

Report Created:
9/30/2014 11:23:50 PM

Streamflow Forecast Summary: June 1, 2012
(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	60	71	78	126%	85	96	62
	JUN-SEP	73	86	95	125%	104	117	76
Libby Reservoir Inflow ¹								
Fisher R nr Libby	JUN-JUL	57	69	77	113%	85	97	68
	JUN-SEP	72	86	95	113%	104	118	84
Yaak R nr Troy	JUN-JUL	146	172	190	132%	210	235	144
	JUN-SEP	172	200	220	133%	240	270	166
Kootenai R at Leonia ^{1,2}	JUN-JUL	3760	4350	4620	118%	4890	5480	3920
	JUN-SEP	4920	5640	5970	119%	6300	7020	5000

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	680	785	860	104%	935	1040	830
	JUN-SEP	805	930	1010	101%	1100	1220	1000
MF Flathead R nr West Glacier	JUN-JUL	665	780	860	104%	940	1050	825
	JUN-SEP	800	925	1010	104%	1090	1220	975
Sf Flathead R nr Hungry Horse	JUN-JUL	620	690	740	114%	790	860	650
	JUN-SEP	695	770	825	113%	880	955	730
Hungry Horse Reservoir Inflow ^{1,2}	JUN-JUL	550	725	805	84%	885	1060	960
	JUN-SEP	645	835	920	84%	1010	1190	1090
Flathead R at Columbia Falls ²	JUN-JUL	2100	2430	2650	99%	2870	3200	2690
	JUN-SEP	2550	2910	3160	100%	3410	3770	3160
Ashley Ck nr Marion ²	JUN-JUL	0.54	1.25	1.74	108%	2.2	2.9	1.61
	JUN-SEP	0.06	0.45	1.21	110%	1.97	3.1	1.1
Swan R nr Bigfork	JUN-JUL	300	330	350	115%	370	400	305
	JUN-SEP	380	415	440	114%	465	500	385
Flathead Lake Inflow ^{1,2}	JUN-JUL	2260	2810	3060	99%	3310	3860	3100
	JUN-SEP	2710	3350	3630	100%	3920	4550	3620
Mill Ck ab Bassoo ck nr Niarada	JUN-JUL	0.82	1.14	1.36	108%	1.58	1.9	1.26
	JUN-SEP	1.12	1.47	1.71	107%	1.95	2.3	1.6
South Crow Ck nr Ronan	JUN-JUL	6	7	7.7	120%	8.4	9.4	6.4
	JUN-SEP	7.3	8.5	9.3	119%	10.1	11.3	7.8
Mission Ck nr St. Ignatius	JUN-JUL	16.9	18.6	19.7	113%	21	23	17.4

SF Jocko R nr Arlee	JUN-SEP	21	23	25	113%	27	29	22.1
	JUN-JUL	17.2	19.4	21	127%	23	25	16.5
NF Jocko R bl Tabor Feeder Canal	JUN-SEP	22	24	26	127%	28	30	20.4
	JUN-JUL	16.7	18.5	19.7	133%	21	23	14.8
	JUN-SEP	18.5	21	22	133%	23	25	16.6

- 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	11.8	20	26	81%	32	40	32
	JUN-SEP	15.5	25	32	82%	39	49	39
Flint Ck nr Southern Cross	JUN-JUL	2.7	4.9	6.4	83%	7.9	10.1	7.7
	JUN-SEP	3.4	6.4	8.4	82%	10.4	13.4	10.2
Flint Ck bl Boulder Ck	JUN-JUL	15.3	23	29	88%	35	43	33
	JUN-SEP	24	35	42	88%	49	60	48
Lower Willow Ck Reservoir Inflow ²	JUN-JUL	0.22	1.16	2.1	49%	3	4.4	4.3
	JUN-SEP	0	1.55	2.6	49%	3.6	5.2	5.3
MF Rock Ck nr Philipsburg	JUN-JUL	20	28	33	85%	38	46	39
	JUN-SEP	26	34	40	85%	46	54	47
Rock Ck nr Clinton	JUN-JUL	76	107	127	86%	147	178	148
	JUN-SEP	99	134	157	86%	180	215	183
Clark Fork R ab Milltown	JUN-JUL	137	210	260	83%	310	385	315
	JUN-SEP	192	280	340	83%	400	490	410
Nevada Ck nr Helmville	JUN-JUL	3	4.4	5.4	77%	6.4	7.8	7
	JUN-SEP	3.8	5.4	6.5	76%	7.6	9.2	8.5
Blackfoot R nr Bonner	JUN-JUL	320	365	395	104%	425	470	380
	JUN-SEP	405	450	485	103%	520	565	470
Clark Fork R ab Missoula	JUN-JUL	485	585	655	94%	725	825	695
	JUN-SEP	625	745	825	94%	905	1030	880

- 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	37	45	51	74%	57	65	69
	JUN-SEP	41	53	61	74%	69	81	82
Bitterroot R Nr Darby	JUN-JUL	157	178	193	80%	210	230	240
	JUN-SEP	194	220	240	81%	260	285	295
Como Reservoir Inflow ²								

Bitterroot R nr Missoula	JUN-JUL	29	37	42	105%	47	55	40
	JUN-SEP	32	40	46	105%	52	60	44
	JUN-JUL	510	585	640	93%	695	770	690
	JUN-SEP	605	690	750	94%	810	895	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

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	1030	1190	1300	94%	1410	1570	1380
	JUN-SEP	1270	1460	1580	94%	1700	1890	1680
Clark Fork R at St. Regis ¹	JUN-JUL	980	1280	1420	80%	1560	1860	1770
	JUN-SEP	1330	1670	1830	85%	1990	2330	2160
Clark Fork R nr Plains ^{1,2}	JUN-JUL	3670	4360	4680	92%	5000	5690	5100
	JUN-SEP	4530	5360	5740	94%	6120	6950	6090
Thompson nr Thompson Falls	JUN-JUL	63	74	81	99%	88	99	82
	JUN-SEP	84	97	106	98%	115	128	108
Prospect Ck at Thompson Falls	JUN-JUL	35	38	41	100%	44	47	41
	JUN-SEP	43	47	50	100%	53	57	50
Clark Fork R at Whitehorse Rapids ^{1,2}	JUN-JUL	4190	4940	5280	94%	5620	6370	5620
	JUN-SEP	5240	6140	6540	97%	6940	7840	6750

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	JUN-JUL	5.4	13.5	19	49%	25	33	39
	JUN-SEP	5.4	15.9	23	49%	30	41	47
Clark Canyon Inflow ²	JUN-JUL	-23	-14	3.8	7%	22	48	51
	JUN-SEP	-18	-2.4	18	24%	38	68	76
Beaverhead R at Barretts ²	JUN-JUL	-15	-1.1	15	21%	41	79	71
	JUN-SEP	-10	3.6	37	36%	70	120	103
Ruby R Reservoir Inflow ²	JUN-JUL	14.1	23	29	63%	35	44	46
	JUN-SEP	24	34	42	68%	49	60	62
Big Hole R at Wisdom	JUN-JUL	6	14.7	30	56%	45	68	54
	JUN-SEP	7	17.3	35	56%	53	79	63
Big Hole R nr Melrose	JUN-JUL	108	175	220	68%	265	330	325
	JUN-SEP	124	205	260	68%	315	395	380
Jefferson R nr Twin Bridges ²	JUN-JUL	13.8	119	191	49%	265	370	390

Boulder R nr Boulder	JUN-SEP	4.9	139	230	49%	320	455	465
	JUN-JUL	11.4	18.2	23	64%	28	34	36
Willow Ck Reservoir Inflow ²	JUN-SEP	11.6	21	27	63%	33	42	43
	JUN-JUL	0.4	3.5	5.6	52%	7.7	10.8	10.8
Jefferson R nr Three Forks ²	JUN-SEP	0.8	4	6.9	53%	9.8	14	13.1
	JUN-JUL	-13.6	101	179	48%	255	370	370
	JUN-SEP	-9.2	130	225	50%	320	460	450

- 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	141	167	184	92%	200	225	200
	JUN-SEP	240	270	290	94%	310	340	310
Ennis Reservoir Inflow ²	JUN-JUL	260	300	325	87%	350	390	375
	JUN-SEP	385	435	470	87%	505	555	540

- 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	192	225	250	88%	275	310	285
	JUN-SEP	245	285	315	88%	345	385	360
Hyalite Reservoir Inflow ²	JUN-JUL	11.5	13	14	94%	15	16.5	14.9
	JUN-SEP	13.9	15.8	17.1	95%	18.4	20	18
Gallatin R at Logan	JUN-JUL	151	205	240	86%	275	330	280
	JUN-SEP	188	260	305	85%	350	420	360

- 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	5.5	7.7	9.2	101%	10.7	12.9	9.1
	JUN-SEP	6.6	9.6	11.6	96%	13.6	16.6	12.1
Smith R bl Eagle Ck ²	JUN-JUL	41	61	75	100%	89	109	75
	JUN-SEP	45	72	91	100%	110	137	91
NF Musselshell R nr Delpine	JUN-JUL	0.5	1.25	2.4	104%	3.6	5.2	2.3

SF Musselshell R ab Martinsdale	JUN-SEP	0.89	2.3	3.3	103%	4.3	5.7	3.2
	JUN-JUL	5.1	16.4	24	96%	32	43	25
	JUN-SEP	6.9	18.9	27	93%	35	47	29
Musselshell R at Harlowton ²	JUN-JUL	0	14.2	32	86%	50	76	37
	JUN-SEP	0	16.1	34	83%	52	78	41
Musselshell R nr Roundup ²	JUN-JUL	0	17.8	35	74%	52	77	47
	JUN-SEP	0	17.8	35	70%	52	77	50

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	166	198	220	86%	240	275	255
	JUN-SEP	197	230	255	84%	280	315	305
Two Medicine R nr Browning ²	JUN-JUL	70	84	93	98%	102	116	95
	JUN-SEP	78	93	104	97%	115	130	107
Badger Ck nr Browning	JUN-JUL	28	38	45	102%	52	62	44
	JUN-SEP	33	45	53	100%	61	73	53
Swift Reservoir Inflow ²	JUN-JUL	28	34	38	109%	42	48	35
	JUN-SEP	38	46	51	109%	56	64	47
Dupuyer Ck nr Valier	JUN-JUL	0.5	4	7	108%	10	14.6	6.5
	JUN-SEP	0.8	5.4	9	108%	12.6	18	8.3
Cut Bank Ck nr Browning	JUN-JUL	27	35	40	95%	45	53	42
	JUN-SEP	32	40	46	94%	52	60	49
Marias R nr Shelby ²	JUN-JUL	82	148	192	105%	235	300	183
	JUN-SEP	85	159	210	100%	260	335	210
Teton R nr Dutton	JUN-JUL	1	10.4	23	85%	36	54	27
	JUN-SEP	1	13.9	29	83%	44	66	35

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	55	63	68	111%	73	81	61
	JUN-SEP	70	79	85	109%	91	100	78
St. Mary R nr Babb ²	JUN-JUL	230	260	280	112%	300	330	250
	JUN-SEP	285	320	345	110%	370	405	315
St. Mary R at Intl Boundary ²	JUN-JUL	255	295	325	123%	355	395	265
	JUN-SEP	320	370	400	116%	430	480	345

Milk R at Western Crossing of Intl Bndry, AB

JUN-JUL	1.76	6.3	9.3	98%	12.4	16.9	9.5
JUN-SEP	1.12	7.1	11.2	99%	15.2	21	11.3

Milk R at Eastern Crossing of Intl Bndry

JUN-JUL	0.5	7.4	21	108%	35	55	19.5
JUN-SEP	3	13.2	28	97%	43	65	28.9

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	460	675	825	76%	975	1190	1090
	JUN-SEP	555	855	1060	75%	1260	1570	1420
Dearborn R nr Craig	JUN-JUL	20	34	44	70%	54	68	63
	JUN-SEP	25	41	52	78%	63	79	67
Missouri R at Fort Benton ²	JUN-JUL	1020	1170	1280	81%	1390	1540	1580
	JUN-SEP	870	1600	1750	81%	1900	2390	2170
Missouri R nr Virgelle ²	JUN-JUL	895	1250	1490	82%	1730	2090	1820
	JUN-SEP	1210	1680	2000	82%	2320	2780	2430
Missouri R nr Landusky ²	JUN-JUL	1000	1380	1640	84%	1900	2280	1950
	JUN-SEP	1310	1830	2180	84%	2530	3040	2610
Missouri R bl Fort Peck Dam ²	JUN-JUL	925	1290	1530	78%	1770	2130	1960
	JUN-SEP	1220	1680	2000	78%	2320	2780	2550
Lake Sakakawea Inflow ²	JUN-JUL	2510	3640	4410	76%	5180	6310	5800
	JUN-SEP	3470	4540	5500	76%	6460	7530	7240

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	395	440	470	97%	500	545	485
	JUN-SEP	545	610	655	94%	700	765	695
Yellowstone R at Corwin Springs	JUN-JUL	920	1040	1120	98%	1210	1330	1140
	JUN-SEP	1140	1300	1410	97%	1520	1680	1460
Yellowstone R at Livingston	JUN-JUL	1030	1180	1280	98%	1380	1530	1310
	JUN-SEP	1290	1490	1620	95%	1750	1950	1700
Shields R nr Livingston	JUN-JUL	14	44	65	94%	86	116	69
	JUN-SEP	17.3	53	78	91%	103	139	86
Boulder R at Big Timber	JUN-JUL	129	156	175	85%	194	220	205
	JUN-SEP	133	167	190	83%	215	245	230
Mystic Lake Inflow ²								

	JUN-JUL	42	47	50	106%	53	58	47
	JUN-SEP	56	63	67	105%	71	78	64
Stillwater R nr Absarokee ²	JUN-JUL	285	325	350	96%	375	415	365
	JUN-SEP	345	400	435	95%	470	525	460
Clarks Fk Yellowstone R nr Belfry	JUN-JUL	390	430	455	117%	480	520	390
	JUN-SEP	430	480	515	116%	550	600	445
Cooney Reservoir Inflow								
Yellowstone R at Billings	JUN-JUL	1760	2130	2380	100%	2630	3000	2380
	JUN-SEP	2560	2670	2990	100%	3310	3420	2990

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	215	395	520	48%	645	825	1090
	JUN-SEP	146	385	550	44%	715	955	1240
Little Bighorn R nr Hardin	JUN-JUL	28	45	57	85%	69	86	67
	JUN-SEP	36	56	70	84%	84	104	83
Tongue R nr Dayton ²	JUN-JUL	28	38	44	76%	50	60	58
	JUN-SEP	31	42	50	70%	58	69	71
Big Goose Ck nr Sheridan	JUN-JUL	17.8	23	27	77%	31	36	35
	JUN-SEP	25	31	35	80%	39	45	44
Little Goose Ck nr Bighorn	JUN-JUL	10.4	13.2	15.1	72%	17	19.8	21
	JUN-SEP	15.5	19.4	22	76%	25	28	29
Tongue River Reservoir Inflow ²	JUN-JUL	44	71	89	71%	107	134	126
	JUN-SEP	46	80	102	67%	124	158	153
Yellowstone R at Miles City ²	JUN-JUL	2120	2680	3060	85%	3440	4000	3600
	JUN-SEP	3240	3340	3770	85%	4180	4300	4450
Powder R at Moorehead	JUN-JUL	18.6	51	73	70%	95	127	105
	JUN-SEP	26	65	92	72%	119	158	128
Powder R nr Locate	JUN-JUL	9.3	52	81	70%	110	153	116
	JUN-SEP	10.4	64	101	72%	138	192	141
Yellowstone R nr Sidney ²	JUN-JUL	2180	2750	3140	86%	3530	4100	3650
	JUN-SEP	3140	3370	3840	86%	4310	4540	4460

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