

## Blackfoot Water Supply Report March 14, 2014

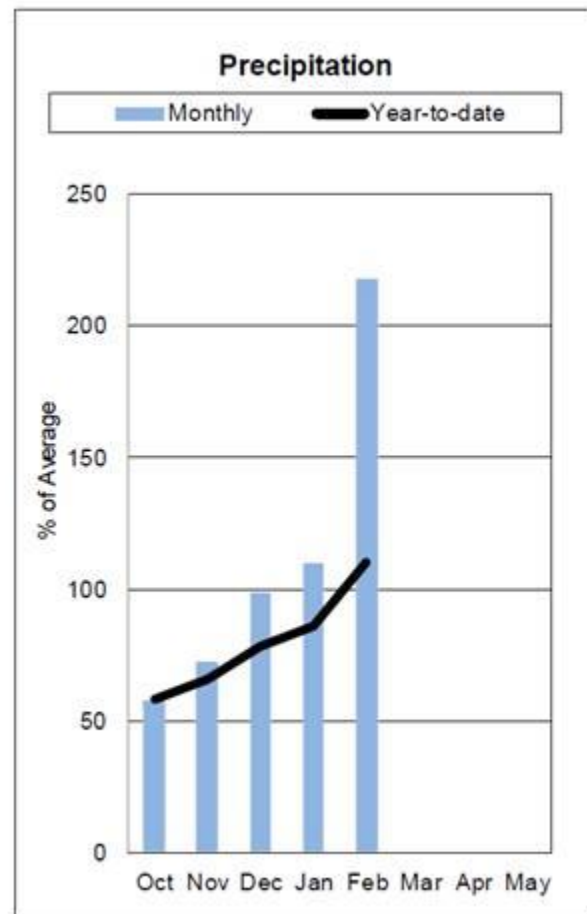
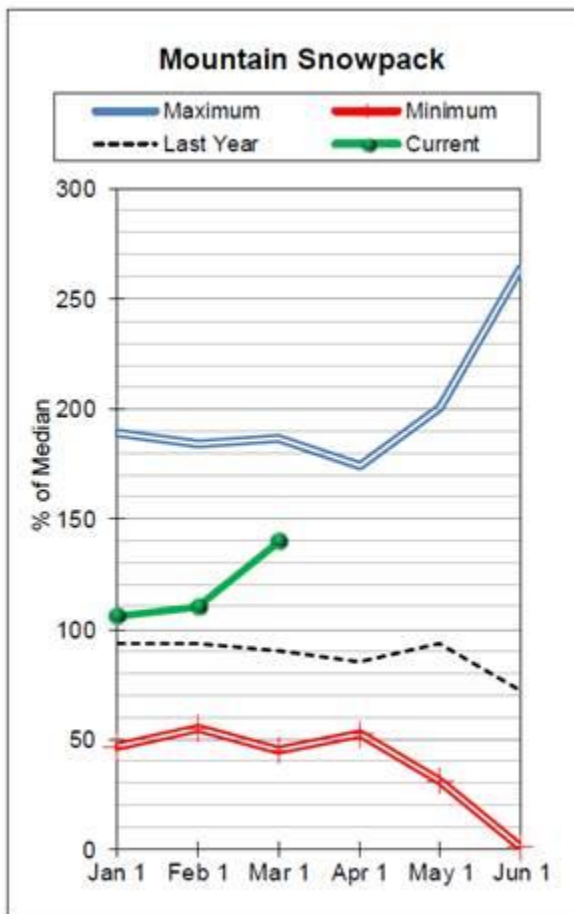
**Montana Water Supply Outlook Report as of March 1, 2014 (from NRCS):**

[http://www.nrcs.usda.gov/wps/portal/nrcs/detail/mt/snow/?cid=nrcs144p2\\_057799](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/mt/snow/?cid=nrcs144p2_057799)

### Overview

Stellar is a perfect word to describe February’s snowpack, precipitation accumulation, and the streamflow forecasts for March 1. Statewide snowpack increased 20 percent according to SNOTEL and snow course observation sites. Precipitation saw nearly the same increments. The state as a whole averaged 177 percent of the February normal precipitation, a big improvement above January, which was near normal. A whopping six of the 14 major basins in the state received better than 200 percent of normal precipitation this month. With the three wettest months of the year yet to come, February may have come as a blessing if insufficient precipitation plays out in the next three months as has been the case in some basins in Southwest Montana over the last two years.

### Upper Clark Fork River Basin



### Snowpack Analysis

Most of the moisture that fell during February seemed to be squarely aimed at the Upper Clark Fork and Bitterroot River basins. February saw a 30 percent increase in the basin total, rising from 110 percent on February 1 to 140 percent on March 1. Low elevations saw substantial snowfall mixed with some rain leaving areas with substantial valley snowpacks ending the month. Lubrecht Flume SNOTEL, a lower elevation site in the Blackfoot River basin, saw over 500 percent of the normal February snowfall and is currently 172 percent of average.

While low elevations do not typically dominate the volume of snow melt driven flows in the river systems, it should be noted that this low elevation and valley snowcover will certainly play a part in the early flows experienced in the creeks and rivers as snowmelt begins. The Upper Clark Fork River Basin on March 1 ranked 3rd for snowpack totals since 1981, and is 155 percent of last year at this time.

<b>Watershed Snowpack Analysis March 1, 2014</b>	# of Sites	% Median	Last Year % Median
CLARK FORK ab FLINT CREEK	12	142%	87%
FLINT CREEK	12	142%	87%
ROCK CREEK	4	138%	97%
CLARK FORK ab BLACKFOOT	19	143%	90%
<b>BLACKFOOT</b>	<b>19</b>	<b>143%</b>	<b>90%</b>
UPPER CLARK FORK RIVER BASIN	29	140%	88%

### Reservoir Storage

Reservoir storage is at or slightly above average for March 1, with the exception being Nevada Creek Reservoir, which is 73 percent of average.

<b>Reservoir Storage ( End of February, 2014 )</b>	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
NEVADA CREEK RES	4.1	5.2	5.6	12.6
Basinwide Total	41.8	44.4	43.7	64.1
# of reservoirs	3	4	4	4

**Streamflow Forecast**

Streamflow prospects are well above average for the April-July period with a basin average of 147 percent. This is an increase of 39 percent from February 1.

<b>Upper Clark Fork River Basin Streamflow Forecasts</b>								
<b>- March 1, 2014</b>								
Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast								
	Forecast Period	90% (KAF)	70% (KAF)	<b>50% (KAF)</b>	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
<b>Blackfoot R nr Bonner</b>								
	APR-JUL	790	905	<b>985</b>	137%	1060	1180	720
	APR-SEP	870	995	<b>1080</b>	135%	1160	1290	800
<b>Clark Fork R ab Missoula</b>								
	APR-JUL	1400	1670	<b>1850</b>	148%	2030	2300	1250
	APR-SEP							1420
1) 90% and 10% exceedance probabilities are actually 95% and 5%								
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions								
3) Median value used in place of average								

**Snow Water Equivalent**  
**March 7, 2014**

Montana SNOTEL Snow/Precipitation Update Report

\*\*Provisional data, subject to revision\*\*

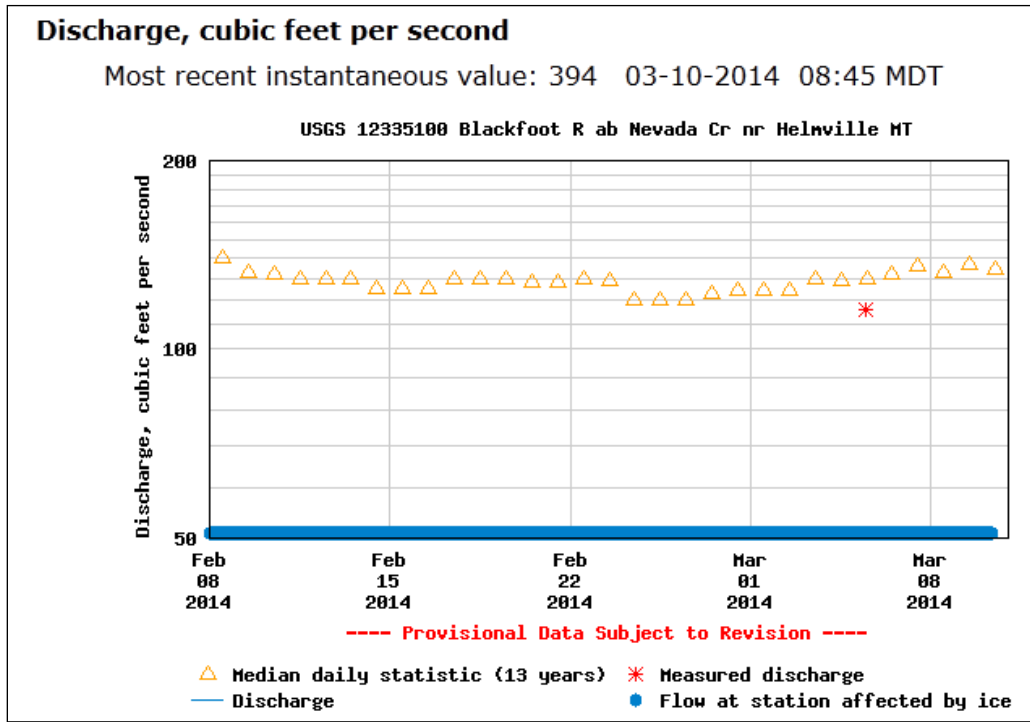
Data based on the first reading of the day for Friday, March 07, 2014

(Sites relevant to the Blackfoot in **BOLD**)

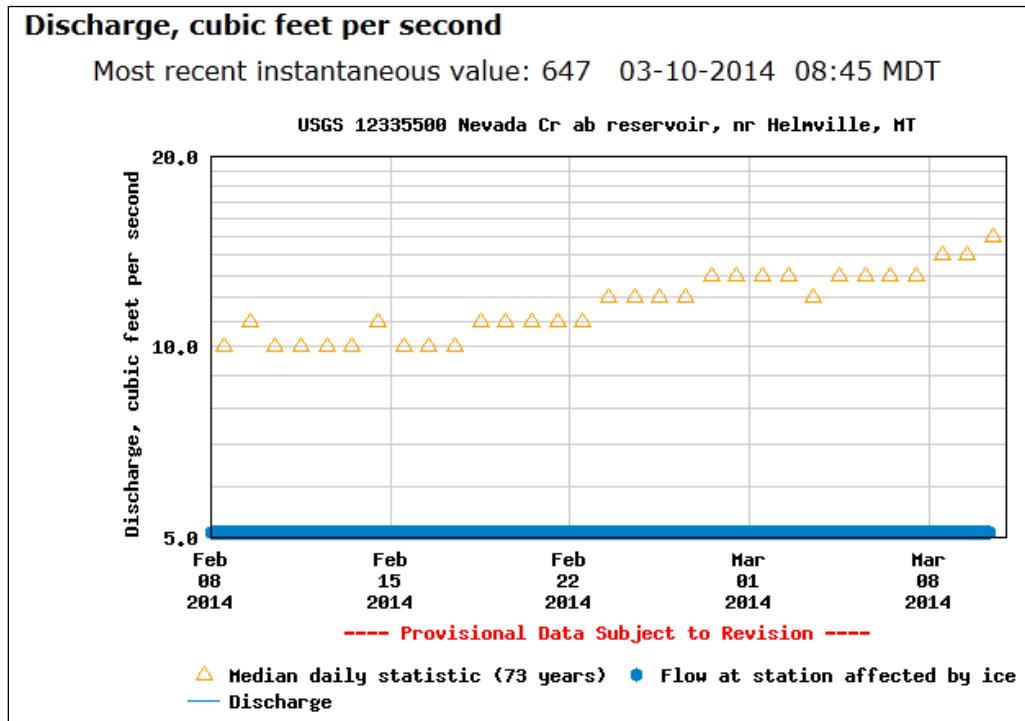
Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
<b>UPPER CLARK FORK RIVER BASIN</b>							
BARKER LAKES	8250	16.7	11.0	152	13.6	12.6	108
BASIN CREEK	7180	11.1	5.8	191	9.8	7.3	134
BLACK PINE	7210	14.8	8.6	172	14.5	10.9	133
COMBINATION	5600	7.8	4.2	186	9.7	7.7	126
<b>COPPER BOTTOM</b>	<b>5200</b>	<b>9.5</b>	<b>N/A</b>	<b>*</b>	<b>16.7</b>	<b>13.7</b>	<b>122</b>
<b>COPPER CAMP</b>	<b>6950</b>	<b>43.2</b>	<b>N/A</b>	<b>*</b>	<b>23.0</b>	<b>27.0</b>	<b>85</b>
<b>LUBRECHT FLUME</b>	<b>4680</b>	<b>8.2</b>	<b>4.8</b>	<b>171</b>	<b>10.5</b>	<b>8.6</b>	<b>122</b>
<b>NEVADA RIDGE</b>	<b>7020</b>	<b>17.2</b>	<b>11.8<sub>C</sub></b>	<b>146</b>	<b>15.7</b>	<b>13.4<sub>C</sub></b>	<b>117</b>
<b>N FK ELK CREEK</b>	<b>6250</b>	<b>14.3</b>	<b>9.3</b>	<b>154</b>	<b>13.1</b>	<b>11.3</b>	<b>116</b>
<b>NORTH FORK JOCKO</b>	<b>6330</b>	<b>42.3</b>	<b>34.8</b>	<b>122</b>	<b>43.0</b>	<b>41.0</b>	<b>105</b>
PETERSON MEADOWS	7200	12.5	7.5	167	12.6	9.1 <sub>C</sub>	138
ROCKER PEAK	8000	17.4	10.4	167	14.8	10.9	136
SKALKAHO SUMMIT	7250	26.5	18.2	146	24.1	18.9	128
<b>STUART MOUNTAIN</b>	<b>7400</b>	<b>33.1</b>	<b>26.3<sub>C</sub></b>	<b>126</b>	<b>30.3</b>	<b>26.4<sub>C</sub></b>	<b>115</b>
WARM SPRINGS	7800	24.0	15.7	153	22.2	18.2	122
<b>Basin Index (%)</b>		<b>146</b>			<b>115</b>		

# March 10, 2014 USGS Real Time Flow Conditions

## Blackfoot Above Nevada Creek: **Ice affected data**



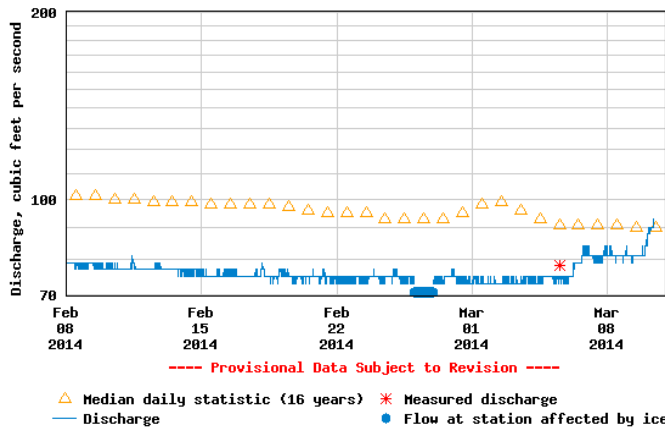
## Nevada Creek: **Ice affected data**



## North Fork Blackfoot

Most recent instantaneous value: 90 03-10-2014 09:00 MDT

USGS 12338300 NF Blackfoot R ab Dry Gulch nr Ovando MT



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Daily discharge, cubic feet per second -- statistics for Mar 10 based on 16 years of record [more](#)

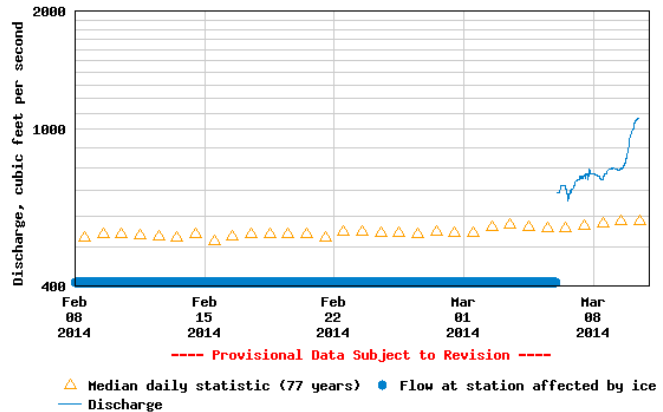
Min (2001)	25th percentile	Most Recent Instantaneous Value Mar 10	Median	Mean	75th percentile	Max (2005)
73	82	90	90.	96	110.	149

## Blackfoot River at Bonner Ice affected data

Discharge, cubic feet per second

Most recent instantaneous value: 1,070 03-10-2014 09:45 MDT

USGS 12340000 Blackfoot River near Bonner MT



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Daily discharge, cubic feet per second -- statistics for Mar 10 based on 79 years of record [more](#)

Min (1988)	25th percentile	Median	Mean	75th percentile	Most Recent Instantaneous Value Mar 10	Max (1986)
403	500.	585	665	745	1070	2870

# One-Month Outlook

## Revised OFFICIAL Forecasts

### March 2014

From  
**National Weather Service Climate Prediction Center**  
<http://www.cpc.ncep.noaa.gov/products/forecasts/>

Equal chances for warmer or cooler temperatures

Equal chances for dryer or wetter conditions

