

Report Created:
9/30/2014 10:29:32 PM

Streamflow Forecast Summary: February 1, 2011
(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	114	131	142	104%	153	170	136
	APR-SEP	124	143	156	104%	169	188	150
Libby Reservoir Inflow ¹								
Fisher R nr Libby	APR-JUL	183	225	255	111%	285	325	230
	APR-SEP	195	240	270	110%	300	345	245
Yaak R nr Troy	APR-JUL	340	400	440	95%	480	540	465
	APR-SEP	365	425	465	95%	505	565	490
Kootenai R at Leonia ^{1,2}	APR-JUL	5700	6540	6920	98%	7300	8140	7040
	APR-SEP	6820	7620	7990	98%	8360	9160	8120

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	1520	1670	1770	109%	1870	2020	1620
	APR-SEP	1710	1870	1970	109%	2070	2230	1800
MF Flathead R nr West Glacier	APR-JUL	1480	1650	1760	111%	1870	2040	1590
	APR-SEP	1630	1800	1920	110%	2040	2210	1740
Sf Flathead R nr Hungry Horse	APR-JUL	1220	1350	1440	115%	1530	1660	1250
	APR-SEP	1300	1440	1530	115%	1620	1760	1330
Hungry Horse Reservoir Inflow ^{1,2}	APR-JUL	1870	2140	2270	114%	2400	2670	2000
	APR-SEP	1990	2280	2410	114%	2540	2830	2120
Flathead R at Columbia Falls ²	APR-JUL	5220	5690	6000	112%	6310	6780	5350
	APR-SEP	5730	6210	6540	112%	6870	7350	5820
Ashley Ck nr Marion ²	MAR	0.72	1.18	1.5	142%	1.82	2.3	1.06
	APR-JUL	5.9	7.3	8.3	115%	9.3	10.7	7.2
Swan R nr Bigfork	APR-JUL	585	640	680	120%	720	775	565
	APR-SEP	670	730	775	120%	820	880	645
Flathead Lake Inflow ^{1,2}	APR-JUL	5680	6520	6900	112%	7280	8120	6180
	APR-SEP	6200	7090	7500	112%	7910	8800	6700
Mill Ck ab Bassoo ck nr Niarada	APR-JUL	4.4	5.4	6.1	149%	6.8	7.8	4.1
	APR-SEP	4.9	5.9	6.6	150%	7.3	8.3	4.4
South Crow Ck nr Ronan	APR-JUL	10	11.4	12.4	123%	13.4	14.8	10.1
	APR-SEP	11.5	13.1	14.2	123%	15.3	16.9	11.5
Mission Ck nr St. Ignatius	APR-JUL	25	27	29	116%	31	33	25
	APR-SEP	30	33	35	117%	37	40	30

SF Jocko R nr Arlee

APR-JUL	36	41	44	147%	47	52	30
APR-SEP	40	45	49	144%	53	58	34

NF Jocko R bl Tabor Feeder Canal

APR-JUL	34	37	39	126%	41	44	31
APR-SEP	37	40	42	127%	44	47	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	47	65	77	101%	89	107	76
	APR-SEP	53	72	85	101%	98	117	84
Flint Ck nr Southern Cross	APR-JUL	7.2	11.1	13.7	100%	16.3	20	13.7
	APR-SEP	8	12.9	16.2	100%	19.5	24	16.2
Flint Ck bl Boulder Ck	APR-JUL	31	46	56	100%	66	81	56
	APR-SEP	41	59	71	100%	83	101	71
Lower Willow Ck Reservoir Inflow ²	APR-MAY	4.6	7	8.6	105%	10.2	12.6	8.2
	APR-JUL	6.9	10.6	13.1	105%	15.6	19.3	12.5
MF Rock Ck nr Philipsburg	APR-JUL	49	59	66	103%	73	83	64
	APR-SEP	56	67	74	103%	81	92	72
Rock Ck nr Clinton	APR-JUL	199	250	285	106%	320	370	270
	APR-SEP	230	285	325	107%	365	420	305
Clark Fork R ab Milltown	APR-JUL	410	555	655	108%	755	900	605
	APR-SEP	495	655	765	109%	875	1040	705
Nevada Ck nr Helmville	APR-MAY	6.3	9.6	11.8	115%	14	17.3	10.3
	APR-JUL	10.9	16.3	19.9	115%	24	29	17.3
Blackfoot R nr Bonner	APR-JUL	745	865	945	117%	1030	1140	805
	APR-SEP	835	965	1050	118%	1140	1260	890
Clark Fork R ab Missoula	APR-JUL	1170	1420	1590	113%	1760	2010	1410
	APR-SEP	1360	1630	1810	113%	1990	2260	1600

- 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	109	138	157	110%	176	205	143
	APR-SEP	119	151	173	110%	195	225	157
Bitterroot R Nr Darby	APR-JUL	330	415	475	103%	535	620	460
	APR-SEP	385	470	530	103%	590	675	515
Como Reservoir Inflow ²	APR-JUL	69	76	81	104%	86	93	78

Bitterroot R nr Missoula	APR-SEP	73	80	85	104%	90	97	82
	APR-JUL	970	1150	1270	102%	1390	1570	1250
	APR-SEP	1070	1260	1390	101%	1520	1710	1370

- 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	2210	2620	2900	109%	3180	3590	2660
	APR-SEP	2490	2930	3230	109%	3530	3970	2960
Clark Fork R at St. Regis ¹	APR-JUL	2770	3500	3830	109%	4160	4890	3520
	APR-SEP	3140	3910	4260	109%	4610	5380	3910
Clark Fork R nr Plains ^{1,2}	APR-JUL	8910	10500	11200	111%	11900	13500	10100
	APR-SEP	9870	11500	12300	111%	13100	14700	11100
Thompson nr Thompson Falls	APR-JUL	168	205	230	112%	255	290	205
	APR-SEP	193	235	260	113%	285	325	230
Prospect Ck at Thompson Falls	APR-JUL	95	112	123	106%	134	151	116
	APR-SEP	102	119	131	106%	143	160	124
Clark Fork R at Whitehorse Rapids ^{1,2}	APR-JUL	9800	11500	12300	109%	13100	14800	11300
	APR-SEP	10900	12700	13500	108%	14300	16100	12500

- 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	56	76	89	93%	102	122	96
	APR-SEP	62	84	100	96%	116	138	104
Clark Canyon Inflow ²	APR-JUL	35	87	122	93%	157	210	131
	APR-SEP	54	111	149	96%	187	245	156
Beaverhead R at Barretts ²	APR-JUL	35	108	158	94%	210	280	168
	APR-SEP	48	134	192	96%	250	335	200
Ruby R Reservoir Inflow ²	APR-JUL	66	81	92	110%	103	118	84
	APR-SEP	78	96	108	107%	120	138	101
Big Hole R at Wisdom	APR-JUL	70	111	138	114%	165	205	121
	APR-SEP	73	116	146	112%	176	220	130
Big Hole R nr Melrose	APR-JUL	530	650	730	120%	810	930	610
	APR-SEP	565	695	785	119%	875	1000	660
Jefferson R nr Twin Bridges ²	APR-JUL	595	790	925	118%	1060	1250	785
	APR-SEP	625	850	1000	114%	1150	1370	880

Boulder R nr Boulder	APR-JUL	39	55	66	85%	77	93	78
	APR-SEP	42	59	71	84%	83	100	85
Willow Ck Reservoir Inflow ²	APR-JUL	4.8	11.2	15.6	87%	20	26	17.9
	APR-SEP	5.7	12.6	17.4	87%	22	29	20
Jefferson R nr Three Forks ²	APR-JUL	455	680	830	106%	980	1210	780
	APR-SEP	495	745	915	106%	1090	1340	860

- 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	320	360	390	99%	420	460	395
	APR-SEP	410	460	495	98%	530	580	505
Ennis Reservoir Inflow ²	APR-JUL	520	610	670	99%	730	820	680
	APR-SEP	650	755	825	97%	895	1000	850

- 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	360	415	455	103%	495	550	440
	APR-SEP	420	485	530	103%	575	640	515
Hyalite Reservoir Inflow ²	APR-JUL	18.2	20	22	100%	24	26	22
	APR-SEP	21	23	25	100%	27	29	25
Gallatin R at Logan	APR-JUL	355	455	525	106%	595	695	495
	APR-SEP	415	530	605	106%	680	795	570

- 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	13	16.2	18.4	108%	21	24	17.1
	APR-SEP	15.8	19.5	22	110%	25	28	20
Smith R bl Eagle Ck ²	APR-JUL	77	109	130	98%	151	183	133
	APR-SEP	87	123	148	99%	173	210	149
NF Musselshell R nr Delpine	APR-JUL	3.6	4.9	5.7	124%	6.5	7.8	4.6
	APR-SEP	4.2	5.6	6.6	122%	7.6	9	5.4

SF Musselshell R ab Martinsdale								
	APR-JUL	29	48	61	117%	74	93	52
	APR-SEP	31	51	65	116%	79	99	56
Musselshell R at Harlowton ²								
	APR-JUL	36	69	91	118%	113	146	77
	APR-SEP	37	71	95	117%	119	153	81
Musselshell R nr Roundup ²								
	APR-JUL	49	77	123	124%	169	235	99
	APR-SEP	50	80	125	123%	170	235	102

		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	305	360	400	87%	440	495	460
	APR-SEP	340	400	440	87%	480	540	505
Two Medicine R nr Browning ²	APR-JUL	145	170	187	91%	205	230	205
	APR-SEP	156	182	199	93%	215	240	215
Badger Ck nr Browning	APR-JUL	59	76	87	101%	98	115	86
	APR-SEP	65	83	95	100%	107	125	95
Swift Reservoir Inflow ²	APR-JUL	47	58	66	103%	74	85	64
	APR-SEP	57	69	78	101%	87	99	77
Dupuyer Ck nr Valier	APR-JUL	3.1	10.2	15	107%	19.8	27	14
	APR-SEP	3.7	11.5	16.8	107%	22	30	15.7
Cut Bank Ck nr Browning	APR-JUL	49	63	73	95%	83	97	77
	APR-SEP	54	69	79	94%	89	104	84
Marias R nr Shelby ²	APR-JUL	220	330	400	96%	470	580	415
	APR-SEP	215	330	405	92%	480	595	440
Teton R nr Dutton	APR-JUL	18.8	29	47	92%	65	93	51
	APR-SEP	22	34	54	92%	74	103	59

		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	95	104	110	105%	116	125	105
	APR-SEP	112	121	127	104%	133	142	122
St. Mary R nr Babb ²								
	APR-JUL	335	375	405	105%	435	475	385
	APR-SEP	400	440	470	104%	500	540	450
St. Mary R at Intl Boundary ²								
	APR-JUL	380	440	480	110%	520	580	435
	APR-SEP	455	515	555	108%	595	655	515
Milk R at Western Crossing of Intl Bndry, AB								

	APR-JUL	255	295	325	114%	355	395	285
	APR-SEP	270	320	350	111%	380	430	315
Mystic Lake Inflow ²	APR-JUL	50	55	58	97%	61	66	60
	APR-SEP	64	71	75	97%	79	86	77
Stillwater R nr Absarokee ²	APR-JUL	375	435	475	96%	515	575	495
	APR-SEP	445	515	560	96%	605	675	585
Clarks Fk Yellowstone R nr Belfry	APR-JUL	540	595	630	117%	665	720	540
	APR-SEP	600	655	695	117%	735	790	595
Cooney Reservoir Inflow								
Yellowstone R at Billings	APR-JUL	2960	3410	3720	106%	4030	4480	3510
	APR-SEP	3300	4010	4370	106%	4730	5450	4120

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	985	1350	1600	99%	1850	2210	1610
	APR-SEP	1050	1460	1730	98%	2000	2410	1760
Little Bighorn R nr Hardin	APR-JUL	54	83	102	80%	121	150	128
	APR-SEP	62	94	115	80%	136	168	144
Tongue R nr Dayton ²	APR-JUL	59	77	90	94%	103	121	96
	APR-SEP	69	89	102	94%	115	135	109
Big Goose Ck nr Sheridan	APR-JUL	30	41	49	94%	57	68	52
	APR-SEP	37	49	57	95%	65	77	60
Little Goose Ck nr Bighorn	APR-JUL	21	28	33	97%	38	45	34
	APR-SEP	28	36	41	98%	46	54	42
Tongue River Reservoir Inflow ²	APR-JUL	98	162	205	93%	250	310	220
	APR-SEP	118	185	230	92%	275	340	250
Yellowstone R at Miles City ²	APR-JUL	4200	4960	5470	102%	5980	6740	5360
	APR-SEP	4720	5750	6340	102%	6930	7970	6210
Powder R at Moorehead	APR-JUL	110	169	210	102%	250	310	205
	APR-SEP	132	193	235	102%	275	340	230
Powder R nr Locate	APR-JUL	116	190	240	102%	290	365	235
	APR-SEP	132	210	265	102%	320	400	260
Yellowstone R nr Sidney ²	APR-JUL	4210	5060	5640	103%	6220	7070	5480
	APR-SEP	4820	5760	6460	103%	7160	8100	6280

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