

Report Created:
9/23/2014 8:40:04 AM

Streamflow Forecast Summary: June 1, 2013
(averages based on 1981-2010 reference period)

		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
KOOTENAI RIVER BASIN in MONTANA	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Tobacco R nr Eureka	JUN-JUL	35	46	53	91%	60	71	58
	JUN-SEP	44	57	66	93%	75	88	71
Libby Reservoir Inflow ¹	JUN-JUL	2730	3170	3370	104%	3570	4010	3240
	JUN-SEP	3470	4020	4270	103%	4520	5070	4150
Fisher R nr Libby	JUN-JUL	33	45	53	87%	61	73	61
	JUN-SEP	43	57	66	88%	75	89	75
Yaak R nr Troy	JUN-JUL	54	80	98	75%	116	142	130
	JUN-SEP	68	96	116	77%	136	164	150
Kootenai R at Leona ^{1,2}	JUN-JUL	2440	3030	3300	91%	3570	4160	3640
	JUN-SEP	3210	3930	4260	92%	4590	5310	4640

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
FLATHEAD RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
NF Flathead R nr Columbia Falls	JUN-JUL	555	660	735	95%	810	915	775
	JUN-SEP	695	815	900	96%	985	1110	935
MF Flathead R nr West Glacier	JUN-JUL	515	630	710	94%	790	905	755
	JUN-SEP	635	760	845	95%	930	1050	890
Sf Flathead R nr Hungry Horse	JUN-JUL	435	505	555	98%	605	675	565
	JUN-SEP	495	570	625	98%	680	755	635
Hungry Horse Reservoir Inflow ^{1,2}	JUN-JUL	595	770	850	99%	930	1100	860
	JUN-SEP	685	875	960	98%	1050	1230	980
Flathead R at Columbia Falls ²	JUN-JUL	1800	2130	2350	96%	2570	2900	2460
	JUN-SEP	2170	2530	2780	96%	3030	3390	2890
Ashley Ck nr Marion ²	JUN-JUL	0.28	0.99	1.48	110%	1.97	2.7	1.35
	JUN-SEP	-1.02	0.11	0.87	147%	1.63	2.8	0.59
Swan R nr Bigfork	JUN-JUL	230	260	280	100%	300	330	280
	JUN-SEP	295	330	355	100%	380	415	355
Flathead Lake Inflow ^{1,2}	JUN-JUL	1920	2470	2720	95%	2970	3520	2860
	JUN-SEP	2260	2890	3180	96%	3470	4100	3320
Mill Ck ab Bassoo ck nr Niarada	JUN-JUL	0.5	0.82	1.04	83%	1.26	1.58	1.25
	JUN-SEP	0.75	1.1	1.34	85%	1.58	1.93	1.58
South Crow Ck nr Ronan	JUN-JUL	4.6	5.6	6.3	97%	7	8	6.5
	JUN-SEP	5.7	6.9	7.7	97%	8.5	9.7	7.9
Mission Ck nr St. Ignatius								

SF Jocko R nr Arlee	JUN-JUL	14.4	16	17.2	97%	18.4	20	17.7
	JUN-SEP	18.2	20	22	100%	24	26	22
NF Jocko R bl Tabor Feeder Canal	JUN-JUL	12.7	15	16.5	96%	18	20	17.1
	JUN-SEP	15.8	18.3	20	95%	22	24	21
	JUN-JUL	11.7	13.5	14.7	95%	15.9	17.7	15.4
	JUN-SEP	13	15.1	16.5	95%	17.9	20	17.3

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast

UPPER CLARK FORK RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Little Blackfoot nr Garrison	JUN-JUL	7.83231	16.26803	22	76%	27.73197	36.16769	29
	JUN-SEP	11.46908	21.31192	28	78%	34.68808	44.53092	36
Flint Ck nr Southern Cross	JUN-JUL	0.9	3.1	4.6	68%	6.1	8.3	6.8
	JUN-SEP	0.94	3.9	5.9	66%	7.9	10.9	9
Flint Ck bl Boulder Ck	JUN-JUL	9.3	17.4	23	74%	29	37	31
	JUN-SEP	15.8	27	34	77%	41	52	44
Lower Willow Ck Reservoir Inflow ²	JUN-JUL	-0.49	0.9	1.84	51%	2.8	4.2	3.6
	JUN-SEP	0	1.55	2.6	58%	3.6	5.2	4.5
MF Rock Ck nr Philipsburg	JUN-JUL	5.9	13.4	18.5	54%	24	31	34
	JUN-SEP	8.81211	17.25986	23	56%	28.74014	37.18789	41
Rock Ck nr Clinton	JUN-JUL	15.36158	45.5127	66	50%	86.4873	116.63842	131
	JUN-SEP	29.98036	64.52641	88	54%	111.47359	146.01964	164
Clark Fork R ab Milltown	JUN-JUL	25.64198	99.09179	149	55%	198.90821	272.35802	270
	JUN-SEP	62	150	210	59%	270	360	355
Nevada Ck nr Helmville	JUN-JUL	1.22	2.6	3.6	62%	4.6	6	5.8
	JUN-SEP	1.8	3.4	4.5	63%	5.6	7.2	7.2
Blackfoot R nr Bonner	JUN-JUL	192.1171	235.51303	265	82%	294.48697	337.8829	325
	JUN-SEP	259.25712	307.33303	340	84%	372.66697	420.74288	405
Clark Fork R ab Missoula	JUN-JUL	245	345	415	70%	485	585	595
	JUN-SEP	350	470	550	72%	630	750	765

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast

BITTERROOT RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
WF Bitterroot R Nr Conner ²	JUN-JUL	14.1	22	28	50%	34	42	56
	JUN-SEP	12.8	25	33	49%	41	53	67
Bitterroot R Nr Darby	JUN-JUL	90	111	126	60%	141	162	210
	JUN-SEP	124	152	170	63%	188	215	270

Boulder R nr Boulder	JUN-JUL	-20	85	157	49%	230	335	320
	JUN-SEP	-32	102	193	54%	285	420	355
Willow Ck Reservoir Inflow ²	JUN-JUL	11.5	18.4	23	72%	28	34	32
	JUN-SEP	10.6	19.8	26	70%	32	41	37
Jefferson R nr Three Forks ²	JUN-JUL	0.85	1.4	3.5	34%	5.6	8.7	10.4
	JUN-SEP	1	1.93	4.8	38%	7.7	11.9	12.5
	JUN-JUL	-15	57	135	38%	215	330	355
	JUN-SEP	-15	55	150	36%	245	385	415

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast

MADISON RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Hebgen Reservoir Inflow ²	JUN-JUL	100	126	143	80%	160	186	178
	JUN-SEP	178	210	230	82%	250	280	280
Ennis Reservoir Inflow ²	JUN-JUL	168	210	235	71%	260	300	330
	JUN-SEP	275	325	360	74%	395	445	485

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast

GALLATIN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Gallatin R nr Gateway	JUN-JUL	187	220	245	96%	270	305	255
	JUN-SEP	245	285	315	98%	345	385	320
Hyalite Reservoir Inflow ²	JUN-JUL	10.5	12	13	101%	14	15.5	12.9
	JUN-SEP	12.4	14.3	15.6	99%	16.9	18.8	15.7
Gallatin R at Logan	JUN-JUL	146	199	235	96%	270	325	245
	JUN-SEP	188	260	305	98%	350	420	310

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast

SMITH-JUDITH-MUSSELSHELL	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Sheep Ck nr White Sulphur Springs	JUN-JUL	4.8	7	8.5	105%	10	12.2	8.1
	JUN-SEP	6.8	9.7	11.7	107%	13.7	16.6	10.9
Smith R bl Eagle Ck ²	JUN-JUL	16.3	36	50	93%	64	84	54
	JUN-SEP	14.3	42	60	92%	78	106	65
NF Musselshell R nr Delpine								

SF Musselshell R ab Martinsdale	JUN-JUL	0.4	0.55	1.7	85%	2.8	4.5	2
	JUN-SEP	0.6	1.42	2.4	86%	3.4	4.8	2.8
Musselshell R at Harlowton ²	JUN-JUL	1.7	8.5	16.1	81%	24	35	20
	JUN-SEP	1.9	10.2	18.3	80%	26	38	23
Musselshell R nr Roundup ²	JUN-JUL	-9	1	15	54%	33	59	28
	JUN-SEP	-6	4	16.2	54%	34	60	30
	JUN-JUL	-26	-6.6	10.5	31%	28	53	34
	JUN-SEP	-27	-9.2	8	24%	25	50	34

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast								
SUN-TETON-MARIAS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Gibson Reservoir Inflow	JUN-JUL	136	168	190	90%	210	245	210
	JUN-SEP	172	205	230	92%	255	290	250
Two Medicine R nr Browning ²	JUN-JUL	65	79	88	107%	97	111	82
	JUN-SEP	75	90	101	107%	112	127	94
Badger Ck nr Browning	JUN-JUL	24	34	41	89%	47	57	46
	JUN-SEP	35	47	55	90%	63	75	61
Swift Reservoir Inflow ²	JUN-JUL	17.8	24	28	93%	32	38	30
	JUN-SEP	26	34	39	95%	44	52	41
Dupuyer Ck nr Valier	JUN-JUL	0.5	0.95	4	74%	7	11.6	5.4
	JUN-SEP	0.8	1.35	5	72%	8.6	14	6.9
Cut Bank Ck nr Browning	JUN-JUL	21	29	34	89%	39	47	38
	JUN-SEP	24	33	39	89%	45	54	44
Marias R nr Shelby ²	JUN-JUL	41	107	151	106%	195	260	143
	JUN-SEP	39	113	164	104%	215	290	158
Teton R nr Dutton	JUN-JUL	0.8	2	8	33%	21	39	24
	JUN-SEP	1	2.1	12	41%	27	49	29

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions
3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast								
ST. MARY & MILK BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Lake Sherburne Inflow	JUN-JUL	49	57	62	111%	67	75	56
	JUN-SEP	63	72	78	110%	84	93	71
St. Mary R nr Babb ²	JUN-JUL	205	235	255	109%	275	305	235
	JUN-SEP	255	290	315	107%	340	375	295
St. Mary R at Intl Boundary ²	JUN-JUL	225	265	295	107%	325	365	275

Milk R at Western Crossing of Intl Bndry, AB	JUN-SEP	285	335	365	106%	395	445	345
	JUN-JUL	0.2	3.6	9	70%	17	29	12.8
Milk R at Eastern Crossing of Intl Bndry	JUN-SEP	0.28	3.6	10.6	71%	19.7	33	14.9
	JUN-JUL	-3	7.5	18.8	98%	39	68	19.2
	JUN-SEP	1	10	26	104%	49	83	25

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast

MISSOURI MAINSTEM BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Missouri R at Toston ²	JUN-JUL	305	520	670	71%	820	1040	940
	JUN-SEP	360	660	865	71%	1070	1370	1220
Dearborn R nr Craig	JUN-JUL	8	22	32	80%	42	56	40
	JUN-SEP	11.9	28	39	85%	50	66	46
Missouri R at Fort Benton ²	JUN-JUL	445	800	1040	74%	1280	1640	1410
	JUN-SEP	635	1100	1420	75%	1740	2210	1900
Missouri R nr Virgelle ²	JUN-JUL	565	940	1200	75%	1460	1840	1600
	JUN-SEP	785	1280	1610	76%	1940	2430	2120
Missouri R nr Landusky ²	JUN-JUL	665	1040	1300	76%	1560	1930	1710
	JUN-SEP	910	1410	1750	77%	2090	2590	2260
Missouri R bl Fort Peck Dam ²	JUN-JUL	465	940	1260	74%	1580	2050	1710
	JUN-SEP	430	1120	1580	73%	2040	2730	2170
Lake Sakakawea Inflow ²	JUN-JUL	1870	3020	3810	75%	4580	5730	5060
	JUN-SEP	1720	3420	4590	75%	5720	7420	6150

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast

UPPER YELLOWSTONE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Yellowstone R at Yellowstone Lake Outlet	JUN-JUL	315	360	390	84%	420	465	465
	JUN-SEP	435	500	545	83%	590	655	655
Yellowstone R at Corwin Springs	JUN-JUL	715	835	920	88%	1000	1130	1040
	JUN-SEP	895	1060	1170	88%	1280	1440	1330
Yellowstone R at Livingston	JUN-JUL	810	960	1060	90%	1160	1310	1180
	JUN-SEP	1020	1220	1350	89%	1480	1680	1520
Shields R nr Livingston	JUN-JUL	12	17.4	38	61%	59	89	62
	JUN-SEP	15	21	46	61%	71	107	76
Boulder R at Big Timber	JUN-JUL	143	170	189	95%	210	235	200
	JUN-SEP	153	187	210	93%	235	265	225

Mystic Lake Inflow ²	JUN-JUL	30	35	38	81%	41	46	47
	JUN-SEP	41	48	52	83%	56	63	63
Stillwater R nr Absarokee ²	JUN-JUL	186	225	250	77%	275	315	325
	JUN-SEP	225	280	315	79%	350	405	400
Clarks Fk Yellowstone R nr Belfry	JUN-JUL	235	275	300	86%	325	365	350
	JUN-SEP	250	300	335	85%	370	420	395
Cooney Reservoir Inflow	JUN-JUL	4	10.5	15	68%	19.5	26	22
	JUN-SEP	10.8	18.6	24	77%	29	37	31
Yellowstone R at Billings	JUN-JUL	1220	1570	1800	83%	2030	2380	2170
	JUN-SEP	1440	1910	2220	83%	2530	3000	2660

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast

LOWER YELLOWSTONE RIVER BASIN (Wyoming)	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Bighorn R nr St. Xavier ²	JUN-JUL	310	490	615	67%	740	920	920
	JUN-SEP	250	490	655	65%	820	1060	1010
Little Bighorn R nr Hardin	JUN-JUL	8.3	25	37	70%	49	66	53
	JUN-SEP	14	34	48	73%	62	82	66
Tongue R nr Dayton ²	JUN-JUL	24	34	40	82%	46	56	49
	JUN-SEP	33	44	52	84%	60	71	62
Big Goose Ck nr Sheridan	JUN-JUL	14.8	20	24	77%	28	33	31
	JUN-SEP	21	27	31	79%	35	41	39
Little Goose Ck nr Bighorn	JUN-JUL	10.4	13.2	15.1	79%	17	19.8	19.1
	JUN-SEP	16.5	20	23	85%	26	29	27
Tongue River Reservoir Inflow ²	JUN-JUL	29	56	74	67%	92	119	110
	JUN-SEP	38	72	94	70%	116	150	134
Yellowstone R at Miles City ²	JUN-JUL	1610	2130	2500	78%	2850	3370	3200
	JUN-SEP	1760	2510	3030	78%	3510	4260	3870
Powder R at Moorehead	JUN-JUL	7.2	29	51	55%	73	105	92
	JUN-SEP	10	33	60	55%	87	126	110
Powder R nr Locate	JUN-JUL	10	27	56	55%	85	128	101
	JUN-SEP	10	26	63	52%	100	154	122
Yellowstone R nr Sidney ²	JUN-JUL	1430	2050	2480	77%	2890	3510	3240
	JUN-SEP	1420	2290	2900	76%	3470	4340	3840

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average