

Report Created:
3/6/2014 12:10:17 PM

Streamflow Forecast Summary: March 1, 2014
(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	APR-JUL	73	94	109	87%	124	145	126
	APR-SEP	81	105	122	87%	139	163	140
Libby Reservoir Inflow ¹	APR-JUL							
	APR-SEP							
Fisher R nr Libby	APR-JUL	154	190	215	105%	240	275	205
	APR-SEP	163	200	225	102%	250	285	220
Yaak R nr Troy	APR-JUL	245	320	370	88%	420	495	420
	APR-SEP	260	335	390	89%	445	520	440
Kootenai R at Leonia ^{1,2}	APR-JUL	4800	5540	5880	89%	6220	6960	6600
	APR-SEP	5710	6450	6780	89%	7110	7850	7590

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	APR-JUL	1200	1320	1410	92%	1500	1620	1540
	APR-SEP	1330	1470	1560	92%	1650	1790	1700
MF Flathead R nr West Glacier	APR-JUL	1300	1450	1550	103%	1650	1800	1500
	APR-SEP	1430	1580	1690	104%	1800	1950	1630
Sf Flathead R nr Hungry Horse	APR-JUL	1130	1240	1310	111%	1380	1490	1180
	APR-SEP	1200	1310	1390	110%	1470	1580	1260
Hungry Horse Reservoir Inflow ^{1,2}	APR-JUL	1730	1980	2090	112%	2200	2450	1860
	APR-SEP	1830	2100	2220	112%	2340	2610	1980
Flathead R at Columbia Falls ²	APR-JUL	4450	4870	5150	103%	5430	5850	5020
	APR-SEP	4830	5280	5590	103%	5900	6350	5450
Ashley Ck nr Marion ²	APR-JUL	3.6	5	6	92%	7	8.4	6.5
	MAR	0.71475	1.1823	1.5	126%	1.8177	2.3	1.19
Swan R nr Bigfork	APR-JUL	530	580	615	118%	650	700	520
	APR-SEP	600	660	700	118%	740	800	595
Flathead Lake Inflow ^{1,2}	APR-JUL	4820	5600	5950	102%	6300	7080	5810
	APR-SEP	5190	6040	6430	103%	6820	7670	6270
Mill Ck ab Bassoo ck nr Niarada	APR-JUL	4.5	5.4	6	150%	6.6	7.5	4
	APR-SEP	5	6	6.6	150%	7.2	8.2	4.4
South Crow Ck nr Ronan	APR-JUL	8.3	9.9	10.9	108%	11.9	13.5	10.1
	APR-SEP	9.5	11.2	12.4	107%	13.6	15.3	11.6
Mission Ck nr St. Ignatius	APR-JUL	22	24	26	104%	28	30	25
	APR-SEP	26	29	31	103%	33	36	30
SF Jocko R nr Arlee								

NF Jocko R bl Tabor Feeder Canal	APR-JUL	35	40	43	130%	46	51	33
	APR-SEP	39	44	48	130%	52	57	37
	APR-JUL	34	37	39	126%	41	44	31
	APR-SEP	36	39	41	124%	43	46	33

- 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	APR-JUL	73	92	105	150%	118	137	70
	APR-SEP	80	101	115	149%	129	150	77
Flint Ck nr Southern Cross	APR-JUL	12.2	16	18.5	149%	21	25	12.4
	APR-SEP	14.1	18.8	22	151%	25	30	14.6
Flint Ck bl Boulder Ck	APR-JUL	51	66	76	146%	86	101	52
	APR-SEP	64	82	94	142%	106	124	66
Lower Willow Ck Reservoir Inflow ²	APR-MAY	7.8	10.3	11.9	163%	13.5	16	7.3
	APR-JUL	11.4	15.3	17.9	169%	21	24	10.6
MF Rock Ck nr Philipsburg	APR-JUL	67	76	83	143%	90	99	58
	APR-SEP	73	84	91	140%	98	109	65
Rock Ck nr Clinton	APR-JUL	285	340	375	150%	410	465	250
	APR-SEP	320	375	415	148%	455	510	280
Clark Fork R ab Milltown	APR-JUL	585	735	840	158%	945	1090	530
	APR-SEP	675	840	955	155%	1070	1240	615
Nevada Ck nr Helmville	APR-JUL	17.7	23	27	190%	31	36	14.2
	APR-SEP							15.6
Blackfoot R nr Bonner	APR-JUL	790	905	985	137%	1060	1180	720
	APR-SEP	870	995	1080	135%	1160	1290	800
Clark Fork R ab Missoula	APR-JUL	1400	1670	1850	148%	2030	2300	1250
	APR-SEP							1420

- 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	APR-JUL	151	179	198	155%	215	245	128
	APR-SEP	157	189	210	151%	230	265	139
Bitterroot R Nr Darby	APR-JUL	475	560	615	150%	670	755	410
	APR-SEP	545	625	680	145%	735	815	470
Como Reservoir Inflow ²	APR-JUL	79	86	91	120%	96	103	76
	APR-SEP	82	90	95	120%	100	108	79
Bitterroot R nr Missoula								

APR-JUL	1360	1530	1650	143%	1770	1940	1150
APR-SEP	1430	1610	1740	139%	1870	2050	1250

- 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 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	APR-JUL	2790	3200	3480	145%	3760	4170	2400
	APR-SEP	3030	3480	3780	142%	4080	4530	2670
Clark Fork R at St. Regis ¹	APR-JUL	3520	4250	4580	145%	4910	5640	3160
	APR-SEP	3840	4620	4970	142%	5320	6100	3510
Clark Fork R nr Plains ^{1,2}	APR-JUL	8590	10100	10800	117%	11500	13000	9200
	APR-SEP	9380	11000	11800	117%	12600	14200	10100
Thompson nr Thompson Falls	APR-JUL	101	138	163	90%	188	225	181
	APR-SEP	117	157	184	90%	210	250	205
Prospect Ck at Thompson Falls	APR-JUL	70	87	98	96%	109	126	102
	APR-SEP	76	92	104	95%	116	132	110
Clark Fork R at Whitehorse Rapids ^{1,2}	APR-JUL	9780	11400	12200	116%	13000	14600	10500
	APR-SEP	10700	12600	13400	117%	14200	16100	11500

- 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

JEFFERSON RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Lima Reservoir Inflow ²	APR-JUL	18.6	39	53	65%	67	87	82
	APR-SEP	14.4	39	55	62%	71	96	89
Clark Canyon Inflow ²	APR-JUL	-15	28	62	61%	97	147	101
	APR-SEP	-4	38	75	63%	113	168	120
Beaverhead R at Barretts ²	APR-JUL	26	41	91	71%	141	215	129
	APR-SEP	34	52	111	71%	169	255	156
Ruby R Reservoir Inflow ²	APR-JUL	34	51	62	81%	74	91	77
	APR-SEP	43	62	75	82%	88	108	91
Big Hole R at Wisdom	APR-JUL	77	121	151	148%	181	225	102
	APR-SEP	79	127	160	148%	193	240	108
Big Hole R nr Melrose	APR-JUL	530	650	735	143%	820	940	515
	APR-SEP	565	700	790	141%	880	1020	560
Jefferson R nr Twin Bridges ²	APR-JUL	445	670	820	119%	975	1200	690
	APR-SEP	465	715	890	122%	1060	1310	730
Boulder R nr Boulder	APR-JUL	64	81	92	133%	103	120	69
	APR-SEP	68	86	99	134%	111	129	74
Willow Ck Reservoir Inflow ²								

Jefferson R nr Three Forks ²	APR-JUL	18.7	25	29	173%	33	39	16.8
	APR-SEP	24	31	35	181%	39	46	19.3
	APR-JUL	545	800	970	131%	1140	1400	740
	APR-SEP	590	870	1060	133%	1250	1530	800

- 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	APR-JUL	295	335	360	97%	385	425	370
	APR-SEP	375	425	455	97%	485	535	470
Ennis Reservoir Inflow ²	APR-JUL	475	560	615	98%	670	755	625
	APR-SEP	595	695	760	98%	825	925	775

- 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	APR-JUL	335	395	435	109%	475	535	400
	APR-SEP	390	460	510	109%	555	625	470
Hyalite Reservoir Inflow ²	APR-JUL	19.1	21	23	115%	24	27	20
	APR-SEP	22	25	26	113%	28	30	23
Gallatin R at Logan	APR-JUL	320	420	490	111%	560	665	440
	APR-SEP	375	495	570	113%	650	770	505

- 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	APR-JUL	14.2	17.6	20	129%	22	26	15.5
	APR-SEP	16.6	21	23	125%	26	30	18.4
Smith R bl Eagle Ck ²	APR-JUL	98	132	154	145%	177	210	106
	APR-SEP	108	147	174	150%	200	240	116
NF Musselshell R nr Delpine	APR-JUL	3.9	5.1	5.9	174%	6.7	7.9	3.4
	APR-SEP	4.8	6.1	7	175%	7.9	9.2	4
SF Musselshell R ab Martinsdale	APR-JUL	30	46	56	160%	66	82	35
	APR-SEP	33	50	61	161%	72	89	38
Musselshell R at Harlowton ²	APR-JUL	48	83	106	186%	130	164	57
	APR-SEP	48	85	110	186%	135	172	59

Musselshell R nr Roundup²

APR-JUL	37	103	148	221%	194	260	67
APR-SEP	40	106	151	229%	196	260	66

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								
	APR-JUL	355	420	460	116%	500	565	395
	APR-SEP	395	460	505	115%	550	615	440
Two Medicine R nr Browning ²								
	APR-JUL	145	171	188	103%	205	230	183
	APR-SEP	154	181	199	103%	215	245	194
Badger Ck nr Browning								
	APR-JUL	66	81	92	105%	103	118	88
	APR-SEP	78	95	107	104%	119	136	103
Swift Reservoir Inflow ²								
	APR-JUL	40	52	61	107%	69	81	57
	APR-SEP	50	63	72	107%	81	95	67
Dupuyer Ck nr Valier								
	APR-JUL	0.7	7.9	12.8	115%	17.7	25	11.1
	APR-SEP	1.23	9.2	14.6	115%	20	28	12.7
Cut Bank Ck nr Browning								
	APR-JUL	47	61	70	101%	80	94	69
	APR-SEP	50	66	76	101%	86	102	75
Marias R nr Shelby ²								
	APR-JUL	210	320	390	113%	465	570	345
	APR-SEP	210	325	405	113%	480	595	360
Teton R nr Dutton								
	APR-JUL	5.4	33	53	126%	72	100	42
	APR-SEP	8.3	39	59	123%	80	111	48

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								
	APR-JUL	81	90	97	100%	103	112	97
	APR-SEP	96	106	112	100%	119	129	112
St. Mary R nr Babb ²								
	APR-JUL	290	330	360	97%	385	425	370
	APR-SEP	345	390	415	98%	445	490	425
St. Mary R at Intl Boundary ²								
	APR-JUL	320	380	420	97%	460	520	435
	APR-SEP	380	440	485	96%	525	590	505
Milk R at Western Crossing of Intl Bndry, AB								
	APR-JUL							25
	APR-SEP							26
Milk R at Eastern Crossing of Intl Bndry								
	APR-JUL							45
	APR-SEP							55

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	APR-JUL	1380	1790	2070	116%	2350	2770	1790
	APR-SEP	1590	2070	2400	116%	2730	3220	2070
Dearborn R nr Craig	APR-JUL	52	80	100	112%	119	148	89
	APR-SEP	57	87	108	114%	128	159	95
Missouri R at Fort Benton ²	APR-JUL	2040	2640	3060	117%	3470	4070	2610
	APR-SEP	2410	3130	3620	116%	4120	4840	3110
Missouri R nr Virgelle ²	APR-JUL	2300	3000	3470	116%	3950	4650	3000
	APR-SEP	2640	3480	4050	115%	4610	5450	3520
Missouri R nr Landusky ²	APR-JUL	2510	3230	3730	118%	4220	4950	3160
	APR-SEP	2890	3760	4350	117%	4940	5810	3720
Missouri R bl Fort Peck Dam ²	APR-JUL	2580	3380	3920	121%	4460	5260	3240
	APR-SEP	2770	3770	4440	120%	5120	6120	3700
Lake Sakakawea Inflow ²	APR-JUL	7590	9430	10700	129%	11900	13800	8310
	APR-SEP	8200	10500	12000	128%	13600	15900	9400

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	APR-JUL	510	580	625	109%	670	740	575
	APR-SEP	675	765	825	107%	885	975	770
Yellowstone R at Corwin Springs	APR-JUL	1520	1710	1830	115%	1960	2140	1590
	APR-SEP	1770	1990	2140	114%	2290	2510	1880
Yellowstone R at Livingston	APR-JUL	1700	1930	2090	116%	2240	2480	1800
	APR-SEP	1980	2250	2440	114%	2630	2900	2140
Shields R nr Livingston	APR-JUL	106	151	182	141%	215	260	129
	APR-SEP	113	163	198	138%	230	280	143
Boulder R at Big Timber	APR-JUL	270	315	345	123%	375	415	280
	APR-SEP	290	340	375	125%	410	460	300
Mystic Lake Inflow ²	APR-JUL	55	60	64	108%	68	73	59
	APR-SEP	67	74	79	107%	84	91	74
Stillwater R nr Absarokee ²	APR-JUL	395	455	500	112%	540	605	445
	APR-SEP	465	540	590	113%	640	715	520
Clarks Fk Yellowstone R nr Belfry	APR-JUL	550	610	650	127%	690	750	510
	APR-SEP	610	675	720	131%	760	830	550
Cooney Reservoir Inflow	APR-JUL	27	39	48	126%	57	69	38
	APR-SEP	36	50	59	123%	68	82	48

Yellowstone R at Billings

APR-JUL	2940	3500	3880	120%	4260	4820	3230
APR-SEP	3330	3990	4440	119%	4890	5550	3730

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	APR-JUL	1390	1760	2020	146%	2280	2650	1380
	APR-SEP	1510	1930	2220	152%	2510	2930	1460
Little Bighorn R nr Hardin	APR-JUL	86	114	133	136%	152	180	98
	APR-SEP	97	128	149	134%	170	200	111
Tongue R nr Dayton ²	APR-JUL	72	90	103	120%	116	134	86
	APR-SEP	83	103	117	119%	131	151	98
Big Goose Ck nr Sheridan	APR-JUL	37	49	56	122%	64	76	46
	APR-SEP	45	57	65	120%	73	85	54
Little Goose Ck nr Bighorn	APR-JUL	27	34	39	126%	43	51	31
	APR-SEP	34	42	47	121%	53	60	39
Tongue River Reservoir Inflow ²	APR-JUL	138	205	250	130%	290	360	193
	APR-SEP	158	225	275	128%	320	390	215
Yellowstone R at Miles City ²	APR-JUL	4560	5520	6170	129%	6820	7770	4780
	APR-SEP	5110	6250	7020	129%	7790	8930	5450
Powder R at Moorehead	APR-JUL	166	235	280	158%	325	395	177
	APR-SEP	191	260	310	158%	355	425	196
Powder R nr Locate	APR-JUL	184	265	320	161%	375	455	199
	APR-SEP	210	295	355	161%	415	500	220
Yellowstone R nr Sidney ²	APR-JUL	4590	5690	6430	133%	7170	8270	4830
	APR-SEP	5050	6350	7240	133%	8130	9430	5430

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