

# Montana

# Water Supply

# Outlook Report

# June 1, 2012



**Picture: Madison Plateau SNOTEL Site near West Yellowstone**

# Water Supply Outlook Report and Federal - State - Private Cooperative Snow Surveys

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*For more water supply and resource management information, contact:*

**Brian Domonkos**  
**Water Supply Specialist**  
**Federal Building**  
**10 East Babcock, Room 443**  
**Bozeman, MT 59715**  
**Phone 406-587-6991**

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*How forecasts are made*

**Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.**

**Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.**

**Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.**

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# Montana Water Supply Outlook Report as of June 1, 2012

Mountain snowmelt during May was near normal for the majority of the month with the exceptions at the beginning and the end. A cold spell with some snowfall at the beginning of the month helped sustain snowpack levels in most river basins across the state. Specifically, a storm at the end of May deposited as much as three inches of snow water equivalent in the Bridger mountain range. Lesser accumulations fell elsewhere across the state during that storm, which ultimately increased snowpack percent of average. These late season snowstorms are quite common, but can be hard to forecast. Predicting timing and severity of these storms are particularly difficult, and cannot be relied upon for streamflow forecasting. As a result streamflow forecasts changed little on June 1 from May 1 with some relief in the Tongue and Powder.

## Snowpack

During the month of May snowpack recovered the 15 percent loss from April. In some locations significant snowpack is holding out later than normal but not to the same levels as last year. According to SNOTEL data the Flathead River basin has retained nearly 60 percent of its peak snowpack this year, while the Mission Valley has nearly 80 percent of its 2012 snowpack. Provided the right weather conditions, this is enough snow to yield additional streamflow peaks from snowmelt. Conversely southern Montana is below average with most low and mid-elevation snowpacks entirely melted out.

RIVER BASIN	% OF AVERAGE	LAST YEAR % OF AVERAGE	MAY % CHANGE
COLUMBIA	121	237	+21
KOOTENAI	145	249	+16
FLATHEAD	133	235	+32
UPPER CLARK FORK	96	240	+16
BITTERROOT	76	207	-8
LOWER CLARK FORK	121	288	+14
MISSOURI	85	261	+12
MISSOURI HEADWATERS	76	240	+6
JEFFERSON	64	228	0
MADISON	78	218	0
GALLATIN	81	244	+1
MISSOURI MAINSTEM	109	328	+27
HEADWATERS MAINSTEM	82	300	+10
SMITH-JUDITH-MUSSELSHELL	109	386	+21
SUN-TETON-MARIAS	118	273	+32
MILK (Bearpaw Mtns)	--	---	---
ST. MARY	126	170	+6
ST. MARY & MILK	133	167	+14
YELLOWSTONE	76	268	+7
UPPER YELLOWSTONE	90	222	+12
LOWER YELLOWSTONE	52	305	-7
STATE-WIDE	103	243	+17

## Precipitation

May mountain and valley precipitation across the state was 95 percent of average and 56 percent of last year, while the water year precipitation was 104 percent of average and 79 percent of last year. West of the Continental Divide, May mountain and valley precipitation was 95 percent of average and 81 percent of last year and the water year precipitation was 108 percent of average and 85 percent of last year. East of the Divide, May mountain and valley precipitation was 95 percent of average and 49 percent of last year and the water year precipitation was 101 percent of average and 75 percent of last year.

RIVER BASIN	MAY % OF AVERAGE	WATER YEAR % OF AVERAGE
COLUMBIA .....	95 .....	108
KOOTENAI .....	104 .....	115
FLATHEAD .....	97 .....	109
UPPER CLARK FORK .....	89 .....	102
BITTERROOT .....	101 .....	107
LOWER CLARK FORK .....	96 .....	109
MISSOURI .....	99 .....	105
JEFFERSON .....	89 .....	95
MADISON .....	102 .....	105
GALLATIN .....	112 .....	104
MISSOURI MAINSTEM .....	95 .....	107
SMITH-JUDITH-MUSSELSHELL .....	90 .....	113
SUN-TETON-MARIAS .....	74 .....	100
MILK .....	173 .....	147
ST. MARY .....	143 .....	127
YELLOWSTONE .....	95 .....	97
UPPER YELLOWSTONE .....	99 .....	100
LOWER YELLOWSTONE .....	92 .....	95
STATEWIDE .....	95 .....	104

## Reservoirs

State-wide reservoir storage was 106 percent of average and 101 percent of last year. Reservoir storage west of the divide was 117 percent of average and 148 percent of last year. East of the Divide, reservoir storage was 102 percent of average and 89 percent of last year.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
COLUMBIA .....	117 .....	79
KOOTENAI .....	128 .....	76
FLATHEAD .....	109 .....	80
UPPER CLARK FORK .....	111 .....	115
BITTERROOT .....	109 .....	96
LOWER CLARK FORK .....	105 .....	104
MISSOURI .....	102 .....	115
JEFFERSON .....	102 .....	106
MADISON .....	115 .....	94
GALLATIN .....	129 .....	104
MISSOURI MAINSTEM .....	101 .....	116
SMITH-JUDITH-MUSSELSHELL .....	120 .....	125
SUN-TETON-MARIAS .....	105 .....	112
MILK .....	130 .....	131
ST. MARY .....	146 .....	86
YELLOWSTONE .....	105 .....	113
UPPER YELLOWSTONE .....	92 .....	106
LOWER YELLOWSTONE .....	105 .....	113
STATEWIDE .....	106 .....	105

## Streamflow

State-wide, streamflows are forecast to be 93 percent of average. West of the divide streamflows are forecast to be 102 percent of average and east of the divide are forecast to be 85 percent of average.

Following are streamflow forecasts for the period June 1 through July 31. THE FIGURES IN THE TABLE BELOW ARE AN AVERAGE OF ALL FORECASTS WITHIN THE PARTICULAR BASIN AT THE 50 PERCENT EXCEEDANCE ONLY. FOR FORECASTS ABOVE AND BELOW THE 50 PERCENT EXCEEDANCE, LOOK TO THE SPECIFIC BASIN REPORTS. The figures below are the combined averages of the individual forecast points within the particular basin. Specific forecast probabilities are available in each individual River Basin Report.

RIVER BASIN	JUNE-JULY	
	THIS YEAR % OF AVERAGE	LAST YEAR % OF AVERAGE
COLUMBIA . . . . .	99 . . . . .	188
KOOTENAI . . . . .	121 . . . . .	168
FLATHEAD . . . . .	110 . . . . .	200
UPPER CLARK FORK . . . . .	83 . . . . .	194
BITTERROOT . . . . .	88 . . . . .	162
LOWER CLARK FORK . . . . .	93 . . . . .	183
MISSOURI . . . . .	80 . . . . .	191
JEFFERSON . . . . .	48 . . . . .	183
MADISON . . . . .	90 . . . . .	149
GALLATIN . . . . .	89 . . . . .	156
MISSOURI MAINSTEM . . . . .	78 . . . . .	173
SMITH-JUDITH-MUSSELSHELL . . . . .	94 . . . . .	251
SUN-TETON-MARIAS . . . . .	99 . . . . .	194
MILK . . . . .	104 . . . . .	193
ST. MARY . . . . .	116 . . . . .	155
YELLOWSTONE . . . . .	85 . . . . .	200
UPPER YELLOWSTONE . . . . .	96 . . . . .	170
LOWER YELLOWSTONE . . . . .	74 . . . . .	231
STATE-WIDE . . . . .	90 . . . . .	190

NOTE: The JUNE-JULY LAST YEAR % OF AVERAGE column above is what was forecast last year at this same time, NOT what actually occurred.

# Surface Water Supply Index

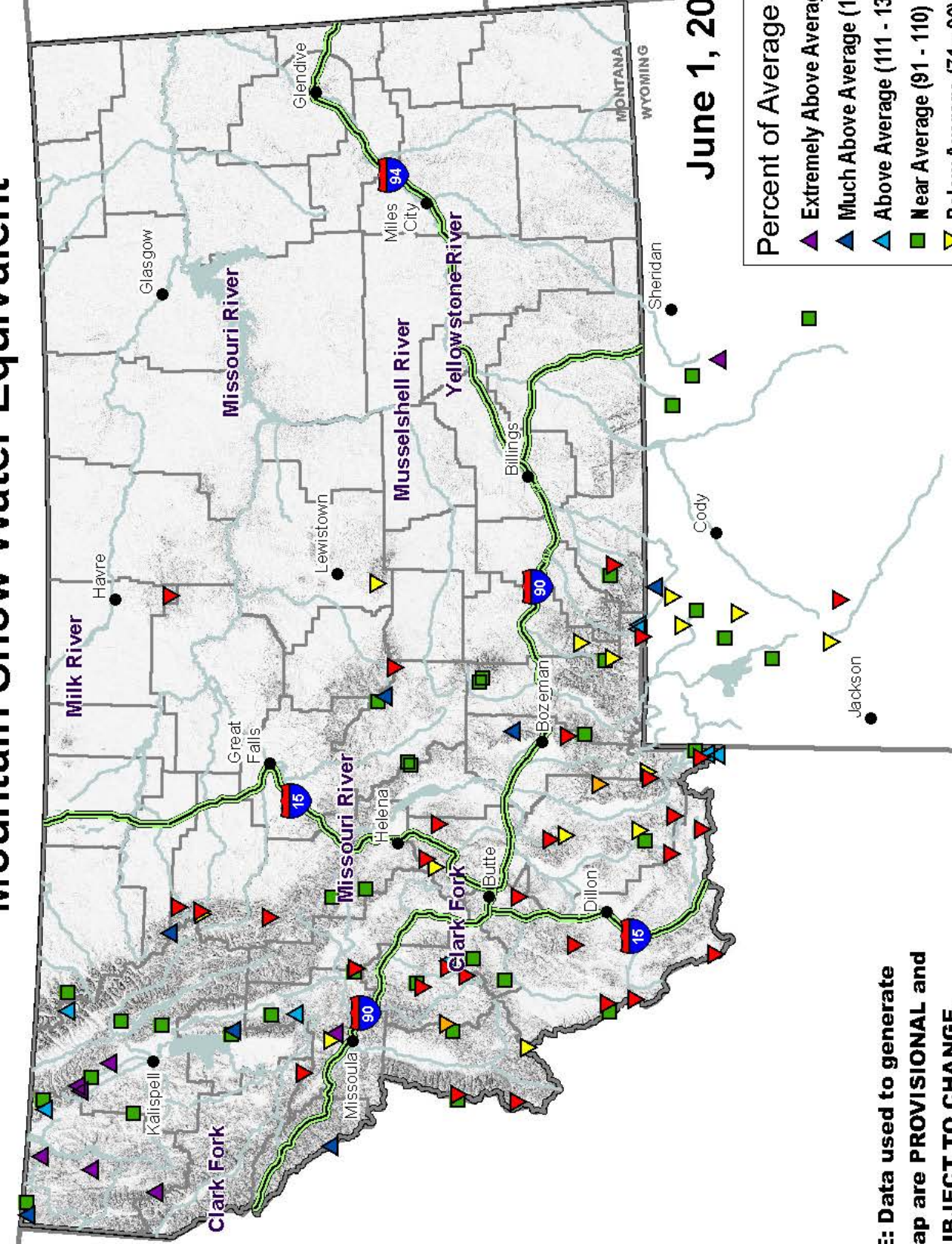
The Surface Water Supply Index (SWSI) is a measure of available surface water availability for the spring and summer months. Water users that rely on mountain precipitation can use the index to evaluate seasonal surface water supplies. The SWSI accounts for mountain snowpack, mountain precipitation, streamflow, reservoir storage, and soil moisture.

SWSI RATING	SURFACE WATER CONDITION
+3.0 to +4.0	Extremely Wet
+2.0 to +3.0	Moderately Wet
+1.0 to +2.0	Slightly Wet
-1.0 to +1.0	Near Average
-1.0 to -2.0	Slightly Dry
-2.0 to -3.0	Moderately Dry
-3.0 to -4.0	Extremely Dry

This Year SWSI	Last Year SWSI	Basin
+2.7	+3.4	Tobacco River
+2.5	+2.4	Kootenai Ft. Steele to Libby Dam
+3.7	----	Kootenai River below Libby Dam
+2.4	+3.8	Fisher River
+3.1	+3.2	Yaak River
+1.3	+3.8	North Fork Flathead River
+1.7	+3.8	Middle Fork Flathead River
+3.1	+3.8	South Fork Flathead River
+2.0	+3.2	Flathead River at Columbia Falls
+2.9	+3.9	Swan River
+1.4	+3.8	Flathead River at Polson
+1.6	----	Mission Valley
+2.3	----	Little Bitterroot River
+1.1	+3.5	Clark Fork River above Milltown
+1.5	----	Clark Fork above Missoula
+2.4	+4.0	Blackfoot River
+1.9	+2.5	Bitterroot River
+1.6	+3.2	Clark Fork River below Bitterroot River
+1.5	+3.6	Clark Fork River below Flathead River
-0.7	+2.3	Beaverhead River
-1.0	+2.4	Ruby River
+0.6	+3.7	Big Hole River
-0.1	+3.0	Boulder River (Jefferson)
+0.4	+3.0	Jefferson River
+1.4	+2.8	Madison River
-0.3	+3.4	Gallatin River
+0.2	+3.3	Missouri River above Canyon Ferry
+0.3	+3.1	Missouri River below Canyon Ferry
+2.8	----	Smith River
+1.0	+3.2	Sun River
+0.1	+2.3	Teton River
+0.1	+3.3	Birch/Dupuyer Creeks
+1.6	----	Upper Judith River
+0.2	+3.4	Marias River above Tiber
+0.9	+3.9	Marias River below Tiber
+0.9	+3.8	Musselshell River
+0.4	+2.3	Missouri River above Ft. Peck
+0.3	+3.9	Missouri River below Ft. Peck
+2.4	+3.3	St. Mary River
+1.2	+3.9	Milk River
-1.6	+2.8	Dearborn River near Craig
+1.0	+3.7	Yellowstone River above Livingston
+0.1	+3.8	Shields River
-1.0	+3.6	Boulder River (Yellowstone)
-0.4	+3.8	Stillwater River
-3.4	+3.8	Rock/Red Lodge Creeks
+2.2	+3.9	Clarks Fork River
+0.8	+3.7	Yellowstone River above Bighorn River
-1.4	+4.0	Bighorn River below Bighorn Lake
-0.8	+3.8	Little Bighorn River
-0.2	+3.8	Yellowstone River below Bighorn River
-1.0	+3.9	Tongue River
-0.9	+4.0	Powder River



# Mountain Snow Water Equivalent



June 1, 2012

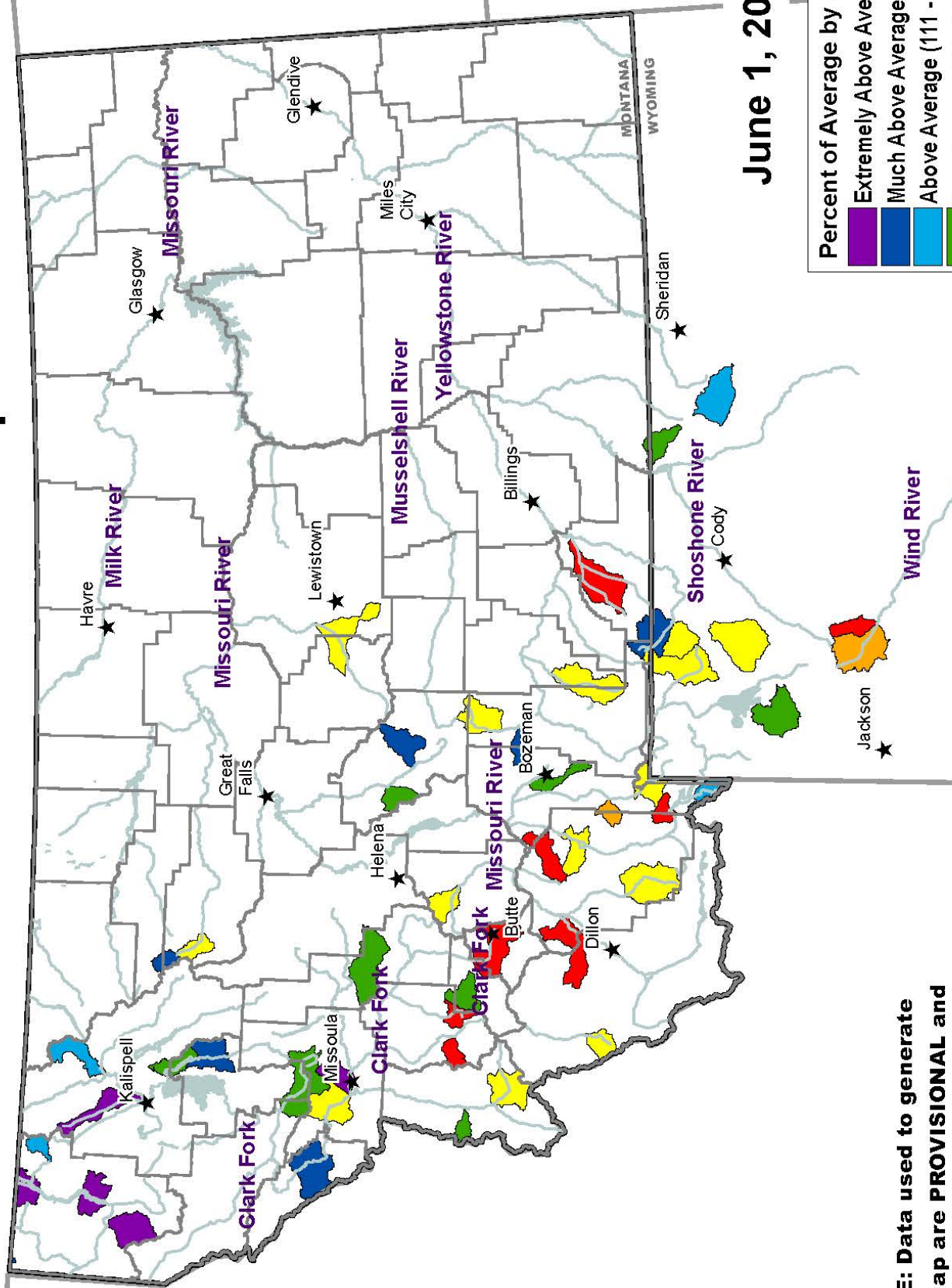
## Percent of Average

- ▲ Extremely Above Average (Over 150)
- ▲ Much Above Average (131 - 150)
- ▲ Above Average (111 - 130)
- Near Average (91 - 110)
- ▼ Below Average (71 - 90)
- ▼ Much Below Average (51 - 70)
- ▼ Extremely Below Average (Below 51)

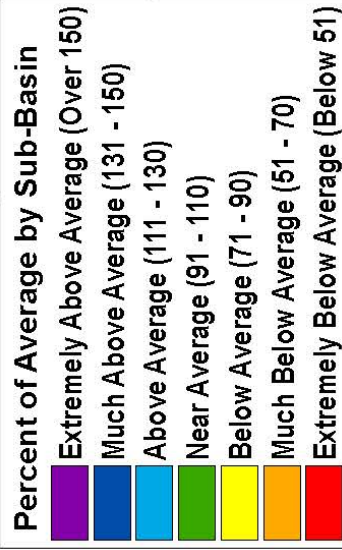
**NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.**



# Mountain Snow Water Equivalent



June 1, 2012

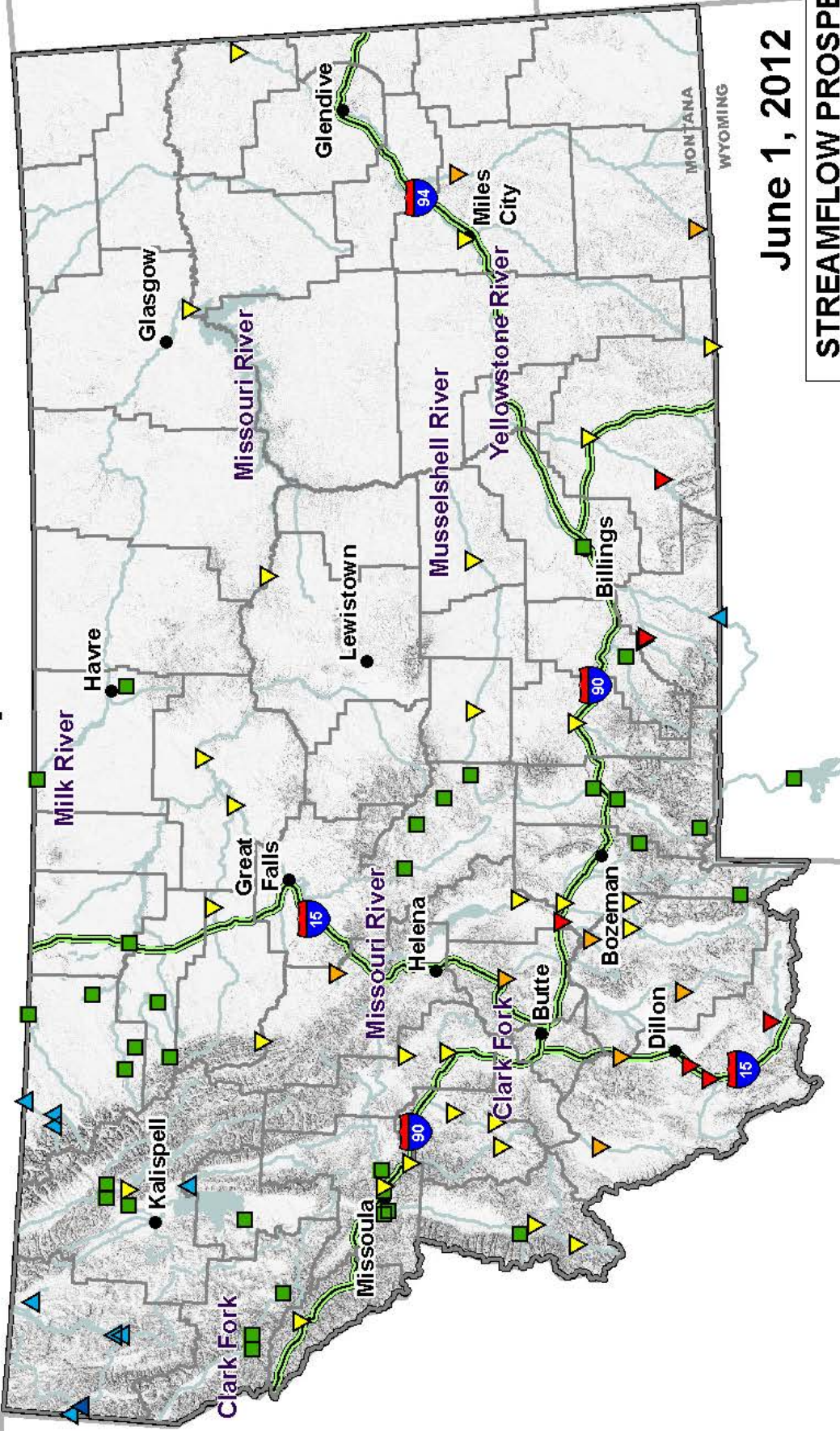


**NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.**





# Streamflow Prospects for Montana



June 1, 2012

## STREAMFLOW PROSPECTS

- ▲ Extremely Above Average (Over 150)
- ▲ Much Above Average (131 - 150)
- ▲ Above Average (111 - 130)
- Near Average (91 - 110)
- ▲ Below Average (71 - 90)
- ▲ Much Below Average (51 - 70)
- ▲ Extremely Below Average (Below 51)

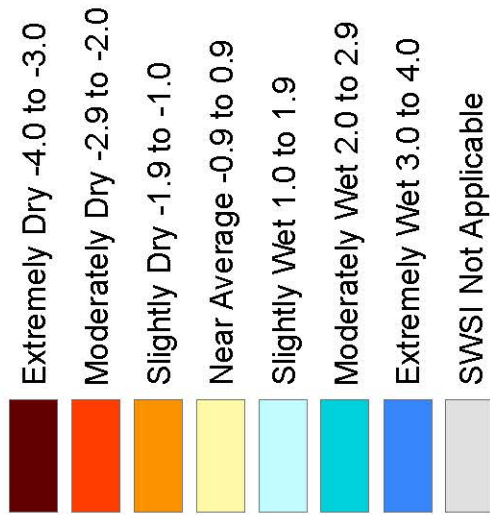
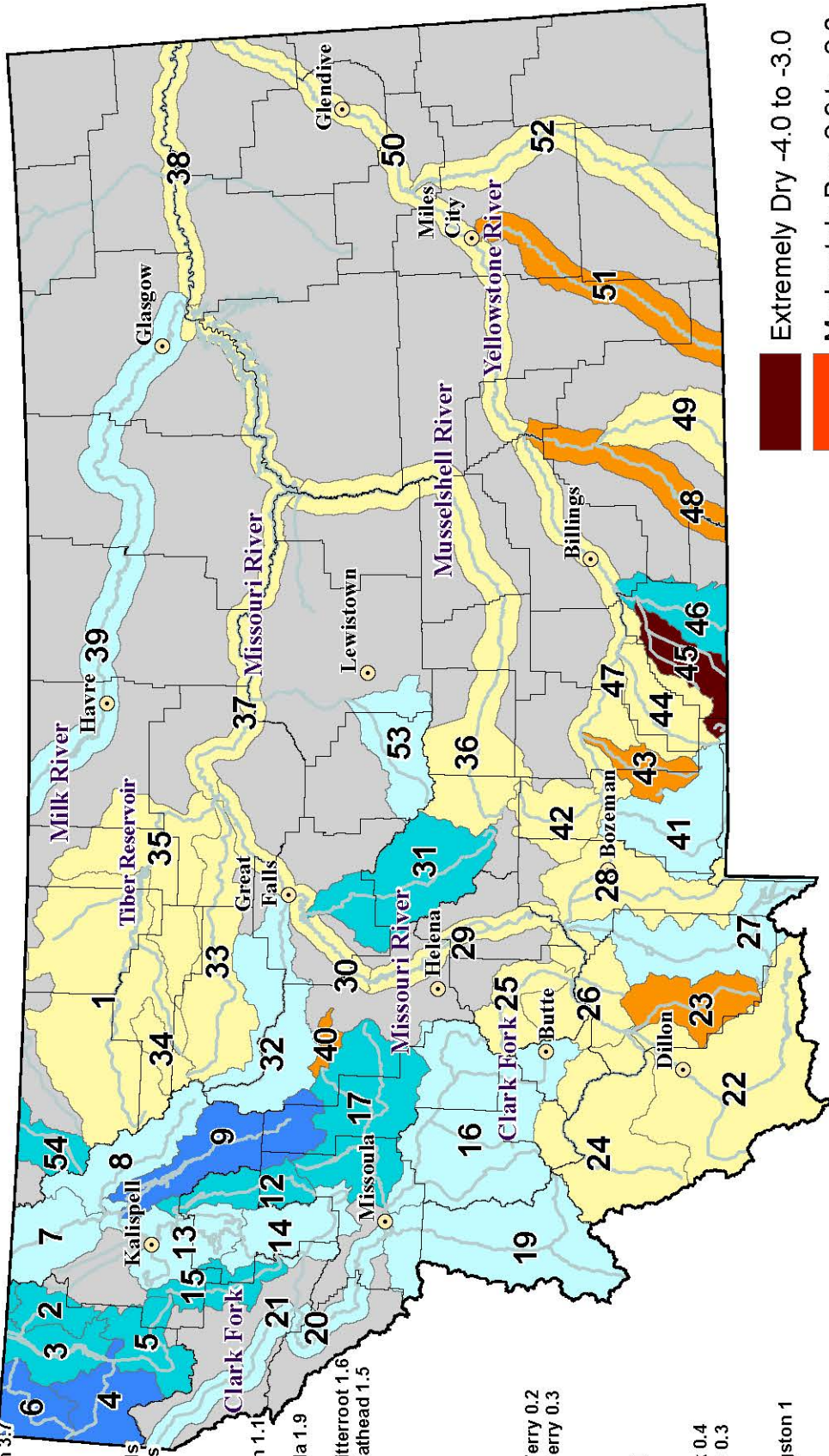
**NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.**



# Surface Water Supply Index (SWSI) Values

## RIVER INDEX & SWSI VALUES

- 1 Marias above Tiber Reservoir 0.2
- 2 Tobacco 2.7
- 3 Kootenai Ft. Steele to Libby Dam 2.5
- 4 Kootenai below Libby Dam 3.7
- 5 Fisher 2.4
- 6 Yaak 3.1
- 7 North FK. Flathead 1.3
- 8 Middle FK. Flathead 1.7
- 9 South FK. Flathead 3.1
- 10 Flathead at Columbia Falls
- 11 Stillwater/Whitefish Rivers
- 12 Swan 2.9
- 13 Flathead at Polson 1.4
- 14 Mission Valley 1.6
- 15 Little Bitterroot 2.3
- 16 Clark Fork above Milltown 1.1
- 17 Blackfoot 2.4
- 18 Clark Fork above Missoula 1.9
- 19 Bitterroot 1.9
- 20 Clark Fork River below Bitterroot 1.6
- 21 Clark Fork River below Flathead 1.5
- 22 Beaverhead -0.7
- 23 Ruby -1
- 24 Big Hole 0.6
- 25 Boulder (Jefferson) -0.1
- 26 Jefferson 0.4
- 27 Madison 1.4
- 28 Gallatin -0.3
- 29 Missouri above Canyon Ferry 0.2
- 30 Missouri below Canyon Ferry 0.3
- 31 Smith 2.8
- 32 Sun 1
- 33 Teton 0.1
- 34 Birch/Dupuyer Creeks 0.1
- 35 Marias 0.9
- 36 Musselshell 0.9
- 37 Missouri above Fort Peck 0.4
- 38 Missouri below Fort Peck 0.3
- 39 Milk 1.2
- 40 Dearborn near Craig -1.6
- 41 Yellowstone above Livingston 1
- 42 Shields 0.1
- 43 Boulder (Yellowstone) -1
- 44 Stillwater -0.4
- 45 Rock/Red Lodge Creeks -3.4
- 46 Clarks Fork Yellowstone 2.2
- 47 Yellowstone above Bighorn River 0.8
- 48 Bighorn below Bighorn Lake -1.4
- 49 Little Bighorn -0.8
- 50 Yellowstone below Bighorn -0.2
- 51 Tongue -1
- 52 Powder -0.9
- 53 Upper Judith 1.6
- 54 Saint Mary 2.4



**June 7, 2012**

**NOTE: Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.**

BASIN SUMMARY OF  
SNOW COURSE DATA

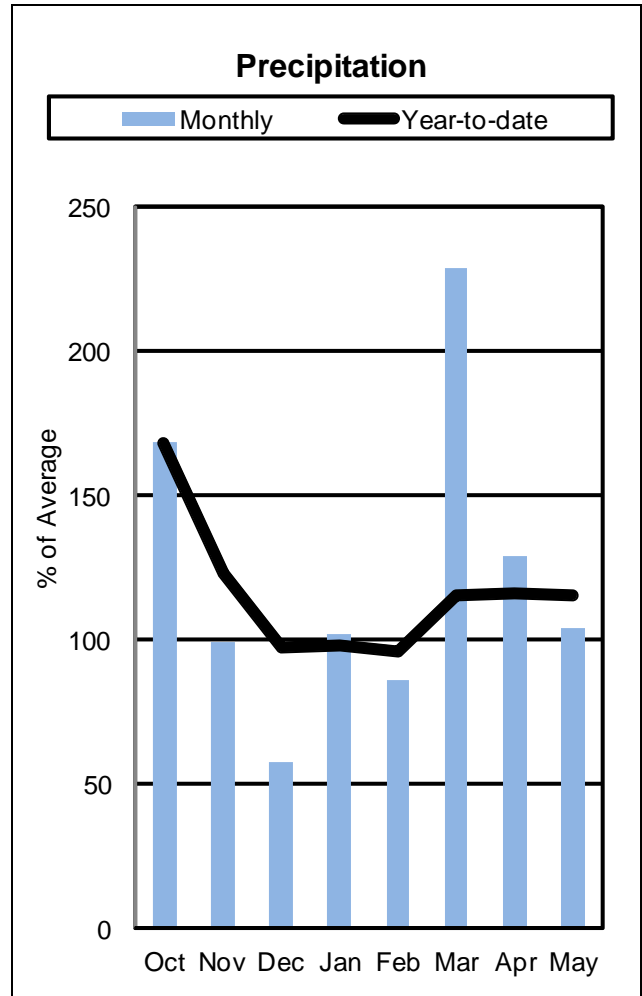
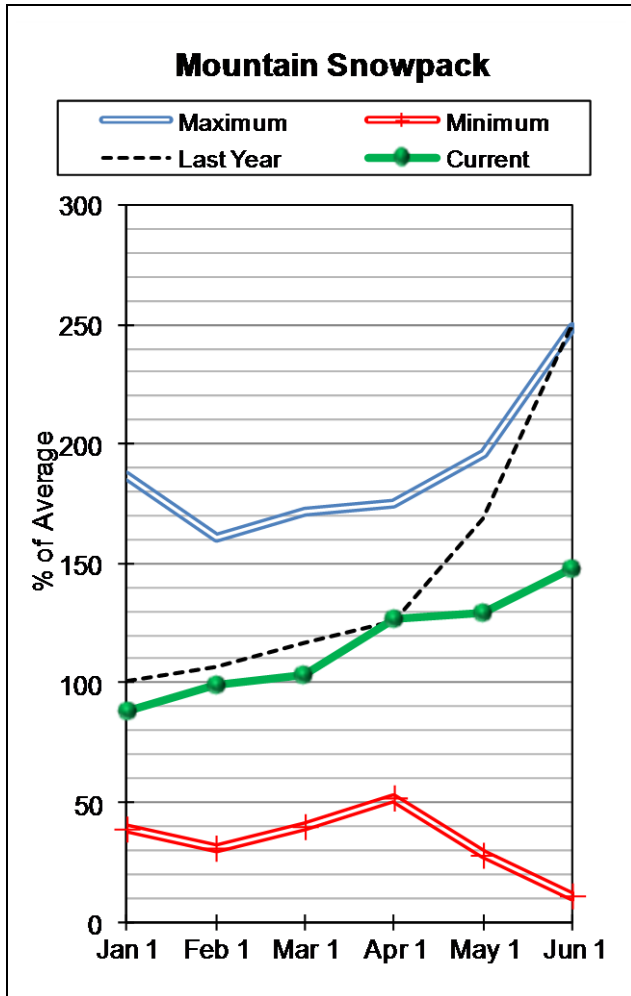
JUNE 2012

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
ALBRO LAKE SNOTEL	8300	6/01/12	8	3.0	28.4	13.4
BADGER PASS SNOTEL	6900	6/01/12	60	31.6	49.3	22.9
BANFIELD MTN SNOTEL	5600	6/01/12	16	7.0	15.1	2.9
BARKER LAKES SNOTEL	8250	6/01/12	27	8.6	25.6	9.5
BASIN CREEK SNOTEL	7180	6/01/12	1	.8	8.1	4.1
BEAGLE SPGS SNOTEL	8850	6/01/12	0	.0	9.3	1.4
BEAVER CREEK SNOTEL	7850	6/01/12	12	3.8	21.2	8.6
BISSON CREEK SNOTEL	4920	6/01/12	0	.0	.0	.0
BLACK BEAR SNOTEL	7950	6/01/12	65	32.6	53.9	26.1
BLACK PINE SNOTEL	7100	6/01/12	0	.0	8.1	1.9
BLACKTAIL MTN SNOTEL	5650	6/01/12	0	.0	9.2	--
BLOODY DICK SNOTEL	7550	6/01/12	0	.0	8.9	1.0
BOULDER MTN SNOTEL	7950	6/01/12	27	8.6	27.2	9.2
BOX CANYON SNOTEL	6700	6/01/12	0	.0	.0	.0
BOXELDER CREEK	5100	5/29/12	6	2.4	.0	.2
BRACKETT CR SNOTEL	7320	6/01/12	19	7.4	28.1	5.1
BURNT MTN SNOTEL	5880	6/01/12	0	.0	.0	.0
CALVERT CR SNOTEL	6430	6/01/12	0	.0	.0	.0
CARROT BASIN SNOTEL	9000	6/01/12	42	18.5	35.7	24.2
CHICKEN CREEK	4060	5/31/12	0	.0	.0	.0
CLOVER MDW SNOTEL	8800	6/01/12	26	9.9	22.9	11.3
COLE CREEK SNOTEL	7850	6/01/12	5	1.8	25.2	11.0
COMBINATION SNOTEL	5600	6/01/12	0	.0	.0	.0
COPPER BOTTOM SNOTEL	5200	6/01/12	0	.0	.0	.0
COPPER CAMP SNOTEL	6950	6/01/12	48	28.6	48.7	--
CRYSTAL LAKE SNOTEL	6050	6/01/12	1	.6	15.6	.7
DAISY PEAK SNOTEL	7600	6/01/12	0	.0	14.7	3.4
DALY CREEK SNOTEL	5780	6/01/12	0	.0	.0	.0
DARKHORSE LK. SNOTEL	8700	6/01/12	56	23.8	46.4	26.3
DEADMAN CR SNOTEL	6450	6/01/12	0	.0	3.0	.0
DISCOVERY BASIN	7050	5/31/12	1	.5	10.7	2.4
DIVIDE SNOTEL	7800	6/01/12	0	.0	6.5	2.7
DUPUYER CREEK SNOTEL	5750	6/01/12	0	.0	5.9	.4
EMERY CREEK SNOTEL	4350	6/01/12	0	.0	.0	.0
FISHER CREEK SNOTEL	9100	6/01/12	80	39.1	53.9	30.1
FLATTOP MTN SNOTEL	6300	6/01/12	104	46.1	62.0	36.5
FROHNER MDWS SNOTEL	6480	6/01/12	0	.0	.7	.7
GARVER CREEK SNOTEL	4250	6/01/12	0	.0	.0	.0
GRAVE CRK SNOTEL	4300	6/01/12	0	.0	8.7	.0
HAND CREEK SNOTEL	5030	6/01/12	0	.0	.0	.0
HAWKINS LAKE SNOTEL	6450	6/01/12	50	23.8	40.4	17.8
HELL ROARING DIVIDE	5770	5/31/12	42	21.1	41.4	10.8
HERRIG JUNCTION	4850	5/31/12	20	9.6	26.8	5.4
HOODOO BASIN SNOTEL	6050	6/01/12	79	39.8	53.8	28.4
KRAFT CREEK SNOTEL	4750	6/01/12	0	.0	.0	.0
LAKEVIEW RDG. SNOTEL	7400	6/01/12	0	.0	4.1	.3
LEMHI RIDGE SNOTEL	8100	6/01/12	0	.0	13.0	1.4
LICK CREEK SNOTEL	6860	6/01/12	0	.0	10.0	.5
LONE MOUNTAIN SNOTEL	8880	6/01/12	17	6.5	30.8	11.8
LOWER TWIN SNOTEL	7900	6/01/12	30	11.4	23.4	13.0
LUBRECHT SNOTEL	4680	6/01/12	0	.0	.0	.0
MADISON PLT SNOTEL	7750	6/01/12	24	10.9	32.0	9.0
MANY GLACIER SNOTEL	4900	6/01/12	0	.0	.0	.0
MONUMENT PK SNOTEL	8850	6/01/12	28	12.5	30.3	15.9
MOSS PEAK SNOTEL	6780	6/01/12	93	44.8	63.7	31.0
MT LOCKHART SNOTEL	6400	6/01/12	15	8.0	27.6	9.6
MULE CREEK SNOTEL	8300	6/01/12	11	3.5	19.4	9.3

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
N.E. ENTRANCE SNOTEL	7350	6/01/12	0	.0	.0	.4
NEVADA RIDGE SNOTEL	7020	6/01/12	5	3.1	19.2	3.4
NEZ PERCE CMP SNOTEL	5650	6/01/12	0	.0	4.3	.3
N.F. ELK CR SNOTEL	6250	6/01/12	0	.0	3.1	.6
NF JOCKO SNOTEL	6330	6/01/12	52	29.4	53.5	26.4
NOISY BASIN SNOTEL	6040	6/01/12	72	31.3	69.7	30.1
PETERSON MDW SNOTEL	7200	6/01/12	0	.0	11.4	2.7
PICKFOOT CRK SNOTEL	6650	6/01/12	0	.0	4.2	.0
PIKE CREEK SNOTEL	5930	6/01/12	0	.0	13.5	--
PLACER BASIN SNOTEL	8830	6/01/12	25	10.8	34.1	14.6
POORMAN CR SNOTEL	5100	6/01/12	35	17.9	44.5	11.1
PORCUPINE SNOTEL	6500	6/01/12	0	.0	.0	.0
RED MOUNTAIN	6000	5/31/12	17	8.3	19.7	4.1
ROCKER PEAK SNOTEL	8000	6/01/12	25	9.0	23.1	11.7
ROCKY BOY SNOTEL	4700	6/01/12	0	.0	.0	.2
SACAJAWEA SNOTEL	6550	6/01/12	2	1.2	9.7	.0
SADDLE MTN SNOTEL	7900	6/01/12	32	12.4	33.2	16.3
S.F. SHIELDS SNOTEL	8100	6/01/12	27	11.1	27.2	12.3
SHORT CREEK SNOTEL	7000	6/01/12	0	.0	.0	.0
SHOWER FALLS SNOTEL	8100	6/01/12	48	20.0	37.0	20.5
SKALKAHO SNOTEL	7260	6/01/12	18	7.5	25.1	14.6
SLEEPING WOMAN SNTL	6150	6/01/12	0	.0	12.1	1.2
SPUR PARK SNOTEL	8100	6/01/12	47	20.9	36.8	14.2
STAHL PEAK SNOTEL	6030	6/01/12	78	36.3	57.4	28.0
STRYKER BASIN	6180	5/31/12	59	30.1	46.8	19.4
STUART MOUNTAIN SNTL	7400	6/01/12	57	27.7	46.2	17.0
TAYLOR ROAD	4080	5/29/12	3	.8	.0	.2
TEPEE CREEK SNOTEL	8000	6/01/12	0	.0	8.6	5.2
TIZER BASIN SNOTEL	6840	6/01/12	0	.0	5.8	.3
TV MOUNTAIN	6800	5/31/12	12	4.8	18.8	6.8
TWELVEMILE SNOTEL	5600	6/01/12	0	.0	.0	.4
TWIN LAKES SNOTEL	6400	6/01/12	42	24.5	38.8	22.3
WALDRON SNOTEL	5600	6/01/12	0	.0	5.3	.1
WARM SPRINGS SNOTEL	7800	6/01/12	49	20.6	32.5	17.0
WEST YELL'ST SNOTEL	6700	6/01/12	0	.0	.0	.0
WHISKEY CREEK SNOTEL	6800	6/01/12	0	.0	13.4	1.2
WHITE MILL SNOTEL	8700	6/01/12	48	20.5	35.1	18.0
WOOD CREEK SNOTEL	5960	6/01/12	0	.0	9.6	.5



# Kootenai River Basin in Montana



Snowpack conditions in the Kootenai River Basin as of June 1 were well above average. Snow water content was 145 percent of average and 58 percent of last year. Snowpack in the Kootenai in Canada was well above average. Snow water content was 153 percent of average and 100 percent of last year.

Mountain precipitation during May was 109 percent of average and 90 percent of last year. Valley precipitation during May was 70 percent of average and 113 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 115 percent of average and 88 percent of last year.

Lake Koocanusa storage at the end of May was 128 percent of average and 169 percent of average.

Assuming average precipitation, June through July streamflows are forecast to average 121 percent.

Surface Water Supply Index (SWSI) was +2.7 in the Tobacco River; +2.5 in the Kootenai Ft. Steele to Libby Dam; +3.7 in the Kootenai River below Libby Dam; +2.4 in the Fisher River; and +3.1 in the Yaak River.

KOOTENAI RIVER BASIN in Montana  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		30%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
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 (1,2)	JUN-JUL	3320	3760	3960	115	4160	4600	3440
	JUN-SEP	4340	4890	5140	116	5390	5940	4440
Fisher River nr Libby	JUN-JUL	57	69	77	113	85	97	68
	JUN-SEP	72	86	95	113	104	118	84
Yaak River 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

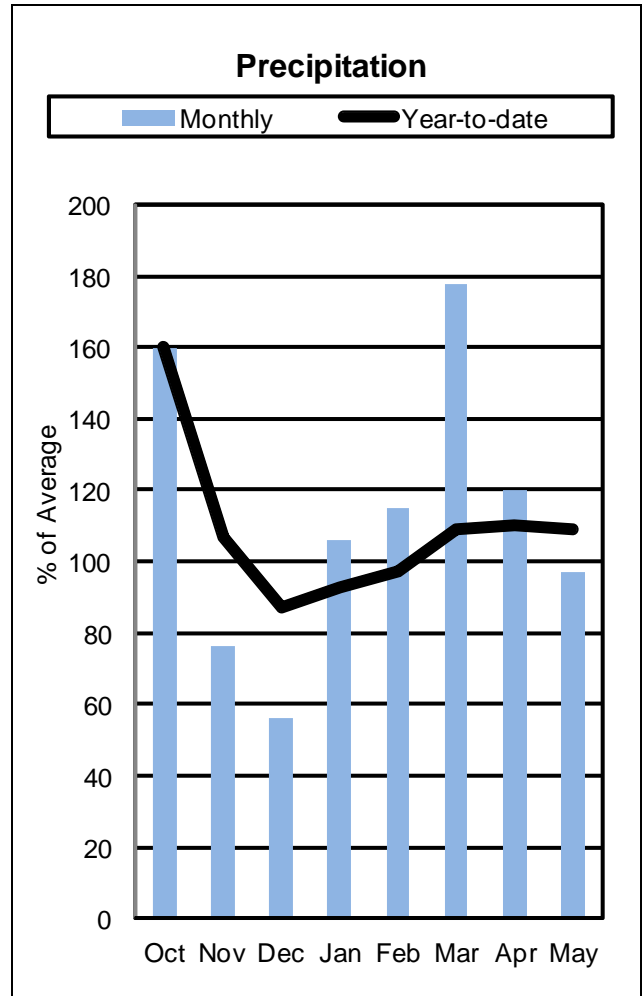
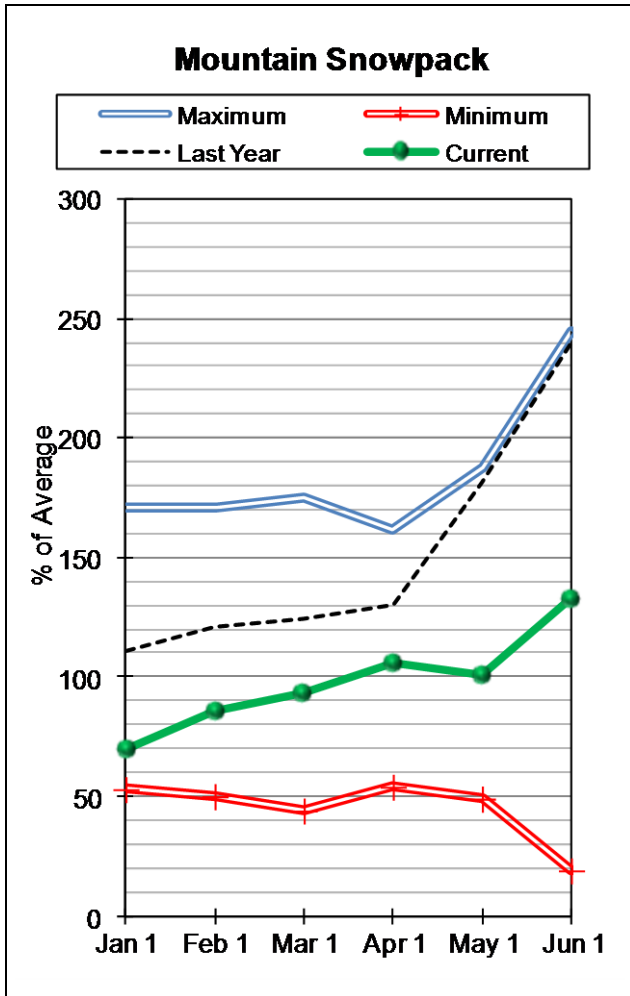
KOOTENAI RIVER BASIN in Montana Reservoir Storage (1000 AF) - End of May					KOOTENAI RIVER BASIN in Montana Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
LAKE KOOCANUSA	5748.0	4090.0	2421.0	3193.1	KOOTENAY in CANADA	5	100	153
					KOOTENAI MAINTSTEM	4	60	157
					TOBACCO	2	55	130
					FISHER	1	0	0
					YAAK	3	53	147
					KOOTENAI in MONTANA	9	58	145
					KOOTENAI ab BONNERS FERRY	14	76	148

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

# Flathead River Basin



Snowpack conditions in the Flathead River Basin were well above average on June 1. Snow water content was 133 percent of average and 54 percent of last year. Snowpack in the Flathead of Canada was well above average. Snow water content was 253 percent of average and 58 percent of last year.

Mountain precipitation during May was 98 percent of average and 86 percent of last year. Valley precipitation during May was 77 percent of average and 96 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 109 percent of average and 82 percent of last year.

Hungry Horse Reservoir storage at the end of May was 119 percent of average and 175 percent of last year. Flathead Lake storage at the end of May was 93 percent of average and 92 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 110 percent.

Surface Water Supply Index (SWSI) was +1.3 in the North Fork Flathead River; +1.7 in the Middle Fork Flathead River; +3.1 in the South Fork Flathead River; +2.0 in the Flathead River at Columbia Falls; +2.9 in the Swan River; +1.4 in the Flathead River at Polson; +1.6 in the Mission Valley; +2.3 in the Little Bitterroot River.

FLATHEAD RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
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	0.5	1.3	1.7	108	2.2	2.9	1.6
	JUN-SEP	0.1	0.5	1.2	110	2.0	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	0.8	1.1	1.4	108	1.6	1.9	1.3
	JUN-SEP	1.1	1.5	1.7	107	2.0	2.3	1.6
South Crow Ck nr Ronan	JUN-JUL	6.0	7.0	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
	JUN-SEP	21	23	25	113	27	29	22
Sf Jocko R nr Arlee	JUN-JUL	17.2	19.4	21	127	23	25	16.5
	JUN-SEP	22	24	26	128	28	30	20
NF Jocko R bl Tabor Feeder Canal	JUN-JUL	16.7	18.5	19.7	133	21	23	14.8
	JUN-SEP	18.5	21	22	133	23	25	16.6

FLATHEAD RIVER BASIN Reservoir Storage (1000 AF) - End of May					FLATHEAD RIVER BASIN Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CAMAS (4)	45.2	40.1	28.9	31.2	NF FLATHEAD in CANADA	1	58	253
LOWER JOCKO LAKE	6.4	5.3	4.0	3.5	NF FLATHEAD in MONTANA	6	58	140
MISSION VALLEY (8)	100.0	79.6	46.2	68.7	MIDDLE FORK FLATHEAD	3	62	131
HUNGRY HORSE	3451.0	3067.0	1749.0	2588.0	SOUTH FORK FLATHEAD	2	45	104
FLATHEAD LAKE	1791.0	1391.0	1506.0	1499.2	STILLWATER-WHITEFISH	5	53	171
					SWAN	4	56	121
					MISSION VALLEY	2	61	145
					LITTLE BITTERROOT-ASHLEY	0	0	0
					JOCKO	4	47	120
					FLATHEAD in MONTANA	19	54	133
					FLATHEAD RIVER BASIN	20	54	136

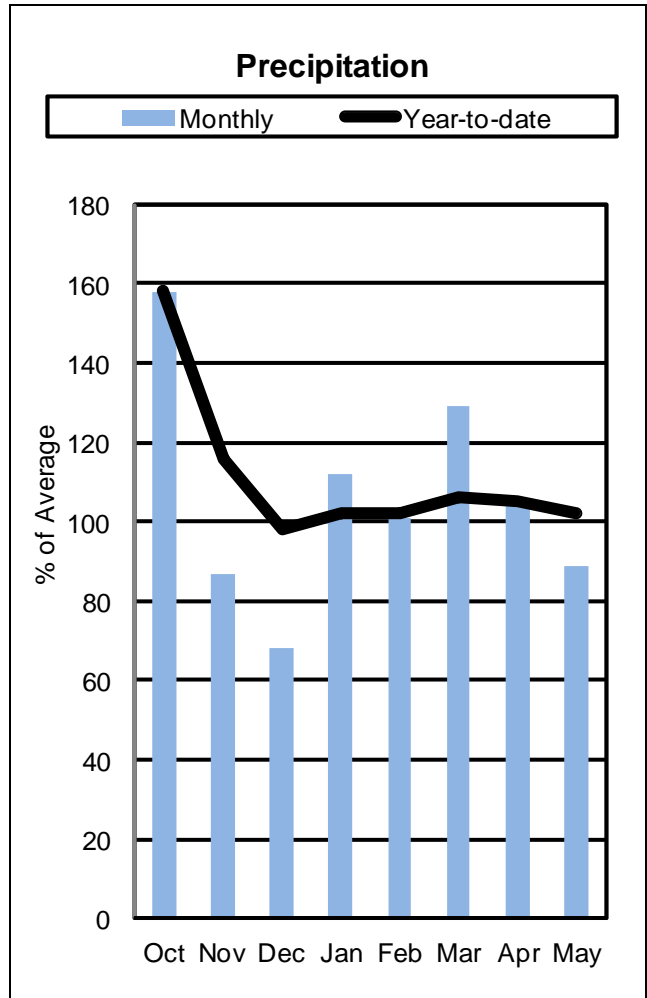
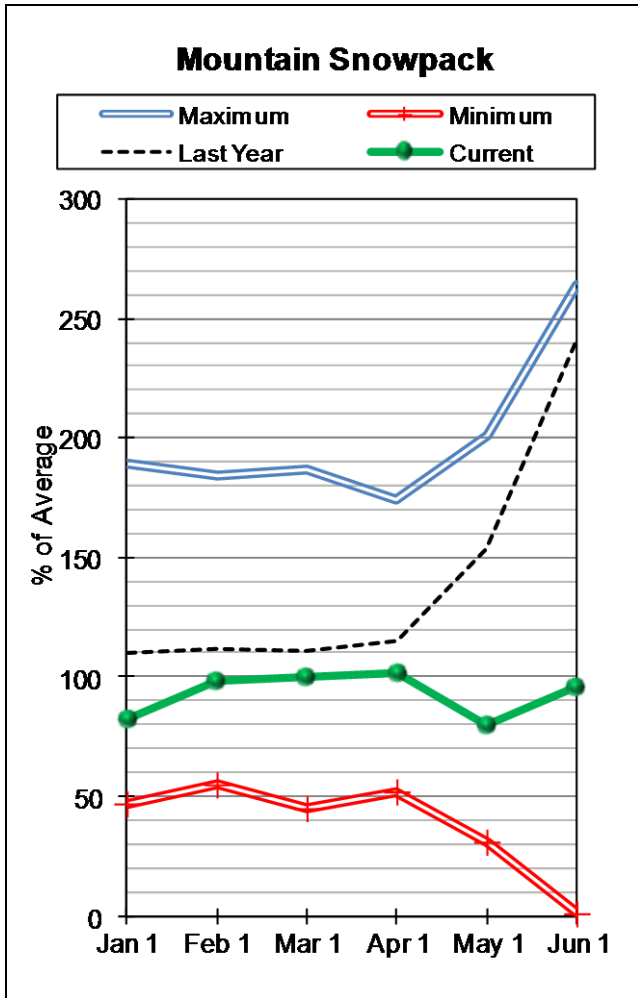
\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
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- (3) - Median value used in place of average.



# Upper Clark Fork River Basin



Snowpack conditions in the Upper Clark Fork River Basin were near average on June 1. Snow water content was 96 percent of average and 43 percent of last year.

Mountain precipitation during May was 93 percent of average and 73 percent of last year. Valley precipitation during May was 62 percent of average and 70 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 102 percent of average and 83 percent of last year.

East Fork Rock Creek storage was 131 percent of average and 104 percent of last year; and Nevada Creek storage was 101 percent of average and 97 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 83 percent.

Surface Water Supply Index (SWSI) was +1.1 in the Clark Fork River above Milltown; and +2.4 in the Blackfoot River.

UPPER CLARK FORK RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		30%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Little Blackfoot R 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	0.2	1.2	2.1	49	3.0	4.4	4.3
	JUN-SEP	0.0	1.6	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	3.0	4.4	5.4	77	6.4	7.8	7.0
	JUN-SEP	3.8	5.4	6.5	77	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

UPPER CLARK FORK RIVER BASIN  
Reservoir Storage (1000 AF) - End of May

UPPER CLARK FORK RIVER BASIN  
Watershed Snowpack Analysis - June 1, 2012

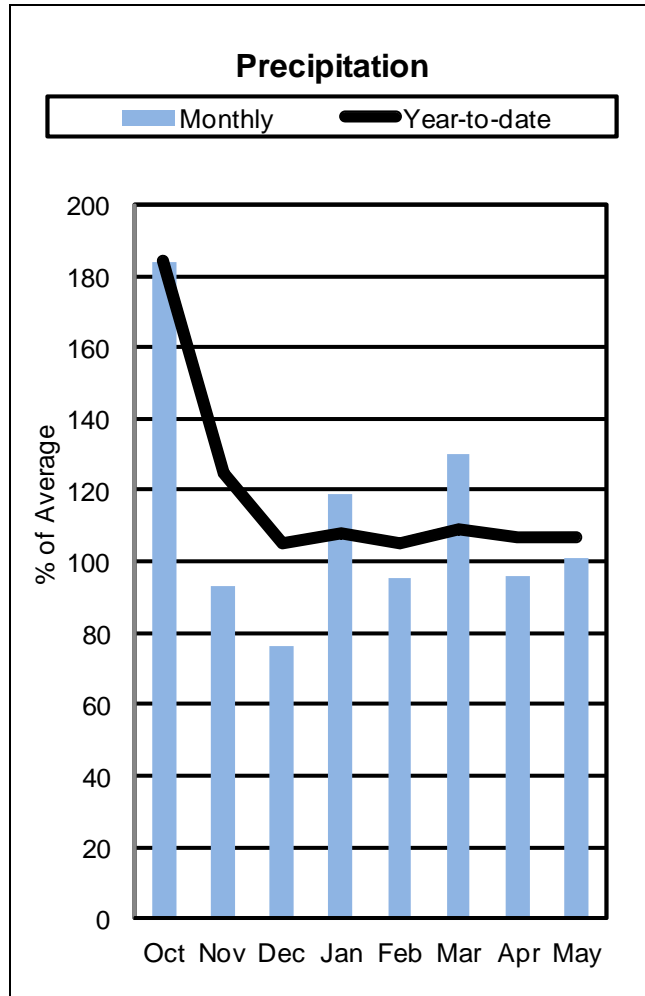
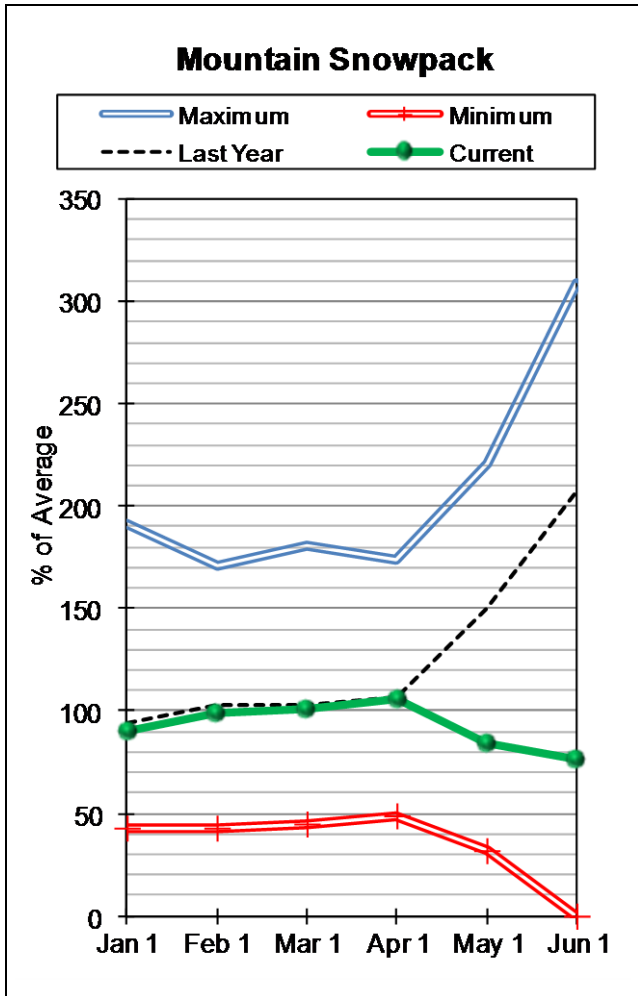
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
EAST FORK ROCK CREEK	15.6	13.8	13.3	10.5	CLARK FORK ab FLINT CREEK	5	39	92
GEORGETOWN LAKE	31.0	30.1	---	28.1	FLINT CREEK	4	2	7
LOWER WILLOW CREEK		NO REPORT			ROCK CREEK	2	21	43
NEVADA CREEK	12.6	11.2	11.5	11.1	CLARK FORK ab BLACKFOOT	10	31	74
					BLACKFOOT	6	52	127
					UPPER CLARK FORK BASIN	15	43	96

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
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- (3) - Median value used in place of average.

# Bitterroot River Basin



Snowpack conditions in the Bitterroot River Basin were well below average on June 1. Snow water content was 76 percent of average and 37 percent of last year.

Mountain precipitation during May was 106 percent of average and 88 percent of last year. Valley precipitation during May was 67 percent of average and 46 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 107 percent of average and 89 percent of last year.

Painted Rocks Lake storage was 106 percent of average and 98 percent of last year and Como storage was 112 percent of average and 135 percent of last year.

Assuming near average precipitation, June through July streamflows are forecast to average 88 percent.

Surface Water Supply Index (SWSI) was +1.9 in the Bitterroot River.

BITTERROOT RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		30%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
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)	JUN-JUL	29	37	42	105	47	55	40
	JUN-SEP	32	40	46	105	52	60	44
Bitterroot R nr Missoula	JUN-JUL	510	585	640	93	695	770	690
	JUN-SEP	605	690	750	94	810	895	800

BITTERROOT RIVER BASIN Reservoir Storage (1000 AF) - End of May					BITTERROOT RIVER BASIN Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
PAINTED ROCKS LAKE	31.7	32.4	33.1	30.5	WEST FORK BITTERROOT	2	33	75
COMO	34.9	34.7	25.7	30.9	EAST SIDE BITTERROOT	3	34	64
					WEST SIDE BITTERROOT	3	42	89
					BITTERROOT RIVER BASIN	7	37	76

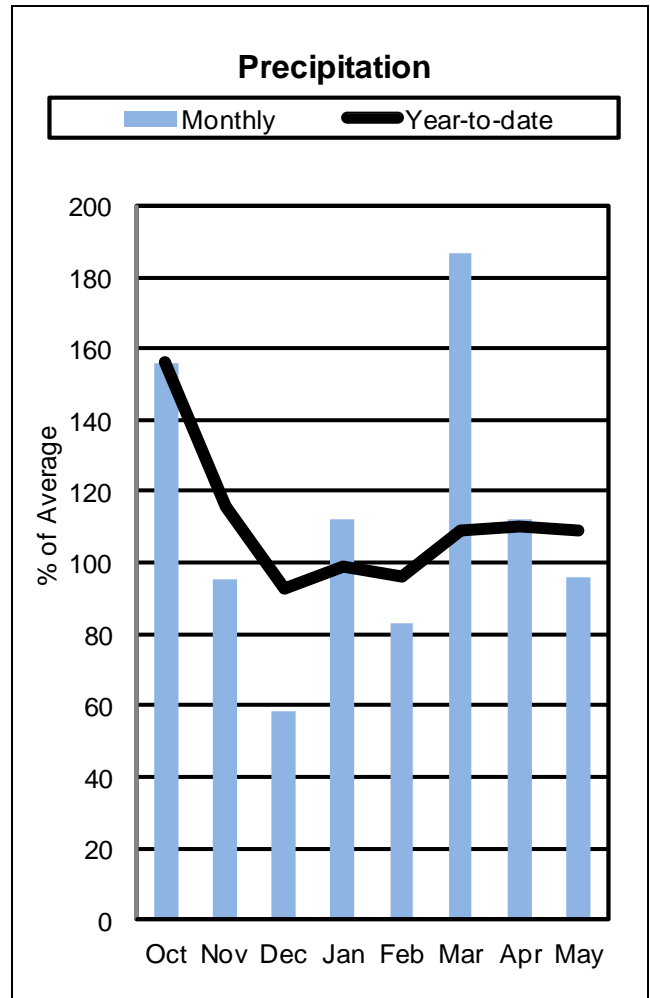
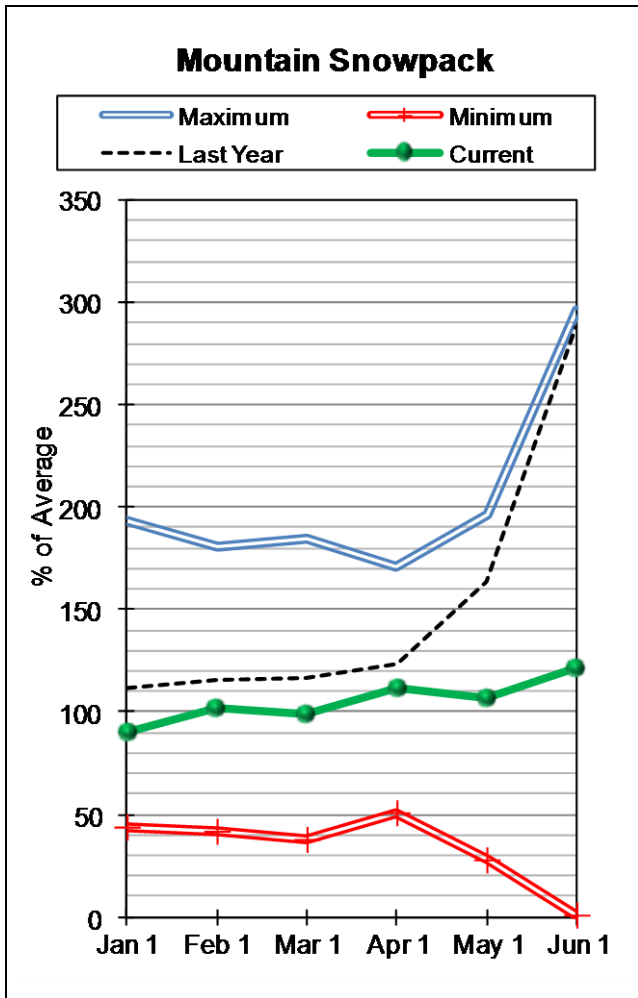
\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.



# Lower Clark Fork River Basin



Snowpack conditions in the Lower Clark Fork River Basin were well above average on June 1. Snow water content was 121 percent of average and 42 percent of last year.

Mountain precipitation during May was 102 percent of average and 90 percent of last year. Valley precipitation during May was 71 percent of average and 84 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 109 percent of average and 86 percent of last year.

Storage at the end of May in Noxon Rapids was 105 percent of average and 101 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 105 percent.

Surface Water Supply Index (SWSI) was +1.6 in the Clark Fork River below Bitterroot River and +1.5 in the Clark Fork River below Flathead River.

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LOWER CLARK FORK RIVER BASIN  
Streamflow Forecasts - June 1, 2012

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Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		30%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
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 R 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 at Whitehorse Rpds (1,2)	JUN-JUL	4190	4940	5280	94	5620	6370	5620
	JUN-SEP	5240	6140	6540	97	6940	7840	6750

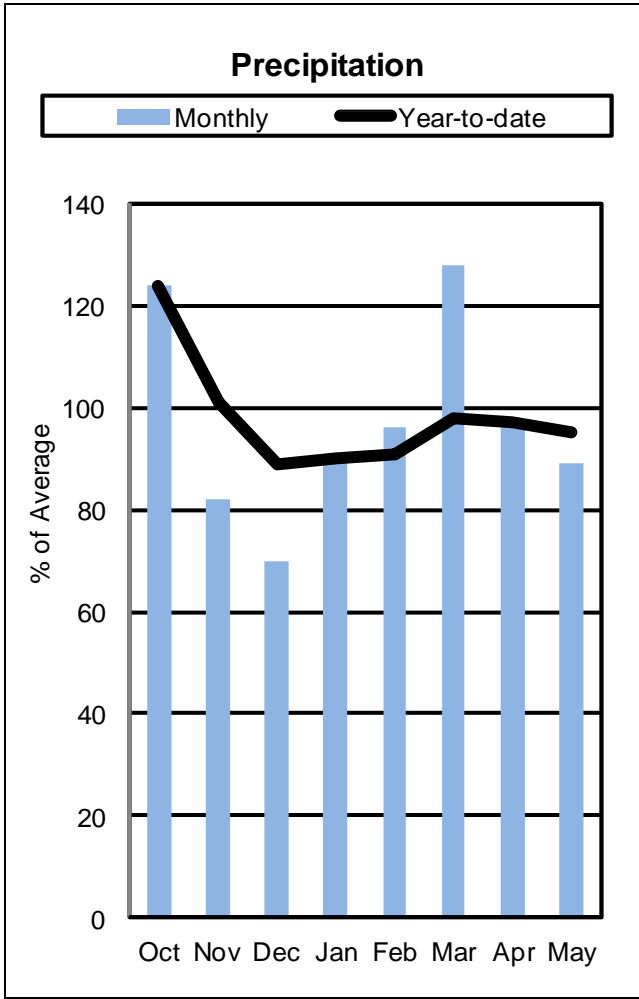
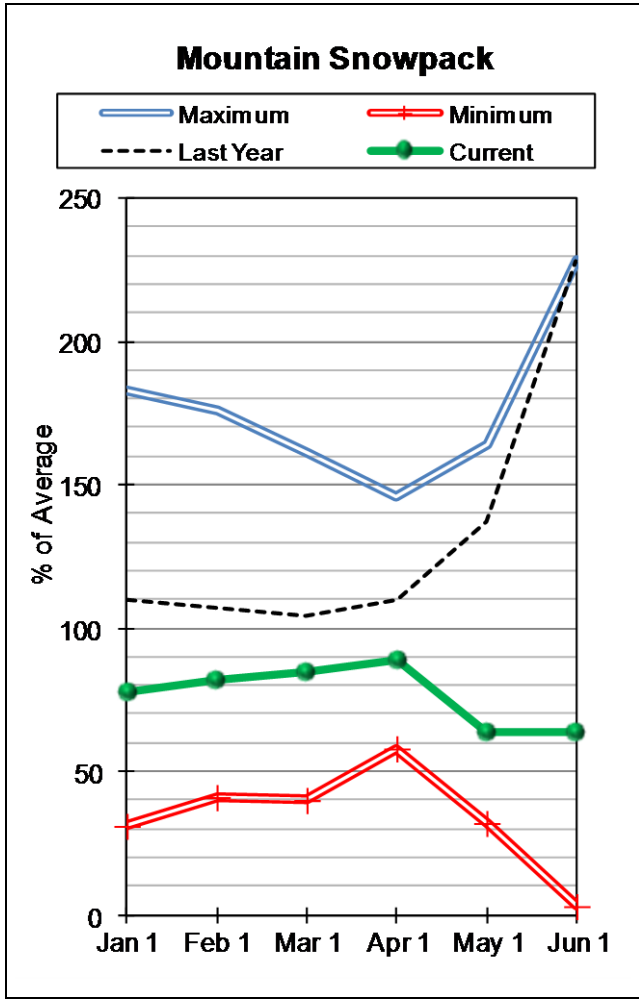
LOWER CLARK FORK RIVER BASIN Reservoir Storage (1000 AF) - End of May					LOWER CLARK FORK RIVER BASIN Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
NOXON RAPIDS	335.0	328.8	326.8	313.6	LOWER CLARK FORK BASIN	8	42	121

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

# Jefferson River Basin



Snowpack conditions in the Jefferson River Basin were well below average on June 1. Snow water content was 64 percent of average and 28 percent of last year.

Mountain precipitation during May was 92 percent of average and 61 percent of last year. Valley precipitation during May was 46 percent of average and 52 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 95 percent of average and 79 percent of last year.

Lima storage was 118 percent of average and 111 percent of last year; Clark Canyon storage was 96 percent of average and 91 percent of last year; Ruby River storage was 99 percent of average and 97 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 48 percent.

Surface Water Supply Index (SWSI) was -0.7 in the Beaverhead River; -1.0 in the Ruby River; +0.6 in the Big Hole River; -0.1 in the Boulder River; and +0.4 in the Jefferson River near Three Forks.

JEFFERSON RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Lima Reservoir Inflow (2)	JUN-JUL	5.4	13.5	19.0	49	25	33	39
	JUN-SEP	5.4	15.9	23	49	30	41	47
Clark Canyon Reservoir Inflow (2)	JUN-JUL	-23.0	-14.0	3.8	8	22	48	51
	JUN-SEP	-18.0	-2.4	18.0	24	38	68	76
Beaverhead R at Barretts (2)	JUN-JUL	-15.0	-1.1	15.0	21	41	79	71
	JUN-SEP	-10.0	4.0	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	6.0	14.7	30	56	45	68	54
	JUN-SEP	7.0	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	14.0	119	191	49	265	370	390
	JUN-SEP	5.0	139	230	50	320	455	465
Boulder R nr Boulder	JUN-JUL	11.4	18.2	23	64	28	34	36
	JUN-SEP	11.6	21	27	63	33	42	43
Willow Ck Reservoir Inflow (2)	JUN-JUL	0.4	3.5	5.6	52	7.7	10.8	10.8
	JUN-SEP	0.8	4.0	6.9	53	9.8	14.0	13.1
Jefferson R nr Three Forks (2)	JUN-JUL	-14.0	101	179	48	255	370	370
	JUN-SEP	-9.0	130	225	50	320	460	450

JEFFERSON RIVER BASIN Reservoir Storage (1000 AF) - End of May					JEFFERSON RIVER BASIN Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
LIMA	84.0	77.8	70.3	65.8	BEAVERHEAD	8	23	58
CLARK CANYON	255.6	155.5	171.1	161.2	RUBY	5	30	60
RUBY RIVER	38.8	37.5	38.6	37.9	BIGHOLE	8	34	73
					BOULDER	3	31	59
					JEFFERSON RIVER BASIN	19	28	64

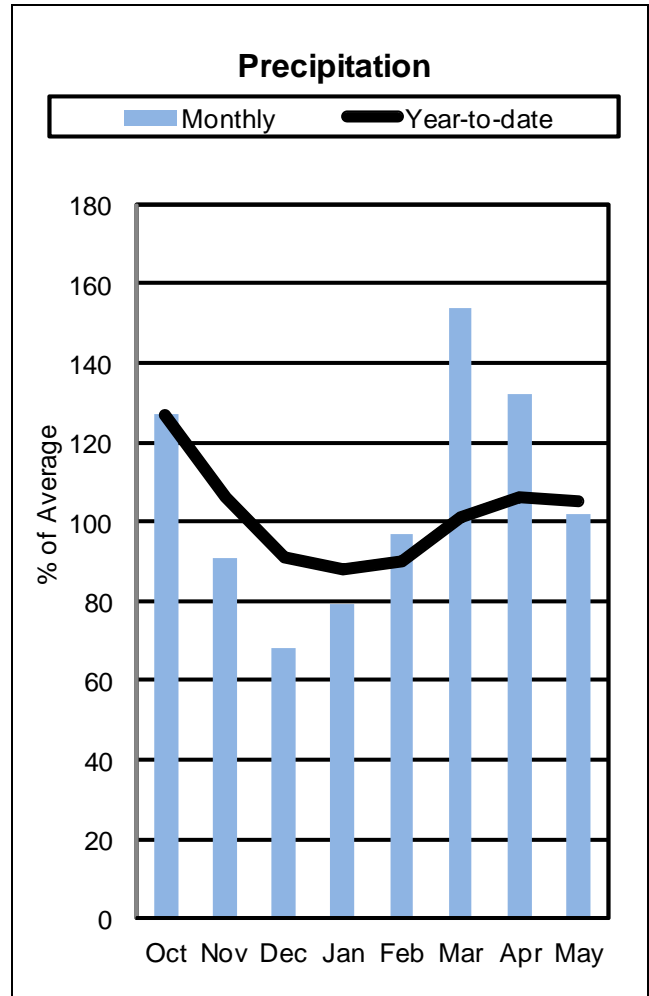
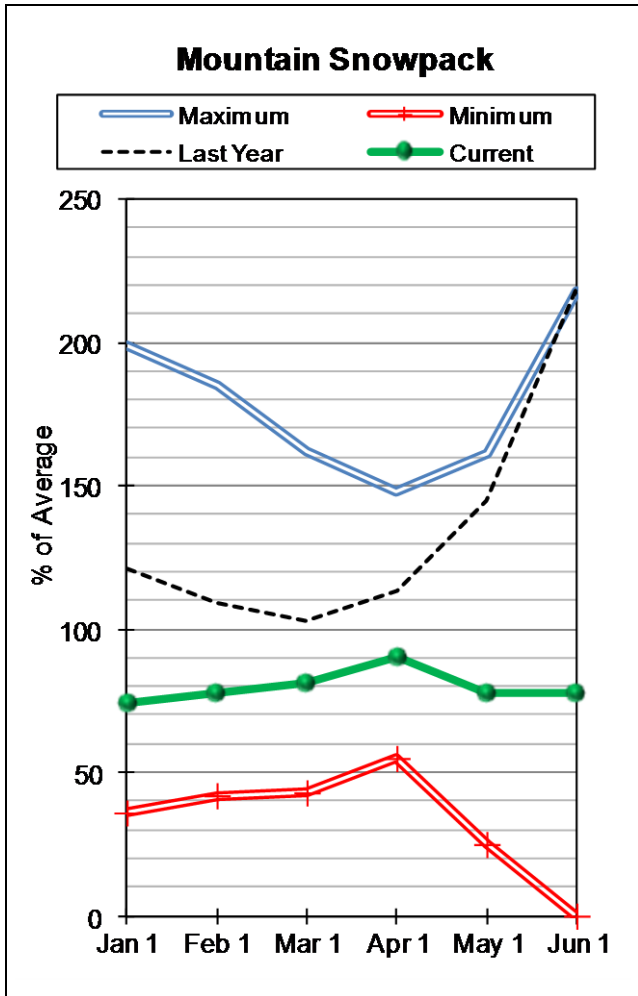
\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.



# Madison River Basin



Snowpack conditions in the Madison River Basin were well below average on June 1. Snow water content was 78 percent of average and 36 percent of last year.

Mountain and valley precipitation during May was 102 percent of average and 67 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 105 percent of average and 85 percent of last year.

Ennis Lake storage at the end of May was 98 percent of average and 107 percent of last year and Hebgen Lake storage was 116 percent of average and 123 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 90 percent.

Surface Water Supply Index (SWSI) was +1.4 for the Madison River.

MADISON RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>									
		90%		70%		50%		30%		10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)	(1000AF)		
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			

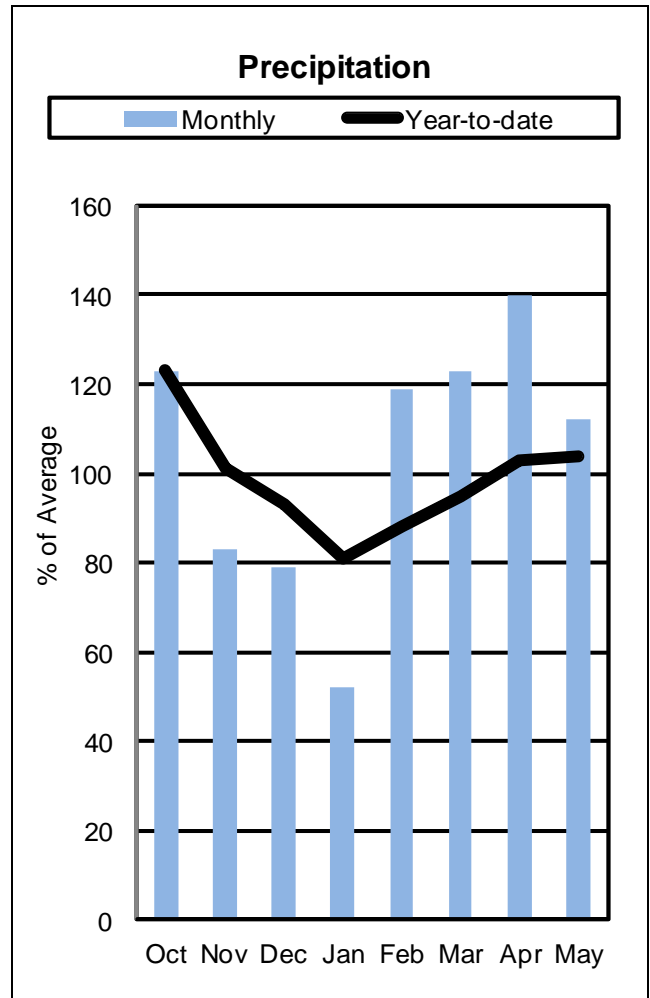
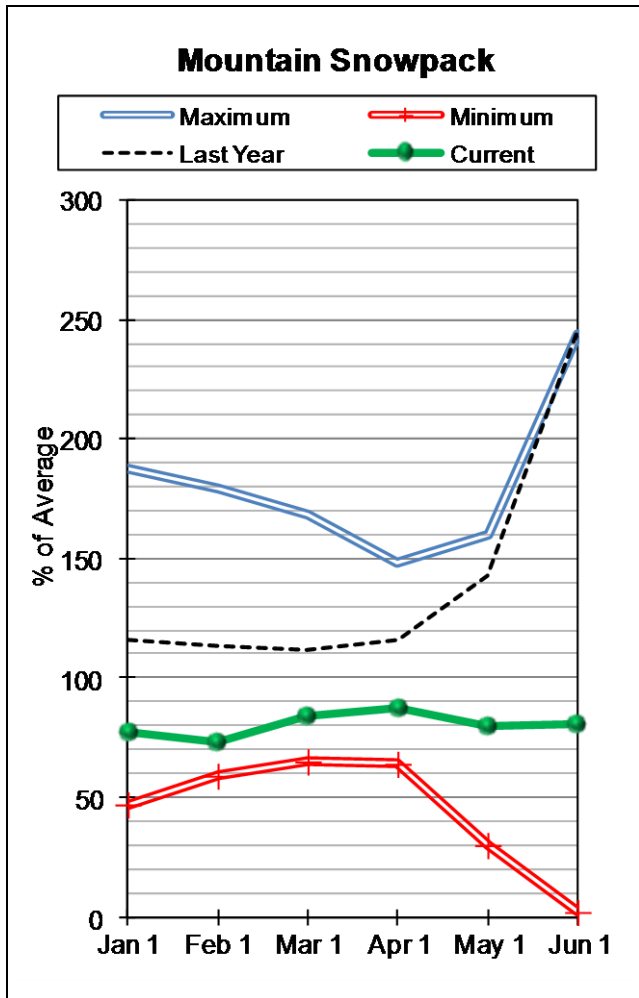
Reservoir	MADISON RIVER BASIN Reservoir Storage (1000 AF) - End of May				MADISON RIVER BASIN Watershed Snowpack Analysis - June 1, 2012			
	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ENNIS LAKE	41.0	34.7	32.5	35.3	MADISON abv HEBGEN LAKE	4	44	120
HEBGEN LAKE	377.5	366.1	297.0	314.7	MADISON blw HEBGEN LAKE	7	31	61
					MADISON RIVER BASIN	11	36	78

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

# Gallatin River Basin



Snowpack conditions in the Gallatin River Basin were below average on June 1. Snow water content was 81 percent of average and 33 percent of last year.

Mountain precipitation during May was 119 percent of average and 101 percent of last year. Valley precipitation during May was 70 percent of average and 81 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 104 percent of average and 87 percent of last year.

Middle Creek storage was 129 percent of average and 124 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 89 percent.

Surface Water Supply Index (SWSI) was -0.3 for the Gallatin River.

GALLATIN RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		===== Wetter =====>				
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
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	13.0	14.0	94	15.0	16.5	14.9
	JUN-SEP	13.9	15.8	17.1	95	18.4	20	18.0
Gallatin R at Logan	JUN-JUL	151	205	240	86	275	330	280
	JUN-SEP	188	260	305	85	350	420	360

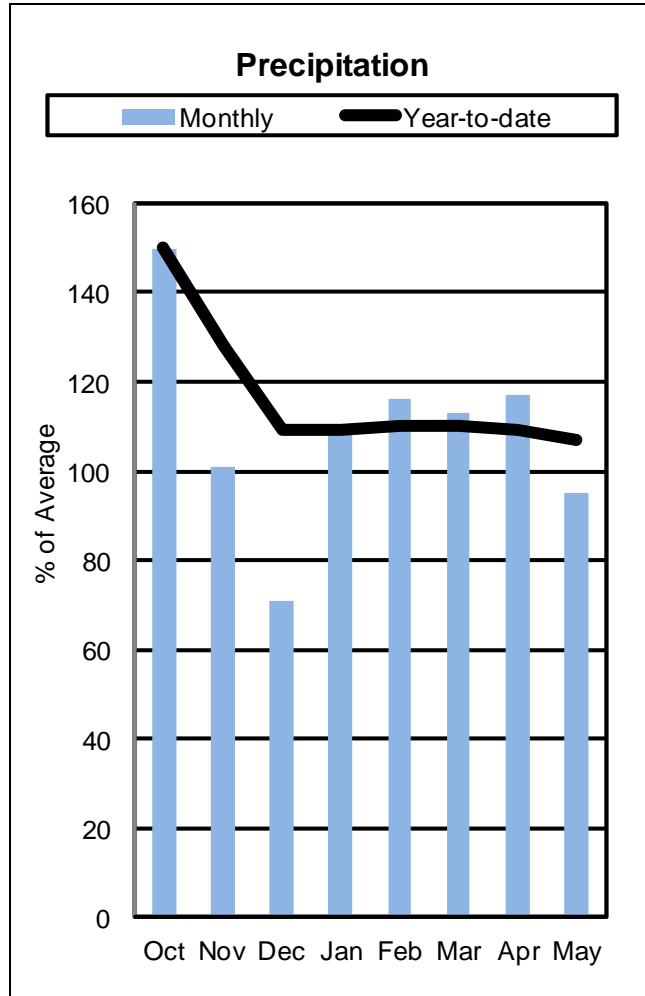
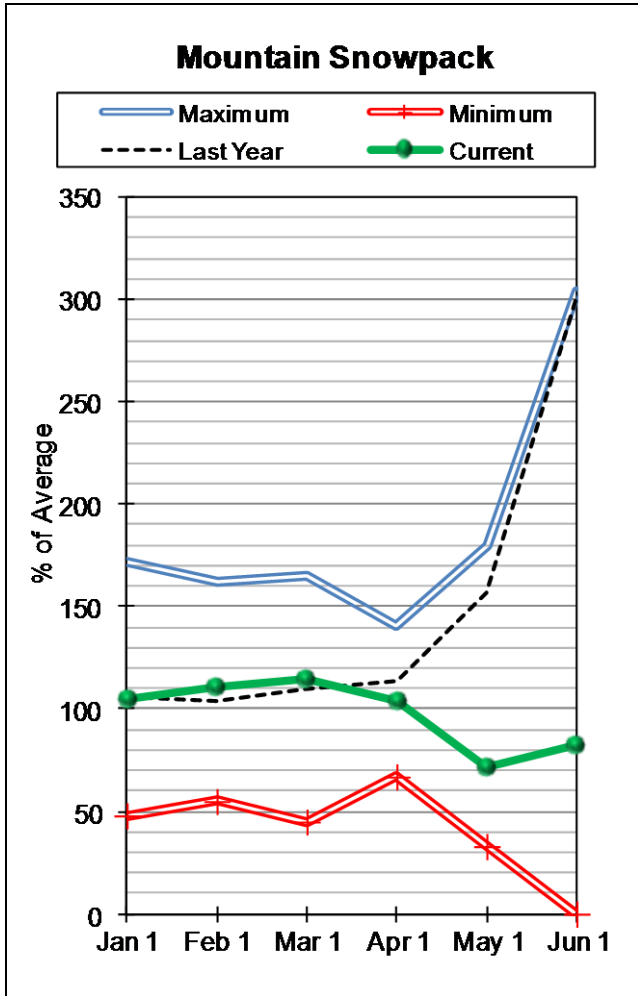
GALLATIN RIVER BASIN Reservoir Storage (1000 AF) - End of May					GALLATIN RIVER BASIN Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MIDDLE CREEK	10.2	9.8	7.9	7.6	UPPER GALLATIN	3	33	65
					HYALITE	2	43	95
					BRIDGER	2	23	169
					GALLATIN RIVER BASIN	7	33	81

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

# Missouri Mainstem River Basin



Snowpack conditions in the Headwaters Missouri Mainstem River Basin were below average on June 1. Snow water content was 82 percent of average and 27 percent of last year.

Mountain precipitation during May was 98 percent of average and 73 percent of last year. Valley precipitation during May was 93 percent of average and 40 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 107 percent of average and 76 percent of last year.

Canyon Ferry Lake storage was 108 percent of average and 128 percent of last year; Helena Valley storage was 88 percent of average and 77 percent of last year; Lake Helena storage was 76 percent of average and 101 percent of last year; Hauser & Helena storage was 119 percent of average and 100 percent of last year; Holter Lake storage was 102 percent of average and 99 percent of last year; and Fort Peck Lake storage was 100 percent of average and 84 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 78 percent.

Surface Water Supply Index (SWSI) was +0.2 in the Missouri River above Canyon Ferry; +0.3 in the Missouri River below Canyon Ferry; +0.4 in the Missouri River above Fort Peck; and +0.3 in the Missouri River below Fort Peck.

MISSOURI MAINSTEM RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		Drier		Wetter				
		90% (1000AF)	70% (1000AF)	50% (1000AF)	30% (1000AF)	10% (1000AF)	Chance Of Exceeding * (% AVG.)	
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

MISSOURI MAINSTEM RIVER BASIN  
Reservoir Storage (1000 AF) - End of May

MISSOURI MAINSTEM RIVER BASIN  
Watershed Snowpack Analysis - June 1, 2012

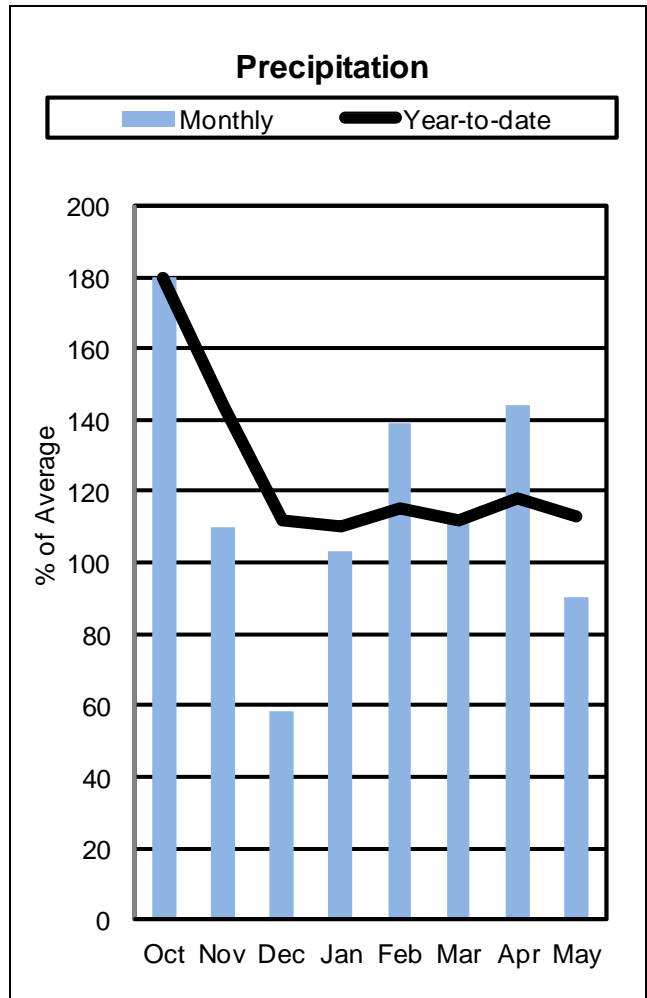
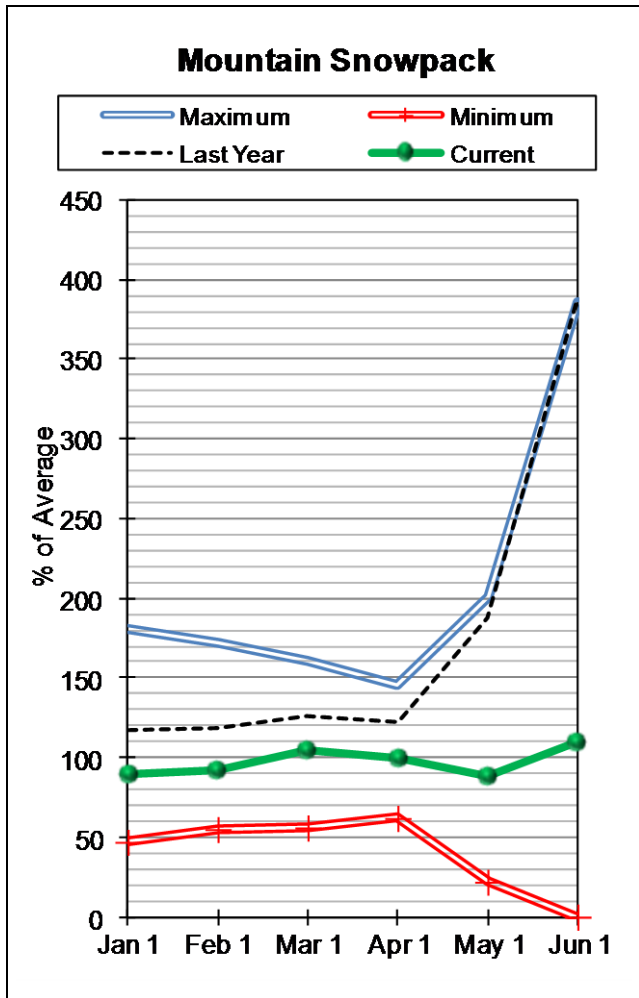
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CANYON FERRY LAKE	2043.0	1790.0	1403.0	1656.7	HEADWATERS MAINSTEM	5	27	82
HELENA VALLEY	9.2	6.8	8.8	7.7	SMITH-JUDITH-MUSSELSHELL	9	28	109
LAKE HELENA	12.7	11.0	10.9	14.4	SUN-TETON-MARIAS	5	36	118
HAUSER & HELENA	74.6	74.3	74.0	62.6	MAINSTEM ab FT PECK RES	18	30	106
HOLTER LAKE	81.9	81.0	81.8	79.8	MILK RIVER BASIN	3	0	533
FORT PECK LAKE	18910.0	15560.0	18426.0	15495.0	MISSOURI MAINSTEM BASIN	21	32	109

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

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# Smith-Judith-Musselshell River Basins



Snowpack conditions in the Smith-Judith-Musselshell River Basins were above average June 1. Snow water content was 109 percent of average and 28 percent of last year. Snow water content in the Smith River Basin was 123 percent of average and 34 percent of last year; the Judith River Basin was 117 percent of average and 31 percent of last year; and the Musselshell River was 17 percent of last year.

Mountain and valley precipitation during May in the Smith-Belts was 103 percent of average and 65 percent of last year; in the Judith was 88 percent of average and 36 percent of last year; and in the Musselshell was 71 percent of average and 27 percent of last year. Mountain and valley water year precipitation for the greater basin, beginning October 1, 2011, was 113 percent of average and 75 percent of last year.

Smith River storage was 114 percent of average and 100 percent of last year; Ackley storage was 124 percent of average and 107 percent of last year; Bair storage was 127 percent of average and 100 percent of last year; Martinsdale storage was 113 percent of average and 103 percent of last year; and Deadman's Basin was 122 percent of average and 92 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 94 percent.

Surface Water Supply Index (SWSI) was +2.8 in the Smith River, +1.6 in the Upper Judith River, and +0.9 in the Musselshell River.



SMITH-JUDITH-MUSSELSHELL RIVER BASINS  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
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	1.3	2.4	104	3.6	5.2	2.3
	JUN-SEP	0.9	2.3	3.3	103	4.3	5.7	3.2
SF Musselshell R ab Martinsdale	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	0.0	14.2	32	87	50	76	37
	JUN-SEP	0.0	16.1	34	83	52	78	41
Musselshell R nr Roundup (2)	JUN-JUL	0.0	17.8	35	75	52	77	47
	JUN-SEP	0.0	17.8	35	70	52	77	50

SMITH-JUDITH-MUSSELSHELL RIVER BASINS  
Reservoir Storage (1000 AF) - End of May

SMITH-JUDITH-MUSSELSHELL RIVER BASINS  
Watershed Snowpack Analysis - June 1, 2012

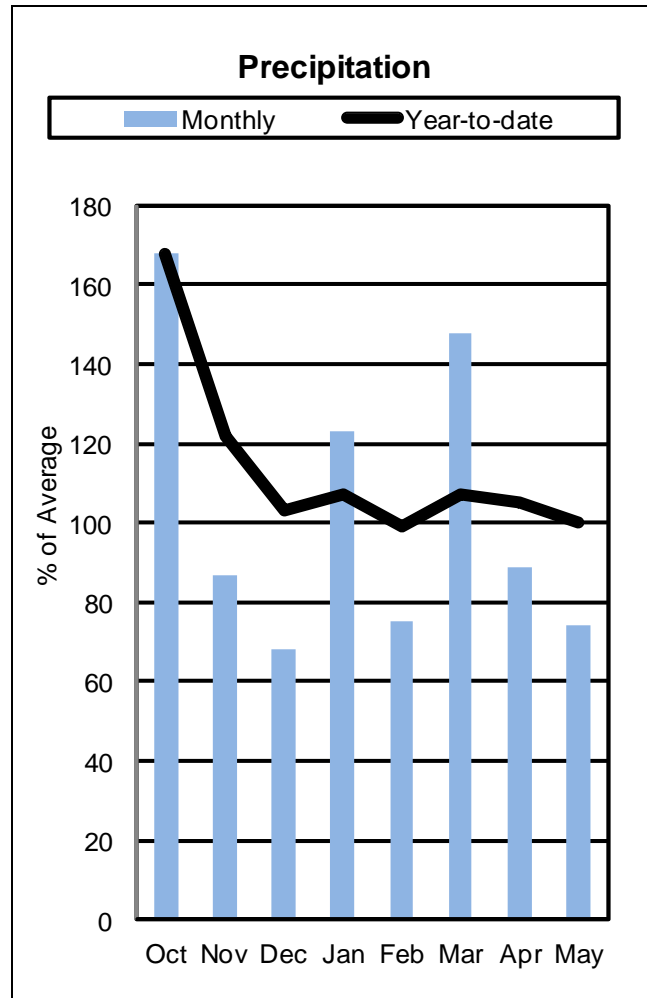
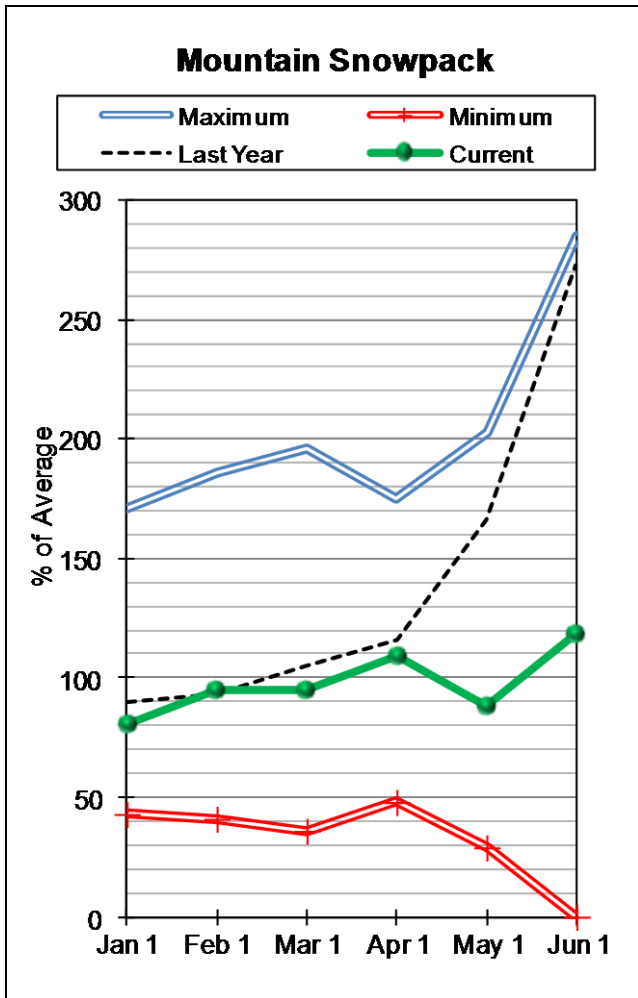
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
SMITH RIVER	10.6	11.6	11.6	10.2	SMITH	6	34	123
ACKLEY LAKE	7.0	6.1	5.7	4.9	HIGHWOOD	0	0	0
BAIR	7.0	7.5	7.5	5.9	JUDITH	4	31	117
MARTINSDALE	23.1	20.5	19.9	18.2	MUSSELSHELL	2	17	0
DEADMAN'S BASIN	72.2	70.4	76.2	57.6	SMITH-JUDITH-MUSSELSHELL	9	28	109

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
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- (3) - Median value used in place of average.

# Sun-Teton-Marias River Basins



Snowpack conditions in the Sun-Teton-Marias River Basins were above average on June 1. Snow water content was 118 percent of average and 36 percent of last year. Snow water content in the Sun River Basin was 79 percent of average and 22 percent of last year; the Teton River Basin was 79 percent of average and 21 percent of last year; and the Marias River Basin was 136 percent of average and 46 percent of last year.

Mountain and valley precipitation during May in the Sun was 97 percent of average and 59 percent of last year; in the Teton was 60 percent of average and 44 percent of last year; and in the Marias was 76 percent of average and 60 percent of last year. Mountain and valley water year precipitation for the greater basin, beginning October 1, 2011, was 100 percent of average and 83 percent of last year.

Gibson storage was 103 percent of average and 124 percent of last year; Pishkun storage was 103 percent of average and 101 percent of last year; Willow Creek storage was 111 percent of average and 99 percent of last year; Lower Two Medicine Lake storage was 102 percent of average and 158 percent of last year; Swift storage was 84 percent of average and 141 percent of last year; Lake Frances storage was 101 percent of average and 84 percent of last year; and Lake Elwell (Tiber) storage was 107 percent of average and 91 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 99 percent.

Surface Water Supply Index (SWSI) was +1.0 in the Sun River; +0.1 in the Teton River; +0.1 in the Birch/Dupuyer Creeks; +0.2 in the Marias above Tiber Reservoir.

SUN-TETON-MARIAS RIVER BASINS  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		90%		50%			10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)		(1000AF)	(1000AF)
Gibson Reservoir Inflow (2)	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	4.0	7.0	108	10.0	14.6	6.5
	JUN-SEP	0.8	5.4	9.0	108	12.6	18.0	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	1.0	10.4	23	85	36	54	27
	JUN-SEP	1.0	13.9	29	83	44	66	35

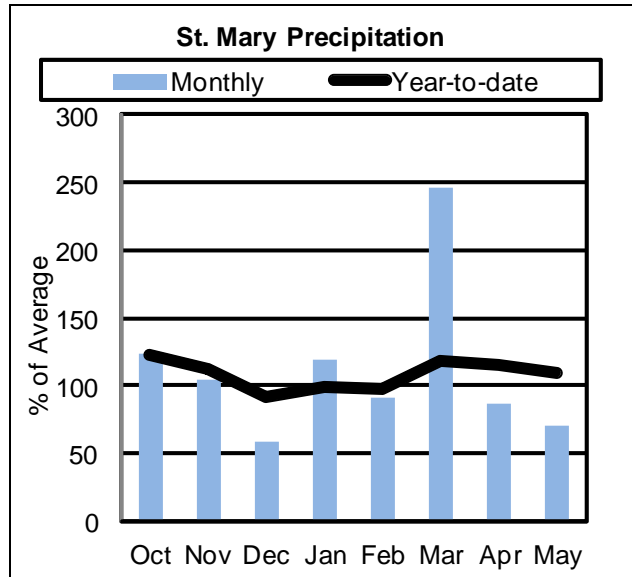
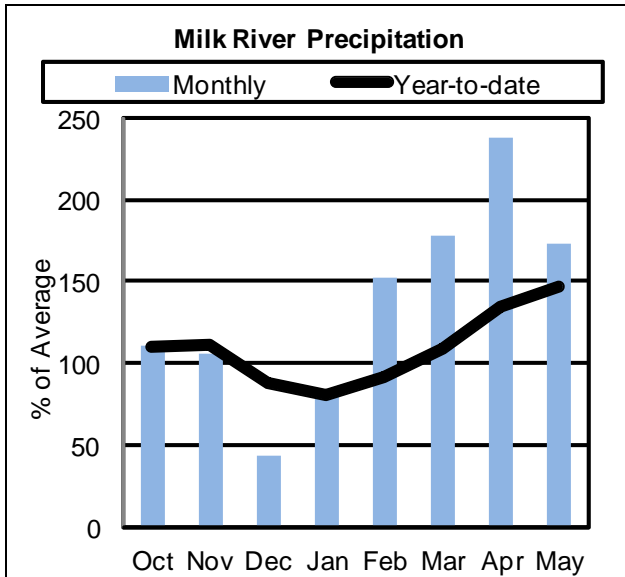
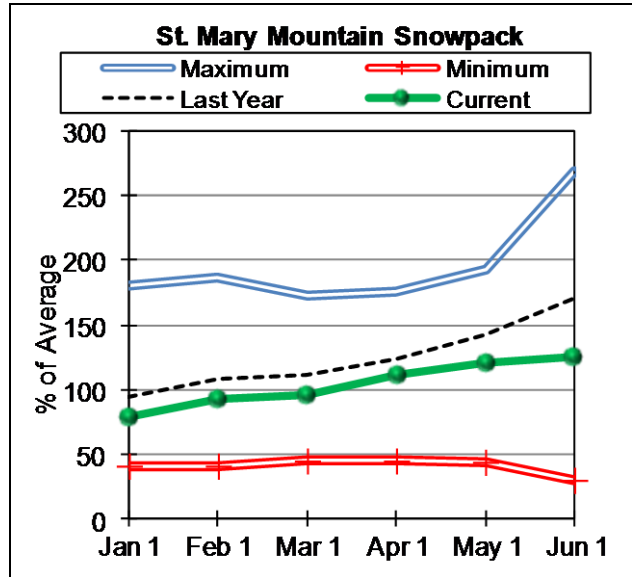
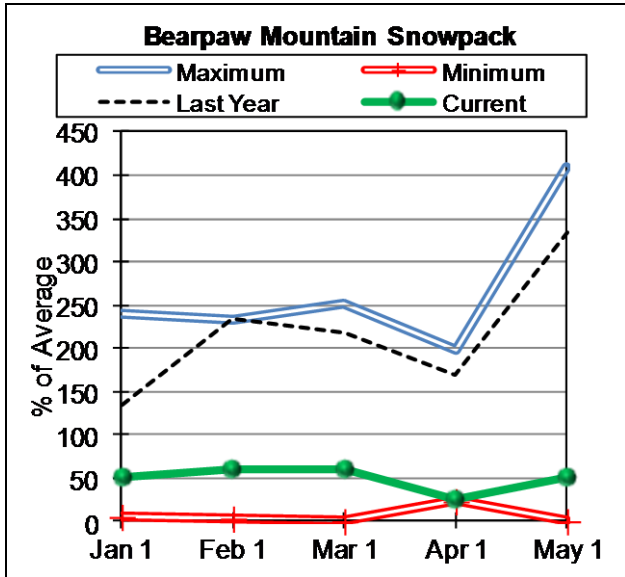
SUN-TETON-MARIAS RIVER BASINS Reservoir Storage (1000 AF) - End of May					SUN-TETON-MARIAS RIVER BASINS Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GIBSON	99.1	92.2	74.6	89.2	SUN	2	22	79
PISHKUN	32.0	31.2	30.8	30.3	TETON	3	21	79
WILLOW CREEK	32.2	31.1	31.5	28.0	MARIAS	2	46	136
LOWER TWO MEDICINE LAKE	11.9	12.5	7.9	12.3	SUN-TETON-MARIAS	5	36	118
FOUR HORNS LAKE	19.2	11.2	11.8	12.7				
SWIFT	30.0	19.7	14.0	23.5				
LAKE FRANCES	112.0	85.1	100.8	83.9				
LAKE ELWELL (TIBER)	1347.0	786.3	868.8	737.7				

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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- (3) - Median value used in place of average.

# St. Mary and Milk River Basins



Snowpack in the Saint Mary River Basin was well above average on June 1. Snow water content was 126 percent of average and 74 percent of last year. The Milk River Basin (Bearpaw Mountains) had little remaining snow as is typically the case on June 1.

Mountain and valley precipitation in the St. Mary River Basin during May was 70 percent of average and 71 percent of last year; and in the Milk River Basin during May was 173 percent of average and 93 percent of last year. Mountain and valley water year precipitation for both basins, beginning October 1, 2011, was 127 percent of average and 95 percent of last year.

Assuming average precipitation, June through July streamflows in the St. Mary are forecast to average 116 percent and the Milk to average 104 percent.

Lake Sherburne storage was 146 percent of average and 170 percent of last year; Fresno storage was 116 percent of average and 93 percent of last year; and Nelson storage was 145 percent of average and 100 percent of last year.

Surface Water Supply Index (SWSI) was +2.4 for the St. Mary and +1.2 for the Milk River.

ST. MARY and MILK RIVER BASINS  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Lake Sherburne Inflow (2)	JUN-JUL	55	63	68	112	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 Int'l 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 (3)	JUN-JUL	1.8	6.3	9.3	98	12.4	16.9	9.5
	JUN-SEP	1.1	7.1	11.2	99	15.2	21	11.3
Milk R at Eastern Crossing (2,3)	JUN-JUL	0.5	7.4	21	108	35	55	19.5
	JUN-SEP	3.0	13.2	28	97	43	65	29
Beaver Ck nr Havre	JUN-JUL	0.1	0.8	4.2	105	7.6	12.5	4.0

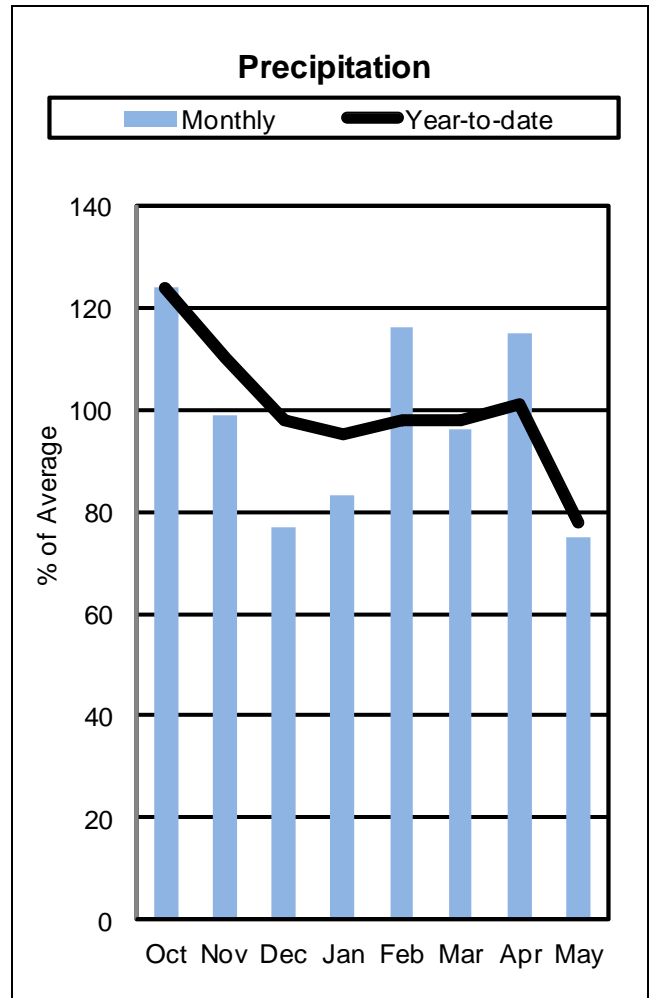
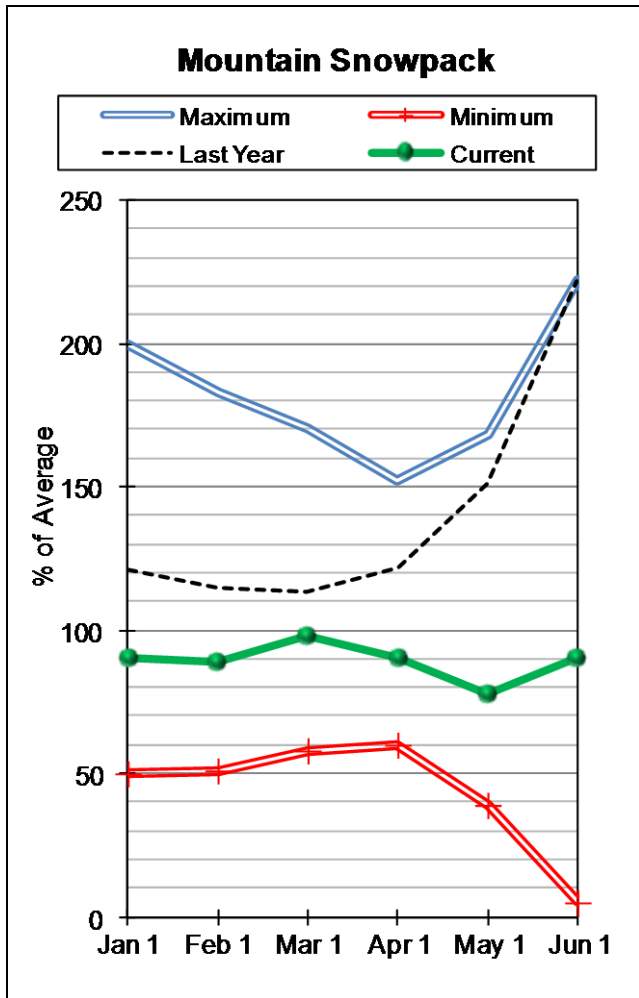
ST. MARY and MILK RIVER BASINS Reservoir Storage (1000 AF) - End of May					ST. MARY and MILK RIVER BASINS Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
LAKE SHERBURNE	64.3	50.5	29.7	34.6	ST. MARY	2	74	126
FRESNO	127.0	96.9	103.7	83.5	BEARPAW MOUNTAINS	3	0	533
BEAVER CREEK		NO REPORT			CYPRESS HILLS, CANADA	0	0	0
NELSON	66.8	58.9	58.9	40.6	MILK RIVER BASIN	3	0	533
					ST. MARY & MILK BASINS	5	80	133

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

# Upper Yellowstone River Basin



Snowpack conditions in the Upper Yellowstone River Basin were below average on June 1. Snow water content was 90 percent of average and 40 percent of last year.

Mountain precipitation during May was 107 percent of average and 68 percent of last year. Valley precipitation during May was 74 percent of average and 25 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 100 percent of average and 74 percent of last year.

Mystic Lake storage was 81 percent of average and 1150 percent of last year and Cooney storage was 95 percent of average and 72 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 96 percent.

Surface Water Supply Index (SWSI) was +1.0 in the Yellowstone River above Livingston; +0.1 in the Shields River; -1.0 in the Boulder River; -0.4 in the Stillwater River; -3.4 in the Rock/Red Lodge Creeks; +2.2 in the Clarks Fork River; and +0.8 in the Yellowstone River above Bighorn River.

UPPER YELLOWSTONE RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>				30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
		90%		50%				
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)			
Yellowstone R at Yellowstone Lake	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	14.0	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
West Rosebud Ck nr Roscoe (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 (2) (2)	JUN-JUL	2.9	9.1	13.3	58	17.5	24	23
Cooney Reservoir Inflow (2)	JUN-SEP	8.9	16.4	22	65	27	34	34
Yellowstone R at Billings (2)	JUN-JUL	1760	2130	2380	100	2630	3000	2380
	JUN-SEP	2560	2670	2990	100	3310	3420	2990

UPPER YELLOWSTONE RIVER BASIN Reservoir Storage (1000 AF) - End of May					UPPER YELLOWSTONE RIVER BASIN Watershed Snowpack Analysis - June 1, 2012			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MYSTIC LAKE	21.0	4.6	0.4	5.7	YELLOWSTONE ab LIVINGSTON	11	41	91
COONEY	27.4	20.5	28.3	21.5	SHIELDS	4	30	113
					BOULDER-STILLWATER	3	36	76
					RED LODGE-ROCK CREEK	2	7	16
					CLARK'S FORK	7	59	109
					UPPER YELLOWSTONE BASIN	23	40	90

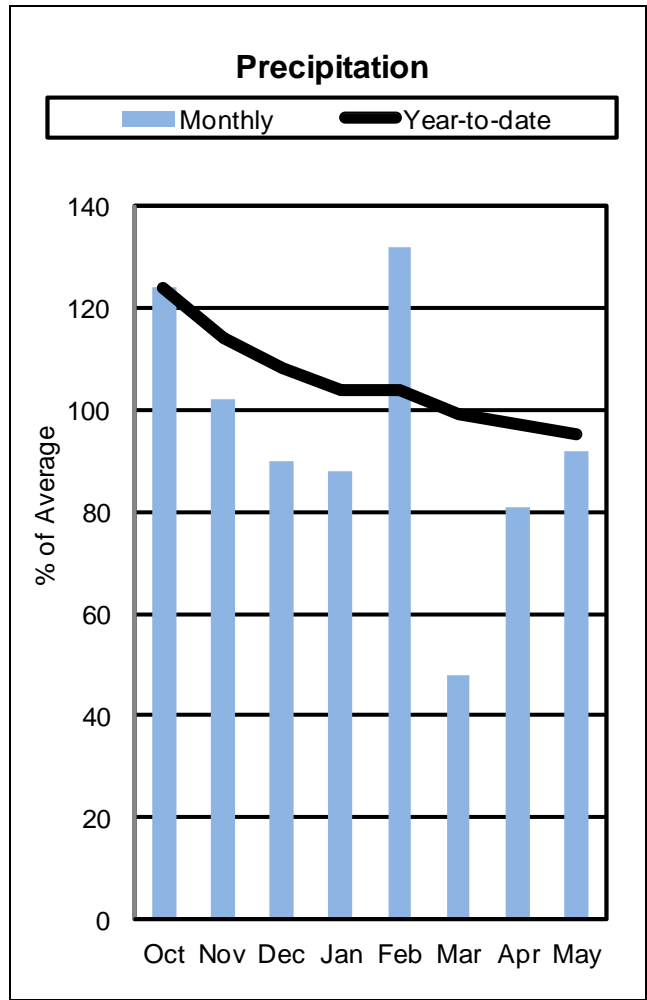
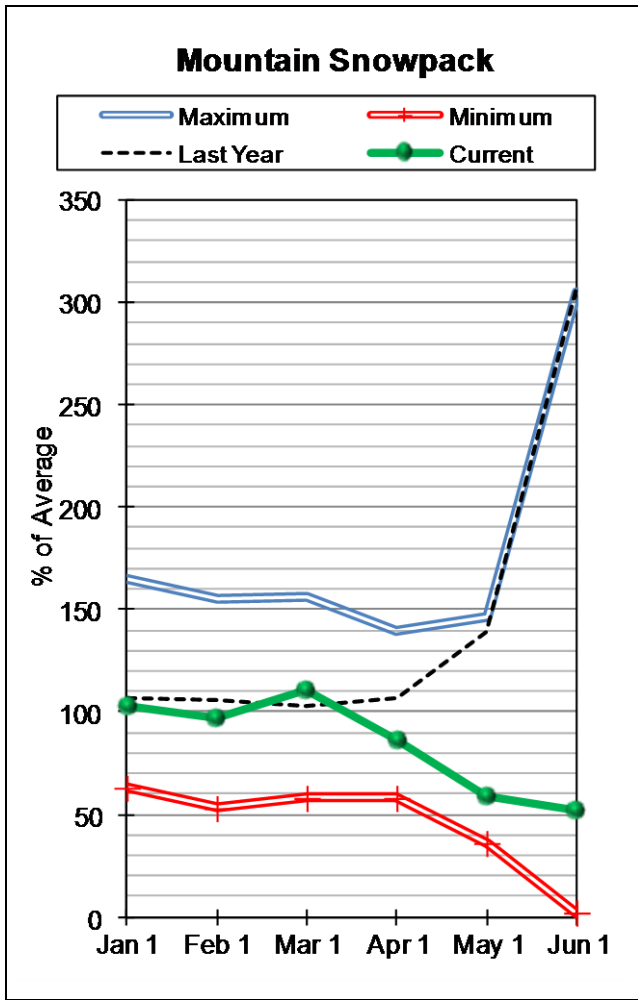
\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.



# Lower Yellowstone River Basin



Snowpack conditions in the Lower Yellowstone River Basin were well below average on June 1. Snow water content was 52 percent of average and 16 percent of last year.

Mountain and valley precipitation during May was 92 percent of average and 35 percent of last year. Mountain and valley water year precipitation, beginning October 1, 2011, was 95 percent of average and 64 percent of last year.

Bighorn Lake storage was 102 percent of average and 92 percent of last year and Tongue River storage was 169 percent of average and 100 percent of last year.

Assuming average precipitation, June through July streamflows are forecast to average 74 percent.

Surface Water Supply Index (SWSI) was -1.4 in the Bighorn River below Bighorn Lake; -0.8 in the Little Bighorn River; -0.2 in the Yellowstone River below Bighorn River; -1.0 in the Tongue River; and -0.9 in the Powder River.

LOWER YELLOWSTONE RIVER BASIN  
Streamflow Forecasts - June 1, 2012

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
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	17.0	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 Moorhead	JUN-JUL	19.0	51	73	70	95	127	105
	JUN-SEP	26	65	92	72	119	158	128
Powder R nr Locate	JUN-JUL	9.0	52	81	70	110	153	116
	JUN-SEP	10.0	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

LOWER YELLOWSTONE RIVER BASIN  
Reservoir Storage (1000 AF) - End of May

LOWER YELLOWSTONE RIVER BASIN  
Watershed Snowpack Analysis - June 1, 2012

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BIGHORN LAKE	1356.0	883.1	956.3	867.1	WIND RIVER (Wyoming)	12	8	26
TONGUE RIVER	79.1	81.2	81.6	48.0	SHOSHONE RIVER (Wyoming)	6	30	59
					BIGHORN RIVER (Wyoming)	16	26	69
					LITTLE BIGHORN (Wyoming)	2	30	87
					TONGUE RIVER (Wyoming)	7	15	79
					POWDER RIVER (Wyoming)	6	0	0
					LOWER YELLOWSTONE BASIN (	32	16	52

\* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

*Issued by: Released by:*

**Dave White**  
**Chief**  
**Natural Resources Conservation Service**  
**U.S. Department of Agriculture**

**Joyce Swartzendruber**  
**State Conservationist**  
**Natural Resources Conservation Service**  
**Bozeman, Montana**



Federal Building, Room 443  
10 E. Babcock  
Bozeman, MT 59715



**Montana  
Water Supply Outlook  
Report**  
Natural Resources Conservation Service

