

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
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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	JUN-JUL	18.5	28	34	106%	40	49	32
	JUN-SEP	23	34	41	105%	48	59	39
Flint Ck nr Southern Cross	JUN-JUL	6.5	8.4	9.6	125%	10.8	12.7	7.7
	JUN-SEP	5.6	9.8	12.6	124%	15.4	19.6	10.2
Flint Ck bl Boulder Ck	JUN-JUL	32	40	45	136%	50	58	33
	JUN-SEP	48	58	65	135%	72	82	48
Lower Willow Ck Reservoir Inflow ²	JUN-JUL	1.59	3.3	4.5	105%	5.7	7.4	4.3
	JUN-SEP	2.3	4.2	5.5	104%	6.8	8.7	5.3
MF Rock Ck nr Philipsburg	JUN-JUL	35	41	45	115%	49	55	39
	JUN-SEP	41	49	54	115%	59	67	47
Rock Ck nr Clinton	JUN-JUL	108	149	176	119%	205	245	148
	JUN-SEP	138	184	215	117%	245	290	183
Clark Fork R ab Milltown	JUN-JUL	265	330	370	117%	410	475	315
	JUN-SEP	360	430	480	117%	530	600	410
Nevada Ck nr Helmville	JUN-JUL	5.1	7.1	8.5	121%	9.9	11.9	7
	JUN-SEP	6.4	8.7	10.3	121%	11.9	14.2	8.5
Blackfoot R nr Bonner	JUN-JUL	310	380	425	112%	470	540	380
	JUN-SEP	400	470	520	111%	570	640	470
Clark Fork R ab Missoula	JUN-JUL	735	795	835	120%	875	935	695
	JUN-SEP	960	1020	1060	120%	1100	1160	880

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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	54	66	75	109%	84	96	69
	JUN-SEP	65	79	89	109%	99	113	82
Bitterroot R Nr Darby	JUN-JUL	210	245	270	113%	295	330	240
	JUN-SEP	255	300	330	112%	360	405	295
Como Reservoir Inflow ²	JUN-JUL	30	38	44	110%	50	58	40
	JUN-SEP	34	43	49	111%	55	64	44
Bitterroot R nr Missoula	JUN-JUL	530	605	655	95%	705	780	690
	JUN-SEP	640	710	760	95%	810	880	800

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

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	JUN-JUL	1340	1430	1490	108%	1550	1640	1380
	JUN-SEP	1660	1760	1820	108%	1880	1980	1680
Clark Fork R at St. Regis ¹	JUN-JUL	1790	1850	1870	106%	1890	1950	1770
	JUN-SEP	2190	2250	2280	106%	2310	2370	2160
Clark Fork R nr Plains ^{1,2}	JUN-JUL	4410	4630	4730	93%	4830	5050	5100
	JUN-SEP	5280	5530	5640	93%	5750	6000	6090
Thompson nr Thompson Falls	JUN-JUL	53	64	71	87%	78	89	82
	JUN-SEP	73	85	93	86%	101	113	108
Prospect Ck at Thompson Falls	JUN-JUL	28	33	37	90%	41	46	41
	JUN-SEP	36	41	45	90%	49	54	50
Clark Fork R at Whitehorse Rapids ^{1,2}	JUN-JUL	4920	5110	5200	93%	5290	5480	5620
	JUN-SEP	5830	6120	6250	93%	6380	6670	6750

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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	JUN-JUL	21	29	35	90%	41	49	39
	JUN-SEP	25	36	43	91%	50	61	47
Clark Canyon Inflow ²	JUN-JUL	19	28	46	90%	64	90	51
	JUN-SEP	27	48	68	89%	88	118	76
Beaverhead R at Barretts ²	JUN-JUL	26	38	64	90%	90	128	71
	JUN-SEP	37	60	93	90%	126	176	103
Ruby R Reservoir Inflow ²	JUN-JUL	17.1	26	34	74%	38	47	46
	JUN-SEP	27	38	46	74%	52	63	62
Big Hole R at Wisdom	JUN-JUL	34	57	72	133%	87	110	54
	JUN-SEP	38	64	82	130%	100	126	63
Big Hole R nr Melrose	JUN-JUL	250	315	395	122%	405	470	325
	JUN-SEP	285	365	460	121%	475	555	380
Jefferson R nr Twin Bridges ²	JUN-JUL	240	345	450	115%	485	590	390
	JUN-SEP	265	400	530	114%	580	715	465
Boulder R nr Boulder	JUN-JUL	26	32	37	103%	42	48	36
	JUN-SEP	29	38	44	102%	50	59	43
Willow Ck Reservoir Inflow ²	JUN-JUL	7.3	10.4	12.5	116%	14.6	17.7	10.8
	JUN-SEP	7.9	12.1	15	115%	17.9	22	13.1

Jefferson R nr Three Forks²

JUN-JUL	200	315	415	112%	475	590	370
JUN-SEP	245	385	500	111%	575	715	450

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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	JUN-JUL	148	174	191	96%	210	235	200
	JUN-SEP	245	275	295	95%	315	345	310
Ennis Reservoir Inflow ²	JUN-JUL	275	315	340	91%	365	405	375
	JUN-SEP	415	465	500	93%	535	585	540

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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	JUN-JUL	260	295	320	112%	345	380	285
	JUN-SEP	325	365	395	110%	425	465	360
Hyalite Reservoir Inflow ²	JUN-JUL	13.1	14.6	15.6	105%	16.6	18.1	14.9
	JUN-SEP	15.7	17.6	18.9	105%	20	22	18
Gallatin R at Logan	JUN-JUL	240	295	330	118%	365	420	280
	JUN-SEP	295	365	410	114%	455	525	360

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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	JUN-JUL	6.3	8.5	10	110%	11.5	13.7	9.1
	JUN-SEP	8.4	11.3	13.3	110%	15.3	18.2	12.1
Smith R bl Eagle Ck ²	JUN-JUL	42	62	76	101%	90	110	75
	JUN-SEP	46	74	92	101%	110	138	91
NF Musselshell R nr Delpine	JUN-JUL	0.79	1.05	1.98	86%	3.4	5	2.3
	JUN-SEP	1.04	1.92	2.6	81%	3.9	5.3	3.2
SF Musselshell R ab Martinsdale	JUN-JUL	6.8	12	17	68%	27	38	25
	JUN-SEP	7.6	13.9	19.1	66%	30	42	29
Musselshell R at Harlowton ²	JUN-JUL	11.2	14.2	28	76%	50	76	37
	JUN-SEP	12	16.1	30	73%	52	78	41

Musselshell R nr Roundup²

JUN-JUL	12	17.8	30	64%	52	77	47
JUN-SEP	12.8	19.8	32	64%	54	79	50

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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	JUN-JUL	138	170	192	75%	215	245	255
	JUN-SEP	167	200	225	74%	250	285	305
Two Medicine R nr Browning ²	JUN-JUL	48	62	71	75%	80	94	95
	JUN-SEP	56	71	82	77%	93	108	107
Badger Ck nr Browning	JUN-JUL	17.2	27	34	77%	41	51	44
	JUN-SEP	21	33	41	77%	49	61	53
Swift Reservoir Inflow ²	JUN-JUL	21	27	31	89%	35	41	35
	JUN-SEP	29	37	42	89%	47	55	47
Dupuyer Ck nr Valier	JUN-JUL	2.4	3	6.1	94%	9.2	13.6	6.5
	JUN-SEP	3	4	7.6	92%	11.2	16.6	8.3
Cut Bank Ck nr Browning	JUN-JUL	16.8	25	30	71%	35	43	42
	JUN-SEP	19.5	28	34	69%	40	48	49
Marias R nr Shelby ²	JUN-JUL	50	82	126	69%	170	235	183
	JUN-SEP	58	94	145	69%	196	270	210
Teton R nr Dutton	JUN-JUL	9.6	11.4	24	89%	37	55	27
	JUN-SEP	12	14.9	30	86%	45	67	35

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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	46	54	54	89%	64	72	61
	JUN-SEP	60	69	67	86%	81	90	78
St. Mary R nr Babb ²	JUN-JUL	194	225	225	90%	265	295	250
	JUN-SEP	240	275	285	90%	325	360	315
St. Mary R at Intl Boundary ²	JUN-JUL	180	220	250	94%	280	320	265
	JUN-SEP	240	290	320	93%	350	400	345
Milk R at Western Crossing of Intl Bndry, AB	JUN-JUL	3.2	4.8	7.9	83%	11	15.5	9.5
	JUN-SEP	3.8	5.4	9.5	84%	13.6	19.6	11.3
Milk R at Eastern Crossing of Intl Bndry	JUN-JUL	6.5	10.7	16.2	83%	31	51	19.5
	JUN-SEP	9.6	15	24	83%	39	61	28.9

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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	1090	1130	1180	108%	1230	1280	1090
	JUN-SEP	1420	1480	1540	108%	1600	1660	1420
Dearborn R nr Craig	JUN-JUL	14	28	41	65%	48	62	63
	JUN-SEP	17.9	34	45	67%	56	72	67
Missouri R at Fort Benton ²	JUN-JUL	1490	1640	1750	111%	1860	2010	1580
	JUN-SEP	2050	2260	2410	111%	2560	2770	2170
Missouri R nr Virgelle ²	JUN-JUL	1470	1830	2070	114%	2310	2670	1820
	JUN-SEP	1970	2440	2760	114%	3080	3540	2430
Missouri R nr Landusky ²	JUN-JUL	1520	1900	2160	111%	2420	2800	1950
	JUN-SEP	2040	2550	2900	111%	3250	3760	2610
Missouri R bl Fort Peck Dam ²	JUN-JUL	1630	1990	2230	114%	2470	2830	1960
	JUN-SEP	2130	2590	2910	114%	3230	3690	2550
Lake Sakakawea Inflow ²	JUN-JUL	4230	5100	5920	102%	6690	7540	5800
	JUN-SEP	5320	6390	7350	102%	8310	9380	7240

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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	475	520	535	110%	580	625	485
	JUN-SEP	650	715	760	109%	805	870	695
Yellowstone R at Corwin Springs	JUN-JUL	1010	1140	1220	107%	1300	1430	1140
	JUN-SEP	1260	1420	1530	105%	1640	1800	1460
Yellowstone R at Livingston	JUN-JUL	1150	1300	1400	107%	1500	1650	1310
	JUN-SEP	1430	1630	1760	104%	1890	2090	1700
Shields R nr Livingston	JUN-JUL	25	43	64	93%	85	115	69
	JUN-SEP	30	51	76	88%	101	137	86
Boulder R at Big Timber	JUN-JUL	230	255	275	134%	295	320	205
	JUN-SEP	250	280	305	133%	330	360	230
Mystic Lake Inflow ²	JUN-JUL	36	41	44	94%	47	52	47
	JUN-SEP	49	56	60	94%	64	71	64
Stillwater R nr Absarokee ²	JUN-JUL	265	305	330	90%	355	395	365
	JUN-SEP	320	375	410	89%	445	500	460
Clarks Fk Yellowstone R nr Belfry	JUN-JUL	285	325	350	90%	375	415	390

Cooney Reservoir Inflow	JUN-SEP	310	360	395	89%	430	480	445
Yellowstone R at Billings	JUN-JUL	2120	2280	2480	104%	2640	2810	2380
	JUN-SEP	2670	2870	3100	104%	3320	3530	2990

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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	JUN-JUL	680	860	985	90%	1110	1290	1090
	JUN-SEP	705	945	1110	90%	1270	1510	1240
Little Bighorn R nr Hardin	JUN-JUL	17.3	34	46	69%	58	75	67
	JUN-SEP	23	43	57	69%	71	91	83
Tongue R nr Dayton ²	JUN-JUL	31	41	47	81%	53	63	58
	JUN-SEP	39	50	58	82%	66	77	71
Big Goose Ck nr Sheridan	JUN-JUL	18.8	24	28	80%	32	37	35
	JUN-SEP	25	31	35	80%	39	45	44
Little Goose Ck nr Bighorn	JUN-JUL	13.1	15.9	17.8	85%	19.7	22	21
	JUN-SEP	18.5	22	25	86%	28	31	29
Tongue River Reservoir Inflow ²	JUN-JUL	56	83	101	80%	119	146	126
	JUN-SEP	64	98	120	78%	142	176	153
Yellowstone R at Miles City ²	JUN-JUL	3100	3310	3530	98%	3740	3960	3600
	JUN-SEP	3830	4090	4360	98%	4630	4890	4450
Powder R at Moorehead	JUN-JUL	29	61	83	79%	105	137	105
	JUN-SEP	36	75	102	80%	129	168	128
Powder R nr Locate	JUN-JUL	20	63	92	79%	121	164	116
	JUN-SEP	22	76	113	80%	150	205	141
Yellowstone R nr Sidney ²	JUN-JUL	2960	3210	3500	96%	3800	4090	3650
	JUN-SEP	3600	3920	4300	96%	4640	5000	4460

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