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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								
Flint Ck nr Southern Cross								
	MAY-JUL	4.9	7.9	10	95%	12.1	15.1	10.5
	MAY-SEP	5.8	9.5	12	94%	14.5	18.2	12.7
Flint Ck bl Boulder Ck								
	MAY-JUL	24	35	43	96%	51	62	45
	MAY-SEP	34	47	57	97%	66	79	59
Lower Willow Ck Reservoir Inflow ²								
	MAY-JUL	3.7	5.8	7.3	90%	8.8	10.9	8.1
	MAY-SEP	4.3	6.5	8	90%	9.5	11.7	8.9
MF Rock Ck nr Philipsburg								
	MAY-JUL	35	43	48	91%	53	61	53
	MAY-SEP	41	49	54	90%	59	67	60
Rock Ck nr Clinton								
	MAY-JUL	142	178	205	93%	230	265	220
	MAY-SEP	164	205	230	92%	255	295	250
Clark Fork R ab Milltown								
	MAY-JUL	230	335	405	91%	480	585	445
	MAY-SEP	295	410	490	92%	565	685	530
Nevada Ck nr Helmville								
	MAY-JUL	3.5	8.3	11.5	105%	14.7	19.5	11
	MAY-SEP	4.2	9.3	12.8	103%	16.3	21	12.4
Blackfoot R nr Bonner								
	MAY-JUL	470	570	640	108%	710	810	590
	MAY-SEP	545	650	725	107%	795	905	675
Clark Fork R ab Missoula								
	MAY-JUL	720	915	1040	101%	1180	1370	1030
	MAY-SEP	860	1070	1210	101%	1360	1570	1200

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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								
	MAY-JUL	66	85	97	89%	109	127	109
	MAY-SEP	75	94	108	90%	121	140	120
Bitterroot R Nr Darby								
	MAY-JUL	265	315	350	93%	385	440	375
	MAY-SEP	285	345	380	93%	420	475	410
Como Reservoir Inflow ²								
	MAY-JUL	57	62	66	100%	69	74	66
	MAY-SEP	59	65	68	99%	72	78	69
Bitterroot R nr Missoula								
	MAY-JUL	755	840	895	90%	955	1040	990
	MAY-SEP	830	920	985	90%	1050	1140	1090

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LOWER CLARK FORK RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Clark Fork R bl Missoula	MAY-JUL	1560	1780	1930	95%	2090	2310	2030
	MAY-SEP	1770	2030	2190	95%	2360	2620	2300
Clark Fork R at St. Regis ¹	MAY-JUL	1860	2310	2510	95%	2710	3150	2640
	MAY-SEP	2140	2630	2840	95%	3060	3550	2990
Clark Fork R nr Plains ^{1,2}	MAY-JUL	6860	7840	8280	106%	8730	9700	7780
	MAY-SEP	7480	8620	9140	106%	9670	10800	8650
Thompson nr Thompson Falls								
Prospect Ck at Thompson Falls	MAY-JUL	49	57	63	83%	68	76	76
	MAY-SEP	56	64	70	83%	75	84	84
Clark Fork R at Whitehorse Rapids ^{1,2}								

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

JEFFERSON RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Lima Reservoir Inflow ²	MAY-JUL	12.6	27	36	72%	45	59	50
	MAY-SEP	14.2	30	40	71%	50	66	56
Clark Canyon Inflow ²	MAY-JUL	1	22	40	63%	58	85	64
	MAY-SEP	1.06	34	56	67%	78	111	83
Beaverhead R at Barretts ²	MAY-JUL	9.1	39	60	71%	81	111	85
	MAY-SEP	23	58	82	74%	106	141	111
Ruby R Reservoir Inflow ²	MAY-JUL	42	54	63	94%	72	84	67
	MAY-SEP	52	67	77	94%	87	102	82
Big Hole R at Wisdom	MAY-JUL	10.2	43	65	87%	87	120	75
	MAY-SEP	11.9	47	71	89%	95	130	80
Big Hole R nr Melrose	MAY-JUL	260	345	400	91%	455	540	440
	MAY-SEP	285	380	440	92%	500	595	480
Jefferson R nr Twin Bridges ²	MAY-JUL	118	280	435	84%	500	660	515
	MAY-SEP	176	350	470	85%	590	765	555
Boulder R nr Boulder	MAY-JUL	22	39	50	83%	61	78	60
	MAY-SEP	24	42	55	85%	68	86	65
Willow Ck Reservoir Inflow ²	MAY-JUL	0.77	6.2	9.9	69%	13.6	19	14.4
Jefferson R nr Three Forks ²	MAY-JUL	194	355	465	81%	575	740	575
	MAY-SEP	195	385	510	80%	640	830	635

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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	MAY-JUL	215	255	280	92%	305	345	305
	MAY-SEP	290	340	375	93%	410	460	405
Ennis Reservoir Inflow ²	MAY-JUL	355	420	465	88%	510	575	530
	MAY-SEP	465	550	605	89%	660	745	680

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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	MAY-JUL	325	365	390	105%	415	455	370
	MAY-SEP	380	425	460	105%	490	535	440
Hyalite Reservoir Inflow ²	MAY-JUL	18	19.8	21	114%	22	24	18.5
	MAY-SEP	22	24	25	119%	26	28	21
Gallatin R at Logan	MAY-JUL	285	360	410	108%	460	535	380
	MAY-SEP	320	410	470	106%	530	620	445

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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	MAY-JUL	9.2	12.2	14.2	106%	16.2	19.2	13.4
	MAY-SEP	11.1	14.7	17.2	106%	19.7	23	16.2
Smith R bl Eagle Ck ²	MAY-JUL	39	66	85	96%	104	131	89
	MAY-SEP	39	72	95	96%	118	151	99
NF Musselshell R nr Delpine								
SF Musselshell R ab Martinsdale	MAY-JUL	7.3	26	39	105%	52	71	37
	MAY-SEP	9.1	29	42	105%	55	75	40
Musselshell R at Harlowton ²	MAY-JUL	20	39	51	106%	63	82	48
	MAY-SEP	17.9	39	53	106%	67	88	50
Musselshell R nr Roundup ²	MAY-JUL	26	44	56	104%	69	87	54
	MAY-SEP	24	43	56	104%	69	87	54

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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	MAY-JUL	310	350	375	106%	400	440	355
	MAY-SEP	340	385	415	105%	445	490	395
Two Medicine R nr Browning ²	MAY-JUL	130	153	168	110%	183	205	153
	MAY-SEP	140	164	180	110%	196	220	164
Badger Ck nr Browning	MAY-JUL	60	73	82	106%	91	104	77
	MAY-SEP	70	86	96	104%	106	122	92
Swift Reservoir Inflow ²	MAY-JUL	36	46	53	108%	60	70	49
	MAY-SEP	44	56	64	107%	72	84	60
Dupuyer Ck nr Valier	MAY-JUL	4.2	7.1	9	99%	10.9	13.8	9.1
	MAY-SEP	5	8.2	10.4	97%	12.6	15.8	10.7
Cut Bank Ck nr Browning	MAY-JUL	48	59	66	106%	73	84	62
	MAY-SEP	53	64	72	106%	80	91	68
Marias R nr Shelby ²	MAY-JUL	215	285	330	110%	375	445	300
	MAY-SEP	220	295	345	110%	395	470	315
Teton R nr Dutton	MAY-JUL	1.88	24	39	111%	54	76	35
	MAY-SEP	4.5	29	45	110%	61	85	41

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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	MAY-JUL	78	88	95	110%	102	112	86
	MAY-SEP	91	103	110	109%	118	129	101
St. Mary R nr Babb ²	MAY-JUL	310	350	375	110%	400	440	340
	MAY-SEP	360	405	435	110%	465	515	395
St. Mary R at Intl Boundary ²	MAY-JUL	350	405	445	111%	480	535	400
	MAY-SEP	410	470	515	110%	555	620	470
Milk R at Western Crossing of Intl Bndry, AB								
Milk R at Eastern Crossing of Intl Bndry								

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MISSOURI MAINSTEM BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Missouri R at Toston ²	MAY-JUL	930	1190	1370	93%	1550	1810	1480
	MAY-SEP	1060	1390	1620	92%	1840	2180	1760

Dearborn R nr Craig

Missouri R at Fort Benton²

MAY-JUL	1370	1800	2090	95%	2380	2810	2190
MAY-SEP	1670	2200	2560	96%	2920	3440	2680

Missouri R nr Virgelle²

MAY-JUL	1660	2130	2440	97%	2750	3220	2510
MAY-SEP	1950	2530	2920	96%	3310	3890	3030

Missouri R nr Landusky²

MAY-JUL	1750	2260	2600	98%	2940	3450	2650
MAY-SEP	2070	2700	3120	98%	3540	4170	3200

Missouri R bl Fort Peck Dam²

MAY-JUL	1760	2340	2730	101%	3120	3700	2700
MAY-SEP	1900	2660	3170	100%	3680	4440	3160

Lake Sakakawea Inflow²

MAY-JUL	5190	6630	7610	105%	8580	10000	7230
MAY-SEP	5720	7510	8720	105%	9940	11700	8320

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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	MAY-JUL	490	550	595	109%	640	700	545
	MAY-SEP	665	745	795	108%	845	925	735
Yellowstone R at Corwin Springs	MAY-JUL	1360	1510	1610	109%	1710	1860	1480
	MAY-SEP	1640	1810	1930	109%	2050	2220	1770
Yellowstone R at Livingston	MAY-JUL	1520	1700	1830	110%	1960	2150	1670
	MAY-SEP	1840	2050	2200	109%	2350	2560	2010
Shields R nr Livingston	MAY-JUL	34	66	87	81%	108	140	108
	MAY-SEP	38	73	96	78%	119	154	123
Boulder R at Big Timber	MAY-JUL	220	255	280	104%	305	340	270
	MAY-SEP	235	275	305	105%	330	370	290
Mystic Lake Inflow ²	MAY-JUL	52	57	60	105%	63	67	57
	MAY-SEP	67	73	77	107%	80	86	72
Stillwater R nr Absarokee ²	MAY-JUL	360	415	455	108%	490	545	420
	MAY-SEP	425	490	535	108%	580	645	495
Clarks Fk Yellowstone R nr Belfry	MAY-JUL	460	510	545	114%	575	625	480
	MAY-SEP	500	555	595	113%	630	685	525
Cooney Reservoir Inflow	MAY-JUL	21	31	38	115%	45	55	33
	MAY-SEP	31	42	49	114%	56	67	43
Yellowstone R at Billings	MAY-JUL	2630	3020	3290	110%	3550	3940	3000
	MAY-SEP	3020	3500	3830	110%	4160	4640	3490

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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	MAY-JUL	795	1070	1250	99%	1440	1710	1260
	MAY-SEP	820	1110	1310	98%	1510	1810	1340
Little Bighorn R nr Hardin	MAY-JUL	33	58	76	89%	93	119	85
	MAY-SEP	39	68	87	90%	107	136	97
Tongue R nr Dayton ²	MAY-JUL	48	62	72	90%	83	97	80
	MAY-SEP	57	73	84	91%	95	112	92
Big Goose Ck nr Sheridan	MAY-JUL	25	35	42	95%	49	59	44
	MAY-SEP	33	43	50	96%	57	67	52
Little Goose Ck nr Bighorn	MAY-JUL	17.9	24	28	97%	32	38	29
	MAY-SEP	25	32	36	97%	40	47	37
Tongue River Reservoir Inflow ²	MAY-JUL	59	111	147	84%	182	235	175
	MAY-SEP	76	132	169	85%	205	265	198
Yellowstone R at Miles City ²	MAY-JUL	3440	4150	4630	106%	5110	5820	4370
	MAY-SEP	3890	4740	5330	106%	5910	6770	5030
Powder R at Moorehead	MAY-JUL	26	99	149	99%	199	270	151
	MAY-SEP	43	117	167	98%	215	290	170
Powder R nr Locate	MAY-JUL	25	107	164	100%	220	305	164
	MAY-SEP	38	124	183	99%	240	330	185
Yellowstone R nr Sidney ²	MAY-JUL	3310	4130	4680	107%	5240	6050	4380
	MAY-SEP	3660	4640	5310	107%	5980	6960	4980

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