1.75	1.75
Sweet Grass County	A2	RM 474.54	206635	67% - 1.5yr	571.43	1267.73	1264.92	2.07	1.9	26.32	18.21	127.47	216.79	2.01	1.39	2.81	2.81
Sweet Grass County	A2	RM 474.43	205945	67% - 1.5yr	571.43	1267.33	1265.16	2.47	2.11	37.64	25.26	89.64	204.7	1.99	1.32	2.17	2.17
Sweet Grass County	A2	RM 474.30	205321	67% - 1.5yr	571.43	1267.05	1264.46	2.13	1.99	27.53	17.91	129.38	216.28	2.05	1.33	2.58	2.58
Sweet Grass County	A2	RM 474.21	204877	67% - 1.5yr	571.43	1266.69	1264.22	2.62	2.56	40.98	30.81	101.58	142.01	2.14	1.61	2.47	2.47
Sweet Grass County	A2	RM 474.12	204378	67% - 1.5yr	571.43	1266.56	1263.24	2.06	1.83	25.16	13.1	122.43	271.97	2.22	1.15	3.32	3.32
Sweet Grass County	A2	RM 474.01	203787	67% - 1.5yr	571.43	1266.18	1263.55	2.43	2.19	38.49	27.08	138.33	223.1	1.66	1.17	2.63	2.63
Sweet Grass County	A2	RM 473.87	203072	67% - 1.5yr	571.43	1265.69	1263.52	2.58	2.23	40.04	26.67	97.57	204.34	1.89	1.26	2.17	2.17
Sweet Grass County	A2	RM 473.74	202395	67% - 1.5yr	571.43	1265.4	1263.06	2.13	2	27.6	21.4	113.22	204.42	2.02	1.57	2.33	2.33
Sweet Grass County	A2	RM 473.62	201781	67% - 1.5yr	571.43	1264.9	1262.63	2.57	2.5	43.62	37.82	138.92	165.75	1.59	1.38	2.27	2.27
Sweet Grass County	A2	RM 473.50	201110	67% - 1.5yr	571.43	1264.28	1261.83	2.48	2.48	43.43	42.15	174.36	179.99	1.32	1.28	2.45	2.45
Sweet Grass County	A2	RM 473.36	200362	67% - 1.5yr	571.43	1263.98	1261.08	1.97	1.94	22.66	21.14	127.81	139.06	2.27	2.12	2.9	2.9
Sweet Grass County	A2	RM 473.27	199862	67% - 1.5yr	571.43	1263.63	1260.81	2.53	2.53	38.76	38.76	108.54	108.54	2.08	2.08	2.82	2.82
Sweet Grass County	A2	RM 473.17	199362	67% - 1.5yr	571.43	1263.49	1260.56	2.13	2.13	25.27	25.27	100.13	100.13	2.68	2.68	2.93	2.93
Sweet Grass County	A2	RM 473.08	198879	67% - 1.5yr	571.43	1263.19	1260.56	2.58	2.58	39.18	38.64	99.24	100.64	2.23	2.2	2.62	2.62
Sweet Grass County	A2	RM 472.98	198340	67% - 1.5yr	571.43	1263.01	1260.21	2.16	2.13	27.31	24.47	117.29	132.6	2.26	2.02	2.81	2.81
Sweet Grass County	A2	RM 472.89	197862	67% - 1.5yr	571.43	1262.57	1260.5	2.87	2.52	51.35	34.39	99.64	178.31	1.9	1.27	2.07	2.07
Sweet Grass County	A2	RM 472.79	197362	67% - 1.5yr	571.43	1262.27	1259.98	2.42	2.23	37.74	29.67	133.14	190.8	1.71	1.34	2.29	2.29
Sweet Grass County	A2	RM 472.70	196862	67% - 1.5yr	571.43	1261.82	1259.35	2.71	2.35	46.32	30.21	111.21	203.65	1.83	1.19	2.47	2.47
Sweet Grass County	A2	RM 472.60	196360	67% - 1.5yr	571.43	1261.59	1259.01	2.03	1.86	28	24.78	176.06	239.93	1.45	1.28	2.58	2.58
Sweet Grass County	A2	RM 472.50	195816	67% - 1.5yr	571.43	1261.19	1258.53	2.28	2.05	33.83	23.77	143.51	237.54	1.68	1.17	2.66	2.66
Sweet Grass County	A2	RM 472.41	195349	67% - 1.5yr	571.43	1260.83	1258.52	2.32	2.13	37.84	32.37	178.16	236.06	1.33	1.14	2.31	2.31
Sweet Grass County	A2	RM 472.31	194860	67% - 1.5yr	571.43	1260.57	1258.34	2.06	1.87	26.62	20.21	145.53	216.57	1.86	1.41	2.23	2.23
Sweet Grass County	A2	RM 472.22	194356	67% - 1.5yr	571.43	1260.36	1257.3	2.14	2	23.43	16.03	114.11	184.95	2.27	1.54	3.06	3.06
Sweet Grass County	A2	RM 472.09	193660	67% - 1.5yr	571.43	1259.57	1257.45	3.44	3.31	72.47	58.57	80.19	105.45	2.04	1.64	2.12	2.12
Sweet Grass County	A2	RM 471.95	192935	67% - 1.5yr	571.43	1259.52	1256.05	1.96	1.71	21.23	12.37	102.83	211.09	2.75	1.58	3.47	3.47
Sweet Grass County	A2	RM 471.86	192442	67% - 1.5yr	571.43	1259.15	1256.23	2.79	2.26	43.46	24.59	70.43	168.79	2.69	1.5	2.92	2.92
Sweet Grass County	A2	RM 471.75	191870	67% - 1.5yr	571.43	1258.99	1256.47	2.09	1.84	26.8	16.58	134.52	252.36	1.98	1.23	2.53	2.53

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	67% - 1.5yr	571.43	1258.44	1256.54	2.92	2.76	56.11	39.53	121.22	183.59	1.6	1.13	1.9	1.9
Sweet Grass County	A2	RM 471.52	190686	67% - 1.5yr	571.43	1258.23	1255.75	1.96	1.65	23.04	13.97	127.42	271.74	2.11	1.28	2.48	2.48
Sweet Grass County	A2	RM 471.38	189910	67% - 1.5yr	571.43	1257.61	1255.44	2.64	2.45	50.18	33.47	143.89	283.42	1.23	0.82	2.17	2.17
Sweet Grass County	A2	RM 471.28	189362	67% - 1.5yr	571.43	1256.97	1254.65	2.39	2.15	43	31.2	187.88	343.17	1.07	0.78	2.32	2.32
Sweet Grass County	A2	RM 471.18	188875	67% - 1.5yr	571.43	1256.59	1254.2	2.21	1.89	25.5	18.9	145.66	312.09	1.31	0.97	2.39	2.39
Sweet Grass County	A2	RM 471.06	188150	67% - 1.5yr	571.43	1256.18	1253.95	2.1	1.69	30.29	16.82	128.81	434.37	1.4	0.78	2.23	2.23
Sweet Grass County	A2	RM 470.94	187526	67% - 1.5yr	571.43	1255.77	1253.58	2.26	1.86	30.48	17.44	104.11	312.42	1.72	0.98	2.2	2.2
Sweet Grass County	A2	RM 470.84	186938	67% - 1.5yr	571.43	1255.42	1252.88	2.19	1.82	33.38	21.19	155.48	373.18	1.36	0.86	2.54	2.54
Sweet Grass County	A2	RM 470.73	186362	67% - 1.5yr	571.43	1255.1	1253.49	1.58	1.74	19.05	18.96	181.71	327.45	1.01	1	2.03	2.03
Sweet Grass County	A2	RM 470.65	185977	67% - 1.5yr	571.43	1254.88	1252.18	1.86	1.81	23.19	19.84	197.11	256.5	1.55	1.32	2.7	2.7
Sweet Grass County	A2	RM 470.56	185491	67% - 1.5yr	571.43	1254.57	1252.52	2.07	2.06	28.98	25.78	188.19	239.7	1.47	1.31	2.05	2.05
Sweet Grass County	A2	RM 470.44	184875	67% - 1.5yr	571.43	1254.45	1251.39	1.54	1.45	13.81	7.77	158.29	303	2.33	1.3	3.06	3.06
Sweet Grass County	A2	RM 470.35	184363	67% - 1.5yr	571.43	1253.89	1251.52	2.98	2.95	57.1	45.72	111.39	140.77	1.72	1.38	2.37	2.37
Sweet Grass County	A2	RM 470.23	183828	67% - 1.5yr	571.43	1253.54	1251.51	2.27	2.16	35.6	30.01	177.84	225.14	1.39	1.18	2.03	2.03
Sweet Grass County	A2	RM 470.13	183304	67% - 1.5yr	571.43	1253.18	1249.86	2.15	2.05	31.58	23.67	161.89	258.81	1.45	1.08	3.32	3.32
Sweet Grass County	A2	RM 470.05	182914	67% - 1.5yr	571.43	1252.93	1250.59	2.06	1.92	29.26	23.49	170.53	261.66	1.42	1.14	2.33	2.33
Sweet Grass County	A2	RM 469.93	182267	67% - 1.5yr	571.43	1252.26	1249.62	2.8	2.69	49.24	42.96	102.76	130.06	1.87	1.63	2.64	2.64
Sweet Grass County	A2	RM 469.85	181860	67% - 1.5yr	571.43	1251.84	1249.59	3.02	2.87	56	44.41	90.84	125.54	2	1.59	2.25	2.25
Sweet Grass County	A2	RM 469.75	181348	67% - 1.5yr	571.43	1251.77	1248.77	1.95	1.84	22.48	18.73	115.61	168.07	2.22	1.85	3	3
Sweet Grass County	A2	RM 469.68	180952	67% - 1.5yr	571.43	1251.47	1249.31	2.4	2.37	36.72	31.11	133.47	159.73	1.78	1.51	2.15	2.15
Sweet Grass County	A2	RM 469.58	180427	67% - 1.5yr	571.43	1251.45	1247.94	1.56	1.41	13.27	8.4	125.64	292.93	2.86	1.8	3.5	3.5
Sweet Grass County	A2	RM 469.47	179860	67% - 1.5yr	571.43	1251.19	1247.85	2.18	1.97	23.78	20.11	88.26	214.08	2.86	2.41	3.34	3.34
Sweet Grass County			179808	67% - 1.5yr	Bridge												
Sweet Grass County	A2	RM 469.44	179726	67% - 1.5yr	571.43	1251.17	1247.84	1.94	1.94	21	21	110.86	295.87	2.65	2.65	3.32	3.32
Sweet Grass County	A2	RM 469.39	179400	67% - 1.5yr	571.43	1250.82	1248.45	2.67	2.66	44.14	37.67	109.75	192.91	1.95	1.66	2.37	2.37
Sweet Grass County	A2	RM 469.30	178975	67% - 1.5yr	571.43	1250.79	1247.55	1.9	1.76	19.98	11.78	105.96	257.93	2.79	1.62	3.24	3.24
Sweet Grass County	A2	RM 469.21	178467	67% - 1.5yr	571.43	1250.18	1248.31	3.24	3.04	67.81	45.26	101.44	165.34	1.71	1.14	1.87	1.87
Sweet Grass County	A2	RM 469.09	177862	67% - 1.5yr	571.43	1250.13	1247.12	1.72	1.4	18.36	9.41	118.23	469.32	1.94	0.99	3.01	3.01
Sweet Grass County	A2	RM 469.00	177350	67% - 1.5yr	571.43	1249.37	1247.58	3.49	3.01	82.69	49.72	88.07	230.72	1.46	0.88	1.8	1.8
Sweet Grass County	A2	RM 468.90	176865	67% - 1.5yr	571.43	1248.98	1246.48	2.03	1.82	21.38	16.35	152.64	264.99	1.55	1.18	2.5	2.5
Sweet Grass County	A2	RM 468.80	176341	67% - 1.5yr	571.43	1248.76	1246.11	1.98	1.78	25.15	17.28	134.31	269.88	1.77	1.21	2.65	2.65
Sweet Grass County	A2	RM 468.71	175823	67% - 1.5yr	571.43	1248.28	1246.41	2.59	2.31	48.97	40.59	140.97	263.25	1.18	0.98	1.87	1.87
Sweet Grass County	A2	RM 468.57	175192	67% - 1.5yr	571.43	1248.06	1245.17	1.58	1.52	16.07	13.29	168.44	355.82	1.72	1.42	2.89	2.89
Sweet Grass County	A2	RM 468.42	174099	67% - 1.5yr	571.43	1247.35	1244.97	2.45	2.3	41.45	32.85	163.02	259.41	1.4	1.11	2.38	2.38
Sweet Grass County	A3	RM 468.25	173324	67% - 1.5yr	571.43	1247.25	1242.97	1.54	1.38	12.86	6.11	126.8	417.68	2.87	1.35	4.27	4.27
Sweet Grass County	A3	RM 468.16	172855	67% - 1.5yr	571.43	1247.09	1243.58	1.94	1.61	21.95	11.05	117.96	434.59	2.33	1.16	3.5	3.5
Sweet Grass County	A3	RM 468.07	172364	67% - 1.5yr	571.43	1247.02	1243.89	1.59	1.31	14.8	7.25	135.72	514.94	2.3	1.12	3.13	3.13
Sweet Grass County	A3	RM 467.97	171839	67% - 1.5yr	571.43	1246.31	1244.32	3.51	3.01	80.51	48.64	83.01	228.94	1.68	1	1.99	1.99
Sweet Grass County	A3	RM 467.87	171312	67% - 1.5yr	571.43	1246.04	1243.46	1.91	1.85	23.08	20.84	156.03	225.52	1.79	1.61	2.58	2.58
Sweet Grass County	A3	RM 467.78	170840	67% - 1.5yr	571.43	1245.6	1243.74	2.65	2.42	47.11	38.26	99.6	190.82	1.52	1.24	1.87	1.87
Sweet Grass County	A3	RM 467.69	170376	67% - 1.5yr	571.43	1245.31	1242.96	2.28	2.03	33.31	24.35	112.46	222.34	1.75	1.27	2.35	2.35
Sweet Grass County	A3	RM 467.55	169614	67% - 1.5yr	571.43	1244.81	1242.1	2.14	2.01	31.99	27.7	126.33	241.52	1.37	1.18	2.71	2.71
Sweet Grass County	A3	RM 467.41	168870	67% - 1.5yr	571.43	1244.64	1241.15	1.6	1.38	14.46	6.64	128.27	360.21	2.52	1.15	3.49	3.49
Sweet Grass County	A3	RM 467.30	168362	67% - 1.5yr	571.43	1243.9	1242.15	3.58	3.28	83.66	55.44	88.51	160.22	1.65	1.09	1.75	1.75
Sweet Grass County	A3	RM 467.16	167641	67% - 1.5yr	571.43	1243.73	1240.78	1.77	1.6	19.27	11.55	153.04	308.42	1.96	1.17	2.95	2.95
Sweet Grass County	A3	RM 467.00	166780	67% - 1.5yr	571.43	1243.19	1240.48	2.44	2.28	39.01	26.21	131.03	226.52	1.65	1.1	2.72	2.72
Sweet Grass County	A3	RM 466.83	165902	67% - 1.5yr	571.43	1242.68	1239.84	2.36	1.99	33.5	15.04	107.69	303.26	2.12	0.95	2.84	2.84
Sweet Grass County	A3	RM 466.73	165364	67% - 1.5yr	571.43	1242.43	1239.81	2.27	2.07	31.31	19	114.63	219.96	2.07	1.26	2.62	2.62
Sweet Grass County	A3	RM 466.64	164858	67% - 1.5yr	571.43	1242.06	1239.36	2.72	2.41	41.38	23.02	85.89	222.24	2.27	1.26	2.69	2.69
Sweet Grass County	A3	RM 466.49	164108	67% - 1.5yr	571.43	1241.61	1239.67	2.55	1.94	41.9	21.55	106.46	410.63	1.72	0.89	1.94	1.94
Sweet Grass County	A3	RM 466.25	162845	67% - 1.5yr	571.43	1240.5	1238.71	2.85	2.46	52.33	38.54	78.03	180.6	1.77	1.28	1.79	1.79
Sweet Grass County	A3	RM 465.79	160351	67% - 1.5yr	571.43	1239.19	1236.48	2.1	1.51	26.79	11.63	103.6	421.38	2.12	0.9	2.7	2.7
Sweet Grass County	A3	RM 465.01	155919	67% - 1.5yr	571.43	1237.04	1234.44	2.47	2.35	37.94	28.4	119.56	169.76	1.92	1.44	2.6	2.6
Sweet Grass County	A3	RM 464.68	154254	67% - 1.5yr	571.43	1236.14	1233.35	2.08	2.03	28.19	20.37	163.98	233.43	1.67	1.2	2.8	2.8
Sweet Grass County	A3	RM 464.48	153160	67% - 1.5yr	571.43	1235.58	1232.71	2	1.82	26.5	17.52	171.41	322.96	1.6	1.05	2.87	2.87
Sweet Grass County	A3	RM 464.33	152378	67% - 1.5yr	571.43	1235.2	1232.61	1.91	1.66	24.24	18.68	181.11	284.51	1.58	1.21	2.59	2.59
Sweet Grass County	A3	RM 464.16	151621	67% - 1.5yr	571.43	1234.63	1232.45	2.37	2.12	37.73	27.26	154.43	249.41	1.5	1.08	2.18	2.18
Sweet Grass County	A3	RM 464.04	150961	67% - 1.5yr	571.43	1234.44	1231.48	1.87	1.53	19.8	8.73	113.26	331.11	2.59	1.13	2.96	2.96
Sweet Grass County	A3	RM 463.88	150174	67% - 1.5yr	571.43	1233.87	1231.85	2.77	2.57	51.07	40.47	128.68	181.41	1.54	1.22	2.02	2.02
Sweet Grass County	A3	RM 463.78	149616	67% - 1.5yr	571.43	1233.52	1230.54	2.23	2.02	32.1	21.74	146.28	355.13	1.72	1.16	2.99	2.99
Sweet Grass County	A3	RM 463.67	149069	67% - 1.5yr	571.43	1233.07	1230.86	2.56	2.17	43.29	27.12	130.29	313.44	1.6	1	2.21	2.21

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	67% - 1.5yr	571.43	1232.84	1230.39	2.2	1.88	30.17	20.85	130.98	308.68	1.9	1.31	2.45	2.45
Sweet Grass County	A3	RM 463.49	148111	67% - 1.5yr	571.43	1232.37	1229.73	2.76	2.56	47.15	34.22	106.1	213.7	1.92	1.39	2.64	2.64
Sweet Grass County	A3	RM 463.34	147326	67% - 1.5yr	571.43	1231.95	1229.72	2.06	1.72	28.91	16.85	174.42	537.64	1.47	0.85	2.23	2.23
Sweet Grass County	A3	RM 463.20	146616	67% - 1.5yr	571.43	1231.58	1228.95	2.06	1.49	27.36	13.52	102.84	843.03	1.76	0.85	2.62	2.62
Sweet Grass County	A3	RM 463.06	145881	67% - 1.5yr	571.43	1231.19	1228.89	2.03	1.26	27.81	11.69	130.03	1022.53	1.5	0.63	2.3	2.3
Sweet Grass County	A4	RM 462.79	144435	67% - 1.5yr	571.43	1230.92	1228.25	1.25	0.66	9.66	4.83	133.51	1378.17	1.96	0.96	2.67	2.67
Sweet Grass County	A4	RM 462.16	141146	67% - 1.5yr	571.43	1228.94	1226.15	2.51	1.94	39.27	16.81	105	363.75	1.92	0.81	2.79	2.79
Sweet Grass County		RM 461.97	140135	67% - 1.5yr	571.43	1228.34	1226.06	2.24	1.57	33.4	15.4	120.82	661.21	1.53	0.71	2.28	2.28
Sweet Grass County	A4	RM 461.71	138705	67% - 1.5yr	571.43	1226.85	1224.75	3.08	2.55	65.92	44.78	95.42	285.68	1.37	0.93	2.09	2.09
Sweet Grass County	A4	RM 461.52	137683	67% - 1.5yr	571.43	1226.1	1222.31	1.83	1.51	17.43	8.63	73.48	227.93	3.48	1.66	3.79	3.79
Sweet Grass County	A4	RM 461.33	136718	67% - 1.5yr	571.43	1225.8	1223.38	2.02	1.9	26.67	14.32	121.04	394.86	1.64	0.88	2.42	2.42
Sweet Grass County	A4	RM 461.14	135736	67% - 1.5yr	571.43	1225.07	1222.44	2.59	2.49	41.13	32.39	110.98	147.23	1.98	1.56	2.63	2.63
Sweet Grass County	A4	RM 460.99	134951	67% - 1.5yr	571.43	1224.59	1221.98	2.45	2.31	37.39	28.27	121.51	172.35	1.9	1.43	2.6	2.6
Sweet Grass County	A4	RM 460.85	134214	67% - 1.5yr	571.43	1224.06	1222.07	2.54	2.49	40.22	31.9	133.62	171.89	1.68	1.34	1.99	1.99
Sweet Grass County	A4	RM 460.74	133616	67% - 1.5yr	571.43	1224.05	1220.27	1.51	1.44	12.21	9.63	122.01	238.66	3.07	2.41	3.78	3.78
Sweet Grass County	A4	RM 460.63	133067	67% - 1.5yr	571.43	1224.04	1218.9	1.13	1.12	5.95	4.73	105.16	225.7	4.79	3.78	5.14	5.14
Sweet Grass County			132957	67% - 1.5yr	Bridge												
Sweet Grass County	A4	RM 460.59	132836	67% - 1.5yr	571.43	1223.55	1221.09	2.68	2.68	44.74	44.74	111.01	215	1.92	1.92	2.46	2.46
Sweet Grass County	A4	RM 460.50	132281	67% - 1.5yr	571.43	1222.95	1221.12	2.86	2.86	56.85	56.85	147.55	243.82	1.35	1.35	1.83	1.83
Sweet Grass County	A4	RM 460.38	131785	67% - 1.5yr	571.43	1222.53	1220.5	2.41	2.24	35.21	29.2	137.51	248.18	1.32	1.1	2.03	2.03
Sweet Grass County	A4	RM 460.29	131287	67% - 1.5yr	571.43	1221.99	1219.97	2.59	2.51	47.12	44.53	124.78	180.82	1.34	1.26	2.02	2.02
Sweet Grass County	A4	RM 460.19	130793	67% - 1.5yr	571.43	1221.53	1219.38	2.52	2.38	42.33	37.63	111.9	203.58	1.54	1.37	2.15	2.15
Sweet Grass County	A4	RM 460.08	130210	67% - 1.5yr	571.43	1221.17	1218.23	2.32	2.32	32.72	32.72	119.6	119.6	2.06	2.06	2.95	2.95
Sweet Grass County	A4	RM 459.99	129763	67% - 1.5yr	571.43	1220.93	1218.01	2.41	2.41	33.73	33.73	99.93	99.93	2.37	2.37	2.92	2.92
Sweet Grass County	A4	RM 459.90	129246	67% - 1.5yr	571.43	1220.81	1217.62	2.09	2.09	24	23.89	98.22	98.7	2.78	2.77	3.19	3.19
Sweet Grass County	A4	RM 459.81	128792	67% - 1.5yr	571.43	1220.41	1218.15	2.83	2.83	48.31	48.31	97.26	97.26	2.08	2.08	2.26	2.26
Sweet Grass County	A4	RM 459.72	128310	67% - 1.5yr	627.22	1220.28	1217.31	2.19	2.19	27.91	27.91	123.24	163.38	2.32	2.32	2.97	2.97
Sweet Grass County	A4	RM 459.62	127798	67% - 1.5yr	627.22	1219.87	1217.46	2.71	2.62	46.64	37.98	127.78	224.85	1.78	1.45	2.41	2.41
Sweet Grass County	A5	RM 459.53	127324	67% - 1.5yr	627.22	1219.35	1217.26	2.85	2.85	55.21	55.21	150.59	150.59	1.46	1.46	2.09	2.09
Sweet Grass County	A5	RM 459.44	126881	67% - 1.5yr	627.22	1218.99	1216.93	2.4	2.4	39.19	39.19	180.64	180.64	1.45	1.45	2.07	2.07
Sweet Grass County	A5	RM 459.31	126192	67% - 1.5yr	627.22	1218.6	1215.66	2.17	2.11	29.08	27.72	146.32	169.16	1.96	1.87	2.94	2.94
Sweet Grass County	A5	RM 459.24	125848	67% - 1.5yr	627.22	1218.36	1215.69	2.38	2.33	35.8	33.52	142.95	156.67	1.83	1.72	2.67	2.67
Sweet Grass County	A5	RM 459.16	125420	67% - 1.5yr	627.22	1217.81	1215.82	2.93	2.93	59.38	59.38	155.95	155.95	1.37	1.37	1.99	1.99
Sweet Grass County	A5	RM 459.02	124624	67% - 1.5yr	627.22	1217.35	1214.8	2	2	26.38	26.38	195.64	206.83	1.6	1.6	2.54	2.54
Sweet Grass County	A5	RM 458.79	123371	67% - 1.5yr	627.22	1216.6	1214.02	2.3	2.3	33.1	33.1	144.46	144.46	1.88	1.88	2.58	2.58
Sweet Grass County	A5	RM 458.48	121727	67% - 1.5yr	627.22	1215.56	1213.35	2.32	2.14	36.14	31.04	131.54	229.86	1.51	1.3	2.21	2.21
Sweet Grass County	A5	RM 458.36	121100	67% - 1.5yr	627.22	1214.54	1212.73	3.43	3.16	81.82	64.16	111.47	186.48	1.36	1.06	1.81	1.81
Sweet Grass County	A5	RM 458.25	120543	67% - 1.5yr	627.22	1214.16	1211.35	2.16	1.88	27.69	18.44	113.82	227.46	2.21	1.46	2.81	2.81
Sweet Grass County	A5	RM 458.13	119849	67% - 1.5yr	627.22	1213.53	1211.21	2.86	2.64	54.32	42.42	128.53	195.04	1.57	1.22	2.32	2.32
Sweet Grass County	A5	RM 458.03	119256	67% - 1.5yr	627.22	1213.45	1210.09	1.87	1.8	18.77	16.08	105.7	133.89	3.05	2.61	3.37	3.37
Sweet Grass County	A5	RM 457.87	118444	67% - 1.5yr	627.22	1213.32	1209.57	1.79	1.79	16.4	16.23	100.64	101.72	3.48	3.44	3.75	3.75
Sweet Grass County	A5	RM 457.76	117858	67% - 1.5yr	627.22	1213.13	1210.24	2.1	2.1	25.91	25.91	132.68	132.68	2.25	2.25	2.89	2.89
Sweet Grass County	A5	RM 457.66	117350	67% - 1.5yr	627.22	1212.9	1210.03	2.22	2.22	29.43	29.43	129.76	129.76	2.17	2.17	2.87	2.87
Sweet Grass County	A5	RM 457.54	116694	67% - 1.5yr	627.22	1212.57	1209.93	2.32	2.32	32.47	31.99	129.42	131.38	2.09	2.06	2.64	2.64
Sweet Grass County	A5	RM 457.35	115703	67% - 1.5yr	627.22	1211.36	1209.69	3.38	3.38	82.35	82.35	151.22	151.22	1.23	1.23	1.66	1.66
Sweet Grass County	A5	RM 457.20	114921	67% - 1.5yr	627.22	1211.09	1208.7	1.8	1.8	20.54	20.54	193.6	193.6	1.8	1.8	2.38	2.38
Sweet Grass County	A5	RM 457.02	113974	67% - 1.5yr	627.22	1210.02	1208.04	3.5	3.16	79.41	57.02	97.05	165.19	1.68	1.2	1.97	1.97
Sweet Grass County	A5	RM 456.84	113009	67% - 1.5yr	627.22	1209.65	1206.55	2.18	2.18	26.94	26.94	113.04	113.04	2.54	2.54	3.1	3.1
Sweet Grass County	A5	RM 456.68	112164	67% - 1.5yr	627.22	1209.04	1206.59	2.88	2.88	50.83	50.83	108.99	108.99	2	2	2.45	2.45
Sweet Grass County	A5	RM 456.55	111455	67% - 1.5yr	627.22	1208.62	1206.19	2.45	2.45	37.45	37.45	137.27	137.27	1.87	1.87	2.44	2.44
Sweet Grass County	A5	RM 456.43	110857	67% - 1.5yr	627.22	1208.42	1205.33	2.17	2.17	25.94	25.94	103.61	103.61	2.79	2.79	3.09	3.09
Sweet Grass County	A6	RM 456.29	110121	67% - 1.5yr	627.22	1208.06	1205.45	2.5	2.5	34.57	34.57	111.86	111.86	2.24	2.24	2.61	2.61
Sweet Grass County	A6	RM 456.18	109508	67% - 1.5yr	627.22	1207.67	1205.45	2.61	2.61	42.44	42.44	126.36	126.36	1.9	1.9	2.22	2.22
Sweet Grass County	A6	RM 456.03	108721	67% - 1.5yr	627.22	1207.11	1204.59	2.49	2.49	40.75	40.75	153.29	153.29	1.64	1.64	2.52	2.52
Sweet Grass County	A6	RM 455.84	107742	67% - 1.5yr	627.22	1206.46	1204.05	2.3	2.3	30.97	30.97	176.19	192.5	1.55	1.55	2.42	2.42
Sweet Grass County	A6	RM 455.70	106976	67% - 1.5yr	627.22	1206.24	1203.14	1.93	1.93	20.36	20.36	120.69	171.35	2.69	2.69	3.11	3.11
Sweet Grass County	A6	RM 455.56	106256	67% - 1.5yr	627.22	1205.89	1203.35	2.43	2.42	33.05	30.64	117.75	188.33	2.19	2.03	2.54	2.54
Sweet Grass County	A6	RM 455.39	105360	67% - 1.5yr	627.22	1205.64	1202.74	1.9	1.9	21.32	21.32	146.52	185.64	2.25	2.25	2.9	2.9
Sweet Grass County	A6	RM 455.26	104667	67% - 1.5yr	627.22	1204.63	1202.83	3.73	3.73	93.93	93.71	116.36	130.86	1.44	1.44	1.8	1.8
Sweet Grass County	A6	RM 455.09	103771	67% - 1.5yr	627.22	1204.47	1201.58	1.7	1.61	16.68	13.78	154.27	199	2.37	1.96	2.89	2.89
Sweet Grass County	A6	RM 454.95	103072	67% - 1.5yr	627.22	1203.91	1201.94	2.72	2.65	53.52	52.01	176.98	203.13	1.2	1.17	1.97	1.97

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	67% - 1.5yr	627.22	1203.33	1200.61	2.13	2.08	31.15	29.91	176.48	219.68	1.43	1.37	2.72	2.72
Sweet Grass County	A6	RM 454.72	101863	67% - 1.5yr	627.22	1202.59	1200.47	3.08	3.08	58.73	58.73	135.85	135.85	1.5	1.5	2.12	2.12
Sweet Grass County	A6	RM 454.64	101419	67% - 1.5yr	627.22	1202.43	1199.69	2.2	2.2	28.65	28.65	150.62	150.62	1.9	1.9	2.74	2.74
Sweet Grass County	A6	RM 454.53	100846	67% - 1.5yr	627.22	1202.06	1199.59	2.5	2.5	36.28	36.28	118.12	118.12	2.12	2.12	2.48	2.48
Sweet Grass County	A6	RM 454.43	100338	67% - 1.5yr	627.22	1201.83	1199	2.41	2.41	33.54	33.54	109.4	117.81	2.38	2.38	2.84	2.84
Sweet Grass County	A6	RM 454.29	99597	67% - 1.5yr	627.22	1201.54	1198.71	2.31	2.31	30.62	30.62	111.47	155.09	2.44	2.44	2.82	2.82
Sweet Grass County	A6	RM 454.15	98861	67% - 1.5yr	627.22	1201.28	1198.68	2.16	2.16	26.16	25.95	133.99	135.1	2.16	2.15	2.6	2.6
Sweet Grass County	A6	RM 454.00	98105	67% - 1.5yr	627.22	1200.89	1198.53	2.34	2.34	29.45	29.45	165.28	165.28	1.62	1.62	2.36	2.36
Sweet Grass County	A6	RM 453.89	97523	67% - 1.5yr	627.22	1200.36	1198.31	2.69	2.65	42.22	40.21	173.12	185.51	1.34	1.28	2.06	2.06
Sweet Grass County	A6	RM 453.78	96929	67% - 1.5yr	627.22	1200.26	1197.07	1.75	1.75	17.66	17.66	147.74	147.74	2.42	2.42	3.19	3.19
Sweet Grass County	A6	RM 453.67	96361	67% - 1.5yr	627.22	1199.68	1197.77	2.99	2.96	56.94	55.08	148.04	155.76	1.41	1.36	1.91	1.91
Sweet Grass County	A6	RM 453.58	95863	67% - 1.5yr	627.22	1199.68	1196.37	1.73	1.73	16.23	16.23	180.1	180.1	2.36	2.36	3.31	3.31
Sweet Grass County	A6	RM 453.48	95355	67% - 1.5yr	627.22	1199.28	1196.86	2.65	2.65	41.02	41.02	115.59	115.59	2.04	2.04	2.41	2.41
Sweet Grass County	A6	RM 453.35	94633	67% - 1.5yr	627.22	1198.85	1196.43	2.52	2.52	36.4	36.15	133.31	134.28	1.87	1.86	2.42	2.42
Sweet Grass County	A7	RM 453.23	93994	67% - 1.5yr	627.22	1198.26	1196.41	2.98	2.69	53.68	45.55	106.64	189.15	1.45	1.23	1.84	1.84
Sweet Grass County	A7	RM 453.11	93361	67% - 1.5yr	627.22	1197.99	1195.68	2.01	1.99	24.33	23.67	165.87	176.56	1.84	1.79	2.31	2.31
Sweet Grass County	A7	RM 453.01	92863	67% - 1.5yr	627.22	1197.51	1195.38	2.77	2.69	47.07	40.7	129.13	157.08	1.72	1.49	2.13	2.13
Sweet Grass County	A7	RM 452.91	92363	67% - 1.5yr	627.22	1197.26	1194.85	2.43	2.21	32.29	26.99	110.18	185.61	1.83	1.53	2.41	2.41
Sweet Grass County	A7	RM 452.82	91863	67% - 1.5yr	627.22	1196.99	1194.65	2.34	2.17	33.78	29.38	104.97	170.78	1.94	1.69	2.34	2.34
Sweet Grass County	A7	RM 452.72	91363	67% - 1.5yr	627.22	1196.96	1193.29	1.53	1.53	12.7	12.21	140.36	146.29	2.91	2.8	3.67	3.67
Sweet Grass County	A7	RM 452.64	90932	67% - 1.5yr	627.22	1196.73	1194.02	2.19	2.03	28.89	23.3	133.5	182.22	2.1	1.69	2.71	2.71
Sweet Grass County	A7	RM 452.53	90362	67% - 1.5yr	627.22	1196.31	1193.87	2.69	2.59	41.87	35.34	108.27	136.67	2.1	1.77	2.44	2.44
Sweet Grass County	A7	RM 452.43	89864	67% - 1.5yr	627.22	1196	1193.52	2.7	2.59	41.84	33.36	106.82	142.8	2.13	1.7	2.47	2.47
Sweet Grass County	A7	RM 452.33	89331	67% - 1.5yr	627.22	1195.69	1193.16	2.57	2.54	35.88	33.77	132.26	142.38	1.84	1.73	2.53	2.53
Sweet Grass County	A7	RM 452.25	88863	67% - 1.5yr	627.22	1195.43	1192.91	2.48	2.46	34.59	32.79	131.64	140	1.92	1.82	2.52	2.52
Sweet Grass County	A7	RM 452.16	88399	67% - 1.5yr	627.22	1195.13	1192.68	2.61	2.49	39.29	31.27	116.48	154.64	2.04	1.63	2.45	2.45
Sweet Grass County	A7	RM 452.06	87882	67% - 1.5yr	627.22	1194.9	1192.4	2.37	2.25	33.15	24.92	118.33	167.42	2.22	1.67	2.5	2.5
Sweet Grass County	A7	RM 451.96	87394	67% - 1.5yr	627.22	1194.54	1191.9	2.66	2.54	43.67	35.75	120.1	154.86	1.94	1.59	2.64	2.64
Sweet Grass County	A7	RM 451.86	86835	67% - 1.5yr	627.22	1194.23	1191.79	2.51	2.3	35.51	28	116.56	165.36	2.09	1.65	2.44	2.44
Sweet Grass County	A7	RM 451.75	86230	67% - 1.5yr	627.22	1193.98	1191.43	2.26	2.26	29.39	29.39	128.86	128.86	2.16	2.16	2.55	2.55
Sweet Grass County	A7	RM 451.61	85483	67% - 1.5yr	627.22	1193.65	1190.7	2.21	2.21	30.12	30.12	145.57	145.57	1.95	1.95	2.95	2.95
Sweet Grass County	A7	RM 451.49	84861	67% - 1.5yr	627.22	1193	1191.07	3.02	2.95	55.51	52.02	113.75	125	1.82	1.7	1.94	1.94
Sweet Grass County	A7	RM 451.34	84113	67% - 1.5yr	627.22	1192.89	1190.06	1.77	1.77	18.21	18.21	149.61	149.61	2.37	2.37	2.83	2.83
Sweet Grass County	A7	RM 451.20	83363	67% - 1.5yr	627.22	1192.42	1189.8	2.63	2.63	40.3	40.3	101.97	101.97	2.34	2.34	2.62	2.62
Sweet Grass County	A7	RM 451.10	82863	67% - 1.5yr	627.22	1192.23	1189.79	2.31	2.31	31.51	31.51	127.42	127.42	2.13	2.13	2.44	2.44
Sweet Grass County	A7	RM 451.00	82325	67% - 1.5yr	627.22	1191.95	1189.55	2.39	2.23	35.53	30.38	117.14	171.05	1.92	1.64	2.4	2.4
Sweet Grass County	A7	RM 450.86	81602	67% - 1.5yr	627.22	1191.7	1188.29	1.87	1.73	37.33	24	88.94	171.28	3.37	2.12	3.41	3.41
Sweet Grass County	A7	RM 450.73	80923	67% - 1.5yr	627.22	1191	1188.46	3.1	2.99	56.72	47.63	89.05	111.3	2.25	1.88	2.54	2.54
Sweet Grass County	A7	RM 450.63	80374	67% - 1.5yr	627.22	1190.74	1188.16	2.5	2.49	37.97	36.99	124.71	128.24	2.02	1.96	2.58	2.58
Sweet Grass County	A7	RM 450.53	79863	67% - 1.5yr	627.22	1190.53	1187.88	2.22	2.22	27.41	27.41	145.53	145.53	1.94	1.94	2.65	2.65
Sweet Grass County	A7	RM 450.43	79300	67% - 1.5yr	627.22	1190.27	1187.72	2.29	2.13	28.6	25.21	124.59	178.18	1.87	1.65	2.55	2.55
Sweet Grass County	A7	RM 450.34	78849	67% - 1.5yr	656.38	1189.8	1188.05	2.85	2.62	52.34	45.26	120.5	200.78	1.44	1.25	1.75	1.75
Sweet Grass County	A7	RM 450.23	78298	67% - 1.5yr	656.38	1189.68	1186.92	1.71	1.71	17.33	17.33	192.72	192.72	1.99	1.99	2.76	2.76
Sweet Grass County	A7	RM 450.14	77822	67% - 1.5yr	656.38	1189.43	1186.4	2.14	2.14	27.93	26.95	150.72	156.46	2.04	1.96	3.02	3.02
Sweet Grass County	A7	RM 450.05	77362	67% - 1.5yr	656.38	1188.86	1187.2	3.02	3.02	60.38	60.38	137.33	137.33	1.58	1.58	1.66	1.66
Sweet Grass County	A7	RM 449.96	76841	67% - 1.5yr	656.38	1188.63	1186.28	2.33	2.28	32.16	28.4	125.29	162.92	2.24	1.97	2.35	2.35
Sweet Grass County	A7	RM 449.86	76356	67% - 1.5yr	656.38	1188.45	1185.58	2.27	2.17	28.74	21.63	106.45	154.78	2.69	2.02	2.87	2.87
Sweet Grass County	A7	RM 449.77	75860	67% - 1.5yr	656.38	1188.15	1185.68	2.6	2.35	35.47	32.66	145.25	181.57	1.67	1.54	2.46	2.46
Sweet Grass County	A7	RM 449.68	75373	67% - 1.5yr	656.38	1187.67	1185.9	2.69	2.6	52.16	50.32	196.21	213.31	1.22	1.18	1.76	1.76
Sweet Grass County	A7	RM 449.59	74904	67% - 1.5yr	656.38	1187.66	1184.15	1.72	1.59	15.72	12.27	108.29	166.8	3.2	2.47	3.51	3.51
Sweet Grass County	A7	RM 449.48	74351	67% - 1.5yr	656.38	1187.28	1184.86	2.75	2.49	46.63	33.54	99.69	188.6	1.94	1.4	2.42	2.42
Sweet Grass County	A7	RM 449.37	73741	67% - 1.5yr	656.38	1187.14	1184.73	1.6	1.57	16.79	16.13	209.65	329.25	1.59	1.53	2.41	2.41
Sweet Grass County	A7	RM 449.26	73165	67% - 1.5yr	656.38	1187	1184.33	1.74	1.18	15.52	6.38	125.58	697.46	2.16	0.88	2.67	2.67
Sweet Grass County	A7	RM 449.10	72364	67% - 1.5yr	656.38	1186.21	1183.97	3.34	2.65	66.56	31.99	84.17	422.23	2.21	1.04	2.25	2.25
Sweet Grass County	A7	RM 449.00	71858	67% - 1.5yr	656.38	1185.64	1183.97	3.42	2.62	76.68	45.66	96.32	270.77	1.66	0.98	1.67	1.67
Sweet Grass County	A7	RM 448.88	71223	67% - 1.5yr	656.38	1185.01	1183.11	2.44	2.3	42.07	35.41	189	290.59	1.28	1.08	1.89	1.89
Sweet Grass County	A7	RM 448.76	70537	67% - 1.5yr	656.38	1184.78	1182.01	1.48	1.35	15.14	12.74	244.08	413.51	1.39	1.17	2.76	2.76
Sweet Grass County	A7	RM 448.55	69424	67% - 1.5yr	656.38	1184.48	1181.8	1.63	1.53	15.63	13.5	153.37	224.35	2.22	1.91	2.67	2.67
Sweet Grass County	A7	RM 448.41	68815	67% - 1.5yr	656.38	1183.91	1181.16	2.96	2.95	47.07	43.95	85.46	92.37	2.59	2.41	2.75	2.75
Sweet Grass County	A7	RM 448.32	68353	67% - 1.5yr	656.38	1184.07	1179.91	1.4	1.4	9.86	9.86	123.99	130.8	3.77	3.77	4.16	4.16
Sweet Grass County	A7	RM 448.23	67851	67% - 1.5yr	656.38	1183.95	1179.82	1.72	1.72	14.7	14.7	101.62	101.62	3.76	3.76	4.13	4.13

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	67% - 1.5yr	Bridge												
Sweet Grass County	A7	RM 448.20	67729	67% - 1.5yr	656.38	1183.51	1180.89	2.92	2.92	50.37	50.37	101.27	114.63	2.22	2.22	2.62	2.62
Sweet Grass County	A7	RM 448.07	67043	67% - 1.5yr	656.38	1183.16	1180.7	2.36	2.36	34.24	34.24	139.88	162.16	1.99	1.99	2.45	2.45
Sweet Grass County	A7	RM 447.94	66348	67% - 1.5yr	656.38	1182.88	1180.22	2.21	2.21	27.85	27.85	120.64	211.07	2.46	2.46	2.67	2.67
Sweet Grass County	A7	RM 447.85	65863	67% - 1.5yr	656.38	1182.46	1180.39	2.81	2.8	49.69	46.72	128.68	161.93	1.82	1.71	2.07	2.07
Sweet Grass County	A7	RM 447.75	65363	67% - 1.5yr	656.38	1182.41	1179.55	1.89	1.89	18.46	18.46	138.86	184.8	2.51	2.51	2.87	2.87
Sweet Grass County	A7	RM 447.66	64865	67% - 1.5yr	656.38	1182.19	1179.59	2.22	2.2	28.27	22.03	121.03	210.85	2.44	1.9	2.6	2.6
Sweet Grass County	A7	RM 447.56	64365	67% - 1.5yr	656.38	1181.76	1179.67	2.82	2.61	50.61	36.13	130.88	246.45	1.76	1.25	2.09	2.09
Sweet Grass County	A7	RM 447.49	64001	67% - 1.5yr	656.38	1181.6	1179.82	2.2	2.08	31.11	23.44	193.13	297.77	1.53	1.16	1.78	1.78
Sweet Grass County	A7	RM 447.39	63473	67% - 1.5yr	656.38	1181.02	1178.85	3.09	2.48	56.66	32.43	88.74	239.5	1.94	1.1	2.17	2.17
Sweet Grass County	A7	RM 447.27	62880	67% - 1.5yr	656.38	1180.73	1178.26	2.45	2.05	36.93	21.39	99.65	280.44	1.98	1.14	2.47	2.47
Sweet Grass County	A7	RM 447.17	62358	67% - 1.5yr	656.38	1180.42	1177.92	2.49	1.81	38.53	16.29	106.76	454.68	1.9	0.8	2.5	2.5
Sweet Grass County	A7	RM 447.08	61863	67% - 1.5yr	656.38	1179.94	1177.91	2.8	2	54.44	31.31	98.32	418.52	1.37	0.79	2.03	2.03
Sweet Grass County	A7	RM 446.98	61358	67% - 1.5yr	656.38	1179.45	1177.28	2.72	2.05	43.98	23.48	92.75	315.88	1.91	1.01	2.17	2.17
Sweet Grass County	A7	RM 446.89	60841	67% - 1.5yr	656.38	1179.02	1176.94	2.98	2.14	55.62	29.44	77.33	309.64	1.87	0.99	2.07	2.07
Sweet Grass County	A7	RM 446.80	60396	67% - 1.5yr	656.38	1178.87	1175.92	2.2	1.58	28.35	14.55	90.09	366.2	2.3	1.17	2.95	2.95
Sweet Grass County	A7	RM 446.70	59903	67% - 1.5yr	656.38	1178.5	1176.22	2.96	2.09	52.11	24.24	65.84	324.53	2.24	1.01	2.28	2.28
Sweet Grass County	A7	RM 446.60	59371	67% - 1.5yr	656.38	1178.03	1175.91	3.05	2.45	54.1	31.36	75.72	245.79	1.9	1.09	2.13	2.13
Sweet Grass County	A7	RM 446.51	58868	67% - 1.5yr	656.38	1177.75	1175.24	2.53	2.24	40.54	30.43	113.25	215.28	1.83	1.38	2.5	2.5
Sweet Grass County	A7	RM 446.41	58363	67% - 1.5yr	656.38	1177.56	1174.39	2.06	1.9	23.38	17.2	134.36	218.38	2.15	1.59	3.16	3.16
Sweet Grass County	A7	RM 446.30	57762	67% - 1.5yr	656.38	1177.15	1174.85	2.6	2.43	39.06	33.86	122.71	173.8	1.79	1.55	2.31	2.31
Sweet Grass County	A7	RM 446.22	57365	67% - 1.5yr	656.38	1176.79	1174.39	2.77	2.77	45.3	45.3	125.38	125.38	1.89	1.89	2.39	2.39
Sweet Grass County	A7	RM 446.12	56852	67% - 1.5yr	656.38	1176.49	1174.04	2.51	2.51	35.98	35.98	138.68	138.68	1.88	1.88	2.45	2.45
Sweet Grass County	A7	RM 446.02	56303	67% - 1.5yr	656.38	1176.35	1173.3	2.13	2.04	24.51	21.1	97.54	138.39	3	2.57	3.06	3.06
Sweet Grass County	A7	RM 445.94	55871	67% - 1.5yr	656.38	1175.85	1173.6	3.21	3.02	63.43	54.16	93.63	131.14	1.99	1.69	2.26	2.26
Sweet Grass County	A7	RM 445.82	55236	67% - 1.5yr	656.38	1175.5	1173.05	2.19	2.17	32.62	29.78	203.75	226.74	1.46	1.34	2.45	2.45
Sweet Grass County	A7	RM 445.71	54753	67% - 1.5yr	656.38	1175.3	1172.38	1.94	1.92	18.39	17.91	205.32	213.19	1.65	1.6	2.92	2.92
Sweet Grass County	A7	RM 445.60	54202	67% - 1.5yr	656.38	1175.09	1172.32	2	2	21.55	21.34	182.37	192.95	1.8	1.78	2.77	2.77
Sweet Grass County	A7	RM 445.46	53453	67% - 1.5yr	656.38	1174.58	1171.04	2.63	2.59	34.98	29.46	127.51	159.52	1.95	1.64	3.54	3.54
Sweet Grass County	A7	RM 445.36	52888	67% - 1.5yr	656.38	1174.36	1170.25	2.45	2.21	33.57	20.6	96.16	186.86	2.65	1.62	4.11	4.11
Sweet Grass County	A7	RM 445.26	52344	67% - 1.5yr	656.38	1173.98	1171.35	2.8	2.67	46.8	37.65	103.83	142.79	2.18	1.76	2.63	2.63
Sweet Grass County	A7	RM 445.17	51873	67% - 1.5yr	656.38	1173.26	1171.83	3.45	3.37	82.38	76.64	133.5	151.85	1.38	1.28	1.43	1.43
Sweet Grass County	A7	RM 445.07	51376	67% - 1.5yr	656.38	1173.18	1170.28	1.93	1.91	23.24	22.44	180.33	195.04	1.88	1.82	2.9	2.9
Sweet Grass County	A7	RM 444.97	50844	67% - 1.5yr	656.38	1172.76	1170.19	2.54	2.54	37.05	37.05	144.22	144.22	1.79	1.79	2.57	2.57
Sweet Grass County	A7	RM 444.88	50352	67% - 1.5yr	656.38	1172.5	1170.05	2.38	2.35	33.06	29.52	141.11	160.14	1.95	1.74	2.45	2.45
Sweet Grass County	A7	RM 444.79	49860	67% - 1.5yr	656.38	1172.12	1169.94	2.67	2.53	44.53	35.42	129.04	173.08	1.88	1.5	2.17	2.17
Sweet Grass County	A7	RM 444.69	49316	67% - 1.5yr	656.38	1171.73	1169.55	2.67	2.49	43.86	37.89	123.26	156.4	1.95	1.69	2.18	2.18
Sweet Grass County	A7	RM 444.60	48863	67% - 1.5yr	656.38	1171.77	1167.23	1.75	1.6	14.79	9.91	85.58	172.27	4.31	2.83	4.53	4.53
Sweet Grass County	A7	RM 444.50	48367	67% - 1.5yr	656.38	1171.37	1168.66	2.89	2.46	50.02	31.12	101.56	202.76	2.13	1.32	2.71	2.71
Sweet Grass County	A7	RM 444.41	47863	67% - 1.5yr	656.38	1171.26	1168.6	2.12	2	25.01	22.23	129.37	187.15	2.1	1.87	2.66	2.66
Sweet Grass County	A7	RM 444.30	47336	67% - 1.5yr	656.38	1171.14	1168.26	1.75	1.72	17.04	15.46	162.55	290.17	2.3	2.09	2.88	2.88
Sweet Grass County	A7	RM 444.20	46789	67% - 1.5yr	656.38	1170.53	1167.97	3.15	3.15	60.45	59.05	101.74	105.4	2.05	2	2.56	2.56
Sweet Grass County	A7	RM 444.12	46346	67% - 1.5yr	656.38	1170.31	1167.62	2.73	2.64	42.87	36.5	97.79	122.1	2.44	2.07	2.68	2.68
Sweet Grass County	A7	RM 444.02	45829	67% - 1.5yr	656.38	1170.13	1167.57	2.33	2.32	27.65	25.28	139.6	153.31	2.02	1.85	2.56	2.56
Sweet Grass County	A7	RM 443.91	45243	67% - 1.5yr	656.38	1169.85	1167.08	2.3	2.3	32.85	31.09	150.03	158.79	1.9	1.8	2.77	2.77
Sweet Grass County	A7	RM 443.84	44853	67% - 1.5yr	656.38	1169.27	1167.23	3.07	3.07	67.62	67.62	171.61	171.61	1.24	1.24	2.04	2.04
Sweet Grass County	A7	RM 443.75	44415	67% - 1.5yr	656.38	1169.03	1166.67	2.19	2.19	31.24	31.24	181.83	209.94	1.65	1.65	2.36	2.36
Sweet Grass County	A7	RM 443.64	43870	67% - 1.5yr	656.38	1168.6	1166.09	2.63	2.3	43.18	31.16	107.52	223.53	1.89	1.36	2.51	2.51
Sweet Grass County	A7	RM 443.53	43290	67% - 1.5yr	656.38	1168.42	1165.72	2.14	1.9	26.21	20.85	85.52	191.24	2.48	1.95	2.7	2.7
Sweet Grass County	A8	RM 443.45	42860	67% - 1.5yr	656.38	1168.11	1165.25	2.49	2.49	36.13	36.13	122.15	122.15	2.16	2.16	2.86	2.86
Sweet Grass County	A8	RM 443.35	42363	67% - 1.5yr	656.38	1167.68	1164.95	2.92	2.82	50.64	36.92	101.49	180.22	2.19	1.59	2.74	2.74
Sweet Grass County	A8	RM 443.25	41863	67% - 1.5yr	656.38	1167.53	1165.05	2.25	2.03	30.51	20.96	127.19	282.62	2.1	1.44	2.48	2.48
Sweet Grass County	A8	RM 443.16	41342	67% - 1.5yr	656.38	1167.28	1165.43	2.19	1.81	32.23	23.78	149.24	345.32	1.51	1.12	1.84	1.84
Sweet Grass County	A8	RM 443.07	40863	67% - 1.5yr	656.38	1166.85	1164.49	2.47	1.99	40.48	23.87	138.72	353.75	1.58	0.93	2.37	2.37
Sweet Grass County	A8	RM 442.97	40345	67% - 1.5yr	656.38	1166.57	1164.28	2.1	1.59	24.93	16.62	159.25	441.58	1.54	1.03	2.3	2.3
Sweet Grass County	A8	RM 442.88	39863	67% - 1.5yr	656.38	1166.38	1164.06	1.77	1.48	19.43	14.47	175.01	452.88	1.48	1.1	2.33	2.33
Sweet Grass County	A8	RM 442.78	39363	67% - 1.5yr	656.38	1165.66	1164.18	3.07	2.93	68.14	51.39	120.6	277.94	1.2	0.91	1.8	1.8
Sweet Grass County	A8	RM 442.68	38840	67% - 1.5yr	656.38	1165.33	1162.8	2.16	1.76	23.11	13.93	115.55	357.24	1.74	1.04	2.53	2.53
Sweet Grass County	A8	RM 442.60	38390	67% - 1.5yr	656.38	1165.28	1162.57	1.39	1.23	12.03	8.5	157.4	407.17	1.89	1.34	2.71	2.71
Sweet Grass County	A8	RM 442.50	37863	67% - 1.5yr	656.38	1164.88	1162.29	2.62	2.23	36.94	25.77	89.06	254.76	2.17	1.52	2.6	2.6
Sweet Grass County	A8	RM 442.42	37461	67% - 1.5yr	656.38	1164.52	1162.07	3.02	2.61	39	25.07	118.51	303.27	1.5	0.96	2.46	2.46

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	67% - 1.5yr	656.38	1164.15	1161.85	2.78	2.36	48.75	27.63	101.35	287.03	1.85	1.04	2.31	2.31
Sweet Grass County	A8	RM 442.24	36451	67% - 1.5yr	656.38	1163.91	1161.75	2.35	2.1	30.78	26	115.61	235.06	1.57	1.33	2.16	2.16
Sweet Grass County	A8	RM 442.12	35820	67% - 1.5yr	656.38	1163.62	1161.12	2.24	1.92	25.18	19.32	119.25	261.38	1.74	1.33	2.5	2.5
Sweet Grass County	A8	RM 442.03	35367	67% - 1.5yr	656.38	1163.31	1161.18	2.42	2.16	38.82	30.5	120.62	253.01	1.55	1.22	2.14	2.14
Sweet Grass County	A8	RM 441.95	34945	67% - 1.5yr	656.38	1163.25	1160.28	1.61	1.43	15.68	10.94	132.68	318.15	2.11	1.45	2.97	2.97
Sweet Grass County	A8	RM 441.84	34360	67% - 1.5yr	656.38	1162.79	1160.33	2.54	2.35	32.2	23.17	184.88	283.79	1.37	0.99	2.47	2.47
Sweet Grass County	A8	RM 441.74	33863	67% - 1.5yr	656.38	1162.46	1160.06	2.46	2.21	32.85	25.05	171.23	257.29	1.51	1.16	2.4	2.4
Sweet Grass County	A8	RM 441.65	33357	67% - 1.5yr	656.38	1162.3	1159.78	1.91	1.7	21.4	11.05	172.8	387.19	1.95	1	2.52	2.52
Sweet Grass County	A8	RM 441.53	32732	67% - 1.5yr	656.38	1161.97	1159.44	2.24	1.98	31.23	18.25	148.1	298.13	1.91	1.11	2.53	2.53
Sweet Grass County	A8	RM 441.47	32366	67% - 1.5yr	656.38	1161.86	1158.95	1.99	1.67	23.15	11.45	138.83	383.31	2.27	1.12	2.91	2.91
Sweet Grass County	A8	RM 441.38	31928	67% - 1.5yr	656.38	1161.85	1158.24	1.38	0.95	10.73	4.81	153.74	743.52	2.53	1.13	3.61	3.61
Sweet Grass County	A8	RM 441.27	31350	67% - 1.5yr	656.38	1161.29	1158.76	3.1	2.64	57.91	27.16	93.03	268.19	2.09	0.98	2.53	2.53
Sweet Grass County	A8	RM 441.18	30882	67% - 1.5yr	656.38	1161.17	1158.5	2.22	1.83	27.18	11.03	125.53	429.6	2.05	0.83	2.67	2.67
Sweet Grass County	A8	RM 441.07	30295	67% - 1.5yr	656.38	1160.97	1158.19	2.02	1.78	24.74	7.61	149.54	581.94	2.08	0.64	2.78	2.78
Sweet Grass County	A8	RM 441.00	29913	67% - 1.5yr	656.38	1160.8	1157.63	2.1	1.75	26.85	8.2	146.59	612.37	2.02	0.61	3.17	3.17
Sweet Grass County	A8	RM 440.80	28852	67% - 1.5yr	656.38	1159.97	1157.49	3.01	2.78	50.86	33.28	103.86	178.26	2.02	1.33	2.48	2.48
Sweet Grass County	A8	RM 440.60	27841	67% - 1.5yr	656.38	1159.12	1157.2	2.79	2.49	51.73	37.35	121.05	235.99	1.55	1.12	1.92	1.92
Sweet Grass County	A8	RM 440.51	27361	67% - 1.5yr	656.38	1158.73	1156.41	2.64	2.14	43.19	27.06	101.76	256.81	1.91	1.19	2.32	2.32
Sweet Grass County	A8	RM 440.42	26862	67% - 1.5yr	656.38	1158.09	1156.26	3.25	2.66	71.02	41.62	88.24	278.33	1.51	0.89	1.83	1.83
Sweet Grass County	A8	RM 440.30	26223	67% - 1.5yr	656.38	1157.93	1155.63	1.73	1.36	18.63	11.2	85.46	428.53	1.89	1.13	2.3	2.3
Sweet Grass County	A8	RM 440.17	25466	67% - 1.5yr	656.38	1157.42	1154.7	2.91	2.03	51	22.3	64.35	350.45	2.19	0.92	2.72	2.72
Sweet Grass County	A8	RM 440.06	24863	67% - 1.5yr	656.38	1157.19	1153.97	2.09	1.93	25.75	17.56	129.75	219.81	2.27	1.54	3.21	3.21
Sweet Grass County	A8	RM 439.96	24366	67% - 1.5yr	656.38	1156.9	1154.18	2.51	2.21	36.14	25.04	94.36	180.43	2.42	1.68	2.72	2.72
Sweet Grass County	A8	RM 439.87	23863	67% - 1.5yr	656.38	1156.73	1153.59	2.26	2.12	26.51	21.42	103.12	146.78	2.77	2.25	3.15	3.15
Sweet Grass County	A8	RM 439.77	23365	67% - 1.5yr	656.38	1156.53	1153.6	2.36	2.35	29.39	26.37	124.29	158.42	2.24	2.01	2.93	2.93
Sweet Grass County	A8	RM 439.68	22863	67% - 1.5yr	656.38	1156.28	1153.45	2.47	2.47	32.34	31.8	125.54	137.54	2.12	2.08	2.83	2.83
Sweet Grass County	A8	RM 439.58	22363	67% - 1.5yr	656.38	1156.14	1153.39	2.06	1.95	23.71	19.86	150.12	202.23	2.09	1.76	2.75	2.75
Sweet Grass County	A8	RM 439.49	21863	67% - 1.5yr	656.38	1156.02	1152.86	1.93	1.83	20.27	17.45	115.87	152.31	2.88	2.5	3.16	3.16
Sweet Grass County	A8	RM 439.39	21363	67% - 1.5yr	656.38	1155.83	1153.06	2.13	2.12	26.04	24.33	129.84	165.45	2.37	2.21	2.78	2.78
Sweet Grass County	A8	RM 439.30	20863	67% - 1.5yr	656.38	1155.42	1152.92	2.78	2.75	44.3	33.44	109.93	157.59	2.14	1.61	2.51	2.51
Sweet Grass County	A8	RM 439.20	20353	67% - 1.5yr	656.38	1154.97	1152.64	3.04	3.01	52.02	49.02	108.61	116.69	1.98	1.87	2.33	2.33
Sweet Grass County	A8	RM 439.11	19864	67% - 1.5yr	656.38	1154.85	1152.34	2.3	2	31.19	21.25	98.01	215.55	2.24	1.52	2.51	2.51
Sweet Grass County	A8	RM 439.01	19360	67% - 1.5yr	656.38	1154.35	1152.4	2.88	2.77	48.28	44.22	123.72	170.26	1.52	1.39	1.95	1.95
Sweet Grass County	A8	RM 438.91	18848	67% - 1.5yr	656.38	1154.08	1151.92	2.35	2.06	31.34	22.52	121.66	255.57	1.73	1.24	2.17	2.17
Sweet Grass County	A8	RM 438.82	18363	67% - 1.5yr	656.38	1153.86	1151.23	2.18	1.93	29.12	21.91	114.45	241.01	2.01	1.51	2.63	2.63
Sweet Grass County	A8	RM 438.73	17853	67% - 1.5yr	656.38	1153.38	1151.37	2.83	2.48	44.19	32.09	116.6	256.45	1.42	1.03	2	2
Sweet Grass County	A8	RM 438.63	17363	67% - 1.5yr	656.38	1153.1	1150.74	2.39	1.9	35.36	20.18	100.37	316.22	1.92	1.09	2.36	2.36
Sweet Grass County	A8	RM 438.54	16863	67% - 1.5yr	656.38	1152.94	1150.59	2	1.72	24.03	17.32	103.82	246.5	2.17	1.55	2.35	2.35
Sweet Grass County	A8	RM 438.43	16307	67% - 1.5yr	656.38	1152.8	1149.52	1.73	1.73	17.27	17.27	157.63	165.99	2.41	2.41	3.28	3.28
Sweet Grass County	A9	RM 438.36	15889	67% - 1.5yr	656.38	1152.67	1149.4	1.89	1.88	15.21	14.48	186.18	197.06	1.86	1.78	3.26	3.26
Sweet Grass County	A9	RM 438.26	15363	67% - 1.5yr	656.38	1152.26	1149.84	2.72	2.52	42.78	34.16	112.77	158.09	2.06	1.65	2.43	2.43
Sweet Grass County	A9	RM 438.16	14863	67% - 1.5yr	656.38	1152.08	1149.31	2.31	2.11	29.09	17.86	117.06	212.63	2.38	1.46	2.77	2.77
Sweet Grass County	A9	RM 438.07	14394	67% - 1.5yr	656.38	1151.86	1149.19	2.39	2.09	34.28	18.88	124.2	269.88	2.14	1.18	2.67	2.67
Sweet Grass County	A9	RM 437.96	13827	67% - 1.5yr	656.38	1151.6	1149.19	2.35	1.94	34.24	17.24	117.26	350.35	1.92	0.96	2.41	2.41
Sweet Grass County	A9	RM 437.88	13363	67% - 1.5yr	656.38	1151.32	1148.94	2.57	2.03	36.8	20.51	100.1	314.89	1.93	1.07	2.38	2.38
Sweet Grass County	A9	RM 437.78	12844	67% - 1.5yr	656.38	1151.07	1148.72	2.43	1.96	33.55	17.15	98.13	335.77	1.96	1	2.35	2.35
Sweet Grass County	A9	RM 437.69	12354	67% - 1.5yr	656.38	1150.95	1148.45	1.74	1.47	19.42	12.19	145.94	425.99	1.72	1.08	2.49	2.49
Sweet Grass County	A9	RM 437.59	11863	67% - 1.5yr	656.38	1150.64	1148.76	2.12	1.88	31.6	22.63	145.83	375.03	1.3	0.93	2.23	2.23
Sweet Grass County	A9	RM 437.50	11362	67% - 1.5yr	656.38	1150.43	1148.29	1.74	1.52	20.42	14.04	184.02	421.03	1.48	1.02	2.14	2.14
Sweet Grass County	A9	RM 437.41	10902	67% - 1.5yr	656.38	1150.13	1148.26	2.08	1.83	30.66	20.29	175.93	421.45	1.28	0.85	1.87	1.87
Sweet Grass County	A9	RM 437.31	10361	67% - 1.5yr	656.38	1149.74	1147.37	2.26	1.86	33.76	20.04	147.33	379.9	1.56	0.93	2.36	2.36
Sweet Grass County	A9	RM 437.20	9764	67% - 1.5yr	656.38	1149.36	1147.02	2.44	1.86	33.13	16.9	103.09	372.77	1.85	0.94	2.34	2.34
Sweet Grass County	A9	RM 437.08	9128	67% - 1.5yr	656.38	1148.97	1146.9	2.26	2	30.99	22.52	184.15	324.13	1.39	1.01	2.07	2.07
Sweet Grass County	A9	RM 436.95	8363	67% - 1.5yr	656.38	1148.79	1145.32	1.93	1.29	14.25	6.96	99.69	482.51	2.21	1.06	3.47	3.47
Sweet Grass County	A9	RM 436.83	7805	67% - 1.5yr	656.38	1148.67	1145.93	1.4	1.36	13.79	10.58	153.51	586.44	1.33	1.02	2.73	2.73
Sweet Grass County	A9	RM 436.75	6857	67% - 1.5yr	656.38	1148.14	1145.61	2.77	2.03	46.97	14.81	65.81	513.04	2.02	0.63	2.53	2.53
Sweet Grass County	A9	RM 436.66	6193	67% - 1.5yr	656.38	1147.71	1145.68	2.48	1.85	39.27	19.11	97.51	443.16	1.68	0.82	2.03	2.03
Sweet Grass County	A9	RM 436.56	5280	67% - 1.5yr	656.38	1147.17	1144.44	2.89	1.82	47.24	16.05	50.6	420.83	2.67	0.86	2.72	2.72
Sweet Grass County	A9	RM 436.40	4576	67% - 1.5yr	656.38	1146.92	1144.05	2.47	1.52	34.23	12.01	52.38	490.81	2.73	0.91	2.88	2.88
Sweet Grass County	A9	RM 436.29	3787	67% - 1.5yr	656.38	1146.48	1144.44	2.51	2.06	40.6	26.09	93.75	341.61	1.7	1.09	2.05	2.05
Sweet Grass County	A9	RM 436.16	3087	67% - 1.5yr	656.38	1145.79	1143.57	2.79	2.35	51.11	32.56	107.61	323.51	1.61	1.02	2.22	2.22

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	67% - 1.5yr	656.38	1145.52	1143.09	2.5	1.93	33.75	20.23	101.09	398.71	1.61	0.96	2.43	2.43
Sweet Grass County	A9	RM 435.98	2200	67% - 1.5yr	656.38	1145.2	1142.85	2.57	2.01	41.38	23.92	68.8	339.55	1.91	1.08	2.35	2.35
Sweet Grass County	A9	RM 435.88	1580	67% - 1.5yr	656.38	1144.67	1142.56	2.7	2.22	48.86	29.59	56.93	326.09	1.53	0.91	2.1	2.1
Sweet Grass County	A9	RM 435.73	890	67% - 1.5yr	656.38	1144.35	1141.99	1.93	1.66	23.76	17.23	75.51	322.86	1.79	1.27	2.36	2.36
Sweet Grass County	A9	RM 435.62	104	67% - 1.5yr	656.38	1143.74	1141.54	2.57	2.29	45.85	35.19	124.33	271.8	1.38	1.06	2.2	2.2

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	67% - 1.5yr	656.6	1143.41	1140.73	1.51	1.44	15.43	13.19	145.38	355.52	1.49	1.28	2.72	2.72
Stillwater County	A9	RM 435.38	231282.1	67% - 1.5yr	656.6	1143.11	1139.61	1.59	1.55	15.82	13.86	195.38	252.99	1.9	1.67	3.5	3.5
Stillwater County	A9	RM 435.25	230611.3	67% - 1.5yr	656.6	1142.57	1138.48	2.73	2.72	43.75	41.86	105.59	110.71	2.28	2.18	4.09	4.09
Stillwater County	A9	RM 435.16	230122.9	67% - 1.5yr	656.6	1142.3	1138.39	2.69	2.69	41.83	38.91	101.68	109.51	2.4	2.23	3.91	3.91
Stillwater County	A9	RM 435.07	229649	67% - 1.5yr	656.6	1142.06	1137.85	2.66	2.61	40.15	31.7	97.42	126.3	2.52	1.99	4.21	4.21
Stillwater County	A9	RM 434.97	229153	67% - 1.5yr	656.6	1141.78	1137.87	2.75	2.67	43.08	39.18	94.57	109.08	2.48	2.26	3.91	3.91
Stillwater County	A9	RM 434.84	228443.5	67% - 1.5yr	656.6	1141.42	1137	2.68	2.58	40.68	33.55	95.53	122.72	2.51	2.07	4.42	4.42
Stillwater County	A9	RM 434.73	227855.5	67% - 1.5yr	656.6	1141.25	1135.61	2.43	2.41	30.23	27.26	77.19	87.95	3.49	3.14	5.64	5.64
Stillwater County	A9	RM 434.63	227328.2	67% - 1.5yr	656.6	1141.12	1135.42	2.35	2.35	29.1	29.1	87.4	90.7	3.19	3.19	5.69	5.69
Stillwater County	A9	RM 434.57	227011.2	67% - 1.5yr	656.6	1140.99	1136.35	2.42	2.42	32.44	32.44	101.41	105.48	2.68	2.68	4.64	4.64
Stillwater County	A9	RM 434.53	226817.6	67% - 1.5yr	656.6	1140.86	1136.73	2.58	2.58	39.05	39.05	113.52	116.29	2.25	2.25	4.13	4.13
Stillwater County	A10	RM 434.49	226573.3	67% - 1.5yr	656.6	1140.78	1137.23	2.32	2.32	31.44	31.44	122.18	141.71	2.31	2.31	3.55	3.55
Stillwater County			226533.4	67% - 1.5yr	Bridge												
Stillwater County	A10	RM 434.47	226483	67% - 1.5yr	656.6	1140.68	1137.49	2.33	2.33	32.51	32.51	131.51	147.77	2.14	2.14	3.19	3.19
Stillwater County	A10	RM 434.42	226233.2	67% - 1.5yr	656.6	1140.53	1137.1	2.39	2.39	34.76	34.76	135.6	136.29	2.03	2.03	3.43	3.43
Stillwater County	A10	RM 434.37	225940.2	67% - 1.5yr	656.6	1140.35	1136.51	2.49	2.49	36.55	36.55	117.9	118.36	2.24	2.24	3.84	3.84
Stillwater County	A10	RM 434.24	225278.2	67% - 1.5yr	656.6	1140.09	1136.56	2.3	2.2	30.61	27.75	112.73	140.68	2.34	2.12	3.53	3.53
Stillwater County	A10	RM 434.15	224819.6	67% - 1.5yr	656.6	1139.84	1137.06	2.36	2.24	35.65	30.29	153.09	196.62	1.75	1.49	2.78	2.78
Stillwater County	A10	RM 434.07	224366.5	67% - 1.5yr	656.6	1139.46	1136.55	2.52	2.48	40.35	37.58	102.2	159.31	1.77	1.66	3.06	3.06
Stillwater County	A10	RM 433.98	223883.5	67% - 1.5yr	656.6	1139.27	1136.28	2.08	2.02	28.23	25.72	130.44	212.94	1.67	1.53	2.99	2.99
Stillwater County	A10	RM 433.87	223309.3	67% - 1.5yr	656.6	1139.01	1135.82	2.17	2.01	28.29	24.28	104.98	181.28	2.11	1.81	3.19	3.19
Stillwater County	A10	RM 433.78	222850	67% - 1.5yr	656.6	1138.75	1135.54	2.22	2.22	31.55	31.55	171.35	189.34	1.73	1.73	3.21	3.21
Stillwater County	A10	RM 433.66	222201.9	67% - 1.5yr	656.6	1138.39	1135.16	2.29	2.29	31.79	31.79	138.01	138.65	2.07	2.07	3.23	3.23
Stillwater County	A10	RM 433.54	221596.6	67% - 1.5yr	656.6	1138.05	1135.33	2.44	2.44	35.78	34.41	127.75	133.06	2.11	2.03	2.72	2.72
Stillwater County	A10	RM 433.42	220956.2	67% - 1.5yr	656.6	1137.72	1134.88	2.42	2.42	34.67	33.67	122.28	133.57	2.22	2.15	2.84	2.84
Stillwater County	A10	RM 433.31	220362.5	67% - 1.5yr	656.6	1137.41	1134.67	2.23	2.21	33.46	31.52	198.84	240.55	1.48	1.4	2.74	2.74
Stillwater County	A10	RM 433.20	219758.6	67% - 1.5yr	656.6	1137.07	1134.17	1.97	1.75	26.39	19.63	147.91	350.07	1.47	1.09	2.9	2.9
Stillwater County	A10	RM 433.09	219185.2	67% - 1.5yr	656.6	1136.78	1133.45	2	2	24.95	24.95	175.81	182.77	1.87	1.87	3.33	3.33
Stillwater County	A10	RM 432.97	218599.7	67% - 1.5yr	656.6	1136.41	1133.57	2.36	2.32	34.74	33	145.06	167.27	1.9	1.8	2.83	2.83
Stillwater County	A10	RM 432.84	217905.9	67% - 1.5yr	656.6	1136.07	1132.7	2.26	2.17	30.56	27.86	133.37	156.31	2.12	1.94	3.37	3.37
Stillwater County	A10	RM 432.69	217146.9	67% - 1.5yr	656.6	1135.7	1131.51	2.51	2.44	33.92	28.84	88.04	107.26	2.95	2.51	4.19	4.19
Stillwater County	A10	RM 432.60	216656.8	67% - 1.5yr	656.6	1135.54	1132.1	2.37	2.35	31.2	25.27	101.68	127.46	2.72	2.2	3.44	3.44
Stillwater County	A10	RM 432.45	215889.7	67% - 1.5yr	656.6	1135.24	1132.07	2.32	2.31	31.92	31.07	130.43	158.16	2.17	2.12	3.17	3.17
Stillwater County	A10	RM 432.35	215361.3	67% - 1.5yr	656.6	1135.02	1132.33	2.17	2.16	29.1	27.1	154.41	186.14	1.96	1.82	2.69	2.69
Stillwater County	A10	RM 432.20	214585.3	67% - 1.5yr	674.8	1134.54	1131.29	2.51	2.51	37.53	36.58	123.54	126.94	2.17	2.12	3.25	3.25
Stillwater County	A10	RM 432.10	214039.1	67% - 1.5yr	674.8	1134.3	1130.7	2.37	2.17	33.2	23.31	124.1	253.69	2.23	1.57	3.6	3.6
Stillwater County	A10	RM 432.02	213606.1	67% - 1.5yr	674.8	1134.17	1130.52	2	1.91	24.28	20.9	159.49	201.04	2.03	1.75	3.65	3.65
Stillwater County	A10	RM 431.87	212811.5	67% - 1.5yr	674.8	1133.74	1129.24	2.27	2.18	33.22	28.17	169.52	216.58	1.71	1.45	4.5	4.5
Stillwater County	A10	RM 431.74	212127.4	67% - 1.5yr	674.8	1133.51	1129.66	1.87	1.38	21.19	13.97	158.55	366.86	2.05	1.35	3.85	3.85
Stillwater County	A10	RM 431.60	211373.6	67% - 1.5yr	674.8	1133.07	1129.96	2.4	2.37	34.33	32.33	131.39	143.94	2.14	2.01	3.11	3.11
Stillwater County	A10	RM 431.49	210820.2	67% - 1.5yr	674.8	1132.83	1129.62	2.32	2.29	31.54	29.06	128.22	142.37	2.26	2.09	3.21	3.21
Stillwater County	A10	RM 431.41	210365.9	67% - 1.5yr	674.8	1132.59	1129.57	2.42	2.41	34.84	33.34	127.91	134.08	2.18	2.08	3.02	3.02
Stillwater County	A10	RM 431.28	209716.5	67% - 1.5yr	674.8	1132.26	1129.79	2.31	2.31	33.67	33.25	162.3	164.45	1.8	1.78	2.47	2.47
Stillwater County	A10	RM 431.14	208918.5	67% - 1.5yr	674.8	1131.87	1129.82	1.85	2.07	23.07	26.61	126.91	189.34	1.48	1.72	3.12	3.12
Stillwater County	A10	RM 431.03	208358.8	67% - 1.5yr	674.8	1131.51	1128.56	2.26	2.33	34.48	36.13	111.76	187.88	1.47	1.54	2.95	2.95
Stillwater County	A10	RM 430.93	207821.9	67% - 1.5yr	674.8	1131.14	1128.76	2.32	2.16	36.7	31.57	119.85	250.02	1.45	1.26	2.38	2.38
Stillwater County	A10	RM 430.83	207325.6	67% - 1.5yr	674.8	1130.83	1127.66	2.23	2.12	32.22	29.95	150.28	202.58	1.69	1.57	3.17	3.17
Stillwater County	A10	RM 430.70	206629.1	67% - 1.5yr	674.8	1130.68	1126.9	1.64	1.56	15.32	13.87	148.23	211.75	2.23	2.04	3.77	3.77
Stillwater County	A10	RM 430.59	206064.9	67% - 1.5yr	674.8	1130.51	1127.2	1.84	1.73	19.41	16.62	133.59	196.9	2.42	2.08	3.31	3.31
Stillwater County	A10	RM 430.51	205629.5	67% - 1.5yr	674.8	1130.23	1126.28	2.42	2.33	32.89	29.2	103.31	126.09	2.58	2.29	3.95	3.95
Stillwater County	A10	RM 430.43	205204.2	67% - 1.5yr	674.8	1130.06	1126.08	2.45	2.37	32.99	29.46	96.07	123.93	2.76	2.47	3.98	3.98
Stillwater County	A10	RM 430.34	204728.4	67% - 1.5yr	674.8	1129.85	1126.07	2.51	2.44	35.22	30.17	99.33	129.02	2.64	2.26	3.78	3.78
Stillwater County	A11	RM 430.23	204119.7	67% - 1.5yr	674.8	1129.72	1126.63	1.9	1.87	21.71	18.36	166.21	246.12	2.13	1.8	3.09	3.09
Stillwater County	A11	RM 430.12	203479.6	67% - 1.5yr	674.8	1129.47	1126.96	2.17	2.1	28.88	27.4	108.34	197.59	2	1.91	2.94	2.94
Stillwater County	A11	RM 430.04	202968.2	67% - 1.5yr	674.8	1129.22	1127.24	2.17	2.18	30.14	27.93	111.31	196.23	1.75	1.63	2.58	2.58
Stillwater County	A11	RM 429.95	202589.5	67% - 1.5yr	674.8	1128.98	1126.33	2.07	2.13	28.71	28.53	139.46	216.53	1.51	1.51	2.65	2.65
Stillwater County	A11	RM 429.88	202224.7	67% - 1.5yr	674.8	1128.78	1125.62	2.12	2.09	28.46	26.17	121.2	211.31	1.81	1.67	3.16	3.16
Stillwater County	A11	RM 429.78	201933.6	67% - 1.5yr	674.8	1128.52	1123.72	2.43	2.23	34.23	26.65	87.98	192.83	2.37	1.84	4.8	4.8
Stillwater County	A11	RM 429.69	201539.9	67% - 1.5yr	674.8	1128.23	1123.39	2.69	2.28	42.36	29.33	86.93	192.77	2.28	1.57	4.84	4.84
Stillwater County	A11	RM 429.58	200961.9	67% - 1.5yr	674.8	1127.96	1124.69	2.33	1.85	33.29	19.77	116.48	342.02	1.8	1.07	3.27	3.27

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	67% - 1.5yr	674.8	1127.48	1125.15	1.86	1.73	23.33	19.13	182.29	320.62	1.48	1.21	3.05	3.05
Stillwater County	A11	RM 429.28	199644.1	67% - 1.5yr	674.8	1127.18	1123.59	2.02	1.85	26.59	19.45	147.14	297.15	1.67	1.22	3.59	3.59
Stillwater County	A11	RM 429.18	199152	67% - 1.5yr	674.8	1126.93	1124.66	1.73	1.83	20.95	17.74	142.55	325.28	1.34	1.13	3.02	3.02
Stillwater County	A11	RM 429.10	198708.6	67% - 1.5yr	674.8	1126.58	1124.26	2.11	2.19	29.84	28.76	83.95	210.81	1.51	1.46	3	3
Stillwater County	A11	RM 429.00	198203.8	67% - 1.5yr	674.8	1126.3	1123.47	1.86	2.01	24.96	26.55	119.68	259.69	1.21	1.29	2.82	2.82
Stillwater County	A11	RM 428.89	197650.5	67% - 1.5yr	674.8	1126.09	1121.26	2	1.78	24.05	17.58	148.91	246.41	2.11	1.54	4.83	4.83
Stillwater County	A11	RM 428.81	197194.1	67% - 1.5yr	674.8	1125.87	1121.47	2.29	1.95	29.7	16.81	97.67	241.96	2.52	1.43	4.4	4.4
Stillwater County	A11	RM 428.66	196404.4	67% - 1.5yr	674.8	1125.66	1122.31	1.81	1.78	20.61	19.51	182.99	243.5	1.84	1.75	3.35	3.35
Stillwater County	A11	RM 428.52	195702.6	67% - 1.5yr	674.8	1125.23	1122.1	2.22	2.22	32.99	32.99	198.27	216.69	1.53	1.53	3.13	3.13
Stillwater County	A11	RM 428.44	195293.8	67% - 1.5yr	674.8	1125	1121.18	2.26	2.24	30.51	28.39	141.34	196.72	2.12	1.97	3.82	3.82
Stillwater County	A11	RM 428.39	195075.5	67% - 1.5yr	674.8	1124.83	1120.72	2.5	2.49	36.81	34.6	121.99	183.99	2.22	2.08	4.11	4.11
Stillwater County	A11	RM 428.33	194724.6	67% - 1.5yr	674.8	1124.69	1121.22	2.35	2.35	32.5	32.5	129.08	163.86	2.23	2.23	3.47	3.47
Stillwater County	A11	RM 428.28	194450.8	67% - 1.5yr	674.8	1124.56	1121.2	2.31	2.3	32.01	30.97	139.43	231.96	2.1	2.03	3.36	3.36
Stillwater County	A11	RM 428.23	194235.2	67% - 1.5yr	674.8	1124.49	1120.74	2.21	2.19	28.94	27.85	140.66	285.78	2.17	2.09	3.74	3.74
Stillwater County	A11	RM 428.20	194033.4	67% - 1.5yr	674.8	1124.43	1120.37	2.11	2.02	24.96	21.35	119.55	225.51	2.57	2.2	4.06	4.06
Stillwater County			193969.6	67% - 1.5yr	Bridge												
Stillwater County	A11	RM 428.17	193915	67% - 1.5yr	674.8	1124.16	1120.32	2.25	2.13	28.62	23.5	112.83	170.32	2.54	2.09	3.84	3.84
Stillwater County			193871.1	67% - 1.5yr	Bridge												
Stillwater County	A11	RM 428.15	193779.9	67% - 1.5yr	674.8	1124.05	1120.23	2.31	2.15	30.31	23.02	111.36	179.86	2.49	1.89	3.82	3.82
Stillwater County	A11	RM 428.11	193602.7	67% - 1.5yr	674.8	1124.01	1119.42	2.13	2.01	26.62	22.75	124.9	200.31	2.32	1.97	4.59	4.59
Stillwater County	A11	RM 428.09	193436.6	67% - 1.5yr	674.8	1123.9	1119.9	2.31	2.15	31.6	26.76	116.19	197.59	2.22	1.87	4	4
Stillwater County	A11	RM 428.05	193246.1	67% - 1.5yr	674.8	1123.75	1120.1	2.47	2.27	37.2	27.31	122.21	219.75	2.05	1.5	3.65	3.65
Stillwater County	A11	RM 428.00	192989.8	67% - 1.5yr	674.8	1123.63	1120.28	2.36	2.15	33.38	24.55	124.57	241.09	2.12	1.55	3.35	3.35
Stillwater County	A11	RM 427.95	192728.8	67% - 1.5yr	674.8	1123.52	1119.57	2.27	2.14	30.72	23.36	131.12	244.56	2.16	1.64	3.95	3.95
Stillwater County	A11	RM 427.88	192333.2	67% - 1.5yr	674.8	1123.29	1119.27	2.52	2.38	36.13	28.41	100.62	167.38	2.49	1.96	4.01	4.01
Stillwater County	A11	RM 427.83	192088.8	67% - 1.5yr	674.8	1123.18	1119.18	2.5	2.4	35.39	30.99	99.58	216.69	2.54	2.23	4	4
Stillwater County	A11	RM 427.76	191724.1	67% - 1.5yr	674.8	1123.04	1119.07	2.43	2.25	33.22	23.06	101.84	170.3	2.6	1.8	3.97	3.97
Stillwater County			191581.1	67% - 1.5yr	Bridge												
Stillwater County	A11	RM 427.72	191495.5	67% - 1.5yr	674.8	1122.59	1118.71	2.61	2.58	39.16	36.42	105.17	114.71	2.45	2.28	3.88	3.88
Stillwater County	A11	RM 427.65	191155.9	67% - 1.5yr	674.8	1122.53	1118.58	2.01	2.01	23.21	22.49	137.18	409.97	2.44	2.37	3.95	3.95
Stillwater County	A11	RM 427.53	190509.6	67% - 1.5yr	674.8	1122.27	1117.37	2.32	2.32	28.53	28.53	92.22	243.66	3.15	3.15	4.9	4.9
Stillwater County	A11	RM 427.41	189886.1	67% - 1.5yr	674.8	1122.12	1118.73	2.15	2.15	25.34	25.34	112.63	168.9	2.79	2.79	3.39	3.39
Stillwater County	A11	RM 427.29	189253.3	67% - 1.5yr	674.8	1121.81	1119.12	2.32	2.31	34.94	34.13	173.49	214.6	1.68	1.64	2.69	2.69
Stillwater County	A11	RM 427.17	188639.5	67% - 1.5yr	674.8	1121.44	1118.44	2.2	2.13	32.06	28.63	194.09	243.4	1.56	1.4	3	3
Stillwater County	A11	RM 427.09	188179.7	67% - 1.5yr	674.8	1121.11	1118.34	2.45	2.29	35.77	26.12	124.17	186.73	2.18	1.59	2.77	2.77
Stillwater County	A11	RM 427.00	187745.4	67% - 1.5yr	674.8	1120.96	1117.71	2.2	1.94	29.29	23.2	136.37	238.75	2.04	1.63	3.25	3.25
Stillwater County	A11	RM 426.92	187309.3	67% - 1.5yr	674.8	1120.62	1117.32	2.41	2.31	39.86	38.49	191.75	213.34	1.41	1.37	3.3	3.3
Stillwater County	A11	RM 426.86	186960.4	67% - 1.5yr	674.8	1120.4	1116.77	2.23	2.15	32.2	30.93	172.37	190.64	1.71	1.65	3.63	3.63
Stillwater County	A11	RM 426.75	186401.3	67% - 1.5yr	674.8	1120.07	1116.11	2.36	2.21	34.05	30.74	138.57	169.09	1.99	1.8	3.96	3.96
Stillwater County	A11	RM 426.67	185983.5	67% - 1.5yr	674.8	1119.9	1115.84	2.17	2.17	27.78	27.75	137.18	153.96	2.26	2.26	4.06	4.06
Stillwater County	A11	RM 426.59	185580.4	67% - 1.5yr	674.8	1119.68	1115.47	2.43	2.4	32.98	30.99	104.28	112.66	2.65	2.5	4.21	4.21
Stillwater County	A11	RM 426.52	185166.5	67% - 1.5yr	674.8	1119.56	1115.54	2.29	2.29	28.67	28.67	103.87	103.87	2.83	2.83	4.02	4.02
Stillwater County	A11	RM 426.43	184738.3	67% - 1.5yr	674.8	1119.42	1115.89	2.27	2.26	28.66	27.78	111.79	115.99	2.66	2.58	3.53	3.53
Stillwater County	A11	RM 426.32	184158.4	67% - 1.5yr	674.8	1119.24	1116.39	2.16	2.16	26.77	26.77	131.09	131.09	2.39	2.39	2.85	2.85
Stillwater County	A11	RM 426.20	183517.2	67% - 1.5yr	674.8	1118.9	1116.07	2.26	2.26	34.54	34.09	200.43	203.38	1.49	1.47	2.83	2.83
Stillwater County	A11	RM 426.11	183030.7	67% - 1.5yr	674.8	1118.58	1115.37	2.13	2.13	29	28.85	233.89	243.04	1.35	1.35	3.21	3.21
Stillwater County	A11	RM 426.00	182442.5	67% - 1.5yr	674.8	1118.23	1115.74	2.08	1.98	28.91	26.58	202.66	242.44	1.55	1.42	2.49	2.49
Stillwater County	A11	RM 425.89	181895	67% - 1.5yr	674.8	1117.92	1115.1	2.1	2.1	28.06	27.83	180.99	182.55	1.77	1.76	2.82	2.82
Stillwater County	A11	RM 425.72	181043.5	67% - 1.5yr	674.8	1117.44	1113.77	2.32	2.32	32.97	32.91	146.52	150.39	1.99	1.98	3.67	3.67
Stillwater County	A11	RM 425.58	180310.5	67% - 1.5yr	674.8	1117.11	1112.19	2.41	2.39	31.33	28.98	96.61	106.53	2.9	2.68	4.92	4.92
Stillwater County	A11	RM 425.46	179669.9	67% - 1.5yr	674.8	1116.82	1112.78	2.6	2.6	37	36.08	92.82	136.64	2.8	2.73	4.04	4.04
Stillwater County	A11	RM 425.34	179022.4	67% - 1.5yr	674.8	1116.72	1113.64	1.9	1.78	21	17.13	132.95	200.29	2.32	1.9	3.08	3.08
Stillwater County	A11	RM 425.24	178485.9	67% - 1.5yr	674.8	1116.37	1114.19	2.43	2.17	38.78	28.1	126.06	299.08	1.61	1.17	2.23	2.23
Stillwater County	A11	RM 425.18	178205.8	67% - 1.5yr	674.8	1116.11	1113.81	2.45	2.37	39.5	32.09	122.56	219.51	1.6	1.3	2.8	2.8
Stillwater County	A11	RM 425.11	177826.8	67% - 1.5yr	674.8	1115.84	1113.29	2.13	2.32	30.02	32.37	118.05	168.27	1.6	1.73	3.55	3.55
Stillwater County	A11	RM 425.04	177454.7	67% - 1.5yr	674.8	1115.7	1112.86	2.14	1.95	27.89	23.12	103.48	204.05	2.04	1.69	3.23	3.23
Stillwater County	A11	RM 424.97	177098.9	67% - 1.5yr	674.8	1115.4	1113.11	2.51	2.28	39.87	33.04	106.5	199.18	1.79	1.48	2.39	2.39
Stillwater County	A11	RM 424.89	176675.9	67% - 1.5yr	674.8	1115.22	1112.27	1.84	1.87	22.31	19.14	136.04	291.23	1.6	1.38	4.42	4.42
Stillwater County	A11	RM 424.81	176242.8	67% - 1.5yr	674.8	1114.83	1112.25	2.39	2.31	38.43	34.55	110.31	236.65	1.48	1.34	2.83	2.83
Stillwater County	A11	RM 424.70	175789.3	67% - 1.5yr	674.8	1114.69	1111.91	1.84	1.69	21.4	18.12	160.8	289.81	1.79	1.52	2.78	2.78

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	67% - 1.5yr	674.8	1114.44	1111.34	1.95	1.8	24.01	20.22	127.18	265.38	1.8	1.52	3.1	3.1
Stillwater County	A11	RM 424.51	174723.2	67% - 1.5yr	674.8	1114.21	1110.93	1.97	1.91	26.75	22	136.72	337.16	1.39	1.15	3.28	3.28
Stillwater County	A11	RM 424.38	174051	67% - 1.5yr	674.8	1113.86	1110.98	2.1	1.93	28.55	23.13	118.7	257.04	1.68	1.36	2.88	2.88
Stillwater County	A11	RM 424.30	173607.9	67% - 1.5yr	674.8	1113.56	1110.75	2.25	2.24	33.99	25.9	117.92	293.75	1.52	1.16	2.81	2.81
Stillwater County	A11	RM 424.21	173153.7	67% - 1.5yr	674.8	1113.31	1110.74	1.85	1.87	24.64	22.53	186.7	360.39	1.24	1.13	2.56	2.56
Stillwater County	A11	RM 424.13	172713.5	67% - 1.5yr	674.8	1113.02	1110.43	2.07	1.7	27.96	17.91	79.75	373.22	1.66	1.06	2.67	2.67
Stillwater County	A11	RM 424.05	172309.3	67% - 1.5yr	674.8	1112.76	1110.18	1.87	1.79	24.87	15.34	132.14	502.27	1.28	0.79	2.58	2.58
Stillwater County	A11	RM 423.98	171892.1	67% - 1.5yr	674.8	1112.66	1110.15	1.52	1.35	15.39	9.7	239.71	512.47	1.54	0.97	2.5	2.5
Stillwater County	A11	RM 423.90	171454.2	67% - 1.5yr	674.8	1112.31	1109.55	2.33	2.1	35.39	20.21	148.44	341.72	1.65	0.94	2.76	2.76
Stillwater County	A11	RM 423.84	171147.5	67% - 1.5yr	674.8	1112.12	1109.08	2.36	2.04	33.97	19.31	120.52	351.64	2.02	1.15	3.04	3.04
Stillwater County	A11	RM 423.74	170686.3	67% - 1.5yr	674.8	1112.02	1108.91	1.8	1.43	19.72	10.43	123.46	487.87	2.04	1.08	3.11	3.11
Stillwater County	A11	RM 423.69	170436.3	67% - 1.5yr	674.8	1111.77	1108.49	2.51	2.08	35.68	21.64	73.3	252.62	2.54	1.53	3.28	3.28
Stillwater County	A11	RM 423.57	169782.9	67% - 1.5yr	674.8	1111.53	1108.2	2.08	2.05	25.92	20.48	151.68	195.25	2.13	1.69	3.33	3.33
Stillwater County	A11	RM 423.47	169296.5	67% - 1.5yr	674.8	1111.24	1107.67	2.44	2.44	34.36	34.22	115.11	140.89	2.4	2.39	3.57	3.57
Stillwater County	A11	RM 423.39	168860.7	67% - 1.5yr	674.8	1110.99	1107.7	2.61	2.61	38.38	38.38	100.95	138.56	2.56	2.56	3.29	3.29
Stillwater County	A11	RM 423.27	168178	67% - 1.5yr	674.8	1110.64	1107.36	2.59	2.59	39.62	39.62	116.59	116.59	2.23	2.23	3.28	3.28
Stillwater County	A12	RM 423.17	167687.7	67% - 1.5yr	674.8	1110.45	1107.46	2.25	2.25	31.07	28.25	150.64	166.19	1.99	1.81	2.99	2.99
Stillwater County	A12	RM 423.08	167239.6	67% - 1.5yr	674.8	1110.18	1107.21	2.44	2.27	36.68	26.66	124.92	207.64	1.97	1.43	2.97	2.97
Stillwater County	A12	RM 423.01	166844.5	67% - 1.5yr	674.8	1109.85	1106.84	2.65	2.49	45.25	38.03	121.88	187.65	1.72	1.44	3.01	3.01
Stillwater County	A12	RM 422.91	166338	67% - 1.5yr	674.8	1109.58	1106.54	2.35	2.21	33.34	28.94	109.65	167.81	2.09	1.82	3.04	3.04
Stillwater County	A12	RM 422.80	165757.6	67% - 1.5yr	674.8	1109.31	1106.83	2.22	2.12	30.97	26.95	142.78	225.74	1.86	1.62	2.48	2.48
Stillwater County	A12	RM 422.70	165279.2	67% - 1.5yr	674.8	1109.15	1105.79	1.87	1.69	22.86	20.3	197.44	295.71	1.64	1.46	3.35	3.35
Stillwater County	A12	RM 422.63	164895.4	67% - 1.5yr	674.8	1108.94	1105.43	2.03	1.79	27.39	22.48	175.33	311.7	1.54	1.26	3.5	3.5
Stillwater County	A12	RM 422.53	164348.1	67% - 1.5yr	674.8	1108.51	1104.76	2.35	2.2	35.94	29.64	151.7	222.51	1.67	1.38	3.75	3.75
Stillwater County	A12	RM 422.39	163609.2	67% - 1.5yr	674.8	1108.09	1104.22	2.38	2.35	33.44	30.49	127.49	148.32	2.21	2.02	3.87	3.87
Stillwater County	A12	RM 422.30	163120.4	67% - 1.5yr	674.8	1107.81	1104.18	2.55	2.54	36.97	34.91	107.6	114.23	2.46	2.33	3.63	3.63
Stillwater County	A12	RM 422.19	162534.3	67% - 1.5yr	674.8	1107.64	1103.72	2.22	2.22	27.48	27.48	113.11	113.11	2.68	2.68	3.92	3.92
Stillwater County	A12	RM 422.08	161934.5	67% - 1.5yr	674.8	1107.32	1104.18	2.55	2.55	36.86	36.86	104.91	104.91	2.52	2.52	3.14	3.14
Stillwater County	A12	RM 421.98	161402.1	67% - 1.5yr	674.8	1107.21	1103.86	2.01	2.01	23.26	23.18	141.88	142.36	2.37	2.36	3.35	3.35
Stillwater County	A12	RM 421.90	161037.7	67% - 1.5yr	674.8	1107.09	1103.14	2	2	24.27	24.27	164.85	164.85	2.05	2.05	3.95	3.95
Stillwater County	A12	RM 421.86	160799.3	67% - 1.5yr	674.8	1106.97	1102.54	2.09	2.09	28.27	28.27	190.43	190.43	1.69	1.69	4.43	4.43
Stillwater County	A12	RM 421.81	160535.9	67% - 1.5yr	674.8	1106.79	1102.38	2.17	2.17	31.67	31.67	209.3	209.3	1.49	1.49	4.41	4.41
Stillwater County	A12	RM 421.77	160279.4	67% - 1.5yr	674.8	1106.53	1102.41	2.44	2.4	40.39	38.47	179.61	201.08	1.46	1.4	4.12	4.12
Stillwater County	A12	RM 421.69	159875.5	67% - 1.5yr	674.8	1106.44	1102.56	1.94	1.88	21.08	18.36	128.32	156.1	2.63	2.3	3.88	3.88
Stillwater County	A12	RM 421.60	159411.4	67% - 1.5yr	674.8	1106.17	1103.26	2.4	2.26	35.12	30.98	130.15	165.66	2.03	1.8	2.91	2.91
Stillwater County	A12	RM 421.53	159038	67% - 1.5yr	674.8	1105.92	1102.81	2.56	2.44	40.24	34.97	123.39	159.59	1.99	1.73	3.1	3.1
Stillwater County	A12	RM 421.45	158590.5	67% - 1.5yr	674.8	1105.73	1103.26	2.18	1.99	29.79	22.71	149.25	240.83	1.85	1.41	2.47	2.47
Stillwater County	A12	RM 421.32	157930.2	67% - 1.5yr	674.8	1105.37	1102.82	2.21	2.09	32.51	26.64	85.72	256.57	1.53	1.26	2.55	2.55
Stillwater County	A12	RM 421.24	157513	67% - 1.5yr	674.8	1105.01	1103.05	2.14	2.24	34.77	35.48	119.77	281.15	1.05	1.07	2.53	2.53
Stillwater County	A12	RM 421.13	156951.5	67% - 1.5yr	674.8	1104.71	1100.38	2.15	1.87	30.69	22.98	102.84	309.16	1.56	1.17	4.33	4.33
Stillwater County	A12	RM 421.05	156536.5	67% - 1.5yr	674.8	1104.51	1102.11	2.02	1.75	27.62	21.31	86.36	336.42	1.49	1.15	2.4	2.4
Stillwater County	A12	RM 420.94	155960.1	67% - 1.5yr	674.8	1104.29	1101.68	1.6	1.55	15.84	14.47	213.29	249.89	1.95	1.79	2.61	2.61
Stillwater County	A12	RM 420.85	155473.6	67% - 1.5yr	674.8	1103.67	1100.98	3.13	2.89	62.69	42.58	121.66	201.49	1.74	1.18	2.69	2.69
Stillwater County	A12	RM 420.75	154957.2	67% - 1.5yr	674.8	1103.43	1099.95	2.33	2.2	33.69	25.43	143.41	211.34	1.92	1.45	3.48	3.48
Stillwater County	A12	RM 420.66	154483	67% - 1.5yr	674.8	1103.26	1099.89	2.05	1.9	25.23	16.22	154.4	262.89	2.1	1.35	3.37	3.37
Stillwater County	A12	RM 420.58	154037.5	67% - 1.5yr	674.8	1102.96	1100.13	2.48	2.21	36.27	22.66	117.69	217.51	2.25	1.41	2.83	2.83
Stillwater County	A12	RM 420.52	153691.5	67% - 1.5yr	674.8	1102.79	1099.7	2.44	2.12	35.55	24.19	122.28	215.67	2.17	1.48	3.09	3.09
Stillwater County	A12	RM 420.46	153398	67% - 1.5yr	674.8	1102.63	1099.36	2.46	2.2	36.23	26.25	125.47	198.68	2.13	1.54	3.27	3.27
Stillwater County	A12	RM 420.38	152998.3	67% - 1.5yr	674.8	1102.47	1099.19	2.18	1.97	29.86	23.98	161.1	233.96	1.83	1.47	3.28	3.28
Stillwater County	A12	RM 420.30	152566.4	67% - 1.5yr	674.8	1102.3	1099.43	1.86	1.63	23.2	19.4	225.12	328.07	1.51	1.26	2.87	2.87
Stillwater County	A12	RM 420.21	152106.2	67% - 1.5yr	674.8	1101.99	1098.69	2.19	1.89	31.27	26.29	170.19	254.14	1.67	1.41	3.29	3.29
Stillwater County	A12	RM 420.15	151738.6	67% - 1.5yr	674.8	1101.85	1098.38	1.96	1.96	18.48	17.99	194.48	200.76	1.77	1.72	3.47	3.47
Stillwater County	A12	RM 420.08	151399.3	67% - 1.5yr	674.8	1101.73	1097.97	1.92	1.92	23.32	22.96	191.92	195.2	1.83	1.8	3.76	3.76
Stillwater County	A12	RM 420.03	151123.2	67% - 1.5yr	674.8	1101.6	1097.96	2.06	2.03	24.79	20.15	140.53	176.34	2.32	1.89	3.64	3.64
Stillwater County	A12	RM 419.96	150779.4	67% - 1.5yr	674.8	1101.35	1098.1	2.49	2.49	36.21	34.65	118.26	133.13	2.29	2.19	3.25	3.25
Stillwater County	A12	RM 419.91	150511.3	67% - 1.5yr	674.8	1101.23	1097.83	2.5	2.49	34.81	31.43	100.47	112.08	2.68	2.42	3.4	3.4
Stillwater County	A12	RM 419.85	150192.4	67% - 1.5yr	674.8	1100.99	1097.85	2.79	2.73	45.39	40.46	103.46	118.86	2.33	2.08	3.14	3.14
Stillwater County	A12	RM 419.78	149807.6	67% - 1.5yr	674.8	1100.89	1097.13	2.38	2.23	31.24	18.5	102.48	186.73	2.74	1.62	3.76	3.76
Stillwater County	A12	RM 419.70	149371.5	67% - 1.5yr	674.8	1100.71	1097.73	2.35	2.27	32.69	29.39	131.01	150.95	2.18	1.97	2.98	2.98
Stillwater County	A12	RM 419.63	149047.6	67% - 1.5yr	674.8	1100.62	1097.92	2.06	2.03	26.09	21.56	164.62	202.56	1.98	1.64	2.69	2.69

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	67% - 1.5yr	674.8	1100.19	1097.22	2.67	2.38	45.91	31.1	121.91	245.44	1.7	1.16	2.97	2.97
Stillwater County	A12	RM 419.46	148117.9	67% - 1.5yr	674.8	1099.93	1097.34	2.36	2.18	36.02	24.46	119.31	271.06	1.68	1.14	2.85	2.85
Stillwater County	A12	RM 419.38	147728.5	67% - 1.5yr	674.8	1099.61	1097.36	2.41	2.14	39.51	28.09	122.75	300.55	1.47	1.05	2.25	2.25
Stillwater County	A12	RM 419.31	147342.9	67% - 1.5yr	674.8	1099.53	1096.9	1.61	1.49	16.12	13.95	109.39	278.22	1.87	1.63	2.63	2.63
Stillwater County	A12	RM 419.19	146720.3	67% - 1.5yr	674.8	1099.44	1096.42	1.22	1.35	9.05	10.47	101.46	216.01	2.01	2.33	5.04	5.04
Stillwater County	A12	RM 419.10	146243.9	67% - 1.5yr	674.8	1099.37	1095.09	1.46	1.43	11.43	10.57	155.99	179.18	2.95	2.73	4.28	4.28
Stillwater County	A12	RM 419.03	145859.8	67% - 1.5yr	674.8	1099.16	1095.88	2.09	2.09	26.84	26.39	163.49	173.71	1.97	1.94	3.28	3.28
Stillwater County	A12	RM 418.95	145435.3	67% - 1.5yr	674.8	1098.95	1095.15	2.12	2.12	29.5	28.93	199.94	210.2	1.59	1.56	3.8	3.8
Stillwater County	A12	RM 418.84	144864	67% - 1.5yr	674.8	1098.58	1094.92	2.2	2.18	31.99	28.77	192.64	221.2	1.59	1.43	3.66	3.66
Stillwater County	A12	RM 418.69	144066	67% - 1.5yr	674.8	1098.06	1095.29	2.31	2.15	34.96	25.91	158.52	262.44	1.63	1.21	2.77	2.77
Stillwater County	A12	RM 418.57	143452.8	67% - 1.5yr	674.8	1097.64	1095.1	2.37	2.24	36.51	30.79	129.85	213.67	1.67	1.42	2.53	2.53
Stillwater County	A12	RM 418.49	143008.1	67% - 1.5yr	674.8	1097.5	1094.94	1.82	1.54	21.16	13.67	169.12	388.68	1.74	1.13	2.56	2.56
Stillwater County	A12	RM 418.35	142310.9	67% - 1.5yr	674.8	1097.07	1093.15	2.39	2	35.69	22.49	113.46	286.22	1.87	1.18	3.92	3.92
Stillwater County	A12	RM 418.25	141740.8	67% - 1.5yr	674.8	1096.79	1093.71	1.91	1.57	25.57	18.67	175.21	475.72	1.32	0.97	3.07	3.07
Stillwater County	A12	RM 418.08	140894.8	67% - 1.5yr	674.8	1096.36	1092.65	2.04	1.76	26.52	18.22	134.43	315.8	1.77	1.22	3.71	3.71
Stillwater County	A12	RM 417.89	139893.7	67% - 1.5yr	674.8	1095.68	1092.75	2.57	2.46	40.24	30.07	127.07	187.4	2.02	1.51	2.93	2.93
Stillwater County	A12	RM 417.79	139376.4	67% - 1.5yr	674.8	1095.28	1091.64	2.78	2.53	48.21	31.56	117.47	217.27	1.88	1.23	3.64	3.64
Stillwater County	A12	RM 417.65	138633.4	67% - 1.5yr	674.8	1094.79	1091.57	2.76	2.58	44.15	33.7	91.43	145.81	2.35	1.79	3.22	3.22
Stillwater County	A12	RM 417.54	138089.5	67% - 1.5yr	674.8	1094.47	1091.15	2.82	2.54	44.99	30.24	83.62	155.97	2.54	1.71	3.32	3.32
Stillwater County	A12	RM 417.40	137321.3	67% - 1.5yr	763.9	1094.1	1091.71	2.47	2.16	38.4	26.29	116.66	281.41	1.84	1.26	2.39	2.39
Stillwater County	A12	RM 417.30	136818.2	67% - 1.5yr	763.9	1093.75	1091.51	2.33	2.21	36.23	31.51	197.25	272.66	1.52	1.32	2.24	2.24
Stillwater County	A12	RM 417.20	136304	67% - 1.5yr	763.9	1093.61	1091.27	1.6	1.53	16.76	15.6	199.88	333.03	1.61	1.5	2.34	2.34
Stillwater County	A13	RM 417.09	135706	67% - 1.5yr	763.9	1093.09	1090.35	2.54	2.53	41.79	40.73	181.08	220.13	1.66	1.62	2.74	2.74
Stillwater County	A13	RM 417.01	135303.6	67% - 1.5yr	763.9	1092.91	1090	2.05	2.05	27.75	27.75	237.68	264.29	1.57	1.57	2.91	2.91
Stillwater County	A13	RM 416.94	134899.8	67% - 1.5yr	763.9	1092.54	1089.69	2.52	2.52	35.82	35.82	193.66	221.27	1.57	1.57	2.85	2.85
Stillwater County	A13	RM 416.85	134457.6	67% - 1.5yr	763.9	1092.41	1089.62	1.99	1.9	23.85	19.27	182.21	238.09	2.09	1.69	2.79	2.79
Stillwater County	A13	RM 416.73	133843.5	67% - 1.5yr	763.9	1092.04	1089.6	2.29	2.25	34.54	30.16	208.04	259.95	1.6	1.4	2.44	2.44
Stillwater County	A13	RM 416.63	133286.1	67% - 1.5yr	763.9	1091.71	1089.3	2.27	2.07	33.63	27.63	118.38	272.42	1.64	1.36	2.41	2.41
Stillwater County	A13	RM 416.52	132717.9	67% - 1.5yr	763.9	1091.4	1089.09	2.13	1.78	31.64	24.62	103.34	404.09	1.36	1.06	2.31	2.31
Stillwater County	A13	RM 416.43	132250.3	67% - 1.5yr	763.9	1090.99	1088.74	2.08	1.99	31.44	26.42	110.95	379.88	1.2	1.01	2.24	2.24
Stillwater County	A13	RM 416.33	131707.5	67% - 1.5yr	763.9	1090.66	1088.02	1.97	1.87	27.67	23.57	125.62	379.13	1.26	1.08	2.64	2.64
Stillwater County	A13	RM 416.22	131140.9	67% - 1.5yr	763.9	1090.19	1087.56	2.63	2.2	43.2	28.95	82.69	277.21	1.87	1.25	2.63	2.63
Stillwater County	A13	RM 416.13	130626.3	67% - 1.5yr	763.9	1089.88	1086.65	2.38	2.09	35.2	25.07	138.39	266.13	1.92	1.37	3.23	3.23
Stillwater County	A13	RM 416.04	130164.9	67% - 1.5yr	763.9	1089.42	1085.03	2.9	2.46	51.71	28.41	117.39	285.59	1.98	1.09	4.39	4.39
Stillwater County	A13	RM 415.96	129734.7	67% - 1.5yr	763.9	1089.22	1085.48	2.46	1.92	36.33	22.32	119.47	304.76	2.13	1.31	3.74	3.74
Stillwater County	A13	RM 415.90	129423.4	67% - 1.5yr	763.9	1089.08	1085.77	2.04	1.71	27.04	21.5	151.59	332.69	1.68	1.34	3.31	3.31
Stillwater County	A13	RM 415.83	129071.6	67% - 1.5yr	763.9	1088.93	1085.89	1.84	1.63	21.47	17.61	150.79	320.13	1.8	1.48	3.6	3.6
Stillwater County	A13	RM 415.74	128639.5	67% - 1.5yr	763.9	1088.72	1084.72	2.11	1.85	25.43	17.8	142.28	239.42	2.46	1.72	4	4
Stillwater County	A13	RM 415.72	128521.2	67% - 1.5yr	763.9	1088.62	1084.8	2.34	2.03	31.1	20.42	125.09	227.66	2.52	1.65	3.82	3.82
Stillwater County	A13	RM 415.65	128106.2	67% - 1.5yr	763.9	1088.43	1083.7	2.45	2.15	33.61	23.58	116.58	194.43	2.6	1.82	4.73	4.73
Stillwater County	A13	RM 415.59	127828.3	67% - 1.5yr	763.9	1088.28	1083.61	2.53	2.44	36.54	29.32	120.48	165.69	2.49	2	4.67	4.67
Stillwater County	A13	RM 415.55	127620.5	67% - 1.5yr	763.9	1088.29	1082.84	1.72	1.72	15.27	15.27	130.65	130.65	3.39	3.39	5.44	5.44
Stillwater County			127503	67% - 1.5yr	Bridge												
Stillwater County	A13	RM 415.52	127472.1	67% - 1.5yr	763.9	1087.89	1082.96	1.75	1.75	15.36	15.31	121.4	121.78	3.6	3.59	4.93	4.93
Stillwater County	A13	RM 415.50	127340.9	67% - 1.5yr	763.9	1087.74	1083.14	2.18	2.18	27.19	27.19	143.14	143.14	2.45	2.45	4.6	4.6
Stillwater County	A13	RM 415.45	127087.4	67% - 1.5yr	763.9	1087.51	1083.18	2.62	2.62	38.98	38.98	117.43	117.43	2.49	2.49	4.33	4.33
Stillwater County	A13	RM 415.39	126788	67% - 1.5yr	763.9	1087.39	1084.07	2.41	2.41	35.81	35.81	160.47	223.7	1.97	1.97	3.32	3.32
Stillwater County	A13	RM 415.34	126499.1	67% - 1.5yr	763.9	1087.19	1084.45	2.62	2.48	42.96	38.01	125.29	230.61	1.88	1.66	2.74	2.74
Stillwater County	A13	RM 415.25	126040.7	67% - 1.5yr	763.9	1086.9	1082.42	2.59	2.45	39.95	34.9	115.75	178.68	2.17	1.9	4.48	4.48
Stillwater County	A13	RM 415.18	125663.1	67% - 1.5yr	763.9	1086.74	1083.81	2.37	2.26	33.53	29.4	130.99	180.93	2.13	1.87	2.93	2.93
Stillwater County	A13	RM 415.10	125251.2	67% - 1.5yr	763.9	1086.36	1083.01	2.91	2.66	49.2	38.26	99.54	157.74	2.34	1.82	3.35	3.35
Stillwater County	A13	RM 414.97	124585.1	67% - 1.5yr	763.9	1085.93	1082.64	2.83	2.58	47.65	37.05	105.66	176.09	2.16	1.68	3.29	3.29
Stillwater County	A13	RM 414.88	124110.1	67% - 1.5yr	763.9	1085.57	1083.02	2.84	2.61	50.23	41.11	118.94	187.35	1.91	1.56	2.55	2.55
Stillwater County	A13	RM 414.71	123222	67% - 1.5yr	763.9	1085.11	1080.88	2.29	2.29	31.39	31.39	158.12	158.12	2.11	2.11	4.23	4.23
Stillwater County	A13	RM 414.57	122473.6	67% - 1.5yr	763.9	1084.68	1081.21	2.51	2.5	37.44	35.8	140.91	160.5	2.16	2.07	3.47	3.47
Stillwater County	A13	RM 414.43	121696.6	67% - 1.5yr	763.9	1084.29	1080.49	2.34	2.23	33.72	29.66	164.57	412.92	1.94	1.72	3.8	3.8
Stillwater County	A13	RM 414.21	120527.7	67% - 1.5yr	763.9	1083.47	1080.81	2.39	2.32	40.15	38.4	212.05	261.88	1.31	1.26	2.66	2.66
Stillwater County	A13	RM 413.90	118914.7	67% - 1.5yr	763.9	1082.21	1079.28	2.57	2.54	40.08	36.02	144.96	200.7	2.04	1.84	2.93	2.93
Stillwater County	A13	RM 413.65	117570.4	67% - 1.5yr	763.9	1081.38	1078.15	2.62	2.59	40.85	34.39	135.92	403.67	2.15	1.81	3.23	3.23
Stillwater County	A14	RM 413.44	116446.3	67% - 1.5yr	763.9	1080.84	1076.4	2.4	2.34	33.44	24.34	137.22	325.3	2.32	1.69	4.44	4.44

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	67% - 1.5yr	763.9	1080.28	1077.8	2.61	2.24	44.02	26.54	163.56	482.79	1.68	1.01	2.48	2.48
Stillwater County	A14	RM 413.11	114697.4	67% - 1.5yr	763.9	1079.78	1077.12	2.18	2.08	30.6	26.47	192.58	399.5	1.7	1.47	2.66	2.66
Stillwater County	A14	RM 412.99	114113.2	67% - 1.5yr	763.9	1079.28	1076.41	2.58	2.44	43.98	36.64	175.89	339	1.59	1.33	2.87	2.87
Stillwater County	A14	RM 412.88	113533.6	67% - 1.5yr	763.9	1078.93	1076.03	2.41	2.16	34.73	21.97	138.69	330.76	2.12	1.34	2.9	2.9
Stillwater County	A14	RM 412.73	112742.6	67% - 1.5yr	763.9	1078.44	1074.72	2.5	2.16	40.04	23.22	167.03	403.07	1.72	1	3.72	3.72
Stillwater County	A14	RM 412.59	112005.5	67% - 1.5yr	763.9	1077.79	1074.72	2.61	2.29	45.53	29.42	186.39	354.11	1.53	0.99	3.07	3.07
Stillwater County	A14	RM 412.49	111442.5	67% - 1.5yr	763.9	1077.38	1074.54	2.37	2.16	37.74	29.06	188.72	313.01	1.49	1.15	2.84	2.84
Stillwater County	A14	RM 412.31	110522	67% - 1.5yr	763.9	1077	1072.96	2.05	2.01	23.73	21.44	144.24	166.13	2.57	2.33	4.04	4.04
Stillwater County	A14	RM 412.19	109955.3	67% - 1.5yr	763.9	1076.4	1071.57	3.22	3.22	60.03	60.03	99.27	99.27	2.39	2.39	4.83	4.83
Stillwater County	A14	RM 412.05	109175.2	67% - 1.5yr	763.9	1075.99	1072.08	2.77	2.75	43.42	39.88	108.99	119.74	2.53	2.32	3.91	3.91
Stillwater County	A14	RM 411.92	108510.2	67% - 1.5yr	763.9	1075.7	1072.88	2.47	2.47	35.88	35.88	136.86	136.86	2.26	2.26	2.82	2.82
Stillwater County	A14	RM 411.81	107950.5	67% - 1.5yr	763.9	1075.3	1070.62	2.77	2.77	45.42	45.42	125.06	125.06	2.21	2.21	4.68	4.68
Stillwater County	A14	RM 411.71	107391.9	67% - 1.5yr	763.9	1075.12	1070.83	2.36	2.36	30.46	30.46	115.85	115.85	2.8	2.8	4.28	4.28
Stillwater County	A14	RM 411.58	106721	67% - 1.5yr	763.9	1074.85	1071.65	2.33	2.33	32.2	32.2	152.26	170.43	2.16	2.16	3.2	3.2
Stillwater County	A14	RM 411.47	106133.7	67% - 1.5yr	763.9	1074.45	1071.87	2.61	2.59	42.13	36.94	150.38	173.51	1.94	1.7	2.58	2.58
Stillwater County	A14	RM 411.32	105338.4	67% - 1.5yr	763.9	1073.83	1069.29	2.73	2.61	46.99	41.36	151.81	182.26	1.82	1.6	4.54	4.54
Stillwater County	A14	RM 411.14	104374.6	67% - 1.5yr	763.9	1073.21	1067.92	2.75	2.55	42.53	29.79	106.58	166.67	2.57	1.8	5.29	5.29
Stillwater County	A14	RM 411.00	103638.4	67% - 1.5yr	763.9	1072.87	1069.6	2.47	2.09	37.43	25.96	137.05	264.8	1.99	1.38	3.27	3.27
Stillwater County	A14	RM 410.85	102835.8	67% - 1.5yr	763.9	1072.37	1069.92	2.15	2.09	32.81	26.78	83.39	347.07	1.29	1.06	2.45	2.45
Stillwater County	A14	RM 410.74	102286.3	67% - 1.5yr	763.9	1071.97	1068.99	2.36	1.91	35.69	24.87	68.43	331.42	1.74	1.2	2.98	2.98
Stillwater County	A14	RM 410.63	101668.3	67% - 1.5yr	763.9	1071.5	1068.37	2.66	2.02	44.83	24.53	82.53	385.2	1.8	0.98	3.13	3.13
Stillwater County	A14	RM 410.52	101115.7	67% - 1.5yr	763.9	1071.18	1067.81	2.23	2	30.49	20.56	120.48	283.32	2	1.35	3.37	3.37
Stillwater County	A14	RM 410.42	100568.4	67% - 1.5yr	763.9	1070.68	1066.66	2.48	2.56	43.19	44.92	143.68	214.4	1.34	1.39	4.02	4.02
Stillwater County	A14	RM 410.33	100099.2	67% - 1.5yr	763.9	1070.43	1066.6	2.12	2.05	28.35	25.26	198.71	255.03	1.8	1.6	3.83	3.83
Stillwater County	A14	RM 410.22	99589.26	67% - 1.5yr	763.9	1070.05	1066.94	2.51	2.41	38.14	28.95	147.44	204.99	2.05	1.56	3.11	3.11
Stillwater County	A14	RM 410.12	99057.4	67% - 1.5yr	763.9	1069.7	1065.8	2.54	2.26	41.93	34.49	171.23	255.06	1.66	1.36	3.9	3.9
Stillwater County	A14	RM 410.03	98630.66	67% - 1.5yr	763.9	1069.31	1065.33	2.56	2.36	45.39	41.65	201.94	256.51	1.38	1.27	3.98	3.98
Stillwater County	A14	RM 409.99	98385.41	67% - 1.5yr	763.9	1069.04	1065.38	2.68	2.48	46.82	38.77	165.63	237.94	1.63	1.35	3.66	3.66
Stillwater County	A14	RM 409.94	98072.09	67% - 1.5yr	763.9	1068.81	1065.51	2.47	2.29	40.35	31.84	188.71	323.09	1.6	1.26	3.3	3.3
Stillwater County	A14	RM 409.87	97717.24	67% - 1.5yr	763.9	1068.81	1065.52	1.7	1.37	16.39	11.42	159.16	350.64	2.53	1.76	3.28	3.28
Stillwater County	A14	RM 409.76	97130.84	67% - 1.5yr	763.9	1068.53	1065.37	2.24	1.92	29.69	21.81	142.68	260.04	2.22	1.63	3.16	3.16
Stillwater County	A14	RM 409.60	96278.7	67% - 1.5yr	763.9	1067.6	1064.65	3.3	3	73.24	55.68	147.89	221.88	1.51	1.15	2.95	2.95
Stillwater County	A14	RM 409.43	95381.62	67% - 1.5yr	763.9	1067.1	1063.55	2.4	1.95	33.72	16.39	122.66	568.9	2.26	1.1	3.55	3.55
Stillwater County	A14	RM 409.24	94405.29	67% - 1.5yr	763.9	1066.31	1064.55	2.4	2.23	43.25	34	115.77	417.63	1.09	0.86	2.1	2.1
Stillwater County	A14	RM 409.15	93912.54	67% - 1.5yr	763.9	1065.85	1064.27	1.58	2.09	18.89	20.19	137.27	326.58	1.04	1.12	3.78	3.78
Stillwater County	A14	RM 408.99	93008.08	67% - 1.5yr	763.9	1065.16	1063.94	1.92	2.56	29.42	36.92	136.62	267.89	0.88	1.12	2.63	2.63
Stillwater County	A14	RM 408.84	92229.27	67% - 1.5yr	763.9	1064.84	1062.1	1.99	1.99	27.4	24.27	140.13	314.13	1.37	1.22	2.74	2.74
Stillwater County	A14	RM 408.63	91072.98	67% - 1.5yr	763.9	1063.68	1061.85	2.35	2.49	44.69	46.99	202.65	352.54	0.85	0.9	2.1	2.1
Stillwater County	A14	RM 408.41	89726.16	67% - 1.5yr	763.9	1063.05	1059.04	2.13	1.9	25.11	19.35	100.2	194.33	2.69	2.07	4.01	4.01
Stillwater County	A14	RM 408.26	88966.66	67% - 1.5yr	763.9	1062.79	1058.13	2.18	2.1	26	20.55	124.79	164.76	2.79	2.2	4.66	4.66
Stillwater County	A14	RM 408.10	88091.52	67% - 1.5yr	763.9	1062.38	1057.78	2.62	2.53	36.77	32.99	96.98	112.45	2.98	2.69	4.6	4.6
Stillwater County	A14	RM 408.02	87720.33	67% - 1.5yr	763.9	1062.3	1058.61	2.3	2.24	29.19	26.45	120.02	136.49	2.75	2.49	3.69	3.69
Stillwater County	A14	RM 407.83	86708.48	67% - 1.5yr	763.9	1061.73	1058.65	2.52	2.45	42.71	38.71	142.77	231.46	1.48	1.35	3.08	3.08
Stillwater County	A14	RM 407.71	86078.99	67% - 1.5yr	763.9	1061.41	1057.9	2.34	2.19	32.37	25.43	114.29	201.44	2.2	1.73	3.51	3.51
Stillwater County	A14	RM 407.61	85508.29	67% - 1.5yr	763.9	1061.17	1058.36	2.03	2.03	27.77	22.73	169.79	307.33	1.49	1.22	2.81	2.81
Stillwater County	A14	RM 407.50	84909.3	67% - 1.5yr	763.9	1060.85	1058.55	2.17	1.99	33.11	26.98	176.87	360.25	1.3	1.07	2.79	2.79
Stillwater County	A14	RM 407.41	84433.26	67% - 1.5yr	763.9	1060.53	1057.85	2.47	1.98	39.58	24.53	111.89	370.58	1.67	1.04	2.87	2.87
Stillwater County	A14	RM 407.36	84180.66	67% - 1.5yr	763.9	1060.26	1057.59	2.8	2.19	49.14	29.28	96.72	317.39	1.85	1.1	2.67	2.67
Stillwater County	A14	RM 407.29	83775.88	67% - 1.5yr	763.9	1059.94	1057.08	2.08	2.25	28.19	30.71	120.18	188.87	1.64	1.8	3.12	3.12
Stillwater County	A14	RM 407.13	82954.84	67% - 1.5yr	763.9	1059.4	1056.27	2.23	2.22	35.41	35.1	273.59	276.51	1.25	1.24	3.13	3.13
Stillwater County	A14	RM 406.98	82156.72	67% - 1.5yr	763.9	1059.1	1056.37	1.79	1.77	19.22	18.65	195.56	205.94	2.15	2.1	2.73	2.73
Stillwater County	A14	RM 406.86	81532.92	67% - 1.5yr	763.9	1058.58	1055.69	2.83	2.78	46.11	43.33	111.94	121.81	2.4	2.26	2.89	2.89
Stillwater County	A14	RM 406.77	81053.3	67% - 1.5yr	763.9	1058.38	1053.84	2.62	2.5	38.18	30.38	109.17	145.63	2.64	2.1	4.54	4.54
Stillwater County	A14	RM 406.64	80405.13	67% - 1.5yr	763.9	1058.19	1054.89	2.23	2.14	28.12	21.92	135.26	182.34	2.51	1.96	3.29	3.29
Stillwater County	A14	RM 406.48	79524.79	67% - 1.5yr	763.9	1057.59	1054.8	2.68	2.48	46.63	37.36	184.3	260.42	1.47	1.18	2.79	2.79
Stillwater County	A14	RM 406.25	78337.26	67% - 1.5yr	763.9	1056.78	1054.03	2.48	2.33	37.07	28.63	137.81	201.49	2.11	1.62	2.75	2.75
Stillwater County	A14	RM 406.08	77409.13	67% - 1.5yr	763.9	1056.14	1052.87	2.78	2.58	46.17	38.11	117.52	166.91	2.15	1.78	3.27	3.27
Stillwater County	A14	RM 405.93	76624.91	67% - 1.5yr	763.9	1055.7	1052.64	2.63	2.56	39.4	33.94	114.34	137.68	2.51	2.17	3.06	3.06
Stillwater County	A14	RM 405.81	75994.44	67% - 1.5yr	763.9	1055.47	1051.93	2.36	2.29	32.04	29.54	133.13	151.05	2.39	2.21	3.54	3.54
Stillwater County	A15	RM 405.77	75764.36	67% - 1.5yr	763.9	1055.26	1052.63	2.67	2.52	43.99	38.87	140.47	175.18	1.95	1.73	2.63	2.63

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	67% - 1.5yr	763.9	1054.89	1052.06	2.63	2.21	42.64	30.81	82.19	244.87	1.95	1.41	2.83	2.83
Stillwater County	A15	RM 405.61	74883.52	67% - 1.5yr	763.9	1054.69	1051.81	2.77	2.23	44.67	25.72	69.55	320.3	2.3	1.33	2.88	2.88
Stillwater County	A15	RM 405.52	74415.92	67% - 1.5yr	763.9	1054.05	1051.43	3.67	2.91	80.63	41.55	52.24	240.1	2.16	1.11	2.63	2.63
Stillwater County	A15	RM 405.45	74031.34	67% - 1.5yr	763.9	1053.92	1051.1	2.94	1.87	49.72	25.87	57.4	357.49	2.41	1.25	2.83	2.83
Stillwater County	A15	RM 405.34	73437.72	67% - 1.5yr	763.9	1053.48	1050.67	2.72	2.48	43.52	30.17	116.05	206.39	2.23	1.54	2.8	2.8
Stillwater County	A15	RM 405.18	72616.33	67% - 1.5yr	763.9	1052.88	1049.45	3.04	2.81	51.47	29.11	91.4	195.92	2.68	1.51	3.42	3.42
Stillwater County	A15	RM 405.09	72171.48	67% - 1.5yr	763.9	1052.73	1049.09	2.49	2.28	35.54	25.64	115.98	205.86	2.45	1.76	3.65	3.65
Stillwater County	A15	RM 405.02	71774.52	67% - 1.5yr	763.9	1052.43	1048.59	2.93	2.67	47.86	35.72	88	157.93	2.69	2	3.84	3.84
Stillwater County	A15	RM 404.97	71526.86	67% - 1.5yr	763.9	1052.37	1048.35	2.54	2.33	36.29	28.59	105.63	211.34	2.54	2	4.03	4.03
Stillwater County	A15	RM 404.90	71150.58	67% - 1.5yr	763.9	1052.17	1048.99	2.65	2.4	39.82	29.37	102.63	176.54	2.49	1.84	3.18	3.18
Stillwater County	A15	RM 404.84	70801.47	67% - 1.5yr	763.9	1052.08	1049.19	2.28	2.14	30.02	25	116.49	186.84	2.41	2	2.89	2.89
Stillwater County	A15	RM 404.77	70415.17	67% - 1.5yr	763.9	1051.82	1048.51	2.75	2.49	42.17	32.54	84.29	160.53	2.68	2.06	3.31	3.31
Stillwater County	A15	RM 404.71	70152.7	67% - 1.5yr	763.9	1051.79	1048.14	2.23	2.07	27.29	23.86	82.89	156.83	2.85	2.47	3.66	3.66
Stillwater County	A15	RM 404.59	69477.61	67% - 1.5yr	763.9	1051.38	1047.56	2.73	2.73	41.72	41.72	106.73	106.73	2.62	2.62	3.82	3.82
Stillwater County	A15	RM 404.54	69214.33	67% - 1.5yr	763.9	1051.28	1047.65	2.55	2.55	37.17	35.67	120.12	125.56	2.49	2.39	3.63	3.63
Stillwater County	A15	RM 404.35	68254.38	67% - 1.5yr	763.9	1050.78	1048.18	2.36	2.42	35.55	36.46	135.87	173.95	1.75	1.81	3.01	3.01
Stillwater County	A15	RM 404.23	67606.98	67% - 1.5yr	763.9	1050.41	1047.77	2.41	2.39	36.38	35.37	127.81	178.37	1.85	1.81	2.64	2.64
Stillwater County	A15	RM 404.10	66934.17	67% - 1.5yr	763.9	1050.03	1047.61	2.36	2.23	34.24	30.98	119.95	197.92	1.95	1.76	2.41	2.41
Stillwater County	A15	RM 403.94	66110.59	67% - 1.5yr	763.9	1049.58	1045.27	2.5	2.25	37.4	28.69	107.55	211.79	2.17	1.66	4.3	4.3
Stillwater County	A15	RM 403.85	65604.39	67% - 1.5yr	763.9	1049.26	1044.79	2.82	2.39	43.04	27.91	76.46	203.63	2.89	1.86	4.47	4.47
Stillwater County	A15	RM 403.75	65058.55	67% - 1.5yr	763.9	1048.85	1046.13	3.01	2.78	54.49	42.81	100.51	167.07	2.1	1.65	2.72	2.72
Stillwater County	A15	RM 403.69	64721.22	67% - 1.5yr	763.9	1048.75	1046.02	2.27	2.14	32.56	29	131.53	239.19	1.84	1.64	2.73	2.73
Stillwater County	A15	RM 403.62	64341.29	67% - 1.5yr	763.9	1048.4	1045.75	2.75	2.53	50.58	43.69	84.51	232.59	1.51	1.32	2.65	2.65
Stillwater County	A15	RM 403.55	63997.04	67% - 1.5yr	763.9	1048.02	1045.95	2.68	2.55	51.03	46.41	115.31	266.08	1.28	1.17	2.07	2.07
Stillwater County	A15	RM 403.38	62985.06	67% - 1.5yr	763.9	1047.5	1043.43	2.07	1.95	26.37	22.15	166.89	234.57	1.99	1.67	4.07	4.07
Stillwater County	A15	RM 403.24	62260	67% - 1.5yr	763.9	1047.26	1043.43	1.98	1.98	22.57	22.57	159.6	159.6	2.42	2.42	3.83	3.83
Stillwater County	A15	RM 403.15	61770.95	67% - 1.5yr	763.9	1046.93	1042.51	2.54	2.54	37.34	35.9	125.89	131.14	2.39	2.29	4.42	4.42
Stillwater County	A15	RM 403.05	61263.44	67% - 1.5yr	763.9	1046.72	1043.23	2.4	2.4	33.71	33.62	138.93	139.28	2.29	2.28	3.49	3.49
Stillwater County	A15	RM 402.97	60777.65	67% - 1.5yr	763.9	1046.54	1043.89	2.18	2.18	28.81	27.66	168.84	175.97	2.07	1.99	2.65	2.65
Stillwater County	A15	RM 402.83	60113.9	67% - 1.5yr	763.9	1046.01	1043.49	2.56	2.56	45.79	45.79	222.55	295.72	1.34	1.34	2.52	2.52
Stillwater County	A15	RM 402.68	59309.8	67% - 1.5yr	763.9	1045.35	1042.55	2.27	2.22	34.73	31.99	226.66	345.06	1.48	1.36	2.8	2.8
Stillwater County	A15	RM 402.53	58529.61	67% - 1.5yr	763.9	1045.13	1040.51	1.99	1.75	20.65	10.18	116.01	363.1	3.23	1.59	4.62	4.62
Stillwater County	A15	RM 402.37	57665.93	67% - 1.5yr	763.9	1044.6	1041.09	2.71	2.46	51.32	38.02	205.93	350.97	1.33	0.99	3.51	3.51
Stillwater County	A15	RM 402.24	56987.42	67% - 1.5yr	763.9	1044.36	1040.75	1.72	1.53	19.11	13.98	249.59	483.82	1.67	1.23	3.61	3.61
Stillwater County	A15	RM 402.07	56034.67	67% - 1.5yr	763.9	1043.81	1041.1	2.23	1.9	33.03	25.92	202.13	328.16	1.56	1.23	2.71	2.71
Stillwater County	A15	RM 401.87	54972.92	67% - 1.5yr	763.9	1042.76	1040.1	2.99	2.78	56.06	34.15	135.82	243.44	1.86	1.13	2.66	2.66
Stillwater County	A15	RM 401.69	54002.29	67% - 1.5yr	763.9	1042.47	1038.43	1.9	1.84	21.56	18.75	179.83	219.53	2.17	1.89	4.04	4.04
Stillwater County	A15	RM 401.55	53267.48	67% - 1.5yr	763.9	1042.03	1036.56	2.73	2.61	37.35	28.46	73.56	103.68	3.71	2.82	5.47	5.47
Stillwater County	A15	RM 401.41	52506.25	67% - 1.5yr	763.9	1041.82	1037.91	2.35	2.15	31.62	22.56	128.87	229.74	2.42	1.73	3.91	3.91
Stillwater County	A15	RM 401.31	51997.63	67% - 1.5yr	763.9	1041.43	1038.08	2.83	2.65	47.05	35.13	116.48	184.01	2.24	1.67	3.35	3.35
Stillwater County	A15	RM 401.17	51259.17	67% - 1.5yr	763.9	1040.98	1037.38	2.62	2.58	41.81	38.92	143.07	156.11	2.03	1.89	3.6	3.6
Stillwater County	A15	RM 401.03	50507.04	67% - 1.5yr	763.9	1040.66	1036.56	2.38	2.29	31.65	26.94	122.62	150.52	2.6	2.22	4.1	4.1
Stillwater County	A15	RM 400.90	49826.69	67% - 1.5yr	763.9	1040.23	1036.25	2.68	2.61	43.67	37.54	138.29	166.04	2.05	1.76	3.98	3.98
Stillwater County	A15	RM 400.74	49002.09	67% - 1.5yr	763.9	1039.73	1037.21	2.68	2.16	43.05	28.05	109.62	255.69	2.13	1.38	2.52	2.52
Stillwater County	A15	RM 400.61	48243.95	67% - 1.5yr	763.9	1039.25	1035.99	2.49	2.17	40.07	29.11	143.45	288.28	1.68	1.22	3.25	3.25
Stillwater County	A15	RM 400.50	47710.55	67% - 1.5yr	763.9	1038.9	1035.67	2.24	2.2	32.41	31.02	147.79	211.82	1.71	1.64	3.23	3.23
Stillwater County	A15	RM 400.42	47243.72	67% - 1.5yr	763.9	1038.6	1034.87	2.44	2.38	35.03	32.22	103.63	154.19	2.26	2.08	3.73	3.73
Stillwater County	A15	RM 400.34	46832.6	67% - 1.5yr	763.9	1038.46	1034.91	2.32	2.16	29.9	26.27	92.5	151.44	2.65	2.33	3.55	3.55
Stillwater County	A15	RM 400.25	46335.82	67% - 1.5yr	763.9	1038.33	1035.01	2.15	2	26.15	22.45	103.77	173.49	2.56	2.2	3.32	3.32
Stillwater County	A15	RM 400.18	45999.89	67% - 1.5yr	763.9	1038.18	1034.98	2.27	2.15	29.87	26.96	110.78	166.97	2.36	2.13	3.2	3.2
Stillwater County	A15	RM 400.13	45714.33	67% - 1.5yr	763.9	1038.06	1035.2	2.31	2.07	30.88	21.19	119.72	227.13	2.37	1.62	2.86	2.86
Stillwater County	A15	RM 400.11	45623.77	67% - 1.5yr	763.9	1037.96	1035.11	2.5	2.24	37.73	27.48	126.68	222.97	2.11	1.53	2.85	2.85
Stillwater County	A15	RM 400.09	45529.19	67% - 1.5yr	763.9	1037.77	1035.05	2.93	2.62	54.07	43.02	125	201.38	1.82	1.45	2.72	2.72
Stillwater County	A15	RM 400.03	45177.97	67% - 1.5yr	763.9	1037.39	1034.82	3.02	2.73	59.8	48.84	133.06	209.15	1.64	1.34	2.57	2.57
Stillwater County	A15	RM 399.95	44761.86	67% - 1.5yr	763.9	1037.26	1033.69	2.22	2.22	28.64	28.64	148.42	157.31	2.32	2.32	3.57	3.57
Stillwater County	A16	RM 399.85	44225.61	67% - 1.5yr	763.9	1036.9	1033.63	2.58	2.58	40.11	40.11	142.94	152.26	2.08	2.08	3.27	3.27
Stillwater County	A16	RM 399.74	43664.16	67% - 1.5yr	763.9	1036.67	1033.48	2.23	2.23	29.8	29.8	161.8	161.8	2.12	2.12	3.19	3.19
Stillwater County	A16	RM 399.62	43026.17	67% - 1.5yr	763.9	1036.21	1033.67	2.49	2.49	42.37	42.37	214.67	214.67	1.43	1.43	2.54	2.54
Stillwater County	A16	RM 399.50	42404.94	67% - 1.5yr	763.9	1035.92	1031.89	2.13	2.13	26.77	26.77	163.18	163.18	2.2	2.2	4.03	4.03
Stillwater County	A16	RM 399.39	41801.43	67% - 1.5yr	763.9	1035.62	1031.8	2.3	2.3	31.55	31.55	151.67	159.34	2.19	2.19	3.82	3.82

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

67% - 1.5yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	67% - 1.5yr	763.9	1035.28	1031.14	2.59	2.54	40.42	34.58	141.16	169.53	2.08	1.78	4.14	4.14
Stillwater County	A16	RM 399.19	40736.83	67% - 1.5yr	763.9	1034.87	1031.46	2.76	2.73	45.77	42.46	132.14	144.07	2.09	1.94	3.41	3.41
Stillwater County	A16	RM 399.09	40202.15	67% - 1.5yr	763.9	1034.69	1031.09	2.32	2.17	30.44	21.87	127.17	193.22	2.53	1.82	3.6	3.6
Stillwater County	A16	RM 399.00	39710.39	67% - 1.5yr	763.9	1034.54	1031.41	2.15	1.82	27.57	18.74	142.33	284.24	2.18	1.48	3.12	3.12
Stillwater County	A16	RM 398.91	39231.58	67% - 1.5yr	763.9	1034.23	1031.73	2.33	2.1	37.18	30.46	176.17	311.72	1.43	1.17	2.5	2.5
Stillwater County	A16	RM 398.80	38666.26	67% - 1.5yr	763.9	1033.76	1031.55	2.38	2.04	38.48	27.44	184.63	358.31	1.46	1.04	2.21	2.21
Stillwater County	A16	RM 398.73	38275.64	67% - 1.5yr	763.9	1033.46	1030.78	2.35	2.1	33.27	25.84	181.8	305.11	1.53	1.19	2.68	2.68
Stillwater County	A16	RM 398.62	37715.08	67% - 1.5yr	763.9	1033.14	1030.19	2.13	1.97	27.9	20.67	169.76	319.45	1.64	1.21	2.95	2.95
Stillwater County	A16	RM 398.51	37115.9	67% - 1.5yr	763.9	1032.69	1030.68	2.33	2.23	37.49	32.86	210.39	284.03	1.37	1.21	2.03	2.03
Stillwater County	A16	RM 398.40	36522.49	67% - 1.5yr	763.9	1032.44	1028.27	1.92	1.79	21.42	16.67	168.22	298.68	1.84	1.43	4.17	4.17
Stillwater County	A16	RM 398.29	35952.65	67% - 1.5yr	763.9	1032.06	1027.62	2.27	2.27	34.33	33.52	220.3	225.65	1.53	1.49	4.44	4.44
Stillwater County	A16	RM 398.17	35320.39	67% - 1.5yr	763.9	1031.88	1028.88	1.7	1.7	17.83	17.3	228.21	235.58	1.97	1.91	3	3
Stillwater County	A16	RM 398.04	34597.07	67% - 1.5yr	763.9	1031.54	1027.24	1.95	1.95	29.21	29.08	252.71	253.87	1.55	1.54	4.3	4.3
Stillwater County	A16	RM 397.95	34133.39	67% - 1.5yr	763.9	1031.14	1027.15	2.35	2.33	36.6	35.82	206.02	211.88	1.58	1.54	3.99	3.99
Stillwater County	A16	RM 397.81	33366.95	67% - 1.5yr	763.9	1030.72	1027.05	2.01	1.99	26.61	25.78	235.18	246.27	1.61	1.56	3.67	3.67
Stillwater County	A16	RM 397.68	32754.86	67% - 1.5yr	763.9	1030.49	1026.97	1.93	1.9	22.27	20.81	188.19	216.97	2.11	1.97	3.52	3.52
Stillwater County	A16	RM 397.56	32104.4	67% - 1.5yr	763.9	1030.08	1026.76	2.52	2.45	37.17	34.97	132.07	161.17	2.28	2.15	3.32	3.32
Stillwater County	A16	RM 397.40	31237.31	67% - 1.5yr	763.9	1029.65	1026.27	2.34	2.22	33.85	29.41	169.15	322.53	1.91	1.66	3.38	3.38
Stillwater County	A16	RM 397.17	30082.69	67% - 1.5yr	763.9	1029.01	1025.84	2.15	1.99	30.57	21.02	219.15	569.28	1.59	1.09	3.17	3.17
Stillwater County	A16	RM 396.97	29050.44	67% - 1.5yr	763.9	1028.4	1025.61	2.01	1.88	28.05	23.8	269.65	479.48	1.38	1.17	2.79	2.79
Stillwater County	A16	RM 396.71	27639.86	67% - 1.5yr	763.9	1027.67	1022.48	2.43	2.43	31.49	31.49	103.44	278.36	3.04	3.04	5.19	5.19
Stillwater County	A16	RM 396.62	27103.31	67% - 1.5yr	763.9	1027.49	1022.36	2.45	2.45	31.66	31.26	99.36	210.47	3.14	3.1	5.13	5.13
Stillwater County	A16	RM 396.52	26616.35	67% - 1.5yr	763.9	1027.25	1023.41	2.64	2.64	38.07	38.07	101.65	276.76	2.84	2.84	3.84	3.84
Stillwater County	A16	RM 396.29	25423.1	67% - 1.5yr	763.9	1026.8	1023.53	2.15	1.94	29.17	21.86	179.33	335.21	1.83	1.38	3.27	3.27
Stillwater County	A16	RM 396.14	24635.78	67% - 1.5yr	763.9	1026.34	1022.46	2.46	2.15	36.03	23.92	128	300.83	2.16	1.44	3.88	3.88
Stillwater County	A16	RM 396.03	24026.24	67% - 1.5yr	763.9	1026.08	1024.1	2.16	1.89	30.3	21.1	178.64	426.59	1.68	1.17	1.98	1.98
Stillwater County	A16	RM 395.89	23301.08	67% - 1.5yr	763.9	1025.54	1022.79	2.53	2.07	42.14	26.34	128.6	423.62	1.59	1	2.75	2.75
Stillwater County	A16	RM 395.73	22420.29	67% - 1.5yr	763.9	1025.16	1022.66	1.3	1.24	11.75	9.97	180.41	562.81	1.36	1.15	2.5	2.5
Stillwater County	A16	RM 395.64	21923.33	67% - 1.5yr	763.9	1024.88	1022.13	1.78	1.65	21.14	13.51	142.57	582.97	1.51	0.97	3.06	3.06
Stillwater County	A16	RM 395.57	21526.11	67% - 1.5yr	763.9	1024.52	1021.61	2.38	1.97	34.54	15.7	76.18	613.68	2.03	0.92	2.91	2.91
Stillwater County	A16	RM 395.48	21053.74	67% - 1.5yr	763.9	1024.09	1021.89	2.36	2.22	39.88	31.11	107.77	445.08	1.24	0.97	2.2	2.2
Stillwater County	A16	RM 395.36	20532.68	67% - 1.5yr	763.9	1023.82	1021.53	1.85	1.8	23.02	18.35	129.56	444.99	1.5	1.19	2.29	2.29
Stillwater County	A16	RM 394.98	18666.37	67% - 1.5yr	763.9	1023.12	1020.31	2.54	2.18	40.1	25.15	90.6	292.53	1.91	1.2	2.81	2.81
Stillwater County	A16	RM 394.80	17678.79	67% - 1.5yr	763.9	1022.75	1019.23	2.31	2.14	33.44	25.18	103.06	257.72	1.84	1.38	3.52	3.52
Stillwater County	A16	RM 394.71	17254.4	67% - 1.5yr	763.9	1022.59	1019.74	1.81	1.78	21.3	18.89	137.29	287.07	1.69	1.5	2.85	2.85
Stillwater County	A16	RM 394.65	16921.48	67% - 1.5yr	763.9	1022.37	1019.93	1.9	1.89	24.11	22.42	142.06	281.76	1.56	1.44	3.37	3.37
Stillwater County	A16	RM 394.59	16622.61	67% - 1.5yr	763.9	1022.04	1019.92	2.18	2.11	32.06	28	117.77	281.04	1.48	1.29	2.47	2.47
Stillwater County	A16	RM 394.53	16295.21	67% - 1.5yr	763.9	1021.73	1019.83	2.22	2.07	35.73	30.06	132.42	364.84	1.21	1.02	2.72	2.72
Stillwater County	A16	RM 394.45	15858.14	67% - 1.5yr	763.9	1021.27	1019.03	2.37	2.27	37.95	32.38	109.89	265.19	1.49	1.27	2.39	2.39
Stillwater County	A16	RM 394.20	14503.23	67% - 1.5yr	763.9	1020.53	1016.38	2.34	2.06	34.08	22.33	141.19	296.04	1.91	1.26	4.15	4.15
Stillwater County	A16	RM 394.12	14088.57	67% - 1.5yr	763.9	1020.25	1016.74	2.46	2.19	37.38	25.83	139.19	257.8	1.95	1.35	3.51	3.51
Stillwater County	A16	RM 393.99	13393.6	67% - 1.5yr	763.9	1019.88	1017.11	2.28	1.83	33.38	20.66	109.02	387.84	1.73	1.07	2.77	2.77
Stillwater County	A16	RM 393.85	12650.05	67% - 1.5yr	763.9	1019.36	1016.49	2.05	1.99	30.27	24.84	172.98	388.04	1.2	0.99	2.87	2.87
Stillwater County	A16	RM 393.59	11240.84	67% - 1.5yr	763.9	1018.79	1015.45	1.53	1.41	15.43	11.71	257.55	450.6	1.58	1.2	3.34	3.34
Stillwater County	A16	RM 393.27	9813.245	67% - 1.5yr	763.9	1017.71	1013.32	3.03	2.71	58.72	38.35	131.69	245.61	1.76	1.15	4.39	4.39
Stillwater County	A16	RM 393.10	8870.543	67% - 1.5yr	763.9	1017.15	1013.34	1.95	1.85	26.71	22.42	259.61	372.48	1.32	1.11	3.81	3.81
Stillwater County	A16	RM 392.95	8114.595	67% - 1.5yr	763.9	1016.41	1014.13	2.41	2.34	41.7	38.45	245.91	287.19	1.23	1.14	2.28	2.28
Stillwater County	A16	RM 392.69	6912.838	67% - 1.5yr	763.9	1015.75	1012.43	1.78	1.6	21.13	17.34	187.02	410.83	1.53	1.25	3.32	3.32
Stillwater County	A16	RM 392.44	5710.825	67% - 1.5yr	763.9	1015.13	1011.68	2.2	1.97	29.69	20.32	131.69	487.72	1.98	1.36	3.45	3.45
Stillwater County	A17	RM 392.20	4388.056	67% - 1.5yr	763.9	1014.1	1010.8	2.79	2.6	49.85	42.19	155.53	200.84	1.73	1.46	3.3	3.3
Stillwater County	A17	RM 392.00	3345.174	67% - 1.5yr	763.9	1013.62	1009.53	2.14	1.85	27.53	19.21	158.55	285.66	2.07	1.44	4.09	4.09
Stillwater County	A17	RM 391.84	2491.214	67% - 1.5yr	763.9	1013.33	1010.51	1.77	1.69	20.69	16.44	150.73	359.57	1.58	1.25	2.92	2.92
Stillwater County	A17	RM 391.68	1656.536	67% - 1.5yr	763.9	1012.96	1010.5	1.6	1.59	19.13	16.14	254.76	531.25	1.07	0.9	2.46	2.46
Stillwater County	A17	RM 391.58	1120.168	67% - 1.5yr	763.9	1012.67	1009.55	1.76	1.63	21.63	16.21	298	469.21	1.33	1	3.12	3.12
Stillwater County	A17	RM 391.46	505.9	67% - 1.5yr	763.9	1012.39	1009.4	1.74	1.55	20.39	13.84	272.76	489.95	1.48	1	2.99	2.99

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	1.5-yr	763.9	1012.03	1008.74	1.89	1.62	22.4	13.34	204.65	429.31	1.85	1.1	3.29	3.29
Yellowstone County	A17	RM 391.14	149661.4	1.5-yr	763.9	1011.64	1007.82	1.95	1.48	28.38	13.94	201.76	579.67	1.82	0.89	3.82	3.82
Yellowstone County	A17	RM 390.83	149168.3	1.5-yr	763.9	1010.45	1007.89	2.31	2.12	42.1	36.08	242.57	372.99	1.23	1.05	2.56	2.56
Yellowstone County	A17	RM 390.51	148644.1	1.5-yr	763.9	1009.61	1006	1.47	1.46	19.82	17.46	197.37	303.09	1.97	1.73	3.61	3.61
Yellowstone County	A17	RM 390.34	148387.5	1.5-yr	763.9	1009.19	1005.26	2.08	1.93	38.9	25.89	148.1	287.21	2.07	1.38	3.93	3.93
Yellowstone County	A17	RM 390.13	148054.9	1.5-yr	763.9	1008.57	1005.54	2.29	2.1	37.8	22.05	135.68	289.42	2.15	1.26	3.03	3.03
Yellowstone County	A17	RM 389.96	147776.4	1.5-yr	763.9	1008.21	1004.81	1.88	1.71	23.73	19.33	168.05	304.43	1.8	1.46	3.4	3.4
Yellowstone County	A17	RM 389.76	147468.2	1.5-yr	763.9	1007.94	1004.52	1.32	1.29	16.41	14.59	296.18	341.57	1.94	1.73	3.42	3.42
Yellowstone County	A17	RM 389.55	147162.3	1.5-yr	763.9	1007.41	1003.2	1.86	1.86	43.1	43.1	250.93	250.93	1.64	1.64	4.21	4.21
Yellowstone County	A17	RM 389.31	146731.1	1.5-yr	763.9	1006.79	1003.49	1.62	1.59	17.62	16.87	252.42	269.13	1.86	1.78	3.3	3.3
Yellowstone County	A17	RM 389.08	146349	1.5-yr	763.9	1006.17	1001.61	1.79	1.66	44.51	29.43	258.4	442.76	1.58	1.04	4.56	4.56
Yellowstone County	A17	RM 388.92	146095.5	1.5-yr	763.9	1005.64	1002.49	1.82	1.71	22.57	17.34	264.26	377.38	1.54	1.19	3.15	3.15
Yellowstone County	A17	RM 388.79	145883.6	1.5-yr	763.9	1005.43	1002.14	1.76	1.49	18.81	10.86	162.05	352.62	2.53	1.45	3.29	3.29
Yellowstone County	A17	RM 388.61	145594.9	1.5-yr	763.9	1005.01	1000.48	2.32	1.95	36.57	26.65	132.25	237.28	2.27	1.65	4.53	4.53
Yellowstone County	A17	RM 388.58	145547	1.5-yr	763.9	1004.93	1000.28	2.21	1.98	40.1	28.81	142.4	258.45	2.34	1.68	4.65	4.65
Yellowstone County	A17	RM 388.36	145196.7	1.5-yr	763.9	1004.46	1001.21	2.01	1.7	26.74	15.34	154.82	350.07	2.22	1.28	3.25	3.25
Yellowstone County	A17	RM 388.22	144960.1	1.5-yr	763.9	1003.95	1000.23	2.62	2.27	45.07	24.97	128.49	337.2	1.89	1.05	3.72	3.72
Yellowstone County	A17	RM 388.09	144745.8	1.5-yr	763.9	1003.42	999.87	2.21	1.94	38.88	33.26	216.01	389.33	1.23	1.05	3.55	3.55
Yellowstone County	A17	RM 387.91	144452	1.5-yr	763.9	1002.65	999.77	1.4	1.64	19.49	24.32	309.82	411.11	0.91	1.14	2.88	2.88
Yellowstone County	A17	RM 387.79	144255.2	1.5-yr	763.9	1002.57	999.17	1.05	1.01	6.28	5.41	319.16	524.94	1.66	1.44	3.4	3.4
Yellowstone County	A17	RM 387.59	143932.9	1.5-yr	763.9	1002.27	998.1	1.2	1.19	34.87	33.68	688.53	735.25	0.92	0.88	4.17	4.17
Yellowstone County	A17	RM 387.36	143562.1	1.5-yr	763.9	1001.21	997.78	1.91	1.91	21.47	21.47	319.71	326.66	1.25	1.25	3.43	3.43
Yellowstone County	A17	RM 387.24	143353.9	1.5-yr	763.9	1000.91	997.71	1.69	1.69	18.15	18.15	341.32	347.91	1.32	1.32	3.2	3.2
Yellowstone County	A17	RM 387.04	143026.2	1.5-yr	763.9	1000.09	996.49	2.39	2.37	37.52	35.49	263.32	281.6	1.21	1.14	3.6	3.6
Yellowstone County	A17	RM 386.86	142750.4	1.5-yr	763.9	999.59	997.01	1.7	1.68	23.08	21.16	299.7	332.8	1.49	1.37	2.58	2.58
Yellowstone County	A17	RM 386.74	142538.5	1.5-yr	763.9	999.2	996.31	1.76	1.72	26.6	24.74	316.91	359.04	1.33	1.24	2.89	2.89
Yellowstone County	A17	RM 386.61	142318.4	1.5-yr	763.9	998.65	995.9	2.23	2.17	34.9	30.43	179.54	229.33	1.76	1.53	2.75	2.75
Yellowstone County	A17	RM 386.47	142095.8	1.5-yr	763.9	998.26	995.18	2.19	2	31.21	23.14	159.62	269.18	1.92	1.42	3.08	3.08
Yellowstone County	A17	RM 386.33	141875.1	1.5-yr	763.9	997.81	994.36	2.47	2.15	36.27	20.46	131.55	289.64	2.17	1.23	3.45	3.45
Yellowstone County	A17	RM 386.17	141622.7	1.5-yr	763.9	997.32	993.9	2.33	2.2	39.4	30.42	183.77	267.21	1.68	1.3	3.42	3.42
Yellowstone County	A17	RM 386.08	141479.6	1.5-yr	763.9	996.98	994.12	2.31	2.19	43.48	32.39	173.68	254.56	1.84	1.37	2.86	2.86
Yellowstone County	A17	RM 386.03	141389.2	1.5-yr	763.9	996.63	993.82	2.61	2.54	48.26	36.03	198.59	275.53	1.46	1.09	2.81	2.81
Yellowstone County	A17	RM 385.96	141289.2	1.5-yr	763.9	996.6	993.01	1.75	1.7	18.38	15.58	216.63	266.82	1.98	1.68	3.59	3.59
Yellowstone County	A17	RM 385.91	141204.9	1.5-yr	763.9	996.51	992.33	1.76	1.76	18.68	18.68	240.76	270.2	1.81	1.81	4.18	4.18
Yellowstone County	A17	RM 385.84	141096	1.5-yr	763.9	996.41	990.57	1.81	1.81	18.98	18.98	332.1	332.1	2.86	2.86	5.84	5.84
Yellowstone County		RM 342.71	141053	1.5-yr	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	1.5-yr	763.9	996.29	992.45	1.98	1.98	29.93	29.93	134.84	134.84	2.86	2.86	3.84	3.84
Yellowstone County	A17	RM 385.79	141006	1.5-yr	763.9	996.27	992.48	1.9	1.9	18.74	18.74	146.63	146.63	2.74	2.74	3.79	3.79
Yellowstone County	A18	RM 385.69	140846.5	1.5-yr	763.9	996.04	992.9	2.08	2.08	41.31	41.31	202.5	205.39	1.82	1.82	3.14	3.14
Yellowstone County	A18	RM 385.60	140705.5	1.5-yr	763.9	995.72	992.71	2.18	2.17	38.75	36.52	173.61	187.64	2.01	1.9	3.01	3.01
Yellowstone County	A18	RM 385.50	140538.8	1.5-yr	763.9	995.52	990.71	1.91	1.9	27.78	23.82	145.98	171.24	2.74	2.35	4.81	4.81
Yellowstone County	A18	RM 385.39	140367.1	1.5-yr	763.9	995.3	992.41	2.05	1.99	23.96	19.52	184.61	234.52	2.01	1.64	2.89	2.89
Yellowstone County	A18	RM 385.30	140231.3	1.5-yr	763.9	995.01	992.53	2.24	2.19	41.99	36.48	232.95	275.51	1.45	1.26	2.48	2.48
Yellowstone County	A18	RM 385.23	140108.3	1.5-yr	763.9	994.71	992.01	2	1.9	36.08	30.67	223.9	337.72	1.4	1.19	2.7	2.7
Yellowstone County	A18	RM 385.12	139921.2	1.5-yr	763.9	993.92	991.37	2.68	2.66	53.55	50.31	172.41	222.28	1.37	1.29	2.55	2.55
Yellowstone County	A18	RM 384.93	139688.7	1.5-yr	763.9	993.53	991.06	1.85	1.73	23.2	19.29	207.72	336.51	1.58	1.31	2.47	2.47
Yellowstone County	A18	RM 384.75	139352.1	1.5-yr	763.9	992.67	989.77	2.79	2.42	61.82	40	110.95	267.43	1.82	1.18	2.9	2.9
Yellowstone County	A18	RM 384.63	139146.9	1.5-yr	763.9	992.17	989.58	1.81	1.68	25.68	22.04	165.3	524.48	1.09	0.94	2.58	2.58
Yellowstone County	A18	RM 384.48	138904.5	1.5-yr	763.9	991.72	989.55	1.45	1.55	20.39	19.27	152.88	362.3	1.44	1.36	2.37	2.37
Yellowstone County	A18	RM 384.34	138682.4	1.5-yr	763.9	991.37	988.23	1.51	1.7	31.17	27.49	152.68	261.64	1.95	1.72	3.14	3.14
Yellowstone County	A18	RM 384.26	138551.1	1.5-yr	763.9	991.11	987.34	2.28	1.99	45.21	20.32	81.65	338.75	2.54	1.13	3.77	3.77
Yellowstone County	A18	RM 384.15	138370.3	1.5-yr	763.9	990.54	987.39	2.89	2.59	64.26	37.61	76.5	232.94	2.17	1.27	3.15	3.15
Yellowstone County	A18	RM 384.06	138235.3	1.5-yr	763.9	990.39	987.31	2.28	1.6	32.71	16.54	82.26	481.93	2.12	1.07	3.08	3.08
Yellowstone County	A18	RM 383.96	138072.3	1.5-yr	763.9	989.82	987.67	2.49	2.37	50.87	43.75	134.05	406.75	0.92	0.79	2.15	2.15
Yellowstone County	A18	RM 383.86	137914.6	1.5-yr	763.9	989.61	987.24	1.55	1.47	16.01	14.83	148.78	366.72	1.54	1.42	2.37	2.37
Yellowstone County	A18	RM 383.75	137749.9	1.5-yr	763.9	989.26	986.55	1.49	1.88	21.74	24.33	167.8	320.22	1.14	1.27	2.78	2.78
Yellowstone County	A18	RM 383.62	137544.5	1.5-yr	763.9	988.97	986.32	1.48	1.6	16.6	15.05	155.21	408.53	1.29	1.17	3.35	3.35
Yellowstone County	A18	RM 383.54	137415.7	1.5-yr	763.9	988.87	984.41	1.4	1.36	12.74	10.72	355.64	559.77	1.53	1.28	4.46	4.46
Yellowstone County	B1	RM 383.39	137175.7	1.5-yr	957.14	988.51	984.98	1.99	1.99	23.04	23.04	256.15	256.15	1.88	1.88	3.53	3.53
Yellowstone County	B1	RM 383.31	137040.5	1.5-yr	957.14	988.31	984.86	1.97	1.89	24	19.15	325.95	427.91	1.48	1.18	3.45	3.45
Yellowstone County	B1	RM 383.16	136817.2	1.5-yr	957.14	988.01	984.9	1.87	1.69	15.43	12.01	393.59	569.13	1.28	0.99	3.11	3.11

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	1.5-yr	957.14	987.33	983.64	2.05	1.99	23.91	21.62	327.71	379.68	1.4	1.27	3.69	3.69
Yellowstone County	B1	RM 382.61	135921.1	1.5-yr	957.14	986.72	982.68	2.05	1.96	25.42	20.03	188.97	255.57	2.42	1.91	4.04	4.04
Yellowstone County	B1	RM 382.44	135657.8	1.5-yr	957.14	986.33	981.56	2.5	2.13	34.57	22.66	123.37	232.26	2.95	1.94	4.77	4.77
Yellowstone County	B1	RM 382.28	135389.1	1.5-yr	957.14	986.09	981.45	2.23	2.04	27.85	17.48	134.84	243.97	3.06	1.92	4.64	4.64
Yellowstone County	B1	RM 382.11	135122	1.5-yr	957.14	985.68	980.52	2.57	2.51	40.09	33.16	128.35	159.39	2.9	2.39	5.16	5.16
Yellowstone County	B1	RM 381.93	134829.3	1.5-yr	957.14	985.24	981.3	2.28	2.28	47.27	47.27	173.39	173.39	2.42	2.42	3.94	3.94
Yellowstone County	B1	RM 381.79	134602.8	1.5-yr	957.14	984.77	981.63	2.5	2.5	38.79	38.79	162.58	162.58	2.35	2.35	3.14	3.14
Yellowstone County	B1	RM 381.69	134426.2	1.5-yr	957.14	984.67	981.06	1.83	1.83	21.47	20.5	195.4	204.89	2.67	2.55	3.61	3.61
Yellowstone County	B1	RM 381.58	134232.5	1.5-yr	957.14	984.36	981.02	2.15	2.13	32.21	31.19	265.05	275.73	1.68	1.63	3.34	3.34
Yellowstone County	B1	RM 381.47	134047.3	1.5-yr	957.14	984.06	980.95	1.99	1.98	30.96	28.74	234.72	254.75	2.04	1.9	3.11	3.11
Yellowstone County	B1	RM 381.35	133871.9	1.5-yr	957.14	983.79	980.79	1.99	1.98	30.47	28.95	244.58	259.46	1.96	1.87	3	3
Yellowstone County	B1	RM 381.22	133659.2	1.5-yr	957.14	983.36	979.74	2.1	2.1	36.42	36.42	272.4	272.4	1.67	1.67	3.62	3.62
Yellowstone County	B1	RM 381.11	133491.4	1.5-yr	957.14	983.04	979.61	2.12	2.06	37.01	33.2	185.02	237.63	2.18	1.96	3.43	3.43
Yellowstone County	B1	RM 381.00	133302.9	1.5-yr	957.14	982.59	978.23	2.5	2.39	38.13	34.21	177.78	227.19	1.96	1.76	4.36	4.36
Yellowstone County	B1	RM 380.92	133180	1.5-yr	957.14	982.45	976.97	2.24	2.03	32.03	21.02	145.62	259.64	2.77	1.81	5.48	5.48
Yellowstone County	B1	RM 380.81	132986.3	1.5-yr	957.14	982.19	978.55	2.24	2.16	30.31	26.22	188.73	237.15	2.16	1.87	3.64	3.64
Yellowstone County	B1	RM 380.69	132800.2	1.5-yr	957.14	981.98	978.53	1.97	1.87	22.69	20.09	259.3	318.38	1.81	1.6	3.45	3.45
Yellowstone County	B1	RM 380.57	132628.6	1.5-yr	957.14	981.77	978.7	1.81	1.78	26.94	24.31	220.91	282.08	2.11	1.9	3.07	3.07
Yellowstone County	B1	RM 380.48	132470	1.5-yr	957.14	981.58	978.24	1.85	1.75	24.89	20.08	195.44	284.25	2.38	1.92	3.34	3.34
Yellowstone County	B1	RM 380.34	132222.4	1.5-yr	957.14	981.18	977.37	2.25	2.08	31.36	22.74	197.4	315.89	2	1.46	3.81	3.81
Yellowstone County	B1	RM 380.22	132032.4	1.5-yr	957.14	980.82	977.02	2.45	2.41	35.48	30.25	170.59	204.08	2.28	1.95	3.8	3.8
Yellowstone County	B1	RM 380.11	131847.7	1.5-yr	957.14	980.55	976.29	2.34	2.14	36.58	24.9	169.47	366.08	2.17	1.48	4.26	4.26
Yellowstone County	B1	RM 380.01	131671.4	1.5-yr	957.14	980.3	976.21	2.26	1.9	34.02	17.66	159.65	411.85	2.35	1.22	4.09	4.09
Yellowstone County	B1	RM 379.92	131538.8	1.5-yr	957.14	980.07	976.69	2.34	2.07	33.1	21.7	183.81	363.82	1.94	1.27	3.38	3.38
Yellowstone County	B1	RM 379.84	131406.9	1.5-yr	957.14	979.98	975.94	1.57	1.5	16.55	13.75	387.55	499.59	1.54	1.28	4.04	4.04
Yellowstone County	B1	RM 379.75	131265.1	1.5-yr	957.14	979.8	974.98	1.63	1.57	20.18	17.86	362.8	433.81	1.59	1.41	4.82	4.82
Yellowstone County	B1	RM 379.65	131104.3	1.5-yr	957.14	979.59	975.6	1.66	1.54	18.74	16.98	367.78	454.18	1.51	1.37	3.99	3.99
Yellowstone County	B1	RM 379.56	130964.3	1.5-yr	957.14	979.45	975.94	1.5	1.5	15.64	15.11	312.11	732.34	1.67	1.62	3.51	3.51
Yellowstone County	B1	RM 379.46	130794	1.5-yr	957.14	979.27	974.74	1.69	1.65	16.94	13.97	222.9	645.27	2.17	1.79	4.53	4.53
Yellowstone County	B1	RM 379.36	130642.3	1.5-yr	957.14	979.15	975.71	1.61	1.61	21.29	21.29	240.85	240.85	2.47	2.47	3.44	3.44
Yellowstone County	B1	RM 379.27	130496.2	1.5-yr	957.14	978.7	974.66	2.71	2.27	53.05	21.43	148.8	453.18	2.31	0.93	4.04	4.04
Yellowstone County	B1	RM 379.17	130345.7	1.5-yr	957.14	978.44	973.93	2.54	2.31	39.35	19.06	147.76	365.21	2.52	1.22	4.51	4.51
Yellowstone County	B1	RM 379.04	130142	1.5-yr	957.14	978.15	974.79	2.3	1.88	32	15.65	199.22	585.18	1.96	0.96	3.36	3.36
Yellowstone County	B1	RM 378.97	130026.7	1.5-yr	957.14	977.95	974.64	2.3	1.98	33.17	18.81	224.63	475.05	1.79	1.02	3.31	3.31
Yellowstone County	B1	RM 378.86	129850.9	1.5-yr	957.14	977.58	974.4	2.29	2.04	37.83	28.26	238.83	421.38	1.68	1.25	3.18	3.18
Yellowstone County	B1	RM 378.76	129682.3	1.5-yr	957.14	977.25	974.17	2.2	2.09	31.19	20.54	248.54	462.2	1.74	1.15	3.08	3.08
Yellowstone County	B1	RM 378.67	129541.3	1.5-yr	957.14	976.99	973.97	2.24	1.86	30.88	16.9	231.05	544.55	1.77	0.97	3.02	3.02
Yellowstone County	B1	RM 378.61	129443.1	1.5-yr	957.14	976.75	973.83	2.46	1.93	45.45	24.66	192.56	562.98	1.68	0.91	2.92	2.92
Yellowstone County	B1	RM 378.52	129297.7	1.5-yr	957.14	976.45	973.62	2.01	1.84	24.6	21.96	413.67	550.36	1.11	0.99	2.83	2.83
Yellowstone County	B1	RM 378.46	129200.8	1.5-yr	957.14	976.32	973.48	1.6	1.57	20.22	18.37	449.8	504.03	1.33	1.21	2.84	2.84
Yellowstone County	B1	RM 378.40	129112.2	1.5-yr	957.14	976.1	973.41	1.71	1.7	39.51	38.38	440.62	459.41	1.26	1.23	2.69	2.69
Yellowstone County	B1	RM 378.29	128929.4	1.5-yr	957.14	975.87	972.93	1.24	1.23	12.78	12.36	535.9	560.9	1.44	1.39	2.94	2.94
Yellowstone County	B1	RM 378.13	128673.7	1.5-yr	957.14	975.51	971.4	1.91	1.91	20.33	20.33	235.4	255.04	2.13	2.13	4.11	4.11
Yellowstone County	B1	RM 378.07	128569	1.5-yr	957.14	975.45	970.46	1.76	1.76	15.79	15.79	208.93	265.42	2.6	2.6	4.99	4.99
Yellowstone County	B1	RM 377.96	128380.3	1.5-yr	957.14	975.3	968.85	1.93	1.93	25.79	25.79	105.97	105.97	4.69	4.69	6.45	6.45
Yellowstone County		RM 338.83	128364	1.5-yr	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	1.5-yr	957.14	975.28	967.19	1.77	1.77	22.39	22.39	103.7	103.7	5.2	5.2	8.09	8.09
Yellowstone County	B1	RM 377.87	128244.4	1.5-yr	957.14	975.09	970.56	2.18	2.18	36.54	36.52	221.41	232.14	2.01	2.01	4.53	4.53
Yellowstone County	B1	RM 377.79	128118	1.5-yr	957.14	974.81	970.94	2.36	2.36	29.17	29.17	241.48	291.73	1.68	1.68	3.87	3.87
Yellowstone County	B1	RM 377.69	127964.3	1.5-yr	957.14	974.63	969.86	2.01	2.01	23.92	23.92	262.6	312.34	1.81	1.81	4.77	4.77
Yellowstone County	B1	RM 377.61	127824.8	1.5-yr	957.14	974.26	970.53	2.53	2.53	36.62	36.62	222.37	235.91	1.7	1.7	3.73	3.73
Yellowstone County	B1	RM 377.55	127735.1	1.5-yr	957.14	974.16	970.41	2.16	2.16	26.44	26.44	242.63	242.63	1.83	1.83	3.75	3.75
Yellowstone County	B1	RM 377.48	127618.1	1.5-yr	957.14	973.94	970.26	2.23	2.23	30.23	30.23	280.65	282.16	1.53	1.53	3.68	3.68
Yellowstone County	B1	RM 377.39	127466.6	1.5-yr	957.14	973.55	969.73	2.46	2.45	36.44	36.01	249.92	253	1.56	1.54	3.82	3.82
Yellowstone County	B1	RM 377.34	127391.5	1.5-yr	957.14	973.36	969.95	2.42	2.42	45.18	43.87	239.88	247.23	1.65	1.6	3.41	3.41
Yellowstone County	B1	RM 377.25	127241.9	1.5-yr	957.14	973.19	970.26	1.75	1.74	19.64	19.21	350.79	359.16	1.56	1.53	2.93	2.93
Yellowstone County	B1	RM 377.16	127097.7	1.5-yr	957.14	972.89	969.82	2.03	2.03	29.76	28.62	319.13	373.85	1.31	1.26	3.07	3.07
Yellowstone County	B1	RM 377.08	126969	1.5-yr	957.14	972.83	969	1.36	1.32	11.08	10.07	387.19	458.84	1.73	1.57	3.83	3.83
Yellowstone County	B1	RM 377.04	126900.8	1.5-yr	957.14	972.69	968.6	1.73	1.73	28.33	27.95	328.4	333.18	1.68	1.66	4.09	4.09
Yellowstone County	B1	RM 376.98	126797.5	1.5-yr	957.14	972.47	969.02	2.01	2.01	22.36	21.96	278.76	284.17	1.7	1.67	3.45	3.45
Yellowstone County	B1	RM 376.92	126710.1	1.5-yr	957.14	972.35	969.01	1.68	1.68	38.96	38.79	412.24	414.09	1.38	1.38	3.34	3.34

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	1.5-yr	957.14	972.17	967.73	1.35	1.37	17.75	17.45	400.24	468.19	1.51	1.49	4.44	4.44
Yellowstone County	B1	RM 376.75	126442.1	1.5-yr	957.14	972.01	967.82	1.38	1.38	18.07	17.59	335.76	382.28	1.86	1.81	4.19	4.19
Yellowstone County	B1	RM 376.67	126309	1.5-yr	957.14	971.85	967.23	1.64	1.62	21.52	20.27	225.49	259.94	2.42	2.28	4.62	4.62
Yellowstone County	B1	RM 376.58	126174.1	1.5-yr	957.14	971.6	966.82	1.98	1.95	35.51	34.43	244.03	268.06	1.88	1.83	4.78	4.78
Yellowstone County	B1	RM 376.51	126058.2	1.5-yr	957.14	971.33	966.77	2.13	2.13	35.73	35.73	249.71	249.71	1.8	1.8	4.56	4.56
Yellowstone County	B1	RM 376.42	125918.5	1.5-yr	957.14	971.18	967.68	1.82	1.82	20.81	20.81	252.71	252.71	2.08	2.08	3.5	3.5
Yellowstone County	B1	RM 376.35	125809.8	1.5-yr	957.14	971.11	966.71	1.7	1.7	16.66	16.66	223.29	223.29	2.52	2.52	4.4	4.4
Yellowstone County	B1	RM 376.28	125697	1.5-yr	957.14	970.85	966.28	2.32	2.32	32.54	32.54	197.18	197.18	2.09	2.09	4.57	4.57
Yellowstone County	B1	RM 376.20	125565.9	1.5-yr	957.14	970.67	966.16	2.2	2.2	30.68	30.68	218.53	218.53	1.99	1.99	4.51	4.51
Yellowstone County	B1	RM 376.10	125404.8	1.5-yr	957.14	970.37	966.61	2.25	2.2	32.96	32.23	242.75	268.3	1.65	1.62	3.76	3.76
Yellowstone County	B1	RM 376.00	125250.5	1.5-yr	957.14	970.06	967.42	2.23	2.11	33.99	28.21	238.44	354.9	1.71	1.42	2.64	2.64
Yellowstone County	B1	RM 375.88	125055.1	1.5-yr	957.14	969.74	966.01	2.16	1.91	31.85	19.43	178.83	519.98	2.2	1.35	3.73	3.73
Yellowstone County	B1	RM 375.78	124897.3	1.5-yr	957.14	969.55	965.37	1.99	1.73	27.53	14.63	174.65	550.83	2.17	1.16	4.18	4.18
Yellowstone County	B1	RM 375.67	124708.2	1.5-yr	957.14	969.33	965.8	1.95	1.71	26.39	18.13	208.18	426.3	1.91	1.31	3.53	3.53
Yellowstone County	B1	RM 375.58	124564.2	1.5-yr	957.14	969.08	966.54	2.1	1.93	30.5	21.81	220.7	398.86	1.74	1.25	2.54	2.54
Yellowstone County	B1	RM 375.23	124013.6	1.5-yr	957.14	968.32	965.23	2.1	1.86	26.44	14.66	188.7	400.91	2.31	1.28	3.09	3.09
Yellowstone County	B1	RM 375.10	123799.5	1.5-yr	957.14	967.84	963.88	2.74	2.36	54.12	25.59	122.59	321.54	2.67	1.26	3.96	3.96
Yellowstone County	B1	RM 374.97	123580.4	1.5-yr	957.14	967.52	963.97	2.29	1.93	44.37	20.61	127.75	418.05	2.57	1.18	3.55	3.55
Yellowstone County	B1	RM 374.83	123365.5	1.5-yr	957.14	967.24	963.52	2.09	1.63	29.31	15.84	121.01	458.26	2.38	1.28	3.72	3.72
Yellowstone County	B1	RM 374.73	123195.7	1.5-yr	957.14	967.13	963.36	1.57	1.32	14.84	8.17	140.15	571.71	2.3	1.27	3.77	3.77
Yellowstone County	B1	RM 374.61	123010.3	1.5-yr	957.14	966.89	963.49	1.98	1.67	29.02	17.7	151.94	396.88	2.37	1.44	3.4	3.4
Yellowstone County	B1	RM 374.53	122875.3	1.5-yr	991.98	966.69	963.14	2.09	1.85	28.93	20.64	181.7	347.95	2.16	1.54	3.55	3.55
Yellowstone County	B1	RM 374.44	122726.7	1.5-yr	991.98	966.42	963.04	2.37	2.03	39.36	23.14	122.15	293.78	2.83	1.66	3.38	3.38
Yellowstone County	B1	RM 374.32	122535.1	1.5-yr	991.98	966.19	962.82	1.98	1.83	32.33	24.17	184.29	372.43	1.95	1.46	3.37	3.37
Yellowstone County	B1	RM 374.22	122379	1.5-yr	991.98	965.95	960.92	2.17	1.74	30.24	14.46	134.27	454.28	2.62	1.25	5.03	5.03
Yellowstone County	B1	RM 374.13	122231.1	1.5-yr	991.98	965.74	960.11	2.46	1.9	33.54	14.49	104.23	414.2	2.93	1.26	5.63	5.63
Yellowstone County	B1	RM 373.97	121972.4	1.5-yr	991.98	965.59	958.8	1.64	1.49	17.59	13.3	218.51	382.45	2.3	1.74	6.79	6.79
Yellowstone County	B1	RM 373.88	121829.3	1.5-yr	991.98	965.41	962.21	1.88	1.73	27.08	18.16	189.31	376.02	2.28	1.53	3.2	3.2
Yellowstone County	B1	RM 373.79	121688.7	1.5-yr	991.98	965.24	961.66	1.86	1.63	28.31	16.68	183.47	452.23	2.28	1.34	3.58	3.58
Yellowstone County	B1	RM 373.69	121523.5	1.5-yr	991.98	965.05	961.11	1.81	1.6	22.73	15.17	195.97	443.91	2.09	1.39	3.94	3.94
Yellowstone County	B1	RM 373.56	121314.3	1.5-yr	991.98	964.55	959.37	2.51	2.4	41.96	35.43	179.28	226.65	2.16	1.83	5.18	5.18
Yellowstone County	B1	RM 373.39	121015.9	1.5-yr	991.98	964.2	958.78	2.04	2.01	28.08	25.32	182.52	205.81	2.66	2.39	5.42	5.42
Yellowstone County	B1	RM 373.26	120802.3	1.5-yr	991.98	964.06	960.81	1.52	1.48	15.38	14.25	354.54	411.42	1.83	1.7	3.25	3.25
Yellowstone County	B1	RM 373.09	120539.5	1.5-yr	991.98	963.73	959.94	1.84	1.82	22.43	20.72	295.49	356.01	1.81	1.67	3.79	3.79
Yellowstone County	B1	RM 372.99	120365.2	1.5-yr	991.98	963.47	959.69	1.8	1.77	31.01	27.28	320.07	373.07	1.71	1.51	3.78	3.78
Yellowstone County	B1	RM 372.82	120107.7	1.5-yr	991.98	963.19	959.03	1.47	1.46	13.52	13.1	419.84	434.43	1.61	1.56	4.16	4.16
Yellowstone County	B1	RM 372.72	119922.5	1.5-yr	991.98	962.94	958.92	1.65	1.65	27.31	27.29	386.72	386.92	1.55	1.55	4.02	4.02
Yellowstone County	B1	RM 372.65	119797.7	1.5-yr	991.98	962.73	957.32	1.7	1.67	20.79	19.87	375.22	403.05	1.55	1.48	5.41	5.41
Yellowstone County	B1	RM 372.58	119676.6	1.5-yr	991.98	962.62	958.2	1.5	1.5	14.78	14.72	401.23	402.83	1.65	1.64	4.42	4.42
Yellowstone County	B1	RM 372.41	119395.9	1.5-yr	991.98	962.42	958.82	1.37	1.36	10.47	9.84	424.36	456.16	1.71	1.6	3.6	3.6
Yellowstone County	B1	RM 372.32	119268.8	1.5-yr	991.98	962.3	957.24	1.41	1.41	27.18	26.69	378.58	385.99	1.86	1.82	5.06	5.06
Yellowstone County	B1	RM 372.20	119079.1	1.5-yr	991.98	961.89	956.93	1.67	1.66	43.49	42	342.4	359.98	1.72	1.66	4.96	4.96
Yellowstone County	B1	RM 372.08	118886.4	1.5-yr	991.98	961.48	956.2	1.69	1.68	35.3	32.78	279.75	589.28	2.09	1.94	5.28	5.28
Yellowstone County	B1	RM 371.94	118669.8	1.5-yr	991.98	961.02	957.58	1.79	1.79	36.6	36.6	349.33	430.56	1.59	1.59	3.44	3.44
Yellowstone County	B1	RM 371.83	118490.4	1.5-yr	991.98	960.69	957.52	1.65	1.64	24.49	23.16	371.91	502.04	1.57	1.48	3.17	3.17
Yellowstone County	B1	RM 371.74	118350.7	1.5-yr	991.98	960.41	957.48	1.84	1.84	25.49	25.1	373.38	498.21	1.38	1.36	2.93	2.93
Yellowstone County	B1	RM 371.62	118155.6	1.5-yr	991.98	960.16	956.41	1.77	1.56	23.74	16.19	218.05	387.83	2.4	1.64	3.75	3.75
Yellowstone County	B1	RM 371.53	118001.4	1.5-yr	991.98	959.88	955.99	2.17	2.05	31.12	23.17	230.62	336.94	1.92	1.43	3.89	3.89
Yellowstone County	B1	RM 371.43	117839.2	1.5-yr	991.98	959.5	955.47	2.41	2.32	49.47	44.38	181.09	258.12	2.24	2.01	4.03	4.03
Yellowstone County	B1	RM 371.37	117745.1	1.5-yr	991.98	959.36	955.72	2.24	2.15	25.1	21.12	239.44	320.57	1.83	1.54	3.64	3.64
Yellowstone County	B1	RM 371.32	117662.6	1.5-yr	991.98	959.29	956.41	1.83	1.73	30.47	22.7	293.76	442.87	1.74	1.3	2.88	2.88
Yellowstone County	B1	RM 371.25	117560.3	1.5-yr	991.98	959.1	955.99	1.85	1.76	25.06	22.14	367.76	473.73	1.44	1.27	3.11	3.11
Yellowstone County	B1	RM 371.21	117499	1.5-yr	991.98	959.03	955.72	1.67	1.58	20.38	16.9	351.23	497.69	1.52	1.26	3.31	3.31
Yellowstone County	B1	RM 371.12	117353.9	1.5-yr	991.98	958.85	955.54	1.67	1.67	18.16	18.16	324.66	324.66	1.83	1.83	3.31	3.31
Yellowstone County	B1	RM 371.04	117225.1	1.5-yr	991.98	958.51	954.84	2.33	2.33	32.85	32.85	201.84	204.96	2.11	2.11	3.67	3.67
Yellowstone County		RM 335.51	117205	1.5-yr	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	1.5-yr	991.98	958.44	954.9	2.26	2.26	32.39	32.39	213.66	220.79	2.06	2.06	3.54	3.54
Yellowstone County	B1	RM 370.94	117054.9	1.5-yr	991.98	958.25	955.57	2.13	2.13	32.92	32.92	236.56	593.86	1.97	1.97	2.68	2.68
Yellowstone County	B1	RM 370.85	116910.9	1.5-yr	991.98	957.96	954.47	2.31	2.31	36.19	35.02	199.51	455.78	2.15	2.08	3.49	3.49
Yellowstone County	B1	RM 370.77	116793.6	1.5-yr	991.98	957.61	953.84	2.68	2.66	44.9	41.59	207.76	517.73	1.78	1.65	3.77	3.77
Yellowstone County	B1	RM 370.72	116711.6	1.5-yr	991.98	957.43	953.13	2.72	2.51	47.07	35.42	138.07	535.17	2.59	1.95	4.3	4.3

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	1.5-yr	991.98	957.37	953.05	2.69	2.3	40.03	26.68	145.87	571.75	2.41	1.61	4.32	4.32
Yellowstone County	B1	RM 370.63	116558.9	1.5-yr	991.98	957.22	953.42	2.35	2.29	45.41	38.29	173.2	463.83	2.41	2.03	3.8	3.8
Yellowstone County	B1	RM 370.56	116440.6	1.5-yr	991.98	957.13	953.34	2.06	1.95	21.35	13.86	165.13	345.23	2.89	1.88	3.79	3.79
Yellowstone County	B1	RM 370.44	116241.1	1.5-yr	991.98	956.85	952.03	2.42	2.15	38.26	22.33	130.5	357.46	3.08	1.79	4.82	4.82
Yellowstone County	B1	RM 370.34	116071.6	1.5-yr	991.98	956.69	949.79	2.33	2.2	32.17	20.85	108.4	210.51	3.88	2.5	6.9	6.9
Yellowstone County	B1	RM 370.24	115908.6	1.5-yr	991.98	956.57	950.22	2.2	2.02	29.96	14.41	115.59	268.48	3.82	1.83	6.35	6.35
Yellowstone County	B1	RM 370.11	115705	1.5-yr	991.98	956.4	952.12	2.15	1.89	29.45	17.09	150.83	309.96	2.91	1.69	4.28	4.28
Yellowstone County	B1	RM 370.00	115535.2	1.5-yr	991.98	956.18	952.2	2.16	1.96	34.35	26.24	203.24	323.56	2.05	1.56	3.98	3.98
Yellowstone County	B1	RM 369.89	115356.1	1.5-yr	991.98	955.93	953.15	1.95	1.87	20.89	19.12	310.98	367.01	1.58	1.45	2.78	2.78
Yellowstone County	B1	RM 369.77	115164.3	1.5-yr	991.98	955.69	952.34	1.79	1.78	20.39	19.56	370.59	410.18	1.5	1.43	3.35	3.35
Yellowstone County	B1	RM 369.64	114965.6	1.5-yr	991.98	955.34	951.9	1.9	1.87	27.51	25.98	378.23	437.21	1.34	1.27	3.44	3.44
Yellowstone County	B1	RM 369.54	114789.5	1.5-yr	991.98	955.01	952.38	1.89	1.81	24.3	21.45	345.99	425.46	1.46	1.29	2.63	2.63
Yellowstone County	B1	RM 369.45	114650.1	1.5-yr	991.98	954.82	951	1.64	1.58	21.55	21.22	391.88	467.86	1.37	1.34	3.82	3.82
Yellowstone County	B1	RM 369.32	114431.1	1.5-yr	991.98	954.47	951.1	1.6	1.57	25.01	23.72	369.37	416.98	1.59	1.51	3.37	3.37
Yellowstone County	B1	RM 369.17	114210.5	1.5-yr	991.98	954.08	949.85	2.09	1.94	32.35	24.91	161.79	276.07	2.4	1.85	4.23	4.23
Yellowstone County	B1	RM 369.06	114022.4	1.5-yr	991.98	953.67	949.89	2.58	2.36	39.15	27.83	132.12	218.01	2.71	1.93	3.78	3.78
Yellowstone County	B1	RM 368.96	113871.2	1.5-yr	991.98	953.55	949.68	2.12	1.87	28.66	20.99	164.47	294.66	2.46	1.8	3.87	3.87
Yellowstone County	B1	RM 368.88	113745.9	1.5-yr	991.98	953.38	948.77	2.08	1.95	29.22	24.17	212.47	314.65	1.95	1.61	4.61	4.61
Yellowstone County	B1	RM 368.82	113641	1.5-yr	991.98	953.11	948.47	2.34	2.25	45.53	36.14	210.49	302.51	1.84	1.46	4.64	4.64
Yellowstone County	B1	RM 368.72	113477.3	1.5-yr	991.98	952.81	948.45	1.93	1.83	35.53	28.43	263.19	378.33	1.79	1.43	4.36	4.36
Yellowstone County	B1	RM 368.63	113328.9	1.5-yr	991.98	952.51	947.82	2.03	1.89	31.08	24	242.33	373.06	1.82	1.41	4.69	4.69
Yellowstone County	B1	RM 368.54	113195.6	1.5-yr	991.98	952.27	947.51	2.07	1.96	30.13	24.1	253.78	346.32	1.83	1.46	4.76	4.76
Yellowstone County	B1	RM 368.44	113035.8	1.5-yr	991.98	951.68	947.4	2.93	2.85	62.38	46.86	153.29	211.27	2.2	1.65	4.28	4.28
Yellowstone County	B1	RM 368.35	112878.7	1.5-yr	991.98	951.77	946.64	1.37	1.37	11.84	11.84	276.96	276.96	2.62	2.62	5.13	5.13
Yellowstone County	B1	RM 368.26	112737.6	1.5-yr	991.98	951.49	946.23	2.14	2.14	58.21	58.21	183.03	183.03	2.54	2.54	5.26	5.26
Yellowstone County	B1	RM 368.18	112604.7	1.5-yr	991.98	951.2	947.11	2.35	2.35	35.63	35.63	156.87	175.24	2.69	2.69	4.09	4.09
Yellowstone County	B2	RM 368.09	112456.7	1.5-yr	991.98	950.95	947.7	2.48	2.48	41.46	41.46	148.39	148.39	2.7	2.7	3.25	3.25
Yellowstone County	B2	RM 368.00	112314.4	1.5-yr	991.98	950.86	947.56	1.97	1.97	23.14	23.13	195.24	409.13	2.58	2.58	3.3	3.3
Yellowstone County	B2	RM 367.86	112104.7	1.5-yr	991.98	950.52	946.1	2.37	2.37	37.43	37.43	164.66	164.66	2.54	2.54	4.42	4.42
Yellowstone County	B2	RM 367.79	111989.2	1.5-yr	991.98	950.33	945.04	2.34	2.34	46.26	46.26	163.34	163.34	2.6	2.6	5.29	5.29
Yellowstone County	B2	RM 367.72	111876.5	1.5-yr	991.98	950.19	945.45	2.25	2.2	30.58	25.28	149.5	185.69	2.94	2.43	4.74	4.74
Yellowstone County	B2	RM 367.64	111739.2	1.5-yr	991.98	949.97	945.68	2.46	2.4	42.14	32.67	134.65	179.52	2.97	2.3	4.29	4.29
Yellowstone County	B2	RM 367.50	111519.9	1.5-yr	991.98	949.7	945.21	2.4	2.32	36.64	32.28	122.86	144.78	3.35	2.95	4.49	4.49
Yellowstone County	B2	RM 367.40	111357.1	1.5-yr	991.98	949.54	944.36	2.41	2.21	33.24	18.75	110.35	220.7	3.63	2.04	5.18	5.18
Yellowstone County	B2	RM 367.31	111214.8	1.5-yr	991.98	949.42	945.36	2.3	2.18	27.61	19.43	142.37	216.99	2.99	2.1	4.06	4.06
Yellowstone County	B2	RM 367.19	110992.7	1.5-yr	991.98	949.2	945.91	2.05	1.96	26.7	22.47	241.52	303.73	1.98	1.67	3.29	3.29
Yellowstone County	B2	RM 367.11	110813.5	1.5-yr	991.98	948.78	945.17	2.39	2.32	41	38.91	272.19	298.71	1.51	1.43	3.61	3.61
Yellowstone County	B2	RM 367.03	110669.4	1.5-yr	991.98	948.51	945.89	2.04	1.98	27.43	24.81	309.17	356.21	1.56	1.41	2.62	2.62
Yellowstone County	B2	RM 366.95	110543	1.5-yr	991.98	948.35	945.34	1.62	1.58	24.69	23.96	393.57	421.27	1.54	1.49	3.01	3.01
Yellowstone County	B2	RM 366.84	110376	1.5-yr	991.98	948.14	944.61	1.49	1.49	18.24	18.24	416.95	416.95	1.6	1.6	3.53	3.53
Yellowstone County	B2	RM 366.78	110300.8	1.5-yr	991.98	948.04	943.84	1.54	1.54	19.4	19.4	376.39	376.39	1.72	1.72	4.2	4.2
Yellowstone County	B2	RM 366.73	110074.8	1.5-yr	991.98	947.72	943.42	1.79	1.79	22.77	22.77	284.29	284.29	1.95	1.95	4.3	4.3
Yellowstone County	B2	RM 366.68	109931.6	1.5-yr	991.98	947.52	942.77	1.94	1.94	27.76	27.76	215.5	215.5	2.37	2.37	4.75	4.75
Yellowstone County	B2	RM 366.53	109747.6	1.5-yr	991.98	947.23	940.86	2.32	2.32	28.63	28.63	140.4	140.4	3.05	3.05	6.37	6.37
Yellowstone County	B2	RM 366.38	109510.8	1.5-yr	991.98	946.98	941.55	2.4	2.4	35.96	35.96	111.16	111.16	3.72	3.72	5.43	5.43
Yellowstone County	B2	RM 366.27	109345.5	1.5-yr	991.98	946.89	942.72	1.82	1.82	25.83	25.83	217.98	217.98	2.5	2.5	4.17	4.17
Yellowstone County	B2	RM 366.15	109158.9	1.5-yr	991.98	946.57	941.59	2.15	2.15	39.85	39.85	193.42	193.42	2.39	2.39	4.98	4.98
Yellowstone County	B2	RM 366.04	108972.6	1.5-yr	991.98	946.33	941.41	2.2	2.2	24.78	24.78	160.63	160.63	2.81	2.81	4.92	4.92
Yellowstone County	B2	RM 365.94	108818.8	1.5-yr	991.98	946.21	940.93	2.08	2.08	23.08	23.08	173.15	173.15	2.75	2.75	5.28	5.28
Yellowstone County	B2	RM 365.83	108647.5	1.5-yr	991.98	946.02	939.93	2.06	2.06	36.6	36.6	209.43	209.43	2.29	2.29	6.09	6.09
Yellowstone County	B2	RM 365.75	108521.3	1.5-yr	991.98	945.81	941.33	2.09	2.03	37.45	32.86	187.76	231.19	2.41	2.11	4.48	4.48
Yellowstone County	B2	RM 365.71	108446.5	1.5-yr	991.98	945.72	941.83	1.93	1.89	33.82	31.58	201.08	220.65	2.54	2.38	3.89	3.89
Yellowstone County	B2	RM 365.64	108343.5	1.5-yr	991.98	945.55	942.19	2	1.97	33.11	28.84	232.36	271.42	2.13	1.85	3.36	3.36
Yellowstone County	B2	RM 365.57	108220.5	1.5-yr	991.98	945.25	942.08	2.21	2.18	51.14	48.86	245.25	260.21	1.83	1.75	3.17	3.17
Yellowstone County	B2	RM 365.51	108118.9	1.5-yr	991.98	944.99	941.87	2.21	2.18	44.3	42.1	215.15	229.85	2.08	1.98	3.12	3.12
Yellowstone County	B2	RM 365.46	108042.9	1.5-yr	991.98	944.93	941.73	1.82	1.81	21.87	21.29	261.85	271	2.08	2.03	3.2	3.2
Yellowstone County	B2	RM 365.41	107956.5	1.5-yr	991.98	944.86	941.46	1.66	1.66	21.15	21.15	285.65	285.65	2.09	2.09	3.4	3.4
Yellowstone County	B2	RM 365.37	107905.7	1.5-yr	991.98	944.81	940.74	1.67	1.67	18.19	18.19	292.79	292.79	2.03	2.03	4.07	4.07
Yellowstone County	B2	RM 365.31	107792.4	1.5-yr	991.98	944.66	939.27	1.86	1.86	21.47	21.07	237.86	243.21	2.23	2.2	5.39	5.39
Yellowstone County	B2	RM 365.27	107727.9	1.5-yr	991.98	944.51	939.34	2.16	2.16	33.36	33.36	241.33	241.33	1.91	1.91	5.17	5.17
Yellowstone County	B2	RM 365.23	107674.2	1.5-yr	991.98	944.39	939.52	2.31	2.31	27.13	27.13	202.47	202.47	2.12	2.12	4.87	4.87

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	1.5-yr	991.98	944.32	939.93	2.1	2.1	33.86	33.86	223.19	223.19	2.12	2.12	4.39	4.39
Yellowstone County	B2	RM 365.15	107534.7	1.5-yr	991.98	944.24	939.68	2.02	2.02	25.4	25.4	212.06	212.06	2.32	2.32	4.56	4.56
Yellowstone County	B2	RM 365.10	107466	1.5-yr	991.98	944.15	938.61	2.08	2.08	25.78	25.78	182.05	182.05	2.62	2.62	5.54	5.54
Yellowstone County	B2	RM 365.06	107396.2	1.5-yr	991.98	944.1	939.07	2	2	27.06	27.06	167.98	167.98	2.96	2.96	5.03	5.03
Yellowstone County	B2	RM 365.01	107325.8	1.5-yr	991.98	944.06	939.22	1.76	1.76	33.92	33.92	172.89	172.89	3.26	3.26	4.84	4.84
Yellowstone County	B2	RM 364.99	107287.5	1.5-yr	991.98	943.99	939.27	1.89	1.89	41.51	41.51	169.11	169.11	3.11	3.11	4.72	4.72
Yellowstone County	B2	RM 364.90	107128.3	1.5-yr	991.98	943.76	937.97	2.14	2.08	23.89	22	142.82	159.68	3.24	2.98	5.79	5.79
Yellowstone County		RM 331.55	107100	1.5-yr	Bridge												
Yellowstone County	B2	RM 364.85	107057	1.5-yr	991.98	943.66	938.58	2.1	2.06	22.97	21.45	144.45	157.84	3.26	3.05	5.08	5.08
Yellowstone County	B2	RM 364.81	106996.1	1.5-yr	991.98	943.63	938.93	1.94	1.94	20.53	20.53	201.39	201.39	2.54	2.54	4.7	4.7
Yellowstone County	B2	RM 364.74	106893.3	1.5-yr	991.98	943.51	938.94	2.03	1.99	30.12	28.29	163.67	177.22	2.98	2.81	4.57	4.57
Yellowstone County	B2	RM 364.64	106739.2	1.5-yr	991.98	943.27	939.09	2.35	2.33	28.29	26.7	124.31	143.93	3.4	3.21	4.18	4.18
Yellowstone County		RM 331.32	106722	1.5-yr	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	1.5-yr	991.98	943.17	939.16	2.37	2.36	29.12	27.49	128.18	136.54	3.31	3.12	4.01	4.01
Yellowstone County	B2	RM 364.61	106686.8	1.5-yr	991.98	943.17	939.21	2.18	2.18	24.59	24.59	139.02	164.63	3.28	3.28	3.96	3.96
Yellowstone County	B2	RM 364.60	106666.6	1.5-yr	991.98	943.11	939.26	2.35	2.35	29.12	29.12	135.32	135.32	3.12	3.12	3.85	3.85
Yellowstone County		RM 331.14	106644	1.5-yr	Bridge												
Yellowstone County	B2	RM 364.57	106627	1.5-yr	991.98	943.04	939.21	2.29	2.29	27.39	27.39	138.05	138.05	3.2	3.2	3.83	3.83
Yellowstone County	B2	RM 364.53	106558.4	1.5-yr	991.98	943	939.11	2.16	2.16	24.73	24.73	147.03	147.03	3.12	3.12	3.89	3.89
Yellowstone County	B2	RM 364.49	106490.3	1.5-yr	991.98	942.93	939.24	2.19	2.19	25.8	25.8	154.82	154.82	2.93	2.93	3.69	3.69
Yellowstone County	B2	RM 364.43	106394	1.5-yr	991.98	942.85	939.13	2.16	2.16	24.99	24.99	153.23	153.23	2.99	2.99	3.72	3.72
Yellowstone County	B2	RM 364.37	106296.4	1.5-yr	991.98	942.78	938.98	2.1	2.1	22.89	22.89	144.54	144.54	3.27	3.27	3.8	3.8
Yellowstone County	B2	RM 364.32	106215.1	1.5-yr	991.98	942.71	938.52	2.13	2.13	32.63	32.63	146.23	146.23	3.19	3.19	4.19	4.19
Yellowstone County	B2	RM 364.29	106172.9	1.5-yr	991.98	942.72	938.13	1.69	1.68	40.86	38.5	186.7	489.62	3.15	2.97	4.59	4.59
Yellowstone County	B2	RM 364.26	106126.6	1.5-yr	991.98	942.54	937.7	2.24	2.15	34.35	29.89	136.51	165.28	3.21	2.79	4.84	4.84
Yellowstone County	B2	RM 364.22	106055.2	1.5-yr	991.98	942.46	938.15	2.24	2.24	37.36	37.36	128.95	168.48	3.44	3.44	4.31	4.31
Yellowstone County	B2	RM 364.14	105927.3	1.5-yr	991.98	942.22	938.12	2.53	2.43	44.54	34.56	119.65	161.85	3.26	2.53	4.1	4.1
Yellowstone County	B2	RM 364.06	105809.9	1.5-yr	991.98	942.13	938.22	2.2	2.17	33.03	27.92	146.88	176.17	3.07	2.59	3.91	3.91
Yellowstone County	B2	RM 363.96	105648.3	1.5-yr	991.98	942	938.28	1.86	1.86	25.11	24.08	237.3	271.26	2.24	2.15	3.72	3.72
Yellowstone County	B2	RM 363.85	105472.4	1.5-yr	991.98	941.81	936.25	2.05	1.89	22.25	17.64	147.79	213.57	3.11	2.46	5.56	5.56
Yellowstone County	B2	RM 363.76	105316.8	1.5-yr	991.98	941.71	937.03	1.89	1.8	25.78	18.87	144.53	227.71	3.31	2.42	4.68	4.68
Yellowstone County	B2	RM 363.63	105118.1	1.5-yr	991.98	941.5	937.93	1.76	1.76	30.02	30.02	305.93	305.93	1.84	1.84	3.57	3.57
Yellowstone County	B2	RM 363.52	104943.9	1.5-yr	991.98	941.18	937.54	1.73	1.72	34.91	33.38	343.89	361.35	1.67	1.6	3.64	3.64
Yellowstone County	B2	RM 363.46	104841.5	1.5-yr	991.98	941.05	937.16	1.48	1.46	22.88	19.47	327.72	410.91	2.04	1.73	3.89	3.89
Yellowstone County	B2	RM 363.33	104622.9	1.5-yr	991.98	940.71	936.36	1.7	1.54	33.89	21.32	266.5	487.95	2.1	1.32	4.35	4.35
Yellowstone County	B2	RM 363.20	104414.5	1.5-yr	991.98	940.36	936.48	1.81	1.66	28.02	20.56	279.57	456.62	1.91	1.4	3.88	3.88
Yellowstone County	B2	RM 363.10	104256.4	1.5-yr	991.98	940.07	936.25	1.98	1.76	32.69	25.1	262.76	402.9	1.82	1.4	3.82	3.82
Yellowstone County	B2	RM 363.03	104144.8	1.5-yr	991.98	939.92	936.22	1.88	1.75	24.48	17.1	230.17	361.92	2.24	1.56	3.7	3.7
Yellowstone County	B2	RM 362.86	103869.6	1.5-yr	991.98	939.74	934.32	1.37	1.25	12.23	9.89	402.17	566.26	1.74	1.4	5.42	5.42
Yellowstone County	B2	RM 362.74	103671.4	1.5-yr	991.98	939.39	934.52	2.05	1.97	28.9	26.01	306.97	361.21	1.55	1.4	4.87	4.87
Yellowstone County	B2	RM 362.63	103493.2	1.5-yr	991.98	938.91	934.5	2.4	2.35	41.53	37.33	241.8	276.16	1.7	1.53	4.41	4.41
Yellowstone County	B2	RM 362.52	103330.7	1.5-yr	991.98	938.55	934.5	2.2	2.19	39.75	37.32	258.28	276.84	1.74	1.64	4.05	4.05
Yellowstone County	B2	RM 362.43	103185.5	1.5-yr	991.98	938.3	934.1	2.15	2.14	20.73	20.26	296.15	332.69	1.56	1.53	4.2	4.2
Yellowstone County	B2	RM 362.36	103070.8	1.5-yr	991.98	938.19	932.98	2	2	19.21	19.21	260.61	288.68	1.9	1.9	5.21	5.21
Yellowstone County	B2	RM 362.27	102929.3	1.5-yr	991.98	938.1	932.93	1.84	1.84	15.93	15.93	193.31	193.31	2.79	2.79	5.17	5.17
Yellowstone County	B2	RM 362.20	102813.3	1.5-yr	991.98	937.83	933.37	2.59	2.59	34.97	34.97	108.52	108.52	3.54	3.54	4.46	4.46
Yellowstone County	B2	RM 362.13	102693.1	1.5-yr	991.98	937.7	933.47	2.56	2.56	34.74	34.74	124.29	161.62	3.11	3.11	4.23	4.23
Yellowstone County	B3	RM 362.05	102570.9	1.5-yr	991.98	937.61	933.85	2.29	2.29	28.48	28.48	178.04	178.04	2.44	2.44	3.76	3.76
Yellowstone County	B3	RM 362.00	102488.8	1.5-yr	991.98	937.56	934.11	1.95	1.95	24.32	24.32	238.6	250.47	2.13	2.13	3.45	3.45
Yellowstone County	B3	RM 361.93	102368.8	1.5-yr	991.98	937.41	934.31	1.91	1.91	23.88	23.88	345.93	345.93	1.62	1.62	3.1	3.1
Yellowstone County	B3	RM 361.86	102261.1	1.5-yr	991.98	937.12	934.36	2.3	2.3	39.37	39.37	252.73	265.22	1.71	1.71	2.76	2.76
Yellowstone County	B3	RM 361.78	102138.9	1.5-yr	991.98	936.99	933.72	1.81	1.81	20.41	20.41	320.82	322.33	1.71	1.71	3.27	3.27
Yellowstone County	B3	RM 361.68	101970.2	1.5-yr	991.98	936.73	933.64	1.76	1.75	26.57	26.01	408.38	424.9	1.38	1.35	3.09	3.09
Yellowstone County	B3	RM 361.65	101918.4	1.5-yr	991.98	936.69	933.71	1.48	1.48	19.6	19.6	402.02	423.25	1.66	1.66	2.98	2.98
Yellowstone County	B3	RM 361.61	101855.6	1.5-yr	991.98	936.55	932.7	1.79	1.79	23.59	23.59	326.42	372.37	1.7	1.7	3.85	3.85
Yellowstone County	B3	RM 361.56	101767.4	1.5-yr	991.98	936.45	930.29	1.75	1.75	19.1	19.1	262.29	315.33	2.16	2.16	6.16	6.16
Yellowstone County	B3	RM 361.48	101644.6	1.5-yr	991.98	936.29	929.97	1.96	1.96	28.14	28.14	177.38	293.3	2.85	2.85	6.32	6.32
Yellowstone County	B3	RM 361.42	101546.2	1.5-yr	991.98	936.08	932.36	2.37	2.34	30.43	27.45	165.66	594.86	2.53	2.28	3.72	3.72
Yellowstone County	B3	RM 361.37	101468.9	1.5-yr	991.98	936.04	932.21	2.11	2.06	24.34	19.72	161.18	467.26	2.9	2.35	3.83	3.83
Yellowstone County	B3	RM 361.33	101409.4	1.5-yr	991.98	935.91	932.02	2.41	2.35	32.47	25.51	150.22	444.11	2.73	2.14	3.89	3.89
Yellowstone County	B3	RM 361.29	101346	1.5-yr	991.98	935.76	930.51	2.65	2.56	39.02	31.58	133.98	241.13	2.78	2.25	5.25	5.25

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	1.5-yr	991.98	935.61	928.42	2.86	2.66	43.01	32.27	106.48	521.81	3.2	2.39	7.19	7.19
Yellowstone County	B3	RM 361.21	101251.*	1.5-yr	991.98	935.66	927.55	2.27	2.18	52.15	32.1	113.34	588.84	3.82	2.34	8.12	8.12
Yellowstone County		RM 361.21	101217.5	1.5-yr	991.98	935.7	926.68	1.9	1.75	18.59	10.38	113.1	697.23	4.56	2.53	9.02	9.02
Yellowstone County	B3	RM 361.18	101167.2	1.5-yr	991.98	935.68	928.03	1.84	1.68	18.02	11.84	129.3	966.53	4.07	2.67	7.65	7.65
Yellowstone County	B3	RM 361.16	101134.2	1.5-yr	991.98	935.69	928.92	1.62	1.48	16.23	12.99	200.13	958.09	2.96	2.37	6.77	6.77
Yellowstone County	B3	RM 361.09	101028.7	1.5-yr	991.98	935.58	931.28	1.77	1.77	20.4	20.4	336.91	942.37	1.66	1.66	4.3	4.3
Yellowstone County	B3	RM 361.01	100891.3	1.5-yr	991.98	935.39	931.55	1.82	1.82	22.37	22.37	322.27	853.29	1.69	1.69	3.84	3.84
Yellowstone County	B3	RM 360.92	100756	1.5-yr	991.98	935.19	931.05	1.6	1.6	30.61	30.61	429.46	1152.89	1.44	1.44	4.14	4.14
Yellowstone County	B3	RM 360.81	100570.1	1.5-yr	991.98	934.64	929.52	1.89	1.89	44.21	44.21	382.93	879.53	1.37	1.37	5.12	5.12
Yellowstone County	B3	RM 360.69	100383.5	1.5-yr	991.98	934.38	930.6	1.54	1.51	18.44	16.79	316.45	1109.08	1.99	1.82	4.49	4.49
Yellowstone County	B3	RM 360.59	100227.2	1.5-yr	991.98	934.09	930.53	2.09	1.97	28.62	23.57	251.18	1266.27	1.83	1.51	3.88	3.88
Yellowstone County	B3	RM 360.50	100081	1.5-yr	991.98	933.86	930.55	2.11	2.06	31.37	26.26	200.3	925.4	2.34	1.96	3.31	3.31
Yellowstone County	B3	RM 360.42	99970.7	1.5-yr	991.98	933.66	929.97	2.29	2.18	33.69	26.2	180.39	792.54	2.38	1.85	3.69	3.69
Yellowstone County	B3	RM 360.36	99862.66	1.5-yr	991.98	933.52	929.68	2.18	2.12	27.63	22.67	225.19	752.53	2.01	1.65	3.84	3.84
Yellowstone County	B3	RM 360.27	99717.18	1.5-yr	991.98	933.22	929.52	2.54	2.31	39.86	26.91	147.01	637.78	2.37	1.6	3.7	3.7
Yellowstone County	B3	RM 360.18	99578.06	1.5-yr	991.98	933.02	929.32	2.43	2.31	39.1	31.23	133.89	566.16	3.02	2.41	3.7	3.7
Yellowstone County	B3	RM 360.11	99458.59	1.5-yr	991.98	932.94	929.38	2.14	1.79	27.04	15.97	148.51	549.58	2.46	1.46	3.56	3.56
Yellowstone County	B3	RM 360.03	99328	1.5-yr	1001.7	932.82	929.58	1.91	1.73	29.27	18.53	166.54	761.97	2.49	1.58	3.24	3.24
Yellowstone County	B3	RM 359.96	99226.54	1.5-yr	1001.7	932.67	929.2	2.07	1.84	28.04	17.54	160.84	869.27	2.56	1.6	3.47	3.47
Yellowstone County	B3	RM 359.88	99098.18	1.5-yr	1001.7	932.51	927.78	2.21	1.96	27.97	15.64	141.41	810.89	2.93	1.63	4.73	4.73
Yellowstone County	B3	RM 359.78	98940.52	1.5-yr	1001.7	932.33	928.1	2.22	2	34.37	18	144.88	799.83	3.02	1.58	4.23	4.23
Yellowstone County	B3	RM 359.70	98813.18	1.5-yr	1001.7	931.94	928.32	2.92	2.81	56.17	37.45	119.91	296.83	2.82	1.88	3.62	3.62
Yellowstone County	B3	RM 359.61	98663.44	1.5-yr	1001.7	931.87	928.8	1.81	1.78	24.69	22.12	308.2	395.37	1.79	1.6	3.07	3.07
Yellowstone County	B3	RM 359.50	98492.66	1.5-yr	1001.7	931.62	928.22	1.9	1.87	22.72	20.03	278.01	390.65	1.88	1.66	3.4	3.4
Yellowstone County	B3	RM 359.38	98291.15	1.5-yr	1001.7	931.31	927.09	1.96	1.93	32.58	28.22	283.21	405.3	1.69	1.46	4.22	4.22
Yellowstone County	B3	RM 359.26	98107.42	1.5-yr	1001.7	930.95	927.71	1.94	1.81	27.35	24.52	366.22	506.66	1.34	1.2	3.24	3.24
Yellowstone County	B3	RM 359.18	97966.53	1.5-yr	1001.7	930.73	927.28	1.86	1.64	23.13	16.15	279.86	535.65	1.78	1.24	3.45	3.45
Yellowstone County	B3	RM 359.10	97841.82	1.5-yr	1001.7	930.54	926.69	1.88	1.72	24.41	19.7	323.73	487.26	1.51	1.22	3.85	3.85
Yellowstone County	B3	RM 359.01	97692.75	1.5-yr	1001.7	930.3	925.91	1.85	1.51	30.03	23.54	266.97	502.17	1.74	1.36	4.39	4.39
Yellowstone County	B3	RM 358.90	97524.59	1.5-yr	1001.7	929.85	926.77	2.43	2.24	37.77	23.03	184.87	335.81	2.18	1.33	3.08	3.08
Yellowstone County	B3	RM 358.81	97374.99	1.5-yr	1001.7	929.6	926.37	2.36	2.25	33.35	21.59	205.07	335.26	2.05	1.33	3.23	3.23
Yellowstone County	B3	RM 358.74	97267.71	1.5-yr	1001.7	929.35	925.53	2.59	2.02	55.09	26.55	159.81	570.88	2.09	1.01	3.82	3.82
Yellowstone County	B3	RM 358.67	97155.8	1.5-yr	1001.7	929.23	925.59	1.77	1.67	21.16	16.06	270.16	628.06	1.45	1.1	3.64	3.64
Yellowstone County	B3	RM 358.61	97062.24	1.5-yr	1001.7	929.11	925.74	1.49	1.55	19.39	18.05	377.36	657.32	1.3	1.21	3.37	3.37
Yellowstone County	B3	RM 358.56	96985.92	1.5-yr	1001.7	929.04	926.2	1.3	1.37	13.28	11.78	353.55	638.57	1.63	1.45	4.45	4.45
Yellowstone County	B3	RM 358.50	96888.4	1.5-yr	1001.7	928.98	925.64	1.32	1.29	11.72	9.01	362.61	747.43	1.68	1.29	3.34	3.34
Yellowstone County	B3	RM 358.43	96788.43	1.5-yr	1001.7	928.92	925.27	1.03	1.02	13.04	10.08	470.44	865.19	1.51	1.17	3.65	3.65
Yellowstone County	B3	RM 358.30	96638.82	1.5-yr	1001.7	928.86	924.7	0.87	0.8	7.26	5.54	644.74	979.33	1.68	1.28	4.16	4.16
Yellowstone County	B3	RM 358.24	96561.93	1.5-yr	1001.7	928.81	923.57	0.99	0.88	8.54	6.87	621.38	972.81	1.46	1.17	5.24	5.24
Yellowstone County	B3	RM 358.20	96500.79	1.5-yr	1001.7	928.72	922.99	1.27	1.24	13.01	12.24	590.02	655.36	1.31	1.23	5.73	5.73
Yellowstone County	B3	RM 358.14	96404.93	1.5-yr	1001.7	928.62	922.57	1.31	1.27	12.47	11.23	540.94	638.62	1.38	1.24	6.05	6.05
Yellowstone County	B3	RM 358.12	96368.05	1.5-yr	1001.7	928.6	922.78	1.3	1.17	11.82	8.56	347.45	632.42	1.97	1.43	5.82	5.82
Yellowstone County	B3	RM 358.04	96244.75	1.5-yr	1001.7	928.41	923.22	1.92	1.65	33.14	17.41	160.57	420.04	2.76	1.45	5.19	5.19
Yellowstone County	B3	RM 358.00	96168.44	1.5-yr	1001.7	928.17	923.39	2.64	2.03	46.73	19.75	98.02	390.5	3.01	1.26	4.78	4.78
Yellowstone County	B3	RM 357.93	96065.49	1.5-yr	1001.7	927.93	923.1	2.91	2.34	39.61	22.61	101.32	273.98	2.75	1.56	4.83	4.83
Yellowstone County	B3	RM 357.88	95975.44	1.5-yr	1001.7	927.96	923.91	2.04	1.73	27.33	16.54	149.77	386.25	2.48	1.5	4.05	4.05
Yellowstone County	B3	RM 357.82	95884.99	1.5-yr	1001.7	927.91	924.01	1.7	1.56	19.38	14.03	191.26	392.05	2.46	1.78	3.9	3.9
Yellowstone County	B3	RM 357.78	95821.69	1.5-yr	1001.7	927.83	924.08	1.61	1.62	21.94	19.92	247.75	346.2	1.97	1.79	3.75	3.75
Yellowstone County	B3	RM 357.69	95683.91	1.5-yr	1001.7	927.63	923.81	1.87	1.87	21.46	21.46	275	275	1.95	1.95	3.82	3.82
Yellowstone County	B4	RM 357.62	95571.15	1.5-yr	1001.7	927.39	921.84	2.26	2.26	33.8	33.8	193.1	193.1	2.29	2.29	5.55	5.55
Yellowstone County	B4	RM 357.56	95469.4	1.5-yr	1001.7	927.36	918.46	1.72	1.72	21.02	20.46	211.5	217.69	2.75	2.68	8.9	8.9
Yellowstone County	B4	RM 357.48	95351.48	1.5-yr	1001.7	927.08	922.69	2.38	2.37	35.72	34.62	195.22	202.23	2.15	2.09	4.39	4.39
Yellowstone County	B4	RM 357.44	95275.91	1.5-yr	1001.7	926.93	922.22	2.42	2.42	37.17	37.17	192.32	192.32	2.15	2.15	4.71	4.71
Yellowstone County	B4	RM 357.34	95127.12	1.5-yr	1001.7	926.74	923.1	2.27	2.25	30.16	28.59	176.78	188.07	2.49	2.36	3.64	3.64
Yellowstone County	B4	RM 357.23	94939.75	1.5-yr	1001.7	926.58	920.81	2.11	2.05	26.45	19.18	138.59	198.71	3.4	2.46	5.77	5.77
Yellowstone County	B4	RM 357.13	94789.23	1.5-yr	1001.7	926.39	921.26	2.39	2.19	31.05	22.2	134.62	232.05	2.88	2.05	5.13	5.13
Yellowstone County	B4	RM 357.01	94595.53	1.5-yr	1001.7	926.3	921.72	1.85	1.61	18.16	10.45	179.84	368.65	2.93	1.69	4.58	4.58
Yellowstone County	B4	RM 356.90	94412.13	1.5-yr	1001.7	926.12	921.02	1.98	1.84	22.85	17.64	231.3	330.27	2.14	1.65	5.1	5.1
Yellowstone County	B4	RM 356.81	94272.48	1.5-yr	1001.7	925.94	919.95	2.07	1.81	27.52	20.61	229.62	375.35	1.97	1.47	5.99	5.99
Yellowstone County	B4	RM 356.73	94148.77	1.5-yr	1001.7	925.79	921.15	2.02	1.84	24.43	19.28	204.99	312.29	2.26	1.78	4.63	4.63
Yellowstone County	B4	RM 356.66	94030.68	1.5-yr	1001.7	925.67	921.75	1.84	1.76	21.01	17.62	264.51	361.91	1.9	1.6	3.92	3.92

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	1.5-yr	1001.7	925.58	921.88	1.66	1.55	18.91	16.29	244.86	335.71	2.25	1.94	3.7	3.7
Yellowstone County	B4	RM 356.50	93782.14	1.5-yr	1001.7	925.43	921.75	1.87	1.74	25.64	19.95	151.82	273.22	2.79	2.17	3.68	3.68
Yellowstone County	B4	RM 356.44	93670.16	1.5-yr	1001.7	925.27	921.33	2.15	2	25.47	18.92	133.35	249.44	2.74	2.05	3.94	3.94
Yellowstone County	B4	RM 356.35	93525.27	1.5-yr	1001.7	925.08	919.71	2.31	2.14	35.45	23.1	106.98	217.42	3.41	2.22	5.37	5.37
Yellowstone County	B4	RM 356.26	93386.36	1.5-yr	1001.7	925.01	919.77	2.1	1.78	21.12	11.05	113.1	294.81	3.73	1.96	5.24	5.24
Yellowstone County	B4	RM 356.18	93264.31	1.5-yr	1001.7	924.94	919.95	1.99	1.82	23.03	13.04	123	288.59	3.55	2	4.99	4.99
Yellowstone County	B4	RM 356.11	93150.71	1.5-yr	1001.7	924.87	920.24	1.78	1.64	27.66	12.27	175.7	438.67	3.16	1.39	4.63	4.63
Yellowstone County	B4	RM 356.04	93034.25	1.5-yr	1001.7	924.67	920.36	2.08	1.94	42.84	23.29	170.88	343.94	2.76	1.5	4.31	4.31
Yellowstone County	B4	RM 355.97	92927.46	1.5-yr	1001.7	924.4	920.09	2.48	2.31	42.93	20.19	146.87	342.27	2.7	1.27	4.31	4.31
Yellowstone County	B4	RM 355.91	92825.82	1.5-yr	1001.7	924.32	919.82	2.24	1.87	26.25	9.62	149.17	532.91	2.87	1.05	4.5	4.5
Yellowstone County	B4	RM 355.82	92688.73	1.5-yr	1001.7	924.2	919.51	2.16	1.75	28.1	8.31	151.12	664.37	2.94	0.86	4.69	4.69
Yellowstone County	B4	RM 355.69	92483.67	1.5-yr	1001.7	923.59	919.96	3.31	2.53	62.63	40.97	103.53	239.02	2.53	1.65	3.63	3.63
Yellowstone County	B4	RM 355.68	92480	1.5-yr	Bridge												
Yellowstone County		RM 355.60	92465.94	1.5-yr	1001.7	923.31	919.92	3.04	2.46	52.42	32.84	121.34	260.7	2.5	1.56	3.39	3.39
Yellowstone County	B4	RM 355.66	92419.94	1.5-yr	1001.7	923.33	919.8	2.54	2.23	31.84	21.09	139.95	273.49	2.48	1.64	3.53	3.53
Yellowstone County	B4	RM 355.60	92333.48	1.5-yr	1001.7	923.24	919.42	2.44	2.16	29.88	20.33	146.96	298.65	2.48	1.69	3.82	3.82
Yellowstone County	B4	RM 355.49	92159.95	1.5-yr	1001.7	923.01	918.52	2.26	2.01	46.5	29.34	130.7	301.96	2.61	1.65	4.49	4.49
Yellowstone County	B4	RM 355.43	92061.2	1.5-yr	1001.7	922.86	918.67	1.98	2	41.78	30.32	134.53	278.31	2.68	1.95	4.19	4.19
Yellowstone County	B4	RM 355.41	92020.68	1.5-yr	1001.7	922.8	919.02	1.8	1.89	44.68	31.29	155.13	353.38	2.34	1.64	3.78	3.78
Yellowstone County	B4	RM 355.38	91976.12	1.5-yr	1001.7	922.68	919.25	2.22	1.97	43.52	24.8	125.51	334.28	2.67	1.52	3.43	3.43
Yellowstone County	B4	RM 355.35	91933.98	1.5-yr	1001.7	922.66	919.21	2.1	1.76	26.89	13.66	109.75	382.65	2.95	1.49	3.45	3.45
Yellowstone County	B4	RM 355.32	91885.87	1.5-yr	1001.7	922.62	919.16	2.05	1.73	25.25	13.84	105.37	361.37	2.94	1.6	3.46	3.46
Yellowstone County	B4	RM 355.29	91828.99	1.5-yr	1001.7	922.55	918.93	2.18	1.76	26.9	13.83	100.08	369.35	3.02	1.54	4.02	4.02
Yellowstone County	B4	RM 355.23	91732.97	1.5-yr	1001.7	922.46	918.68	2.08	1.88	28.08	19.82	99.86	322.32	3.09	2.18	4.02	4.02
Yellowstone County	B4	RM 355.14	91596.1	1.5-yr	1001.7	922.37	918.52	1.9	1.72	21.03	14.91	117.82	566.43	2.99	2.11	3.85	3.85
Yellowstone County	B4	RM 354.94	91268.08	1.5-yr	1001.7	921.99	917.25	2	1.82	42.3	29.27	164.58	268.68	2.96	2.05	4.74	4.74
Yellowstone County	B4	RM 354.86	91153.59	1.5-yr	1001.7	921.78	917.03	2.23	2.09	43.7	26.14	125.07	225.01	3.56	2.13	4.75	4.75
Yellowstone County	B4	RM 354.80	91056.05	1.5-yr	1001.7	921.57	915.66	2.49	2.39	52.53	29.49	116.88	218.73	3.43	1.92	5.91	5.91
Yellowstone County	B4	RM 354.70	90880.27	1.5-yr	1001.7	921.33	915.38	2.29	2.15	44.41	38.12	139.88	187.58	2.88	2.48	5.95	5.95
Yellowstone County	B4	RM 354.61	90744.35	1.5-yr	1001.7	921.21	917.13	2.03	1.94	21.88	20.44	186.5	227.43	2.41	2.27	4.08	4.08
Yellowstone County	B4	RM 354.53	90609.24	1.5-yr	1001.7	921.16	916.52	1.58	1.55	16.32	15.02	238.32	1127.8	2.59	2.39	4.64	4.64
Yellowstone County	B4	RM 354.45	90486.63	1.5-yr	1001.7	920.96	915.87	2.03	1.99	30.66	25.67	201.02	1180.04	2.43	2.03	5.09	5.09
Yellowstone County	B4	RM 354.39	90385.43	1.5-yr	1001.7	920.73	915.24	2.39	2.35	38.41	31.43	161.72	1169.61	2.57	2.1	5.49	5.49
Yellowstone County	B4	RM 354.33	90291.31	1.5-yr	1001.7	920.65	915.37	2.21	1.93	27.07	16.97	150.94	1321.12	2.69	1.68	5.28	5.28
Yellowstone County	B4	RM 354.23	90133.96	1.5-yr	1001.7	920.38	915.46	2.49	2.31	41.41	27.08	114.5	195.98	3.39	2.21	4.92	4.92
Yellowstone County	B4	RM 354.13	89983.48	1.5-yr	1001.7	920.26	914.94	2.16	2.1	37.78	24.59	130.33	206.58	3.53	2.31	5.32	5.32
Yellowstone County	B4	RM 354.00	89778.46	1.5-yr	1001.7	920.03	916.2	2.13	1.86	36.02	18.82	156.78	366.77	2.82	1.47	3.83	3.83
Yellowstone County	B5	RM 353.90	89604.28	1.5-yr	1001.7	919.79	917.06	2.06	2.06	30.16	27.98	230.66	249.19	2.11	1.96	2.89	2.89
Yellowstone County	B5	RM 353.80	89446.75	1.5-yr	1054.75	919.53	916.36	1.94	1.92	37.21	33.97	298.35	331.24	1.82	1.66	3.17	3.17
Yellowstone County	B5	RM 353.70	89288.94	1.5-yr	1054.75	919.29	915.92	1.67	1.61	27.32	22.98	342.8	1295.84	1.83	1.54	3.37	3.37
Yellowstone County	B5	RM 353.65	89204.58	1.5-yr	1054.75	919.12	915.49	1.69	1.69	36.57	36.57	370.76	370.76	1.68	1.68	3.63	3.63
Yellowstone County	B5	RM 353.56	89077.56	1.5-yr	1054.75	918.87	914.2	1.66	1.58	34.54	24.16	338.36	1110.23	1.84	1.28	4.67	4.67
Yellowstone County	B5	RM 353.50	88982.39	1.5-yr	1054.75	918.78	914.58	1.38	1.24	21.48	12.08	302.67	997.73	2.4	1.35	4.2	4.2
Yellowstone County	B5	RM 353.41	88846.15	1.5-yr	1054.75	918.54	914.41	1.85	1.52	33.79	15.25	223.63	841.62	2.34	1.05	4.13	4.13
Yellowstone County	B5	RM 353.32	88709.14	1.5-yr	1054.75	918.33	913.6	1.98	1.59	31.39	14.52	193.1	590.12	2.43	1.12	4.73	4.73
Yellowstone County	B5	RM 353.25	88587.13	1.5-yr	1054.75	918.1	912.76	2.27	1.82	35.66	17.82	159.64	464.64	2.5	1.25	5.34	5.34
Yellowstone County	B5	RM 353.15	88438.48	1.5-yr	1054.75	917.83	912.71	2.45	2	38.35	26.13	174.26	377.01	2.05	1.4	5.12	5.12
Yellowstone County	B5	RM 353.08	88321.13	1.5-yr	1054.75	917.64	912.99	2.34	1.92	36.93	21.51	194.31	488.06	1.93	1.12	4.65	4.65
Yellowstone County	B5	RM 353.01	88210.34	1.5-yr	1054.75	917.48	913.13	1.97	1.76	31.7	21.64	249.31	515.62	1.7	1.16	4.35	4.35
Yellowstone County	B5	RM 352.94	88090.6	1.5-yr	1054.75	917.39	912.5	1.66	1.39	20.15	12.2	173.12	497.93	2.52	1.53	4.89	4.89
Yellowstone County	B5	RM 352.86	87957.76	1.5-yr	1054.75	917.22	913.38	2.09	1.66	30.45	16.62	113.95	382.41	3.05	1.66	3.84	3.84
Yellowstone County	B5	RM 352.79	87857.09	1.5-yr	1054.75	917.09	913.06	2.17	1.87	38.64	23.58	93.07	305.66	3.04	1.84	4.03	4.03
Yellowstone County	B5	RM 352.72	87748.15	1.5-yr	1054.75	916.85	911.97	2.66	2.18	48.8	24.56	83.67	268.44	3.61	1.8	4.88	4.88
Yellowstone County	B5	RM 352.68	87677.1	1.5-yr	1054.75	916.75	912.27	2.28	2.28	44.59	44.59	207.76	207.76	2.23	2.23	4.48	4.48
Yellowstone County	B5	RM 352.64	87605.18	1.5-yr	1054.75	916.63	911.68	2.24	2.24	38.16	38.16	178.2	178.2	2.65	2.65	4.95	4.95
Yellowstone County	B5	RM 352.63	87594	1.5-yr	Bridge												
Yellowstone County		RM 352.47	87583.47	1.5-yr	1054.75	916.6	911.45	2.05	2.05	30.95	30.95	181.31	181.31	2.83	2.83	5.15	5.15
Yellowstone County	B5	RM 352.54	87461.4	1.5-yr	1054.75	916.51	912.57	1.75	1.69	20.33	17.81	263.83	387.72	2.25	1.97	3.94	3.94
Yellowstone County	B5	RM 352.47	87340.46	1.5-yr	1054.75	916.35	912.2	1.96	1.63	25.84	16.61	228.84	886.68	1.92	1.23	4.15	4.15
Yellowstone County	B5	RM 352.39	87216.99	1.5-yr	1054.75	916.02	912.01	2.53	2.23	40.34	28.11	176.65	650.15	1.73	1.21	4.83	4.83
Yellowstone County	B5	RM 352.31	87079.16	1.5-yr	1054.75	915.55	910.66	2.89	2.61	66.41	39.83	151.98	521.66	1.82	1.09	4.89	4.89

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	1.5-yr	1054.75	915.33	911.35	2.1	2.02	35.66	30.38	174.93	757.73	1.6	1.36	3.98	3.98
Yellowstone County	B5	RM 352.18	86873.5	1.5-yr	1054.75	915.42	911.21	0.76	0.85	3.93	4.4	203.89	869.36	1.84	2.06	4.21	4.21
Yellowstone County	B5	RM 352.09	86723.6	1.5-yr	1054.75	915.23	912.18	1.92	1.7	25.77	18.61	170.43	615.36	1.93	1.39	3.05	3.05
Yellowstone County	B5	RM 351.99	86568.41	1.5-yr	1054.75	914.87	912.6	2.57	2.21	40.55	24.78	141.12	410.41	1.91	1.16	2.29	2.29
Yellowstone County	B5	RM 351.93	86466.74	1.5-yr	1054.75	914.73	911.69	2.25	1.78	33.95	22.02	165.2	655.71	1.56	1.01	3.04	3.04
Yellowstone County	B5	RM 351.88	86386.8	1.5-yr	1054.75	914.65	911.38	1.64	1.28	23.06	16.75	166.58	834.98	1.42	1.04	3.27	3.27
Yellowstone County	B5	RM 351.81	86277.68	1.5-yr	1054.75	914.54	910.99	1.39	1.12	16.68	13.9	203.68	955.24	1.29	1.08	3.55	3.55
Yellowstone County	B5	RM 351.74	86159.62	1.5-yr	1054.75	914.19	911.37	1.65	1.51	24.71	18.2	168.39	761.21	1.38	1.01	3.36	3.36
Yellowstone County	B5	RM 351.67	86034.59	1.5-yr	1054.75	913.89	911.31	1.61	1.58	23.6	19.52	191.87	671.11	1.22	1.01	3.51	3.51
Yellowstone County	B5	RM 351.58	85891.33	1.5-yr	1054.75	913.66	911.47	1.19	1.51	13.67	14.12	229.12	613.58	1.11	1.15	3.57	3.57
Yellowstone County	B5	RM 351.52	85811.35	1.5-yr	1054.75	913.5	911.37	1.65	1.74	19.57	17.79	215.9	566.31	1.19	1.08	2.78	2.78
Yellowstone County	B5	RM 351.47	85728.2	1.5-yr	1054.75	913.42	911.17	1.53	1.49	15.51	13.05	174.08	547.98	1.59	1.34	2.87	2.87
Yellowstone County	B5	RM 351.40	85601.48	1.5-yr	1054.75	913.27	910.26	1.85	1.51	20.87	13	112.01	602.4	2.01	1.25	3.36	3.36
Yellowstone County	B5	RM 351.34	85482.66	1.5-yr	1054.75	913.16	909.98	1.25	1.46	24.86	14.43	134.84	727.86	1.83	1.06	3.19	3.19
Yellowstone County	B5	RM 351.25	85342.53	1.5-yr	1054.75	913.02	909.91	1.33	1.35	15.29	11.45	218.5	791.91	1.32	0.99	3.14	3.14
Yellowstone County	B5	RM 351.21	85257.19	1.5-yr	1054.75	912.91	909.48	1.63	1.46	19.28	12.95	169.6	739.98	1.46	0.98	3.43	3.43
Yellowstone County	B5	RM 351.12	85127.55	1.5-yr	1054.75	912.82	909.49	1.66	1.38	17.8	10.52	125.04	657.1	1.97	1.16	3.33	3.33
Yellowstone County	B5	RM 351.04	84988.05	1.5-yr	1054.75	912.7	908.79	1.81	1.4	20.9	10.94	123.18	674.13	2.16	1.12	3.91	3.91
Yellowstone County	B5	RM 350.90	84769.91	1.5-yr	1054.75	912.64	909.27	1.34	1.07	12.41	6.5	96.45	730.76	2.6	1.35	3.37	3.37
Yellowstone County	B5	RM 350.75	84536.19	1.5-yr	1054.75	912.46	909.72	1.22	1.46	23.26	18.47	237.89	606.07	1.5	1.19	3.08	3.08
Yellowstone County	B5	RM 350.66	84383.33	1.5-yr	1054.75	912.25	909.32	1.8	1.68	26.46	15.84	142.36	500.14	2.1	1.25	2.93	2.93
Yellowstone County	B5	RM 350.57	84244.69	1.5-yr	1054.75	912	908.48	1.65	1.78	31.28	23.54	148.98	384.45	2.05	1.54	3.52	3.52
Yellowstone County	B5	RM 350.50	84128.62	1.5-yr	1054.75	911.78	908.49	1.82	1.91	32.41	22.53	149.59	403.62	1.97	1.37	3.29	3.29
Yellowstone County	B5	RM 350.40	83974.24	1.5-yr	1054.75	911.61	908.73	1.36	1.56	17.24	14.97	286.44	574.63	1.35	1.18	2.88	2.88
Yellowstone County	B5	RM 350.33	83868.06	1.5-yr	1054.75	911.49	908.17	1.41	1.49	15.1	13.5	311.33	607.21	1.3	1.16	3.32	3.32
Yellowstone County	B5	RM 350.23	83712.91	1.5-yr	1054.75	911.26	907.61	1.76	1.68	24.37	16.38	215.59	522.82	1.79	1.2	3.65	3.65
Yellowstone County	B5	RM 350.14	83563.43	1.5-yr	1054.75	911.08	907.94	1.49	1.54	17.72	13.87	277.47	611.69	1.44	1.13	3.14	3.14
Yellowstone County	B5	RM 350.06	83419.86	1.5-yr	1054.75	910.84	907.84	1.45	1.53	22.07	17.72	326.12	666.37	1.29	1.04	3	3
Yellowstone County	B5	RM 349.94	83229.4	1.5-yr	1054.75	910.59	906.93	1.71	1.52	21.4	12.53	203.07	592.92	2	1.17	3.66	3.66
Yellowstone County	B5	RM 349.83	83071.99	1.5-yr	1054.75	910.52	907.36	1.3	1.17	9.91	5.79	368.02	722.05	2.15	1.25	3.16	3.16
Yellowstone County	B5	RM 349.68	82904.73	1.5-yr	1054.75	910.3	906.92	1.8	1.59	26.16	14.9	330.55	677.92	1.72	0.98	3.38	3.38
Yellowstone County	B5	RM 349.54	82632.78	1.5-yr	1054.75	909.89	906.29	1.75	1.68	21.83	19.74	396.89	468.35	1.48	1.34	3.6	3.6
Yellowstone County	B5	RM 349.33	82276.28	1.5-yr	1054.75	909.61	906.45	1.04	1.05	10.57	9.77	311.62	688.19	1.58	1.47	3.16	3.16
Yellowstone County	B5	RM 349.19	82046.53	1.5-yr	1054.75	909.24	905.16	1.96	1.65	26.09	17.28	255.33	600.59	1.6	1.06	4.08	4.08
Yellowstone County	B5	RM 349.04	81800.47	1.5-yr	1117.53	908.97	904.5	1.5	1.42	15.96	13.16	337.55	606.7	1.58	1.3	4.47	4.47
Yellowstone County	B5	RM 348.89	81574.02	1.5-yr	1117.53	908.8	904.75	1.17	1.14	15.42	13.74	520.74	605.08	1.81	1.61	4.05	4.05
Yellowstone County	B5	RM 348.77	81370.46	1.5-yr	1117.53	908.58	905.09	1.36	1.36	20.93	20.93	394.48	394.48	2.09	2.09	3.49	3.49
Yellowstone County	B5	RM 348.64	81138.52	1.5-yr	1117.53	908.35	903.35	1.6	1.51	16.35	11.71	287.38	431.35	2.41	1.72	5	5
Yellowstone County	B5	RM 348.52	80960.09	1.5-yr	1117.53	908.12	902.88	1.98	1.91	30.43	23.23	196.68	269.73	2.85	2.17	5.24	5.24
Yellowstone County	B5	RM 348.38	80737.31	1.5-yr	1117.53	907.74	902.85	2.3	2.25	41.5	35.63	185.41	221.24	2.62	2.25	4.89	4.89
Yellowstone County	B5	RM 348.26	80551.51	1.5-yr	1117.53	907.47	902.73	2.34	2.15	38	23.2	151.67	276.7	3.09	1.88	4.74	4.74
Yellowstone County	B5	RM 348.09	80276.34	1.5-yr	1117.53	907.1	901.64	2.39	2.33	37.04	28.95	161.76	423.54	2.88	2.25	5.46	5.46
Yellowstone County	B5	RM 347.95	80055.79	1.5-yr	1117.53	906.93	902.96	2.1	1.88	23.59	15.37	165.09	413.78	2.98	1.95	3.97	3.97
Yellowstone County	B5	RM 347.82	79844.2	1.5-yr	1117.53	906.76	902.93	1.89	1.83	28.98	20.23	172.24	328.76	2.79	1.95	3.83	3.83
Yellowstone County	B5	RM 347.77	79751.93	1.5-yr	1117.53	906.64	902.38	1.98	1.85	34.9	20.94	174.35	396.39	2.73	1.64	4.26	4.26
Yellowstone County	B5	RM 347.70	79643.98	1.5-yr	1117.53	906.5	901.91	1.98	1.76	33.87	18.62	174.5	431.56	2.69	1.47	4.59	4.59
Yellowstone County	B5	RM 347.61	79501.64	1.5-yr	1117.53	906.44	902.2	1.62	1.22	14.05	6.69	192.93	667.47	2.88	1.37	4.24	4.24
Yellowstone County	B5	RM 347.51	79347.38	1.5-yr	1117.53	906.21	900.54	2.31	1.88	26.36	10.88	111.65	381.05	3.79	1.56	5.67	5.67
Yellowstone County	B5	RM 347.42	79196.21	1.5-yr	1117.53	906.13	900.73	1.99	1.78	38.59	18.54	138.17	384.24	3.41	1.63	5.4	5.4
Yellowstone County	B5	RM 347.35	79079.87	1.5-yr	1117.53	906.17	900.77	1	1	4.3	4.22	484.15	494.34	2.31	2.27	5.4	5.4
Yellowstone County	B5	RM 347.23	78895.71	1.5-yr	1117.53	906.11	900.89	1.1	1.1	7.96	7.96	503.12	503.12	2.02	2.02	5.22	5.22
Yellowstone County	B5	RM 347.13	78732.21	1.5-yr	1117.53	906.01	900.98	1.17	1.17	17.13	16.63	438.64	453.11	2.17	2.11	5.03	5.03
Yellowstone County	B5	RM 346.93	78400.21	1.5-yr	1117.53	905.5	900.98	1.5	1.5	46.92	44.52	431.48	455.95	1.72	1.63	4.52	4.52
Yellowstone County	B5	RM 346.80	78193.27	1.5-yr	1117.53	904.75	900.02	1.92	1.86	54.52	54.92	391.54	423.19	1.41	1.42	4.73	4.73
Yellowstone County	B5	RM 346.64	77938.83	1.5-yr	1117.53	904.42	900.47	1.69	1.5	16.87	12.79	245.89	402.49	2.44	1.85	3.95	3.95
Yellowstone County	B5	RM 346.49	77706.6	1.5-yr	1117.53	904.14	900.21	2.13	1.93	28.47	22.28	171.58	282.71	2.66	2.08	3.93	3.93
Yellowstone County	B6	RM 346.35	77480.6	1.5-yr	1117.53	903.9	900.33	1.97	1.88	29.25	24.96	208.63	288.51	2.5	2.14	3.57	3.57
Yellowstone County	B6	RM 346.23	77285.9	1.5-yr	1117.53	903.61	900.11	2.27	2.11	28.81	19.92	175.03	283.54	2.7	1.87	3.5	3.5
Yellowstone County	B6	RM 346.11	77095.33	1.5-yr	1117.53	903.39	899.75	2.21	2	35.65	22.86	174.72	323.24	2.74	1.76	3.64	3.64
Yellowstone County	B6	RM 346.00	76926.16	1.5-yr	1117.53	903.22	899.8	2.08	1.82	27.57	18.67	175.61	321.03	2.82	1.91	3.42	3.42
Yellowstone County	B6	RM 345.90	76766.95	1.5-yr	1117.53	902.98	899.51	2.29	2.01	37.2	26.05	176.44	301.26	2.63	1.84	3.47	3.47

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	1.5-yr	1117.53	902.85	899.04	1.96	1.77	23.84	18.95	193.39	288.26	2.74	2.19	3.95	3.95
Yellowstone County	B6	RM 345.73	76484.99	1.5-yr	1117.53	902.63	899.01	2.28	2.15	32.84	28.47	193.24	252.92	2.35	2.05	3.73	3.73
Yellowstone County	B6	RM 345.67	76386.71	1.5-yr	1117.53	902.59	899.1	1.85	1.74	21.44	15.88	208.9	326.97	2.64	1.97	3.69	3.69
Yellowstone County	B6	RM 345.60	76268.76	1.5-yr	1117.53	902.45	899.22	1.93	1.81	27.74	19.99	233.6	385.12	2.22	1.6	3.55	3.55
Yellowstone County	B6	RM 345.50	76118.1	1.5-yr	1117.53	902.31	899.07	1.77	1.63	21.99	16.87	225.74	375.12	2.38	1.83	3.41	3.41
Yellowstone County	B6	RM 345.37	75909.53	1.5-yr	1117.53	901.99	897.51	1.97	1.97	32.62	32.52	287.88	288.83	1.97	1.97	4.48	4.48
Yellowstone County	B6	RM 345.27	75751.01	1.5-yr	1117.53	901.72	898.15	2.07	2.02	29.79	24.88	250.54	310.21	2.14	1.79	3.57	3.57
Yellowstone County	B6	RM 345.07	75427.56	1.5-yr	1117.53	901.43	897.07	1.78	1.76	19.11	17.29	240.36	268.65	2.6	2.36	4.36	4.36
Yellowstone County	B6	RM 344.90	75166.64	1.5-yr	1117.53	901.28	897.3	1.54	1.47	15.08	13.2	292.69	353.71	2.44	2.14	3.98	3.98
Yellowstone County	B6	RM 344.75	74927.69	1.5-yr	1117.53	901.04	896.02	1.82	1.72	27.36	22.71	228.13	296.71	2.64	2.19	5.02	5.02
Yellowstone County	B6	RM 344.64	74743.45	1.5-yr	1117.53	900.8	895.93	2.16	2.03	24.94	20.12	153.43	203.73	3.34	2.7	4.87	4.87
Yellowstone County	B6	RM 344.53	74576.12	1.5-yr	1117.53	900.63	895.39	2.23	1.98	38.41	23.83	149.24	285.56	3.19	1.97	5.24	5.24
Yellowstone County	B6	RM 344.43	74405.67	1.5-yr	1117.53	900.5	896.11	2.04	1.82	19.82	13.21	166.66	308.06	3	2	4.39	4.39
Yellowstone County	B6	RM 344.29	74192.79	1.5-yr	1117.53	900.37	895.87	1.92	1.77	23.37	13.87	177.35	352.66	3.03	1.79	4.5	4.5
Yellowstone County	B6	RM 344.13	73931.76	1.5-yr	1117.53	900.17	895.4	1.94	1.8	23.01	15.03	156.27	278	3.42	2.23	4.77	4.77
Yellowstone County	B6	RM 343.87	73520.95	1.5-yr	1117.53	899.95	895.23	1.57	1.45	14.11	9.21	287.43	482.67	2.45	1.59	4.72	4.72
Yellowstone County	B6	RM 343.80	73403.19	1.5-yr	1117.53	899.88	894.69	1.36	1.26	22.86	18.15	356.81	497.89	2.24	1.78	5.19	5.19
Yellowstone County	B6	RM 343.66	73173.16	1.5-yr	1117.53	899.53	894.63	1.49	1.48	38.11	37.04	391.65	404.72	1.91	1.86	4.9	4.9
Yellowstone County	B6	RM 343.55	72997.33	1.5-yr	1117.53	899.25	894.63	1.45	1.44	28.81	27.72	337.55	351.62	2.29	2.2	4.62	4.62
Yellowstone County	B6	RM 343.45	72840.49	1.5-yr	1117.53	899.04	894.78	1.51	1.51	26.5	26.5	334.59	334.59	2.22	2.22	4.26	4.26
Yellowstone County	B6	RM 343.37	72718.86	1.5-yr	1117.53	898.84	894.5	1.73	1.73	32.11	32.11	282.29	282.29	2.29	2.29	4.34	4.34
Yellowstone County	B6	RM 343.29	72586.22	1.5-yr	1117.53	898.68	894.28	1.64	1.6	27.31	23.08	272.83	334.71	2.47	2.09	4.4	4.4
Yellowstone County	B6	RM 343.21	72458.03	1.5-yr	1117.53	898.5	893.99	1.57	1.52	38.45	30.17	351.36	491.21	2.02	1.58	4.51	4.51
Yellowstone County	B6	RM 343.14	72328.78	1.5-yr	1117.53	898.16	893.94	1.67	1.63	51.35	39.88	422.61	624.06	1.57	1.22	4.22	4.22
Yellowstone County	B6	RM 343.04	72174.44	1.5-yr	1117.53	897.93	894.12	1.43	1.35	15.7	11.98	476.35	670.2	1.62	1.24	3.81	3.81
Yellowstone County	B6	RM 342.96	72046.7	1.5-yr	1117.53	897.76	894.17	1.49	1.41	29.59	21.68	407.04	602.17	1.8	1.32	3.59	3.59
Yellowstone County	B6	RM 342.87	71890.42	1.5-yr	1117.53	897.39	893.92	1.72	1.65	39.81	32.26	402.54	527.34	1.59	1.29	3.47	3.47
Yellowstone County	B6	RM 342.78	71759.64	1.5-yr	1117.53	897.19	893.85	1.68	1.6	17	14.76	385.45	509.03	1.58	1.37	3.34	3.34
Yellowstone County	B6	RM 342.71	71649.64	1.5-yr	1117.53	897.04	893.88	1.83	1.69	18.74	15.96	321.67	468.02	1.66	1.41	3.16	3.16
Yellowstone County	B6	RM 342.64	71534.72	1.5-yr	1117.53	896.88	893.45	1.66	1.63	26.84	25.96	447.89	472.47	1.5	1.45	3.43	3.43
Yellowstone County	B6	RM 342.59	71441.82	1.5-yr	1117.53	896.66	893.13	1.74	1.74	35.84	35.84	445.87	545.83	1.44	1.44	3.53	3.53
Yellowstone County	B6	RM 342.49	71299.94	1.5-yr	1117.53	896.53	892.73	1.24	1.24	14.23	14.23	503.48	570.75	1.78	1.78	3.8	3.8
Yellowstone County	B6	RM 342.40	71182.23	1.5-yr	1117.53	896.47	892.4	0.96	0.96	10.94	10.94	500.14	558.15	2.32	2.32	4.07	4.07
Yellowstone County	B6	RM 342.29	70973.95	1.5-yr	1117.53	896.27	891.26	1.36	1.36	22.57	22.55	442.76	465.25	1.86	1.86	5.01	5.01
Yellowstone County	B6	RM 342.17	70788.09	1.5-yr	1117.53	895.84	891.21	2.1	2.1	38.14	38.14	274.74	295.93	1.94	1.94	4.63	4.63
Yellowstone County	B6	RM 342.09	70668.79	1.5-yr	1117.53	895.75	892.22	1.58	1.58	19.18	19.18	303.26	303.26	2.33	2.33	3.53	3.53
Yellowstone County	B6	RM 341.96	70472.35	1.5-yr	1117.53	895.61	891.5	1.53	1.53	11.96	11.96	402.41	402.41	1.82	1.82	4.11	4.11
Yellowstone County	B6	RM 341.82	70207.79	1.5-yr	1117.53	895.44	890.89	1.2	1.2	14.39	14.39	544.47	544.47	1.71	1.71	4.55	4.55
Yellowstone County	B6	RM 341.68	69974.03	1.5-yr	1117.53	895.21	890.38	1.3	1.3	18.42	17.73	452.07	472.17	1.89	1.82	4.83	4.83
Yellowstone County	B6	RM 341.57	69788.71	1.5-yr	1117.53	894.96	889.58	1.86	1.86	10.67	10.67	384.6	384.6	1.57	1.57	5.38	5.38
Yellowstone County	B6	RM 341.47	69629.19	1.5-yr	1117.53	894.82	889.76	1.55	1.55	38.86	38.86	353.68	353.68	2.04	2.04	5.06	5.06
Yellowstone County	B6	RM 341.32	69391.37	1.5-yr	1117.53	894.41	890.36	1.56	1.55	30.61	28.69	350.16	378.17	2.04	1.91	4.05	4.05
Yellowstone County	B6	RM 341.24	69252.71	1.5-yr	1117.53	894.3	890.28	1.37	1.32	12.34	10.34	396.67	512.8	1.97	1.65	4.02	4.02
Yellowstone County	B6	RM 341.11	69044.61	1.5-yr	1117.53	894.03	890	1.78	1.66	26.65	18.78	319.65	495.76	1.93	1.36	4.03	4.03
Yellowstone County	B6	RM 340.94	68773.18	1.5-yr	1117.53	893.67	889.22	1.82	1.66	25.69	15.32	275.18	514.1	2.19	1.31	4.45	4.45
Yellowstone County	B6	RM 340.81	68556.42	1.5-yr	1117.53	893.5	889.05	1.44	1.16	19.12	9.11	311.73	876.4	2.31	1.1	4.45	4.45
Yellowstone County	B6	RM 340.65	68325.7	1.5-yr	1117.53	893.29	888.87	1.8	1.41	16.4	6.75	200.28	657.64	2.93	1.21	4.42	4.42
Yellowstone County	B6	RM 340.52	68126.27	1.5-yr	1117.53	893.1	887.3	2.09	1.75	30.03	9.6	128.08	501.72	4.01	1.28	5.8	5.8
Yellowstone County	B6	RM 340.40	67936.51	1.5-yr	1117.53	892.98	886.73	1.82	1.5	29.64	8.82	170.6	727.63	3.47	1.02	6.25	6.25
Yellowstone County	B7	RM 340.26	67715.84	1.5-yr	1117.53	892.75	887.99	1.68	1.49	35.78	18.62	249.88	555.77	2.6	1.35	4.76	4.76
Yellowstone County	B7	RM 340.16	67550.99	1.5-yr	1117.53	892.47	888.43	1.68	1.57	44.08	27.99	299.33	519.84	2.17	1.37	4.04	4.04
Yellowstone County	B7	RM 340.06	67387.35	1.5-yr	1117.53	892.23	888.74	1.49	1.35	26.63	22.69	315.25	433.65	2.23	1.9	3.49	3.49
Yellowstone County	B7	RM 339.96	67234.59	1.5-yr	1117.53	892.01	888.85	1.71	1.71	18.97	18.97	356.87	356.87	1.83	1.83	3.16	3.16
Yellowstone County	B7	RM 339.88	67094.07	1.5-yr	1117.53	891.83	888.78	1.58	1.56	29.58	27.36	430.75	473.21	1.63	1.51	3.05	3.05
Yellowstone County	B7	RM 339.79	66960.51	1.5-yr	1117.53	891.46	888.98	2.04	2.04	32.24	32.24	407.32	407.32	1.34	1.34	2.48	2.48
Yellowstone County	B7	RM 339.72	66843.76	1.5-yr	1117.53	891.26	888.72	1.81	1.79	24.03	22.97	407.94	432.41	1.51	1.44	2.54	2.54
Yellowstone County	B7	RM 339.66	66753.41	1.5-yr	1117.53	891.18	887.9	1.51	1.51	16.11	15.92	475.71	481.42	1.55	1.54	3.28	3.28
Yellowstone County	B7	RM 339.52	66527.74	1.5-yr	1117.53	891	887.31	1.53	1.42	14.01	8.92	308.02	545.9	2.27	1.44	3.69	3.69
Yellowstone County	B7	RM 339.37	66324.85	1.5-yr	1117.53	890.78	887.17	1.76	1.59	31.51	19.95	226.67	440.21	2.52	1.59	3.61	3.61
Yellowstone County	B7	RM 339.24	66108.49	1.5-yr	1117.53	890.37	886.45	2.31	2.09	29.25	21.59	212.27	355.81	2.04	1.5	3.92	3.92
Yellowstone County	B7	RM 339.13	65940.41	1.5-yr	1117.53	890.11	885.31	2.43	1.93	39.45	21.33	142.7	423.18	2.54	1.37	4.8	4.8

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	1.5-yr	1117.53	889.84	886.09	2.24	2.05	29.69	24.35	171.96	272.63	2.43	2	3.75	3.75
Yellowstone County	B7	RM 338.94	65621.59	1.5-yr	1117.53	889.73	886.36	2	1.76	21.53	15.95	222.59	430.94	1.99	1.47	3.37	3.37
Yellowstone County	B7	RM 338.83	65433.26	1.5-yr	1117.53	889.52	886.37	1.84	1.68	26.63	18.65	219.26	463.45	2.05	1.44	3.5	3.5
Yellowstone County	B7	RM 338.72	65256.88	1.5-yr	1117.53	889.3	886.18	1.77	1.67	25.88	18.16	199.85	419.08	2.33	1.64	3.5	3.5
Yellowstone County	B7	RM 338.62	65095.08	1.5-yr	1117.53	889.02	886.28	2.16	2.08	27.88	18.08	171.8	371.57	2.25	1.46	3.4	3.4
Yellowstone County	B7	RM 338.49	64891.36	1.5-yr	1117.53	888.83	885.05	2.08	1.81	25.14	13.1	161.76	496.9	2.45	1.28	3.78	3.78
Yellowstone County	B7	RM 338.40	64742.15	1.5-yr	1117.53	888.79	884.28	1.52	1.2	13.27	8.44	163.27	620.33	2.42	1.54	4.51	4.51
Yellowstone County	B7	RM 338.29	64577.05	1.5-yr	1117.53	888.64	884.18	1.87	1.48	20.1	10.44	121.93	528.27	2.75	1.43	4.46	4.46
Yellowstone County	B7	RM 338.19	64384.71	1.5-yr	1117.53	888.55	885.23	1.3	1.2	12.21	8.25	388.24	792.2	1.75	1.18	3.32	3.32
Yellowstone County	B7	RM 338.06	64164.59	1.5-yr	1117.53	888.41	884.64	1.41	1.12	13.51	7.1	283.06	858.06	2.2	1.16	3.77	3.77
Yellowstone County	B7	RM 337.91	63921.69	1.5-yr	1117.53	888.2	884.16	1.78	1.44	17.09	8.07	197.94	647	2.54	1.2	4.04	4.04
Yellowstone County	B7	RM 337.83	63789.53	1.5-yr	1117.53	887.89	882.72	2.48	2.21	36.77	21.4	173.26	345.5	2.51	1.46	5.17	5.17
Yellowstone County	B7	RM 337.75	63667.96	1.5-yr	1117.53	887.66	881.69	2.7	2.29	41	21.51	139.4	327.89	2.85	1.49	5.97	5.97
Yellowstone County	B7	RM 337.68	63550.4	1.5-yr	1117.53	887.55	882.49	2.33	2.15	35.69	24.64	160.64	257.05	2.92	2.02	5.06	5.06
Yellowstone County	B7	RM 337.58	63396.62	1.5-yr	1117.53	887.35	883.62	2.39	2.11	32.9	23.24	180.97	305.56	2.45	1.73	3.73	3.73
Yellowstone County	B7	RM 337.47	63212.44	1.5-yr	1117.53	887.14	883.31	2.2	1.78	31.84	18.19	176.72	445.8	2.47	1.41	3.83	3.83
Yellowstone County	B7	RM 337.38	63064.58	1.5-yr	1117.53	886.9	883.29	2.38	1.92	33.52	19.17	157.96	390	2.61	1.49	3.61	3.61
Yellowstone County	B7	RM 337.27	62894.98	1.5-yr	1117.53	886.85	883.15	1.67	1.33	15.81	8.24	198.29	656.33	2.45	1.28	3.7	3.7
Yellowstone County	B7	RM 337.16	62717.85	1.5-yr	1117.53	886.76	882.57	1.35	1.21	11.4	7.11	385.22	767.04	1.93	1.21	4.19	4.19
Yellowstone County	B7	RM 337.04	62524.52	1.5-yr	1117.53	886.69	879.61	1.39	1.09	10.21	3.14	151.77	873.05	3.81	1.17	7.08	7.08
Yellowstone County	B7	RM 336.96	62390.64	1.5-yr	1117.53	886.59	880.21	1.65	1.37	20.81	6.73	181.43	787.45	3.22	1.04	6.38	6.38
Yellowstone County	B7	RM 336.87	62246.97	1.5-yr	1117.53	886.46	881.41	1.89	1.58	21.38	7.17	155.57	642.16	3.31	1.1	5.05	5.05
Yellowstone County	B7	RM 336.80	62131.42	1.5-yr	1117.53	886.34	881.33	2.01	1.65	35.32	11.68	161.27	725.42	2.9	0.95	5.01	5.01
Yellowstone County	B7	RM 336.72	62005.73	1.5-yr	1117.53	886.1	881.38	2.29	2.06	42.37	22.66	134.02	335.16	3.14	1.68	4.72	4.72
Yellowstone County	B7	RM 336.66	61902.64	1.5-yr	1117.53	885.78	881.45	2.84	2.69	53.76	39.16	110.65	180.57	3.15	2.3	4.33	4.33
Yellowstone County	B7	RM 336.59	61800.43	1.5-yr	1117.53	885.77	880.66	2.12	1.93	33.44	20.21	132.88	274.52	3.48	2.11	5.11	5.11
Yellowstone County	B7	RM 336.52	61689.55	1.5-yr	1117.53	885.66	881.76	2.16	1.84	30.97	18.43	144.13	358.75	2.83	1.69	3.9	3.9
Yellowstone County	B7	RM 336.46	61580.5	1.5-yr	1117.53	885.55	882.13	2	1.86	28.97	18.16	152.92	354.66	2.7	1.7	3.42	3.42
Yellowstone County	B7	RM 336.40	61491.01	1.5-yr	1117.53	885.45	882.03	2.04	1.84	30.52	16.09	157.44	420.55	2.74	1.45	3.42	3.42
Yellowstone County	B7	RM 336.34	61394.22	1.5-yr	1117.53	885.34	881.93	2.06	1.65	29.16	13.06	161.8	592.77	2.56	1.14	3.41	3.41
Yellowstone County	B7	RM 336.27	61278.9	1.5-yr	1117.53	885.22	881.67	1.98	1.54	26.28	10.31	167.76	717.13	2.58	1.01	3.55	3.55
Yellowstone County	B7	RM 336.19	61159.07	1.5-yr	1117.53	885.05	882.11	2.11	1.69	27.04	15.5	197.81	842.79	1.96	1.12	2.94	2.94
Yellowstone County	B7	RM 336.09	60993.57	1.5-yr	1117.53	884.89	882.16	1.64	1.33	19.04	10.77	318.99	878.28	1.69	0.96	2.73	2.73
Yellowstone County	B7	RM 335.98	60812.26	1.5-yr	1117.53	884.69	881.93	1.45	1.27	21.98	13.8	348.7	881.91	1.59	1	2.96	2.96
Yellowstone County	B7	RM 335.89	60669.74	1.5-yr	1117.53	884.51	880.16	1.5	1.42	16.29	12.29	503.41	715.22	1.46	1.1	4.35	4.35
Yellowstone County	B7	RM 335.77	60465.85	1.5-yr	1117.53	884.19	880.49	1.6	1.58	24.38	21.86	547.49	623.15	1.27	1.14	3.7	3.7
Yellowstone County	B7	RM 335.68	60324.8	1.5-yr	1117.53	883.95	880.65	1.68	1.67	17.12	16.45	501.04	554.39	1.33	1.27	3.3	3.3
Yellowstone County	B7	RM 335.59	60183.7	1.5-yr	1117.53	883.74	880.3	1.79	1.79	17.15	16.95	491.92	560.09	1.27	1.25	3.44	3.44
Yellowstone County	B7	RM 335.51	60046.12	1.5-yr	1117.53	883.58	880.03	1.64	1.63	14.59	14.14	509.49	535.51	1.34	1.3	3.55	3.55
Yellowstone County	B7	RM 335.41	59899.97	1.5-yr	1117.53	883.48	879.45	1.23	1.17	10.12	9.26	752.67	878.86	1.18	1.08	4.03	4.03
Yellowstone County	B7	RM 335.36	59814.82	1.5-yr	1117.53	883.48	878.65	0.8	0.75	3.99	3.19	839.95	1345.39	1.63	1.3	4.83	4.83
Yellowstone County	B7	RM 335.12	59393.71	1.5-yr	1117.53	883.27	878.54	1.42	1.04	11.92	4.87	303.21	1123.94	2.34	0.95	4.73	4.73
Yellowstone County	B7	RM 335.03	59228.59	1.5-yr	1117.53	882.97	876.8	2.38	1.65	39.67	14.26	147.77	708.86	2.66	0.95	6.17	6.17
Yellowstone County	B7	RM 334.91	59041.32	1.5-yr	1117.53	882.7	878.31	2.09	1.51	35.3	14.53	225.08	871.34	2.06	0.85	4.39	4.39
Yellowstone County	B7	RM 334.85	58937.73	1.5-yr	1117.53	882.51	878.66	2.07	1.54	36.54	17.51	222.86	740.39	2.03	0.98	3.85	3.85
Yellowstone County	B7	RM 334.73	58737.5	1.5-yr	1117.53	881.95	879.52	2.68	2.07	46.62	28.8	183.86	437.78	1.99	1.23	2.57	2.57
Yellowstone County	B7	RM 334.63	58573.32	1.5-yr	1117.53	881.65	878.31	2.52	1.84	38.63	22.56	163.2	512.59	2.02	1.18	3.34	3.34
Yellowstone County	B7	RM 334.54	58424.99	1.5-yr	1117.53	881.61	877.09	1.29	1.16	20.87	11.9	130.94	706.3	2.4	1.36	4.52	4.52
Yellowstone County	B7	RM 334.22	57821.07	1.5-yr	1117.53	881.27	875.76	1.67	1.35	14.02	8.91	164.6	451.82	3.53	2.24	5.51	5.51
Yellowstone County	B7	RM 334.09	57621.62	1.5-yr	1117.53	880.89	875.55	2.87	2.26	51.2	26.62	100.62	305.09	3.12	1.62	5.34	5.34
Yellowstone County	B7	RM 333.98	57440.64	1.5-yr	1117.53	880.88	875.46	1.85	1.5	18.71	11.52	135.44	328.7	3.68	2.27	5.42	5.42
Yellowstone County	B7	RM 333.83	57207.78	1.5-yr	1117.53	880.73	875.4	1.91	1.72	23.88	17.44	148.81	291.18	3.06	2.23	5.33	5.33
Yellowstone County	B7	RM 333.69	56989.22	1.5-yr	1117.53	880.55	873.45	1.52	1.52	25.32	24.54	319.82	358.71	2.29	2.22	7.1	7.1
Yellowstone County	B7	RM 333.54	56738.21	1.5-yr	1117.53	880.43	874.22	1.03	1.01	11.33	9.16	374.6	493.59	2.87	2.32	6.21	6.21
Yellowstone County	B7	RM 333.42	56552.03	1.5-yr	1117.53	880.29	873.42	1.25	1.24	20.53	17.6	399.85	470.98	2.24	1.92	6.87	6.87
Yellowstone County	B7	RM 333.30	56351.75	1.5-yr	1117.53	879.95	875.65	1.53	1.52	44.06	42.88	416.41	430.14	1.75	1.71	4.3	4.3
Yellowstone County	B7	RM 333.19	56177.76	1.5-yr	1117.53	879.51	875.72	1.8	1.79	36.22	35.66	340.7	346.4	1.83	1.8	3.79	3.79
Yellowstone County	B7	RM 333.09	56027.56	1.5-yr	1117.53	879.34	875.59	1.57	1.52	16.33	14.17	371.91	447.06	1.9	1.65	3.75	3.75
Yellowstone County	B7	RM 332.99	55855.76	1.5-yr	1117.53	879.07	873.86	1.76	1.65	41.76	36.36	350.17	446.21	1.74	1.51	5.21	5.21
Yellowstone County	B7	RM 332.88	55687.68	1.5-yr	1117.53	878.87	874.43	1.52	1.51	15.03	14.78	395.7	427.9	1.76	1.73	4.44	4.44
Yellowstone County	B7	RM 332.77	55504.73	1.5-yr	1117.53	878.77	875.49	1.31	1.28	11.19	8.32	376.01	539.6	2.18	1.62	3.28	3.28

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	1.5-yr	1117.53	878.63	874.96	1.49	1.41	17.96	11.66	333.34	565.58	2.16	1.4	3.67	3.67
Yellowstone County	B7	RM 332.56	55182.74	1.5-yr	1117.53	878.53	874.54	1.38	1.33	14.14	10.66	309.44	444.7	2.51	1.89	3.99	3.99
Yellowstone County	B7	RM 332.47	55059.84	1.5-yr	1117.53	878.48	873.95	1.34	1.23	12.25	7.68	266.31	503.43	2.9	1.81	4.53	4.53
Yellowstone County	B7	RM 332.38	54913.1	1.5-yr	1117.53	878.27	873.16	1.99	1.86	28.65	25.78	157.96	192.99	3.45	3.11	5.11	5.11
Yellowstone County	B7	RM 332.33	54822.67	1.5-yr	1117.53	878.18	872.5	1.98	1.83	36.65	27.3	168.3	249.52	3.28	2.44	5.68	5.68
Yellowstone County	B7	RM 332.21	54626.48	1.5-yr	1117.53	878	873.4	1.88	1.85	28.66	26.13	169.61	197.73	3.35	3.06	4.59	4.59
Yellowstone County	B7	RM 332.20	54613	1.5-yr	Bridge												
Yellowstone County		RM 332.16	54607.45	1.5-yr	1117.53	877.94	873.19	1.89	1.85	28.08	25.69	160.74	185.55	3.55	3.25	4.75	4.75
Yellowstone County	B7	RM 332.17	54575.38	1.5-yr	1117.53	877.87	872.76	2.04	1.99	32.13	24.92	137.83	211.93	3.82	2.96	5.11	5.11
Yellowstone County	B7	RM 332.16	54558	1.5-yr	Bridge												
Yellowstone County		RM 331.96	54550.39	1.5-yr	1117.53	877.79	872.47	2.15	2.08	26.11	21.69	127.75	218.51	3.91	3.24	5.32	5.32
Yellowstone County	B7	RM 332.08	54422.01	1.5-yr	1117.53	877.69	873.77	2.14	2.04	29.92	14.65	150.62	374.22	3.21	1.56	3.92	3.92
Yellowstone County	B7	RM 331.96	54224.76	1.5-yr	1117.53	877.53	873.18	1.94	1.9	25.96	19.78	173.42	256.47	3.01	2.3	4.35	4.35
Yellowstone County	B7	RM 331.85	54057.19	1.5-yr	1117.53	877.33	873.16	1.88	1.87	45.48	41.73	227.68	250.35	2.6	2.39	4.17	4.17
Yellowstone County	B7	RM 331.74	53882.8	1.5-yr	1117.53	876.96	872.62	2.36	2.3	37.23	33.01	146.36	169.91	3.21	2.85	4.34	4.34
Yellowstone County	B8	RM 331.66	53744.64	1.5-yr	1117.53	876.88	871.68	1.89	1.86	28.93	25.13	216.5	253.62	2.72	2.37	5.2	5.2
Yellowstone County	B8	RM 331.55	53575.67	1.5-yr	1117.53	876.68	872.61	2.05	1.83	27.18	19.38	178.53	304.81	2.82	2.01	4.07	4.07
Yellowstone County	B8	RM 331.41	53354.89	1.5-yr	1117.53	876.4	872.56	2.15	2.03	34.83	24.94	209.1	328.9	2.34	1.67	3.84	3.84
Yellowstone County	B8	RM 331.32	53209.79	1.5-yr	1117.53	876.19	871.92	2.13	1.9	28.58	18.39	206.39	389.47	2.36	1.51	4.27	4.27
Yellowstone County	B8	RM 331.23	53053.99	1.5-yr	1117.53	875.98	871.53	1.95	1.81	30.33	24.5	290.68	436.04	1.76	1.42	4.45	4.45
Yellowstone County	B8	RM 331.14	52919.44	1.5-yr	1117.53	875.85	871.72	1.61	1.41	21.07	15.5	264.21	528.01	2.05	1.51	4.13	4.13
Yellowstone County	B8	RM 331.08	52820.06	1.5-yr	1117.53	875.75	871.29	1.48	1.46	17.99	15.5	294.14	415.96	2.14	1.84	4.46	4.46
Yellowstone County	B8	RM 331.01	52700.37	1.5-yr	1117.53	875.62	871.8	1.58	1.54	21.29	17.25	292.54	444.84	2.02	1.64	3.82	3.82
Yellowstone County	B8	RM 330.93	52576.5	1.5-yr	1117.53	875.51	871.67	1.53	1.51	19.36	16.26	243.74	352.1	2.51	2.11	3.83	3.83
Yellowstone County	B8	RM 330.83	52418.21	1.5-yr	1117.53	875.32	870.75	1.98	1.75	22.83	17.63	140.32	248.26	3.34	2.58	4.57	4.57
Yellowstone County	B8	RM 330.77	52321.13	1.5-yr	1117.53	875.21	870.68	2.08	1.97	23.61	18.79	146.96	222.98	3.18	2.54	4.53	4.53
Yellowstone County	B8	RM 330.68	52174.9	1.5-yr	1117.53	875.04	870.33	2.32	2.16	29.67	21.36	126.12	220.48	3.25	2.35	4.71	4.71
Yellowstone County	B8	RM 330.58	52000.46	1.5-yr	1117.53	874.87	869.72	2.33	2.03	39.17	22.28	114.46	274.82	3.54	2.01	5.15	5.15
Yellowstone County	B8	RM 330.48	51852.83	1.5-yr	1117.53	874.68	868.81	2.44	2	41.03	18.49	103.53	324.4	3.86	1.72	5.87	5.87
Yellowstone County	B8	RM 330.39	51701.57	1.5-yr	1117.53	874.57	869.32	2.27	2.02	27.07	14.38	123.59	313.11	3.33	1.77	5.25	5.25
Yellowstone County	B8	RM 330.32	51592.04	1.5-yr	1117.53	874.48	869.57	2.24	2	26.4	16.53	133.51	273.43	3.27	2.05	4.91	4.91
Yellowstone County	B8	RM 330.25	51473.55	1.5-yr	1117.53	874.37	868.38	2.26	1.97	28.76	16.83	134.78	313.17	3.15	1.84	5.99	5.99
Yellowstone County	B8	RM 330.17	51344.77	1.5-yr	1117.53	874.25	869.9	2.25	1.96	29.66	18.99	147.93	313.88	2.84	1.82	4.34	4.34
Yellowstone County	B8	RM 330.10	51243.99	1.5-yr	1117.53	874.13	870.02	2.2	1.94	30.87	23.37	181.74	304.43	2.5	1.9	4.11	4.11
Yellowstone County	B8	RM 330.05	51150.67	1.5-yr	1117.53	874.05	869.94	1.86	1.68	23.75	17.34	252.07	436.52	2.1	1.53	4.11	4.11
Yellowstone County	B8	RM 329.95	50995.78	1.5-yr	1117.53	873.88	869.67	1.7	1.68	22.29	19.1	341.41	403.76	1.92	1.65	4.21	4.21
Yellowstone County	B8	RM 329.86	50853.11	1.5-yr	1117.53	873.75	869.99	1.61	1.56	16.62	13.22	355.49	466.25	1.94	1.54	3.76	3.76
Yellowstone County	B8	RM 329.75	50682.47	1.5-yr	1117.53	873.58	869.45	1.45	1.42	24.99	19.48	427.32	565.65	1.78	1.39	4.13	4.13
Yellowstone County	B8	RM 329.66	50540.7	1.5-yr	1117.53	873.35	869.45	1.65	1.58	23.62	19.14	345.2	456.11	1.91	1.55	3.9	3.9
Yellowstone County	B8	RM 329.57	50390.78	1.5-yr	1117.53	873.17	869.17	1.63	1.51	18.55	14.51	430.92	621.98	1.52	1.19	4	4
Yellowstone County	B8	RM 329.49	50267.58	1.5-yr	1117.53	873	869.52	1.69	1.56	20	15.31	386.61	582.46	1.61	1.23	3.48	3.48
Yellowstone County	B8	RM 329.43	50165.22	1.5-yr	1117.53	872.97	869.82	1.2	1.15	9.42	8.13	503.07	615.13	1.82	1.57	3.15	3.15
Yellowstone County	B8	RM 329.37	50053.96	1.5-yr	1117.53	872.92	869.58	1.16	1.06	8.76	6.98	443.25	721.77	1.84	1.46	3.34	3.34
Yellowstone County	B8	RM 329.31	49969.13	1.5-yr	1117.53	872.85	869.66	1.29	1.17	13.24	9.25	369.69	763.73	1.79	1.25	3.19	3.19
Yellowstone County	B8	RM 329.26	49883.05	1.5-yr	1117.53	872.78	868.74	1.31	1.22	11.32	8.27	369.6	703.62	1.79	1.3	4.04	4.04
Yellowstone County	B8	RM 329.20	49785.51	1.5-yr	1117.53	872.69	868.71	1.39	1.31	13.46	10.52	397.43	686.42	1.59	1.24	3.98	3.98
Yellowstone County	B8	RM 329.15	49699.71	1.5-yr	1230.53	872.62	868.64	1.29	1.2	16.46	12.09	463.38	790.18	1.76	1.29	3.98	3.98
Yellowstone County	B8	RM 329.08	49597.49	1.5-yr	1230.53	872.53	869.34	1.21	1.14	15.95	10.6	468.6	930.2	1.75	1.16	3.19	3.19
Yellowstone County	B8	RM 328.96	49388.08	1.5-yr	1230.53	872.35	868.99	1.44	1.17	15.91	8.54	303.06	954.32	2.05	1.1	3.36	3.36
Yellowstone County	B8	RM 328.85	49197.37	1.5-yr	1230.53	872.14	866.79	1.84	1.68	11.83	9.1	369.79	623.1	1.53	1.18	5.35	5.35
Yellowstone County	B8	RM 328.75	49036.09	1.5-yr	1230.53	872.06	866.93	1.53	1.39	10.98	8.33	388.21	757.78	1.55	1.17	5.13	5.13
Yellowstone County	B8	RM 328.68	48920.76	1.5-yr	1230.53	871.91	867.09	1.79	1.66	23.25	15.82	300.81	585.4	1.86	1.26	4.82	4.82
Yellowstone County	B8	RM 328.60	48788.86	1.5-yr	1230.53	871.69	866.36	2.16	1.96	24.15	14.66	192.21	394	2.64	1.59	5.33	5.33
Yellowstone County	B8	RM 328.52	48664.7	1.5-yr	1230.53	871.7	867.75	1.46	1.32	12.85	7.68	161.02	656.02	2.4	1.42	3.95	3.95
Yellowstone County	B8	RM 328.44	48539.46	1.5-yr	1230.53	871.45	867.34	2.31	2.12	35.93	22.8	135.76	276.34	3.33	2.1	4.11	4.11
Yellowstone County	B8	RM 328.36	48405.85	1.5-yr	1230.53	871.26	867.12	2.54	2.19	31.79	18.44	130.71	313.96	3.1	1.79	4.14	4.14
Yellowstone County	B8	RM 328.28	48276.93	1.5-yr	1230.53	871.21	867.73	1.84	1.82	28.3	20.91	186.5	333.55	2.74	2.03	4.1	4.1
Yellowstone County	B8	RM 328.16	48097.58	1.5-yr	1230.53	871.01	866.7	1.87	1.78	29.35	21.87	211.99	414.33	2.24	1.67	4.31	4.31
Yellowstone County	B8	RM 328.05	47914.16	1.5-yr	1230.53	870.83	866.62	1.65	1.54	22.08	17.98	258.24	454.65	2.16	1.76	4.21	4.21
Yellowstone County	B8	RM 327.93	47729.4	1.5-yr	1230.53	870.59	865.67	1.92	1.79	22.26	18.27	293.55	426.34	1.96	1.61	4.92	4.92
Yellowstone County	B8	RM 327.88	47641.03	1.5-yr	1230.53	870.4	866	2.24	1.97	33.79	23.93	242.96	430.76	2.05	1.45	4.4	4.4

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	1.5-yr	1230.53	870.3	866.29	2.07	1.82	22.74	12.48	174.4	422.05	2.92	1.61	4.01	4.01
Yellowstone County	B8	RM 327.75	47432.57	1.5-yr	1230.53	870.12	865.09	2.49	2.12	29.61	13.97	130.8	350.11	3.53	1.66	5.03	5.03
Yellowstone County	B8	RM 327.69	47341.24	1.5-yr	1230.53	869.9	864.48	3.03	2.19	42.81	18.38	94.05	346.72	3.8	1.62	5.42	5.42
Yellowstone County	B8	RM 327.62	47227.31	1.5-yr	1230.53	869.92	863.86	2.3	1.7	27.93	12.59	127.48	508.07	3.17	1.42	6.06	6.06
Yellowstone County	B8	RM 327.56	47124.87	1.5-yr	1230.53	869.92	864.46	1.84	1.39	18.48	9.9	152.46	592.12	2.8	1.5	5.46	5.46
Yellowstone County	B8	RM 327.51	47053.82	1.5-yr	1230.53	869.83	865.84	1.88	1.6	22.48	17.23	274.49	594.37	1.68	1.29	3.99	3.99
Yellowstone County	B8	RM 327.44	46933.28	1.5-yr	1230.53	869.81	866.93	0.95	1.09	7.19	8.39	386.07	639.7	1.51	1.76	3.19	3.19
Yellowstone County	B8	RM 327.37	46817.72	1.5-yr	1230.53	869.69	866.26	1.51	1.48	16.83	12.82	336.14	608.73	1.79	1.37	3.43	3.43
Yellowstone County	B8	RM 327.29	46687.12	1.5-yr	1230.53	869.61	866.04	1.48	1.39	14.77	10.09	301.5	676.56	1.92	1.31	3.57	3.57
Yellowstone County	B8	RM 327.23	46600.07	1.5-yr	1230.53	869.52	866.25	1.58	1.55	16.02	10.13	280.63	654.88	1.91	1.21	3.67	3.67
Yellowstone County	B8	RM 327.16	46485.25	1.5-yr	1230.53	869.38	865.67	1.78	1.65	22.93	14.2	263.59	604.61	1.99	1.23	3.71	3.71
Yellowstone County	B8	RM 327.08	46360.36	1.5-yr	1230.53	869.31	864.94	1.48	1.29	15.25	7.06	253.2	831.41	2.47	1.14	4.37	4.37
Yellowstone County	B8	RM 327.00	46240.1	1.5-yr	1230.53	869.26	864.56	1.38	1.25	15.27	8.19	226.35	576.08	3.16	1.7	4.7	4.7
Yellowstone County	B8	RM 326.94	46091.8	1.5-yr	1230.53	869.2	864.04	1.44	1.21	10.85	6.04	223.67	572.88	3.18	1.77	5.16	5.16
Yellowstone County	B8	RM 326.88	46003.77	1.5-yr	1230.53	869.09	864.08	1.81	1.49	22.62	11.11	169.6	564.03	2.97	1.46	5.01	5.01
Yellowstone County	B8	RM 326.82	45901.15	1.5-yr	1230.53	868.99	864.18	1.89	1.55	24.68	14.18	201.44	646.88	2.12	1.22	4.81	4.81
Yellowstone County	B8	RM 326.78	45830.7	1.5-yr	1230.53	868.91	864.46	2.05	1.52	24.56	13.58	163.64	637.77	2.29	1.27	4.45	4.45
Yellowstone County	B8	RM 326.70	45707.6	1.5-yr	1230.53	868.83	864.66	1.77	1.36	17.32	11.4	217.24	617.27	2.23	1.47	4.17	4.17
Yellowstone County	B8	RM 326.64	45589.72	1.5-yr	1230.53	868.7	864.92	1.57	1.56	41.53	37.27	387.19	578.19	1.52	1.37	3.78	3.78
Yellowstone County	B8	RM 326.55	45430.24	1.5-yr	1230.53	868.48	864.83	1.64	1.54	17.22	14.89	346.28	474.02	1.95	1.68	3.65	3.65
Yellowstone County	B8	RM 326.45	45281.78	1.5-yr	1230.53	868.36	864.12	1.66	1.58	17.84	14.44	328.93	479.73	2	1.62	4.24	4.24
Yellowstone County	B8	RM 326.41	45207.36	1.5-yr	1230.53	868.32	864.32	1.41	1.35	13.33	11.34	432.08	595.3	1.8	1.54	4	4
Yellowstone County	B8	RM 326.35	45106.57	1.5-yr	1230.53	868.28	864.43	1.18	1.11	8.84	7.05	479.98	657.76	2.11	1.68	3.85	3.85
Yellowstone County	B8	RM 326.28	45022.31	1.5-yr	1230.53	868.29	864.61	0.78	0.74	3.51	3.02	548.28	695.29	2.75	2.38	3.68	3.68
Yellowstone County	B8	RM 326.07	44588.61	1.5-yr	1230.53	868.04	862.39	1.81	1.8	11.05	10.7	381.62	394.79	1.79	1.73	5.64	5.64
Yellowstone County	B8	RM 326.00	44481.07	1.5-yr	1230.53	867.98	861.24	1.75	1.74	10.88	9.62	364.27	414.15	1.93	1.71	6.74	6.74
Yellowstone County	B8	RM 325.94	44379.11	1.5-yr	1230.53	867.92	861.85	1.37	1.37	28.39	25.92	542.3	596.49	1.65	1.51	6.07	6.07
Yellowstone County	B8	RM 325.89	44304.17	1.5-yr	1230.53	867.78	863	1.35	1.34	31.43	28.95	615.32	679.25	1.48	1.37	4.78	4.78
Yellowstone County	B8	RM 325.86	44262.16	1.5-yr	1230.53	867.75	863.76	1.3	1.29	6.22	5.64	595.13	662.04	1.59	1.44	3.99	3.99
Yellowstone County	B8	RM 325.81	44176.46	1.5-yr	1230.53	867.7	863.1	1.36	1.32	6.35	5.08	614.3	794.93	1.46	1.17	4.6	4.6
Yellowstone County	B8	RM 325.76	44089.5	1.5-yr	1230.53	867.66	862.66	1.18	1.15	21.48	17.5	620.78	796.41	1.68	1.36	5	5
Yellowstone County	B8	RM 325.69	43989.97	1.5-yr	1230.53	867.59	862.55	1.2	1.17	7.14	5.35	545.07	774.91	1.88	1.41	5.04	5.04
Yellowstone County	B8	RM 325.58	43809.68	1.5-yr	1230.53	867.49	862.61	1.15	1.06	21.19	15.28	446.79	718.4	2.25	1.62	4.88	4.88
Yellowstone County	B8	RM 325.50	43680.96	1.5-yr	1230.53	867.32	862.6	1.35	1.32	27.07	23.16	413.02	504.91	2.16	1.85	4.72	4.72
Yellowstone County	B8	RM 325.43	43556.76	1.5-yr	1230.53	867.15	860.89	1.39	1.34	30.19	22.01	362.11	524.78	2.41	1.75	6.26	6.26
Yellowstone County	B8	RM 325.37	43461.41	1.5-yr	1230.53	867.04	861.36	1.32	1.26	28.47	20.25	338.92	553.57	2.48	1.77	5.68	5.68
Yellowstone County	B8	RM 325.30	43343.13	1.5-yr	1230.53	866.89	861.56	1.6	1.51	22.36	13.19	249.66	468.57	2.96	1.74	5.33	5.33
Yellowstone County	B8	RM 325.21	43210.67	1.5-yr	1230.53	866.77	861.34	1.75	1.63	20.91	11.22	202.57	418.16	3.37	1.8	5.42	5.42
Yellowstone County	B8	RM 325.13	43078.9	1.5-yr	1230.53	866.62	861.36	2.01	1.85	26.98	10.41	146.48	422.01	4.1	1.57	5.26	5.26
Yellowstone County	B8	RM 325.06	42966.54	1.5-yr	1230.53	866.41	860.78	2.49	2.36	38.91	20.83	119.62	240.35	4.07	2.17	5.63	5.63
Yellowstone County	B8	RM 324.99	42864.51	1.5-yr	1230.53	866.28	861.24	2.48	2.19	42.47	15.74	132.14	414.72	3.67	1.35	5.04	5.04
Yellowstone County	B8	RM 324.91	42729.7	1.5-yr	1230.53	866.16	860.76	2.32	2.01	38.77	13.99	130.78	429.94	3.95	1.42	5.4	5.4
Yellowstone County	B8	RM 324.81	42573.19	1.5-yr	1230.53	866.05	860.39	2.16	1.9	32.97	15.67	133.97	334.85	4.08	1.93	5.66	5.66
Yellowstone County	B8	RM 324.73	42451.12	1.5-yr	1230.53	865.96	861.59	2.04	1.78	28.82	10.71	178.25	568.87	3.28	1.22	4.37	4.37
Yellowstone County	B8	RM 324.65	42323.44	1.5-yr	1230.53	865.88	861.99	1.61	1.44	30.98	17.76	300.68	626.87	2.38	1.36	3.89	3.89
Yellowstone County	B8	RM 324.56	42178.25	1.5-yr	1230.53	865.73	861.76	1.73	1.45	12.26	8.5	333.79	636.44	1.93	1.33	3.97	3.97
Yellowstone County	B8	RM 324.48	42039.74	1.5-yr	1230.53	865.59	861.58	1.6	1.5	35.71	23.42	432.94	725.27	1.73	1.13	4.01	4.01
Yellowstone County	B8	RM 324.42	41946.09	1.5-yr	1230.53	865.49	861.04	1.23	1.16	21.82	13.93	471.59	807.2	2.06	1.31	4.45	4.45
Yellowstone County	B8	RM 324.34	41812.99	1.5-yr	1230.53	865.22	861.07	1.63	1.48	44.05	25.03	376.24	764.84	1.92	1.09	4.15	4.15
Yellowstone County	B8	RM 324.28	41712.42	1.5-yr	1230.53	864.95	859.64	1.86	1.69	46.08	27.25	307.73	609.66	2.03	1.2	5.31	5.31
Yellowstone County	B8	RM 324.20	41597.64	1.5-yr	1230.53	864.86	860.59	1.03	0.99	17.06	13.16	648.44	899.78	1.79	1.38	4.27	4.27
Yellowstone County	B8	RM 324.16	41526.97	1.5-yr	1230.53	864.73	861.07	1.51	1.46	9.94	9.4	617.35	693.6	1.28	1.21	3.66	3.66
Yellowstone County	B8	RM 324.10	41434.55	1.5-yr	1230.53	864.66	860.81	1.23	1.23	21	21	608.81	608.81	1.65	1.65	3.85	3.85
Yellowstone County	B8	RM 324.04	41346.42	1.5-yr	1230.53	864.59	860.39	1.12	1.12	11.93	11.51	544.41	598.76	1.91	1.84	4.2	4.2
Yellowstone County	B8	RM 323.97	41219.29	1.5-yr	1230.53	864.51	860.64	1.11	1.08	13.16	10.93	493.93	693.16	1.98	1.64	3.87	3.87
Yellowstone County	B8	RM 323.83	40977.08	1.5-yr	1230.53	864.37	860.31	1.13	1.05	10.32	6.52	451.59	846.57	2.19	1.38	4.06	4.06
Yellowstone County	B8	RM 323.71	40786.71	1.5-yr	1230.53	864.17	858.49	1.77	1.53	20.5	9.5	218.38	589.19	2.95	1.36	5.68	5.68
Yellowstone County	B8	RM 323.60	40615.85	1.5-yr	1230.53	864.16	858.06	1.33	1.08	11.37	5.19	120.6	652.15	3.85	1.74	6.1	6.1
Yellowstone County	B8	RM 323.55	40536.83	1.5-yr	1230.53	863.82	857.58	2.68	2.24	47.98	21.06	112.75	364.48	3.44	1.51	6.24	6.24
Yellowstone County	B8	RM 323.49	40429.96	1.5-yr	1230.53	863.71	858.37	2.54	2.09	38.96	16.37	116.24	389.41	3.61	1.51	5.34	5.34
Yellowstone County	B8	RM 323.41	40309.21	1.5-yr	1230.53	863.61	859.41	2.38	1.97	35.33	16.28	125.63	402.79	3.36	1.55	4.2	4.2

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	1.5-yr	1230.53	863.55	859.58	1.97	1.64	22.78	10.95	173.87	553.04	2.84	1.36	3.97	3.97
Yellowstone County	B8	RM 323.27	40082.34	1.5-yr	1230.53	863.44	859.66	1.99	1.65	26.58	11.92	187.22	612.21	2.72	1.22	3.78	3.78
Yellowstone County	B8	RM 323.21	39985.33	1.5-yr	1230.53	863.33	859.54	2.02	1.64	29.66	14.67	210.34	645.37	2.36	1.17	3.79	3.79
Yellowstone County	B8	RM 323.16	39899.29	1.5-yr	1230.53	863.24	859.55	1.68	1.44	30.61	16.1	273.6	796.2	2.04	1.07	3.69	3.69
Yellowstone County	B8	RM 323.06	39735.77	1.5-yr	1230.53	862.91	858.56	1.65	1.65	33.11	25.98	274.4	558.68	1.91	1.5	4.35	4.35
Yellowstone County	B8	RM 322.93	39531.81	1.5-yr	1230.53	862.66	859.35	1.54	1.47	21.11	15.09	286.95	542.44	2.17	1.55	3.31	3.31
Yellowstone County	B8	RM 322.79	39301.41	1.5-yr	1230.53	862.42	858.62	1.75	1.54	22.03	12.17	219.18	586.26	2.47	1.36	3.8	3.8
Yellowstone County	B8	RM 322.69	39142.64	1.5-yr	1230.53	862.29	857.47	1.85	1.54	18.62	9.49	200.75	606.58	2.59	1.32	4.82	4.82
Yellowstone County	B8	RM 322.58	38982.22	1.5-yr	1230.53	861.76	856.56	3.19	2.84	63.71	37.67	110.86	262.89	2.79	1.65	5.2	5.2
Yellowstone County	B9	RM 322.51	38859.49	1.5-yr	1230.53	861.66	858.28	2.53	2.28	39.75	25.32	155.78	328.06	2.58	1.64	3.38	3.38
Yellowstone County	B9	RM 322.41	38696.02	1.5-yr	1230.53	861.54	857.62	1.66	1.65	24.75	23.63	338.87	415.6	1.88	1.8	3.92	3.92
Yellowstone County	B9	RM 322.34	38586.33	1.5-yr	1230.53	861.41	857.65	1.42	1.47	20.59	20.19	461.73	543.23	1.57	1.54	3.77	3.77
Yellowstone County	B9	RM 322.23	38396.25	1.5-yr	1230.53	861.26	857.13	1.12	1.13	13.98	13.2	511.17	612.67	1.88	1.77	4.13	4.13
Yellowstone County	B9	RM 322.13	38239.27	1.5-yr	1230.53	861.14	857.1	1.03	1.09	14.05	14.06	543.49	610.02	1.85	1.85	4.04	4.04
Yellowstone County	B9	RM 322.03	38090.48	1.5-yr	1230.53	860.87	856.15	1.54	1.61	39.93	38.5	416.79	483.46	1.64	1.58	4.71	4.71
Yellowstone County	B9	RM 321.91	37898.13	1.5-yr	1230.53	860.64	856.85	1.74	1.74	12.16	12.16	342.58	342.58	2.06	2.06	3.79	3.79
Yellowstone County	B9	RM 321.82	37758.36	1.5-yr	1230.53	860.63	856.34	1.25	1.25	5.75	5.75	511.22	511.22	1.92	1.92	4.3	4.3
Yellowstone County	B9	RM 321.70	37567.01	1.5-yr	1230.53	860.52	855.27	1.18	1.18	22.17	22.17	729.89	729.89	1.43	1.43	5.26	5.26
Yellowstone County	B9	RM 321.60	37414.63	1.5-yr	1230.53	860.46	854.48	0.83	0.83	6.37	6.37	688.75	688.75	2.15	2.15	5.98	5.98
Yellowstone County	B9	RM 321.48	37188.51	1.5-yr	1230.53	860.3	855.03	1.23	1.2	19.06	17.33	521.04	594.89	1.89	1.72	5.27	5.27
Yellowstone County	B9	RM 321.38	37016.94	1.5-yr	1230.53	860.05	854.75	1.5	1.45	23.46	20.7	450.89	534.22	1.8	1.59	5.3	5.3
Yellowstone County	B9	RM 321.28	36857.57	1.5-yr	1230.53	859.97	855.3	1.15	1.13	9.86	8.52	453.96	537.9	2.35	2.03	4.67	4.67
Yellowstone County	B9	RM 321.13	36652.19	1.5-yr	1230.53	859.85	854.69	1.32	1.07	18.69	10.86	273.17	642.6	3.11	1.79	5.16	5.16
Yellowstone County	B9	RM 321.05	36531.25	1.5-yr	1230.53	859.69	855.36	1.75	1.65	26.82	13.36	188.91	407.97	3.7	1.83	4.33	4.33
Yellowstone County	B9	RM 321.00	36446.98	1.5-yr	1230.53	859.38	855.12	2.67	2.54	50.98	31.46	126.54	219.02	3.62	2.21	4.26	4.26
Yellowstone County	B9	RM 320.71	36404.1	1.5-yr	1230.53	859.3	855.12	2.74	2.67	36.15	24.51	128.96	197.19	3.47	2.33	4.19	4.19
Yellowstone County	B9	RM 320.62	36361.3	1.5-yr	1230.53	859.23	855.12	2.81	2.76	38.01	23.91	129.06	211.82	3.38	2.11	4.12	4.12
Yellowstone County	B9	RM 320.92	36318.56	1.5-yr	1230.53	859.15	855.12	2.88	2.78	54.32	31.68	123.78	223.14	3.43	1.98	4.04	4.04
Yellowstone County	B9	RM 320.44	36258.3	1.5-yr	1230.53	859.1	855.19	2.72	2.59	36.85	20.31	133.44	257.51	3.38	1.84	3.92	3.92
Yellowstone County	B9	RM 320.38	36198.1	1.5-yr	1230.53	859.07	855.26	2.55	2.38	32.61	17.81	141.93	283.76	3.37	1.82	3.81	3.81
Yellowstone County	B9	RM 320.80	36137.92	1.5-yr	1230.53	859.03	855.33	2.41	2.17	38.99	20.14	149.54	383.94	3.36	1.71	3.7	3.7
Yellowstone County	B9	RM 320.71	35990.21	1.5-yr	1230.53	859.04	854.38	1.44	1.39	18.61	14.29	272.43	423.72	3.12	2.39	4.65	4.65
Yellowstone County	B9	RM 320.54	35839.45	1.5-yr	1230.53	858.92	853.99	1.5	1.44	17.63	13.36	322.75	537.45	2.53	1.91	4.94	4.94
Yellowstone County	B9	RM 320.44	35717.45	1.5-yr	1230.53	858.82	854.32	1.57	1.5	16.28	11.48	334.73	542.33	2.33	1.63	4.5	4.5
Yellowstone County	B9	RM 320.62	35556.9	1.5-yr	1230.53	858.66	854.17	1.72	1.53	30.06	14.48	239.82	622.81	2.72	1.29	4.49	4.49
Yellowstone County	B9	RM 320.38	35461.42	1.5-yr	1230.53	858.59	854.17	1.71	1.42	19.82	7.58	195.95	688.17	3.35	1.26	4.42	4.42
Yellowstone County	B9	RM 320.32	35359.13	1.5-yr	1230.53	858.39	854.57	2.26	1.99	38.13	14.39	137.54	461.9	3.61	1.34	3.83	3.83
Yellowstone County	B9	RM 320.25	35241.01	1.5-yr	1230.53	857.9	854.29	3.28	3.1	70.5	39.08	107.95	220.77	3.29	1.8	3.61	3.61
Yellowstone County	B9	RM 320.20	35163.52	1.5-yr	1230.53	857.76	854.2	3.16	2.91	66.7	36.31	118.03	257.74	3.05	1.64	3.56	3.56
Yellowstone County	B9	RM 320.14	35071.29	1.5-yr	1230.53	857.59	854.32	2.91	2.69	58.81	31.67	155.02	340.1	2.52	1.35	3.27	3.27
Yellowstone County	B9	RM 320.01	34865.89	1.5-yr	1230.53	857.28	854.42	2.26	2.3	24.53	24.38	119.85	306.65	1.9	1.89	2.93	2.93
Yellowstone County		RM 319.44	34790	1.5-yr	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	1.5-yr	1230.53	857.12	854.66	1.14	1.53	9.62	12.07	137.61	356.83	1.94	2.42	3.54	3.54
Yellowstone County	B9	RM 319.86	34625.68	1.5-yr	1230.53	857.06	854.6	1.18	1.6	12.08	13.93	147.13	433.65	1.8	2.07	3.5	3.5
Yellowstone County	B9	RM 319.78	34508.06	1.5-yr	1230.53	856.9	854.51	2.03	1.92	28.22	23.86	105.12	375.54	2.25	1.88	3.38	3.38
Yellowstone County	B9	RM 319.73	34426.63	1.5-yr	1230.53	856.71	854.69	2.64	1.76	40.13	38.65	151.29	470.22	1.79	1.72	3.24	3.24
Yellowstone County	B9	RM 319.66	34314.84	1.5-yr	1230.53	856.59	854.51	1.78	1.84	17.24	15.17	151.36	506.41	1.66	1.46	3.16	3.16
Yellowstone County	B9	RM 319.57	34163.05	1.5-yr	1230.53	856.45	853.93	1.93	1.87	17.98	15.4	188.26	450.95	1.75	1.49	3.11	3.11
Yellowstone County	B9	RM 319.44	33955.96	1.5-yr	1230.53	856.31	853.14	1.88	1.75	26.35	19.31	152.83	513.19	1.91	1.39	3.17	3.17
Yellowstone County	B9	RM 319.39	33872.4	1.5-yr	1230.53	856.22	852.65	2.05	1.83	20.4	14.24	137.96	492.76	2	1.38	3.57	3.57
Yellowstone County	B9	RM 319.34	33786.83	1.5-yr	1230.53	856.15	852.83	1.99	1.68	19.27	11.56	178.14	624.84	1.97	1.17	3.32	3.32
Yellowstone County	B9	RM 319.22	33580.15	1.5-yr	1230.53	856.07	851.79	1.98	1.33	17.81	9.54	79.67	559.15	3.18	1.65	4.28	4.28
Yellowstone County	B9	RM 319.17	33497.33	1.5-yr	1230.53	856.05	851.64	1.51	1.32	13.11	9.37	117.97	565.19	2.43	1.7	4.41	4.41
Yellowstone County	B9	RM 319.09	33368.53	1.5-yr	1230.53	855.8	851.25	2.23	2.12	36.14	27.85	127.33	259.09	2.95	2.24	4.55	4.55
Yellowstone County	B9	RM 319.04	33287.21	1.5-yr	1230.53	855.59	851.49	2.69	2.4	54.33	35.74	108.25	241.8	3.28	2.12	4.1	4.1
Yellowstone County	B9	RM 318.96	33153.16	1.5-yr	1230.53	855.41	851.64	2.39	2.24	43.97	32.96	151.86	260.05	2.84	2.11	3.77	3.77
Yellowstone County	B9	RM 318.91	33065.54	1.5-yr	1230.53	855.3	851.86	2.3	2.14	38.91	28.01	161.89	282.75	2.84	2.04	3.44	3.44
Yellowstone County	B9	RM 318.82	32939.33	1.5-yr	1230.53	855.12	851.86	2.43	2.15	30.74	19.94	150.75	301.77	2.95	1.9	3.26	3.26
Yellowstone County	B9	RM 318.74	32833.24	1.5-yr	1230.53	855.14	851.86	1.62	1.44	17.69	11.64	178.82	465.85	2.8	1.83	3.28	3.28
Yellowstone County	B9	RM 318.62	32649.76	1.5-yr	1230.53	854.93	850.67	1.67	1.66	30.43	27.01	310.23	453.92	1.84	1.63	4.26	4.26
Yellowstone County	B9	RM 318.42	32315.28	1.5-yr	1230.53	854.47	850.15	1.82	1.81	20.92	20.15	331.14	344.61	2.05	1.97	4.32	4.32

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	1.5-yr	1230.53	854.04	849.17	1.91	1.71	23.28	14.81	204.52	378.77	3.01	1.9	4.87	4.87
Yellowstone County	B9	RM 317.97	31551.39	1.5-yr	1230.53	853.82	848.35	1.93	1.89	15.98	13.1	218.76	273.52	2.91	2.37	5.47	5.47
Yellowstone County	B10	RM 317.87	31388.76	1.5-yr	1230.53	853.58	848.78	2.44	2.31	33.04	21.94	147.33	238.79	3.39	2.23	4.8	4.8
Yellowstone County	B10	RM 317.78	31248.07	1.5-yr	1230.53	853.53	848.75	2.07	1.72	23.99	11.22	142.61	419.64	3.68	1.7	4.79	4.79
Yellowstone County	B10	RM 317.70	31120.75	1.5-yr	1230.53	853.53	848.56	1.61	1.2	15.19	6.99	170.56	738.75	3.07	1.39	4.97	4.97
Yellowstone County	B10	RM 317.61	30982.56	1.5-yr	1230.53	853.39	848.29	1.9	1.54	19.87	9.85	191.64	587.1	2.78	1.36	5.1	5.1
Yellowstone County	B10	RM 317.53	30849.94	1.5-yr	1230.53	853.35	848.5	1.39	1.33	12.11	9.8	340.62	518.57	2.21	1.79	4.85	4.85
Yellowstone County	B10	RM 317.45	30723.4	1.5-yr	1230.53	853.21	848.47	1.65	1.61	19.39	17.14	322.01	444.56	1.94	1.71	4.74	4.74
Yellowstone County	B10	RM 317.37	30601.88	1.5-yr	1230.53	853.09	848.17	1.54	1.56	23.15	17.24	299.18	533.87	2	1.48	4.92	4.92
Yellowstone County	B10	RM 317.30	30483.81	1.5-yr	1230.53	852.98	848.41	1.65	1.5	16.09	11.11	254.62	494.26	2.43	1.66	4.57	4.57
Yellowstone County	B10	RM 317.19	30302.33	1.5-yr	1230.53	852.85	848.84	1.81	1.55	17.47	8.94	156.98	430.47	3.65	1.84	4.02	4.02
Yellowstone County	B10	RM 317.05	30079.26	1.5-yr	1230.53	852.69	848.38	1.97	1.78	19.24	12.25	157.38	288.43	3.79	2.39	4.31	4.31
Yellowstone County	B10	RM 316.93	29889.26	1.5-yr	1230.53	852.51	847.25	2.2	2.14	28.47	19.89	147.75	219.16	3.79	2.62	5.26	5.26
Yellowstone County	B10	RM 316.79	29668.4	1.5-yr	1230.53	852.38	847.89	2.06	1.98	25.41	18.82	143.7	206.02	4.1	3.02	4.48	4.48
Yellowstone County	B10	RM 316.66	29466.39	1.5-yr	1230.53	852.27	847.86	1.93	1.84	21.15	16.62	161.43	219.02	3.9	3.05	4.41	4.41
Yellowstone County	B10	RM 316.58	29329.04	1.5-yr	1230.53	852.17	847.74	1.98	1.83	27.26	15.09	167.32	333.69	3.66	2.02	4.43	4.43
Yellowstone County	B10	RM 316.51	29227.18	1.5-yr	1230.53	852.05	847.41	2.11	1.94	28.7	15.92	179.53	359.4	3.2	1.76	4.65	4.65
Yellowstone County	B10	RM 316.43	29091.4	1.5-yr	1230.53	851.9	847.41	2.06	1.87	38.29	27.46	237.52	377.61	2.44	1.74	4.49	4.49
Yellowstone County	B10	RM 316.33	28935.99	1.5-yr	1230.53	851.59	847.74	2.15	1.99	43.7	32.4	251.19	374.98	2.23	1.65	3.85	3.85
Yellowstone County	B10	RM 316.24	28786.65	1.5-yr	1230.53	851.33	847.5	1.84	1.79	40.25	34.57	300.24	384.26	2.08	1.79	3.84	3.84
Yellowstone County	B10	RM 316.14	28628.02	1.5-yr	1230.53	851.14	846.92	1.63	1.55	23.88	19.82	298.49	383.65	2.5	2.07	4.22	4.22
Yellowstone County	B10	RM 316.05	28475.44	1.5-yr	1230.53	850.9	846.73	1.88	1.83	35.58	31.4	288.69	336.71	2.26	1.99	4.16	4.16
Yellowstone County	B10	RM 315.97	28355.68	1.5-yr	1230.53	850.78	846.43	1.85	1.76	15.42	12.77	291.8	378.35	2.23	1.84	4.35	4.35
Yellowstone County	B10	RM 315.84	28140.65	1.5-yr	1230.53	850.47	846.58	2.34	2.19	37.7	26.15	160.45	268.94	3.02	2.09	3.89	3.89
Yellowstone County	B10	RM 315.71	27926.69	1.5-yr	1230.53	850.25	846.34	2.3	2.11	23.25	17.35	187.61	303.97	2.57	1.92	3.91	3.91
Yellowstone County	B10	RM 315.58	27720.72	1.5-yr	1230.53	850.18	846.16	1.84	1.38	20.35	9.02	134.72	638.81	3.21	1.39	4.02	4.02
Yellowstone County	B10	RM 315.44	27505.06	1.5-yr	1230.53	850.01	846.09	1.9	1.58	21.1	9.54	149.16	495.35	3.51	1.57	3.92	3.92
Yellowstone County	B10	RM 315.30	27283.58	1.5-yr	1230.53	849.89	844.45	1.47	1.33	16.86	9.96	317.48	808.46	1.96	1.15	5.44	5.44
Yellowstone County	B10	RM 315.18	27097.16	1.5-yr	1230.53	849.78	844.72	1.27	1.16	10.86	8.68	446.94	900.76	1.48	1.18	5.05	5.05
Yellowstone County	B10	RM 315.01	26818.99	1.5-yr	1230.53	849.46	844.66	1.68	1.55	22.98	18.48	441.47	633.34	1.56	1.25	4.8	4.8
Yellowstone County	B10	RM 314.85	26559.67	1.5-yr	1230.53	849.11	844.84	2.08	1.95	27.97	20.37	160.01	256.68	3.4	2.46	4.26	4.26
Yellowstone County	B10	RM 314.69	26324.37	1.5-yr	1230.53	848.83	844.24	2.29	2.22	33.56	29.02	167.8	208.33	3.09	2.67	4.59	4.59
Yellowstone County	B10	RM 314.57	26132.54	1.5-yr	1230.53	848.58	844.63	2.42	2.34	36.22	26	138.87	203.96	3.62	2.58	3.95	3.95
Yellowstone County	B10	RM 314.46	25963.96	1.5-yr	1230.53	848.43	844.48	2.2	2.13	34.14	28.83	192.14	240.28	2.86	2.41	3.95	3.95
Yellowstone County	B10	RM 314.35	25782.69	1.5-yr	1230.53	848.23	844.51	2.04	2.04	32.24	32.2	220.66	220.98	2.73	2.73	3.72	3.72
Yellowstone County	B10	RM 314.24	25607.48	1.5-yr	1230.53	848.09	844.14	1.95	1.95	17.03	17.03	217.34	217.34	2.9	2.9	3.95	3.95
Yellowstone County	B10	RM 314.15	25461.23	1.5-yr	1230.53	847.92	844.05	2.08	2.08	37.53	37.53	252.28	252.28	2.34	2.34	3.87	3.87
Yellowstone County	B10	RM 314.06	25326.45	1.5-yr	1230.53	847.88	843.63	1.51	1.51	10.76	10.52	370.08	380.33	2.19	2.15	4.25	4.25
Yellowstone County	B10	RM 313.98	25189.4	1.5-yr	1230.53	847.77	843.05	1.59	1.58	21.9	21.18	403.63	418.68	1.92	1.86	4.72	4.72
Yellowstone County	B10	RM 313.83	24942.42	1.5-yr	1230.53	847.57	843.2	1.32	1.32	14.1	14.1	446.11	446.11	2.09	2.09	4.37	4.37
Yellowstone County	B10	RM 313.72	24768.08	1.5-yr	1230.53	847.42	842.35	1.53	1.5	16.19	13.9	327.73	392.74	2.44	2.09	5.07	5.07
Yellowstone County	B10	RM 313.66	24671.51	1.5-yr	1230.53	847.32	843.14	1.71	1.66	17.88	15.04	280.75	348.83	2.53	2.13	4.18	4.18
Yellowstone County	B10	RM 313.57	24513.04	1.5-yr	1230.53	847.17	842.47	1.78	1.72	21.36	18.76	300.58	359.46	2.27	1.99	4.7	4.7
Yellowstone County	B10	RM 313.47	24364.02	1.5-yr	1230.53	847.07	841.55	1.65	1.65	16.51	16.51	275.67	275.67	2.71	2.71	5.52	5.52
Yellowstone County	B10	RM 313.33	24143.26	1.5-yr	1230.53	846.83	842.65	2.08	2.07	25.5	22.95	160.5	179.76	3.68	3.31	4.18	4.18
Yellowstone County	B10	RM 313.18	23899.74	1.5-yr	1230.53	846.38	842.19	2.77	2.77	52.06	49.83	143.41	150.22	3.1	2.96	4.19	4.19
Yellowstone County	B10	RM 313.07	23728.15	1.5-yr	1230.53	846.22	842.62	2.4	2.39	31.53	26.94	158.62	187	3.23	2.76	3.6	3.6
Yellowstone County	B10	RM 312.98	23590.93	1.5-yr	1230.53	846.18	842.5	2.02	1.9	20.37	16.37	188.56	262.82	3.08	2.46	3.68	3.68
Yellowstone County	B10	RM 312.90	23455.11	1.5-yr	1230.53	846.11	842.38	1.8	1.7	24.4	19.26	195.85	296.47	3.1	2.44	3.73	3.73
Yellowstone County	B10	RM 312.75	23227.05	1.5-yr	1230.53	845.89	841.71	1.93	1.8	23.23	18.03	219.97	339.65	2.6	2.01	4.18	4.18
Yellowstone County	B10	RM 312.65	23058.61	1.5-yr	1230.53	845.74	841.61	1.82	1.73	22.89	18.18	259.85	407.77	2.21	1.75	4.13	4.13
Yellowstone County	B10	RM 312.53	22873.59	1.5-yr	1230.53	845.67	841.37	1.47	1.34	13.04	8.39	235	452.38	3.15	2.02	4.3	4.3
Yellowstone County	B10	RM 312.49	22797.96	1.5-yr	1230.53	845.59	841.34	1.75	1.56	17.12	10.68	198.09	396.21	3.2	1.99	4.25	4.25
Yellowstone County	B10	RM 312.39	22646.67	1.5-yr	1230.53	845.42	840.85	2.19	1.81	29.7	16.84	145	407.2	2.98	1.67	4.57	4.57
Yellowstone County	B10	RM 312.33	22536.68	1.5-yr	1230.53	845.24	840.82	2.43	1.95	37.82	20.76	137.64	381.26	3.06	1.66	4.42	4.42
Yellowstone County	B10	RM 312.22	22360.55	1.5-yr	1230.53	845.16	840.91	1.98	1.62	25.27	13.77	124.41	399.82	3.54	1.9	4.25	4.25
Yellowstone County	B10	RM 312.13	22230.65	1.5-yr	1230.53	845.12	840.94	1.42	1.31	14.4	11.65	343.13	481.66	2.41	1.95	4.18	4.18
Yellowstone County	B10	RM 312.04	22082.88	1.5-yr	1230.53	844.98	840.82	1.6	1.51	19.99	17.37	339.35	437.46	2.15	1.87	4.16	4.16
Yellowstone County	B10	RM 311.95	21934.61	1.5-yr	1230.53	844.82	840.79	1.67	1.62	20.64	18.85	336.33	382.57	2.17	1.98	4.03	4.03
Yellowstone County	B10	RM 311.89	21840.24	1.5-yr	1230.53	844.75	840.76	1.54	1.47	19.83	16.8	314.63	392.56	2.52	2.13	3.99	3.99
Yellowstone County	B10	RM 311.77	21651.91	1.5-yr	1230.53	844.64	840.18	1.51	1.44	15.74	11.74	223.92	317.56	3.61	2.69	4.46	4.46

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	1.5-yr	1230.53	844.5	839.85	1.94	1.7	24.57	15.2	149.3	290.95	4.07	2.49	4.66	4.66
Yellowstone County	B10	RM 311.58	21350.77	1.5-yr	1230.53	844.36	839.63	2.01	1.74	28.04	17.76	171.55	338.3	3.39	2.13	4.73	4.73
Yellowstone County	B10	RM 311.48	21191.11	1.5-yr	1230.53	844.24	839.42	1.89	1.71	22.07	17.16	225.4	437.29	2.79	2.17	4.82	4.82
Yellowstone County	B10	RM 311.37	21010.53	1.5-yr	1230.53	844.11	839.18	1.65	1.51	20.16	15.09	332.41	510.46	2.16	1.61	4.93	4.93
Yellowstone County	B10	RM 311.27	20852.82	1.5-yr	1230.53	843.94	838.96	1.72	1.57	21.99	15.3	297.97	481.57	2.35	1.63	4.98	4.98
Yellowstone County	B10	RM 311.19	20716.8	1.5-yr	1230.53	843.86	838.84	1.58	1.41	17.33	9.98	246.87	497.09	3.08	1.76	5.02	5.02
Yellowstone County	B10	RM 311.09	20559.11	1.5-yr	1230.53	843.57	839.14	2.37	2.12	34.96	20.38	144.51	286.87	3.51	2.02	4.42	4.42
Yellowstone County	B10	RM 310.97	20364.78	1.5-yr	1230.53	843.43	839.45	2.1	1.95	26.9	17.78	166.47	276.76	3.47	2.28	3.98	3.98
Yellowstone County	B10	RM 310.87	20211.96	1.5-yr	1230.53	843.32	839.02	2.05	2	23.9	17.43	181.42	256.86	3.31	2.4	4.3	4.3
Yellowstone County	B10	RM 310.76	20019.23	1.5-yr	1230.53	843.05	839.18	2.46	2.41	32.75	23.95	138.39	195.14	3.61	2.62	3.88	3.88
Yellowstone County	B11	RM 310.67	19877.9	1.5-yr	1230.53	842.95	839.11	2.22	2.04	35.25	24.55	162.35	261.58	3.33	2.31	3.84	3.84
Yellowstone County	B11	RM 310.57	19727.96	1.5-yr	1230.53	842.8	839.08	2.08	1.92	36.05	22.69	187.6	330.45	3.09	1.94	3.71	3.71
Yellowstone County	B11	RM 310.48	19578.86	1.5-yr	1230.53	842.66	838.96	1.96	1.77	27.32	15.3	203.34	417.26	2.99	1.67	3.7	3.7
Yellowstone County	B11	RM 310.39	19437.53	1.5-yr	1230.53	842.6	838.54	1.67	1.41	12.99	7.92	249.46	521.26	2.75	1.67	4.07	4.07
Yellowstone County	B11	RM 310.31	19317.45	1.5-yr	1230.53	842.53	838.23	1.71	1.53	11.98	9.97	342.48	485.88	1.99	1.66	4.3	4.3
Yellowstone County	B11	RM 310.24	19187.47	1.5-yr	1230.53	842.41	838.23	1.5	1.46	36.87	31.89	433.87	546.43	1.79	1.54	4.18	4.18
Yellowstone County	B11	RM 310.16	19069.04	1.5-yr	1230.53	842.21	837.93	1.38	1.36	29.33	26.75	468.88	543.06	1.83	1.67	4.28	4.28
Yellowstone County	B11	RM 310.09	18955.28	1.5-yr	1230.53	842.1	837.93	1.53	1.41	7.62	6.13	457.77	637.41	1.71	1.37	4.17	4.17
Yellowstone County	B11	RM 309.97	18765.62	1.5-yr	1230.53	842.05	837.59	0.97	0.95	10.4	9.56	555.65	622.98	2.26	2.08	4.46	4.46
Yellowstone County	B11	RM 309.90	18643.48	1.5-yr	1230.53	841.97	837.5	1.26	1.21	5.36	4.67	540.37	655.65	1.78	1.55	4.47	4.47
Yellowstone County	B11	RM 309.82	18525.48	1.5-yr	1230.53	841.91	837.5	1.24	1.22	21.41	19.95	558.63	640.65	1.7	1.58	4.41	4.41
Yellowstone County	B11	RM 309.73	18379.74	1.5-yr	1230.53	841.72	837.35	1.1	1.1	20.62	20.62	755.43	755.43	1.48	1.48	4.37	4.37
Yellowstone County	B11	RM 309.65	18253.83	1.5-yr	1230.53	841.62	837.38	0.87	0.87	11.29	11.29	809.62	809.62	1.74	1.74	4.24	4.24
Yellowstone County	B11	RM 309.52	18029.98	1.5-yr	1230.53	841.36	836.68	1.23	1.23	21.71	21.71	691.35	691.35	1.45	1.45	4.68	4.68
Yellowstone County	B11	RM 309.39	17824.11	1.5-yr	1230.53	841.21	836.74	0.87	0.87	10	10	745.59	745.59	1.89	1.89	4.47	4.47
Yellowstone County	B11	RM 309.22	17557.23	1.5-yr	1230.53	841.04	836.07	1.26	1.25	10.36	8.77	331.69	398.37	2.93	2.48	4.97	4.97
Yellowstone County	B11	RM 309.06	17331.95	1.5-yr	1230.53	840.82	835.79	1.79	1.72	36.43	24.07	183.73	293.37	3.72	2.44	5.03	5.03
Yellowstone County	B11	RM 308.94	17142.36	1.5-yr	1230.53	840.28	835.4	2.94	2.9	53.25	40.35	117.13	158.65	3.57	2.68	4.88	4.88
Yellowstone County	B11	RM 308.83	16971.41	1.5-yr	1230.53	840.23	836.04	2.12	2.04	31.89	25.84	154.46	200.83	3.73	3.01	4.19	4.19
Yellowstone County	B11	RM 308.71	16778.65	1.5-yr	1230.53	840.16	835.91	1.72	1.69	13.14	10.29	245.27	320.05	2.92	2.28	4.25	4.25
Yellowstone County	B11	RM 308.62	16631.4	1.5-yr	1230.53	840.03	835.85	1.81	1.73	43.12	31.28	252.41	369.02	2.67	1.93	4.17	4.17
Yellowstone County	B11	RM 308.55	16518.64	1.5-yr	1230.53	839.88	835.85	1.83	1.79	25.72	21.82	258.7	315.03	2.58	2.19	4.02	4.02
Yellowstone County	B11	RM 308.43	16328.3	1.5-yr	1230.53	839.64	834.51	1.67	1.63	36.2	29.58	340.53	428.24	2.16	1.76	5.13	5.13
Yellowstone County	B11	RM 308.35	16192.95	1.5-yr	1230.53	839.49	834.88	1.51	1.48	22.14	16.63	353.9	483.22	2.29	1.72	4.61	4.61
Yellowstone County	B11	RM 308.24	16015.46	1.5-yr	1230.53	839.37	834.63	1.38	1.24	13.8	9.3	360.93	615.64	2.39	1.61	4.73	4.73
Yellowstone County	B11	RM 308.12	15826.82	1.5-yr	1230.53	839.28	834.63	1.27	1.16	11.26	7.39	379.98	651.9	2.48	1.62	4.64	4.64
Yellowstone County	B11	RM 308.02	15675.58	1.5-yr	1230.53	839.23	834.76	1.22	1.16	7.91	6	303.12	427.64	3.28	2.48	4.47	4.47
Yellowstone County	B11	RM 307.88	15434.86	1.5-yr	1230.53	838.82	834.45	2.73	2.32	45.6	28.81	109.26	237.15	3.6	2.23	4.37	4.37
Yellowstone County	B11	RM 307.77	15261.75	1.5-yr	1230.53	838.54	834.45	2.75	2.62	52.7	42.03	123.21	190.03	3.13	2.47	4.09	4.09
Yellowstone County	B11	RM 307.68	15125.28	1.5-yr	1230.53	838.42	834.85	2.29	2.1	35.21	20.97	153.27	313	3.17	1.87	3.57	3.57
Yellowstone County	B11	RM 307.60	14980.1	1.5-yr	1230.53	838.4	834.36	1.53	1.51	13.81	12.2	266.84	307.05	3.01	2.66	4.04	4.04
Yellowstone County	B11	RM 307.52	14873.7	1.5-yr	1230.53	838.26	834.12	1.91	1.91	23.56	21.64	250.08	273.58	2.57	2.36	4.14	4.14
Yellowstone County	B11	RM 307.46	14779.11	1.5-yr	1230.53	838.13	833.6	2	2	35.53	34.78	259.72	265.5	2.37	2.31	4.53	4.53
Yellowstone County	B11	RM 307.39	14664.34	1.5-yr	1230.53	838.01	833.63	2	1.97	17.15	13.22	247.43	327.01	2.48	1.91	4.38	4.38
Yellowstone County	B11	RM 307.30	14517.89	1.5-yr	1230.53	837.8	833.81	2.14	2.09	47.6	37.99	310.2	404.2	1.83	1.46	3.98	3.98
Yellowstone County	B11	RM 307.22	14385.45	1.5-yr	1230.53	837.6	833.87	1.9	1.83	26.9	22.3	288.4	370.36	2.2	1.82	3.72	3.72
Yellowstone County	B11	RM 307.14	14262.57	1.5-yr	1230.53	837.48	833.51	1.66	1.62	24.89	20.99	333.35	418.97	2.15	1.81	3.97	3.97
Yellowstone County	B11	RM 307.08	14166.72	1.5-yr	1230.53	837.42	833.11	1.47	1.39	13.85	9.97	347.93	535.47	2.3	1.65	4.31	4.31
Yellowstone County	B11	RM 307.01	14050.92	1.5-yr	1230.53	837.33	832.65	1.57	1.49	11.22	9.83	370.02	485.77	1.94	1.7	4.68	4.68
Yellowstone County	B11	RM 306.95	13949.23	1.5-yr	1230.53	837.21	832.35	1.79	1.62	21.73	14.65	315.1	577.49	1.96	1.32	4.87	4.87
Yellowstone County	B11	RM 306.90	13869.87	1.5-yr	1230.53	837.13	832.56	1.75	1.56	21.51	15.95	307.66	495.06	2.16	1.59	4.57	4.57
Yellowstone County	B11	RM 306.82	13726.64	1.5-yr	1230.53	837.01	832.62	1.64	1.52	18.48	13.32	326.73	506.6	2.22	1.6	4.39	4.39
Yellowstone County	B11	RM 306.72	13574.53	1.5-yr	1230.53	836.83	831.8	1.91	1.67	23.44	12.91	219.99	515.15	2.63	1.43	5.04	5.04
Yellowstone County	B11	RM 306.62	13414.11	1.5-yr	1230.53	836.6	832.77	2.14	2.02	36.76	22.94	209.66	393.29	2.5	1.55	3.83	3.83
Yellowstone County	B11	RM 306.52	13251.36	1.5-yr	1230.53	836.32	832.87	2.46	2.26	33.69	20.89	146.04	278.89	3.18	1.95	3.45	3.45
Yellowstone County	B11	RM 306.42	13099.73	1.5-yr	1230.53	836.03	832.74	2.82	2.51	44.46	26.65	129.18	278.39	2.98	1.76	3.29	3.29
Yellowstone County	B11	RM 306.34	12958.96	1.5-yr	1230.53	835.99	832.84	1.95	1.8	25.14	17.63	230.91	405.88	2.41	1.68	3.15	3.15
Yellowstone County	B11	RM 306.25	12825.95	1.5-yr	1230.53	835.78	832.35	2.09	2	30.07	26.49	302.81	402.22	1.74	1.53	3.43	3.43
Yellowstone County	B11	RM 306.16	12673.7	1.5-yr	1230.53	835.58	832.41	1.97	1.84	24.34	19.08	257.84	392.19	2.19	1.71	3.17	3.17
Yellowstone County	B11	RM 306.11	12592.39	1.5-yr	1230.53	835.5	832.17	1.93	1.76	27.56	20.63	224.66	370.09	2.53	1.89	3.33	3.33
Yellowstone County	B11	RM 306.03	12457.47	1.5-yr	1230.53	835.35	831.25	1.83	1.74	23.38	18.75	324.5	506.1	1.75	1.4	4.1	4.1

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	1.5-yr	1230.53	835.03	831.25	2.2	2.08	35.27	29.47	310.17	463.44	1.53	1.28	3.78	3.78
Yellowstone County	B11	RM 305.84	12159.82	1.5-yr	1230.53	834.73	831.1	2.19	2.02	33.06	26.22	241.85	399.68	1.93	1.53	3.64	3.64
Yellowstone County	B11	RM 305.74	11989.73	1.5-yr	1230.53	834.5	830.64	2.11	1.96	30.95	22.37	187.35	320.87	2.73	1.96	3.85	3.85
Yellowstone County	B11	RM 305.67	11883.31	1.5-yr	1230.53	834.32	830.43	2.37	2.11	34.45	22.56	153.76	315.42	2.86	1.85	3.89	3.89
Yellowstone County	B11	RM 305.60	11764.11	1.5-yr	1230.53	834.35	830.18	1.38	1.35	11.55	9.44	140.62	455.66	2.5	2.01	4.16	4.16
Yellowstone County	B11	RM 305.52	11651.48	1.5-yr	1230.53	834.12	830.18	2.23	1.91	31.38	21.75	141.31	417.43	2.25	1.54	3.94	3.94
Yellowstone County	B11	RM 305.44	11514.64	1.5-yr	1230.53	834.04	830.43	1.75	1.32	14	9.83	148.39	563.42	2.37	1.65	3.61	3.61
Yellowstone County	B11	RM 305.40	11441.77	1.5-yr	1230.53	833.93	830.61	1.85	1.6	13.31	12.25	195.74	442.29	1.9	1.74	3.32	3.32
Yellowstone County	B11	RM 305.32	11312.15	1.5-yr	1230.53	833.78	830.61	2.03	1.81	25.88	16.14	136.22	440.39	2.5	1.54	3.16	3.16
Yellowstone County	B11	RM 305.24	11186.22	1.5-yr	1230.53	833.76	830.43	1.35	1.14	13.62	8.56	123.39	717.68	2.43	1.5	3.33	3.33
Yellowstone County	B11	RM 305.06	10905.09	1.5-yr	1230.53	833.59	830.15	1.53	1.18	9.64	6.8	285.44	998.5	1.49	1.05	3.43	3.43
Yellowstone County	B11	RM 304.71	10460.6	1.5-yr	1230.53	833.31	828.96	1.42	1.4	15.25	14.03	375.29	623.2	1.54	1.41	4.35	4.35
Yellowstone County	B11	RM 304.62	10332.33	1.5-yr	1230.53	833.29	829.09	1.08	1.03	7.42	6.18	203.83	510.24	2.83	2.33	4.2	4.2
Yellowstone County	B11	RM 304.50	10132.63	1.5-yr	1230.53	832.98	829.09	2.32	2.17	42.46	31.8	114.18	223.33	3.43	2.54	3.89	3.89
Yellowstone County	B11	RM 304.42	10011.11	1.5-yr	1230.53	832.88	829.18	1.99	1.92	28.58	23.47	137.79	241.71	3.25	2.65	3.71	3.71
Yellowstone County	B11	RM 304.34	9873.393	1.5-yr	1230.53	832.8	828.78	1.8	1.79	15.97	14.95	253.67	272.57	2.7	2.52	4.02	4.02
Yellowstone County	B11	RM 304.25	9735.197	1.5-yr	1230.53	832.64	828.39	2.05	2.05	30.24	27.98	195.8	212.63	3.06	2.83	4.25	4.25
Yellowstone County	B11	RM 304.18	9615.178	1.5-yr	1230.53	832.54	828.54	2.05	2.04	19.15	17.44	204.14	225.99	2.94	2.67	4	4
Yellowstone County	B11	RM 304.09	9478.266	1.5-yr	1230.53	832.43	828.6	2.08	2.06	27.13	24.29	176.82	200.96	3.33	2.98	3.83	3.83
Yellowstone County	B11	RM 304.00	9326.206	1.5-yr	1230.53	832.32	828.39	1.95	1.94	26.52	24.54	185.99	202.64	3.38	3.13	3.94	3.94
Yellowstone County	B11	RM 303.91	9177.479	1.5-yr	1230.53	832.21	828.14	1.87	1.83	26.54	20.3	206.92	277.91	3.17	2.42	4.07	4.07
Yellowstone County	B11	RM 303.78	8973.508	1.5-yr	1230.53	831.98	827.93	2.17	2.15	26.23	20.98	153.41	195.5	3.69	2.93	4.05	4.05
Yellowstone County	B11	RM 303.65	8773.522	1.5-yr	1230.53	831.78	827.9	2.29	2.19	33.44	20.31	155.03	269.88	3.45	2.08	3.88	3.88
Yellowstone County	B11	RM 303.55	8608.195	1.5-yr	1230.53	831.65	827.65	2.14	2.06	20.89	16.7	216.52	296.09	2.64	2.1	4	4
Yellowstone County	B11	RM 303.43	8422.329	1.5-yr	1230.53	831.5	827.87	1.95	1.89	27.85	24.53	240.35	285.64	2.59	2.27	3.63	3.63
Yellowstone County	B11	RM 303.34	8276.308	1.5-yr	1230.53	831.45	826.92	1.48	1.38	13.52	11	314.85	435.15	2.53	2.05	4.53	4.53
Yellowstone County	B11	RM 303.26	8138.725	1.5-yr	1230.53	831.28	826.98	1.9	1.9	22.42	22.42	199.95	199.95	3.24	3.24	4.29	4.29
Yellowstone County	B11	RM 303.18	8018.762	1.5-yr	1230.53	831.18	826.22	1.91	1.91	26.73	26.73	201.04	201.04	3.2	3.2	4.96	4.96
Yellowstone County	B11	RM 303.09	7876.674	1.5-yr	1230.53	831.05	825.43	1.85	1.85	28.49	28.49	240.57	240.57	2.77	2.77	5.62	5.62
Yellowstone County	B11	RM 302.99	7711.603	1.5-yr	1230.53	830.85	826.22	1.81	1.8	33.77	32.24	290.68	307.05	2.33	2.22	4.63	4.63
Yellowstone County	B11	RM 302.89	7556.419	1.5-yr	1230.53	830.62	825.73	1.83	1.81	33.9	31.95	265.92	288.61	2.51	2.36	4.88	4.88
Yellowstone County	B11	RM 302.81	7423.411	1.5-yr	1230.53	830.48	825.86	1.87	1.86	23.41	22.35	182.32	192.44	3.6	3.43	4.63	4.63
Yellowstone County	B11	RM 302.70	7257.14	1.5-yr	1230.53	830.4	826.01	1.77	1.75	18.04	16.23	182.13	204.55	3.82	3.43	4.39	4.39
Yellowstone County	B12	RM 302.56	7050.708	1.5-yr	1230.53	830.1	825.25	2.38	2.38	29.23	29.23	152.92	172.66	3.39	3.39	4.85	4.85
Yellowstone County		RM 300.55	7034	1.5-yr	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	1.5-yr	1230.53	830.07	825.95	2.24	2.24	25.05	25.05	153.45	153.45	3.73	3.73	4.12	4.12
Yellowstone County	B12	RM 302.49	6918.549	1.5-yr	1230.53	830.01	825.92	2.15	2.15	25.4	25.4	163.2	185.49	3.51	3.51	4.09	4.09
Yellowstone County	B12	RM 302.41	6794.522	1.5-yr	1230.53	829.92	825.64	2.19	2.02	21.78	16.5	161.39	279.99	3.25	2.45	4.28	4.28
Yellowstone County	B12	RM 302.34	6674.634	1.5-yr	1230.53	829.83	825.76	2.09	1.95	29.75	24	204.35	330.35	2.73	2.2	4.06	4.06
Yellowstone County	B12	RM 302.22	6485.378	1.5-yr	1230.53	829.72	825.76	1.62	1.45	17.75	15.2	231.3	412.68	2.42	2.06	3.96	3.96
Yellowstone County	B12	RM 302.14	6360.047	1.5-yr	1230.53	829.49	825.76	2.2	1.89	32.31	20.68	170.84	365.97	2.8	1.78	3.73	3.73
Yellowstone County	B12	RM 302.08	6267.13	1.5-yr	1230.53	829.43	825.79	1.98	1.83	16.95	13.82	245.74	358.68	2.3	1.87	3.63	3.63
Yellowstone County	B12	RM 301.98	6100.949	1.5-yr	1230.53	829.37	825.34	1.51	1.43	15.68	13.28	248.07	353.5	2.88	2.44	4.04	4.04
Yellowstone County	B12	RM 301.88	5944.005	1.5-yr	1230.53	829.27	824.7	1.54	1.46	15.98	12.44	304.93	455.02	2.38	1.85	4.58	4.58
Yellowstone County	B12	RM 301.79	5801.18	1.5-yr	1230.53	829.21	824.36	1.44	1.37	9.43	7.86	364.09	500.75	2.17	1.8	4.84	4.84
Yellowstone County	B12	RM 301.72	5685.105	1.5-yr	1230.53	829.15	824.85	1.45	1.39	14.53	12.22	320.35	449.83	2.35	1.97	4.3	4.3
Yellowstone County	B12	RM 301.65	5569.191	1.5-yr	1230.53	829.02	824.61	1.66	1.62	20.47	17.8	304.84	406.04	2.15	1.87	4.41	4.41
Yellowstone County	B12	RM 301.59	5465.51	1.5-yr	1230.53	828.88	824.42	1.74	1.76	24.91	22.87	315.55	384.67	1.98	1.82	4.46	4.46
Yellowstone County	B12	RM 301.53	5366.723	1.5-yr	1230.53	828.75	824.12	1.64	1.68	30.13	28.79	353.3	411.73	1.87	1.78	4.63	4.63
Yellowstone County	B12	RM 301.47	5270.902	1.5-yr	1230.53	828.59	824.12	1.69	1.7	31.17	28.76	343.26	408.77	1.92	1.77	4.47	4.47
Yellowstone County	B12	RM 301.39	5140.04	1.5-yr	1230.53	828.5	824.36	1.3	1.21	16.36	13.25	340.74	535.26	2.36	1.9	4.14	4.14
Yellowstone County	B12	RM 301.33	5044.575	1.5-yr	1230.53	828.43	824.12	1.39	1.35	13.96	12.21	328.43	414.51	2.51	2.19	4.31	4.31
Yellowstone County	B12	RM 301.24	4906.408	1.5-yr	1230.53	828.31	823.87	1.58	1.52	16.06	13.57	309.21	402.54	2.38	2.01	4.44	4.44
Yellowstone County	B12	RM 301.18	4802.631	1.5-yr	1230.53	828.16	823.17	1.89	1.78	24.56	20.86	308.53	424.86	1.92	1.63	4.99	4.99
Yellowstone County	B12	RM 301.12	4698.913	1.5-yr	1230.53	828.03	823.81	1.88	1.85	23.97	22.18	307.26	344.12	2.1	1.94	4.21	4.21
Yellowstone County	B12	RM 301.07	4611.142	1.5-yr	1230.53	827.97	824	1.7	1.67	18.32	16.81	283.43	320.45	2.51	2.3	3.97	3.97
Yellowstone County	B12	RM 301.02	4531.484	1.5-yr	1230.53	827.91	823.81	1.74	1.69	13.42	12.15	246.95	289.13	2.79	2.52	4.1	4.1
Yellowstone County	B12	RM 300.97	4453.011	1.5-yr	1230.53	827.8	823.9	2.08	1.96	20.18	16.55	179.57	240.66	3.19	2.61	3.89	3.89
Yellowstone County	B12	RM 300.89	4332.618	1.5-yr	1230.53	827.68	823.66	2.15	2.11	33.76	31.07	198.89	236.85	2.67	2.46	4.01	4.01
Yellowstone County	B12	RM 300.83	4232.362	1.5-yr	1230.53	827.47	823.78	2.43	2.28	40.14	31.7	171.16	258.91	2.65	2.09	3.69	3.69
Yellowstone County	B12	RM 300.77	4151.049	1.5-yr	1230.53	827.4	823.75	2.15	2.04	32.42	26.93	168.55	250.58	2.91	2.41	3.65	3.65

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	1.5-yr	1230.53	827.33	823.63	1.8	1.65	16.31	12.67	203.25	319.13	3.01	2.33	3.7	3.7
Yellowstone County	B12	RM 300.55	3793.957	1.5-yr	1230.53	827.2	822.93	1.66	1.55	21.42	15.33	260.47	468.1	2.39	1.7	4.27	4.27
Yellowstone County	B12	RM 300.45	3633.035	1.5-yr	1230.53	827.03	822.53	1.43	1.48	24.39	19.67	297.37	492.58	2.1	1.69	4.49	4.49
Yellowstone County	B12	RM 300.35	3461.833	1.5-yr	1230.53	826.77	822.66	1.97	1.77	13.59	10.31	305.45	459.68	2	1.51	4.12	4.12
Yellowstone County	B12	RM 300.24	3286.175	1.5-yr	1230.53	826.57	822.47	1.96	1.86	40.62	34.02	345.11	449.53	1.77	1.48	4.09	4.09
Yellowstone County	B12	RM 300.15	3141.724	1.5-yr	1230.53	826.26	822.47	1.8	1.74	35.5	32.71	388.28	448.38	1.71	1.57	3.79	3.79
Yellowstone County	B12	RM 300.10	3054.752	1.5-yr	1230.53	826.14	822.35	1.9	1.73	15.59	12.14	280.49	412.86	2.23	1.73	3.79	3.79
Yellowstone County	B12	RM 300.00	2887.728	1.5-yr	1230.53	825.99	821.22	1.74	1.67	29.13	25.46	345.55	432.19	1.96	1.71	4.77	4.77
Yellowstone County	B12	RM 299.91	2736.431	1.5-yr	1230.53	825.82	821.5	1.59	1.58	18.57	17.31	347.14	467.91	1.79	1.66	4.32	4.32
Yellowstone County	B12	RM 299.83	2614.069	1.5-yr	1230.53	825.6	821.41	1.81	1.88	28.58	27.78	316.01	411.63	1.63	1.59	4.19	4.19
Yellowstone County	B12	RM 299.72	2484.158	1.5-yr	1230.53	825.48	820.89	1.58	1.56	18.4	16.71	361.19	403.07	2.15	1.95	4.59	4.59
Yellowstone County	B12	RM 299.59	2312.328	1.5-yr	1230.53	825.25	821.13	2.03	1.78	24.14	17.65	215.32	386.37	2.46	1.79	4.12	4.12
Yellowstone County	B12	RM 299.48	2160.343	1.5-yr	1230.53	825.03	821.13	2.44	1.99	27.58	14.95	134.73	372.96	3.09	1.66	3.89	3.89
Yellowstone County	B12	RM 299.38	1995.229	1.5-yr	1230.53	824.86	821.13	2.37	1.82	48.57	22.11	126.45	488.89	3.08	1.38	3.73	3.73
Yellowstone County	B12	RM 299.31	1874.433	1.5-yr	1230.53	824.69	821.22	2.37	1.92	27.69	15.79	135.55	377.57	3.01	1.7	3.47	3.47
Yellowstone County	B12	RM 299.22	1738.666	1.5-yr	1230.53	824.53	821.16	2.48	1.91	35.64	15.76	125.29	479.65	3.1	1.35	3.36	3.36
Yellowstone County	B12	RM 299.15	1613.992	1.5-yr	1230.53	824.47	820.95	2.02	1.38	22.89	9.15	151.84	784.58	2.87	1.13	3.52	3.52
Yellowstone County	B12	RM 299.06	1473.748	1.5-yr	1230.53	824.4	820.64	1.87	1.25	23.42	8.06	113.54	882.56	3.32	1.11	3.76	3.76
Yellowstone County	B12	RM 298.99	1360.532	1.5-yr	1230.53	824.29	820.46	2.08	1.42	30.82	11.81	97.62	708	3.3	1.23	3.82	3.82
Yellowstone County	B12	RM 298.93	1269.876	1.5-yr	1230.53	824.22	820.46	1.84	1.38	27.58	12.9	104.1	633.61	3.1	1.41	3.76	3.76
Yellowstone County	B12	RM 298.88	1195.725	1.5-yr	1230.53	824.15	820.43	1.76	1.38	23.83	11.26	115.75	656.04	2.95	1.36	3.72	3.72
Yellowstone County	B12	RM 298.82	1096.849	1.5-yr	1230.53	823.96	820.58	2.31	1.72	30.79	14.84	147.54	626.98	2.4	1.14	3.38	3.38
Yellowstone County	B12	RM 298.77	1018.392	1.5-yr	1230.53	823.88	820.4	2.05	1.59	26.14	13.73	182.57	662.94	2.26	1.17	3.48	3.48
Yellowstone County	B12	RM 298.67	854.844	1.5-yr	1230.53	823.76	819.39	1.97	1.47	15.49	10.51	218.55	687.25	1.82	1.22	4.37	4.37
Yellowstone County	B12	RM 298.59	724.135	1.5-yr	1230.53	823.64	819.55	1.73	1.54	22.41	18.18	229.48	570.78	1.74	1.4	4.09	4.09
Yellowstone County	B12	RM 298.49	579.164	1.5-yr	1230.53	823.53	819.27	1.71	1.35	12.68	9.82	210.19	557.94	2.13	1.63	4.26	4.26
Yellowstone County	B12	RM 298.42	469.573	1.5-yr	1230.53	823.43	819.27	1.76	1.51	23.92	13.22	173.9	596.04	2.52	1.37	4.16	4.16
Yellowstone County	B12	RM 298.35	368.049	1.5-yr	1230.53	823.31	819.97	1.97	1.61	23	12.81	145.48	455.7	3.05	1.68	3.33	3.33
Yellowstone County	B12	RM 298.30	290.003	1.5-yr	1230.53	823.27	819.82	1.79	1.49	15.46	6.6	194.97	783.48	2.49	1.05	3.45	3.45
Yellowstone County	B12	RM 298.26	211.35	1.5-yr	1230.53	823.2	819.82	1.81	1.6	21.14	13.42	198.61	520.63	2.35	1.48	3.38	3.38
Yellowstone County	B12	RM 298.19	83.499	1.5-yr	1230.53	823.07	819.49	1.96	1.68	18.29	14.04	169.09	406.94	2.36	1.8	3.59	3.59

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	1.5-yr	1166.7	822.94	820.43	1.42	1.21	11.7	8.12	188.6	713.43	2.34	1.61	2.51	2.51
Treasure County	C1	RM 297.89	61639	1.5-yr	1166.7	822.76	820.07	1.42	1.31	13.11	10.06	347.37	692.08	1.68	1.29	2.69	2.69
Treasure County	C1	RM 297.76	61392	1.5-yr	1166.7	822.55	819.93	1.53	1.42	17.09	14.01	320.49	591.4	1.69	1.38	2.62	2.62
Treasure County	C1	RM 297.62	61179	1.5-yr	1166.7	822.45	819.69	1.28	1.13	9.54	8.04	266.38	608.79	2.01	1.69	2.76	2.76
Treasure County	C1	RM 297.5	60985	1.5-yr	1166.7	822.22	819.39	1.99	1.66	22.42	13.82	157.74	466.5	2.55	1.57	2.82	2.82
Treasure County	C1	RM 297.36	60767	1.5-yr	1166.7	821.99	819.14	1.97	1.73	22.72	12.94	168.54	528.8	2.32	1.31	2.85	2.85
Treasure County	C1	RM 297.22	60535	1.5-yr	1166.7	821.78	819	1.92	1.61	21.43	14.55	146	459.89	2.34	1.57	2.78	2.78
Treasure County	C1	RM 297.08	60314	1.5-yr	1166.7	821.61	818.76	1.7	1.56	16.53	14.74	189.81	350.44	2.44	2.16	2.85	2.85
Treasure County	C1	RM 296.94	60093	1.5-yr	1166.7	821.34	818.42	2.07	1.98	24.94	19.12	170.47	332.99	2.31	1.77	2.92	2.92
Treasure County	C1	RM 296.79	59847	1.5-yr	1166.7	821.25	817.97	1.35	1.34	10.96	9.97	241.62	445.88	2.15	1.95	3.28	3.28
Treasure County	C1	RM 296.64	59608	1.5-yr	1166.7	821.14	817.9	1.44	1.39	11.38	9.21	170.95	449.97	2.4	1.93	3.24	3.24
Treasure County	C1	RM 296.51	59386	1.5-yr	1166.7	821.08	817.8	1.14	1.14	7.72	7.72	473.67	503.24	2.16	2.16	3.27	3.27
Treasure County	C1	RM 296.33	59113	1.5-yr	1166.7	820.98	817.52	1.2	1.2	7.73	7.36	331.38	453.58	2.94	2.8	3.46	3.46
Treasure County	C1	RM 296.16	58839	1.5-yr	1166.7	820.31	817.46	3.24	3.17	58.92	49.91	136.4	195.33	2.63	2.22	2.86	2.86
Treasure County	C1	RM 296.01	58583	1.5-yr	1166.7	820.14	817.45	2.03	2.03	24.33	24.33	257.41	285.91	2.23	2.23	2.68	2.68
Treasure County	C1	RM 295.83	58296	1.5-yr	1166.7	819.85	817.4	1.74	1.74	17.23	17.23	428.38	428.38	1.56	1.56	2.46	2.46
Treasure County	C1	RM 295.66	58032	1.5-yr	1166.7	819.43	817.27	2.07	2.07	26.5	26.5	316.51	316.51	1.78	1.78	2.17	2.17
Treasure County	C1	RM 295.52	57800	1.5-yr	1166.7	819.34	816.19	1.33	1.33	9.95	9.95	419.77	419.77	2.09	2.09	3.15	3.15
Treasure County	C1	RM 295.31	57474	1.5-yr	1166.7	819.23	815.61	1.16	1.13	6.37	5.94	427.7	480.08	2.3	2.15	3.62	3.62
Treasure County	C1	RM 295.13	57174	1.5-yr	1166.7	819.09	815.57	1.4	1.35	10.75	9.38	342.55	422.36	2.34	2.04	3.52	3.52
Treasure County	C1	RM 294.94	56877	1.5-yr	1166.7	818.75	815.46	2.18	2.07	25.16	21.41	183.67	239.23	2.76	2.35	3.3	3.3
Treasure County	C1	RM 294.76	56587	1.5-yr	1166.7	818.55	815.45	1.87	1.8	19.66	16.45	231.73	307.34	2.6	2.17	3.09	3.09
Treasure County	C1	RM 294.55	56261	1.5-yr	1166.7	818.31	815.36	1.88	1.68	19.75	14.69	185.92	361.29	2.64	1.96	2.95	2.95
Treasure County	C1	RM 294.38	55980	1.5-yr	1166.7	818.11	815.07	1.68	1.63	16.9	15.13	214.91	386.55	2.13	1.9	3.05	3.05
Treasure County	C1	RM 294.21	55714	1.5-yr	1166.7	817.88	814.88	1.92	1.73	20.56	15.06	192.01	360.88	2.64	1.93	3	3
Treasure County	C1	RM 294.02	55401	1.5-yr	1166.7	817.64	814.59	1.85	1.75	19.54	16.45	193.02	340.07	2.39	2.01	3.05	3.05
Treasure County	C1	RM 293.83	55100	1.5-yr	1166.7	817.45	814.3	1.75	1.52	15.8	12.77	213.94	409.52	2.36	1.91	3.15	3.15
Treasure County	C1	RM 293.63	54777	1.5-yr	1166.7	817.36	813.55	1.25	1.25	7.94	7.94	305.19	356.9	3.06	3.06	3.81	3.81
Treasure County	C1	RM 293.43	54432	1.5-yr	1166.7	817.13	813.29	1.82	1.82	17.25	16.05	194.4	429.48	3.29	3.06	3.85	3.85
Treasure County	C1	RM 293.26	54152	1.5-yr	1166.7	816.86	813.24	2.15	2.14	25.26	19.56	202.53	665.88	2.68	2.07	3.62	3.62
Treasure County	C1	RM 293.07	53839	1.5-yr	1166.7	816.53	813.24	2.19	1.69	27.67	18.45	207.78	466.78	2.37	1.57	3.29	3.29
Treasure County	C1	RM 292.83	53458	1.5-yr	1166.7	816.37	813.1	1.32	1.16	9.92	6.97	353.25	739.27	2.14	1.5	3.27	3.27
Treasure County	C1	RM 292.6	53082	1.5-yr	1166.7	816.18	812.6	1.53	1.36	12.59	8.82	234.13	412.96	2.98	2.08	3.58	3.58
Treasure County	C2	RM 292.32	52612	1.5-yr	1166.7	815.97	811.76	1.69	1.28	12.47	7.31	203.96	518.74	3.02	1.76	4.21	4.21
Treasure County	C2	RM 292.09	52256	1.5-yr	1166.7	815.82	811.6	1.74	1.35	14.73	8.13	165.09	467.88	3.39	1.85	4.23	4.23
Treasure County	C2	RM 291.9	51956	1.5-yr	1166.7	815.65	811.55	1.75	1.51	17.38	13.57	232.52	388.94	2.56	1.99	4.1	4.1
Treasure County	C2	RM 291.71	51639	1.5-yr	1166.7	815.04	811.5	2.81	2.47	45.32	31.8	155.19	262.99	2.58	1.8	3.54	3.54
Treasure County	C2	RM 291.52	51333	1.5-yr	1166.7	814.89	811.46	1.81	1.56	17.66	11.66	209.02	385.25	2.96	1.94	3.43	3.43
Treasure County	C2	RM 291.33	51042	1.5-yr	1166.7	814.65	811.46	1.94	1.84	21.6	18.44	227.95	307.33	2.43	2.07	3.2	3.2
Treasure County	C2	RM 291.15	50747	1.5-yr	1166.7	814.58	811.4	1.27	1.17	8.82	6.94	293.29	447.92	2.84	2.23	3.18	3.18
Treasure County	C2	RM 290.94	50437	1.5-yr	1166.7	814.37	811.31	1.7	1.48	17.07	11.31	253.5	528.53	2.26	1.49	3.06	3.06
Treasure County	C2	RM 290.78	50179	1.5-yr	1166.7	814.18	810.97	1.55	1.41	13.7	11.17	332.3	509.22	1.99	1.62	3.22	3.22
Treasure County	C2	RM 290.6	49891	1.5-yr	1166.7	814.08	810.54	1.11	1.07	7.3	6.89	461.75	514.61	2.24	2.11	3.55	3.55
Treasure County	C2	RM 290.43	49607	1.5-yr	1166.7	813.84	810.13	1.79	1.72	16.32	14.61	264.77	357.73	2.3	2.05	3.71	3.71
Treasure County	C2	RM 290.23	49287	1.5-yr	1166.7	813.44	810.07	2.36	2.24	29.37	24.92	147.99	190.92	3.21	2.73	3.37	3.37
Treasure County	C2	RM 290.04	48976	1.5-yr	1166.7	813.33	810.04	1.66	1.59	14.48	11.59	206.25	289.93	3.17	2.53	3.29	3.29
Treasure County	C2	RM 289.85	48667	1.5-yr	1166.7	813.17	809.87	1.49	1.43	12.79	10.89	349.46	492.83	2.05	1.74	3.3	3.3
Treasure County	C2	RM 289.67	48372	1.5-yr	1166.7	812.96	809.87	1.59	1.59	11.53	11.53	381.6	405.1	1.92	1.92	3.09	3.09
Treasure County	C2	RM 289.46	48067	1.5-yr	1166.7	812.84	809.56	1.29	1.27	9.41	7.86	364.37	488.92	2.47	2.06	3.28	3.28
Treasure County	C2	RM 289.27	47769	1.5-yr	1166.7	812.57	809.32	1.82	1.81	20.07	18.44	312.57	348.31	2.05	1.88	3.26	3.26
Treasure County	C2	RM 289.11	47515	1.5-yr	1166.7	812.42	809	1.66	1.64	14.53	12.01	221.41	286.19	3.17	2.61	3.42	3.42
Treasure County	C2	RM 288.94	47232	1.5-yr	1166.7	812.25	808.59	1.84	1.78	17.26	13.54	179.02	237.81	3.52	2.75	3.66	3.66
Treasure County	C2	RM 288.76	46939	1.5-yr	1166.7	812.1	808.33	1.77	1.58	16.88	10.43	215.46	413.13	2.97	1.82	3.77	3.77
Treasure County	C2	RM 288.55	46613	1.5-yr	1166.7	811.71	808.24	2.29	2.25	30.08	28.39	208.88	225.52	2.43	2.3	3.46	3.46
Treasure County	C2	RM 288.36	46302	1.5-yr	1166.7	811.64	807.91	1.48	1.44	11.05	9.47	215.67	260.14	3.63	3.11	3.73	3.73
Treasure County	C2	RM 288.18	46008	1.5-yr	1166.7	811.46	807.77	1.76	1.68	17.1	11.99	240.36	376.29	2.7	1.89	3.7	3.7
Treasure County	C2	RM 287.99	45713	1.5-yr	1166.7	811.31	807.58	1.66	1.59	13.48	12.22	222.07	294.72	2.91	2.65	3.73	3.73
Treasure County	C2	RM 287.81	45421	1.5-yr	1166.7	811.19	807.25	1.56	1.39	12.99	9.3	220.46	392.79	3.01	2.14	3.94	3.94
Treasure County	C2	RM 287.62	45112	1.5-yr	1166.7	810.86	807.19	2.31	2.16	27.49	20.73	133.45	211.22	3.42	2.56	3.67	3.67
Treasure County	C2	RM 287.42	44789	1.5-yr	1166.7	810.62	807.15	2.19	1.99	25.08	17.47	150.88	259.66	3.25	2.26	3.47	3.47

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	1.5-yr	1166.7	810.45	806.81	1.54	1.53	15.05	14.62	416.69	432.19	1.81	1.76	3.63	3.63
Treasure County	C2	RM 287.06	44222	1.5-yr	1166.7	810.24	806.77	1.44	1.42	11.73	11.43	489.37	510.32	1.65	1.61	3.47	3.47
Treasure County	C2	RM 286.9	43958	1.5-yr	1166.7	810.1	806.52	1.47	1.44	11.55	10.71	266.79	292.63	2.97	2.76	3.58	3.58
Treasure County	C2	RM 286.72	43671	1.5-yr	1166.7	809.91	802.22	1.89	1.89	16.12	15.58	120.35	195.36	5.13	4.95	7.69	7.69
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	1.5-yr	1166.7	809.89	802.22	1.92	1.92	16.58	16.58	118.04	148.96	5.15	5.15	7.67	7.67
Treasure County	C3	RM 286.58	43448	1.5-yr	1166.7	809.78	806.32	2	1.87	20.95	16.31	172.63	268.78	3.27	2.54	3.47	3.47
Treasure County	C3	RM 286.51	43344	1.5-yr	1166.7	809.75	806.32	1.78	1.67	16.37	14.38	192.79	342.95	3.31	2.91	3.44	3.44
Treasure County	C3	RM 286.46	43257	1.5-yr	1166.7	809.72	804.36	1.73	1.61	15.32	12.17	191.92	352.78	3.44	2.72	5.36	5.36
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	1.5-yr	1166.7	809.68	804.36	1.75	1.65	15.76	12.59	194.89	330.92	3.37	2.69	5.32	5.32
Treasure County	C3	RM 286.37	43117	1.5-yr	1166.7	809.63	806.17	1.72	1.62	16.49	14.78	290.1	590	2.64	2.37	3.46	3.46
Treasure County	C3	RM 286.26	42931	1.5-yr	1166.7	809.41	806.17	2.04	1.86	30.27	21.86	194.11	354.44	2.68	1.94	3.25	3.25
Treasure County	C3	RM 286.06	42624	1.5-yr	1166.7	809.29	806.08	1.35	1.2	10.18	6.63	349.36	739.42	2.39	1.55	3.21	3.21
Treasure County	C3	RM 285.81	42213	1.5-yr	1166.7	809.03	805.78	1.79	1.4	18.51	9.53	171.34	836.42	2.32	1.18	3.24	3.24
Treasure County	C3	RM 285.56	41812	1.5-yr	1166.7	808.87	805.34	1.33	1.18	9.06	3.91	230.66	845.59	3.38	1.46	3.54	3.54
Treasure County	C3	RM 285.23	41280	1.5-yr	1166.7	808.61	805.17	1.8	1.35	17.65	6.91	134.36	867.4	2.89	1.11	3.44	3.44
Treasure County	C3	RM 284.69	40395	1.5-yr	1166.7	807.98	804.85	2.27	1.94	30.19	20.92	130.6	397.22	2.32	1.59	3.13	3.13
Treasure County	C3	RM 284.26	39705	1.5-yr	1166.7	807.68	804.6	1.31	1.22	10.3	8.55	344.94	539.58	2.13	1.77	3.08	3.08
Treasure County	C3	RM 283.96	39199	1.5-yr	1166.7	807.4	804.3	1.6	1.41	14.85	7.53	238.23	730.61	2.39	1.2	3.1	3.1
Treasure County	C3	RM 283.69	38766	1.5-yr	1166.7	807.23	803.9	1.5	1.19	11.81	4.36	177.51	873.52	3.19	1.16	3.33	3.33
Treasure County	C3	RM 283.35	38229	1.5-yr	1166.7	807.06	803.42	1.37	1.01	9.84	3.6	267.19	1280.89	2.67	0.97	3.64	3.64
Treasure County	C3	RM 283.05	37749	1.5-yr	1166.7	806.71	803.32	1.98	1.7	21.39	8.15	179.57	672.34	2.84	1.07	3.39	3.39
Treasure County	C3	RM 282.78	37306	1.5-yr	1166.7	806.43	803.11	1.69	1.39	14.35	5.93	227.17	842.54	2.47	1.01	3.32	3.32
Treasure County	C3	RM 282.56	36942	1.5-yr	1166.7	806.29	802.83	1.27	1.04	9.08	4.11	276.16	1181.77	2.14	0.96	3.46	3.46
Treasure County	C3	RM 282.31	36546	1.5-yr	1166.7	806.12	802.74	1.46	0.97	11.46	3.68	181.34	1254.65	3.06	0.96	3.39	3.39
Treasure County	C3	RM 282.09	36195	1.5-yr	1166.7	805.77	802.56	2.29	1.64	30.88	14.31	176.72	757.89	2.24	1.03	3.21	3.21
Treasure County	C4	RM 281.73	35619	1.5-yr	1166.7	805.38	801.74	1.58	1.48	13.74	12.39	299.64	403.88	2.33	2.11	3.64	3.64
Treasure County	C4	RM 281.35	35005	1.5-yr	1166.7	805.23	801.53	1.14	1.11	6.67	5.71	292.15	490.1	3.47	2.97	3.7	3.7
Treasure County	C4	RM 281.03	34521	1.5-yr	1166.7	805.01	801.19	1.67	1.53	14.2	8.35	200.52	422.06	3.45	2.01	3.82	3.82
Treasure County	C4	RM 280.73	34051	1.5-yr	1166.7	804.83	800.82	1.5	1.41	8.26	7.44	385.35	481.65	1.99	1.79	4.01	4.01
Treasure County	C4	RM 280.5	33687	1.5-yr	1166.7	804.69	800.66	1.4	1.33	6.9	6.14	470.35	584.29	1.75	1.56	4.03	4.03
Treasure County	C4	RM 280.27	33304	1.5-yr	1166.7	804.58	800.31	1.12	1.08	5.66	5.37	583.95	679.06	1.74	1.65	4.26	4.26
Treasure County	C4	RM 279.95	32800	1.5-yr	1166.7	804.43	800.08	1.05	0.97	5.89	4.75	490.5	711.79	2.2	1.77	4.35	4.35
Treasure County	C4	RM 279.6	32231	1.5-yr	1166.7	804.01	799.98	2.08	1.87	16.38	12.98	255.61	385.1	2.13	1.69	4.03	4.03
Treasure County	C4	RM 279.33	31805	1.5-yr	1166.7	803.48	799.98	2.42	2.35	29.66	26.19	224.19	276.62	2.14	1.89	3.5	3.5
Treasure County	C4	RM 279.14	31495	1.5-yr	1166.7	803.3	799.96	1.78	1.63	15.68	12.37	225.7	349.51	2.71	2.13	3.35	3.35
Treasure County	C4	RM 278.96	31209	1.5-yr	1166.7	803.24	799.87	1.24	1.22	7.76	7.34	350.96	411.32	2.58	2.44	3.37	3.37
Treasure County	C4	RM 278.76	30894	1.5-yr	1166.7	803.08	799.6	1.45	1.43	12.21	11.66	364.69	427.53	2.08	1.99	3.48	3.48
Treasure County	C4	RM 278.56	30571	1.5-yr	1166.7	802.78	799.53	1.74	1.7	18.9	17.48	330.25	400.62	1.91	1.77	3.26	3.26
Treasure County	C4	RM 278.37	30259	1.5-yr	1166.7	802.66	799.26	1.24	1.23	8.57	8.46	362.45	400.62	2.61	2.57	3.4	3.4
Treasure County	C5	RM 278.16	29915	1.5-yr	1166.7	802.38	798.81	1.95	1.92	19.05	17.72	195.82	248.67	3.05	2.83	3.56	3.56
Treasure County	C5	RM 277.99	29648	1.5-yr	1166.7	802.14	798.77	2.14	2.14	23.78	23.41	182.58	221.23	2.99	2.94	3.37	3.37
Treasure County	C5	RM 277.8	29336	1.5-yr	1166.7	801.95	798.74	1.89	1.89	19.17	17.77	206.76	248.38	2.99	2.77	3.21	3.21
Treasure County	C5	RM 277.61	29041	1.5-yr	1166.7	801.76	798.72	1.86	1.82	18.71	16.28	211.9	267.11	2.94	2.56	3.04	3.04
Treasure County	C5	RM 277.43	28747	1.5-yr	1166.7	801.59	798.48	1.62	1.59	15.26	14.1	302.14	351.93	2.37	2.19	3.11	3.11
Treasure County	C5	RM 277.22	28415	1.5-yr	1166.7	801.3	798.47	1.84	1.84	18.69	18.69	270.69	278.56	2.34	2.34	2.84	2.84
Treasure County	C5	RM 277.04	28123	1.5-yr	1166.7	801.12	798.4	1.62	1.59	15.02	13.69	295.69	340.49	2.43	2.21	2.72	2.72
Treasure County	C5	RM 276.81	27791	1.5-yr	1166.7	801.01	797.8	1.21	1.2	8.24	8.01	366.77	389.62	2.62	2.55	3.21	3.21
Treasure County	C5	RM 276.63	27499	1.5-yr	1166.7	800.77	797.4	1.86	1.81	18.58	16.15	209.14	286.98	2.98	2.59	3.37	3.37
Treasure County	C5	RM 276.4	27133	1.5-yr	1166.7	800.56	797.1	1.77	1.68	16.07	14.14	223.29	302.72	2.92	2.56	3.46	3.46
Treasure County	C5	RM 276.19	26801	1.5-yr	1166.7	800.38	796.87	1.77	1.62	16.87	13.04	180.32	359.58	2.96	2.28	3.52	3.52
Treasure County	C5	RM 276.01	26502	1.5-yr	1166.7	800.21	796.74	1.85	1.68	17.79	12.99	151.98	308.02	3.3	2.39	3.47	3.47
Treasure County	C5	RM 275.81	26193	1.5-yr	1166.7	800.08	796.61	1.59	1.48	13.75	10.69	179.56	366.51	2.92	2.26	3.47	3.47
Treasure County	C5	RM 275.63	25896	1.5-yr	1166.7	799.9	796.49	1.85	1.6	17.96	11.95	132.36	358.53	3.22	2.11	3.41	3.41
Treasure County	C5	RM 275.45	25606	1.5-yr	1166.7	799.8	796.37	1.51	1.3	12.57	9.17	153.82	468.52	2.73	1.96	3.43	3.43
Treasure County	C5	RM 275.26	25299	1.5-yr	1166.7	799.68	796.16	1.41	1.41	10.22	10.22	245.11	258.56	3.38	3.38	3.51	3.51
Treasure County	C5	RM 275.09	25033	1.5-yr	1166.7	799.51	796.13	1.78	1.74	16.56	15.32	198.01	223.04	3.26	3.01	3.38	3.38
Treasure County	C6	RM 274.89	24716	1.5-yr	1166.7	799.35	796.04	1.68	1.45	15.29	10	226.05	926.74	2.95	1.92	3.31	3.31
Treasure County	C6	RM 274.72	24440	1.5-yr	1166.7	799.02	796.04	2.22	2.02	28.57	25.64	212.46	486.34	2.36	2.11	2.98	2.98

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	1.5-yr	1166.7	798.83	795.79	1.57	1.38	15.56	12.29	285.07	1213.87	1.97	1.56	3.04	3.04
Treasure County	C6	RM 274.38	23892	1.5-yr	1166.7	798.66	795.55	1.53	1.3	13.12	5.36	217.6	1035.26	2.57	1.04	3.11	3.11
Treasure County	C6	RM 274.13	23491	1.5-yr	1166.7	798.45	795.16	1.64	1.38	16.17	7.83	212.44	985.03	2.15	1.03	3.29	3.29
Treasure County	C6	RM 273.83	22999	1.5-yr	1166.7	798.3	794.46	1.34	1.08	9.32	4.02	168.71	1150.66	3.33	1.42	3.84	3.84
Treasure County	C6	RM 273.58	22595	1.5-yr	1166.7	798.09	794.04	1.77	1.44	15.68	6.37	165.59	992.44	3.06	1.23	4.06	4.06
Treasure County	C6	RM 273.35	22238	1.5-yr	1166.7	797.87	794.04	1.9	1.41	19.08	5.49	199.77	1856.7	2.41	0.68	3.83	3.83
Treasure County	C6	RM 273.15	21916	1.5-yr	1166.7	797.71	793.92	1.57	1.16	13.23	3.72	251.68	2413.94	2.2	0.61	3.79	3.79
Treasure County	C6	RM 272.83	21397	1.5-yr	1166.7	797.53	793.79	1.39	1.03	9.36	2.3	239.77	2545.96	2.73	0.66	3.74	3.74
Treasure County	C6	RM 272.5	20872	1.5-yr	1166.7	797.13	793.46	2.12	1.66	24.18	11.95	220.49	1360.9	2.04	1	3.67	3.67
Treasure County	C6	RM 272.19	20368	1.5-yr	1166.7	796.68	793.34	1.89	1.55	19.17	11.35	234.31	781	2.5	1.48	3.34	3.34
Treasure County	C6	RM 271.91	19902	1.5-yr	1166.7	796.44	793.18	1.62	1.31	14.32	8.86	221.87	648.63	2.78	1.72	3.26	3.26
Treasure County	C6	RM 271.68	19534	1.5-yr	1166.7	796.15	792.81	2.02	1.65	22.77	14.78	182.46	458.45	2.66	1.73	3.34	3.34
Treasure County	C6	RM 271.41	19102	1.5-yr	1166.7	796.06	792.54	1.11	0.99	7.12	5.25	280.46	732.97	2.38	1.75	3.52	3.52
Treasure County	C6	RM 271.06	18548	1.5-yr	1166.7	795.7	792.18	2.01	1.9	22.57	18.18	160.62	309.7	2.65	2.12	3.53	3.53
Treasure County	C6	RM 270.64	17870	1.5-yr	1166.7	795.48	792.05	1.31	1.13	9.82	5.89	209.07	728.13	2.45	1.46	3.42	3.42
Treasure County	C6	RM 270.05	16897	1.5-yr	1166.7	795.03	791.48	1.95	1.54	19.86	8.86	147.61	601.38	2.92	1.28	3.55	3.55
Treasure County	C6	RM 269.75	16413	1.5-yr	1166.7	794.68	791.35	1.91	1.67	20.6	11.61	213.4	491.84	2.57	1.44	3.32	3.32
Treasure County	C6	RM 269.47	15967	1.5-yr	1166.7	794.39	791.23	1.81	1.7	17.84	14.2	202.31	305.04	2.84	2.25	3.16	3.16
Treasure County	C7	RM 269.27	15645	1.5-yr	1166.7	794.26	791.23	1.47	1.36	12.12	9.36	264.01	434.54	2.62	2.01	3.03	3.03
Treasure County	C7	RM 269.06	15308	1.5-yr	1166.7	794.13	791.01	1.32	1.18	9.95	8.13	167.03	629.34	2.54	2.05	3.12	3.12
Treasure County	C7	RM 268.83	14957	1.5-yr	1166.7	794.03	790.6	0.92	0.91	5.25	3.49	250.88	1016.17	1.98	1.31	3.42	3.42
Treasure County	C7	RM 268.55	14516	1.5-yr	1166.7	793.9	790.17	1.13	1.09	6.85	3.74	210.38	678.99	3	1.62	3.73	3.73
Treasure County	C7	RM 268.2	13976	1.5-yr	1166.7	793.67	789.62	1.63	1.47	14.25	8.93	223.3	420.27	3.02	1.89	4.05	4.05
Treasure County	C7	RM 267.87	13439	1.5-yr	1166.7	793.38	789.53	1.8	1.47	16.82	9.98	183.65	402.44	3.33	1.97	3.85	3.85
Treasure County	C7	RM 267.53	12884	1.5-yr	1166.7	792.93	789.5	2.11	1.66	25.49	13.86	219.79	553.06	2.35	1.27	3.43	3.43
Treasure County	C7	RM 267.14	12253	1.5-yr	1166.7	792.74	789.26	1.29	0.99	8.61	5.19	217.69	845.23	2.67	1.6	3.48	3.48
Treasure County	C7	RM 266.8	11700	1.5-yr	1166.7	792.6	789.2	1.31	1.05	9.48	6.01	209.18	872.53	2.72	1.71	3.4	3.4
Treasure County	C7	RM 266.41	11078	1.5-yr	1166.7	792.28	789.14	2.02	1.46	23.08	13.1	139.19	681.05	2.58	1.44	3.15	3.15
Treasure County	C7	RM 266.11	10593	1.5-yr	1166.7	791.98	788.83	1.69	1.52	16.99	12.04	244.34	674.71	2.16	1.53	3.15	3.15
Treasure County	C7	RM 265.92	10283	1.5-yr	1166.7	791.77	788.65	1.76	1.51	15.6	11.56	235.48	787.42	2.12	1.56	3.12	3.12
Treasure County	C7	RM 265.68	9915	1.5-yr	1166.7	791.6	788.21	1.66	1.41	14.34	9.82	177.66	484.11	3.23	2.2	3.39	3.39
Treasure County	C7	RM 265.52	9650	1.5-yr	1166.7	791.43	788.07	1.88	1.49	19.91	12.08	153.21	502.22	2.6	1.56	3.36	3.36
Treasure County	C7	RM 265.34	9362	1.5-yr	1166.7	791.18	788.07	1.86	1.62	20.5	14.75	160.17	450.36	2.24	1.59	3.11	3.11
Treasure County	C7	RM 265.16	9071	1.5-yr	1166.7	790.99	787.95	1.45	1.41	12.42	11.17	265.43	497.32	1.85	1.66	3.04	3.04
Treasure County	C7	RM 264.98	8775	1.5-yr	1166.7	790.77	787.59	1.84	1.61	16.57	13.2	200.06	419.58	2.19	1.73	3.18	3.18
Treasure County	C7	RM 264.81	8508	1.5-yr	1166.7	790.67	787.35	1.14	1.17	7.15	7.6	600.91	832.46	1.13	1.2	3.32	3.32
Treasure County	C7	RM 264.64	8216	1.5-yr	1166.7	790.52	787.22	1.29	1.23	5.86	6.39	635.47	867.88	1	1.1	3.3	3.3
Treasure County	C7	RM 264.39	7803	1.5-yr	1166.7	790.3	786.86	1.44	1.38	11.38	10.4	340.51	541.43	1.71	1.56	3.45	3.45
Treasure County	C7	RM 264.15	7406	1.5-yr	1166.7	790.15	786.6	1.36	1.12	10.11	6.98	172.1	712.68	2.15	1.46	3.55	3.55
Treasure County	C7	RM 263.97	7116	1.5-yr	1166.7	790.05	786.49	1.38	1.03	9.77	5.21	169.94	639.93	3.37	1.77	3.56	3.56
Treasure County	C7	RM 263.79	6834	1.5-yr	1166.7	789.86	786.49	1.84	1.55	15.91	11.46	193.92	448.51	2.35	1.67	3.37	3.37
Treasure County	C7	RM 263.6	6534	1.5-yr	1166.7	789.69	786.37	1.64	1.33	14.94	7.33	198.56	674.9	2.68	1.3	3.32	3.32
Treasure County	C7	RM 263.39	6194	1.5-yr	1166.7	789.56	786.25	1.15	1.13	7.79	7.48	436.63	542.65	2.14	2.05	3.32	3.32
Treasure County	C7	RM 263.19	5862	1.5-yr	1166.7	789.25	786	1.81	1.67	21.32	17.5	330.17	506.61	1.69	1.38	3.24	3.24
Treasure County	C7	RM 262.95	5479	1.5-yr	1166.7	788.98	785.85	1.61	1.5	12.69	9.32	254.44	395.04	2.69	1.97	3.13	3.13
Treasure County	C7	RM 262.78	5206	1.5-yr	1166.7	788.81	785.76	1.66	1.55	12.6	10.15	366.89	586.52	1.59	1.28	3.05	3.05
Treasure County	C7	RM 262.58	4883	1.5-yr	1166.7	788.59	785.64	1.32	1.3	11.03	9.85	569.95	797.94	1.39	1.24	2.95	2.95
Treasure County	C7	RM 262.42	4613	1.5-yr	1166.7	788.44	785.54	1.16	1.11	7.26	6.72	555.61	775.35	1.54	1.42	2.9	2.9
Treasure County	C7	RM 262.24	4323	1.5-yr	1166.7	788.31	785.43	1.03	1.03	7.2	7.08	764.39	860.87	1.48	1.46	2.89	2.89
Treasure County	C7	RM 261.95	3917	1.5-yr	1166.7	788.08	785.28	1.28	1.25	9.38	8.71	473.61	520.98	1.92	1.79	2.8	2.8
Treasure County	C7	RM 261.7	3519	1.5-yr	1166.7	787.82	784.87	1.33	1.33	16.76	16.75	397.83	398.03	2.21	2.21	2.95	2.95
Treasure County	C7	RM 261.53	3256	1.5-yr	1166.7	787.51	784.51	1.66	1.65	24.99	24.41	346.39	357.43	2.03	1.98	3	3
Treasure County	C7	RM 261.35	2959	1.5-yr	1166.7	787.41	784.33	1.08	1.08	6.18	6.18	469.83	469.83	2.29	2.29	3.08	3.08
Treasure County	C7	RM 261.2	2720	1.5-yr	1166.7	787.26	784.14	1.37	1.37	20.82	20.82	409.93	409.93	2.08	2.08	3.12	3.12
Treasure County	C7	RM 261.03	2441	1.5-yr	1166.7	787.16	783.66	1.12	1.12	6.28	6.17	386.86	394.84	2.7	2.65	3.5	3.5
Treasure County	C7	RM 260.84	2142	1.5-yr	1166.7	787.04	783.41	1.32	1.31	9.56	9.28	338.87	350.48	2.62	2.54	3.63	3.63
Treasure County	C7	RM 260.66	1863	1.5-yr	1166.7	786.92	783.29	1.43	1.43	10.1	9.7	314.09	334.36	2.59	2.49	3.62	3.62
Treasure County	C8	RM 259.9	634	1.5-yr	1166.7	785.89	782.46	2.55	2.44	34.3	28.2	143.71	184.4	3.15	2.59	3.44	3.44
Treasure County	C8	RM 259.72	347	1.5-yr	1166.7	785.65	782.45	2.26	2.15	27.32	25.13	169.79	196.62	2.99	2.75	3.2	3.2
Treasure County	C8	RM 259.55	68	1.5-yr	1166.7	785.53	782.2	1.7	1.7	15.31	15.31	236.21	236.21	2.91	2.91	3.33	3.33

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	1.5-yr	1166.7	785.53	782.19	1.76	1.67	16.29	14.35	202.44	245.65	3.23	2.84	3.34	3.34
Rosebud County	C8	RM 259.41	87598	1.5-yr	1166.7	785.37	781.96	1.76	1.76	17.39	17.39	203.39	203.39	3.26	3.26	3.41	3.41
Rosebud County	C8	RM 259.22	87292	1.5-yr	1166.7	785.24	781.55	1.59	1.5	12.65	9.53	231.43	329.67	3.14	2.36	3.69	3.69
Rosebud County	C8	RM 259.04	87004	1.5-yr	1166.7	785.1	781	1.68	1.63	16.16	14.61	206.51	241.78	3.28	2.96	4.1	4.1
Rosebud County	C8	RM 258.85	86696	1.5-yr	1166.7	784.91	780.9	1.8	1.74	15.02	13.23	228.21	271.98	2.8	2.46	4.01	4.01
Rosebud County	C8	RM 258.66	86399	1.5-yr	1166.7	784.79	780.78	1.67	1.65	13.87	12.72	181.02	203.12	3.81	3.49	4.01	4.01
Rosebud County	C8	RM 258.47	86098	1.5-yr	1166.7	784.61	780.65	1.88	1.78	18.29	15.12	194.7	262.87	3.03	2.5	3.96	3.96
Rosebud County	C8	RM 258.28	85798	1.5-yr	1166.7	784.44	780.53	1.78	1.52	16.68	12.17	204.06	368.95	2.86	2.08	3.91	3.91
Rosebud County	C8	RM 258.1	85498	1.5-yr	1166.7	784.32	780.14	1.64	1.5	13.15	9.64	170.16	271.92	3.93	2.87	4.18	4.18
Rosebud County	C8	RM 257.91	85200	1.5-yr	1166.7	784.17	780.14	1.72	1.68	16.51	15.14	218.68	307.29	2.71	2.48	4.03	4.03
Rosebud County	C8	RM 257.71	84875	1.5-yr	1166.7	783.84	780.14	2.09	1.9	26.12	18.48	214.27	399.79	2.18	1.54	3.7	3.7
Rosebud County	C8	RM 257.54	84597	1.5-yr	1166.7	783.62	780.17	1.88	1.65	19.41	12.96	193.95	392.82	2.82	1.87	3.45	3.45
Rosebud County	C8	RM 257.36	84298	1.5-yr	1166.7	783.4	780.05	1.91	1.59	20.18	14.08	175.91	406.88	2.61	1.82	3.35	3.35
Rosebud County	C8	RM 257.16	83984	1.5-yr	1166.7	783.37	780	1.08	0.96	6.13	4.53	302.22	529.7	3.15	2.33	3.37	3.37
Rosebud County	C8	RM 256.87	83608	1.5-yr	1166.7	783.05	779.89	2.13	1.9	24.45	18.02	172.42	279.83	2.98	2.19	3.16	3.16
Rosebud County	C8	RM 256.65	83257	1.5-yr	1166.7	782.94	779.82	1.53	1.34	12.5	10.02	165.9	379.04	2.88	2.29	3.11	3.11
Rosebud County	C8	RM 256.45	82941	1.5-yr	1166.7	782.76	779.67	1.61	1.53	13.93	11.98	219.24	297.94	2.97	2.55	3.09	3.09
Rosebud County	C8	RM 256.26	82630	1.5-yr	1166.7	782.52	779.58	1.83	1.65	20.24	14.12	272.11	446.16	2.28	1.58	2.94	2.94
Rosebud County	C8	RM 256.1	82375	1.5-yr	1166.7	782.38	779.42	1.42	1.42	10.92	10.92	430.6	430.6	1.9	1.9	2.96	2.96
Rosebud County	C8	RM 255.91	82077	1.5-yr	1166.7	782.29	779.09	1.1	1.1	6.55	6.55	448.33	448.33	2.37	2.37	3.2	3.2
Rosebud County	C8	RM 255.7	81747	1.5-yr	1166.7	782.1	778.73	1.53	1.52	12.9	12.29	290.22	306.32	2.63	2.51	3.37	3.37
Rosebud County	C8	RM 255.51	81446	1.5-yr	1166.7	781.9	778.49	1.72	1.68	16.2	14.55	244.61	291.3	2.77	2.48	3.41	3.41
Rosebud County	C8	RM 255.31	81125	1.5-yr	1166.7	781.73	778.36	1.62	1.57	15.99	13.38	228.96	296.97	3.13	2.61	3.37	3.37
Rosebud County	C8	RM 255.14	80856	1.5-yr	1166.7	781.56	778.24	1.77	1.73	16.47	12.54	206.85	280.05	3.17	2.41	3.32	3.32
Rosebud County	C8	RM 254.95	80554	1.5-yr	1166.7	781.37	778.12	1.85	1.81	18.04	15.58	202.69	240.28	3.11	2.68	3.25	3.25
Rosebud County	C8	RM 254.76	80251	1.5-yr	1166.7	781.21	778	1.75	1.71	16.19	12.92	215.06	279.82	3.1	2.46	3.21	3.21
Rosebud County	C8	RM 254.58	79960	1.5-yr	1166.7	781.08	777.88	1.65	1.63	14.48	12.15	228.56	277.95	3.08	2.58	3.2	3.2
Rosebud County	C8	RM 254.39	79658	1.5-yr	1166.7	780.99	777.41	1.35	1.33	9.7	8.79	291.67	339.61	2.97	2.69	3.58	3.58
Rosebud County	C8	RM 254.2	79359	1.5-yr	1166.7	780.78	777.39	1.75	1.74	17.3	16.86	266.21	277.19	2.51	2.44	3.39	3.39
Rosebud County	C8	RM 254.01	79052	1.5-yr	1166.7	780.65	776.82	1.58	1.58	12.5	11.86	204.22	215.82	3.62	3.43	3.83	3.83
Rosebud County	C9	RM 253.82	78779	1.5-yr	1166.7	780.48	776.24	1.79	1.75	18.14	16.48	238.1	275.95	2.73	2.47	4.24	4.24
Rosebud County	C9	RM 253.63	78478	1.5-yr	1166.7	780.2	776.12	2.06	1.91	28.42	16.38	147.18	307.82	3.69	2.11	4.08	4.08
Rosebud County	C9	RM 253.45	78178	1.5-yr	1166.7	780	775.97	2.03	1.7	18.9	10.8	166.31	596.35	3.01	1.71	4.03	4.03
Rosebud County	C9	RM 253.26	77879	1.5-yr	1166.7	779.96	775.72	1.36	1.11	8.2	3.38	208.08	760.3	3.67	1.5	4.24	4.24
Rosebud County	C9	RM 253.07	77578	1.5-yr	1166.7	779.77	775.57	1.88	1.55	17.66	7.85	168.84	549.74	3.29	1.45	4.2	4.2
Rosebud County	C9	RM 252.88	77278	1.5-yr	1166.7	779.65	775.45	1.57	1.37	13.58	7.91	221.02	539.02	2.76	1.59	4.2	4.2
Rosebud County	C9	RM 252.69	76962	1.5-yr	1166.7	779.59	775.33	1.13	0.88	6.84	3.39	260	915.88	2.97	1.46	4.26	4.26
Rosebud County	C9	RM 252.49	76646	1.5-yr	1166.7	779.37	775.36	1.91	1.44	18.43	8.27	147.66	761.08	3.38	1.5	4.01	4.01
Rosebud County	C9	RM 252.24	76252	1.5-yr	1166.7	779.16	775.4	1.88	1.57	19.81	11.14	165.07	559.33	2.77	1.54	3.76	3.76
Rosebud County	C9	RM 252.01	75885	1.5-yr	1166.7	778.92	775.39	1.69	1.54	21.03	12.17	238.25	696.04	2.57	1.48	3.53	3.53
Rosebud County	C9	RM 251.7	75438	1.5-yr	1166.7	778.79	775.01	1.1	1.07	6.42	5.12	372.07	654.84	2.68	2.13	3.78	3.78
Rosebud County	C9	RM 251.49	75098	1.5-yr	1166.7	778.59	775.02	1.55	1.41	13.28	9.93	420.91	755.56	1.68	1.25	3.57	3.57
Rosebud County	C9	RM 251.23	74691	1.5-yr	1166.7	778.3	775.05	1.5	1.46	11.14	9.31	430.21	681.52	1.8	1.5	3.25	3.25
Rosebud County	C9	RM 251.01	74322	1.5-yr	1166.7	778.17	774.84	1.27	1.11	7.97	5.59	304.93	594.82	2.7	1.89	3.33	3.33
Rosebud County	C9	RM 250.79	73973	1.5-yr	1166.7	778.09	774.42	1.14	0.93	7.27	4.66	304.05	718.59	2.81	1.8	3.67	3.67
Rosebud County	C9	RM 250.6	73678	1.5-yr	1166.7	777.92	774.17	1.43	1.21	20.05	13.71	367.64	865.91	1.71	1.17	3.75	3.75
Rosebud County	C9	RM 250.37	73306	1.5-yr	1166.7	777.66	774.05	1.63	1.26	13.1	6.25	202.67	657.67	3.18	1.51	3.61	3.61
Rosebud County	C9	RM 250.17	72982	1.5-yr	1166.7	777.43	773.93	2	1.31	22.18	13.28	200.27	730.93	2.23	1.32	3.5	3.5
Rosebud County	C9	RM 249.95	72617	1.5-yr	1166.7	777.22	773.83	1.67	1.21	14.77	8.43	224.21	634.26	2.69	1.53	3.39	3.39
Rosebud County	C9	RM 249.73	72253	1.5-yr	1166.7	777.02	773.71	1.63	1.25	14.77	8.7	260.34	664.06	2.4	1.41	3.31	3.31
Rosebud County	C9	RM 249.53	71936	1.5-yr	1166.7	776.96	773.38	1.1	0.89	6.61	3.98	342.07	814.72	2.76	1.66	3.58	3.58
Rosebud County	C9	RM 249.31	71579	1.5-yr	1166.7	776.75	773.14	1.52	1.41	15.34	11.75	357.54	806.89	1.83	1.4	3.61	3.61
Rosebud County	C9	RM 249.13	71274	1.5-yr	1166.7	776.62	772.84	1.3	1.09	9.14	3.76	293.46	988.36	2.82	1.15	3.78	3.78
Rosebud County	C9	RM 248.94	70978	1.5-yr	1166.7	776.44	772.56	1.74	1.38	15.27	6.56	190.78	754.93	3.03	1.3	3.88	3.88
Rosebud County	C9	RM 248.76	70681	1.5-yr	1166.7	776.42	772.32	0.92	0.76	4.62	2.16	420.82	1305	2.73	1.27	4.1	4.1
Rosebud County	C9	RM 248.53	70312	1.5-yr	1166.7	776.37	772.17	1.07	0.65	5.49	1.51	157.66	2367.22	3.46	0.95	4.2	4.2
Rosebud County	C9	RM 248.31	69962	1.5-yr	1166.7	776.23	772.04	1.42	1.15	10.33	3.01	271	1891.58	2.72	0.79	4.19	4.19
Rosebud County	C9	RM 248.08	69603	1.5-yr	1166.7	776.06	771.92	1.59	1.19	11.12	2.78	206.09	1886.78	3.28	0.82	4.14	4.14
Rosebud County	C9	RM 247.88	69253	1.5-yr	1166.7	775.78	771.92	1.86	1.6	31.72	18.18	313.8	725.87	1.91	1.09	3.86	3.86
Rosebud County	C9	RM 247.64	68836	1.5-yr	1166.7	775.38	771.95	1.58	1.45	13.33	10.46	390.26	570.15	1.85	1.45	3.43	3.43

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	1.5-yr	1166.7	775.22	771.87	1.21	0.97	7.65	4.44	278.58	771.91	2.96	1.72	3.35	3.35
Rosebud County	C9	RM 247.11	67963	1.5-yr	1166.7	774.9	771.45	2.16	1.87	26.48	14.87	183.28	463.6	2.54	1.43	3.45	3.45
Rosebud County	C9	RM 246.83	67502	1.5-yr	1166.7	774.68	770.97	1.65	1.32	15.46	7.56	193.66	605.78	3.14	1.53	3.71	3.71
Rosebud County	C9	RM 246.52	67019	1.5-yr	1166.7	774.53	770.61	1.37	1.18	9.73	5.92	224.5	512.06	3.32	2.02	3.92	3.92
Rosebud County	C9	RM 246.22	66538	1.5-yr	1166.7	773.78	770.53	3.05	2.94	55.78	42.63	178.54	274.4	2.13	1.62	3.25	3.25
Rosebud County	C9	RM 245.94	66068	1.5-yr	1166.7	773.35	770.29	1.65	1.49	16.25	12.46	265.93	518.69	2.03	1.55	3.06	3.06
Rosebud County	C9	RM 245.66	65624	1.5-yr	1166.7	772.94	769.81	1.94	1.63	21.58	6.32	191.06	983.51	3.01	0.87	3.7	3.7
Rosebud County	C9	RM 245.4	65205	1.5-yr	1166.7	772.67	769.59	1.61	1.74	14.01	14.48	257.69	364.95	1.78	1.84	3.51	3.51
Rosebud County	C9	RM 245.15	64804	1.5-yr	1166.7	772.23	769.41	2.1	2.22	30.36	29.79	162.91	250.37	2.15	2.1	3.07	3.07
Rosebud County	C9	RM 244.89	64387	1.5-yr	1166.7	771.82	769.41	2.06	1.92	24.94	22.83	176.78	290.85	2.29	2.09	2.79	2.79
Rosebud County	C9	RM 244.7	64085	1.5-yr	1166.7	771.75	769.37	1.21	1.12	8.11	6.43	203.65	656.91	2	1.59	2.84	2.84
Rosebud County	C9	RM 244.51	63776	1.5-yr	1166.7	771.65	769.35	1.04	1.05	7.53	6.69	261.29	690.95	1.81	1.6	2.74	2.74
Rosebud County	C9	RM 244.33	63499	1.5-yr	1166.7	771.62	769.16	0.62	0.66	2.57	2.86	267.22	962.71	1.64	1.83	3.19	3.19
Rosebud County	C9	RM 244.14	63224	1.5-yr	1166.7	771.56	768.52	0.98	0.83	5.64	3.6	203.75	947.17	2.33	1.48	3.13	3.13
Rosebud County	C9	RM 243.96	62927	1.5-yr	1166.7	771.45	768.13	1.28	1.11	9.34	5.64	173.97	698.45	2.49	1.5	3.32	3.32
Rosebud County	C9	RM 243.77	62617	1.5-yr	1166.7	771.41	767.57	0.83	0.6	3.55	1.76	160.76	1193.61	3.36	1.64	3.84	3.84
Rosebud County	C9	RM 243.59	62327	1.5-yr	1166.7	771.31	766.98	1.36	1.04	10.69	4.59	121.27	675.53	3.96	1.66	4.33	4.33
Rosebud County	C9	RM 243.39	62012	1.5-yr	1166.7	771.09	766.86	1.9	1.57	18.57	12.05	152.3	338.79	3.44	2.21	4.23	4.23
Rosebud County	C9	RM 243.21	61718	1.5-yr	1166.7	771	766.74	1.53	1.52	11.56	10.25	198.5	228.68	3.84	3.4	4.26	4.26
Rosebud County	C10	RM 243.03	61422	1.5-yr	1166.7	770.63	766.73	2.44	2.41	32.42	28.53	167.93	193.57	2.85	2.5	3.9	3.9
Rosebud County	C10	RM 242.84	61125	1.5-yr	1166.7	770.25	766.76	2.52	2.44	33.91	31.08	163.89	186.31	2.8	2.57	3.49	3.49
Rosebud County	C10	RM 242.65	60825	1.5-yr	1166.7	770.05	766.76	2	1.96	21.21	19.45	195.83	218.83	2.96	2.71	3.29	3.29
Rosebud County	C10	RM 242.47	60527	1.5-yr	1166.7	769.91	766.77	1.68	1.66	15	13.41	236.91	268.08	2.93	2.62	3.14	3.14
Rosebud County	C10	RM 242.29	60239	1.5-yr	1166.7	769.78	766.64	1.53	1.5	12.15	10.48	275.57	327.18	2.77	2.38	3.14	3.14
Rosebud County	C10	RM 242.1	59939	1.5-yr	1166.7	769.53	766.29	1.87	1.85	21.23	17.91	270.15	325.36	2.31	1.94	3.24	3.24
Rosebud County	C10	RM 241.9	59618	1.5-yr	1166.7	769.33	765.95	1.67	1.67	15.04	14.16	236.87	251.95	2.95	2.77	3.38	3.38
Rosebud County	C10	RM 241.72	59324	1.5-yr	1166.7	769.23	765.5	1.4	1.35	10.31	7.57	283.67	407.41	2.92	2.14	3.73	3.73
Rosebud County	C10	RM 241.53	59025	1.5-yr	1166.7	768.93	765.17	2.14	2.04	26.53	17.46	156.4	257.88	3.45	2.25	3.76	3.76
Rosebud County	C10	RM 241.34	58725	1.5-yr	1166.7	768.72	765.02	2.08	1.91	21.65	12.79	175.79	332.61	3.15	1.85	3.7	3.7
Rosebud County	C10	RM 241.16	58424	1.5-yr	1166.7	768.54	764.97	1.93	1.62	19.44	11.47	164.13	428.83	2.92	1.71	3.57	3.57
Rosebud County	C10	RM 240.97	58132	1.5-yr	1166.7	768.37	764.83	1.71	1.52	15.71	9.15	187.67	449.9	2.97	1.72	3.54	3.54
Rosebud County	C10	RM 240.78	57818	1.5-yr	1166.7	768.26	764.56	1.47	1.14	11.16	5.61	159.68	619.85	3.37	1.67	3.7	3.7
Rosebud County	C10	RM 240.56	57467	1.5-yr	1166.7	768.07	764.28	1.66	1.49	19.93	13.54	208.26	428.88	2.94	1.99	3.79	3.79
Rosebud County	C10	RM 240.41	57228	1.5-yr	1166.7	767.98	763.91	1.38	1.31	11.43	9.33	212.52	355.94	3.46	2.82	4.07	4.07
Rosebud County	C10	RM 240.22	56944	1.5-yr	1166.7	767.76	763.51	1.88	1.87	16.8	14.33	154.72	206.05	4	3.4	4.25	4.25
Rosebud County	C10	RM 240.09	56741	1.5-yr	1166.7	767.43	763.47	2.7	2.65	29.36	21.08	117.2	195.25	3.68	2.62	3.96	3.96
Rosebud County	C10	RM 239.97	56546	1.5-yr	1166.7	767.35	763.47	2.21	2.19	28.31	23.99	149.8	220.92	3.52	2.97	3.88	3.88
Rosebud County	C10	RM 239.86	56371	1.5-yr	1166.7	767.33	760.88	1.62	1.62	12.39	12.39	185.61	185.61	3.88	3.88	6.45	6.45
Rosebud County			56353	1.5-yr	Bridge												
Rosebud County	C10	RM 239.83	56334	1.5-yr	1166.7	767.3	760.88	1.58	1.58	9.58	9.58	193.67	193.67	3.8	3.8	6.42	6.42
Rosebud County	C10	RM 239.68	56093	1.5-yr	1166.7	766.98	763.02	2.4	2.39	20.68	19.77	162.3	170.56	3	2.86	3.96	3.96
Rosebud County	C10	RM 239.56	55888	1.5-yr	1166.7	766.93	757.33	2.03	2.03	14.73	14.73	110.2	110.2	5.23	5.23	9.6	9.6
Rosebud County			55879	1.5-yr	Bridge												
Rosebud County	C10	RM 239.55	55870	1.5-yr	1166.7	766.92	757.33	2.06	2.06	15.16	15.16	107.35	107.35	5.28	5.28	9.59	9.59
Rosebud County	C10	RM 239.41	55655	1.5-yr	1166.7	766.66	763.17	2.56	2.56	27.36	27.36	138.16	138.16	3.29	3.29	3.49	3.49
Rosebud County	C10	RM 239.25	55398	1.5-yr	1166.7	766.46	763.17	2.42	2.42	25.1	24.18	158.81	165.24	3.03	2.92	3.29	3.29
Rosebud County	C10	RM 239.07	55108	1.5-yr	1166.7	766.37	763.2	1.8	1.74	14.01	11.82	215.97	274.94	2.9	2.44	3.17	3.17
Rosebud County	C10	RM 238.89	54826	1.5-yr	1166.7	766.14	763.23	2.09	1.88	19.06	13.74	188.85	308.52	2.81	2.02	2.91	2.91
Rosebud County	C10	RM 238.73	54570	1.5-yr	1166.7	765.97	763.38	1.99	1.93	17.92	15.81	235.43	276.54	2.48	2.19	2.59	2.59
Rosebud County	C10	RM 238.51	54223	1.5-yr	1166.7	765.77	762.88	1.58	1.58	13.98	13.98	353.12	353.12	2.09	2.09	2.89	2.89
Rosebud County	C10	RM 238.33	53926	1.5-yr	1166.7	765.62	762.37	1.5	1.5	11.35	11.35	301.35	301.35	2.58	2.58	3.25	3.25
Rosebud County	C10	RM 238.14	53626	1.5-yr	1166.7	765.34	762.25	1.99	1.94	21.77	16.93	210.24	282.62	2.78	2.16	3.09	3.09
Rosebud County	C10	RM 237.95	53321	1.5-yr	1166.7	765.03	762.09	2.2	2.1	26.47	20.77	185.55	255.66	2.77	2.17	2.94	2.94
Rosebud County	C10	RM 237.77	53027	1.5-yr	1166.7	764.93	761.85	1.48	1.44	12.23	10.3	290.86	375	2.62	2.21	3.08	3.08
Rosebud County	C10	RM 237.56	52703	1.5-yr	1166.7	764.77	761.46	1.49	1.49	11	11	348.82	362.48	2.24	2.24	3.31	3.31
Rosebud County	C10	RM 237.36	52386	1.5-yr	1166.7	764.63	761.22	1.32	1.32	10.35	10.3	382.76	415.96	2.31	2.3	3.41	3.41
Rosebud County	C10	RM 237.15	52029	1.5-yr	1166.7	764.48	760.88	1.31	1.3	9.93	8.85	375.25	451.88	2.37	2.11	3.6	3.6
Rosebud County	C10	RM 236.99	51756	1.5-yr	1166.7	764.3	760.22	1.75	1.74	11.99	11.73	173.19	185.64	3.86	3.77	4.08	4.08
Rosebud County	C10	RM 236.83	51500	1.5-yr	1166.7	764.09	760.07	2.2	2.2	20.12	19.32	159.28	172.07	3.32	3.19	4.02	4.02
Rosebud County	C10	RM 236.66	51221	1.5-yr	1166.7	764.02	760.07	1.76	1.76	12.42	11.32	180.43	331.16	3.67	3.34	3.95	3.95

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	1.5-yr	1166.7	763.94	759.94	1.65	1.64	10.8	10.14	188.86	201.86	3.75	3.52	4	4
Rosebud County	C11	RM 236.29	50623	1.5-yr	1166.7	763.85	760	1.62	1.6	10.64	9.78	205.37	226.86	3.5	3.21	3.85	3.85
Rosebud County	C11	RM 236.1	50327	1.5-yr	1166.7	763.68	760	1.87	1.83	14.81	13.74	200.74	230.55	3.09	2.87	3.68	3.68
Rosebud County	C11	RM 235.91	50024	1.5-yr	1166.7	763.43	760	2.17	2.13	24.55	20.64	164.26	210.14	3.27	2.74	3.43	3.43
Rosebud County	C11	RM 235.73	49726	1.5-yr	1166.7	763.31	760.15	1.65	1.56	14.2	11.91	241.56	344.1	2.66	2.23	3.16	3.16
Rosebud County	C11	RM 235.57	49480	1.5-yr	1166.7	763.22	760.02	1.38	1.38	10.63	10.63	312.07	322.04	2.7	2.7	3.2	3.2
Rosebud County	C11	RM 235.36	49133	1.5-yr	1166.7	763.03	759.74	1.57	1.56	13.38	13.01	279.08	298.4	2.65	2.58	3.29	3.29
Rosebud County	C11	RM 235.17	48830	1.5-yr	1166.7	762.82	759.55	1.72	1.72	13.57	13.57	320.5	328.58	2.12	2.12	3.27	3.27
Rosebud County	C11	RM 235	48571	1.5-yr	1166.7	762.74	759.29	1.37	1.37	9.33	8.98	315.87	335.91	2.69	2.59	3.45	3.45
Rosebud County	C11	RM 234.82	48271	1.5-yr	1166.7	762.33	759.21	2.43	2.4	32.93	29.64	181.8	204.72	2.64	2.37	3.12	3.12
Rosebud County	C11	RM 234.63	47978	1.5-yr	1166.7	762.09	759.21	2.01	1.91	22.63	15.72	219.52	337.09	2.61	1.81	2.88	2.88
Rosebud County	C11	RM 234.45	47692	1.5-yr	1166.7	761.85	759.12	1.86	1.78	18.95	15.87	278.94	357.39	2.19	1.84	2.73	2.73
Rosebud County	C11	RM 234.2	47305	1.5-yr	1166.7	761.6	758.6	1.56	1.49	14.2	10.43	319.34	467.89	2.29	1.68	3	3
Rosebud County	C11	RM 234.01	47006	1.5-yr	1166.7	761.51	758.27	1.17	1.1	6.62	5.93	445.98	538.6	2.19	1.96	3.24	3.24
Rosebud County	C11	RM 233.84	46737	1.5-yr	1166.7	761.42	758.12	1.18	1.12	8.34	8.17	439.45	487.29	2.19	2.14	3.3	3.3
Rosebud County	C11	RM 233.61	46365	1.5-yr	1166.7	761.31	757.67	1.16	1.14	6.9	5.55	301.41	381.11	3.34	2.69	3.64	3.64
Rosebud County	C11	RM 233.35	45943	1.5-yr	1166.7	761.07	757.03	1.82	1.56	18.12	13.26	214.57	362.44	2.83	2.06	4.04	4.04
Rosebud County	C11	RM 233.13	45584	1.5-yr	1166.7	760.92	756.45	1.59	1.59	12.66	12.66	203.3	212.18	3.62	3.62	4.47	4.47
Rosebud County	C11	RM 232.94	45281	1.5-yr	1166.7	760.75	756.15	1.84	1.84	16.73	16.73	166.12	172.41	3.82	3.82	4.6	4.6
Rosebud County	C11	RM 232.75	44978	1.5-yr	1166.7	760.68	756.03	1.47	1.47	10.58	9.89	199.83	223.35	3.97	3.71	4.65	4.65
Rosebud County	C11	RM 232.56	44674	1.5-yr	1166.7	760.58	755.79	1.52	1.52	12.13	12.13	238.4	248.18	3.22	3.22	4.78	4.78
Rosebud County	C11	RM 232.37	44366	1.5-yr	1166.7	760.35	755.72	1.9	1.9	19.44	19.43	203	382.22	3.02	3.02	4.63	4.63
Rosebud County	C11	RM 232.19	44074	1.5-yr	1166.7	760.22	755.67	1.69	1.69	14.69	14.69	200.11	286.48	3.44	3.44	4.55	4.55
Rosebud County	C11	RM 232.01	43791	1.5-yr	1166.7	760.07	755.65	1.74	1.74	16.19	16.19	221.77	254.23	3.02	3.02	4.42	4.42
Rosebud County	C11	RM 231.81	43473	1.5-yr	1166.7	759.78	755.6	2.1	1.93	23.18	18.44	194.3	385.91	2.79	2.21	4.18	4.18
Rosebud County	C11	RM 231.62	43160	1.5-yr	1166.7	759.58	755.57	1.96	1.76	19.24	14.16	169.12	267.87	3.39	2.48	4.01	4.01
Rosebud County	C11	RM 231.42	42835	1.5-yr	1166.7	759.54	755.45	1.31	1.16	8.47	6.19	219.61	354.1	3.89	2.83	4.09	4.09
Rosebud County	C11	RM 231.22	42522	1.5-yr	1166.7	759.39	755.45	1.69	1.45	14.04	9.73	184.63	336.37	3.48	2.39	3.94	3.94
Rosebud County	C11	RM 230.99	42160	1.5-yr	1166.7	758.99	755.45	2.46	2.12	31.85	22.17	141.33	248.16	3.21	2.22	3.54	3.54
Rosebud County	C11	RM 230.79	41841	1.5-yr	1166.7	758.88	755.43	1.74	1.51	15.84	10.43	197.67	364.15	3.24	2.12	3.45	3.45
Rosebud County	C11	RM 230.53	41415	1.5-yr	1166.7	758.74	755.17	1.32	1.18	9.65	8.18	280.34	503.54	2.33	1.97	3.57	3.57
Rosebud County	C11	RM 230.29	41045	1.5-yr	1166.7	758.55	755.15	1.56	1.38	12.61	9.08	219.8	423.09	2.78	1.99	3.4	3.4
Rosebud County	C11	RM 230.06	40676	1.5-yr	1166.7	758.35	754.81	1.54	1.47	14.31	13.07	283.62	477.37	2.12	1.93	3.54	3.54
Rosebud County	C11	RM 229.81	40276	1.5-yr	1166.7	758.19	754.74	1.29	1.24	9.27	7.67	315.53	737.21	2.67	2.2	3.45	3.45
Rosebud County	C11	RM 229.6	39937	1.5-yr	1166.7	757.93	754.58	1.82	1.74	16.51	12.77	253.54	649.04	2.47	1.9	3.35	3.35
Rosebud County	C11	RM 229.4	39596	1.5-yr	1166.7	757.82	754.34	1.38	1.27	10.35	7.7	281.06	658.02	2.85	2.11	3.48	3.48
Rosebud County	C11	RM 229.2	39273	1.5-yr	1166.7	757.52	754.15	2.06	1.95	24.09	18.89	204.95	388.5	2.5	1.96	3.36	3.36
Rosebud County	C11	RM 229.02	38994	1.5-yr	1166.7	757.27	754.12	2.02	1.72	23.32	13.82	208.34	488.63	2.49	1.47	3.15	3.15
Rosebud County	C11	RM 228.82	38676	1.5-yr	1166.7	757.09	753.8	1.6	1.4	14.65	10.89	266.49	512.04	2.48	1.84	3.29	3.29
Rosebud County	C11	RM 228.64	38383	1.5-yr	1166.7	756.95	753.73	1.52	1.19	13.1	10.01	217.85	538.24	2.58	1.96	3.26	3.26
Rosebud County	C11	RM 228.46	38093	1.5-yr	1166.7	756.87	753.53	1.16	0.91	7.48	6.4	292.7	722.54	2.64	2.26	3.34	3.34
Rosebud County	C11	RM 228.26	37771	1.5-yr	1166.7	756.81	753.35	1.08	0.79	6.39	5.19	267.73	987.96	2.77	2.24	3.46	3.46
Rosebud County	C11	RM 228.03	37408	1.5-yr	1166.7	756.64	753.16	1.55	1.11	13.11	6.23	227.83	955.34	2.86	1.35	3.48	3.48
Rosebud County	C11	RM 227.74	36949	1.5-yr	1166.7	756.41	752.95	1.71	1.52	15.46	12.44	160	357.59	3.13	2.5	3.46	3.46
Rosebud County	C11	RM 227.49	36537	1.5-yr	1166.7	756.21	752.83	1.77	1.5	17.02	10.39	172.62	472.22	2.93	1.77	3.38	3.38
Rosebud County	C11	RM 227.2	36062	1.5-yr	1166.7	756.03	752.41	1.62	1.45	13.99	8.84	166.12	445.38	3.02	1.89	3.62	3.62
Rosebud County	C11	RM 226.98	35709	1.5-yr	1166.7	755.61	752.31	2.34	2.1	31.07	19.58	195.02	354.77	2.5	1.57	3.3	3.3
Rosebud County	C11	RM 226.79	35400	1.5-yr	1166.7	755.38	752.25	1.78	1.58	18.93	12.39	251.91	453.04	2.49	1.63	3.13	3.13
Rosebud County	C11	RM 226.56	35065	1.5-yr	1166.7	755.22	751.83	1.39	1.21	11.39	8.91	332.28	521.38	2.37	1.85	3.39	3.39
Rosebud County	C11	RM 226.36	34743	1.5-yr	1166.7	754.97	751.68	1.7	1.6	17.42	16.48	297.45	343.02	2.24	2.12	3.29	3.29
Rosebud County	C11	RM 226.2	34476	1.5-yr	1166.7	754.83	751.25	1.41	1.33	10.3	9.59	381.66	452.95	2.13	1.98	3.58	3.58
Rosebud County	C11	RM 226.01	34177	1.5-yr	1166.7	754.66	750.81	1.42	1.39	18.59	16.84	279.36	329.77	2.89	2.62	3.85	3.85
Rosebud County	C11	RM 225.83	33884	1.5-yr	1166.7	754.37	750.59	2.05	1.6	21.78	14.12	153.04	344.49	3.35	2.15	3.78	3.78
Rosebud County	C11	RM 225.64	33580	1.5-yr	1166.7	754.19	750.56	1.69	1.65	16.51	12.36	292.69	401.23	2.36	1.76	3.63	3.63
Rosebud County	C11	RM 225.45	33275	1.5-yr	1166.7	754.08	750.31	1.32	1.32	9.63	9.45	318.98	325.5	2.76	2.71	3.77	3.77
Rosebud County	C11	RM 225.26	32969	1.5-yr	1166.7	753.93	750.25	1.49	1.49	12.28	12.05	287.52	296.66	2.72	2.67	3.68	3.68
Rosebud County	C11	RM 225.16	32805	1.5-yr	1166.7	753.81	750.19	1.7	1.7	15.42	15.01	223.56	229.9	3.07	2.99	3.62	3.62
Rosebud County	C11	RM 225.06	32646	1.5-yr	1166.7	753.69	747.9	1.88	1.88	17.25	17.25	154.16	159.13	4.02	4.02	5.79	5.79
Rosebud County			32620	1.5-yr	Mult Open												
Rosebud County	C11	RM 225.03	32594	1.5-yr	1166.7	753.65	747.9	1.88	1.88	17.42	17.42	157.59	160.74	3.93	3.93	5.75	5.75

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	1.5-yr	1166.7	753.59	750.09	1.51	1.51	11.86	11.86	238.61	243.62	3.24	3.24	3.5	3.5
Rosebud County	C12	RM 224.71	32083	1.5-yr	1166.7	753.43	750.04	1.62	1.62	14.12	14.12	284.78	284.78	2.52	2.52	3.39	3.39
Rosebud County	C12	RM 224.53	31796	1.5-yr	1166.7	753.29	749.96	1.61	1.61	12.76	12.76	259.24	429.1	2.8	2.8	3.33	3.33
Rosebud County	C12	RM 224.34	31486	1.5-yr	1166.7	753.03	750.03	1.79	1.74	20.01	19.04	360.21	531.92	1.7	1.62	3	3
Rosebud County	C12	RM 224.16	31195	1.5-yr	1166.7	752.87	749.78	1.44	1.39	11.43	10.21	240.33	345.5	2.79	2.49	3.19	3.19
Rosebud County	C12	RM 223.96	30878	1.5-yr	1166.7	752.69	749.48	1.72	1.59	16.07	13	177.69	320.51	2.88	2.32	3.31	3.31
Rosebud County	C12	RM 223.76	30567	1.5-yr	1166.7	752.42	749.18	2.09	1.93	24.51	20.37	145.2	282.34	2.64	2.18	3.24	3.24
Rosebud County	C12	RM 223.55	30235	1.5-yr	1166.7	752.28	748.87	1.6	1.53	13.56	10.11	229.74	333.02	3.12	2.32	3.41	3.41
Rosebud County	C12	RM 223.37	29952	1.5-yr	1166.7	752.11	748.72	1.78	1.77	16.64	14.5	204.3	244.52	3.2	2.79	3.39	3.39
Rosebud County	C12	RM 223.2	29681	1.5-yr	1166.7	751.99	748.51	1.69	1.64	14.71	12.12	207.23	259.95	3.33	2.74	3.48	3.48
Rosebud County	C12	RM 223.02	29391	1.5-yr	1166.7	751.88	748.51	1.51	1.43	12.28	11.13	259.01	320.62	2.91	2.64	3.37	3.37
Rosebud County	C12	RM 222.82	29071	1.5-yr	1166.7	751.74	748.5	1.5	1.44	12.23	11.54	263.09	294.34	2.9	2.75	3.24	3.24
Rosebud County	C12	RM 222.64	28787	1.5-yr	1166.7	751.58	748.46	1.66	1.51	14.87	11.54	235.31	355.76	2.89	2.25	3.12	3.12
Rosebud County	C12	RM 222.45	28479	1.5-yr	1166.7	751.41	748.44	1.64	1.49	15.07	11.95	261.69	378.78	2.61	2.06	2.97	2.97
Rosebud County	C12	RM 222.22	28128	1.5-yr	1166.7	751.25	748.15	1.5	1.35	12.08	9.69	248.36	359.32	3	2.4	3.1	3.1
Rosebud County	C12	RM 222.01	27784	1.5-yr	1166.7	751.15	747.57	1.23	1.17	7.96	5.93	362.44	519.75	2.59	1.92	3.58	3.58
Rosebud County	C12	RM 221.77	27401	1.5-yr	1166.7	751.07	747.18	0.96	0.94	4.87	4.41	602.14	732.19	2.01	1.82	3.89	3.89
Rosebud County	C12	RM 221.55	27042	1.5-yr	1166.7	750.98	747.07	0.92	0.91	4.55	4.36	721.88	784.31	1.75	1.68	3.91	3.91
Rosebud County	C12	RM 221.34	26708	1.5-yr	1166.7	750.89	746.94	0.96	0.92	4.17	3.82	587.9	725.86	2.02	1.85	3.95	3.95
Rosebud County	C12	RM 221.15	26406	1.5-yr	1166.7	750.8	746.7	1.19	1.16	7.09	5.51	263.26	368.01	3.7	2.87	4.1	4.1
Rosebud County	C12	RM 220.96	26081	1.5-yr	1166.7	750.35	746.66	2.71	2.57	38.68	28.75	131.62	190.53	3.22	2.38	3.68	3.68
Rosebud County	C12	RM 220.77	25779	1.5-yr	1166.7	750.08	746.73	2.35	2.32	29.3	27.96	157.26	167.62	3.14	3	3.34	3.34
Rosebud County	C12	RM 220.6	25513	1.5-yr	1166.7	750.05	746.72	1.46	1.44	11.24	10.11	246.24	281.57	3.21	2.89	3.33	3.33
Rosebud County	C12	RM 220.4	25183	1.5-yr	1166.7	749.84	746.88	1.73	1.73	15.92	15.92	272.46	272.46	2.47	2.47	2.96	2.96
Rosebud County	C12	RM 220.23	24914	1.5-yr	1166.7	749.76	746.8	1.29	1.29	8.88	8.88	366.12	366.12	2.48	2.48	2.96	2.96
Rosebud County	C12	RM 220.02	24578	1.5-yr	1166.7	749.61	746.54	1.38	1.36	9.24	8.95	413.99	431.77	2.05	1.98	3.07	3.07
Rosebud County	C12	RM 219.83	24268	1.5-yr	1166.7	749.53	746.18	1.04	1.04	5.22	4.91	554.77	593.9	2.01	1.89	3.35	3.35
Rosebud County	C12	RM 219.63	23947	1.5-yr	1166.7	749.38	745.79	1.34	1.34	7.85	7.7	431.47	441.36	2.02	1.98	3.59	3.59
Rosebud County	C12	RM 219.47	23683	1.5-yr	1166.7	749.31	745.56	1.2	1.19	7.4	6.8	354.91	389.92	2.75	2.52	3.75	3.75
Rosebud County	C12	RM 219.29	23386	1.5-yr	1166.7	749.08	745.27	1.87	1.79	18.55	14.83	196.37	261.03	3.14	2.5	3.81	3.81
Rosebud County	C12	RM 219.11	23085	1.5-yr	1166.7	748.87	745.15	1.98	1.75	20.99	13.52	173.47	349.88	2.98	1.91	3.72	3.72
Rosebud County	C12	RM 218.92	22783	1.5-yr	1166.7	748.67	745.15	1.78	1.59	17.02	13.83	221.78	372.3	2.42	1.97	3.52	3.52
Rosebud County	C12	RM 218.73	22473	1.5-yr	1166.7	748.53	745.06	1.55	1.35	12.48	8.45	220.07	395.49	3.25	2.19	3.47	3.47
Rosebud County	C12	RM 218.54	22180	1.5-yr	1166.7	748.41	744.99	1.51	1.42	12.48	8.41	272.74	436.4	2.8	1.89	3.42	3.42
Rosebud County	C12	RM 218.38	21902	1.5-yr	1166.7	748.31	744.43	1.46	1.34	10.87	6.72	228.25	410	3.45	2.13	3.88	3.88
Rosebud County	C12	RM 218.18	21580	1.5-yr	1166.7	748.09	743.9	1.91	1.69	18.69	9.48	172.55	394.6	3.48	1.75	4.19	4.19
Rosebud County	C12	RM 217.99	21276	1.5-yr	1166.7	747.9	743.66	1.91	1.69	20.05	10.75	211.33	460.94	2.82	1.5	4.24	4.24
Rosebud County	C12	RM 217.81	20981	1.5-yr	1166.7	747.88	743.51	1.17	1.17	6.65	6.53	279.39	284.63	3.56	3.49	4.37	4.37
Rosebud County	C12	RM 217.64	20702	1.5-yr	1166.7	747.66	743.41	1.95	1.92	19.28	16.11	166.42	226.87	3.58	2.98	4.25	4.25
Rosebud County	C12	RM 217.45	20392	1.5-yr	1166.7	747.44	743.29	2.04	1.92	21.9	13.41	175.99	352.57	3.21	1.95	4.15	4.15
Rosebud County	C12	RM 217.25	20070	1.5-yr	1166.7	747.37	743.29	1.52	1.31	11.6	5.85	191.27	478.95	3.71	1.86	4.08	4.08
Rosebud County	C12	RM 217	19662	1.5-yr	1166.7	747.16	743.25	1.77	1.62	16.06	10.14	184.18	328.26	3.49	2.19	3.91	3.91
Rosebud County	C12	RM 216.77	19300	1.5-yr	1166.7	746.91	743.25	1.94	1.72	20.99	11.97	214.76	444.64	2.69	1.53	3.66	3.66
Rosebud County	C12	RM 216.53	18912	1.5-yr	1166.7	746.67	743.3	1.66	1.43	15.7	7.83	272.36	656.59	2.5	1.24	3.37	3.37
Rosebud County	C12	RM 216.27	18500	1.5-yr	1166.7	746.43	743.24	1.51	1.4	13.5	8.75	350.22	588.21	2.18	1.41	3.19	3.19
Rosebud County	C12	RM 215.98	18038	1.5-yr	1166.7	746.2	743.12	1.38	1.12	11.07	6.85	272.26	725.88	2.31	1.43	3.08	3.08
Rosebud County	C12	RM 215.68	17550	1.5-yr	1166.7	746.06	742.31	1.23	1.13	7.64	4.96	266.24	454.24	3.5	2.27	3.75	3.75
Rosebud County	C12	RM 215.41	17101	1.5-yr	1166.7	745.85	741.82	1.66	1.6	14.28	11.44	208.36	273.54	3.33	2.67	4.03	4.03
Rosebud County	C12	RM 215.21	16781	1.5-yr	1166.7	745.49	741.65	2.38	2.25	29.92	21.91	155.26	228.21	3.11	2.27	3.84	3.84
Rosebud County	C12	RM 215.02	16479	1.5-yr	1166.7	745.22	741.68	2.34	2.15	28.62	23.19	143.34	206.89	3.26	2.63	3.54	3.54
Rosebud County	C13	RM 214.86	16220	1.5-yr	1166.7	745.22	741.64	1.36	1.31	9.47	7.86	248.15	311.94	3.44	2.85	3.58	3.58
Rosebud County	C13	RM 214.65	15883	1.5-yr	1166.7	745.05	741.6	1.61	1.61	10.83	10.83	310.94	310.94	2.33	2.33	3.45	3.45
Rosebud County	C13	RM 214.46	15577	1.5-yr	1166.7	744.92	741.6	1.51	1.51	11.53	11.53	281.67	281.67	2.74	2.74	3.32	3.32
Rosebud County	C13	RM 214.27	15282	1.5-yr	1166.7	744.8	741.59	1.43	1.43	11.03	11.03	319.55	389.84	2.55	2.55	3.21	3.21
Rosebud County	C13	RM 214.07	14957	1.5-yr	1166.7	744.66	741.54	1.27	1.27	11.35	11.35	384.12	436.37	2.39	2.39	3.12	3.12
Rosebud County	C13	RM 213.9	14672	1.5-yr	1166.7	744.5	741.37	1.44	1.44	11.71	11.71	350.5	429.4	2.32	2.32	3.13	3.13
Rosebud County	C13	RM 213.7	14343	1.5-yr	1166.7	744.31	740.88	1.62	1.6	13.56	12.87	219.82	401.83	3.28	3.11	3.43	3.43
Rosebud County	C13	RM 213.54	14083	1.5-yr	1166.7	744.11	740.59	1.94	1.93	19.69	18.94	184.72	310.37	3.25	3.13	3.52	3.52
Rosebud County	C13	RM 213.36	13792	1.5-yr	1166.7	743.97	740.39	1.72	1.67	16.08	14.81	237.03	363.72	2.82	2.59	3.58	3.58
Rosebud County	C13	RM 213.16	13475	1.5-yr	1166.7	743.76	740.27	1.85	1.66	18.63	12.99	190.27	459.32	2.83	1.96	3.49	3.49

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	1.5-yr	1166.7	743.55	740.31	1.98	1.72	19.33	12.27	182.77	491.05	2.7	1.7	3.24	3.24
Rosebud County	C13	RM 212.79	12880	1.5-yr	1166.7	743.34	740.19	1.92	1.66	19.8	13.64	174.68	360.34	3	2.06	3.15	3.15
Rosebud County	C13	RM 212.6	12572	1.5-yr	1166.7	743.21	739.79	1.55	1.53	12.53	10.97	231.86	296.62	3.24	2.84	3.42	3.42
Rosebud County	C13	RM 212.42	12284	1.5-yr	1166.7	743	739.58	1.92	1.75	19.44	13.87	190.23	309.52	3.13	2.23	3.42	3.42
Rosebud County	C13	RM 212.23	11983	1.5-yr	1166.7	742.84	739.17	1.7	1.64	16.09	14.14	251.01	433.69	2.71	2.38	3.67	3.67
Rosebud County	C13	RM 212.05	11688	1.5-yr	1166.7	742.72	738.83	1.57	1.51	12.56	10.89	210.31	253.8	3.51	3.04	3.89	3.89
Rosebud County	C13	RM 211.85	11386	1.5-yr	1166.7	742.56	738.79	1.72	1.67	15.59	13.7	216.48	274.09	3.12	2.74	3.77	3.77
Rosebud County	C13	RM 211.65	11066	1.5-yr	1166.7	742.39	738.58	1.7	1.6	15.83	12.77	241.54	362.1	2.8	2.26	3.81	3.81
Rosebud County	C13	RM 211.44	10724	1.5-yr	1166.7	742.16	738.38	1.86	1.59	18.72	11.67	195.5	509.35	2.96	1.84	3.78	3.78
Rosebud County	C13	RM 211.21	10353	1.5-yr	1166.7	742.04	737.87	1.53	1.27	11.78	7.72	170.35	452.99	3.61	2.37	4.17	4.17
Rosebud County	C13	RM 210.96	9946	1.5-yr	1166.7	741.74	737.72	2.13	1.71	24.12	13.14	158.07	410.16	3.09	1.67	4.02	4.02
Rosebud County	C13	RM 210.75	9612	1.5-yr	1166.7	741.62	737.48	1.63	1.25	13.9	8.25	190.47	491.3	3.23	1.9	4.14	4.14
Rosebud County	C13	RM 210.57	9317	1.5-yr	1166.7	741.54	737.5	1.4	1.25	10.01	6.7	241.45	434.52	3.22	2.14	4.04	4.04
Rosebud County	C13	RM 210.36	8986	1.5-yr	1166.7	741.26	737.54	2.03	1.85	22.39	15.18	190.8	322.71	2.9	1.96	3.72	3.72
Rosebud County	C13	RM 210.16	8674	1.5-yr	1166.7	741.01	737.53	1.88	1.8	20.64	18.83	263.83	305.57	2.32	2.12	3.48	3.48
Rosebud County	C13	RM 209.98	8382	1.5-yr	1166.7	740.97	737.25	1.16	1.08	7.16	5.46	299.93	484.77	3.13	2.38	3.72	3.72
Rosebud County	C13	RM 209.8	8091	1.5-yr	1166.7	740.89	736.96	1.29	1.13	8.21	3.9	217.99	574.99	3.8	1.79	3.93	3.93
Rosebud County	C13	RM 209.6	7774	1.5-yr	1166.7	740.71	736.72	1.76	1.5	15.56	6.75	173.85	489.12	3.71	1.59	3.99	3.99
Rosebud County	C13	RM 209.41	7482	1.5-yr	1166.7	740.61	736.53	1.56	1.37	12.77	7.47	234.26	465.84	3.13	1.82	4.08	4.08
Rosebud County	C13	RM 209.21	7161	1.5-yr	1166.7	740.4	736.29	1.84	1.79	17.17	13.67	180.64	235.66	3.51	2.78	4.11	4.11
Rosebud County	C13	RM 209.03	6871	1.5-yr	1166.7	740.22	736.14	1.94	1.89	19.58	15.29	184.53	247.52	3.25	2.53	4.08	4.08
Rosebud County	C13	RM 208.85	6571	1.5-yr	1166.7	740.12	736.03	1.56	1.43	12.76	7.63	228.76	433.3	3.22	1.91	4.09	4.09
Rosebud County	C13	RM 208.65	6257	1.5-yr	1166.7	739.99	735.74	1.58	1.32	13.42	9.25	216.93	434.8	2.97	2.04	4.25	4.25
Rosebud County	C13	RM 208.46	5945	1.5-yr	1166.7	739.71	735.69	2.03	1.87	21.27	16.22	187.98	317.43	2.6	1.97	4.02	4.02
Rosebud County	C13	RM 208.29	5682	1.5-yr	1166.7	739.29	735.63	2.67	2.47	36.86	30.01	109.81	173.39	3.39	2.73	3.66	3.66
Rosebud County	C14	RM 208.1	5374	1.5-yr	1166.7	739.21	735.61	1.71	1.7	14.9	13.98	197.97	212.08	3.45	3.24	3.6	3.6
Rosebud County	C14	RM 207.91	5064	1.5-yr	1166.7	739.03	735.56	1.74	1.73	14.5	12.75	287.87	330.37	2.33	2.04	3.47	3.47
Rosebud County	C14	RM 207.72	4766	1.5-yr	1166.7	738.85	735.52	1.67	1.65	15.16	11.07	298.43	418.45	2.33	1.69	3.33	3.33
Rosebud County	C14	RM 207.53	4450	1.5-yr	1166.7	738.71	735.35	1.26	1.23	9.76	9.03	428.95	482.31	2.13	1.97	3.36	3.36
Rosebud County	C14	RM 207.33	4123	1.5-yr	1166.7	738.53	735.27	1.5	1.33	12.37	7.83	270.71	504.31	2.75	1.74	3.26	3.26
Rosebud County	C14	RM 207.15	3851	1.5-yr	1166.7	738.43	735.14	1.36	1.25	9.53	4.27	303.41	756.61	2.77	1.24	3.29	3.29
Rosebud County	C14	RM 206.99	3599	1.5-yr	1166.7	738.33	734.95	1.38	1.19	10.93	5.29	324.24	831.51	2.46	1.19	3.38	3.38
Rosebud County	C14	RM 206.81	3315	1.5-yr	1166.7	738.23	734.49	1.36	1.2	10.05	5.21	255.14	714.61	2.93	1.51	3.74	3.74
Rosebud County	C14	RM 206.61	2997	1.5-yr	1166.7	738.11	733.91	1.49	1.26	11.25	5.24	193.31	568.04	3.53	1.63	4.2	4.2
Rosebud County	C14	RM 206.43	2701	1.5-yr	1166.7	738	733.52	1.49	1.21	12.3	7.2	242.55	698.78	2.67	1.55	4.48	4.48
Rosebud County	C14	RM 206.21	2350	1.5-yr	1166.7	737.89	733.38	1.35	1.13	8.95	6.26	252.95	751.35	2.86	1.99	4.51	4.51
Rosebud County	C14	RM 205.97	1963	1.5-yr	1166.7	737.81	732.73	1.21	1.16	6.95	4.55	223.85	543.61	4.3	2.8	5.08	5.08
Rosebud County	C14	RM 205.72	1563	1.5-yr	1166.7	737.22	732.73	3.06	2.87	62.24	35.61	105.21	282.06	3.59	2.02	4.49	4.49
Rosebud County	C14	RM 205.49	1198	1.5-yr	1166.7	737	732.63	1.89	1.79	24.5	15.73	192.08	366.09	3.19	2.04	4.37	4.37
Rosebud County	C14	RM 205.3	907	1.5-yr	1166.7	736.65	732.76	2.16	2.05	27.73	21.77	242.72	330.96	2.2	1.72	3.89	3.89
Rosebud County	C14	RM 205.11	594	1.5-yr	1166.7	736.46	732.8	1.8	1.61	16.77	11.45	190.15	430.2	3.3	2.25	3.66	3.66
Rosebud County	C14	RM 204.9	243	1.5-yr	1166.7	736.23	732.63	1.87	1.82	19.03	14.05	218.91	486.46	2.84	2.09	3.6	3.6

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	1.5-yr	1169.5	736.23	732.67	1.78	1.4	17.42	11.46	189	462.61	2.75	1.8	3.56	3.56
Custer County	C14	RM 204.43	73135	1.5-yr	1169.5	736.07	732.44	1.61	1.39	14.34	6.96	262.88	644.84	2.7	1.31	3.63	3.63
Custer County	C14	RM 204.22	72808	1.5-yr	1169.5	735.81	732.3	1.84	1.56	19.52	10.3	255.22	596.19	2.39	1.26	3.51	3.51
Custer County	C14	RM 204	72454	1.5-yr	1169.5	735.72	731.9	1.28	1.11	8.37	4.69	258.25	552.61	3.41	1.91	3.82	3.82
Custer County	C14	RM 203.82	72156	1.5-yr	1169.5	735.52	731.14	1.82	1.55	17.23	7.19	189.33	552.48	3.32	1.37	4.38	4.38
Custer County	C14	RM 203.65	71895	1.5-yr	1169.5	735.32	730.95	2.1	1.46	22.81	7.54	155.56	736.95	3.35	1.09	4.37	4.37
Custer County	C14	RM 203.5	71641	1.5-yr	1169.5	735.23	730.78	1.71	1.22	15.4	6.75	193.41	695.29	3.18	1.38	4.45	4.45
Custer County	C14	RM 203.3	71324	1.5-yr	1169.5	735.2	730.79	1.2	0.81	7.24	3.8	160.98	784.72	3.58	1.84	4.41	4.41
Custer County	C14	RM 203.1	71035	1.5-yr	1169.5	734.96	730.79	1.95	1.53	20.38	10.21	181.37	682.51	3.03	1.5	4.17	4.17
Custer County	C14	RM 202.9	70718	1.5-yr	1169.5	734.69	730.67	2.02	1.7	25.43	17.7	245.07	600.96	1.93	1.34	4.02	4.02
Custer County	C14	RM 202.71	70415	1.5-yr	1169.5	734.4	730.64	1.88	1.62	19.98	12.75	224.65	439.08	2.59	1.64	3.76	3.76
Custer County	C14	RM 202.51	70088	1.5-yr	1169.5	734.02	730.68	2.34	2	29.34	15.83	148.24	366.57	2.99	1.6	3.34	3.34
Custer County	C14	RM 202.34	69815	1.5-yr	1169.5	733.87	730.63	1.6	1.55	15.23	12.42	319.15	417.28	2.21	1.8	3.24	3.24
Custer County	C14	RM 202.13	69483	1.5-yr	1169.5	733.69	730.54	1.5	1.31	12.46	6.9	280.69	670.99	2.71	1.49	3.15	3.15
Custer County	C14	RM 201.97	69219	1.5-yr	1169.5	733.57	730.01	1.54	1.32	12.96	10.07	255.33	412.98	2.77	2.14	3.56	3.56
Custer County	C14	RM 201.75	68884	1.5-yr	1169.5	733.53	729.45	1.03	1.03	5.27	4.91	302.84	326.46	3.75	3.49	4.08	4.08
Custer County	C14	RM 201.57	68612	1.5-yr	1169.5	733.37	729.37	1.57	1.48	15.09	12.14	360.49	486.51	2.03	1.63	4	4
Custer County	C14	RM 201.38	68299	1.5-yr	1169.5	732.97	729.23	2.06	1.99	25.9	21.56	273.95	345.71	2.05	1.7	3.74	3.74
Custer County	C14	RM 201.23	68055	1.5-yr	1169.5	732.66	729.13	1.93	1.74	23.75	18.23	328.4	492.53	1.78	1.37	3.53	3.53
Custer County	C14	RM 201.06	67778	1.5-yr	1169.5	732.57	729.03	1.23	1.01	8.97	6.5	258.96	727.08	2.24	1.61	3.54	3.54
Custer County	C14	RM 200.85	67439	1.5-yr	1169.5	732.13	729.05	2.62	2.38	37.21	29.3	111.08	214.32	2.95	2.29	3.08	3.08
Custer County	C14	RM 200.64	67103	1.5-yr	1169.5	732.01	728.97	1.61	1.49	13.89	9.39	212.4	394.43	2.96	1.99	3.04	3.04
Custer County	C14	RM 200.48	66842	1.5-yr	1169.5	731.92	728.8	1.28	1.24	9.68	8.98	306.3	453.57	2.24	2.07	3.12	3.12
Custer County	C14	RM 200.27	66515	1.5-yr	1169.5	731.75	728.63	1.37	1.31	10.8	8.07	359.69	503.72	2.37	1.77	3.12	3.12
Custer County	C14	RM 200.05	66162	1.5-yr	1169.5	731.48	728.3	1.66	1.63	16.65	15.32	363.19	403.55	1.94	1.78	3.18	3.18
Custer County	C14	RM 199.9	65916	1.5-yr	1169.5	731.4	727.78	1.21	1.21	8.34	8.19	380.94	388.54	2.53	2.48	3.62	3.62
Custer County	C14	RM 199.71	65614	1.5-yr	1169.5	731.17	727.34	1.81	1.81	15.37	15.37	217.36	217.36	2.98	2.98	3.83	3.83
Custer County	C14	RM 199.53	65326	1.5-yr	1169.5	731.12	727.34	1.33	1.33	8.99	8.99	256	256	3.45	3.45	3.78	3.78
Custer County	C14	RM 199.38	65076	1.5-yr	1169.5	730.99	727.34	1.56	1.56	12.28	12.28	305.51	305.51	2.45	2.45	3.65	3.65
Custer County	C14	RM 199.18	64754	1.5-yr	1169.5	730.73	727.64	1.86	1.86	14.25	14.25	342.37	342.37	1.84	1.84	3.09	3.09
Custer County	C14	RM 199.04	64535	1.5-yr	1169.5	730.64	727.64	1.44	1.44	11.29	11.29	338.88	339.52	2.39	2.39	3	3
Custer County	C14	RM 198.77	64102	1.5-yr	1169.5	730.45	727.28	1.44	1.44	11.37	11.37	294.57	301.89	2.76	2.76	3.17	3.17
Custer County	C14	RM 198.57	63773	1.5-yr	1169.5	730.18	726.99	1.93	1.93	20.03	20.03	203.54	208.14	2.97	2.97	3.19	3.19
Custer County	C14	RM 198.4	63505	1.5-yr	1169.5	729.97	726.86	2.01	1.93	22.05	17.26	197.11	277.07	2.87	2.24	3.11	3.11
Custer County	C14	RM 198.22	63215	1.5-yr	1169.5	729.66	726.57	2.22	1.91	27.51	16.37	188.26	385.82	2.68	1.59	3.09	3.09
Custer County	C14	RM 198.04	62923	1.5-yr	1169.5	729.48	726.32	1.78	1.56	17.46	14.38	223.7	335.03	2.73	2.24	3.16	3.16
Custer County	C14	RM 197.84	62611	1.5-yr	1169.5	729.36	726.04	1.34	1.34	10.49	10.45	348.86	378.34	2.31	2.31	3.32	3.32
Custer County	C14	RM 197.65	62306	1.5-yr	1169.5	729.19	725.69	1.55	1.52	12.69	11.43	244.87	300.6	2.84	2.56	3.5	3.5
Custer County	C14	RM 197.47	62013	1.5-yr	1169.5	729.17	725.29	1.02	0.98	5.21	4.48	292.34	377.6	3.73	3.21	3.88	3.88
Custer County	C14	RM 197.27	61686	1.5-yr	1169.5	729.01	724.81	1.69	1.41	15.29	8.83	209.82	557.87	2.97	1.71	4.2	4.2
Custer County	C14	RM 197.07	61373	1.5-yr	1169.5	728.87	724.81	1.61	1.5	13.82	10.87	200.96	330.82	3.09	2.42	4.06	4.06
Custer County	C14	RM 196.91	61115	1.5-yr	1169.5	728.81	724.81	1.38	1.01	10.1	6.05	218.94	870.95	3.06	1.82	4	4
Custer County	C14	RM 196.73	60815	1.5-yr	1169.5	728.73	724.76	1.32	0.95	8.97	4.12	228.31	912.91	3.31	1.52	3.97	3.97
Custer County	C14	RM 196.54	60518	1.5-yr	1169.5	728.61	724.67	1.45	1.21	11.91	6.15	268.38	733.68	2.59	1.33	3.94	3.94
Custer County	C14	RM 196.33	60178	1.5-yr	1169.5	728.53	724.57	1.24	1.09	7.94	5.1	244.4	506.37	3.33	2.13	3.96	3.96
Custer County	C14	RM 196.17	59915	1.5-yr	1169.5	728.47	724.51	1.23	1.13	7.69	5.73	188.92	404.27	3.49	2.59	3.96	3.96
Custer County	C15	RM 195.98	59615	1.5-yr	1169.5	727.7	724.52	3.47	3.47	67.65	67.65	129.62	129.62	2.6	2.6	3.18	3.18
Custer County	C15	RM 195.81	59337	1.5-yr	1169.5	727.54	724.33	2.27	2.27	27.35	27.35	166.47	166.47	3.1	3.1	3.21	3.21
Custer County	C15	RM 195.61	59020	1.5-yr	1169.5	727.41	724.24	1.68	1.68	15.05	15.05	226.54	226.54	3.07	3.07	3.17	3.17
Custer County	C15	RM 195.43	58727	1.5-yr	1169.5	727.16	724.22	1.87	1.87	21.21	21.21	301.27	301.27	2.07	2.07	2.94	2.94
Custer County	C15	RM 195.23	58415	1.5-yr	1169.5	726.98	723.93	1.48	1.48	11.83	11.83	359.52	365.51	2.2	2.2	3.05	3.05
Custer County	C15	RM 195.04	58114	1.5-yr	1169.5	726.72	723.54	1.81	1.75	19.21	17.7	267.73	330.71	2.25	2.07	3.18	3.18
Custer County	C15	RM 194.86	57824	1.5-yr	1169.5	726.46	722.93	1.92	1.81	20.3	17.17	206.09	299.57	2.76	2.33	3.53	3.53
Custer County	C15	RM 194.67	57521	1.5-yr	1169.5	726.34	722.75	1.59	1.59	12.9	12.9	214.59	214.59	3.43	3.43	3.59	3.59
Custer County	C15	RM 194.49	57231	1.5-yr	1169.5	726.24	722.53	1.51	1.51	11.73	11.16	226.77	248.19	3.41	3.24	3.71	3.71
Custer County	C15	RM 194.32	56946	1.5-yr	1169.5	726.03	722.5	1.88	1.88	16.65	16.65	239.7	257.69	2.6	2.6	3.53	3.53
Custer County	C15	RM 194.13	56643	1.5-yr	1169.5	725.81	722.5	1.87	1.87	19.83	19.83	247.86	255.94	2.52	2.52	3.31	3.31
Custer County	C15	RM 193.93	56331	1.5-yr	1169.5	725.66	722.31	1.58	1.57	13.27	12.43	245.18	263.01	3.02	2.83	3.35	3.35
Custer County	C15	RM 193.74	56024	1.5-yr	1169.5	725.51	722.23	1.63	1.63	13.96	13.6	225.72	234.52	3.18	3.1	3.28	3.28
Custer County	C15	RM 193.55	55708	1.5-yr	1169.5	725.32	722.13	1.78	1.78	16.76	16.27	213.27	220.14	3.09	2.99	3.2	3.2

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	1.5-yr	1169.5	725.13	722.13	1.89	1.88	19.37	18.89	214.78	220.85	2.88	2.81	3	3
Custer County	C15	RM 193.2	55158	1.5-yr	1169.5	725.02	722.13	1.5	1.47	12.34	10.86	274.73	321.2	2.81	2.48	2.89	2.89
Custer County	C15	RM 193	54825	1.5-yr	1169.5	724.87	721.84	1.5	1.47	12.34	11.09	274.15	313.94	2.82	2.53	3.03	3.03
Custer County	C15	RM 192.81	54525	1.5-yr	1169.5	724.71	721.37	1.69	1.56	15.06	11.28	206.17	314.76	3.19	2.38	3.34	3.34
Custer County	C15	RM 192.63	54247	1.5-yr	1169.5	724.58	721.01	1.62	1.59	13.59	11.62	212.61	254.91	3.38	2.88	3.57	3.57
Custer County	C15	RM 192.44	53935	1.5-yr	1169.5	724.49	721.01	1.45	1.36	11.07	8.54	237.27	349.97	3.19	2.46	3.48	3.48
Custer County	C16	RM 192.26	53653	1.5-yr	1169.5	724.35	721.01	1.59	1.55	13.28	12.4	225.39	250.16	3.23	3.01	3.34	3.34
Custer County	C16	RM 192.05	53309	1.5-yr	1169.5	723.94	721.11	2.36	2.34	31.13	28.69	186.52	204.3	2.65	2.44	2.84	2.84
Custer County	C16	RM 191.74	52809	1.5-yr	1169.5	723.65	721.1	1.46	1.46	11.99	11.99	397.79	417.37	2.01	2.01	2.55	2.55
Custer County	C16	RM 191.35	52181	1.5-yr	1169.5	723.09	721.02	1.64	1.64	17.81	17.76	474.89	476.12	1.5	1.5	2.07	2.07
Custer County	C16	RM 191.12	51812	1.5-yr	1169.5	722.81	720.51	1.34	1.34	10.86	10.86	484.05	484.05	1.81	1.81	2.3	2.3
Custer County	C16	RM 190.87	51406	1.5-yr	1169.5	722.56	719.89	1.29	1.29	9.31	9.31	579.69	579.69	1.56	1.56	2.67	2.67
Custer County	C16	RM 190.54	50885	1.5-yr	1169.5	722.35	719.15	0.96	0.96	5.76	5.76	739.41	742.22	1.65	1.65	3.2	3.2
Custer County	C16	RM 190.29	50477	1.5-yr	1169.5	721.91	718.45	2.19	2.16	25.7	22.27	176.52	206.95	3.02	2.61	3.46	3.46
Custer County	C16	RM 190.1	50176	1.5-yr	1169.5	721.65	718.43	2.08	2.08	24.48	24.48	223.47	234.33	2.52	2.52	3.22	3.22
Custer County	C16	RM 189.85	49765	1.5-yr	1169.5	721.37	718.13	1.6	1.57	15.25	14.4	331.04	362.27	2.18	2.07	3.24	3.24
Custer County	C16	RM 189.65	49458	1.5-yr	1169.5	721.2	713.92	1.54	1.54	12.83	12.83	270.49	376.66	2.81	2.81	7.28	7.28
Custer County	C16		49425	1.5-yr	Bridge												
Custer County	C16	RM 189.62	49416	1.5-yr	1169.5	721.15	713.92	1.57	1.57	13.46	13.46	268.11	317.58	2.77	2.77	7.23	7.23
Custer County	C16	RM 189.43	49103	1.5-yr	1169.5	720.72	718.09	2.27	2.27	31.7	31.7	262.93	266.4	1.96	1.96	2.63	2.63
Custer County	C16	RM 189.22	48763	1.5-yr	1169.5	720.67	717.93	1.06	1.06	6.48	6.48	449.7	450.88	2.44	2.44	2.74	2.74
Custer County	C16	RM 188.91	48267	1.5-yr	1169.5	720.45	717.54	1.42	1.42	9.24	9.24	395.98	435.34	2.08	2.08	2.91	2.91
Custer County	C16	RM 188.66	47869	1.5-yr	1169.5	720.17	716.75	1.84	1.84	17.57	17.57	192.05	234.22	3.31	3.31	3.42	3.42
Custer County	C16	RM 188.51	47622	1.5-yr	1169.5	720.02	716.72	1.87	1.87	18.83	18.32	211.27	256.53	2.96	2.88	3.3	3.3
Custer County	C16	RM 188.32	47314	1.5-yr	1169.5	719.86	716.79	1.64	1.45	15.34	10.67	150.75	452.48	2.65	1.82	3.07	3.07
Custer County	C16	RM 188.14	47024	1.5-yr	1169.5	719.66	716.93	1.54	1.61	10.67	12.67	167.97	363.33	1.73	2.06	2.73	2.73
Custer County	C16	RM 187.98	46768	1.5-yr	1169.5	719.54	716.91	1.4	1.34	11.35	9.03	218.32	468.15	2.36	1.87	2.63	2.63
Custer County	C16	RM 187.78	46440	1.5-yr	1169.5	719.43	716.69	1.29	1.24	8.43	7.47	249.39	511.39	2.08	1.84	2.74	2.74
Custer County	C16	RM 187.55	46083	1.5-yr	1169.5	719.12	716.04	1.92	1.78	20.44	14.14	222.02	353.31	2.69	1.86	3.08	3.08
Custer County	C16	RM 187.35	45750	1.5-yr	1169.5	718.73	715.34	2.3	2.29	28.61	27.03	174.17	185.01	2.92	2.75	3.39	3.39
Custer County	C16	RM 187.14	45421	1.5-yr	1169.5	718.52	715.3	1.81	1.8	18.35	16.68	251.21	277.79	2.58	2.34	3.22	3.22
Custer County	C16	RM 187.01	45211	1.5-yr	1169.5	718.44	715.3	1.48	1.47	12.15	11.01	292.74	325.24	2.7	2.44	3.14	3.14
Custer County	C16	RM 186.84	44930	1.5-yr	1169.5	718.23	715.03	1.73	1.73	17.41	17.09	290.42	298.42	2.33	2.29	3.2	3.2
Custer County	C16	RM 186.62	44553	1.5-yr	1169.5	718.08	712.45	1.52	1.52	11.03	11.03	186.07	186.07	4.15	4.15	5.63	5.63
Custer County	C16		44545	1.5-yr	Bridge												
Custer County	C16	RM 186.61	44538	1.5-yr	1169.5	718.07	712.45	1.52	1.52	11.09	11.09	186.03	186.03	4.14	4.14	5.62	5.62
Custer County	C16	RM 186.46	44311	1.5-yr	1169.5	717.78	714.53	2.25	2.25	27.47	26.68	178.8	234.57	2.91	2.82	3.25	3.25
Custer County	C16	RM 186.26	43996	1.5-yr	1169.5	717.55	714.27	1.99	1.99	21.34	21.34	200.86	214.02	2.93	2.93	3.28	3.28
Custer County	C16	RM 186.1	43730	1.5-yr	1169.5	717.45	713.9	1.53	1.53	13.02	13.02	286.08	286.08	2.67	2.67	3.55	3.55
Custer County	C16	RM 185.91	43424	1.5-yr	1180.8	717.24	713.84	1.72	1.72	14.44	14.44	300.18	300.98	2.29	2.29	3.4	3.4
Custer County	C16	RM 185.71	43110	1.5-yr	1180.8	716.66	713.84	2.73	2.73	36.32	36.32	217.82	217.82	1.98	1.98	2.82	2.82
Custer County	C16	RM 185.52	42808	1.5-yr	1180.8	716.59	713.71	1.42	1.42	11.68	11.42	354.94	364.09	2.34	2.29	2.88	2.88
Custer County	C16	RM 185.34	42508	1.5-yr	1180.8	716.24	713.28	2.07	2.07	18.71	18.71	331.14	331.14	1.73	1.73	2.96	2.96
Custer County	C16	RM 185.16	42219	1.5-yr	1180.8	716.13	712.93	1.31	1.31	10.29	10.29	415.16	721.76	2.16	2.16	3.2	3.2
Custer County	C17	RM 184.95	41881	1.5-yr	1180.8	715.89	712.72	1.64	1.63	15.6	15.1	286.81	413.59	2.51	2.43	3.17	3.17
Custer County	C17	RM 184.78	41621	1.5-yr	1180.8	715.62	712.51	2.01	1.97	22.09	20.04	210.58	236.97	2.79	2.53	3.11	3.11
Custer County	C17	RM 184.59	41311	1.5-yr	1180.8	715.38	711.96	2.02	2.01	21.75	20.17	190.31	206.95	3.06	2.84	3.42	3.42
Custer County	C17	RM 184.4	41010	1.5-yr	1180.8	715.29	711.62	1.51	1.51	11.93	11.93	239.38	239.38	3.26	3.26	3.67	3.67
Custer County	C17	RM 184.23	40728	1.5-yr	1180.8	715.09	711.31	1.85	1.85	18.81	18.81	232.09	232.09	2.75	2.75	3.78	3.78
Custer County	C17	RM 184.1	40517	1.5-yr	1180.8	714.95	710.39	1.84	1.84	17.72	17.37	202.19	206.11	3.17	3.12	4.56	4.56
Custer County	C17		40500	1.5-yr	Bridge												
Custer County	C17	RM 184.08	40496	1.5-yr	1180.8	714.93	710.39	1.85	1.85	18.01	17.69	202.03	205.62	3.15	3.1	4.54	4.54
Custer County	C17	RM 184.03	40407	1.5-yr	1180.8	714.89	711.49	1.75	1.75	16.12	16.12	210.72	210.72	3.2	3.2	3.4	3.4
Custer County	C17	RM 183.83	40098	1.5-yr	1180.8	714.75	711.42	1.64	1.64	14.17	14.17	226.79	226.79	3.17	3.17	3.33	3.33
Custer County	C17	RM 183.65	39806	1.5-yr	1180.8	714.59	711.39	1.72	1.72	15.68	15.68	221.71	221.71	3.1	3.1	3.2	3.2
Custer County	C17	RM 183.47	39513	1.5-yr	1180.8	714.36	711.39	1.97	1.97	20.98	20.98	206.59	206.59	2.9	2.9	2.97	2.97
Custer County	C17	RM 183.28	39210	1.5-yr	1180.8	714.23	711.31	1.58	1.58	13.58	13.58	261.44	261.44	2.86	2.86	2.92	2.92
Custer County	C17	RM 183.09	38909	1.5-yr	1180.8	714.02	711.04	1.79	1.79	17.59	17.59	234.57	234.57	2.81	2.81	2.98	2.98
Custer County	C17	RM 182.94	38660	1.5-yr	1180.8	713.92	710.66	1.55	1.55	12.6	12.6	241.08	241.08	3.16	3.16	3.26	3.26
Custer County	C17	RM 182.72	38316	1.5-yr	1180.8	713.75	710.1	1.64	1.62	14.55	13.43	249.63	273.98	2.88	2.66	3.65	3.65

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	1.5-yr	1180.8	713.43	710.12	2.19	2.11	25.54	22.59	172.13	203.78	3.1	2.74	3.31	3.31
Custer County	C17	RM 182.34	37706	1.5-yr	1180.8	713.23	710.27	1.86	1.81	19.41	17.77	237.69	273.59	2.6	2.38	2.96	2.96
Custer County	C17	RM 182.15	37402	1.5-yr	1180.8	713.03	710.26	1.74	1.71	16.93	16.02	249.22	289.2	2.66	2.51	2.77	2.77
Custer County	C17	RM 181.97	37127	1.5-yr	1180.8	712.87	710.26	1.61	1.59	14.7	13.93	283.72	307.43	2.55	2.41	2.61	2.61
Custer County	C17	RM 181.78	36815	1.5-yr	1180.8	712.64	710.09	1.76	1.73	17.73	16.59	273.3	304.42	2.4	2.25	2.55	2.55
Custer County	C17	RM 181.59	36505	1.5-yr	1180.8	712.31	709.76	1.99	1.96	21.51	19.87	288.41	318.52	2.05	1.89	2.55	2.55
Custer County	C17	RM 181.37	36155	1.5-yr	1180.8	712	709.37	1.82	1.76	19.38	15.87	273.61	352.88	2.32	1.9	2.63	2.63
Custer County	C17	RM 181.23	35925	1.5-yr	1180.8	711.68	709.36	2.19	2.1	28.49	24.18	238.35	306.28	2.17	1.84	2.32	2.32
Custer County	C17	RM 181.03	35607	1.5-yr	1180.8	711.47	709.02	1.55	1.54	14.37	14.03	347.33	366.74	2.16	2.12	2.45	2.45
Custer County	C17	RM 180.83	35292	1.5-yr	1180.8	711.26	708.68	1.49	1.45	13.53	12.31	359.61	450.63	1.99	1.81	2.58	2.58
Custer County	C17	RM 180.66	35006	1.5-yr	1180.8	711.06	708.22	1.56	1.55	14.38	13.92	340.54	354.6	2.22	2.15	2.84	2.84
Custer County	C18	RM 180.46	34700	1.5-yr	1180.8	710.88	708.05	1.56	1.54	13.36	12.66	279.04	296.77	2.72	2.58	2.83	2.83
Custer County	C18	RM 180.29	34421	1.5-yr	1180.8	710.6	707.79	2.02	1.98	23.09	21.04	228.36	258.26	2.53	2.3	2.81	2.81
Custer County	C18	RM 180.08	34086	1.5-yr	1180.8	710.4	707.53	1.68	1.65	15.53	14.05	250.31	286	2.76	2.5	2.87	2.87
Custer County	C18	RM 179.9	33807	1.5-yr	1180.8	710.23	707.32	1.71	1.67	16.42	14.45	262.13	312.84	2.57	2.26	2.91	2.91
Custer County	C18	RM 179.73	33525	1.5-yr	1180.8	709.96	706.89	1.95	1.92	21.83	20.38	245.39	268.85	2.45	2.29	3.07	3.07
Custer County	C18	RM 179.54	33218	1.5-yr	1180.8	709.59	706.7	2.12	2.12	24.84	24.84	273.59	273.59	2.04	2.04	2.89	2.89
Custer County	C18	RM 179.35	32914	1.5-yr	1180.8	709.38	706.45	1.68	1.67	16.06	15.38	285.7	308.38	2.46	2.36	2.93	2.93
Custer County	C18	RM 179.16	32611	1.5-yr	1180.8	709.15	706.29	1.82	1.82	18.37	18.37	234.88	234.88	2.77	2.77	2.86	2.86
Custer County	C18	RM 178.99	32337	1.5-yr	1180.8	708.99	706.07	1.7	1.7	15.95	15.87	250.69	251.82	2.77	2.75	2.92	2.92
Custer County	C18	RM 178.79	32025	1.5-yr	1180.8	708.77	705.9	1.79	1.78	17.63	16.46	243.09	261.19	2.72	2.54	2.87	2.87
Custer County	C18	RM 178.61	31730	1.5-yr	1180.8	708.59	705.59	1.73	1.73	16.6	16.6	257.52	367.44	2.66	2.66	3	3
Custer County	C18	RM 178.43	31434	1.5-yr	1180.8	708.42	705.25	1.67	1.67	15.13	15.13	243.7	243.7	2.9	2.9	3.17	3.17
Custer County	C18	RM 178.23	31114	1.5-yr	1180.8	708.25	704.7	1.67	1.67	15.02	15.02	240.24	240.24	2.94	2.94	3.55	3.55
Custer County	C18	RM 178.06	30848	1.5-yr	1180.8	708.1	704.57	1.72	1.72	15.51	15.51	215.43	215.43	3.19	3.19	3.53	3.53
Custer County	C18	RM 177.88	30549	1.5-yr	1180.8	707.92	704.57	1.81	1.81	17.83	17.3	226.12	233.69	2.88	2.79	3.35	3.35
Custer County	C18	RM 177.66	30211	1.5-yr	1186.5	707.56	704.57	2.22	2.22	26.84	26.84	187.88	187.88	2.85	2.85	2.99	2.99
Custer County	C18	RM 177.49	29932	1.5-yr	1186.5	707.4	704.47	1.79	1.79	17.53	17.53	233.49	233.49	2.84	2.84	2.93	2.93
Custer County	C19	RM 177.3	29625	1.5-yr	1186.5	707.25	704.46	1.57	1.57	13.83	13.83	296.04	296.04	2.56	2.56	2.79	2.79
Custer County	C19	RM 177.11	29314	1.5-yr	1186.5	706.95	704.46	1.92	1.92	21.44	21.44	279.17	279.17	2.22	2.22	2.49	2.49
Custer County	C19	RM 176.93	29040	1.5-yr	1186.5	706.77	704.42	1.55	1.55	14.22	14.22	346.18	369.99	2.21	2.21	2.35	2.35
Custer County	C19	RM 176.74	28720	1.5-yr	1186.5	706.57	704.21	1.47	1.44	13.07	12.45	338.46	433.85	2.08	1.98	2.36	2.36
Custer County	C19	RM 176.53	28384	1.5-yr	1186.5	706.23	703.63	1.86	1.8	21.57	20.74	275.52	362.13	1.89	1.83	2.6	2.6
Custer County	C19	RM 176.36	28109	1.5-yr	1186.5	706	703.08	1.64	1.64	15.78	15.73	322.47	323.49	2.25	2.24	2.92	2.92
Custer County	C19	RM 176.18	27824	1.5-yr	1186.5	705.52	702.71	2.5	2.5	35.92	35.92	196.49	196.49	2.42	2.42	2.81	2.81
Custer County	C19	RM 176	27527	1.5-yr	1186.5	705.3	702.51	1.85	1.83	19.44	17.66	256.75	290.47	2.49	2.26	2.79	2.79
Custer County	C19	RM 175.81	27227	1.5-yr	1186.5	705.07	702.24	1.75	1.75	17.94	17.7	296.23	300.51	2.29	2.26	2.83	2.83
Custer County	C19	RM 175.62	26928	1.5-yr	1186.5	704.8	701.81	1.91	1.83	20.28	15.02	232.04	332.78	2.64	1.95	2.99	2.99
Custer County	C19	RM 175.43	26622	1.5-yr	1186.5	704.44	701.81	2.21	1.8	28.56	21.24	213.02	384.88	2.31	1.71	2.63	2.63
Custer County	C19	RM 175.25	26325	1.5-yr	1186.5	704.11	701.72	2.03	1.95	24.27	22.37	209.71	291.74	2.27	2.09	2.39	2.39
Custer County	C19	RM 175.08	26048	1.5-yr	1186.5	703.87	701.63	1.7	1.7	17.71	17.71	355.12	355.12	1.97	1.97	2.24	2.24
Custer County	C19	RM 174.9	25768	1.5-yr	1186.5	703.53	701.31	1.9	1.9	22.69	22.69	333.03	333.03	1.87	1.87	2.22	2.22
Custer County	C19	RM 174.69	25444	1.5-yr	1186.5	703.03	700.82	2.1	2.1	27.78	27.78	307.92	307.92	1.84	1.84	2.21	2.21
Custer County	C19	RM 174.49	25112	1.5-yr	1186.5	702.54	700.04	2.14	2.14	27.64	27.64	264.49	264.49	2.09	2.09	2.5	2.5
Custer County	C19	RM 174.32	24844	1.5-yr	1186.5	702.13	699.39	2.33	2.33	31.44	31.44	215.45	215.45	2.36	2.36	2.74	2.74
Custer County	C19	RM 174.13	24549	1.5-yr	1186.5	701.99	698.84	1.67	1.67	15.04	15.04	237.97	237.97	2.98	2.98	3.15	3.15
Custer County	C19	RM 173.94	24238	1.5-yr	1186.5	701.73	698.14	1.94	1.94	21.04	21.04	233.65	233.65	2.62	2.62	3.59	3.59
Custer County	C19	RM 173.75	23939	1.5-yr	1186.5	701.42	697.92	2.21	2.21	25.5	25.37	167.6	168.43	3.21	3.19	3.5	3.5
Custer County	C19	RM 173.57	23651	1.5-yr	1186.5	701.3	697.83	1.77	1.77	16.15	16.15	203.61	203.61	3.3	3.3	3.47	3.47
Custer County	C19	RM 173.39	23352	1.5-yr	1186.5	701.06	697.83	2.05	2.05	22.64	22.64	196.07	196.07	2.95	2.95	3.23	3.23
Custer County	C19	RM 173.2	23054	1.5-yr	1186.5	700.83	697.72	1.97	1.97	21.25	21.25	217.75	248.72	2.77	2.77	3.11	3.11
Custer County	C19	RM 173.02	22756	1.5-yr	1186.5	700.65	697.29	1.77	1.77	17.23	16.85	238.2	243.97	2.81	2.74	3.36	3.36
Custer County	C19	RM 172.82	22437	1.5-yr	1186.5	700.42	696.82	1.65	1.65	17.06	17.06	388.37	388.37	1.85	1.85	3.6	3.6
Custer County	C19	RM 172.67	22200	1.5-yr	1186.5	700.05	696.52	2	2	26.32	26.32	366.01	366.01	1.62	1.62	3.53	3.53
Custer County	C19	RM 172.49	21903	1.5-yr	1186.5	699.79	696.23	1.68	1.68	16.23	16.23	294.34	294.34	2.4	2.4	3.56	3.56
Custer County	C19	RM 172.29	21585	1.5-yr	1186.5	699.61	695.79	1.67	1.67	14.68	14.68	224.28	278.38	3.17	3.17	3.82	3.82
Custer County	C19	RM 172.12	21325	1.5-yr	1186.5	699.1	695.81	2.67	2.67	42.65	42.65	210.45	210.45	2.11	2.11	3.29	3.29
Custer County	C19		21310	1.5-yr	Bridge												
Custer County	C19	RM 172.11	21300	1.5-yr	1186.5	698.91	695.81	2.92	2.92	52.59	52.59	208.62	208.62	1.95	1.95	3.1	3.1
Custer County	C19	RM 171.89	20942	1.5-yr	1186.5	698.61	695.57	1.86	1.86	18.76	18.76	222.86	222.86	2.87	2.87	3.04	3.04

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	1.5-yr	1186.5	698.29	695.49	2.11	2.11	25.58	25.45	230.18	231.37	2.44	2.43	2.8	2.8
Custer County	C19	RM 171.52	20341	1.5-yr	1186.5	698.06	695.3	1.86	1.86	19.41	19.41	247.34	247.34	2.58	2.58	2.76	2.76
Custer County	C19	RM 171.34	20043	1.5-yr	1186.5	697.78	695.11	1.99	1.99	22.34	22.34	236.25	236.25	2.53	2.53	2.67	2.67
Custer County	C19	RM 171.15	19745	1.5-yr	1186.5	697.55	694.86	1.88	1.88	19.78	19.78	244.08	244.08	2.59	2.59	2.69	2.69
Custer County	C19	RM 170.96	19437	1.5-yr	1186.5	697.32	694.67	1.82	1.82	18.62	18.62	254.29	254.29	2.57	2.57	2.65	2.65
Custer County	C19	RM 170.78	19143	1.5-yr	1186.5	697.09	694.2	1.86	1.86	19.12	19.12	238.07	238.07	2.68	2.68	2.89	2.89
Custer County	C19	RM 170.58	18838	1.5-yr	1186.5	696.77	693.91	2.09	2.09	25.12	25.12	238.93	238.93	2.38	2.38	2.86	2.86
Custer County	C19	RM 170.4	18543	1.5-yr	1186.5	696.56	693.9	1.77	1.77	17.85	17.85	265.78	265.78	2.52	2.52	2.66	2.66
Custer County	C19	RM 170.22	18257	1.5-yr	1186.5	696.36	693.7	1.74	1.74	17.05	17.05	267.3	267.3	2.55	2.55	2.66	2.66
Custer County	C19	RM 170.03	17941	1.5-yr	1186.5	696.09	693.31	1.92	1.92	20.6	20.6	233.21	233.21	2.65	2.65	2.78	2.78
Custer County	C19	RM 169.84	17641	1.5-yr	1186.5	695.87	692.78	1.89	1.89	19.25	19.25	210.33	210.33	2.98	2.98	3.09	3.09
Custer County	C19	RM 169.65	17341	1.5-yr	1186.5	695.66	692.47	1.95	1.95	20.33	20.33	200.12	200.12	3.04	3.04	3.19	3.19
Custer County	C19	RM 169.47	17041	1.5-yr	1186.5	695.39	692.17	2.11	2.1	24.26	22.85	199.81	213.08	2.82	2.65	3.22	3.22
Custer County	C19	RM 169.28	16732	1.5-yr	1186.5	695.17	692	1.93	1.93	20.15	19.91	214.08	216.71	2.88	2.84	3.17	3.17
Custer County	C19	RM 169.09	16441	1.5-yr	1186.5	694.95	691.96	1.91	1.91	20.05	20.05	223.22	232.04	2.78	2.78	2.99	2.99
Custer County	C19	RM 168.91	16152	1.5-yr	1186.5	694.72	691.93	1.96	1.96	21.33	21.33	228.05	228.05	2.66	2.66	2.79	2.79
Custer County	C19	RM 168.72	15846	1.5-yr	1186.5	694.55	691.82	1.64	1.64	15.07	15.07	274.56	274.56	2.63	2.63	2.73	2.73
Custer County	C19	RM 168.51	15500	1.5-yr	1186.5	694.31	691.6	1.7	1.7	16.61	16.44	292.16	295.33	2.39	2.37	2.71	2.71
Custer County	C19	RM 168.35	15241	1.5-yr	1186.5	694.05	691.48	1.94	1.93	22.04	21.27	265.64	276.71	2.3	2.22	2.57	2.57
Custer County	C19	RM 168.15	14931	1.5-yr	1186.5	693.65	691.2	2.17	2.17	27.48	27.48	235.3	235.3	2.32	2.32	2.45	2.45
Custer County	C19	RM 167.97	14639	1.5-yr	1186.5	693.44	690.59	1.81	1.81	18.08	18.08	241.47	241.47	2.72	2.72	2.85	2.85
Custer County	C19	RM 167.79	14340	1.5-yr	1186.5	693.24	690.5	1.8	1.8	18.19	18.19	247.93	282.14	2.65	2.65	2.73	2.73
Custer County	C19	RM 167.61	14054	1.5-yr	1186.5	692.93	690.42	2.07	2.07	24.63	24.63	241.07	241.07	2.38	2.38	2.51	2.51
Custer County	C19	RM 167.41	13735	1.5-yr	1186.5	692.61	690.14	1.98	1.97	22.92	21.56	262.6	280.66	2.28	2.14	2.47	2.47
Custer County	C19	RM 167.22	13433	1.5-yr	1186.5	692.38	689.79	1.76	1.76	17.63	17.63	271.94	271.94	2.48	2.48	2.59	2.59
Custer County	C19	RM 167.04	13143	1.5-yr	1186.5	692.21	689.14	1.66	1.64	15.1	14.64	254.52	265.39	2.8	2.72	3.07	3.07
Custer County	C19	RM 166.85	12847	1.5-yr	1186.5	691.86	688.98	2.2	2.2	28.42	28.42	234.45	234.45	2.3	2.3	2.87	2.87
Custer County	C19	RM 166.67	12552	1.5-yr	1186.5	691.6	688.84	1.9	1.9	20.23	20.23	241.13	241.13	2.59	2.59	2.77	2.77
Custer County	C19	RM 166.52	12319	1.5-yr	1186.5	691.5	688.64	1.57	1.57	13.66	13.66	274.87	274.87	2.74	2.74	2.86	2.86
Custer County	C19	RM 166.31	11978	1.5-yr	1186.5	691.27	688.02	1.78	1.78	16.39	16.39	238.34	238.34	2.8	2.8	3.25	3.25
Custer County	C20	RM 166.2	11806	1.5-yr	1189.3	691.17	687.4	1.77	1.77	16.78	16.78	221.93	221.93	3.02	3.02	3.77	3.77
Custer County	C20	RM 166.06	11569	1.5-yr	1189.3	690.95	687.38	2.01	2.01	22.67	22.67	230.14	230.14	2.58	2.58	3.57	3.57
Custer County	C20	RM 165.92	11350	1.5-yr	1189.3	690.7	687.38	2.15	2.15	26.25	26.25	222.59	222.59	2.49	2.49	3.32	3.32
Custer County	C20	RM 165.73	11039	1.5-yr	1189.3	690.47	687.26	1.8	1.8	18.24	18.24	260.28	260.28	2.54	2.54	3.21	3.21
Custer County	C20	RM 165.55	10750	1.5-yr	1189.3	690.27	687.11	1.78	1.78	17.81	17.81	262.5	262.5	2.55	2.55	3.16	3.16
Custer County	C20	RM 165.35	10440	1.5-yr	1189.3	690.03	686.75	1.81	1.81	18.67	18.67	262.43	262.43	2.5	2.5	3.28	3.28
Custer County	C20	RM 165.17	10140	1.5-yr	1189.3	689.82	686.41	1.78	1.75	17.41	15.47	244.19	280.28	2.73	2.43	3.41	3.41
Custer County	C20	RM 165.01	9883	1.5-yr	1189.3	689.64	686.16	1.78	1.78	17.73	17.73	254.05	254.05	2.63	2.63	3.48	3.48
Custer County	C20	RM 164.81	9577	1.5-yr	1189.3	689.41	686.04	1.8	1.79	18.72	18.36	280.56	286.47	2.36	2.31	3.37	3.37
Custer County	C20	RM 164.61	9252	1.5-yr	1189.3	689.23	685.8	1.64	1.62	13.81	12.97	251.13	273.19	2.87	2.69	3.42	3.42
Custer County	C20	RM 164.42	8945	1.5-yr	1189.3	689.05	685.78	1.67	1.67	14.93	14.93	294.39	294.39	2.42	2.42	3.27	3.27
Custer County	C20	RM 164.23	8641	1.5-yr	1189.3	688.78	685.85	1.82	1.82	16.37	16.37	394.43	394.43	1.66	1.66	2.93	2.93
Custer County	C20	RM 164.06	8372	1.5-yr	1189.3	688.66	685.64	1.44	1.44	11.2	11.2	286.7	286.7	2.88	2.88	3.02	3.02
Custer County	C20	RM 163.85	8031	1.5-yr	1189.3	688.47	685	1.6	1.6	14.16	14.16	275.09	275.09	2.71	2.71	3.47	3.47
Custer County	C20	RM 163.67	7743	1.5-yr	1189.3	688.31	684.45	1.72	1.72	14.94	14.94	189.25	189.25	3.65	3.65	3.86	3.86
Custer County	C20	RM 163.48	7449	1.5-yr	1189.3	688.11	684.13	2.01	2.01	20.26	20.26	159.84	159.84	3.69	3.69	3.98	3.98
Custer County	C20	RM 163.3	7150	1.5-yr	1189.3	687.99	684.13	1.73	1.73	15.32	14.99	201.69	206.45	3.41	3.34	3.86	3.86
Custer County	C20	RM 163.12	6859	1.5-yr	1189.3	687.89	683.91	1.51	1.5	11.52	11.07	261.9	274.55	3	2.88	3.98	3.98
Custer County	C20	RM 162.94	6583	1.5-yr	1189.3	687.75	683.78	1.69	1.69	14.38	14.15	196.95	200.21	3.58	3.52	3.97	3.97
Custer County	C20	RM 162.74	6254	1.5-yr	1189.3	687.46	683.77	2.17	2.17	24.8	24.8	172.54	172.54	3.18	3.18	3.69	3.69
Custer County	C20	RM 162.55	5957	1.5-yr	1189.3	687.21	683.96	2.08	2.08	23.04	23.04	226.45	226.45	2.52	2.52	3.25	3.25
Custer County	C20	RM 162.34	5620	1.5-yr	1189.3	687.02	683.92	1.61	1.61	14.9	14.9	299.39	299.39	2.46	2.46	3.1	3.1
Custer County	C20	RM 162.18	5352	1.5-yr	1189.3	686.81	683.41	1.54	1.54	22.21	22.21	350.19	350.19	2.2	2.2	3.4	3.4
Custer County	C20	RM 162.03	5111	1.5-yr	1189.3	686.71	683.26	1.32	1.32	9.04	9.04	318.05	318.05	2.84	2.84	3.45	3.45
Custer County	C20	RM 161.81	4770	1.5-yr	1189.3	686.42	682.63	2.04	2.04	21.54	21.54	173.88	173.88	3.35	3.35	3.79	3.79
Custer County	C20	RM 161.62	4470	1.5-yr	1189.3	686.15	682.53	2.22	2.22	26	26	169.53	221.92	3.16	3.16	3.62	3.62
Custer County	C20	RM 161.43	4159	1.5-yr	1189.3	685.94	682.63	1.97	1.97	20.74	20.74	201.41	201.41	3	3	3.31	3.31
Custer County	C20	RM 161.24	3859	1.5-yr	1189.3	685.67	682.51	2.11	2.11	24.34	23.32	197.69	206.65	2.85	2.73	3.16	3.16
Custer County	C20	RM 161.06	3559	1.5-yr	1189.3	685.47	682.38	1.89	1.89	19.26	19.26	213.22	213.22	2.95	2.95	3.09	3.09
Custer County	C20	RM 160.87	3258	1.5-yr	1189.3	685.18	682.24	2.13	2.13	24.98	24.98	201.35	201.35	2.77	2.77	2.94	2.94

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	1.5-yr	1189.3	685.01	682.11	1.72	1.72	16.21	16.21	249.07	249.07	2.78	2.78	2.9	2.9
Custer County	C20	RM 160.5	2662	1.5-yr	1189.3	684.8	681.85	1.76	1.76	18.32	18.32	300.51	300.51	2.25	2.25	2.95	2.95
Custer County	C20	RM 160.31	2364	1.5-yr	1189.3	684.55	681.58	1.72	1.72	17.68	17.65	317.4	318.05	2.17	2.17	2.97	2.97
Custer County	C20	RM 160.12	2063	1.5-yr	1189.3	684.36	681.02	1.61	1.6	14.44	13.82	276.59	290.52	2.67	2.55	3.34	3.34
Custer County	C20	RM 159.93	1758	1.5-yr	1189.3	684.01	680.9	2.09	2.09	26.94	26.94	288.22	288.22	1.97	1.97	3.11	3.11
Custer County	C20	RM 159.75	1459	1.5-yr	1189.3	683.71	680.88	1.92	1.92	20.82	20.82	246.74	246.74	2.52	2.52	2.83	2.83
Custer County	C20	RM 159.55	1151	1.5-yr	1189.3	683.47	680.74	1.84	1.84	19.24	19.24	256.66	256.66	2.52	2.52	2.73	2.73
Custer County	C20	RM 159.38	876	1.5-yr	1189.3	683.22	680.37	1.96	1.96	21.43	20.31	228.1	241.46	2.65	2.52	2.85	2.85
Custer County	C20	RM 159.19	566	1.5-yr	1189.3	683.01	679.77	1.82	1.82	18.02	18.01	230.68	230.71	2.84	2.84	3.24	3.24
Custer County	C20	RM 158.98	229	1.5-yr	1189.3	682.75	679.44	1.94	1.94	20.55	20.55	214.65	214.65	2.85	2.85	3.31	3.31

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	1.5-yr	1189.3	682.75	679.22	1.87	1.87	18.59	18.59	210.88	210.88	3.02	3.02	3.53	3.53
Prairie County	C21	RM 158.55	61087	1.5-yr	1189.3	682.64	678.98	1.56	1.56	12.45	12.45	223.52	223.52	3.41	3.41	3.66	3.66
Prairie County	C21	RM 158.36	60787	1.5-yr	1189.3	682.52	678.83	1.54	1.54	12.41	12.41	243.41	243.41	3.18	3.18	3.69	3.69
Prairie County	C21	RM 158.17	60481	1.5-yr	1189.3	682.37	678.35	1.62	1.62	15.25	15.25	248.75	248.75	2.95	2.95	4.02	4.02
Prairie County	C21	RM 157.98	60173	1.5-yr	1189.3	682.08	678.22	2	2	22.37	22.37	225.6	225.6	2.64	2.64	3.86	3.86
Prairie County	C21	RM 157.78	59862	1.5-yr	1189.3	681.85	678.23	1.95	1.95	20.27	19.79	199.2	204.2	3.06	2.99	3.62	3.62
Prairie County	C21	RM 157.6	59561	1.5-yr	1189.3	681.73	678.14	1.59	1.59	13.15	13.14	232.05	232.27	3.23	3.23	3.59	3.59
Prairie County	C21	RM 157.38	59209	1.5-yr	1189.3	681.55	677.81	1.62	1.59	14.84	13.75	279.06	313.74	2.58	2.39	3.74	3.74
Prairie County	C21	RM 157.18	58885	1.5-yr	1189.3	681.4	677.42	1.56	1.52	12.75	11.52	235.15	277.63	3.16	2.85	3.98	3.98
Prairie County	C21	RM 156.99	58595	1.5-yr	1189.3	681.18	677.32	1.98	1.88	20.39	16.17	172.93	241.8	3.3	2.61	3.86	3.86
Prairie County	C21	RM 156.8	58287	1.5-yr	1189.3	680.77	677.32	2.56	2.46	35.32	27.16	148.27	212.65	2.98	2.28	3.45	3.45
Prairie County	C21	RM 156.62	57990	1.5-yr	1189.3	680.64	677.29	1.8	1.75	17.31	16.19	205.52	242.92	2.99	2.8	3.35	3.35
Prairie County	C21	RM 156.42	57683	1.5-yr	1189.3	680.51	677.21	1.54	1.54	12.88	12.88	269.84	269.84	2.87	2.87	3.3	3.3
Prairie County	C21	RM 156.24	57378	1.5-yr	1189.3	680.24	676.91	1.94	1.94	21.34	21.32	244.5	244.68	2.51	2.51	3.33	3.33
Prairie County	C21	RM 156.04	57069	1.5-yr	1189.3	680.1	676.56	1.61	1.61	13.37	13.16	219.99	223.52	3.36	3.31	3.54	3.54
Prairie County	C21	RM 155.85	56762	1.5-yr	1189.3	679.92	676.11	1.82	1.82	17.15	16.54	194.86	202.88	3.35	3.23	3.81	3.81
Prairie County	C21	RM 155.66	56455	1.5-yr	1189.3	679.65	675.96	2.15	2.15	24.42	23.02	174.84	185.94	3.16	2.98	3.69	3.69
Prairie County	C21	RM 155.47	56151	1.5-yr	1189.3	679.49	675.89	1.73	1.72	16.57	16.23	256.45	262.36	2.69	2.63	3.6	3.6
Prairie County	C21	RM 155.27	55835	1.5-yr	1189.3	679.26	675.92	1.71	1.71	17.34	17.34	316.55	316.55	2.2	2.2	3.34	3.34
Prairie County	C21	RM 155.08	55530	1.5-yr	1189.3	679.01	675.95	1.75	1.75	18	18	295.65	295.65	2.29	2.29	3.06	3.06
Prairie County	C21	RM 154.88	55209	1.5-yr	1189.3	678.8	675.64	1.64	1.64	14.16	14.16	298.53	298.53	2.43	2.43	3.16	3.16
Prairie County	C21	RM 154.69	54901	1.5-yr	1189.3	678.51	675.39	1.94	1.94	21.93	21.93	263.73	263.73	2.32	2.32	3.12	3.12
Prairie County	C21	RM 154.5	54588	1.5-yr	1189.3	678.24	675.02	1.86	1.86	19.79	19.75	257.14	257.55	2.48	2.48	3.22	3.22
Prairie County	C21	RM 154.3	54273	1.5-yr	1189.3	678	674.8	1.77	1.77	17.94	17.9	277.5	278.23	2.42	2.42	3.2	3.2
Prairie County	C21	RM 154.1	53959	1.5-yr	1189.3	677.71	674.67	1.91	1.91	21.18	21.18	267.49	267.49	2.33	2.33	3.04	3.04
Prairie County	C21	RM 153.91	53650	1.5-yr	1189.3	677.52	674.51	1.67	1.67	15.28	15.21	258.87	260.04	2.76	2.74	3.01	3.01
Prairie County	C21	RM 153.72	53338	1.5-yr	1189.3	677.31	674.06	1.79	1.79	17.17	17.04	224.95	226.66	2.96	2.94	3.25	3.25
Prairie County	C21	RM 153.52	53023	1.5-yr	1189.3	676.91	673.78	2.36	2.29	31.99	27.67	204.17	246.83	2.44	2.11	3.13	3.13
Prairie County	C21	RM 153.32	52704	1.5-yr	1189.3	676.55	673.64	2.13	2.13	26.31	26.31	233.49	233.49	2.39	2.39	2.91	2.91
Prairie County	C21	RM 153.12	52380	1.5-yr	1189.3	676.31	673.43	1.78	1.78	17.83	17.83	257.88	257.88	2.59	2.59	2.88	2.88
Prairie County	C21	RM 152.92	52065	1.5-yr	1189.3	676.1	672.88	1.76	1.76	16.7	16.7	258.94	279.36	2.62	2.62	3.22	3.22
Prairie County	C21	RM 152.73	51762	1.5-yr	1189.3	675.86	672.27	1.84	1.84	18.86	18.86	264.72	264.72	2.44	2.44	3.59	3.59
Prairie County	C21	RM 152.54	51463	1.5-yr	1189.3	675.63	671.85	1.85	1.85	18.03	18.03	247.87	247.87	2.6	2.6	3.78	3.78
Prairie County	C21	RM 152.35	51157	1.5-yr	1189.3	675.48	671.41	1.64	1.64	14.19	14.19	224.43	224.43	3.22	3.22	4.07	4.07
Prairie County	C21	RM 152.16	50852	1.5-yr	1189.3	675.31	671.23	1.71	1.71	16.42	16.42	264.4	264.4	2.63	2.63	4.08	4.08
Prairie County	C21	RM 151.97	50546	1.5-yr	1189.3	675.14	670.99	1.7	1.67	13.84	11.85	222.84	266.57	3.14	2.68	4.15	4.15
Prairie County	C21	RM 151.77	50227	1.5-yr	1189.3	675.03	670.87	1.59	1.53	12.71	9.19	200.77	293.82	3.67	2.64	4.16	4.16
Prairie County	C21	RM 151.59	49936	1.5-yr	1189.3	674.74	670.75	2.25	2.14	25.95	21.76	147.2	192.76	3.46	2.89	3.99	3.99
Prairie County	C21	RM 151.38	49599	1.5-yr	1189.3	674.57	670.9	1.86	1.83	18.11	16.67	198.09	219.5	3.22	2.96	3.67	3.67
Prairie County	C21	RM 151.19	49287	1.5-yr	1189.3	674.44	670.96	1.66	1.66	14.28	14.28	220.61	220.61	3.26	3.26	3.48	3.48
Prairie County	C21	RM 151.01	49012	1.5-yr	1189.3	674.28	670.91	1.7	1.7	15.78	15.78	283.33	283.33	2.47	2.47	3.37	3.37
Prairie County	C21	RM 150.81	48683	1.5-yr	1189.3	674.1	670.79	1.55	1.55	13.35	13.35	300.65	300.65	2.56	2.56	3.31	3.31
Prairie County	C21	RM 150.63	48400	1.5-yr	1277.1	673.98	670.45	1.4	1.4	10.71	10.71	354.11	354.11	2.57	2.57	3.53	3.53
Prairie County	C21	RM 150.44	48094	1.5-yr	1277.1	673.79	669.86	1.7	1.69	12.9	11.97	273.33	296.52	2.74	2.54	3.93	3.93
Prairie County	C21	RM 150.25	47780	1.5-yr	1277.1	673.47	669.38	2.23	2.23	28.34	28.34	160.71	160.71	3.56	3.56	4.09	4.09
Prairie County	C21	RM 150.05	47474	1.5-yr	1277.1	673.38	669.21	1.7	1.7	14.35	14.35	198.2	198.2	3.79	3.79	4.17	4.17
Prairie County	C21	RM 149.87	47178	1.5-yr	1277.1	673.23	669.02	1.73	1.73	16.57	16.57	267.51	267.51	2.76	2.76	4.21	4.21
Prairie County	C21	RM 149.66	46846	1.5-yr	1277.1	673.1	668.97	1.51	1.51	10.39	10.39	269.25	269.25	3.13	3.13	4.13	4.13
Prairie County	C21	RM 149.48	46551	1.5-yr	1277.1	672.86	668.91	1.97	1.97	21.99	21.22	254.67	350.52	2.54	2.45	3.95	3.95
Prairie County	C21	RM 149.27	46219	1.5-yr	1277.1	672.54	668.94	2.12	1.97	23.73	18.04	201.77	400.93	2.83	2.14	3.6	3.6
Prairie County	D1	RM 149.08	45914	1.5-yr	1277.1	672.36	668.95	1.78	1.78	17.33	17.33	250.6	250.6	2.86	2.86	3.41	3.41
Prairie County	D1	RM 148.89	45608	1.5-yr	1277.1	672.24	668.96	1.46	1.46	11.71	11.71	312.59	312.59	2.79	2.79	3.28	3.28
Prairie County	D1	RM 148.7	45301	1.5-yr	1277.1	672.05	668.73	1.64	1.64	13.18	13.18	344.07	344.07	2.26	2.26	3.32	3.32
Prairie County	D1	RM 148.5	44987	1.5-yr	1277.1	671.83	668.42	1.8	1.79	17.31	16.32	232.17	249.03	3.05	2.87	3.41	3.41
Prairie County	D1	RM 148.3	44667	1.5-yr	1277.1	671.57	668.01	2.06	2.03	22.12	20.55	189.71	208.34	3.26	3.02	3.56	3.56
Prairie County	D1	RM 148.11	44353	1.5-yr	1277.1	671.42	667.73	1.77	1.76	16.55	15.53	230.09	247.12	3.13	2.94	3.69	3.69
Prairie County	D1	RM 147.93	44062	1.5-yr	1277.1	671.26	667.4	1.65	1.65	15.41	15.41	304.05	304.05	2.54	2.54	3.86	3.86
Prairie County	D1	RM 147.74	43761	1.5-yr	1277.1	671.07	667.21	1.77	1.69	17.08	12.99	219.5	312.36	3.2	2.42	3.86	3.86
Prairie County	D1	RM 147.55	43454	1.5-yr	1277.1	670.89	666.79	1.86	1.75	17.64	12.83	184.77	285.09	3.55	2.57	4.1	4.1
Prairie County	D1	RM 147.34	43128	1.5-yr	1277.1	670.68	666.46	2.02	1.89	20.61	15.02	169.39	261.61	3.58	2.59	4.22	4.22

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	1.5-yr	1277.1	670.43	666.42	2.18	2.04	25.14	18.64	176.91	269.31	3.16	2.33	4.01	4.01
Prairie County	D1	RM 146.96	42505	1.5-yr	1277.1	670.24	666.49	1.96	1.96	19.73	19.29	187.33	191.75	3.47	3.39	3.75	3.75
Prairie County	D1	RM 146.77	42199	1.5-yr	1277.1	670.12	666.48	1.69	1.69	14.76	14.76	221.14	221.14	3.41	3.41	3.64	3.64
Prairie County	D1	RM 146.58	41899	1.5-yr	1277.1	670.02	666.59	1.44	1.44	11.1	11.1	292.67	292.67	3.03	3.03	3.43	3.43
Prairie County	D1	RM 146.32	41487	1.5-yr	1277.1	669.76	666.62	1.79	1.79	15.95	15.95	287.54	287.54	2.49	2.49	3.14	3.14
Prairie County	D1	RM 146	40968	1.5-yr	1277.1	669.4	666.48	1.78	1.78	18.33	18.33	272.3	272.3	2.63	2.63	2.92	2.92
Prairie County	D1	RM 145.65	40420	1.5-yr	1277.1	669.02	665.52	1.82	1.82	18.36	18.36	237.64	237.64	2.96	2.96	3.5	3.5
Prairie County	D1	RM 145.36	39958	1.5-yr	1277.1	668.73	664.91	1.75	1.74	17.79	17.42	263.93	269.86	2.77	2.71	3.82	3.82
Prairie County	D1	RM 145.13	39579	1.5-yr	1277.1	668.54	664.58	1.58	1.58	13.86	13.86	259.58	259.58	3.11	3.11	3.96	3.96
Prairie County	D1	RM 144.92	39251	1.5-yr	1277.1	668.39	664.24	1.57	1.57	14.09	14.09	262.19	262.19	3.1	3.1	4.15	4.15
Prairie County	D1	RM 144.73	38942	1.5-yr	1277.1	668.21	663.99	1.69	1.69	16.46	16.46	259.53	259.53	2.91	2.91	4.22	4.22
Prairie County	D1	RM 144.56	38672	1.5-yr	1277.1	667.98	663.14	1.87	1.87	19.47	19.47	258.61	258.61	2.65	2.65	4.85	4.85
Prairie County	D1		38642.5	1.5-yr	Bridge												
Prairie County	D1	RM 144.52	38613	1.5-yr	1277.1	667.9	663.14	1.93	1.93	20.95	20.95	257.34	257.34	2.57	2.57	4.76	4.76
Prairie County	D1	RM 144.33	38305	1.5-yr	1277.1	667.69	664.19	1.85	1.85	18.12	18.12	226.04	226.04	3.06	3.06	3.5	3.5
Prairie County	D1	RM 144.13	37987	1.5-yr	1277.1	667.55	664.33	1.58	1.57	13.3	13.08	267.77	272.73	3.02	2.97	3.22	3.22
Prairie County	D1	RM 143.91	37637	1.5-yr	1277.1	667.39	663.96	1.54	1.54	13.05	12.54	297.92	310.74	2.78	2.67	3.44	3.44
Prairie County	D1	RM 143.71	37320	1.5-yr	1277.1	667.12	663.43	2.04	2.04	21.49	21.49	189.6	189.6	3.31	3.31	3.69	3.69
Prairie County	D1	RM 143.45	36908	1.5-yr	1277.1	666.73	663.01	2.31	2.31	28.04	28.04	175.53	175.53	3.15	3.15	3.72	3.72
Prairie County	D1	RM 143.21	36511	1.5-yr	1277.1	666.53	662.92	1.78	1.78	16.57	16.57	220.27	220.27	3.25	3.25	3.61	3.61
Prairie County	D1	RM 142.97	36139	1.5-yr	1277.1	666.37	662.7	1.66	1.66	14.2	14.2	227.86	227.86	3.37	3.37	3.67	3.67
Prairie County	D1	RM 142.71	35717	1.5-yr	1277.1	666.01	662.52	2.19	2.19	25.28	25.28	183.82	183.82	3.17	3.17	3.49	3.49
Prairie County	D1	RM 142.46	35322	1.5-yr	1277.1	665.82	662.36	1.69	1.69	15.23	15.23	251.25	251.25	3.01	3.01	3.46	3.46
Prairie County	D1	RM 142.23	34952	1.5-yr	1277.1	665.61	662.21	1.75	1.75	16.17	16.17	234.48	234.48	3.11	3.11	3.4	3.4
Prairie County	D1	RM 142.02	34614	1.5-yr	1277.1	665.31	662.21	2.04	1.99	24.31	22.57	265.22	301.8	2.29	2.13	3.1	3.1
Prairie County	D1	RM 141.8	34258	1.5-yr	1277.1	665.11	662.01	1.47	1.47	12.38	12.38	373.67	373.67	2.32	2.32	3.1	3.1
Prairie County	D1	RM 141.6	33942	1.5-yr	1277.1	664.81	661.72	1.91	1.91	20.05	20.05	287.07	287.07	2.33	2.33	3.09	3.09
Prairie County	D1	RM 141.42	33642	1.5-yr	1277.1	664.68	661.32	1.46	1.46	11.53	11.53	334.77	334.77	2.61	2.61	3.36	3.36
Prairie County	D1	RM 141.22	33325	1.5-yr	1277.1	664.53	660.91	1.47	1.47	12	12	325.39	325.39	2.67	2.67	3.62	3.62
Prairie County	D1	RM 141.02	33011	1.5-yr	1277.1	664.28	660.58	1.94	1.94	19.37	19.37	192.13	192.13	3.42	3.42	3.7	3.7
Prairie County	D1	RM 140.84	32709	1.5-yr	1277.1	664.12	660.35	1.76	1.76	16.62	16.62	238.17	238.17	3.04	3.04	3.77	3.77
Prairie County	D1	RM 140.64	32394	1.5-yr	1277.1	664.02	660.07	1.52	1.52	11.41	11.41	234.77	234.77	3.57	3.57	3.95	3.95
Prairie County	D1	RM 140.44	32074	1.5-yr	1277.1	663.83	659.63	1.81	1.81	16.82	16.82	221.33	221.33	3.19	3.19	4.2	4.2
Prairie County	D1	RM 140.23	31738	1.5-yr	1277.1	663.53	659.62	2.15	2.15	23.91	23.91	202.55	202.55	2.93	2.93	3.91	3.91
Prairie County	D1	RM 140.03	31420	1.5-yr	1277.1	663.36	659.59	1.76	1.76	16.41	16.41	248.3	248.3	2.92	2.92	3.77	3.77
Prairie County	D1	RM 139.84	31118	1.5-yr	1277.1	663.17	659.19	1.74	1.74	17.53	17.53	305.56	305.56	2.4	2.4	3.98	3.98
Prairie County	D1	RM 139.64	30801	1.5-yr	1277.1	663	658.96	1.66	1.66	14.05	13.67	219.84	226.22	3.5	3.4	4.04	4.04
Prairie County	D1	RM 139.44	30466	1.5-yr	1277.1	662.84	658.72	1.69	1.69	15.26	14.95	246.85	252.05	3.06	2.99	4.12	4.12
Prairie County	D1	RM 139.23	30138	1.5-yr	1277.1	662.7	658.34	1.62	1.62	14.87	14.87	213.43	213.43	3.69	3.69	4.36	4.36
Prairie County	D1	RM 139.02	29799	1.5-yr	1277.1	662.4	658.14	2.13	2.13	27.41	27.41	172	172	3.49	3.49	4.26	4.26
Prairie County	D1	RM 138.81	29470	1.5-yr	1277.1	662.32	658.11	1.5	1.5	12.62	12.62	216.66	216.66	3.93	3.93	4.21	4.21
Prairie County	D1	RM 138.62	29157	1.5-yr	1277.1	662.19	657.94	1.62	1.62	12.78	12.78	212.19	212.19	3.71	3.71	4.25	4.25
Prairie County	D1	RM 138.41	28823	1.5-yr	1277.1	661.99	657.82	1.87	1.87	19.6	19.6	200.5	200.5	3.41	3.41	4.17	4.17
Prairie County	D1	RM 138.22	28519	1.5-yr	1277.1	661.82	657.8	1.85	1.85	17.03	17.03	196.2	196.2	3.51	3.51	4.02	4.02
Prairie County	D1	RM 138.02	28200	1.5-yr	1277.1	661.77	657.74	1.36	1.36	9.89	9.89	246.15	246.15	3.81	3.81	4.02	4.02
Prairie County	D1	RM 137.82	27874	1.5-yr	1277.1	661.63	656.95	1.55	1.55	13.4	13.4	258.04	258.04	3.2	3.2	4.68	4.68
Prairie County	D1	RM 137.62	27552	1.5-yr	1277.1	661.42	656.75	1.77	1.77	17.91	17.91	230.98	385.09	3.13	3.13	4.67	4.67
Prairie County	D1	RM 137.42	27247	1.5-yr	1277.1	661.22	656.66	1.87	1.87	19.19	19.19	194.9	194.9	3.5	3.5	4.56	4.56
Prairie County	D1	RM 137.24	26944	1.5-yr	1277.1	661.06	656.66	1.83	1.83	18.45	18.45	195.55	195.55	3.58	3.58	4.4	4.4
Prairie County	D1	RM 137.04	26627	1.5-yr	1279.9	660.9	655.41	1.79	1.79	17.71	17.71	197.17	197.17	3.62	3.62	5.49	5.49
Prairie County	D1		26616.5	1.5-yr	Bridge												
Prairie County	D1	RM 137.02	26606	1.5-yr	1279.9	660.87	655.41	1.8	1.8	18.02	18.02	196.96	196.96	3.6	3.6	5.46	5.46
Prairie County	D2	RM 136.84	26475	1.5-yr	1279.9	660.83	656.46	1.62	1.62	13.45	13.45	200.68	200.68	3.93	3.93	4.37	4.37
Prairie County	D2		26471.5	1.5-yr	Bridge												
Prairie County	D2	RM 136.65	26468	1.5-yr	1279.9	660.82	656.45	1.62	1.62	13.85	13.85	203.59	203.59	3.88	3.88	4.37	4.37
Prairie County	D2	RM 136.44	26317	1.5-yr	1279.9	660.79	656.37	1.46	1.46	11.19	11.19	220.63	220.63	3.99	3.99	4.42	4.42
Prairie County	D2	RM 136.23	26001	1.5-yr	1279.9	660.63	656.19	1.7	1.7	13.57	13.57	239.9	239.9	3.13	3.13	4.44	4.44
Prairie County	D2	RM 136.04	25673	1.5-yr	1279.9	660.51	656.01	1.64	1.64	12.3	12.3	205.4	205.4	3.8	3.8	4.5	4.5
Prairie County	D2	RM 135.85	25337	1.5-yr	1279.9	660.33	655.93	1.87	1.87	17.54	17.54	183.53	183.53	3.72	3.72	4.4	4.4
Prairie County	D2	RM 135.66	25033	1.5-yr	1279.9	660.21	655.91	1.74	1.74	15.06	15.06	197.39	197.39	3.73	3.73	4.3	4.3

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	1.5-yr	1279.9	660.07	655.86	1.73	1.73	17.55	17.55	196.15	196.15	3.76	3.76	4.21	4.21
Prairie County	D2	RM 135.24	24417	1.5-yr	1279.9	660	655.68	1.41	1.41	11.09	11.09	225.83	225.83	4.03	4.03	4.32	4.32
Prairie County	D2	RM 135	24090	1.5-yr	1279.9	659.85	655.56	1.6	1.6	14.49	14.49	240.86	240.86	3.32	3.32	4.29	4.29
Prairie County	D2	RM 134.78	23742	1.5-yr	1279.9	659.72	655.36	1.52	1.52	12.87	12.87	218.77	218.77	3.84	3.84	4.36	4.36
Prairie County	D2	RM 134.58	23351	1.5-yr	1279.9	659.5	655.29	1.81	1.81	19.02	19.02	187.76	187.76	3.77	3.77	4.21	4.21
Prairie County	D2	RM 134.39	23000	1.5-yr	1279.9	659.31	655.24	1.79	1.79	19.29	19.29	214.35	214.35	3.34	3.34	4.07	4.07
Prairie County	D2	RM 134.19	22682	1.5-yr	1279.9	659.13	655.11	1.71	1.71	15.96	15.88	263.21	318.16	2.84	2.83	4.02	4.02
Prairie County	D2	RM 133.99	22372	1.5-yr	1279.9	658.99	654.97	1.6	1.6	12.12	12.12	258.38	258.38	3.1	3.1	4.02	4.02
Prairie County	D2	RM 133.79	22053	1.5-yr	1279.9	658.8	655	1.81	1.81	17.22	17.02	225.35	228.09	3.14	3.11	3.8	3.8
Prairie County	D2	RM 133.59	21733	1.5-yr	1279.9	658.64	654.96	1.71	1.71	15.49	15.42	238.48	239.48	3.13	3.12	3.68	3.68
Prairie County	D2	RM 133.41	21417	1.5-yr	1279.9	658.51	654.78	1.58	1.58	12.96	12.89	248.11	249.52	3.27	3.25	3.73	3.73
Prairie County	D2	RM 133.21	21104	1.5-yr	1279.9	658.34	654.64	1.73	1.73	15.57	15.3	229.84	234.03	3.23	3.17	3.7	3.7
Prairie County	D2	RM 133.02	20811	1.5-yr	1279.9	658.21	654.53	1.68	1.68	14.89	14.89	242.78	242.78	3.14	3.14	3.68	3.68
Prairie County	D2	RM 132.83	20491	1.5-yr	1279.9	658.02	654.29	1.74	1.74	16.64	16.27	261.25	267.86	2.81	2.74	3.73	3.73
Prairie County	D2	RM 132.63	20184	1.5-yr	1279.9	657.82	654.04	1.8	1.76	17.69	15.74	251.48	291.96	2.8	2.49	3.78	3.78
Prairie County	D2	RM 132.42	19875	1.5-yr	1279.9	657.64	653.98	1.78	1.75	16.36	15.03	214.99	240.58	3.32	3.05	3.66	3.66
Prairie County	D2	RM 132.23	19553	1.5-yr	1279.9	657.54	653.88	1.5	1.47	11.66	10.94	253.05	279.41	3.32	3.12	3.66	3.66
Prairie County	D2	RM 132.02	19225	1.5-yr	1279.9	657.32	653.63	1.83	1.83	17.98	17.98	239.14	239.14	2.93	2.93	3.69	3.69
Prairie County	D2	RM 131.81	18910	1.5-yr	1279.9	657.08	653.37	1.96	1.96	20.66	20.66	222.44	222.44	2.94	2.94	3.71	3.71
Prairie County	D2	RM 131.58	18573	1.5-yr	1279.9	656.96	653.02	1.56	1.56	12.47	12.37	236.85	243.82	3.46	3.43	3.94	3.94
Prairie County	D2	RM 131.38	18237	1.5-yr	1279.9	656.8	652.75	1.69	1.64	14.43	13.51	209.24	236.32	3.53	3.31	4.05	4.05
Prairie County	D2	RM 131.18	17875	1.5-yr	1279.9	656.57	652.49	1.93	1.93	19.4	19.4	204.02	204.02	3.25	3.25	4.08	4.08
Prairie County	D2	RM 130.98	17548	1.5-yr	1279.9	656.37	652.34	1.94	1.93	19.32	18.2	195.5	208.53	3.38	3.18	4.03	4.03
Prairie County	D2	RM 130.78	17227	1.5-yr	1279.9	656.22	652.27	1.77	1.77	16.03	16.03	211.45	211.45	3.42	3.42	3.95	3.95
Prairie County	D2	RM 130.59	16914	1.5-yr	1279.9	656.13	652.16	1.49	1.49	11.12	11.12	234.75	234.75	3.66	3.66	3.97	3.97
Prairie County	D2	RM 130.39	16588	1.5-yr	1279.9	655.98	651.95	1.69	1.69	14.33	14.33	208.1	208.1	3.64	3.64	4.03	4.03
Prairie County	D2	RM 130.19	16280	1.5-yr	1279.9	655.81	651.81	1.81	1.81	17.06	17.06	214.39	214.39	3.29	3.29	4	4
Prairie County	D2	RM 130	15965	1.5-yr	1279.9	655.69	651.57	1.6	1.6	13.27	13.27	238.09	238.09	3.35	3.35	4.12	4.12
Prairie County	D2	RM 129.81	15649	1.5-yr	1279.9	655.59	651.47	1.5	1.5	11.34	11.25	232.79	234.68	3.66	3.63	4.12	4.12
Prairie County	D2	RM 129.62	15337	1.5-yr	1279.9	655.42	651.34	1.74	1.74	15.53	15.53	213.42	213.42	3.44	3.44	4.08	4.08
Prairie County	D2	RM 129.43	15031	1.5-yr	1279.9	655.32	651.21	1.59	1.59	12.71	12.71	223.07	223.07	3.61	3.61	4.11	4.11
Prairie County	D2	RM 129.24	14724	1.5-yr	1291.2	655.15	651.06	1.79	1.79	16.59	16.59	212.79	212.79	3.38	3.38	4.09	4.09
Prairie County	D2	RM 129.04	14417	1.5-yr	1291.2	654.96	651.06	1.9	1.9	18.68	18.64	206.89	210.02	3.29	3.29	3.9	3.9
Prairie County	D2	RM 128.82	14112	1.5-yr	1291.2	654.77	651.05	1.91	1.91	18.9	18.88	206.26	242.84	3.28	3.28	3.72	3.72
Prairie County	D2	RM 128.62	13798	1.5-yr	1291.2	654.64	651.08	1.7	1.7	15	15	225.41	225.41	3.36	3.36	3.56	3.56
Prairie County	D2	RM 128.41	13446	1.5-yr	1291.2	654.47	651.07	1.67	1.67	14.69	14.69	250.08	250.08	3.1	3.1	3.4	3.4
Prairie County	D2	RM 128.21	13125	1.5-yr	1291.2	654.3	650.98	1.73	1.73	15.82	15.82	243.79	243.79	3.07	3.07	3.32	3.32
Prairie County	D2	RM 127.98	12790	1.5-yr	1291.2	654.14	650.84	1.67	1.67	14.72	14.72	246.29	246.29	3.14	3.14	3.29	3.29
Prairie County	D2	RM 127.75	12473	1.5-yr	1291.2	654	650.59	1.56	1.56	13.21	13.21	286.25	286.25	2.89	2.89	3.41	3.41
Prairie County	D2	RM 127.55	12112	1.5-yr	1291.2	653.82	650.35	1.56	1.56	13.23	13.23	283.36	283.36	2.91	2.91	3.47	3.47
Prairie County	D2	RM 127.27	11729	1.5-yr	1291.2	653.65	649.95	1.56	1.56	13.01	13.01	273.26	273.26	3.03	3.03	3.7	3.7
Prairie County	D2	RM 126.97	11415	1.5-yr	1291.2	653.45	649.68	1.8	1.8	16.81	16.81	219.66	219.66	3.27	3.27	3.77	3.77
Prairie County	D2	RM 126.71	10962	1.5-yr	1291.2	653.24	649.49	1.74	1.74	15.55	15.55	213.98	213.98	3.46	3.46	3.75	3.75
Prairie County	D2	RM 126.43	10478	1.5-yr	1291.2	653.08	649.32	1.44	1.44	10.72	10.72	273.67	273.67	3.28	3.28	3.76	3.76
Prairie County	D2	RM 126.42	10074	1.5-yr	1291.2	652.85	649.05	1.75	1.75	16.41	16.41	245.13	245.13	3.01	3.01	3.8	3.8
Prairie County	D2	RM 126.41	9625	1.5-yr	1291.2	652.61	648.27	1.76	1.76	15.97	15.97	218.39	218.39	3.36	3.36	4.34	4.34
Prairie County	D2		9598.5	1.5-yr	Bridge												
Prairie County	D2	RM 126.4	9572	1.5-yr	1291.2	652.56	648.27	1.79	1.79	16.52	16.52	218.14	218.14	3.31	3.31	4.29	4.29
Prairie County	D3	RM 126.38	9533	1.5-yr	1291.2	652.54	648.27	1.8	1.8	16.78	16.78	218.02	218.02	3.29	3.29	4.27	4.27
Prairie County	D3		9523	1.5-yr	Bridge												
Prairie County	D3	RM 126.36	9513	1.5-yr	1291.2	652.52	648.27	1.81	1.81	17.03	17.03	217.91	217.91	3.27	3.27	4.25	4.25
Prairie County	D3	RM 126.22	9286	1.5-yr	1291.2	652.43	648.8	1.61	1.61	13.4	13.4	239.92	239.92	3.34	3.34	3.63	3.63
Prairie County	D3	RM 126.03	8974	1.5-yr	1291.2	652.31	648.71	1.55	1.55	12.8	12.74	268.98	270.27	3.09	3.08	3.6	3.6
Prairie County	D3	RM 125.82	8648	1.5-yr	1291.2	652.14	648.36	1.61	1.61	14.14	14.14	277.14	277.14	2.89	2.89	3.78	3.78
Prairie County	D3	RM 125.63	8335	1.5-yr	1291.2	652.02	648.12	1.52	1.52	11.92	11.91	258.55	258.76	3.3	3.29	3.9	3.9
Prairie County	D3	RM 125.43	8020	1.5-yr	1291.2	651.88	647.8	1.65	1.64	13.61	12.58	215.68	235.15	3.64	3.36	4.08	4.08
Prairie County	D3	RM 125.24	7711	1.5-yr	1291.2	651.8	647.26	1.45	1.45	9.87	9.73	226.37	229.86	3.93	3.87	4.54	4.54
Prairie County	D3	RM 125.05	7403	1.5-yr	1291.2	651.7	647.23	1.55	1.54	11.65	11.3	209.02	215.96	4	3.87	4.47	4.47
Prairie County	D3	RM 124.83	7059	1.5-yr	1291.2	651.6	647.25	1.46	1.46	10.7	10.63	237.41	238.89	3.71	3.69	4.35	4.35
Prairie County	D3	RM 124.62	6712	1.5-yr	1291.2	651.49	647.25	1.49	1.49	11.41	11.41	253.98	253.98	3.41	3.41	4.24	4.24

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	1.5-yr	1291.2	651.3	647.27	1.77	1.77	16.11	16.1	217.1	230.07	3.36	3.36	4.03	4.03
Prairie County	D3	RM 124.15	5960	1.5-yr	1291.2	651.04	647.27	1.89	1.89	19.14	19.14	229.33	229.33	2.98	2.98	3.77	3.77
Prairie County	D3	RM 123.94	5627	1.5-yr	1291.2	650.71	647.27	2.2	2.2	25.9	25.9	192.12	198.88	3.05	3.05	3.44	3.44
Prairie County	D3	RM 123.74	5312	1.5-yr	1291.2	650.45	647.25	2.15	2.15	24.76	24.76	202.59	202.59	2.97	2.97	3.2	3.2
Prairie County	D3	RM 123.56	5014	1.5-yr	1291.2	650.39	647.24	1.37	1.37	9.94	9.94	309.64	324.27	3.05	3.05	3.15	3.15
Prairie County	D3	RM 123.24	4500	1.5-yr	1291.2	650.17	647.19	1.3	1.3	12.18	12.18	485.98	485.98	2.04	2.04	2.98	2.98
Prairie County	D3	RM 122.99	4116	1.5-yr	1291.2	650	646.67	1.23	1.23	8.5	8.5	423.88	423.88	2.48	2.48	3.33	3.33
Prairie County	D3	RM 122.76	3746	1.5-yr	1291.2	649.85	646.22	1.33	1.33	9.72	9.71	357.61	357.91	2.72	2.72	3.63	3.63
Prairie County	D3	RM 122.55	3414	1.5-yr	1291.2	649.68	645.7	1.59	1.59	13.04	13.04	238.53	238.53	3.4	3.4	3.98	3.98
Prairie County	D3	RM 122.3	3012	1.5-yr	1291.2	649.44	645.57	1.87	1.87	18.1	18.1	210.64	210.64	3.28	3.28	3.87	3.87
Prairie County	D3	RM 122.08	2651	1.5-yr	1291.2	649.24	645.49	1.82	1.82	17	17	237.17	237.17	3	3	3.75	3.75
Prairie County	D3	RM 121.88	2338	1.5-yr	1291.2	649.09	645.42	1.71	1.71	14.38	14.38	240.94	240.94	3.14	3.14	3.67	3.67
Prairie County	D3	RM 121.66	1982	1.5-yr	1291.2	648.9	645.3	1.79	1.79	16.25	16.25	222.26	222.26	3.24	3.24	3.6	3.6
Prairie County	D3	RM 121.46	1651	1.5-yr	1291.2	648.71	645.06	1.79	1.79	17.04	17.04	239.97	239.97	3.01	3.01	3.65	3.65
Prairie County	D3	RM 121.24	1304	1.5-yr	1291.2	648.46	644.99	1.92	1.92	19.65	18.91	242.01	252.01	2.78	2.67	3.47	3.47
Prairie County	D3	RM 121.02	957	1.5-yr	1291.2	648.24	644.88	1.8	1.78	16.67	15.69	257.02	276.55	2.79	2.62	3.36	3.36
Prairie County	D3	RM 120.84	660	1.5-yr	1291.2	648.06	644.78	1.75	1.75	18.15	18.15	251.6	251.6	2.93	2.93	3.28	3.28
Prairie County	D3	RM 120.64	350	1.5-yr	1291.2	647.9	644.42	1.68	1.68	14.71	14.71	238.82	238.82	3.22	3.22	3.48	3.48

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	1.5-yr	1291.42	647.83	643.94	1.7	1.68	15.59	13.7	254.01	314.56	2.97	2.61	3.89	3.89
Dawson County	D3	RM 120.28	90838.07	1.5-yr	1291.42	647.77	643.78	1.71	1.67	15.13	13.93	225.69	255.08	3.29	3.03	3.98	3.98
Dawson County	D3	RM 120.18	90675.23	1.5-yr	1291.42	647.69	643.7	1.68	1.63	14.36	13.07	213.48	248.97	3.48	3.18	3.99	3.99
Dawson County	D3	RM 120.00	90388.96	1.5-yr	1291.42	647.6	643.56	1.56	1.55	12.16	11.6	226.64	239.36	3.65	3.49	4.03	4.03
Dawson County	D3	RM 119.84	90136.35	1.5-yr	1291.42	647.49	643.44	1.65	1.65	13.72	13.3	213.73	221.11	3.65	3.54	4.05	4.05
Dawson County	D3	RM 119.68	89873.82	1.5-yr	1291.42	647.34	643.31	1.83	1.83	16.79	15.66	189.21	203.47	3.72	3.47	4.03	4.03
Dawson County	D3	RM 119.53	89627.16	1.5-yr	1291.42	647.25	643.2	1.69	1.69	14.15	14.15	203.6	203.6	3.76	3.76	4.06	4.06
Dawson County	D3	RM 119.39	89404.11	1.5-yr	1291.42	647.19	643.09	1.55	1.54	12.17	11.77	231.36	240.79	3.59	3.48	4.1	4.1
Dawson County	D3	RM 119.26	89201.38	1.5-yr	1291.42	647.11	642.99	1.54	1.53	12.36	12.02	263.7	272.46	3.19	3.1	4.13	4.13
Dawson County	D3	RM 119.12	88969.13	1.5-yr	1291.42	646.97	642.87	1.78	1.74	15.79	14.19	193.4	245.37	3.73	3.35	4.1	4.1
Dawson County	D3	RM 119.00	88780.83	1.5-yr	1291.42	646.89	642.78	1.75	1.72	15.32	13.77	199.46	227.28	3.67	3.3	4.11	4.11
Dawson County	D3	RM 118.85	88537.07	1.5-yr	1291.42	646.82	642.66	1.56	1.54	12.57	11.48	241.51	272.01	3.38	3.09	4.15	4.15
Dawson County	D3	RM 118.72	88336.12	1.5-yr	1291.42	646.77	642.56	1.4	1.36	9.71	8.5	237.19	284.85	3.81	3.34	4.21	4.21
Dawson County	D3	RM 118.60	88130.39	1.5-yr	1291.42	646.68	642.46	1.57	1.55	12.29	11.28	220.72	245.12	3.7	3.41	4.22	4.22
Dawson County	D3	RM 118.47	87924.15	1.5-yr	1291.42	646.55	642.37	1.81	1.77	17.02	15.39	211.72	244.04	3.3	2.99	4.18	4.18
Dawson County	D3	RM 118.34	87719.85	1.5-yr	1291.42	646.33	642.27	2.17	2.13	26.07	24.54	211.82	235.19	2.73	2.58	4.06	4.06
Dawson County	D3	RM 118.21	87507.02	1.5-yr	1291.42	646.23	642.16	1.85	1.8	16.81	15.21	175.82	203.18	3.89	3.52	4.07	4.07
Dawson County	D3	RM 118.07	87276.02	1.5-yr	1297.08	646.15	642.05	1.58	1.58	13.85	13.8	297.49	298.55	2.75	2.74	4.1	4.1
Dawson County	D4	RM 117.90	87004.77	1.5-yr	1297.08	646.05	641.92	1.49	1.37	11.63	8.87	234.19	379.7	3.28	2.49	4.13	4.13
Dawson County	D4	RM 117.77	86795.88	1.5-yr	1297.08	645.96	641.81	1.58	1.42	13.14	9.28	217.15	412.03	3.17	2.22	4.14	4.14
Dawson County	D4	RM 117.62	86560.03	1.5-yr	1297.08	645.89	641.7	1.39	1.31	9.83	8.14	247.32	337.42	3.53	2.92	4.19	4.19
Dawson County	D4	RM 117.46	86294.2	1.5-yr	1297.08	645.72	641.57	1.84	1.72	17.14	13.5	183	270.5	3.56	2.79	4.15	4.15
Dawson County	D4	RM 117.33	86073.88	1.5-yr	1297.08	645.54	641.46	2.12	1.99	22.08	17.51	137.01	207.62	4.01	3.15	4.08	4.08
Dawson County	D4	RM 117.16	85808.16	1.5-yr	1297.08	645.48	641.33	1.66	1.55	13.45	10.84	182.25	265.18	3.92	3.15	4.15	4.15
Dawson County	D4	RM 117.03	85604.68	1.5-yr	1297.08	645.43	641.3	1.44	1.41	10.84	10.13	243.69	300.6	3.29	3.07	4.13	4.13
Dawson County	D4	RM 116.87	85336.88	1.5-yr	1297.08	645.34	641.29	1.42	1.31	10.36	8.09	238.63	375.52	3.39	2.64	4.06	4.06
Dawson County	D4	RM 116.69	85043.25	1.5-yr	1297.08	645.2	641.44	1.57	1.49	13.56	11.17	279.08	385.34	2.74	2.25	3.76	3.76
Dawson County	D4	RM 116.56	84823.15	1.5-yr	1297.08	645.03	641.34	1.8	1.75	18.02	14.85	234.35	332	2.71	2.23	3.69	3.69
Dawson County	D4	RM 116.39	84558.58	1.5-yr	1297.08	644.93	641.21	1.44	1.39	11.03	9.4	269.92	360.89	3.04	2.59	3.72	3.72
Dawson County	D4	RM 116.22	84287.19	1.5-yr	1297.08	644.83	641	1.45	1.44	10.82	9.57	259.34	296.6	3.43	3.04	3.83	3.83
Dawson County	D4	RM 116.05	84007.59	1.5-yr	1297.08	644.68	640.84	1.7	1.65	14.79	12.67	213.93	261.23	3.48	3	3.84	3.84
Dawson County	D4	RM 115.87	83722.29	1.5-yr	1297.08	644.51	640.8	1.86	1.78	18.11	15.54	214.27	266.54	3.17	2.73	3.71	3.71
Dawson County	D4	RM 115.73	83500.35	1.5-yr	1297.08	644.36	640.69	1.79	1.76	18.97	17.49	310.77	352.85	2.25	2.09	3.67	3.67
Dawson County	D4	RM 115.61	83294.37	1.5-yr	1297.08	644.27	640.59	1.4	1.37	11.27	10.25	385.01	435.11	2.38	2.17	3.68	3.68
Dawson County	D4	RM 115.45	83034.82	1.5-yr	1297.08	644.12	640.37	1.52	1.48	13.38	11.53	354.67	430.14	2.36	2.04	3.75	3.75
Dawson County	D4	RM 115.29	82782.88	1.5-yr	1297.08	643.97	640.34	1.56	1.52	13.58	12.46	313.62	354.72	2.62	2.4	3.63	3.63
Dawson County	D4	RM 115.09	82480.02	1.5-yr	1297.08	643.89	640.2	1.26	1.24	8.37	7.72	324	358.72	3.15	2.91	3.69	3.69
Dawson County	D4	RM 114.96	82177.99	1.5-yr	1297.08	643.75	640	1.53	1.5	12.16	10.93	260.73	296.7	3.24	2.91	3.75	3.75
Dawson County	D4	RM 114.74	81836.48	1.5-yr	1297.08	643.42	639.98	2.22	2.2	25.61	22.8	179.76	203.65	3.25	2.89	3.44	3.44
Dawson County	D4	RM 114.58	81577.9	1.5-yr	1297.08	643.35	639.46	1.63	1.52	13.57	11.45	195.77	335.66	3.51	2.95	3.9	3.9
Dawson County	D4	RM 114.42	81309.47	1.5-yr	1297.08	643.24	639.33	1.59	1.59	13.25	13.25	249.77	249.77	3.26	3.26	3.91	3.91
Dawson County	D4	RM 114.28	81078.59	1.5-yr	1297.08	643.1	639.21	1.77	1.77	16.05	15.72	213.07	217.7	3.44	3.37	3.89	3.89
Dawson County	D4	RM 114.11	80813.63	1.5-yr	1297.08	642.95	639.2	1.84	1.83	17.44	16.88	207.51	215.7	3.39	3.28	3.75	3.75
Dawson County	D4	RM 113.97	80580.15	1.5-yr	1297.08	642.79	639.45	1.93	1.92	19.92	19.35	225.35	233.23	2.98	2.9	3.34	3.34
Dawson County	D4	RM 113.79	80292.13	1.5-yr	1297.08	642.57	639.45	2.03	1.92	22.69	16.95	201.08	324.63	2.78	2.08	3.12	3.12
Dawson County	D4	RM 113.60	79987.05	1.5-yr	1297.08	642.5	639.2	1.35	1.18	9.64	7.37	179.84	460.88	3.16	2.4	3.3	3.3
Dawson County	D4	RM 113.43	79712.89	1.5-yr	1297.08	642.37	638.73	1.6	1.39	13.12	9.5	173.8	370.16	3.51	2.52	3.64	3.64
Dawson County	D4	RM 113.24	79405.49	1.5-yr	1297.08	642.1	638.43	2.17	1.91	23.96	17.84	130.78	259.14	3.56	2.62	3.67	3.67
Dawson County	D4	RM 113.08	79152.39	1.5-yr	1297.08	641.94	638.37	2.04	1.82	21.35	16.64	138.2	266.96	3.46	2.67	3.57	3.57
Dawson County	D4	RM 112.94	78925.1	1.5-yr	1297.08	641.89	638.26	1.48	1.36	11.43	9.69	192.76	347.05	3.28	2.76	3.63	3.63
Dawson County	D4	RM 112.74	78585.88	1.5-yr	1297.08	641.69	638.09	1.71	1.61	15.91	13.46	237.95	333.63	2.86	2.42	3.6	3.6
Dawson County	D4	RM 112.59	78355.25	1.5-yr	1297.08	641.48	637.98	1.92	1.81	21.27	17.45	271.4	364.45	2.4	1.96	3.5	3.5
Dawson County	D4	RM 112.37	78008.78	1.5-yr	1297.08	641.37	637.88	1.37	1.21	10.02	7.92	206.92	491.54	3.01	2.36	3.49	3.49
Dawson County	D4	RM 112.19	77721.27	1.5-yr	1297.08	641.22	637.59	1.54	1.48	12.63	11.54	213.24	308.36	3.1	2.83	3.63	3.63
Dawson County	D4	RM 111.89	77240.22	1.5-yr	1297.08	640.97	637.16	1.7	1.7	15.02	14.87	235.68	238.18	3.24	3.21	3.81	3.81
Dawson County	D4	RM 111.42	76486.24	1.5-yr	1297.08	640.65	636.91	1.51	1.51	12.18	12.08	287.11	289.53	2.99	2.97	3.74	3.74
Dawson County	D4	RM 111.26	76213.83	1.5-yr	1297.08	640.54	636.66	1.44	1.44	11.46	11.35	329.26	332.5	2.73	2.71	3.88	3.88
Dawson County	D4	RM 111.09	75911.9	1.5-yr	1297.08	640.32	636.51	1.83	1.83	17.81	17.81	230.3	230.3	3.08	3.08	3.81	3.81
Dawson County	D4	RM 110.95	75678.54	1.5-yr	1297.08	640.16	636.4	1.93	1.92	18.94	18.71	194.97	197.58	3.45	3.41	3.76	3.76
Dawson County	D4	RM 110.78	75415.61	1.5-yr	1297.08	639.98	636.27	2.04	2.04	21.38	21.38	184.44	184.44	3.44	3.44	3.71	3.71
Dawson County	D4	RM 110.55	75040.65	1.5-yr	1297.08	639.82	636.09	1.67	1.67	14.67	14.59	240.55	241.83	3.22	3.2	3.73	3.73

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	1.5-yr	1297.08	639.74	635.96	1.45	1.45	11.1	11.08	293.1	293.64	3.06	3.06	3.78	3.78
Dawson County	D4	RM 110.17	74428.56	1.5-yr	1297.08	639.49	635.79	1.77	1.76	18.31	17.5	321.63	338.06	2.28	2.18	3.7	3.7
Dawson County	D4	RM 109.95	74074.87	1.5-yr	1297.08	639.33	635.62	1.47	1.47	11.7	11.66	297.85	298.88	2.95	2.94	3.71	3.71
Dawson County	D4	RM 109.75	73741.09	1.5-yr	1297.08	639.17	635.46	1.56	1.56	12.91	12.87	272.73	273.61	3.05	3.04	3.72	3.72
Dawson County	D4	RM 109.54	73418.83	1.5-yr	1297.08	639.04	635.3	1.5	1.49	12.08	11.62	287.24	300.57	3	2.89	3.74	3.74
Dawson County	D4	RM 109.37	73150.54	1.5-yr	1297.08	638.89	635.17	1.72	1.62	15.33	12.68	224.7	297.08	3.26	2.7	3.72	3.72
Dawson County	D4	RM 109.19	72864.56	1.5-yr	1297.08	638.76	635.03	1.65	1.65	14.16	13.1	238.65	259.06	3.29	3.04	3.73	3.73
Dawson County	D4	RM 109.04	72628	1.5-yr	1297.08	638.58	634.92	1.95	1.95	19.57	19.4	194.23	195.92	3.42	3.39	3.66	3.66
Dawson County	D4	RM 108.86	72339.73	1.5-yr	1297.08	638.49	634.77	1.5	1.46	12.18	11.48	287.17	328.76	2.86	2.7	3.72	3.72
Dawson County	D4	RM 108.70	72072.36	1.5-yr	1297.08	638.4	634.65	1.38	1.34	10.12	9.42	291.61	346.74	3.01	2.8	3.75	3.75
Dawson County	D4	RM 108.55	71827.97	1.5-yr	1297.08	638.32	634.53	1.33	1.33	9.63	9.61	343.45	343.89	2.84	2.84	3.79	3.79
Dawson County	D4	RM 108.40	71587.18	1.5-yr	1297.08	638.17	634.41	1.63	1.63	13.59	13.56	265.29	265.91	3	2.99	3.76	3.76
Dawson County	D4	RM 108.25	71345.86	1.5-yr	1297.08	638.06	634.29	1.6	1.6	12.89	12.85	283.48	284.46	2.87	2.86	3.77	3.77
Dawson County	D4	RM 108.12	71131.88	1.5-yr	1297.08	637.99	634.19	1.44	1.43	10.96	10.77	289.42	295.11	3.11	3.06	3.8	3.8
Dawson County	D4	RM 107.98	70905.01	1.5-yr	1297.08	637.87	634.08	1.62	1.62	13.62	13.49	245.46	247.77	3.27	3.24	3.79	3.79
Dawson County	D4	RM 107.82	70651.22	1.5-yr	1297.08	637.73	633.95	1.74	1.73	15.82	15.34	231.93	240.78	3.21	3.12	3.77	3.77
Dawson County	D4	RM 107.68	70418.24	1.5-yr	1297.08	637.61	633.84	1.77	1.74	16.14	14.94	219.72	241.32	3.33	3.09	3.77	3.77
Dawson County	D4	RM 107.50	70132.11	1.5-yr	1297.08	637.49	633.17	1.63	1.59	13.73	12.16	239.71	278.22	3.3	2.93	4.32	4.32
Dawson County	D4	RM 107.31	69834.56	1.5-yr	1297.08	637.34	633.23	1.67	1.66	15.1	14.43	264.38	279.41	2.92	2.8	4.11	4.11
Dawson County	D4	RM 107.13	69541.52	1.5-yr	1297.08	637.17	633.98	1.64	1.61	15.42	14.66	322.33	347.52	2.43	2.31	3.19	3.19
Dawson County	D5	RM 106.98	69305.02	1.5-yr	1299.92	637.06	634.16	1.38	1.36	11.37	11.17	421.85	446.81	2.17	2.14	2.9	2.9
Dawson County	D5	RM 106.85	69065.27	1.5-yr	1299.92	636.94	633.6	1.36	1.34	11.02	10.61	403.64	460.53	2.18	2.1	3.34	3.34
Dawson County	D5	RM 106.65	68764.02	1.5-yr	1299.92	636.73	632.98	1.61	1.57	14	13.16	304.93	359.85	2.45	2.3	3.75	3.75
Dawson County	D5	RM 106.47	68475.87	1.5-yr	1299.92	636.56	632.51	1.62	1.59	14.94	13.07	307.26	383.32	2.44	2.14	4.05	4.05
Dawson County	D5	RM 106.28	68173.97	1.5-yr	1299.92	636.33	631.71	1.87	1.72	18.16	12.92	204.05	328.23	3.23	2.3	4.62	4.62
Dawson County	D5	RM 106.10	67879.83	1.5-yr	1299.92	636.15	631.29	1.91	1.67	19.54	12.14	206.53	428.44	2.92	1.82	4.86	4.86
Dawson County	D5	RM 105.89	67550.49	1.5-yr	1299.92	635.97	631.76	1.73	1.54	16.33	10.57	226.74	462.22	2.81	1.83	4.21	4.21
Dawson County	D5	RM 105.74	67300.35	1.5-yr	1299.92	635.83	632.3	1.68	1.3	15.36	9.46	203.14	569.23	2.85	1.76	3.53	3.53
Dawson County	D5	RM 105.54	66973.54	1.5-yr	1299.92	635.56	632.17	2.04	1.68	22.91	12.51	147.79	521.8	2.7	1.48	3.39	3.39
Dawson County	D5	RM 105.30	66609.03	1.5-yr	1299.92	635.35	632.29	1.43	1.23	12.48	9.62	219.79	699.76	1.97	1.51	3.23	3.23
Dawson County	D5	RM 105.06	66212.24	1.5-yr	1299.92	635.19	631.19	1.42	1.37	12.5	11.6	181.11	706.16	1.96	1.82	4	4
Dawson County	D5	RM 104.89	65945.5	1.5-yr	1299.92	634.93	631.5	1.48	1.57	14.24	14.34	203.8	594.34	1.64	1.65	3.51	3.51
Dawson County	D5	RM 104.77	65742.33	1.5-yr	1299.92	634.78	631.67	1.62	1.54	14.89	9.08	125.62	598.11	2.46	1.5	4.07	4.07
Dawson County	D5	RM 104.64	65530.83	1.5-yr	1299.92	634.7	632.1	1.36	1.29	11	8.72	171.28	612.87	2.23	1.76	3.74	3.74
Dawson County	D5	RM 104.43	65180.62	1.5-yr	1299.92	634.56	631.56	1.09	1.12	8.29	7.86	361.11	912.1	1.33	1.27	3.77	3.77
Dawson County	D5	RM 104.26	64906.83	1.5-yr	1299.92	634.42	631.59	1.05	0.99	6.99	5.74	205.82	881.17	1.81	1.49	3.78	3.78
Dawson County	D5	RM 104.10	64643.2	1.5-yr	1299.92	634.32	630.81	1.06	1.17	6.6	5.89	150.64	540.83	2.29	2.05	3.88	3.88
Dawson County	D5	RM 103.95	64410.06	1.5-yr	1299.92	634.23	631.24	1.2	1.35	8.79	6.58	184.93	629.65	2.03	1.53	4.41	4.41
Dawson County	D5	RM 103.68	63957.56	1.5-yr	1299.92	634.1	629.68	1.38	1.39	11	6.64	188.7	645.32	2.39	1.45	4.66	4.66
Dawson County	D5	RM 103.48	63615.6	1.5-yr	1299.92	634	630.4	1.5	1.36	12.31	7.91	152.13	537.13	2.77	1.78	4.49	4.49
Dawson County	D5	RM 103.26	63259.44	1.5-yr	1299.92	633.92	630.13	1.34	1.27	9.83	5.85	172.46	610.16	2.82	1.68	4.51	4.51
Dawson County	D5	RM 102.58	62131.5	1.5-yr	1299.92	633.73	629.72	1.19	1.12	7.73	6.33	178.73	507.01	2.8	2.3	4.05	4.05
Dawson County	D5	RM 102.44	61920.83	1.5-yr	1299.92	633.62	629.74	1.5	1.44	12.35	10.55	255.44	379.52	2.78	2.38	3.88	3.88
Dawson County	D5	RM 102.31	61720.14	1.5-yr	1299.92	633.47	629.03	1.83	1.71	18.11	14.29	200.53	338.35	2.83	2.24	4.44	4.44
Dawson County	D5	RM 102.15	61456.58	1.5-yr	1299.92	633.34	629.39	1.69	1.51	15.21	11.59	201.3	372.33	3.03	2.31	3.95	3.95
Dawson County	D5	RM 102.00	61217.89	1.5-yr	1299.92	633.23	629.48	1.52	1.42	13.09	10.9	267.9	438.84	2.48	2.08	3.75	3.75
Dawson County	D5	RM 101.84	60967.97	1.5-yr	1299.92	633.09	629.23	1.63	1.31	14.9	8.51	155.67	710.54	2.57	1.47	3.86	3.86
Dawson County	D5	RM 101.60	60582.61	1.5-yr	1299.92	632.91	628.87	1.34	1.22	10.28	7.95	336.08	564.18	2.43	1.88	4.04	4.04
Dawson County	D5	RM 101.45	60336.09	1.5-yr	1299.92	632.75	629.16	1.62	1.56	14.05	12.02	251.39	325.64	2.98	2.55	3.59	3.59
Dawson County	D5	RM 101.25	60019.5	1.5-yr	1299.92	632.57	627.81	1.76	1.7	16.18	14.37	209.15	266.03	3.23	2.87	4.76	4.76
Dawson County	D5	RM 101.09	59759.25	1.5-yr	1299.92	632.43	627.99	1.75	1.67	16.26	14.32	216.65	285.44	3.08	2.72	4.44	4.44
Dawson County	D5	RM 100.88	59426.42	1.5-yr	1299.92	632.27	627.86	1.74	1.55	15.76	10.98	196.58	369.32	3.24	2.26	4.41	4.41
Dawson County	D5	RM 100.67	59075.4	1.5-yr	1299.92	632.08	627.1	1.92	1.63	18.25	11.54	151.88	336.23	3.73	2.37	4.98	4.98
Dawson County	D5	RM 100.46	58743.44	1.5-yr	1299.92	631.97	627.92	1.56	1.33	12.69	8.14	202.94	477.96	3.19	2.05	4.05	4.05
Dawson County	D5	RM 100.25	58401.49	1.5-yr	1299.92	631.79	627.57	1.71	1.61	15.29	11.08	196.17	344.49	3.23	2.34	4.22	4.22
Dawson County	D5	RM 100.05	58077.55	1.5-yr	1299.92	631.65	626.86	1.67	1.51	14.53	10.77	176.97	352.55	3.29	2.44	4.79	4.79
Dawson County	D5	RM 99.87	57778.81	1.5-yr	1299.92	631.45	626.4	1.74	1.73	17.14	16.93	301.61	305.7	2.48	2.45	5.05	5.05
Dawson County	D5	RM 99.68	57474.16	1.5-yr	1299.92	631.32	626.29	1.57	1.53	12.69	11.5	246.92	279.77	3.33	3.03	5.03	5.03
Dawson County	D5	RM 99.49	57160.47	1.5-yr	1299.92	631.14	626.53	1.78	1.75	16.32	15.05	218.38	242.04	3.32	3.07	4.61	4.61
Dawson County	D5	RM 99.30	56863.46	1.5-yr	1299.92	631.01	627.26	1.62	1.61	13.97	13.71	267.93	273.42	3	2.95	3.75	3.75
Dawson County	D5	RM 99.13	56566.63	1.5-yr	1299.92	630.89	626.77	1.51	1.48	12.23	10.48	293.66	350.45	2.92	2.5	4.12	4.12

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	1.5-yr	1299.92	630.75	626.63	1.48	1.46	12.4	10.96	339.1	392.09	2.56	2.27	4.12	4.12
Dawson County	D5	RM 98.71	55911.87	1.5-yr	1299.92	630.53	626.34	1.66	1.63	15.74	14.15	322.21	368.26	2.41	2.17	4.19	4.19
Dawson County	D5	RM 98.57	55680.2	1.5-yr	1299.92	630.35	626.1	1.76	1.69	17.62	13.73	297.01	407.2	2.44	1.9	4.25	4.25
Dawson County	D5	RM 98.35	55325.95	1.5-yr	1299.92	630.12	625.91	1.79	1.74	16.56	13.29	216.82	285.12	3.27	2.63	4.21	4.21
Dawson County	D5	RM 98.19	55066.09	1.5-yr	1299.92	630	624.42	1.8	1.69	15.88	8.81	184	363.6	3.81	2.12	5.58	5.58
Dawson County	D5	RM 97.99	54752.97	1.5-yr	1299.92	629.86	625.04	1.75	1.72	16.01	11.68	236.53	330.21	3.15	2.29	4.82	4.82
Dawson County	D5	RM 97.84	54493.48	1.5-yr	1299.92	629.76	625.39	1.52	1.51	12.42	11.12	292.51	328.11	2.92	2.62	4.37	4.37
Dawson County	D5	RM 97.68	54241.32	1.5-yr	1299.92	629.61	624.99	1.63	1.52	15.4	12.46	340.05	457.53	2.3	1.87	4.62	4.62
Dawson County	D5	RM 97.48	53918.21	1.5-yr	1299.92	629.34	624.81	1.77	1.61	17.77	13.97	274.91	488.22	2.1	1.65	4.53	4.53
Dawson County	D5	RM 97.28	53585.68	1.5-yr	1299.92	629.1	625.86	1.5	1.49	13.66	13.25	328.8	436.15	2.05	2	3.65	3.65
Dawson County	D5	RM 97.08	53263.89	1.5-yr	1299.92	628.86	625.27	1.78	1.66	17.41	14.89	209.17	332.32	2.74	2.35	3.58	3.58
Dawson County	D5	RM 96.94	53030.11	1.5-yr	1299.92	628.65	623.97	1.99	1.86	22.08	19.12	199.01	308.73	2.61	2.27	4.68	4.68
Dawson County	D5	RM 96.77	52762.2	1.5-yr	1299.92	628.45	623.51	1.88	1.75	19.86	17.13	202.34	335.63	2.57	2.22	4.94	4.94
Dawson County	D5	RM 96.55	52403.59	1.5-yr	1299.92	628.15	624.57	2.06	1.81	23.1	15.01	160.42	387.33	2.84	1.85	3.58	3.58
Dawson County	D5	RM 96.35	52079.12	1.5-yr	1299.92	628.08	625.39	0.91	1	5.47	6.24	289.16	755.85	1.55	1.77	4.61	4.61
Dawson County	D5	RM 96.17	51777.74	1.5-yr	1299.92	627.84	624.71	1.69	1.64	16.97	15.32	130.42	394.67	2.21	2.01	3.46	3.46
Dawson County	D5	RM 96.00	51500.38	1.5-yr	1299.92	627.63	624.3	1.65	1.58	15.81	14.37	122.42	394.02	2.29	2.09	3.33	3.33
Dawson County	D5	RM 95.79	51156.87	1.5-yr	1299.92	627.47	624.35	1.19	1.26	8.8	9.09	284.94	514.1	1.93	2	3.22	3.22
Dawson County	D5	RM 95.60	50859.75	1.5-yr	1299.92	627.34	622.97	1.34	1.24	10.07	7.67	209.43	536.54	2.57	1.96	4.37	4.37
Dawson County	D5	RM 95.40	50547.92	1.5-yr	1299.92	627.25	623.13	1.12	1.08	7.16	6.29	377.96	560.47	2.43	2.15	4.12	4.12
Dawson County	D5	RM 95.21	50245.97	1.5-yr	1299.92	627.13	622.21	1.4	1.26	10.29	6	217.6	548	3.22	1.89	4.92	4.92
Dawson County	D5	RM 95.04	49971.19	1.5-yr	1299.92	626.96	621.68	1.86	1.66	18.08	10.81	158.99	412.57	3.17	1.9	5.28	5.28
Dawson County	D5	RM 94.88	49717.07	1.5-yr	1299.92	626.83	621.44	1.84	1.35	17.64	6.38	150.2	850.36	3.18	1.15	5.39	5.39
Dawson County	D5	RM 94.71	49446.9	1.5-yr	1299.92	626.74	621.69	1.39	1.13	10.59	5.63	233.97	927.55	2.72	1.45	5.05	5.05
Dawson County	D5	RM 94.58	49286.95	1.5-yr	1299.92	626.76	618.6	0.63	0.63	1.87	1.87	456.42	584.35	4.51	4.51	8.16	8.16
Dawson County	D5	RM 94.57	49255.56	1.5-yr	1299.92	626.74	618.63	0.84	0.84	3.35	3.35	359.52	360.17	4.29	4.29	8.11	8.11
Dawson County		RM 94.55	49216.94	1.5-yr	Bridge												
Dawson County	D5	RM 94.53	49181.49	1.5-yr	1299.92	626.54	620.63	1.56	1.56	12.38	12.38	251.38	293.95	3.32	3.32	5.92	5.92
Dawson County	D5	RM 94.52	49157.18	1.5-yr	1299.92	626.55	620.89	1.42	1.42	10.54	10.54	281.53	318.75	3.25	3.25	5.65	5.65
Dawson County	D6	RM 94.42	48998.19	1.5-yr	1299.92	626.39	621.76	1.89	1.89	18.57	18.3	212.36	215.51	3.24	3.19	4.63	4.63
Dawson County	D6	RM 94.30	48806.79	1.5-yr	1302.75	626.23	621.22	1.97	1.97	22.54	22.54	279.27	279.27	2.36	2.36	5.01	5.01
Dawson County	D6	RM 94.20	48653.06	1.5-yr	1302.75	626.12	621.41	1.85	1.84	19.12	17.36	261.89	289.45	2.7	2.45	4.71	4.71
Dawson County	D6	RM 94.08	48445.46	1.5-yr	1302.75	626.08	622.37	1.32	1.32	9.35	9.24	334.43	338.41	2.95	2.92	3.71	3.71
Dawson County	D6	RM 93.96	48246.42	1.5-yr	1302.75	625.96	621.88	1.56	1.55	13.64	13.44	328.49	333.45	2.55	2.51	4.08	4.08
Dawson County	D6	RM 93.83	48030.25	1.5-yr	1302.75	625.81	620.28	1.75	1.75	16.11	15.5	237.8	247.42	3.13	3.01	5.53	5.53
Dawson County	D6	RM 93.68	47782.89	1.5-yr	1302.75	625.63	620.19	1.96	1.94	19.47	17.6	191.53	213.84	3.47	3.14	5.44	5.44
Dawson County	D6	RM 93.57	47606.95	1.5-yr	1302.75	625.47	620.08	2.15	2.14	23.83	21.96	182.8	198.98	3.32	3.06	5.39	5.39
Dawson County	D6	RM 93.53	47552.11	1.5-yr	1302.75	625.45	620.21	2.03	2.02	20.93	17.23	184.33	224.91	3.48	2.87	5.23	5.23
Dawson County			47536.14	1.5-yr	Bridge												
Dawson County	D6	RM 93.51	47522.95	1.5-yr	1302.75	625.3	620.33	2.07	2.06	21.79	19.4	180.28	203.53	3.49	3.1	4.97	4.97
Dawson County	D6	RM 93.47	47460.74	1.5-yr	1302.75	625.26	618.63	2.02	2.01	20.87	19.26	188.07	204.98	3.43	3.16	6.63	6.63
Dawson County	D6	RM 93.43	47382.46	1.5-yr	1302.75	625.23	619.44	1.88	1.87	17.45	16.93	185.34	191.47	3.75	3.64	5.79	5.79
Dawson County		RM 93.415	47357.71	1.5-yr	Bridge												
Dawson County	D6	RM 93.40	47335.01	1.5-yr	1302.75	625.21	620.19	1.79	1.79	16.01	15.82	199.89	202.18	3.65	3.6	5.02	5.02
Dawson County	D6	RM 93.36	47287.92	1.5-yr	1302.75	625.2	620.47	1.67	1.67	13.86	13.86	213.24	213.24	3.67	3.67	4.73	4.73
Dawson County	D6	RM 93.25	47111.44	1.5-yr	1302.75	625.05	621.12	1.92	1.91	22.53	20.69	228.81	251.18	2.96	2.72	3.93	3.93
Dawson County	D6	RM 93.05	46807.77	1.5-yr	1302.75	624.91	621.74	1.59	1.52	13.67	10.59	281.79	416.29	2.86	2.22	3.17	3.17
Dawson County	D6	RM 92.93	46606.31	1.5-yr	1302.75	624.76	621.34	1.73	1.72	16.99	15.45	303.15	422.71	2.48	2.26	3.42	3.42
Dawson County	D6	RM 92.83	46460.06	1.5-yr	1302.75	624.64	621.02	1.84	1.82	18.75	18.02	281.35	327.16	2.5	2.4	3.62	3.62
Dawson County	D6	RM 92.71	46261.84	1.5-yr	1302.75	624.53	620.37	1.69	1.62	15.25	13.66	274.16	351.76	2.75	2.47	4.16	4.16
Dawson County	D6	RM 92.59	46079.79	1.5-yr	1302.75	624.45	620.95	1.49	1.49	12.53	12.27	319.08	331.19	2.74	2.68	3.5	3.5
Dawson County	D6	RM 92.50	45933.81	1.5-yr	1302.75	624.35	620.75	1.63	1.63	15.04	15.04	316.29	317.36	2.52	2.52	3.6	3.6
Dawson County	D6	RM 92.39	45753.94	1.5-yr	1302.75	624.25	620.58	1.61	1.61	14.23	14.09	298.45	301.56	2.72	2.69	3.67	3.67
Dawson County	D6	RM 92.29	45591.17	1.5-yr	1302.75	624.17	620.64	1.58	1.56	13.65	12.16	292.47	340.3	2.81	2.5	3.53	3.53
Dawson County	D6	RM 92.18	45414.13	1.5-yr	1302.75	624.1	620.23	1.36	1.35	10.19	9.59	354.82	386.25	2.7	2.54	3.87	3.87
Dawson County		RM 92.14	45354.08	1.5-yr	Bridge												
Dawson County	D6	RM 92.10	45305.76	1.5-yr	1302.75	623.84	620.04	1.39	1.39	10.89	10.81	360.49	455.64	2.59	2.57	3.8	3.8
Dawson County	D6	RM 92.06	45238.47	1.5-yr	1302.75	623.77	620.12	1.59	1.55	14.71	13.68	352.46	392.45	2.31	2.15	3.65	3.65
Dawson County	D6	RM 91.99	45117.89	1.5-yr	1302.75	623.72	619.81	1.44	1.39	12.25	11.31	347.92	476.7	2.24	2.07	3.91	3.91
Dawson County	D6	RM 91.85	44886.16	1.5-yr	1302.75	623.63	619.7	1.24	1.23	9.55	7.71	237.81	587.32	2.67	2.16	3.93	3.93
Dawson County	D6	RM 91.77	44752.88	1.5-yr	1302.75	623.55	619.28	1.32	1.34	13.1	9.42	224.91	576.36	2.34	1.69	4.27	4.27

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	1.5-yr	1302.75	623.41	619	1.54	1.38	12.33	8.87	148.19	405.6	3.24	2.33	4.41	4.41
Dawson County	D6	RM 91.45	44219.47	1.5-yr	1302.75	623.3	618.66	1.52	1.45	12.81	11.33	189.07	325.53	3.11	2.75	4.65	4.65
Dawson County	D6	RM 91.31	43987.79	1.5-yr	1302.75	623.14	618.98	1.72	1.72	16.17	16.09	271.15	272.58	2.79	2.78	4.16	4.16
Dawson County	D6	RM 91.11	43666.49	1.5-yr	1302.75	622.98	618.54	1.7	1.69	14.68	13.92	219.42	232.72	3.49	3.31	4.44	4.44
Dawson County	D6	RM 90.97	43442.55	1.5-yr	1302.75	622.86	618.3	1.79	1.77	16.6	15.04	224.14	250.09	3.25	2.95	4.56	4.56
Dawson County	D6	RM 90.76	43114.74	1.5-yr	1302.75	622.67	618.97	1.73	1.73	19.4	18.78	263.49	273.08	2.85	2.76	3.7	3.7
Dawson County	D6	RM 90.59	42823.65	1.5-yr	1302.75	622.5	618.64	1.7	1.5	15.72	9.66	232.7	601.94	2.84	1.75	3.86	3.86
Dawson County	D6	RM 90.43	42564.46	1.5-yr	1302.75	622.22	618.18	2.16	2	25.64	20.68	208.77	296.24	2.71	2.2	4.04	4.04
Dawson County	D6	RM 90.29	42331.05	1.5-yr	1302.75	622.08	618.21	1.8	1.72	17.51	15.27	236.08	299.29	2.89	2.53	3.87	3.87
Dawson County	D6	RM 90.16	42118.24	1.5-yr	1302.75	621.94	618.54	1.85	1.73	18.48	15.59	229.61	308.86	2.88	2.44	3.4	3.4
Dawson County	D6	RM 89.96	41795.66	1.5-yr	1302.75	621.77	618.08	1.57	1.56	14.08	13.49	333.56	352.59	2.47	2.37	3.69	3.69
Dawson County	D6	RM 89.83	41589.45	1.5-yr	1302.75	621.52	617.17	2.09	2.04	23.55	20.87	211.95	245.87	2.91	2.59	4.35	4.35
Dawson County	D6	RM 89.65	41302.33	1.5-yr	1302.75	621.27	618.15	2.05	2.01	23.76	22.5	251.69	272.23	2.5	2.38	3.12	3.12
Dawson County	D6	RM 89.46	41003.8	1.5-yr	1302.75	621.12	617.56	1.69	1.66	14.93	13.67	236.74	264.88	3.23	2.96	3.56	3.56
Dawson County	D6	RM 89.29	40732.3	1.5-yr	1302.75	621.03	617.42	1.49	1.31	11.9	8.56	253.25	470.04	2.94	2.11	3.61	3.61
Dawson County	D6	RM 89.13	40476.68	1.5-yr	1302.75	620.88	617.29	1.64	1.58	14.34	12.65	231.92	302.08	3.1	2.73	3.6	3.6
Dawson County	D6	RM 88.96	40193.97	1.5-yr	1302.75	620.76	617.14	1.64	1.5	13.67	10.88	186.73	307.27	3.56	2.82	3.62	3.62
Dawson County	D7	RM 88.77	39887.75	1.5-yr	1302.75	620.59	616.98	1.73	1.69	16.15	13.77	258.49	328.28	2.88	2.45	3.61	3.61
Dawson County	D7	RM 88.58	39581.56	1.5-yr	1302.75	620.36	616.82	1.97	1.9	19.93	15.36	185.88	258.09	3.47	2.66	3.54	3.54
Dawson County	D7	RM 88.44	39345.29	1.5-yr	1302.75	620.22	616.7	1.97	1.87	19.81	15.45	181.67	285.56	3.52	2.72	3.52	3.52
Dawson County	D7	RM 88.25	39047.22	1.5-yr	1302.75	620.07	616.54	1.81	1.66	17.37	12.69	220.56	351.57	3.06	2.23	3.53	3.53
Dawson County	D7	RM 88.06	38736.32	1.5-yr	1302.75	619.94	616.38	1.5	1.49	12.36	11.55	305.89	337.91	2.82	2.64	3.57	3.57
Dawson County	D7	RM 87.87	38426.68	1.5-yr	1302.75	619.82	616.22	1.36	1.28	10.82	9.75	399.45	508.31	2.28	2.05	3.6	3.6
Dawson County	D7	RM 87.70	38161.81	1.5-yr	1302.75	619.7	616.08	1.51	1.16	11.52	5.84	181.73	626.09	3.62	1.8	3.62	3.62
Dawson County	D7	RM 87.52	37862.82	1.5-yr	1302.75	619.65	615.92	1.12	1.05	7.07	6.4	308.23	546.55	2.52	2.27	3.73	3.73
Dawson County	D7	RM 87.34	37574.69	1.5-yr	1302.75	619.46	615.85	1.66	1.57	15.33	12.82	253.88	375.46	2.64	2.21	3.61	3.61
Dawson County	D7	RM 87.17	37307.08	1.5-yr	1302.75	619.3	615.82	1.8	1.64	16.68	12.43	162.99	315.88	3.4	2.51	3.48	3.48
Dawson County	D7	RM 87.00	37023.47	1.5-yr	1302.75	619.17	615.79	1.6	1.54	14.19	13.09	240.74	341.34	2.7	2.48	3.38	3.38
Dawson County	D7	RM 86.82	36748.51	1.5-yr	1302.75	619.02	615.76	1.67	1.56	15.24	12.9	210.89	350.45	2.84	2.39	3.26	3.26
Dawson County	D7	RM 86.67	36501.76	1.5-yr	1302.75	618.76	615.73	2.24	1.91	27.09	17.57	151.18	354.41	3.02	1.93	3.03	3.03
Dawson County	D7	RM 86.52	36253.46	1.5-yr	1302.75	618.63	615.7	1.66	1.51	15.28	11.07	250.55	445.89	2.67	1.94	2.93	2.93
Dawson County	D7	RM 86.39	36046.31	1.5-yr	1302.75	618.45	615.59	1.95	1.62	21.49	14.89	147.45	452.1	2.6	1.78	2.86	2.86
Dawson County	D7	RM 86.24	35796.38	1.5-yr	1302.75	618.39	615.46	1.15	1.03	7.23	6.02	166.41	536.07	2.87	2.35	2.93	2.93
Dawson County	D7	RM 86.08	35541.56	1.5-yr	1302.75	618.1	615.48	2.1	1.97	25.13	21.96	150.7	300.44	2.55	2.2	2.63	2.63
Dawson County	D7	RM 85.91	35282.1	1.5-yr	1302.75	617.88	615.5	1.87	1.79	20.57	17.89	191.42	366.6	2.29	1.98	2.37	2.37
Dawson County	D7	RM 85.78	35075.01	1.5-yr	1302.75	617.83	614.9	1.15	1.09	8.11	7.28	287.54	758.69	2.02	1.81	2.93	2.93
Dawson County	D7	RM 85.59	34774.5	1.5-yr	1302.75	617.74	614.32	1.33	1.08	9.1	5.76	184.84	563.69	3.39	2.13	3.42	3.42
Dawson County	D7	RM 85.39	34449.3	1.5-yr	1302.75	617.56	614.15	1.69	1.54	15.31	12.19	219.47	353.37	3.01	2.39	3.41	3.41
Dawson County	D7	RM 85.23	34186.4	1.5-yr	1302.75	617.34	614.01	2.08	1.87	22.42	16.66	157.48	284.33	3.33	2.46	3.33	3.33
Dawson County	D7	RM 85.04	33863.7	1.5-yr	1302.75	617.2	613.84	1.65	1.53	15.48	12.3	265.03	430.72	2.49	1.97	3.35	3.35
Dawson County	D7	RM 84.89	33626.36	1.5-yr	1302.75	617.09	613.92	1.36	1.34	10.88	10.36	413.04	442.54	2.3	2.19	3.17	3.17
Dawson County	D7	RM 84.72	33349.5	1.5-yr	1302.75	616.94	613.77	1.45	1.45	11.88	11.73	345.19	350.21	2.59	2.56	3.17	3.17
Dawson County	D7	RM 84.57	33104.21	1.5-yr	1302.75	616.82	613.45	1.51	1.5	12.2	12.01	294.82	300.35	2.93	2.89	3.38	3.38
Dawson County	D7	RM 84.41	32856.7	1.5-yr	1302.75	616.72	613.32	1.5	1.49	12.29	11.97	312.69	323.14	2.78	2.71	3.4	3.4
Dawson County	D7	RM 84.22	32552.24	1.5-yr	1302.75	616.57	613.16	1.58	1.44	13.69	10.32	261.68	432.2	2.79	2.09	3.41	3.41
Dawson County	D7	RM 84.05	32270.74	1.5-yr	1302.75	616.4	613.14	1.71	1.53	15.61	11.9	206.16	365.85	3.05	2.32	3.27	3.27
Dawson County	D7	RM 83.89	32017.88	1.5-yr	1302.75	616.23	613.11	1.84	1.71	17.99	14.19	191.2	318.01	3.04	2.4	3.12	3.12
Dawson County	D7	RM 83.73	31759.16	1.5-yr	1302.75	616.08	613.07	1.69	1.57	16.09	11.88	239.92	433.53	2.61	1.92	3.01	3.01
Dawson County	D7	RM 83.53	31426.04	1.5-yr	1302.75	615.96	613.01	1.33	1.22	10	8.22	303.55	504.35	2.58	2.12	2.94	2.94
Dawson County	D7	RM 83.39	31213.34	1.5-yr	1302.75	615.85	612.95	1.53	1.36	13.01	10.01	189.12	466.22	2.69	2.05	2.9	2.9
Dawson County	D7	RM 83.21	30910.79	1.5-yr	1302.75	615.72	612.91	1.42	1.25	11.08	8.15	170.07	518.26	2.78	2.02	2.94	2.94
Dawson County	D7	RM 83.05	30660.14	1.5-yr	1302.75	615.62	612.78	1.25	1.17	8.76	7.22	229.1	506.09	2.65	2.2	3.16	3.16
Dawson County	D7	RM 82.94	30491.79	1.5-yr	1302.75	615.55	612.69	1.25	1.22	8.79	7.71	219.21	466.96	2.61	2.28	3.16	3.16
Dawson County	D7	RM 82.81	30280.45	1.5-yr	1302.75	615.42	612.58	1.41	1.41	11.49	10.74	178.49	408.47	2.42	2.26	3.27	3.27
Dawson County	D7	RM 82.68	30058.39	1.5-yr	1302.75	615.32	612.34	1.51	1.41	12.33	9.51	152.77	406.46	2.98	2.28	3.22	3.22
Dawson County	D7	RM 82.51	29786.14	1.5-yr	1302.75	615.27	612.1	1.1	1.06	6.57	5.93	229.15	479.17	2.85	2.56	3.42	3.42
Dawson County	D7	RM 82.33	29497.12	1.5-yr	1302.75	615.2	611.87	1.17	1.15	7.35	4.68	246.14	603.57	2.98	1.87	3.45	3.45
Dawson County	D7	RM 82.22	29323.27	1.5-yr	1302.75	615.1	611.66	1.5	1.39	12.02	6.89	193.52	535.48	3.07	1.76	3.44	3.44
Dawson County	D7	RM 82.06	29049.94	1.5-yr	1302.75	615.03	611.37	1.36	1.22	9.68	5.35	202.97	593.11	3.32	1.81	3.66	3.66
Dawson County	D7	RM 81.91	28820.21	1.5-yr	1302.75	614.99	611.21	1.3	1.11	8.54	4.92	191.58	562.15	3.65	2.08	3.77	3.77
Dawson County	D7	RM 81.71	28446.75	1.5-yr	1302.75	614.93	611.02	1.06	0.94	5.58	3.62	220.81	573.77	3.71	2.4	3.91	3.91

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	1.5-yr	1302.75	614.69	610.8	1.93	1.76	18.5	12.92	165.37	274.85	3.88	2.69	3.89	3.89
Dawson County	D7	RM 81.31	27735.46	1.5-yr	1302.75	614.23	610.65	2.82	2.81	40.71	39.56	131.98	136.16	3.5	3.41	3.58	3.58
Dawson County	D8	RM 81.10	27398.33	1.5-yr	1302.75	613.95	610.47	2.4	2.35	29.85	23.82	160.04	206.51	3.38	2.69	3.47	3.47
Dawson County	D8	RM 80.94	27148.21	1.5-yr	1302.75	613.87	610.34	1.76	1.76	16.12	15.93	225.85	228.45	3.27	3.24	3.53	3.53
Dawson County	D8	RM 80.76	26855.69	1.5-yr	1302.75	613.79	610.19	1.53	1.37	11.85	8.23	181.68	386.37	3.59	2.46	3.6	3.6
Dawson County	D8	RM 80.64	26669.58	1.5-yr	1302.75	613.71	610.09	1.54	1.46	12.25	10.46	209.02	309.57	3.39	2.89	3.62	3.62
Dawson County	D8	RM 80.45	26373.01	1.5-yr	1302.75	613.66	609.94	1.35	1.02	9.22	5.24	122.87	822.96	3.58	1.98	3.72	3.72
Dawson County	D8	RM 80.17	25926.88	1.5-yr	1302.75	613.5	609.71	1.67	1.38	13.91	8.73	146.98	406.87	3.78	2.32	3.79	3.79
Dawson County	D8	RM 79.91	25496.94	1.5-yr	1302.75	613.4	609.42	1.17	1.17	7.26	7.19	362.06	365.85	3.07	3.05	3.98	3.98
Dawson County	D8	RM 79.43	24626.85	1.5-yr	1302.75	613.17	609.14	1.27	1.27	8.22	7.49	288.56	318.49	3.54	3.22	4.03	4.03
Dawson County	D8	RM 79.23	24229.4	1.5-yr	1302.75	612.92	608.87	1.95	1.95	18.71	18.71	167.81	167.81	3.98	3.98	4.05	4.05
Dawson County	D8	RM 78.27	22640.58	1.5-yr	1302.75	612.09	608.6	1.78	1.57	17.1	10.87	226.68	444.24	2.96	1.87	3.48	3.48
Dawson County	D8	RM 78.12	22398.86	1.5-yr	1302.75	611.97	608.48	1.7	1.48	15.62	10.13	222.94	462.09	2.95	1.9	3.49	3.49
Dawson County	D8	RM 77.97	22135.34	1.5-yr	1302.75	611.86	608.34	1.62	1.5	13.61	10.62	214.67	337.48	3.3	2.57	3.52	3.52
Dawson County	D8	RM 77.79	21831.85	1.5-yr	1302.75	611.72	608.18	1.58	1.48	14.03	10.97	282.84	433.54	2.6	2.03	3.54	3.54
Dawson County	D8	RM 77.57	21474.71	1.5-yr	1302.75	611.55	608	1.59	1.52	13.21	11.15	250.08	321.11	3.17	2.67	3.55	3.55
Dawson County	D8	RM 77.38	21170.35	1.5-yr	1302.75	611.37	607.84	1.77	1.69	16.35	13.54	215.18	285.73	3.27	2.7	3.54	3.54
Dawson County	D8	RM 77.13	20780.17	1.5-yr	1302.75	611.27	607.63	1.44	1.2	10.78	7.33	188.55	492.24	3.27	2.2	3.64	3.64
Dawson County	D8	RM 77.00	20442.34	1.5-yr	1302.75	611.12	607.46	1.74	1.44	15.41	10.2	131.76	386.12	3.65	2.35	3.66	3.66
Dawson County	D8	RM 76.90	20124.49	1.5-yr	1302.75	611.04	607.29	1.51	1.29	11.49	8.28	153.17	383.91	3.74	2.63	3.75	3.75
Dawson County	D8	RM 76.76	19785.25	1.5-yr	1302.75	610.99	607.12	1.14	1.07	6.65	5.74	268.89	413.27	3.43	2.96	3.87	3.87
Dawson County	D8	RM 76.63	19501.04	1.5-yr	1302.75	610.9	606.97	1.31	1.23	9.31	8.2	246.86	408.55	2.95	2.58	3.93	3.93
Dawson County	D8	RM 76.37	19137.53	1.5-yr	1302.75	610.77	606.78	1.36	1.36	9.45	9.27	272.76	278.77	3.5	3.44	3.99	3.99
Dawson County	D8	RM 76.22	18884.28	1.5-yr	1302.75	610.69	606.65	1.4	1.39	9.82	9	253.7	278.73	3.66	3.36	4.05	4.05
Dawson County	D8	RM 76.00	18519.22	1.5-yr	1302.75	610.53	606.61	1.64	1.62	13.63	12.34	225.2	252.07	3.53	3.19	3.92	3.92
Dawson County	D8	RM 75.75	18119.45	1.5-yr	1302.75	610.33	606.58	1.8	1.78	16.56	15.24	209.51	230.25	3.45	3.17	3.74	3.74
Dawson County	D8	RM 75.56	17818.36	1.5-yr	1302.75	610.2	606.75	1.57	1.57	13.63	13.49	303.99	307.32	2.73	2.7	3.45	3.45
Dawson County	D8	RM 75.31	17411.3	1.5-yr	1302.75	610.05	606.34	1.42	1.39	10.56	9.71	263.12	313.98	3.25	2.99	3.71	3.71
Dawson County	D8	RM 75.13	17092.44	1.5-yr	1302.75	609.94	606.17	1.38	1.35	10.12	8.77	306.22	361.98	3.07	2.66	3.77	3.77
Dawson County	D8	RM 74.90	16719.46	1.5-yr	1302.75	609.72	605.98	1.78	1.74	16.64	13.85	224.87	278.95	3.23	2.69	3.74	3.74
Dawson County	D8	RM 74.65	16308.2	1.5-yr	1302.75	609.59	605.91	1.43	1.33	10.7	7.85	267.86	419.44	3.19	2.34	3.67	3.67
Dawson County	D8	RM 74.37	15846.14	1.5-yr	1302.75	609.33	605.85	1.77	1.55	17.14	11.69	221.55	434.12	2.85	1.94	3.48	3.48
Dawson County	D8	RM 74.13	15464.97	1.5-yr	1302.75	609.17	605.82	1.49	1.35	11.94	8.8	235.57	443.32	2.97	2.18	3.35	3.35
Dawson County	D8	RM 73.91	15098.01	1.5-yr	1302.75	609.03	605.99	1.3	1.21	9.51	7.65	283.61	510.53	2.61	2.11	3.04	3.04
Dawson County	D8	RM 73.71	14783.86	1.5-yr	1302.75	608.93	605.87	1.23	1.16	8.4	7.04	292.2	506.82	2.68	2.24	3.06	3.06
Dawson County	D8	RM 73.53	14496.67	1.5-yr	1302.75	608.84	605.72	1.25	1.16	8.46	6.98	249.62	904.48	2.85	2.35	3.12	3.12
Dawson County	D8	RM 73.29	14096.19	1.5-yr	1302.75	608.54	605.51	1.98	1.84	21.08	16.75	198.62	304.76	2.93	2.33	3.03	3.03
Dawson County	D8	RM 73.07	13729.79	1.5-yr	1302.75	608.24	605.52	2.01	1.93	22.39	18.48	196.15	307.44	2.65	2.19	2.99	2.99
Dawson County	D8	RM 72.97	13573.93	1.5-yr	1302.75	608.07	605.5	2.13	2.05	25.86	20.93	199.11	313.27	2.5	2.03	2.9	2.9
Dawson County	D8	RM 72.91	13479.91	1.5-yr	1302.75	607.98	605.45	2.04	1.97	24.01	20.26	221.07	386.97	2.4	2.03	2.81	2.81
Dawson County		RM 72.905	13470.04	1.5-yr	Bridge												
Dawson County	D8	RM 72.90	13463.18	1.5-yr	1302.75	607.32	605.31	2.76	2.71	47.32	43.92	208.91	314.95	1.9	1.76	2.15	2.15
Dawson County	D8	RM 72.83	13354.45	1.5-yr	1302.75	607.28	604.9	1.94	1.9	22.58	20.67	263.58	370.83	2.14	1.96	2.38	2.38
Dawson County	D8	RM 72.62	13000.82	1.5-yr	1302.75	606.98	604.4	1.75	1.69	17.66	15.63	295.23	397.03	2.35	2.08	2.58	2.58
Dawson County	D8	RM 72.37	12609.05	1.5-yr	1302.75	606.61	603.89	2	1.83	22.69	17.46	228.58	387.2	2.52	1.94	2.71	2.71
Dawson County	D8	RM 72.16	12261.75	1.5-yr	1302.75	606.28	603.69	1.92	1.85	21.38	18.63	286.3	372.42	2.31	2.02	2.6	2.6
Dawson County	D8	RM 71.92	11875.08	1.5-yr	1302.75	606.05	603.18	1.54	1.51	13.58	12.48	336.84	410.98	2.4	2.21	2.86	2.86
Dawson County	D8	RM 71.69	11512.65	1.5-yr	1302.75	605.79	602.95	1.69	1.63	16.26	14.7	303.44	379.64	2.45	2.22	2.85	2.85
Dawson County	D8	RM 71.49	11192.6	1.5-yr	1302.75	605.64	602.03	1.59	1.54	13.18	11.4	237.66	317.81	3.28	2.84	3.61	3.61
Dawson County	D8	RM 71.31	10913.3	1.5-yr	1302.75	605.51	601.99	1.6	1.54	13.52	11.22	244.59	345.06	3.14	2.61	3.53	3.53
Dawson County	D9	RM 71.10	10567.75	1.5-yr	1302.75	605.37	602.11	1.56	1.38	13.49	10.43	197.48	469.17	2.74	2.11	3.26	3.26
Dawson County	D9	RM 70.91	10267.7	1.5-yr	1302.75	605.17	602.05	1.78	1.59	16.9	12.58	126.11	387.15	3.05	2.25	3.13	3.13
Dawson County	D9	RM 70.72	9968.939	1.5-yr	1302.75	605.04	601.91	1.7	1.54	15.46	12.78	153.11	353.21	3.12	2.54	3.13	3.13
Dawson County	D9	RM 70.50	9603.574	1.5-yr	1302.75	604.87	601.9	1.53	1.43	13.07	10.74	248.68	425.91	2.61	2.14	2.97	2.97
Dawson County	D9	RM 70.27	9238.535	1.5-yr	1302.75	604.62	601.31	1.79	1.75	17.22	15.84	236.79	269.87	2.99	2.75	3.31	3.31
Dawson County	D9	RM 70.08	8928.013	1.5-yr	1302.75	604.46	600.85	1.7	1.64	15.31	13.2	234.44	296.09	3.12	2.69	3.61	3.61
Dawson County	D9	RM 69.79	8464.726	1.5-yr	1302.75	604.29	600.61	1.5	1.37	11.7	8.86	248.41	391.65	3.22	2.43	3.68	3.68
Dawson County	D9	RM 69.50	7983.226	1.5-yr	1302.75	604.1	600.56	1.57	1.44	13.1	10.12	237.14	388.13	3.03	2.33	3.54	3.54
Dawson County	D9	RM 69.26	7575.04	1.5-yr	1302.75	603.92	600.35	1.58	1.5	13.17	9.65	245.78	381.58	3.11	2.28	3.57	3.57
Dawson County	D9	RM 69.03	7206.967	1.5-yr	1302.75	603.8	599.95	1.45	1.25	10.75	7.26	236.36	442.76	3.49	2.35	3.85	3.85
Dawson County	D9	RM 68.82	6851.789	1.5-yr	1302.75	603.62	599.77	1.7	1.61	14.92	12.06	214.17	299.67	3.35	2.7	3.85	3.85

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

1.5-yr

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	1.5-yr	1302.75	603.42	599.59	1.86	1.83	17.3	14.72	189.13	226.22	3.7	3.14	3.83	3.83
Dawson County	D9	RM 68.39	6158.879	1.5-yr	1302.75	603.26	599.51	1.71	1.68	15.42	14.53	241.43	265.42	3.14	2.96	3.75	3.75
Dawson County	D9	RM 68.11	5709.195	1.5-yr	1302.75	603.05	599.37	1.62	1.59	13.96	12.98	262.22	299.85	3.05	2.84	3.68	3.68
Dawson County	D9	RM 67.86	5308.187	1.5-yr	1302.75	602.84	599.17	1.84	1.66	17.28	14.11	130.26	279.26	3.51	2.82	3.67	3.67
Dawson County	D10	RM 67.57	4859.184	1.5-yr	1302.75	602.67	598.93	1.53	1.46	12.03	9.9	240.29	319.39	3.39	2.79	3.74	3.74
Dawson County	D10	RM 67.37	4523.862	1.5-yr	1302.75	602.53	598.75	1.58	1.44	12.94	8.97	224.36	390.29	3.37	2.32	3.78	3.78
Dawson County	D10	RM 67.15	4175.103	1.5-yr	1302.75	602.26	598.47	2.12	1.94	22.72	16.89	158.11	254.4	3.57	2.64	3.78	3.78
Dawson County	D10	RM 66.95	3842.803	1.5-yr	1302.75	602.09	598.2	1.84	1.66	18	12.04	211.57	390.7	3.02	2.01	3.89	3.89
Dawson County	D10	RM 66.74	3505.323	1.5-yr	1302.75	601.94	598.12	1.7	1.52	14.54	9.84	189.78	346.54	3.68	2.47	3.81	3.81
Dawson County	D10	RM 66.52	3142.889	1.5-yr	1302.75	601.79	598.26	1.61	1.55	13.55	12.02	249	314.23	3.21	2.85	3.53	3.53
Dawson County	D10	RM 66.28	2774.58	1.5-yr	1302.75	601.51	598.21	2.01	1.92	21.42	18.71	206.17	260.89	3.05	2.67	3.3	3.3
Dawson County	D10	RM 66.11	2492.331	1.5-yr	1302.75	601.38	597.8	1.67	1.62	15.13	14.15	269.84	313.47	2.84	2.66	3.58	3.58
Dawson County	D10	RM 65.90	2160.839	1.5-yr	1302.75	601.24	597.33	1.55	1.43	12.55	9.65	227.64	366.75	3.32	2.54	3.91	3.91
Dawson County	D10	RM 65.75	1926.044	1.5-yr	1302.75	601.11	597.2	1.69	1.47	15.67	11.3	203.78	440.59	2.85	2.04	3.91	3.91
Dawson County	D10	RM 65.60	1669.095	1.5-yr	1302.75	600.96	597.07	1.81	1.54	16.6	9.97	140.14	392.66	3.66	2.17	3.89	3.89
Dawson County	D10	RM 65.42	1386.836	1.5-yr	1302.75	600.91	596.92	1.28	1.17	8.37	6.47	247.82	410.9	3.53	2.72	3.99	3.99
Dawson County	D10	RM 65.23	1090.639	1.5-yr	1302.75	600.76	596.91	1.6	1.45	13.95	10.7	232.81	431.26	2.83	2.16	3.86	3.86
Dawson County	D10	RM 64.96	634.963	1.5-yr	1302.75	600.61	597.09	1.34	1.17	9.67	5.86	270.22	719.38	2.99	1.82	3.52	3.52

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	1.5-yr	1302.6	600.42	596.42	1.1	1.02	6.95	5.92	397.89	631.44	2.46	2.1	4	4
Richland/McKenzie County	D10	RM 64.32	103200	1.5-yr	1302.6	600.29	596.33	1.46	1.31	11.19	7.88	231.78	481.54	3.13	2.2	3.96	3.96
Richland/McKenzie County	D10	RM 64.12	102900	1.5-yr	1302.6	600.23	596.18	1.16	1.08	7.39	5.7	280.03	599.13	2.71	2.08	4.05	4.05
Richland/McKenzie County	D10	RM 63.92	102601	1.5-yr	1302.6	600.17	596.08	1.17	1	7.79	5.09	272.35	809.52	2.56	1.66	4.09	4.09
Richland/McKenzie County	D10	RM 63.74	102302	1.5-yr	1302.6	600.1	595.94	1.19	1.04	7.57	5.32	254.39	634.42	2.95	2.06	4.16	4.16
Richland/McKenzie County	D10	RM 63.55	101998	1.5-yr	1302.6	600.04	595.79	1.21	1.06	7.21	4.49	208.62	551.81	3.82	2.37	4.25	4.25
Richland/McKenzie County	D10	RM 63.34	101671	1.5-yr	1302.6	599.95	595.21	1.37	1.11	9.95	5.11	239.06	755.79	3.03	1.55	4.74	4.74
Richland/McKenzie County	D10	RM 63.08	101293	1.5-yr	1302.6	599.5	595.12	2.48	2.22	32.21	18.63	159.25	329.86	3.23	1.85	4.38	4.38
Richland/McKenzie County	D10	RM 62.96	101094	1.5-yr	1302.6	599.31	595.12	2.38	2.17	34.79	19.57	144.64	289.83	3.72	2.07	4.19	4.19
Richland/McKenzie County	D10	RM 62.83	100882	1.5-yr	1302.6	599.2	595.12	2.08	1.84	23.89	14.84	159.5	302.51	3.81	2.35	4.08	4.08
Richland/McKenzie County	D10	RM 62.64	100582	1.5-yr	1302.6	599.08	595.12	1.79	1.53	15.96	10.41	187.39	352.44	3.73	2.42	3.96	3.96
Richland/McKenzie County	D10	RM 62.46	100282	1.5-yr	1302.6	598.78	595.1	2.33	2.03	27.89	18.9	156.94	276.84	3.44	2.32	3.68	3.68
Richland/McKenzie County	D10	RM 62.27	99977	1.5-yr	1302.6	598.78	594.91	1.28	1.19	8.59	7.16	299.65	401.9	3.27	2.72	3.87	3.87
Richland/McKenzie County	D10	RM 62.1	99691	1.5-yr	1302.6	598.67	594.75	1.36	1.26	9.17	8.08	271.6	483.15	2.42	2.14	3.92	3.92
Richland/McKenzie County	D10	RM 61.91	99377	1.5-yr	1302.6	598.48	594.51	1.65	1.35	13.45	9.04	161.43	512.63	2.83	1.88	3.97	3.97
Richland/McKenzie County	D10	RM 61.72	99082	1.5-yr	1302.6	598.35	594.36	1.56	1.35	12.47	8.55	125.54	418.06	3.41	2.3	3.99	3.99
Richland/McKenzie County	D10	RM 61.54	98782	1.5-yr	1302.6	598.19	594.36	1.65	1.57	13.32	10.34	223.97	312.33	3.43	2.65	3.83	3.83
Richland/McKenzie County	D10	RM 61.35	98482	1.5-yr	1302.6	598.05	594.26	1.72	1.57	15.25	10.2	211.16	363.82	3.42	2.28	3.79	3.79
Richland/McKenzie County	D10	RM 61.16	98182	1.5-yr	1302.6	597.96	594.17	1.48	1.22	11.86	6.78	248.77	634.86	2.95	1.68	3.79	3.79
Richland/McKenzie County	D10	RM 60.99	97906	1.5-yr	1302.6	597.86	594.02	1.43	1.3	10.39	7.31	215.54	414.64	3.44	2.41	3.84	3.84
Richland/McKenzie County	D10	RM 60.79	97582	1.5-yr	1302.6	597.68	593.78	1.74	1.52	16.94	11.01	224.08	501.82	2.64	1.71	3.9	3.9
Richland/McKenzie County	D10	RM 60.64	97339	1.5-yr	1302.6	597.64	593.58	1.08	0.93	6.68	4.62	264.69	832.96	2.44	1.67	4.06	4.06
Richland/McKenzie County	D10	RM 60.42	96982	1.5-yr	1302.6	597.53	593.38	1.24	1.11	7.69	6.46	212.04	440.12	3.28	2.73	4.15	4.15
Richland/McKenzie County	D10	RM 60.25	96700	1.5-yr	1302.6	597.39	593.24	1.71	1.51	16.31	12.49	189	434.35	2.66	2.02	4.15	4.15
Richland/McKenzie County	D10	RM 60.04	96365	1.5-yr	1302.6	597.13	593.14	1.9	1.76	21.68	16.81	213.1	468.77	2.1	1.62	3.99	3.99
Richland/McKenzie County	D10	RM 59.86	96088	1.5-yr	1302.6	597.02	592.99	1.65	1.46	13.67	9.89	168.75	377.37	3.63	2.61	4.03	4.03
Richland/McKenzie County	D10	RM 59.65	95769	1.5-yr	1302.6	596.94	592.85	1.43	1.29	10.93	6.95	204.75	733	3.08	1.94	4.09	4.09
Richland/McKenzie County	D10	RM 59.5	95530	1.5-yr	1302.6	596.84	592.75	1.48	1.28	12.14	8.55	206.9	574.82	2.68	1.87	4.09	4.09
Richland/McKenzie County	D10	RM 59.29	95183	1.5-yr	1302.6	596.7	592.55	1.36	1.28	10.29	8.04	230.97	498.5	2.73	2.12	4.15	4.15
Richland/McKenzie County	D10	RM 59.07	94797	1.5-yr	1302.6	596.56	592.36	1.24	1.18	9.42	8.08	406.53	541.28	2.45	2.1	4.2	4.2
Richland/McKenzie County	D10	RM 58.93	94582	1.5-yr	1302.6	596.43	592.31	1.47	1.46	11.91	10.77	325.25	381.46	2.73	2.46	4.12	4.12
Richland/McKenzie County	D10	RM 58.75	94282	1.5-yr	1302.6	596.33	592.28	1.44	1.42	9.81	8.89	256.6	307.2	3.52	3.19	4.05	4.05
Richland/McKenzie County	D10	RM 58.56	93982	1.5-yr	1302.6	596	592.22	2.36	2.28	28.27	20.89	156.11	238.2	3.53	2.59	3.78	3.78
Richland/McKenzie County	D10	RM 58.37	93682	1.5-yr	1302.6	595.81	592.22	2.11	2.1	22.86	21.08	182.93	224.8	3.38	3.11	3.59	3.59
Richland/McKenzie County	D10	RM 58.19	93382	1.5-yr	1302.6	595.74	592.22	1.53	1.53	11.97	11.97	251.57	406.2	3.39	3.39	3.52	3.52
Richland/McKenzie County	D10	RM 58.01	93086	1.5-yr	1302.6	595.58	592.14	1.72	1.72	15.38	15.38	229.97	291.37	3.29	3.29	3.44	3.44
Richland/McKenzie County	D10	RM 57.82	92782	1.5-yr	1302.6	595.47	592.11	1.43	1.36	11.75	10.57	306.34	462	2.44	2.19	3.36	3.36
Richland/McKenzie County	D10	RM 57.63	92482	1.5-yr	1302.6	595.25	592.11	1.89	1.66	19.46	14.3	160.15	407.3	2.85	2.09	3.14	3.14
Richland/McKenzie County	D10	RM 57.46	92205	1.5-yr	1302.6	595.12	591.95	1.51	1.3	12.26	8.42	188.38	573.04	2.94	2.01	3.17	3.17
Richland/McKenzie County	D10	RM 57.26	91882	1.5-yr	1302.6	594.83	591.9	1.94	1.71	21.04	16.45	117.57	371.84	2.64	2.05	2.93	2.93
Richland/McKenzie County	D10	RM 57.07	91583	1.5-yr	1302.6	594.7	591.73	1.62	1.37	14.35	10.31	133.5	475.36	2.81	2	2.97	2.97
Richland/McKenzie County	D10	RM 56.87	91253	1.5-yr	1302.6	594.47	591.49	1.45	1.31	12.52	9.71	184.11	589.41	2.19	1.69	3.04	3.04
Richland/McKenzie County	D10	RM 56.68	90943	1.5-yr	1302.6	594.36	591.12	1.07	1.17	7.11	7.21	298.59	571.38	1.92	1.95	3.24	3.24
Richland/McKenzie County	D10	RM 56.54	90682	1.5-yr	1302.6	594.15	590.76	1.38	1.71	9.79	13.47	201.21	350.63	1.58	2.17	3.43	3.43
Richland/McKenzie County	D10	RM 56.35	90387	1.5-yr	1302.6	594.03	590.46	1.31	1.43	10.18	10.62	173.92	392.35	2.24	2.32	3.57	3.57
Richland/McKenzie County	D11	RM 56.16	90086	1.5-yr	1302.6	593.83	590.11	1.79	1.79	16.54	16.54	216.58	216.58	3.36	3.36	3.72	3.72
Richland/McKenzie County	D11	RM 55.96	89768	1.5-yr	1302.6	593.7	589.96	1.66	1.61	13.88	11.95	217.38	276.62	3.59	3.09	3.74	3.74
Richland/McKenzie County	D11	RM 55.78	89479	1.5-yr	1302.6	593.59	589.96	1.61	1.47	13.34	8.65	213.26	405.4	3.38	2.19	3.63	3.63
Richland/McKenzie County	D11	RM 55.61	89193	1.5-yr	1302.6	593.47	589.98	1.6	1.48	13.35	10.09	220.7	353.52	3.29	2.49	3.49	3.49
Richland/McKenzie County	D11	RM 55.41	88882	1.5-yr	1302.6	593.27	589.76	1.86	1.6	18.59	11.17	203.47	455.36	2.99	1.79	3.51	3.51
Richland/McKenzie County	D11	RM 55.23	88582	1.5-yr	1302.6	593.17	589.53	1.47	1.29	11.06	6.96	234.05	467.36	3.52	2.2	3.64	3.64
Richland/McKenzie County	D11	RM 55.04	88282	1.5-yr	1302.6	593.03	589.39	1.62	1.41	13.99	10.12	250.66	433.23	3	2.17	3.64	3.64
Richland/McKenzie County	D11	RM 54.86	87996	1.5-yr	1302.6	592.73	589.33	2.15	1.95	26.24	19.85	220.34	350.36	2.52	1.9	3.4	3.4
Richland/McKenzie County	D11	RM 54.69	87715	1.5-yr	1302.6	592.63	589.23	1.55	1.28	13.17	9.35	186.59	517.06	2.79	1.97	3.4	3.4
Richland/McKenzie County	D11	RM 54.48	87382	1.5-yr	1302.6	592.47	589.15	1.52	1.18	12.67	7.35	178.2	691.69	2.85	1.64	3.32	3.32
Richland/McKenzie County	D11	RM 54.32	87122	1.5-yr	1302.6	592.34	589	1.61	1.28	13.52	7.17	157.96	686.84	3.23	1.69	3.34	3.34
Richland/McKenzie County	D11	RM 54.1	86783	1.5-yr	1302.6	592.24	588.83	1.28	1.06	8.51	5.22	199.39	749.67	3.31	2.01	3.41	3.41
Richland/McKenzie County	D11	RM 53.92	86482	1.5-yr	1302.6	592.16	588.68	1.22	1.07	8.15	5.62	250.31	688.88	2.83	1.93	3.48	3.48
Richland/McKenzie County	D11	RM 53.73	86182	1.5-yr	1302.6	592.07	588.51	1.31	1.12	8.85	5.29	194.47	640.32	3.39	2	3.56	3.56
Richland/McKenzie County	D11	RM 53.55	85882	1.5-yr	1302.6	591.97	588.37	1.32	1.14	9.13	6.78	181.62	493.32	3.26	2.4	3.6	3.6
Richland/McKenzie County	D11	RM 53.36	85582	1.5-yr	1302.6	591.86	588.01	1.34	1.33	9.86	9.9	166.55	391.13	2.8	2.81	3.85	3.85
Richland/McKenzie County	D11	RM 53.17	85290	1.5-yr	1302.6	591.7	587.56	1.69	1.6	14.18	12.78	202.36	301.38	3.73	3.4	4.14	4.14

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D11	RM 52.98	84982	1.5-yr	1302.6	591.39	587.56	2.21	2.1	29.3	27.52	266.97	1082.25	2.15	2.03	3.83	3.83
Richland/McKenzie County	D11	RM 52.79	84682	1.5-yr	1302.6	591.08	587.56	1.85	1.85	20.78	20.78	336.58	762.14	2.09	2.09	3.52	3.52
Richland/McKenzie County	D11	RM 52.61	84390	1.5-yr	1302.6	591	587.43	1.15	1.13	7.52	6.83	443.45	900.53	2.53	2.3	3.57	3.57
Richland/McKenzie County	D11	RM 52.42	84082	1.5-yr	1302.6	590.87	587.28	1.34	1.2	10.85	8.02	408.44	1115.83	2.04	1.5	3.59	3.59
Richland/McKenzie County	D11	RM 52.24	83798	1.5-yr	1302.6	590.64	587.28	1.8	1.37	18.28	8.47	226.22	1483.89	2.57	1.18	3.36	3.36
Richland/McKenzie County	D11	RM 52.01	83423	1.5-yr	1302.6	590.42	587.23	1.61	1.54	13.9	11.18	122.88	521.16	3.04	2.4	3.19	3.19
Richland/McKenzie County	D11	RM 51.87	83182	1.5-yr	1302.6	590.3	587.16	1.34	1.37	11.25	9.49	143.66	602.67	1.92	1.6	3.14	3.14
Richland/McKenzie County	D11	RM 51.69	82882	1.5-yr	1302.6	590.16	587.16	1.34	1.21	9.33	6.41	144.67	692.77	2.34	1.58	3	3
Richland/McKenzie County	D11	RM 51.51	82585	1.5-yr	1302.6	590.04	587.16	1.44	1.44	12.83	9.85	144.89	619.08	1.95	1.48	2.88	2.88
Richland/McKenzie County	D11	RM 51.32	82274	1.5-yr	1302.6	589.95	587.16	1.3	1.3	10.64	8.27	167.65	715.79	1.86	1.43	2.79	2.79
Richland/McKenzie County	D11	RM 51.13	81982	1.5-yr	1302.6	589.87	587.13	1.33	1.21	9.95	7.05	161.12	635.4	2.63	1.85	2.76	2.76
Richland/McKenzie County	D11	RM 50.95	81682	1.5-yr	1302.6	589.75	587.08	1.22	1.15	8.41	5.83	140.82	674.75	2.54	1.74	2.67	2.67
Richland/McKenzie County	D11	RM 50.76	81378	1.5-yr	1302.6	589.65	586.89	1.22	1	8.69	5.28	172.21	975.93	2.3	1.38	2.76	2.76
Richland/McKenzie County	D11	RM 50.56	81065	1.5-yr	1302.6	589.4	586.37	1.49	1.38	11.96	9.2	169.95	447.17	2.94	2.25	3.03	3.03
Richland/McKenzie County	D11	RM 50.39	80787	1.5-yr	1302.6	589.36	585.7	1.25	1.18	7.97	6.72	195.97	401.84	3.57	3	3.66	3.66
Richland/McKenzie County	D11	RM 50.21	80482	1.5-yr	1302.6	589.26	585.55	1.19	1.15	7.54	6.24	234.85	492.73	3	2.48	3.71	3.71
Richland/McKenzie County	D11	RM 50.02	80182	1.5-yr	1302.6	589.12	585.55	1.49	1.43	11.86	10.17	192.23	410.64	3.01	2.56	3.57	3.57
Richland/McKenzie County	D12	RM 49.82	79860	1.5-yr	1302.6	588.84	585.55	2	1.97	20.98	19.57	206.3	251.94	3.16	2.94	3.29	3.29
Richland/McKenzie County	D12	RM 49.65	79582	1.5-yr	1302.6	588.59	585.55	2.16	2.09	25.56	22.08	210.92	275.2	2.83	2.45	3.04	3.04
Richland/McKenzie County	D12	RM 49.5	79348	1.5-yr	1302.6	588.62	585.49	1.06	1.04	5.99	5.71	352.67	459.6	3.07	2.93	3.17	3.17
Richland/McKenzie County	D12	RM 49.26	78981	1.5-yr	1302.6	588.49	585.29	1.54	1.32	12.72	9.52	135.75	472.48	3.01	2.24	3.2	3.2
Richland/McKenzie County	D12	RM 49.08	78682	1.5-yr	1302.6	588.3	585.11	1.67	1.48	14.95	11.67	153.08	437.12	3.01	2.34	3.26	3.26
Richland/McKenzie County	D12	RM 48.87	78351	1.5-yr	1302.6	588.19	584.96	1.44	1.34	11	9.24	203.06	376.29	3.07	2.59	3.23	3.23
Richland/McKenzie County	D12	RM 48.7	78082	1.5-yr	1302.6	588.07	584.86	1.45	1.44	12.32	11.8	243.6	419.1	2.26	2.16	3.21	3.21
Richland/McKenzie County	D12	RM 48.52	77782	1.5-yr	1302.6	588.03	584.74	0.92	0.97	5.1	5.19	465.27	623.05	2.12	2.16	3.29	3.29
Richland/McKenzie County	D12	RM 48.33	77482	1.5-yr	1302.6	587.94	584.51	1.12	1.14	7.14	6.63	383.19	567.36	2.16	2.01	3.43	3.43
Richland/McKenzie County	D12	RM 48.15	77182	1.5-yr	1302.6	587.83	584.24	1.32	1.1	9.63	7.95	363.8	598.64	2.39	1.97	3.59	3.59
Richland/McKenzie County	D12	RM 47.97	76887	1.5-yr	1302.6	587.77	584.09	1.13	1.04	6.33	4.67	295.63	571.62	2.97	2.19	3.68	3.68
Richland/McKenzie County	D12	RM 47.76	76570	1.5-yr	1302.6	587.72	583.86	0.95	0.95	4.17	4.12	410.78	607.62	2.28	2.25	3.86	3.86
Richland/McKenzie County	D12	RM 47.59	76293	1.5-yr	1302.6	587.65	583.71	1.06	1.02	4.81	4.8	360.91	532.42	2.42	2.42	3.94	3.94
Richland/McKenzie County	D12	RM 47.4	75982	1.5-yr	1302.6	587.53	583.42	1.39	1.27	9.52	7.51	189.06	407.9	3.18	2.51	4.11	4.11
Richland/McKenzie County	D12	RM 47.12	75521	1.5-yr	1302.6	587.4	583.04	1.35	1.35	8.86	8.4	234.58	248.72	4.1	3.89	4.36	4.36
Richland/McKenzie County	D12	RM 47	75323	1.5-yr	1302.6	587.14	583.04	2.28	2.26	26.26	24.48	160.5	172.81	3.56	3.33	4.1	4.1
Richland/McKenzie County	D12	RM 46.85	75082	1.5-yr	1302.6	587.02	583.04	2	1.97	20.23	18.31	181.7	204.31	3.58	3.24	3.98	3.98
Richland/McKenzie County	D12	RM 46.67	74782	1.5-yr	1302.6	586.87	583.04	1.91	1.88	18.2	16.05	184.09	212.29	3.7	3.26	3.83	3.83
Richland/McKenzie County	D12	RM 46.47	74459	1.5-yr	1302.6	586.81	583.04	1.33	1.33	9.36	8.93	310.22	326.68	3.15	3	3.77	3.77
Richland/McKenzie County	D12	RM 46.3	74186	1.5-yr	1302.6	586.68	583.04	1.55	1.55	11.41	11.41	312.45	312.45	2.7	2.7	3.64	3.64
Richland/McKenzie County	D12	RM 46.14	73920	1.5-yr	1302.6	586.59	583.04	1.37	1.36	9.61	9.28	337.11	350.86	2.83	2.73	3.55	3.55
Richland/McKenzie County	D12	RM 45.9	73546	1.5-yr	1302.6	586.46	582.97	1.36	1.24	9.78	8.16	335.67	474.53	2.65	2.21	3.49	3.49
Richland/McKenzie County	D12	RM 45.75	73307	1.5-yr	1302.6	586.28	582.88	1.76	1.64	13.76	11.71	295.97	389.33	2.4	2.04	3.4	3.4
Richland/McKenzie County	D12	RM 45.54	72980	1.5-yr	1302.6	586.19	582.55	1.25	1.19	8.68	7.77	379.22	459.84	2.66	2.38	3.64	3.64
Richland/McKenzie County	D12	RM 45.29	72680	1.5-yr	1302.6	586.06	582.25	1.39	1.3	10.89	9.17	346.79	460.87	2.59	2.18	3.81	3.81
Richland/McKenzie County	D12	RM 45.09	72380	1.5-yr	1302.6	585.96	582.08	1.34	1.24	9.15	6.43	262.7	420.7	3.55	2.49	3.88	3.88
Richland/McKenzie County	D12	RM 44.91	72080	1.5-yr	1302.6	585.88	582.01	1.32	1.19	9.09	6.49	282.47	468.21	3.28	2.34	3.87	3.87
Richland/McKenzie County	D12	RM 44.72	71783	1.5-yr	1302.6	585.73	581.97	1.67	1.43	14.19	8.91	205.68	417.21	3.5	2.19	3.76	3.76
Richland/McKenzie County	D12	RM 44.53	71483	1.5-yr	1302.6	585.5	581.82	2.04	1.68	21.73	11.35	177.12	461.64	3.24	1.68	3.68	3.68
Richland/McKenzie County	D12	RM 44.34	71183	1.5-yr	1302.6	585.18	581.8	2.3	1.98	29.76	19.25	196.93	402.4	2.62	1.68	3.38	3.38
Richland/McKenzie County	D12	RM 44.17	70899	1.5-yr	1302.6	585.19	581.79	1.14	1.01	6.75	4.74	301.13	746.33	3.33	2.34	3.4	3.4
Richland/McKenzie County	D12	RM 43.97	70594	1.5-yr	1302.6	585.12	581.73	1.15	1.03	7.52	6.1	325.86	890.46	2.54	2.06	3.39	3.39
Richland/McKenzie County	D12	RM 43.74	70230	1.5-yr	1302.6	584.99	581.66	1.21	1.22	8.35	8.12	156.19	615.77	2.51	2.44	3.33	3.33
Richland/McKenzie County	D12	RM 43.59	69983	1.5-yr	1302.6	584.86	581.56	1.28	1.16	8.63	6.36	135.64	702.84	2.6	1.89	3.3	3.3
Richland/McKenzie County	D12	RM 43.4	69684	1.5-yr	1302.6	584.77	581.49	1.2	1.13	7.62	5.69	150.08	591.36	2.64	1.95	3.28	3.28
Richland/McKenzie County	D12	RM 43.03	69084	1.5-yr	1302.6	584.59	581.37	1.46	1.26	12.06	8.07	119.43	603.4	2.59	1.71	3.22	3.22
Richland/McKenzie County	D12	RM 42.66	68489	1.5-yr	1302.6	584.46	581.18	1.36	1.25	10.27	6.76	113.89	598.25	2.69	1.75	3.28	3.28
Richland/McKenzie County	D12	RM 42.29	67889	1.5-yr	1302.6	584.4	580.87	0.95	0.88	4.84	3.69	280.16	659.31	2.95	2.24	3.53	3.53
Richland/McKenzie County	D12	RM 42.08	67558	1.5-yr	1302.6	584.35	580.61	1.13	0.95	6.43	3.03	177.8	826.02	3.54	1.66	3.74	3.74
Richland/McKenzie County	D12	RM 41.89	67260	1.5-yr	1302.6	584.28	580.31	1.18	1.07	7.09	4.26	288.97	594.38	3.42	2.05	3.97	3.97
Richland/McKenzie County	D12	RM 41.75	67037	1.5-yr	1302.6	584.2	579.99	1.28	1.24	9.08	6.96	332.14	510.17	2.75	2.1	4.21	4.21
Richland/McKenzie County	D12	RM 41.54	66695	1.5-yr	1302.6	584.06	579.72	1.5	1.39	10.89	6.61	195.02	400.92	4.06	2.45	4.34	4.34
Richland/McKenzie County	D12	RM 41.34	66361	1.5-yr	1302.6	583.92	579.43	1.66	1.47	14.66	8.79	218.95	484.84	3.12	1.86	4.49	4.49
Richland/McKenzie County	D12	RM 41.18	66116	1.5-yr	1302.6	583.82	579.08	1.6	1.47	12.78	8.12	195.34	401.5	3.73	2.35	4.74	4.74
Richland/McKenzie County	D12	RM 40.99	65802	1.5-yr	1302.6	583.71	578.99	1.57	1.4	12.44	7.41	203	452.64	3.59	2.12	4.72	4.72

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D12	RM 40.8	65502	1.5-yr	1302.6	583.61	578.97	1.46	1.36	11.35	9.29	273.33	398.11	3.08	2.51	4.64	4.64
Richland/McKenzie County	D12	RM 40.62	65205	1.5-yr	1302.6	583.53	578.92	1.18	1.17	7.87	6.25	375.4	561.69	2.56	2.03	4.61	4.61
Richland/McKenzie County	D12	RM 40.24	64602	1.5-yr	1302.6	583.31	578.6	1.29	1.29	7.08	6.93	457.34	684.54	2.21	2.16	4.71	4.71
Richland/McKenzie County	D12	RM 40	64219	1.5-yr	1302.6	583.16	578.56	1.4	1.4	10.47	9.88	305.49	413.89	3.04	2.87	4.6	4.6
Richland/McKenzie County	D12	RM 39.87	64002	1.5-yr	1302.6	583.06	578.55	1.56	1.55	11.99	9.79	217.97	454.21	3.83	3.12	4.51	4.51
Richland/McKenzie County	D12	RM 39.68	63702	1.5-yr	1302.6	582.94	578.45	1.64	1.57	14.11	9.84	239.19	408.21	3.19	2.22	4.49	4.49
Richland/McKenzie County	D12	RM 39.5	63402	1.5-yr	1302.6	582.75	578.35	1.83	1.69	17.94	12.31	222.54	402.73	2.97	2.03	4.4	4.4
Richland/McKenzie County	D12	RM 39.31	63102	1.5-yr	1302.6	582.65	578.31	1.57	1.37	12.61	7.08	226.23	551.61	3.19	1.78	4.34	4.34
Richland/McKenzie County	D12	RM 39.13	62802	1.5-yr	1302.6	582.53	578.2	1.5	1.38	12.25	7.72	283.48	547.06	2.82	1.77	4.33	4.33
Richland/McKenzie County	D12	RM 38.94	62501	1.5-yr	1302.6	582.43	578.12	1.4	1.2	10.39	6.89	261.16	523.73	3.14	2.08	4.31	4.31
Richland/McKenzie County	D12	RM 38.76	62201	1.5-yr	1302.6	582.35	578.03	1.29	1.2	8.29	6.06	237.77	412.16	3.8	2.78	4.32	4.32
Richland/McKenzie County	D12	RM 38.57	61901	1.5-yr	1302.6	582.2	577.87	1.69	1.51	15.62	8.22	231.35	615.58	2.78	1.46	4.33	4.33
Richland/McKenzie County	D12	RM 38.38	61601	1.5-yr	1302.6	582.16	577.84	1.04	0.84	5.11	3.39	264.87	1372.57	2.8	1.85	4.32	4.32
Richland/McKenzie County	D12	RM 38.2	61301	1.5-yr	1302.6	582.1	577.82	1.15	0.82	6.6	3.21	240.58	1086.08	3.64	1.75	4.28	4.28
Richland/McKenzie County	D12	RM 38.01	61008	1.5-yr	1302.6	582.01	577.81	1.33	1	10.14	5.7	307.49	1003.96	2.42	1.35	4.2	4.2
Richland/McKenzie County	D12	RM 37.84	60708	1.5-yr	1302.6	581.87	577.71	1.4	1.28	11.15	8.36	332.3	599.21	2.4	1.79	4.16	4.16
Richland/McKenzie County	D12	RM 37.65	60408	1.5-yr	1302.6	581.82	577.66	0.91	0.83	4.89	3.79	561.72	922.18	2.29	1.77	4.16	4.16
Richland/McKenzie County	D12	RM 37.5	60107	1.5-yr	1302.6	581.75	577.54	0.96	0.92	4.3	4.29	553.84	792	1.8	1.8	4.21	4.21
Richland/McKenzie County	D12	RM 37.35	59808	1.5-yr	1302.6	581.62	577.37	0.96	1.04	5.22	5.55	426.77	559.1	2.1	2.23	4.25	4.25
Richland/McKenzie County	D12	RM 37.16	59508	1.5-yr	1302.6	581.48	577.24	1.44	1.43	9.72	7.57	233.6	422.75	2.77	2.15	4.24	4.24
Richland/McKenzie County	D12	RM 36.97	59208	1.5-yr	1302.6	581.33	576.96	1.64	1.73	11.61	11.92	179.82	277.22	2.63	2.71	4.37	4.37
Richland/McKenzie County	D12	RM 36.78	58908	1.5-yr	1302.6	581.28	576.87	1.36	1.33	8.76	5.57	197.95	473.25	3.28	2.08	4.41	4.41
Richland/McKenzie County	D12	RM 36.6	58608	1.5-yr	1302.6	581.23	576.66	1.27	1.24	7.9	6.38	180.34	330.56	3.97	3.18	4.57	4.57
Richland/McKenzie County	D12	RM 36.38	58263	1.5-yr	1302.6	581.16	576.49	1.25	1.25	7.83	7.83	288.07	288.07	3.63	3.63	4.67	4.67
Richland/McKenzie County	D13	RM 36.23	58011	1.5-yr	1302.6	581.04	576.43	1.56	1.56	11.66	11.66	194.09	194.09	4.29	4.29	4.61	4.61
Richland/McKenzie County	D13	RM 36.04	57708	1.5-yr	1302.6	580.85	576.42	1.94	1.92	19.11	15.25	188.38	239.78	3.56	2.83	4.43	4.43
Richland/McKenzie County	D13	RM 35.85	57408	1.5-yr	1302.6	580.69	576.41	1.87	1.76	13.64	9.87	276.36	410.54	2.51	1.81	4.28	4.28
Richland/McKenzie County	D13	RM 35.66	57108	1.5-yr	1302.6	580.67	576.36	1.2	1.13	6.28	5.02	325.61	456.62	3.16	2.53	4.31	4.31
Richland/McKenzie County	D13	RM 35.48	56810	1.5-yr	1302.6	580.5	576.3	1.77	1.56	15.52	9.32	175.22	386.49	3.83	2.29	4.2	4.2
Richland/McKenzie County	D13	RM 35.29	56508	1.5-yr	1302.6	580.33	576.19	1.87	1.65	19.08	13.26	211.23	406.17	2.81	1.94	4.14	4.14
Richland/McKenzie County	D13	RM 35.1	56208	1.5-yr	1302.6	580.25	576.07	1.41	1.32	9.96	7.1	242.08	373.89	3.74	2.64	4.18	4.18
Richland/McKenzie County	D13	RM 34.92	55908	1.5-yr	1302.6	580.12	576.09	1.58	1.47	13.92	9.8	252.2	395.68	3.19	2.24	4.03	4.03
Richland/McKenzie County	D13	RM 34.73	55605	1.5-yr	1302.6	580.02	575.89	1.34	1.3	8.59	7.51	411.75	492.1	2.33	2.04	4.13	4.13
Richland/McKenzie County	D13	RM 34.54	55297	1.5-yr	1302.6	579.85	575.79	1.55	1.45	12.16	10.29	318.49	466.56	2.28	1.92	4.06	4.06
Richland/McKenzie County	D13	RM 34.36	55008	1.5-yr	1302.6	579.8	575.75	1.12	1.02	5.9	4.56	321.99	510.25	3.23	2.49	4.05	4.05
Richland/McKenzie County	D13	RM 34.17	54708	1.5-yr	1302.6	579.74	575.49	1.1	1.01	6.67	5.01	379.18	633.91	2.7	2.03	4.25	4.25
Richland/McKenzie County	D13	RM 33.94	54408	1.5-yr	1302.6	579.69	575.34	1	0.84	4.96	3.65	355.65	717.43	2.96	2.17	4.35	4.35
Richland/McKenzie County	D13	RM 33.76	54079	1.5-yr	1302.6	579.63	575.12	1.12	1	6.71	5.42	283.48	562.47	2.97	2.38	4.5	4.5
Richland/McKenzie County	D13	RM 33.6	53799	1.5-yr	1302.6	579.57	574.88	1.08	0.96	6.46	5.34	372.39	637.19	2.59	2.13	4.69	4.69
Richland/McKenzie County	D13	RM 33.42	53508	1.5-yr	1302.6	579.52	574.61	1.05	0.95	5.14	3.69	259.83	512.25	3.76	2.68	4.91	4.91
Richland/McKenzie County	D13	RM 33.23	53208	1.5-yr	1302.6	579.48	574.45	1.05	0.88	5.31	3.32	208.48	557.71	4.26	2.64	5.03	5.03
Richland/McKenzie County	D13	RM 33.04	52908	1.5-yr	1302.6	579.43	574.3	1.17	1.04	6.33	4.06	192.88	410.35	4.8	3.06	5.13	5.13
Richland/McKenzie County	D13	RM 32.86	52608	1.5-yr	1302.6	579.33	574.18	1.43	1.34	9.67	5.14	208.18	424.87	4.35	2.29	5.15	5.15
Richland/McKenzie County	D13	RM 32.67	52308	1.5-yr	1302.6	579.21	574.18	1.65	1.31	13.13	4.44	187.25	730.2	4.1	1.36	5.03	5.03
Richland/McKenzie County	D13	RM 32.48	52008	1.5-yr	1302.6	579.09	574.04	1.71	1.55	14.5	8.44	193.59	380.93	3.84	2.21	5.05	5.05
Richland/McKenzie County	D13	RM 32.29	51709	1.5-yr	1302.6	579.04	574.04	1.4	1.21	9.5	4.71	222.08	544.96	4.04	1.98	5	5
Richland/McKenzie County	D13	RM 32.11	51423	1.5-yr	1302.6	578.99	573.94	1.26	1.15	7.57	5.37	220.08	376.04	4.3	3.05	5.05	5.05
Richland/McKenzie County	D13	RM 31.92	51108	1.5-yr	1302.6	578.86	573.85	1.6	1.47	13.1	9.99	210.15	340.79	3.5	2.65	5.01	5.01
Richland/McKenzie County	D13	RM 31.73	50809	1.5-yr	1302.6	578.83	573.72	1.13	1.09	5.85	4.79	261.31	421.97	4.28	3.5	5.11	5.11
Richland/McKenzie County	D13	RM 31.51	50462	1.5-yr	1302.6	578.63	573.24	1.88	1.87	14.89	14.75	161.29	201.86	4.31	4.27	5.39	5.39
Richland/McKenzie County	D13	RM 31.35	50208	1.5-yr	1302.6	578.41	573.24	2.26	2.24	26.21	23.85	168.47	199.91	3.42	3.11	5.17	5.17
Richland/McKenzie County	D13	RM 31.22	50009	1.5-yr	1302.6	578.29	573.24	2.18	2.15	23.32	20.27	149.68	221.01	3.98	3.45	5.05	5.05
Richland/McKenzie County	D13	RM 31.12	49859	1.5-yr	1302.6	578.29	570.86	1.48	1.48	13.85	13.85	193.74	193.74	4.55	4.55	7.43	7.43
Richland/McKenzie County	D13	Highway 23	49844	1.5-yr	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	1.5-yr	1302.6	578.27	570.86	1.48	1.48	13.51	13.51	190.68	190.68	4.6	4.6	7.41	7.41
Richland/McKenzie County	D13	RM 30.97	49608	1.5-yr	1302.6	578.24	573.24	1.26	1.26	7.33	7.33	221.16	221.16	4.68	4.68	5	5
Richland/McKenzie County	D13	RM 30.79	49308	1.5-yr	1302.6	578.1	573.24	1.67	1.67	13.73	12.57	197.61	217.27	3.94	3.6	4.86	4.86
Richland/McKenzie County	D13	RM 30.6	49009	1.5-yr	1302.6	577.93	573.24	1.9	1.89	18.13	16.93	185.04	199.33	3.7	3.45	4.69	4.69
Richland/McKenzie County	D13	RM 30.41	48706	1.5-yr	1302.6	577.82	573.15	1.72	1.69	13.68	12.14	197.29	227.08	3.83	3.4	4.67	4.67
Richland/McKenzie County	D13	RM 30.22	48403	1.5-yr	1302.6	577.73	573.15	1.59	1.56	12.07	9.5	195.94	254.45	4.19	3.28	4.58	4.58
Richland/McKenzie County	D13	RM 30.03	48102	1.5-yr	1302.6	577.72	573.15	1.07	1.06	5.64	5.08	313.3	363.49	3.89	3.5	4.57	4.57
Richland/McKenzie County	D13	RM 29.85	47809	1.5-yr	1302.6	577.67	573.15	1.04	1.01	5.55	4.96	373.64	491.66	3.35	2.99	4.52	4.52

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D13	RM 29.66	47508	1.5-yr	1302.6	577.57	573.11	1.36	1.36	9.04	8.65	244.6	256.9	3.91	3.73	4.46	4.46
Richland/McKenzie County	D13	RM 29.48	47209	1.5-yr	1302.6	577.52	573.11	1.19	1.17	6.54	5.46	299.4	376.19	3.66	3.04	4.41	4.41
Richland/McKenzie County	D13	RM 29.28	46894	1.5-yr	1302.6	577.46	572.98	1.11	1.07	6.75	5.99	397.4	517.19	2.77	2.45	4.48	4.48
Richland/McKenzie County	D13	RM 29.1	46608	1.5-yr	1302.6	577.37	572.94	1.4	1.06	9.97	5.95	168.67	615.02	3.49	2.06	4.43	4.43
Richland/McKenzie County	D13	RM 28.92	46308	1.5-yr	1302.6	577.27	572.85	1.5	1.21	11.04	6.6	146.25	462.1	3.96	2.33	4.42	4.42
Richland/McKenzie County	D13	RM 28.73	46008	1.5-yr	1302.6	577.2	572.67	1.39	1.07	9.61	6.07	149.45	523.95	3.72	2.32	4.53	4.53
Richland/McKenzie County	D13	RM 28.54	45708	1.5-yr	1302.6	577.12	572.67	1.44	1.08	9.69	5.93	193.72	594.09	3.33	2.02	4.45	4.45
Richland/McKenzie County	D13	RM 28.36	45419	1.5-yr	1302.6	577.08	572.48	1.08	0.94	5.79	4.44	229.55	490.14	3.69	2.82	4.6	4.6
Richland/McKenzie County	D13	RM 28.15	45071	1.5-yr	1302.6	577.03	572.25	0.93	0.93	4.49	4.3	426.03	448.2	3.27	3.13	4.78	4.78
Richland/McKenzie County	D13	RM 27.98	44808	1.5-yr	1302.6	576.93	572.04	1.33	1.31	8.53	7.8	234.86	260.83	4.16	3.8	4.89	4.89
Richland/McKenzie County	D13	RM 27.8	44508	1.5-yr	1302.6	576.89	571.87	1.2	1.19	6.61	6.09	224.61	247.13	4.82	4.44	5.02	5.02
Richland/McKenzie County	D14	RM 27.61	44208	1.5-yr	1302.6	576.84	571.87	1.25	1.24	7.4	6.6	242.34	273.61	4.31	3.83	4.97	4.97
Richland/McKenzie County	D14	RM 27.43	43916	1.5-yr	1302.6	576.81	571.87	1.09	1.07	5.45	4.74	256.9	433.83	4.67	4.06	4.94	4.94
Richland/McKenzie County	D14	RM 27.23	43608	1.5-yr	1302.6	576.8	571.87	0.87	0.86	3.46	3.11	309.62	348.5	4.83	4.33	4.93	4.93
Richland/McKenzie County	D14	RM 27.04	43305	1.5-yr	1302.6	576.74	571.87	1.1	1.08	5.75	4.87	275.61	332.78	4.3	3.62	4.87	4.87
Richland/McKenzie County	D14	RM 26.86	43008	1.5-yr	1302.6	576.68	571.87	1.25	1.22	7.3	5.69	225.99	300.2	4.59	3.57	4.81	4.81
Richland/McKenzie County	D14	RM 26.67	42708	1.5-yr	1302.6	576.64	571.87	1.14	1.12	6.11	5.35	251.77	294.64	4.51	3.94	4.77	4.77
Richland/McKenzie County	D14	RM 26.48	42408	1.5-yr	1302.6	576.55	571.87	1.41	1.35	9.36	7.43	208.17	275.6	4.42	3.49	4.68	4.68
Richland/McKenzie County	D14	RM 26.29	42108	1.5-yr	1302.6	576.47	571.87	1.47	1.43	10.25	7.26	205.04	300.07	4.32	3.04	4.6	4.6
Richland/McKenzie County	D14	RM 26.11	41808	1.5-yr	1302.6	576.43	571.87	1.22	1.2	7.09	6.43	247.43	278.42	4.3	3.9	4.56	4.56
Richland/McKenzie County	D14	RM 25.92	41508	1.5-yr	1302.6	576.41	571.87	1	1	4.75	4.75	300.56	300.8	4.33	4.33	4.54	4.54
Richland/McKenzie County	D14	RM 25.73	41208	1.5-yr	1302.6	576.38	571.74	0.95	0.95	4.24	4.24	306.55	306.55	4.47	4.47	4.64	4.64
Richland/McKenzie County	D14	RM 25.55	40918	1.5-yr	1302.6	576.32	571.74	1.12	1.12	6.42	6.42	343.77	343.77	3.39	3.39	4.58	4.58
Richland/McKenzie County	D14	RM 25.37	40619	1.5-yr	1302.6	576.25	571.74	1.16	1.16	6.97	6.97	349.2	349.2	3.22	3.22	4.51	4.51
Richland/McKenzie County	D14	RM 25.17	40310	1.5-yr	1302.6	576.15	571.74	1.34	1.34	6.88	6.88	346.22	346.22	2.8	2.8	4.42	4.42
Richland/McKenzie County	D14	RM 24.99	40008	1.5-yr	1302.6	576.13	571.74	0.99	0.98	4.17	4.01	381.76	402.97	3.46	3.33	4.39	4.39
Richland/McKenzie County	D14	RM 24.8	39703	1.5-yr	1302.6	576.11	571.71	0.79	0.78	3.24	3.06	397.33	423.2	4.15	3.92	4.4	4.4
Richland/McKenzie County	D14	RM 24.62	39408	1.5-yr	1302.6	576.04	571.64	1.15	1.13	6.58	6.1	273.64	324.46	3.82	3.57	4.4	4.4
Richland/McKenzie County	D14	RM 24.45	39139	1.5-yr	1302.6	575.96	571.64	1.33	1.33	8.48	8.48	238.45	238.45	4.12	4.12	4.32	4.32
Richland/McKenzie County	D14	RM 24.24	38801	1.5-yr	1302.6	575.89	571.58	1.33	1.31	8.59	7.55	237.24	274.78	4.11	3.61	4.31	4.31
Richland/McKenzie County	D14	RM 24.05	38506	1.5-yr	1302.6	575.85	571.48	1.19	1.19	6.85	6.85	261.94	261.94	4.16	4.16	4.37	4.37
Richland/McKenzie County	D14	RM 23.87	38210	1.5-yr	1302.6	575.83	571.28	0.89	0.89	3.76	3.76	330.59	330.59	4.41	4.41	4.55	4.55
Richland/McKenzie County	D14	RM 23.66	37912	1.5-yr	1302.6	575.82	571.21	0.76	0.76	2.81	2.81	440.46	440.46	3.91	3.91	4.61	4.61
Richland/McKenzie County	D14	RM 23.48	37610	1.5-yr	1302.6	575.77	571.12	0.93	0.89	4.36	4.09	345.8	504.99	3.08	2.89	4.65	4.65
Richland/McKenzie County	D14	RM 23.29	37312	1.5-yr	1302.6	575.71	570.86	1.06	1.04	5.3	4.81	306.33	456.02	3.03	2.74	4.85	4.85
Richland/McKenzie County	D14	RM 23.1	37006	1.5-yr	1302.6	575.67	570.82	1.06	0.96	5.25	3.43	252.07	552.09	3.77	2.45	4.85	4.85
Richland/McKenzie County	D14	RM 22.92	36721	1.5-yr	1302.6	575.61	570.8	1.25	1.07	7.23	4.64	210.73	515.9	3.71	2.36	4.81	4.81
Richland/McKenzie County	D14	RM 22.72	36402	1.5-yr	1302.6	575.49	570.81	1.53	1.31	11.19	5.92	177.73	441.17	4.31	2.25	4.68	4.68
Richland/McKenzie County	D14	RM 22.54	36108	1.5-yr	1302.6	575.47	570.76	1.13	1.08	5.89	3.62	275.97	476.08	4.16	2.54	4.71	4.71
Richland/McKenzie County	D14	RM 22.35	35808	1.5-yr	1302.6	575.43	570.74	1.06	1.01	5.49	3.99	307.15	448.77	3.97	2.87	4.69	4.69
Richland/McKenzie County	D14	RM 22.17	35508	1.5-yr	1302.6	575.4	570.68	0.95	0.95	4.2	3.88	301.76	328.25	4.55	4.19	4.72	4.72
Richland/McKenzie County	D14	RM 22.02	35264	1.5-yr	1302.6	575.39	570.68	0.8	0.79	2.96	2.65	352.73	397.41	4.62	4.13	4.71	4.71
Richland/McKenzie County	D14	RM 21.8	34901	1.5-yr	1302.6	575.34	570.69	0.96	0.95	4.76	4.16	398.45	461.39	3.39	2.96	4.65	4.65
Richland/McKenzie County	D14	RM 21.61	34626	1.5-yr	1302.6	575.29	570.67	1	0.99	5.41	5.31	463.74	477.17	2.82	2.77	4.62	4.62
Richland/McKenzie County	D14	RM 21.34	34140	1.5-yr	1302.6	575.24	570.67	0.91	0.78	4.09	2.72	287.18	642.01	3.94	2.6	4.57	4.57
Richland/McKenzie County	D14	RM 21.25	33973	1.5-yr	1302.6	575.17	570.67	1.38	1.07	9.35	5.12	196.32	640.21	3.51	1.9	4.5	4.5
Richland/McKenzie County	D14	RM 21.06	33672	1.5-yr	1302.6	575.15	570.6	1	0.89	5.09	3.17	265.43	678.1	3.49	2.16	4.55	4.55
Richland/McKenzie County	D14	RM 20.9	33400	1.5-yr	1302.6	575.09	570.58	1.15	1.06	7.11	4.67	247.44	626.51	3	1.96	4.51	4.51
Richland/McKenzie County	D14	RM 20.71	33101	1.5-yr	1302.6	575	570.53	1.32	1.21	9.03	6.97	237.92	421.31	3.3	2.55	4.47	4.47
Richland/McKenzie County	D14	RM 20.52	32800	1.5-yr	1302.6	574.97	570.52	1.03	0.98	5.33	4.13	276.11	475.28	3.62	2.8	4.45	4.45
Richland/McKenzie County	D14	RM 20.34	32500	1.5-yr	1302.6	574.93	570.52	1.07	0.98	5.68	4.32	251.03	465.9	3.75	2.85	4.41	4.41
Richland/McKenzie County	D14	RM 20.15	32200	1.5-yr	1302.6	574.87	570.52	1.13	1.12	7.17	6.16	226.29	353.27	3.89	3.33	4.35	4.35
Richland/McKenzie County	D14	RM 19.96	31900	1.5-yr	1302.6	574.69	570.52	1.78	1.76	15.54	12.1	188.19	246.11	3.89	3.02	4.17	4.17
Richland/McKenzie County	D14	RM 19.77	31600	1.5-yr	1302.6	574.69	570.5	1.07	1.07	5.5	5.49	327.39	328.12	3.73	3.72	4.19	4.19
Richland/McKenzie County	D14	RM 19.59	31297	1.5-yr	1302.6	574.64	570.45	1.08	1.04	5.49	4.89	328.05	410.45	3.42	3.05	4.19	4.19
Richland/McKenzie County	D14	RM 19.4	30995	1.5-yr	1302.6	574.55	570.45	1.29	1.22	8.73	5.98	282.1	498.41	3.14	2.15	4.1	4.1
Richland/McKenzie County	D14	RM 19.21	30710	1.5-yr	1302.6	574.54	570.38	0.85	0.78	3.62	2.42	377.36	666.48	3.76	2.5	4.16	4.16
Richland/McKenzie County	D14	RM 19.03	30402	1.5-yr	1302.6	574.5	570.38	0.91	0.86	3.96	3.18	424.3	613.74	3.1	2.48	4.12	4.12
Richland/McKenzie County	D14	RM 18.83	30086	1.5-yr	1302.6	574.43	570.38	1.06	1.01	5.22	4.47	438.39	611.11	2.55	2.18	4.05	4.05
Richland/McKenzie County	D14	RM 18.66	29802	1.5-yr	1302.6	574.35	570.38	1.15	1.08	7.12	5.3	388.5	658.97	2.53	1.87	3.97	3.97
Richland/McKenzie County	D14	RM 18.47	29499	1.5-yr	1302.6	574.2	570.36	1.51	1.44	12.88	9.62	292.12	474.88	2.57	1.91	3.84	3.84
Richland/McKenzie County	D14	RM 18.28	29197	1.5-yr	1302.6	574.1	570.36	1.37	1.36	9.13	8.81	290.47	301.49	3.28	3.17	3.74	3.74

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D14	RM 17.89	28624	1.5-yr	1302.6	574.07	570.33	0.77	0.77	2.96	2.96	462.02	462.02	3.66	3.66	3.74	3.74
Richland/McKenzie County	D14	RM 17.56	27975	1.5-yr	1302.6	573.94	570.29	1.18	1.16	7.14	6.8	350.28	375.4	3.14	2.99	3.65	3.65
Richland/McKenzie County	D14	RM 17.36	27539	1.5-yr	1302.6	573.72	570.31	1.64	1.64	14.1	14.1	252.18	252.18	3.16	3.16	3.41	3.41
Richland/McKenzie County	D14	RM 17.1	27113	1.5-yr	1302.6	573.58	570.28	1.42	1.42	10.62	10.62	292.18	292.18	3.14	3.14	3.3	3.3
Richland/McKenzie County	D14	RM 16.74	26537	1.5-yr	1302.6	573.46	570.14	1.07	1.07	5.93	5.93	399.81	399.81	3.04	3.04	3.32	3.32
Richland/McKenzie County	D14	RM 16.35	25925	1.5-yr	1302.6	573.37	569.46	1	0.99	4.98	4.66	341.11	375.74	3.76	3.51	3.91	3.91
Richland/McKenzie County	D14	RM 16.17	25629	1.5-yr	1302.6	573.33	569.2	0.94	0.93	4.51	3.97	375.96	433.97	3.67	3.23	4.13	4.13
Richland/McKenzie County	D14	RM 15.95	25324	1.5-yr	1302.6	573.32	568.99	0.69	0.68	2.28	1.83	455.34	575.32	4.15	3.33	4.33	4.33
Richland/McKenzie County	D14	RM 15.75	25032	1.5-yr	1302.6	573.29	568.85	0.79	0.78	3.13	2.83	460.08	513.11	3.59	3.24	4.44	4.44
Richland/McKenzie County	D14	RM 15.56	24777	1.5-yr	1302.6	573.21	568.85	1.2	1.2	6.9	6.9	287.74	287.74	3.79	3.79	4.36	4.36
Richland/McKenzie County	D14	RM 15.34	24438	1.5-yr	1302.6	573.15	568.79	1.2	1.2	6.95	6.95	257.2	257.2	4.2	4.2	4.36	4.36
Richland/McKenzie County	D14	RM 15.16	24144	1.5-yr	1302.6	573.1	568.75	1.18	1.18	6.69	6.69	261.44	261.44	4.22	4.22	4.35	4.35
Richland/McKenzie County	D14	RM 14.98	23841	1.5-yr	1302.6	573.04	568.76	1.27	1.27	8.49	8.49	250.6	250.6	4.1	4.1	4.28	4.28
Richland/McKenzie County	D14	RM 14.79	23543	1.5-yr	1302.6	572.96	568.72	1.31	1.31	7.77	7.77	270.58	270.58	3.67	3.67	4.24	4.24
Richland/McKenzie County	D14	RM 14.61	23241	1.5-yr	1302.6	572.91	568.7	1.2	1.2	7.05	7.05	268.91	268.91	4.02	4.02	4.21	4.21
Richland/McKenzie County	D14	RM 14.42	22940	1.5-yr	1302.6	572.89	568.69	0.99	0.99	4.77	4.77	323.86	323.86	4.05	4.05	4.2	4.2
Richland/McKenzie County	D14	RM 14.23	22647	1.5-yr	1302.6	572.87	568.67	0.76	0.76	2.87	2.87	442.94	442.94	3.85	3.85	4.2	4.2
Richland/McKenzie County	D14	RM 14.05	22341	1.5-yr	1302.6	572.85	568.68	0.71	0.71	2.84	2.72	541.54	569.65	3.39	3.24	4.17	4.17
Richland/McKenzie County	D14	RM 13.88	22040	1.5-yr	1302.6	572.8	568.67	0.94	0.94	3.92	3.91	555.68	556.99	2.5	2.5	4.13	4.13
Richland/McKenzie County	D14	RM 13.7	21728	1.5-yr	1302.6	572.73	568.65	1.07	1.07	5.11	5.11	371.87	371.87	3.27	3.27	4.08	4.08
Richland/McKenzie County	D14	RM 13.51	21429	1.5-yr	1302.6	572.69	568.63	0.97	0.97	4.47	4.47	387.2	387.2	3.48	3.48	4.06	4.06
Richland/McKenzie County	D15	RM 13.31	21145	1.5-yr	1302.6	572.67	568.51	0.86	0.86	3.6	3.6	447.52	447.52	3.37	3.37	4.16	4.16
Richland/McKenzie County	D15	RM 13.12	20858	1.5-yr	1302.6	572.62	568.39	0.96	0.96	4.5	4.5	339.01	339.01	3.99	3.99	4.23	4.23
Richland/McKenzie County	D15	RM 12.9	20507	1.5-yr	1302.6	572.56	568.39	1.11	1.11	6	6	295.24	295.24	3.98	3.98	4.17	4.17
Richland/McKenzie County	D15	RM 12.73	20241	1.5-yr	1302.6	572.52	568.35	1.1	1.1	5.88	5.88	292.33	292.33	4.05	4.05	4.17	4.17
Richland/McKenzie County	D15	RM 12.56	19961	1.5-yr	1302.6	572.49	568.34	0.97	0.97	4.53	4.53	333.88	333.88	4.04	4.04	4.15	4.15
Richland/McKenzie County	D15	RM 12.38	19686	1.5-yr	1302.6	572.48	568.23	0.8	0.8	3.11	3.11	420.72	427.69	3.89	3.89	4.25	4.25
Richland/McKenzie County	D15	RM 12.21	19384	1.5-yr	1302.6	572.43	568.17	0.96	0.96	3.85	3.85	443.94	532.05	3.07	3.07	4.26	4.26
Richland/McKenzie County	D15	RM 11.99	19084	1.5-yr	1302.6	572.39	568.16	0.96	0.96	3.89	3.89	464.65	464.65	2.93	2.93	4.23	4.23
Richland/McKenzie County	D15	RM 11.53	18484	1.5-yr	1302.6	572.29	568.11	1.03	1.03	5.07	4.8	376.48	399.05	3.36	3.18	4.18	4.18
Richland/McKenzie County	D15	RM 11.34	18216	1.5-yr	1302.6	572.26	568.06	0.97	0.96	5.26	4.83	347.02	381.42	3.88	3.56	4.2	4.2
Richland/McKenzie County	D15	RM 11.17	17885	1.5-yr	1302.6	572.17	567.88	1.14	1.14	8.7	8.7	371.95	371.95	3.07	3.07	4.29	4.29
Richland/McKenzie County	D15	RM 10.97	17584	1.5-yr	1302.6	572.12	567.8	0.99	0.99	4.88	4.88	423.94	423.94	3.09	3.09	4.32	4.32
Richland/McKenzie County	D15	RM 10.75	17284	1.5-yr	1302.6	572.09	567.79	0.82	0.82	2.98	2.98	491.51	491.51	3.23	3.23	4.3	4.3
Richland/McKenzie County	D15	RM 10.53	16964	1.5-yr	1302.6	572.04	567.73	0.99	0.99	4.55	4.46	413.69	422.95	3.19	3.12	4.31	4.31
Richland/McKenzie County	D15	RM 10.35	16670	1.5-yr	1302.6	571.98	567.73	1.09	1.08	5.71	5.35	438.95	470.8	2.72	2.55	4.25	4.25
Richland/McKenzie County	D15	RM 10.15	16384	1.5-yr	1302.6	571.93	567.73	1.06	0.92	5.45	3.45	250.55	575.08	3.92	2.47	4.2	4.2
Richland/McKenzie County	D15	RM 9.94	16084	1.5-yr	1302.6	571.9	567.73	0.92	0.78	4.23	2.81	271.24	675.78	3.71	2.46	4.17	4.17
Richland/McKenzie County	D15	RM 9.76	15797	1.5-yr	1302.6	571.85	567.65	0.96	0.91	4.22	3	346.91	617.63	3.37	2.4	4.2	4.2
Richland/McKenzie County	D15	RM 9.57	15487	1.5-yr	1302.6	571.8	567.58	1.07	0.98	5.57	3.86	243.98	506.33	4.04	2.8	4.22	4.22
Richland/McKenzie County	D15	RM 9.37	15187	1.5-yr	1302.6	571.74	567.58	1.21	1.09	7.12	4.42	201.59	480.42	4.01	2.48	4.16	4.16
Richland/McKenzie County	D15	RM 9.24	14963	1.5-yr	1302.6	571.67	564.5	1.28	1.28	7.84	7.79	234.33	235.6	4.33	4.31	7.17	7.17
Richland/McKenzie County	D15	RR/Walkway	14952	1.5-yr	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	1.5-yr	1302.6	571.65	564.5	1.29	1.29	7.91	7.86	234.33	235.75	4.32	4.29	7.15	7.15
Richland/McKenzie County	D15	RM 9.1	14741	1.5-yr	1302.6	571.55	567.39	1.55	1.55	11.91	11.91	228.44	234.85	3.68	3.68	4.16	4.16
Richland/McKenzie County	D15	RM 9.03	14639	1.5-yr	1302.6	571.54	565.46	1.36	1.35	8.99	8.74	247.41	255.31	3.88	3.77	6.08	6.08
Richland/McKenzie County	D15	Highway 68	14629	1.5-yr	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	1.5-yr	1302.6	571.52	565.46	1.36	1.36	9.08	8.83	247.35	255.03	3.87	3.76	6.06	6.06
Richland/McKenzie County	D15	RM 8.82	14300	1.5-yr	1302.6	571.49	567.41	0.95	0.95	4.49	4.49	377.53	377.53	3.64	3.64	4.08	4.08
Richland/McKenzie County	D15	RM 8.61	13963	1.5-yr	1302.6	571.42	567.39	1.1	1.07	5.99	5.54	305.51	361.87	3.63	3.36	4.03	4.03
Richland/McKenzie County	D15	RM 8.44	13687	1.5-yr	1302.6	571.36	567.32	1.24	1.18	7.54	5.42	254	400.55	3.86	2.77	4.04	4.04
Richland/McKenzie County	D15	RM 8.24	13387	1.5-yr	1302.6	571.28	567.32	1.36	1.2	9.16	4.73	228.48	554.37	3.82	1.96	3.96	3.96
Richland/McKenzie County	D15	RM 8.05	13080	1.5-yr	1302.6	571.23	567.05	1.18	1.13	6.8	5.38	263.22	365.94	3.97	3.14	4.18	4.18
Richland/McKenzie County	D15	RM 7.87	12786	1.5-yr	1302.6	571.14	567.05	1.36	1.3	9.11	6.36	228.65	396.22	3.87	2.69	4.09	4.09
Richland/McKenzie County	D15	RM 7.69	12506	1.5-yr	1302.6	571.1	567.05	1.2	1.14	7.03	5.36	264.02	388.2	3.86	2.94	4.05	4.05
Richland/McKenzie County	D15	RM 7.48	12179	1.5-yr	1302.6	571.07	566.95	0.91	0.91	4	4	359.15	359.15	4	4	4.12	4.12
Richland/McKenzie County	D16	RM 7.3	11891	1.5-yr	1302.6	571.03	566.76	1.02	1.02	5.12	5.12	322.92	322.92	3.94	3.94	4.27	4.27
Richland/McKenzie County	D16	RM 7.14	11639	1.5-yr	1302.6	570.97	566.76	1.16	1.12	6.85	6.1	322.03	382.28	3.41	3.03	4.21	4.21
Richland/McKenzie County	D16	RM 6.94	11319	1.5-yr	1302.6	570.92	566.76	1.07	1.04	5.59	4.72	295.07	371.93	4	3.37	4.16	4.16
Richland/McKenzie County	D16	RM 6.77	11043	1.5-yr	1302.6	570.89	566.76	0.98	0.94	4.8	3.59	348.86	510.61	3.66	2.73	4.13	4.13
Richland/McKenzie County	D16	RM 6.58	10733	1.5-yr	1302.6	570.85	566.59	0.95	0.9	4.45	3.17	341.28	522.75	3.9	2.77	4.26	4.26
Richland/McKenzie County	D16	RM 6.38	10417	1.5-yr	1302.6	570.68	566.59	1.72	1.57	14.55	10.08	180.98	309.07	3.9	2.68	4.09	4.09

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Richland/McKenzie County	D16	RM 6.21	10138	1.5-yr	1302.6	570.62	566.44	1.46	1.34	10.4	5.72	215.12	451.09	3.95	2.16	4.18	4.18
Richland/McKenzie County	D16	RM 6.01	9825	1.5-yr	1302.6	570.62	566.17	0.86	0.85	3.74	2.45	411.86	638.57	3.66	2.39	4.45	4.45
Richland/McKenzie County	D16	RM 5.83	9551	1.5-yr	1302.6	570.6	565.96	0.69	0.67	2.29	1.46	479.73	780.76	3.95	2.5	4.64	4.64
Richland/McKenzie County	D16	RM 5.67	9297	1.5-yr	1302.6	570.58	565.96	0.82	0.79	3.35	1.91	340.26	760.37	3.86	2.18	4.62	4.62
Richland/McKenzie County	D16	RM 5.43	8926	1.5-yr	1302.6	570.51	565.96	1.09	1.07	6.24	4.3	268.2	553.86	3.25	2.23	4.55	4.55
Richland/McKenzie County	D16	RM 5.25	8623	1.5-yr	1302.6	570.37	565.96	1.51	1.42	10.94	7.13	206.77	340.77	4.14	2.68	4.41	4.41
Richland/McKenzie County	D16	RM 5.06	8331	1.5-yr	1302.6	570.35	565.82	1.09	1	5.72	3.65	289.25	499.07	4.09	2.6	4.53	4.53
Richland/McKenzie County	D16	RM 4.87	8029	1.5-yr	1302.6	570.33	565.67	0.95	0.88	4.48	3.46	332.43	503.21	3.82	2.94	4.66	4.66
Richland/McKenzie County	D16	RM 4.71	7757	1.5-yr	1302.6	570.28	565.54	1.06	0.95	5.3	3.19	247.87	514.45	4.44	2.66	4.74	4.74
Richland/McKenzie County	D16	RM 4.53	7456	1.5-yr	1302.6	570.2	565.54	1.38	1.22	8.92	4.75	197.49	454.42	4.45	2.34	4.66	4.66
Richland/McKenzie County	D16	RM 4.34	7156	1.5-yr	1302.6	570.14	565.54	1.3	1.15	8.74	4.93	213.27	464.69	4.35	2.43	4.6	4.6
Richland/McKenzie County	D16	RM 4.17	6884	1.5-yr	1302.6	570.09	565.54	1.25	1.15	7.39	5.18	222.71	372.36	4.36	3.04	4.55	4.55
Richland/McKenzie County	D16	RM 3.96	6550	1.5-yr	1302.6	570.07	565.54	0.98	0.9	4.57	3.27	216.6	477.11	4.25	3.04	4.53	4.53
Richland/McKenzie County	D16	RM 3.78	6249	1.5-yr	1302.6	570	565.54	1.17	1.08	6.89	4.25	195.66	530.14	3.69	2.27	4.46	4.46
Richland/McKenzie County	D16	RM 3.55	5904	1.5-yr	1302.6	569.96	565.54	1.05	0.95	5.26	3.06	206.04	559.29	4.23	2.45	4.42	4.42
Richland/McKenzie County	D16	RM 3.38	5657	1.5-yr	1302.6	569.9	565.53	1.27	1.18	7.77	5.11	171.27	411.02	4.12	2.69	4.37	4.37
Richland/McKenzie County	D16	RM 3.2	5363	1.5-yr	1302.6	569.83	565.54	1.33	1.34	9.03	7.24	165.99	350.75	3.46	2.77	4.29	4.29
Richland/McKenzie County	D16	RM 3.01	5062	1.5-yr	1302.6	569.79	565.54	1.16	1.13	6.76	5.3	310	410.66	3.62	2.82	4.25	4.25
Richland/McKenzie County	D16	RM 2.82	4763	1.5-yr	1302.6	569.72	565.46	1.11	1.11	6.77	6.62	418.81	428.45	2.8	2.74	4.26	4.26

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A1	RM 478.19	225868	5% Duration	436.65	1280.8	1278.12	1.79	1.71	18.5	14.43	97.35	133.98	2.46	1.91	2.68	2.68
Sweet Grass County	A1	RM 478.10	225378	5% Duration	436.65	1280.49	1277.66	2.43	2.29	35.74	25.26	85.57	131.94	2.05	1.45	2.83	2.83
Sweet Grass County	A1	RM 478.00	224862	5% Duration	436.65	1280.06	1277.97	2.54	2.42	46.58	38.83	135.37	178.69	1.21	1.01	2.09	2.09
Sweet Grass County	A1	RM 477.91	224362	5% Duration	436.65	1279.46	1277.65	2.86	2.48	49.4	35.16	81.68	160.27	1.54	1.1	1.8	1.8
Sweet Grass County	A1	RM 477.81	223862	5% Duration	436.65	1278.97	1276.96	2.83	2.46	44.42	28.55	86.06	170.97	1.62	1.04	2.01	2.01
Sweet Grass County	A1	RM 477.72	223354	5% Duration	436.65	1278.5	1276.32	2.72	2.61	48.92	42.42	90.44	122.07	1.58	1.37	2.18	2.18
Sweet Grass County	A1	RM 477.63	222892	5% Duration	436.65	1278.51	1275.76	1.29	1.23	10.8	9.42	171.18	238.86	1.73	1.5	2.74	2.74
Sweet Grass County	A1	RM 477.49	222220	5% Duration	436.65	1278.25	1276.07	1.67	1.58	14.69	14.14	202.42	296.74	1.01	0.97	2.19	2.19
Sweet Grass County	A1	RM 477.40	221702	5% Duration	436.65	1278.18	1275.47	1.04	0.94	7.42	5.81	242.4	462.74	1.46	1.14	2.71	2.71
Sweet Grass County	A1	RM 477.31	221259	5% Duration	436.65	1277.87	1275.74	2.13	1.93	29.54	23.21	119.29	207.05	1.66	1.31	2.13	2.13
Sweet Grass County	A1	RM 477.21	220767	5% Duration	436.65	1277.72	1275.28	1.76	1.6	19.16	14.33	125.54	219.72	1.93	1.45	2.44	2.44
Sweet Grass County	A1	RM 477.11	220252	5% Duration	436.65	1277.39	1274.86	2.23	2	33.71	26.74	127.34	211.33	1.48	1.17	2.53	2.53
Sweet Grass County	A1	RM 477.04	219860	5% Duration	436.65	1277.08	1275.13	2.31	2.01	36.69	28.14	129.05	219.89	1.4	1.07	1.95	1.95
Sweet Grass County	A1	RM 476.95	219422	5% Duration	436.65	1276.65	1274.55	2.5	2.23	42.38	30.73	116.94	199.79	1.45	1.06	2.09	2.09
Sweet Grass County	A1	RM 476.84	218828	5% Duration	436.65	1276.25	1273.95	2.12	1.89	31.13	24.73	129.74	229.9	1.37	1.09	2.3	2.3
Sweet Grass County	A1	RM 476.75	218345	5% Duration	436.65	1275.96	1273.54	2.01	1.93	21.7	19.66	168.82	212.78	1.28	1.16	2.43	2.43
Sweet Grass County	A1	RM 476.66	217855	5% Duration	436.65	1275.58	1273.45	2.32	2.22	30.44	25.7	150.59	233.4	1.24	1.05	2.12	2.12
Sweet Grass County	A1	RM 476.57	217396	5% Duration	436.65	1275.25	1273.09	2.42	2.02	36.64	24.55	90.56	244.52	1.87	1.25	2.16	2.16
Sweet Grass County	A1	RM 476.47	216861	5% Duration	436.65	1274.77	1273.04	2.61	2.33	47.57	37.47	117.11	200.23	1.33	1.05	1.73	1.73
Sweet Grass County	A1	RM 476.38	216362	5% Duration	436.65	1274.51	1272.1	2.15	1.8	28.64	17.68	94.32	233.24	1.92	1.18	2.41	2.41
Sweet Grass County	A1	RM 476.28	215816	5% Duration	436.65	1274.07	1271.85	2.56	2.36	42.72	32.29	97.25	162.86	1.64	1.24	2.22	2.22
Sweet Grass County	A1	RM 476.15	215126	5% Duration	436.65	1273.36	1271.76	2.62	2.44	50.44	44.26	122.91	185.79	1.15	1.01	1.6	1.6
Sweet Grass County	A1	RM 476.01	214437	5% Duration	436.65	1272.94	1270.96	1.93	1.81	24.84	21.53	132.11	210.94	1.54	1.33	1.98	1.98
Sweet Grass County	A1	RM 475.91	213787	5% Duration	436.65	1272.57	1270.35	1.96	1.93	26.03	23.85	147.12	164.41	1.5	1.38	2.22	2.22
Sweet Grass County	A1	RM 475.76	213072	5% Duration	436.65	1271.99	1270.22	2.37	2.3	38.76	35.24	131.8	171.78	1.39	1.26	1.77	1.77
Sweet Grass County	A1	RM 475.63	212347	5% Duration	436.65	1271.56	1269.34	1.89	1.85	25.02	23.12	169.45	189.07	1.35	1.25	2.21	2.21
Sweet Grass County	A1	RM 475.47	211539	5% Duration	436.65	1271.07	1268.97	2.09	2.02	28.46	26.81	123.9	137.68	1.66	1.57	2.09	2.09
Sweet Grass County	A1	RM 475.35	210875	5% Duration	436.65	1270.28	1268.88	2.94	2.94	60.67	60.67	111.27	111.27	1.33	1.33	1.4	1.4
Sweet Grass County	A1	RM 475.24	210333	5% Duration	436.65	1270.3	1267.53	1.54	1.54	13.56	13.31	112.16	114.35	2.52	2.47	2.77	2.77
Sweet Grass County	A2	RM 475.12	209673	5% Duration	436.65	1269.52	1267.9	3.38	3.24	82.39	75.34	104.08	119.96	1.23	1.12	1.62	1.62
Sweet Grass County	A2	RM 475.00	209034	5% Duration	436.65	1268.97	1266.93	2.26	2.26	34.41	34.41	129.69	129.69	1.49	1.49	2.04	2.04
Sweet Grass County	A2	RM 474.87	208359	5% Duration	436.65	1268.77	1266.75	1.74	1.51	18.66	14.29	78.03	193.94	1.97	1.49	2.02	2.02
Sweet Grass County	A2	RM 474.76	207797	5% Duration	436.65	1268.41	1266.42	2.31	2.03	33.44	23.29	74.06	163.77	1.91	1.32	2	2
Sweet Grass County	A2	RM 474.67	207305	5% Duration	436.65	1267.75	1266.29	3.25	2.67	72.91	46.98	65.84	180.65	1.42	0.91	1.46	1.46
Sweet Grass County	A2	RM 474.54	206635	5% Duration	436.65	1267.45	1264.92	1.88	1.78	22.37	17.02	121.57	176.91	1.82	1.38	2.53	2.53
Sweet Grass County	A2	RM 474.43	205945	5% Duration	436.65	1266.99	1265.16	2.49	2.15	39.83	25.9	83.79	179.06	1.76	1.14	1.82	1.82
Sweet Grass County	A2	RM 474.30	205321	5% Duration	436.65	1266.68	1264.46	1.99	1.96	25.52	22.33	127.67	148.48	1.71	1.5	2.22	2.22
Sweet Grass County	A2	RM 474.21	204877	5% Duration	436.65	1266.35	1264.22	2.38	2.36	35.86	33.96	100.41	107.29	1.82	1.73	2.13	2.13
Sweet Grass County	A2	RM 474.12	204378	5% Duration	436.65	1266.26	1263.24	1.81	1.72	18.69	13.08	95.76	145.99	2.5	1.74	3.01	3.01
Sweet Grass County	A2	RM 474.01	203787	5% Duration	436.65	1265.97	1263.55	2.14	2.01	31.15	24.89	135.69	184.03	1.48	1.18	2.42	2.42
Sweet Grass County	A2	RM 473.87	203072	5% Duration	436.65	1265.41	1263.52	2.48	2.16	38.51	24.28	96.32	195.96	1.64	1.03	1.89	1.89
Sweet Grass County	A2	RM 473.74	202395	5% Duration	436.65	1265.14	1263.06	1.9	1.79	22.79	19.87	111.95	155.74	1.79	1.57	2.08	2.08
Sweet Grass County	A2	RM 473.62	201781	5% Duration	436.65	1264.74	1262.63	2.19	2.14	32.71	31.29	137.73	147.48	1.44	1.38	2.11	2.11
Sweet Grass County	A2	RM 473.50	201110	5% Duration	436.65	1263.93	1261.83	2.58	2.58	51.98	51.98	174.09	174.09	0.97	0.97	2.1	2.1
Sweet Grass County	A2	RM 473.36	200362	5% Duration	436.65	1263.61	1261.08	1.79	1.79	19.69	18.71	122.68	129.6	1.99	1.89	2.53	2.53
Sweet Grass County	A2	RM 473.27	199862	5% Duration	436.65	1263.28	1260.81	2.32	2.32	34.25	34.25	105.04	105.04	1.79	1.79	2.47	2.47
Sweet Grass County	A2	RM 473.17	199362	5% Duration	436.65	1263.15	1260.56	1.86	1.86	20.1	20.1	98.73	98.73	2.37	2.37	2.59	2.59
Sweet Grass County	A2	RM 473.08	198879	5% Duration	436.65	1262.89	1260.56	2.27	2.27	31.57	31.57	97.31	97.31	1.98	1.98	2.33	2.33
Sweet Grass County	A2	RM 472.98	198340	5% Duration	436.65	1262.73	1260.21	1.89	1.88	21.66	20.68	114.6	120.51	2.02	1.93	2.52	2.52
Sweet Grass County	A2	RM 472.89	197862	5% Duration	436.65	1262.32	1260.5	2.59	2.38	43.53	28.73	98.44	166.14	1.68	1.1	1.82	1.82
Sweet Grass County	A2	RM 472.79	197362	5% Duration	436.65	1261.98	1259.98	2.27	2.15	34.89	27.22	130.5	179.49	1.45	1.13	2	2
Sweet Grass County	A2	RM 472.70	196862	5% Duration	436.65	1261.57	1259.35	2.43	2.22	38.8	31.71	109.32	149.25	1.61	1.32	2.22	2.22
Sweet Grass County	A2	RM 472.60	196360	5% Duration	436.65	1261.29	1259.01	2.01	1.84	28.17	23.72	151.12	209.47	1.34	1.13	2.27	2.27
Sweet Grass County	A2	RM 472.50	195816	5% Duration	436.65	1260.93	1258.53	2.09	1.96	29.06	24.57	129.6	167.91	1.57	1.33	2.4	2.4
Sweet Grass County	A2	RM 472.41	195349	5% Duration	436.65	1260.51	1258.52	2.34	2.2	39.98	36.13	151.91	183.97	1.19	1.08	1.99	1.99
Sweet Grass County	A2	RM 472.31	194860	5% Duration	436.65	1260.19	1258.34	2.01	1.9	27.1	22.61	143.76	183.97	1.5	1.25	1.85	1.85
Sweet Grass County	A2	RM 472.22	194356	5% Duration	436.65	1259.97	1257.3	2.01	1.95	20.57	17.2	112.4	140.44	1.92	1.6	2.67	2.67
Sweet Grass County	A2	RM 472.09	193660	5% Duration	436.65	1259.22	1257.45	3.19	3.16	65.54	55.42	78.03	93.87	1.75	1.47	1.77	1.77
Sweet Grass County	A2	RM 471.95	192935	5% Duration	436.65	1259.16	1256.05	1.75	1.62	17.53	13.14	99.5	146.65	2.47	1.84	3.11	3.11
Sweet Grass County	A2	RM 471.86	192442	5% Duration	436.65	1258.85	1256.23	2.46	2.12	34.95	21.5	68.94	138.37	2.44	1.49	2.62	2.62
Sweet Grass County	A2	RM 471.75	191870	5% Duration	436.65	1258.68	1256.47	1.91	1.8	22.96	17.37	124.7	176.1	1.82	1.38	2.22	2.22

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A2	RM 471.65	191367	5% Duration	436.65	1258.19	1256.54	2.63	2.56	47.54	43.05	117.75	133.86	1.4	1.27	1.66	1.66
Sweet Grass County	A2	RM 471.52	190686	5% Duration	436.65	1257.98	1255.75	1.74	1.52	18.93	13.01	126.75	223.71	1.87	1.28	2.23	2.23
Sweet Grass County	A2	RM 471.38	189910	5% Duration	436.65	1257.37	1255.44	2.55	2.42	47.09	39.79	122.79	179.43	1.19	1.01	1.93	1.93
Sweet Grass County	A2	RM 471.28	189362	5% Duration	436.65	1256.72	1254.65	2.4	2.22	42.95	33.58	146.48	230.05	1.09	0.86	2.07	2.07
Sweet Grass County	A2	RM 471.18	188875	5% Duration	436.65	1256.37	1254.2	2.15	1.82	25.7	18.05	120.66	255.6	1.34	0.94	2.17	2.17
Sweet Grass County	A2	RM 471.06	188150	5% Duration	436.65	1255.94	1253.95	2.01	1.72	28.68	19.55	118.15	290.68	1.28	0.87	1.99	1.99
Sweet Grass County	A2	RM 470.94	187526	5% Duration	436.65	1255.57	1253.58	2.04	1.75	25.64	16.78	102.69	248.53	1.54	1.01	1.99	1.99
Sweet Grass County	A2	RM 470.84	186938	5% Duration	436.65	1255.2	1252.88	2.09	1.79	30.76	19.39	138.01	300.84	1.3	0.82	2.32	2.32
Sweet Grass County	A2	RM 470.73	186362	5% Duration	436.65	1254.83	1253.49	1.49	1.76	18.52	20.77	173.36	281.41	0.79	0.88	1.77	1.77
Sweet Grass County	A2	RM 470.65	185977	5% Duration	436.65	1254.62	1252.18	1.71	1.69	20.7	19.8	193.54	216.86	1.31	1.26	2.44	2.44
Sweet Grass County	A2	RM 470.56	185491	5% Duration	436.65	1254.26	1252.52	2	2	29.48	29.48	187.16	205.82	1.16	1.16	1.74	1.74
Sweet Grass County	A2	RM 470.44	184875	5% Duration	436.65	1254.13	1251.39	1.37	1.36	11.39	10.31	156.36	173.37	2.04	1.85	2.74	2.74
Sweet Grass County	A2	RM 470.35	184363	5% Duration	436.65	1253.69	1251.52	2.57	2.57	44.17	44.12	110.09	110.22	1.54	1.54	2.17	2.17
Sweet Grass County	A2	RM 470.23	183828	5% Duration	436.65	1253.33	1251.51	2.04	1.97	30.28	28.76	176.25	195.27	1.19	1.14	1.82	1.82
Sweet Grass County	A2	RM 470.13	183304	5% Duration	436.65	1252.94	1249.86	1.98	1.91	28.33	26.24	161.39	202.81	1.22	1.13	3.09	3.09
Sweet Grass County	A2	RM 470.05	182914	5% Duration	436.65	1252.64	1250.59	2.02	1.91	29.58	25.63	162.76	221.4	1.19	1.03	2.05	2.05
Sweet Grass County	A2	RM 469.93	182267	5% Duration	436.65	1251.94	1249.62	2.61	2.52	45.28	40.59	101.54	122.35	1.58	1.41	2.33	2.33
Sweet Grass County	A2	RM 469.85	181860	5% Duration	436.65	1251.52	1249.59	2.79	2.7	50.07	41.55	89.41	114.06	1.71	1.42	1.93	1.93
Sweet Grass County	A2	RM 469.75	181348	5% Duration	436.65	1251.4	1248.77	1.82	1.73	20.79	18.29	114.39	152.82	1.88	1.65	2.64	2.64
Sweet Grass County	A2	RM 469.68	180952	5% Duration	436.65	1251.05	1249.31	2.39	2.39	39.13	39.13	128.9	128.9	1.42	1.42	1.74	1.74
Sweet Grass County	A2	RM 469.58	180427	5% Duration	436.65	1251.04	1247.94	1.4	1.36	11	7.79	116.57	171.3	2.66	1.88	3.1	3.1
Sweet Grass County	A2	RM 469.47	179860	5% Duration	436.65	1250.84	1247.85	1.92	1.77	18.81	15.51	87.55	122.34	2.53	2.07	2.98	2.98
Sweet Grass County			179808	5% Duration	Bridge												
Sweet Grass County	A2	RM 469.44	179726	5% Duration	436.65	1250.81	1247.84	1.71	1.71	17.07	17.07	109.73	166.25	2.32	2.32	2.97	2.97
Sweet Grass County	A2	RM 469.39	179400	5% Duration	436.65	1250.49	1248.45	2.45	2.45	38.64	38.64	105.18	144.59	1.7	1.7	2.04	2.04
Sweet Grass County	A2	RM 469.30	178975	5% Duration	436.65	1250.46	1247.55	1.67	1.63	15.71	11.07	101.07	168.34	2.59	1.81	2.92	2.92
Sweet Grass County	A2	RM 469.21	178467	5% Duration	436.65	1249.97	1248.31	2.86	2.78	54.56	46.27	98.66	120.5	1.54	1.3	1.66	1.66
Sweet Grass County	A2	RM 469.09	177862	5% Duration	436.65	1249.85	1247.12	1.64	1.44	17.2	9.48	110.42	332.45	1.78	0.98	2.73	2.73
Sweet Grass County	A2	RM 469.00	177350	5% Duration	436.65	1249.13	1247.58	3.31	2.94	77.24	59.66	82.3	153.68	1.31	1.01	1.55	1.55
Sweet Grass County	A2	RM 468.90	176865	5% Duration	436.65	1248.76	1246.48	1.86	1.69	17.44	14.64	150.58	228.92	1.35	1.13	2.28	2.28
Sweet Grass County	A2	RM 468.80	176341	5% Duration	436.65	1248.57	1246.11	1.73	1.59	19.81	16.01	133.37	218.95	1.59	1.28	2.45	2.45
Sweet Grass County	A2	RM 468.71	175823	5% Duration	436.65	1248.02	1246.41	2.61	2.38	53.72	45.49	138.51	240.1	0.94	0.8	1.61	1.61
Sweet Grass County	A2	RM 468.57	175192	5% Duration	436.65	1247.78	1245.17	1.46	1.41	14.38	13.32	160	233.35	1.52	1.41	2.61	2.61
Sweet Grass County	A2	RM 468.42	174099	5% Duration	436.65	1247.01	1244.97	2.44	2.38	42.68	36.96	142.91	182.8	1.25	1.08	2.05	2.05
Sweet Grass County	A3	RM 468.25	173324	5% Duration	436.65	1246.96	1242.97	1.32	1.25	9.74	7.75	125.58	258.32	2.61	2.07	3.98	3.98
Sweet Grass County	A3	RM 468.16	172855	5% Duration	436.65	1246.82	1243.58	1.71	1.54	17.76	11.52	116.95	332.7	2.07	1.34	3.23	3.23
Sweet Grass County	A3	RM 468.07	172364	5% Duration	436.65	1246.74	1243.89	1.44	1.28	12.54	6.94	132.94	404.72	2.06	1.14	2.85	2.85
Sweet Grass County	A3	RM 467.97	171839	5% Duration	436.65	1246.06	1244.32	3.33	2.97	75.39	49.41	80.26	180.54	1.48	0.96	1.74	1.74
Sweet Grass County	A3	RM 467.87	171312	5% Duration	436.65	1245.8	1243.46	1.7	1.64	19.1	17.77	154.99	193.66	1.56	1.45	2.34	2.34
Sweet Grass County	A3	RM 467.78	170840	5% Duration	436.65	1245.39	1243.74	2.42	2.23	41.27	34.57	98.9	177.68	1.32	1.1	1.65	1.65
Sweet Grass County	A3	RM 467.69	170376	5% Duration	436.65	1245.06	1242.96	2.15	1.91	31.33	23.51	111.91	204.02	1.5	1.12	2.1	2.1
Sweet Grass County	A3	RM 467.55	169614	5% Duration	436.65	1244.47	1242.1	2.32	2.05	36.7	28.6	94.86	191.29	1.44	1.11	2.36	2.36
Sweet Grass County	A3	RM 467.41	168870	5% Duration	436.65	1244.33	1241.15	1.43	1.33	12.12	8.49	127.03	210.59	2.23	1.56	3.18	3.18
Sweet Grass County	A3	RM 467.30	168362	5% Duration	436.65	1243.6	1242.15	3.43	3.25	81.83	68.37	87.67	117.94	1.37	1.14	1.45	1.45
Sweet Grass County	A3	RM 467.16	167641	5% Duration	436.65	1243.37	1240.78	1.7	1.61	18.84	15.43	150.16	200.93	1.64	1.35	2.59	2.59
Sweet Grass County	A3	RM 467.00	166780	5% Duration	436.65	1242.81	1240.48	2.42	2.31	37	30.26	93.32	124.92	1.86	1.51	2.34	2.34
Sweet Grass County	A3	RM 466.83	165902	5% Duration	436.65	1242.38	1239.84	2.17	2.03	29.17	16.88	101.66	192.58	1.94	1.12	2.53	2.53
Sweet Grass County	A3	RM 466.73	165364	5% Duration	436.65	1242.14	1239.81	2.06	1.95	26.68	20.21	112.11	161.56	1.83	1.38	2.34	2.34
Sweet Grass County	A3	RM 466.64	164858	5% Duration	436.65	1241.84	1239.36	2.36	2.17	32.07	21.81	84.53	171.47	2.08	1.41	2.47	2.47
Sweet Grass County	A3	RM 466.49	164108	5% Duration	436.65	1241.37	1239.67	2.42	1.97	39.57	21.67	105.62	341.99	1.49	0.82	1.7	1.7
Sweet Grass County	A3	RM 466.25	162845	5% Duration	436.65	1240.3	1238.71	2.55	2.21	43.2	31.54	78.03	173.84	1.58	1.14	1.6	1.6
Sweet Grass County	A3	RM 465.79	160351	5% Duration	436.65	1238.86	1236.48	2.04	1.63	26.53	14.39	102.25	277.42	1.82	0.97	2.38	2.38
Sweet Grass County	A3	RM 465.01	155919	5% Duration	436.65	1236.73	1234.44	2.24	2.2	31.7	28.48	105.78	120.15	1.83	1.65	2.29	2.29
Sweet Grass County	A3	RM 464.68	154254	5% Duration	436.65	1235.91	1233.35	1.86	1.86	23.52	23.52	161.5	161.5	1.45	1.45	2.56	2.56
Sweet Grass County	A3	RM 464.48	153160	5% Duration	436.65	1235.33	1232.71	1.84	1.76	23.55	18.37	169.41	241.03	1.37	1.07	2.63	2.63
Sweet Grass County	A3	RM 464.33	152378	5% Duration	436.65	1234.94	1232.61	1.77	1.58	21.46	16.83	171.07	250.61	1.4	1.1	2.33	2.33
Sweet Grass County	A3	RM 464.16	151621	5% Duration	436.65	1234.31	1232.45	2.33	2.21	38.8	31	145.19	196.83	1.26	1.01	1.86	1.86
Sweet Grass County	A3	RM 464.04	150961	5% Duration	436.65	1234.15	1231.48	1.64	1.47	15.73	9.61	111.38	208.93	2.34	1.42	2.66	2.66
Sweet Grass County	A3	RM 463.88	150174	5% Duration	436.65	1233.63	1231.85	2.52	2.4	44.59	38.77	127.93	158.93	1.32	1.14	1.78	1.78
Sweet Grass County	A3	RM 463.78	149616	5% Duration	436.65	1233.27	1230.54	2.02	1.9	27.48	21.73	144.52	201.62	1.48	1.17	2.73	2.73
Sweet Grass County	A3	RM 463.67	149069	5% Duration	436.65	1232.79	1230.86	2.43	2.21	40.72	29.1	124.65	200.84	1.38	0.98	1.92	1.92

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A3	RM 463.59	148630	5% Duration	436.65	1232.55	1230.39	2.03	1.81	26.86	19.37	128.2	227.46	1.64	1.18	2.16	2.16
Sweet Grass County	A3	RM 463.49	148111	5% Duration	436.65	1232.17	1229.73	2.36	2.24	35.75	31.11	104.46	128.17	1.75	1.52	2.44	2.44
Sweet Grass County	A3	RM 463.34	147326	5% Duration	436.65	1231.73	1229.72	1.9	1.68	25.86	19.55	172.59	292.33	1.26	0.95	2.01	2.01
Sweet Grass County	A3	RM 463.20	146616	5% Duration	436.65	1231.33	1228.95	2.07	1.53	27.07	11.95	84.74	378.29	1.85	0.8	2.38	2.38
Sweet Grass County	A3	RM 463.06	145881	5% Duration	436.65	1230.97	1228.89	2	1.38	26.59	9.78	110.22	656	1.54	0.56	2.08	2.08
Sweet Grass County	A4	RM 462.79	144435	5% Duration	436.65	1230.62	1228.25	1.32	0.73	11.33	4.81	132.34	1144.21	1.67	0.7	2.36	2.36
Sweet Grass County	A4	RM 462.16	141146	5% Duration	436.65	1228.72	1226.15	2.24	1.93	31.85	17.21	99.35	235.55	1.8	0.96	2.57	2.57
Sweet Grass County		RM 461.97	140135	5% Duration	436.65	1228.16	1226.06	2.03	1.54	28.52	15.19	119.37	455.01	1.37	0.73	2.1	2.1
Sweet Grass County	A4	RM 461.71	138705	5% Duration	436.65	1226.58	1224.75	3.12	2.65	68.29	43.14	81	236.56	1.33	0.84	1.83	1.83
Sweet Grass County	A4	RM 461.52	137683	5% Duration	436.65	1225.79	1222.31	1.63	1.39	13.95	7.01	69.01	191.11	3.39	1.64	3.48	3.48
Sweet Grass County	A4	RM 461.33	136718	5% Duration	436.65	1225.5	1223.38	1.93	1.85	25.7	23.85	118.58	185.29	1.37	1.27	2.12	2.12
Sweet Grass County	A4	RM 461.14	135736	5% Duration	436.65	1224.76	1222.44	2.35	2.32	35.76	32.15	109.7	123.46	1.69	1.52	2.32	2.32
Sweet Grass County	A4	RM 460.99	134951	5% Duration	436.65	1224.29	1221.98	2.21	2.15	31.49	27.82	113.13	132.74	1.73	1.53	2.31	2.31
Sweet Grass County	A4	RM 460.85	134214	5% Duration	436.65	1223.69	1222.07	2.46	2.46	40.57	40.57	129.86	129.86	1.37	1.37	1.63	1.63
Sweet Grass County	A4	RM 460.74	133616	5% Duration	436.65	1223.7	1220.27	1.31	1.28	9.47	7.63	120.37	156.13	2.76	2.22	3.44	3.44
Sweet Grass County	A4	RM 460.63	133067	5% Duration	436.65	1223.7	1218.9	0.93	0.93	4.12	3.72	103.84	124.08	4.5	4.05	4.8	4.8
Sweet Grass County			132957	5% Duration	Bridge												
Sweet Grass County	A4	RM 460.59	132836	5% Duration	436.65	1223.31	1221.09	2.34	2.34	35.36	35.36	109.01	114.57	1.71	1.71	2.22	2.22
Sweet Grass County	A4	RM 460.50	132281	5% Duration	436.65	1222.77	1221.12	2.51	2.51	45.94	45.94	146.37	203.38	1.19	1.19	1.65	1.65
Sweet Grass County	A4	RM 460.38	131785	5% Duration	436.65	1222.31	1220.5	2.27	2.1	31.12	28.1	137.02	221.77	1.11	1	1.81	1.81
Sweet Grass County	A4	RM 460.29	131287	5% Duration	436.65	1221.8	1219.97	2.36	2.27	40.85	38.04	121.24	176.44	1.17	1.09	1.83	1.83
Sweet Grass County	A4	RM 460.19	130793	5% Duration	436.65	1221.2	1219.38	2.53	2.37	45.91	40.54	109.76	193.93	1.24	1.09	1.82	1.82
Sweet Grass County	A4	RM 460.08	130210	5% Duration	436.65	1220.79	1218.23	2.18	2.18	30.49	30.49	117.23	117.23	1.71	1.71	2.56	2.56
Sweet Grass County	A4	RM 459.99	129763	5% Duration	436.65	1220.58	1218.01	2.16	2.16	28.02	28.02	94.17	94.17	2.14	2.14	2.56	2.56
Sweet Grass County	A4	RM 459.90	129246	5% Duration	436.65	1220.46	1217.62	1.82	1.82	18.85	18.85	96.39	96.39	2.49	2.49	2.85	2.85
Sweet Grass County	A4	RM 459.81	128792	5% Duration	436.65	1220.13	1218.15	2.5	2.5	39.31	39.31	95.64	95.64	1.83	1.83	1.98	1.98
Sweet Grass County	A4	RM 459.72	128310	5% Duration	479.97	1220	1217.31	1.9	1.9	21.83	21.83	121.58	144.21	2.08	2.08	2.69	2.69
Sweet Grass County	A4	RM 459.62	127798	5% Duration	479.97	1219.63	1217.46	2.43	2.39	39.28	33.17	126.46	192.09	1.56	1.31	2.16	2.16
Sweet Grass County	A5	RM 459.53	127324	5% Duration	479.97	1219.15	1217.26	2.54	2.54	45.99	45.99	149.06	149.06	1.27	1.27	1.88	1.88
Sweet Grass County	A5	RM 459.44	126881	5% Duration	479.97	1218.72	1216.93	2.25	2.25	36.93	36.93	179.97	179.97	1.18	1.18	1.8	1.8
Sweet Grass County	A5	RM 459.31	126192	5% Duration	479.97	1218.33	1215.66	1.93	1.88	24.03	23.03	145.32	156.64	1.7	1.64	2.67	2.67
Sweet Grass County	A5	RM 459.24	125848	5% Duration	479.97	1218.12	1215.69	2.11	2.08	29.27	27.44	141.52	153.49	1.61	1.5	2.42	2.42
Sweet Grass County	A5	RM 459.16	125420	5% Duration	479.97	1217.6	1215.82	2.65	2.65	51.19	51.19	154.65	154.65	1.17	1.17	1.78	1.78
Sweet Grass County	A5	RM 459.02	124624	5% Duration	479.97	1217.06	1214.8	1.87	1.87	24.35	24.35	191.04	199	1.35	1.35	2.25	2.25
Sweet Grass County	A5	RM 458.79	123371	5% Duration	479.97	1216.34	1214.02	2.05	2.05	27.37	27.37	140.91	140.91	1.66	1.66	2.32	2.32
Sweet Grass County	A5	RM 458.48	121727	5% Duration	479.97	1215.33	1213.35	2.11	1.97	31.18	27.27	125.89	207.99	1.35	1.18	1.98	1.98
Sweet Grass County	A5	RM 458.36	121100	5% Duration	479.97	1214.34	1212.73	3.2	2.97	74.78	60.83	110.15	170.36	1.17	0.95	1.61	1.61
Sweet Grass County	A5	RM 458.25	120543	5% Duration	479.97	1213.93	1211.35	1.9	1.69	22.07	14.85	112.87	211.01	2.01	1.34	2.58	2.58
Sweet Grass County	A5	RM 458.13	119849	5% Duration	479.97	1213.04	1211.21	3.31	3.16	77.62	62.65	109.08	145.54	1.29	1.04	1.83	1.83
Sweet Grass County	A5	RM 458.03	119256	5% Duration	479.97	1213.08	1210.09	1.69	1.69	15.72	15.72	101.34	127.64	2.8	2.8	2.99	2.99
Sweet Grass County	A5	RM 457.87	118444	5% Duration	479.97	1212.98	1209.57	1.52	1.52	12.2	12.2	100.03	100.03	3.15	3.15	3.41	3.41
Sweet Grass County	A5	RM 457.76	117858	5% Duration	479.97	1212.8	1210.24	1.87	1.87	21.53	21.53	128.61	128.61	1.99	1.99	2.56	2.56
Sweet Grass County	A5	RM 457.66	117350	5% Duration	479.97	1212.59	1210.03	1.98	1.98	24.33	24.33	127.16	127.16	1.91	1.91	2.56	2.56
Sweet Grass County	A5	RM 457.54	116694	5% Duration	479.97	1212.3	1209.93	2.04	2.04	25.99	25.99	126.23	126.23	1.87	1.87	2.37	2.37
Sweet Grass County	A5	RM 457.35	115703	5% Duration	479.97	1211.13	1209.69	3.16	3.16	76.43	76.43	149.91	149.91	1.01	1.01	1.44	1.44
Sweet Grass County	A5	RM 457.20	114921	5% Duration	479.97	1210.82	1208.7	1.62	1.62	17.39	17.39	192.29	192.29	1.55	1.55	2.12	2.12
Sweet Grass County	A5	RM 457.02	113974	5% Duration	479.97	1209.78	1208.04	3.27	3.01	72.31	48.6	94.36	160.54	1.48	0.99	1.74	1.74
Sweet Grass County	A5	RM 456.84	113009	5% Duration	479.97	1209.29	1206.55	1.94	1.94	22.14	22.14	110.08	110.08	2.25	2.25	2.74	2.74
Sweet Grass County	A5	RM 456.68	112164	5% Duration	479.97	1208.74	1206.59	2.58	2.58	42.69	42.69	106.08	106.08	1.75	1.75	2.15	2.15
Sweet Grass County	A5	RM 456.55	111455	5% Duration	479.97	1208.26	1206.19	2.32	2.32	36.02	36.02	134.83	134.83	1.53	1.53	2.07	2.07
Sweet Grass County	A5	RM 456.43	110857	5% Duration	479.97	1208.08	1205.33	1.89	1.89	20.45	20.45	102.14	102.14	2.48	2.48	2.74	2.74
Sweet Grass County	A6	RM 456.29	110121	5% Duration	479.97	1207.76	1205.45	2.2	2.2	27.84	27.84	109.98	109.98	1.98	1.98	2.31	2.31
Sweet Grass County	A6	RM 456.18	109508	5% Duration	479.97	1207.4	1205.45	2.33	2.33	35.34	35.34	123.92	123.92	1.66	1.66	1.95	1.95
Sweet Grass County	A6	RM 456.03	108721	5% Duration	479.97	1206.87	1204.59	2.24	2.24	34.02	34.02	146.13	146.13	1.47	1.47	2.28	2.28
Sweet Grass County	A6	RM 455.84	107742	5% Duration	479.97	1206.08	1204.05	2.33	2.33	31.81	31.81	172.24	184.74	1.19	1.19	2.04	2.04
Sweet Grass County	A6	RM 455.70	106976	5% Duration	479.97	1205.88	1203.14	1.7	1.7	16.61	16.61	117.48	139.05	2.4	2.4	2.75	2.75
Sweet Grass County	A6	RM 455.56	106256	5% Duration	479.97	1205.56	1203.35	2.18	2.18	27.85	27.85	115.11	158.64	1.91	1.91	2.21	2.21
Sweet Grass County	A6	RM 455.39	105360	5% Duration	479.97	1205.31	1202.74	1.71	1.71	17.91	17.91	143.59	179.93	1.96	1.96	2.57	2.57
Sweet Grass County	A6	RM 455.26	104667	5% Duration	479.97	1204.38	1202.83	3.45	3.45	84.23	84.23	113.78	127.11	1.22	1.22	1.55	1.55
Sweet Grass County	A6	RM 455.09	103771	5% Duration	479.97	1204.22	1201.58	1.45	1.4	12.65	11.43	152.65	176.72	2.15	1.94	2.64	2.64
Sweet Grass County	A6	RM 454.95	103072	5% Duration	479.97	1203.68	1201.94	2.59	2.52	52	50.44	176.01	201.33	0.97	0.95	1.74	1.74

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A6	RM 454.82	102364	5% Duration	479.97	1202.99	1200.61	2.16	2.07	32.4	29.58	142.39	183.73	1.39	1.26	2.39	2.39
Sweet Grass County	A6	RM 454.72	101863	5% Duration	479.97	1202.26	1200.47	2.97	2.97	57.65	57.65	119.5	119.5	1.35	1.35	1.78	1.78
Sweet Grass County	A6	RM 454.64	101419	5% Duration	479.97	1202.07	1199.69	2.06	2.06	26.09	26.09	143.39	143.39	1.62	1.62	2.38	2.38
Sweet Grass County	A6	RM 454.53	100846	5% Duration	479.97	1201.72	1199.59	2.29	2.29	31.74	31.74	116.89	116.89	1.8	1.8	2.13	2.13
Sweet Grass County	A6	RM 454.43	100338	5% Duration	479.97	1201.5	1199	2.14	2.14	27.4	27.4	105.91	105.91	2.12	2.12	2.5	2.5
Sweet Grass County	A6	RM 454.29	99597	5% Duration	479.97	1201.24	1198.71	2.01	2.01	24.13	24.13	109.86	126.96	2.17	2.17	2.53	2.53
Sweet Grass County	A6	RM 454.15	98861	5% Duration	479.97	1201	1198.68	1.89	1.89	20.62	20.62	132.65	132.65	1.91	1.91	2.33	2.33
Sweet Grass County	A6	RM 454.00	98105	5% Duration	479.97	1200.65	1198.53	2.08	2.08	23.77	23.77	157.63	157.63	1.46	1.46	2.12	2.12
Sweet Grass County	A6	RM 453.89	97523	5% Duration	479.97	1200.03	1198.31	2.73	2.71	43.52	41.41	164.41	173.93	1.07	1.02	1.73	1.73
Sweet Grass County	A6	RM 453.78	96929	5% Duration	479.97	1199.97	1197.07	1.52	1.52	13.82	13.82	145.97	145.97	2.16	2.16	2.9	2.9
Sweet Grass County	A6	RM 453.67	96361	5% Duration	479.97	1199.32	1197.77	3.08	3.06	63.18	61.48	142.92	148.31	1.09	1.06	1.55	1.55
Sweet Grass County	A6	RM 453.58	95863	5% Duration	479.97	1199.34	1196.37	1.54	1.54	13.34	13.34	177.2	177.2	2.07	2.07	2.97	2.97
Sweet Grass County	A6	RM 453.48	95355	5% Duration	479.97	1199.01	1196.86	2.33	2.33	32.73	32.73	114.06	114.06	1.81	1.81	2.15	2.15
Sweet Grass County	A6	RM 453.35	94633	5% Duration	479.97	1198.65	1196.43	2.16	2.16	27.33	27.33	132.47	132.47	1.68	1.68	2.22	2.22
Sweet Grass County	A7	RM 453.23	93994	5% Duration	479.97	1197.98	1196.41	2.96	2.64	54.8	44.76	103.13	182.27	1.22	1	1.57	1.57
Sweet Grass County	A7	RM 453.11	93361	5% Duration	479.97	1197.7	1195.68	1.84	1.81	21.1	20.51	163.61	173.57	1.57	1.52	2.02	2.02
Sweet Grass County	A7	RM 453.01	92863	5% Duration	479.97	1197.24	1195.38	2.53	2.49	40.81	36.28	127.17	146.75	1.48	1.32	1.86	1.86
Sweet Grass County	A7	RM 452.91	92363	5% Duration	479.97	1196.94	1194.85	2.34	2.11	31.6	25.5	103.66	173.89	1.62	1.31	2.09	2.09
Sweet Grass County	A7	RM 452.82	91863	5% Duration	479.97	1196.63	1194.65	2.26	2.1	33.44	29.06	103.19	163	1.61	1.4	1.98	1.98
Sweet Grass County	A7	RM 452.72	91363	5% Duration	479.97	1196.62	1193.29	1.33	1.33	9.9	9.9	138.03	138.03	2.61	2.61	3.32	3.32
Sweet Grass County	A7	RM 452.64	90932	5% Duration	479.97	1196.4	1194.02	2.01	1.91	25.62	22.07	133.17	164.43	1.78	1.53	2.38	2.38
Sweet Grass County	A7	RM 452.53	90362	5% Duration	479.97	1196	1193.87	2.43	2.38	35.67	31.82	106.78	124.21	1.82	1.63	2.13	2.13
Sweet Grass County	A7	RM 452.43	89864	5% Duration	479.97	1195.69	1193.52	2.45	2.41	36.04	28.84	105.44	135.07	1.85	1.48	2.17	2.17
Sweet Grass County	A7	RM 452.33	89331	5% Duration	479.97	1195.37	1193.16	2.38	2.38	31.11	30.01	130.58	135.93	1.54	1.49	2.2	2.2
Sweet Grass County	A7	RM 452.25	88863	5% Duration	479.97	1195.1	1192.91	2.29	2.29	30.51	30	127.61	129.84	1.64	1.62	2.19	2.19
Sweet Grass County	A7	RM 452.16	88399	5% Duration	479.97	1194.8	1192.68	2.38	2.33	34.16	30.48	113.22	130.22	1.77	1.58	2.13	2.13
Sweet Grass County	A7	RM 452.06	87882	5% Duration	479.97	1194.57	1192.4	2.13	2.1	28.26	25.82	117.14	130.89	1.91	1.75	2.17	2.17
Sweet Grass County	A7	RM 451.96	87394	5% Duration	479.97	1194.22	1191.9	2.45	2.4	38.46	33.78	113.57	132.4	1.72	1.51	2.32	2.32
Sweet Grass County	A7	RM 451.86	86835	5% Duration	479.97	1193.91	1191.79	2.29	2.17	30.83	25.96	114.73	146.18	1.8	1.52	2.11	2.11
Sweet Grass County	A7	RM 451.75	86230	5% Duration	479.97	1193.66	1191.43	2.03	2.03	24.83	24.83	127.09	127.09	1.86	1.86	2.22	2.22
Sweet Grass County	A7	RM 451.61	85483	5% Duration	479.97	1193.32	1190.7	2.03	2.03	26.58	26.58	139.52	139.52	1.7	1.7	2.62	2.62
Sweet Grass County	A7	RM 451.49	84861	5% Duration	479.97	1192.67	1191.07	2.83	2.79	52.22	48.96	109.5	118.78	1.54	1.45	1.6	1.6
Sweet Grass County	A7	RM 451.34	84113	5% Duration	479.97	1192.53	1190.06	1.6	1.6	15.73	15.73	148.96	148.96	2.01	2.01	2.47	2.47
Sweet Grass County	A7	RM 451.20	83363	5% Duration	479.97	1192.12	1189.8	2.31	2.31	32.27	32.27	100.47	100.47	2.07	2.07	2.32	2.32
Sweet Grass County	A7	RM 451.10	82863	5% Duration	479.97	1191.93	1189.79	2.05	2.05	25.78	25.78	124.58	124.58	1.88	1.88	2.14	2.14
Sweet Grass County	A7	RM 451.00	82325	5% Duration	479.97	1191.58	1189.55	2.37	2.21	37.13	31.02	114.99	165.01	1.58	1.32	2.03	2.03
Sweet Grass County	A7	RM 450.86	81602	5% Duration	479.97	1191.31	1188.29	1.71	1.61	32.5	21.72	88.84	152.24	2.98	1.96	3.02	3.02
Sweet Grass County	A7	RM 450.73	80923	5% Duration	479.97	1190.72	1188.46	2.72	2.67	45.46	38.72	87.65	105.35	2	1.7	2.26	2.26
Sweet Grass County	A7	RM 450.63	80374	5% Duration	479.97	1190.48	1188.16	2.19	2.19	30.34	30.29	120.97	121.16	1.81	1.81	2.32	2.32
Sweet Grass County	A7	RM 450.53	79863	5% Duration	479.97	1190.29	1187.88	1.94	1.94	21.24	21.24	143.75	143.75	1.72	1.72	2.41	2.41
Sweet Grass County	A7	RM 450.43	79300	5% Duration	479.97	1190.06	1187.72	2.01	1.87	22.16	19.38	123.47	175.08	1.68	1.47	2.34	2.34
Sweet Grass County	A7	RM 450.34	78849	5% Duration	505.17	1189.48	1188.05	2.98	2.72	60.76	50.43	118.49	196.48	1.14	0.95	1.43	1.43
Sweet Grass County	A7	RM 450.23	78298	5% Duration	505.17	1189.37	1186.92	1.56	1.56	14.76	14.76	188.33	188.33	1.72	1.72	2.45	2.45
Sweet Grass County	A7	RM 450.14	77822	5% Duration	505.17	1189.14	1186.4	1.91	1.91	23.5	23.5	150.06	150.06	1.76	1.76	2.74	2.74
Sweet Grass County	A7	RM 450.05	77362	5% Duration	505.17	1188.57	1187.2	2.84	2.84	57.13	57.13	136.42	136.42	1.3	1.3	1.37	1.37
Sweet Grass County	A7	RM 449.96	76841	5% Duration	505.17	1188.34	1186.28	2.07	2.04	26.33	24.15	124.47	144.58	1.96	1.8	2.06	2.06
Sweet Grass County	A7	RM 449.86	76356	5% Duration	505.17	1188.2	1185.58	1.94	1.88	21.49	18.88	105.62	124.71	2.45	2.16	2.62	2.62
Sweet Grass County	A7	RM 449.77	75860	5% Duration	505.17	1187.94	1185.68	2.27	2.07	29.07	26.72	127.73	158.25	1.68	1.54	2.26	2.26
Sweet Grass County	A7	RM 449.68	75373	5% Duration	505.17	1187.3	1185.9	2.88	2.8	64.05	61.56	174.03	187.83	1	0.96	1.4	1.4
Sweet Grass County	A7	RM 449.59	74904	5% Duration	505.17	1187.36	1184.15	1.49	1.41	12.1	10.2	107.57	160.69	2.92	2.45	3.21	3.21
Sweet Grass County	A7	RM 449.48	74351	5% Duration	505.17	1187.02	1184.86	2.5	2.31	39.82	30.39	95.06	161.49	1.78	1.36	2.17	2.17
Sweet Grass County	A7	RM 449.37	73741	5% Duration	505.17	1186.85	1184.73	1.51	1.49	15.87	15.44	202.74	300.73	1.35	1.31	2.12	2.12
Sweet Grass County	A7	RM 449.26	73165	5% Duration	505.17	1186.66	1184.33	1.76	1.4	16.01	7.27	121.82	464.57	1.88	0.84	2.33	2.33
Sweet Grass County	A7	RM 449.10	72364	5% Duration	505.17	1185.99	1183.97	2.92	2.51	52.76	31.61	84.12	352.78	1.98	1.18	2.02	2.02
Sweet Grass County	A7	RM 449.00	71858	5% Duration	505.17	1185.51	1183.97	2.92	2.29	57.2	36.98	96.32	236.36	1.54	0.98	1.55	1.55
Sweet Grass County	A7	RM 448.88	71223	5% Duration	505.17	1184.68	1183.11	2.58	2.46	50.72	44.41	176.79	238.4	1.03	0.9	1.57	1.57
Sweet Grass County	A7	RM 448.76	70537	5% Duration	505.17	1184.38	1182.01	1.6	1.46	17.45	14.13	179.37	297.73	1.44	1.17	2.37	2.37
Sweet Grass County	A7	RM 448.55	69424	5% Duration	505.17	1184.04	1181.8	1.61	1.52	16.45	14.31	152.24	213.72	1.79	1.56	2.23	2.23
Sweet Grass County	A7	RM 448.41	68815	5% Duration	505.17	1183.53	1181.16	2.67	2.67	41.75	41.75	81.08	81.08	2.34	2.34	2.36	2.36
Sweet Grass County	A7	RM 448.32	68353	5% Duration	505.17	1183.66	1179.91	1.21	1.21	7.54	7.54	120.18	120.18	3.47	3.47	3.74	3.74
Sweet Grass County	A7	RM 448.23	67851	5% Duration	505.17	1183.57	1179.82	1.47	1.47	11.1	11.1	99.89	99.89	3.44	3.44	3.75	3.75

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County			67792	5% Duration	Bridge												
Sweet Grass County	A7	RM 448.20	67729	5% Duration	505.17	1183.19	1180.89	2.61	2.61	42.05	42.05	99.45	99.45	1.95	1.95	2.31	2.31
Sweet Grass County	A7	RM 448.07	67043	5% Duration	505.17	1182.82	1180.7	2.18	2.18	30.77	30.77	136.09	139.88	1.7	1.7	2.12	2.12
Sweet Grass County	A7	RM 447.94	66348	5% Duration	505.17	1182.56	1180.22	1.95	1.95	22.66	22.66	119.12	129.06	2.17	2.17	2.35	2.35
Sweet Grass County	A7	RM 447.85	65863	5% Duration	505.17	1182.14	1180.39	2.61	2.61	45.66	45.66	126.97	144.98	1.52	1.52	1.76	1.76
Sweet Grass County	A7	RM 447.75	65363	5% Duration	505.17	1182.1	1179.55	1.66	1.66	14.88	14.88	134.9	150.86	2.26	2.26	2.55	2.55
Sweet Grass County	A7	RM 447.66	64865	5% Duration	505.17	1181.92	1179.59	1.92	1.92	21.91	21.91	118.27	131.55	2.22	2.22	2.33	2.33
Sweet Grass County	A7	RM 447.56	64365	5% Duration	505.17	1181.55	1179.67	2.47	2.36	40.09	32.79	127.66	200.74	1.59	1.3	1.89	1.89
Sweet Grass County	A7	RM 447.49	64001	5% Duration	505.17	1181.37	1179.82	1.99	1.94	26.5	22.99	192.63	251.94	1.31	1.14	1.55	1.55
Sweet Grass County	A7	RM 447.39	63473	5% Duration	505.17	1180.79	1178.85	2.88	2.37	51.04	29.92	87.87	211.55	1.73	1.01	1.94	1.94
Sweet Grass County	A7	RM 447.27	62880	5% Duration	505.17	1180.51	1178.26	2.19	1.9	30.5	19.75	98.42	230.02	1.79	1.15	2.26	2.26
Sweet Grass County	A7	RM 447.17	62358	5% Duration	505.17	1180.21	1177.92	2.32	1.78	33.6	16.33	96.74	313.77	1.88	0.91	2.29	2.29
Sweet Grass County	A7	RM 447.08	61863	5% Duration	505.17	1179.73	1177.91	2.71	2.02	53.72	35.17	97.06	326.5	1.17	0.77	1.82	1.82
Sweet Grass County	A7	RM 446.98	61358	5% Duration	505.17	1179.25	1177.28	2.49	1.92	37.81	21.42	91.9	269.83	1.73	0.97	1.97	1.97
Sweet Grass County	A7	RM 446.89	60841	5% Duration	505.17	1178.78	1176.94	2.87	2.1	53.84	31.57	76.37	247.67	1.65	0.97	1.83	1.83
Sweet Grass County	A7	RM 446.80	60396	5% Duration	505.17	1178.64	1175.92	2.03	1.47	24.34	12.6	84.27	304.47	2.23	1.14	2.73	2.73
Sweet Grass County	A7	RM 446.70	59903	5% Duration	505.17	1178.26	1176.22	2.83	2.05	49.29	23	65.84	278.58	2	0.91	2.05	2.05
Sweet Grass County	A7	RM 446.60	59371	5% Duration	505.17	1177.77	1175.91	2.94	2.42	51.66	31.69	75.08	207.33	1.65	1.01	1.86	1.86
Sweet Grass County	A7	RM 446.51	58868	5% Duration	505.17	1177.43	1175.24	2.51	2.22	40.75	28.4	103.06	194.58	1.68	1.17	2.19	2.19
Sweet Grass County	A7	RM 446.41	58363	5% Duration	505.17	1177.25	1174.39	1.89	1.77	20.5	16.28	130.56	188.29	1.91	1.52	2.86	2.86
Sweet Grass County	A7	RM 446.30	57762	5% Duration	505.17	1176.81	1174.85	2.55	2.38	38.81	33.11	118.57	165.15	1.5	1.29	1.97	1.97
Sweet Grass County	A7	RM 446.22	57365	5% Duration	505.17	1176.49	1174.39	2.52	2.52	39.62	39.62	120.11	120.11	1.67	1.67	2.09	2.09
Sweet Grass County	A7	RM 446.12	56852	5% Duration	505.17	1176.16	1174.04	2.34	2.34	32.02	32.02	137.61	137.61	1.57	1.57	2.13	2.13
Sweet Grass County	A7	RM 446.02	56303	5% Duration	505.17	1176.05	1173.3	1.85	1.78	19.01	16.81	97.33	122.01	2.7	2.38	2.75	2.75
Sweet Grass County	A7	RM 445.94	55871	5% Duration	505.17	1175.62	1173.6	2.85	2.69	52.12	43.99	93.4	126.55	1.76	1.48	2.02	2.02
Sweet Grass County	A7	RM 445.82	55236	5% Duration	505.17	1175.17	1173.05	2.17	2.17	33.62	33.1	184.88	188.12	1.26	1.24	2.12	2.12
Sweet Grass County	A7	RM 445.71	54753	5% Duration	505.17	1174.96	1172.38	1.86	1.85	17.4	17.01	180.04	185.27	1.51	1.48	2.57	2.57
Sweet Grass County	A7	RM 445.60	54202	5% Duration	505.17	1174.73	1172.32	1.91	1.91	19.59	19.59	176.9	183.92	1.49	1.49	2.41	2.41
Sweet Grass County	A7	RM 445.46	53453	5% Duration	505.17	1174.24	1171.04	2.46	2.45	29.67	28.85	126.02	134.27	1.63	1.58	3.19	3.19
Sweet Grass County	A7	RM 445.36	52888	5% Duration	505.17	1174.04	1170.25	2.19	2.06	27.06	17.51	87.27	146.87	2.59	1.67	3.79	3.79
Sweet Grass County	A7	RM 445.26	52344	5% Duration	505.17	1173.75	1171.35	2.44	2.36	36.74	30.32	102.94	131.82	1.97	1.63	2.4	2.4
Sweet Grass County	A7	RM 445.17	51873	5% Duration	505.17	1173.02	1171.83	3.24	3.18	77.45	71.87	132.71	149.21	1.15	1.07	1.19	1.19
Sweet Grass County	A7	RM 445.07	51376	5% Duration	505.17	1172.87	1170.28	1.77	1.77	20.87	20.47	179	184.07	1.58	1.55	2.59	2.59
Sweet Grass County	A7	RM 444.97	50844	5% Duration	505.17	1172.47	1170.19	2.34	2.34	32.17	32.17	142.4	142.4	1.52	1.52	2.28	2.28
Sweet Grass County	A7	RM 444.88	50352	5% Duration	505.17	1172.2	1170.05	2.17	2.16	28.3	27.64	139.77	143.32	1.67	1.63	2.15	2.15
Sweet Grass County	A7	RM 444.79	49860	5% Duration	505.17	1171.82	1169.94	2.46	2.39	39.86	36.57	127.63	144.06	1.6	1.47	1.87	1.87
Sweet Grass County	A7	RM 444.69	49316	5% Duration	505.17	1171.35	1169.55	2.55	2.42	42.95	40.22	121.57	139.3	1.6	1.5	1.8	1.8
Sweet Grass County	A7	RM 444.60	48863	5% Duration	505.17	1171.41	1167.23	1.48	1.39	10.74	8.22	84.11	145.64	4.03	3.04	4.18	4.18
Sweet Grass County	A7	RM 444.50	48367	5% Duration	505.17	1171.04	1168.66	2.7	2.45	45.28	33.77	95.42	145	1.91	1.42	2.38	2.38
Sweet Grass County	A7	RM 444.41	47863	5% Duration	505.17	1170.88	1168.6	2.04	1.93	23.96	21.08	128.88	172.27	1.73	1.52	2.28	2.28
Sweet Grass County	A7	RM 444.30	47336	5% Duration	505.17	1170.75	1168.26	1.62	1.61	15.24	14.51	160.29	168.73	1.95	1.85	2.49	2.49
Sweet Grass County	A7	RM 444.20	46789	5% Duration	505.17	1170.22	1167.97	2.84	2.84	50.33	50.33	94.93	94.93	1.88	1.88	2.26	2.26
Sweet Grass County	A7	RM 444.12	46346	5% Duration	505.17	1170.03	1167.62	2.37	2.32	33.53	30.36	96.94	109.9	2.19	1.98	2.41	2.41
Sweet Grass County	A7	RM 444.02	45829	5% Duration	505.17	1169.86	1167.57	2.05	2.05	23.21	23.21	126.28	126.28	1.95	1.95	2.3	2.3
Sweet Grass County	A7	RM 443.91	45243	5% Duration	505.17	1169.62	1167.08	2.01	2.01	26.12	26.12	149.27	149.27	1.68	1.68	2.54	2.54
Sweet Grass County	A7	RM 443.84	44853	5% Duration	505.17	1169.04	1167.23	2.89	2.89	63.48	63.48	169.31	169.31	1.03	1.03	1.81	1.81
Sweet Grass County	A7	RM 443.75	44415	5% Duration	505.17	1168.71	1166.67	2.09	2.09	30.44	30.44	180.15	199.6	1.34	1.34	2.04	2.04
Sweet Grass County	A7	RM 443.64	43870	5% Duration	505.17	1168.24	1166.09	2.55	2.3	40.61	31.46	88.72	156.55	1.89	1.46	2.15	2.15
Sweet Grass County	A7	RM 443.53	43290	5% Duration	505.17	1168.07	1165.72	2	1.78	24.04	18.84	84.42	169.5	2.15	1.68	2.35	2.35
Sweet Grass County	A8	RM 443.45	42860	5% Duration	505.17	1167.81	1165.25	2.22	2.22	29.97	29.97	116.01	116.01	1.96	1.96	2.56	2.56
Sweet Grass County	A8	RM 443.35	42363	5% Duration	505.17	1167.47	1164.95	2.5	2.47	38.18	32.9	99.55	134.91	2.02	1.74	2.53	2.53
Sweet Grass County	A8	RM 443.25	41863	5% Duration	505.17	1167.32	1165.05	1.99	1.82	24.55	16.9	125.57	253.77	1.91	1.31	2.27	2.27
Sweet Grass County	A8	RM 443.16	41342	5% Duration	505.17	1167.07	1165.43	2.02	1.7	28.57	21.19	146.81	305.68	1.33	0.99	1.63	1.63
Sweet Grass County	A8	RM 443.07	40863	5% Duration	505.17	1166.64	1164.49	2.3	1.93	36.59	23.84	136.78	289.97	1.39	0.9	2.15	2.15
Sweet Grass County	A8	RM 442.97	40345	5% Duration	505.17	1166.35	1164.28	1.95	1.55	21.58	14.39	158.21	368.8	1.32	0.88	2.07	2.07
Sweet Grass County	A8	RM 442.88	39863	5% Duration	505.17	1166.16	1164.06	1.65	1.41	16.6	12.28	164.49	366.28	1.34	0.99	2.11	2.11
Sweet Grass County	A8	RM 442.78	39363	5% Duration	505.17	1165.44	1164.18	2.91	2.86	64.52	55.62	116.56	217.32	1.03	0.89	1.59	1.59
Sweet Grass County	A8	RM 442.68	38840	5% Duration	505.17	1165.04	1162.8	2.19	1.78	24.35	16.28	106.47	269.86	1.58	1.05	2.24	2.24
Sweet Grass County	A8	RM 442.60	38390	5% Duration	505.17	1164.97	1162.57	1.36	1.2	12.13	8.86	152.11	355.52	1.64	1.2	2.4	2.4
Sweet Grass County	A8	RM 442.50	37863	5% Duration	505.17	1164.63	1162.29	2.35	2.04	30.6	22.21	86.48	221.34	1.98	1.43	2.34	2.34
Sweet Grass County	A8	RM 442.42	37461	5% Duration	505.17	1164.27	1162.07	2.81	2.52	37.29	29.92	96.74	191.76	1.55	1.24	2.21	2.21

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A8	RM 442.32	36914	5% Duration	505.17	1163.93	1161.85	2.51	2.24	41.19	26.61	100.56	232.71	1.64	1.06	2.08	2.08
Sweet Grass County	A8	RM 442.24	36451	5% Duration	505.17	1163.66	1161.75	2.23	1.96	28.27	23.49	111.34	222.97	1.39	1.15	1.92	1.92
Sweet Grass County	A8	RM 442.12	35820	5% Duration	505.17	1163.37	1161.12	2.1	1.8	23.36	17.74	109.51	228.64	1.63	1.24	2.25	2.25
Sweet Grass County	A8	RM 442.03	35367	5% Duration	505.17	1163.05	1161.18	2.32	2.09	37.56	30.05	114.5	222.83	1.36	1.09	1.87	1.87
Sweet Grass County	A8	RM 441.95	34945	5% Duration	505.17	1162.98	1160.28	1.46	1.33	13.39	10.48	131.81	264.66	1.85	1.44	2.7	2.7
Sweet Grass County	A8	RM 441.84	34360	5% Duration	505.17	1162.53	1160.33	2.44	2.36	28.03	22.47	177.34	229.5	1.16	0.93	2.2	2.2
Sweet Grass County	A8	RM 441.74	33863	5% Duration	505.17	1162.17	1160.06	2.37	2.21	30.02	24.97	167.7	219.17	1.25	1.04	2.11	2.11
Sweet Grass County	A8	RM 441.65	33357	5% Duration	505.17	1162.01	1159.78	1.76	1.69	18.65	14.7	171.8	228.85	1.66	1.31	2.22	2.22
Sweet Grass County	A8	RM 441.53	32732	5% Duration	505.17	1161.68	1159.44	2.06	1.92	27.81	23.84	147.45	189.27	1.62	1.39	2.24	2.24
Sweet Grass County	A8	RM 441.47	32366	5% Duration	505.17	1161.57	1158.95	1.79	1.63	19.62	14.15	138.7	241.85	1.98	1.43	2.61	2.61
Sweet Grass County	A8	RM 441.38	31928	5% Duration	505.17	1161.53	1158.24	1.31	0.98	10.07	4.73	153.74	614.22	2.22	1.04	3.29	3.29
Sweet Grass County	A8	RM 441.27	31350	5% Duration	505.17	1161.03	1158.76	2.81	2.55	49.48	32.26	91.08	167.59	1.88	1.22	2.28	2.28
Sweet Grass County	A8	RM 441.18	30882	5% Duration	505.17	1160.89	1158.5	2.08	1.82	24.26	16.26	124.98	232.41	1.78	1.19	2.39	2.39
Sweet Grass County	A8	RM 441.07	30295	5% Duration	505.17	1160.68	1158.19	1.84	1.77	21.46	18.75	148.72	181.57	1.8	1.57	2.5	2.5
Sweet Grass County	A8	RM 441.00	29913	5% Duration	505.17	1160.5	1157.63	1.97	1.89	24.9	19.73	142.34	191.89	1.76	1.4	2.87	2.87
Sweet Grass County	A8	RM 440.80	28852	5% Duration	505.17	1159.74	1157.49	2.67	2.54	40.67	30.23	103.85	148.83	1.79	1.33	2.25	2.25
Sweet Grass County	A8	RM 440.60	27841	5% Duration	505.17	1158.89	1157.2	2.58	2.36	46.64	38.43	120.13	195.6	1.33	1.09	1.68	1.68
Sweet Grass County	A8	RM 440.51	27361	5% Duration	505.17	1158.53	1156.41	2.35	1.96	34.98	22.06	97.88	229.68	1.79	1.12	2.12	2.12
Sweet Grass County	A8	RM 440.42	26862	5% Duration	505.17	1157.9	1156.26	3.08	2.58	66.48	39.78	87.99	246.92	1.33	0.79	1.63	1.63
Sweet Grass County	A8	RM 440.30	26223	5% Duration	505.17	1157.72	1155.63	1.63	1.25	16.83	9.9	79.7	379.25	1.82	1.06	2.09	2.09
Sweet Grass County	A8	RM 440.17	25466	5% Duration	505.17	1157.06	1154.7	3.16	2.41	63.05	28	61.76	256.09	1.9	0.82	2.36	2.36
Sweet Grass County	A8	RM 440.06	24863	5% Duration	505.17	1156.81	1153.97	1.99	1.9	24.43	18.73	126.38	178.16	1.96	1.5	2.84	2.84
Sweet Grass County	A8	RM 439.96	24366	5% Duration	505.17	1156.52	1154.18	2.36	2.14	33.37	24.84	90.91	149.14	2.13	1.59	2.34	2.34
Sweet Grass County	A8	RM 439.87	23863	5% Duration	505.17	1156.39	1153.59	1.99	1.9	21.37	19.22	101.68	119.61	2.46	2.22	2.8	2.8
Sweet Grass County	A8	RM 439.77	23365	5% Duration	505.17	1156.19	1153.6	2.14	2.14	24.75	24.75	122.84	126.17	1.92	1.92	2.59	2.59
Sweet Grass County	A8	RM 439.68	22863	5% Duration	505.17	1155.93	1153.45	2.27	2.27	27.58	27.58	124.07	124.22	1.8	1.8	2.49	2.49
Sweet Grass County	A8	RM 439.58	22363	5% Duration	505.17	1155.77	1153.39	1.93	1.86	21.49	20.09	148.79	173.15	1.74	1.63	2.38	2.38
Sweet Grass County	A8	RM 439.49	21863	5% Duration	505.17	1155.67	1152.86	1.69	1.62	16.17	15.29	114.28	127.4	2.57	2.45	2.8	2.8
Sweet Grass County	A8	RM 439.39	21363	5% Duration	505.17	1155.49	1153.06	1.92	1.92	22.11	21.93	128.69	149.99	2.05	2.03	2.43	2.43
Sweet Grass County	A8	RM 439.30	20863	5% Duration	505.17	1155.13	1152.92	2.49	2.49	36.83	36.83	108.99	108.99	1.86	1.86	2.21	2.21
Sweet Grass County	A8	RM 439.20	20353	5% Duration	505.17	1154.74	1152.64	2.64	2.63	40.44	38.35	106.85	113.38	1.79	1.69	2.11	2.11
Sweet Grass County	A8	RM 439.11	19864	5% Duration	505.17	1154.59	1152.34	2.11	1.85	27.4	19.45	97.91	194.66	1.98	1.4	2.25	2.25
Sweet Grass County	A8	RM 439.01	19360	5% Duration	505.17	1154.14	1152.4	2.61	2.5	39.72	37.87	122.94	161.1	1.31	1.25	1.74	1.74
Sweet Grass County	A8	RM 438.91	18848	5% Duration	505.17	1153.84	1151.92	2.21	1.96	27.9	19.21	121.09	249.56	1.49	1.03	1.92	1.92
Sweet Grass County	A8	RM 438.82	18363	5% Duration	505.17	1153.64	1151.23	1.94	1.73	23.79	18.31	112.57	221.8	1.82	1.4	2.41	2.41
Sweet Grass County	A8	RM 438.73	17853	5% Duration	505.17	1153.12	1151.37	2.81	2.48	45.25	34.8	107.65	209.87	1.26	0.97	1.74	1.74
Sweet Grass County	A8	RM 438.63	17363	5% Duration	505.17	1152.77	1150.74	2.44	2.03	37.84	20.49	89.59	257.26	1.79	0.97	2.03	2.03
Sweet Grass County	A8	RM 438.54	16863	5% Duration	505.17	1152.59	1150.59	2	1.69	24.74	16.63	97.5	230.09	1.95	1.3	2	2
Sweet Grass County	A8	RM 438.43	16307	5% Duration	505.17	1152.47	1149.52	1.54	1.54	14.4	14.4	156.91	156.91	2.08	2.08	2.95	2.95
Sweet Grass County	A9	RM 438.36	15889	5% Duration	505.17	1152.33	1149.4	1.77	1.77	12.89	12.68	173.48	176.54	1.64	1.62	2.93	2.93
Sweet Grass County	A9	RM 438.26	15363	5% Duration	505.17	1151.98	1149.84	2.46	2.33	36.52	30.01	110.9	145.93	1.81	1.49	2.14	2.14
Sweet Grass County	A9	RM 438.16	14863	5% Duration	505.17	1151.82	1149.31	2.02	1.94	22.94	16.85	115.77	165.54	2.14	1.57	2.51	2.51
Sweet Grass County	A9	RM 438.07	14394	5% Duration	505.17	1151.62	1149.19	2.1	1.95	27.33	18.4	121.77	198.26	1.94	1.31	2.43	2.43
Sweet Grass County	A9	RM 437.96	13827	5% Duration	505.17	1151.36	1149.19	2.13	1.89	29.39	18.45	116.14	251.01	1.7	1.06	2.17	2.17
Sweet Grass County	A9	RM 437.88	13363	5% Duration	505.17	1151.08	1148.94	2.38	1.94	32.8	20.92	95.94	231.78	1.77	1.13	2.14	2.14
Sweet Grass County	A9	RM 437.78	12844	5% Duration	505.17	1150.86	1148.72	2.14	1.84	26.74	17.26	97.28	242.22	1.76	1.13	2.14	2.14
Sweet Grass County	A9	RM 437.69	12354	5% Duration	505.17	1150.74	1148.45	1.53	1.38	15.74	10.55	145.29	370.34	1.52	1.02	2.29	2.29
Sweet Grass County	A9	RM 437.59	11863	5% Duration	505.17	1150.43	1148.76	1.99	1.83	29.33	22.1	140.16	321.29	1.14	0.86	2.02	2.02
Sweet Grass County	A9	RM 437.50	11362	5% Duration	505.17	1150.23	1148.29	1.58	1.44	17.39	12.87	174.1	348.93	1.35	1.01	1.94	1.94
Sweet Grass County	A9	RM 437.41	10902	5% Duration	505.17	1149.92	1148.26	1.95	1.8	28.63	23	175.03	322.93	1.08	0.87	1.66	1.66
Sweet Grass County	A9	RM 437.31	10361	5% Duration	505.17	1149.51	1147.37	2.11	1.81	30.66	21.71	139.14	276.23	1.42	1.01	2.13	2.13
Sweet Grass County	A9	RM 437.20	9764	5% Duration	505.17	1149.14	1147.02	2.26	1.8	29.42	16.93	99.37	286.7	1.7	0.98	2.12	2.12
Sweet Grass County	A9	RM 437.08	9128	5% Duration	505.17	1148.71	1146.9	2.21	2.01	30.09	23.93	180.76	273.92	1.15	0.92	1.81	1.81
Sweet Grass County	A9	RM 436.95	8363	5% Duration	505.17	1148.55	1145.32	1.76	1.25	12.86	6.44	86.05	360.6	2.29	1.12	3.23	3.23
Sweet Grass County	A9	RM 436.83	7805	5% Duration	505.17	1148.43	1145.93	1.35	1.31	12.84	11.23	132.1	400.39	1.29	1.12	2.5	2.5
Sweet Grass County	A9	RM 436.75	6857	5% Duration	505.17	1147.94	1145.61	2.51	2.05	39.58	18.82	63.77	277.81	1.88	0.89	2.33	2.33
Sweet Grass County	A9	RM 436.66	6193	5% Duration	505.17	1147.51	1145.68	2.34	1.82	36.5	20.4	97.51	342.41	1.47	0.83	1.83	1.83
Sweet Grass County	A9	RM 436.56	5280	5% Duration	505.17	1146.97	1144.44	2.65	1.77	40.75	14.28	50.6	345.9	2.47	0.82	2.53	2.53
Sweet Grass County	A9	RM 436.40	4576	5% Duration	505.17	1146.71	1144.05	2.39	1.51	32.75	10.64	51.21	432.91	2.57	0.79	2.66	2.66
Sweet Grass County	A9	RM 436.29	3787	5% Duration	505.17	1146.26	1144.44	2.46	1.99	39.92	22.45	86.56	311.05	1.61	0.9	1.82	1.82
Sweet Grass County	A9	RM 436.16	3087	5% Duration	505.17	1145.61	1143.57	2.55	2.19	44.39	27.36	106.57	283.19	1.44	0.89	2.04	2.04

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Sweet Grass County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Sweet Grass County	A9	RM 436.07	2676	5% Duration	505.17	1145.32	1143.09	2.4	1.88	30.32	17.59	100.24	344.29	1.42	0.81	2.22	2.22
Sweet Grass County	A9	RM 435.98	2200	5% Duration	505.17	1145.02	1142.85	2.34	1.83	35.32	20.97	67.94	293.8	1.76	1.03	2.18	2.18
Sweet Grass County	A9	RM 435.88	1580	5% Duration	505.17	1144.46	1142.56	2.66	2.16	48.98	30.42	53.81	273.27	1.4	0.86	1.9	1.9
Sweet Grass County	A9	RM 435.73	890	5% Duration	505.17	1144.14	1141.99	1.79	1.52	21.19	15.11	74.86	297.63	1.59	1.11	2.15	2.15
Sweet Grass County	A9	RM 435.62	104	5% Duration	505.17	1143.47	1141.54	2.57	2.29	47.54	37.68	112.42	225.58	1.24	0.98	1.94	1.94

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A9	RM 435.42	232605.4	5% Duration	505.3	1143.06	1140.73	1.42	1.48	14.61	14.3	140.09	291.99	1.19	1.17	2.37	2.37
Stillwater County	A9	RM 435.38	231282.1	5% Duration	505.3	1142.7	1139.61	1.56	1.55	16.37	15.49	191.45	224.03	1.53	1.45	3.09	3.09
Stillwater County	A9	RM 435.25	230611.3	5% Duration	505.3	1142.18	1138.48	2.54	2.54	40.06	40.06	103.07	103.07	1.93	1.93	3.69	3.69
Stillwater County	A9	RM 435.16	230122.9	5% Duration	505.3	1141.9	1138.39	2.47	2.47	36.45	36.45	95.05	95.05	2.15	2.15	3.51	3.51
Stillwater County	A9	RM 435.07	229649	5% Duration	505.3	1141.67	1137.85	2.43	2.43	34.9	34.9	94.49	94.49	2.2	2.2	3.82	3.82
Stillwater County	A9	RM 434.97	229153	5% Duration	505.3	1141.39	1137.87	2.52	2.47	37.77	34.52	89.94	101.68	2.2	2.01	3.52	3.52
Stillwater County	A9	RM 434.84	228443.5	5% Duration	505.3	1141.01	1137	2.49	2.45	36.99	32.54	92.57	108.09	2.17	1.91	4.01	4.01
Stillwater County	A9	RM 434.73	227855.5	5% Duration	505.3	1140.89	1135.61	2.09	2.08	22.69	21.44	73.71	78.18	3.28	3.1	5.28	5.28
Stillwater County	A9	RM 434.63	227328.2	5% Duration	505.3	1140.77	1135.42	2.03	2.03	22.22	22.22	85.63	85.63	2.91	2.91	5.35	5.35
Stillwater County	A9	RM 434.57	227011.2	5% Duration	505.3	1140.66	1136.35	2.12	2.12	25.68	25.68	98.11	98.11	2.43	2.43	4.31	4.31
Stillwater County	A9	RM 434.53	226817.6	5% Duration	505.3	1140.53	1136.73	2.32	2.32	33.06	33.06	111.08	111.08	1.96	1.96	3.8	3.8
Stillwater County	A10	RM 434.49	226573.3	5% Duration	505.3	1140.45	1137.23	2.08	2.08	26.43	26.43	120.38	120.38	2.02	2.02	3.22	3.22
Stillwater County			226533.4	5% Duration	Bridge												
Stillwater County	A10	RM 434.47	226483	5% Duration	505.3	1140.36	1137.49	2.1	2.1	27.66	27.66	128.69	128.69	1.87	1.87	2.87	2.87
Stillwater County	A10	RM 434.42	226233.2	5% Duration	505.3	1140.21	1137.1	2.18	2.18	30.58	30.58	133.9	133.9	1.73	1.73	3.11	3.11
Stillwater County	A10	RM 434.37	225940.2	5% Duration	505.3	1140.06	1136.51	2.2	2.2	29.8	29.8	115.62	115.62	1.98	1.98	3.55	3.55
Stillwater County	A10	RM 434.24	225278.2	5% Duration	505.3	1139.82	1136.56	2.02	1.94	24.6	22.37	111.42	136.9	2.09	1.9	3.26	3.26
Stillwater County	A10	RM 434.15	224819.6	5% Duration	505.3	1139.54	1137.06	2.22	2.14	33.34	29.31	151.45	182.65	1.47	1.29	2.48	2.48
Stillwater County	A10	RM 434.07	224366.5	5% Duration	505.3	1139.2	1136.55	2.28	2.26	33.83	31.22	94.28	146.82	1.64	1.52	2.8	2.8
Stillwater County	A10	RM 433.98	223883.5	5% Duration	505.3	1138.97	1136.28	1.97	1.92	26.58	24.75	127.12	200.08	1.41	1.32	2.69	2.69
Stillwater County	A10	RM 433.87	223309.3	5% Duration	505.3	1138.71	1135.82	1.98	1.84	24.74	21.69	103.64	170.98	1.83	1.6	2.89	2.89
Stillwater County	A10	RM 433.78	222850	5% Duration	505.3	1138.43	1135.54	2.09	2.09	29.52	29.52	163.29	164.47	1.48	1.48	2.89	2.89
Stillwater County	A10	RM 433.66	222201.9	5% Duration	505.3	1138.08	1135.16	2.07	2.07	27.21	27.21	135.67	135.67	1.8	1.8	2.92	2.92
Stillwater County	A10	RM 433.54	221596.6	5% Duration	505.3	1137.77	1135.33	2.16	2.16	29.33	29.33	125.74	125.74	1.86	1.86	2.44	2.44
Stillwater County	A10	RM 433.42	220956.2	5% Duration	505.3	1137.49	1134.88	2.08	2.08	26.43	26.43	120.84	120.84	2.01	2.01	2.61	2.61
Stillwater County	A10	RM 433.31	220362.5	5% Duration	505.3	1137.19	1134.67	2.01	2.01	28.71	27.98	194.99	226.34	1.29	1.25	2.52	2.52
Stillwater County	A10	RM 433.20	219758.6	5% Duration	505.3	1136.78	1134.17	1.93	1.8	26.98	20.9	144.37	299.82	1.21	0.94	2.61	2.61
Stillwater County	A10	RM 433.09	219185.2	5% Duration	505.3	1136.46	1133.45	1.85	1.85	22.59	22.59	174.05	174.05	1.57	1.57	3.01	3.01
Stillwater County	A10	RM 432.97	218599.7	5% Duration	505.3	1136.07	1133.57	2.22	2.19	32.52	31.12	142.43	151.61	1.59	1.52	2.5	2.5
Stillwater County	A10	RM 432.84	217905.9	5% Duration	505.3	1135.67	1132.7	2.16	2.1	29.83	27.37	131.4	150.06	1.75	1.61	2.97	2.97
Stillwater County	A10	RM 432.69	217146.9	5% Duration	505.3	1135.36	1131.51	2.19	2.17	26.77	22.83	86.61	102.95	2.66	2.27	3.85	3.85
Stillwater County	A10	RM 432.60	216656.8	5% Duration	505.3	1135.22	1132.1	2.08	2.08	24.82	24.38	100.71	102.57	2.42	2.37	3.12	3.12
Stillwater County	A10	RM 432.45	215889.7	5% Duration	505.3	1134.93	1132.07	2.08	2.08	26.86	26.86	127.69	144.69	1.9	1.9	2.86	2.86
Stillwater County	A10	RM 432.35	215361.3	5% Duration	505.3	1134.69	1132.33	2.01	2.01	26.19	26.19	151.78	164.01	1.66	1.66	2.36	2.36
Stillwater County	A10	RM 432.20	214585.3	5% Duration	518.9	1134.26	1131.29	2.22	2.22	30.54	30.38	121.71	122.34	1.92	1.91	2.97	2.97
Stillwater County	A10	RM 432.10	214039.1	5% Duration	518.9	1134.03	1130.7	2.1	1.99	26.99	22.05	124.1	211.92	1.96	1.6	3.33	3.33
Stillwater County	A10	RM 432.02	213606.1	5% Duration	518.9	1133.9	1130.52	1.8	1.74	20.43	17.92	155.59	188.45	1.8	1.59	3.38	3.38
Stillwater County	A10	RM 431.87	212811.5	5% Duration	518.9	1133.45	1129.24	2.14	2.08	31.13	26.32	166.25	203.8	1.45	1.22	4.21	4.21
Stillwater County	A10	RM 431.74	212127.4	5% Duration	518.9	1133.17	1129.66	1.79	1.41	20.48	12.9	155.89	336.04	1.74	1.1	3.51	3.51
Stillwater County	A10	RM 431.60	211373.6	5% Duration	518.9	1132.75	1129.96	2.17	2.16	29.65	28.09	130.02	138.16	1.84	1.74	2.79	2.79
Stillwater County	A10	RM 431.49	210820.2	5% Duration	518.9	1132.52	1129.62	2.06	2.06	25.91	24.6	124.59	131.54	2.02	1.92	2.9	2.9
Stillwater County	A10	RM 431.41	210365.9	5% Duration	518.9	1132.31	1129.57	2.13	2.13	27.97	27.78	125.44	126.31	1.94	1.93	2.74	2.74
Stillwater County	A10	RM 431.28	209716.5	5% Duration	518.9	1131.99	1129.79	2.08	2.08	28.88	28.88	161.21	161.21	1.55	1.55	2.2	2.2
Stillwater County	A10	RM 431.14	208918.5	5% Duration	518.9	1131.6	1129.82	1.66	1.89	19.49	22.92	121	182.39	1.28	1.5	2.85	2.85
Stillwater County	A10	RM 431.03	208358.8	5% Duration	518.9	1131.25	1128.56	2.13	2.14	31.35	31.55	98.68	174.04	1.38	1.39	2.69	2.69
Stillwater County	A10	RM 430.93	207821.9	5% Duration	518.9	1130.85	1128.76	2.34	2.12	37.85	31	101.66	213.43	1.39	1.15	2.09	2.09
Stillwater County	A10	RM 430.83	207325.6	5% Duration	518.9	1130.48	1127.66	2.18	2.08	32.92	30.53	147.4	196.13	1.37	1.27	2.82	2.82
Stillwater County	A10	RM 430.70	206629.1	5% Duration	518.9	1130.3	1126.9	1.53	1.47	13.83	12.69	145.76	202.21	1.9	1.75	3.4	3.4
Stillwater County	A10	RM 430.59	206064.9	5% Duration	518.9	1130.13	1127.2	1.73	1.62	18.08	15.2	132.17	191.58	2.07	1.74	2.93	2.93
Stillwater County	A10	RM 430.51	205629.5	5% Duration	518.9	1129.89	1126.28	2.17	2.1	27.58	25.01	102.3	120.39	2.26	2.05	3.61	3.61
Stillwater County	A10	RM 430.43	205204.2	5% Duration	518.9	1129.74	1126.08	2.15	2.08	26.28	23.52	94.85	118.56	2.48	2.22	3.66	3.66
Stillwater County	A10	RM 430.34	204728.4	5% Duration	518.9	1129.57	1126.07	2.18	2.13	27.46	24.59	98.17	113.9	2.38	2.14	3.5	3.5
Stillwater County	A11	RM 430.23	204119.7	5% Duration	518.9	1129.43	1126.63	1.7	1.69	18.04	17.08	164.07	173.97	1.86	1.76	2.8	2.8
Stillwater County	A11	RM 430.12	203479.6	5% Duration	518.9	1129.2	1126.96	1.93	1.88	23.72	22.81	107.15	163.14	1.75	1.69	2.67	2.67
Stillwater County	A11	RM 430.04	202968.2	5% Duration	518.9	1128.95	1127.24	1.93	1.99	25.13	24.44	110.8	178.74	1.5	1.46	2.31	2.31
Stillwater County	A11	RM 429.95	202589.5	5% Duration	518.9	1128.69	1126.33	1.91	2.01	26.17	27.49	138.81	199.74	1.23	1.29	2.36	2.36
Stillwater County	A11	RM 429.88	202224.7	5% Duration	518.9	1128.48	1125.62	1.96	1.94	25.66	25.37	119.61	180.89	1.53	1.52	2.86	2.86
Stillwater County	A11	RM 429.78	201933.6	5% Duration	518.9	1128.24	1123.72	2.19	2	28.71	23.82	86.52	152.68	2.13	1.76	4.52	4.52
Stillwater County	A11	RM 429.69	201539.9	5% Duration	518.9	1127.98	1123.39	2.41	2.06	34.48	22.96	80.63	172.6	2.2	1.46	4.59	4.59
Stillwater County	A11	RM 429.58	200961.9	5% Duration	518.9	1127.71	1124.69	2.16	1.8	29.64	19.9	116.04	275.79	1.56	1.05	3.02	3.02

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 429.38	200210.8	5% Duration	518.9	1127.22	1125.15	1.76	1.66	21.39	17.46	161.66	275.15	1.39	1.14	2.79	2.79
Stillwater County	A11	RM 429.28	199644.1	5% Duration	518.9	1126.93	1123.59	1.88	1.75	24	19.53	143.25	248.34	1.47	1.19	3.34	3.34
Stillwater County	A11	RM 429.18	199152	5% Duration	518.9	1126.65	1124.66	1.59	1.79	18.99	21.67	141.59	237.24	1.07	1.22	2.74	2.74
Stillwater County	A11	RM 429.10	198708.6	5% Duration	518.9	1126.31	1124.26	1.87	2.04	24.99	26.63	82.6	187.87	1.27	1.36	2.73	2.73
Stillwater County	A11	RM 429.00	198203.8	5% Duration	518.9	1125.97	1123.47	1.8	2.02	24.89	27.92	105.1	222.73	1.02	1.15	2.5	2.5
Stillwater County	A11	RM 428.89	197650.5	5% Duration	518.9	1125.78	1121.26	1.84	1.67	20.49	14.95	132.62	208.01	2.04	1.49	4.52	4.52
Stillwater County	A11	RM 428.81	197194.1	5% Duration	518.9	1125.59	1121.47	2.08	1.84	25.42	15.56	95.9	202.08	2.29	1.4	4.12	4.12
Stillwater County	A11	RM 428.66	196404.4	5% Duration	518.9	1125.38	1122.31	1.64	1.63	17.79	17.12	178.45	216.21	1.61	1.55	3.07	3.07
Stillwater County	A11	RM 428.52	195702.6	5% Duration	518.9	1124.88	1122.1	2.21	2.21	35.41	35.41	195.82	197.53	1.2	1.2	2.78	2.78
Stillwater County	A11	RM 428.44	195293.8	5% Duration	518.9	1124.64	1121.18	2.09	2.09	27.59	27.53	137.2	137.53	1.81	1.81	3.46	3.46
Stillwater County	A11	RM 428.39	195075.5	5% Duration	518.9	1124.49	1120.72	2.25	2.25	30.96	30.96	114.5	151.57	2.01	2.01	3.77	3.77
Stillwater County	A11	RM 428.33	194724.6	5% Duration	518.9	1124.35	1121.22	2.12	2.12	27.8	27.8	126.26	140.03	1.94	1.94	3.13	3.13
Stillwater County	A11	RM 428.28	194450.8	5% Duration	518.9	1124.23	1121.2	2.1	2.1	27.63	27.63	132.09	140.24	1.87	1.87	3.03	3.03
Stillwater County	A11	RM 428.23	194235.2	5% Duration	518.9	1124.15	1120.74	2.01	2.01	25.38	24.79	139.29	163.73	1.85	1.81	3.41	3.41
Stillwater County	A11	RM 428.20	194033.4	5% Duration	518.9	1124.09	1120.37	1.9	1.83	21.27	17.93	118.83	154.39	2.24	1.89	3.72	3.72
Stillwater County			193969.6	5% Duration	Bridge												
Stillwater County	A11	RM 428.17	193915	5% Duration	518.9	1123.81	1120.32	2.05	1.97	24.85	19.83	111.86	149.33	2.22	1.77	3.49	3.49
Stillwater County			193871.1	5% Duration	Bridge												
Stillwater County	A11	RM 428.15	193779.9	5% Duration	518.9	1123.72	1120.23	2.1	1.99	25.91	19.65	107.3	153.26	2.25	1.7	3.49	3.49
Stillwater County	A11	RM 428.11	193602.7	5% Duration	518.9	1123.67	1119.42	1.96	1.85	23.49	19.81	122.47	164.33	2.03	1.7	4.25	4.25
Stillwater County	A11	RM 428.09	193436.6	5% Duration	518.9	1123.56	1119.9	2.15	2.01	28.89	23.81	114.38	176.1	1.91	1.57	3.66	3.66
Stillwater County	A11	RM 428.05	193246.1	5% Duration	518.9	1123.4	1120.1	2.35	2.22	34.69	27.39	111.15	169.29	1.88	1.48	3.3	3.3
Stillwater County	A11	RM 428.00	192989.8	5% Duration	518.9	1123.26	1120.28	2.29	2.14	33.31	24.86	122.84	204.76	1.77	1.32	2.98	2.98
Stillwater County	A11	RM 427.95	192728.8	5% Duration	518.9	1123.14	1119.57	2.17	2.1	29.87	25.69	129.28	177.39	1.8	1.55	3.57	3.57
Stillwater County	A11	RM 427.88	192333.2	5% Duration	518.9	1122.92	1119.27	2.31	2.21	31.7	27.84	98.6	141.98	2.17	1.91	3.65	3.65
Stillwater County	A11	RM 427.83	192088.8	5% Duration	518.9	1122.81	1119.18	2.29	2.2	31.12	27.32	97.91	172.32	2.21	1.94	3.63	3.63
Stillwater County	A11	RM 427.76	191724.1	5% Duration	518.9	1122.64	1119.07	2.3	2.22	31.29	20.43	101.84	164.39	2.2	1.43	3.57	3.57
Stillwater County			191581.1	5% Duration	Bridge												
Stillwater County	A11	RM 427.72	191495.5	5% Duration	518.9	1122.23	1118.71	2.36	2.35	33.42	32.15	102.79	107.43	2.14	2.06	3.52	3.52
Stillwater County	A11	RM 427.65	191155.9	5% Duration	518.9	1122.16	1118.58	1.82	1.82	19.71	19.44	131.56	288.58	2.17	2.14	3.58	3.58
Stillwater County	A11	RM 427.53	190509.6	5% Duration	518.9	1121.97	1117.37	1.97	1.97	20.66	20.66	87.06	183.28	3.03	3.03	4.6	4.6
Stillwater County	A11	RM 427.41	189886.1	5% Duration	518.9	1121.85	1118.73	1.83	1.83	18.74	18.74	110.51	146.72	2.57	2.57	3.12	3.12
Stillwater County	A11	RM 427.29	189253.3	5% Duration	518.9	1121.57	1119.12	2.09	2.09	29.89	29.64	172.44	187.95	1.44	1.43	2.45	2.45
Stillwater County	A11	RM 427.17	188639.5	5% Duration	518.9	1121.12	1118.44	2.12	2.09	32	30.09	190.44	212.23	1.28	1.2	2.68	2.68
Stillwater County	A11	RM 427.09	188179.7	5% Duration	518.9	1120.83	1118.34	2.18	2.1	29.53	25.22	123.18	150.96	1.91	1.64	2.49	2.49
Stillwater County	A11	RM 427.00	187745.4	5% Duration	518.9	1120.67	1117.71	1.99	1.78	24.93	21.32	132.59	189.99	1.81	1.56	2.96	2.96
Stillwater County	A11	RM 426.92	187309.3	5% Duration	518.9	1120.19	1117.32	2.64	2.55	51.08	50.08	162.71	176.95	1.17	1.15	2.87	2.87
Stillwater County	A11	RM 426.86	186960.4	5% Duration	518.9	1119.98	1116.77	2.2	2.12	30.68	29.14	128.66	142.51	1.8	1.72	3.21	3.21
Stillwater County	A11	RM 426.75	186401.3	5% Duration	518.9	1119.69	1116.11	2.21	2.09	30.53	28.47	122.3	141.96	1.87	1.75	3.58	3.58
Stillwater County	A11	RM 426.67	185983.5	5% Duration	518.9	1119.54	1115.84	1.99	1.99	24.45	24.45	134.09	134.09	1.95	1.95	3.7	3.7
Stillwater County	A11	RM 426.59	185580.4	5% Duration	518.9	1119.36	1115.47	2.13	2.11	26.2	24.99	101.98	107.95	2.38	2.28	3.89	3.89
Stillwater County	A11	RM 426.52	185166.5	5% Duration	518.9	1119.25	1115.54	1.97	1.97	21.83	21.83	101.58	101.58	2.59	2.59	3.71	3.71
Stillwater County	A11	RM 426.43	184738.3	5% Duration	518.9	1119.14	1115.89	1.95	1.95	21.94	21.37	110.84	114.12	2.4	2.33	3.25	3.25
Stillwater County	A11	RM 426.32	184158.4	5% Duration	518.9	1118.98	1116.39	1.86	1.86	20.54	20.54	129.92	129.92	2.15	2.15	2.59	2.59
Stillwater County	A11	RM 426.20	183517.2	5% Duration	518.9	1118.66	1116.07	2.07	2.07	30	29.77	188.61	190.15	1.33	1.32	2.59	2.59
Stillwater County	A11	RM 426.11	183030.7	5% Duration	518.9	1118.32	1115.37	2.02	2.02	26.65	26.65	218.61	223.43	1.17	1.17	2.95	2.95
Stillwater County	A11	RM 426.00	182442.5	5% Duration	518.9	1117.93	1115.74	1.98	1.9	27.51	25.17	192.53	224.85	1.33	1.21	2.19	2.19
Stillwater County	A11	RM 425.89	181895	5% Duration	518.9	1117.61	1115.1	1.96	1.96	26	26	177.36	177.36	1.49	1.49	2.51	2.51
Stillwater County	A11	RM 425.72	181043.5	5% Duration	518.9	1117.06	1113.77	2.2	2.2	31.58	31.58	144.92	144.92	1.63	1.63	3.29	3.29
Stillwater County	A11	RM 425.58	180310.5	5% Duration	518.9	1116.79	1112.19	2.08	2.08	24.12	23.49	93.84	96.41	2.66	2.59	4.6	4.6
Stillwater County	A11	RM 425.46	179669.9	5% Duration	518.9	1116.56	1112.78	2.2	2.2	27.2	27.2	91.75	129.11	2.57	2.57	3.78	3.78
Stillwater County	A11	RM 425.34	179022.4	5% Duration	518.9	1116.45	1113.64	1.67	1.58	16.8	13.71	131.56	193.01	2.08	1.7	2.81	2.81
Stillwater County	A11	RM 425.24	178485.9	5% Duration	518.9	1116.08	1114.19	2.29	2.18	36.83	26.93	125.75	256.97	1.32	0.97	1.94	1.94
Stillwater County	A11	RM 425.18	178205.8	5% Duration	518.9	1115.82	1113.81	2.13	2.26	31.58	32.79	120.32	165.03	1.33	1.39	2.51	2.51
Stillwater County	A11	RM 425.11	177826.8	5% Duration	518.9	1115.58	1113.29	1.88	2.09	24.67	27.24	116.04	164.06	1.36	1.51	3.29	3.29
Stillwater County	A11	RM 425.04	177454.7	5% Duration	518.9	1115.44	1112.86	1.91	1.76	23.12	18.58	101.45	200.33	1.83	1.47	2.97	2.97
Stillwater County	A11	RM 424.97	177098.9	5% Duration	518.9	1115.15	1113.11	2.33	2.1	36.18	29.31	105.79	195.94	1.55	1.26	2.14	2.14
Stillwater County	A11	RM 424.89	176675.9	5% Duration	518.9	1114.95	1112.27	1.67	1.76	19.2	17.64	132.53	241.09	1.37	1.27	4.15	4.15
Stillwater County	A11	RM 424.81	176242.8	5% Duration	518.9	1114.59	1112.25	2.25	2.16	34.71	30.37	98.55	209.92	1.39	1.22	2.59	2.59
Stillwater County	A11	RM 424.70	175789.3	5% Duration	518.9	1114.42	1111.91	1.73	1.58	19.92	16.36	160.17	272.46	1.53	1.26	2.51	2.51

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A11	RM 424.58	175159.4	5% Duration	518.9	1114.18	1111.34	1.74	1.65	20	17.7	122.87	235.86	1.6	1.42	2.84	2.84
Stillwater County	A11	RM 424.51	174723.2	5% Duration	518.9	1113.9	1110.93	1.93	1.96	27.4	25	128.87	273.44	1.15	1.06	2.97	2.97
Stillwater County	A11	RM 424.38	174051	5% Duration	518.9	1113.58	1110.98	1.82	1.82	22.12	19.59	107.64	206.76	1.56	1.38	2.6	2.6
Stillwater County	A11	RM 424.30	173607.9	5% Duration	518.9	1113.34	1110.75	2.09	2.05	29.16	26.3	99.88	212.34	1.55	1.4	2.59	2.59
Stillwater County	A11	RM 424.21	173153.7	5% Duration	518.9	1113.07	1110.74	1.73	1.78	22.89	23.57	185.28	311.36	1.01	1.04	2.33	2.33
Stillwater County	A11	RM 424.13	172713.5	5% Duration	518.9	1112.8	1110.43	1.86	1.61	23.12	16.28	75.26	299.92	1.52	1.07	2.45	2.45
Stillwater County	A11	RM 424.05	172309.3	5% Duration	518.9	1112.51	1110.18	1.74	1.82	22.89	21.29	130.28	352.32	1.05	0.98	2.33	2.33
Stillwater County	A11	RM 423.98	171892.1	5% Duration	518.9	1112.38	1110.15	1.47	1.39	15.23	11.97	233.68	394.41	1.3	1.03	2.23	2.23
Stillwater County	A11	RM 423.90	171454.2	5% Duration	518.9	1112.01	1109.55	2.26	2.13	34.57	28.83	138.19	234.19	1.47	1.22	2.46	2.46
Stillwater County	A11	RM 423.84	171147.5	5% Duration	518.9	1111.81	1109.08	2.26	2.04	32.64	21.79	118.67	274.29	1.74	1.16	2.73	2.73
Stillwater County	A11	RM 423.74	170686.3	5% Duration	518.9	1111.66	1108.91	1.81	1.54	21.19	13.57	121.11	353.96	1.72	1.1	2.75	2.75
Stillwater County	A11	RM 423.69	170436.3	5% Duration	518.9	1111.39	1108.49	2.47	2.04	36.07	22.63	70.81	211.21	2.25	1.41	2.9	2.9
Stillwater County	A11	RM 423.57	169782.9	5% Duration	518.9	1111.15	1108.2	1.94	1.94	23.63	23.63	145.81	176.95	1.84	1.84	2.95	2.95
Stillwater County	A11	RM 423.47	169296.5	5% Duration	518.9	1110.89	1107.67	2.2	2.2	29.18	29.18	114.25	136.63	2.07	2.07	3.22	3.22
Stillwater County	A11	RM 423.39	168860.7	5% Duration	518.9	1110.68	1107.7	2.28	2.28	30.31	30.31	99.26	99.26	2.3	2.3	2.98	2.98
Stillwater County	A11	RM 423.27	168178	5% Duration	518.9	1110.38	1107.36	2.26	2.26	31.46	31.46	115.48	115.48	1.98	1.98	3.01	3.01
Stillwater County	A12	RM 423.17	167687.7	5% Duration	518.9	1110.18	1107.46	2	2	25.56	25.56	149.14	149.14	1.74	1.74	2.72	2.72
Stillwater County	A12	RM 423.08	167239.6	5% Duration	518.9	1109.91	1107.21	2.24	2.09	32.14	26.33	123.21	175.55	1.73	1.41	2.7	2.7
Stillwater County	A12	RM 423.01	166844.5	5% Duration	518.9	1109.57	1106.84	2.53	2.34	42.1	35.38	110.36	164.94	1.6	1.34	2.73	2.73
Stillwater County	A12	RM 422.91	166338	5% Duration	518.9	1109.33	1106.54	2.08	1.97	27.08	23.52	109.12	163.83	1.85	1.61	2.79	2.79
Stillwater County	A12	RM 422.80	165757.6	5% Duration	518.9	1109.08	1106.83	1.97	1.9	25.32	22.6	141.55	210.66	1.64	1.47	2.25	2.25
Stillwater County	A12	RM 422.70	165279.2	5% Duration	518.9	1108.9	1105.79	1.71	1.56	20.12	17.73	195.93	286.75	1.41	1.24	3.11	3.11
Stillwater County	A12	RM 422.63	164895.4	5% Duration	518.9	1108.66	1105.43	1.96	1.74	26.89	22.27	165.81	280.5	1.34	1.11	3.23	3.23
Stillwater County	A12	RM 422.53	164348.1	5% Duration	518.9	1108.16	1104.76	2.32	2.22	37.41	33.1	147.75	193.92	1.36	1.2	3.4	3.4
Stillwater County	A12	RM 422.39	163609.2	5% Duration	518.9	1107.69	1104.22	2.23	2.22	31.17	30.04	125.28	131.44	1.86	1.79	3.47	3.47
Stillwater County	A12	RM 422.30	163120.4	5% Duration	518.9	1107.44	1104.18	2.3	2.3	31.3	31.3	103.44	103.44	2.18	2.18	3.26	3.26
Stillwater County	A12	RM 422.19	162534.3	5% Duration	518.9	1107.29	1103.72	1.96	1.96	21.7	21.7	104.22	104.22	2.54	2.54	3.57	3.57
Stillwater County	A12	RM 422.08	161934.5	5% Duration	518.9	1107.04	1104.18	2.21	2.21	28.45	28.45	102.97	102.97	2.29	2.29	2.86	2.86
Stillwater County	A12	RM 421.98	161402.1	5% Duration	518.9	1106.93	1103.86	1.75	1.75	18.36	18.36	140.58	140.58	2.11	2.11	3.07	3.07
Stillwater County	A12	RM 421.90	161037.7	5% Duration	518.9	1106.82	1103.14	1.78	1.78	20.04	20.04	163.66	163.66	1.78	1.78	3.67	3.67
Stillwater County	A12	RM 421.86	160799.3	5% Duration	518.9	1106.68	1102.54	1.94	1.94	25.72	25.72	188.66	188.66	1.42	1.42	4.14	4.14
Stillwater County	A12	RM 421.81	160535.9	5% Duration	518.9	1106.47	1102.38	2.11	2.11	31.43	31.43	186.7	186.7	1.31	1.31	4.09	4.09
Stillwater County	A12	RM 421.77	160279.4	5% Duration	518.9	1106.19	1102.41	2.43	2.38	39.62	37.48	137.81	153.8	1.5	1.42	3.78	3.78
Stillwater County	A12	RM 421.69	159875.5	5% Duration	518.9	1106.14	1102.56	1.7	1.66	16.73	15.01	127.35	148	2.35	2.12	3.58	3.58
Stillwater County	A12	RM 421.60	159411.4	5% Duration	518.9	1105.89	1103.26	2.16	2.05	29.69	26.35	127.92	158.89	1.79	1.59	2.63	2.63
Stillwater County	A12	RM 421.53	159038	5% Duration	518.9	1105.69	1102.81	2.24	2.14	31.32	27.2	114.98	146.27	1.9	1.65	2.87	2.87
Stillwater County	A12	RM 421.45	158590.5	5% Duration	518.9	1105.5	1103.26	1.99	1.82	25.9	19.06	147.87	236.4	1.64	1.2	2.24	2.24
Stillwater County	A12	RM 421.32	157930.2	5% Duration	518.9	1105.15	1102.82	2.02	1.91	28.06	24.3	80.51	221.97	1.41	1.22	2.33	2.33
Stillwater County	A12	RM 421.24	157513	5% Duration	518.9	1104.76	1103.05	2.08	2.21	33.9	34.32	102.96	245.91	0.94	0.95	2.28	2.28
Stillwater County	A12	RM 421.13	156951.5	5% Duration	518.9	1104.43	1100.38	2.18	1.85	31.66	22.84	86.11	250.53	1.55	1.12	4.05	4.05
Stillwater County	A12	RM 421.05	156536.5	5% Duration	518.9	1104.19	1102.11	2.11	1.81	30.88	23.61	73.57	269.73	1.39	1.06	2.08	2.08
Stillwater County	A12	RM 420.94	155960.1	5% Duration	518.9	1103.97	1101.68	1.48	1.45	14.37	13.36	211.59	233.45	1.64	1.53	2.29	2.29
Stillwater County	A12	RM 420.85	155473.6	5% Duration	518.9	1103.38	1100.98	2.91	2.81	56.42	45.36	115.99	151.18	1.53	1.23	2.4	2.4
Stillwater County	A12	RM 420.75	154957.2	5% Duration	518.9	1103.11	1099.95	2.16	2.11	30.31	27.38	137.64	162.21	1.68	1.52	3.16	3.16
Stillwater County	A12	RM 420.66	154483	5% Duration	518.9	1102.93	1099.89	1.87	1.81	22.17	18.94	151.06	183.91	1.82	1.56	3.04	3.04
Stillwater County	A12	RM 420.58	154037.5	5% Duration	518.9	1102.66	1100.13	2.23	2.11	30.54	20.56	115.38	183.37	1.99	1.34	2.53	2.53
Stillwater County	A12	RM 420.52	153691.5	5% Duration	518.9	1102.5	1099.7	2.21	2.01	30.08	21.14	119.24	190.36	1.93	1.36	2.8	2.8
Stillwater County	A12	RM 420.46	153398	5% Duration	518.9	1102.36	1099.36	2.18	2.02	29.5	24.42	123.33	163.74	1.89	1.57	3	3
Stillwater County	A12	RM 420.38	152998.3	5% Duration	518.9	1102.2	1099.19	1.96	1.81	25.04	23.19	150.51	185.25	1.67	1.55	3.01	3.01
Stillwater County	A12	RM 420.30	152566.4	5% Duration	518.9	1102	1099.43	1.81	1.62	23.3	19.95	215.62	295.36	1.26	1.08	2.57	2.57
Stillwater County	A12	RM 420.21	152106.2	5% Duration	518.9	1101.62	1098.69	2.19	1.93	32.78	27.64	158.32	225.12	1.42	1.19	2.93	2.93
Stillwater County	A12	RM 420.15	151738.6	5% Duration	518.9	1101.48	1098.38	1.88	1.88	17.39	17.22	169.88	171.64	1.63	1.61	3.1	3.1
Stillwater County	A12	RM 420.08	151399.3	5% Duration	518.9	1101.34	1097.97	1.87	1.87	23.75	23.68	186.66	187.19	1.48	1.48	3.37	3.37
Stillwater County	A12	RM 420.03	151123.2	5% Duration	518.9	1101.23	1097.96	1.89	1.89	22.01	21.96	138.78	139.07	1.98	1.97	3.27	3.27
Stillwater County	A12	RM 419.96	150779.4	5% Duration	518.9	1101	1098.1	2.25	2.25	30.91	30.91	114.22	114.22	2.02	2.02	2.9	2.9
Stillwater County	A12	RM 419.91	150511.3	5% Duration	518.9	1100.9	1097.83	2.19	2.19	27.72	27.08	98.93	101.35	2.39	2.34	3.07	3.07
Stillwater County	A12	RM 419.85	150192.4	5% Duration	518.9	1100.69	1097.85	2.47	2.44	36.83	34.57	101.79	109.92	2.06	1.94	2.84	2.84
Stillwater County	A12	RM 419.78	149807.6	5% Duration	518.9	1100.6	1097.13	2.05	2.01	24.08	18.91	101.66	132.93	2.48	1.95	3.47	3.47
Stillwater County	A12	RM 419.70	149371.5	5% Duration	518.9	1100.44	1097.73	2.07	2.02	26.36	24.29	129.17	143.45	1.94	1.79	2.71	2.71
Stillwater County	A12	RM 419.63	149047.6	5% Duration	518.9	1100.34	1097.92	1.85	1.84	21.89	21.33	163.13	167.63	1.72	1.68	2.42	2.42

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A12	RM 419.53	148495.9	5% Duration	518.9	1099.95	1097.22	2.36	2.23	37.4	32.38	117.74	176.47	1.52	1.32	2.73	2.73
Stillwater County	A12	RM 419.46	148117.9	5% Duration	518.9	1099.69	1097.34	2.13	2.08	30.59	24.82	114.09	203.87	1.5	1.22	2.61	2.61
Stillwater County	A12	RM 419.38	147728.5	5% Duration	518.9	1099.29	1097.36	2.47	2.25	43.68	35.14	114.06	228.91	1.25	1.01	1.93	1.93
Stillwater County	A12	RM 419.31	147342.9	5% Duration	518.9	1099.2	1096.9	1.58	1.43	16.18	13.38	101.15	260.74	1.68	1.39	2.3	2.3
Stillwater County	A12	RM 419.19	146720.3	5% Duration	518.9	1099.11	1096.42	1.08	1.21	7.39	8.58	95.03	204.68	1.81	2.1	4.71	4.71
Stillwater County	A12	RM 419.10	146243.9	5% Duration	518.9	1099.06	1095.09	1.25	1.23	8.73	8.17	155.22	172.11	2.66	2.49	3.97	3.97
Stillwater County	A12	RM 419.03	145859.8	5% Duration	518.9	1098.88	1095.88	1.87	1.87	22.46	22.46	160.95	165.51	1.72	1.72	3	3
Stillwater County	A12	RM 418.95	145435.3	5% Duration	518.9	1098.65	1095.15	2	2	27.44	27.44	186.75	190.58	1.39	1.39	3.5	3.5
Stillwater County	A12	RM 418.84	144864	5% Duration	518.9	1098.3	1094.92	2.04	2.04	27.61	27.61	165.28	167.9	1.54	1.54	3.38	3.38
Stillwater County	A12	RM 418.69	144066	5% Duration	518.9	1097.79	1095.29	2.16	2.07	31.76	26.37	150.77	210.32	1.44	1.2	2.5	2.5
Stillwater County	A12	RM 418.57	143452.8	5% Duration	518.9	1097.38	1095.1	2.2	2.07	32.22	28.42	121.38	185.65	1.53	1.35	2.28	2.28
Stillwater County	A12	RM 418.49	143008.1	5% Duration	518.9	1097.22	1094.94	1.7	1.52	19.43	14.28	165.85	309.1	1.5	1.1	2.28	2.28
Stillwater County	A12	RM 418.35	142310.9	5% Duration	518.9	1096.82	1093.15	2.2	1.88	30.23	19.36	98.6	227.85	1.89	1.21	3.67	3.67
Stillwater County	A12	RM 418.25	141740.8	5% Duration	518.9	1096.55	1093.71	1.84	1.56	24.38	17.14	154.45	398.03	1.24	0.87	2.84	2.84
Stillwater County	A12	RM 418.08	140894.8	5% Duration	518.9	1096.05	1092.65	2.07	1.78	28.47	18.51	127.76	288.96	1.55	1.01	3.4	3.4
Stillwater County	A12	RM 417.89	139893.7	5% Duration	518.9	1095.33	1092.75	2.41	2.36	37.44	32.97	124.85	146.22	1.71	1.5	2.58	2.58
Stillwater County	A12	RM 417.79	139376.4	5% Duration	518.9	1094.88	1091.64	2.78	2.61	46.64	32.14	85.76	137.55	2.1	1.45	3.24	3.24
Stillwater County	A12	RM 417.65	138633.4	5% Duration	518.9	1094.5	1091.57	2.49	2.34	36.87	30.67	87.3	123.55	2.16	1.79	2.93	2.93
Stillwater County	A12	RM 417.54	138089.5	5% Duration	518.9	1094.23	1091.15	2.46	2.25	35.2	24.96	82.36	139.21	2.34	1.66	3.08	3.08
Stillwater County	A12	RM 417.40	137321.3	5% Duration	583.9	1093.88	1091.71	2.24	1.98	32.8	25.66	114.81	229.73	1.64	1.28	2.16	2.16
Stillwater County	A12	RM 417.30	136818.2	5% Duration	583.9	1093.51	1091.51	2.16	2.06	33.01	28.46	196.23	259.65	1.28	1.11	2	2
Stillwater County	A12	RM 417.20	136304	5% Duration	583.9	1093.32	1091.27	1.52	1.45	16.17	14.86	198.9	330.19	1.33	1.22	2.05	2.05
Stillwater County	A13	RM 417.09	135706	5% Duration	583.9	1092.82	1090.35	2.32	2.32	36.87	36.87	178	195.47	1.41	1.41	2.47	2.47
Stillwater County	A13	RM 417.01	135303.6	5% Duration	583.9	1092.62	1090	1.9	1.9	24.71	24.71	215.69	236.59	1.42	1.42	2.62	2.62
Stillwater County	A13	RM 416.94	134899.8	5% Duration	583.9	1092.27	1089.69	2.31	2.31	30.68	30.68	187.15	210.29	1.35	1.35	2.58	2.58
Stillwater County	A13	RM 416.85	134457.6	5% Duration	583.9	1092.15	1089.62	1.75	1.73	19.13	17.23	181.01	216.67	1.85	1.66	2.53	2.53
Stillwater County	A13	RM 416.73	133843.5	5% Duration	583.9	1091.82	1089.6	2.03	2.02	28.27	26.98	202.84	227.35	1.42	1.35	2.22	2.22
Stillwater County	A13	RM 416.63	133286.1	5% Duration	583.9	1091.5	1089.3	2.06	1.94	28.66	25.65	114.33	250.21	1.48	1.33	2.2	2.2
Stillwater County	A13	RM 416.52	132717.9	5% Duration	583.9	1091.18	1089.09	2.05	1.7	30.06	23.52	94.29	350.95	1.25	0.98	2.09	2.09
Stillwater County	A13	RM 416.43	132250.3	5% Duration	583.9	1090.77	1088.74	2.07	1.89	30.69	24.69	90.43	311.15	1.24	1	2.03	2.03
Stillwater County	A13	RM 416.33	131707.5	5% Duration	583.9	1090.39	1088.02	1.92	1.93	27.92	27	121.26	339.65	1.03	1	2.37	2.37
Stillwater County	A13	RM 416.22	131140.9	5% Duration	583.9	1089.91	1087.56	2.47	2.13	39.89	28.14	81.03	239.37	1.62	1.15	2.35	2.35
Stillwater County	A13	RM 416.13	130626.3	5% Duration	583.9	1089.57	1086.65	2.26	2.13	33.16	27.15	133.75	230.86	1.67	1.37	2.92	2.92
Stillwater County	A13	RM 416.04	130164.9	5% Duration	583.9	1089.09	1085.03	2.78	2.57	48.91	36.37	109.56	193.37	1.78	1.33	4.06	4.06
Stillwater County	A13	RM 415.96	129734.7	5% Duration	583.9	1088.89	1085.48	2.3	1.89	32.98	23.44	113.49	228.57	1.9	1.35	3.41	3.41
Stillwater County	A13	RM 415.90	129423.4	5% Duration	583.9	1088.68	1085.77	2.06	1.81	29.84	24.82	146.97	289.71	1.33	1.11	2.91	2.91
Stillwater County	A13	RM 415.83	129071.6	5% Duration	583.9	1088.48	1085.89	1.72	1.73	20.49	19.16	146.75	257.48	1.39	1.31	3.15	3.15
Stillwater County	A13	RM 415.74	128639.5	5% Duration	583.9	1088.3	1084.72	1.97	1.83	23.4	17.28	137.83	204.56	2.11	1.56	3.58	3.58
Stillwater County	A13	RM 415.72	128521.2	5% Duration	583.9	1088.21	1084.8	2.17	1.99	28.28	21.67	123.61	179.86	2.13	1.63	3.41	3.41
Stillwater County	A13	RM 415.65	128106.2	5% Duration	583.9	1088.02	1083.7	2.25	2.09	29.58	20.83	110.87	171.49	2.31	1.63	4.32	4.32
Stillwater County	A13	RM 415.59	127828.3	5% Duration	583.9	1087.91	1083.61	2.25	2.22	28.16	25.72	97.2	108.06	2.67	2.43	4.3	4.3
Stillwater County	A13	RM 415.55	127620.5	5% Duration	583.9	1087.92	1082.84	1.47	1.47	11.53	11.53	128.3	128.3	3.09	3.09	5.08	5.08
Stillwater County			127503	5% Duration	Bridge												
Stillwater County	A13	RM 415.52	127472.1	5% Duration	583.9	1087.54	1082.96	1.48	1.48	11.39	11.39	120	120	3.29	3.29	4.58	4.58
Stillwater County	A13	RM 415.50	127340.9	5% Duration	583.9	1087.4	1083.14	1.93	1.93	22.15	22.15	138.74	138.74	2.18	2.18	4.26	4.26
Stillwater County	A13	RM 415.45	127087.4	5% Duration	583.9	1087.23	1083.18	2.25	2.25	29.61	29.61	112.51	112.51	2.3	2.3	4.05	4.05
Stillwater County	A13	RM 415.39	126788	5% Duration	583.9	1087.1	1084.07	2.16	2.16	30.11	30.11	158.93	211.77	1.7	1.7	3.03	3.03
Stillwater County	A13	RM 415.34	126499.1	5% Duration	583.9	1086.86	1084.45	2.48	2.34	40.57	36	122.75	187.73	1.59	1.41	2.41	2.41
Stillwater County	A13	RM 415.25	126040.7	5% Duration	583.9	1086.59	1082.42	2.34	2.23	33.85	30.67	111.82	149.97	1.92	1.75	4.17	4.17
Stillwater County	A13	RM 415.18	125663.1	5% Duration	583.9	1086.41	1083.81	2.17	2.07	29.75	26.82	129.12	170.39	1.83	1.65	2.6	2.6
Stillwater County	A13	RM 415.10	125251.2	5% Duration	583.9	1086.05	1083.01	2.66	2.44	42.78	32.08	98.35	154.81	2.06	1.55	3.04	3.04
Stillwater County	A13	RM 414.97	124585.1	5% Duration	583.9	1085.65	1082.64	2.57	2.34	40.31	31.21	99.87	160.95	2	1.55	3.01	3.01
Stillwater County	A13	RM 414.88	124110.1	5% Duration	583.9	1085.26	1083.02	2.7	2.49	47.71	38.74	116.69	178.01	1.62	1.32	2.24	2.24
Stillwater County	A13	RM 414.71	123222	5% Duration	583.9	1084.78	1080.88	2.07	2.07	26.97	26.97	154.61	154.61	1.83	1.83	3.9	3.9
Stillwater County	A13	RM 414.57	122473.6	5% Duration	583.9	1084.39	1081.21	2.21	2.21	30.15	30.15	138.21	149.44	1.92	1.92	3.18	3.18
Stillwater County	A13	RM 414.43	121696.6	5% Duration	583.9	1084.04	1080.49	2.05	1.98	26.84	24.12	158.76	190.98	1.76	1.59	3.55	3.55
Stillwater County	A13	RM 414.21	120527.7	5% Duration	583.9	1083.16	1080.81	2.38	2.31	41.7	40.05	187.89	228.78	1.15	1.1	2.35	2.35
Stillwater County	A13	RM 413.90	118914.7	5% Duration	583.9	1081.86	1079.28	2.36	2.36	35.31	33.87	137.43	170.13	1.8	1.73	2.58	2.58
Stillwater County	A13	RM 413.65	117570.4	5% Duration	583.9	1081.06	1078.15	2.36	2.36	34.73	34.73	132.96	305.03	1.86	1.86	2.91	2.91
Stillwater County	A14	RM 413.44	116446.3	5% Duration	583.9	1080.57	1076.4	2.08	2.07	26.09	24.03	134.95	231.29	2.08	1.92	4.17	4.17

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A14	RM 413.27	115556.7	5% Duration	583.9	1080.03	1077.8	2.4	2.21	38.36	26.56	152.69	329.96	1.53	1.06	2.23	2.23
Stillwater County	A14	RM 413.11	114697.4	5% Duration	583.9	1079.52	1077.12	1.99	1.91	26.89	24.29	190.94	330.06	1.45	1.31	2.4	2.4
Stillwater County	A14	RM 412.99	114113.2	5% Duration	583.9	1079	1076.41	2.42	2.31	40.1	33.73	164.99	276.33	1.42	1.19	2.59	2.59
Stillwater County	A14	RM 412.88	113533.6	5% Duration	583.9	1078.68	1076.03	2.17	2.01	29.32	19.86	136.97	259.1	1.88	1.28	2.64	2.64
Stillwater County	A14	RM 412.73	112742.6	5% Duration	583.9	1078.18	1074.72	2.29	2.12	35.44	24.9	165.13	301.96	1.48	1.04	3.46	3.46
Stillwater County	A14	RM 412.59	112005.5	5% Duration	583.9	1077.62	1074.72	2.25	2.08	34.99	25.76	181.17	286.8	1.4	1.03	2.9	2.9
Stillwater County	A14	RM 412.49	111442.5	5% Duration	583.9	1076.98	1074.54	2.6	2.46	49.77	37.89	179.33	268.9	1.16	0.88	2.44	2.44
Stillwater County	A14	RM 412.31	110522	5% Duration	583.9	1076.57	1072.96	1.89	1.87	21.28	20.42	143.17	150.86	2.16	2.07	3.61	3.61
Stillwater County	A14	RM 412.19	109955.3	5% Duration	583.9	1076.03	1071.57	2.9	2.9	50.86	50.86	96.49	96.49	2.09	2.09	4.46	4.46
Stillwater County	A14	RM 412.05	109175.2	5% Duration	583.9	1075.63	1072.08	2.46	2.46	35.72	35.72	106.96	106.96	2.22	2.22	3.55	3.55
Stillwater County	A14	RM 411.92	108510.2	5% Duration	583.9	1075.33	1072.88	2.25	2.25	31.25	31.25	134.32	134.32	1.93	1.93	2.45	2.45
Stillwater County	A14	RM 411.81	107950.5	5% Duration	583.9	1074.95	1070.62	2.51	2.51	39.14	39.14	122.28	122.28	1.9	1.9	4.33	4.33
Stillwater County	A14	RM 411.71	107391.9	5% Duration	583.9	1074.79	1070.83	2.04	2.04	23.51	23.51	113.71	113.71	2.52	2.52	3.96	3.96
Stillwater County	A14	RM 411.58	106721	5% Duration	583.9	1074.55	1071.65	2.07	2.07	26.53	26.53	148.19	163.35	1.91	1.91	2.9	2.9
Stillwater County	A14	RM 411.47	106133.7	5% Duration	583.9	1074.18	1071.87	2.32	2.32	34.97	34.46	149.08	151.3	1.68	1.66	2.3	2.3
Stillwater County	A14	RM 411.32	105338.4	5% Duration	583.9	1073.45	1069.29	2.65	2.58	47.54	44.55	150.14	165.29	1.46	1.37	4.16	4.16
Stillwater County	A14	RM 411.14	104374.6	5% Duration	583.9	1072.93	1067.92	2.36	2.25	31.53	25.23	96.73	128.04	2.53	2.03	5.01	5.01
Stillwater County	A14	RM 411.00	103638.4	5% Duration	583.9	1072.64	1069.6	2.16	1.9	29.8	21.39	135.88	241.06	1.78	1.28	3.04	3.04
Stillwater County	A14	RM 410.85	102835.8	5% Duration	583.9	1072.13	1069.92	2.06	2.01	30.91	26.56	74.71	285.69	1.18	1.02	2.21	2.21
Stillwater County	A14	RM 410.74	102286.3	5% Duration	583.9	1071.74	1068.99	2.15	1.77	30.77	21.91	66.25	296.39	1.57	1.11	2.75	2.75
Stillwater County	A14	RM 410.63	101668.3	5% Duration	583.9	1071.2	1068.37	2.7	2.09	47.45	27.58	75.45	291.57	1.66	0.96	2.83	2.83
Stillwater County	A14	RM 410.52	101115.7	5% Duration	583.9	1070.89	1067.81	2.04	1.88	26.78	20.46	119.13	233.41	1.74	1.33	3.08	3.08
Stillwater County	A14	RM 410.42	100568.4	5% Duration	583.9	1070.38	1066.66	2.48	2.45	43.33	42.47	116.93	186.41	1.31	1.28	3.72	3.72
Stillwater County	A14	RM 410.33	100099.2	5% Duration	583.9	1070.13	1066.6	1.94	1.91	25.09	22.66	192.67	219.59	1.55	1.4	3.53	3.53
Stillwater County	A14	RM 410.22	99589.26	5% Duration	583.9	1069.82	1066.94	2.17	2.14	29.74	26.56	146.16	166.93	1.83	1.64	2.88	2.88
Stillwater County	A14	RM 410.12	99057.4	5% Duration	583.9	1069.47	1065.8	2.3	2.08	35.98	28.97	169.95	243.94	1.44	1.16	3.67	3.67
Stillwater County	A14	RM 410.03	98630.66	5% Duration	583.9	1068.98	1065.33	2.59	2.4	48.31	44.15	173.98	215.91	1.23	1.13	3.65	3.65
Stillwater County	A14	RM 409.99	98385.41	5% Duration	583.9	1068.75	1065.38	2.49	2.33	41.18	38.12	144.71	180.14	1.56	1.44	3.37	3.37
Stillwater County	A14	RM 409.94	98072.09	5% Duration	583.9	1068.46	1065.51	2.46	2.37	42.72	35.31	183.54	268.61	1.29	1.06	2.95	2.95
Stillwater County	A14	RM 409.87	97717.24	5% Duration	583.9	1068.46	1065.52	1.56	1.3	14.42	9.58	156.21	311.74	2.23	1.48	2.94	2.94
Stillwater County	A14	RM 409.76	97130.84	5% Duration	583.9	1068.2	1065.37	2.05	1.81	25.87	20.09	139.87	224.77	1.93	1.5	2.83	2.83
Stillwater County	A14	RM 409.60	96278.7	5% Duration	583.9	1067.23	1064.65	3.27	3.12	71.54	56.29	115.9	156.21	1.52	1.2	2.58	2.58
Stillwater County	A14	RM 409.43	95381.62	5% Duration	583.9	1066.85	1063.55	2.13	1.84	26.92	15.28	114.57	353.8	2.17	1.23	3.3	3.3
Stillwater County	A14	RM 409.24	94405.29	5% Duration	583.9	1066.05	1064.55	2.47	2.33	46.61	36.73	96.09	314.23	1.02	0.81	1.83	1.83
Stillwater County	A14	RM 409.15	93912.54	5% Duration	583.9	1065.55	1064.27	1.32	2.05	14.65	22.19	132.32	239.83	0.78	1.19	3.48	3.48
Stillwater County	A14	RM 408.99	93008.08	5% Duration	583.9	1064.95	1063.94	1.66	2.38	23.51	32.66	127.73	241.39	0.73	1.02	2.42	2.42
Stillwater County	A14	RM 408.84	92229.27	5% Duration	583.9	1064.69	1062.1	1.72	1.73	20.94	19.54	133.81	281.95	1.27	1.2	2.59	2.59
Stillwater County	A14	RM 408.63	91072.98	5% Duration	583.9	1063.38	1061.85	2.69	2.75	60.7	60.6	151.21	283.83	0.78	0.78	1.8	1.8
Stillwater County	A14	RM 408.41	89726.16	5% Duration	583.9	1062.61	1059.04	2.04	1.82	24.17	18.16	96.27	181.39	2.36	1.77	3.57	3.57
Stillwater County	A14	RM 408.26	88966.66	5% Duration	583.9	1062.4	1058.13	1.93	1.91	20.86	18.2	114.21	132.5	2.64	2.3	4.27	4.27
Stillwater County	A14	RM 408.10	88091.52	5% Duration	583.9	1062.09	1057.78	2.22	2.16	27.17	24.64	95.87	108.94	2.73	2.48	4.31	4.31
Stillwater County	A14	RM 408.02	87720.33	5% Duration	583.9	1062.02	1058.61	1.96	1.93	21.79	19.89	118.04	131.87	2.52	2.3	3.41	3.41
Stillwater County	A14	RM 407.83	86708.48	5% Duration	583.9	1061.47	1058.65	2.35	2.3	39.22	35.93	137.27	216.4	1.28	1.17	2.82	2.82
Stillwater County	A14	RM 407.71	86078.99	5% Duration	583.9	1061.19	1057.9	2.02	1.9	24.8	20.95	112.15	179.78	2.02	1.71	3.29	3.29
Stillwater County	A14	RM 407.61	85508.29	5% Duration	583.9	1060.97	1058.36	1.78	1.82	22.31	21.72	166.93	249.95	1.32	1.28	2.61	2.61
Stillwater County	A14	RM 407.50	84909.3	5% Duration	583.9	1060.65	1058.55	2.03	1.86	30.09	24.34	166.06	328.65	1.18	0.96	2.59	2.59
Stillwater County	A14	RM 407.41	84433.26	5% Duration	583.9	1060.25	1057.85	2.49	2.02	41.66	24.9	104.83	322.7	1.5	0.9	2.59	2.59
Stillwater County	A14	RM 407.36	84180.66	5% Duration	583.9	1059.98	1057.59	2.68	2.2	47.48	28.81	95.61	275.73	1.59	0.96	2.39	2.39
Stillwater County	A14	RM 407.29	83775.88	5% Duration	583.9	1059.7	1057.08	1.8	1.98	22.04	24.48	116.18	181.71	1.46	1.62	2.88	2.88
Stillwater County	A14	RM 407.13	82954.84	5% Duration	583.9	1059.06	1056.27	2.31	2.31	40.2	40	236.91	238.18	1.07	1.06	2.78	2.78
Stillwater County	A14	RM 406.98	82156.72	5% Duration	583.9	1058.71	1056.37	1.67	1.65	17.82	17.36	193.94	202.58	1.78	1.74	2.34	2.34
Stillwater County	A14	RM 406.86	81532.92	5% Duration	583.9	1058.26	1055.69	2.51	2.48	37.93	35.88	110.65	118.64	2.1	1.98	2.57	2.57
Stillwater County	A14	RM 406.77	81053.3	5% Duration	583.9	1058.07	1053.84	2.28	2.23	30.13	24.43	107.71	136.84	2.37	1.92	4.23	4.23
Stillwater County	A14	RM 406.64	80405.13	5% Duration	583.9	1057.9	1054.89	1.94	1.92	22.08	16.73	133.16	178.19	2.26	1.71	3.01	3.01
Stillwater County	A14	RM 406.48	79524.79	5% Duration	583.9	1057.3	1054.8	2.57	2.45	44.17	39.61	161.23	194.84	1.36	1.22	2.5	2.5
Stillwater County	A14	RM 406.25	78337.26	5% Duration	583.9	1056.45	1054.03	2.3	2.22	33.75	29.62	136.98	167.77	1.79	1.57	2.42	2.42
Stillwater County	A14	RM 406.08	77409.13	5% Duration	583.9	1055.79	1052.87	2.59	2.43	41.67	33.93	109.79	152.38	1.94	1.58	2.92	2.92
Stillwater County	A14	RM 405.93	76624.91	5% Duration	583.9	1055.41	1052.64	2.29	2.26	31	27.26	114.32	132.44	2.22	1.95	2.77	2.77
Stillwater County	A14	RM 405.81	75994.44	5% Duration	583.9	1055.2	1051.93	2.03	1.98	24.63	22.6	131.21	148.21	2.16	1.99	3.27	3.27
Stillwater County	A15	RM 405.77	75764.36	5% Duration	583.9	1055.03	1052.63	2.34	2.23	35.03	31.11	138.3	168.95	1.75	1.55	2.4	2.4

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A15	RM 405.67	75185.26	5% Duration	583.9	1054.61	1052.06	2.55	2.11	42.12	29.2	82.19	239.7	1.67	1.16	2.54	2.54
Stillwater County	A15	RM 405.61	74883.52	5% Duration	583.9	1054.42	1051.81	2.54	2.1	39.22	24.19	69.55	266.07	2.03	1.25	2.61	2.61
Stillwater County	A15	RM 405.52	74415.92	5% Duration	583.9	1053.82	1051.43	3.35	2.76	69.51	38.79	52.24	198.4	1.92	1.07	2.39	2.39
Stillwater County	A15	RM 405.45	74031.34	5% Duration	583.9	1053.58	1051.1	2.99	1.96	54.25	26.79	57.4	300.62	2.06	1.02	2.48	2.48
Stillwater County	A15	RM 405.34	73437.72	5% Duration	583.9	1053.09	1050.67	2.63	2.47	43.49	32.37	116.05	173.13	1.84	1.37	2.42	2.42
Stillwater County	A15	RM 405.18	72616.33	5% Duration	583.9	1052.53	1049.45	2.73	2.7	43.04	36.91	89.74	112.9	2.38	2.04	3.08	3.08
Stillwater County	A15	RM 405.09	72171.48	5% Duration	583.9	1052.35	1049.09	2.35	2.21	33.04	24.56	113.57	178.83	2.11	1.57	3.26	3.26
Stillwater County	A15	RM 405.02	71774.52	5% Duration	583.9	1052.08	1048.59	2.68	2.47	41.23	29.79	85.56	136.55	2.41	1.73	3.49	3.49
Stillwater County	A15	RM 404.97	71526.86	5% Duration	583.9	1052.01	1048.35	2.34	2.16	31.9	24.62	101.2	153.52	2.29	1.76	3.67	3.67
Stillwater County	A15	RM 404.90	71150.58	5% Duration	583.9	1051.79	1048.99	2.49	2.29	37.04	27.28	100.93	161.09	2.16	1.59	2.8	2.8
Stillwater County	A15	RM 404.84	70801.47	5% Duration	583.9	1051.69	1049.19	2.16	2.02	28.26	24.17	114.89	167.19	2.04	1.75	2.5	2.5
Stillwater County	A15	RM 404.77	70415.17	5% Duration	583.9	1051.43	1048.51	2.55	2.33	37.91	29.62	83.06	138.16	2.33	1.82	2.92	2.92
Stillwater County	A15	RM 404.71	70152.7	5% Duration	583.9	1051.41	1048.14	2.02	1.87	23.28	20.3	81.74	143.87	2.5	2.17	3.27	3.27
Stillwater County	A15	RM 404.59	69477.61	5% Duration	583.9	1051.07	1047.56	2.36	2.36	32.53	32.53	105.52	105.52	2.34	2.34	3.51	3.51
Stillwater County	A15	RM 404.54	69214.33	5% Duration	583.9	1050.98	1047.65	2.22	2.22	29.27	29.27	118.45	118.45	2.22	2.22	3.33	3.33
Stillwater County	A15	RM 404.35	68254.38	5% Duration	583.9	1050.49	1048.18	2.11	2.19	30.08	31.58	133.14	168.06	1.5	1.58	2.72	2.72
Stillwater County	A15	RM 404.23	67606.98	5% Duration	583.9	1050.13	1047.77	2.18	2.16	31.18	30.4	125.32	172.29	1.6	1.57	2.36	2.36
Stillwater County	A15	RM 404.10	66934.17	5% Duration	583.9	1049.72	1047.61	2.18	2.05	30.82	27.53	118.39	190.3	1.68	1.5	2.11	2.11
Stillwater County	A15	RM 403.94	66110.59	5% Duration	583.9	1049.24	1045.27	2.37	2.12	34.82	27.28	103.21	183.61	1.91	1.5	3.97	3.97
Stillwater County	A15	RM 403.85	65604.39	5% Duration	583.9	1048.97	1044.79	2.51	2.16	35.33	22.47	75.35	167.53	2.64	1.67	4.18	4.18
Stillwater County	A15	RM 403.75	65058.55	5% Duration	583.9	1048.64	1046.13	2.61	2.43	42.51	34.29	99.42	156.64	1.91	1.54	2.51	2.51
Stillwater County	A15	RM 403.69	64721.22	5% Duration	583.9	1048.52	1046.02	2.03	1.9	27.06	23.74	130.37	215.92	1.62	1.43	2.5	2.5
Stillwater County	A15	RM 403.62	64341.29	5% Duration	583.9	1048.19	1045.75	2.64	2.28	46.24	35.14	70.79	212	1.58	1.21	2.44	2.44
Stillwater County	A15	RM 403.55	63997.04	5% Duration	583.9	1047.76	1045.95	2.61	2.49	51.68	47.62	114.28	247.74	1.03	0.95	1.81	1.81
Stillwater County	A15	RM 403.38	62985.06	5% Duration	583.9	1047.11	1043.43	2.03	1.91	26.43	22.24	156.84	211.96	1.71	1.44	3.68	3.68
Stillwater County	A15	RM 403.24	62260	5% Duration	583.9	1046.86	1043.43	1.81	1.81	19.88	19.88	157.33	157.33	2.05	2.05	3.43	3.43
Stillwater County	A15	RM 403.15	61770.95	5% Duration	583.9	1046.6	1042.51	2.23	2.23	28.51	28.51	106.13	106.13	2.46	2.46	4.09	4.09
Stillwater County	A15	RM 403.05	61263.44	5% Duration	583.9	1046.43	1043.23	2.09	2.09	26.26	26.26	132.65	132.65	2.11	2.11	3.2	3.2
Stillwater County	A15	RM 402.97	60777.65	5% Duration	583.9	1046.27	1043.89	1.91	1.91	22.8	22.8	164.31	164.31	1.86	1.86	2.38	2.38
Stillwater County	A15	RM 402.83	60113.9	5% Duration	583.9	1045.8	1043.49	2.31	2.31	38.19	38.19	204.81	255.48	1.24	1.24	2.31	2.31
Stillwater County	A15	RM 402.68	59309.8	5% Duration	583.9	1045	1042.55	2.28	2.26	38.31	37.16	221.17	315.37	1.15	1.12	2.45	2.45
Stillwater County	A15	RM 402.53	58529.61	5% Duration	583.9	1044.82	1040.51	1.7	1.58	15.46	10.71	114.94	227.97	2.95	2.05	4.31	4.31
Stillwater County	A15	RM 402.37	57665.93	5% Duration	583.9	1044.3	1041.09	2.64	2.53	48.19	38.01	159.19	226.13	1.38	1.09	3.21	3.21
Stillwater County	A15	RM 402.24	56987.42	5% Duration	583.9	1044.08	1040.75	1.59	1.46	16.87	13.34	225.36	361.51	1.56	1.24	3.33	3.33
Stillwater County	A15	RM 402.07	56034.67	5% Duration	583.9	1043.56	1041.1	2.06	1.8	29.84	25.64	200.69	286.8	1.31	1.13	2.46	2.46
Stillwater County	A15	RM 401.87	54972.92	5% Duration	583.9	1042.4	1040.1	2.87	2.84	55	48.05	132.87	154.06	1.53	1.34	2.3	2.3
Stillwater County	A15	RM 401.69	54002.29	5% Duration	583.9	1041.99	1038.43	1.88	1.84	22	19.3	163.6	191.75	1.88	1.65	3.56	3.56
Stillwater County	A15	RM 401.55	53267.48	5% Duration	583.9	1041.66	1036.56	2.35	2.28	28.24	22.07	71.48	95.48	3.45	2.68	5.1	5.1
Stillwater County	A15	RM 401.41	52506.25	5% Duration	583.9	1041.45	1037.91	2.18	2.07	27.86	19.07	118.08	183.23	2.25	1.54	3.54	3.54
Stillwater County	A15	RM 401.31	51997.63	5% Duration	583.9	1041.07	1038.08	2.61	2.52	42.4	34.96	115.78	147.92	1.9	1.57	2.99	2.99
Stillwater County	A15	RM 401.17	51259.17	5% Duration	583.9	1040.61	1037.38	2.43	2.43	37.17	34.14	130.31	142.12	1.84	1.69	3.23	3.23
Stillwater County	A15	RM 401.03	50507.04	5% Duration	583.9	1040.33	1036.56	2.08	2.03	25.29	23.51	120.88	133.82	2.31	2.15	3.77	3.77
Stillwater County	A15	RM 400.90	49826.69	5% Duration	583.9	1039.94	1036.25	2.39	2.36	35.84	32.33	133.02	149.36	1.84	1.66	3.69	3.69
Stillwater County	A15	RM 400.74	49002.09	5% Duration	583.9	1039.48	1037.21	2.36	1.97	34.66	24.83	108.94	218.22	1.9	1.36	2.27	2.27
Stillwater County	A15	RM 400.61	48243.95	5% Duration	583.9	1038.95	1035.99	2.38	2.17	38.96	28.08	142.42	267.21	1.4	1.01	2.96	2.96
Stillwater County	A15	RM 400.50	47710.55	5% Duration	583.9	1038.55	1035.67	2.14	2.11	31.4	30.19	141.02	199.48	1.44	1.38	2.88	2.88
Stillwater County	A15	RM 400.42	47243.72	5% Duration	583.9	1038.28	1034.87	2.19	2.13	29.42	27.76	102.13	146.74	1.97	1.87	3.41	3.41
Stillwater County	A15	RM 400.34	46832.6	5% Duration	583.9	1038.16	1034.91	2.04	1.89	23.98	21.02	90.77	146.81	2.39	2.1	3.25	3.25
Stillwater County	A15	RM 400.25	46335.82	5% Duration	583.9	1038.04	1035.01	1.88	1.76	20.74	17.65	101.85	168.7	2.32	1.97	3.03	3.03
Stillwater County	A15	RM 400.18	45999.89	5% Duration	583.9	1037.91	1034.98	1.99	1.87	23.67	21.33	109.36	163.11	2.12	1.91	2.93	2.93
Stillwater County	A15	RM 400.13	45714.33	5% Duration	583.9	1037.79	1035.2	2.05	1.87	25.3	19.26	118.88	194.12	2.12	1.61	2.59	2.59
Stillwater County	A15	RM 400.11	45623.77	5% Duration	583.9	1037.7	1035.11	2.25	2.02	31.51	24.3	124.85	198.97	1.89	1.45	2.59	2.59
Stillwater County	A15	RM 400.09	45529.19	5% Duration	583.9	1037.53	1035.05	2.67	2.4	47.02	36.77	123.83	195.51	1.59	1.24	2.48	2.48
Stillwater County	A15	RM 400.03	45177.97	5% Duration	583.9	1037.05	1034.82	2.95	2.75	61.58	53.73	132.17	186.3	1.31	1.14	2.23	2.23
Stillwater County	A15	RM 399.95	44761.86	5% Duration	583.9	1036.93	1033.69	1.97	1.97	23.7	23.7	147.28	147.28	2.01	2.01	3.24	3.24
Stillwater County	A16	RM 399.85	44225.61	5% Duration	583.9	1036.61	1033.63	2.3	2.3	33.5	33.5	142.19	149.47	1.79	1.79	2.98	2.98
Stillwater County	A16	RM 399.74	43664.16	5% Duration	583.9	1036.4	1033.48	1.94	1.94	23.26	23.26	151.73	151.73	1.98	1.98	2.92	2.92
Stillwater County	A16	RM 399.62	43026.17	5% Duration	583.9	1035.87	1033.67	2.48	2.48	45.24	45.24	205.95	205.95	1.14	1.14	2.2	2.2
Stillwater County	A16	RM 399.50	42404.94	5% Duration	583.9	1035.57	1031.89	1.93	1.93	23.15	23.15	159.6	159.6	1.9	1.9	3.68	3.68
Stillwater County	A16	RM 399.39	41801.43	5% Duration	583.9	1035.28	1031.8	2.08	2.08	27.13	27.13	149.56	152.51	1.87	1.87	3.48	3.48

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Stillwater County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Stillwater County	A16	RM 399.30	41294.57	5% Duration	583.9	1034.96	1031.14	2.34	2.33	34.52	32.34	135.61	145.69	1.84	1.72	3.82	3.82
Stillwater County	A16	RM 399.19	40736.83	5% Duration	583.9	1034.6	1031.46	2.42	2.41	36.81	35.57	130.41	135.52	1.85	1.79	3.14	3.14
Stillwater County	A16	RM 399.09	40202.15	5% Duration	583.9	1034.44	1031.09	1.99	1.91	23.12	17.47	126.26	175.78	2.3	1.74	3.35	3.35
Stillwater County	A16	RM 399.00	39710.39	5% Duration	583.9	1034.3	1031.41	1.9	1.65	22.2	14.96	139.23	265.43	1.98	1.34	2.88	2.88
Stillwater County	A16	RM 398.91	39231.58	5% Duration	583.9	1034.01	1031.73	2.16	1.94	32.65	28.23	160.52	261.51	1.33	1.15	2.28	2.28
Stillwater County	A16	RM 398.80	38666.26	5% Duration	583.9	1033.52	1031.55	2.23	1.99	35.64	25.61	181.4	326.08	1.25	0.9	1.97	1.97
Stillwater County	A16	RM 398.73	38275.64	5% Duration	583.9	1033.21	1030.78	2.2	1.98	30.61	25.33	170.85	259.37	1.38	1.14	2.43	2.43
Stillwater County	A16	RM 398.62	37715.08	5% Duration	583.9	1032.89	1030.19	1.94	1.86	24.48	20	165.24	268.52	1.43	1.17	2.7	2.7
Stillwater County	A16	RM 398.51	37115.9	5% Duration	583.9	1032.4	1030.68	2.21	2.2	35.84	33.28	198.67	246.79	1.16	1.08	1.73	1.73
Stillwater County	A16	RM 398.40	36522.49	5% Duration	583.9	1032.14	1028.27	1.79	1.7	19.21	17.02	159.54	239.48	1.62	1.44	3.87	3.87
Stillwater County	A16	RM 398.29	35952.65	5% Duration	583.9	1031.78	1027.62	2.11	2.11	30.4	30.4	193.77	193.77	1.43	1.43	4.16	4.16
Stillwater County	A16	RM 398.17	35320.39	5% Duration	583.9	1031.6	1028.88	1.51	1.51	14.77	14.77	226.82	226.82	1.7	1.7	2.72	2.72
Stillwater County	A16	RM 398.04	34597.07	5% Duration	583.9	1031.26	1027.24	1.82	1.82	26.23	26.23	246.12	246.12	1.3	1.3	4.01	4.01
Stillwater County	A16	RM 397.95	34133.39	5% Duration	583.9	1030.87	1027.15	2.16	2.15	32.34	31.81	194.39	198.34	1.39	1.37	3.71	3.71
Stillwater County	A16	RM 397.81	33366.95	5% Duration	583.9	1030.39	1027.05	1.94	1.93	26.18	25.52	221.56	228.49	1.36	1.32	3.34	3.34
Stillwater County	A16	RM 397.68	32754.86	5% Duration	583.9	1030.14	1026.97	1.76	1.76	19.75	19.18	186.06	192.31	1.78	1.73	3.17	3.17
Stillwater County	A16	RM 397.56	32104.4	5% Duration	583.9	1029.78	1026.76	2.22	2.17	30.21	28.54	130.78	142.04	2	1.89	3.01	3.01
Stillwater County	A16	RM 397.40	31237.31	5% Duration	583.9	1029.35	1026.27	2.12	2.05	29.33	26.42	164.73	218.91	1.66	1.49	3.08	3.08
Stillwater County	A16	RM 397.17	30082.69	5% Duration	583.9	1028.79	1025.84	1.91	1.84	24.05	19.76	190.36	378.61	1.59	1.31	2.95	2.95
Stillwater County	A16	RM 396.97	29050.44	5% Duration	583.9	1027.99	1025.61	2.21	2.21	37.53	37.53	260.62	309.5	1.01	1.01	2.38	2.38
Stillwater County	A16	RM 396.71	27639.86	5% Duration	583.9	1027.29	1022.48	2.12	2.12	24.73	24.73	100.93	144.2	2.73	2.73	4.81	4.81
Stillwater County	A16	RM 396.62	27103.31	5% Duration	583.9	1027.14	1022.36	2.1	2.1	24.09	24.09	97.99	138.25	2.84	2.84	4.78	4.78
Stillwater County	A16	RM 396.52	26616.35	5% Duration	583.9	1026.96	1023.41	2.25	2.25	28.57	28.57	100.36	163.03	2.58	2.58	3.55	3.55
Stillwater County	A16	RM 396.29	25423.1	5% Duration	583.9	1026.51	1023.53	1.98	1.83	25.84	21.59	171.83	272.38	1.61	1.35	2.98	2.98
Stillwater County	A16	RM 396.14	24635.78	5% Duration	583.9	1026.11	1022.46	2.15	1.92	28.25	19.81	124.02	241.22	2	1.4	3.65	3.65
Stillwater County	A16	RM 396.03	24026.24	5% Duration	583.9	1025.86	1024.1	1.96	1.75	25.86	19.72	177.04	356.04	1.48	1.13	1.76	1.76
Stillwater County	A16	RM 395.89	23301.08	5% Duration	583.9	1025.3	1022.79	2.42	2	39.62	26.47	119.2	310.47	1.47	0.99	2.51	2.51
Stillwater County	A16	RM 395.73	22420.29	5% Duration	583.9	1024.9	1022.66	1.24	1.19	11.12	9.88	162.5	449.19	1.24	1.1	2.24	2.24
Stillwater County	A16	RM 395.64	21923.33	5% Duration	583.9	1024.61	1022.13	1.58	1.65	17.62	15.37	139.19	351.39	1.28	1.11	2.79	2.79
Stillwater County	A16	RM 395.57	21526.11	5% Duration	583.9	1024.29	1021.61	2.12	1.87	28.42	18.47	75.31	406.81	1.83	1.19	2.68	2.68
Stillwater County	A16	RM 395.48	21053.74	5% Duration	583.9	1023.86	1021.89	2.22	2.18	37.34	32.77	102.25	323.34	1.06	0.93	1.97	1.97
Stillwater County	A16	RM 395.36	20532.68	5% Duration	583.9	1023.57	1021.53	1.66	1.69	19.71	19.18	128.68	304.94	1.26	1.23	2.04	2.04
Stillwater County	A16	RM 394.98	18666.37	5% Duration	583.9	1022.85	1020.31	2.39	2.09	36.98	26.42	88.13	232.22	1.69	1.2	2.54	2.54
Stillwater County	A16	RM 394.80	17678.79	5% Duration	583.9	1022.46	1019.23	2.16	2.01	30.12	24.6	94.93	209.62	1.7	1.39	3.23	3.23
Stillwater County	A16	RM 394.71	17254.4	5% Duration	583.9	1022.31	1019.74	1.68	1.65	18.86	17.14	125.07	250.02	1.56	1.42	2.57	2.57
Stillwater County	A16	RM 394.65	16921.48	5% Duration	583.9	1022.12	1019.93	1.64	1.73	18.54	18.99	131.84	234.24	1.41	1.44	3.11	3.11
Stillwater County	A16	RM 394.59	16622.61	5% Duration	583.9	1021.82	1019.92	1.97	1.93	27.37	24.35	113.08	259.17	1.31	1.17	2.25	2.25
Stillwater County	A16	RM 394.53	16295.21	5% Duration	583.9	1021.45	1019.83	2.05	2.13	32.11	27.91	122	307.17	1.03	0.89	2.44	2.44
Stillwater County	A16	RM 394.45	15858.14	5% Duration	583.9	1021.02	1019.03	2.19	2.14	34.23	31.68	108.01	235.18	1.25	1.16	2.14	2.14
Stillwater County	A16	RM 394.20	14503.23	5% Duration	583.9	1020.26	1016.38	2.21	1.95	30.76	20.42	128.6	247.44	1.82	1.21	3.88	3.88
Stillwater County	A16	RM 394.12	14088.57	5% Duration	583.9	1020.04	1016.74	2.18	1.98	30.11	20.54	135.17	241.1	1.8	1.23	3.3	3.3
Stillwater County	A16	RM 393.99	13393.6	5% Duration	583.9	1019.69	1017.11	2.1	1.7	29.26	17.78	106.9	359.49	1.57	0.96	2.58	2.58
Stillwater County	A16	RM 393.85	12650.05	5% Duration	583.9	1019.09	1016.49	1.92	2.02	28.92	28.07	170.51	314.89	0.94	0.92	2.6	2.6
Stillwater County	A16	RM 393.59	11240.84	5% Duration	583.9	1018.46	1015.45	1.52	1.41	15.41	12.53	216.88	335.51	1.52	1.23	3	3
Stillwater County	A16	RM 393.27	9813.245	5% Duration	583.9	1017.43	1013.32	2.82	2.62	51.33	35.82	114.95	186.02	1.72	1.2	4.11	4.11
Stillwater County	A16	RM 393.10	8870.543	5% Duration	583.9	1016.9	1013.34	1.87	1.77	24.59	20.61	219.13	303.56	1.3	1.09	3.56	3.56
Stillwater County	A16	RM 392.95	8114.595	5% Duration	583.9	1016.21	1014.13	2.23	2.17	37.67	34.36	238.5	277.1	1.06	0.97	2.08	2.08
Stillwater County	A16	RM 392.69	6912.838	5% Duration	583.9	1015.46	1012.43	1.81	1.57	22.14	16.31	159.85	366.49	1.47	1.08	3.03	3.03
Stillwater County	A16	RM 392.44	5710.825	5% Duration	583.9	1014.81	1011.68	2.11	1.9	28.68	22.8	129.22	373.15	1.69	1.35	3.12	3.12
Stillwater County	A17	RM 392.20	4388.056	5% Duration	583.9	1013.81	1010.8	2.55	2.42	42.22	37.04	135.87	164.91	1.66	1.46	3.01	3.01
Stillwater County	A17	RM 392.00	3345.174	5% Duration	583.9	1013.38	1009.53	1.89	1.69	22.43	15.38	155.46	269.9	1.87	1.28	3.85	3.85
Stillwater County	A17	RM 391.84	2491.214	5% Duration	583.9	1013.11	1010.51	1.55	1.53	16.56	15.53	148.79	294.98	1.38	1.29	2.7	2.7
Stillwater County	A17	RM 391.68	1656.536	5% Duration	583.9	1012.7	1010.5	1.56	1.63	19.35	19.74	229.53	386.74	0.91	0.93	2.2	2.2
Stillwater County	A17	RM 391.58	1120.168	5% Duration	583.9	1012.41	1009.55	1.68	1.62	20.14	16.91	258.73	343.71	1.25	1.05	2.86	2.86
Stillwater County	A17	RM 391.46	505.9	5% Duration	583.9	1012.12	1009.4	1.64	1.54	18.76	14.61	249.57	365.36	1.33	1.04	2.72	2.72

* Bathymetric survey was collected from RM 435.5 to 391.4. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	A17	RM 391.31	149936	5% Duration	583.9	1011.79	1008.74	1.69	1.51	18.64	13.51	200.78	323.84	1.64	1.19	3.05	3.05
Yellowstone County	A17	RM 391.14	149661.4	5% Duration	583.9	1011.42	1007.82	1.75	1.45	23.2	11.69	200.16	492.82	1.62	0.81	3.6	3.6
Yellowstone County	A17	RM 390.83	149168.3	5% Duration	583.9	1010.19	1007.89	2.26	2.09	43.23	39.67	219.32	303.97	1.08	0.99	2.3	2.3
Yellowstone County	A17	RM 390.51	148644.1	5% Duration	583.9	1009.27	1006	1.37	1.37	17.57	16.49	193.44	273.62	1.66	1.56	3.27	3.27
Yellowstone County	A17	RM 390.34	148387.5	5% Duration	583.9	1008.84	1005.26	1.97	1.9	36.41	27.58	130.28	205.21	1.98	1.5	3.58	3.58
Yellowstone County	A17	RM 390.13	148054.9	5% Duration	583.9	1008.25	1005.54	2.1	1.99	32.48	26.56	127.5	181.75	1.97	1.61	2.71	2.71
Yellowstone County	A17	RM 389.96	147776.4	5% Duration	583.9	1007.87	1004.81	1.87	1.68	23	17.94	148.47	267.56	1.67	1.3	3.06	3.06
Yellowstone County	A17	RM 389.76	147468.2	5% Duration	583.9	1007.57	1004.52	1.25	1.24	15.73	15.22	294.83	307.83	1.58	1.53	3.05	3.05
Yellowstone County	A17	RM 389.55	147162.3	5% Duration	583.9	1007.05	1003.2	1.78	1.78	32.44	32.44	202.33	202.33	1.62	1.62	3.85	3.85
Yellowstone County	A17	RM 389.31	146731.1	5% Duration	583.9	1006.47	1003.49	1.48	1.47	15.75	15.2	249.23	261.56	1.57	1.52	2.98	2.98
Yellowstone County	A17	RM 389.08	146349	5% Duration	583.9	1005.82	1001.61	1.79	1.78	39.28	31.8	215.7	269.32	1.51	1.22	4.21	4.21
Yellowstone County	A17	RM 388.92	146095.5	5% Duration	583.9	1005.28	1002.49	1.81	1.76	23.21	20.07	229.43	276.23	1.39	1.2	2.79	2.79
Yellowstone County	A17	RM 388.79	145883.6	5% Duration	583.9	1005.08	1002.14	1.61	1.46	16.38	10.41	161.31	287.94	2.19	1.39	2.94	2.94
Yellowstone County	A17	RM 388.61	145594.9	5% Duration	583.9	1004.68	1000.48	2.13	1.83	30.52	22.76	121.63	202.97	2.12	1.57	4.2	4.2
Yellowstone County	A17	RM 388.58	145547	5% Duration	583.9	1004.61	1000.28	1.99	1.84	32	22.88	138.39	234.03	2.09	1.49	4.33	4.33
Yellowstone County	A17	RM 388.36	145196.7	5% Duration	583.9	1004.18	1001.21	1.83	1.64	22.44	14.4	151.5	279.26	1.98	1.28	2.97	2.97
Yellowstone County	A17	RM 388.22	144960.1	5% Duration	583.9	1003.72	1000.23	2.35	2.15	36.68	23.12	117.65	250.8	1.82	1.15	3.49	3.49
Yellowstone County	A17	RM 388.09	144745.8	5% Duration	583.9	1003.24	999.87	2.04	1.79	34.27	28.37	203.18	365.03	1.12	0.93	3.37	3.37
Yellowstone County	A17	RM 387.91	144452	5% Duration	583.9	1002.22	999.77	1.67	1.89	25.52	32.64	216.66	311.8	0.77	0.99	2.45	2.45
Yellowstone County	A17	RM 387.79	144255.2	5% Duration	583.9	1002.09	999.17	1.09	1.07	7.89	7.58	276.63	400.46	1.41	1.36	2.92	2.92
Yellowstone County	A17	RM 387.59	143932.9	5% Duration	583.9	1001.7	998.1	1.62	1.62	27.34	27.34	296.1	296.1	1.22	1.22	3.59	3.59
Yellowstone County	A17	RM 387.36	143562.1	5% Duration	583.9	1000.96	997.78	1.79	1.79	19.32	19.32	262.75	262.75	1.24	1.24	3.18	3.18
Yellowstone County	A17	RM 387.24	143353.9	5% Duration	583.9	1000.67	997.71	1.57	1.57	16.64	16.64	310.68	310.68	1.2	1.2	2.96	2.96
Yellowstone County	A17	RM 387.04	143026.2	5% Duration	583.9	999.84	996.49	2.26	2.26	35.99	35.09	225.59	231.52	1.15	1.12	3.35	3.35
Yellowstone County	A17	RM 386.86	142750.4	5% Duration	583.9	999.31	997.01	1.6	1.59	20.76	20.28	290.21	298.95	1.25	1.23	2.3	2.3
Yellowstone County	A17	RM 386.74	142538.5	5% Duration	583.9	998.89	996.31	1.74	1.71	25.48	23.39	258.27	290.74	1.28	1.18	2.58	2.58
Yellowstone County	A17	RM 386.61	142318.4	5% Duration	583.9	998.38	995.9	2.04	2	30.2	28.22	177.55	208.04	1.5	1.4	2.48	2.48
Yellowstone County	A17	RM 386.47	142095.8	5% Duration	583.9	997.96	995.18	2.04	1.89	28.32	23.01	157.25	230.59	1.65	1.34	2.78	2.78
Yellowstone County	A17	RM 386.33	141875.1	5% Duration	583.9	997.55	994.36	2.22	2.03	30.3	20.32	128.46	218.87	1.95	1.31	3.19	3.19
Yellowstone County	A17	RM 386.17	141622.7	5% Duration	583.9	997.06	993.9	2.15	2.07	35.17	29.8	178.6	228.11	1.46	1.24	3.16	3.16
Yellowstone County	A17	RM 386.08	141479.6	5% Duration	583.9	996.72	994.12	2.1	2.04	36.59	27.89	172.32	235.01	1.6	1.22	2.6	2.6
Yellowstone County	A17	RM 386.03	141389.2	5% Duration	583.9	996.3	993.82	2.6	2.6	52.64	52.64	194.23	194.23	1.16	1.16	2.48	2.48
Yellowstone County	A17	RM 385.96	141289.2	5% Duration	583.9	996.25	993.01	1.64	1.62	17.31	16.12	211.97	232.88	1.67	1.55	3.24	3.24
Yellowstone County	A17	RM 385.91	141204.9	5% Duration	583.9	996.14	992.33	1.69	1.69	18.66	18.66	232.22	257.5	1.49	1.49	3.81	3.81
Yellowstone County	A17	RM 385.84	141096	5% Duration	583.9	996.05	990.57	1.58	1.58	15.13	15.13	327.48	327.48	2.5	2.5	5.48	5.48
Yellowstone County		RM 342.71	141053	5% Duration	Bridge												
Yellowstone County	A17	RM 385.81	141034.4	5% Duration	583.9	995.96	992.45	1.71	1.71	22.1	22.1	133.38	133.38	2.56	2.56	3.51	3.51
Yellowstone County	A17	RM 385.79	141006	5% Duration	583.9	995.94	992.48	1.64	1.64	14.74	14.74	142.82	142.82	2.49	2.49	3.46	3.46
Yellowstone County	A18	RM 385.69	140846.5	5% Duration	583.9	995.71	992.9	1.94	1.94	36.31	36.31	199.54	199.54	1.51	1.51	2.81	2.81
Yellowstone County	A18	RM 385.60	140705.5	5% Duration	583.9	995.41	992.71	1.96	1.96	31.99	31.99	166.16	166.16	1.79	1.79	2.7	2.7
Yellowstone County	A18	RM 385.50	140538.8	5% Duration	583.9	995.26	990.71	1.62	1.62	19.99	19.99	143.6	143.6	2.52	2.52	4.55	4.55
Yellowstone County	A18	RM 385.39	140367.1	5% Duration	583.9	995.07	992.41	1.77	1.75	18.61	16.38	179.32	206.39	1.84	1.62	2.66	2.66
Yellowstone County	A18	RM 385.30	140231.3	5% Duration	583.9	994.8	992.53	2.01	1.99	35.02	32.04	231.93	256.28	1.25	1.15	2.27	2.27
Yellowstone County	A18	RM 385.23	140108.3	5% Duration	583.9	994.46	992.01	1.89	1.82	34.26	31.13	222.93	306	1.15	1.05	2.45	2.45
Yellowstone County	A18	RM 385.12	139921.2	5% Duration	583.9	993.69	991.37	2.45	2.42	45.16	43.7	156.16	194.04	1.28	1.24	2.32	2.32
Yellowstone County	A18	RM 384.93	139688.7	5% Duration	583.9	993.28	991.06	1.72	1.63	21.23	18.14	204.05	311.24	1.35	1.15	2.22	2.22
Yellowstone County	A18	RM 384.75	139352.1	5% Duration	583.9	992.44	989.77	2.58	2.23	52.43	34.72	100.63	222.32	1.78	1.18	2.67	2.67
Yellowstone County	A18	RM 384.63	139146.9	5% Duration	583.9	991.93	989.58	1.94	1.67	29.1	21.77	128.78	424.82	1.14	0.85	2.35	2.35
Yellowstone County	A18	RM 384.48	138904.5	5% Duration	583.9	991.43	989.55	1.43	1.5	20.85	19.29	145.14	345.08	1.22	1.13	2.08	2.08
Yellowstone County	A18	RM 384.34	138682.4	5% Duration	583.9	991.06	988.23	1.4	1.57	27.29	25.85	150.33	236.11	1.66	1.58	2.83	2.83
Yellowstone County	A18	RM 384.26	138551.1	5% Duration	583.9	990.81	987.34	2.03	1.92	36.31	22.84	79.55	211.16	2.3	1.44	3.47	3.47
Yellowstone County	A18	RM 384.15	138370.3	5% Duration	583.9	990.37	987.39	2.49	2.26	48.26	34.32	75.86	180.68	2.02	1.43	2.98	2.98
Yellowstone County	A18	RM 384.06	138235.3	5% Duration	583.9	990.22	987.31	2.02	1.44	26.21	12.92	81.27	437.59	1.98	0.97	2.91	2.91
Yellowstone County	A18	RM 383.96	138072.3	5% Duration	583.9	989.62	987.67	2.56	2.41	57.19	48.82	126.75	372.68	0.76	0.65	1.95	1.95
Yellowstone County	A18	RM 383.86	137914.6	5% Duration	583.9	989.32	987.24	1.49	1.4	15.99	14.53	140.88	347.85	1.32	1.2	2.08	2.08
Yellowstone County	A18	RM 383.75	137749.9	5% Duration	583.9	988.96	986.55	1.5	1.81	23.35	24.95	122.26	248.1	1.22	1.3	2.48	2.48
Yellowstone County	A18	RM 383.62	137544.5	5% Duration	583.9	988.62	986.32	1.45	1.68	16.32	14.88	131.37	333.75	1.14	1.04	3	3
Yellowstone County	A18	RM 383.54	137415.7	5% Duration	583.9	988.52	984.41	1.37	1.37	13.2	12.88	312.34	438.31	1.36	1.33	4.11	4.11
Yellowstone County	B1	RM 383.39	137175.7	5% Duration	712	988.19	984.98	1.77	1.77	19.05	19.05	238.67	238.67	1.69	1.69	3.21	3.21
Yellowstone County	B1	RM 383.31	137040.5	5% Duration	712	988	984.86	1.81	1.81	22.66	20.83	258.89	282.67	1.52	1.39	3.14	3.14
Yellowstone County	B1	RM 383.16	136817.2	5% Duration	712	987.7	984.9	1.76	1.67	18.21	13.91	264.33	365.08	1.53	1.16	2.8	2.8

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 382.88	136371.1	5% Duration	712	986.89	983.64	2.16	2.14	28.01	25.92	255.16	279.24	1.29	1.19	3.25	3.25
Yellowstone County	B1	RM 382.61	135921.1	5% Duration	712	986.19	982.68	1.97	1.94	24.3	21.21	177.95	208.37	2.02	1.76	3.51	3.51
Yellowstone County	B1	RM 382.44	135657.8	5% Duration	712	985.8	981.56	2.31	2.09	30.52	22.06	116.93	182.84	2.57	1.86	4.24	4.24
Yellowstone County	B1	RM 382.28	135389.1	5% Duration	712	985.56	981.45	2.04	1.96	23.18	17.37	126.33	177.22	2.73	2.05	4.11	4.11
Yellowstone County	B1	RM 382.11	135122	5% Duration	712	985.23	980.52	2.26	2.24	31.74	29.6	120.45	130.24	2.62	2.44	4.71	4.71
Yellowstone County	B1	RM 381.93	134829.3	5% Duration	712	984.83	981.3	2.04	2.04	37.2	37.2	168.17	168.17	2.07	2.07	3.53	3.53
Yellowstone County	B1	RM 381.79	134602.8	5% Duration	712	984.4	981.63	2.21	2.21	31.38	31.38	161.15	161.15	2	2	2.77	2.77
Yellowstone County	B1	RM 381.69	134426.2	5% Duration	712	984.31	981.06	1.57	1.57	15.84	15.84	191.43	191.43	2.36	2.36	3.25	3.25
Yellowstone County	B1	RM 381.58	134232.5	5% Duration	712	983.99	981.02	2.04	2.04	30.42	29.92	251.2	255.75	1.39	1.36	2.97	2.97
Yellowstone County	B1	RM 381.47	134047.3	5% Duration	712	983.67	980.95	1.83	1.83	26.64	26.64	227.81	227.81	1.71	1.71	2.72	2.72
Yellowstone County	B1	RM 381.35	133871.9	5% Duration	712	983.4	980.79	1.83	1.83	23.4	23.4	232.67	232.67	1.67	1.67	2.61	2.61
Yellowstone County	B1	RM 381.22	133659.2	5% Duration	712	982.98	979.74	2.01	2.01	34.07	34.07	247.98	247.98	1.43	1.43	3.24	3.24
Yellowstone County	B1	RM 381.11	133491.4	5% Duration	712	982.67	979.61	1.92	1.87	29.14	26.45	176.08	219.5	1.91	1.74	3.06	3.06
Yellowstone County	B1	RM 381.00	133302.9	5% Duration	712	982.21	978.23	2.37	2.26	36.41	32.05	174.43	221.27	1.61	1.42	3.98	3.98
Yellowstone County	B1	RM 380.92	133180	5% Duration	712	982.08	976.97	1.97	1.86	25.12	18.41	143.45	214.03	2.44	1.79	5.11	5.11
Yellowstone County	B1	RM 380.81	132986.3	5% Duration	712	981.82	978.55	2.04	1.98	26.4	23.57	186.5	221.21	1.82	1.62	3.27	3.27
Yellowstone County	B1	RM 380.69	132800.2	5% Duration	712	981.58	978.53	1.88	1.82	20.98	18.98	233.85	273.38	1.58	1.43	3.05	3.05
Yellowstone County	B1	RM 380.57	132628.6	5% Duration	712	981.38	978.7	1.69	1.65	21.51	19.55	211.52	262.83	1.8	1.64	2.68	2.68
Yellowstone County	B1	RM 380.48	132470	5% Duration	712	981.21	978.24	1.67	1.6	20.79	17.11	192.45	264.84	2.03	1.68	2.97	2.97
Yellowstone County	B1	RM 380.34	132222.4	5% Duration	712	980.81	977.37	2.07	2.01	27.85	24.22	191.65	241.72	1.68	1.47	3.44	3.44
Yellowstone County	B1	RM 380.22	132032.4	5% Duration	712	980.49	977.02	2.13	2.12	28.05	26.82	168.66	177.07	1.98	1.89	3.47	3.47
Yellowstone County	B1	RM 380.11	131847.7	5% Duration	712	980.23	976.29	2.1	1.98	30.1	22.9	163.15	281.17	1.92	1.46	3.94	3.94
Yellowstone County	B1	RM 380.01	131671.4	5% Duration	712	979.98	976.21	2.04	1.83	27.92	17.55	156.99	298.08	2.07	1.3	3.77	3.77
Yellowstone County	B1	RM 379.92	131538.8	5% Duration	712	979.76	976.69	2.14	1.95	29.17	22.05	176.89	283.57	1.69	1.28	3.07	3.07
Yellowstone County	B1	RM 379.84	131406.9	5% Duration	712	979.64	975.94	1.49	1.46	15.3	13.69	350.65	403.51	1.35	1.21	3.7	3.7
Yellowstone County	B1	RM 379.75	131265.1	5% Duration	712	979.46	974.98	1.54	1.51	18.59	17.46	335.99	370.21	1.36	1.28	4.48	4.48
Yellowstone County	B1	RM 379.65	131104.3	5% Duration	712	979.18	975.6	1.69	1.6	20.66	18.52	335.22	404.46	1.23	1.1	3.58	3.58
Yellowstone County	B1	RM 379.56	130964.3	5% Duration	712	978.99	975.94	1.51	1.53	17.15	17.75	285.59	473.6	1.33	1.38	3.05	3.05
Yellowstone County	B1	RM 379.46	130794	5% Duration	712	978.83	974.74	1.57	1.55	14.66	13.89	180.6	297.56	2.19	2.08	4.09	4.09
Yellowstone County	B1	RM 379.36	130642.3	5% Duration	712	978.72	975.71	1.44	1.44	16.58	16.58	233.52	233.52	2.11	2.11	3.01	3.01
Yellowstone County	B1	RM 379.27	130496.2	5% Duration	712	978.33	974.66	2.45	2.36	39.76	27.5	139.14	233.63	2.08	1.44	3.67	3.67
Yellowstone County	B1	RM 379.17	130345.7	5% Duration	712	978.14	973.93	2.16	2.11	28.95	21.2	144.74	225.65	2.27	1.66	4.21	4.21
Yellowstone County	B1	RM 379.04	130142	5% Duration	712	977.86	974.79	2.08	1.88	27.36	17.47	194.88	391.52	1.7	1.09	3.07	3.07
Yellowstone County	B1	RM 378.97	130026.7	5% Duration	712	977.66	974.64	2.06	1.92	28.48	21.61	220.2	372.18	1.54	1.17	3.02	3.02
Yellowstone County	B1	RM 378.86	129850.9	5% Duration	712	977.27	974.4	2.1	1.95	34.21	29.73	237.17	345.23	1.37	1.19	2.87	2.87
Yellowstone County	B1	RM 378.76	129682.3	5% Duration	712	976.96	974.17	1.94	1.91	24.45	21.94	221.6	305.17	1.66	1.49	2.79	2.79
Yellowstone County	B1	RM 378.67	129541.3	5% Duration	712	976.74	973.97	1.97	1.78	25.1	17.83	226.27	373.66	1.55	1.1	2.77	2.77
Yellowstone County	B1	RM 378.61	129443.1	5% Duration	712	976.49	973.83	2.27	1.89	38.86	24.77	181.35	405.76	1.51	0.96	2.66	2.66
Yellowstone County	B1	RM 378.52	129297.7	5% Duration	712	976.15	973.62	1.99	1.84	26.46	24.38	330.89	417.59	1.05	0.97	2.53	2.53
Yellowstone County	B1	RM 378.46	129200.8	5% Duration	712	976.01	973.48	1.52	1.52	19.24	18.67	390.83	404.06	1.2	1.16	2.53	2.53
Yellowstone County	B1	RM 378.40	129112.2	5% Duration	712	975.78	973.41	1.67	1.66	36.83	36.03	366.51	376.59	1.16	1.14	2.37	2.37
Yellowstone County	B1	RM 378.29	128929.4	5% Duration	712	975.44	972.93	1.3	1.3	15.13	14.87	503.89	514.89	1.08	1.07	2.51	2.51
Yellowstone County	B1	RM 378.13	128673.7	5% Duration	712	975.03	971.4	1.81	1.81	19.5	19.5	219.41	219.41	1.79	1.79	3.63	3.63
Yellowstone County	B1	RM 378.07	128569	5% Duration	712	974.98	970.46	1.57	1.57	13.71	13.71	184.03	199.4	2.46	2.46	4.52	4.52
Yellowstone County	B1	RM 377.96	128380.3	5% Duration	712	974.89	968.85	1.57	1.57	16.73	16.73	104.52	104.52	4.35	4.35	6.04	6.04
Yellowstone County		RM 338.83	128364	5% Duration	Bridge												
Yellowstone County	B1	RM 377.94	128353.3	5% Duration	712	974.88	967.19	1.43	1.43	13.65	13.65	101.3	101.3	4.92	4.92	7.69	7.69
Yellowstone County	B1	RM 377.87	128244.4	5% Duration	712	974.7	970.56	1.97	1.97	30.44	30.44	188.67	188.67	1.94	1.94	4.14	4.14
Yellowstone County	B1	RM 377.79	128118	5% Duration	712	974.46	970.94	2.16	2.16	25.12	25.12	194.33	194.33	1.7	1.7	3.52	3.52
Yellowstone County	B1	RM 377.69	127964.3	5% Duration	712	974.29	969.86	1.82	1.82	21.02	21.02	240.46	240.46	1.62	1.62	4.43	4.43
Yellowstone County	B1	RM 377.61	127824.8	5% Duration	712	973.95	970.53	2.27	2.27	32.28	32.28	204.06	204.06	1.53	1.53	3.42	3.42
Yellowstone County	B1	RM 377.55	127735.1	5% Duration	712	973.85	970.41	1.93	1.93	21.65	21.65	236.14	236.14	1.56	1.56	3.44	3.44
Yellowstone County	B1	RM 377.48	127618.1	5% Duration	712	973.62	970.26	2.06	2.06	27.43	27.43	248.22	248.22	1.39	1.39	3.36	3.36
Yellowstone County	B1	RM 377.39	127466.6	5% Duration	712	973.24	969.73	2.27	2.27	31.97	31.97	233.66	233.66	1.34	1.34	3.51	3.51
Yellowstone County	B1	RM 377.34	127391.5	5% Duration	712	973.05	969.95	2.21	2.21	37.56	37.56	231.79	231.79	1.39	1.39	3.1	3.1
Yellowstone County	B1	RM 377.25	127241.9	5% Duration	712	972.82	970.26	1.68	1.68	19.23	19.23	329.21	329.21	1.29	1.29	2.56	2.56
Yellowstone County	B1	RM 377.16	127097.7	5% Duration	712	972.43	969.82	2.21	2.17	33.69	32.9	237.91	272.63	1.23	1.2	2.61	2.61
Yellowstone County	B1	RM 377.08	126969	5% Duration	712	972.36	969	1.36	1.35	11.39	11.12	341.64	369.86	1.46	1.43	3.36	3.36
Yellowstone County	B1	RM 377.04	126900.8	5% Duration	712	972.2	968.6	1.77	1.77	28.05	28.05	284.45	284.45	1.41	1.41	3.6	3.6
Yellowstone County	B1	RM 376.98	126797.5	5% Duration	712	971.96	969.02	2.02	2.02	26.12	26.12	219.92	219.92	1.61	1.61	2.94	2.94
Yellowstone County	B1	RM 376.92	126710.1	5% Duration	712	971.84	969.01	1.78	1.78	24.94	24.94	265.45	265.45	1.5	1.5	2.83	2.83

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 376.84	126584.2	5% Duration	712	971.7	967.73	1.41	1.41	18.86	18.34	303.19	356.92	1.45	1.42	3.97	3.97
Yellowstone County	B1	RM 376.75	126442.1	5% Duration	712	971.55	967.82	1.37	1.36	15.01	14.5	297.11	338.27	1.6	1.55	3.73	3.73
Yellowstone County	B1	RM 376.67	126309	5% Duration	712	971.43	967.23	1.48	1.45	14.35	13.31	195.92	226.63	2.34	2.17	4.2	4.2
Yellowstone County	B1	RM 376.58	126174.1	5% Duration	712	971.22	966.82	1.86	1.83	31.03	29.95	230.98	253.13	1.59	1.54	4.4	4.4
Yellowstone County	B1	RM 376.51	126058.2	5% Duration	712	970.97	966.77	1.95	1.95	31.6	31.6	220.3	220.3	1.65	1.65	4.2	4.2
Yellowstone County	B1	RM 376.42	125918.5	5% Duration	712	970.81	967.68	1.65	1.65	18.11	18.11	251.3	251.3	1.72	1.72	3.13	3.13
Yellowstone County	B1	RM 376.35	125809.8	5% Duration	712	970.74	966.71	1.49	1.49	13.28	13.28	222.13	222.13	2.16	2.16	4.03	4.03
Yellowstone County	B1	RM 376.28	125697	5% Duration	712	970.53	966.28	2.04	2.04	25.74	25.74	182.12	182.12	1.92	1.92	4.25	4.25
Yellowstone County	B1	RM 376.20	125565.9	5% Duration	712	970.36	966.16	1.92	1.92	24.05	24.05	206.82	206.82	1.79	1.79	4.2	4.2
Yellowstone County	B1	RM 376.10	125404.8	5% Duration	712	970.05	966.61	2.07	2.03	29.7	29.12	237.88	261.29	1.37	1.34	3.44	3.44
Yellowstone County	B1	RM 376.00	125250.5	5% Duration	712	969.71	967.42	2.1	2.04	31.28	26.88	218.26	285.09	1.51	1.29	2.29	2.29
Yellowstone County	B1	RM 375.88	125055.1	5% Duration	712	969.39	966.01	1.98	1.85	27	19.54	175.15	410.17	1.9	1.37	3.38	3.38
Yellowstone County	B1	RM 375.78	124897.3	5% Duration	712	969.21	965.37	1.84	1.72	23.9	16.09	156.47	343.86	2.05	1.38	3.84	3.84
Yellowstone County	B1	RM 375.67	124708.2	5% Duration	712	969	965.8	1.83	1.66	23.26	14.65	176.05	357.06	1.9	1.2	3.2	3.2
Yellowstone County	B1	RM 375.58	124564.2	5% Duration	712	968.74	966.54	1.97	1.89	28.43	23.33	218.84	322.41	1.42	1.17	2.2	2.2
Yellowstone County	B1	RM 375.23	124013.6	5% Duration	712	967.93	965.23	1.95	1.87	23.75	16.82	180.45	266.65	2.01	1.42	2.7	2.7
Yellowstone County	B1	RM 375.10	123799.5	5% Duration	712	967.51	963.88	2.39	2.21	42.23	25.37	118.16	219.22	2.44	1.47	3.63	3.63
Yellowstone County	B1	RM 374.97	123580.4	5% Duration	712	967.19	963.97	2.1	1.86	38.9	21.88	125.53	299.38	2.29	1.28	3.22	3.22
Yellowstone County	B1	RM 374.83	123365.5	5% Duration	712	966.87	963.52	2.08	1.64	30.05	15.9	113.58	380.79	2.15	1.14	3.35	3.35
Yellowstone County	B1	RM 374.73	123195.7	5% Duration	712	966.75	963.36	1.51	1.32	14.24	9.17	136	421.84	1.99	1.28	3.39	3.39
Yellowstone County	B1	RM 374.61	123010.3	5% Duration	712	966.5	963.49	1.89	1.63	26.43	17.52	148.82	324.54	2.02	1.34	3.01	3.01
Yellowstone County	B1	RM 374.53	122875.3	5% Duration	728.1	966.28	963.14	1.99	1.79	26.86	20.17	179.19	302.8	1.79	1.34	3.14	3.14
Yellowstone County	B1	RM 374.44	122726.7	5% Duration	728.1	966.04	963.04	2.16	1.89	33.02	20.41	120.33	251.01	2.48	1.53	3	3
Yellowstone County	B1	RM 374.32	122535.1	5% Duration	728.1	965.73	962.82	2.13	1.92	33.54	23.55	173.79	338.16	1.6	1.12	2.91	2.91
Yellowstone County	B1	RM 374.22	122379	5% Duration	728.1	965.48	960.92	2.14	1.84	30.23	15.97	118.8	305.6	2.45	1.3	4.56	4.56
Yellowstone County	B1	RM 374.13	122231.1	5% Duration	728.1	965.26	960.11	2.38	1.98	31.21	15.56	89.89	255.75	2.89	1.44	5.15	5.15
Yellowstone County	B1	RM 373.97	121972.4	5% Duration	728.1	965.15	958.8	1.56	1.41	15.53	11.16	166.69	288.71	2.5	1.79	6.35	6.35
Yellowstone County	B1	RM 373.88	121829.3	5% Duration	728.1	964.98	962.21	1.78	1.67	25.43	20.41	188.25	291.6	1.86	1.5	2.77	2.77
Yellowstone County	B1	RM 373.79	121688.7	5% Duration	728.1	964.81	961.66	1.77	1.63	22.97	16.89	173.35	308.38	1.96	1.44	3.15	3.15
Yellowstone County	B1	RM 373.69	121523.5	5% Duration	728.1	964.6	961.11	1.74	1.62	22.49	18.08	184.84	319.11	1.75	1.4	3.49	3.49
Yellowstone County	B1	RM 373.56	121314.3	5% Duration	728.1	964.13	959.37	2.31	2.25	35.59	30.82	156.2	185.45	2.01	1.74	4.76	4.76
Yellowstone County	B1	RM 373.39	121015.9	5% Duration	728.1	963.84	958.78	1.73	1.72	20.7	19.93	179.37	187.36	2.34	2.25	5.06	5.06
Yellowstone County	B1	RM 373.26	120802.3	5% Duration	728.1	963.69	960.81	1.39	1.37	12.85	12.48	336.36	360.18	1.55	1.5	2.88	2.88
Yellowstone County	B1	RM 373.09	120539.5	5% Duration	728.1	963.35	959.94	1.71	1.7	20.79	20.07	291.02	320.6	1.46	1.41	3.41	3.41
Yellowstone County	B1	RM 372.99	120365.2	5% Duration	728.1	963.06	959.69	1.71	1.7	29.57	28.9	265.11	271.76	1.61	1.57	3.37	3.37
Yellowstone County	B1	RM 372.82	120107.7	5% Duration	728.1	962.74	959.03	1.46	1.46	14.68	14.68	345.66	345.66	1.44	1.44	3.71	3.71
Yellowstone County	B1	RM 372.72	119922.5	5% Duration	728.1	962.43	958.92	1.7	1.7	28.08	28.08	301.09	301.09	1.42	1.42	3.51	3.51
Yellowstone County	B1	RM 372.65	119797.7	5% Duration	728.1	962.19	957.32	1.78	1.77	24.6	23.42	269.8	286.25	1.51	1.44	4.87	4.87
Yellowstone County	B1	RM 372.58	119676.6	5% Duration	728.1	962.05	958.2	1.59	1.59	16.77	16.77	303.43	303.43	1.51	1.51	3.85	3.85
Yellowstone County	B1	RM 372.41	119395.9	5% Duration	728.1	961.7	958.82	1.6	1.6	17.67	17.63	324.2	324.9	1.4	1.4	2.88	2.88
Yellowstone County	B1	RM 372.32	119268.8	5% Duration	728.1	961.53	957.24	1.6	1.6	25.39	25.39	262.7	262.7	1.74	1.74	4.29	4.29
Yellowstone County	B1	RM 372.20	119079.1	5% Duration	728.1	961.21	956.93	1.78	1.78	29.2	28.73	198.09	201.5	2.06	2.03	4.28	4.28
Yellowstone County	B1	RM 372.08	118886.4	5% Duration	728.1	960.97	956.2	1.59	1.59	25.19	25.16	223.67	457.25	2.05	2.04	4.77	4.77
Yellowstone County	B1	RM 371.94	118669.8	5% Duration	728.1	960.64	957.58	1.68	1.68	25.31	25.31	288.95	360.7	1.5	1.5	3.06	3.06
Yellowstone County	B1	RM 371.83	118490.4	5% Duration	728.1	960.34	957.52	1.56	1.55	21.86	21.39	346.85	444.48	1.32	1.29	2.82	2.82
Yellowstone County	B1	RM 371.74	118350.7	5% Duration	728.1	960.01	957.48	1.87	1.86	27.12	26.86	322.6	397.14	1.16	1.15	2.53	2.53
Yellowstone County	B1	RM 371.62	118155.6	5% Duration	728.1	959.75	956.41	1.62	1.49	20.6	15.06	210.98	324.05	2.06	1.5	3.34	3.34
Yellowstone County	B1	RM 371.53	118001.4	5% Duration	728.1	959.45	955.99	2.07	2.03	29.39	26.04	211.86	246.5	1.64	1.45	3.46	3.46
Yellowstone County	B1	RM 371.43	117839.2	5% Duration	728.1	959.18	955.47	2.05	2	31.49	28.7	161.03	208.89	2.18	1.99	3.71	3.71
Yellowstone County	B1	RM 371.37	117745.1	5% Duration	728.1	959.07	955.72	1.94	1.9	20.59	18.26	211.84	261.53	1.77	1.57	3.35	3.35
Yellowstone County	B1	RM 371.32	117662.6	5% Duration	728.1	958.99	956.41	1.64	1.61	24.9	21.04	288.79	364.4	1.46	1.24	2.58	2.58
Yellowstone County	B1	RM 371.25	117560.3	5% Duration	728.1	958.74	955.99	1.82	1.77	26.82	24.22	365.55	442.48	1.09	0.98	2.75	2.75
Yellowstone County	B1	RM 371.21	117499	5% Duration	728.1	958.62	955.72	1.7	1.63	22.83	21.31	334.96	407.49	1.17	1.1	2.9	2.9
Yellowstone County	B1	RM 371.12	117353.9	5% Duration	728.1	958.41	955.54	1.61	1.61	17.19	17.19	311.19	311.19	1.45	1.45	2.87	2.87
Yellowstone County	B1	RM 371.04	117225.1	5% Duration	728.1	958.1	954.84	2.12	2.12	28.79	28.79	196.17	196.17	1.75	1.75	3.26	3.26
Yellowstone County		RM 335.51	117205	5% Duration	Bridge												
Yellowstone County	B1	RM 371.02	117196.6	5% Duration	728.1	958.02	954.9	2.08	2.08	28.5	28.5	208.59	210.53	1.68	1.68	3.12	3.12
Yellowstone County	B1	RM 370.94	117054.9	5% Duration	728.1	957.8	955.57	2.04	2.04	31.05	31.05	233.33	417.62	1.53	1.53	2.23	2.23
Yellowstone County	B1	RM 370.85	116910.9	5% Duration	728.1	957.49	954.47	2.15	2.15	31.43	31.43	188.32	360.77	1.8	1.8	3.02	3.02
Yellowstone County	B1	RM 370.77	116793.6	5% Duration	728.1	957.09	953.84	2.67	2.67	45.8	45.8	163.81	378.45	1.67	1.67	3.25	3.25
Yellowstone County	B1	RM 370.72	116711.6	5% Duration	728.1	956.93	953.13	2.5	2.4	41.67	33.89	135.06	407.95	2.14	1.74	3.8	3.8

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B1	RM 370.70	116669.2	5% Duration	728.1	956.83	953.05	2.58	2.39	38.57	25.61	124.93	356.91	2.23	1.48	3.78	3.78
Yellowstone County	B1	RM 370.63	116558.9	5% Duration	728.1	956.69	953.42	2.21	2.2	37.48	35.34	158.72	300.84	2.07	1.95	3.27	3.27
Yellowstone County	B1	RM 370.56	116440.6	5% Duration	728.1	956.61	953.34	1.84	1.83	18.56	17.08	156.07	183.9	2.53	2.33	3.27	3.27
Yellowstone County	B1	RM 370.44	116241.1	5% Duration	728.1	956.38	952.03	2.11	2.01	27.92	20.08	124.1	183.27	2.76	1.98	4.35	4.35
Yellowstone County	B1	RM 370.34	116071.6	5% Duration	728.1	956.27	949.79	1.93	1.89	21.87	17.73	106.22	134.7	3.54	2.86	6.48	6.48
Yellowstone County	B1	RM 370.24	115908.6	5% Duration	728.1	956.19	950.22	1.81	1.74	19.94	15.56	112.8	151.97	3.52	2.75	5.97	5.97
Yellowstone County	B1	RM 370.11	115705	5% Duration	728.1	956.04	952.12	1.83	1.7	21.14	14.47	147.1	237.56	2.62	1.8	3.92	3.92
Yellowstone County	B1	RM 370.00	115535.2	5% Duration	728.1	955.85	952.2	1.93	1.78	25.78	21.87	192.69	265.11	1.82	1.54	3.65	3.65
Yellowstone County	B1	RM 369.89	115356.1	5% Duration	728.1	955.61	953.15	1.77	1.71	19.37	18.28	277.6	312.87	1.44	1.36	2.46	2.46
Yellowstone County	B1	RM 369.77	115164.3	5% Duration	728.1	955.33	952.34	1.69	1.69	20.59	20.35	334.48	347.28	1.29	1.27	2.99	2.99
Yellowstone County	B1	RM 369.64	114965.6	5% Duration	728.1	954.95	951.9	1.88	1.85	25.29	24.52	274.25	295.33	1.39	1.35	3.05	3.05
Yellowstone County	B1	RM 369.54	114789.5	5% Duration	728.1	954.64	952.38	1.83	1.77	23.37	21.05	291.35	340.15	1.34	1.21	2.26	2.26
Yellowstone County	B1	RM 369.45	114650.1	5% Duration	728.1	954.43	951	1.61	1.54	21.14	21	311.43	367.71	1.3	1.29	3.43	3.43
Yellowstone County	B1	RM 369.32	114431.1	5% Duration	728.1	954	951.1	1.63	1.62	26.88	27.02	340.88	361.51	1.24	1.25	2.9	2.9
Yellowstone County	B1	RM 369.17	114210.5	5% Duration	728.1	953.59	949.85	2.07	1.87	26.45	19.36	140.08	235.19	2.26	1.65	3.74	3.74
Yellowstone County	B1	RM 369.06	114022.4	5% Duration	728.1	953.31	949.89	2.25	2.12	30.13	22.45	130.23	194.09	2.38	1.77	3.42	3.42
Yellowstone County	B1	RM 368.96	113871.2	5% Duration	728.1	953.18	949.68	1.89	1.7	23.21	17.77	162.26	263.81	2.12	1.62	3.5	3.5
Yellowstone County	B1	RM 368.88	113745.9	5% Duration	728.1	952.99	948.77	1.94	1.85	26.84	23.26	201.87	274.91	1.65	1.43	4.22	4.22
Yellowstone County	B1	RM 368.82	113641	5% Duration	728.1	952.71	948.47	2.22	2.16	41.29	36.95	186.53	228.23	1.65	1.48	4.24	4.24
Yellowstone County	B1	RM 368.72	113477.3	5% Duration	728.1	952.32	948.45	1.98	1.92	40.35	34	227.24	290.74	1.55	1.31	3.87	3.87
Yellowstone County	B1	RM 368.63	113328.9	5% Duration	728.1	951.88	947.82	2.29	2.2	37.09	30.74	190.25	247.19	1.62	1.34	4.06	4.06
Yellowstone County	B1	RM 368.54	113195.6	5% Duration	728.1	951.59	947.51	2.28	2.24	36.8	32.11	167.87	197.3	1.89	1.65	4.08	4.08
Yellowstone County	B1	RM 368.44	113035.8	5% Duration	728.1	951.18	947.4	2.66	2.66	40.95	40.95	115.66	115.66	2.37	2.37	3.78	3.78
Yellowstone County	B1	RM 368.35	112878.7	5% Duration	728.1	951.24	946.64	1.25	1.25	10.39	10.39	273.12	273.12	2.13	2.13	4.6	4.6
Yellowstone County	B1	RM 368.26	112737.6	5% Duration	728.1	950.98	946.23	1.95	1.95	49.8	49.8	176.91	176.91	2.11	2.11	4.75	4.75
Yellowstone County	B1	RM 368.18	112604.7	5% Duration	728.1	950.7	947.11	2.11	2.11	30.22	30.22	155.03	162.58	2.23	2.23	3.59	3.59
Yellowstone County	B2	RM 368.09	112456.7	5% Duration	728.1	950.46	947.7	2.21	2.21	33.21	33.21	145.83	145.83	2.26	2.26	2.76	2.76
Yellowstone County	B2	RM 368.00	112314.4	5% Duration	728.1	950.35	947.56	1.8	1.8	20.44	20.44	193.2	246.65	2.1	2.1	2.79	2.79
Yellowstone County	B2	RM 367.86	112104.7	5% Duration	728.1	950	946.1	2.19	2.19	33.09	33.09	162.51	162.51	2.04	2.04	3.9	3.9
Yellowstone County	B2	RM 367.79	111989.2	5% Duration	728.1	949.8	945.04	2.16	2.16	39.47	39.47	160.74	160.74	2.1	2.1	4.75	4.75
Yellowstone County	B2	RM 367.72	111876.5	5% Duration	728.1	949.68	945.45	1.98	1.97	24.04	22.57	127.57	136.94	2.88	2.7	4.23	4.23
Yellowstone County	B2	RM 367.64	111739.2	5% Duration	728.1	949.49	945.68	2.16	2.16	33.13	30.65	132.22	143.24	2.55	2.36	3.81	3.81
Yellowstone County	B2	RM 367.50	111519.9	5% Duration	728.1	949.28	945.21	2.02	1.98	26.33	23.71	120.9	137.07	2.97	2.68	4.07	4.07
Yellowstone County	B2	RM 367.40	111357.1	5% Duration	728.1	949.14	944.36	2.02	1.97	23.65	14.96	108.87	179.1	3.28	2.07	4.78	4.78
Yellowstone County	B2	RM 367.31	111214.8	5% Duration	728.1	949.05	945.36	1.95	1.9	20.01	16.79	140.7	172.57	2.65	2.22	3.68	3.68
Yellowstone County	B2	RM 367.19	110992.7	5% Duration	728.1	948.83	945.91	1.86	1.82	23.36	21.82	234.36	259.18	1.66	1.55	2.92	2.92
Yellowstone County	B2	RM 367.11	110813.5	5% Duration	728.1	948.4	945.17	2.28	2.23	36.87	34.58	204.74	224.2	1.55	1.45	3.23	3.23
Yellowstone County	B2	RM 367.03	110669.4	5% Duration	728.1	948.11	945.89	2	1.96	28.39	27.55	274.49	290.63	1.31	1.28	2.22	2.22
Yellowstone County	B2	RM 366.95	110543	5% Duration	728.1	947.89	945.34	1.65	1.61	24.78	24.28	338.74	356.7	1.29	1.26	2.55	2.55
Yellowstone County	B2	RM 366.84	110376	5% Duration	728.1	947.61	944.61	1.55	1.55	19.6	19.6	350.12	350.12	1.34	1.34	3	3
Yellowstone County	B2	RM 366.78	110300.8	5% Duration	728.1	947.5	943.84	1.57	1.57	18.43	18.43	317.62	317.62	1.46	1.46	3.66	3.66
Yellowstone County	B2	RM 366.73	110074.8	5% Duration	728.1	947.1	943.42	1.9	1.9	26.08	26.08	247.84	247.84	1.55	1.55	3.68	3.68
Yellowstone County	B2	RM 366.68	109931.6	5% Duration	728.1	946.91	942.77	1.85	1.85	24.69	24.69	179.93	179.93	2.19	2.19	4.14	4.14
Yellowstone County	B2	RM 366.53	109747.6	5% Duration	728.1	946.66	940.86	2.09	2.09	24.78	24.78	137.16	137.16	2.54	2.54	5.8	5.8
Yellowstone County	B2	RM 366.38	109510.8	5% Duration	728.1	946.45	941.55	2.05	2.05	25.55	25.55	109.47	109.47	3.25	3.25	4.9	4.9
Yellowstone County	B2	RM 366.27	109345.5	5% Duration	728.1	946.33	942.72	1.72	1.72	22.75	22.75	213.65	213.65	1.98	1.98	3.61	3.61
Yellowstone County	B2	RM 366.15	109158.9	5% Duration	728.1	946.04	941.59	1.98	1.98	30.08	30.08	166.31	166.31	2.21	2.21	4.45	4.45
Yellowstone County	B2	RM 366.04	108972.6	5% Duration	728.1	945.85	941.41	1.94	1.94	19.85	19.85	150.03	150.03	2.51	2.51	4.44	4.44
Yellowstone County	B2	RM 365.94	108818.8	5% Duration	728.1	945.73	940.93	1.84	1.84	18.84	18.84	165.81	165.81	2.38	2.38	4.8	4.8
Yellowstone County	B2	RM 365.83	108647.5	5% Duration	728.1	945.54	939.93	1.9	1.9	28.11	28.11	196.14	196.14	1.95	1.95	5.61	5.61
Yellowstone County	B2	RM 365.75	108521.3	5% Duration	728.1	945.35	941.33	1.93	1.88	29.53	26.24	174.82	207.13	2.11	1.87	4.02	4.02
Yellowstone County	B2	RM 365.71	108446.5	5% Duration	728.1	945.28	941.83	1.72	1.7	26.88	25.26	195.85	210.83	2.16	2.03	3.45	3.45
Yellowstone County	B2	RM 365.64	108343.5	5% Duration	728.1	945.11	942.19	1.84	1.84	25.7	25.6	216.92	217.7	1.83	1.82	2.92	2.92
Yellowstone County	B2	RM 365.57	108220.5	5% Duration	728.1	944.79	942.08	2.15	2.15	46.98	45.55	229.33	237.47	1.47	1.43	2.71	2.71
Yellowstone County	B2	RM 365.51	108118.9	5% Duration	728.1	944.51	941.87	2.1	2.09	38.4	37.04	205.44	213.83	1.69	1.63	2.64	2.64
Yellowstone County	B2	RM 365.46	108042.9	5% Duration	728.1	944.43	941.73	1.75	1.75	20.39	20.08	251.99	256.29	1.65	1.63	2.7	2.7
Yellowstone County	B2	RM 365.41	107956.5	5% Duration	728.1	944.34	941.46	1.61	1.61	19.97	19.97	274.9	274.9	1.64	1.64	2.88	2.88
Yellowstone County	B2	RM 365.37	107905.7	5% Duration	728.1	944.27	940.74	1.66	1.66	19.51	19.51	282.72	282.72	1.55	1.55	3.53	3.53
Yellowstone County	B2	RM 365.31	107792.4	5% Duration	728.1	944.12	939.27	1.76	1.76	19.46	19.26	205.11	207.32	2.02	2	4.85	4.85
Yellowstone County	B2	RM 365.27	107727.9	5% Duration	728.1	943.94	939.34	2.19	2.19	32.36	32.36	187.2	187.2	1.78	1.78	4.6	4.6
Yellowstone County	B2	RM 365.23	107674.2	5% Duration	728.1	943.84	939.52	2.23	2.23	30.01	30.01	169.63	169.63	1.92	1.92	4.32	4.32

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B2	RM 365.19	107603	5% Duration	728.1	943.74	939.93	2.07	2.07	34.77	34.77	197.93	197.93	1.78	1.78	3.81	3.81
Yellowstone County	B2	RM 365.15	107534.7	5% Duration	728.1	943.62	939.68	2.02	2.02	27.84	27.84	209.97	209.97	1.71	1.71	3.94	3.94
Yellowstone County	B2	RM 365.10	107466	5% Duration	728.1	943.52	938.61	2.01	2.01	25.78	25.78	179.39	179.39	2.02	2.02	4.91	4.91
Yellowstone County	B2	RM 365.06	107396.2	5% Duration	728.1	943.46	939.07	1.87	1.87	24.62	24.62	162.72	162.72	2.4	2.4	4.39	4.39
Yellowstone County	B2	RM 365.01	107325.8	5% Duration	728.1	943.41	939.22	1.6	1.6	29.7	29.7	165.51	165.51	2.74	2.74	4.19	4.19
Yellowstone County	B2	RM 364.99	107287.5	5% Duration	728.1	943.34	939.27	1.74	1.74	34.58	34.58	160.61	160.61	2.61	2.61	4.07	4.07
Yellowstone County	B2	RM 364.90	107128.3	5% Duration	728.1	943.12	937.97	1.96	1.94	21.46	19.82	140.65	154.09	2.64	2.44	5.15	5.15
Yellowstone County		RM 331.55	107100	5% Duration	Bridge												
Yellowstone County	B2	RM 364.85	107057	5% Duration	728.1	943.01	938.58	1.92	1.91	20.58	19.17	142.65	154.19	2.66	2.47	4.43	4.43
Yellowstone County	B2	RM 364.81	106996.1	5% Duration	728.1	942.97	938.93	1.88	1.88	19.25	19.25	175.95	175.95	2.2	2.2	4.04	4.04
Yellowstone County	B2	RM 364.74	106893.3	5% Duration	728.1	942.87	938.94	1.89	1.89	22.2	20.67	157.68	169.82	2.44	2.27	3.93	3.93
Yellowstone County	B2	RM 364.64	106739.2	5% Duration	728.1	942.68	939.09	2.08	2.08	23.54	23.54	121.83	121.83	2.87	2.87	3.59	3.59
Yellowstone County		RM 331.32	106722	5% Duration	Bridge												
Yellowstone County	B2	RM 364.62	106707.8	5% Duration	728.1	942.59	939.16	2.11	2.11	24.4	24.4	125.58	125.58	2.76	2.76	3.43	3.43
Yellowstone County	B2	RM 364.61	106686.8	5% Duration	728.1	942.59	939.21	1.94	1.94	20.6	20.6	135.92	135.92	2.77	2.77	3.38	3.38
Yellowstone County	B2	RM 364.60	106666.6	5% Duration	728.1	942.53	939.26	2.11	2.11	24.87	24.87	132.17	132.17	2.61	2.61	3.27	3.27
Yellowstone County		RM 331.14	106644	5% Duration	Bridge												
Yellowstone County	B2	RM 364.57	106627	5% Duration	728.1	942.47	939.21	2.04	2.04	23.16	23.16	135.96	135.96	2.66	2.66	3.26	3.26
Yellowstone County	B2	RM 364.53	106558.4	5% Duration	728.1	942.42	939.11	1.94	1.94	21.2	21.2	144.42	144.42	2.59	2.59	3.31	3.31
Yellowstone County	B2	RM 364.49	106490.3	5% Duration	728.1	942.35	939.24	2	2	23.16	23.16	152.26	152.26	2.39	2.39	3.11	3.11
Yellowstone County	B2	RM 364.43	106394	5% Duration	728.1	942.26	939.13	1.97	1.97	22.23	22.23	150.1	150.1	2.46	2.46	3.13	3.13
Yellowstone County	B2	RM 364.37	106296.4	5% Duration	728.1	942.19	938.98	1.88	1.88	19.46	19.46	142.21	142.21	2.73	2.73	3.21	3.21
Yellowstone County	B2	RM 364.32	106215.1	5% Duration	728.1	942.11	938.52	1.91	1.91	25.49	25.49	143.04	143.04	2.67	2.67	3.59	3.59
Yellowstone County	B2	RM 364.29	106172.9	5% Duration	728.1	942.11	938.13	1.53	1.53	35.19	35.19	183.72	190.75	2.59	2.59	3.98	3.98
Yellowstone County	B2	RM 364.26	106126.6	5% Duration	728.1	941.96	937.7	2.01	1.96	25.6	23.32	132.44	149.43	2.72	2.48	4.26	4.26
Yellowstone County	B2	RM 364.22	106055.2	5% Duration	728.1	941.9	938.15	1.95	1.95	27.66	27.66	126.4	151.56	2.95	2.95	3.75	3.75
Yellowstone County	B2	RM 364.14	105927.3	5% Duration	728.1	941.7	938.12	2.22	2.2	32.77	29.49	117.52	131.89	2.79	2.51	3.58	3.58
Yellowstone County	B2	RM 364.06	105809.9	5% Duration	728.1	941.62	938.22	1.93	1.93	24.86	24.86	141.74	141.74	2.66	2.66	3.4	3.4
Yellowstone County	B2	RM 363.96	105648.3	5% Duration	728.1	941.45	938.28	1.8	1.8	24.08	24.08	232.65	232.65	1.74	1.74	3.17	3.17
Yellowstone County	B2	RM 363.85	105472.4	5% Duration	728.1	941.28	936.25	1.84	1.74	18.65	15.27	139.68	187.11	2.74	2.24	5.03	5.03
Yellowstone County	B2	RM 363.76	105316.8	5% Duration	728.1	941.19	937.03	1.68	1.62	19.91	17.48	139.8	177.47	2.89	2.54	4.16	4.16
Yellowstone County	B2	RM 363.63	105118.1	5% Duration	728.1	940.95	937.93	1.76	1.76	30.83	30.83	242.87	242.87	1.71	1.71	3.02	3.02
Yellowstone County	B2	RM 363.52	104943.9	5% Duration	728.1	940.66	937.54	1.73	1.73	24.51	24.51	262.02	262.04	1.6	1.6	3.12	3.12
Yellowstone County	B2	RM 363.46	104841.5	5% Duration	728.1	940.54	937.16	1.44	1.44	22.66	22.39	312.34	316.57	1.61	1.59	3.38	3.38
Yellowstone County	B2	RM 363.33	104622.9	5% Duration	728.1	940.24	936.36	1.62	1.57	21.36	16.5	215.42	288.58	2.08	1.6	3.88	3.88
Yellowstone County	B2	RM 363.20	104414.5	5% Duration	728.1	939.94	936.48	1.74	1.66	27.41	23.36	275.3	350.2	1.51	1.28	3.46	3.46
Yellowstone County	B2	RM 363.10	104256.4	5% Duration	728.1	939.66	936.25	1.83	1.7	27.85	20.62	196.55	292.05	1.98	1.47	3.41	3.41
Yellowstone County	B2	RM 363.03	104144.8	5% Duration	728.1	939.55	936.22	1.67	1.6	19.45	17.06	219.86	264.58	1.96	1.72	3.33	3.33
Yellowstone County	B2	RM 362.86	103869.6	5% Duration	728.1	939.33	934.32	1.32	1.25	12.1	10.48	372.85	468.33	1.44	1.25	5.01	5.01
Yellowstone County	B2	RM 362.74	103671.4	5% Duration	728.1	938.95	934.52	2.03	1.98	28.72	25.76	235.18	269.82	1.52	1.36	4.43	4.43
Yellowstone County	B2	RM 362.63	103493.2	5% Duration	728.1	938.47	934.5	2.34	2.33	37.5	35.96	213.69	223.84	1.46	1.4	3.97	3.97
Yellowstone County	B2	RM 362.52	103330.7	5% Duration	728.1	938.1	934.5	2.11	2.11	35.81	35.45	218.79	221.18	1.57	1.56	3.6	3.6
Yellowstone County	B2	RM 362.43	103185.5	5% Duration	728.1	937.83	934.1	2.16	2.16	21.23	21.23	227	239.02	1.48	1.48	3.72	3.72
Yellowstone County	B2	RM 362.36	103070.8	5% Duration	728.1	937.71	932.98	1.95	1.95	17.02	17.02	239.8	255.64	1.56	1.56	4.73	4.73
Yellowstone County	B2	RM 362.27	102929.3	5% Duration	728.1	937.65	932.93	1.61	1.61	12.23	12.23	185.97	185.97	2.42	2.42	4.72	4.72
Yellowstone County	B2	RM 362.20	102813.3	5% Duration	728.1	937.47	933.37	2.11	2.11	23.66	23.66	107.34	107.34	3.21	3.21	4.1	4.1
Yellowstone County	B2	RM 362.13	102693.1	5% Duration	728.1	937.37	933.47	2.1	2.1	24.23	24.23	123.61	160.06	2.8	2.8	3.9	3.9
Yellowstone County	B3	RM 362.05	102570.9	5% Duration	728.1	937.28	933.85	1.94	1.94	21.02	21.02	175.72	175.72	2.14	2.14	3.43	3.43
Yellowstone County	B3	RM 362.00	102488.8	5% Duration	728.1	937.23	934.11	1.69	1.69	19.06	19.06	236.45	240.46	1.82	1.82	3.12	3.12
Yellowstone County	B3	RM 361.93	102368.8	5% Duration	728.1	937.06	934.31	1.76	1.76	21.22	21.22	297.55	297.55	1.44	1.44	2.75	2.75
Yellowstone County	B3	RM 361.86	102261.1	5% Duration	728.1	936.81	934.36	2.05	2.05	31.8	31.8	241.25	242.26	1.47	1.47	2.45	2.45
Yellowstone County	B3	RM 361.78	102138.9	5% Duration	728.1	936.67	933.72	1.6	1.6	17.94	17.94	292	292	1.55	1.55	2.95	2.95
Yellowstone County	B3	RM 361.68	101970.2	5% Duration	728.1	936.29	933.64	1.89	1.89	35.57	35.25	393.95	397.89	0.98	0.97	2.65	2.65
Yellowstone County	B3	RM 361.65	101918.4	5% Duration	728.1	936.19	933.71	1.55	1.55	24.62	24.62	382.04	388.61	1.23	1.23	2.48	2.48
Yellowstone County	B3	RM 361.61	101855.6	5% Duration	728.1	935.99	932.7	1.89	1.89	28.16	28.16	278.85	311.92	1.38	1.38	3.29	3.29
Yellowstone County	B3	RM 361.56	101767.4	5% Duration	728.1	935.89	930.29	1.71	1.71	19.18	19.18	230.29	245.91	1.85	1.85	5.6	5.6
Yellowstone County	B3	RM 361.48	101644.6	5% Duration	728.1	935.75	929.97	1.77	1.77	21.85	21.85	173.32	265.28	2.37	2.37	5.78	5.78
Yellowstone County	B3	RM 361.42	101546.2	5% Duration	728.1	935.55	932.36	2.19	2.19	28.23	28.23	158.64	176.25	2.09	2.09	3.19	3.19
Yellowstone County	B3	RM 361.37	101468.9	5% Duration	728.1	935.51	932.21	1.9	1.9	20.82	20.01	157.85	164.77	2.42	2.33	3.3	3.3
Yellowstone County	B3	RM 361.33	101409.4	5% Duration	728.1	935.38	932.02	2.2	2.19	28.31	26.96	145.89	170.48	2.27	2.16	3.36	3.36
Yellowstone County	B3	RM 361.29	101346	5% Duration	728.1	935.25	930.51	2.37	2.35	32.51	30.49	125.52	172.52	2.44	2.29	4.74	4.74

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B3	RM 361.25	101284.9	5% Duration	728.1	935.15	928.42	2.46	2.35	32.35	27.12	97.62	305.48	3.01	2.52	6.73	6.73
Yellowstone County	B3	RM 361.21	101251.*	5% Duration	728.1	935.2	927.55	1.9	1.88	36.86	31.26	104.22	357.49	3.68	3.11	7.65	7.65
Yellowstone County		RM 361.21	101217.5	5% Duration	728.1	935.22	926.68	1.57	1.51	12.89	10.15	109.86	489.86	4.21	3.31	8.54	8.54
Yellowstone County	B3	RM 361.18	101167.2	5% Duration	728.1	935.21	928.03	1.54	1.46	11.72	8.32	116.68	747.67	4.01	2.84	7.18	7.18
Yellowstone County	B3	RM 361.16	101134.2	5% Duration	728.1	935.21	928.92	1.41	1.32	11.65	9.09	157.93	662.36	3.22	2.51	6.29	6.29
Yellowstone County	B3	RM 361.09	101028.7	5% Duration	728.1	935.07	931.28	1.8	1.8	21.28	21.28	265.14	553.05	1.53	1.53	3.79	3.79
Yellowstone County	B3	RM 361.01	100891.3	5% Duration	728.1	934.89	931.55	1.8	1.8	21.37	21.37	234.2	526.63	1.73	1.73	3.34	3.34
Yellowstone County	B3	RM 360.92	100756	5% Duration	728.1	934.68	931.05	1.68	1.68	32.47	32.47	301.41	685.33	1.44	1.44	3.63	3.63
Yellowstone County	B3	RM 360.81	100570.1	5% Duration	728.1	934.19	929.52	1.89	1.89	36.6	36.6	255.08	631.82	1.51	1.51	4.67	4.67
Yellowstone County	B3	RM 360.69	100383.5	5% Duration	728.1	933.97	930.6	1.43	1.41	15.31	14.55	303.15	974.44	1.66	1.58	4.08	4.08
Yellowstone County	B3	RM 360.59	100227.2	5% Duration	728.1	933.66	930.53	2.01	1.95	29.66	26.14	234.78	906.16	1.51	1.33	3.45	3.45
Yellowstone County	B3	RM 360.50	100081	5% Duration	728.1	933.42	930.55	1.9	1.89	26.9	25.47	196.08	451.75	1.95	1.85	2.87	2.87
Yellowstone County	B3	RM 360.42	99970.7	5% Duration	728.1	933.23	929.97	2.06	2.03	28.81	25.74	177.71	452.51	1.99	1.78	3.26	3.26
Yellowstone County	B3	RM 360.36	99862.66	5% Duration	728.1	933.06	929.68	2.08	2.08	25.74	25.58	214.45	496.99	1.64	1.63	3.38	3.38
Yellowstone County	B3	RM 360.27	99717.18	5% Duration	728.1	932.74	929.52	2.39	2.24	36.56	30.68	138.22	355.32	2.03	1.71	3.22	3.22
Yellowstone County	B3	RM 360.18	99578.06	5% Duration	728.1	932.58	929.32	2.1	2.04	30	26.49	133.13	380.21	2.59	2.29	3.26	3.26
Yellowstone County	B3	RM 360.11	99458.59	5% Duration	728.1	932.45	929.38	2.06	1.84	26.11	18.21	136.07	298.25	2.17	1.52	3.07	3.07
Yellowstone County	B3	RM 360.03	99328	5% Duration	732.4	932.31	929.58	1.87	1.74	27.57	21.76	160.76	311	2.06	1.62	2.73	2.73
Yellowstone County	B3	RM 359.96	99226.54	5% Duration	732.4	932.16	929.2	1.97	1.82	24.15	19.19	153.96	355.67	2.15	1.71	2.96	2.96
Yellowstone County	B3	RM 359.88	99098.18	5% Duration	732.4	932.02	927.78	2.01	1.88	23.15	16.79	134.64	402.15	2.57	1.87	4.24	4.24
Yellowstone County	B3	RM 359.78	98940.52	5% Duration	732.4	931.88	928.1	1.95	1.9	25.39	18.97	140.83	366.69	2.65	1.98	3.78	3.78
Yellowstone County	B3	RM 359.70	98813.18	5% Duration	732.4	931.6	928.32	2.45	2.42	39.87	34.87	118.23	137.87	2.51	2.2	3.28	3.28
Yellowstone County	B3	RM 359.61	98663.44	5% Duration	732.4	931.45	928.8	1.74	1.74	23.98	23.61	305.27	312.31	1.38	1.36	2.65	2.65
Yellowstone County	B3	RM 359.50	98492.66	5% Duration	732.4	931.18	928.22	1.79	1.79	20.76	19.8	237.12	268.62	1.72	1.64	2.96	2.96
Yellowstone County	B3	RM 359.38	98291.15	5% Duration	732.4	930.9	927.09	1.87	1.83	27.85	25.45	205.09	269.64	1.84	1.68	3.81	3.81
Yellowstone County	B3	RM 359.26	98107.42	5% Duration	732.4	930.51	927.71	2.04	1.93	29.77	25.77	269.24	348.31	1.3	1.12	2.8	2.8
Yellowstone County	B3	RM 359.18	97966.53	5% Duration	732.4	930.29	927.28	1.84	1.71	22.9	17.03	228.78	342.22	1.69	1.26	3.01	3.01
Yellowstone County	B3	RM 359.10	97841.82	5% Duration	732.4	930.06	926.69	1.96	1.84	27.43	24.55	255	329.67	1.37	1.23	3.37	3.37
Yellowstone County	B3	RM 359.01	97692.75	5% Duration	732.4	929.82	925.91	1.91	1.57	23.86	18.06	207.93	364.77	1.69	1.28	3.91	3.91
Yellowstone County	B3	RM 358.90	97524.59	5% Duration	732.4	929.51	926.77	2.1	2.06	29.17	24.23	180.26	225.45	1.9	1.58	2.74	2.74
Yellowstone County	B3	RM 358.81	97374.99	5% Duration	732.4	929.29	926.37	2.04	2.01	26.24	24.58	199.78	216.69	1.79	1.68	2.92	2.92
Yellowstone County	B3	RM 358.74	97267.71	5% Duration	732.4	929.06	925.53	2.27	1.93	42.69	26.65	156.54	400.33	1.84	1.15	3.53	3.53
Yellowstone County	B3	RM 358.67	97155.8	5% Duration	732.4	928.89	925.59	1.63	1.67	19.31	19.08	254.68	456.45	1.17	1.16	3.3	3.3
Yellowstone County	B3	RM 358.61	97062.24	5% Duration	732.4	928.73	925.74	1.47	1.59	19.27	19.94	338.44	511.72	1.04	1.07	2.99	2.99
Yellowstone County	B3	RM 358.56	96985.92	5% Duration	732.4	928.66	926.2	1.17	1.3	11.32	11.91	340.4	502.1	1.31	1.38	4.07	4.07
Yellowstone County	B3	RM 358.50	96888.4	5% Duration	732.4	928.59	925.64	1.22	1.26	10.58	10.4	343.48	497.91	1.38	1.36	2.95	2.95
Yellowstone County	B3	RM 358.43	96788.43	5% Duration	732.4	928.52	925.27	1	1.05	13.97	11.2	371.24	610.8	1.48	1.18	3.25	3.25
Yellowstone County	B3	RM 358.30	96638.82	5% Duration	732.4	928.45	924.7	0.85	0.82	7.4	5.72	536.1	742.98	1.57	1.21	3.75	3.75
Yellowstone County	B3	RM 358.24	96561.93	5% Duration	732.4	928.4	923.57	1.04	0.94	7.78	5.62	464.33	743.81	1.45	1.05	4.83	4.83
Yellowstone County	B3	RM 358.20	96500.79	5% Duration	732.4	928.31	922.99	1.32	1.3	13.51	13.05	493.39	523.95	1.11	1.07	5.32	5.32
Yellowstone County	B3	RM 358.14	96404.93	5% Duration	732.4	928.15	922.57	1.46	1.44	17.13	16.37	478.83	514.24	1.03	0.99	5.58	5.58
Yellowstone County	B3	RM 358.12	96368.05	5% Duration	732.4	928.12	922.78	1.28	1.21	12.06	10.61	341.72	457.06	1.52	1.34	5.34	5.34
Yellowstone County	B3	RM 358.04	96244.75	5% Duration	732.4	927.93	923.22	1.81	1.64	27.87	18.8	151.36	273.64	2.43	1.63	4.71	4.71
Yellowstone County	B3	RM 358.00	96168.44	5% Duration	732.4	927.7	923.39	2.46	2.04	39.47	23.59	94.72	228.52	2.64	1.57	4.31	4.31
Yellowstone County	B3	RM 357.93	96065.49	5% Duration	732.4	927.47	923.1	2.73	2.31	40.38	22.33	82.25	201.17	2.86	1.58	4.37	4.37
Yellowstone County	B3	RM 357.88	95975.44	5% Duration	732.4	927.46	923.91	2.02	1.77	26.62	17.74	144.04	300.72	2.07	1.38	3.55	3.55
Yellowstone County	B3	RM 357.82	95884.99	5% Duration	732.4	927.41	924.01	1.63	1.53	18.36	14.66	188.16	304.31	2	1.59	3.4	3.4
Yellowstone County	B3	RM 357.78	95821.69	5% Duration	732.4	927.32	924.08	1.63	1.61	19.9	18.69	226.89	298.35	1.62	1.53	3.24	3.24
Yellowstone County	B3	RM 357.69	95683.91	5% Duration	732.4	927.11	923.81	1.82	1.82	21.53	21.53	237.98	237.98	1.69	1.69	3.3	3.3
Yellowstone County	B4	RM 357.62	95571.15	5% Duration	732.4	926.89	921.84	2.09	2.09	29.68	29.68	176.3	176.3	1.99	1.99	5.05	5.05
Yellowstone County	B4	RM 357.56	95469.4	5% Duration	732.4	926.86	918.46	1.52	1.52	16.19	16.19	195.51	195.51	2.46	2.46	8.4	8.4
Yellowstone County	B4	RM 357.48	95351.48	5% Duration	732.4	926.57	922.69	2.27	2.27	34.98	34.98	192.29	192.29	1.67	1.67	3.88	3.88
Yellowstone County	B4	RM 357.44	95275.91	5% Duration	732.4	926.43	922.22	2.26	2.26	32.7	32.7	161.76	161.76	2.01	2.01	4.21	4.21
Yellowstone County	B4	RM 357.34	95127.12	5% Duration	732.4	926.23	923.1	2.08	2.08	26.43	26.09	174.2	176.54	2.02	1.99	3.13	3.13
Yellowstone County	B4	RM 357.23	94939.75	5% Duration	732.4	926.1	920.81	1.8	1.8	18.81	18.12	134.13	139.65	3.03	2.91	5.29	5.29
Yellowstone County	B4	RM 357.13	94789.23	5% Duration	732.4	925.9	921.26	2.19	2.06	27.56	20.32	132.21	202.35	2.44	1.79	4.64	4.64
Yellowstone County	B4	RM 357.01	94595.53	5% Duration	732.4	925.8	921.72	1.66	1.59	15.55	10.42	175.76	274.62	2.5	1.68	4.08	4.08
Yellowstone County	B4	RM 356.90	94412.13	5% Duration	732.4	925.59	921.02	1.92	1.86	23.28	20.52	209.88	247.2	1.8	1.59	4.57	4.57
Yellowstone County	B4	RM 356.81	94272.48	5% Duration	732.4	925.37	919.95	2.07	1.89	27.16	23.05	164.61	222.83	2.05	1.74	5.42	5.42
Yellowstone County	B4	RM 356.73	94148.77	5% Duration	732.4	925.25	921.15	1.89	1.78	21.33	18.5	166.35	214.78	2.21	1.92	4.1	4.1
Yellowstone County	B4	RM 356.66	94030.68	5% Duration	732.4	925.14	921.75	1.82	1.76	20.91	20.43	207.88	235.72	1.81	1.77	3.39	3.39

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B4	RM 356.59	93912.76	5% Duration	732.4	925.03	921.88	1.61	1.54	17.37	16.03	237.43	291.59	1.76	1.63	3.15	3.15
Yellowstone County	B4	RM 356.50	93782.14	5% Duration	732.4	924.89	921.75	1.73	1.63	22.03	19.94	149.04	216.45	2.3	2.08	3.14	3.14
Yellowstone County	B4	RM 356.44	93670.16	5% Duration	732.4	924.72	921.33	1.99	1.91	23.13	21.14	128.48	183.29	2.29	2.1	3.39	3.39
Yellowstone County	B4	RM 356.35	93525.27	5% Duration	732.4	924.57	919.71	2.05	1.92	25.81	22.07	100.85	145.41	3.1	2.65	4.86	4.86
Yellowstone County	B4	RM 356.26	93386.36	5% Duration	732.4	924.51	919.77	1.82	1.63	16.74	11.41	111.19	202.61	3.29	2.25	4.74	4.74
Yellowstone County	B4	RM 356.18	93264.31	5% Duration	732.4	924.45	919.95	1.74	1.65	17.5	14.63	120.58	179.64	3.12	2.61	4.5	4.5
Yellowstone County	B4	RM 356.11	93150.71	5% Duration	732.4	924.39	920.24	1.56	1.55	21.81	19.79	173.9	208.26	2.7	2.45	4.15	4.15
Yellowstone County	B4	RM 356.04	93034.25	5% Duration	732.4	924.2	920.36	1.86	1.83	34.58	29.65	166.85	220.73	2.35	2.02	3.84	3.84
Yellowstone County	B4	RM 355.97	92927.46	5% Duration	732.4	923.98	920.09	2.18	2.18	31.22	31.22	142.19	176.22	2.36	2.36	3.89	3.89
Yellowstone County	B4	RM 355.91	92825.82	5% Duration	732.4	923.89	919.82	2.01	2.01	22.11	21.78	145.94	163.16	2.5	2.46	4.07	4.07
Yellowstone County	B4	RM 355.82	92688.73	5% Duration	732.4	923.78	919.51	1.92	1.91	21.64	16.99	147.84	218.71	2.59	2.03	4.27	4.27
Yellowstone County	B4	RM 355.69	92483.67	5% Duration	732.4	923.34	919.96	2.78	2.18	45.15	29.92	102.45	220.88	2.3	1.52	3.38	3.38
Yellowstone County	B4	RM 355.68	92480	5% Duration	Bridge												
Yellowstone County		RM 355.60	92465.94	5% Duration	732.4	922.85	919.92	2.84	2.46	48.68	33.1	119.86	212.16	2.07	1.4	2.93	2.93
Yellowstone County	B4	RM 355.66	92419.94	5% Duration	732.4	922.84	919.8	2.42	2.21	32.36	21.95	121.28	210.25	2.32	1.58	3.04	3.04
Yellowstone County	B4	RM 355.60	92333.48	5% Duration	732.4	922.73	919.42	2.34	2.15	29.75	21.43	130.62	210.15	2.25	1.62	3.31	3.31
Yellowstone County	B4	RM 355.49	92159.95	5% Duration	732.4	922.46	918.52	2.29	2.09	44.46	29.57	124.01	240.32	2.19	1.46	3.94	3.94
Yellowstone County	B4	RM 355.43	92061.2	5% Duration	732.4	922.3	918.67	1.9	1.94	38.5	33.93	130.55	196.64	2.2	1.94	3.63	3.63
Yellowstone County	B4	RM 355.41	92020.68	5% Duration	732.4	922.19	919.02	1.87	2	49.79	43.21	148.41	234.77	1.83	1.59	3.17	3.17
Yellowstone County	B4	RM 355.38	91976.12	5% Duration	732.4	922.08	919.25	2.25	2.08	36.14	27.01	113.83	203.7	2.32	1.73	2.83	2.83
Yellowstone County	B4	RM 355.35	91933.98	5% Duration	732.4	922.03	919.21	2.18	1.96	30.58	18.74	106.79	255.71	2.4	1.46	2.82	2.82
Yellowstone County	B4	RM 355.32	91885.87	5% Duration	732.4	921.98	919.16	2.13	1.89	28.68	19.18	101.17	241.3	2.4	1.6	2.82	2.82
Yellowstone County	B4	RM 355.29	91828.99	5% Duration	732.4	921.89	918.93	2.25	1.92	30.18	20.99	97.44	226.12	2.43	1.69	3.36	3.36
Yellowstone County	B4	RM 355.23	91732.97	5% Duration	732.4	921.8	918.68	1.99	1.87	25.16	21.32	97.05	183.64	2.52	2.13	3.36	3.36
Yellowstone County	B4	RM 355.14	91596.1	5% Duration	732.4	921.68	918.52	1.91	1.76	22.69	18.1	115.02	234.87	2.36	1.88	3.16	3.16
Yellowstone County	B4	RM 354.94	91268.08	5% Duration	732.4	921.31	917.25	1.9	1.85	27.88	22.37	143.15	184.26	2.69	2.15	4.06	4.06
Yellowstone County	B4	RM 354.86	91153.59	5% Duration	732.4	921.18	917.03	1.97	1.94	31.94	28.83	119.02	134.39	3.12	2.82	4.15	4.15
Yellowstone County	B4	RM 354.80	91056.05	5% Duration	732.4	921.03	915.66	2.15	2.14	34.15	32.44	107.84	113.88	3.16	3	5.37	5.37
Yellowstone County	B4	RM 354.70	90880.27	5% Duration	732.4	920.85	915.38	2.05	1.93	31.51	26.85	128.35	168.48	2.64	2.25	5.47	5.47
Yellowstone County	B4	RM 354.61	90744.35	5% Duration	732.4	920.72	917.13	1.85	1.79	19.73	18.55	176.97	211.67	2.04	1.93	3.59	3.59
Yellowstone County	B4	RM 354.53	90609.24	5% Duration	732.4	920.65	916.52	1.46	1.44	14.87	13.72	238.24	779.91	2.08	1.92	4.13	4.13
Yellowstone County	B4	RM 354.45	90486.63	5% Duration	732.4	920.45	915.87	1.87	1.86	27.04	26	186.28	878.25	2.1	2.02	4.58	4.58
Yellowstone County	B4	RM 354.39	90385.43	5% Duration	732.4	920.24	915.24	2.17	2.16	32.8	31.46	159.64	877.05	2.12	2.03	5	5
Yellowstone County	B4	RM 354.33	90291.31	5% Duration	732.4	920.11	915.37	2.19	2.04	27.96	15.47	140.89	977.97	2.32	1.28	4.74	4.74
Yellowstone County	B4	RM 354.23	90133.96	5% Duration	732.4	919.93	915.46	2.15	2.08	30.38	22.68	112.91	158.71	2.98	2.22	4.47	4.47
Yellowstone County	B4	RM 354.13	89983.48	5% Duration	732.4	919.84	914.94	1.8	1.79	26.32	24.69	128.79	137.62	3.16	2.97	4.9	4.9
Yellowstone County	B4	RM 354.00	89778.46	5% Duration	732.4	919.62	916.2	1.9	1.77	28.23	18.4	154.14	259.15	2.45	1.6	3.42	3.42
Yellowstone County	B5	RM 353.90	89604.28	5% Duration	732.4	919.39	917.06	1.86	1.86	25.43	25.43	228.81	228.81	1.72	1.72	2.49	2.49
Yellowstone County	B5	RM 353.80	89446.75	5% Duration	761.3	919.06	916.36	1.9	1.9	38.43	37.87	295.24	300.01	1.36	1.34	2.7	2.7
Yellowstone County	B5	RM 353.70	89288.94	5% Duration	761.3	918.71	915.92	1.72	1.71	26.49	24.96	312.35	531.25	1.41	1.33	2.79	2.79
Yellowstone County	B5	RM 353.65	89204.58	5% Duration	761.3	918.54	915.49	1.76	1.76	28.42	28.42	291.64	291.64	1.48	1.48	3.05	3.05
Yellowstone County	B5	RM 353.56	89077.56	5% Duration	761.3	918.36	914.2	1.58	1.55	24.3	22.81	247.04	385.47	1.93	1.82	4.16	4.16
Yellowstone County	B5	RM 353.50	88982.39	5% Duration	761.3	918.3	914.58	1.26	1.21	15.95	12.96	273.17	475.67	2.17	1.76	3.72	3.72
Yellowstone County	B5	RM 353.41	88846.15	5% Duration	761.3	918.1	914.41	1.67	1.54	27.45	19.36	215.84	455.11	1.97	1.39	3.69	3.69
Yellowstone County	B5	RM 353.32	88709.14	5% Duration	761.3	917.9	913.6	1.8	1.6	26.04	16.07	168.76	330.98	2.33	1.43	4.3	4.3
Yellowstone County	B5	RM 353.25	88587.13	5% Duration	761.3	917.72	912.76	1.98	1.72	27.67	19.69	156.92	285.98	2.17	1.55	4.96	4.96
Yellowstone County	B5	RM 353.15	88438.48	5% Duration	761.3	917.48	912.71	2.2	1.84	31.56	23.78	152.03	278.87	1.97	1.48	4.77	4.77
Yellowstone County	B5	RM 353.08	88321.13	5% Duration	761.3	917.26	912.99	2.23	1.94	35.08	24.48	175.58	325.73	1.72	1.2	4.27	4.27
Yellowstone County	B5	RM 353.01	88210.34	5% Duration	761.3	917.04	913.13	1.98	1.84	34.8	27.95	230.35	372.14	1.39	1.11	3.91	3.91
Yellowstone County	B5	RM 352.94	88090.6	5% Duration	761.3	916.91	912.5	1.68	1.42	21.36	13.18	170.5	419.44	2.08	1.28	4.41	4.41
Yellowstone County	B5	RM 352.86	87957.76	5% Duration	761.3	916.73	913.38	2.01	1.64	28.37	16.25	111.58	309.61	2.62	1.5	3.35	3.35
Yellowstone County	B5	RM 352.79	87857.09	5% Duration	761.3	916.59	913.06	2.12	1.81	36.49	22.37	89.89	260.95	2.64	1.61	3.53	3.53
Yellowstone County	B5	RM 352.72	87748.15	5% Duration	761.3	916.41	911.97	2.31	1.99	36.39	21.23	81.86	202.47	3.25	1.88	4.44	4.44
Yellowstone County	B5	RM 352.68	87677.1	5% Duration	761.3	916.34	912.27	2	2	33.35	33.35	182.85	182.85	2.08	2.08	4.07	4.07
Yellowstone County	B5	RM 352.64	87605.18	5% Duration	761.3	916.25	911.68	1.89	1.89	27.17	27.17	174.52	174.52	2.31	2.31	4.57	4.57
Yellowstone County	B5	RM 352.63	87594	5% Duration	Bridge												
Yellowstone County		RM 352.47	87583.47	5% Duration	761.3	916.22	911.45	1.71	1.71	21.49	21.49	177.62	177.62	2.51	2.51	4.77	4.77
Yellowstone County	B5	RM 352.54	87461.4	5% Duration	761.3	916.13	912.57	1.52	1.5	15.88	14.19	256.46	310.32	1.94	1.73	3.56	3.56
Yellowstone County	B5	RM 352.47	87340.46	5% Duration	761.3	915.96	912.2	1.85	1.65	23.65	15.23	200.08	616.61	1.77	1.14	3.76	3.76
Yellowstone County	B5	RM 352.39	87216.99	5% Duration	761.3	915.65	912.01	2.21	2.22	33.5	28.88	168.18	423.22	1.44	1.25	4.46	4.46
Yellowstone County	B5	RM 352.31	87079.16	5% Duration	761.3	915.17	910.66	2.79	2.62	61.15	44.72	121.53	352.66	1.85	1.35	4.51	4.51

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B5	RM 352.23	86961.03	5% Duration	761.3	915.03	911.35	2.03	1.83	32.18	22.7	121.95	547.97	1.92	1.35	3.68	3.68
Yellowstone County	B5	RM 352.18	86873.5	5% Duration	761.3	915.1	911.21	0.65	0.72	3.28	3.44	180.07	760.8	1.75	1.83	3.89	3.89
Yellowstone County	B5	RM 352.09	86723.6	5% Duration	761.3	914.94	912.18	1.72	1.54	21.73	15.57	168.38	512.3	1.66	1.19	2.76	2.76
Yellowstone County	B5	RM 351.99	86568.41	5% Duration	761.3	914.64	912.6	2.21	1.95	31.29	21.52	139	335.09	1.7	1.17	2.06	2.06
Yellowstone County	B5	RM 351.93	86466.74	5% Duration	761.3	914.48	911.69	2.07	1.68	30.07	19.62	162.44	574.14	1.33	0.87	2.79	2.79
Yellowstone County	B5	RM 351.88	86386.8	5% Duration	761.3	914.37	911.38	1.64	1.24	23.22	14.62	144.41	752.59	1.34	0.84	2.99	2.99
Yellowstone County	B5	RM 351.81	86277.68	5% Duration	761.3	914.26	910.99	1.41	1.08	17.25	11.68	156.32	818.04	1.35	0.92	3.27	3.27
Yellowstone County	B5	RM 351.74	86159.62	5% Duration	761.3	913.92	911.37	1.57	1.43	23.26	17.26	150.38	626.08	1.27	0.94	3.09	3.09
Yellowstone County	B5	RM 351.67	86034.59	5% Duration	761.3	913.58	911.31	1.48	1.59	22.17	19.24	181.55	569.52	0.97	0.85	3.2	3.2
Yellowstone County	B5	RM 351.58	85891.33	5% Duration	761.3	913.32	911.47	0.97	1.49	10.46	13.51	222.97	500.5	0.79	1.02	3.23	3.23
Yellowstone County	B5	RM 351.52	85811.35	5% Duration	761.3	913.16	911.37	1.56	1.71	18.26	19.14	179.47	398.51	1.07	1.12	2.44	2.44
Yellowstone County	B5	RM 351.47	85728.2	5% Duration	761.3	913.09	911.17	1.33	1.38	12.36	11.77	166.92	444.93	1.32	1.26	2.55	2.55
Yellowstone County	B5	RM 351.40	85601.48	5% Duration	761.3	912.94	910.26	1.68	1.44	17.93	11.59	106.69	473.42	1.77	1.14	3.03	3.03
Yellowstone County	B5	RM 351.34	85482.66	5% Duration	761.3	912.81	909.98	1.13	1.47	22.81	14.82	130.41	540.13	1.54	1	2.84	2.84
Yellowstone County	B5	RM 351.25	85342.53	5% Duration	761.3	912.66	909.91	1.34	1.4	16.08	11.28	158.67	557.17	1.39	0.97	2.78	2.78
Yellowstone County	B5	RM 351.21	85257.19	5% Duration	761.3	912.55	909.48	1.61	1.53	19.11	12.97	139.88	536.78	1.36	0.93	3.07	3.07
Yellowstone County	B5	RM 351.12	85127.55	5% Duration	761.3	912.47	909.49	1.51	1.37	15.2	9.65	119.2	514.07	1.71	1.08	2.98	2.98
Yellowstone County	B5	RM 351.04	84988.05	5% Duration	761.3	912.34	908.79	1.7	1.4	19.04	11.23	121.93	510.1	1.82	1.07	3.55	3.55
Yellowstone County	B5	RM 350.90	84769.91	5% Duration	761.3	912.27	909.27	1.3	1.02	11.9	6.69	95.65	594.97	2.25	1.26	3	3
Yellowstone County	B5	RM 350.75	84536.19	5% Duration	761.3	912.08	909.72	1.27	1.45	21.64	19.16	198.86	431.69	1.37	1.22	2.7	2.7
Yellowstone County	B5	RM 350.66	84383.33	5% Duration	761.3	911.87	909.32	1.63	1.62	22.29	17.7	140.68	339.54	1.74	1.38	2.55	2.55
Yellowstone County	B5	RM 350.57	84244.69	5% Duration	761.3	911.63	908.48	1.47	1.64	26.14	22.27	147.6	320.73	1.7	1.44	3.15	3.15
Yellowstone County	B5	RM 350.50	84128.62	5% Duration	761.3	911.4	908.49	1.63	1.82	26.03	23.05	145.39	288.59	1.64	1.45	2.91	2.91
Yellowstone County	B5	RM 350.40	83974.24	5% Duration	761.3	911.23	908.73	1.31	1.55	17.01	16.03	206.45	368.99	1.41	1.33	2.5	2.5
Yellowstone County	B5	RM 350.33	83868.06	5% Duration	761.3	911.11	908.17	1.41	1.48	15.09	14.74	234.79	410.83	1.28	1.25	2.94	2.94
Yellowstone County	B5	RM 350.23	83712.91	5% Duration	761.3	910.9	907.61	1.64	1.59	21.37	16.56	184.37	358.49	1.72	1.33	3.29	3.29
Yellowstone County	B5	RM 350.14	83563.43	5% Duration	761.3	910.73	907.94	1.39	1.51	15.52	14.6	237.25	413.92	1.3	1.22	2.79	2.79
Yellowstone County	B5	RM 350.06	83419.86	5% Duration	761.3	910.46	907.84	1.42	1.59	22.59	21.82	269.11	441.55	1.12	1.09	2.62	2.62
Yellowstone County	B5	RM 349.94	83229.4	5% Duration	761.3	910.24	906.93	1.5	1.42	17.09	14.56	180.3	334.26	1.89	1.61	3.31	3.31
Yellowstone County	B5	RM 349.83	83071.99	5% Duration	761.3	910.17	907.36	1.13	1.08	7.98	6.4	364.65	480.76	1.82	1.46	2.81	2.81
Yellowstone County	B5	RM 349.68	82904.73	5% Duration	761.3	909.96	906.92	1.65	1.58	23.13	18.44	325.55	432.14	1.4	1.12	3.04	3.04
Yellowstone County	B5	RM 349.54	82632.78	5% Duration	761.3	909.47	906.29	1.72	1.67	22.1	20.5	347.61	390.52	1.26	1.17	3.18	3.18
Yellowstone County	B5	RM 349.33	82276.28	5% Duration	761.3	909.14	906.45	1.03	1.04	10.5	10.25	254.35	524.97	1.43	1.39	2.69	2.69
Yellowstone County	B5	RM 349.19	82046.53	5% Duration	761.3	908.73	905.16	2.05	1.87	28.23	20.17	179.63	336.08	1.69	1.21	3.57	3.57
Yellowstone County	B5	RM 349.04	81800.47	5% Duration	786.6	908.38	904.5	1.63	1.6	19.72	17.72	267.54	416.81	1.31	1.18	3.88	3.88
Yellowstone County	B5	RM 348.89	81574.02	5% Duration	786.6	908.15	904.75	1.23	1.22	15.29	14.55	413.76	440.75	1.54	1.47	3.4	3.4
Yellowstone County	B5	RM 348.77	81370.46	5% Duration	786.6	907.96	905.09	1.3	1.3	15.08	15.08	325.79	325.79	1.85	1.85	2.87	2.87
Yellowstone County	B5	RM 348.64	81138.52	5% Duration	786.6	907.72	903.35	1.53	1.52	16.09	15.31	283.61	300.48	1.81	1.72	4.37	4.37
Yellowstone County	B5	RM 348.52	80960.09	5% Duration	786.6	907.49	902.88	1.79	1.79	23.87	22.68	189.28	199.51	2.33	2.21	4.61	4.61
Yellowstone County	B5	RM 348.38	80737.31	5% Duration	786.6	907.1	902.85	2.14	2.14	38.58	37.43	183.59	189.64	2	1.94	4.25	4.25
Yellowstone County	B5	RM 348.26	80551.51	5% Duration	786.6	906.81	902.73	2.13	2.11	30.95	26.87	147.35	171.12	2.51	2.18	4.08	4.08
Yellowstone County	B5	RM 348.09	80276.34	5% Duration	786.6	906.5	901.64	2.11	2.11	27.19	26.71	141.73	150.39	2.63	2.58	4.86	4.86
Yellowstone County	B5	RM 347.95	80055.79	5% Duration	786.6	906.3	902.96	1.94	1.85	21.7	17	165.09	241.52	2.36	1.85	3.34	3.34
Yellowstone County	B5	RM 347.82	79844.2	5% Duration	786.6	906.09	902.93	1.84	1.77	26.53	23.41	165.96	225.87	2.22	1.96	3.16	3.16
Yellowstone County	B5	RM 347.77	79751.93	5% Duration	786.6	905.93	902.38	1.96	1.92	35.13	30.41	169.62	247.01	2.08	1.81	3.55	3.55
Yellowstone County	B5	RM 347.70	79643.98	5% Duration	786.6	905.72	901.91	2.05	2	35.47	29.39	164.76	232.42	2.04	1.69	3.81	3.81
Yellowstone County	B5	RM 347.61	79501.64	5% Duration	786.6	905.58	902.2	1.82	1.62	19.73	11.49	182.98	388.46	2.14	1.25	3.38	3.38
Yellowstone County	B5	RM 347.51	79347.38	5% Duration	786.6	905.36	900.54	2.21	2.03	25.68	19.69	105.78	161.72	3.13	2.4	4.82	4.82
Yellowstone County	B5	RM 347.42	79196.21	5% Duration	786.6	905.27	900.73	1.92	1.84	28.79	24.04	121.55	172.07	2.96	2.48	4.54	4.54
Yellowstone County	B5	RM 347.35	79079.87	5% Duration	786.6	905.3	900.77	1.03	1.03	5.67	5.67	360.81	360.81	2.12	2.12	4.53	4.53
Yellowstone County	B5	RM 347.23	78895.71	5% Duration	786.6	905.17	900.89	1.37	1.37	13.53	13.53	383.99	383.99	1.5	1.5	4.28	4.28
Yellowstone County	B5	RM 347.13	78732.21	5% Duration	786.6	905	900.98	1.4	1.4	18.5	18.5	332.84	332.84	1.69	1.69	4.02	4.02
Yellowstone County	B5	RM 346.93	78400.21	5% Duration	786.6	904.54	900.98	1.79	1.79	24.6	24.6	216.28	216.28	2.03	2.03	3.56	3.56
Yellowstone County	B5	RM 346.80	78193.27	5% Duration	786.6	904.12	900.02	2.08	1.98	38.52	38.21	232.91	255.62	1.56	1.55	4.1	4.1
Yellowstone County	B5	RM 346.64	77938.83	5% Duration	786.6	903.83	900.47	1.63	1.48	16.64	13.56	233.41	333.75	1.96	1.6	3.36	3.36
Yellowstone County	B5	RM 346.49	77706.6	5% Duration	786.6	903.56	900.21	1.96	1.78	23.08	20.61	158.05	217.53	2.27	2.03	3.35	3.35
Yellowstone County	B6	RM 346.35	77480.6	5% Duration	786.6	903.33	900.33	1.8	1.72	22.7	21.57	193.93	232.93	2.11	2.01	3	3
Yellowstone County	B6	RM 346.23	77285.9	5% Duration	786.6	903.08	900.11	2	1.92	23.85	22.32	171.38	196.68	2.22	2.08	2.97	2.97
Yellowstone County	B6	RM 346.11	77095.33	5% Duration	786.6	902.86	899.75	1.95	1.84	27.59	23.41	168.55	219.4	2.3	1.95	3.11	3.11
Yellowstone County	B6	RM 346.00	76926.16	5% Duration	786.6	902.69	899.8	1.86	1.71	22.97	17.82	173.9	255.95	2.31	1.79	2.89	2.89
Yellowstone County	B6	RM 345.90	76766.95	5% Duration	786.6	902.44	899.51	2.06	1.92	31.94	25.25	174.99	244.21	2.12	1.68	2.93	2.93

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B6	RM 345.80	76608.55	5% Duration	786.6	902.31	899.04	1.72	1.61	19.48	17.19	191.85	247.1	2.22	1.97	3.41	3.41
Yellowstone County	B6	RM 345.73	76484.99	5% Duration	786.6	902.09	899.01	2.04	1.98	27.66	27.52	190.44	214.42	1.84	1.85	3.19	3.19
Yellowstone County	B6	RM 345.67	76386.71	5% Duration	786.6	902.03	899.1	1.63	1.59	17.48	17.34	206.62	234.45	2.11	2.12	3.13	3.13
Yellowstone County	B6	RM 345.60	76268.76	5% Duration	786.6	901.85	899.22	1.86	1.81	28	27.54	231.87	270.33	1.63	1.61	2.95	2.95
Yellowstone County	B6	RM 345.50	76118.1	5% Duration	786.6	901.66	899.07	1.7	1.62	19.72	19.85	217.31	263.95	1.82	1.84	2.76	2.76
Yellowstone County	B6	RM 345.37	75909.53	5% Duration	786.6	901.35	897.51	1.9	1.9	26.46	26.46	212.46	212.46	1.95	1.95	3.84	3.84
Yellowstone County	B6	RM 345.27	75751.01	5% Duration	786.6	901.13	898.15	1.93	1.93	26.49	25.89	197.29	202.17	2.07	2.02	2.98	2.98
Yellowstone County	B6	RM 345.07	75427.56	5% Duration	786.6	900.82	897.07	1.64	1.63	17.23	16.97	238.2	242.48	2.01	1.99	3.75	3.75
Yellowstone County	B6	RM 344.90	75166.64	5% Duration	786.6	900.61	897.3	1.51	1.48	15.41	14.43	289.89	316.26	1.79	1.68	3.31	3.31
Yellowstone County	B6	RM 344.75	74927.69	5% Duration	786.6	900.28	896.02	1.81	1.78	28.59	25.77	223.62	253.46	1.93	1.74	4.26	4.26
Yellowstone County	B6	RM 344.64	74743.45	5% Duration	786.6	900.04	895.93	1.98	1.95	22.24	19.57	151.68	175.76	2.61	2.3	4.11	4.11
Yellowstone County	B6	RM 344.53	74576.12	5% Duration	786.6	899.86	895.39	2.1	2	25.91	19.6	132.86	186.3	2.79	2.11	4.47	4.47
Yellowstone County	B6	RM 344.43	74405.67	5% Duration	786.6	899.73	896.11	1.97	1.87	20.96	16.68	143.91	199.91	2.63	2.1	3.62	3.62
Yellowstone County	B6	RM 344.29	74192.79	5% Duration	786.6	899.53	895.87	1.94	1.87	25.01	21.14	169.13	215.24	2.32	1.96	3.66	3.66
Yellowstone County	B6	RM 344.13	73931.76	5% Duration	786.6	899.29	895.4	1.9	1.82	21.59	18.08	151.6	196.43	2.63	2.2	3.89	3.89
Yellowstone County	B6	RM 343.87	73520.95	5% Duration	786.6	898.95	895.23	1.76	1.75	18.12	17.59	210.35	217.29	2.13	2.06	3.72	3.72
Yellowstone County	B6	RM 343.80	73403.19	5% Duration	786.6	898.85	894.69	1.63	1.62	19.78	19	248.77	261.12	1.93	1.86	4.16	4.16
Yellowstone County	B6	RM 343.66	73173.16	5% Duration	786.6	898.61	894.63	1.65	1.65	21.22	21.22	218.95	218.95	2.18	2.18	3.98	3.98
Yellowstone County	B6	RM 343.55	72997.33	5% Duration	786.6	898.41	894.63	1.52	1.52	27.96	27.96	275.53	275.53	1.87	1.87	3.78	3.78
Yellowstone County	B6	RM 343.45	72840.49	5% Duration	786.6	898.18	894.78	1.61	1.61	23.68	23.68	248.96	248.96	1.96	1.96	3.4	3.4
Yellowstone County	B6	RM 343.37	72718.86	5% Duration	786.6	898.02	894.5	1.74	1.74	21.62	21.62	219.03	219.03	2.06	2.06	3.52	3.52
Yellowstone County	B6	RM 343.29	72586.22	5% Duration	786.6	897.88	894.28	1.66	1.65	22.24	21.67	240.58	249.97	1.96	1.91	3.6	3.6
Yellowstone County	B6	RM 343.21	72458.03	5% Duration	786.6	897.74	893.99	1.58	1.58	20.68	20.49	249.41	263.26	1.99	1.98	3.75	3.75
Yellowstone County	B6	RM 343.14	72328.78	5% Duration	786.6	897.58	893.94	1.65	1.65	25.83	25.83	236.87	255.39	2.02	2.02	3.64	3.64
Yellowstone County	B6	RM 343.04	72174.44	5% Duration	786.6	897.39	894.12	1.45	1.43	17.72	17.33	411.83	428.71	1.31	1.28	3.27	3.27
Yellowstone County	B6	RM 342.96	72046.7	5% Duration	786.6	897.19	894.17	1.48	1.46	27.97	26.98	315.64	334.26	1.68	1.62	3.02	3.02
Yellowstone County	B6	RM 342.87	71890.42	5% Duration	786.6	896.9	893.92	1.67	1.65	23.17	21.94	319.27	342.2	1.47	1.4	2.98	2.98
Yellowstone County	B6	RM 342.78	71759.64	5% Duration	786.6	896.73	893.85	1.62	1.57	16.73	15.36	304.05	367.01	1.49	1.37	2.88	2.88
Yellowstone County	B6	RM 342.71	71649.64	5% Duration	786.6	896.57	893.88	1.77	1.67	19.05	15.93	255.7	358.53	1.56	1.31	2.69	2.69
Yellowstone County	B6	RM 342.64	71534.72	5% Duration	786.6	896.39	893.45	1.66	1.65	25.6	24.45	355.97	375.56	1.33	1.27	2.94	2.94
Yellowstone County	B6	RM 342.59	71441.82	5% Duration	786.6	896.14	893.13	1.8	1.8	35.85	35.85	363.64	374.13	1.2	1.2	3.01	3.01
Yellowstone County	B6	RM 342.49	71299.94	5% Duration	786.6	895.96	892.73	1.26	1.26	14.05	14.05	455.61	466.27	1.37	1.37	3.23	3.23
Yellowstone County	B6	RM 342.40	71182.23	5% Duration	786.6	895.9	892.4	0.89	0.89	9.59	9.59	473.57	486.21	1.87	1.87	3.5	3.5
Yellowstone County	B6	RM 342.29	70973.95	5% Duration	786.6	895.7	891.26	1.3	1.3	18.46	18.46	337.47	346.4	1.8	1.8	4.44	4.44
Yellowstone County	B6	RM 342.17	70788.09	5% Duration	786.6	895.3	891.21	2.01	2.01	33.2	33.2	256.47	261.09	1.53	1.53	4.09	4.09
Yellowstone County	B6	RM 342.09	70668.79	5% Duration	786.6	895.2	892.22	1.45	1.45	16.59	16.59	296.14	296.14	1.83	1.83	2.98	2.98
Yellowstone County	B6	RM 341.96	70472.35	5% Duration	786.6	895.04	891.5	1.44	1.44	14.44	14.44	285.63	285.63	1.91	1.91	3.53	3.53
Yellowstone County	B6	RM 341.82	70207.79	5% Duration	786.6	894.82	890.89	1.24	1.24	15.77	15.77	394.54	394.54	1.61	1.61	3.93	3.93
Yellowstone County	B6	RM 341.68	69974.03	5% Duration	786.6	894.51	890.38	1.41	1.41	20.98	20.98	394.31	394.31	1.42	1.42	4.13	4.13
Yellowstone County	B6	RM 341.57	69788.71	5% Duration	786.6	894.22	889.58	1.92	1.92	16.99	16.99	186.83	186.83	2.2	2.2	4.64	4.64
Yellowstone County	B6	RM 341.47	69629.19	5% Duration	786.6	894.13	889.76	1.49	1.49	20.56	20.56	230.37	230.37	2.29	2.29	4.37	4.37
Yellowstone County	B6	RM 341.32	69391.37	5% Duration	786.6	893.9	890.36	1.43	1.43	20.34	19.95	292.39	298.56	1.88	1.84	3.54	3.54
Yellowstone County	B6	RM 341.24	69252.71	5% Duration	786.6	893.78	890.28	1.31	1.29	12.3	11.76	379.31	416.73	1.53	1.47	3.5	3.5
Yellowstone County	B6	RM 341.11	69044.61	5% Duration	786.6	893.49	890	1.71	1.68	25.74	23.27	254.76	287.78	1.8	1.63	3.48	3.48
Yellowstone County	B6	RM 340.94	68773.18	5% Duration	786.6	893.07	889.22	1.78	1.76	26	23.57	248.21	277.27	1.77	1.61	3.85	3.85
Yellowstone County	B6	RM 340.81	68556.42	5% Duration	786.6	892.83	889.05	1.49	1.41	18.96	15.4	278.98	368.15	1.86	1.51	3.78	3.78
Yellowstone County	B6	RM 340.65	68325.7	5% Duration	786.6	892.61	888.87	1.7	1.56	15.93	12.08	188.73	276.64	2.41	1.83	3.74	3.74
Yellowstone County	B6	RM 340.52	68126.27	5% Duration	786.6	892.45	887.3	1.81	1.75	21.74	13.79	123.98	203.14	3.5	2.21	5.15	5.15
Yellowstone County	B6	RM 340.40	67936.51	5% Duration	786.6	892.35	886.73	1.61	1.58	20.08	17.07	158.2	190.13	3.08	2.62	5.62	5.62
Yellowstone County	B7	RM 340.26	67715.84	5% Duration	786.6	892.19	887.99	1.52	1.48	21.88	19.34	209.53	243.43	2.46	2.18	4.2	4.2
Yellowstone County	B7	RM 340.16	67550.99	5% Duration	786.6	892	888.43	1.5	1.47	29.17	25.97	257.68	298.25	2.02	1.8	3.57	3.57
Yellowstone County	B7	RM 340.06	67387.35	5% Duration	786.6	891.81	888.74	1.28	1.2	20.86	19.21	311.79	386.3	1.83	1.69	3.07	3.07
Yellowstone County	B7	RM 339.96	67234.59	5% Duration	786.6	891.58	888.85	1.58	1.58	17.31	17.31	345.86	345.86	1.44	1.44	2.73	2.73
Yellowstone County	B7	RM 339.88	67094.07	5% Duration	786.6	891.42	888.78	1.45	1.44	18.52	18.14	353.67	364.17	1.53	1.5	2.64	2.64
Yellowstone County	B7	RM 339.79	66960.51	5% Duration	786.6	891.05	888.98	2.02	2.02	33.39	33.39	373.18	373.18	1.04	1.04	2.07	2.07
Yellowstone County	B7	RM 339.72	66843.76	5% Duration	786.6	890.83	888.72	1.72	1.71	22.57	22.12	328.13	335.45	1.4	1.37	2.11	2.11
Yellowstone County	B7	RM 339.66	66753.41	5% Duration	786.6	890.72	887.9	1.47	1.47	16.39	16.39	423.09	423.09	1.26	1.26	2.82	2.82
Yellowstone County	B7	RM 339.52	66527.74	5% Duration	786.6	890.53	887.31	1.38	1.34	12.28	10.89	303.83	363.07	1.83	1.62	3.22	3.22
Yellowstone County	B7	RM 339.37	66324.85	5% Duration	786.6	890.32	887.17	1.58	1.48	24.83	19.62	215.55	310.09	2.17	1.71	3.15	3.15
Yellowstone County	B7	RM 339.24	66108.49	5% Duration	786.6	889.92	886.45	2.11	2.01	26.3	21.33	196.79	280.01	1.72	1.4	3.47	3.47
Yellowstone County	B7	RM 339.13	65940.41	5% Duration	786.6	889.65	885.31	2.2	1.89	33.85	21.41	135.13	297.37	2.21	1.4	4.34	4.34

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 339.02	65745.93	5% Duration	786.6	889.41	886.09	1.92	1.8	23.3	20.34	166.88	241.2	2.07	1.82	3.32	3.32
Yellowstone County	B7	RM 338.94	65621.59	5% Duration	786.6	889.28	886.36	1.83	1.67	18.41	16.04	209.95	329.19	1.64	1.43	2.92	2.92
Yellowstone County	B7	RM 338.83	65433.26	5% Duration	786.6	889.06	886.37	1.73	1.64	23.64	19.44	192.8	318.98	1.83	1.51	3.04	3.04
Yellowstone County	B7	RM 338.72	65256.88	5% Duration	786.6	888.85	886.18	1.57	1.57	20.59	16.03	195.38	340.26	1.93	1.5	3.05	3.05
Yellowstone County	B7	RM 338.62	65095.08	5% Duration	786.6	888.61	886.28	1.85	1.89	21.62	19.83	167.6	240.49	1.88	1.73	2.99	2.99
Yellowstone County	B7	RM 338.49	64891.36	5% Duration	786.6	888.42	885.05	1.83	1.7	20.22	14.68	154.15	295.13	2.15	1.57	3.37	3.37
Yellowstone County	B7	RM 338.40	64742.15	5% Duration	786.6	888.35	884.28	1.55	1.17	14.11	7.58	145.3	573.8	2.25	1.2	4.07	4.07
Yellowstone County	B7	RM 338.29	64577.05	5% Duration	786.6	888.2	884.18	1.78	1.45	19.34	9.93	120.68	451.33	2.34	1.2	4.02	4.02
Yellowstone County	B7	RM 338.19	64384.71	5% Duration	786.6	888.06	885.23	1.3	1.26	13.43	12.43	383.85	527.33	1.27	1.18	2.83	2.83
Yellowstone County	B7	RM 338.06	64164.59	5% Duration	786.6	887.88	884.64	1.35	1.22	13.19	10.58	280.09	474.97	1.69	1.36	3.24	3.24
Yellowstone County	B7	RM 337.91	63921.69	5% Duration	786.6	887.65	884.16	1.67	1.47	16.18	12.61	189.31	328.34	2.09	1.63	3.49	3.49
Yellowstone County	B7	RM 337.83	63789.53	5% Duration	786.6	887.37	882.72	2.23	2.12	30.61	27.56	170.37	202.93	2.03	1.83	4.65	4.65
Yellowstone County	B7	RM 337.75	63667.96	5% Duration	786.6	887.18	881.69	2.32	2.12	31.55	24.32	136.51	198.96	2.42	1.87	5.49	5.49
Yellowstone County	B7	RM 337.68	63550.4	5% Duration	786.6	887.09	882.49	1.95	1.85	25.27	22.45	153.54	183.75	2.59	2.31	4.6	4.6
Yellowstone County	B7	RM 337.58	63396.62	5% Duration	786.6	886.89	883.62	2.09	1.92	26.53	22.48	177.1	235.71	2.04	1.74	3.27	3.27
Yellowstone County	B7	RM 337.47	63212.44	5% Duration	786.6	886.64	883.31	2.06	1.79	29.28	20.28	174.71	316.53	2	1.38	3.33	3.33
Yellowstone County	B7	RM 337.38	63064.58	5% Duration	786.6	886.4	883.29	2.17	1.87	29.97	20.68	155.21	283.25	2.16	1.49	3.11	3.11
Yellowstone County	B7	RM 337.27	62894.98	5% Duration	786.6	886.29	883.15	1.65	1.43	16.78	11.22	196.18	430.67	1.91	1.28	3.14	3.14
Yellowstone County	B7	RM 337.16	62717.85	5% Duration	786.6	886.13	882.57	1.42	1.37	13.94	12.64	358.63	445.62	1.42	1.29	3.56	3.56
Yellowstone County	B7	RM 337.04	62524.52	5% Duration	786.6	886.06	879.61	1.28	1.1	8.96	5.7	150.24	350.26	3.22	2.05	6.45	6.45
Yellowstone County	B7	RM 336.96	62390.64	5% Duration	786.6	885.98	880.21	1.48	1.35	13.56	10.23	157.24	250	3.08	2.33	5.77	5.77
Yellowstone County	B7	RM 336.87	62246.97	5% Duration	786.6	885.87	881.41	1.67	1.54	17.67	13.58	152.77	238.77	2.78	2.13	4.46	4.46
Yellowstone County	B7	RM 336.80	62131.42	5% Duration	786.6	885.74	881.33	1.89	1.79	26.97	22.19	148.78	218.7	2.51	2.07	4.41	4.41
Yellowstone County	B7	RM 336.72	62005.73	5% Duration	786.6	885.58	881.38	1.99	1.89	29.93	24.37	127.94	185.85	2.75	2.24	4.2	4.2
Yellowstone County	B7	RM 336.66	61902.64	5% Duration	786.6	885.37	881.45	2.34	2.26	36.64	30.05	108.71	151.8	2.78	2.3	3.92	3.92
Yellowstone County	B7	RM 336.59	61800.43	5% Duration	786.6	885.35	880.66	1.74	1.66	22.25	15.88	129.99	211.75	3.13	2.24	4.69	4.69
Yellowstone County	B7	RM 336.52	61689.55	5% Duration	786.6	885.25	881.76	1.84	1.64	23.06	16.7	143	270.27	2.44	1.77	3.49	3.49
Yellowstone County	B7	RM 336.46	61580.5	5% Duration	786.6	885.16	882.13	1.69	1.62	20.96	16.48	150.77	262.24	2.34	1.85	3.03	3.03
Yellowstone County	B7	RM 336.40	61491.01	5% Duration	786.6	885.07	882.03	1.71	1.62	21.81	16.18	155.78	273.46	2.39	1.78	3.04	3.04
Yellowstone County	B7	RM 336.34	61394.22	5% Duration	786.6	884.97	881.93	1.78	1.54	22.1	14.12	160.13	360.4	2.21	1.42	3.04	3.04
Yellowstone County	B7	RM 336.27	61278.9	5% Duration	786.6	884.87	881.67	1.69	1.52	19.42	10.02	166.19	444.94	2.26	1.17	3.2	3.2
Yellowstone County	B7	RM 336.19	61159.07	5% Duration	786.6	884.71	882.11	1.87	1.63	22.8	14.85	195.4	701.89	1.64	1.07	2.6	2.6
Yellowstone County	B7	RM 336.09	60993.57	5% Duration	786.6	884.52	882.16	1.52	1.38	16.67	12.08	312.09	579.62	1.36	0.98	2.36	2.36
Yellowstone County	B7	RM 335.98	60812.26	5% Duration	786.6	884.29	881.93	1.44	1.33	20.27	14.84	316.42	603.66	1.34	0.98	2.56	2.56
Yellowstone County	B7	RM 335.89	60669.74	5% Duration	786.6	884.09	880.16	1.45	1.44	17.28	16.06	419.19	454.53	1.29	1.2	3.93	3.93
Yellowstone County	B7	RM 335.77	60465.85	5% Duration	786.6	883.77	880.49	1.55	1.55	20.21	20.18	390.74	391.39	1.3	1.3	3.28	3.28
Yellowstone County	B7	RM 335.68	60324.8	5% Duration	786.6	883.55	880.65	1.61	1.61	17.65	17.47	371.78	394.8	1.31	1.3	2.9	2.9
Yellowstone County	B7	RM 335.59	60183.7	5% Duration	786.6	883.33	880.3	1.71	1.71	18.58	18.38	333.08	380.99	1.38	1.36	3.03	3.03
Yellowstone County	B7	RM 335.51	60046.12	5% Duration	786.6	883.16	880.03	1.58	1.58	16.01	16.01	392.66	392.66	1.26	1.26	3.13	3.13
Yellowstone County	B7	RM 335.41	59899.97	5% Duration	786.6	883.02	879.45	1.28	1.25	12.11	11.36	531.91	588.35	1.14	1.07	3.57	3.57
Yellowstone County	B7	RM 335.36	59814.82	5% Duration	786.6	883.02	878.65	0.77	0.75	3.93	3.62	709.79	877.27	1.43	1.32	4.37	4.37
Yellowstone County	B7	RM 335.12	59393.71	5% Duration	786.6	882.82	878.54	1.27	1.07	9.63	5.79	259.73	539.48	2.26	1.36	4.28	4.28
Yellowstone County	B7	RM 335.03	59228.59	5% Duration	786.6	882.57	876.8	2.09	1.64	31.23	17.31	144.14	372.41	2.33	1.29	5.77	5.77
Yellowstone County	B7	RM 334.91	59041.32	5% Duration	786.6	882.31	878.31	1.91	1.58	31.01	18.83	205.02	444.12	1.84	1.12	4	4
Yellowstone County	B7	RM 334.85	58937.73	5% Duration	786.6	882.12	878.66	1.86	1.55	32.37	23.19	218.57	422.08	1.67	1.21	3.46	3.46
Yellowstone County	B7	RM 334.73	58737.5	5% Duration	786.6	881.54	879.52	2.44	2.03	40.65	30.13	180.84	324.3	1.61	1.2	2.16	2.16
Yellowstone County	B7	RM 334.63	58573.32	5% Duration	786.6	881.12	878.31	2.58	2	42.72	30.08	144.24	325.06	1.72	1.21	2.81	2.81
Yellowstone County	B7	RM 334.54	58424.99	5% Duration	786.6	880.96	877.09	1.66	1.41	36.33	17.37	105.1	514.96	2.27	1.08	3.87	3.87
Yellowstone County	B7	RM 334.22	57821.07	5% Duration	786.6	880.56	875.76	1.56	1.34	12.82	8.14	158.11	350.14	2.96	1.88	4.8	4.8
Yellowstone County	B7	RM 334.09	57621.62	5% Duration	786.6	880.07	875.55	3	2.55	55.35	35.47	91.22	186.17	2.58	1.66	4.52	4.52
Yellowstone County	B7	RM 333.98	57440.64	5% Duration	786.6	880.07	875.46	1.79	1.54	18.42	12.14	129.96	257.63	3	1.98	4.61	4.61
Yellowstone County	B7	RM 333.83	57207.78	5% Duration	786.6	879.85	875.4	1.94	1.8	25.82	22.51	144.97	221.9	2.26	1.97	4.45	4.45
Yellowstone County	B7	RM 333.69	56989.22	5% Duration	786.6	879.63	873.45	1.63	1.63	20.45	20.45	243.53	243.53	1.98	1.98	6.18	6.18
Yellowstone County	B7	RM 333.54	56738.21	5% Duration	786.6	879.58	874.22	0.98	0.98	6.93	6.75	280.54	289.84	2.85	2.78	5.36	5.36
Yellowstone County	B7	RM 333.42	56552.03	5% Duration	786.6	879.46	873.42	1.3	1.3	16.52	16.52	316.4	316.4	1.91	1.91	6.04	6.04
Yellowstone County	B7	RM 333.30	56351.75	5% Duration	786.6	879.17	875.65	1.66	1.66	27.56	27.56	259.64	259.64	1.83	1.83	3.52	3.52
Yellowstone County	B7	RM 333.19	56177.76	5% Duration	786.6	878.94	875.72	1.68	1.68	20.73	20.73	231.18	231.18	2.03	2.03	3.22	3.22
Yellowstone County	B7	RM 333.09	56027.56	5% Duration	786.6	878.82	875.59	1.48	1.46	14.82	14.14	298.69	316.37	1.78	1.7	3.23	3.23
Yellowstone County	B7	RM 332.99	55855.76	5% Duration	786.6	878.55	873.86	1.73	1.66	36	31.22	279.34	342.72	1.6	1.39	4.69	4.69
Yellowstone County	B7	RM 332.88	55687.68	5% Duration	786.6	878.29	874.43	1.59	1.57	15.15	14.85	376.87	406.03	1.26	1.24	3.86	3.86
Yellowstone County	B7	RM 332.77	55504.73	5% Duration	786.6	878.16	875.49	1.29	1.27	11.33	10.93	358.92	386.23	1.66	1.6	2.67	2.67

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B7	RM 332.66	55333.33	5% Duration	786.6	877.96	874.96	1.54	1.52	21.18	20.33	311.67	335.19	1.61	1.55	3	3
Yellowstone County	B7	RM 332.56	55182.74	5% Duration	786.6	877.81	874.54	1.39	1.37	15.83	14.72	306.93	342.4	1.8	1.67	3.27	3.27
Yellowstone County	B7	RM 332.47	55059.84	5% Duration	786.6	877.73	873.95	1.31	1.26	12.05	10.54	260.31	322.79	2.21	1.93	3.78	3.78
Yellowstone County	B7	RM 332.38	54913.1	5% Duration	786.6	877.54	873.16	1.79	1.7	24.18	21.92	156.18	185.09	2.76	2.5	4.38	4.38
Yellowstone County	B7	RM 332.33	54822.67	5% Duration	786.6	877.46	872.5	1.77	1.69	25.61	23.15	152.55	178.75	2.87	2.6	4.96	4.96
Yellowstone County	B7	RM 332.21	54626.48	5% Duration	786.6	877.29	873.4	1.71	1.68	23.73	21.71	165.86	188.65	2.72	2.49	3.89	3.89
Yellowstone County	B7	RM 332.20	54613	5% Duration	Bridge												
Yellowstone County		RM 332.16	54607.45	5% Duration	786.6	877.25	873.19	1.67	1.64	21.91	20.3	157.2	176.28	2.93	2.72	4.06	4.06
Yellowstone County	B7	RM 332.17	54575.38	5% Duration	786.6	877.2	872.76	1.77	1.74	25.05	22.82	136.53	158.74	3.19	2.9	4.44	4.44
Yellowstone County	B7	RM 332.16	54558	5% Duration	Bridge												
Yellowstone County		RM 331.96	54550.39	5% Duration	786.6	877.14	872.47	1.85	1.8	19.93	17.37	125.66	154.58	3.32	2.89	4.67	4.67
Yellowstone County	B7	RM 332.08	54422.01	5% Duration	786.6	877.02	873.77	1.93	1.9	24.84	23.61	148.71	179.01	2.58	2.46	3.25	3.25
Yellowstone County	B7	RM 331.96	54224.76	5% Duration	786.6	876.84	873.18	1.78	1.78	23.07	22.28	171.93	194.51	2.34	2.28	3.66	3.66
Yellowstone County	B7	RM 331.85	54057.19	5% Duration	786.6	876.67	873.16	1.74	1.74	26.44	26.44	184.55	184.55	2.46	2.46	3.51	3.51
Yellowstone County	B7	RM 331.74	53882.8	5% Duration	786.6	876.43	872.62	2	1.98	27.45	25.29	144.53	158.5	2.71	2.5	3.81	3.81
Yellowstone County	B8	RM 331.66	53744.64	5% Duration	786.6	876.32	871.68	1.68	1.67	23.84	23.01	214.18	222.55	2.19	2.11	4.64	4.64
Yellowstone County	B8	RM 331.55	53575.67	5% Duration	786.6	876.12	872.61	1.87	1.72	22.22	17.61	171.13	244.61	2.36	1.87	3.51	3.51
Yellowstone County	B8	RM 331.41	53354.89	5% Duration	786.6	875.84	872.56	2.01	1.94	27.82	23.54	178.27	222.87	2.15	1.82	3.28	3.28
Yellowstone County	B8	RM 331.32	53209.79	5% Duration	786.6	875.61	871.92	2.06	1.95	28.66	23.12	200.33	271.4	1.84	1.48	3.69	3.69
Yellowstone County	B8	RM 331.23	53053.99	5% Duration	786.6	875.35	871.53	2.03	1.92	31.23	26.82	202.14	265.45	1.8	1.55	3.82	3.82
Yellowstone County	B8	RM 331.14	52919.44	5% Duration	786.6	875.19	871.72	1.75	1.56	24.15	18.13	207.87	359.52	1.87	1.4	3.47	3.47
Yellowstone County	B8	RM 331.08	52820.06	5% Duration	786.6	875.12	871.29	1.47	1.43	15.37	14.12	211.97	269.94	2.22	2.04	3.83	3.83
Yellowstone County	B8	RM 331.01	52700.37	5% Duration	786.6	874.98	871.8	1.62	1.6	20.65	18.65	238.56	308.14	1.77	1.6	3.18	3.18
Yellowstone County	B8	RM 330.93	52576.5	5% Duration	786.6	874.86	871.67	1.49	1.46	18.58	16.84	219.97	283.02	2.1	1.9	3.19	3.19
Yellowstone County	B8	RM 330.83	52418.21	5% Duration	786.6	874.68	870.75	1.8	1.61	19.76	15.34	138.97	230.18	2.73	2.12	3.93	3.93
Yellowstone County	B8	RM 330.77	52321.13	5% Duration	786.6	874.59	870.68	1.86	1.77	19.4	16.88	133.09	178.38	2.86	2.5	3.91	3.91
Yellowstone County	B8	RM 330.68	52174.9	5% Duration	786.6	874.44	870.33	2.08	1.96	24.58	20.96	122.98	172.53	2.72	2.33	4.11	4.11
Yellowstone County	B8	RM 330.58	52000.46	5% Duration	786.6	874.29	869.72	2.07	1.9	26.29	17.37	106.89	197.69	3.18	2.1	4.57	4.57
Yellowstone County	B8	RM 330.48	51852.83	5% Duration	786.6	874.15	868.81	2.1	1.91	30.94	18.78	102.23	202.71	3.37	2.03	5.34	5.34
Yellowstone County	B8	RM 330.39	51701.57	5% Duration	786.6	874.05	869.32	1.96	1.8	20.57	16.43	116.26	181.97	3	2.41	4.73	4.73
Yellowstone County	B8	RM 330.32	51592.04	5% Duration	786.6	873.97	869.57	1.92	1.78	20.03	15.15	129.75	205.1	2.85	2.16	4.4	4.4
Yellowstone County	B8	RM 330.25	51473.55	5% Duration	786.6	873.87	868.38	2	1.81	22.9	14.33	118.19	229.21	3.05	1.9	5.49	5.49
Yellowstone County	B8	RM 330.17	51344.77	5% Duration	786.6	873.76	869.9	1.99	1.81	24.12	17.2	139.91	242.48	2.51	1.79	3.86	3.86
Yellowstone County	B8	RM 330.10	51243.99	5% Duration	786.6	873.65	870.02	1.95	1.78	25.5	20.73	177.96	262.25	2.07	1.68	3.63	3.63
Yellowstone County	B8	RM 330.05	51150.67	5% Duration	786.6	873.56	869.94	1.72	1.61	20.75	16.57	202.16	296.83	2.07	1.65	3.62	3.62
Yellowstone County	B8	RM 329.95	50995.78	5% Duration	786.6	873.4	869.67	1.57	1.57	19.94	19.92	296.54	296.9	1.69	1.69	3.73	3.73
Yellowstone County	B8	RM 329.86	50853.11	5% Duration	786.6	873.26	869.99	1.49	1.49	14.73	13.97	319.28	338.66	1.65	1.56	3.27	3.27
Yellowstone County	B8	RM 329.75	50682.47	5% Duration	786.6	873.09	869.45	1.37	1.37	19.31	18.38	366.33	386.26	1.56	1.49	3.64	3.64
Yellowstone County	B8	RM 329.66	50540.7	5% Duration	786.6	872.91	869.45	1.48	1.46	19.69	17.59	282.69	325.08	1.85	1.65	3.46	3.46
Yellowstone County	B8	RM 329.57	50390.78	5% Duration	786.6	872.72	869.17	1.56	1.51	18.62	15.29	309.31	396.11	1.6	1.31	3.55	3.55
Yellowstone County	B8	RM 329.49	50267.58	5% Duration	786.6	872.56	869.52	1.64	1.57	19.87	16.87	296.86	378.68	1.56	1.33	3.04	3.04
Yellowstone County	B8	RM 329.43	50165.22	5% Duration	786.6	872.53	869.82	1.09	1.07	8.07	7.79	434.54	465.03	1.64	1.59	2.71	2.71
Yellowstone County	B8	RM 329.37	50053.96	5% Duration	786.6	872.47	869.58	1.1	1.03	8.3	7.3	412.66	580.55	1.5	1.32	2.89	2.89
Yellowstone County	B8	RM 329.31	49969.13	5% Duration	786.6	872.4	869.66	1.24	1.17	12.1	10.64	331.68	504.91	1.52	1.33	2.74	2.74
Yellowstone County	B8	RM 329.26	49883.05	5% Duration	786.6	872.33	868.74	1.21	1.19	9.97	8.71	308.68	456.5	1.66	1.45	3.59	3.59
Yellowstone County	B8	RM 329.20	49785.51	5% Duration	786.6	872.22	868.71	1.32	1.34	13.41	13.83	383.57	487.74	1.16	1.2	3.51	3.51
Yellowstone County	B8	RM 329.15	49699.71	5% Duration	830.6	872.13	868.64	1.22	1.21	15.98	14.27	455.54	592.79	1.29	1.15	3.49	3.49
Yellowstone County	B8	RM 329.08	49597.49	5% Duration	830.6	871.98	869.34	1.17	1.24	15.93	14.61	438.9	562.97	1.3	1.19	2.64	2.64
Yellowstone County	B8	RM 328.96	49388.08	5% Duration	830.6	871.77	868.99	1.38	1.29	15.67	12.98	297.81	516.78	1.5	1.24	2.78	2.78
Yellowstone County	B8	RM 328.85	49197.37	5% Duration	830.6	871.55	866.79	1.76	1.65	14.28	13.45	223.41	292.1	1.83	1.73	4.76	4.76
Yellowstone County	B8	RM 328.75	49036.09	5% Duration	830.6	871.44	866.93	1.68	1.54	13.01	11.42	240.9	384.16	1.61	1.41	4.51	4.51
Yellowstone County	B8	RM 328.68	48920.76	5% Duration	830.6	871.29	867.09	1.77	1.73	23.32	19.96	225.13	314.8	1.79	1.53	4.2	4.2
Yellowstone County	B8	RM 328.60	48788.86	5% Duration	830.6	871.12	866.36	1.9	1.8	20.72	17.49	177.94	242.21	2.27	1.91	4.76	4.76
Yellowstone County	B8	RM 328.52	48664.7	5% Duration	830.6	871.09	867.75	1.4	1.31	13	11.47	155.95	390.84	1.86	1.63	3.34	3.34
Yellowstone County	B8	RM 328.44	48539.46	5% Duration	830.6	870.91	867.34	1.93	1.82	24.6	19.87	132.74	198.58	2.86	2.3	3.57	3.57
Yellowstone County	B8	RM 328.36	48405.85	5% Duration	830.6	870.75	867.12	2.13	1.93	24.1	16.9	124.53	225.16	2.73	1.91	3.63	3.63
Yellowstone County	B8	RM 328.28	48276.93	5% Duration	830.6	870.7	867.73	1.55	1.57	19.65	17.11	180.71	261.83	2.31	2.02	3.59	3.59
Yellowstone County	B8	RM 328.16	48097.58	5% Duration	830.6	870.51	866.7	1.71	1.61	21.68	18.77	198.81	317.51	1.88	1.63	3.81	3.81
Yellowstone County	B8	RM 328.05	47914.16	5% Duration	830.6	870.34	866.62	1.46	1.4	17.82	15.45	253.38	400.42	1.7	1.48	3.72	3.72
Yellowstone County	B8	RM 327.93	47729.4	5% Duration	830.6	870.06	865.67	1.81	1.71	21.99	19.99	287.09	361.95	1.47	1.34	4.39	4.39
Yellowstone County	B8	RM 327.88	47641.03	5% Duration	830.6	869.85	866	2.09	1.94	31.22	28.38	239.2	307.85	1.52	1.39	3.85	3.85

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 327.81	47525.32	5% Duration	830.6	869.76	866.29	1.76	1.64	17.65	14.07	169.59	256.93	2.46	1.97	3.47	3.47
Yellowstone County	B8	RM 327.75	47432.57	5% Duration	830.6	869.65	865.09	1.99	1.84	20.58	13.57	123.4	210.3	3.26	2.15	4.55	4.55
Yellowstone County	B8	RM 327.69	47341.24	5% Duration	830.6	869.5	864.48	2.39	1.9	28.79	13.35	88.8	263.04	3.61	1.67	5.02	5.02
Yellowstone County	B8	RM 327.62	47227.31	5% Duration	830.6	869.47	863.86	2.01	1.6	22	10.22	120.68	390.64	2.88	1.33	5.61	5.61
Yellowstone County	B8	RM 327.56	47124.87	5% Duration	830.6	869.45	864.46	1.67	1.31	16.04	8.48	150.41	504.89	2.37	1.25	4.99	4.99
Yellowstone County	B8	RM 327.51	47053.82	5% Duration	830.6	869.36	865.84	1.77	1.57	20.99	17.87	234.96	425.38	1.45	1.24	3.52	3.52
Yellowstone County	B8	RM 327.44	46933.28	5% Duration	830.6	869.33	866.93	0.85	1	6.25	7.54	345.11	586.64	1.17	1.41	2.71	2.71
Yellowstone County	B8	RM 327.37	46817.72	5% Duration	830.6	869.2	866.26	1.38	1.41	15.06	15.65	332.43	428.4	1.32	1.37	2.94	2.94
Yellowstone County	B8	RM 327.29	46687.12	5% Duration	830.6	869.09	866.04	1.34	1.38	13.05	12.43	297.4	442.62	1.43	1.36	3.05	3.05
Yellowstone County	B8	RM 327.23	46600.07	5% Duration	830.6	869	866.25	1.39	1.51	13.04	13.11	241.55	326.6	1.66	1.68	3.15	3.15
Yellowstone County	B8	RM 327.16	46485.25	5% Duration	830.6	868.87	865.67	1.59	1.61	19.56	17.51	260.1	382.98	1.5	1.35	3.2	3.2
Yellowstone County	B8	RM 327.08	46360.36	5% Duration	830.6	868.8	864.94	1.28	1.28	12.65	10.23	250.5	403.31	1.98	1.61	3.86	3.86
Yellowstone County	B8	RM 327.00	46240.1	5% Duration	830.6	868.76	864.56	1.12	1.1	9.96	8.48	220.31	321.97	2.74	2.35	4.2	4.2
Yellowstone County	B8	RM 326.94	46091.8	5% Duration	830.6	868.71	864.04	1.18	1.07	7.64	5.39	221.9	405.51	2.71	1.92	4.67	4.67
Yellowstone County	B8	RM 326.88	46003.77	5% Duration	830.6	868.63	864.08	1.53	1.37	16.66	10.13	165.42	385.89	2.57	1.57	4.55	4.55
Yellowstone County	B8	RM 326.82	45901.15	5% Duration	830.6	868.52	864.18	1.67	1.51	20.97	16.19	195	414.45	1.71	1.32	4.34	4.34
Yellowstone County	B8	RM 326.78	45830.7	5% Duration	830.6	868.39	864.46	2.01	1.58	25.39	16.29	159.71	449.32	1.82	1.17	3.93	3.93
Yellowstone County	B8	RM 326.70	45707.6	5% Duration	830.6	868.26	864.66	1.82	1.44	20.32	11.41	187.57	523.13	1.97	1.1	3.6	3.6
Yellowstone County	B8	RM 326.64	45589.72	5% Duration	830.6	868.09	864.92	1.75	1.65	38.9	31.59	265.72	408.36	1.51	1.23	3.17	3.17
Yellowstone County	B8	RM 326.55	45430.24	5% Duration	830.6	867.82	864.83	1.7	1.63	20.03	18.2	296.43	367.52	1.53	1.39	2.99	2.99
Yellowstone County	B8	RM 326.45	45281.78	5% Duration	830.6	867.58	864.12	1.86	1.8	24.26	22.37	271.7	327.9	1.53	1.41	3.46	3.46
Yellowstone County	B8	RM 326.41	45207.36	5% Duration	830.6	867.49	864.32	1.64	1.64	20.07	18.9	336.83	393.42	1.37	1.29	3.17	3.17
Yellowstone County	B8	RM 326.35	45106.57	5% Duration	830.6	867.39	864.43	1.37	1.35	13.82	13.1	443.22	480.47	1.35	1.28	2.96	2.96
Yellowstone County	B8	RM 326.28	45022.31	5% Duration	830.6	867.4	864.61	0.8	0.78	4.1	3.84	547.76	609.59	1.87	1.75	2.79	2.79
Yellowstone County	B8	RM 326.07	44588.61	5% Duration	830.6	867.04	862.39	1.98	1.98	19.32	19.32	196.17	196.17	2.14	2.14	4.65	4.65
Yellowstone County	B8	RM 326.00	44481.07	5% Duration	830.6	866.95	861.24	1.96	1.96	18.11	18.11	199.3	199.3	2.13	2.13	5.71	5.71
Yellowstone County	B8	RM 325.94	44379.11	5% Duration	830.6	866.88	861.85	1.65	1.65	24.41	24.41	265.02	265.02	1.9	1.9	5.03	5.03
Yellowstone County	B8	RM 325.89	44304.17	5% Duration	830.6	866.79	863	1.59	1.59	22.15	22.15	309.3	309.3	1.69	1.69	3.79	3.79
Yellowstone County	B8	RM 325.86	44262.16	5% Duration	830.6	866.75	863.76	1.52	1.52	12.33	12.33	293.93	293.93	1.86	1.86	2.99	2.99
Yellowstone County	B8	RM 325.81	44176.46	5% Duration	830.6	866.67	863.1	1.64	1.64	14.61	14.61	255.39	255.39	1.98	1.98	3.57	3.57
Yellowstone County	B8	RM 325.76	44089.5	5% Duration	830.6	866.59	862.66	1.54	1.54	20.79	20.79	351.95	351.95	1.53	1.53	3.93	3.93
Yellowstone County	B8	RM 325.69	43989.97	5% Duration	830.6	866.49	862.55	1.5	1.5	13.78	13.78	326.89	326.89	1.7	1.7	3.94	3.94
Yellowstone County	B8	RM 325.58	43809.68	5% Duration	830.6	866.35	862.61	1.35	1.31	17.49	16	300.96	346.36	2.01	1.84	3.74	3.74
Yellowstone County	B8	RM 325.50	43680.96	5% Duration	830.6	866.24	862.6	1.48	1.47	12.97	12.68	252.65	260.98	2.22	2.17	3.64	3.64
Yellowstone County	B8	RM 325.43	43556.76	5% Duration	830.6	866.18	860.89	1.4	1.4	12.7	12.3	217.37	224.65	2.73	2.64	5.29	5.29
Yellowstone County	B8	RM 325.37	43461.41	5% Duration	830.6	866.11	861.36	1.44	1.38	23.13	19.22	251.05	323.26	2.24	1.87	4.75	4.75
Yellowstone County	B8	RM 325.30	43343.13	5% Duration	830.6	865.98	861.56	1.55	1.52	18.14	16.95	225.84	250.95	2.33	2.18	4.42	4.42
Yellowstone County	B8	RM 325.21	43210.67	5% Duration	830.6	865.87	861.34	1.62	1.59	16.7	14.82	192.58	223.85	2.64	2.34	4.53	4.53
Yellowstone County	B8	RM 325.13	43078.9	5% Duration	830.6	865.78	861.36	1.72	1.69	17	15.81	137.1	150.04	3.51	3.27	4.42	4.42
Yellowstone County	B8	RM 325.06	42966.54	5% Duration	830.6	865.63	860.78	2.09	2.06	25.53	23.74	114.43	125.2	3.45	3.21	4.85	4.85
Yellowstone County	B8	RM 324.99	42864.51	5% Duration	830.6	865.51	861.24	2.14	2.11	29.91	27.75	126.43	138.87	3.05	2.83	4.27	4.27
Yellowstone County	B8	RM 324.91	42729.7	5% Duration	830.6	865.42	860.76	1.97	1.94	27	23.16	126.36	149.93	3.33	2.86	4.66	4.66
Yellowstone County	B8	RM 324.81	42573.19	5% Duration	830.6	865.32	860.39	1.81	1.73	22.26	18.33	129.25	167.28	3.49	2.88	4.93	4.93
Yellowstone County	B8	RM 324.73	42451.12	5% Duration	830.6	865.23	861.59	1.81	1.78	23.29	21.13	174.79	197.34	2.61	2.37	3.64	3.64
Yellowstone County	B8	RM 324.65	42323.44	5% Duration	830.6	865.1	861.99	1.67	1.65	27.82	26.58	262.27	280.51	1.88	1.8	3.11	3.11
Yellowstone County	B8	RM 324.56	42178.25	5% Duration	830.6	864.9	861.76	1.83	1.68	18.27	13.87	210.71	314.96	2.07	1.57	3.14	3.14
Yellowstone County	B8	RM 324.48	42039.74	5% Duration	830.6	864.7	861.58	1.89	1.87	32.99	31.95	274.85	287.24	1.59	1.54	3.12	3.12
Yellowstone County	B8	RM 324.42	41946.09	5% Duration	830.6	864.64	861.04	1.31	1.29	15.47	15.13	351.95	366.89	1.79	1.75	3.6	3.6
Yellowstone County	B8	RM 324.34	41812.99	5% Duration	830.6	864.43	861.07	1.72	1.7	24.52	22.96	246.34	266.76	1.95	1.83	3.36	3.36
Yellowstone County	B8	RM 324.28	41712.42	5% Duration	830.6	864.28	859.64	1.8	1.75	28.7	23.72	213.28	267.7	2.14	1.77	4.64	4.64
Yellowstone County	B8	RM 324.20	41597.64	5% Duration	830.6	864.24	860.59	1.02	1.01	13.32	12.91	500.76	527.42	1.61	1.56	3.65	3.65
Yellowstone County	B8	RM 324.16	41526.97	5% Duration	830.6	864.09	861.07	1.57	1.55	15.95	15.68	336.66	356.65	1.53	1.51	3.02	3.02
Yellowstone County	B8	RM 324.10	41434.55	5% Duration	830.6	864.03	860.81	1.23	1.23	14.34	14.34	479.39	479.39	1.4	1.4	3.22	3.22
Yellowstone County	B8	RM 324.04	41346.42	5% Duration	830.6	863.97	860.39	1.11	1.09	9.72	9.23	471.08	518.3	1.54	1.46	3.58	3.58
Yellowstone County	B8	RM 323.97	41219.29	5% Duration	830.6	863.88	860.64	1.13	1.1	12	10.41	417.95	527.82	1.65	1.43	3.24	3.24
Yellowstone County	B8	RM 323.83	40977.08	5% Duration	830.6	863.72	860.31	1.11	1.09	9.88	9.19	412.18	480.95	1.71	1.59	3.41	3.41
Yellowstone County	B8	RM 323.71	40786.71	5% Duration	830.6	863.53	858.49	1.55	1.5	16.43	13.95	214.83	277.68	2.36	2	5.04	5.04
Yellowstone County	B8	RM 323.60	40615.85	5% Duration	830.6	863.5	858.06	1.27	1.05	9.75	5.51	114.75	417.43	3.38	1.9	5.44	5.44
Yellowstone County	B8	RM 323.55	40536.83	5% Duration	830.6	863.25	857.58	2.3	2.03	32.63	22.27	104.6	191.88	3.12	2.13	5.67	5.67
Yellowstone County	B8	RM 323.49	40429.96	5% Duration	830.6	863.18	858.37	2.11	1.88	25.82	17.35	112.96	207.11	3.18	2.14	4.81	4.81
Yellowstone County	B8	RM 323.41	40309.21	5% Duration	830.6	863.1	859.41	1.97	1.77	24.29	16.05	123.81	244.28	2.9	1.92	3.69	3.69

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B8	RM 323.33	40186.15	5% Duration	830.6	863.03	859.58	1.74	1.52	17.99	12.89	171.63	324.37	2.35	1.68	3.45	3.45
Yellowstone County	B8	RM 323.27	40082.34	5% Duration	830.6	862.93	859.66	1.71	1.62	20.46	14.44	185.4	326.11	2.23	1.58	3.27	3.27
Yellowstone County	B8	RM 323.21	39985.33	5% Duration	830.6	862.81	859.54	1.8	1.68	25.2	19.54	209.47	343.99	1.84	1.43	3.27	3.27
Yellowstone County	B8	RM 323.16	39899.29	5% Duration	830.6	862.67	859.55	1.65	1.59	31.87	23.54	248.02	430.82	1.64	1.21	3.12	3.12
Yellowstone County	B8	RM 323.06	39735.77	5% Duration	830.6	862.33	858.56	1.62	1.64	25.54	22.15	231.28	381.97	1.64	1.42	3.77	3.77
Yellowstone County	B8	RM 322.93	39531.81	5% Duration	830.6	862.08	859.35	1.42	1.45	18.47	16.46	278.14	389.22	1.65	1.47	2.73	2.73
Yellowstone County	B8	RM 322.79	39301.41	5% Duration	830.6	861.81	858.62	1.64	1.58	20.12	16.21	216.15	345.01	1.88	1.52	3.19	3.19
Yellowstone County	B8	RM 322.69	39142.64	5% Duration	830.6	861.67	857.47	1.68	1.57	16.97	14.16	190.8	303.13	2.08	1.74	4.2	4.2
Yellowstone County	B8	RM 322.58	38982.22	5% Duration	830.6	861.18	856.56	2.88	2.68	52.93	42.38	108.06	170.06	2.28	1.83	4.62	4.62
Yellowstone County	B9	RM 322.51	38859.49	5% Duration	830.6	860.99	858.28	2.45	2.3	39.41	31.73	153.13	229.67	1.95	1.57	2.71	2.71
Yellowstone County	B9	RM 322.41	38696.02	5% Duration	830.6	860.78	857.62	1.85	1.78	28.08	24.72	242.36	311.85	1.7	1.5	3.16	3.16
Yellowstone County	B9	RM 322.34	38586.33	5% Duration	830.6	860.62	857.65	1.69	1.67	22.95	20.72	273.75	340.05	1.62	1.46	2.98	2.98
Yellowstone County	B9	RM 322.23	38396.25	5% Duration	830.6	860.49	857.13	1.18	1.16	12.54	11.64	340.83	405.11	1.9	1.76	3.37	3.37
Yellowstone County	B9	RM 322.13	38239.27	5% Duration	830.6	860.37	857.1	1.14	1.17	15.43	15.16	401.34	457.5	1.58	1.55	3.27	3.27
Yellowstone County	B9	RM 322.03	38090.48	5% Duration	830.6	860.07	856.15	1.8	1.77	28.45	26.95	261.34	301.33	1.64	1.55	3.92	3.92
Yellowstone County	B9	RM 321.91	37898.13	5% Duration	830.6	859.89	856.85	1.66	1.66	13.82	13.82	228.96	228.96	2.19	2.19	3.03	3.03
Yellowstone County	B9	RM 321.82	37758.36	5% Duration	830.6	859.86	856.34	1.25	1.25	6.47	6.47	352.35	352.35	1.89	1.89	3.53	3.53
Yellowstone County	B9	RM 321.70	37567.01	5% Duration	830.6	859.72	855.27	1.38	1.38	20.65	20.65	453.11	453.11	1.33	1.33	4.45	4.45
Yellowstone County	B9	RM 321.60	37414.63	5% Duration	830.6	859.64	854.48	0.88	0.88	6.67	6.67	632.64	632.64	1.49	1.49	5.16	5.16
Yellowstone County	B9	RM 321.48	37188.51	5% Duration	830.6	859.48	855.03	1.24	1.24	11.76	11.43	305.48	315.84	2.19	2.13	4.45	4.45
Yellowstone County	B9	RM 321.38	37016.94	5% Duration	830.6	859.29	854.75	1.59	1.57	19.09	18.67	305.52	317.35	1.71	1.67	4.54	4.54
Yellowstone County	B9	RM 321.28	36857.57	5% Duration	830.6	859.21	855.3	1.14	1.14	9.92	9.59	417.44	433.74	1.74	1.69	3.91	3.91
Yellowstone County	B9	RM 321.13	36652.19	5% Duration	830.6	859.03	854.69	1.32	1.29	20.57	9.59	269.34	599.38	2.33	1.08	4.34	4.34
Yellowstone County	B9	RM 321.05	36531.25	5% Duration	830.6	858.91	855.36	1.5	1.5	20.23	20.23	183.44	183.44	3.01	3.01	3.55	3.55
Yellowstone County	B9	RM 321.00	36446.98	5% Duration	830.6	858.67	855.12	2.24	2.24	36.98	34.9	123.53	131.34	3	2.82	3.56	3.56
Yellowstone County		RM 320.71	36404.1	5% Duration	830.6	858.61	855.12	2.3	2.3	27.39	27.39	122.16	122.16	2.95	2.95	3.49	3.49
Yellowstone County		RM 320.62	36361.3	5% Duration	830.6	858.56	855.12	2.36	2.36	29.03	29.03	120.66	120.66	2.92	2.92	3.44	3.44
Yellowstone County	B9	RM 320.92	36318.56	5% Duration	830.6	858.49	855.12	2.41	2.41	37.42	36.47	119.83	123.18	2.87	2.8	3.37	3.37
Yellowstone County		RM 320.44	36258.3	5% Duration	830.6	858.44	855.19	2.28	2.28	27.88	27.88	128.58	128.58	2.83	2.83	3.25	3.25
Yellowstone County		RM 320.38	36198.1	5% Duration	830.6	858.4	855.26	2.16	2.16	25.27	25.27	138.27	138.27	2.78	2.78	3.14	3.14
Yellowstone County	B9	RM 320.80	36137.92	5% Duration	830.6	858.35	855.33	2.06	2.04	28.61	24.36	146.11	179.41	2.75	2.34	3.02	3.02
Yellowstone County	B9	RM 320.71	35990.21	5% Duration	830.6	858.33	854.38	1.26	1.25	15.02	14.42	268.46	281.93	2.45	2.35	3.94	3.94
Yellowstone County	B9	RM 320.54	35839.45	5% Duration	830.6	858.18	853.99	1.44	1.44	17.69	17.67	320.1	320.46	1.8	1.8	4.19	4.19
Yellowstone County	B9	RM 320.44	35717.45	5% Duration	830.6	858.09	854.32	1.44	1.43	13.36	12.64	244.72	259.77	2.36	2.23	3.76	3.76
Yellowstone County		RM 320.62	35556.9	5% Duration	830.6	857.94	854.17	1.64	1.59	21.85	18.19	196.66	252.45	2.49	2.07	3.77	3.77
Yellowstone County	B9	RM 320.38	35461.42	5% Duration	830.6	857.88	854.17	1.56	1.51	16.43	14.35	192.91	234.79	2.68	2.34	3.71	3.71
Yellowstone County	B9	RM 320.32	35359.13	5% Duration	830.6	857.72	854.57	1.97	1.9	28.73	24.23	135.46	173.83	2.99	2.51	3.15	3.15
Yellowstone County	B9	RM 320.25	35241.01	5% Duration	830.6	857.39	854.29	2.67	2.57	46.65	40.39	105.48	131.44	2.84	2.46	3.1	3.1
Yellowstone County	B9	RM 320.20	35163.52	5% Duration	830.6	857.26	854.2	2.63	2.51	46.7	38.37	115.79	155.49	2.61	2.13	3.06	3.06
Yellowstone County	B9	RM 320.14	35071.29	5% Duration	830.6	857.1	854.32	2.52	2.4	42.08	34.72	148.2	197.5	2.13	1.75	2.77	2.77
Yellowstone County	B9	RM 320.01	34865.89	5% Duration	830.6	856.81	854.42	1.98	2.03	17.58	19.2	114.98	264.32	1.5	1.64	2.46	2.46
Yellowstone County		RM 319.44	34790	5% Duration	Bridge												
Yellowstone County	B9	RM 319.91	34707.77	5% Duration	830.6	856.61	854.66	0.96	1.28	7.07	9.16	118.52	300.89	1.71	2.2	3.03	3.03
Yellowstone County	B9	RM 319.86	34625.68	5% Duration	830.6	856.56	854.6	1.03	1.4	8.67	11.17	135.6	349.78	1.42	1.83	3	3
Yellowstone County	B9	RM 319.78	34508.06	5% Duration	830.6	856.4	854.51	1.84	1.73	24.26	21.52	103.43	332.32	1.77	1.56	2.88	2.88
Yellowstone County	B9	RM 319.73	34426.63	5% Duration	830.6	856.22	854.69	2.3	1.61	34.62	35.85	138.78	383.53	1.43	1.49	2.75	2.75
Yellowstone County	B9	RM 319.66	34314.84	5% Duration	830.6	856.06	854.51	1.54	1.76	15.43	17.02	124.53	299.82	1.43	1.57	2.63	2.63
Yellowstone County	B9	RM 319.57	34163.05	5% Duration	830.6	855.91	853.93	1.8	1.81	16.24	16.25	162.3	318.02	1.44	1.44	2.57	2.57
Yellowstone County	B9	RM 319.44	33955.96	5% Duration	830.6	855.74	853.14	1.73	1.79	23.95	22.62	143.67	344.91	1.44	1.35	2.6	2.6
Yellowstone County	B9	RM 319.39	33872.4	5% Duration	830.6	855.65	852.65	1.96	1.8	17.3	16.16	126.33	317.55	1.57	1.45	3	3
Yellowstone County	B9	RM 319.34	33786.83	5% Duration	830.6	855.56	852.83	1.99	1.84	18.83	16.48	159.76	335.42	1.55	1.35	2.73	2.73
Yellowstone County	B9	RM 319.22	33580.15	5% Duration	830.6	855.44	851.79	2.06	1.4	19.94	9.49	74.32	466.21	2.76	1.27	3.64	3.64
Yellowstone County	B9	RM 319.17	33497.33	5% Duration	830.6	855.42	851.64	1.6	1.34	15.18	9.86	95.73	429.65	2.28	1.44	3.78	3.78
Yellowstone County	B9	RM 319.09	33368.53	5% Duration	830.6	855.2	851.25	2.07	1.92	28.58	21.86	120.71	230.48	2.49	1.88	3.95	3.95
Yellowstone County	B9	RM 319.04	33287.21	5% Duration	830.6	855.03	851.49	2.37	2.15	39.47	26.77	103.69	203.44	2.85	1.9	3.54	3.54
Yellowstone County	B9	RM 318.96	33153.16	5% Duration	830.6	854.87	851.64	2.08	1.97	33.14	27.18	147.26	217.72	2.38	1.94	3.23	3.23
Yellowstone County	B9	RM 318.91	33065.54	5% Duration	830.6	854.78	851.86	1.99	1.86	24.99	19.25	148.85	227.9	2.55	1.96	2.93	2.93
Yellowstone County	B9	RM 318.82	32939.33	5% Duration	830.6	854.65	851.86	2.04	1.87	22.68	16.13	148.31	249.21	2.53	1.79	2.8	2.8
Yellowstone County	B9	RM 318.74	32833.24	5% Duration	830.6	854.65	851.86	1.44	1.28	14.05	10.1	175.07	383.08	2.36	1.69	2.79	2.79
Yellowstone County	B9	RM 318.62	32649.76	5% Duration	830.6	854.42	850.67	1.56	1.58	27.28	26.07	295.61	389.9	1.41	1.35	3.75	3.75
Yellowstone County	B9	RM 318.42	32315.28	5% Duration	830.6	853.83	850.15	1.76	1.76	21.43	21.43	309.5	309.5	1.52	1.52	3.68	3.68

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B9	RM 318.17	31866.42	5% Duration	830.6	853.35	849.17	1.72	1.65	19.27	15.41	200.31	267.08	2.37	1.89	4.18	4.18
Yellowstone County	B9	RM 317.97	31551.39	5% Duration	830.6	853.15	848.35	1.69	1.69	11.46	11.32	211.75	214.46	2.32	2.29	4.8	4.8
Yellowstone County	B10	RM 317.87	31388.76	5% Duration	830.6	852.98	848.78	2	1.98	23.15	20.85	136.96	154.55	3.02	2.72	4.2	4.2
Yellowstone County	B10	RM 317.78	31248.07	5% Duration	830.6	852.91	848.75	1.81	1.63	18.71	10.5	133.21	277.45	3.3	1.83	4.17	4.17
Yellowstone County	B10	RM 317.70	31120.75	5% Duration	830.6	852.86	848.56	1.71	1.4	17.39	6.83	140.15	517.7	2.98	1.15	4.3	4.3
Yellowstone County	B10	RM 317.61	30982.56	5% Duration	830.6	852.71	848.29	1.91	1.75	21.61	13.25	179.35	346.98	2.25	1.37	4.42	4.42
Yellowstone County	B10	RM 317.53	30849.94	5% Duration	830.6	852.64	848.5	1.42	1.37	13.64	12.46	311.71	400.95	1.65	1.51	4.14	4.14
Yellowstone County	B10	RM 317.45	30723.4	5% Duration	830.6	852.44	848.47	1.82	1.74	24.59	21.48	236.35	313.35	1.75	1.52	3.97	3.97
Yellowstone County	B10	RM 317.37	30601.88	5% Duration	830.6	852.24	848.17	1.8	1.77	30.72	26.37	214.45	306.12	1.79	1.53	4.08	4.08
Yellowstone County	B10	RM 317.30	30483.81	5% Duration	830.6	852.11	848.41	1.81	1.68	18.56	13.01	166.88	278.01	2.56	1.78	3.7	3.7
Yellowstone County	B10	RM 317.19	30302.33	5% Duration	830.6	851.99	848.84	1.78	1.63	17.48	12.29	153.78	255.49	2.85	1.99	3.16	3.16
Yellowstone County	B10	RM 317.05	30079.26	5% Duration	830.6	851.86	848.38	1.75	1.68	16.11	12.37	148.83	205.08	3.15	2.41	3.48	3.48
Yellowstone County	B10	RM 316.93	29889.26	5% Duration	830.6	851.72	847.25	1.87	1.87	21.02	20.74	143.8	145.85	3.09	3.04	4.47	4.47
Yellowstone County	B10	RM 316.79	29668.4	5% Duration	830.6	851.6	847.89	1.72	1.7	17.8	16.42	139.16	153.83	3.45	3.18	3.71	3.71
Yellowstone County	B10	RM 316.66	29466.39	5% Duration	830.6	851.51	847.86	1.62	1.58	14.67	13.31	156.45	177.72	3.26	2.95	3.65	3.65
Yellowstone County	B10	RM 316.58	29329.04	5% Duration	830.6	851.42	847.74	1.69	1.66	20.01	17.65	163.17	189.94	3	2.64	3.68	3.68
Yellowstone County	B10	RM 316.51	29227.18	5% Duration	830.6	851.3	847.41	1.87	1.83	23.89	21.86	176.12	198.07	2.5	2.29	3.9	3.9
Yellowstone County	B10	RM 316.43	29091.4	5% Duration	830.6	851.08	847.41	2.08	2.02	34.56	29.39	195.22	238.97	2.03	1.72	3.67	3.67
Yellowstone County	B10	RM 316.33	28935.99	5% Duration	830.6	850.83	847.74	2.06	2.04	30.03	25.61	187.86	224.09	2.14	1.82	3.09	3.09
Yellowstone County	B10	RM 316.24	28786.65	5% Duration	830.6	850.63	847.5	1.85	1.82	30.2	27.26	227	262.03	1.94	1.74	3.14	3.14
Yellowstone County	B10	RM 316.14	28628.02	5% Duration	830.6	850.5	846.92	1.45	1.44	17.08	14.64	257.19	304.42	2.22	1.9	3.59	3.59
Yellowstone County	B10	RM 316.05	28475.44	5% Duration	830.6	850.28	846.73	1.74	1.73	30.76	29.48	267.47	280.49	1.79	1.71	3.54	3.54
Yellowstone County	B10	RM 315.97	28355.68	5% Duration	830.6	850.14	846.43	1.77	1.73	12.16	11.32	279.73	309.15	1.66	1.55	3.71	3.71
Yellowstone County	B10	RM 315.84	28140.65	5% Duration	830.6	849.91	846.58	2.01	1.92	25.13	20.99	152.77	200.31	2.59	2.16	3.33	3.33
Yellowstone County	B10	RM 315.71	27926.69	5% Duration	830.6	849.71	846.34	2	1.88	17.27	14.77	179.07	240.82	2.15	1.84	3.38	3.38
Yellowstone County	B10	RM 315.58	27720.72	5% Duration	830.6	849.59	846.16	1.86	1.48	19.15	8.64	128.58	458.76	2.76	1.22	3.44	3.44
Yellowstone County	B10	RM 315.44	27505.06	5% Duration	830.6	849.49	846.09	1.57	1.44	14.66	9.87	145.84	282.67	3.06	2.05	3.4	3.4
Yellowstone County	B10	RM 315.30	27283.58	5% Duration	830.6	849.35	844.45	1.42	1.36	16.68	13.98	267.21	427.99	1.71	1.42	4.9	4.9
Yellowstone County	B10	RM 315.18	27097.16	5% Duration	830.6	849.16	844.72	1.49	1.38	15.96	13.17	332.82	583.75	1.26	1.03	4.43	4.43
Yellowstone County	B10	RM 315.01	26818.99	5% Duration	830.6	848.65	844.66	2.03	2	28.04	25.73	267.11	298.02	1.52	1.39	3.99	3.99
Yellowstone County	B10	RM 314.85	26559.67	5% Duration	830.6	848.38	844.84	1.84	1.75	21.27	18.17	154.98	201.13	2.77	2.36	3.53	3.53
Yellowstone County	B10	RM 314.69	26324.37	5% Duration	830.6	848.1	844.24	2.04	2.01	28.42	26.68	163.91	181.18	2.43	2.28	3.87	3.87
Yellowstone County	B10	RM 314.57	26132.54	5% Duration	830.6	847.91	844.63	2.01	2	24.67	22.66	133.23	146.67	3.09	2.84	3.28	3.28
Yellowstone County	B10	RM 314.46	25963.96	5% Duration	830.6	847.75	844.48	1.97	1.95	28.08	25.77	183.27	202.86	2.29	2.1	3.27	3.27
Yellowstone County	B10	RM 314.35	25782.69	5% Duration	830.6	847.55	844.51	1.82	1.82	24.3	24.3	209.69	209.69	2.18	2.18	3.04	3.04
Yellowstone County	B10	RM 314.24	25607.48	5% Duration	830.6	847.43	844.14	1.69	1.69	13.72	13.72	193.08	193.08	2.54	2.54	3.28	3.28
Yellowstone County	B10	RM 314.15	25461.23	5% Duration	830.6	847.24	844.05	1.96	1.96	31.52	31.52	235.88	235.88	1.8	1.8	3.18	3.18
Yellowstone County	B10	RM 314.06	25326.45	5% Duration	830.6	847.16	843.63	1.5	1.5	9.55	9.55	335.64	335.64	1.66	1.66	3.54	3.54
Yellowstone County	B10	RM 313.98	25189.4	5% Duration	830.6	847.04	843.05	1.54	1.54	18.83	18.83	307.5	307.5	1.75	1.75	4	4
Yellowstone County	B10	RM 313.83	24942.42	5% Duration	830.6	846.86	843.2	1.28	1.28	12.03	12.03	360.46	360.46	1.79	1.79	3.66	3.66
Yellowstone County	B10	RM 313.72	24768.08	5% Duration	830.6	846.69	842.35	1.47	1.46	15.05	14.53	317.61	331.39	1.78	1.72	4.35	4.35
Yellowstone County	B10	RM 313.66	24671.51	5% Duration	830.6	846.6	843.14	1.56	1.54	14.96	14.01	227.05	246.15	2.34	2.19	3.46	3.46
Yellowstone County	B10	RM 313.57	24513.04	5% Duration	830.6	846.41	842.47	1.81	1.79	23.4	21.89	262.77	285.51	1.74	1.63	3.94	3.94
Yellowstone County	B10	RM 313.47	24364.02	5% Duration	830.6	846.28	841.55	1.56	1.56	15.96	15.96	269.85	269.85	1.97	1.97	4.72	4.72
Yellowstone County	B10	RM 313.33	24143.26	5% Duration	830.6	846.09	842.65	1.75	1.75	17.47	17.47	155.16	155.16	3.05	3.05	3.44	3.44
Yellowstone County	B10	RM 313.18	23899.74	5% Duration	830.6	845.74	842.19	2.34	2.34	34.08	34.08	136.68	136.68	2.59	2.59	3.55	3.55
Yellowstone County	B10	RM 313.07	23728.15	5% Duration	830.6	845.61	842.62	2	2	22.21	22.21	155.81	155.81	2.67	2.67	2.99	2.99
Yellowstone County	B10	RM 312.98	23590.93	5% Duration	830.6	845.54	842.5	1.77	1.7	16.26	13.11	186.73	246.36	2.46	1.98	3.04	3.04
Yellowstone County	B10	RM 312.90	23455.11	5% Duration	830.6	845.46	842.38	1.59	1.52	17.96	14.93	188.08	255.61	2.58	2.14	3.09	3.09
Yellowstone County	B10	RM 312.75	23227.05	5% Duration	830.6	845.22	841.71	1.81	1.72	21.84	19.15	216.69	280.63	1.97	1.73	3.52	3.52
Yellowstone County	B10	RM 312.65	23058.61	5% Duration	830.6	845.04	841.61	1.8	1.71	22.64	19.38	195.43	268.6	2.12	1.81	3.43	3.43
Yellowstone County	B10	RM 312.53	22873.59	5% Duration	830.6	844.99	841.37	1.29	1.21	9.31	8.14	216	287.93	2.71	2.38	3.62	3.62
Yellowstone County	B10	RM 312.49	22797.96	5% Duration	830.6	844.93	841.34	1.51	1.41	12.29	10.16	174.73	244.23	2.92	2.41	3.59	3.59
Yellowstone County	B10	RM 312.39	22646.67	5% Duration	830.6	844.75	840.85	2.05	1.75	25.19	17.39	118.6	239.57	2.9	1.98	3.9	3.9
Yellowstone County	B10	RM 312.33	22536.68	5% Duration	830.6	844.58	840.82	2.28	1.96	34.14	21.65	129.26	263.59	2.56	1.6	3.76	3.76
Yellowstone County	B10	RM 312.22	22360.55	5% Duration	830.6	844.46	840.91	1.93	1.66	24.09	13.1	121.66	321.76	2.91	1.56	3.54	3.54
Yellowstone County	B10	RM 312.13	22230.65	5% Duration	830.6	844.39	840.94	1.4	1.35	14.97	12.84	328.05	405.67	1.77	1.52	3.45	3.45
Yellowstone County	B10	RM 312.04	22082.88	5% Duration	830.6	844.22	840.82	1.59	1.53	20.58	18.47	249.76	298.12	2.04	1.83	3.4	3.4
Yellowstone County	B10	RM 311.95	21934.61	5% Duration	830.6	844.03	840.79	1.71	1.69	22.45	21.85	279.71	292.62	1.73	1.68	3.23	3.23
Yellowstone County	B10	RM 311.89	21840.24	5% Duration	830.6	843.94	840.76	1.53	1.51	19.1	18.31	276.78	292.67	1.96	1.88	3.18	3.18
Yellowstone County	B10	RM 311.77	21651.91	5% Duration	830.6	843.84	840.18	1.31	1.29	11.72	10.99	216.35	235.32	2.92	2.74	3.66	3.66

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B10	RM 311.69	21530.39	5% Duration	830.6	843.73	839.85	1.64	1.54	18.02	14.52	146.11	198.71	3.38	2.71	3.89	3.89
Yellowstone County	B10	RM 311.58	21350.77	5% Duration	830.6	843.59	839.63	1.78	1.65	20.81	16.59	159.11	221.47	2.85	2.27	3.96	3.96
Yellowstone County	B10	RM 311.48	21191.11	5% Duration	830.6	843.45	839.42	1.78	1.68	20.85	19.69	221.64	256.31	2.05	1.93	4.03	4.03
Yellowstone County	B10	RM 311.37	21010.53	5% Duration	830.6	843.27	839.18	1.72	1.67	22.86	20.14	211.54	248.99	2.27	2	4.09	4.09
Yellowstone County	B10	RM 311.27	20852.82	5% Duration	830.6	843.1	838.96	1.7	1.69	22.93	21.17	223.58	245.92	2.17	2	4.14	4.14
Yellowstone County	B10	RM 311.19	20716.8	5% Duration	830.6	843	838.84	1.5	1.49	16.93	15.38	227.75	254.57	2.42	2.19	4.16	4.16
Yellowstone County	B10	RM 311.09	20559.11	5% Duration	830.6	842.74	839.14	2.13	2.11	26.16	19.32	138.05	190.71	2.82	2.07	3.59	3.59
Yellowstone County	B10	RM 310.97	20364.78	5% Duration	830.6	842.6	839.45	1.88	1.87	21.58	19.81	161.87	177.45	2.72	2.5	3.15	3.15
Yellowstone County	B10	RM 310.87	20211.96	5% Duration	830.6	842.49	839.02	1.84	1.84	19.09	19.09	174.39	174.39	2.59	2.59	3.46	3.46
Yellowstone County	B10	RM 310.76	20019.23	5% Duration	830.6	842.27	839.18	2.12	2.12	24.6	24.6	134.5	134.5	2.92	2.92	3.09	3.09
Yellowstone County	B11	RM 310.67	19877.9	5% Duration	830.6	842.15	839.11	1.99	1.93	26.46	22.17	154.04	191.47	2.7	2.25	3.04	3.04
Yellowstone County	B11	RM 310.57	19727.96	5% Duration	830.6	842	839.08	1.9	1.86	28.78	26.93	177.77	195.33	2.44	2.29	2.91	2.91
Yellowstone County	B11	RM 310.48	19578.86	5% Duration	830.6	841.84	838.96	1.84	1.78	23.39	21.33	194.69	224.24	2.28	2.08	2.87	2.87
Yellowstone County	B11	RM 310.39	19437.53	5% Duration	830.6	841.73	838.54	1.71	1.59	13.16	10.85	239.71	320.65	1.98	1.63	3.2	3.2
Yellowstone County	B11	RM 310.31	19317.45	5% Duration	830.6	841.6	838.23	1.93	1.81	15.68	13.64	226.74	284.61	1.85	1.61	3.37	3.37
Yellowstone County	B11	RM 310.24	19187.47	5% Duration	830.6	841.5	838.23	1.66	1.63	25.6	23.61	229.7	256.82	2.16	1.99	3.26	3.26
Yellowstone County	B11	RM 310.16	19069.04	5% Duration	830.6	841.37	837.93	1.49	1.47	22.6	21.2	277.03	303	1.99	1.87	3.45	3.45
Yellowstone County	B11	RM 310.09	18955.28	5% Duration	830.6	841.26	837.93	1.61	1.57	11.36	10.22	251.68	290.44	2.03	1.82	3.33	3.33
Yellowstone County	B11	RM 309.97	18765.62	5% Duration	830.6	841.21	837.59	1	0.99	8.82	8.57	470.05	488.76	1.76	1.72	3.62	3.62
Yellowstone County	B11	RM 309.90	18643.48	5% Duration	830.6	841.11	837.5	1.33	1.31	7.4	7.06	318.87	339.81	1.95	1.86	3.61	3.61
Yellowstone County	B11	RM 309.82	18525.48	5% Duration	830.6	841.03	837.5	1.42	1.39	17.72	16.94	315.93	342.75	1.82	1.74	3.53	3.53
Yellowstone County	B11	RM 309.73	18379.74	5% Duration	830.6	840.89	837.35	1.29	1.29	15.77	15.77	405.88	405.88	1.59	1.59	3.55	3.55
Yellowstone County	B11	RM 309.65	18253.83	5% Duration	830.6	840.8	837.38	0.99	0.99	12.6	12.6	569.04	569.04	1.47	1.47	3.42	3.42
Yellowstone County	B11	RM 309.52	18029.98	5% Duration	830.6	840.49	836.68	1.46	1.46	20.55	20.55	380.05	380.05	1.5	1.5	3.81	3.81
Yellowstone County	B11	RM 309.39	17824.11	5% Duration	830.6	840.32	836.74	1.03	1.03	10.15	10.15	542.95	542.95	1.49	1.49	3.59	3.59
Yellowstone County	B11	RM 309.22	17557.23	5% Duration	830.6	840.13	836.07	1.23	1.23	10.87	10.87	328.78	328.78	2.05	2.05	4.07	4.07
Yellowstone County	B11	RM 309.06	17331.95	5% Duration	830.6	839.91	835.79	1.6	1.6	30.41	30.41	178.4	178.4	2.91	2.91	4.11	4.11
Yellowstone County	B11	RM 308.94	17142.36	5% Duration	830.6	839.43	835.4	2.59	2.59	40.42	40.42	113.24	113.24	2.83	2.83	4.03	4.03
Yellowstone County	B11	RM 308.83	16971.41	5% Duration	830.6	839.35	836.04	1.87	1.85	24.27	22.22	148.48	164.22	2.99	2.73	3.32	3.32
Yellowstone County	B11	RM 308.71	16778.65	5% Duration	830.6	839.25	835.91	1.67	1.67	11.9	11.9	231.51	231.51	2.15	2.15	3.33	3.33
Yellowstone County	B11	RM 308.62	16631.4	5% Duration	830.6	839.14	835.85	1.69	1.69	23.38	23.38	188.47	188.47	2.6	2.6	3.28	3.28
Yellowstone County	B11	RM 308.55	16518.64	5% Duration	830.6	839.03	835.85	1.74	1.74	17.69	17.09	202.24	210.48	2.35	2.27	3.18	3.18
Yellowstone County	B11	RM 308.43	16328.3	5% Duration	830.6	838.89	834.51	1.57	1.57	21.79	21.62	221.07	222.95	2.39	2.37	4.38	4.38
Yellowstone County	B11	RM 308.35	16192.95	5% Duration	830.6	838.8	834.88	1.36	1.36	15.52	15.5	266.27	266.73	2.29	2.28	3.92	3.92
Yellowstone County	B11	RM 308.24	16015.46	5% Duration	830.6	838.66	834.63	1.35	1.31	14.2	12.67	348.25	405.65	1.76	1.57	4.03	4.03
Yellowstone County	B11	RM 308.12	15826.82	5% Duration	830.6	838.55	834.63	1.23	1.21	11.13	9.99	337.96	383.17	2	1.79	3.91	3.91
Yellowstone County	B11	RM 308.02	15675.58	5% Duration	830.6	838.5	834.76	1.07	1.04	6.48	6	299.12	331.53	2.59	2.4	3.75	3.75
Yellowstone County	B11	RM 307.88	15434.86	5% Duration	830.6	838.12	834.45	2.48	2.22	35.41	21.98	104.53	201.53	3.04	1.86	3.67	3.67
Yellowstone County	B11	RM 307.77	15261.75	5% Duration	830.6	837.89	834.45	2.4	2.3	40.27	36.06	120.02	158.72	2.56	2.28	3.44	3.44
Yellowstone County	B11	RM 307.68	15125.28	5% Duration	830.6	837.78	834.85	1.99	1.92	24.91	22.29	147.05	183.3	2.65	2.37	2.93	2.93
Yellowstone County	B11	RM 307.60	14980.1	5% Duration	830.6	837.75	834.36	1.32	1.32	10.82	10.6	263.71	269.29	2.39	2.35	3.39	3.39
Yellowstone County	B11	RM 307.52	14873.7	5% Duration	830.6	837.61	834.12	1.72	1.72	19.34	19.34	243.95	243.95	1.98	1.98	3.5	3.5
Yellowstone County	B11	RM 307.46	14779.11	5% Duration	830.6	837.46	833.6	1.86	1.86	30.25	30.25	248.42	248.42	1.79	1.79	3.86	3.86
Yellowstone County	B11	RM 307.39	14664.34	5% Duration	830.6	837.35	833.63	1.78	1.78	14.52	14.52	211.34	211.34	2.21	2.21	3.73	3.73
Yellowstone County	B11	RM 307.30	14517.89	5% Duration	830.6	837.16	833.81	2	1.99	31.95	30.45	191.6	202.22	2.17	2.06	3.35	3.35
Yellowstone County	B11	RM 307.22	14385.45	5% Duration	830.6	837.02	833.87	1.74	1.72	21.33	19.34	259.98	292.37	1.83	1.66	3.14	3.14
Yellowstone County	B11	RM 307.14	14262.57	5% Duration	830.6	836.9	833.51	1.53	1.51	21.45	19.54	275.6	310.5	1.95	1.77	3.39	3.39
Yellowstone County	B11	RM 307.08	14166.72	5% Duration	830.6	836.83	833.11	1.35	1.33	12.3	11.27	316.82	357.89	1.91	1.74	3.72	3.72
Yellowstone County	B11	RM 307.01	14050.92	5% Duration	830.6	836.74	832.65	1.49	1.43	9.99	8.98	295.78	365.05	1.77	1.59	4.09	4.09
Yellowstone County	B11	RM 306.95	13949.23	5% Duration	830.6	836.62	832.35	1.73	1.66	20.64	17.56	244.13	318.01	1.86	1.58	4.27	4.27
Yellowstone County	B11	RM 306.90	13869.87	5% Duration	830.6	836.55	832.56	1.63	1.52	18.72	15.24	257.62	347.71	1.93	1.57	3.99	3.99
Yellowstone County	B11	RM 306.82	13726.64	5% Duration	830.6	836.44	832.62	1.46	1.4	14.31	13.4	286.12	326.37	1.94	1.82	3.82	3.82
Yellowstone County	B11	RM 306.72	13574.53	5% Duration	830.6	836.27	831.8	1.71	1.56	19.7	16.23	217.71	310.29	2.09	1.71	4.47	4.47
Yellowstone County	B11	RM 306.62	13414.11	5% Duration	830.6	836.02	832.77	1.96	1.88	31.65	26.66	205.28	267.79	1.96	1.65	3.25	3.25
Yellowstone County	B11	RM 306.52	13251.36	5% Duration	830.6	835.81	832.87	2.03	1.92	23.86	19.43	144.05	196.84	2.71	2.2	2.95	2.95
Yellowstone County	B11	RM 306.42	13099.73	5% Duration	830.6	835.58	832.74	2.35	2.16	32.22	23.66	127.52	206.29	2.56	1.86	2.84	2.84
Yellowstone County	B11	RM 306.34	12958.96	5% Duration	830.6	835.51	832.84	1.7	1.61	18.56	15.42	224.54	312.87	1.99	1.65	2.68	2.68
Yellowstone County	B11	RM 306.25	12825.95	5% Duration	830.6	835.3	832.35	1.94	1.86	26.27	23.98	239.18	297.14	1.65	1.5	2.95	2.95
Yellowstone County	B11	RM 306.16	12673.7	5% Duration	830.6	835.13	832.41	1.72	1.62	19.34	16.47	243.45	325.1	1.85	1.57	2.72	2.72
Yellowstone County	B11	RM 306.11	12592.39	5% Duration	830.6	835.06	832.17	1.62	1.5	19.44	15.73	212.6	307.16	2.23	1.8	2.9	2.9
Yellowstone County	B11	RM 306.03	12457.47	5% Duration	830.6	834.92	831.25	1.64	1.58	19.37	18.01	288.09	373.75	1.52	1.41	3.67	3.67

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B11	RM 305.93	12317.98	5% Duration	830.6	834.59	831.25	2.08	2	32.54	29.31	256.87	340.14	1.36	1.22	3.34	3.34
Yellowstone County	B11	RM 305.84	12159.82	5% Duration	830.6	834.2	831.1	2.18	2.03	35.67	29.02	234.33	348.8	1.45	1.17	3.1	3.1
Yellowstone County	B11	RM 305.74	11989.73	5% Duration	830.6	833.97	830.64	1.82	1.73	23.35	19.29	178.27	251.5	2.33	1.91	3.33	3.33
Yellowstone County	B11	RM 305.67	11883.31	5% Duration	830.6	833.83	830.43	2.01	1.87	25.46	18.39	150.5	256.13	2.42	1.74	3.4	3.4
Yellowstone County	B11	RM 305.60	11764.11	5% Duration	830.6	833.83	830.18	1.21	1.18	9.45	8.5	134.48	382.73	2.08	1.85	3.65	3.65
Yellowstone County	B11	RM 305.52	11651.48	5% Duration	830.6	833.62	830.18	1.96	1.8	25.49	20.6	128.74	298.97	1.93	1.54	3.44	3.44
Yellowstone County	B11	RM 305.44	11514.64	5% Duration	830.6	833.52	830.43	1.7	1.26	13.4	9	130.21	466.59	2.14	1.42	3.09	3.09
Yellowstone County	B11	RM 305.40	11441.77	5% Duration	830.6	833.42	830.61	1.73	1.46	12.23	11.07	155.01	348.6	1.81	1.63	2.81	2.81
Yellowstone County	B11	RM 305.32	11312.15	5% Duration	830.6	833.29	830.61	1.82	1.64	20.76	15.98	130.18	312.76	2.12	1.62	2.68	2.68
Yellowstone County	B11	RM 305.24	11186.22	5% Duration	830.6	833.25	830.43	1.33	1.11	13.5	8.07	112.06	596.29	2.14	1.26	2.82	2.82
Yellowstone County	B11	RM 305.06	10905.09	5% Duration	830.6	832.99	830.15	1.81	1.45	8.74	8.64	267.97	595.46	0.98	0.96	2.84	2.84
Yellowstone County	B11	RM 304.71	10460.6	5% Duration	830.6	832.53	828.96	1.86	1.67	25.15	20.78	226.64	392.06	1.54	1.27	3.57	3.57
Yellowstone County	B11	RM 304.62	10332.33	5% Duration	830.6	832.51	829.09	1.1	1.01	7.94	6.75	200.1	463.59	2.1	1.77	3.43	3.43
Yellowstone County	B11	RM 304.50	10132.63	5% Duration	830.6	832.19	829.09	2.25	2.06	36.38	27.01	107.35	193.17	2.84	2.09	3.1	3.1
Yellowstone County	B11	RM 304.42	10011.11	5% Duration	830.6	832.09	829.18	1.9	1.79	24.78	20.98	130.57	210.82	2.62	2.2	2.92	2.92
Yellowstone County	B11	RM 304.34	9873.393	5% Duration	830.6	831.99	828.78	1.72	1.72	13.97	13.97	239.32	239.32	2.02	2.02	3.21	3.21
Yellowstone County	B11	RM 304.25	9735.197	5% Duration	830.6	831.84	828.39	1.86	1.86	24.43	24.43	188.37	188.37	2.37	2.37	3.46	3.46
Yellowstone County	B11	RM 304.18	9615.178	5% Duration	830.6	831.74	828.54	1.86	1.86	17.19	17.19	183.62	183.62	2.44	2.44	3.2	3.2
Yellowstone County	B11	RM 304.09	9478.266	5% Duration	830.6	831.63	828.6	1.84	1.84	21.5	21.5	172.41	172.41	2.61	2.61	3.03	3.03
Yellowstone County	B11	RM 304.00	9326.206	5% Duration	830.6	831.52	828.39	1.72	1.72	20.82	20.82	181.19	181.19	2.66	2.66	3.14	3.14
Yellowstone County	B11	RM 303.91	9177.479	5% Duration	830.6	831.4	828.14	1.69	1.69	21.83	21.83	199.83	199.83	2.46	2.46	3.25	3.25
Yellowstone County	B11	RM 303.78	8973.508	5% Duration	830.6	831.2	827.93	1.86	1.86	19.42	19.42	151.27	151.27	2.96	2.96	3.27	3.27
Yellowstone County	B11	RM 303.65	8773.522	5% Duration	830.6	831.02	827.9	1.98	1.98	24.53	24.53	150.36	150.36	2.79	2.79	3.12	3.12
Yellowstone County	B11	RM 303.55	8608.195	5% Duration	830.6	830.84	827.65	2.06	2.06	19.51	18.9	200.31	210.17	2.01	1.95	3.19	3.19
Yellowstone County	B11	RM 303.43	8422.329	5% Duration	830.6	830.62	827.87	1.98	1.97	28.18	26.71	226.02	240.32	1.85	1.75	2.75	2.75
Yellowstone County	B11	RM 303.34	8276.308	5% Duration	830.6	830.51	826.92	1.58	1.55	16.36	14.2	259.46	305.17	2.02	1.75	3.59	3.59
Yellowstone County	B11	RM 303.26	8138.725	5% Duration	830.6	830.36	826.98	1.76	1.76	19.05	19.05	187.37	187.37	2.51	2.51	3.38	3.38
Yellowstone County	B11	RM 303.18	8018.762	5% Duration	830.6	830.27	826.22	1.76	1.76	19.47	19.47	179.5	179.5	2.63	2.63	4.05	4.05
Yellowstone County	B11	RM 303.09	7876.674	5% Duration	830.6	830.13	825.43	1.8	1.8	23.88	23.88	212.07	212.07	2.18	2.18	4.7	4.7
Yellowstone County	B11	RM 302.99	7711.603	5% Duration	830.6	830	826.22	1.7	1.7	16.99	16.99	174.15	174.15	2.8	2.8	3.78	3.78
Yellowstone County	B11	RM 302.89	7556.419	5% Duration	830.6	829.86	825.73	1.72	1.72	29.24	28.04	217.78	227.61	2.21	2.12	4.12	4.12
Yellowstone County	B11	RM 302.81	7423.411	5% Duration	830.6	829.76	825.86	1.57	1.57	16.24	16.06	174.71	176.78	3.02	2.99	3.91	3.91
Yellowstone County	B11	RM 302.70	7257.14	5% Duration	830.6	829.69	826.01	1.46	1.46	12.38	12.38	179.34	179.34	3.17	3.17	3.69	3.69
Yellowstone County	B12	RM 302.56	7050.708	5% Duration	830.6	829.47	825.25	1.97	1.97	21.24	21.24	149.32	154.23	2.83	2.83	4.22	4.22
Yellowstone County		RM 300.55	7034	5% Duration	Bridge												
Yellowstone County	B12	RM 302.54	7014.507	5% Duration	830.6	829.44	825.95	1.81	1.81	17.25	17.25	147.84	147.84	3.18	3.18	3.5	3.5
Yellowstone County	B12	RM 302.49	6918.549	5% Duration	830.6	829.4	825.92	1.75	1.75	16.74	16.74	154.51	161.54	3.08	3.08	3.48	3.48
Yellowstone County	B12	RM 302.41	6794.522	5% Duration	830.6	829.3	825.64	1.89	1.79	16.42	13.18	159.43	232.24	2.66	2.13	3.66	3.66
Yellowstone County	B12	RM 302.34	6674.634	5% Duration	830.6	829.2	825.76	1.86	1.8	22.4	18.98	196.76	262.13	2.2	1.86	3.44	3.44
Yellowstone County	B12	RM 302.22	6485.378	5% Duration	830.6	829.08	825.76	1.57	1.39	16.19	13.15	192.86	344.21	2.16	1.74	3.31	3.31
Yellowstone County	B12	RM 302.14	6360.047	5% Duration	830.6	828.87	825.76	2.02	1.81	27.44	18.87	155.97	276.32	2.43	1.66	3.1	3.1
Yellowstone County	B12	RM 302.08	6267.13	5% Duration	830.6	828.8	825.79	1.84	1.75	15.68	13.39	199.58	261.37	2.13	1.82	3.01	3.01
Yellowstone County	B12	RM 301.98	6100.949	5% Duration	830.6	828.75	825.34	1.35	1.27	12.09	10.33	239.49	325.06	2.36	2.01	3.41	3.41
Yellowstone County	B12	RM 301.88	5944.005	5% Duration	830.6	828.64	824.7	1.44	1.4	14.03	12.7	280.91	342.39	1.91	1.73	3.94	3.94
Yellowstone County	B12	RM 301.79	5801.18	5% Duration	830.6	828.56	824.36	1.38	1.33	8.43	7.88	308.58	363.44	1.84	1.72	4.2	4.2
Yellowstone County	B12	RM 301.72	5685.105	5% Duration	830.6	828.51	824.85	1.34	1.29	12.26	10.73	256.39	331.41	2.23	1.95	3.66	3.66
Yellowstone County	B12	RM 301.65	5569.191	5% Duration	830.6	828.38	824.61	1.57	1.55	18.03	17.01	258.96	308.44	1.84	1.73	3.78	3.78
Yellowstone County	B12	RM 301.59	5465.51	5% Duration	830.6	828.22	824.42	1.72	1.74	25.73	25.5	261.82	292.1	1.65	1.64	3.8	3.8
Yellowstone County	B12	RM 301.53	5366.723	5% Duration	830.6	828.1	824.12	1.56	1.56	27.7	25.96	214.09	250.23	2.27	2.13	3.98	3.98
Yellowstone County	B12	RM 301.47	5270.902	5% Duration	830.6	827.99	824.12	1.56	1.53	25.34	23.04	215.11	254.66	2.35	2.13	3.87	3.87
Yellowstone County	B12	RM 301.39	5140.04	5% Duration	830.6	827.92	824.36	1.22	1.15	14.37	10.94	291.31	452.26	2.12	1.6	3.55	3.55
Yellowstone County	B12	RM 301.33	5044.575	5% Duration	830.6	827.85	824.12	1.23	1.2	10.93	10.05	302.63	354.26	2.12	1.95	3.74	3.74
Yellowstone County	B12	RM 301.24	4906.408	5% Duration	830.6	827.74	823.87	1.42	1.38	13.76	12.86	305.18	349.27	1.84	1.72	3.87	3.87
Yellowstone County	B12	RM 301.18	4802.631	5% Duration	830.6	827.53	823.17	1.95	1.87	28.13	24.65	260.78	328.88	1.55	1.35	4.35	4.35
Yellowstone County	B12	RM 301.12	4698.913	5% Duration	830.6	827.35	823.81	1.89	1.87	25.99	24.85	276.88	294.17	1.58	1.51	3.53	3.53
Yellowstone County	B12	RM 301.07	4611.142	5% Duration	830.6	827.28	824	1.58	1.57	16.89	15.96	262.73	282.15	1.99	1.88	3.28	3.28
Yellowstone County	B12	RM 301.02	4531.484	5% Duration	830.6	827.23	823.81	1.54	1.51	11.56	10.87	218.45	240.61	2.43	2.28	3.42	3.42
Yellowstone County	B12	RM 300.97	4453.011	5% Duration	830.6	827.15	823.9	1.79	1.72	15.91	13.56	166.9	206.53	2.75	2.34	3.24	3.24
Yellowstone County	B12	RM 300.89	4332.618	5% Duration	830.6	827	823.66	1.98	1.94	31.6	29.71	198.58	227.45	2	1.88	3.33	3.33
Yellowstone County	B12	RM 300.83	4232.362	5% Duration	830.6	826.8	823.78	2.23	2.12	28.34	24.47	140.34	182.53	2.49	2.15	3.02	3.02
Yellowstone County	B12	RM 300.77	4151.049	5% Duration	830.6	826.75	823.75	1.93	1.84	27.05	24.21	165.34	219.58	2.31	2.06	2.99	2.99

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Yellowstone County - Regulated Flows - Developed Conditions

5%

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Yellowstone County	B12	RM 300.69	4011.358	5% Duration	830.6	826.66	823.63	1.63	1.53	13.78	10.96	199.71	287.03	2.39	1.9	3.03	3.03
Yellowstone County	B12	RM 300.55	3793.957	5% Duration	830.6	826.5	822.93	1.65	1.58	19.17	15.38	211.72	311.31	2.12	1.69	3.57	3.57
Yellowstone County	B12	RM 300.45	3633.035	5% Duration	830.6	826.36	822.53	1.49	1.45	16.89	14.85	224.66	322.41	2.03	1.78	3.83	3.83
Yellowstone County	B12	RM 300.35	3461.833	5% Duration	830.6	826.18	822.66	1.75	1.68	14.19	11.43	203.08	265.39	2.32	1.87	3.52	3.52
Yellowstone County	B12	RM 300.24	3286.175	5% Duration	830.6	825.94	822.47	1.98	1.9	32.99	31.72	270.52	298.35	1.52	1.46	3.47	3.47
Yellowstone County	B12	RM 300.15	3141.724	5% Duration	830.6	825.7	822.47	1.73	1.68	26.26	25.44	292.11	316.03	1.62	1.57	3.22	3.22
Yellowstone County	B12	RM 300.10	3054.752	5% Duration	830.6	825.61	822.35	1.68	1.6	12.62	10.89	247.32	307.15	1.97	1.69	3.26	3.26
Yellowstone County	B12	RM 300.00	2887.728	5% Duration	830.6	825.49	821.22	1.56	1.51	18.95	17.62	296.66	339.44	1.75	1.62	4.26	4.26
Yellowstone County	B12	RM 299.91	2736.431	5% Duration	830.6	825.3	821.5	1.54	1.52	18.84	17.96	332.71	431.33	1.33	1.27	3.81	3.81
Yellowstone County	B12	RM 299.83	2614.069	5% Duration	830.6	825.05	821.41	1.84	1.84	26.28	26	245.13	312.96	1.46	1.44	3.64	3.64
Yellowstone County	B12	RM 299.72	2484.158	5% Duration	830.6	824.94	820.89	1.41	1.41	15.13	15	332.48	335.47	1.77	1.76	4.05	4.05
Yellowstone County	B12	RM 299.59	2312.328	5% Duration	830.6	824.71	821.13	1.82	1.66	20.87	16.18	209.37	326.45	1.98	1.53	3.58	3.58
Yellowstone County	B12	RM 299.48	2160.343	5% Duration	830.6	824.52	821.13	2.09	1.78	20.77	13.64	129	263.57	2.72	1.77	3.39	3.39
Yellowstone County	B12	RM 299.38	1995.229	5% Duration	830.6	824.35	821.13	2.14	1.74	37.17	19.71	120.44	333.98	2.71	1.43	3.22	3.22
Yellowstone County	B12	RM 299.31	1874.433	5% Duration	830.6	824.24	821.22	2.02	1.7	20.72	12.78	132.3	304.49	2.62	1.6	3.01	3.01
Yellowstone County	B12	RM 299.22	1738.666	5% Duration	830.6	824.08	821.16	2.15	1.8	27.48	13.85	123.78	345.51	2.69	1.34	2.92	2.92
Yellowstone County	B12	RM 299.15	1613.992	5% Duration	830.6	824.02	820.95	1.8	1.4	18.75	8.79	146.93	508.94	2.51	1.16	3.07	3.07
Yellowstone County	B12	RM 299.06	1473.748	5% Duration	830.6	823.95	820.64	1.68	1.26	18.72	8.09	111.32	532.51	2.93	1.24	3.3	3.3
Yellowstone County	B12	RM 298.99	1360.532	5% Duration	830.6	823.81	820.46	2.01	1.44	26.03	10.08	94.13	521.48	2.95	1.11	3.35	3.35
Yellowstone County	B12	RM 298.93	1269.876	5% Duration	830.6	823.77	820.46	1.69	1.3	22.59	11.27	101.9	486.03	2.71	1.32	3.31	3.31
Yellowstone County	B12	RM 298.88	1195.725	5% Duration	830.6	823.71	820.43	1.58	1.28	18.41	10.3	113.1	462.61	2.57	1.4	3.28	3.28
Yellowstone County	B12	RM 298.82	1096.849	5% Duration	830.6	823.55	820.58	2	1.64	24.24	14.89	142.05	401.31	2.08	1.26	2.97	2.97
Yellowstone County	B12	RM 298.77	1018.392	5% Duration	830.6	823.47	820.4	1.78	1.51	20.49	14.3	179.08	422.33	1.89	1.31	3.07	3.07
Yellowstone County	B12	RM 298.67	854.844	5% Duration	830.6	823.34	819.39	1.85	1.42	12.36	9.3	202.27	515.96	1.53	1.14	3.95	3.95
Yellowstone County	B12	RM 298.59	724.135	5% Duration	830.6	823.23	819.55	1.63	1.43	19.83	15.45	195.89	470.5	1.6	1.23	3.68	3.68
Yellowstone County	B12	RM 298.49	579.164	5% Duration	830.6	823.14	819.27	1.51	1.18	9.66	7.35	187.99	480.19	1.95	1.47	3.86	3.86
Yellowstone County	B12	RM 298.42	469.573	5% Duration	830.6	823.06	819.27	1.47	1.3	16.75	11.73	170.62	419.19	2.2	1.52	3.79	3.79
Yellowstone County	B12	RM 298.35	368.049	5% Duration	830.6	822.99	819.97	1.54	1.29	14.35	9.6	143.92	349.84	2.77	1.83	3.02	3.02
Yellowstone County	B12	RM 298.30	290.003	5% Duration	830.6	822.96	819.82	1.4	1.27	9.52	7.1	190.41	391.77	2.24	1.66	3.14	3.14
Yellowstone County	B12	RM 298.26	211.35	5% Duration	830.6	822.92	819.82	1.43	1.28	13	9.36	171.92	377.02	2.41	1.73	3.1	3.1
Yellowstone County	B12	RM 298.19	83.499	5% Duration	830.6	822.85	819.49	1.49	1.28	10.52	8.59	164.95	363.46	2.19	1.79	3.37	3.37

* Bathymetric survey was collected from RM 391.4 to 322.6. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C1	RM 298.06	61918	5% Duration	965.6	822.72	820.43	1.31	1.15	10.32	7.49	186.96	654.75	2.14	1.54	2.29	2.29
Treasure County	C1	RM 297.89	61639	5% Duration	965.6	822.54	820.07	1.37	1.29	12.6	10.76	334.98	579.94	1.51	1.29	2.47	2.47
Treasure County	C1	RM 297.76	61392	5% Duration	965.6	822.32	819.93	1.41	1.4	15.31	13.77	316.47	518.25	1.48	1.33	2.39	2.39
Treasure County	C1	RM 297.62	61179	5% Duration	965.6	822.21	819.69	1.23	1.09	9.28	7.89	259.96	575.88	1.82	1.54	2.52	2.52
Treasure County	C1	RM 297.5	60985	5% Duration	965.6	821.98	819.39	1.88	1.6	20.56	13.47	156.4	395.33	2.34	1.52	2.59	2.59
Treasure County	C1	RM 297.36	60767	5% Duration	965.6	821.75	819.14	1.87	1.71	21.12	14.24	165.45	397.47	2.12	1.42	2.61	2.61
Treasure County	C1	RM 297.22	60535	5% Duration	965.6	821.51	819	1.91	1.6	22.02	15.02	145.55	429.85	2.08	1.4	2.51	2.51
Treasure County	C1	RM 297.08	60314	5% Duration	965.6	821.34	818.76	1.59	1.47	15.09	14.04	188.12	324.57	2.18	2.02	2.58	2.58
Treasure County	C1	RM 296.94	60093	5% Duration	965.6	821.05	818.42	1.97	1.93	23.46	20.06	168.3	285.29	2.06	1.76	2.63	2.63
Treasure County	C1	RM 296.79	59847	5% Duration	965.6	820.95	817.97	1.32	1.3	10.69	9.89	224.29	402.1	2	1.85	2.98	2.98
Treasure County	C1	RM 296.64	59608	5% Duration	965.6	820.84	817.9	1.35	1.33	10.75	9.96	164.16	367.43	2.19	2.02	2.94	2.94
Treasure County	C1	RM 296.51	59386	5% Duration	965.6	820.77	817.8	1.1	1.1	7.57	7.57	472.19	485.34	1.86	1.86	2.96	2.96
Treasure County	C1	RM 296.33	59113	5% Duration	965.6	820.68	817.52	1.11	1.11	6.84	6.84	329.7	365.3	2.65	2.65	3.15	3.15
Treasure County	C1	RM 296.16	58839	5% Duration	965.6	820.11	817.46	2.9	2.87	48.53	43.99	136.19	169.11	2.44	2.21	2.66	2.66
Treasure County	C1	RM 296.01	58583	5% Duration	965.6	819.92	817.45	1.86	1.86	21.09	21.09	256.46	280.19	2.02	2.02	2.46	2.46
Treasure County	C1	RM 295.83	58296	5% Duration	965.6	819.61	817.4	1.7	1.7	16.43	16.43	410.42	410.42	1.39	1.39	2.21	2.21
Treasure County	C1	RM 295.66	58032	5% Duration	965.6	819.15	817.27	2.03	2.03	26.46	26.46	311.48	311.48	1.52	1.52	1.89	1.89
Treasure County	C1	RM 295.52	57800	5% Duration	965.6	819.05	816.19	1.28	1.28	9.27	9.27	394.34	394.34	1.92	1.92	2.86	2.86
Treasure County	C1	RM 295.31	57474	5% Duration	965.6	818.94	815.61	1.1	1.07	5.99	5.63	393.66	434.41	2.2	2.07	3.33	3.33
Treasure County	C1	RM 295.13	57174	5% Duration	965.6	818.8	815.57	1.33	1.29	9.85	9.12	331.11	379.2	2.13	1.97	3.23	3.23
Treasure County	C1	RM 294.94	56877	5% Duration	965.6	818.49	815.46	2.01	1.92	22.03	19.21	181.98	227.82	2.53	2.2	3.03	3.03
Treasure County	C1	RM 294.76	56587	5% Duration	965.6	818.29	815.45	1.73	1.68	17.35	15.25	230.31	285.19	2.35	2.07	2.83	2.83
Treasure County	C1	RM 294.55	56261	5% Duration	965.6	818.05	815.36	1.77	1.6	18.05	13.85	183.85	334.48	2.41	1.84	2.69	2.69
Treasure County	C1	RM 294.38	55980	5% Duration	965.6	817.84	815.07	1.6	1.56	16.07	15.02	211.28	358.82	1.89	1.76	2.77	2.77
Treasure County	C1	RM 294.21	55714	5% Duration	965.6	817.6	814.88	1.81	1.66	18.94	14.36	189.97	331.31	2.39	1.81	2.72	2.72
Treasure County	C1	RM 294.02	55401	5% Duration	965.6	817.35	814.59	1.77	1.68	18.89	16.53	189.89	314.23	2.14	1.86	2.76	2.76
Treasure County	C1	RM 293.83	55100	5% Duration	965.6	817.12	814.3	1.74	1.5	16.83	13.35	200.94	376.59	2.18	1.72	2.82	2.82
Treasure County	C1	RM 293.63	54777	5% Duration	965.6	817.03	813.55	1.16	1.16	7.15	7.15	296.52	300.6	2.82	2.82	3.48	3.48
Treasure County	C1	RM 293.43	54432	5% Duration	965.6	816.83	813.29	1.66	1.66	14.68	14.68	191.48	204.46	3.04	3.04	3.55	3.55
Treasure County	C1	RM 293.26	54152	5% Duration	965.6	816.59	813.24	1.98	1.98	21.98	21.98	188.54	237.59	2.59	2.59	3.35	3.35
Treasure County	C1	RM 293.07	53839	5% Duration	965.6	816.26	813.24	2.07	1.66	25.29	17.11	196.75	387.01	2.23	1.5	3.02	3.02
Treasure County	C1	RM 292.83	53458	5% Duration	965.6	816.07	813.1	1.3	1.17	9.72	7.6	348.82	632.87	1.86	1.46	2.97	2.97
Treasure County	C1	RM 292.6	53082	5% Duration	965.6	815.88	812.6	1.43	1.3	11.37	8.23	232.19	380.25	2.7	1.96	3.28	3.28
Treasure County	C2	RM 292.32	52612	5% Duration	965.6	815.67	811.76	1.6	1.27	12.23	6.52	179.86	466.22	3.1	1.64	3.91	3.91
Treasure County	C2	RM 292.09	52256	5% Duration	965.6	815.52	811.6	1.67	1.34	14.05	7.18	162.67	456.84	3.13	1.58	3.92	3.92
Treasure County	C2	RM 291.9	51956	5% Duration	965.6	815.33	811.55	1.7	1.48	16.88	13.09	229.34	371.67	2.28	1.76	3.78	3.78
Treasure County	C2	RM 291.71	51639	5% Duration	965.6	814.76	811.5	2.64	2.41	39.98	27.21	143.21	237.38	2.51	1.69	3.26	3.26
Treasure County	C2	RM 291.52	51333	5% Duration	965.6	814.62	811.46	1.66	1.49	15.35	10.96	206.99	336.17	2.71	1.93	3.16	3.16
Treasure County	C2	RM 291.33	51042	5% Duration	965.6	814.38	811.46	1.82	1.75	19.8	17.55	226.98	289.35	2.16	1.91	2.92	2.92
Treasure County	C2	RM 291.15	50747	5% Duration	965.6	814.3	811.4	1.18	1.1	7.85	6.41	287.6	412.03	2.62	2.13	2.9	2.9
Treasure County	C2	RM 290.94	50437	5% Duration	965.6	814.08	811.31	1.65	1.5	16.81	11.79	252.12	464.14	1.98	1.39	2.77	2.77
Treasure County	C2	RM 290.78	50179	5% Duration	965.6	813.88	810.97	1.54	1.42	13.66	10.78	284.45	434.54	1.99	1.57	2.91	2.91
Treasure County	C2	RM 290.6	49891	5% Duration	965.6	813.78	810.54	1.07	1.03	7.05	6.87	460.17	494.35	1.94	1.89	3.24	3.24
Treasure County	C2	RM 290.43	49607	5% Duration	965.6	813.53	810.13	1.73	1.67	16.7	15.06	240.6	314.06	2.19	1.98	3.4	3.4
Treasure County	C2	RM 290.23	49287	5% Duration	965.6	813.16	810.07	2.16	2.06	25.28	21.54	146.88	185.75	2.96	2.52	3.09	3.09
Treasure County	C2	RM 290.04	48976	5% Duration	965.6	813.05	810.04	1.51	1.46	12.41	11.42	204.98	246.6	2.91	2.68	3.01	3.01
Treasure County	C2	RM 289.85	48667	5% Duration	965.6	812.88	809.87	1.44	1.41	12.69	11.24	339.42	444.63	1.81	1.6	3.01	3.01
Treasure County	C2	RM 289.67	48372	5% Duration	965.6	812.65	809.87	1.54	1.54	11.58	11.58	335.89	354.79	1.86	1.86	2.79	2.79
Treasure County	C2	RM 289.46	48067	5% Duration	965.6	812.53	809.56	1.23	1.23	8.85	8.35	361.63	398.59	2.17	2.05	2.97	2.97
Treasure County	C2	RM 289.27	47769	5% Duration	965.6	812.23	809.32	1.8	1.8	20.68	20.43	302.15	310.46	1.77	1.75	2.92	2.92
Treasure County	C2	RM 289.11	47515	5% Duration	965.6	812.09	809	1.54	1.54	12.89	12.7	218.77	231.44	2.87	2.83	3.08	3.08
Treasure County	C2	RM 288.94	47232	5% Duration	965.6	811.93	808.59	1.68	1.66	14.84	12.68	178.09	212.43	3.22	2.75	3.34	3.34
Treasure County	C2	RM 288.76	46939	5% Duration	965.6	811.77	808.33	1.66	1.55	15.49	11.5	214.51	322.08	2.65	1.97	3.44	3.44
Treasure County	C2	RM 288.55	46613	5% Duration	965.6	811.39	808.24	2.17	2.15	27.68	26.84	193.97	202.8	2.29	2.22	3.14	3.14
Treasure County	C2	RM 288.36	46302	5% Duration	965.6	811.33	807.91	1.34	1.32	9.35	8.5	214.77	241.25	3.33	3.03	3.42	3.42
Treasure County	C2	RM 288.18	46008	5% Duration	965.6	811.15	807.77	1.65	1.61	15.68	14.34	239.52	272.91	2.4	2.2	3.39	3.39
Treasure County	C2	RM 287.99	45713	5% Duration	965.6	811	807.58	1.55	1.48	12.37	11.25	211.79	270.95	2.73	2.49	3.42	3.42
Treasure County	C2	RM 287.81	45421	5% Duration	965.6	810.87	807.25	1.49	1.35	12.26	8.52	216.35	378.9	2.74	1.89	3.62	3.62
Treasure County	C2	RM 287.62	45112	5% Duration	965.6	810.57	807.19	2.11	1.99	23.56	19.02	132.25	190.85	3.16	2.54	3.39	3.39
Treasure County	C2	RM 287.42	44789	5% Duration	965.6	810.35	807.15	1.99	1.85	21.2	16.61	149.12	220.99	3.02	2.36	3.21	3.21

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C2	RM 287.24	44498	5% Duration	965.6	810.16	806.81	1.52	1.51	15.26	15.01	400.08	408.36	1.59	1.56	3.34	3.34
Treasure County	C2	RM 287.06	44222	5% Duration	965.6	809.9	806.77	1.49	1.48	12.24	11.93	455.6	472.15	1.42	1.38	3.13	3.13
Treasure County	C2	RM 286.9	43958	5% Duration	965.6	809.76	806.52	1.37	1.36	10.49	9.88	265.36	284.68	2.65	2.5	3.24	3.24
Treasure County	C2	RM 286.72	43671	5% Duration	965.6	809.62	802.22	1.66	1.66	12.64	12.64	119.5	180.22	4.87	4.87	7.4	7.4
Treasure County	C2	Old Meyer Bridge	43660		Mult Open												
Treasure County	C2	RM 286.71	43650	5% Duration	965.6	809.6	802.22	1.68	1.68	12.93	12.93	116.91	142.15	4.91	4.91	7.38	7.38
Treasure County	C3	RM 286.58	43448	5% Duration	965.6	809.5	806.32	1.82	1.72	17.76	15.58	170.55	227.04	3.02	2.65	3.18	3.18
Treasure County	C3	RM 286.51	43344	5% Duration	965.6	809.47	806.32	1.61	1.53	13.83	12.91	191.59	275.32	3.05	2.84	3.15	3.15
Treasure County	C3	RM 286.46	43257	5% Duration	965.6	809.43	804.36	1.57	1.48	12.89	10.98	190.44	258.85	3.18	2.71	5.07	5.07
Treasure County	C3	Meyer Bridge	43230		Mult Open												
Treasure County	C3	RM 286.43	43215	5% Duration	965.6	809.41	804.36	1.57	1.51	12.98	12.07	193.07	249.97	3.13	2.92	5.05	5.05
Treasure County	C3	RM 286.37	43117	5% Duration	965.6	809.36	806.17	1.6	1.52	14.76	13.27	277.44	563.29	2.37	2.13	3.19	3.19
Treasure County	C3	RM 286.26	42931	5% Duration	965.6	809.16	806.17	1.9	1.74	23.52	19.01	186.79	297.79	2.53	2.04	2.99	2.99
Treasure County	C3	RM 286.06	42624	5% Duration	965.6	809.03	806.08	1.26	1.16	9.3	7.09	341.92	528.31	2.19	1.66	2.95	2.95
Treasure County	C3	RM 285.81	42213	5% Duration	965.6	808.75	805.78	1.78	1.43	18.98	11.75	164.86	584.76	2.13	1.3	2.96	2.96
Treasure County	C3	RM 285.56	41812	5% Duration	965.6	808.61	805.34	1.21	1.13	7.72	5.19	226.12	495.67	3.18	2.14	3.27	3.27
Treasure County	C3	RM 285.23	41280	5% Duration	965.6	808.36	805.17	1.71	1.34	15.99	9.1	125.8	491.83	2.83	1.59	3.19	3.19
Treasure County	C3	RM 284.69	40395	5% Duration	965.6	807.74	804.85	2.17	1.88	28.33	20.1	128.44	362.44	2.12	1.49	2.89	2.89
Treasure County	C3	RM 284.26	39705	5% Duration	965.6	807.42	804.6	1.25	1.17	9.62	8.22	327.14	485.95	1.98	1.69	2.82	2.82
Treasure County	C3	RM 283.96	39199	5% Duration	965.6	807.14	804.3	1.53	1.43	13.78	10.95	226.5	394.67	2.24	1.78	2.84	2.84
Treasure County	C3	RM 283.69	38766	5% Duration	965.6	806.98	803.9	1.4	1.2	10.59	5.79	176.45	516.68	2.95	1.6	3.08	3.08
Treasure County	C3	RM 283.35	38229	5% Duration	965.6	806.8	803.42	1.32	1.1	9.36	4.09	262.2	842.92	2.45	1.06	3.37	3.37
Treasure County	C3	RM 283.05	37749	5% Duration	965.6	806.46	803.32	1.84	1.69	18.89	12.76	175.9	330.32	2.65	1.78	3.14	3.14
Treasure County	C3	RM 282.78	37306	5% Duration	965.6	806.2	803.11	1.57	1.4	13.62	7.72	207.86	508.38	2.45	1.38	3.09	3.09
Treasure County	C3	RM 282.56	36942	5% Duration	965.6	806.05	802.83	1.22	1.07	8.81	5.89	266.19	699.36	1.96	1.31	3.22	3.22
Treasure County	C3	RM 282.31	36546	5% Duration	965.6	805.87	802.74	1.41	1.05	10.84	4.02	179.66	897.03	2.83	1.03	3.13	3.13
Treasure County	C3	RM 282.09	36195	5% Duration	965.6	805.48	802.56	2.3	1.79	32.49	19.2	172.19	464.98	1.99	1.17	2.91	2.91
Treasure County	C4	RM 281.73	35619	5% Duration	965.6	805.04	801.74	1.54	1.45	13.3	12.29	280.17	338.39	2.14	1.98	3.3	3.3
Treasure County	C4	RM 281.35	35005	5% Duration	965.6	804.9	801.53	1.05	1.03	5.73	4.96	283.85	357.15	3.24	2.8	3.37	3.37
Treasure County	C4	RM 281.03	34521	5% Duration	965.6	804.7	801.19	1.52	1.45	12.21	9.15	198.88	316.07	3.17	2.37	3.51	3.51
Treasure County	C4	RM 280.73	34051	5% Duration	965.6	804.52	800.82	1.43	1.37	9.37	8.33	282.45	357.05	2.36	2.1	3.7	3.7
Treasure County	C4	RM 280.5	33687	5% Duration	965.6	804.38	800.66	1.35	1.3	8.37	7.54	325.34	397.31	2.17	1.96	3.72	3.72
Treasure County	C4	RM 280.27	33304	5% Duration	965.6	804.27	800.31	1.11	1.07	6.04	5.9	472.92	530.76	1.8	1.76	3.95	3.95
Treasure County	C4	RM 279.95	32800	5% Duration	965.6	804.12	800.08	1.02	0.96	5.46	4.84	466.87	602.34	1.99	1.76	4.03	4.03
Treasure County	C4	RM 279.6	32231	5% Duration	965.6	803.72	799.98	1.98	1.82	17.06	14.31	203.55	285.62	2.34	1.96	3.74	3.74
Treasure County	C4	RM 279.33	31805	5% Duration	965.6	803.2	799.98	2.3	2.27	26.95	24.67	217.94	255.73	1.92	1.76	3.22	3.22
Treasure County	C4	RM 279.14	31495	5% Duration	965.6	803.02	799.96	1.66	1.54	14.95	11.95	208.65	310.66	2.64	2.1	3.06	3.06
Treasure County	C4	RM 278.96	31209	5% Duration	965.6	802.96	799.87	1.16	1.14	6.7	6.41	343.78	395.87	2.34	2.24	3.09	3.09
Treasure County	C4	RM 278.76	30894	5% Duration	965.6	802.8	799.6	1.39	1.37	11.58	11.22	341.88	393.25	1.93	1.87	3.2	3.2
Treasure County	C4	RM 278.56	30571	5% Duration	965.6	802.47	799.53	1.72	1.69	19.61	19.57	328.86	366.73	1.6	1.6	2.94	2.94
Treasure County	C4	RM 278.37	30259	5% Duration	965.6	802.33	799.26	1.17	1.17	8.08	8.08	361.48	389.28	2.28	2.28	3.07	3.07
Treasure County	C5	RM 278.16	29915	5% Duration	965.6	802.06	798.81	1.8	1.79	16.41	15.57	193.31	230.82	2.77	2.63	3.25	3.25
Treasure County	C5	RM 277.99	29648	5% Duration	965.6	801.84	798.77	1.96	1.96	20.38	20.38	181.2	208.14	2.71	2.71	3.07	3.07
Treasure County	C5	RM 277.8	29336	5% Duration	965.6	801.66	798.74	1.73	1.73	16.64	16.64	205.87	226.09	2.71	2.71	2.92	2.92
Treasure County	C5	RM 277.61	29041	5% Duration	965.6	801.47	798.72	1.71	1.69	16.25	14.98	210.77	243.07	2.68	2.46	2.76	2.76
Treasure County	C5	RM 277.43	28747	5% Duration	965.6	801.3	798.48	1.54	1.52	14.29	13.4	301.24	332.37	2.08	1.95	2.81	2.81
Treasure County	C5	RM 277.22	28415	5% Duration	965.6	801	798.47	1.74	1.74	17.69	17.69	255.76	255.76	2.17	2.17	2.54	2.54
Treasure County	C5	RM 277.04	28123	5% Duration	965.6	800.8	798.4	1.54	1.52	14.17	13.26	292.6	316.27	2.14	2	2.4	2.4
Treasure County	C5	RM 276.81	27791	5% Duration	965.6	800.69	797.8	1.15	1.14	7.66	7.48	362.84	374.73	2.32	2.26	2.89	2.89
Treasure County	C5	RM 276.63	27499	5% Duration	965.6	800.46	797.4	1.72	1.69	16.29	14.85	203.71	254.92	2.75	2.5	3.06	3.06
Treasure County	C5	RM 276.4	27133	5% Duration	965.6	800.26	797.1	1.63	1.57	14.02	12.52	220.12	272.29	2.66	2.37	3.16	3.16
Treasure County	C5	RM 276.19	26801	5% Duration	965.6	800.08	796.87	1.66	1.53	15.37	12.42	178.6	306.08	2.69	2.16	3.22	3.22
Treasure County	C5	RM 276.01	26502	5% Duration	965.6	799.91	796.74	1.72	1.57	15.91	12.74	150.9	268.66	3.03	2.41	3.17	3.17
Treasure County	C5	RM 275.81	26193	5% Duration	965.6	799.79	796.61	1.5	1.39	12.44	10.25	172.69	320.65	2.73	2.24	3.17	3.17
Treasure County	C5	RM 275.63	25896	5% Duration	965.6	799.61	796.49	1.73	1.52	16.25	12.03	131.2	300.2	2.95	2.16	3.12	3.12
Treasure County	C5	RM 275.45	25606	5% Duration	965.6	799.5	796.37	1.49	1.27	12.7	9.14	148.16	435.32	2.52	1.79	3.12	3.12
Treasure County	C5	RM 275.26	25299	5% Duration	965.6	799.39	796.16	1.28	1.28	8.61	8.61	243.64	255.45	3.11	3.11	3.22	3.22
Treasure County	C5	RM 275.09	25033	5% Duration	965.6	799.24	796.13	1.61	1.58	13.92	12.94	196.49	218.69	3.01	2.8	3.11	3.11
Treasure County	C6	RM 274.89	24716	5% Duration	965.6	799.09	796.04	1.55	1.38	13.15	8.63	220.55	801.6	2.76	1.8	3.05	3.05
Treasure County	C6	RM 274.72	24440	5% Duration	965.6	798.79	796.04	2.03	1.86	24.81	23.21	211.52	340.55	2.14	2	2.76	2.76

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Treasure County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Treasure County	C6	RM 274.55	24165	5% Duration	965.6	798.58	795.79	1.5	1.33	14.58	13.29	276.36	840.9	1.78	1.63	2.79	2.79
Treasure County	C6	RM 274.38	23892	5% Duration	965.6	798.41	795.55	1.44	1.34	12.04	7.87	215.23	556.46	2.34	1.53	2.86	2.86
Treasure County	C6	RM 274.13	23491	5% Duration	965.6	798.17	795.16	1.59	1.46	15.7	10.93	210.08	532.33	1.9	1.32	3.01	3.01
Treasure County	C6	RM 273.83	22999	5% Duration	965.6	798.03	794.46	1.25	1.05	8.3	4.75	166.07	818.62	3.12	1.76	3.57	3.57
Treasure County	C6	RM 273.58	22595	5% Duration	965.6	797.83	794.04	1.66	1.45	14.68	7.2	158.94	783.34	2.92	1.41	3.8	3.8
Treasure County	C6	RM 273.35	22238	5% Duration	965.6	797.59	794.04	1.89	1.62	19.16	8.19	168.13	1101.36	2.56	1.08	3.56	3.56
Treasure County	C6	RM 273.15	21916	5% Duration	965.6	797.43	793.92	1.57	1.32	13.37	7.36	226.24	1367.1	2.15	1.18	3.52	3.52
Treasure County	C6	RM 272.83	21397	5% Duration	965.6	797.24	793.79	1.34	1.21	8.99	5.1	231.75	1221.85	2.53	1.43	3.45	3.45
Treasure County	C6	RM 272.5	20872	5% Duration	965.6	796.82	793.46	2.17	1.83	22.41	12.84	181.48	808.67	2.12	1.21	3.36	3.36
Treasure County	C6	RM 272.19	20368	5% Duration	965.6	796.42	793.34	1.77	1.53	17.93	10.53	214.19	512.94	2.47	1.44	3.08	3.08
Treasure County	C6	RM 271.91	19902	5% Duration	965.6	796.18	793.18	1.51	1.26	12.9	8.45	220.03	515.11	2.55	1.66	3	3
Treasure County	C6	RM 271.68	19534	5% Duration	965.6	795.89	792.81	1.92	1.6	21.08	13.6	179.33	409.88	2.45	1.58	3.08	3.08
Treasure County	C6	RM 271.41	19102	5% Duration	965.6	795.79	792.54	1.05	0.95	6.57	5.46	272.34	603.29	2.18	1.81	3.25	3.25
Treasure County	C6	RM 271.06	18548	5% Duration	965.6	795.46	792.18	1.84	1.76	19.38	16.62	158.63	276.24	2.44	2.08	3.28	3.28
Treasure County	C6	RM 270.64	17870	5% Duration	965.6	795.22	792.05	1.23	1.1	8.99	6.5	207.06	559.57	2.23	1.6	3.17	3.17
Treasure County	C6	RM 270.05	16897	5% Duration	965.6	794.76	791.48	1.87	1.55	18.93	10.46	145.38	429	2.69	1.47	3.28	3.28
Treasure County	C6	RM 269.75	16413	5% Duration	965.6	794.4	791.35	1.8	1.67	18.98	12.79	211.05	371.46	2.32	1.56	3.05	3.05
Treasure County	C6	RM 269.47	15967	5% Duration	965.6	794.11	791.23	1.68	1.59	15.99	13.59	200.85	276.67	2.58	2.19	2.88	2.88
Treasure County	C7	RM 269.27	15645	5% Duration	965.6	793.97	791.23	1.4	1.31	11.36	9.29	262.18	389.55	2.34	1.91	2.74	2.74
Treasure County	C7	RM 269.06	15308	5% Duration	965.6	793.83	791.01	1.32	1.14	9.94	7.75	152.47	459.73	2.48	1.91	2.82	2.82
Treasure County	C7	RM 268.83	14957	5% Duration	965.6	793.71	790.6	0.94	0.91	5.55	4.84	226.03	663.82	1.87	1.62	3.11	3.11
Treasure County	C7	RM 268.55	14516	5% Duration	965.6	793.59	790.17	1.04	1.02	6.02	5.76	207	373.82	2.74	2.62	3.43	3.43
Treasure County	C7	RM 268.2	13976	5% Duration	965.6	793.39	789.62	1.51	1.4	12.52	9.46	221.4	330.36	2.76	2.08	3.76	3.76
Treasure County	C7	RM 267.87	13439	5% Duration	965.6	793.12	789.53	1.63	1.39	14.16	9.39	181.04	337.43	3.12	2.06	3.59	3.59
Treasure County	C7	RM 267.53	12884	5% Duration	965.6	792.7	789.5	1.96	1.62	22.46	14.43	203.27	403.59	2.3	1.47	3.2	3.2
Treasure County	C7	RM 267.14	12253	5% Duration	965.6	792.51	789.26	1.21	0.95	7.79	4.52	208.83	784.9	2.55	1.47	3.26	3.26
Treasure County	C7	RM 266.8	11700	5% Duration	965.6	792.38	789.2	1.22	0.99	8.41	5.54	205.85	801.97	2.55	1.66	3.18	3.18
Treasure County	C7	RM 266.41	11078	5% Duration	965.6	792.06	789.14	1.94	1.42	21.8	12.66	137.3	619.74	2.39	1.37	2.92	2.92
Treasure County	C7	RM 266.11	10593	5% Duration	965.6	791.74	788.83	1.59	1.46	15.64	12.73	242.48	537.44	1.94	1.58	2.92	2.92
Treasure County	C7	RM 265.92	10283	5% Duration	965.6	791.52	788.65	1.69	1.46	16.58	11.8	200.86	599.84	2.22	1.57	2.87	2.87
Treasure County	C7	RM 265.68	9915	5% Duration	965.6	791.36	788.21	1.51	1.3	12.23	8.7	176.6	447.32	3.02	2.13	3.15	3.15
Treasure County	C7	RM 265.52	9650	5% Duration	965.6	791.19	788.07	1.82	1.45	19.03	11.64	148.21	452.63	2.44	1.48	3.12	3.12
Treasure County	C7	RM 265.34	9362	5% Duration	965.6	790.94	788.07	1.83	1.56	19.73	13.67	141.5	395.15	2.28	1.56	2.87	2.87
Treasure County	C7	RM 265.16	9071	5% Duration	965.6	790.76	787.95	1.38	1.35	11.3	10.56	254.37	452.68	1.69	1.58	2.81	2.81
Treasure County	C7	RM 264.98	8775	5% Duration	965.6	790.55	787.59	1.73	1.51	16.45	12.25	171.63	374.34	2.32	1.71	2.96	2.96
Treasure County	C7	RM 264.81	8508	5% Duration	965.6	790.43	787.35	1.19	1.19	6.21	6.97	589.26	789.56	0.91	1.02	3.08	3.08
Treasure County	C7	RM 264.64	8216	5% Duration	965.6	790.27	787.22	1.41	1.29	6.05	6.44	486.82	697.25	1.01	1.07	3.05	3.05
Treasure County	C7	RM 264.39	7803	5% Duration	965.6	790.06	786.86	1.43	1.34	10.21	9.6	309.19	472.62	1.63	1.53	3.21	3.21
Treasure County	C7	RM 264.15	7406	5% Duration	965.6	789.9	786.6	1.38	1.09	10.67	7.21	154.85	621.63	2.13	1.42	3.3	3.3
Treasure County	C7	RM 263.97	7116	5% Duration	965.6	789.8	786.49	1.33	0.99	9.28	4.64	168.81	628.71	3.15	1.55	3.31	3.31
Treasure County	C7	RM 263.79	6834	5% Duration	965.6	789.62	786.49	1.75	1.49	15.48	10.74	175.99	404.82	2.34	1.61	3.13	3.13
Treasure County	C7	RM 263.6	6534	5% Duration	965.6	789.45	786.37	1.55	1.31	13.76	8.07	197.06	515.27	2.46	1.43	3.08	3.08
Treasure County	C7	RM 263.39	6194	5% Duration	965.6	789.32	786.25	1.07	1.06	7.11	7.05	429.25	514.56	1.93	1.92	3.07	3.07
Treasure County	C7	RM 263.19	5862	5% Duration	965.6	789	786	1.76	1.65	20.75	18.68	310.5	424.48	1.53	1.38	2.99	2.99
Treasure County	C7	RM 262.95	5479	5% Duration	965.6	788.75	785.85	1.46	1.39	11.03	8.49	240.94	346.54	2.61	2	2.9	2.9
Treasure County	C7	RM 262.78	5206	5% Duration	965.6	788.58	785.76	1.59	1.51	13.99	12.06	290.01	421.87	1.76	1.51	2.82	2.82
Treasure County	C7	RM 262.58	4883	5% Duration	965.6	788.32	785.64	1.35	1.33	11.01	10.74	542.87	665.69	1.18	1.15	2.68	2.68
Treasure County	C7	RM 262.42	4613	5% Duration	965.6	788.16	785.54	1.18	1.13	7.25	6.82	503.6	661.66	1.4	1.32	2.62	2.62
Treasure County	C7	RM 262.24	4323	5% Duration	965.6	788.01	785.43	1.06	1.06	7.91	7.85	679.76	700.49	1.34	1.33	2.58	2.58
Treasure County	C7	RM 261.95	3917	5% Duration	965.6	787.74	785.28	1.28	1.27	10.08	9.71	435.1	457	1.73	1.67	2.46	2.46
Treasure County	C7	RM 261.7	3519	5% Duration	965.6	787.44	784.87	1.33	1.33	16.85	16.85	385.95	385.95	1.88	1.88	2.56	2.56
Treasure County	C7	RM 261.53	3256	5% Duration	965.6	787.13	784.51	1.66	1.65	19.2	18.77	289.29	296.96	2.01	1.97	2.62	2.62
Treasure County	C7	RM 261.35	2959	5% Duration	965.6	787.03	784.33	1.07	1.07	6.24	6.24	446.52	446.52	2.02	2.02	2.7	2.7
Treasure County	C7	RM 261.2	2720	5% Duration	965.6	786.89	784.14	1.35	1.35	13.93	13.93	336.37	336.37	2.13	2.13	2.75	2.75
Treasure County	C7	RM 261.03	2441	5% Duration	965.6	786.81	783.66	1.06	1.06	5.78	5.74	375.53	378.19	2.42	2.4	3.15	3.15
Treasure County	C7	RM 260.84	2142	5% Duration	965.6	786.69	783.41	1.26	1.26	9.07	8.96	337.69	342.33	2.27	2.24	3.27	3.27
Treasure County	C7	RM 260.66	1863	5% Duration	965.6	786.56	783.29	1.37	1.37	9.79	9.7	285.59	292.16	2.47	2.44	3.26	3.26
Treasure County	C8	RM 259.9	634	5% Duration	965.6	785.58	782.46	2.36	2.29	30.19	26.47	142.11	167.68	2.87	2.52	3.12	3.12
Treasure County	C8	RM 259.72	347	5% Duration	965.6	785.33	782.45	2.1	2.01	24.45	22.72	168.28	191.31	2.69	2.51	2.88	2.88
Treasure County	C8	RM 259.55	68	5% Duration	965.6	785.2	782.2	1.58	1.58	13.64	13.64	232.19	232.19	2.62	2.62	3	3

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C8	RM 259.59	87898	5% Duration	965.6	785.2	782.19	1.63	1.56	14.44	13.25	201.3	231.52	2.91	2.67	3.01	3.01
Rosebud County	C8	RM 259.41	87598	5% Duration	965.6	785.04	781.96	1.62	1.62	15.07	15.07	201.8	201.8	2.96	2.96	3.08	3.08
Rosebud County	C8	RM 259.22	87292	5% Duration	965.6	784.92	781.55	1.47	1.43	11.13	8.53	229.09	309.56	2.85	2.18	3.37	3.37
Rosebud County	C8	RM 259.04	87004	5% Duration	965.6	784.78	781	1.55	1.51	14.15	12.82	205.83	237.9	2.97	2.69	3.78	3.78
Rosebud County	C8	RM 258.85	86696	5% Duration	965.6	784.6	780.9	1.68	1.64	13.81	12.35	211.82	244.87	2.69	2.4	3.7	3.7
Rosebud County	C8	RM 258.66	86399	5% Duration	965.6	784.49	780.78	1.51	1.49	11.53	10.64	180.24	199.42	3.53	3.26	3.71	3.71
Rosebud County	C8	RM 258.47	86098	5% Duration	965.6	784.32	780.65	1.74	1.66	16.13	13.5	192.47	250.01	2.78	2.32	3.67	3.67
Rosebud County	C8	RM 258.28	85798	5% Duration	965.6	784.15	780.53	1.67	1.46	15.38	10.97	199.87	354.59	2.63	1.87	3.62	3.62
Rosebud County	C8	RM 258.1	85498	5% Duration	965.6	784.05	780.14	1.46	1.36	10.75	8.61	168.82	241.26	3.69	2.94	3.91	3.91
Rosebud County	C8	RM 257.91	85200	5% Duration	965.6	783.91	780.14	1.58	1.55	14.34	13.88	217.58	279.56	2.45	2.38	3.77	3.77
Rosebud County	C8	RM 257.71	84875	5% Duration	965.6	783.55	780.14	2.03	1.9	25.51	19.21	211.11	351.2	1.93	1.45	3.41	3.41
Rosebud County	C8	RM 257.54	84597	5% Duration	965.6	783.32	780.17	1.79	1.61	18.05	13.02	191.97	341.37	2.55	1.83	3.15	3.15
Rosebud County	C8	RM 257.36	84298	5% Duration	965.6	783.1	780.05	1.83	1.56	19.18	13.73	165.12	350.51	2.46	1.77	3.05	3.05
Rosebud County	C8	RM 257.16	83984	5% Duration	965.6	783.06	780	1.01	0.91	5.56	4.2	300.51	496.06	2.86	2.16	3.06	3.06
Rosebud County	C8	RM 256.87	83608	5% Duration	965.6	782.77	779.89	1.99	1.81	21.82	15.66	170.51	273.75	2.73	1.95	2.88	2.88
Rosebud County	C8	RM 256.65	83257	5% Duration	965.6	782.63	779.82	1.47	1.28	12	9.35	163.34	372.27	2.62	2.03	2.81	2.81
Rosebud County	C8	RM 256.45	82941	5% Duration	965.6	782.47	779.67	1.5	1.43	12.45	10.9	217.83	286.08	2.7	2.36	2.8	2.8
Rosebud County	C8	RM 256.26	82630	5% Duration	965.6	782.21	779.58	1.76	1.65	19.1	15.2	254.95	348.87	2.12	1.68	2.63	2.63
Rosebud County	C8	RM 256.1	82375	5% Duration	965.6	782.05	779.42	1.41	1.41	10.95	10.95	408.62	408.62	1.67	1.67	2.63	2.63
Rosebud County	C8	RM 255.91	82077	5% Duration	965.6	781.95	779.09	1.06	1.06	6.37	6.37	437.74	437.74	2.09	2.09	2.86	2.86
Rosebud County	C8	RM 255.7	81747	5% Duration	965.6	781.76	778.73	1.45	1.45	12.23	12.01	286.42	291.73	2.33	2.29	3.03	3.03
Rosebud County	C8	RM 255.51	81446	5% Duration	965.6	781.56	778.49	1.62	1.6	14.99	14.35	239.85	255.25	2.48	2.37	3.07	3.07
Rosebud County	C8	RM 255.31	81125	5% Duration	965.6	781.39	778.36	1.51	1.48	14.16	13.05	226.17	251.6	2.82	2.6	3.03	3.03
Rosebud County	C8	RM 255.14	80856	5% Duration	965.6	781.22	778.24	1.64	1.64	14.7	13.4	205.26	226.15	2.86	2.6	2.98	2.98
Rosebud County	C8	RM 254.95	80554	5% Duration	965.6	781.04	778.12	1.71	1.7	16.07	14.49	199.59	223.14	2.82	2.54	2.92	2.92
Rosebud County	C8	RM 254.76	80251	5% Duration	965.6	780.88	778	1.62	1.62	14.48	13.39	213.82	232.18	2.78	2.57	2.88	2.88
Rosebud County	C8	RM 254.58	79960	5% Duration	965.6	780.74	777.88	1.54	1.53	12.94	11.74	226.53	250.6	2.78	2.52	2.86	2.86
Rosebud County	C8	RM 254.39	79658	5% Duration	965.6	780.65	777.41	1.26	1.25	8.83	8.23	290.52	314.43	2.64	2.46	3.24	3.24
Rosebud County	C8	RM 254.2	79359	5% Duration	965.6	780.43	777.39	1.68	1.68	16.72	16.62	264.63	266.32	2.18	2.16	3.04	3.04
Rosebud County	C8	RM 254.01	79052	5% Duration	965.6	780.31	776.82	1.44	1.44	10.76	10.76	203	203	3.3	3.3	3.49	3.49
Rosebud County	C9	RM 253.82	78779	5% Duration	965.6	780.14	776.24	1.7	1.67	16.64	15.28	229.54	258.59	2.47	2.27	3.9	3.9
Rosebud County	C9	RM 253.63	78478	5% Duration	965.6	779.89	776.12	1.89	1.8	23.19	17.44	144.17	211.37	3.45	2.58	3.77	3.77
Rosebud County	C9	RM 253.45	78178	5% Duration	965.6	779.7	775.97	1.89	1.67	16.64	10.98	161.3	409.03	2.8	1.84	3.73	3.73
Rosebud County	C9	RM 253.26	77879	5% Duration	965.6	779.66	775.72	1.26	1.1	7.43	3.76	195.84	492.8	3.59	1.8	3.94	3.94
Rosebud County	C9	RM 253.07	77578	5% Duration	965.6	779.49	775.57	1.75	1.55	15.72	8.81	165.72	389.81	3.07	1.7	3.92	3.92
Rosebud County	C9	RM 252.88	77278	5% Duration	965.6	779.36	775.45	1.49	1.35	12.66	9.11	218.81	405.35	2.49	1.78	3.91	3.91
Rosebud County	C9	RM 252.69	76962	5% Duration	965.6	779.29	775.33	1.05	0.85	6.19	4.42	259.57	595.31	2.68	1.9	3.96	3.96
Rosebud County	C9	RM 252.49	76646	5% Duration	965.6	779.08	775.36	1.81	1.45	17.34	7.96	143.32	478.17	3.19	1.45	3.72	3.72
Rosebud County	C9	RM 252.24	76252	5% Duration	965.6	778.86	775.4	1.8	1.57	18.61	12.7	161.12	416.63	2.53	1.72	3.46	3.46
Rosebud County	C9	RM 252.01	75885	5% Duration	965.6	778.62	775.39	1.61	1.53	18.35	13.83	230.43	399.89	2.36	1.77	3.23	3.23
Rosebud County	C9	RM 251.7	75438	5% Duration	965.6	778.51	775.01	1.02	1	5.84	5.5	336.61	427.74	2.66	2.5	3.5	3.5
Rosebud County	C9	RM 251.49	75098	5% Duration	965.6	778.31	775.02	1.53	1.4	14.57	12.79	322.67	487.18	1.86	1.64	3.29	3.29
Rosebud County	C9	RM 251.23	74691	5% Duration	965.6	778.03	775.05	1.46	1.44	10.63	9.91	365.09	511.54	1.81	1.69	2.98	2.98
Rosebud County	C9	RM 251.01	74322	5% Duration	965.6	777.91	774.84	1.18	1.04	7.05	5.58	291.18	492.57	2.56	2.02	3.07	3.07
Rosebud County	C9	RM 250.79	73973	5% Duration	965.6	777.83	774.42	1.06	0.88	6.58	4.68	287.95	579.17	2.7	1.92	3.41	3.41
Rosebud County	C9	RM 250.6	73678	5% Duration	965.6	777.65	774.17	1.46	1.26	20.4	15.1	337.88	693.63	1.58	1.17	3.48	3.48
Rosebud County	C9	RM 250.37	73306	5% Duration	965.6	777.41	774.05	1.49	1.22	11.38	6.28	196.65	512.67	3.03	1.67	3.36	3.36
Rosebud County	C9	RM 250.17	72982	5% Duration	965.6	777.18	773.93	1.92	1.32	21.72	13.43	191.37	621.05	2.07	1.27	3.25	3.25
Rosebud County	C9	RM 249.95	72617	5% Duration	965.6	776.95	773.83	1.59	1.2	13.81	7.66	222.11	593.03	2.45	1.35	3.12	3.12
Rosebud County	C9	RM 249.73	72253	5% Duration	965.6	776.75	773.71	1.56	1.26	14.31	9.15	253.74	553.22	2.18	1.4	3.04	3.04
Rosebud County	C9	RM 249.53	71936	5% Duration	965.6	776.68	773.38	1.02	0.87	5.83	3.85	329.8	673.21	2.58	1.71	3.3	3.3
Rosebud County	C9	RM 249.31	71579	5% Duration	965.6	776.47	773.14	1.51	1.43	15.46	12.54	328.92	528.05	1.69	1.37	3.33	3.33
Rosebud County	C9	RM 249.13	71274	5% Duration	965.6	776.34	772.84	1.22	1.11	8.18	4.92	291.64	601.81	2.55	1.53	3.5	3.5
Rosebud County	C9	RM 248.94	70978	5% Duration	965.6	776.17	772.56	1.62	1.36	13.34	8.14	188.14	478.03	2.8	1.71	3.61	3.61
Rosebud County	C9	RM 248.76	70681	5% Duration	965.6	776.15	772.32	0.87	0.77	4.15	2.77	415.81	829.74	2.48	1.65	3.83	3.83
Rosebud County	C9	RM 248.53	70312	5% Duration	965.6	776.09	772.17	1.03	0.69	5.17	1.91	154.81	1316.45	3.24	1.19	3.92	3.92
Rosebud County	C9	RM 248.31	69962	5% Duration	965.6	775.95	772.04	1.34	1.24	9.2	6.37	268.68	496.41	2.47	1.71	3.91	3.91
Rosebud County	C9	RM 248.08	69603	5% Duration	965.6	775.81	771.92	1.45	1.28	9.93	4.77	193.89	548.21	3.22	1.55	3.89	3.89
Rosebud County	C9	RM 247.88	69253	5% Duration	965.6	775.53	771.92	1.8	1.66	29.69	20.1	295.13	511	1.77	1.2	3.61	3.61
Rosebud County	C9	RM 247.64	68836	5% Duration	965.6	775.08	771.95	1.55	1.46	14.21	11.55	346.69	463.34	1.78	1.45	3.13	3.13

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C9	RM 247.34	68336	5% Duration	965.6	774.91	771.87	1.15	0.96	7.15	4.46	276.03	603.52	2.68	1.67	3.04	3.04
Rosebud County	C9	RM 247.11	67963	5% Duration	965.6	774.6	771.45	2.07	1.87	24.9	18.95	174.78	294.13	2.36	1.79	3.15	3.15
Rosebud County	C9	RM 246.83	67502	5% Duration	965.6	774.34	770.97	1.6	1.36	14.97	8.21	193.02	468.87	2.81	1.54	3.37	3.37
Rosebud County	C9	RM 246.52	67019	5% Duration	965.6	774.19	770.61	1.3	1.17	9.05	5.87	223.77	436.8	2.99	1.93	3.58	3.58
Rosebud County	C9	RM 246.22	66538	5% Duration	965.6	773.46	770.53	2.94	2.9	51.4	46.87	149.64	183.71	2.19	2	2.93	2.93
Rosebud County	C9	RM 245.94	66068	5% Duration	965.6	773.05	770.29	1.67	1.5	16.5	11.6	218.85	442.02	2.14	1.49	2.76	2.76
Rosebud County	C9	RM 245.66	65624	5% Duration	965.6	772.67	769.81	1.82	1.77	19.43	16.48	190.07	887.33	2.75	2.33	3.43	3.43
Rosebud County	C9	RM 245.4	65205	5% Duration	965.6	772.39	769.59	1.53	1.68	13.5	15.29	237.09	309.7	1.64	1.86	3.23	3.23
Rosebud County	C9	RM 245.15	64804	5% Duration	965.6	771.96	769.41	1.96	2.08	26.85	28.02	156.83	226.72	1.96	2.04	2.8	2.8
Rosebud County	C9	RM 244.89	64387	5% Duration	965.6	771.56	769.41	1.92	1.81	22.54	21.07	174.56	278.41	2.05	1.92	2.53	2.53
Rosebud County	C9	RM 244.7	64085	5% Duration	965.6	771.46	769.37	1.16	1.11	8.07	6.96	190.38	546.76	1.84	1.59	2.55	2.55
Rosebud County	C9	RM 244.51	63776	5% Duration	965.6	771.34	769.35	1.01	1.06	7.54	7.45	260.02	611.05	1.51	1.49	2.43	2.43
Rosebud County	C9	RM 244.33	63499	5% Duration	965.6	771.31	769.16	0.68	0.66	3.05	2.92	214.78	903.97	1.69	1.63	2.88	2.88
Rosebud County	C9	RM 244.14	63224	5% Duration	965.6	771.24	768.52	1	0.87	5.99	3.89	196.38	826.1	2.09	1.35	2.81	2.81
Rosebud County	C9	RM 243.96	62927	5% Duration	965.6	771.11	768.13	1.3	1.14	9.84	7.02	164.5	521.11	2.29	1.63	2.98	2.98
Rosebud County	C9	RM 243.77	62617	5% Duration	965.6	771.07	767.57	0.85	0.63	3.9	1.82	160.76	1107.51	3.01	1.39	3.5	3.5
Rosebud County	C9	RM 243.59	62327	5% Duration	965.6	770.95	766.98	1.36	1.08	10.74	4.97	119.31	539.8	3.67	1.66	3.97	3.97
Rosebud County	C9	RM 243.39	62012	5% Duration	965.6	770.73	766.86	1.83	1.55	17.87	11.02	151.39	328.24	3.11	1.9	3.87	3.87
Rosebud County	C9	RM 243.21	61718	5% Duration	965.6	770.65	766.74	1.39	1.39	9.82	9.72	196.77	198.85	3.53	3.49	3.91	3.91
Rosebud County	C10	RM 243.03	61422	5% Duration	965.6	770.32	766.73	2.27	2.26	29.11	27.71	166.46	175.54	2.56	2.43	3.59	3.59
Rosebud County	C10	RM 242.84	61125	5% Duration	965.6	769.94	766.76	2.35	2.29	30.39	28.4	162.2	179.17	2.51	2.35	3.18	3.18
Rosebud County	C10	RM 242.65	60825	5% Duration	965.6	769.73	766.76	1.86	1.84	18.85	17.6	192.68	209.55	2.69	2.51	2.97	2.97
Rosebud County	C10	RM 242.47	60527	5% Duration	965.6	769.58	766.77	1.56	1.56	13.46	12.84	235.19	247.55	2.63	2.5	2.81	2.81
Rosebud County	C10	RM 242.29	60239	5% Duration	965.6	769.46	766.64	1.43	1.42	11.04	10.22	268.55	292.13	2.51	2.32	2.82	2.82
Rosebud County	C10	RM 242.1	59939	5% Duration	965.6	769.18	766.29	1.82	1.82	21.17	21.17	268.24	268.24	1.98	1.98	2.89	2.89
Rosebud County	C10	RM 241.9	59618	5% Duration	965.6	768.97	765.95	1.58	1.58	13.9	13.9	234.43	234.43	2.61	2.61	3.02	3.02
Rosebud County	C10	RM 241.72	59324	5% Duration	965.6	768.86	765.5	1.33	1.32	9.74	8.71	281	317.89	2.57	2.3	3.36	3.36
Rosebud County	C10	RM 241.53	59025	5% Duration	965.6	768.59	765.17	1.98	1.96	22.19	17.24	152.08	199.43	3.2	2.47	3.42	3.42
Rosebud County	C10	RM 241.34	58725	5% Duration	965.6	768.38	765.02	1.94	1.87	19.32	15.07	173.66	233.2	2.85	2.21	3.36	3.36
Rosebud County	C10	RM 241.16	58424	5% Duration	965.6	768.18	764.97	1.92	1.65	19.59	12.19	152.29	342.93	2.77	1.71	3.21	3.21
Rosebud County	C10	RM 240.97	58132	5% Duration	965.6	768	764.83	1.65	1.55	15.18	11.29	186.81	323.24	2.62	1.94	3.17	3.17
Rosebud County	C10	RM 240.78	57818	5% Duration	965.6	767.86	764.56	1.49	1.22	11.87	6.05	158.55	524.77	2.99	1.51	3.3	3.3
Rosebud County	C10	RM 240.56	57467	5% Duration	965.6	767.64	764.28	1.65	1.53	19.59	14.97	203.95	335.64	2.57	1.96	3.36	3.36
Rosebud County	C10	RM 240.41	57228	5% Duration	965.6	767.54	763.91	1.34	1.27	10.93	9.39	211.4	305.44	3.05	2.62	3.63	3.63
Rosebud County	C10	RM 240.22	56944	5% Duration	965.6	767.36	763.51	1.74	1.73	14.28	13.98	153.53	163.33	3.62	3.54	3.85	3.85
Rosebud County	C10	RM 240.09	56741	5% Duration	965.6	767.06	763.47	2.49	2.49	25.66	24.59	115.61	133.72	3.35	3.21	3.59	3.59
Rosebud County	C10	RM 239.97	56546	5% Duration	965.6	766.98	763.47	2.05	2.05	23.44	23.44	147.12	151.83	3.2	3.2	3.51	3.51
Rosebud County	C10	RM 239.86	56371	5% Duration	965.6	766.95	760.88	1.48	1.48	10.34	10.34	182.17	182.17	3.58	3.58	6.07	6.07
Rosebud County			56353	5% Duration	Bridge												
Rosebud County	C10	RM 239.83	56334	5% Duration	965.6	766.92	760.88	1.45	1.45	8.31	8.31	190.58	190.58	3.49	3.49	6.04	6.04
Rosebud County	C10	RM 239.68	56093	5% Duration	965.6	766.64	763.02	2.23	2.23	18.34	18.34	154.5	154.52	2.8	2.8	3.62	3.62
Rosebud County	C10	RM 239.56	55888	5% Duration	965.6	766.61	757.33	1.79	1.79	11.66	11.66	108.63	108.63	4.97	4.97	9.28	9.28
Rosebud County			55879	5% Duration	Bridge												
Rosebud County	C10	RM 239.55	55870	5% Duration	965.6	766.59	757.33	1.81	1.81	11.96	11.96	105.91	105.91	5.03	5.03	9.26	9.26
Rosebud County	C10	RM 239.41	55655	5% Duration	965.6	766.36	763.17	2.33	2.33	23.22	23.22	137.05	137.05	3.02	3.02	3.19	3.19
Rosebud County	C10	RM 239.25	55398	5% Duration	965.6	766.17	763.17	2.21	2.21	21.57	21.57	157.44	157.44	2.77	2.77	3	3
Rosebud County	C10	RM 239.07	55108	5% Duration	965.6	766.07	763.2	1.67	1.62	12.34	11.3	209.79	242.46	2.68	2.45	2.87	2.87
Rosebud County	C10	RM 238.89	54826	5% Duration	965.6	765.86	763.23	1.95	1.8	17.09	12.19	187.65	296.36	2.55	1.81	2.63	2.63
Rosebud County	C10	RM 238.73	54570	5% Duration	965.6	765.68	763.38	1.86	1.83	16.41	14.42	233.66	271	2.21	1.94	2.3	2.3
Rosebud County	C10	RM 238.51	54223	5% Duration	965.6	765.45	762.88	1.54	1.54	13.78	13.78	342.2	342.2	1.84	1.84	2.57	2.57
Rosebud County	C10	RM 238.33	53926	5% Duration	965.6	765.29	762.37	1.42	1.42	10.18	10.18	297.2	297.2	2.29	2.29	2.92	2.92
Rosebud County	C10	RM 238.14	53626	5% Duration	965.6	765.03	762.25	1.86	1.85	19.65	17.56	207.22	233.21	2.5	2.24	2.78	2.78
Rosebud County	C10	RM 237.95	53321	5% Duration	965.6	764.72	762.09	2.08	2.01	24.53	21.04	183.8	225.89	2.47	2.12	2.63	2.63
Rosebud County	C10	RM 237.77	53027	5% Duration	965.6	764.59	761.85	1.41	1.39	11.57	10.65	283.2	320.1	2.35	2.17	2.74	2.74
Rosebud County	C10	RM 237.56	52703	5% Duration	965.6	764.43	761.46	1.43	1.43	11.31	11.31	289.83	295.59	2.33	2.33	2.97	2.97
Rosebud County	C10	RM 237.36	52386	5% Duration	965.6	764.28	761.22	1.29	1.29	10.04	10.04	368.69	378.89	2.04	2.04	3.06	3.06
Rosebud County	C10	RM 237.15	52029	5% Duration	965.6	764.1	760.88	1.29	1.29	10.18	10.1	372.63	384.21	2.01	1.99	3.22	3.22
Rosebud County	C10	RM 236.99	51756	5% Duration	965.6	763.94	760.22	1.59	1.59	10.26	10.26	171.8	171.8	3.53	3.53	3.72	3.72
Rosebud County	C10	RM 236.83	51500	5% Duration	965.6	763.75	760.07	2.03	2.03	17.59	17.59	156.85	156.85	3.03	3.03	3.68	3.68
Rosebud County	C10	RM 236.66	51221	5% Duration	965.6	763.68	760.07	1.61	1.61	10.62	10.62	178.68	285.13	3.36	3.36	3.61	3.61

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C10	RM 236.47	50924	5% Duration	965.6	763.6	759.94	1.5	1.5	9.17	9.17	187.6	187.6	3.44	3.44	3.66	3.66
Rosebud County	C11	RM 236.29	50623	5% Duration	965.6	763.52	760	1.48	1.47	9.15	8.68	203.31	216.14	3.21	3.04	3.52	3.52
Rosebud County	C11	RM 236.1	50327	5% Duration	965.6	763.37	760	1.73	1.7	12.96	12.13	195.3	219.5	2.86	2.67	3.37	3.37
Rosebud County	C11	RM 235.91	50024	5% Duration	965.6	763.14	760	1.97	1.96	20.86	19.43	162.98	184.65	3	2.79	3.14	3.14
Rosebud County	C11	RM 235.73	49726	5% Duration	965.6	763.01	760.15	1.56	1.48	13.14	11.5	237.19	315.96	2.4	2.1	2.86	2.86
Rosebud County	C11	RM 235.57	49480	5% Duration	965.6	762.91	760.02	1.29	1.29	9.64	9.64	311.04	318.4	2.4	2.4	2.89	2.89
Rosebud County	C11	RM 235.36	49133	5% Duration	965.6	762.72	759.74	1.47	1.47	12.17	11.89	274.46	283.05	2.38	2.33	2.98	2.98
Rosebud County	C11	RM 235.17	48830	5% Duration	965.6	762.51	759.55	1.63	1.63	14.76	14.76	264.6	264.6	2.24	2.24	2.96	2.96
Rosebud County	C11	RM 235	48571	5% Duration	965.6	762.43	759.29	1.28	1.28	8.5	8.49	301.96	302.27	2.49	2.49	3.14	3.14
Rosebud County	C11	RM 234.82	48271	5% Duration	965.6	762.06	759.21	2.24	2.23	28.76	27.68	176.67	184.55	2.44	2.35	2.85	2.85
Rosebud County	C11	RM 234.63	47978	5% Duration	965.6	761.81	759.21	1.87	1.84	20.34	17.14	217.08	264.17	2.36	1.99	2.6	2.6
Rosebud County	C11	RM 234.45	47692	5% Duration	965.6	761.55	759.12	1.8	1.74	18.88	16	265.74	327.75	1.99	1.69	2.43	2.43
Rosebud County	C11	RM 234.2	47305	5% Duration	965.6	761.26	758.6	1.54	1.51	14.31	11.92	307.79	379.05	2.03	1.69	2.66	2.66
Rosebud County	C11	RM 234.01	47006	5% Duration	965.6	761.16	758.27	1.15	1.09	7.15	6.43	385.41	454.9	2.16	1.94	2.89	2.89
Rosebud County	C11	RM 233.84	46737	5% Duration	965.6	761.05	758.12	1.17	1.11	8.54	8.42	423.89	465.79	1.89	1.86	2.93	2.93
Rosebud County	C11	RM 233.61	46365	5% Duration	965.6	760.94	757.67	1.08	1.08	6.21	6.04	299.39	309.1	2.99	2.91	3.27	3.27
Rosebud County	C11	RM 233.35	45943	5% Duration	965.6	760.69	757.03	1.75	1.55	17.29	14.08	208.78	303.18	2.53	2.06	3.66	3.66
Rosebud County	C11	RM 233.13	45584	5% Duration	965.6	760.55	756.45	1.46	1.46	11.08	11.08	201.17	202.75	3.29	3.29	4.1	4.1
Rosebud County	C11	RM 232.94	45281	5% Duration	965.6	760.4	756.15	1.67	1.67	14.27	14.27	164.29	164.29	3.51	3.51	4.25	4.25
Rosebud County	C11	RM 232.75	44978	5% Duration	965.6	760.33	756.03	1.33	1.33	8.91	8.91	196.23	196.23	3.69	3.69	4.3	4.3
Rosebud County	C11	RM 232.56	44674	5% Duration	965.6	760.23	755.79	1.41	1.41	10.81	10.81	237.33	239.69	2.89	2.89	4.44	4.44
Rosebud County	C11	RM 232.37	44366	5% Duration	965.6	760.01	755.72	1.77	1.77	17.49	17.49	201.54	364.36	2.7	2.7	4.29	4.29
Rosebud County	C11	RM 232.19	44074	5% Duration	965.6	759.88	755.67	1.55	1.55	12.72	12.72	198.66	261.61	3.13	3.13	4.21	4.21
Rosebud County	C11	RM 232.01	43791	5% Duration	965.6	759.73	755.65	1.62	1.62	14.5	14.5	220.06	243.66	2.71	2.71	4.08	4.08
Rosebud County	C11	RM 231.81	43473	5% Duration	965.6	759.44	755.6	2	1.88	22.47	17.49	184.64	350.44	2.59	2	3.84	3.84
Rosebud County	C11	RM 231.62	43160	5% Duration	965.6	759.24	755.57	1.81	1.65	17.27	14.04	163.27	227.36	3.18	2.57	3.67	3.67
Rosebud County	C11	RM 231.42	42835	5% Duration	965.6	759.2	755.45	1.2	1.09	7.26	5.35	218.08	337.32	3.58	2.63	3.75	3.75
Rosebud County	C11	RM 231.22	42522	5% Duration	965.6	759.07	755.45	1.55	1.35	12.49	10.01	175.96	269.14	3.33	2.65	3.62	3.62
Rosebud County	C11	RM 230.99	42160	5% Duration	965.6	758.71	755.45	2.25	1.99	27.23	19.75	138.08	223.59	3.01	2.17	3.26	3.26
Rosebud County	C11	RM 230.79	41841	5% Duration	965.6	758.6	755.43	1.59	1.42	13.62	9.95	195.97	312.68	2.99	2.18	3.17	3.17
Rosebud County	C11	RM 230.53	41415	5% Duration	965.6	758.46	755.17	1.3	1.14	9.13	7.25	249.57	466.62	2.3	1.82	3.29	3.29
Rosebud County	C11	RM 230.29	41045	5% Duration	965.6	758.28	755.15	1.45	1.31	11.44	9.08	214.78	361.15	2.57	2.04	3.13	3.13
Rosebud County	C11	RM 230.06	40676	5% Duration	965.6	758.06	754.81	1.49	1.43	14.09	12.87	282.76	444.61	1.83	1.67	3.25	3.25
Rosebud County	C11	RM 229.81	40276	5% Duration	965.6	757.89	754.74	1.21	1.18	8.5	7.67	313.89	591.58	2.38	2.15	3.15	3.15
Rosebud County	C11	RM 229.6	39937	5% Duration	965.6	757.64	754.58	1.69	1.64	16.24	14.78	220.69	442.03	2.54	2.31	3.06	3.06
Rosebud County	C11	RM 229.4	39596	5% Duration	965.6	757.53	754.34	1.28	1.21	9.23	7.27	273.79	524.52	2.63	2.07	3.19	3.19
Rosebud County	C11	RM 229.2	39273	5% Duration	965.6	757.25	754.15	1.92	1.86	21.6	17.82	198.21	347.18	2.32	1.91	3.1	3.1
Rosebud County	C11	RM 229.02	38994	5% Duration	965.6	757	754.12	1.92	1.71	21.51	13.9	197.95	397.44	2.34	1.51	2.88	2.88
Rosebud County	C11	RM 228.82	38676	5% Duration	965.6	756.81	753.8	1.52	1.35	13.64	10.83	262.69	439.64	2.23	1.77	3.01	3.01
Rosebud County	C11	RM 228.64	38383	5% Duration	965.6	756.66	753.73	1.46	1.15	12.45	9.37	214.89	510.4	2.32	1.74	2.97	2.97
Rosebud County	C11	RM 228.46	38093	5% Duration	965.6	756.58	753.53	1.09	0.87	6.94	5.95	290.69	569.39	2.37	2.02	3.05	3.05
Rosebud County	C11	RM 228.26	37771	5% Duration	965.6	756.51	753.35	0.99	0.75	5.59	5.16	265.4	630.67	2.5	2.29	3.16	3.16
Rosebud County	C11	RM 228.03	37408	5% Duration	965.6	756.34	753.16	1.49	1.15	12.52	6.55	225.65	687.88	2.59	1.34	3.18	3.18
Rosebud County	C11	RM 227.74	36949	5% Duration	965.6	756.12	752.95	1.6	1.42	13.97	11.4	157.96	299.77	2.87	2.33	3.17	3.17
Rosebud County	C11	RM 227.49	36537	5% Duration	965.6	755.91	752.83	1.69	1.47	15.99	11.4	170.52	349.33	2.66	1.88	3.08	3.08
Rosebud County	C11	RM 227.2	36062	5% Duration	965.6	755.72	752.41	1.53	1.41	12.79	9.2	160.13	348.12	2.82	2.02	3.31	3.31
Rosebud County	C11	RM 226.98	35709	5% Duration	965.6	755.33	752.31	2.19	2.05	27.7	21.13	183.05	261.02	2.38	1.81	3.02	3.02
Rosebud County	C11	RM 226.79	35400	5% Duration	965.6	755.1	752.25	1.69	1.56	17.29	12.89	248.9	372.05	2.24	1.66	2.85	2.85
Rosebud County	C11	RM 226.56	35065	5% Duration	965.6	754.92	751.83	1.34	1.19	10.45	8.11	330.76	503.57	2.08	1.61	3.09	3.09
Rosebud County	C11	RM 226.36	34743	5% Duration	965.6	754.66	751.68	1.64	1.55	16.3	15.51	294.8	335.49	1.96	1.86	2.98	2.98
Rosebud County	C11	RM 226.2	34476	5% Duration	965.6	754.51	751.25	1.36	1.29	10.33	9.82	348.37	392.98	2	1.9	3.26	3.26
Rosebud County	C11	RM 226.01	34177	5% Duration	965.6	754.34	750.81	1.33	1.3	16.82	16.15	278.09	300.09	2.58	2.48	3.53	3.53
Rosebud County	C11	RM 225.83	33884	5% Duration	965.6	754.05	750.59	1.92	1.54	19.55	12.46	150.79	321.91	3.09	1.95	3.46	3.46
Rosebud County	C11	RM 225.64	33580	5% Duration	965.6	753.86	750.56	1.62	1.62	16.03	15.74	289.89	295.61	2.05	2.01	3.3	3.3
Rosebud County	C11	RM 225.45	33275	5% Duration	965.6	753.74	750.31	1.25	1.25	8.93	8.93	316.06	316.06	2.45	2.45	3.43	3.43
Rosebud County	C11	RM 225.26	32969	5% Duration	965.6	753.58	750.25	1.41	1.41	11.44	11.44	281.88	281.88	2.43	2.43	3.33	3.33
Rosebud County	C11	RM 225.16	32805	5% Duration	965.6	753.47	750.19	1.58	1.58	13.81	13.81	222.7	222.7	2.74	2.74	3.28	3.28
Rosebud County	C11	RM 225.06	32646	5% Duration	965.6	753.38	747.9	1.69	1.69	14.22	14.22	153.01	155.01	3.74	3.74	5.48	5.48
Rosebud County			32620	5% Duration	Mult Open												
Rosebud County	C11	RM 225.03	32594	5% Duration	965.6	753.34	747.9	1.69	1.69	14.36	14.36	156.31	156.31	3.65	3.65	5.44	5.44

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C12	RM 224.89	32368	5% Duration	965.6	753.28	750.09	1.38	1.38	10.18	10.18	235.87	238.13	2.97	2.97	3.19	3.19
Rosebud County	C12	RM 224.71	32083	5% Duration	965.6	753.13	750.04	1.52	1.52	13.23	13.23	263.24	263.24	2.42	2.42	3.09	3.09
Rosebud County	C12	RM 224.53	31796	5% Duration	965.6	752.99	749.96	1.48	1.48	11.94	11.94	232.72	400.06	2.81	2.81	3.03	3.03
Rosebud County	C12	RM 224.34	31486	5% Duration	965.6	752.72	750.03	1.79	1.75	20.71	19.92	306.73	456.22	1.66	1.6	2.69	2.69
Rosebud County	C12	RM 224.16	31195	5% Duration	965.6	752.57	749.78	1.36	1.31	10.48	9.7	238.18	320.04	2.5	2.31	2.89	2.89
Rosebud County	C12	RM 223.96	30878	5% Duration	965.6	752.38	749.48	1.64	1.51	15.05	12.25	176.08	304.39	2.59	2.11	3	3
Rosebud County	C12	RM 223.76	30567	5% Duration	965.6	752.09	749.18	2.05	1.88	24.29	20.46	141.66	259.25	2.37	1.99	2.91	2.91
Rosebud County	C12	RM 223.55	30235	5% Duration	965.6	751.94	748.87	1.5	1.47	12.32	10.5	229.27	276.88	2.79	2.37	3.07	3.07
Rosebud County	C12	RM 223.37	29952	5% Duration	965.6	751.78	748.72	1.64	1.64	14.62	14.62	202.31	202.31	2.9	2.9	3.06	3.06
Rosebud County	C12	RM 223.2	29681	5% Duration	965.6	751.66	748.51	1.55	1.53	12.82	11.68	205.75	229.79	3.02	2.75	3.15	3.15
Rosebud County	C12	RM 223.02	29391	5% Duration	965.6	751.55	748.51	1.41	1.35	11.17	10.46	257.49	295.47	2.6	2.43	3.04	3.04
Rosebud County	C12	RM 222.82	29071	5% Duration	965.6	751.41	748.5	1.4	1.35	11.03	10.78	257.84	277.19	2.62	2.57	2.91	2.91
Rosebud County	C12	RM 222.64	28787	5% Duration	965.6	751.25	748.46	1.55	1.44	13.55	11.91	232.82	301.27	2.59	2.28	2.79	2.79
Rosebud County	C12	RM 222.45	28479	5% Duration	965.6	751.07	748.44	1.56	1.44	14.29	13.5	257.57	307.9	2.3	2.18	2.63	2.63
Rosebud County	C12	RM 222.22	28128	5% Duration	965.6	750.91	748.15	1.41	1.29	11.05	9.71	246.58	318.49	2.67	2.35	2.76	2.76
Rosebud County	C12	RM 222.01	27784	5% Duration	965.6	750.79	747.57	1.19	1.16	7.41	6.61	357.78	413.35	2.26	2.01	3.22	3.22
Rosebud County	C12	RM 221.77	27401	5% Duration	965.6	750.7	747.18	0.96	0.95	5.17	4.98	504.56	553.89	1.99	1.91	3.52	3.52
Rosebud County	C12	RM 221.55	27042	5% Duration	965.6	750.6	747.07	0.94	0.94	5.24	5.13	540.39	553.19	1.9	1.86	3.53	3.53
Rosebud County	C12	RM 221.34	26708	5% Duration	965.6	750.51	746.94	0.97	0.93	4.36	4.25	496.59	540.81	1.97	1.92	3.57	3.57
Rosebud County	C12	RM 221.15	26406	5% Duration	965.6	750.43	746.7	1.1	1.09	6.22	5.57	260.55	309.9	3.36	3.01	3.73	3.73
Rosebud County	C12	RM 220.96	26081	5% Duration	965.6	750.03	746.66	2.5	2.43	33.66	26.87	126.82	165.32	3.02	2.4	3.37	3.37
Rosebud County	C12	RM 220.77	25779	5% Duration	965.6	749.77	746.73	2.16	2.13	25.36	24.31	155.26	164.08	2.87	2.76	3.04	3.04
Rosebud County	C12	RM 220.6	25513	5% Duration	965.6	749.73	746.72	1.35	1.33	9.83	9.14	244.86	268.52	2.91	2.7	3.01	3.01
Rosebud County	C12	RM 220.4	25183	5% Duration	965.6	749.53	746.88	1.63	1.63	15.42	15.42	249.96	249.96	2.37	2.37	2.65	2.65
Rosebud County	C12	RM 220.23	24914	5% Duration	965.6	749.43	746.8	1.22	1.22	8.56	8.56	346.72	346.72	2.29	2.29	2.63	2.63
Rosebud County	C12	RM 220.02	24578	5% Duration	965.6	749.27	746.54	1.32	1.32	10.31	10	333.53	345.84	2.19	2.12	2.73	2.73
Rosebud County	C12	RM 219.83	24268	5% Duration	965.6	749.19	746.18	1.03	1.03	5.53	5.53	471.15	471.15	2	2	3.01	3.01
Rosebud County	C12	RM 219.63	23947	5% Duration	965.6	749.04	745.79	1.31	1.31	7.79	7.7	357.73	361.98	2.06	2.03	3.25	3.25
Rosebud County	C12	RM 219.47	23683	5% Duration	965.6	748.97	745.56	1.13	1.12	6.76	6.61	339.83	348.25	2.52	2.47	3.41	3.41
Rosebud County	C12	RM 219.29	23386	5% Duration	965.6	748.76	745.27	1.73	1.68	16.29	14.05	192.92	232.1	2.87	2.47	3.49	3.49
Rosebud County	C12	RM 219.11	23085	5% Duration	965.6	748.54	745.15	1.89	1.71	19.71	13.83	166.59	292.06	2.77	1.93	3.39	3.39
Rosebud County	C12	RM 218.92	22783	5% Duration	965.6	748.33	745.15	1.76	1.58	17.16	14.63	212.27	330.21	2.17	1.85	3.18	3.18
Rosebud County	C12	RM 218.73	22473	5% Duration	965.6	748.18	745.06	1.45	1.31	11.4	8.28	216.8	346.16	2.94	2.13	3.12	3.12
Rosebud County	C12	RM 218.54	22180	5% Duration	965.6	748.05	744.99	1.44	1.4	11.75	10.3	270.37	319.95	2.46	2.16	3.06	3.06
Rosebud County	C12	RM 218.38	21902	5% Duration	965.6	747.96	744.43	1.35	1.3	9.64	7.15	223.04	317.11	3.17	2.35	3.53	3.53
Rosebud County	C12	RM 218.18	21580	5% Duration	965.6	747.75	743.9	1.77	1.69	16.55	9.95	169.8	299.82	3.19	1.9	3.85	3.85
Rosebud County	C12	RM 217.99	21276	5% Duration	965.6	747.54	743.66	1.84	1.76	19.27	12.96	207.76	327.15	2.51	1.68	3.88	3.88
Rosebud County	C12	RM 217.81	20981	5% Duration	965.6	747.52	743.51	1.08	1.08	5.94	5.94	263.11	263.11	3.41	3.41	4.01	4.01
Rosebud County	C12	RM 217.64	20702	5% Duration	965.6	747.33	743.41	1.77	1.76	16.2	14.83	159.15	189.51	3.42	3.12	3.92	3.92
Rosebud County	C12	RM 217.45	20392	5% Duration	965.6	747.14	743.29	1.87	1.83	18.74	15.12	167.52	229.42	3.06	2.46	3.85	3.85
Rosebud County	C12	RM 217.25	20070	5% Duration	965.6	747.06	743.29	1.41	1.27	10.17	6.4	190.81	355.84	3.41	2.13	3.77	3.77
Rosebud County	C12	RM 217	19662	5% Duration	965.6	746.88	743.25	1.61	1.51	13.56	9.85	181.67	270.67	3.25	2.36	3.63	3.63
Rosebud County	C12	RM 216.77	19300	5% Duration	965.6	746.63	743.25	1.83	1.7	19.09	13.06	210.43	338.86	2.46	1.68	3.38	3.38
Rosebud County	C12	RM 216.53	18912	5% Duration	965.6	746.38	743.3	1.57	1.46	14.56	10.32	268.97	417.81	2.24	1.58	3.08	3.08
Rosebud County	C12	RM 216.27	18500	5% Duration	965.6	746.11	743.24	1.46	1.43	13.17	10.98	333.92	410.4	1.97	1.64	2.87	2.87
Rosebud County	C12	RM 215.98	18038	5% Duration	965.6	745.84	743.12	1.38	1.18	11.68	9.96	270.75	490.1	1.96	1.67	2.72	2.72
Rosebud County	C12	RM 215.68	17550	5% Duration	965.6	745.69	742.31	1.14	1.08	6.84	5.61	264.07	343.3	3.16	2.6	3.38	3.38
Rosebud County	C12	RM 215.41	17101	5% Duration	965.6	745.5	741.82	1.54	1.51	12.59	10.9	200.32	237.44	3.11	2.69	3.68	3.68
Rosebud County	C12	RM 215.21	16781	5% Duration	965.6	745.16	741.65	2.21	2.15	26.53	21.08	149.79	195.99	2.9	2.29	3.51	3.51
Rosebud County	C12	RM 215.02	16479	5% Duration	965.6	744.9	741.68	2.17	2.01	25.37	21.16	142.03	194.71	2.97	2.47	3.22	3.22
Rosebud County	C13	RM 214.86	16220	5% Duration	965.6	744.89	741.64	1.25	1.22	8.21	7.02	246.54	295.06	3.13	2.67	3.25	3.25
Rosebud County	C13	RM 214.65	15883	5% Duration	965.6	744.73	741.6	1.52	1.52	12.22	12.22	231.8	231.8	2.74	2.74	3.13	3.13
Rosebud County	C13	RM 214.46	15577	5% Duration	965.6	744.61	741.6	1.41	1.41	10.88	10.88	260.78	260.78	2.63	2.63	3.01	3.01
Rosebud County	C13	RM 214.27	15282	5% Duration	965.6	744.48	741.59	1.35	1.35	10.17	10.17	304.05	304.18	2.35	2.35	2.89	2.89
Rosebud County	C13	RM 214.07	14957	5% Duration	965.6	744.34	741.54	1.21	1.21	10.24	10.24	365.99	411.76	2.18	2.18	2.8	2.8
Rosebud County	C13	RM 213.9	14672	5% Duration	965.6	744.17	741.37	1.38	1.38	11.36	11.36	346.02	412.36	2.02	2.02	2.8	2.8
Rosebud County	C13	RM 213.7	14343	5% Duration	965.6	744	740.88	1.48	1.47	11.72	11.31	218.04	290.2	2.99	2.89	3.12	3.12
Rosebud County	C13	RM 213.54	14083	5% Duration	965.6	743.82	740.59	1.77	1.76	16.77	16.27	183.01	254.53	2.98	2.9	3.23	3.23
Rosebud County	C13	RM 213.36	13792	5% Duration	965.6	743.67	740.39	1.6	1.56	14.44	13.27	236.51	329.84	2.53	2.32	3.28	3.28
Rosebud County	C13	RM 213.16	13475	5% Duration	965.6	743.45	740.27	1.79	1.61	17.87	12.9	182.13	349.1	2.63	1.89	3.18	3.18

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Rosebud County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Rosebud County	C13	RM 212.99	13200	5% Duration	965.6	743.22	740.31	1.92	1.72	20.33	12.86	162.23	385.11	2.7	1.7	2.91	2.91
Rosebud County	C13	RM 212.79	12880	5% Duration	965.6	743	740.19	1.85	1.63	18.99	13.66	173.43	319.14	2.68	1.92	2.81	2.81
Rosebud County	C13	RM 212.6	12572	5% Duration	965.6	742.88	739.79	1.43	1.43	11.05	10.34	229.59	262.01	2.94	2.75	3.09	3.09
Rosebud County	C13	RM 212.42	12284	5% Duration	965.6	742.68	739.58	1.78	1.66	17.29	14.17	187.96	250.9	2.84	2.32	3.1	3.1
Rosebud County	C13	RM 212.23	11983	5% Duration	965.6	742.5	739.17	1.62	1.57	15.08	13.46	249.36	308.16	2.39	2.13	3.33	3.33
Rosebud County	C13	RM 212.05	11688	5% Duration	965.6	742.39	738.83	1.44	1.4	10.85	9.75	207.94	239.03	3.21	2.88	3.55	3.55
Rosebud County	C13	RM 211.85	11386	5% Duration	965.6	742.24	738.79	1.59	1.56	13.67	12.4	210.32	238.92	2.88	2.61	3.45	3.45
Rosebud County	C13	RM 211.65	11066	5% Duration	965.6	742.06	738.58	1.6	1.53	14.55	12.53	239.77	325.79	2.5	2.15	3.48	3.48
Rosebud County	C13	RM 211.44	10724	5% Duration	965.6	741.82	738.38	1.79	1.57	17.73	12.27	190.4	414.71	2.69	1.86	3.44	3.44
Rosebud County	C13	RM 211.21	10353	5% Duration	965.6	741.7	737.87	1.43	1.21	10.55	7.66	165.48	352.42	3.37	2.45	3.83	3.83
Rosebud County	C13	RM 210.96	9946	5% Duration	965.6	741.41	737.72	2.02	1.7	22.04	13.7	148.11	311.06	2.95	1.82	3.69	3.69
Rosebud County	C13	RM 210.75	9612	5% Duration	965.6	741.28	737.48	1.56	1.25	13.26	7.98	189.97	446.85	2.89	1.73	3.8	3.8
Rosebud County	C13	RM 210.57	9317	5% Duration	965.6	741.19	737.5	1.33	1.22	9.18	6.75	240.86	374.75	2.87	2.11	3.69	3.69
Rosebud County	C13	RM 210.36	8986	5% Duration	965.6	740.91	737.54	1.93	1.8	20.88	17.03	187.41	253.23	2.6	2.12	3.37	3.37
Rosebud County	C13	RM 210.16	8674	5% Duration	965.6	740.65	737.53	1.84	1.77	19.97	18.61	236.18	264.58	2.21	2.06	3.12	3.12
Rosebud County	C13	RM 209.98	8382	5% Duration	965.6	740.6	737.25	1.12	1.05	6.86	5.36	297.75	423.62	2.78	2.17	3.35	3.35
Rosebud County	C13	RM 209.8	8091	5% Duration	965.6	740.52	736.96	1.21	1.12	7.45	5.45	217.34	343.14	3.45	2.52	3.56	3.56
Rosebud County	C13	RM 209.6	7774	5% Duration	965.6	740.35	736.72	1.64	1.52	13.77	7.7	171.93	337.66	3.39	1.89	3.63	3.63
Rosebud County	C13	RM 209.41	7482	5% Duration	965.6	740.25	736.53	1.47	1.37	11.75	8.55	230.78	345.14	2.82	2.05	3.72	3.72
Rosebud County	C13	RM 209.21	7161	5% Duration	965.6	740.06	736.29	1.68	1.67	14.77	12.86	175.07	203	3.27	2.85	3.78	3.78
Rosebud County	C13	RM 209.03	6871	5% Duration	965.6	739.9	736.14	1.78	1.76	16.93	15.5	178.03	197.61	3.04	2.78	3.76	3.76
Rosebud County	C13	RM 208.85	6571	5% Duration	965.6	739.79	736.03	1.45	1.39	11.23	8.22	220.71	320.68	3	2.19	3.76	3.76
Rosebud County	C13	RM 208.65	6257	5% Duration	965.6	739.66	735.74	1.51	1.29	12.64	8.96	210.12	389.53	2.73	1.93	3.92	3.92
Rosebud County	C13	RM 208.46	5945	5% Duration	965.6	739.37	735.69	1.98	1.83	20.86	17.27	182.61	274.71	2.33	1.92	3.68	3.68
Rosebud County	C13	RM 208.29	5682	5% Duration	965.6	738.99	735.63	2.46	2.29	32.3	26.45	108.41	166.32	3.13	2.54	3.36	3.36
Rosebud County	C14	RM 208.1	5374	5% Duration	965.6	738.91	735.61	1.55	1.55	12.58	12.4	197.15	200.01	3.17	3.12	3.3	3.3
Rosebud County	C14	RM 207.91	5064	5% Duration	965.6	738.74	735.56	1.64	1.64	13.88	13.88	258.93	258.93	2.28	2.28	3.17	3.17
Rosebud County	C14	RM 207.72	4766	5% Duration	965.6	738.54	735.52	1.59	1.59	13.96	13.96	286.9	286.9	2.12	2.12	3.02	3.02
Rosebud County	C14	RM 207.53	4450	5% Duration	965.6	738.39	735.35	1.23	1.21	9.63	9.04	410.42	449.57	1.89	1.78	3.04	3.04
Rosebud County	C14	RM 207.33	4123	5% Duration	965.6	738.2	735.27	1.43	1.34	11.61	8.41	262.55	396.37	2.51	1.82	2.93	2.93
Rosebud County	C14	RM 207.15	3851	5% Duration	965.6	738.1	735.14	1.29	1.26	8.75	7.63	298.23	353.91	2.49	2.17	2.96	2.96
Rosebud County	C14	RM 206.99	3599	5% Duration	965.6	737.98	734.95	1.37	1.28	11.28	7.57	322.46	529.27	2.12	1.42	3.03	3.03
Rosebud County	C14	RM 206.81	3315	5% Duration	965.6	737.86	734.49	1.32	1.23	9.77	8.65	253.24	364.08	2.59	2.3	3.37	3.37
Rosebud County	C14	RM 206.61	2997	5% Duration	965.6	737.75	733.91	1.39	1.26	10.04	6.67	185.16	348.09	3.32	2.2	3.84	3.84
Rosebud County	C14	RM 206.43	2701	5% Duration	965.6	737.63	733.52	1.47	1.3	12.54	7.74	239.12	555.83	2.33	1.43	4.11	4.11
Rosebud County	C14	RM 206.21	2350	5% Duration	965.6	737.5	733.38	1.33	1.15	8.59	5.98	246.55	525.76	2.53	1.76	4.12	4.12
Rosebud County	C14	RM 205.97	1963	5% Duration	965.6	737.43	732.73	1.1	1.09	5.91	4.78	220.39	411.87	3.98	3.2	4.7	4.7
Rosebud County	C14	RM 205.72	1563	5% Duration	965.6	736.93	732.73	2.77	2.71	51.55	35.68	99.69	195.15	3.49	2.38	4.2	4.2
Rosebud County	C14	RM 205.49	1198	5% Duration	965.6	736.71	732.63	1.73	1.69	21.08	16.09	190.05	261.51	2.93	2.23	4.08	4.08
Rosebud County	C14	RM 205.3	907	5% Duration	965.6	736.34	732.76	2.09	2.03	27.24	24.82	241.61	275.42	1.9	1.73	3.58	3.58
Rosebud County	C14	RM 205.11	594	5% Duration	965.6	736.15	732.8	1.65	1.52	14.64	11.52	189.49	331.56	3	2.36	3.35	3.35
Rosebud County	C14	RM 204.9	243	5% Duration	965.6	735.93	732.63	1.73	1.72	16.78	15.57	213.14	313.66	2.62	2.43	3.3	3.3

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C14	RM 204.6	73418	5% Duration	965.6	735.93	732.67	1.67	1.36	15.82	11.76	182.49	376.13	2.54	1.88	3.26	3.26
Custer County	C14	RM 204.43	73135	5% Duration	965.6	735.77	732.44	1.51	1.4	13.03	8.72	258.92	421.97	2.44	1.63	3.33	3.33
Custer County	C14	RM 204.22	72808	5% Duration	965.6	735.49	732.3	1.78	1.65	18.89	12.56	244.42	406.4	2.17	1.44	3.19	3.19
Custer County	C14	RM 204	72454	5% Duration	965.6	735.41	731.9	1.17	1.07	7.26	5.08	255.55	412.85	3.14	2.19	3.51	3.51
Custer County	C14	RM 203.82	72156	5% Duration	965.6	735.24	731.14	1.66	1.54	14.55	8.3	182.56	351.71	3.15	1.79	4.1	4.1
Custer County	C14	RM 203.65	71895	5% Duration	965.6	735.05	730.95	1.93	1.53	19.5	7.95	149.69	489.88	3.21	1.29	4.1	4.1
Custer County	C14	RM 203.5	71641	5% Duration	965.6	734.96	730.78	1.6	1.23	13.73	6.29	188.34	578.91	3	1.36	4.18	4.18
Custer County	C14	RM 203.3	71324	5% Duration	965.6	734.92	730.79	1.12	0.77	6.5	3.78	160.29	658.63	3.32	1.9	4.13	4.13
Custer County	C14	RM 203.1	71035	5% Duration	965.6	734.71	730.79	1.8	1.48	17.17	8.7	163.85	592.06	3.09	1.55	3.92	3.92
Custer County	C14	RM 202.9	70718	5% Duration	965.6	734.41	730.67	2.04	1.75	26.91	18.78	234.96	544.37	1.73	1.2	3.74	3.74
Custer County	C14	RM 202.71	70415	5% Duration	965.6	734.11	730.64	1.79	1.6	18.53	13.04	218.95	365.06	2.36	1.66	3.47	3.47
Custer County	C14	RM 202.51	70088	5% Duration	965.6	733.73	730.68	2.21	1.95	26.87	16.45	145.07	293.86	2.77	1.68	3.05	3.05
Custer County	C14	RM 202.34	69815	5% Duration	965.6	733.57	730.63	1.54	1.51	14.64	13.8	313.79	348.81	1.95	1.84	2.94	2.94
Custer County	C14	RM 202.13	69483	5% Duration	965.6	733.38	730.54	1.41	1.33	11.51	7.98	279.54	492.41	2.41	1.67	2.84	2.84
Custer County	C14	RM 201.97	69219	5% Duration	965.6	733.25	730.01	1.44	1.27	11.75	9.56	248.06	370.48	2.54	2.06	3.24	3.24
Custer County	C14	RM 201.75	68884	5% Duration	965.6	733.22	729.45	0.93	0.93	4.38	4.38	301.22	301.22	3.46	3.46	3.77	3.77
Custer County	C14	RM 201.57	68612	5% Duration	965.6	733.08	729.37	1.5	1.45	13.11	10.49	268.44	351.42	2.37	1.9	3.71	3.71
Custer County	C14	RM 201.38	68299	5% Duration	965.6	732.74	729.23	1.93	1.88	23.36	20.37	269.81	318.27	1.85	1.61	3.51	3.51
Custer County	C14	RM 201.23	68055	5% Duration	965.6	732.41	729.13	1.86	1.73	22.82	18.38	310.97	427.16	1.62	1.31	3.28	3.28
Custer County	C14	RM 201.06	67778	5% Duration	965.6	732.28	729.03	1.25	1.02	9.7	6.71	257.7	707.35	1.96	1.35	3.25	3.25
Custer County	C14	RM 200.85	67439	5% Duration	965.6	731.85	729.05	2.45	2.23	33.5	26.26	109.99	207.01	2.7	2.09	2.8	2.8
Custer County	C14	RM 200.64	67103	5% Duration	965.6	731.72	728.97	1.5	1.42	12.45	9.85	211.52	321.63	2.68	2.11	2.75	2.75
Custer County	C14	RM 200.48	66842	5% Duration	965.6	731.63	728.8	1.24	1.19	9.17	8.42	280.99	415.87	2.12	1.94	2.83	2.83
Custer County	C14	RM 200.27	66515	5% Duration	965.6	731.46	728.63	1.29	1.28	10.08	9.02	356.06	402.2	2.09	1.87	2.83	2.83
Custer County	C14	RM 200.05	66162	5% Duration	965.6	731.16	728.3	1.64	1.62	16.88	16.34	338.05	353.68	1.74	1.69	2.86	2.86
Custer County	C14	RM 199.9	65916	5% Duration	965.6	731.07	727.78	1.15	1.15	7.89	7.89	379.13	379.13	2.21	2.21	3.29	3.29
Custer County	C14	RM 199.71	65614	5% Duration	965.6	730.86	727.34	1.67	1.67	13.35	13.35	210.31	210.31	2.75	2.75	3.52	3.52
Custer County	C14	RM 199.53	65326	5% Duration	965.6	730.8	727.34	1.2	1.2	7.65	7.65	254.48	254.48	3.15	3.15	3.47	3.47
Custer County	C14	RM 199.38	65076	5% Duration	965.6	730.68	727.34	1.46	1.46	11.94	11.94	268.89	268.89	2.46	2.46	3.34	3.34
Custer County	C14	RM 199.18	64754	5% Duration	965.6	730.41	727.64	1.81	1.81	16.41	16.41	253.87	253.87	2.1	2.1	2.77	2.77
Custer County	C14	RM 199.04	64535	5% Duration	965.6	730.33	727.64	1.37	1.37	10.64	10.64	320.72	320.72	2.2	2.2	2.69	2.69
Custer County	C14	RM 198.77	64102	5% Duration	965.6	730.13	727.28	1.34	1.34	10.29	10.29	293.28	297.23	2.45	2.45	2.85	2.85
Custer County	C14	RM 198.57	63773	5% Duration	965.6	729.88	726.99	1.77	1.77	17.41	17.41	202	202	2.7	2.7	2.89	2.89
Custer County	C14	RM 198.4	63505	5% Duration	965.6	729.67	726.86	1.87	1.82	19.63	16.94	194.21	236.23	2.61	2.25	2.81	2.81
Custer County	C14	RM 198.22	63215	5% Duration	965.6	729.36	726.57	2.11	1.91	25.5	16.5	184.63	322.73	2.43	1.56	2.79	2.79
Custer County	C14	RM 198.04	62923	5% Duration	965.6	729.17	726.32	1.68	1.49	16.25	13.22	222.26	327.77	2.43	1.97	2.85	2.85
Custer County	C14	RM 197.84	62611	5% Duration	965.6	729.02	726.04	1.29	1.29	10.23	10.24	346.94	375.07	1.99	1.99	2.98	2.98
Custer County	C14	RM 197.65	62306	5% Duration	965.6	728.85	725.69	1.45	1.43	11.81	11.36	232.39	264.97	2.65	2.55	3.16	3.16
Custer County	C14	RM 197.47	62013	5% Duration	965.6	728.83	725.29	0.93	0.9	4.44	3.94	287.9	350.28	3.45	3.06	3.54	3.54
Custer County	C14	RM 197.27	61686	5% Duration	965.6	728.68	724.81	1.6	1.39	14.16	9.9	208.01	422.33	2.67	1.86	3.86	3.86
Custer County	C14	RM 197.07	61373	5% Duration	965.6	728.54	724.81	1.52	1.42	12.64	10.89	198.75	283.69	2.78	2.4	3.73	3.73
Custer County	C14	RM 196.91	61115	5% Duration	965.6	728.46	724.81	1.34	1.02	9.85	5.73	213.64	802.69	2.78	1.61	3.65	3.65
Custer County	C14	RM 196.73	60815	5% Duration	965.6	728.38	724.76	1.26	0.99	8.43	4.27	225.08	715.82	3.01	1.52	3.62	3.62
Custer County	C14	RM 196.54	60518	5% Duration	965.6	728.25	724.67	1.43	1.27	11.84	8.42	254.94	458.72	2.35	1.66	3.58	3.58
Custer County	C14	RM 196.33	60178	5% Duration	965.6	728.16	724.57	1.16	1.07	7.21	5.34	242.59	408.33	2.98	2.21	3.59	3.59
Custer County	C14	RM 196.17	59915	5% Duration	965.6	728.11	724.51	1.14	1.07	6.81	5.78	185.54	333.95	3.18	2.69	3.6	3.6
Custer County	C15	RM 195.98	59615	5% Duration	968.4	727.44	724.52	3.19	3.19	59.17	59.17	127.25	127.25	2.38	2.38	2.92	2.92
Custer County	C15	RM 195.81	59337	5% Duration	968.4	727.27	724.33	2.06	2.06	23.19	23.19	165.66	165.66	2.84	2.84	2.93	2.93
Custer County	C15	RM 195.61	59020	5% Duration	968.4	727.14	724.24	1.53	1.53	12.78	12.78	225.43	225.43	2.81	2.81	2.9	2.9
Custer County	C15	RM 195.43	58727	5% Duration	968.4	726.88	724.22	1.79	1.79	20.41	20.41	299.92	299.92	1.8	1.8	2.66	2.66
Custer County	C15	RM 195.23	58415	5% Duration	968.4	726.68	723.93	1.42	1.42	10.83	10.83	351.36	351.36	1.94	1.94	2.75	2.75
Custer County	C15	RM 195.04	58114	5% Duration	968.4	726.4	723.54	1.76	1.71	18.97	17.64	261.19	311.1	1.99	1.85	2.86	2.86
Custer County	C15	RM 194.86	57824	5% Duration	968.4	726.13	722.93	1.84	1.75	19.5	16.39	204.63	290.84	2.44	2.05	3.2	3.2
Custer County	C15	RM 194.67	57521	5% Duration	968.4	726.01	722.75	1.45	1.45	11.15	11.15	212.83	212.83	3.13	3.13	3.26	3.26
Custer County	C15	RM 194.49	57231	5% Duration	968.4	725.91	722.53	1.38	1.38	10.13	10.13	225	225	3.11	3.11	3.38	3.38
Custer County	C15	RM 194.32	56946	5% Duration	968.4	725.72	722.5	1.76	1.76	15.63	15.63	217.42	217.42	2.53	2.53	3.21	3.21
Custer County	C15	RM 194.13	56643	5% Duration	968.4	725.49	722.5	1.77	1.77	18.66	18.66	246.41	246.41	2.21	2.21	2.99	2.99
Custer County	C15	RM 193.93	56331	5% Duration	968.4	725.33	722.31	1.46	1.46	11.8	11.73	241.57	243.08	2.74	2.72	3.02	3.02
Custer County	C15	RM 193.74	56024	5% Duration	968.4	725.19	722.23	1.5	1.5	12.22	12.22	224.51	224.51	2.88	2.88	2.96	2.96
Custer County	C15	RM 193.55	55708	5% Duration	968.4	725.02	722.13	1.63	1.63	14.66	14.66	211.66	211.66	2.8	2.8	2.89	2.89

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C15	RM 193.37	55425	5% Duration	968.4	724.82	722.13	1.75	1.75	17.13	16.85	212.64	216.31	2.61	2.56	2.69	2.69
Custer County	C15	RM 193.2	55158	5% Duration	968.4	724.71	722.13	1.4	1.39	11.16	10.14	273.3	305.09	2.52	2.29	2.58	2.58
Custer County	C15	RM 193	54825	5% Duration	968.4	724.56	721.84	1.4	1.38	11.09	10.47	270.5	291.14	2.55	2.41	2.72	2.72
Custer County	C15	RM 192.81	54525	5% Duration	968.4	724.4	721.37	1.57	1.47	13.28	10.7	203.75	280.75	2.92	2.35	3.03	3.03
Custer County	C15	RM 192.63	54247	5% Duration	968.4	724.29	721.01	1.47	1.46	11.5	10.35	210.51	236.84	3.12	2.8	3.28	3.28
Custer County	C15	RM 192.44	53935	5% Duration	968.4	724.2	721.01	1.33	1.26	9.59	8.07	234.12	309.24	2.94	2.48	3.19	3.19
Custer County	C16	RM 192.26	53653	5% Duration	968.4	724.07	721.01	1.44	1.41	11.19	10.55	224.34	245.3	2.97	2.8	3.06	3.06
Custer County	C16	RM 192.05	53309	5% Duration	968.4	723.73	721.11	2.13	2.12	25.9	24.95	183.4	191.25	2.48	2.39	2.62	2.62
Custer County	C16	RM 191.74	52809	5% Duration	968.4	723.44	721.1	1.35	1.35	10.38	10.38	388.9	406.38	1.84	1.84	2.34	2.34
Custer County	C16	RM 191.35	52181	5% Duration	968.4	722.87	721.02	1.59	1.59	17.25	17.25	458.18	458.18	1.33	1.33	1.85	1.85
Custer County	C16	RM 191.12	51812	5% Duration	968.4	722.57	720.51	1.27	1.27	10.12	10.12	468.23	468.23	1.63	1.63	2.06	2.06
Custer County	C16	RM 190.87	51406	5% Duration	968.4	722.3	719.89	1.27	1.27	9.55	9.55	529.35	529.35	1.44	1.44	2.41	2.41
Custer County	C16	RM 190.54	50885	5% Duration	968.4	722.05	719.15	0.97	0.97	5.94	5.94	705.57	705.57	1.42	1.42	2.9	2.9
Custer County	C16	RM 190.29	50477	5% Duration	968.4	721.65	718.45	1.99	1.98	21.77	20.9	173.75	182.01	2.8	2.68	3.19	3.19
Custer County	C16	RM 190.1	50176	5% Duration	968.4	721.39	718.43	1.92	1.92	21.54	21.54	221.95	231.76	2.27	2.27	2.96	2.96
Custer County	C16	RM 189.85	49765	5% Duration	968.4	721.08	718.13	1.53	1.51	14.52	13.83	329.17	352.18	1.91	1.82	2.95	2.95
Custer County	C16	RM 189.65	49458	5% Duration	968.4	720.91	713.92	1.41	1.41	11.2	11.2	266.65	277.98	2.57	2.57	6.99	6.99
Custer County	C16		49425	5% Duration	Bridge												
Custer County	C16	RM 189.62	49416	5% Duration	968.4	720.88	713.92	1.45	1.45	11.73	11.73	264.38	264.38	2.53	2.53	6.96	6.96
Custer County	C16	RM 189.43	49103	5% Duration	968.4	720.43	718.09	2.2	2.2	31.15	31.15	258.91	258.91	1.7	1.7	2.34	2.34
Custer County	C16	RM 189.22	48763	5% Duration	968.4	720.36	717.93	1.01	1.01	6.1	6.1	448.97	448.97	2.14	2.14	2.43	2.43
Custer County	C16	RM 188.91	48267	5% Duration	968.4	720.13	717.54	1.36	1.36	10.3	10.3	318.04	338.25	2.25	2.25	2.59	2.59
Custer County	C16	RM 188.66	47869	5% Duration	968.4	719.88	716.75	1.67	1.67	14.87	14.87	190.7	194.81	3.04	3.04	3.13	3.13
Custer County	C16	RM 188.51	47622	5% Duration	968.4	719.74	716.72	1.71	1.71	16.13	15.97	207.17	209.28	2.74	2.71	3.02	3.02
Custer County	C16	RM 188.32	47314	5% Duration	968.4	719.57	716.79	1.6	1.42	15.06	10.71	148.4	412.83	2.4	1.69	2.78	2.78
Custer County	C16	RM 188.14	47024	5% Duration	968.4	719.36	716.93	1.5	1.54	11.88	12.81	132.21	319.7	1.86	2.01	2.43	2.43
Custer County	C16	RM 187.98	46768	5% Duration	968.4	719.23	716.91	1.35	1.31	10.95	9.31	214.85	417.91	2.08	1.76	2.32	2.32
Custer County	C16	RM 187.78	46440	5% Duration	968.4	719.1	716.69	1.27	1.23	8.1	7.94	242.24	444.19	1.81	1.77	2.41	2.41
Custer County	C16	RM 187.55	46083	5% Duration	968.4	718.79	716.04	1.82	1.76	19.08	14.83	216.73	292.39	2.43	1.89	2.75	2.75
Custer County	C16	RM 187.35	45750	5% Duration	968.4	718.43	715.34	2.12	2.12	25.07	25.07	171.23	171.23	2.67	2.67	3.09	3.09
Custer County	C16	RM 187.14	45421	5% Duration	968.4	718.2	715.3	1.7	1.7	16.94	16.94	247.48	247.48	2.3	2.3	2.9	2.9
Custer County	C16	RM 187.01	45211	5% Duration	968.4	718.11	715.3	1.39	1.39	11.15	10.95	288.73	294.1	2.41	2.37	2.81	2.81
Custer County	C16	RM 186.84	44930	5% Duration	968.4	717.89	715.03	1.68	1.68	17.19	17.19	288.76	288.76	2	2	2.86	2.86
Custer County	C16	RM 186.62	44553	5% Duration	968.4	717.75	712.45	1.36	1.36	9.14	9.14	184.81	184.81	3.84	3.84	5.3	5.3
Custer County	C16		44545	5% Duration	Bridge												
Custer County	C16	RM 186.61	44538	5% Duration	968.4	717.74	712.45	1.37	1.37	9.19	9.19	184.78	184.78	3.84	3.84	5.29	5.29
Custer County	C16	RM 186.46	44311	5% Duration	968.4	717.49	714.53	2.07	2.07	23.94	23.94	174.66	193.9	2.67	2.67	2.95	2.95
Custer County	C16	RM 186.26	43996	5% Duration	968.4	717.28	714.27	1.81	1.81	17.99	17.99	190.11	190.11	2.81	2.81	3.01	3.01
Custer County	C16	RM 186.1	43730	5% Duration	968.4	717.17	713.9	1.41	1.41	11.47	11.47	284.21	284.21	2.41	2.41	3.27	3.27
Custer County	C16	RM 185.91	43424	5% Duration	988.3	716.96	713.84	1.63	1.63	12.75	12.75	293.38	293.38	2.06	2.06	3.12	3.12
Custer County	C16	RM 185.71	43110	5% Duration	988.3	716.42	713.84	2.6	2.6	33.86	33.86	201.78	201.78	1.88	1.88	2.58	2.58
Custer County	C16	RM 185.52	42808	5% Duration	988.3	716.32	713.71	1.34	1.34	10.78	10.65	350.84	355.29	2.1	2.08	2.61	2.61
Custer County	C16	RM 185.34	42508	5% Duration	988.3	715.96	713.28	2.04	2.04	18.8	18.8	295.14	295.14	1.64	1.64	2.68	2.68
Custer County	C16	RM 185.16	42219	5% Duration	988.3	715.82	712.93	1.28	1.28	10.24	10.24	412.99	709.75	1.87	1.87	2.89	2.89
Custer County	C17	RM 184.95	41881	5% Duration	988.3	715.57	712.72	1.57	1.57	14.74	14.56	285.37	311.97	2.2	2.18	2.85	2.85
Custer County	C17	RM 184.78	41621	5% Duration	988.3	715.31	712.51	1.9	1.88	20.53	19.12	208.96	226.47	2.49	2.32	2.8	2.8
Custer County	C17	RM 184.59	41311	5% Duration	988.3	715.07	711.96	1.89	1.89	19.45	18.41	186.62	197.41	2.81	2.65	3.11	3.11
Custer County	C17	RM 184.4	41010	5% Duration	988.3	714.97	711.62	1.4	1.4	10.56	10.56	236.56	236.56	2.98	2.98	3.35	3.35
Custer County	C17	RM 184.23	40728	5% Duration	988.3	714.77	711.31	1.74	1.74	17.42	17.42	230.4	230.4	2.46	2.46	3.46	3.46
Custer County	C17	RM 184.1	40517	5% Duration	988.3	714.64	710.39	1.71	1.71	15.72	15.66	199.87	200.57	2.9	2.89	4.25	4.25
Custer County	C17		40500	5% Duration	Bridge												
Custer County	C17	RM 184.08	40496	5% Duration	988.3	714.62	710.39	1.72	1.72	15.98	15.94	199.72	200.21	2.88	2.87	4.23	4.23
Custer County	C17	RM 184.03	40407	5% Duration	988.3	714.58	711.49	1.62	1.62	14.18	14.18	206.68	206.68	2.95	2.95	3.09	3.09
Custer County	C17	RM 183.83	40098	5% Duration	988.3	714.45	711.42	1.52	1.52	12.52	12.52	224.88	224.88	2.89	2.89	3.03	3.03
Custer County	C17	RM 183.65	39806	5% Duration	988.3	714.29	711.39	1.59	1.59	13.89	13.89	220.46	220.46	2.81	2.81	2.9	2.9
Custer County	C17	RM 183.47	39513	5% Duration	988.3	714.07	711.39	1.83	1.83	18.76	18.76	205.84	205.84	2.62	2.62	2.68	2.68
Custer County	C17	RM 183.28	39210	5% Duration	988.3	713.93	711.31	1.48	1.48	12.26	12.26	260.38	260.38	2.57	2.57	2.62	2.62
Custer County	C17	RM 183.09	38909	5% Duration	988.3	713.73	711.04	1.67	1.67	15.89	15.89	233.56	233.56	2.53	2.53	2.69	2.69
Custer County	C17	RM 182.94	38660	5% Duration	988.3	713.63	710.66	1.43	1.43	11.03	11.03	239.99	239.99	2.89	2.89	2.97	2.97
Custer County	C17	RM 182.72	38316	5% Duration	988.3	713.46	710.1	1.52	1.51	12.92	12.22	245.9	261.33	2.64	2.5	3.36	3.36

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C17	RM 182.54	38020	5% Duration	988.3	713.18	710.12	2	1.95	21.81	19.33	170.54	199.23	2.88	2.55	3.06	3.06
Custer County	C17	RM 182.34	37706	5% Duration	988.3	712.98	710.27	1.73	1.69	17.37	16.19	235.82	264.49	2.37	2.21	2.71	2.71
Custer County	C17	RM 182.15	37402	5% Duration	988.3	712.78	710.26	1.61	1.58	14.93	14.14	247.71	282.12	2.43	2.3	2.52	2.52
Custer County	C17	RM 181.97	37127	5% Duration	988.3	712.63	710.26	1.5	1.48	13.04	12.53	282.26	300.23	2.32	2.22	2.37	2.37
Custer County	C17	RM 181.78	36815	5% Duration	988.3	712.4	710.09	1.63	1.61	15.87	15.16	270.5	293.43	2.19	2.09	2.31	2.31
Custer County	C17	RM 181.59	36505	5% Duration	988.3	712.08	709.76	1.88	1.86	21.1	19.81	262.85	283.08	2	1.88	2.32	2.32
Custer County	C17	RM 181.37	36155	5% Duration	988.3	711.77	709.37	1.71	1.67	17.49	15.54	270.38	315.71	2.12	1.88	2.4	2.4
Custer County	C17	RM 181.23	35925	5% Duration	988.3	711.45	709.36	2.06	2	26.21	23.03	234.73	286.48	1.97	1.73	2.09	2.09
Custer County	C17	RM 181.03	35607	5% Duration	988.3	711.22	709.02	1.47	1.46	13.29	12.98	342.36	356.63	1.95	1.9	2.2	2.2
Custer County	C17	RM 180.83	35292	5% Duration	988.3	710.99	708.68	1.44	1.42	13.37	12.49	357.88	431.2	1.73	1.62	2.31	2.31
Custer County	C17	RM 180.66	35006	5% Duration	988.3	710.77	708.22	1.5	1.49	13.86	13.53	338.24	347.91	1.95	1.9	2.55	2.55
Custer County	C18	RM 180.46	34700	5% Duration	988.3	710.59	708.05	1.46	1.45	12.16	11.94	277.41	283.63	2.44	2.4	2.54	2.54
Custer County	C18	RM 180.29	34421	5% Duration	988.3	710.31	707.79	1.91	1.89	21.28	19.63	220.99	244.4	2.32	2.14	2.52	2.52
Custer County	C18	RM 180.08	34086	5% Duration	988.3	710.11	707.53	1.58	1.56	14.13	13.43	248.65	268	2.49	2.37	2.58	2.58
Custer County	C18	RM 179.9	33807	5% Duration	988.3	709.93	707.32	1.62	1.6	15.38	14.11	257.75	291.25	2.32	2.13	2.61	2.61
Custer County	C18	RM 179.73	33525	5% Duration	988.3	709.66	706.89	1.86	1.83	20.01	18.76	227.45	246.12	2.34	2.19	2.77	2.77
Custer County	C18	RM 179.54	33218	5% Duration	988.3	709.3	706.7	2.05	2.05	23.46	23.46	247.28	247.28	1.95	1.95	2.6	2.6
Custer County	C18	RM 179.35	32914	5% Duration	988.3	709.08	706.45	1.6	1.59	15.1	14.76	282.1	293.6	2.2	2.15	2.63	2.63
Custer County	C18	RM 179.16	32611	5% Duration	988.3	708.85	706.29	1.7	1.7	16.61	16.61	233.73	233.73	2.48	2.48	2.56	2.56
Custer County	C18	RM 178.99	32337	5% Duration	988.3	708.69	706.07	1.6	1.6	14.55	14.55	249.29	249.29	2.48	2.48	2.62	2.62
Custer County	C18	RM 178.79	32025	5% Duration	988.3	708.47	705.9	1.68	1.68	16.13	16.13	239.96	239.96	2.45	2.45	2.57	2.57
Custer County	C18	RM 178.61	31730	5% Duration	988.3	708.28	705.59	1.63	1.63	15.42	15.42	254.94	359.71	2.37	2.37	2.69	2.69
Custer County	C18	RM 178.43	31434	5% Duration	988.3	708.11	705.25	1.57	1.57	13.76	13.76	241.67	241.67	2.61	2.61	2.86	2.86
Custer County	C18	RM 178.23	31114	5% Duration	988.3	707.94	704.7	1.56	1.56	13.44	13.44	233.17	233.17	2.72	2.72	3.24	3.24
Custer County	C18	RM 178.06	30848	5% Duration	988.3	707.8	704.57	1.59	1.59	13.6	13.6	212.9	212.9	2.93	2.93	3.23	3.23
Custer County	C18	RM 177.88	30549	5% Duration	988.3	707.63	704.57	1.68	1.68	15.66	15.51	215.74	217.86	2.72	2.7	3.06	3.06
Custer County	C18	RM 177.66	30211	5% Duration	991.1	707.31	704.57	2.03	2.03	23.19	23.19	186.81	186.81	2.61	2.61	2.74	2.74
Custer County	C18	RM 177.49	29932	5% Duration	991.1	707.15	704.47	1.64	1.64	15.13	15.13	232.43	232.43	2.6	2.6	2.68	2.68
Custer County	C19	RM 177.3	29625	5% Duration	991.1	707	704.46	1.45	1.45	12.2	12.2	294.19	294.19	2.33	2.33	2.54	2.54
Custer County	C19	RM 177.11	29314	5% Duration	991.1	706.72	704.46	1.78	1.78	19.08	19.08	267.86	267.86	2.08	2.08	2.26	2.26
Custer County	C19	RM 176.93	29040	5% Duration	991.1	706.54	704.42	1.45	1.45	12.79	12.79	343.26	355.49	2	2	2.12	2.12
Custer County	C19	RM 176.74	28720	5% Duration	991.1	706.33	704.21	1.4	1.37	12.26	11.73	336.59	409.79	1.85	1.77	2.12	2.12
Custer County	C19	RM 176.53	28384	5% Duration	991.1	705.97	703.63	1.81	1.74	21.08	20.09	262.63	346.3	1.72	1.64	2.34	2.34
Custer County	C19	RM 176.36	28109	5% Duration	991.1	705.73	703.08	1.56	1.56	14.86	14.86	319.95	319.95	1.99	1.99	2.65	2.65
Custer County	C19	RM 176.18	27824	5% Duration	991.1	705.27	702.71	2.32	2.32	31.7	31.7	190.74	190.74	2.24	2.24	2.56	2.56
Custer County	C19	RM 176	27527	5% Duration	991.1	705.05	702.51	1.71	1.7	17.21	16.26	252.96	269.55	2.28	2.16	2.54	2.54
Custer County	C19	RM 175.81	27227	5% Duration	991.1	704.82	702.24	1.64	1.64	16.18	16.11	292.28	293.63	2.07	2.06	2.58	2.58
Custer County	C19	RM 175.62	26928	5% Duration	991.1	704.57	701.81	1.76	1.72	17.67	14.78	228.9	283.17	2.44	2.04	2.76	2.76
Custer County	C19	RM 175.43	26622	5% Duration	991.1	704.22	701.81	2.08	1.73	26.09	19.13	212.41	375.54	2.09	1.53	2.41	2.41
Custer County	C19	RM 175.25	26325	5% Duration	991.1	703.89	701.72	1.89	1.81	21.64	19.87	208.43	288.5	2.07	1.9	2.17	2.17
Custer County	C19	RM 175.08	26048	5% Duration	991.1	703.65	701.63	1.59	1.59	16.11	16.11	347.05	347.05	1.79	1.79	2.02	2.02
Custer County	C19	RM 174.9	25768	5% Duration	991.1	703.3	701.31	1.81	1.81	21.45	21.45	331.75	331.75	1.65	1.65	1.99	1.99
Custer County	C19	RM 174.69	25444	5% Duration	991.1	702.77	700.82	2.04	2.04	26.96	26.96	287.48	287.48	1.69	1.69	1.95	1.95
Custer County	C19	RM 174.49	25112	5% Duration	991.1	702.25	700.04	2.07	2.07	26.62	26.62	252.65	252.65	1.9	1.9	2.21	2.21
Custer County	C19	RM 174.32	24844	5% Duration	991.1	701.82	699.39	2.23	2.23	30.06	30.06	211.53	211.53	2.1	2.1	2.43	2.43
Custer County	C19	RM 174.13	24549	5% Duration	991.1	701.67	698.84	1.56	1.56	13.57	13.57	235.68	235.68	2.69	2.69	2.83	2.83
Custer County	C19	RM 173.94	24238	5% Duration	991.1	701.41	698.14	1.85	1.85	19.86	19.86	231.63	231.63	2.32	2.32	3.27	3.27
Custer County	C19	RM 173.75	23939	5% Duration	991.1	701.12	697.92	2.03	2.03	22.2	22.2	164.57	164.57	2.96	2.96	3.2	3.2
Custer County	C19	RM 173.57	23651	5% Duration	991.1	701	697.83	1.62	1.62	14.03	14.03	202.05	202.05	3.02	3.02	3.17	3.17
Custer County	C19	RM 173.39	23352	5% Duration	991.1	700.77	697.83	1.89	1.89	19.91	19.91	194.11	194.11	2.7	2.7	2.94	2.94
Custer County	C19	RM 173.2	23054	5% Duration	991.1	700.55	697.72	1.83	1.83	18.88	18.88	214.96	244.41	2.53	2.53	2.83	2.83
Custer County	C19	RM 173.02	22756	5% Duration	991.1	700.37	697.29	1.64	1.64	15.11	14.96	232.32	234.59	2.6	2.58	3.08	3.08
Custer County	C19	RM 172.82	22437	5% Duration	991.1	700.13	696.82	1.63	1.63	17.23	17.23	364.21	364.21	1.67	1.67	3.31	3.31
Custer County	C19	RM 172.67	22200	5% Duration	991.1	699.73	696.52	2.05	2.05	27.07	27.07	281.5	281.5	1.72	1.72	3.21	3.21
Custer County	C19	RM 172.49	21903	5% Duration	991.1	699.49	696.23	1.59	1.59	14.91	14.91	274.71	274.71	2.27	2.27	3.26	3.26
Custer County	C19	RM 172.29	21585	5% Duration	991.1	699.33	695.79	1.53	1.53	12.63	12.63	220.24	259.91	2.94	2.94	3.54	3.54
Custer County	C19	RM 172.12	21325	5% Duration	991.1	698.84	695.81	2.54	2.54	40.08	40.08	207.89	207.89	1.88	1.88	3.03	3.03
Custer County	C19		21310	5% Duration	Bridge												
Custer County	C19	RM 172.11	21300	5% Duration	991.1	698.63	695.81	2.84	2.84	52.15	52.15	205.87	205.87	1.69	1.69	2.82	2.82
Custer County	C19	RM 171.89	20942	5% Duration	991.1	698.33	695.57	1.72	1.72	16.5	16.5	218.76	218.76	2.64	2.64	2.76	2.76

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C19	RM 171.71	20638	5% Duration	991.1	698.02	695.49	1.98	1.98	23.33	23.33	225.62	225.62	2.21	2.21	2.53	2.53
Custer County	C19	RM 171.52	20341	5% Duration	991.1	697.78	695.3	1.74	1.74	17.58	17.58	244.62	244.62	2.33	2.33	2.48	2.48
Custer County	C19	RM 171.34	20043	5% Duration	991.1	697.51	695.11	1.86	1.86	20.31	20.31	233.2	233.2	2.28	2.28	2.4	2.4
Custer County	C19	RM 171.15	19745	5% Duration	991.1	697.27	694.86	1.76	1.76	17.99	17.99	242.45	242.45	2.33	2.33	2.41	2.41
Custer County	C19	RM 170.96	19437	5% Duration	991.1	697.03	694.67	1.71	1.71	17.08	17.08	252.54	252.54	2.3	2.3	2.36	2.36
Custer County	C19	RM 170.78	19143	5% Duration	991.1	696.81	694.2	1.73	1.73	17.25	17.25	234.96	234.96	2.43	2.43	2.61	2.61
Custer County	C19	RM 170.58	18838	5% Duration	991.1	696.49	693.91	1.98	1.98	23.14	23.14	227.89	227.89	2.2	2.2	2.58	2.58
Custer County	C19	RM 170.4	18543	5% Duration	991.1	696.27	693.9	1.67	1.67	16.45	16.45	261.22	261.22	2.27	2.27	2.37	2.37
Custer County	C19	RM 170.22	18257	5% Duration	991.1	696.06	693.7	1.64	1.64	15.83	15.83	264.75	264.75	2.28	2.28	2.36	2.36
Custer County	C19	RM 170.03	17941	5% Duration	991.1	695.79	693.31	1.81	1.81	19.01	19.01	231.5	231.5	2.36	2.36	2.48	2.48
Custer County	C19	RM 169.84	17641	5% Duration	991.1	695.57	692.78	1.76	1.76	17.18	17.18	209.08	209.08	2.69	2.69	2.79	2.79
Custer County	C19	RM 169.65	17341	5% Duration	991.1	695.36	692.47	1.8	1.8	17.92	17.92	198.76	198.76	2.76	2.76	2.89	2.89
Custer County	C19	RM 169.47	17041	5% Duration	991.1	695.1	692.17	1.96	1.96	21.6	21.6	197.53	197.53	2.56	2.56	2.93	2.93
Custer County	C19	RM 169.28	16732	5% Duration	991.1	694.89	692	1.78	1.78	17.67	17.67	210.34	210.34	2.65	2.65	2.89	2.89
Custer County	C19	RM 169.09	16441	5% Duration	991.1	694.68	691.96	1.77	1.77	17.65	17.65	220.79	224.69	2.54	2.54	2.72	2.72
Custer County	C19	RM 168.91	16152	5% Duration	991.1	694.46	691.93	1.81	1.81	18.85	18.85	225.97	225.97	2.42	2.42	2.53	2.53
Custer County	C19	RM 168.72	15846	5% Duration	991.1	694.28	691.82	1.52	1.52	13.39	13.39	273.16	273.16	2.38	2.38	2.46	2.46
Custer County	C19	RM 168.51	15500	5% Duration	991.1	694.05	691.6	1.59	1.59	15.12	15.12	289.28	289.28	2.15	2.15	2.45	2.45
Custer County	C19	RM 168.35	15241	5% Duration	991.1	693.78	691.48	1.83	1.83	20.3	19.87	262.63	268.77	2.06	2.02	2.3	2.3
Custer County	C19	RM 168.15	14931	5% Duration	991.1	693.39	691.2	2.05	2.05	25.44	25.44	233.72	233.72	2.07	2.07	2.19	2.19
Custer County	C19	RM 167.97	14639	5% Duration	991.1	693.17	690.59	1.68	1.68	16.05	16.05	239.58	239.58	2.47	2.47	2.58	2.58
Custer County	C19	RM 167.79	14340	5% Duration	991.1	692.97	690.5	1.68	1.68	16.21	16.21	246.74	277.41	2.4	2.4	2.47	2.47
Custer County	C19	RM 167.61	14054	5% Duration	991.1	692.67	690.42	1.94	1.94	22.5	22.5	239.39	239.39	2.14	2.14	2.25	2.25
Custer County	C19	RM 167.41	13735	5% Duration	991.1	692.33	690.14	1.88	1.88	21.47	21.14	257.24	261.32	2.05	2.02	2.19	2.19
Custer County	C19	RM 167.22	13433	5% Duration	991.1	692.09	689.79	1.66	1.66	16.32	16.32	267.89	267.89	2.22	2.22	2.3	2.3
Custer County	C19	RM 167.04	13143	5% Duration	991.1	691.92	689.14	1.55	1.54	13.56	13.22	252	260.58	2.54	2.48	2.78	2.78
Custer County	C19	RM 166.85	12847	5% Duration	991.1	691.57	688.98	2.1	2.1	26.68	26.68	226.02	226.02	2.09	2.09	2.59	2.59
Custer County	C19	RM 166.67	12552	5% Duration	991.1	691.31	688.84	1.79	1.79	18.53	18.53	236.65	236.65	2.34	2.34	2.47	2.47
Custer County	C19	RM 166.52	12319	5% Duration	991.1	691.2	688.64	1.48	1.48	12.47	12.47	272.95	272.95	2.46	2.46	2.56	2.56
Custer County	C19	RM 166.31	11978	5% Duration	991.1	690.97	688.02	1.65	1.65	15	15	230.74	230.74	2.6	2.6	2.96	2.96
Custer County	C20	RM 166.2	11806	5% Duration	993.9	690.88	687.4	1.64	1.64	14.73	14.73	218.08	218.08	2.78	2.78	3.48	3.48
Custer County	C20	RM 166.06	11569	5% Duration	993.9	690.67	687.38	1.88	1.88	20.66	20.66	225.78	225.78	2.34	2.34	3.29	3.29
Custer County	C20	RM 165.92	11350	5% Duration	993.9	690.41	687.38	2.03	2.03	24.18	24.18	218.34	218.34	2.25	2.25	3.03	3.03
Custer County	C20	RM 165.73	11039	5% Duration	993.9	690.17	687.26	1.7	1.7	16.92	16.92	255.3	255.3	2.29	2.29	2.91	2.91
Custer County	C20	RM 165.55	10750	5% Duration	993.9	689.96	687.11	1.68	1.68	16.55	16.55	255.57	255.57	2.31	2.31	2.85	2.85
Custer County	C20	RM 165.35	10440	5% Duration	993.9	689.72	686.75	1.72	1.72	17.16	17.16	244.02	244.02	2.37	2.37	2.97	2.97
Custer County	C20	RM 165.17	10140	5% Duration	993.9	689.52	686.41	1.67	1.65	15.66	14.75	232.77	249.71	2.56	2.41	3.11	3.11
Custer County	C20	RM 165.01	9883	5% Duration	993.9	689.36	686.16	1.67	1.67	15.78	15.78	238.39	238.39	2.5	2.5	3.2	3.2
Custer County	C20	RM 164.81	9577	5% Duration	993.9	689.12	686.04	1.71	1.71	17.62	17.62	276.2	276.2	2.1	2.1	3.08	3.08
Custer County	C20	RM 164.61	9252	5% Duration	993.9	688.94	685.8	1.53	1.51	12.51	11.75	242.01	261.44	2.68	2.52	3.14	3.14
Custer County	C20	RM 164.42	8945	5% Duration	993.9	688.75	685.78	1.58	1.58	14.44	14.44	277.03	277.03	2.27	2.27	2.97	2.97
Custer County	C20	RM 164.23	8641	5% Duration	993.9	688.43	685.85	1.88	1.88	19.26	19.26	329.11	329.11	1.61	1.61	2.58	2.58
Custer County	C20	RM 164.06	8372	5% Duration	993.9	688.31	685.64	1.37	1.37	10.53	10.53	283.59	283.59	2.56	2.56	2.67	2.67
Custer County	C20	RM 163.85	8031	5% Duration	993.9	688.11	685	1.54	1.54	13.85	13.85	273.73	273.73	2.35	2.35	3.11	3.11
Custer County	C20	RM 163.67	7743	5% Duration	993.9	687.96	684.45	1.6	1.6	13.22	13.22	187.69	187.69	3.32	3.32	3.51	3.51
Custer County	C20	RM 163.48	7449	5% Duration	993.9	687.77	684.13	1.85	1.85	17.63	17.63	157.87	157.87	3.4	3.4	3.64	3.64
Custer County	C20	RM 163.3	7150	5% Duration	993.9	687.65	684.13	1.6	1.6	13.62	13.6	199.36	199.65	3.11	3.1	3.52	3.52
Custer County	C20	RM 163.12	6859	5% Duration	993.9	687.55	683.91	1.43	1.42	10.24	9.94	251.18	259.5	2.77	2.69	3.64	3.64
Custer County	C20	RM 162.94	6583	5% Duration	993.9	687.42	683.78	1.55	1.55	12.44	12.44	192.88	192.88	3.33	3.33	3.64	3.64
Custer County	C20	RM 162.74	6254	5% Duration	993.9	687.16	683.77	2	2	21.72	21.72	170.17	170.17	2.92	2.92	3.39	3.39
Custer County	C20	RM 162.55	5957	5% Duration	993.9	686.91	683.96	1.98	1.98	20.95	20.95	221.29	221.29	2.27	2.27	2.95	2.95
Custer County	C20	RM 162.34	5620	5% Duration	993.9	686.69	683.92	1.55	1.55	14.36	14.36	291.93	291.93	2.19	2.19	2.77	2.77
Custer County	C20	RM 162.18	5352	5% Duration	993.9	686.47	683.41	1.52	1.52	20.92	20.92	330.62	330.62	1.98	1.98	3.06	3.06
Custer County	C20	RM 162.03	5111	5% Duration	993.9	686.36	683.26	1.25	1.25	8.51	8.51	309.41	309.41	2.56	2.56	3.1	3.1
Custer County	C20	RM 161.81	4770	5% Duration	993.9	686.09	682.63	1.89	1.89	18.93	18.93	170.84	170.84	3.08	3.08	3.46	3.46
Custer County	C20	RM 161.62	4470	5% Duration	993.9	685.84	682.53	2.06	2.06	23.03	23.03	168	216.64	2.88	2.88	3.31	3.31
Custer County	C20	RM 161.43	4159	5% Duration	993.9	685.64	682.63	1.83	1.83	18.23	18.23	192.93	192.93	2.82	2.82	3.01	3.01
Custer County	C20	RM 161.24	3859	5% Duration	993.9	685.38	682.51	1.96	1.96	21.45	21.45	191.08	191.08	2.65	2.65	2.87	2.87
Custer County	C20	RM 161.06	3559	5% Duration	993.9	685.19	682.38	1.74	1.74	16.87	16.87	210.99	210.99	2.7	2.7	2.81	2.81
Custer County	C20	RM 160.87	3258	5% Duration	993.9	684.92	682.24	1.96	1.96	21.85	21.85	199.38	199.38	2.54	2.54	2.68	2.68

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Custer County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Custer County	C20	RM 160.68	2952	5% Duration	993.9	684.75	682.11	1.58	1.58	14.17	14.17	247.51	247.51	2.54	2.54	2.64	2.64
Custer County	C20	RM 160.5	2662	5% Duration	993.9	684.53	681.85	1.67	1.67	17.15	17.15	299.63	299.63	1.99	1.99	2.68	2.68
Custer County	C20	RM 160.31	2364	5% Duration	993.9	684.27	681.58	1.66	1.66	16.92	16.92	307.87	307.98	1.95	1.95	2.69	2.69
Custer County	C20	RM 160.12	2063	5% Duration	993.9	684.08	681.02	1.51	1.5	12.96	12.61	269.02	276.83	2.45	2.39	3.06	3.06
Custer County	C20	RM 159.93	1758	5% Duration	993.9	683.71	680.9	2.05	2.05	26.65	26.65	267.91	267.91	1.81	1.81	2.81	2.81
Custer County	C20	RM 159.75	1459	5% Duration	993.9	683.41	680.88	1.81	1.81	19.09	19.09	236.3	236.3	2.32	2.32	2.53	2.53
Custer County	C20	RM 159.55	1151	5% Duration	993.9	683.16	680.74	1.75	1.75	18.08	18.08	253.33	253.33	2.24	2.24	2.42	2.42
Custer County	C20	RM 159.38	876	5% Duration	993.9	682.9	680.37	1.86	1.86	20.03	20.03	226.37	226.37	2.36	2.36	2.53	2.53
Custer County	C20	RM 159.19	566	5% Duration	993.9	682.69	679.77	1.71	1.71	16.63	16.63	228.2	228.2	2.54	2.54	2.92	2.92
Custer County	C20	RM 158.98	229	5% Duration	993.9	682.42	679.44	1.83	1.83	19	19	212.21	212.21	2.55	2.55	2.98	2.98

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	C20	RM 158.74	61391	5% Duration	993.92	682.42	679.22	1.75	1.75	16.87	16.87	207.58	207.58	2.74	2.74	3.2	3.2
Prairie County	C21	RM 158.55	61087	5% Duration	993.92	682.31	678.98	1.44	1.44	10.95	10.95	220.85	220.85	3.13	3.13	3.33	3.33
Prairie County	C21	RM 158.36	60787	5% Duration	993.92	682.19	678.83	1.43	1.43	11.1	11.1	240.71	240.71	2.89	2.89	3.36	3.36
Prairie County	C21	RM 158.17	60481	5% Duration	993.92	682.04	678.35	1.52	1.52	13.66	13.66	240.41	240.41	2.72	2.72	3.69	3.69
Prairie County	C21	RM 157.98	60173	5% Duration	993.92	681.76	678.22	1.9	1.9	20.96	20.96	221.69	221.69	2.36	2.36	3.54	3.54
Prairie County	C21	RM 157.78	59862	5% Duration	993.92	681.53	678.23	1.81	1.81	17.93	17.93	192.04	192.04	2.85	2.85	3.3	3.3
Prairie County	C21	RM 157.6	59561	5% Duration	993.92	681.42	678.14	1.47	1.47	11.55	11.55	228.05	228.05	2.97	2.97	3.28	3.28
Prairie County	C21	RM 157.38	59209	5% Duration	993.92	681.23	677.81	1.55	1.53	14.08	13.23	272.03	298.64	2.32	2.18	3.42	3.42
Prairie County	C21	RM 157.18	58885	5% Duration	993.92	681.08	677.42	1.45	1.43	11.55	10.87	234.67	259.63	2.85	2.68	3.66	3.66
Prairie County	C21	RM 156.99	58595	5% Duration	993.92	680.86	677.32	1.85	1.78	18.37	15.34	172.56	223.78	3	2.5	3.54	3.54
Prairie County	C21	RM 156.8	58287	5% Duration	993.92	680.48	677.32	2.39	2.31	31.59	27.71	145.86	179.57	2.73	2.39	3.16	3.16
Prairie County	C21	RM 156.62	57990	5% Duration	993.92	680.34	677.29	1.68	1.64	15.68	14.73	204.17	238.62	2.71	2.54	3.05	3.05
Prairie County	C21	RM 156.42	57683	5% Duration	993.92	680.2	677.21	1.44	1.44	11.67	11.67	267.92	267.92	2.58	2.58	2.99	2.99
Prairie County	C21	RM 156.24	57378	5% Duration	993.92	679.93	676.91	1.85	1.85	20.23	20.23	243.46	243.46	2.21	2.21	3.02	3.02
Prairie County	C21	RM 156.04	57069	5% Duration	993.92	679.79	676.56	1.48	1.48	11.64	11.64	218.01	218.01	3.08	3.08	3.23	3.23
Prairie County	C21	RM 155.85	56762	5% Duration	993.92	679.63	676.11	1.67	1.67	14.7	14.39	191.49	195.85	3.11	3.05	3.52	3.52
Prairie County	C21	RM 155.66	56455	5% Duration	993.92	679.38	675.96	1.96	1.96	20.84	20.84	174.22	174.22	2.91	2.91	3.42	3.42
Prairie County	C21	RM 155.47	56151	5% Duration	993.92	679.22	675.89	1.6	1.6	14.72	14.55	254.96	257.97	2.43	2.41	3.33	3.33
Prairie County	C21	RM 155.27	55835	5% Duration	993.92	679	675.92	1.62	1.62	15.89	15.89	295.37	295.37	2.08	2.08	3.08	3.08
Prairie County	C21	RM 155.08	55530	5% Duration	993.92	678.74	675.95	1.66	1.66	16.71	16.71	294.26	294.26	2.04	2.04	2.79	2.79
Prairie County	C21	RM 154.88	55209	5% Duration	993.92	678.53	675.64	1.54	1.54	12.53	12.53	293.57	293.57	2.2	2.2	2.89	2.89
Prairie County	C21	RM 154.69	54901	5% Duration	993.92	678.25	675.39	1.82	1.82	20.12	20.12	261.72	261.72	2.08	2.08	2.86	2.86
Prairie County	C21	RM 154.5	54588	5% Duration	993.92	677.97	675.02	1.74	1.74	17.9	17.9	255.4	255.4	2.24	2.24	2.95	2.95
Prairie County	C21	RM 154.3	54273	5% Duration	993.92	677.73	674.8	1.66	1.66	16.5	16.5	276.83	276.83	2.16	2.16	2.93	2.93
Prairie County	C21	RM 154.1	53959	5% Duration	993.92	677.43	674.67	1.81	1.81	19.88	19.88	264.5	264.5	2.07	2.07	2.76	2.76
Prairie County	C21	RM 153.91	53650	5% Duration	993.92	677.23	674.51	1.56	1.56	13.78	13.77	257.8	258	2.48	2.48	2.72	2.72
Prairie County	C21	RM 153.72	53338	5% Duration	993.92	677.03	674.06	1.65	1.65	15.03	15.03	222.79	222.79	2.71	2.71	2.97	2.97
Prairie County	C21	RM 153.52	53023	5% Duration	993.92	676.64	673.78	2.23	2.19	29.57	26.09	202.41	235.81	2.19	1.93	2.86	2.86
Prairie County	C21	RM 153.32	52704	5% Duration	993.92	676.26	673.64	2.02	2.02	24.51	24.51	229.64	229.64	2.14	2.14	2.62	2.62
Prairie County	C21	RM 153.12	52380	5% Duration	993.92	676.02	673.43	1.68	1.68	16.28	16.28	251.45	251.45	2.36	2.36	2.59	2.59
Prairie County	C21	RM 152.92	52065	5% Duration	993.92	675.8	672.88	1.65	1.65	15.5	15.5	254.36	271.6	2.36	2.36	2.92	2.92
Prairie County	C21	RM 152.73	51762	5% Duration	993.92	675.55	672.27	1.76	1.76	18.1	18.1	261.67	261.67	2.16	2.16	3.28	3.28
Prairie County	C21	RM 152.54	51463	5% Duration	993.92	675.3	671.85	1.76	1.76	17.21	17.21	240.24	240.24	2.35	2.35	3.45	3.45
Prairie County	C21	RM 152.35	51157	5% Duration	993.92	675.15	671.41	1.53	1.53	12.7	12.7	222.78	222.78	2.92	2.92	3.74	3.74
Prairie County	C21	RM 152.16	50852	5% Duration	993.92	674.96	671.23	1.65	1.65	15.84	15.84	262.45	262.45	2.3	2.3	3.73	3.73
Prairie County	C21	RM 151.97	50546	5% Duration	993.92	674.8	670.99	1.6	1.59	12.66	11.57	218.12	239.82	2.85	2.6	3.81	3.81
Prairie County	C21	RM 151.77	50227	5% Duration	993.92	674.68	670.87	1.48	1.45	11.33	9.2	198.71	251.06	3.36	2.72	3.81	3.81
Prairie County	C21	RM 151.59	49936	5% Duration	993.92	674.42	670.75	2.1	2.01	23.31	19.56	145.82	187	3.16	2.64	3.67	3.67
Prairie County	C21	RM 151.38	49599	5% Duration	993.92	674.24	670.9	1.74	1.72	16.36	15.13	197.57	215.89	2.89	2.67	3.34	3.34
Prairie County	C21	RM 151.19	49287	5% Duration	993.92	674.1	670.96	1.54	1.54	12.78	12.78	218.47	218.47	2.95	2.95	3.14	3.14
Prairie County	C21	RM 151.01	49012	5% Duration	993.92	673.93	670.91	1.66	1.66	15.08	15.08	281.83	281.83	2.13	2.13	3.02	3.02
Prairie County	C21	RM 150.81	48683	5% Duration	993.92	673.72	670.79	1.52	1.52	13.46	13.46	295.81	295.81	2.22	2.22	2.93	2.93
Prairie County	C21	RM 150.63	48400	5% Duration	1039.23	673.58	670.45	1.35	1.35	10.39	10.39	344.6	344.6	2.24	2.24	3.13	3.13
Prairie County	C21	RM 150.44	48094	5% Duration	1039.23	673.39	669.86	1.62	1.62	11.35	11.18	267.17	271.26	2.4	2.36	3.53	3.53
Prairie County	C21	RM 150.25	47780	5% Duration	1039.23	673.12	669.38	2.01	2.01	23.11	23.11	156.83	156.83	3.29	3.29	3.74	3.74
Prairie County	C21	RM 150.05	47474	5% Duration	1039.23	673.03	669.21	1.52	1.52	11.81	11.81	195.58	195.58	3.49	3.49	3.82	3.82
Prairie County	C21	RM 149.87	47178	5% Duration	1039.23	672.88	669.02	1.61	1.61	14.98	14.98	265.62	265.62	2.43	2.43	3.86	3.86
Prairie County	C21	RM 149.66	46846	5% Duration	1039.23	672.76	668.97	1.38	1.38	9.07	9.07	251.45	251.45	3	3	3.79	3.79
Prairie County	C21	RM 149.48	46551	5% Duration	1039.23	672.53	668.91	1.84	1.84	20	20	251.41	336.31	2.24	2.24	3.62	3.62
Prairie County	C21	RM 149.27	46219	5% Duration	1039.23	672.19	668.94	2.03	1.92	22.62	16.6	197.52	389.97	2.54	1.85	3.25	3.25
Prairie County	D1	RM 149.08	45914	5% Duration	1039.23	672	668.95	1.66	1.66	15.64	15.64	248.72	248.72	2.52	2.52	3.05	3.05
Prairie County	D1	RM 148.89	45608	5% Duration	1039.23	671.86	668.96	1.37	1.37	10.78	10.78	310.91	310.91	2.44	2.44	2.9	2.9
Prairie County	D1	RM 148.7	45301	5% Duration	1039.23	671.66	668.73	1.59	1.59	13.75	13.75	299.98	299.98	2.17	2.17	2.93	2.93
Prairie County	D1	RM 148.5	44987	5% Duration	1039.23	671.45	668.42	1.67	1.67	15.42	14.83	225.34	235.25	2.75	2.65	3.03	3.03
Prairie County	D1	RM 148.3	44667	5% Duration	1039.23	671.21	668.01	1.89	1.87	19.15	18.02	186.64	200.73	2.95	2.77	3.2	3.2
Prairie County	D1	RM 148.11	44353	5% Duration	1039.23	671.06	667.73	1.63	1.63	14.62	14.22	230.09	236.67	2.77	2.69	3.33	3.33
Prairie County	D1	RM 147.93	44062	5% Duration	1039.23	670.88	667.4	1.58	1.58	14.81	14.81	301.62	301.62	2.18	2.18	3.48	3.48
Prairie County	D1	RM 147.74	43761	5% Duration	1039.23	670.69	667.21	1.66	1.61	15.28	11.86	209.9	281.59	2.96	2.29	3.48	3.48
Prairie County	D1	RM 147.55	43454	5% Duration	1039.23	670.52	666.79	1.73	1.65	15.7	11.39	180.97	268.49	3.25	2.34	3.73	3.73
Prairie County	D1	RM 147.34	43128	5% Duration	1039.23	670.32	666.46	1.86	1.77	18.07	14.03	167.89	233.87	3.25	2.51	3.86	3.86

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D1	RM 147.15	42816	5% Duration	1039.23	670.06	666.42	2.05	1.96	23.06	17.91	175.34	244.25	2.82	2.18	3.64	3.64
Prairie County	D1	RM 146.96	42505	5% Duration	1039.23	669.88	666.49	1.78	1.78	16.77	16.77	186.07	186.07	3.14	3.14	3.39	3.39
Prairie County	D1	RM 146.77	42199	5% Duration	1039.23	669.77	666.48	1.54	1.54	12.57	12.57	219.55	219.55	3.08	3.08	3.29	3.29
Prairie County	D1	RM 146.58	41899	5% Duration	1039.23	669.67	666.59	1.33	1.33	9.8	9.8	290.87	290.87	2.69	2.69	3.08	3.08
Prairie County	D1	RM 146.32	41487	5% Duration	1039.23	669.4	666.62	1.68	1.68	15.61	15.61	259.97	259.97	2.38	2.38	2.78	2.78
Prairie County	D1	RM 146	40968	5% Duration	1039.23	669.03	666.48	1.69	1.69	17.02	17.02	268.03	268.03	2.3	2.3	2.55	2.55
Prairie County	D1	RM 145.65	40420	5% Duration	1039.23	668.65	665.52	1.69	1.69	16.32	16.32	233.37	233.37	2.64	2.64	3.13	3.13
Prairie County	D1	RM 145.36	39958	5% Duration	1039.23	668.35	664.91	1.65	1.65	16.35	16.35	255.98	255.98	2.47	2.47	3.44	3.44
Prairie County	D1	RM 145.13	39579	5% Duration	1039.23	668.16	664.58	1.47	1.47	12.23	12.23	253.04	253.04	2.8	2.8	3.58	3.58
Prairie County	D1	RM 144.92	39251	5% Duration	1039.23	668.01	664.24	1.45	1.45	12.47	12.47	256.97	256.97	2.78	2.78	3.77	3.77
Prairie County	D1	RM 144.73	38942	5% Duration	1039.23	667.83	663.99	1.58	1.58	14.91	14.91	255.05	255.05	2.57	2.57	3.84	3.84
Prairie County	D1	RM 144.56	38672	5% Duration	1039.23	667.6	663.14	1.77	1.77	18.05	18.05	242.3	242.3	2.42	2.42	4.46	4.46
Prairie County	D1		38642.5	5% Duration	Bridge												
Prairie County	D1	RM 144.52	38613	5% Duration	1039.23	667.52	663.14	1.83	1.83	19.44	19.44	237.14	237.14	2.39	2.39	4.38	4.38
Prairie County	D1	RM 144.33	38305	5% Duration	1039.23	667.31	664.19	1.71	1.71	16.16	16.16	220.42	220.42	2.75	2.75	3.12	3.12
Prairie County	D1	RM 144.13	37987	5% Duration	1039.23	667.17	664.33	1.47	1.47	12.08	11.95	265	268.04	2.66	2.64	2.84	2.84
Prairie County	D1	RM 143.91	37637	5% Duration	1039.23	666.99	663.96	1.47	1.47	12.42	12.42	296.8	296.8	2.39	2.39	3.03	3.03
Prairie County	D1	RM 143.71	37320	5% Duration	1039.23	666.73	663.43	1.87	1.87	18.89	18.89	186.93	186.93	2.97	2.97	3.3	3.3
Prairie County	D1	RM 143.45	36908	5% Duration	1039.23	666.36	663.01	2.12	2.12	24.66	24.66	172.64	172.64	2.83	2.83	3.35	3.35
Prairie County	D1	RM 143.21	36511	5% Duration	1039.23	666.16	662.92	1.64	1.64	14.45	14.45	216.09	216.09	2.94	2.94	3.24	3.24
Prairie County	D1	RM 142.97	36139	5% Duration	1039.23	666	662.7	1.52	1.52	12.24	12.24	224.89	224.89	3.05	3.05	3.3	3.3
Prairie County	D1	RM 142.71	35717	5% Duration	1039.23	665.67	662.52	1.99	1.99	21.6	21.6	181.8	181.8	2.87	2.87	3.15	3.15
Prairie County	D1	RM 142.46	35322	5% Duration	1039.23	665.49	662.36	1.54	1.54	13.22	13.22	248.31	248.31	2.71	2.71	3.13	3.13
Prairie County	D1	RM 142.23	34952	5% Duration	1039.23	665.29	662.21	1.58	1.58	13.66	13.66	229.59	229.59	2.86	2.86	3.08	3.08
Prairie County	D1	RM 142.02	34614	5% Duration	1039.23	664.98	662.21	1.95	1.91	23.34	21.71	260.76	292.5	2	1.86	2.77	2.77
Prairie County	D1	RM 141.8	34258	5% Duration	1039.23	664.75	662.01	1.41	1.41	11.86	11.86	357.28	357.28	2.06	2.06	2.74	2.74
Prairie County	D1	RM 141.6	33942	5% Duration	1039.23	664.44	661.72	1.84	1.84	19.41	19.41	268.75	268.75	2.11	2.11	2.72	2.72
Prairie County	D1	RM 141.42	33642	5% Duration	1039.23	664.29	661.32	1.4	1.4	10.95	10.95	320.85	320.85	2.32	2.32	2.97	2.97
Prairie County	D1	RM 141.22	33325	5% Duration	1039.23	664.13	660.91	1.41	1.41	11.58	11.58	323.88	323.88	2.28	2.28	3.22	3.22
Prairie County	D1	RM 141.02	33011	5% Duration	1039.23	663.89	660.58	1.78	1.78	16.89	16.89	190.81	190.81	3.06	3.06	3.31	3.31
Prairie County	D1	RM 140.84	32709	5% Duration	1039.23	663.73	660.35	1.65	1.65	15.17	15.17	236.65	236.65	2.66	2.66	3.38	3.38
Prairie County	D1	RM 140.64	32394	5% Duration	1039.23	663.62	660.07	1.39	1.39	9.85	9.85	232.16	232.16	3.21	3.21	3.55	3.55
Prairie County	D1	RM 140.44	32074	5% Duration	1039.23	663.44	659.63	1.68	1.68	14.95	14.95	219.52	219.52	2.82	2.82	3.81	3.81
Prairie County	D1	RM 140.23	31738	5% Duration	1039.23	663.15	659.62	2.01	2.01	21.91	21.91	197.11	197.11	2.63	2.63	3.53	3.53
Prairie County	D1	RM 140.03	31420	5% Duration	1039.23	662.97	659.59	1.66	1.66	15.14	15.14	241.62	241.62	2.6	2.6	3.38	3.38
Prairie County	D1	RM 139.84	31118	5% Duration	1039.23	662.73	659.19	1.73	1.73	18.33	18.33	296.09	296.09	2.03	2.03	3.54	3.54
Prairie County	D1	RM 139.64	30801	5% Duration	1039.23	662.56	658.96	1.55	1.55	12.68	12.68	216.56	216.56	3.1	3.1	3.6	3.6
Prairie County	D1	RM 139.44	30466	5% Duration	1039.23	662.38	658.72	1.62	1.62	14.74	14.74	244.54	244.54	2.62	2.62	3.66	3.66
Prairie County	D1	RM 139.23	30138	5% Duration	1039.23	662.23	658.34	1.51	1.51	13.03	13.03	207.75	207.75	3.32	3.32	3.89	3.89
Prairie County	D1	RM 139.02	29799	5% Duration	1039.23	661.95	658.14	1.98	1.98	24.44	24.44	168.1	168.1	3.12	3.12	3.81	3.81
Prairie County	D1	RM 138.81	29470	5% Duration	1039.23	661.86	658.11	1.38	1.38	10.86	10.86	214.19	214.19	3.52	3.52	3.75	3.75
Prairie County	D1	RM 138.62	29157	5% Duration	1039.23	661.74	657.94	1.5	1.5	11.35	11.35	208.75	208.75	3.32	3.32	3.8	3.8
Prairie County	D1	RM 138.41	28823	5% Duration	1039.23	661.55	657.82	1.74	1.74	17.23	17.23	195.06	195.06	3.05	3.05	3.73	3.73
Prairie County	D1	RM 138.22	28519	5% Duration	1039.23	661.38	657.8	1.72	1.72	15.32	15.32	193.92	193.92	3.11	3.11	3.58	3.58
Prairie County	D1	RM 138.02	28200	5% Duration	1039.23	661.32	657.74	1.26	1.26	8.64	8.64	243.77	243.77	3.4	3.4	3.58	3.58
Prairie County	D1	RM 137.82	27874	5% Duration	1039.23	661.18	656.95	1.46	1.46	12.42	12.42	252.59	252.59	2.81	2.81	4.23	4.23
Prairie County	D1	RM 137.62	27552	5% Duration	1039.23	660.96	656.75	1.68	1.68	16.87	16.87	226.05	366.14	2.73	2.73	4.21	4.21
Prairie County	D1	RM 137.42	27247	5% Duration	1039.23	660.77	656.66	1.75	1.75	17.16	17.16	189.67	189.67	3.13	3.13	4.11	4.11
Prairie County	D1	RM 137.24	26944	5% Duration	1039.23	660.61	656.66	1.7	1.7	16.37	16.37	189.72	189.72	3.22	3.22	3.95	3.95
Prairie County	D1	RM 137.04	26627	5% Duration	1042.06	660.45	655.41	1.66	1.66	15.71	15.71	192.82	192.82	3.25	3.25	5.04	5.04
Prairie County	D1		26616.5	5% Duration	Bridge												
Prairie County	D1	RM 137.02	26606	5% Duration	1042.06	660.42	655.41	1.68	1.68	16	16	192.59	192.59	3.23	3.23	5.01	5.01
Prairie County	D2	RM 136.84	26475	5% Duration	1042.06	660.38	656.46	1.49	1.49	11.7	11.7	198.59	198.59	3.52	3.52	3.92	3.92
Prairie County	D2		26471.5	5% Duration	Bridge												
Prairie County	D2	RM 136.65	26468	5% Duration	1042.06	660.37	656.45	1.49	1.49	12.04	12.04	200.65	200.65	3.48	3.48	3.92	3.92
Prairie County	D2	RM 136.44	26317	5% Duration	1042.06	660.34	656.37	1.33	1.33	9.63	9.63	216.52	216.52	3.61	3.61	3.97	3.97
Prairie County	D2	RM 136.23	26001	5% Duration	1042.06	660.18	656.19	1.61	1.61	12.71	12.71	224.41	224.41	2.88	2.88	3.99	3.99
Prairie County	D2	RM 136.04	25673	5% Duration	1042.06	660.07	656.01	1.51	1.51	11.17	11.17	193.77	193.77	3.57	3.57	4.06	4.06
Prairie County	D2	RM 135.85	25337	5% Duration	1042.06	659.9	655.93	1.73	1.73	15.45	15.45	181.53	181.53	3.33	3.33	3.97	3.97
Prairie County	D2	RM 135.66	25033	5% Duration	1042.06	659.78	655.91	1.6	1.6	13.19	13.19	193.45	193.45	3.37	3.37	3.87	3.87

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D2	RM 135.46	24715	5% Duration	1042.06	659.64	655.86	1.59	1.59	15.09	15.09	193.32	193.32	3.39	3.39	3.78	3.78
Prairie County	D2	RM 135.24	24417	5% Duration	1042.06	659.57	655.68	1.28	1.28	9.37	9.37	223.7	223.7	3.64	3.64	3.89	3.89
Prairie County	D2	RM 135	24090	5% Duration	1042.06	659.43	655.56	1.49	1.49	12.93	12.93	234.34	234.34	2.99	2.99	3.87	3.87
Prairie County	D2	RM 134.78	23742	5% Duration	1042.06	659.3	655.36	1.39	1.39	10.93	10.93	214.18	214.18	3.5	3.5	3.94	3.94
Prairie County	D2	RM 134.58	23351	5% Duration	1042.06	659.11	655.29	1.64	1.64	15.89	15.89	184.78	184.78	3.44	3.44	3.82	3.82
Prairie County	D2	RM 134.39	23000	5% Duration	1042.06	658.92	655.24	1.64	1.64	16.67	16.67	211.03	211.03	3.01	3.01	3.68	3.68
Prairie County	D2	RM 134.19	22682	5% Duration	1042.06	658.74	655.11	1.61	1.61	14.78	14.78	258.68	306.11	2.5	2.5	3.63	3.63
Prairie County	D2	RM 133.99	22372	5% Duration	1042.06	658.6	654.97	1.48	1.48	11.34	11.34	239.64	239.64	2.93	2.93	3.63	3.63
Prairie County	D2	RM 133.79	22053	5% Duration	1042.06	658.42	655	1.68	1.68	15.39	15.39	222.8	222.8	2.79	2.79	3.42	3.42
Prairie County	D2	RM 133.59	21733	5% Duration	1042.06	658.25	654.96	1.59	1.59	13.83	13.83	234.21	234.21	2.8	2.8	3.29	3.29
Prairie County	D2	RM 133.41	21417	5% Duration	1042.06	658.13	654.78	1.46	1.46	11.39	11.39	242.22	242.22	2.96	2.96	3.35	3.35
Prairie County	D2	RM 133.21	21104	5% Duration	1042.06	657.97	654.64	1.59	1.59	13.66	13.66	225.2	225.2	2.91	2.91	3.33	3.33
Prairie County	D2	RM 133.02	20811	5% Duration	1042.06	657.83	654.53	1.55	1.55	13.14	13.14	237.43	237.43	2.83	2.83	3.3	3.3
Prairie County	D2	RM 132.83	20491	5% Duration	1042.06	657.64	654.29	1.64	1.64	15.51	15.51	260.04	260.04	2.44	2.44	3.35	3.35
Prairie County	D2	RM 132.63	20184	5% Duration	1042.06	657.42	654.04	1.72	1.7	16.73	15	241.8	273.73	2.5	2.24	3.38	3.38
Prairie County	D2	RM 132.42	19875	5% Duration	1042.06	657.24	653.98	1.65	1.63	14.65	13.69	211.75	230.59	2.96	2.77	3.26	3.26
Prairie County	D2	RM 132.23	19553	5% Duration	1042.06	657.13	653.88	1.4	1.37	10.5	9.87	250.47	273.66	2.95	2.77	3.25	3.25
Prairie County	D2	RM 132.02	19225	5% Duration	1042.06	656.92	653.63	1.72	1.72	16.6	16.6	232.02	232.02	2.61	2.61	3.29	3.29
Prairie County	D2	RM 131.81	18910	5% Duration	1042.06	656.66	653.37	1.85	1.85	19.36	19.36	219.24	219.24	2.57	2.57	3.29	3.29
Prairie County	D2	RM 131.58	18573	5% Duration	1042.06	656.53	653.02	1.45	1.45	11.17	11.17	235.86	237.56	3.05	3.05	3.51	3.51
Prairie County	D2	RM 131.38	18237	5% Duration	1042.06	656.38	652.75	1.57	1.52	12.89	12.07	205.57	230.17	3.17	2.97	3.63	3.63
Prairie County	D2	RM 131.18	17875	5% Duration	1042.06	656.15	652.49	1.8	1.8	17.51	17.51	200.12	200.12	2.9	2.9	3.66	3.66
Prairie County	D2	RM 130.98	17548	5% Duration	1042.06	655.95	652.34	1.8	1.8	17.36	17.32	194.24	194.75	2.98	2.98	3.61	3.61
Prairie County	D2	RM 130.78	17227	5% Duration	1042.06	655.8	652.27	1.64	1.64	14.27	14.27	207	207	3.07	3.07	3.53	3.53
Prairie County	D2	RM 130.59	16914	5% Duration	1042.06	655.71	652.16	1.37	1.37	9.74	9.74	231.65	231.65	3.29	3.29	3.55	3.55
Prairie County	D2	RM 130.39	16588	5% Duration	1042.06	655.57	651.95	1.55	1.55	12.51	12.51	205.83	205.83	3.27	3.27	3.62	3.62
Prairie County	D2	RM 130.19	16280	5% Duration	1042.06	655.4	651.81	1.68	1.68	15.35	15.35	211.89	211.89	2.92	2.92	3.59	3.59
Prairie County	D2	RM 130	15965	5% Duration	1042.06	655.27	651.57	1.49	1.49	11.95	11.95	235.82	235.82	2.96	2.96	3.7	3.7
Prairie County	D2	RM 129.81	15649	5% Duration	1042.06	655.17	651.47	1.38	1.38	9.94	9.94	231.08	231.08	3.26	3.26	3.7	3.7
Prairie County	D2	RM 129.62	15337	5% Duration	1042.06	655.01	651.34	1.61	1.61	13.63	13.63	207.15	207.15	3.13	3.13	3.67	3.67
Prairie County	D2	RM 129.43	15031	5% Duration	1042.06	654.91	651.21	1.46	1.46	11.05	11.05	219.83	219.83	3.26	3.26	3.7	3.7
Prairie County	D2	RM 129.24	14724	5% Duration	1047.72	654.75	651.06	1.65	1.65	14.47	14.47	208.64	208.64	3.05	3.05	3.69	3.69
Prairie County	D2	RM 129.04	14417	5% Duration	1047.72	654.57	651.06	1.74	1.74	16.37	16.37	203.83	203.83	2.95	2.95	3.51	3.51
Prairie County	D2	RM 128.82	14112	5% Duration	1047.72	654.39	651.05	1.75	1.75	16.51	16.51	203.23	232.7	2.95	2.95	3.34	3.34
Prairie County	D2	RM 128.62	13798	5% Duration	1047.72	654.25	651.08	1.56	1.56	13.05	13.05	223.93	223.93	3	3	3.17	3.17
Prairie County	D2	RM 128.41	13446	5% Duration	1047.72	654.09	651.07	1.54	1.54	13.08	13.08	246.93	246.93	2.75	2.75	3.02	3.02
Prairie County	D2	RM 128.21	13125	5% Duration	1047.72	653.92	650.98	1.6	1.6	14.09	14.09	239.75	239.75	2.74	2.74	2.94	2.94
Prairie County	D2	RM 127.98	12790	5% Duration	1047.72	653.75	650.84	1.54	1.54	13.06	13.06	244.23	244.23	2.78	2.78	2.91	2.91
Prairie County	D2	RM 127.75	12473	5% Duration	1047.72	653.61	650.59	1.46	1.46	12.18	12.18	284.84	284.84	2.51	2.51	3.01	3.01
Prairie County	D2	RM 127.55	12112	5% Duration	1047.72	653.42	650.35	1.47	1.47	12.24	12.24	280.21	280.21	2.54	2.54	3.07	3.07
Prairie County	D2	RM 127.27	11729	5% Duration	1047.72	653.24	649.95	1.47	1.47	11.96	11.96	269.51	269.51	2.65	2.65	3.29	3.29
Prairie County	D2	RM 126.97	11415	5% Duration	1047.72	653.05	649.68	1.66	1.66	14.91	14.91	215.58	215.58	2.93	2.93	3.37	3.37
Prairie County	D2	RM 126.71	10962	5% Duration	1047.72	652.84	649.49	1.6	1.6	13.53	13.53	210.98	210.98	3.11	3.11	3.35	3.35
Prairie County	D2	RM 126.43	10478	5% Duration	1047.72	652.68	649.32	1.33	1.33	9.54	9.54	271.74	271.74	2.9	2.9	3.36	3.36
Prairie County	D2	RM 126.42	10074	5% Duration	1047.72	652.45	649.05	1.64	1.64	14.99	14.99	241.72	241.72	2.64	2.64	3.4	3.4
Prairie County	D2	RM 126.41	9625	5% Duration	1047.72	652.21	648.27	1.62	1.62	14.09	14.09	216.34	216.34	2.98	2.98	3.94	3.94
Prairie County	D2		9598.5	5% Duration	Bridge												
Prairie County	D2	RM 126.4	9572	5% Duration	1047.72	652.16	648.27	1.65	1.65	14.61	14.61	216.02	216.02	2.94	2.94	3.89	3.89
Prairie County	D3	RM 126.38	9533	5% Duration	1047.72	652.14	648.27	1.66	1.66	14.87	14.87	215.87	215.87	2.92	2.92	3.87	3.87
Prairie County	D3		9523	5% Duration	Bridge												
Prairie County	D3	RM 126.36	9513	5% Duration	1047.72	652.12	648.27	1.67	1.67	15.11	15.11	215.74	215.74	2.9	2.9	3.85	3.85
Prairie County	D3	RM 126.22	9286	5% Duration	1047.72	652.03	648.8	1.48	1.48	11.82	11.82	237.64	237.64	2.97	2.97	3.23	3.23
Prairie County	D3	RM 126.03	8974	5% Duration	1047.72	651.9	648.71	1.45	1.45	11.65	11.65	267.29	267.29	2.7	2.7	3.19	3.19
Prairie County	D3	RM 125.82	8648	5% Duration	1047.72	651.73	648.36	1.53	1.53	13.32	13.32	274.38	274.38	2.5	2.5	3.37	3.37
Prairie County	D3	RM 125.63	8335	5% Duration	1047.72	651.6	648.12	1.41	1.41	10.75	10.75	255.91	255.91	2.91	2.91	3.48	3.48
Prairie County	D3	RM 125.43	8020	5% Duration	1047.72	651.46	647.8	1.51	1.51	11.85	11.61	213.41	217.99	3.26	3.19	3.66	3.66
Prairie County	D3	RM 125.24	7711	5% Duration	1047.72	651.39	647.26	1.31	1.31	8.35	8.35	222.72	222.72	3.58	3.58	4.13	4.13
Prairie County	D3	RM 125.05	7403	5% Duration	1047.72	651.3	647.23	1.39	1.39	9.77	9.77	206.52	206.52	3.64	3.64	4.07	4.07
Prairie County	D3	RM 124.83	7059	5% Duration	1047.72	651.21	647.25	1.33	1.33	9.05	9.05	231.01	231.01	3.42	3.42	3.96	3.96
Prairie County	D3	RM 124.62	6712	5% Duration	1047.72	651.1	647.25	1.37	1.37	9.9	9.9	249.93	249.93	3.07	3.07	3.85	3.85

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Prairie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Prairie County	D3	RM 124.41	6375	5% Duration	1047.72	650.92	647.27	1.61	1.61	13.85	13.85	213.07	213.07	3.05	3.05	3.65	3.65
Prairie County	D3	RM 124.15	5960	5% Duration	1047.72	650.67	647.27	1.75	1.75	16.98	16.98	225.07	225.07	2.67	2.67	3.4	3.4
Prairie County	D3	RM 123.94	5627	5% Duration	1047.72	650.37	647.27	2.01	2.01	22.3	22.3	187.55	187.55	2.77	2.77	3.1	3.1
Prairie County	D3	RM 123.74	5312	5% Duration	1047.72	650.11	647.25	1.96	1.96	21.46	21.46	201.19	201.19	2.65	2.65	2.86	2.86
Prairie County	D3	RM 123.56	5014	5% Duration	1047.72	650.05	647.24	1.25	1.25	8.66	8.66	308.5	315.23	2.71	2.71	2.81	2.81
Prairie County	D3	RM 123.24	4500	5% Duration	1047.72	649.8	647.19	1.28	1.28	12.08	12.08	467.78	467.78	1.74	1.74	2.61	2.61
Prairie County	D3	RM 122.99	4116	5% Duration	1047.72	649.61	646.67	1.18	1.18	8.3	8.3	412.74	412.74	2.16	2.16	2.94	2.94
Prairie County	D3	RM 122.76	3746	5% Duration	1047.72	649.45	646.22	1.26	1.26	9.27	9.27	355.32	355.32	2.34	2.34	3.23	3.23
Prairie County	D3	RM 122.55	3414	5% Duration	1047.72	649.29	645.7	1.46	1.46	11.38	11.38	235.37	235.37	3.05	3.05	3.59	3.59
Prairie County	D3	RM 122.3	3012	5% Duration	1047.72	649.06	645.57	1.71	1.71	15.77	15.77	207.35	207.35	2.95	2.95	3.49	3.49
Prairie County	D3	RM 122.08	2651	5% Duration	1047.72	648.86	645.49	1.69	1.69	15.2	15.2	234.25	234.25	2.65	2.65	3.37	3.37
Prairie County	D3	RM 121.88	2338	5% Duration	1047.72	648.7	645.42	1.58	1.58	12.56	12.56	238.44	238.44	2.79	2.79	3.28	3.28
Prairie County	D3	RM 121.66	1982	5% Duration	1047.72	648.52	645.3	1.64	1.64	14.28	14.28	216.87	216.87	2.95	2.95	3.22	3.22
Prairie County	D3	RM 121.46	1651	5% Duration	1047.72	648.34	645.06	1.65	1.65	15.18	15.18	236.56	236.56	2.68	2.68	3.28	3.28
Prairie County	D3	RM 121.24	1304	5% Duration	1047.72	648.08	644.99	1.8	1.8	18.06	18.06	238.28	238.28	2.44	2.44	3.09	3.09
Prairie County	D3	RM 121.02	957	5% Duration	1047.72	647.85	644.88	1.7	1.69	15.23	14.58	252.66	265.04	2.44	2.33	2.97	2.97
Prairie County	D3	RM 120.84	660	5% Duration	1047.72	647.66	644.78	1.65	1.65	16.5	16.5	247.54	247.54	2.57	2.57	2.88	2.88
Prairie County	D3	RM 120.64	350	5% Duration	1047.72	647.5	644.42	1.55	1.55	13.11	13.11	234.74	234.74	2.87	2.87	3.08	3.08

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D3	RM 120.37	90975.57	5% Duration	1047.86	647.42	643.94	1.61	1.61	14.67	14.08	252.24	280.17	2.57	2.47	3.47	3.47
Dawson County	D3	RM 120.28	90838.07	5% Duration	1047.86	647.35	643.78	1.6	1.57	13.68	12.55	218.39	245	2.98	2.73	3.56	3.56
Dawson County	D3	RM 120.18	90675.23	5% Duration	1047.86	647.28	643.7	1.56	1.53	12.99	11.88	213.48	245.02	3.06	2.8	3.57	3.57
Dawson County	D3	RM 120.00	90388.96	5% Duration	1047.86	647.18	643.56	1.43	1.42	10.66	10.39	226.64	233.35	3.23	3.16	3.61	3.61
Dawson County	D3	RM 119.84	90136.35	5% Duration	1047.86	647.07	643.44	1.52	1.51	11.98	11.82	213.73	216.77	3.23	3.19	3.63	3.63
Dawson County	D3	RM 119.68	89873.82	5% Duration	1047.86	646.94	643.31	1.67	1.67	14.43	14.42	188.17	188.34	3.33	3.33	3.62	3.62
Dawson County	D3	RM 119.53	89627.16	5% Duration	1047.86	646.85	643.2	1.53	1.53	12.1	12.1	202.31	202.31	3.38	3.38	3.66	3.66
Dawson County	D3	RM 119.39	89404.11	5% Duration	1047.86	646.78	643.09	1.42	1.42	10.61	10.32	231.36	238.62	3.18	3.1	3.7	3.7
Dawson County	D3	RM 119.26	89201.38	5% Duration	1047.86	646.71	642.99	1.43	1.43	11.22	11.05	263.7	268.03	2.78	2.74	3.72	3.72
Dawson County	D3	RM 119.12	88969.13	5% Duration	1047.86	646.58	642.87	1.62	1.59	13.57	12.48	193.4	233.97	3.34	3.07	3.7	3.7
Dawson County	D3	RM 119.00	88780.83	5% Duration	1047.86	646.5	642.78	1.6	1.58	13.27	12.06	199.46	222.24	3.28	2.98	3.72	3.72
Dawson County	D3	RM 118.85	88537.07	5% Duration	1047.86	646.42	642.66	1.45	1.43	11.22	10.35	241.08	265.86	2.99	2.76	3.76	3.76
Dawson County	D3	RM 118.72	88336.12	5% Duration	1047.86	646.37	642.56	1.28	1.25	8.39	7.43	237.19	277.47	3.42	3.03	3.81	3.81
Dawson County	D3	RM 118.60	88130.39	5% Duration	1047.86	646.29	642.46	1.43	1.42	10.58	9.79	220.72	241.27	3.31	3.07	3.83	3.83
Dawson County	D3	RM 118.47	87924.15	5% Duration	1047.86	646.16	642.37	1.68	1.65	15.2	13.94	211.72	238.11	2.92	2.68	3.8	3.8
Dawson County	D3	RM 118.34	87719.85	5% Duration	1047.86	645.95	642.27	2.05	2.01	23.27	21.75	184.9	205.19	2.72	2.54	3.68	3.68
Dawson County	D3	RM 118.21	87507.02	5% Duration	1047.86	645.87	642.16	1.66	1.63	14.1	12.9	175.82	199.11	3.53	3.23	3.71	3.71
Dawson County	D3	RM 118.07	87276.02	5% Duration	1050.69	645.78	642.05	1.49	1.49	12.76	12.76	296.76	296.76	2.38	2.38	3.73	3.73
Dawson County	D4	RM 117.90	87004.77	5% Duration	1050.69	645.67	641.92	1.4	1.31	10.7	7.84	234.19	378.62	2.9	2.11	3.75	3.75
Dawson County	D4	RM 117.77	86795.88	5% Duration	1050.69	645.57	641.81	1.51	1.39	12.49	9.08	215.72	375.03	2.79	2.02	3.75	3.75
Dawson County	D4	RM 117.62	86560.03	5% Duration	1050.69	645.5	641.7	1.29	1.23	8.82	7.23	247.32	332.62	3.14	2.57	3.8	3.8
Dawson County	D4	RM 117.46	86294.2	5% Duration	1050.69	645.34	641.57	1.7	1.61	15.24	12.41	183	254.2	3.17	2.57	3.77	3.77
Dawson County	D4	RM 117.33	86073.88	5% Duration	1050.69	645.18	641.46	1.92	1.81	18.63	15.36	136.34	193.94	3.67	3	3.72	3.72
Dawson County	D4	RM 117.16	85808.16	5% Duration	1050.69	645.12	641.33	1.5	1.42	11.48	9.39	182.25	255.52	3.56	2.9	3.78	3.78
Dawson County	D4	RM 117.03	85604.68	5% Duration	1050.69	645.06	641.3	1.32	1.29	9.49	8.97	243.69	294.9	2.92	2.76	3.76	3.76
Dawson County	D4	RM 116.87	85336.88	5% Duration	1050.69	644.98	641.29	1.32	1.22	9.36	7.32	238.63	363.63	3.02	2.36	3.69	3.69
Dawson County	D4	RM 116.69	85043.25	5% Duration	1050.69	644.83	641.44	1.49	1.44	12.89	11.06	279.08	360.16	2.36	2.03	3.39	3.39
Dawson County	D4	RM 116.56	84823.15	5% Duration	1050.69	644.64	641.34	1.72	1.69	17.17	15.58	233.15	293.26	2.34	2.12	3.3	3.3
Dawson County	D4	RM 116.39	84558.58	5% Duration	1050.69	644.54	641.21	1.35	1.32	10.22	9.29	269.7	330.63	2.64	2.4	3.33	3.33
Dawson County	D4	RM 116.22	84287.19	5% Duration	1050.69	644.44	641	1.33	1.33	9.45	9.05	259.34	271.69	3.04	2.92	3.44	3.44
Dawson County	D4	RM 116.05	84007.59	5% Duration	1050.69	644.3	640.84	1.56	1.52	12.87	11.68	213.93	243.5	3.1	2.83	3.46	3.46
Dawson County	D4	RM 115.87	83722.29	5% Duration	1050.69	644.13	640.8	1.72	1.67	16.27	14.57	214.27	251.29	2.79	2.51	3.33	3.33
Dawson County	D4	RM 115.73	83500.35	5% Duration	1050.69	643.99	640.69	1.72	1.69	16.84	15.68	240.33	267.25	2.49	2.33	3.29	3.29
Dawson County	D4	RM 115.61	83294.37	5% Duration	1050.69	643.89	640.59	1.35	1.34	11.21	10.62	385.01	412.36	2	1.9	3.3	3.3
Dawson County	D4	RM 115.45	83034.82	5% Duration	1050.69	643.73	640.37	1.46	1.43	12.31	11.21	297.52	335.94	2.4	2.18	3.37	3.37
Dawson County	D4	RM 115.29	82782.88	5% Duration	1050.69	643.59	640.34	1.49	1.47	13.1	11.94	312.24	350.6	2.24	2.04	3.24	3.24
Dawson County	D4	RM 115.09	82480.02	5% Duration	1050.69	643.49	640.2	1.17	1.16	7.56	6.97	324	355.22	2.76	2.54	3.3	3.3
Dawson County	D4	RM 114.96	82177.99	5% Duration	1050.69	643.36	640	1.41	1.4	10.84	9.73	260.57	292.66	2.86	2.56	3.36	3.36
Dawson County	D4	RM 114.74	81836.48	5% Duration	1050.69	643.06	639.98	2.02	2.02	21.99	21.99	178.92	178.92	2.91	2.91	3.08	3.08
Dawson County	D4	RM 114.58	81577.9	5% Duration	1050.69	642.98	639.46	1.51	1.41	12.13	10.04	195.77	328.21	3.14	2.58	3.53	3.53
Dawson County	D4	RM 114.42	81309.47	5% Duration	1050.69	642.88	639.33	1.45	1.45	11.34	11.34	245.72	245.72	2.95	2.95	3.55	3.55
Dawson County	D4	RM 114.28	81078.59	5% Duration	1050.69	642.76	639.21	1.6	1.6	13.49	13.48	212.78	212.89	3.09	3.09	3.54	3.54
Dawson County	D4	RM 114.11	80813.63	5% Duration	1050.69	642.62	639.2	1.65	1.65	14.51	14.12	205.77	212.11	3.09	3.01	3.42	3.42
Dawson County	D4	RM 113.97	80580.15	5% Duration	1050.69	642.47	639.45	1.75	1.75	17.06	16.66	224.45	230.52	2.67	2.61	3.02	3.02
Dawson County	D4	RM 113.79	80292.13	5% Duration	1050.69	642.24	639.45	1.89	1.81	20.48	17.88	201.08	270.08	2.45	2.15	2.79	2.79
Dawson County	D4	RM 113.60	79987.05	5% Duration	1050.69	642.15	639.2	1.3	1.12	9.21	6.83	179.84	456.05	2.8	2.07	2.95	2.95
Dawson County	D4	RM 113.43	79712.89	5% Duration	1050.69	642.02	638.73	1.52	1.31	12.11	8.48	173.35	365.76	3.16	2.2	3.29	3.29
Dawson County	D4	RM 113.24	79405.49	5% Duration	1050.69	641.77	638.43	2.01	1.77	21.31	15.55	130.36	254.34	3.24	2.33	3.33	3.33
Dawson County	D4	RM 113.08	79152.39	5% Duration	1050.69	641.61	638.37	1.89	1.68	19.04	14.58	138.2	263.68	3.13	2.37	3.24	3.24
Dawson County	D4	RM 112.94	78925.1	5% Duration	1050.69	641.55	638.26	1.37	1.25	10.19	8.47	191.9	344.61	2.95	2.44	3.29	3.29
Dawson County	D4	RM 112.74	78585.88	5% Duration	1050.69	641.35	638.09	1.6	1.51	14.62	12.14	237.95	331.79	2.52	2.09	3.26	3.26
Dawson County	D4	RM 112.59	78355.25	5% Duration	1050.69	641.12	637.98	1.86	1.79	20.89	16.83	269.08	354.22	2.06	1.66	3.14	3.14
Dawson County	D4	RM 112.37	78008.78	5% Duration	1050.69	640.98	637.88	1.34	1.18	10.13	7.7	206.92	484.13	2.62	1.98	3.1	3.1
Dawson County	D4	RM 112.19	77721.27	5% Duration	1050.69	640.83	637.59	1.45	1.39	11.54	10.64	211.02	299.14	2.74	2.53	3.24	3.24
Dawson County	D4	RM 111.89	77240.22	5% Duration	1050.69	640.59	637.16	1.56	1.56	13.17	13.17	233.97	233.97	2.88	2.88	3.43	3.43
Dawson County	D4	RM 111.42	76486.24	5% Duration	1050.69	640.26	636.91	1.41	1.41	11.1	11.07	286.71	287.28	2.6	2.6	3.35	3.35
Dawson County	D4	RM 111.26	76213.83	5% Duration	1050.69	640.14	636.66	1.37	1.37	10.94	10.94	328.42	328.42	2.33	2.33	3.48	3.48
Dawson County	D4	RM 111.09	75911.9	5% Duration	1050.69	639.92	636.51	1.7	1.7	15.93	15.93	223.38	223.38	2.77	2.77	3.41	3.41
Dawson County	D4	RM 110.95	75678.54	5% Duration	1050.69	639.77	636.4	1.76	1.76	16.42	16.35	194.34	195.15	3.08	3.06	3.37	3.37
Dawson County	D4	RM 110.78	75415.61	5% Duration	1050.69	639.6	636.27	1.85	1.85	18.16	18.16	180.07	180.07	3.15	3.15	3.33	3.33
Dawson County	D4	RM 110.55	75040.65	5% Duration	1050.69	639.44	636.09	1.54	1.54	12.86	12.86	239.81	239.81	2.85	2.85	3.35	3.35

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D4	RM 110.39	74780.03	5% Duration	1050.69	639.36	635.96	1.34	1.34	9.89	9.89	289.54	289.54	2.71	2.71	3.39	3.39
Dawson County	D4	RM 110.17	74428.56	5% Duration	1050.69	639.12	635.79	1.69	1.69	16.68	16.53	269.62	272.29	2.31	2.29	3.32	3.32
Dawson County	D4	RM 109.95	74074.87	5% Duration	1050.69	638.96	635.62	1.37	1.37	10.48	10.46	297.06	297.47	2.59	2.59	3.34	3.34
Dawson County	D4	RM 109.75	73741.09	5% Duration	1050.69	638.8	635.46	1.43	1.43	11.39	11.39	270.59	270.59	2.71	2.71	3.35	3.35
Dawson County	D4	RM 109.54	73418.83	5% Duration	1050.69	638.67	635.3	1.39	1.39	10.76	10.37	285.21	296.21	2.65	2.56	3.37	3.37
Dawson County	D4	RM 109.37	73150.54	5% Duration	1050.69	638.52	635.17	1.58	1.51	13.58	11.61	224.7	280.68	2.89	2.47	3.35	3.35
Dawson County	D4	RM 109.19	72864.56	5% Duration	1050.69	638.4	635.03	1.5	1.5	12.19	12.16	238.65	239.3	2.93	2.92	3.37	3.37
Dawson County	D4	RM 109.04	72628	5% Duration	1050.69	638.24	634.92	1.76	1.76	16.37	16.3	193.64	194.53	3.09	3.08	3.32	3.32
Dawson County	D4	RM 108.86	72339.73	5% Duration	1050.69	638.14	634.77	1.4	1.36	11.06	10.41	287.17	326.96	2.5	2.36	3.36	3.36
Dawson County	D4	RM 108.70	72072.36	5% Duration	1050.69	638.04	634.65	1.27	1.24	9.05	8.48	291.57	341.66	2.65	2.48	3.4	3.4
Dawson County	D4	RM 108.55	71827.97	5% Duration	1050.69	637.96	634.53	1.23	1.23	8.63	8.63	341.64	341.64	2.5	2.5	3.43	3.43
Dawson County	D4	RM 108.40	71587.18	5% Duration	1050.69	637.82	634.41	1.49	1.49	11.74	11.74	259.4	259.4	2.72	2.72	3.41	3.41
Dawson County	D4	RM 108.25	71345.86	5% Duration	1050.69	637.72	634.29	1.47	1.47	11.36	11.35	275.7	275.92	2.6	2.6	3.42	3.42
Dawson County	D4	RM 108.12	71131.88	5% Duration	1050.69	637.65	634.19	1.31	1.31	9.45	9.33	289.42	293.79	2.77	2.73	3.46	3.46
Dawson County	D4	RM 107.98	70905.01	5% Duration	1050.69	637.54	634.08	1.46	1.46	11.46	11.46	245.27	245.27	2.94	2.94	3.46	3.46
Dawson County	D4	RM 107.82	70651.22	5% Duration	1050.69	637.41	633.95	1.57	1.56	13.27	12.91	231.93	239.41	2.89	2.82	3.46	3.46
Dawson County	D4	RM 107.68	70418.24	5% Duration	1050.69	637.3	633.84	1.58	1.56	13.33	12.57	219.72	235.45	3.02	2.85	3.46	3.46
Dawson County	D4	RM 107.50	70132.11	5% Duration	1050.69	637.19	633.17	1.46	1.43	11.33	10.15	239.71	272.17	3	2.69	4.02	4.02
Dawson County	D4	RM 107.31	69834.56	5% Duration	1050.69	637.05	633.23	1.51	1.49	12.64	12.19	264.38	275.91	2.63	2.55	3.82	3.82
Dawson County	D4	RM 107.13	69541.52	5% Duration	1050.69	636.89	633.98	1.51	1.49	13.58	13.07	322.33	341.59	2.14	2.07	2.91	2.91
Dawson County	D5	RM 106.98	69305.02	5% Duration	1050.69	636.77	634.16	1.29	1.27	10.43	10.3	421.85	443.44	1.88	1.86	2.61	2.61
Dawson County	D5	RM 106.85	69065.27	5% Duration	1050.69	636.64	633.6	1.28	1.27	10.25	9.9	398.61	451.53	1.9	1.84	3.04	3.04
Dawson County	D5	RM 106.65	68764.02	5% Duration	1050.69	636.43	632.98	1.49	1.45	12.7	11.96	296.7	346.91	2.21	2.08	3.45	3.45
Dawson County	D5	RM 106.47	68475.87	5% Duration	1050.69	636.25	632.51	1.5	1.47	13.37	12.92	305.23	341.97	2.15	2.08	3.74	3.74
Dawson County	D5	RM 106.28	68173.97	5% Duration	1050.69	636.05	631.71	1.67	1.56	15.03	11.88	204.05	287.36	2.95	2.34	4.34	4.34
Dawson County	D5	RM 106.10	67879.83	5% Duration	1050.69	635.88	631.29	1.74	1.57	16.88	11.44	206.53	371.4	2.65	1.8	4.59	4.59
Dawson County	D5	RM 105.89	67550.49	5% Duration	1050.69	635.7	631.76	1.58	1.45	14.1	10.01	226.74	401.47	2.54	1.81	3.94	3.94
Dawson County	D5	RM 105.74	67300.35	5% Duration	1050.69	635.56	632.3	1.57	1.23	13.85	8.58	203.14	533.15	2.58	1.6	3.26	3.26
Dawson County	D5	RM 105.54	66973.54	5% Duration	1050.69	635.3	632.17	1.87	1.6	20.04	13.11	147.79	408.88	2.45	1.61	3.13	3.13
Dawson County	D5	RM 105.30	66609.03	5% Duration	1050.69	635.08	632.29	1.31	1.19	11.13	9.2	219.79	626.78	1.7	1.4	2.96	2.96
Dawson County	D5	RM 105.06	66212.24	5% Duration	1050.69	634.92	631.19	1.34	1.3	11.68	10.96	181.11	692.48	1.69	1.58	3.73	3.73
Dawson County	D5	RM 104.89	65945.5	5% Duration	1050.69	634.66	631.5	1.4	1.5	12.99	13.53	180.9	520.69	1.55	1.62	3.24	3.24
Dawson County	D5	RM 104.77	65742.33	5% Duration	1050.69	634.51	631.67	1.46	1.49	12.67	9.48	125.62	430.53	2.19	1.64	3.8	3.8
Dawson County	D5	RM 104.64	65530.83	5% Duration	1050.69	634.44	632.1	1.26	1.22	9.72	8.03	170.76	560.41	1.97	1.62	3.48	3.48
Dawson County	D5	RM 104.43	65180.62	5% Duration	1050.69	634.26	631.56	1.05	1.17	8.32	8.84	361.11	815.24	1.04	1.11	3.47	3.47
Dawson County	D5	RM 104.26	64906.83	5% Duration	1050.69	634.09	631.59	1.02	1.02	6.93	5.69	199.81	821.29	1.53	1.26	3.45	3.45
Dawson County	D5	RM 104.10	64643.2	5% Duration	1050.69	633.99	630.81	0.96	1.11	5.62	5.86	150.64	459.44	1.96	2.06	3.55	3.55
Dawson County	D5	RM 103.95	64410.06	5% Duration	1050.69	633.9	631.24	1.08	1.32	7.5	8.84	181.42	386.58	1.74	2.07	4.08	4.08
Dawson County	D5	RM 103.68	63957.56	5% Duration	1050.69	633.77	629.68	1.26	1.37	9.53	8.63	188.7	408.69	2.07	1.88	4.33	4.33
Dawson County	D5	RM 103.48	63615.6	5% Duration	1050.69	633.68	630.4	1.39	1.32	10.96	8.32	150.91	425.29	2.47	1.87	4.17	4.17
Dawson County	D5	RM 103.26	63259.44	5% Duration	1050.69	633.6	630.13	1.22	1.21	8.51	7.11	172.08	414.1	2.51	2.1	4.19	4.19
Dawson County	D5	RM 102.58	62131.5	5% Duration	1050.69	633.41	629.72	1.1	1.04	6.9	5.86	178.73	477.52	2.48	2.11	3.73	3.73
Dawson County	D5	RM 102.44	61920.83	5% Duration	1050.69	633.31	629.74	1.38	1.33	10.87	9.68	255.44	358.34	2.47	2.2	3.57	3.57
Dawson County	D5	RM 102.31	61720.14	5% Duration	1050.69	633.16	629.03	1.68	1.59	15.88	13.43	200.53	307.98	2.53	2.15	4.13	4.13
Dawson County	D5	RM 102.15	61456.58	5% Duration	1050.69	633.04	629.39	1.56	1.4	13.37	10.32	201.3	356.88	2.72	2.11	3.65	3.65
Dawson County	D5	RM 102.00	61217.89	5% Duration	1050.69	632.93	629.48	1.42	1.34	11.95	10.5	267.9	407.28	2.17	1.92	3.45	3.45
Dawson County	D5	RM 101.84	60967.97	5% Duration	1050.69	632.76	629.23	1.6	1.35	15.02	9.63	155.67	543.17	2.24	1.44	3.53	3.53
Dawson County	D5	RM 101.60	60582.61	5% Duration	1050.69	632.55	628.87	1.3	1.21	10.19	8.37	331.18	502.65	2.1	1.73	3.68	3.68
Dawson County	D5	RM 101.45	60336.09	5% Duration	1050.69	632.39	629.16	1.5	1.46	12.58	11.22	251.39	307.07	2.63	2.35	3.23	3.23
Dawson County	D5	RM 101.25	60019.5	5% Duration	1050.69	632.22	627.81	1.61	1.56	13.93	12.66	207.44	254.95	2.91	2.65	4.41	4.41
Dawson County	D5	RM 101.09	59759.25	5% Duration	1050.69	632.09	627.99	1.61	1.54	14.32	12.75	216.65	278.5	2.74	2.44	4.1	4.1
Dawson County	D5	RM 100.88	59426.42	5% Duration	1050.69	631.93	627.86	1.63	1.47	14.33	10.43	196.58	337.82	2.89	2.11	4.07	4.07
Dawson County	D5	RM 100.67	59075.4	5% Duration	1050.69	631.74	627.1	1.77	1.53	15.97	10.06	151.88	319.39	3.39	2.14	4.64	4.64
Dawson County	D5	RM 100.46	58743.44	5% Duration	1050.69	631.62	627.92	1.48	1.28	11.99	7.92	202.94	436.9	2.83	1.87	3.7	3.7
Dawson County	D5	RM 100.25	58401.49	5% Duration	1050.69	631.45	627.57	1.57	1.5	13.27	11.29	195.73	284.7	2.89	2.47	3.88	3.88
Dawson County	D5	RM 100.05	58077.55	5% Duration	1050.69	631.31	626.86	1.55	1.41	12.85	9.79	176.97	330.86	2.96	2.25	4.45	4.45
Dawson County	D5	RM 99.87	57778.81	5% Duration	1050.69	631.11	626.4	1.63	1.63	15.83	15.73	301.61	303.7	2.14	2.13	4.71	4.71
Dawson County	D5	RM 99.68	57474.16	5% Duration	1050.69	630.98	626.29	1.42	1.39	10.71	9.72	246.92	276.73	2.99	2.72	4.69	4.69
Dawson County	D5	RM 99.49	57160.47	5% Duration	1050.69	630.82	626.53	1.59	1.57	13.55	12.68	218.38	236.77	3.01	2.82	4.29	4.29
Dawson County	D5	RM 99.30	56863.46	5% Duration	1050.69	630.7	627.26	1.46	1.46	11.81	11.65	267.93	271.99	2.68	2.65	3.44	3.44
Dawson County	D5	RM 99.13	56566.63	5% Duration	1050.69	630.58	626.77	1.37	1.36	10.45	9.86	293.66	314.2	2.61	2.47	3.81	3.81

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D5	RM 98.92	56243.98	5% Duration	1050.69	630.44	626.63	1.37	1.36	11.06	10.32	339.1	367.37	2.25	2.11	3.81	3.81
Dawson County	D5	RM 98.71	55911.87	5% Duration	1050.69	630.21	626.34	1.55	1.53	14.4	13.5	322.21	349.38	2.1	1.97	3.87	3.87
Dawson County	D5	RM 98.57	55680.2	5% Duration	1050.69	630.02	626.1	1.65	1.63	16.4	14.68	297.01	340.83	2.12	1.9	3.92	3.92
Dawson County	D5	RM 98.35	55325.95	5% Duration	1050.69	629.81	625.91	1.61	1.57	13.84	12.42	216.58	251.2	2.96	2.66	3.9	3.9
Dawson County	D5	RM 98.19	55066.09	5% Duration	1050.69	629.7	624.42	1.59	1.54	12.76	10.73	184	230.2	3.52	2.97	5.28	5.28
Dawson County	D5	RM 97.99	54752.97	5% Duration	1050.69	629.58	625.04	1.55	1.55	13.02	12.64	236.32	243.7	2.87	2.78	4.54	4.54
Dawson County	D5	RM 97.84	54493.48	5% Duration	1050.69	629.49	625.39	1.35	1.35	10.2	10.2	292.34	292.34	2.65	2.65	4.1	4.1
Dawson County	D5	RM 97.68	54241.32	5% Duration	1050.69	629.34	624.99	1.5	1.42	13.42	11.39	327.12	410.39	2.12	1.8	4.35	4.35
Dawson County	D5	RM 97.48	53918.21	5% Duration	1050.69	629.06	624.81	1.68	1.55	16.8	13.93	270.84	439.87	1.85	1.54	4.25	4.25
Dawson County	D5	RM 97.28	53585.68	5% Duration	1050.69	628.8	625.86	1.4	1.41	12.54	12.18	328.8	434.19	1.76	1.71	3.35	3.35
Dawson County	D5	RM 97.08	53263.89	5% Duration	1050.69	628.57	625.27	1.64	1.53	15.35	13.22	209.17	324.4	2.45	2.12	3.3	3.3
Dawson County	D5	RM 96.94	53030.11	5% Duration	1050.69	628.36	623.97	1.84	1.71	19.63	16.87	198.18	304.52	2.33	2.01	4.39	4.39
Dawson County	D5	RM 96.77	52762.2	5% Duration	1050.69	628.16	623.51	1.75	1.62	17.81	15.23	200.22	328.88	2.31	1.98	4.65	4.65
Dawson County	D5	RM 96.55	52403.59	5% Duration	1050.69	627.88	624.57	1.88	1.7	19.79	14.64	160.42	325.71	2.56	1.9	3.31	3.31
Dawson County	D5	RM 96.35	52079.12	5% Duration	1050.69	627.78	625.39	0.87	0.97	5.33	6.2	275.7	727.35	1.31	1.53	4.31	4.31
Dawson County	D5	RM 96.17	51777.74	5% Duration	1050.69	627.53	624.71	1.58	1.56	15.55	14.26	130.42	383.68	1.9	1.75	3.15	3.15
Dawson County	D5	RM 96.00	51500.38	5% Duration	1050.69	627.31	624.3	1.55	1.5	14.72	13.77	122.42	378.34	1.97	1.85	3.01	3.01
Dawson County	D5	RM 95.79	51156.87	5% Duration	1050.69	627.12	624.35	1.14	1.24	8.47	9.08	279.98	492.27	1.61	1.72	2.87	2.87
Dawson County	D5	RM 95.60	50859.75	5% Duration	1050.69	626.97	622.97	1.29	1.21	9.64	7.74	200.16	467.17	2.31	1.86	4	4
Dawson County	D5	RM 95.40	50547.92	5% Duration	1050.69	626.87	623.13	1.07	1.05	6.88	6.4	377.96	520.89	2.05	1.92	3.74	3.74
Dawson County	D5	RM 95.21	50245.97	5% Duration	1050.69	626.75	622.21	1.3	1.22	9.19	7.57	217.6	366.25	2.84	2.36	4.54	4.54
Dawson County	D5	RM 95.04	49971.19	5% Duration	1050.69	626.58	621.68	1.72	1.61	16.05	12.75	152.77	280.85	2.91	2.33	4.9	4.9
Dawson County	D5	RM 94.88	49717.07	5% Duration	1050.69	626.44	621.44	1.78	1.53	17.23	7.18	148.42	582.9	2.82	1.18	5	5
Dawson County	D5	RM 94.71	49446.9	5% Duration	1050.69	626.33	621.69	1.38	1.22	11.16	6.83	233.56	609.15	2.31	1.42	4.64	4.64
Dawson County	D5	RM 94.58	49286.95	5% Duration	1050.69	626.35	618.6	0.56	0.56	1.52	1.52	456.42	532.98	4.1	4.1	7.76	7.76
Dawson County	D5	RM 94.57	49255.56	5% Duration	1050.69	626.34	618.63	0.75	0.75	2.75	2.75	358.36	358.54	3.91	3.9	7.71	7.71
Dawson County		RM 94.55	49216.94	5% Duration	Bridge												
Dawson County	D5	RM 94.53	49181.49	5% Duration	1050.69	626.17	620.63	1.42	1.42	10.7	10.7	248.86	248.86	2.98	2.98	5.54	5.54
Dawson County	D5	RM 94.52	49157.18	5% Duration	1050.69	626.17	620.89	1.3	1.3	9.15	9.15	280.2	281.12	2.88	2.88	5.28	5.28
Dawson County	D6	RM 94.42	48998.19	5% Duration	1050.69	626.04	621.76	1.71	1.71	15.58	15.58	204.23	204.23	3.01	3.01	4.28	4.28
Dawson County	D6	RM 94.30	48806.79	5% Duration	1053.53	625.86	621.22	1.89	1.89	21.36	21.36	266.09	266.09	2.1	2.1	4.64	4.64
Dawson County	D6	RM 94.20	48653.06	5% Duration	1053.53	625.74	621.41	1.73	1.73	17.66	17.66	260.74	260.74	2.33	2.33	4.33	4.33
Dawson County	D6	RM 94.08	48445.46	5% Duration	1053.53	625.7	622.37	1.23	1.23	8.43	8.43	332.46	332.46	2.58	2.58	3.33	3.33
Dawson County	D6	RM 93.96	48246.42	5% Duration	1053.53	625.57	621.88	1.48	1.48	13.08	13.08	326.37	326.37	2.18	2.18	3.69	3.69
Dawson County	D6	RM 93.83	48030.25	5% Duration	1053.53	625.42	620.28	1.61	1.61	14.28	14.26	237.5	237.76	2.75	2.75	5.14	5.14
Dawson County	D6	RM 93.68	47782.89	5% Duration	1053.53	625.26	620.19	1.77	1.77	16.53	16.39	191.08	192.76	3.11	3.09	5.07	5.07
Dawson County	D6	RM 93.57	47606.95	5% Duration	1053.53	625.12	620.08	1.94	1.94	20.04	20.04	179.06	179.06	3.03	3.03	5.04	5.04
Dawson County	D6	RM 93.53	47552.11	5% Duration	1053.53	625.1	620.21	1.82	1.82	17.45	17.38	182.65	183.29	3.16	3.15	4.88	4.88
Dawson County			47536.14	5% Duration	Bridge												
Dawson County	D6	RM 93.51	47522.95	5% Duration	1053.53	624.95	620.33	1.86	1.86	18.14	17.89	179.49	182.08	3.16	3.11	4.63	4.63
Dawson County	D6	RM 93.47	47460.74	5% Duration	1053.53	624.92	618.63	1.81	1.81	17.26	16.85	183.69	188.4	3.16	3.09	6.29	6.29
Dawson County	D6	RM 93.43	47382.46	5% Duration	1053.53	624.9	619.44	1.67	1.67	14.14	13.9	182.49	185.62	3.46	3.41	5.46	5.46
Dawson County		RM 93.415	47357.71	5% Duration	Bridge												
Dawson County	D6	RM 93.40	47335.01	5% Duration	1053.53	624.87	620.19	1.59	1.59	13.08	13.08	198.99	198.99	3.33	3.33	4.69	4.69
Dawson County	D6	RM 93.36	47287.92	5% Duration	1053.53	624.86	620.47	1.48	1.48	11.31	11.31	212.18	212.18	3.35	3.35	4.39	4.39
Dawson County	D6	RM 93.25	47111.44	5% Duration	1053.53	624.73	621.12	1.74	1.74	19.2	18.5	226.97	235.81	2.66	2.56	3.61	3.61
Dawson County	D6	RM 93.05	46807.77	5% Duration	1053.53	624.58	621.74	1.46	1.43	12.07	10.18	280.71	344.36	2.54	2.15	2.84	2.84
Dawson County	D6	RM 92.93	46606.31	5% Duration	1053.53	624.44	621.34	1.61	1.61	15.43	15.24	301.6	334.67	2.17	2.14	3.1	3.1
Dawson County	D6	RM 92.83	46460.06	5% Duration	1053.53	624.31	621.02	1.71	1.7	17.18	16.69	274.06	296.84	2.24	2.17	3.29	3.29
Dawson County	D6	RM 92.71	46261.84	5% Duration	1053.53	624.2	620.37	1.56	1.51	13.44	12.03	263.89	313.42	2.52	2.26	3.83	3.83
Dawson County	D6	RM 92.59	46079.79	5% Duration	1053.53	624.12	620.95	1.37	1.37	10.96	10.89	318.52	320.48	2.42	2.4	3.17	3.17
Dawson County	D6	RM 92.50	45933.81	5% Duration	1053.53	624.02	620.75	1.51	1.51	13.55	13.55	314.49	314.49	2.21	2.21	3.27	3.27
Dawson County	D6	RM 92.39	45753.94	5% Duration	1053.53	623.92	620.58	1.48	1.48	12.47	12.47	294.79	294.79	2.42	2.42	3.34	3.34
Dawson County	D6	RM 92.29	45591.17	5% Duration	1053.53	623.84	620.64	1.45	1.45	11.93	11.18	290.93	311.43	2.5	2.34	3.2	3.2
Dawson County	D6	RM 92.18	45414.13	5% Duration	1053.53	623.77	620.23	1.25	1.25	8.98	8.94	352.05	356.76	2.4	2.39	3.54	3.54
Dawson County		RM 92.14	45354.08	5% Duration	Bridge												
Dawson County	D6	RM 92.10	45305.76	5% Duration	1053.53	623.51	620.04	1.29	1.29	9.72	9.72	356.89	426.65	2.29	2.29	3.47	3.47
Dawson County	D6	RM 92.06	45238.47	5% Duration	1053.53	623.44	620.12	1.5	1.48	13.8	13.06	349.29	376.8	2	1.89	3.32	3.32
Dawson County	D6	RM 91.99	45117.89	5% Duration	1053.53	623.38	619.81	1.4	1.34	12.02	10.87	331.37	434.82	2	1.81	3.57	3.57
Dawson County	D6	RM 91.85	44886.16	5% Duration	1053.53	623.28	619.7	1.15	1.17	8.63	7.83	237.1	517.82	2.33	2.11	3.58	3.58
Dawson County	D6	RM 91.77	44752.88	5% Duration	1053.53	623.19	619.28	1.25	1.33	12.47	11.12	224.91	446.95	1.98	1.77	3.91	3.91

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D6	RM 91.61	44507.01	5% Duration	1053.53	623.05	619	1.44	1.31	11.19	8.37	148.19	374.01	2.88	2.16	4.05	4.05
Dawson County	D6	RM 91.45	44219.47	5% Duration	1053.53	622.95	618.66	1.42	1.35	11.48	10.2	188.75	318.59	2.76	2.45	4.29	4.29
Dawson County	D6	RM 91.31	43987.79	5% Duration	1053.53	622.79	618.98	1.59	1.59	14.42	14.42	269.73	269.73	2.46	2.46	3.81	3.81
Dawson County	D6	RM 91.11	43666.49	5% Duration	1053.53	622.65	618.54	1.52	1.52	12.2	11.91	219.42	225.29	3.15	3.08	4.11	4.11
Dawson County	D6	RM 90.97	43442.55	5% Duration	1053.53	622.53	618.3	1.61	1.6	13.97	13.32	224.14	235.9	2.92	2.79	4.23	4.23
Dawson County	D6	RM 90.76	43114.74	5% Duration	1053.53	622.35	618.97	1.58	1.58	16.46	16.25	261.83	265.15	2.55	2.51	3.38	3.38
Dawson County	D6	RM 90.59	42823.65	5% Duration	1053.53	622.17	618.64	1.63	1.48	15	10.06	232.7	502.85	2.5	1.68	3.53	3.53
Dawson County	D6	RM 90.43	42564.46	5% Duration	1053.53	621.88	618.18	2.03	1.91	23.85	19.1	208.77	289.46	2.37	1.91	3.7	3.7
Dawson County	D6	RM 90.29	42331.05	5% Duration	1053.53	621.74	618.21	1.67	1.6	15.62	13.92	235.9	288.09	2.55	2.28	3.53	3.53
Dawson County	D6	RM 90.16	42118.24	5% Duration	1053.53	621.59	618.54	1.72	1.63	16.66	14.29	229.29	297.07	2.54	2.18	3.05	3.05
Dawson County	D6	RM 89.96	41795.66	5% Duration	1053.53	621.41	618.08	1.48	1.47	13	12.74	321.71	331.44	2.2	2.16	3.33	3.33
Dawson County	D6	RM 89.83	41589.45	5% Duration	1053.53	621.19	617.17	1.92	1.89	20.58	19.38	211.95	228.93	2.58	2.44	4.02	4.02
Dawson County	D6	RM 89.65	41302.33	5% Duration	1053.53	620.92	618.15	1.93	1.9	22.2	21.19	250.45	267.32	2.16	2.07	2.77	2.77
Dawson County	D6	RM 89.46	41003.8	5% Duration	1053.53	620.77	617.56	1.54	1.52	12.86	12.08	236.74	256.22	2.88	2.71	3.21	3.21
Dawson County	D6	RM 89.29	40732.3	5% Duration	1053.53	620.66	617.42	1.45	1.29	11.81	8.2	252.73	458.87	2.57	1.78	3.24	3.24
Dawson County	D6	RM 89.13	40476.68	5% Duration	1053.53	620.52	617.29	1.53	1.47	12.85	11.47	231.92	293.68	2.73	2.44	3.23	3.23
Dawson County	D6	RM 88.96	40193.97	5% Duration	1053.53	620.4	617.14	1.52	1.4	12.16	9.68	186.73	298.37	3.19	2.53	3.26	3.26
Dawson County	D7	RM 88.77	39887.75	5% Duration	1053.53	620.23	616.98	1.6	1.58	14.23	12.99	245.34	285.18	2.67	2.43	3.25	3.25
Dawson County	D7	RM 88.58	39581.56	5% Duration	1053.53	620.03	616.82	1.78	1.74	16.79	13.95	185.88	233.25	3.14	2.6	3.21	3.21
Dawson County	D7	RM 88.44	39345.29	5% Duration	1053.53	619.9	616.7	1.77	1.71	16.6	13.53	181.64	257.46	3.2	2.59	3.2	3.2
Dawson County	D7	RM 88.25	39047.22	5% Duration	1053.53	619.75	616.54	1.67	1.57	15.38	11.21	216.59	331.53	2.79	2.03	3.2	3.2
Dawson County	D7	RM 88.06	38736.32	5% Duration	1053.53	619.62	616.38	1.38	1.37	10.77	10.23	305.37	326.47	2.5	2.38	3.24	3.24
Dawson County	D7	RM 87.87	38426.68	5% Duration	1053.53	619.49	616.22	1.29	1.22	10.12	9.16	379.73	470.63	2.06	1.86	3.27	3.27
Dawson County	D7	RM 87.70	38161.81	5% Duration	1053.53	619.38	616.08	1.39	1.13	10.05	5.33	181.7	542.74	3.29	1.71	3.3	3.3
Dawson County	D7	RM 87.52	37862.82	5% Duration	1053.53	619.32	615.92	1.05	0.99	6.59	5.95	308.23	539.29	2.19	1.97	3.39	3.39
Dawson County	D7	RM 87.34	37574.69	5% Duration	1053.53	619.14	615.85	1.55	1.48	13.87	12.3	247.56	338.1	2.38	2.11	3.29	3.29
Dawson County	D7	RM 87.17	37307.08	5% Duration	1053.53	618.99	615.82	1.64	1.51	14.27	11.1	162.99	293.46	3.09	2.38	3.17	3.17
Dawson County	D7	RM 87.00	37023.47	5% Duration	1053.53	618.86	615.79	1.48	1.42	12.65	11.69	238.84	334.46	2.41	2.22	3.07	3.07
Dawson County	D7	RM 86.82	36748.51	5% Duration	1053.53	618.72	615.76	1.57	1.44	13.32	10.63	183.73	316.97	2.93	2.32	2.96	2.96
Dawson County	D7	RM 86.67	36501.76	5% Duration	1053.53	618.47	615.73	2.11	1.81	24.66	15.55	151.12	342.78	2.74	1.7	2.74	2.74
Dawson County	D7	RM 86.52	36253.46	5% Duration	1053.53	618.34	615.7	1.55	1.43	13.79	10.1	250.55	421.64	2.38	1.75	2.64	2.64
Dawson County	D7	RM 86.39	36046.31	5% Duration	1053.53	618.14	615.59	1.91	1.58	21.02	13.64	140.85	433.37	2.41	1.54	2.56	2.56
Dawson County	D7	RM 86.24	35796.38	5% Duration	1053.53	618.09	615.46	1.08	0.96	6.65	5.45	165.29	528.06	2.58	2.08	2.63	2.63
Dawson County	D7	RM 86.08	35541.56	5% Duration	1053.53	617.82	615.48	1.97	1.83	22.83	19.86	149.12	292.98	2.28	1.97	2.34	2.34
Dawson County	D7	RM 85.91	35282.1	5% Duration	1053.53	617.57	615.5	1.77	1.7	19.22	17.99	190.06	332.42	2	1.86	2.07	2.07
Dawson County	D7	RM 85.78	35075.01	5% Duration	1053.53	617.51	614.9	1.2	1.06	8.68	6.83	238.03	696.43	2.09	1.64	2.61	2.61
Dawson County	D7	RM 85.59	34774.5	5% Duration	1053.53	617.42	614.32	1.27	1.02	8.54	5.36	184.84	537	3.07	1.91	3.1	3.1
Dawson County	D7	RM 85.39	34449.3	5% Duration	1053.53	617.25	614.15	1.57	1.44	13.73	10.71	219.47	350.22	2.69	2.1	3.1	3.1
Dawson County	D7	RM 85.23	34186.4	5% Duration	1053.53	617.05	614.01	1.9	1.71	19.29	14.35	157.48	275.05	3.03	2.24	3.04	3.04
Dawson County	D7	RM 85.04	33863.7	5% Duration	1053.53	616.88	613.84	1.56	1.46	14.53	12.02	261.98	396.15	2.21	1.82	3.04	3.04
Dawson County	D7	RM 84.89	33626.36	5% Duration	1053.53	616.77	613.92	1.29	1.27	10.17	9.72	412.96	437.82	1.98	1.89	2.85	2.85
Dawson County	D7	RM 84.72	33349.5	5% Duration	1053.53	616.62	613.77	1.34	1.34	10.46	10.36	337.83	341.38	2.33	2.31	2.85	2.85
Dawson County	D7	RM 84.57	33104.21	5% Duration	1053.53	616.51	613.45	1.36	1.36	10.38	10.25	294.82	298.86	2.62	2.59	3.07	3.07
Dawson County	D7	RM 84.41	32856.7	5% Duration	1053.53	616.41	613.32	1.36	1.36	10.6	10.37	312.69	320.69	2.47	2.42	3.09	3.09
Dawson County	D7	RM 84.22	32552.24	5% Duration	1053.53	616.25	613.16	1.49	1.37	12.72	9.68	261.68	411.45	2.47	1.87	3.09	3.09
Dawson County	D7	RM 84.05	32270.74	5% Duration	1053.53	616.08	613.14	1.6	1.44	14.19	10.55	206.16	361.94	2.74	2.03	2.95	2.95
Dawson County	D7	RM 83.89	32017.88	5% Duration	1053.53	615.92	613.11	1.68	1.58	15.64	12.94	191.2	295.75	2.73	2.26	2.81	2.81
Dawson County	D7	RM 83.73	31759.16	5% Duration	1053.53	615.77	613.07	1.59	1.5	14.75	11.4	238.08	393.96	2.31	1.78	2.69	2.69
Dawson County	D7	RM 83.53	31426.04	5% Duration	1053.53	615.63	613.01	1.27	1.16	9.45	7.81	302.67	485.1	2.26	1.87	2.61	2.61
Dawson County	D7	RM 83.39	31213.34	5% Duration	1053.53	615.51	612.95	1.49	1.31	12.82	10.1	188.35	435.65	2.36	1.85	2.56	2.56
Dawson County	D7	RM 83.21	30910.79	5% Duration	1053.53	615.36	612.91	1.39	1.22	11.07	8.18	169.73	488.35	2.42	1.77	2.58	2.58
Dawson County	D7	RM 83.05	30660.14	5% Duration	1053.53	615.24	612.78	1.2	1.13	8.48	7.25	229.1	475.05	2.28	1.96	2.79	2.79
Dawson County	D7	RM 82.94	30491.79	5% Duration	1053.53	615.18	612.69	1.18	1.18	8.28	7.62	219.17	436.3	2.23	2.05	2.79	2.79
Dawson County	D7	RM 82.81	30280.45	5% Duration	1053.53	615.03	612.58	1.33	1.37	10.85	10.64	178.49	386.81	2.03	1.99	2.88	2.88
Dawson County	D7	RM 82.68	30058.39	5% Duration	1053.53	614.92	612.34	1.45	1.36	11.82	10.17	152.77	352.61	2.57	2.2	2.82	2.82
Dawson County	D7	RM 82.51	29786.14	5% Duration	1053.53	614.86	612.1	1.06	1.02	6.39	5.94	227.96	456.73	2.45	2.27	3.01	3.01
Dawson County	D7	RM 82.33	29497.12	5% Duration	1053.53	614.78	611.87	1.1	1.12	6.82	6.96	245.45	362.39	2.56	2.61	3.03	3.03
Dawson County	D7	RM 82.22	29323.27	5% Duration	1053.53	614.67	611.66	1.44	1.38	11.57	9.74	193.42	342.62	2.65	2.23	3.02	3.02
Dawson County	D7	RM 82.06	29049.94	5% Duration	1053.53	614.6	611.37	1.31	1.22	9.25	6.68	194.57	400.76	3.02	2.15	3.23	3.23
Dawson County	D7	RM 81.91	28820.21	5% Duration	1053.53	614.55	611.21	1.24	1.11	8	5.33	191.58	447.18	3.21	2.12	3.34	3.34
Dawson County	D7	RM 81.71	28446.75	5% Duration	1053.53	614.49	611.02	1	0.91	5.16	4.07	220.81	447.49	3.27	2.58	3.47	3.47

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D7	RM 81.49	28026.4	5% Duration	1053.53	614.26	610.8	1.8	1.69	16.57	11.92	165.37	253.26	3.45	2.47	3.46	3.46
Dawson County	D7	RM 81.31	27735.46	5% Duration	1050.69	613.86	610.65	2.54	2.53	34.17	33.61	131.98	134.26	3.14	3.09	3.22	3.22
Dawson County	D8	RM 81.10	27398.33	5% Duration	1050.69	613.59	610.47	2.17	2.17	25.24	22.67	159.56	178.47	3.03	2.72	3.12	3.12
Dawson County	D8	RM 80.94	27148.21	5% Duration	1050.69	613.51	610.34	1.6	1.6	13.84	13.73	225.85	227.49	2.91	2.89	3.16	3.16
Dawson County	D8	RM 80.76	26855.69	5% Duration	1050.69	613.41	610.19	1.42	1.29	10.65	8.01	181.67	340.12	3.22	2.39	3.22	3.22
Dawson County	D8	RM 80.64	26669.58	5% Duration	1050.69	613.34	610.09	1.42	1.34	10.81	9.37	209.02	299.43	3.02	2.61	3.25	3.25
Dawson County	D8	RM 80.45	26373.01	5% Duration	1050.69	613.26	609.94	1.38	1.02	10.1	5.24	122.14	807.95	3.21	1.62	3.32	3.32
Dawson County	D8	RM 80.17	25926.88	5% Duration	1050.69	613.09	609.71	1.6	1.33	13.26	8.7	146.98	362.57	3.38	2.17	3.38	3.38
Dawson County	D8	RM 79.91	25496.94	5% Duration	1050.69	612.99	609.42	1.09	1.09	6.6	6.57	362.06	363.66	2.66	2.65	3.57	3.57
Dawson County	D8	RM 79.43	24626.85	5% Duration	1050.69	612.76	609.14	1.16	1.16	7.11	7.1	288.22	288.61	3.14	3.13	3.62	3.62
Dawson County	D8	RM 79.23	24229.4	5% Duration	1050.69	612.55	608.87	1.73	1.73	15.14	15.14	165.33	165.33	3.67	3.67	3.68	3.68
Dawson County	D8	RM 78.27	22640.58	5% Duration	1050.69	611.73	608.6	1.69	1.54	16.05	10.76	226.64	392.47	2.6	1.73	3.12	3.12
Dawson County	D8	RM 78.12	22398.86	5% Duration	1050.69	611.6	608.48	1.65	1.46	14.88	9.62	206.25	400.78	2.79	1.8	3.12	3.12
Dawson County	D8	RM 77.97	22135.34	5% Duration	1050.69	611.49	608.34	1.5	1.4	12.21	10.06	214.67	310.93	2.93	2.41	3.15	3.15
Dawson County	D8	RM 77.79	21831.85	5% Duration	1050.69	611.35	608.18	1.52	1.43	12.97	10.53	246.86	351.35	2.59	2.1	3.17	3.17
Dawson County	D8	RM 77.57	21474.71	5% Duration	1050.69	611.19	608	1.46	1.41	11.65	9.82	248.73	312.85	2.83	2.38	3.2	3.2
Dawson County	D8	RM 77.38	21170.35	5% Duration	1050.69	611.03	607.84	1.63	1.56	14.32	11.78	215.17	281.18	2.92	2.39	3.19	3.19
Dawson County	D8	RM 77.13	20780.17	5% Duration	1050.69	610.9	607.63	1.4	1.16	10.58	6.98	188.47	477.67	2.89	1.89	3.27	3.27
Dawson County	D8	RM 77.00	20442.34	5% Duration	1050.69	610.74	607.46	1.67	1.37	14.63	9.54	131.69	367.07	3.28	2.08	3.28	3.28
Dawson County	D8	RM 76.90	20124.49	5% Duration	1050.69	610.65	607.29	1.43	1.22	10.71	7.55	153.1	373.06	3.35	2.32	3.36	3.36
Dawson County	D8	RM 76.76	19785.25	5% Duration	1050.69	610.6	607.12	1.06	0.99	5.99	5.12	268.17	408.59	3.05	2.6	3.48	3.48
Dawson County	D8	RM 76.63	19501.04	5% Duration	1050.69	610.51	606.97	1.24	1.17	8.75	7.7	246.86	400.8	2.56	2.24	3.54	3.54
Dawson County	D8	RM 76.37	19137.53	5% Duration	1050.69	610.39	606.78	1.24	1.23	8.06	7.94	272.76	277.24	3.12	3.07	3.61	3.61
Dawson County	D8	RM 76.22	18884.28	5% Duration	1050.69	610.32	606.65	1.26	1.26	8.24	8.1	253.7	258.58	3.29	3.23	3.67	3.67
Dawson County	D8	RM 76.00	18519.22	5% Duration	1050.69	610.17	606.61	1.47	1.47	11.44	10.83	225.2	238.88	3.16	3	3.56	3.56
Dawson County	D8	RM 75.75	18119.45	5% Duration	1050.69	609.98	606.58	1.61	1.61	13.77	13.21	209.51	219.38	3.11	2.98	3.4	3.4
Dawson County	D8	RM 75.56	17818.36	5% Duration	1050.69	609.85	606.75	1.45	1.45	12.2	12.17	303.99	304.75	2.38	2.37	3.1	3.1
Dawson County	D8	RM 75.31	17411.3	5% Duration	1050.69	609.7	606.34	1.29	1.26	9.07	8.47	263.12	306.5	2.9	2.71	3.37	3.37
Dawson County	D8	RM 75.13	17092.44	5% Duration	1050.69	609.6	606.17	1.26	1.25	8.72	8.01	306.22	337.21	2.73	2.5	3.43	3.43
Dawson County	D8	RM 74.90	16719.46	5% Duration	1050.69	609.4	605.98	1.6	1.57	13.83	12.88	224.87	246.35	2.91	2.71	3.42	3.42
Dawson County	D8	RM 74.65	16308.2	5% Duration	1050.69	609.27	605.91	1.3	1.23	9.16	7.28	267.86	374.88	2.87	2.28	3.35	3.35
Dawson County	D8	RM 74.37	15846.14	5% Duration	1050.69	609.03	605.85	1.63	1.46	14.87	11.05	215.12	369	2.63	1.95	3.18	3.18
Dawson County	D8	RM 74.13	15464.97	5% Duration	1050.69	608.86	605.82	1.38	1.26	10.59	8.16	235.57	408.19	2.67	2.05	3.04	3.04
Dawson County	D8	RM 73.91	15098.01	5% Duration	1050.69	608.73	605.99	1.21	1.13	8.59	7.31	283.09	470.24	2.31	1.97	2.74	2.74
Dawson County	D8	RM 73.71	14783.86	5% Duration	1050.69	608.62	605.87	1.14	1.08	7.56	6.53	292.2	481.71	2.37	2.04	2.75	2.75
Dawson County	D8	RM 73.53	14496.67	5% Duration	1050.69	608.53	605.72	1.15	1.07	7.47	6.59	249.62	759.62	2.54	2.24	2.81	2.81
Dawson County	D8	RM 73.29	14096.19	5% Duration	1050.69	608.26	605.51	1.8	1.68	18.01	14.4	198.62	295.08	2.65	2.12	2.74	2.74
Dawson County	D8	RM 73.07	13729.79	5% Duration	1050.69	607.98	605.52	1.8	1.75	18.62	16.27	196.15	285.44	2.4	2.1	2.73	2.73
Dawson County	D8	RM 72.97	13573.93	5% Duration	1050.69	607.83	605.5	1.91	1.87	21.42	18.26	199.11	291.39	2.26	1.93	2.66	2.66
Dawson County	D8	RM 72.91	13479.91	5% Duration	1050.69	607.75	605.45	1.83	1.79	19.94	17.76	221.07	364.8	2.17	1.93	2.58	2.58
Dawson County		RM 72.905	13470.04	5% Duration	Bridge												
Dawson County	D8	RM 72.90	13463.18	5% Duration	1050.69	607.07	605.31	2.58	2.55	43.2	41.29	205.63	298.5	1.67	1.6	1.89	1.89
Dawson County	D8	RM 72.83	13354.45	5% Duration	1050.69	607	604.9	1.81	1.77	20.39	19.07	258.39	352.52	1.91	1.78	2.1	2.1
Dawson County	D8	RM 72.62	13000.82	5% Duration	1050.69	606.7	604.4	1.61	1.57	15.7	14.45	295.23	377.08	2.07	1.9	2.3	2.3
Dawson County	D8	RM 72.37	12609.05	5% Duration	1050.69	606.32	603.89	1.87	1.73	20.65	16.09	228.58	369.32	2.23	1.74	2.43	2.43
Dawson County	D8	RM 72.16	12261.75	5% Duration	1050.69	605.98	603.69	1.79	1.75	19.6	17.52	286.3	354.6	2.01	1.8	2.3	2.3
Dawson County	D8	RM 71.92	11875.08	5% Duration	1050.69	605.73	603.18	1.44	1.42	12.44	11.8	335.17	392.97	2.09	1.98	2.55	2.55
Dawson County	D8	RM 71.69	11512.65	5% Duration	1050.69	605.46	602.95	1.6	1.55	15.28	13.81	303.44	373.9	2.11	1.91	2.51	2.51
Dawson County	D8	RM 71.49	11192.6	5% Duration	1050.69	605.3	602.03	1.44	1.4	11.16	10.03	237.66	302.19	2.95	2.65	3.28	3.28
Dawson County	D8	RM 71.31	10913.3	5% Duration	1050.69	605.19	601.99	1.45	1.41	11.53	10.28	244.59	296.86	2.82	2.51	3.2	3.2
Dawson County	D9	RM 71.10	10567.75	5% Duration	1050.69	605.03	602.11	1.52	1.32	13.26	9.96	197.48	442.62	2.4	1.79	2.92	2.92
Dawson County	D9	RM 70.91	10267.7	5% Duration	1050.69	604.83	602.05	1.69	1.51	15.82	11.75	126.11	348.95	2.71	1.99	2.78	2.78
Dawson County	D9	RM 70.72	9968.939	5% Duration	1050.69	604.69	601.91	1.6	1.44	14.19	11.52	153.03	329.78	2.77	2.22	2.78	2.78
Dawson County	D9	RM 70.50	9603.574	5% Duration	1050.69	604.51	601.9	1.45	1.38	12.41	10.84	247.01	386.39	2.26	1.97	2.6	2.6
Dawson County	D9	RM 70.27	9238.535	5% Duration	1050.69	604.25	601.31	1.66	1.63	15.36	14.29	236.79	264.24	2.62	2.44	2.94	2.94
Dawson County	D9	RM 70.08	8928.013	5% Duration	1050.69	604.09	600.85	1.57	1.52	13.62	12.13	234.44	281.59	2.75	2.45	3.24	3.24
Dawson County	D9	RM 69.79	8464.726	5% Duration	1050.69	603.91	600.61	1.39	1.3	10.54	8.09	248.41	371.75	2.84	2.18	3.3	3.3
Dawson County	D9	RM 69.50	7983.226	5% Duration	1050.69	603.7	600.56	1.49	1.38	12.4	9.99	237.14	359.14	2.64	2.12	3.14	3.14
Dawson County	D9	RM 69.26	7575.04	5% Duration	1050.69	603.51	600.35	1.49	1.43	12.27	10.71	245.78	311.41	2.71	2.36	3.17	3.17
Dawson County	D9	RM 69.03	7206.967	5% Duration	1050.69	603.38	599.95	1.38	1.22	10.06	6.78	236.36	416.91	3.08	2.07	3.43	3.43
Dawson County	D9	RM 68.82	6851.789	5% Duration	1050.69	603.22	599.77	1.57	1.51	12.9	10.71	194.27	257.34	3.27	2.71	3.45	3.45

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Dawson County - Regulated Flows - Developed Conditions

5% Duration

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section
Dawson County	D9	RM 68.60	6509.797	5% Duration	1050.69	603.05	599.59	1.67	1.66	14.42	13.85	189.13	197.46	3.33	3.2	3.46	3.46
Dawson County	D9	RM 68.39	6158.879	5% Duration	1050.69	602.89	599.51	1.57	1.55	13.49	12.72	240.35	258.1	2.78	2.62	3.38	3.38
Dawson County	D9	RM 68.11	5709.195	5% Duration	1050.69	602.68	599.37	1.49	1.47	12.35	11.56	261.38	288.47	2.69	2.52	3.31	3.31
Dawson County	D9	RM 67.86	5308.187	5% Duration	1050.69	602.47	599.17	1.72	1.54	15.56	12.69	128.5	267.55	3.18	2.55	3.3	3.3
Dawson County	D10	RM 67.57	4859.184	5% Duration	1047.86	602.3	598.93	1.4	1.35	10.43	8.88	240.29	301.93	3.02	2.57	3.37	3.37
Dawson County	D10	RM 67.37	4523.862	5% Duration	1047.86	602.16	598.75	1.49	1.38	11.86	7.9	224.36	384.04	2.99	1.98	3.4	3.4
Dawson County	D10	RM 67.15	4175.103	5% Duration	1047.86	601.9	598.47	1.94	1.8	19.85	14.57	158.11	248.15	3.21	2.34	3.43	3.43
Dawson County	D10	RM 66.95	3842.803	5% Duration	1047.86	601.72	598.2	1.72	1.6	16.47	12.65	209.13	318.98	2.69	2.06	3.52	3.52
Dawson County	D10	RM 66.74	3505.323	5% Duration	1047.86	601.57	598.12	1.56	1.42	12.56	8.83	188.21	315.67	3.35	2.33	3.45	3.45
Dawson County	D10	RM 66.52	3142.889	5% Duration	1047.86	601.43	598.26	1.46	1.42	11.54	10.74	249	294.22	2.85	2.66	3.18	3.18
Dawson County	D10	RM 66.28	2774.58	5% Duration	1047.86	601.18	598.21	1.82	1.76	18.34	17	206.17	242.11	2.71	2.52	2.96	2.96
Dawson County	D10	RM 66.11	2492.331	5% Duration	1047.86	601.04	597.8	1.53	1.49	13.25	12.59	269.84	302.95	2.5	2.38	3.24	3.24
Dawson County	D10	RM 65.90	2160.839	5% Duration	1047.86	600.9	597.33	1.43	1.32	11.03	8.46	226.69	351.1	2.99	2.28	3.57	3.57
Dawson County	D10	RM 65.75	1926.044	5% Duration	1047.86	600.76	597.2	1.65	1.43	15.64	10.91	203.78	428.44	2.49	1.73	3.55	3.55
Dawson County	D10	RM 65.60	1669.095	5% Duration	1047.86	600.61	597.07	1.7	1.45	14.96	10.08	139.32	326.98	3.32	2.22	3.54	3.54
Dawson County	D10	RM 65.42	1386.836	5% Duration	1047.86	600.55	596.92	1.18	1.08	7.3	5.63	247.82	397.26	3.18	2.44	3.63	3.63
Dawson County	D10	RM 65.23	1090.639	5% Duration	1047.86	600.41	596.91	1.52	1.38	12.87	9.67	217.77	390.14	2.66	1.99	3.5	3.5
Dawson County	D10	RM 64.96	634.963	5% Duration	1047.86	600.25	597.09	1.26	1.14	8.9	6.06	269.95	595.3	2.64	1.8	3.16	3.16

* Bathymetric survey was collected from RM 107.3 to 89.7. Depths in all other locations are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	tterfly	Cross Section
Richland/McKenzie County	D10	RM 64.51	103500	5% Duration	1047.72	600.04	596.42	1.06	1	6.78	5.83	393.44	600.1	2.1	1.81	3.62	3.62
Richland/McKenzie County	D10	RM 64.32	103200	5% Duration	1047.72	599.91	596.33	1.36	1.25	10.19	7.79	227.74	415.71	2.8	2.14	3.58	3.58
Richland/McKenzie County	D10	RM 64.12	102900	5% Duration	1047.72	599.84	596.18	1.1	1.05	7.06	6.29	276.77	498.29	2.35	2.09	3.66	3.66
Richland/McKenzie County	D10	RM 63.92	102601	5% Duration	1047.72	599.76	596.08	1.14	1.03	7.76	5.93	270.96	640.93	2.16	1.64	3.68	3.68
Richland/McKenzie County	D10	RM 63.74	102302	5% Duration	1047.72	599.69	595.94	1.13	1.04	7.28	5.16	253.92	584.43	2.54	1.79	3.75	3.75
Richland/McKenzie County	D10	RM 63.55	101998	5% Duration	1047.72	599.63	595.79	1.11	1	6.3	4.96	204.56	411.66	3.48	2.74	3.84	3.84
Richland/McKenzie County	D10	RM 63.34	101671	5% Duration	1047.72	599.53	595.21	1.32	1.17	9.75	6.21	235.27	532.84	2.65	1.68	4.32	4.32
Richland/McKenzie County	D10	RM 63.08	101293	5% Duration	1047.72	599.11	595.12	2.29	2.16	28.22	21.88	153.59	220.36	2.95	2.28	3.99	3.99
Richland/McKenzie County	D10	RM 62.96	101094	5% Duration	1047.72	598.94	595.12	2.14	2.06	28.46	20.77	142.02	205.12	3.41	2.48	3.82	3.82
Richland/McKenzie County	D10	RM 62.83	100882	5% Duration	1047.72	598.83	595.12	1.88	1.72	19.71	12.85	157.88	269.77	3.48	2.25	3.71	3.71
Richland/McKenzie County	D10	RM 62.64	100582	5% Duration	1047.72	598.72	595.12	1.62	1.44	13.44	8.66	185.16	333.84	3.41	2.18	3.6	3.6
Richland/McKenzie County	D10	RM 62.46	100282	5% Duration	1047.72	598.46	595.1	2.1	1.89	23.25	15.48	155.84	266.43	3.14	2.08	3.36	3.36
Richland/McKenzie County	D10	RM 62.27	99977	5% Duration	1047.72	598.44	594.91	1.16	1.09	7.26	6.01	298.45	393.64	2.95	2.43	3.53	3.53
Richland/McKenzie County	D10	RM 62.1	99691	5% Duration	1047.72	598.33	594.75	1.3	1.2	8.35	7.56	269.4	458.9	2.1	1.9	3.58	3.58
Richland/McKenzie County	D10	RM 61.91	99377	5% Duration	1047.72	598.13	594.51	1.61	1.32	12.92	8.77	158.42	466.78	2.52	1.7	3.62	3.62
Richland/McKenzie County	D10	RM 61.72	99082	5% Duration	1047.72	598	594.36	1.45	1.28	11.16	7.44	122.69	398.35	3.13	2.06	3.64	3.64
Richland/McKenzie County	D10	RM 61.54	98782	5% Duration	1047.72	597.86	594.36	1.49	1.44	11.13	8.93	221.8	290.98	3.13	2.5	3.5	3.5
Richland/McKenzie County	D10	RM 61.35	98482	5% Duration	1047.72	597.73	594.26	1.57	1.47	13.02	8.34	209.55	357.49	3.13	1.99	3.47	3.47
Richland/McKenzie County	D10	RM 61.16	98182	5% Duration	1047.72	597.62	594.17	1.42	1.22	11.28	6.3	248.77	589.66	2.61	1.45	3.45	3.45
Richland/McKenzie County	D10	RM 60.99	97906	5% Duration	1047.72	597.53	594.02	1.29	1.19	8.81	7.06	212.76	347.54	3.16	2.53	3.51	3.51
Richland/McKenzie County	D10	RM 60.79	97582	5% Duration	1047.72	597.35	593.78	1.64	1.47	15.55	11.3	220.19	416.17	2.36	1.71	3.57	3.57
Richland/McKenzie County	D10	RM 60.64	97339	5% Duration	1047.72	597.3	593.58	1.05	0.93	6.69	5.1	262.23	706.08	2.11	1.6	3.72	3.72
Richland/McKenzie County	D10	RM 60.42	96982	5% Duration	1047.72	597.2	593.38	1.13	1.01	6.49	5.52	208.09	414.92	3	2.54	3.82	3.82
Richland/McKenzie County	D10	RM 60.25	96700	5% Duration	1047.72	597.06	593.24	1.58	1.42	14.5	13.09	186.42	348.28	2.37	2.12	3.82	3.82
Richland/McKenzie County	D10	RM 60.04	96365	5% Duration	1047.72	596.76	593.14	1.86	1.8	22.02	18.39	208.52	401.58	1.78	1.48	3.62	3.62
Richland/McKenzie County	D10	RM 59.86	96088	5% Duration	1047.72	596.67	592.99	1.48	1.34	11.39	8.97	166.45	327.36	3.33	2.61	3.68	3.68
Richland/McKenzie County	D10	RM 59.65	95769	5% Duration	1047.72	596.59	592.85	1.33	1.23	9.75	7.61	202.57	413.37	2.76	2.14	3.74	3.74
Richland/McKenzie County	D10	RM 59.5	95530	5% Duration	1047.72	596.48	592.75	1.41	1.26	11.53	8.27	203.83	512.69	2.35	1.67	3.73	3.73
Richland/McKenzie County	D10	RM 59.29	95183	5% Duration	1047.72	596.33	592.55	1.29	1.23	9.66	8.24	229.51	439.86	2.37	2.01	3.78	3.78
Richland/McKenzie County	D10	RM 59.07	94797	5% Duration	1047.72	596.16	592.36	1.21	1.17	9.48	8.28	405.7	513.51	2.06	1.8	3.8	3.8
Richland/McKenzie County	D10	RM 58.93	94582	5% Duration	1047.72	596.04	592.31	1.38	1.38	11.1	11.05	321.98	339.41	2.35	2.34	3.73	3.73
Richland/McKenzie County	D10	RM 58.75	94282	5% Duration	1047.72	595.94	592.28	1.3	1.3	8.43	7.8	245.58	284.39	3.27	3.03	3.66	3.66
Richland/McKenzie County	D10	RM 58.56	93982	5% Duration	1047.72	595.66	592.22	2.1	2.09	23.22	19.67	154.78	191.04	3.22	2.71	3.44	3.44
Richland/McKenzie County	D10	RM 58.37	93682	5% Duration	1047.72	595.49	592.22	1.87	1.87	18.65	18.3	181.68	199.36	3.08	3.02	3.27	3.27
Richland/McKenzie County	D10	RM 58.19	93382	5% Duration	1047.72	595.41	592.22	1.36	1.36	9.76	9.76	250	363.23	3.09	3.09	3.19	3.19
Richland/McKenzie County	D10	RM 58.01	93086	5% Duration	1047.72	595.28	592.14	1.52	1.52	12.41	12.41	228.21	254.5	3.01	3.01	3.14	3.14
Richland/McKenzie County	D10	RM 57.82	92782	5% Duration	1047.72	595.16	592.11	1.35	1.27	10.87	9.66	305.78	445.8	2.13	1.89	3.05	3.05
Richland/McKenzie County	D10	RM 57.63	92482	5% Duration	1047.72	594.94	592.11	1.77	1.56	17.77	13.15	158.54	376.77	2.57	1.89	2.83	2.83
Richland/McKenzie County	D10	RM 57.46	92205	5% Duration	1047.72	594.8	591.95	1.43	1.23	11.36	8.08	185.47	482.29	2.67	1.89	2.85	2.85
Richland/McKenzie County	D10	RM 57.26	91882	5% Duration	1047.72	594.51	591.9	1.86	1.63	20	15.27	114.95	357.79	2.37	1.8	2.61	2.61
Richland/McKenzie County	D10	RM 57.07	91583	5% Duration	1047.72	594.37	591.73	1.5	1.31	12.86	9.35	131.65	439.67	2.52	1.82	2.64	2.64
Richland/McKenzie County	D10	RM 56.87	91253	5% Duration	1047.72	594.11	591.49	1.47	1.3	13.46	11.08	177.57	514.17	1.91	1.56	2.68	2.68
Richland/McKenzie County	D10	RM 56.68	90943	5% Duration	1047.72	593.98	591.12	1.02	1.16	6.87	7.5	291.25	522.48	1.59	1.73	2.86	2.86
Richland/McKenzie County	D10	RM 56.54	90682	5% Duration	1047.72	593.78	590.76	1.32	1.63	10.36	13.78	154.14	294.62	1.65	2.19	3.06	3.06
Richland/McKenzie County	D10	RM 56.35	90387	5% Duration	1047.72	593.64	590.46	1.22	1.38	9.35	10.04	171.54	378.69	1.87	2	3.18	3.18
Richland/McKenzie County	D11	RM 56.16	90086	5% Duration	1047.72	593.46	590.11	1.61	1.61	13.93	13.93	215.08	215.08	3.02	3.02	3.35	3.35
Richland/McKenzie County	D11	RM 55.96	89768	5% Duration	1047.72	593.34	589.96	1.48	1.45	11.48	10.47	215.84	247.34	3.26	2.97	3.38	3.38
Richland/McKenzie County	D11	RM 55.78	89479	5% Duration	1047.72	593.24	589.96	1.47	1.38	11.43	8.52	210.1	330.78	3.07	2.29	3.28	3.28
Richland/McKenzie County	D11	RM 55.61	89193	5% Duration	1047.72	593.13	589.98	1.46	1.38	11.49	8.88	218.98	331.19	2.97	2.3	3.15	3.15
Richland/McKenzie County	D11	RM 55.41	88882	5% Duration	1047.72	592.93	589.76	1.72	1.54	16.4	11.46	199.17	360.32	2.71	1.89	3.17	3.17
Richland/McKenzie County	D11	RM 55.23	88582	5% Duration	1047.72	592.84	589.53	1.33	1.2	9.32	6.58	232.57	389.64	3.21	2.25	3.31	3.31
Richland/McKenzie County	D11	RM 55.04	88282	5% Duration	1047.72	592.71	589.39	1.48	1.32	12	8.98	244.01	388.55	2.76	2.06	3.32	3.32
Richland/McKenzie County	D11	RM 54.86	87996	5% Duration	1047.72	592.44	589.33	1.99	1.82	22.55	17.92	198.12	290.55	2.49	1.98	3.11	3.11
Richland/McKenzie County	D11	RM 54.69	87715	5% Duration	1047.72	592.32	589.23	1.49	1.22	12.64	8.62	186.11	509.74	2.49	1.68	3.09	3.09
Richland/McKenzie County	D11	RM 54.48	87382	5% Duration	1047.72	592.13	589.15	1.53	1.18	13.28	7.51	177.6	639.35	2.52	1.41	2.98	2.98
Richland/McKenzie County	D11	RM 54.32	87122	5% Duration	1047.72	592	589	1.56	1.26	13.2	7.78	156.73	561.05	2.91	1.69	3	3
Richland/McKenzie County	D11	RM 54.1	86783	5% Duration	1047.72	591.89	588.83	1.22	1.02	8.04	5.19	198.35	654.82	2.98	1.9	3.06	3.06
Richland/McKenzie County	D11	RM 53.92	86482	5% Duration	1047.72	591.8	588.68	1.19	1.05	8.04	5.52	248.71	642.48	2.49	1.69	3.12	3.12
Richland/McKenzie County	D11	RM 53.73	86182	5% Duration	1047.72	591.71	588.51	1.22	1.08	7.97	5.39	193.08	517.83	3.06	2.05	3.2	3.2
Richland/McKenzie County	D11	RM 53.55	85882	5% Duration	1047.72	591.61	588.37	1.25	1.07	8.52	6.31	180.89	469.78	2.91	2.14	3.24	3.24
Richland/McKenzie County	D11	RM 53.36	85582	5% Duration	1047.72	591.51	588.01	1.23	1.22	8.61	8.74	166.01	363.54	2.46	2.49	3.5	3.5
Richland/McKenzie County	D11	RM 53.17	85290	5% Duration	1047.72	591.38	587.56	1.49	1.42	11.31	10.84	199.46	237.74	3.46	3.35	3.82	3.82

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	tterfly	Cross Section
Richland/McKenzie County	D11	RM 52.98	84982	5% Duration	1047.72	591.07	587.56	2.07	1.98	26.92	26.38	264.77	794.2	1.86	1.83	3.51	3.51
Richland/McKenzie County	D11	RM 52.79	84682	5% Duration	1047.72	590.78	587.56	1.72	1.72	17.81	17.81	286.86	495.66	2.12	2.12	3.22	3.22
Richland/McKenzie County	D11	RM 52.61	84390	5% Duration	1047.72	590.71	587.43	1.05	1.04	6.4	5.99	432.78	679.25	2.31	2.16	3.28	3.28
Richland/McKenzie County	D11	RM 52.42	84082	5% Duration	1047.72	590.57	587.28	1.32	1.18	10.67	7.43	359.44	827.29	2	1.38	3.29	3.29
Richland/McKenzie County	D11	RM 52.24	83798	5% Duration	1047.72	590.32	587.28	1.77	1.45	18.41	9.39	224.71	1007.56	2.27	1.15	3.04	3.04
Richland/McKenzie County	D11	RM 52.01	83423	5% Duration	1047.72	590.12	587.23	1.46	1.4	11.8	10.68	122.02	349.94	2.75	2.46	2.89	2.89
Richland/McKenzie County	D11	RM 51.87	83182	5% Duration	1047.72	590	587.16	1.28	1.33	10.43	9.53	128.01	480.57	1.83	1.66	2.84	2.84
Richland/McKenzie County	D11	RM 51.69	82882	5% Duration	1047.72	589.85	587.16	1.28	1.18	8.52	6.76	142.9	562.61	2.05	1.61	2.69	2.69
Richland/McKenzie County	D11	RM 51.51	82585	5% Duration	1047.72	589.72	587.16	1.37	1.44	12.23	11.78	142.94	468.28	1.65	1.58	2.56	2.56
Richland/McKenzie County	D11	RM 51.32	82274	5% Duration	1047.72	589.61	587.16	1.25	1.32	10.45	10.05	165.84	551.88	1.54	1.47	2.45	2.45
Richland/McKenzie County	D11	RM 51.13	81982	5% Duration	1047.72	589.53	587.13	1.27	1.17	9.41	7.79	159.66	500.56	2.31	1.9	2.42	2.42
Richland/McKenzie County	D11	RM 50.95	81682	5% Duration	1047.72	589.4	587.08	1.16	1.12	8.02	7.18	138.67	497.68	2.21	1.97	2.32	2.32
Richland/McKenzie County	D11	RM 50.76	81378	5% Duration	1047.72	589.27	586.89	1.2	1.07	8.9	5.66	171.16	831.51	1.93	1.21	2.38	2.38
Richland/McKenzie County	D11	RM 50.56	81065	5% Duration	1047.72	589.02	586.37	1.39	1.31	10.93	9.83	168.68	368.97	2.57	2.3	2.65	2.65
Richland/McKenzie County	D11	RM 50.39	80787	5% Duration	1047.72	588.97	585.7	1.15	1.08	6.88	6.07	194.45	365.31	3.21	2.82	3.27	3.27
Richland/McKenzie County	D11	RM 50.21	80482	5% Duration	1047.72	588.88	585.55	1.1	1.09	6.71	5.75	229.56	441.52	2.68	2.3	3.33	3.33
Richland/McKenzie County	D11	RM 50.02	80182	5% Duration	1047.72	588.74	585.55	1.39	1.34	10.72	10.05	188.48	346.32	2.69	2.5	3.19	3.19
Richland/McKenzie County	D12	RM 49.82	79860	5% Duration	1047.72	588.49	585.55	1.81	1.8	17.87	17	204.5	234.56	2.83	2.69	2.94	2.94
Richland/McKenzie County	D12	RM 49.65	79582	5% Duration	1047.72	588.24	585.55	1.98	1.95	22.27	20.19	207.16	248.82	2.54	2.3	2.69	2.69
Richland/McKenzie County	D12	RM 49.5	79348	5% Duration	1047.72	588.26	585.49	0.97	0.95	5.24	5.04	351.16	443.6	2.72	2.62	2.81	2.81
Richland/McKenzie County	D12	RM 49.26	78981	5% Duration	1047.72	588.12	585.29	1.5	1.27	12.56	9.03	134.09	458.95	2.68	1.91	2.83	2.83
Richland/McKenzie County	D12	RM 49.08	78682	5% Duration	1047.72	587.93	585.11	1.6	1.41	14.21	11.26	150.96	402.47	2.67	2.11	2.89	2.89
Richland/McKenzie County	D12	RM 48.87	78351	5% Duration	1047.72	587.81	584.96	1.35	1.26	10.09	8.5	201.02	362.6	2.71	2.3	2.85	2.85
Richland/McKenzie County	D12	RM 48.7	78082	5% Duration	1047.72	587.68	584.86	1.43	1.39	12.31	11.92	213.41	360.35	2.17	2.09	2.82	2.82
Richland/McKenzie County	D12	RM 48.52	77782	5% Duration	1047.72	587.62	584.74	0.9	0.95	5.04	5.3	420.83	550.29	1.91	2.01	2.88	2.88
Richland/McKenzie County	D12	RM 48.33	77482	5% Duration	1047.72	587.53	584.51	1.07	1.12	7.13	7.41	347.95	459.01	1.96	2.04	3.02	3.02
Richland/McKenzie County	D12	RM 48.15	77182	5% Duration	1047.72	587.41	584.24	1.29	1.1	9.64	8.91	345.24	495.03	2.09	1.93	3.17	3.17
Richland/McKenzie County	D12	RM 47.97	76887	5% Duration	1047.72	587.34	584.09	1.08	1.01	6.33	5.23	266.7	442.87	2.85	2.35	3.25	3.25
Richland/McKenzie County	D12	RM 47.76	76570	5% Duration	1047.72	587.29	583.86	0.92	0.93	4.4	4.19	332.06	506.46	2.34	2.23	3.43	3.43
Richland/McKenzie County	D12	RM 47.59	76293	5% Duration	1047.72	587.22	583.71	1.04	0.98	5.37	5.01	287.22	447.27	2.56	2.38	3.51	3.51
Richland/McKenzie County	D12	RM 47.4	75982	5% Duration	1047.72	587.1	583.42	1.34	1.23	9.61	7.48	173.17	365.27	3.01	2.34	3.68	3.68
Richland/McKenzie County	D12	RM 47.12	75521	5% Duration	1047.72	586.98	583.04	1.21	1.21	7.31	7.31	230.9	230.9	3.74	3.74	3.94	3.94
Richland/McKenzie County	D12	RM 47	75323	5% Duration	1047.72	586.76	583.04	2.05	2.04	21.94	21.65	158.56	160.59	3.23	3.19	3.72	3.72
Richland/McKenzie County	D12	RM 46.85	75082	5% Duration	1047.72	586.65	583.04	1.8	1.78	16.81	15.65	178.78	193.5	3.26	3.04	3.61	3.61
Richland/McKenzie County	D12	RM 46.67	74782	5% Duration	1047.72	586.51	583.04	1.7	1.69	14.9	13.74	183.09	199.59	3.37	3.1	3.47	3.47
Richland/McKenzie County	D12	RM 46.47	74459	5% Duration	1047.72	586.45	583.04	1.21	1.21	8.05	7.89	308.82	315.65	2.8	2.74	3.41	3.41
Richland/McKenzie County	D12	RM 46.3	74186	5% Duration	1047.72	586.32	583.04	1.41	1.41	10.93	10.93	265.7	265.7	2.79	2.79	3.28	3.28
Richland/McKenzie County	D12	RM 46.14	73920	5% Duration	1047.72	586.24	583.04	1.25	1.25	8.59	8.48	310.93	315.07	2.7	2.66	3.2	3.2
Richland/McKenzie County	D12	RM 45.9	73546	5% Duration	1047.72	586.11	582.97	1.27	1.18	9.08	7.79	318.21	426.64	2.43	2.09	3.14	3.14
Richland/McKenzie County	D12	RM 45.75	73307	5% Duration	1047.72	585.94	582.88	1.64	1.56	13.54	11.68	253.99	321.63	2.43	2.09	3.06	3.06
Richland/McKenzie County	D12	RM 45.54	72980	5% Duration	1047.72	585.84	582.55	1.16	1.12	7.88	7.11	376.39	445.74	2.33	2.1	3.29	3.29
Richland/McKenzie County	D12	RM 45.29	72680	5% Duration	1047.72	585.7	582.25	1.31	1.24	10.12	8.56	345.68	444.96	2.24	1.89	3.45	3.45
Richland/McKenzie County	D12	RM 45.09	72380	5% Duration	1047.72	585.61	582.08	1.21	1.15	7.69	5.85	260.27	369.59	3.23	2.46	3.53	3.53
Richland/McKenzie County	D12	RM 44.91	72080	5% Duration	1047.72	585.54	582.01	1.21	1.11	7.88	5.89	281.47	428.51	2.95	2.2	3.53	3.53
Richland/McKenzie County	D12	RM 44.72	71783	5% Duration	1047.72	585.4	581.97	1.52	1.34	12.03	8.06	203.11	365.33	3.21	2.14	3.43	3.43
Richland/McKenzie County	D12	RM 44.53	71483	5% Duration	1047.72	585.19	581.82	1.88	1.64	19.01	11.59	175.65	359.32	2.95	1.78	3.37	3.37
Richland/McKenzie County	D12	RM 44.34	71183	5% Duration	1047.72	584.84	581.8	2.21	1.97	28.26	17.55	189.26	371.78	2.38	1.47	3.04	3.04
Richland/McKenzie County	D12	RM 44.17	70899	5% Duration	1047.72	584.86	581.79	1.05	0.95	5.9	4.01	300.68	701.6	3	2.04	3.07	3.07
Richland/McKenzie County	D12	RM 43.97	70594	5% Duration	1047.72	584.78	581.73	1.1	0.99	7.24	5.72	324.83	849.86	2.2	1.74	3.05	3.05
Richland/McKenzie County	D12	RM 43.74	70230	5% Duration	1047.72	584.65	581.66	1.13	1.14	7.52	7.32	151.6	576.43	2.24	2.18	2.99	2.99
Richland/McKenzie County	D12	RM 43.59	69983	5% Duration	1047.72	584.51	581.56	1.22	1.12	8.11	6.57	131.06	566.54	2.33	1.87	2.95	2.95
Richland/McKenzie County	D12	RM 43.4	69684	5% Duration	1047.72	584.42	581.49	1.13	1.08	6.95	5.81	146.36	494.8	2.35	1.95	2.93	2.93
Richland/McKenzie County	D12	RM 43.03	69084	5% Duration	1047.72	584.21	581.37	1.47	1.26	12.6	9.06	112.46	492.3	2.37	1.69	2.84	2.84
Richland/McKenzie County	D12	RM 42.66	68489	5% Duration	1047.72	584.08	581.18	1.3	1.23	9.8	7.68	108.44	452.12	2.43	1.88	2.9	2.9
Richland/McKenzie County	D12	RM 42.29	67889	5% Duration	1047.72	584.01	580.87	0.9	0.85	4.53	3.72	278.69	585.63	2.58	2.11	3.14	3.14
Richland/McKenzie County	D12	RM 42.08	67558	5% Duration	1047.72	583.95	580.61	1.05	0.93	5.76	4.14	176.12	494.11	3.18	2.28	3.34	3.34
Richland/McKenzie County	D12	RM 41.89	67260	5% Duration	1047.72	583.89	580.31	1.09	1.03	6.29	4.64	286.14	450.37	3.07	2.26	3.58	3.58
Richland/McKenzie County	D12	RM 41.75	67037	5% Duration	1047.72	583.81	579.99	1.21	1.19	8.46	7.95	329.66	403.43	2.38	2.24	3.82	3.82
Richland/McKenzie County	D12	RM 41.54	66695	5% Duration	1047.72	583.68	579.72	1.34	1.28	9.03	7.31	193.54	287.78	3.71	3	3.97	3.97
Richland/McKenzie County	D12	RM 41.34	66361	5% Duration	1047.72	583.54	579.43	1.56	1.44	13.42	9.67	217.7	374.15	2.76	1.98	4.11	4.11
Richland/McKenzie County	D12	RM 41.18	66116	5% Duration	1047.72	583.45	579.08	1.46	1.37	10.94	8.62	193.99	291.28	3.38	2.65	4.37	4.37
Richland/McKenzie County	D12	RM 40.99	65802	5% Duration	1047.72	583.35	578.99	1.44	1.32	10.73	7.87	198.58	334.23	3.29	2.41	4.36	4.36

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	tterfly	Cross Section
Richland/McKenzie County	D12	RM 40.8	65502	5% Duration	1047.72	583.24	578.97	1.35	1.28	10.16	8.08	272.69	379.63	2.72	2.15	4.27	4.27
Richland/McKenzie County	D12	RM 40.62	65205	5% Duration	1047.72	583.15	578.92	1.11	1.12	7.3	7.26	373.01	434.37	2.2	2.19	4.23	4.23
Richland/McKenzie County	D12	RM 40.24	64602	5% Duration	1047.72	582.93	578.6	1.24	1.24	6.68	6.68	405.9	455.02	2.08	2.08	4.33	4.33
Richland/McKenzie County	D12	RM 40	64219	5% Duration	1047.72	582.79	578.56	1.29	1.28	9.19	9.04	303.56	357.09	2.68	2.64	4.23	4.23
Richland/McKenzie County	D12	RM 39.87	64002	5% Duration	1047.72	582.7	578.55	1.38	1.38	9.73	9.53	216.26	318.05	3.5	3.43	4.15	4.15
Richland/McKenzie County	D12	RM 39.68	63702	5% Duration	1047.72	582.58	578.45	1.5	1.46	12.15	10.94	236.13	277.37	2.87	2.58	4.13	4.13
Richland/McKenzie County	D12	RM 39.5	63402	5% Duration	1047.72	582.4	578.35	1.68	1.61	15.84	12.74	219.39	306	2.65	2.13	4.05	4.05
Richland/McKenzie County	D12	RM 39.31	63102	5% Duration	1047.72	582.29	578.31	1.46	1.34	11.18	7.16	225.13	430.5	2.84	1.81	3.98	3.98
Richland/McKenzie County	D12	RM 39.13	62802	5% Duration	1047.72	582.17	578.2	1.39	1.34	11.05	8.87	281.73	392.49	2.47	1.98	3.97	3.97
Richland/McKenzie County	D12	RM 38.94	62501	5% Duration	1047.72	582.06	578.12	1.31	1.15	9.38	6.74	260.21	455.05	2.78	2	3.94	3.94
Richland/McKenzie County	D12	RM 38.76	62201	5% Duration	1047.72	582	578.03	1.16	1.09	6.87	5.55	234.96	340.35	3.48	2.82	3.97	3.97
Richland/McKenzie County	D12	RM 38.57	61901	5% Duration	1047.72	581.84	577.87	1.58	1.49	14.37	11.17	228.29	377.8	2.46	1.92	3.97	3.97
Richland/McKenzie County	D12	RM 38.38	61601	5% Duration	1047.72	581.79	577.84	1.01	0.84	4.71	3.2	262.55	1123.54	2.46	1.66	3.95	3.95
Richland/McKenzie County	D12	RM 38.2	61301	5% Duration	1047.72	581.72	577.82	1.11	0.84	6.36	2.83	233.27	967.24	3.37	1.49	3.9	3.9
Richland/McKenzie County	D12	RM 38.01	61008	5% Duration	1047.72	581.61	577.81	1.42	1.13	11.79	5.56	275.59	900.57	2.27	1.06	3.8	3.8
Richland/McKenzie County	D12	RM 37.84	60708	5% Duration	1047.72	581.45	577.71	1.4	1.31	11.24	9.12	327.54	517.03	2.02	1.63	3.74	3.74
Richland/McKenzie County	D12	RM 37.65	60408	5% Duration	1047.72	581.4	577.66	0.92	0.85	4.94	3.69	461.11	743.92	2.31	1.72	3.74	3.74
Richland/McKenzie County	D12	RM 37.5	60107	5% Duration	1047.72	581.31	577.54	1	0.96	4.33	4.37	501.91	710.84	1.53	1.54	3.77	3.77
Richland/McKenzie County	D12	RM 37.35	59808	5% Duration	1047.72	581.17	577.37	0.95	1.04	4.8	5.51	425.36	529.06	1.65	1.9	3.8	3.8
Richland/McKenzie County	D12	RM 37.16	59508	5% Duration	1047.72	581.03	577.24	1.37	1.4	9.16	9.74	212.22	273.05	2.56	2.73	3.79	3.79
Richland/McKenzie County	D12	RM 36.97	59208	5% Duration	1047.72	580.89	576.96	1.54	1.62	10.83	12.2	161.19	230.5	2.47	2.8	3.93	3.93
Richland/McKenzie County	D12	RM 36.78	58908	5% Duration	1047.72	580.84	576.87	1.25	1.28	8.21	8.11	181.94	265.67	3.1	3.07	3.97	3.97
Richland/McKenzie County	D12	RM 36.6	58608	5% Duration	1047.72	580.79	576.66	1.15	1.15	6.72	5.91	178.33	291.75	3.57	3.12	4.13	4.13
Richland/McKenzie County	D12	RM 36.38	58263	5% Duration	1044.89	580.72	576.49	1.14	1.14	6.78	6.78	286.62	286.62	3.21	3.21	4.23	4.23
Richland/McKenzie County	D13	RM 36.23	58011	5% Duration	1044.89	580.62	576.43	1.39	1.39	9.49	9.49	192.19	192.19	3.91	3.91	4.19	4.19
Richland/McKenzie County	D13	RM 36.04	57708	5% Duration	1044.89	580.45	576.42	1.75	1.75	16.06	15.55	184.37	190.61	3.23	3.13	4.03	4.03
Richland/McKenzie County	D13	RM 35.85	57408	5% Duration	1044.89	580.29	576.41	1.79	1.75	12.3	10.56	252.79	303.62	2.3	1.97	3.88	3.88
Richland/McKenzie County	D13	RM 35.66	57108	5% Duration	1044.89	580.26	576.36	1.12	1.06	5.32	4.66	318.88	398.88	2.82	2.46	3.9	3.9
Richland/McKenzie County	D13	RM 35.48	56810	5% Duration	1044.89	580.11	576.3	1.64	1.48	13.66	9.32	173.25	317	3.48	2.36	3.81	3.81
Richland/McKenzie County	D13	RM 35.29	56508	5% Duration	1044.89	579.93	576.19	1.8	1.63	18.33	14.29	200.73	325.32	2.54	1.97	3.74	3.74
Richland/McKenzie County	D13	RM 35.1	56208	5% Duration	1044.89	579.85	576.07	1.28	1.23	8.45	6.67	239.51	320.72	3.37	2.65	3.78	3.78
Richland/McKenzie County	D13	RM 34.92	55908	5% Duration	1044.89	579.72	576.09	1.46	1.4	12.03	9.95	249.9	319.55	2.82	2.33	3.63	3.63
Richland/McKenzie County	D13	RM 34.73	55605	5% Duration	1044.89	579.61	575.89	1.31	1.29	7.96	7.65	406.92	434.38	1.95	1.87	3.72	3.72
Richland/McKenzie County	D13	RM 34.54	55297	5% Duration	1044.89	579.41	575.79	1.56	1.47	13.38	11.9	287.2	387.53	2.06	1.83	3.62	3.62
Richland/McKenzie County	D13	RM 34.36	55008	5% Duration	1044.89	579.36	575.75	1.07	0.99	5.43	4.51	320.89	455.1	2.8	2.33	3.61	3.61
Richland/McKenzie County	D13	RM 34.17	54708	5% Duration	1044.89	579.29	575.49	1.08	1.02	6.79	5.69	366.95	525.6	2.32	1.95	3.8	3.8
Richland/McKenzie County	D13	RM 33.94	54408	5% Duration	1044.89	579.23	575.34	0.99	0.85	5.2	3.54	343.28	696.91	2.59	1.76	3.89	3.89
Richland/McKenzie County	D13	RM 33.76	54079	5% Duration	1044.89	579.14	575.12	1.11	1	7.07	5.72	281.71	529.29	2.51	2.01	4.02	4.02
Richland/McKenzie County	D13	RM 33.6	53799	5% Duration	1044.89	579.07	574.88	1.11	0.99	6.99	6.09	367.9	574.9	2.11	1.84	4.19	4.19
Richland/McKenzie County	D13	RM 33.42	53508	5% Duration	1044.89	579.01	574.61	1	0.91	4.76	4.07	254.6	405.96	3.33	2.84	4.4	4.4
Richland/McKenzie County	D13	RM 33.23	53208	5% Duration	1044.89	578.97	574.45	1.02	0.87	5.13	3.28	205.28	498.63	3.81	2.42	4.52	4.52
Richland/McKenzie County	D13	RM 33.04	52908	5% Duration	1044.89	578.92	574.3	1.09	0.97	5.63	4.16	192.18	337.84	4.31	3.17	4.62	4.62
Richland/McKenzie County	D13	RM 32.86	52608	5% Duration	1044.89	578.84	574.18	1.3	1.27	8.27	7	205.64	249.71	3.91	3.29	4.66	4.66
Richland/McKenzie County	D13	RM 32.67	52308	5% Duration	1044.89	578.72	574.18	1.55	1.52	12.03	6.37	185.04	359.1	3.65	1.91	4.54	4.54
Richland/McKenzie County	D13	RM 32.48	52008	5% Duration	1044.89	578.59	574.04	1.6	1.54	13.29	9.35	192.36	287.55	3.37	2.35	4.55	4.55
Richland/McKenzie County	D13	RM 32.29	51709	5% Duration	1044.89	578.53	574.04	1.31	1.24	8.71	5.57	220.01	371	3.57	2.27	4.49	4.49
Richland/McKenzie County	D13	RM 32.11	51423	5% Duration	1044.89	578.48	573.94	1.17	1.1	6.84	5.08	220.08	338.69	3.79	2.82	4.54	4.54
Richland/McKenzie County	D13	RM 31.92	51108	5% Duration	1044.89	578.34	573.85	1.57	1.46	13.29	9.8	209.09	327.06	2.99	2.19	4.49	4.49
Richland/McKenzie County	D13	RM 31.73	50809	5% Duration	1044.89	578.31	573.72	1.04	1.02	5	4.33	256.02	318.39	3.84	3.33	4.59	4.59
Richland/McKenzie County	D13	RM 31.51	50462	5% Duration	1044.89	578.14	573.24	1.7	1.7	12.35	12.35	159.62	168.09	3.86	3.86	4.9	4.9
Richland/McKenzie County	D13	RM 31.35	50208	5% Duration	1044.89	577.93	573.24	2.11	2.11	23.99	23.99	165.99	170.51	2.98	2.98	4.69	4.69
Richland/McKenzie County	D13	RM 31.22	50009	5% Duration	1044.89	577.8	573.24	1.99	1.99	20.21	18.94	147.08	172.08	3.56	3.33	4.56	4.56
Richland/McKenzie County	D13	RM 31.12	49859	5% Duration	1044.89	577.8	570.86	1.32	1.32	10.96	10.96	185.64	185.64	4.25	4.25	6.94	6.94
Richland/McKenzie County	D13	Highway 23	49844	5% Duration	Bridge												
Richland/McKenzie County	D13	RM 31.1	49829	5% Duration	1044.89	577.79	570.86	1.33	1.33	10.75	10.75	183.64	183.64	4.29	4.29	6.93	6.93
Richland/McKenzie County	D13	RM 30.97	49608	5% Duration	1044.89	577.76	573.24	1.12	1.12	6.03	6.03	217.93	217.93	4.27	4.27	4.52	4.52
Richland/McKenzie County	D13	RM 30.79	49308	5% Duration	1044.89	577.63	573.24	1.52	1.52	11.79	11.79	195.69	195.69	3.51	3.51	4.39	4.39
Richland/McKenzie County	D13	RM 30.6	49009	5% Duration	1044.89	577.47	573.24	1.74	1.74	15.75	15.75	182.77	182.77	3.29	3.29	4.23	4.23
Richland/McKenzie County	D13	RM 30.41	48706	5% Duration	1044.89	577.37	573.15	1.56	1.55	11.53	10.73	191.01	207.18	3.5	3.25	4.22	4.22
Richland/McKenzie County	D13	RM 30.22	48403	5% Duration	1044.89	577.29	573.15	1.42	1.42	10.04	9.96	193.24	194.81	3.8	3.77	4.14	4.14
Richland/McKenzie County	D13	RM 30.03	48102	5% Duration	1044.89	577.27	573.15	0.97	0.97	4.82	4.82	311.28	311.28	3.47	3.47	4.12	4.12
Richland/McKenzie County	D13	RM 29.85	47809	5% Duration	1044.89	577.22	573.15	0.96	0.95	5.01	4.65	370.37	404.73	2.93	2.71	4.07	4.07

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	tterfly	Cross Section
Richland/McKenzie County	D13	RM 29.66	47508	5% Duration	1044.89	577.13	573.11	1.23	1.23	7.62	7.62	241.2	241.2	3.52	3.52	4.02	4.02
Richland/McKenzie County	D13	RM 29.48	47209	5% Duration	1044.89	577.08	573.11	1.08	1.08	5.81	5.59	283.82	304.63	3.42	3.29	3.97	3.97
Richland/McKenzie County	D13	RM 29.28	46894	5% Duration	1044.89	577.01	572.98	1.07	1.04	6.66	6.22	392.45	474.41	2.35	2.19	4.03	4.03
Richland/McKenzie County	D13	RM 29.1	46608	5% Duration	1044.89	576.91	572.94	1.36	1.09	9.92	5.6	168.12	581.81	3.04	1.7	3.97	3.97
Richland/McKenzie County	D13	RM 28.92	46308	5% Duration	1044.89	576.79	572.85	1.46	1.2	10.84	6.59	145.71	413.81	3.5	2.1	3.94	3.94
Richland/McKenzie County	D13	RM 28.73	46008	5% Duration	1044.89	576.71	572.67	1.39	1.09	10.13	5.81	147.73	518.48	3.27	1.86	4.04	4.04
Richland/McKenzie County	D13	RM 28.54	45708	5% Duration	1044.89	576.61	572.67	1.45	1.16	10.01	5.38	188.74	581.75	2.91	1.55	3.94	3.94
Richland/McKenzie County	D13	RM 28.36	45419	5% Duration	1044.89	576.57	572.48	1.02	0.91	5.42	4.4	226.29	439.36	3.23	2.61	4.09	4.09
Richland/McKenzie County	D13	RM 28.15	45071	5% Duration	1044.89	576.52	572.25	0.89	0.89	4.27	4.17	423.18	434.6	2.78	2.71	4.27	4.27
Richland/McKenzie County	D13	RM 27.98	44808	5% Duration	1044.89	576.43	572.04	1.22	1.21	7.41	7.09	232.95	244.98	3.69	3.53	4.39	4.39
Richland/McKenzie County	D13	RM 27.8	44508	5% Duration	1044.89	576.39	571.87	1.08	1.07	5.48	5.13	222.81	239.3	4.36	4.07	4.52	4.52
Richland/McKenzie County	D14	RM 27.61	44208	5% Duration	1044.89	576.34	571.87	1.13	1.13	6.3	6.3	238.59	238.59	3.87	3.87	4.47	4.47
Richland/McKenzie County	D14	RM 27.43	43916	5% Duration	1044.89	576.31	571.87	0.97	0.97	4.55	4.28	254.92	382.18	4.2	3.95	4.44	4.44
Richland/McKenzie County	D14	RM 27.23	43608	5% Duration	1044.89	576.3	571.87	0.78	0.78	2.87	2.78	308.66	319.12	4.35	4.21	4.43	4.43
Richland/McKenzie County	D14	RM 27.04	43305	5% Duration	1044.89	576.25	571.87	1	0.99	4.92	4.67	274.42	290.04	3.82	3.63	4.38	4.38
Richland/McKenzie County	D14	RM 26.86	43008	5% Duration	1044.89	576.19	571.87	1.12	1.12	6.1	5.21	224.43	264.42	4.14	3.53	4.32	4.32
Richland/McKenzie County	D14	RM 26.67	42708	5% Duration	1044.89	576.16	571.87	1.03	1.02	5.11	4.74	249.21	271.69	4.08	3.77	4.29	4.29
Richland/McKenzie County	D14	RM 26.48	42408	5% Duration	1044.89	576.08	571.87	1.27	1.24	7.86	6.94	206.26	239.66	3.98	3.51	4.21	4.21
Richland/McKenzie County	D14	RM 26.29	42108	5% Duration	1044.89	576	571.87	1.32	1.32	8.62	7.63	203.7	231.59	3.88	3.42	4.13	4.13
Richland/McKenzie County	D14	RM 26.11	41808	5% Duration	1044.89	575.97	571.87	1.1	1.09	5.94	5.59	244.37	262.4	3.89	3.65	4.1	4.1
Richland/McKenzie County	D14	RM 25.92	41508	5% Duration	1044.89	575.94	571.87	0.9	0.9	3.98	3.98	298.76	298.76	3.89	3.89	4.07	4.07
Richland/McKenzie County	D14	RM 25.73	41208	5% Duration	1044.89	575.92	571.74	0.85	0.85	3.52	3.52	304.78	304.78	4.03	4.03	4.18	4.18
Richland/McKenzie County	D14	RM 25.55	40918	5% Duration	1044.89	575.86	571.74	1.04	1.04	5.81	5.81	341.98	341.98	2.94	2.94	4.12	4.12
Richland/McKenzie County	D14	RM 25.37	40619	5% Duration	1044.89	575.79	571.74	1.09	1.09	6.43	6.43	346.57	346.57	2.77	2.77	4.05	4.05
Richland/McKenzie County	D14	RM 25.17	40310	5% Duration	1044.89	575.69	571.74	1.27	1.27	7.62	7.62	258.19	258.19	3.19	3.19	3.95	3.95
Richland/McKenzie County	D14	RM 24.99	40008	5% Duration	1044.89	575.66	571.74	0.91	0.91	3.57	3.57	368.96	368.96	3.1	3.1	3.92	3.92
Richland/McKenzie County	D14	RM 24.8	39703	5% Duration	1044.89	575.65	571.71	0.71	0.71	2.73	2.66	392.09	403.15	3.73	3.64	3.94	3.94
Richland/McKenzie County	D14	RM 24.62	39408	5% Duration	1044.89	575.58	571.64	1.06	1.03	5.76	5.47	270.62	310.62	3.4	3.25	3.94	3.94
Richland/McKenzie County	D14	RM 24.45	39139	5% Duration	1044.89	575.51	571.64	1.19	1.19	7.12	7.12	236.37	236.37	3.7	3.7	3.87	3.87
Richland/McKenzie County	D14	RM 24.24	38801	5% Duration	1044.89	575.44	571.58	1.2	1.19	7.23	6.92	236.55	249.21	3.67	3.51	3.86	3.86
Richland/McKenzie County	D14	RM 24.05	38506	5% Duration	1044.89	575.4	571.48	1.07	1.07	5.72	5.72	260	260	3.75	3.75	3.92	3.92
Richland/McKenzie County	D14	RM 23.87	38210	5% Duration	1044.89	575.39	571.28	0.8	0.8	3.09	3.09	328.01	328.01	4	4	4.11	4.11
Richland/McKenzie County	D14	RM 23.66	37912	5% Duration	1044.89	575.37	571.21	0.69	0.69	2.39	2.39	437.91	437.91	3.48	3.48	4.16	4.16
Richland/McKenzie County	D14	RM 23.48	37610	5% Duration	1044.89	575.33	571.12	0.89	0.85	4.07	3.8	341.71	497.32	2.66	2.49	4.21	4.21
Richland/McKenzie County	D14	RM 23.29	37312	5% Duration	1044.89	575.27	570.86	1	0.98	4.89	4.82	292.44	396.97	2.71	2.68	4.41	4.41
Richland/McKenzie County	D14	RM 23.1	37006	5% Duration	1044.89	575.22	570.82	1	0.91	4.62	3.79	249.24	416.12	3.36	2.75	4.4	4.4
Richland/McKenzie County	D14	RM 22.92	36721	5% Duration	1044.89	575.15	570.8	1.21	1.04	6.91	4.92	206.75	425.11	3.33	2.35	4.35	4.35
Richland/McKenzie County	D14	RM 22.72	36402	5% Duration	1044.89	575.04	570.81	1.45	1.29	10.29	5.57	174.67	385.53	3.93	2.1	4.23	4.23
Richland/McKenzie County	D14	RM 22.54	36108	5% Duration	1044.89	575.02	570.76	1.02	1.02	4.91	4.37	270.88	306.16	3.78	3.36	4.26	4.26
Richland/McKenzie County	D14	RM 22.35	35808	5% Duration	1044.89	574.98	570.74	0.96	0.95	4.71	3.9	305.72	375.77	3.54	2.92	4.24	4.24
Richland/McKenzie County	D14	RM 22.17	35508	5% Duration	1044.89	574.96	570.68	0.84	0.84	3.42	3.42	299.76	299.76	4.13	4.13	4.28	4.28
Richland/McKenzie County	D14	RM 22.02	35264	5% Duration	1044.89	574.95	570.68	0.71	0.71	2.41	2.35	351.04	359.85	4.2	4.1	4.27	4.27
Richland/McKenzie County	D14	RM 21.8	34901	5% Duration	1044.89	574.9	570.69	0.89	0.89	4.23	4.15	396.75	405.59	2.97	2.91	4.21	4.21
Richland/McKenzie County	D14	RM 21.61	34626	5% Duration	1044.89	574.85	570.67	0.95	0.94	5.19	5.12	459.8	469.75	2.39	2.36	4.18	4.18
Richland/McKenzie County	D14	RM 21.34	34140	5% Duration	1044.89	574.79	570.67	0.84	0.75	3.57	2.29	284.94	615.86	3.52	2.25	4.12	4.12
Richland/McKenzie County	D14	RM 21.25	33973	5% Duration	1044.89	574.73	570.67	1.23	1.1	7.74	4.85	193.34	488.57	3.12	1.94	4.06	4.06
Richland/McKenzie County	D14	RM 21.06	33672	5% Duration	1044.89	574.7	570.6	0.95	0.88	4.72	3.22	254.08	546.49	3.19	2.17	4.1	4.1
Richland/McKenzie County	D14	RM 20.9	33400	5% Duration	1044.89	574.64	570.58	1.12	1.08	6.98	5.06	241.05	513.29	2.61	1.89	4.06	4.06
Richland/McKenzie County	D14	RM 20.71	33101	5% Duration	1044.89	574.56	570.53	1.18	1.15	7.52	6.44	231.39	358.65	2.94	2.53	4.03	4.03
Richland/McKenzie County	D14	RM 20.52	32800	5% Duration	1044.89	574.53	570.52	0.95	0.92	4.75	4.3	270.86	387.09	3.24	2.95	4.01	4.01
Richland/McKenzie County	D14	RM 20.34	32500	5% Duration	1044.89	574.49	570.52	0.99	0.92	5	4.12	232.35	385.11	3.58	2.95	3.97	3.97
Richland/McKenzie County	D14	RM 20.15	32200	5% Duration	1044.89	574.43	570.52	1.03	1.02	6.05	5.63	221.36	312.64	3.54	3.29	3.91	3.91
Richland/McKenzie County	D14	RM 19.96	31900	5% Duration	1044.89	574.28	570.52	1.59	1.59	12.89	12.72	186.44	189.04	3.52	3.47	3.76	3.76
Richland/McKenzie County	D14	RM 19.77	31600	5% Duration	1044.89	574.27	570.5	0.96	0.96	4.63	4.63	318.99	318.99	3.4	3.4	3.77	3.77
Richland/McKenzie County	D14	RM 19.59	31297	5% Duration	1044.89	574.23	570.45	0.99	0.96	4.75	4.44	324.05	381.01	3.04	2.86	3.78	3.78
Richland/McKenzie County	D14	RM 19.4	30995	5% Duration	1044.89	574.14	570.45	1.2	1.16	7.93	6.95	280.1	373.16	2.75	2.41	3.69	3.69
Richland/McKenzie County	D14	RM 19.21	30710	5% Duration	1044.89	574.12	570.38	0.78	0.73	3.16	2.5	374	533.89	3.37	2.67	3.74	3.74
Richland/McKenzie County	D14	RM 19.03	30402	5% Duration	1044.89	574.08	570.38	0.86	0.82	3.54	3.09	421.47	538.45	2.7	2.35	3.7	3.7
Richland/McKenzie County	D14	RM 18.83	30086	5% Duration	1044.89	574.01	570.38	1.03	0.99	4.98	4.67	424.5	517.79	2.21	2.06	3.63	3.63
Richland/McKenzie County	D14	RM 18.66	29802	5% Duration	1044.89	573.92	570.38	1.12	1.08	7.23	6.28	375.15	522.11	2.18	1.88	3.54	3.54
Richland/McKenzie County	D14	RM 18.47	29499	5% Duration	1044.89	573.75	570.36	1.49	1.45	13.05	12.1	274.87	344.65	2.26	2.1	3.39	3.39
Richland/McKenzie County	D14	RM 18.28	29197	5% Duration	1044.89	573.65	570.36	1.27	1.27	8.12	8.12	277.33	277.33	2.98	2.98	3.29	3.29

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	tterfly	Cross Section
Richland/McKenzie County	D14	RM 17.89	28624	5% Duration	1044.89	573.61	570.33	0.7	0.7	2.59	2.59	460.39	460.39	3.22	3.22	3.28	3.28
Richland/McKenzie County	D14	RM 17.56	27975	5% Duration	1044.89	573.48	570.29	1.1	1.09	6.6	6.38	345.32	362.66	2.73	2.64	3.19	3.19
Richland/McKenzie County	D14	RM 17.36	27539	5% Duration	1044.89	573.27	570.31	1.53	1.53	12.93	12.93	249.36	249.36	2.74	2.74	2.96	2.96
Richland/McKenzie County	D14	RM 17.1	27113	5% Duration	1044.89	573.11	570.28	1.34	1.34	9.86	9.86	288.1	288.1	2.72	2.72	2.83	2.83
Richland/McKenzie County	D14	RM 16.74	26537	5% Duration	1044.89	572.97	570.14	1.02	1.02	5.67	5.67	397.57	397.57	2.57	2.57	2.83	2.83
Richland/McKenzie County	D14	RM 16.35	25925	5% Duration	1044.89	572.87	569.46	0.93	0.92	4.47	4.26	338.54	363.37	3.29	3.13	3.41	3.41
Richland/McKenzie County	D14	RM 16.17	25629	5% Duration	1044.89	572.84	569.2	0.87	0.87	4.01	3.84	368.55	387.01	3.24	3.11	3.64	3.64
Richland/McKenzie County	D14	RM 15.95	25324	5% Duration	1044.89	572.83	568.99	0.63	0.63	1.97	1.97	452.39	452.39	3.68	3.68	3.84	3.84
Richland/McKenzie County	D14	RM 15.75	25032	5% Duration	1044.89	572.8	568.85	0.73	0.73	2.85	2.85	458.44	458.44	3.1	3.1	3.95	3.95
Richland/McKenzie County	D14	RM 15.56	24777	5% Duration	1044.89	572.73	568.85	1.1	1.1	6.05	6.05	285.96	285.96	3.32	3.32	3.88	3.88
Richland/McKenzie County	D14	RM 15.34	24438	5% Duration	1044.89	572.67	568.79	1.09	1.09	5.93	5.93	255.43	255.43	3.75	3.75	3.88	3.88
Richland/McKenzie County	D14	RM 15.16	24144	5% Duration	1044.89	572.62	568.75	1.07	1.07	5.69	5.69	259.63	259.63	3.76	3.76	3.87	3.87
Richland/McKenzie County	D14	RM 14.98	23841	5% Duration	1044.89	572.56	568.76	1.15	1.15	7.17	7.17	248.15	248.15	3.66	3.66	3.8	3.8
Richland/McKenzie County	D14	RM 14.79	23543	5% Duration	1044.89	572.49	568.72	1.2	1.2	7.18	7.18	247.41	247.41	3.51	3.51	3.77	3.77
Richland/McKenzie County	D14	RM 14.61	23241	5% Duration	1044.89	572.44	568.7	1.09	1.09	6.04	6.04	266.18	266.18	3.59	3.59	3.74	3.74
Richland/McKenzie County	D14	RM 14.42	22940	5% Duration	1044.89	572.41	568.69	0.9	0.9	4.09	4.09	321.84	321.84	3.6	3.6	3.72	3.72
Richland/McKenzie County	D14	RM 14.23	22647	5% Duration	1044.89	572.4	568.67	0.7	0.7	2.51	2.51	440.94	440.94	3.39	3.39	3.73	3.73
Richland/McKenzie County	D14	RM 14.05	22341	5% Duration	1044.89	572.37	568.68	0.66	0.66	2.43	2.35	525.49	544.01	3.01	2.91	3.69	3.69
Richland/McKenzie County	D14	RM 13.88	22040	5% Duration	1044.89	572.32	568.67	0.91	0.91	3.98	3.98	484.29	484.29	2.36	2.36	3.65	3.65
Richland/McKenzie County	D14	RM 13.7	21728	5% Duration	1044.89	572.25	568.65	1	1	5.05	5.05	320.85	320.85	3.27	3.27	3.6	3.6
Richland/McKenzie County	D14	RM 13.51	21429	5% Duration	1044.89	572.22	568.63	0.89	0.89	4.14	4.14	366.9	366.9	3.19	3.19	3.59	3.59
Richland/McKenzie County	D15	RM 13.31	21145	5% Duration	1044.89	572.19	568.51	0.8	0.8	3.28	3.28	433.97	433.97	2.99	2.99	3.68	3.68
Richland/McKenzie County	D15	RM 13.12	20858	5% Duration	1044.89	572.15	568.39	0.88	0.88	3.87	3.87	335.23	335.23	3.56	3.56	3.76	3.76
Richland/McKenzie County	D15	RM 12.9	20507	5% Duration	1044.89	572.09	568.39	1.01	1.01	5.15	5.15	292.79	292.79	3.54	3.54	3.7	3.7
Richland/McKenzie County	D15	RM 12.73	20241	5% Duration	1044.89	572.05	568.35	1	1	5.03	5.03	290.94	290.94	3.6	3.6	3.7	3.7
Richland/McKenzie County	D15	RM 12.56	19961	5% Duration	1044.89	572.02	568.34	0.88	0.88	3.88	3.88	332.62	332.62	3.58	3.58	3.68	3.68
Richland/McKenzie County	D15	RM 12.38	19686	5% Duration	1044.89	572.01	568.23	0.73	0.73	2.7	2.7	419.23	423.11	3.43	3.43	3.78	3.78
Richland/McKenzie County	D15	RM 12.21	19384	5% Duration	1044.89	571.96	568.17	0.89	0.89	4.05	4.05	362.15	439.4	3.25	3.25	3.79	3.79
Richland/McKenzie County	D15	RM 11.99	19084	5% Duration	1044.89	571.92	568.16	0.89	0.89	4.12	4.12	383.09	383.09	3.06	3.06	3.76	3.76
Richland/McKenzie County	D15	RM 11.53	18484	5% Duration	1044.89	571.83	568.11	0.95	0.95	4.74	4.74	354.11	354.11	3.1	3.1	3.72	3.72
Richland/McKenzie County	D15	RM 11.34	18216	5% Duration	1044.89	571.79	568.06	0.88	0.88	4.49	4.34	343.07	355.63	3.46	3.34	3.73	3.73
Richland/McKenzie County	D15	RM 11.17	17885	5% Duration	1044.89	571.71	567.88	1.07	1.07	7.19	7.19	358.5	358.5	2.72	2.72	3.83	3.83
Richland/McKenzie County	D15	RM 10.97	17584	5% Duration	1044.89	571.65	567.8	0.93	0.93	4.57	4.57	405.69	405.69	2.76	2.76	3.85	3.85
Richland/McKenzie County	D15	RM 10.75	17284	5% Duration	1044.89	571.63	567.79	0.76	0.76	2.81	2.81	439.92	439.92	3.11	3.11	3.84	3.84
Richland/McKenzie County	D15	RM 10.53	16964	5% Duration	1044.89	571.58	567.73	0.92	0.92	4.34	4.32	377.32	379.75	3.01	2.99	3.85	3.85
Richland/McKenzie County	D15	RM 10.35	16670	5% Duration	1044.89	571.51	567.73	1.05	1.05	5.85	5.85	394.5	394.5	2.53	2.53	3.78	3.78
Richland/McKenzie County	D15	RM 10.15	16384	5% Duration	1044.89	571.46	567.73	1	0.89	5.08	3.35	248.64	512.73	3.48	2.28	3.73	3.73
Richland/McKenzie County	D15	RM 9.94	16084	5% Duration	1044.89	571.42	567.73	0.91	0.77	4.3	2.88	269.48	624.05	3.25	2.17	3.69	3.69
Richland/McKenzie County	D15	RM 9.76	15797	5% Duration	1044.89	571.37	567.65	0.91	0.87	3.82	3.38	343.88	478.98	2.92	2.59	3.72	3.72
Richland/McKenzie County	D15	RM 9.57	15487	5% Duration	1044.89	571.32	567.58	1	0.93	5.01	4.06	243	416.83	3.58	2.91	3.74	3.74
Richland/McKenzie County	D15	RM 9.37	15187	5% Duration	1044.89	571.26	567.58	1.11	1.04	6.27	5.25	200.14	334.97	3.56	2.99	3.68	3.68
Richland/McKenzie County	D15	RM 9.24	14963	5% Duration	1044.89	571.21	564.5	1.15	1.15	6.56	6.56	233.65	233.7	3.88	3.88	6.71	6.71
Richland/McKenzie County	D15	RR/Walkway	14952	5% Duration	Bridge												
Richland/McKenzie County	D15	RM 9.22	14942	5% Duration	1044.89	571.19	564.5	1.16	1.16	6.62	6.62	233.5	233.5	3.87	3.87	6.69	6.69
Richland/McKenzie County	D15	RM 9.1	14741	5% Duration	1044.89	571.1	567.39	1.41	1.41	10.19	10.19	219.36	219.36	3.37	3.37	3.71	3.71
Richland/McKenzie County	D15	RM 9.03	14639	5% Duration	1044.89	571.09	565.46	1.23	1.23	7.71	7.63	245.94	248.65	3.45	3.42	5.63	5.63
Richland/McKenzie County	D15	Highway 68	14629	5% Duration	Bridge												
Richland/McKenzie County	D15	RM 9.02	14619	5% Duration	1044.89	571.07	565.46	1.24	1.23	7.78	7.7	245.89	248.4	3.44	3.41	5.61	5.61
Richland/McKenzie County	D15	RM 8.82	14300	5% Duration	1044.89	571.04	567.41	0.87	0.87	3.93	3.93	375.55	375.55	3.21	3.21	3.63	3.63
Richland/McKenzie County	D15	RM 8.61	13963	5% Duration	1044.89	570.97	567.39	1.02	0.99	5.29	4.96	301.88	349.57	3.22	3.02	3.58	3.58
Richland/McKenzie County	D15	RM 8.44	13687	5% Duration	1044.89	570.91	567.32	1.14	1.09	6.65	5.85	251.3	316.12	3.45	3.03	3.59	3.59
Richland/McKenzie County	D15	RM 8.24	13387	5% Duration	1044.89	570.83	567.32	1.27	1.2	8.23	5.45	227.08	388.28	3.39	2.24	3.51	3.51
Richland/McKenzie County	D15	RM 8.05	13080	5% Duration	1044.89	570.78	567.05	1.08	1.05	5.87	5.22	260.52	315.4	3.56	3.17	3.73	3.73
Richland/McKenzie County	D15	RM 7.87	12786	5% Duration	1044.89	570.7	567.05	1.25	1.2	7.97	7.12	226.71	303.07	3.45	3.09	3.65	3.65
Richland/McKenzie County	D15	RM 7.69	12506	5% Duration	1044.89	570.65	567.05	1.1	1.06	6.13	5.32	260.88	328.39	3.46	3.01	3.6	3.6
Richland/McKenzie County	D15	RM 7.48	12179	5% Duration	1044.89	570.63	566.95	0.82	0.82	3.38	3.38	357.08	357.08	3.58	3.58	3.68	3.68
Richland/McKenzie County	D16	RM 7.3	11891	5% Duration	1044.89	570.59	566.76	0.92	0.92	4.32	4.32	320.42	320.42	3.53	3.53	3.82	3.82
Richland/McKenzie County	D16	RM 7.14	11639	5% Duration	1044.89	570.53	566.76	1.08	1.05	6.22	5.52	320.23	374.83	2.99	2.65	3.77	3.77
Richland/McKenzie County	D16	RM 6.94	11319	5% Duration	1044.89	570.48	566.76	0.98	0.95	4.79	4.31	292.22	340.01	3.6	3.23	3.72	3.72
Richland/McKenzie County	D16	RM 6.77	11043	5% Duration	1044.89	570.45	566.76	0.91	0.88	4.28	3.72	347.17	423.43	3.24	2.81	3.69	3.69
Richland/McKenzie County	D16	RM 6.58	10733	5% Duration	1044.89	570.41	566.59	0.87	0.84	3.85	3.22	340.25	428.25	3.47	2.89	3.82	3.82
Richland/McKenzie County	D16	RM 6.38	10417	5% Duration	1044.89	570.26	566.59	1.59	1.49	12.95	9.29	179.3	281.27	3.5	2.5	3.67	3.67

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.

Yellowstone River - Richland/McKenzie County - Regulated Flows - Developed Conditions

Reach	YRCDC Reach Code	YRCDC River Miles	RAS River Station	Profile	Q Total (cms)	W.S. Elevation (m)	Minimum Cross Section Elevation (m)	Average Velocity (m/s)		Average Shear Stress (N/m^2)		Total Wetted Top Width (m)		Average Depth as Hydarulic Depth (m)		Maximum Depth (m) *	
								Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	Main Channel	Cross Section	tterfly	Cross Section
Richland/McKenzie County	D16	RM 6.21	10138	5% Duration	1044.89	570.19	566.44	1.34	1.27	9.07	6.68	212.45	314.98	3.57	2.62	3.75	3.75
Richland/McKenzie County	D16	RM 6.01	9825	5% Duration	1044.89	570.18	566.17	0.79	0.79	3.22	3.19	410.11	414.14	3.24	3.21	4.01	4.01
Richland/McKenzie County	D16	RM 5.83	9551	5% Duration	1044.89	570.17	565.96	0.62	0.62	1.94	1.87	478.72	496.03	3.53	3.41	4.21	4.21
Richland/McKenzie County	D16	RM 5.67	9297	5% Duration	1044.89	570.15	565.96	0.75	0.74	2.85	2.65	339.28	440.89	3.44	3.2	4.19	4.19
Richland/McKenzie County	D16	RM 5.43	8926	5% Duration	1044.89	570.08	565.96	1.01	1.02	5.49	5.3	258.4	362.42	2.93	2.84	4.12	4.12
Richland/McKenzie County	D16	RM 5.25	8623	5% Duration	1044.89	569.97	565.96	1.35	1.31	9.03	7.56	205.6	254.59	3.76	3.14	4.01	4.01
Richland/McKenzie County	D16	RM 5.06	8331	5% Duration	1044.89	569.94	565.82	0.98	0.94	4.78	3.52	288.12	409.67	3.69	2.71	4.12	4.12
Richland/McKenzie County	D16	RM 4.87	8029	5% Duration	1044.89	569.91	565.67	0.87	0.82	3.91	3.09	331.55	473.29	3.42	2.69	4.24	4.24
Richland/McKenzie County	D16	RM 4.71	7757	5% Duration	1044.89	569.88	565.54	0.96	0.89	4.48	3.23	246.23	404.87	4.06	2.91	4.34	4.34
Richland/McKenzie County	D16	RM 4.53	7456	5% Duration	1044.89	569.8	565.54	1.24	1.16	7.44	5.16	196.48	321.06	4.07	2.81	4.26	4.26
Richland/McKenzie County	D16	RM 4.34	7156	5% Duration	1044.89	569.75	565.54	1.17	1.08	7.23	4.92	211.41	359.36	4	2.7	4.21	4.21
Richland/McKenzie County	D16	RM 4.17	6884	5% Duration	1044.89	569.71	565.54	1.12	1.05	6.1	4.55	221.41	335.95	4	2.97	4.17	4.17
Richland/McKenzie County	D16	RM 3.96	6550	5% Duration	1044.89	569.68	565.54	0.88	0.82	3.78	2.88	215.94	431.91	3.88	2.96	4.14	4.14
Richland/McKenzie County	D16	RM 3.78	6249	5% Duration	1044.89	569.62	565.54	1.07	1.02	5.88	4.72	194.19	384.31	3.33	2.67	4.08	4.08
Richland/McKenzie County	D16	RM 3.55	5904	5% Duration	1044.89	569.58	565.54	0.94	0.88	4.36	3.4	206.04	396.66	3.85	2.99	4.04	4.04
Richland/McKenzie County	D16	RM 3.38	5657	5% Duration	1044.89	569.53	565.53	1.13	1.08	6.3	4.65	170.04	347.25	3.77	2.78	4	4
Richland/McKenzie County	D16	RM 3.2	5363	5% Duration	1044.89	569.47	565.54	1.18	1.21	7.34	7.15	165.41	283.43	3.11	3.03	3.93	3.93
Richland/McKenzie County	D16	RM 3.01	5062	5% Duration	1044.89	569.43	565.54	1.03	1.02	5.54	4.98	306.21	346.75	3.3	2.96	3.89	3.89
Richland/McKenzie County	D16	RM 2.82	4763	5% Duration	1044.89	569.37	565.46	1.02	1.02	5.96	5.96	415.82	415.82	2.46	2.46	3.91	3.91

* Bathymetric survey was not collected for the study reach. Depths are approximate based on incorporation of an estimated low flow channel.