

# Blackfoot Water Supply Report

## February 7, 2020

Montana Water Supply Report as of February 1<sup>st</sup>, 2020 (from NRCS):

<https://www.nrcs.usda.gov/wps/portal/nrcs/mt/snow/waterproducts/basin/>

### Overview

The mountain snowpack across the state of Montana made vast improvements during January, with many SNOTEL sites in northwest Montana reporting the highest or second-highest January totals on record for monthly snowfall. The amount of water added to the snowpack in some locations west of the Divide was staggering and incredibly well-timed.

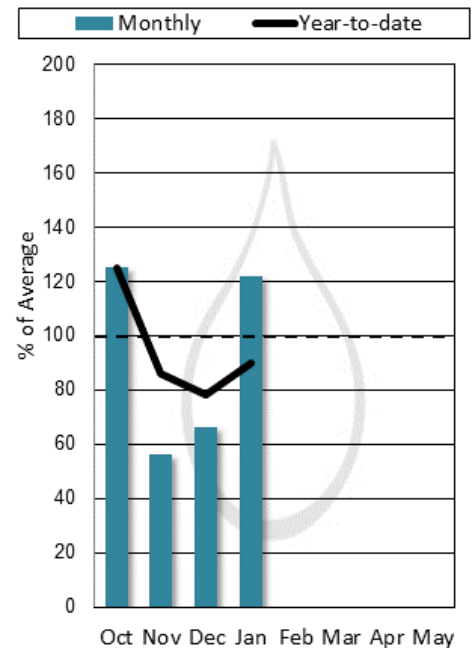
At many locations west of the Divide, the snowpack has more than doubled since the January 1st report, helping snowpack in the northwest river basins to recover from well below normal to near or above normal on February 1st.

While the bulk of the moisture was focused on northwest Montana, many other mountain locations east of the Divide would make notable gains in snowpack during the month. The Jefferson and Madison River basins in southwest Montana improved from below normal at the beginning of the month to near normal at this time, with the most significant gains made in the West Yellowstone area in the headwaters of the Madison River.

As we approach the middle of winter on February 5th, snowfall patterns historically begin to change across the state of Montana. Statistically, February is usually a month of transition and doesn't favor one side of the Divide over the other. Compared to other months, February typically yields some of the lowest snow totals of the winter and spring. However, as last year taught us when the term "Februburied" was coined, it can also be a big month given a favorable atmospheric setup. For now, a desirable atmospheric pattern looks to be in place during the first week of the month.

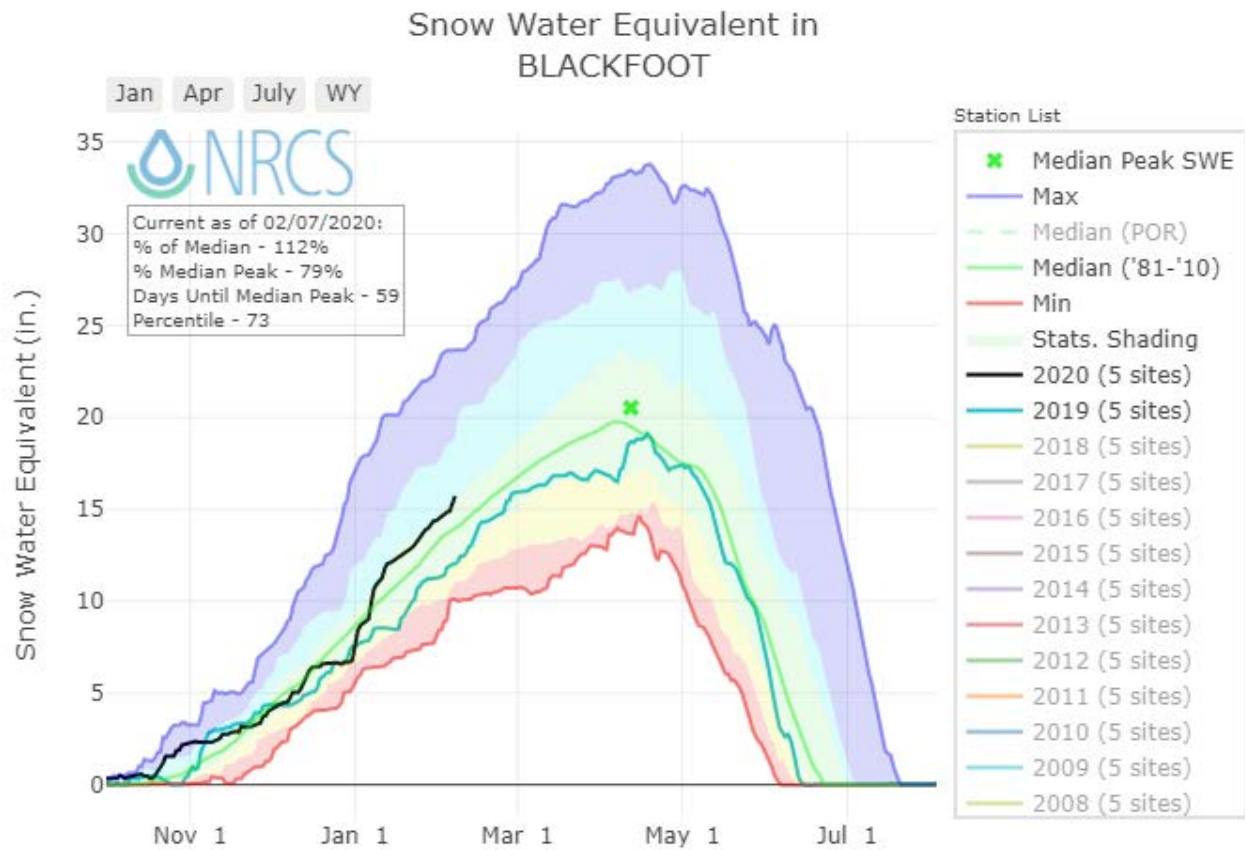
Precipitation totals for January were well above average for many locations in the western mountains of Montana due to the moist westerly flow which dominated the month. This would help to make up for large deficits in northwest Montana, where the dry November and December resulted in low water year totals on January 1st. After the wet month, many mountain locations in the Kootenai and Flathead River basins have improved to near normal for water year precipitation. While other areas west of the Divide received above normal monthly precipitation, it was not enough to make up for the early season deficits and water year precipitation remains below normal. Mountain locations east of the Divide were also able to make up some ground during January, but many areas remain below normal for water-year precipitation on February 1.

Upper Clark Fork Basin  
Mountain and Valley  
Precipitation



## Upper Clark Fork River Basin Overview

Snow totals for January weren't record-setting like many of the other river basins west of the Divide in the Upper Clark Fork, but they were near to above normal in many locations. This would help the basin-wide snowpack percentage to increase and many sites have improved from below normal at the beginning of the month to near or above normal on Feb 1. The best snow totals can be found in the Blackfoot River basin, where snowpack is near to above normal. Although snowpack made improvements during the month due to above-normal snowfall, the totals weren't significant enough to make up for the dry November and December with regards to water year precipitation. Most SNOTEL sites in the basin remain below normal for this date. Since snowpack totals are near to above normal at mountain locations, these early season deficits aren't particularly concerning at this point with the historically wet spring months yet to come. However, they bear mentioning, should future weather not make up for them by the time the growing season comes around.



**Black line: 2020      Blue line: 2019      Green line: 30-year median**

**Reservoir Storage**







Reservoir storage continues to be near to above average for this time of year in most reservoirs across the state of Montana. The only exceptions can be found in the Rocky Mountain Front, where some reservoirs are below the 1981-2010 average.

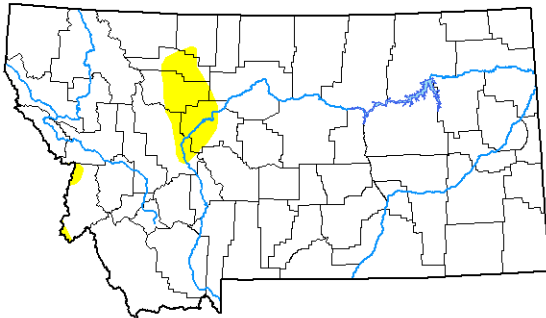
<i>Reservoir Storage</i>	Percentage of Average	Percentage of Capacity	Last Year Percentage of Average
<b>Basin-Wide Storage</b>	<b>111%</b>	<b>76%</b>	<b>107%</b>

**Nevada Creek Reservoir Storage, Feb. 1 = 6,366 ac/ft**

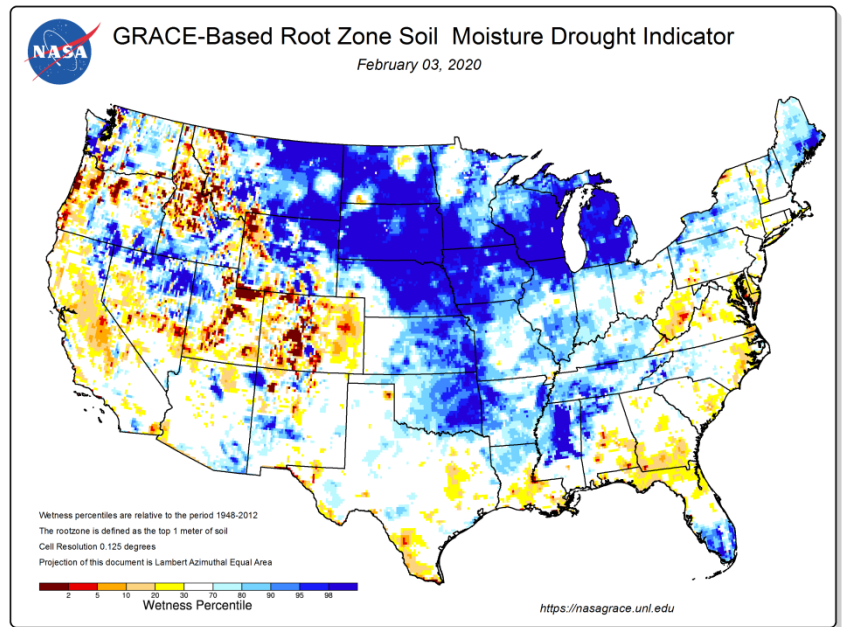
**Montana Drought Monitor – Feb. 7, 2020**

**Drought Intensities**

-  None: No Drought
-  D0: Abnormally Dry
-  D1: Moderate Drought
-  D2: Severe Drought
-  D3: Extreme Drought
-  D4: Exceptional Drought



**National Root Zone Soil Moisture – Feb. 3, 2020**



## Montana SNOTEL Snow Water Equivalent: February 7, 2020

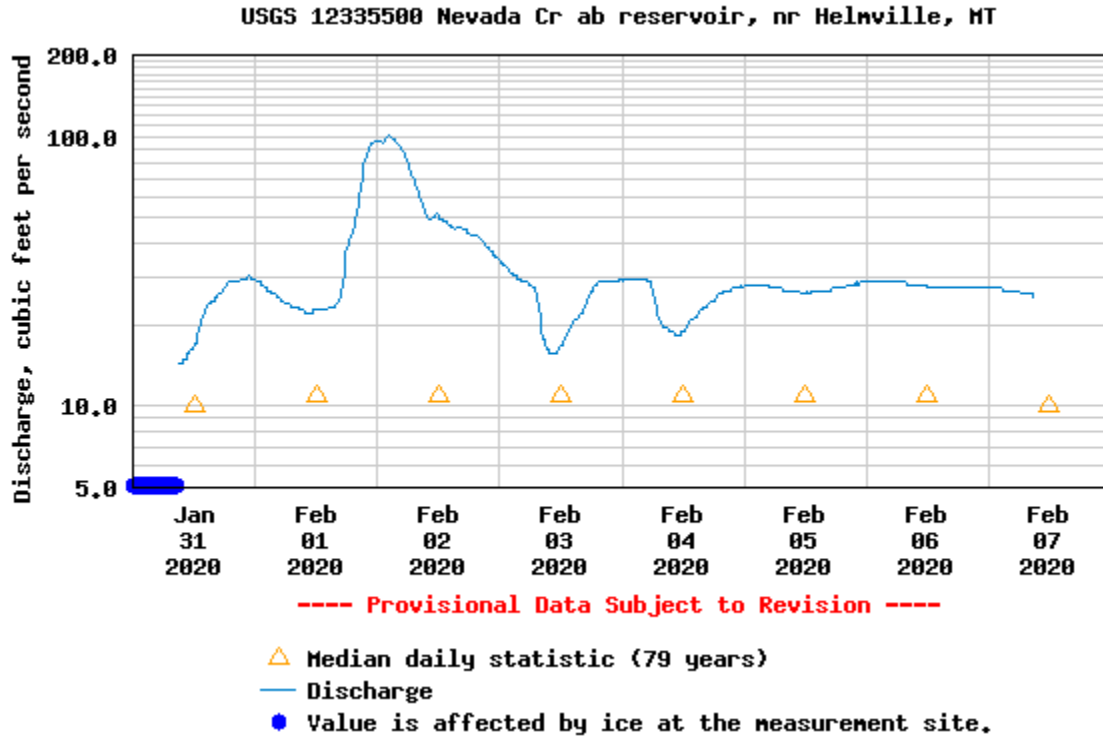
Montana SNOTEL Snow/Precipitation Update Report							
Based on Mountain Data from NRCS SNOTEL Sites							
**Provisional data, subject to revision**							
Data based on the first reading of the day (typically 00:00) for Friday, February 07, 2020							
Basin Site Name	Elev (ft)	Snow Water Equivalent			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	9.4	8.4	112	-M	10.2	*
Basin Creek	7180	4.8	4.7	102	5.7	5.9	97
Black Pine	7210	7.3	6.5	112	7.7	8.8	88
Combination	5600	3.3	3.3	100	4.1	6.4	64
Copper Bottom	5200	5.0	N/A	*	9.5	11.3	84
Copper Camp	6950	-M	N/A	*	18.2	22.4	81
Lubrecht Flume	4680	4.0	4.0	100	6.6	7.2	92
Nevada Ridge	7020	10.5	9.2 <sub>c</sub>	114	10.8	11.2 <sub>c</sub>	96
N Fk Elk Creek	6250	7.7	7.0	110	8.2	9.3	88
North Fork Jocko	6330	33.0	28.2	117	39.3	34.6	114
Peterson Meadows	7200	7.2	5.7	126	7.1	7.3 <sub>c</sub>	97
Rocker Peak	8000	10.2	8.5	120	8.4	8.9	94
Skalkaho Summit	7250	13.3	14.5	92	13.2	15.4	86
Stuart Mountain	7400	23.4	21.5 <sub>c</sub>	109	22.4	22.2 <sub>c</sub>	101
Warm Springs	7800	13.8	12.8	108	13.5	14.8	91
<b>Basin Index (%)</b>		<b>110</b>			<b>94</b>		

## February 7, 2020, USGS Real Time Flow Conditions

### Nevada Creek above Reservoir

Discharge, cubic feet per second

Most recent instantaneous value: 25.3 02-07-2020 08:45 MST



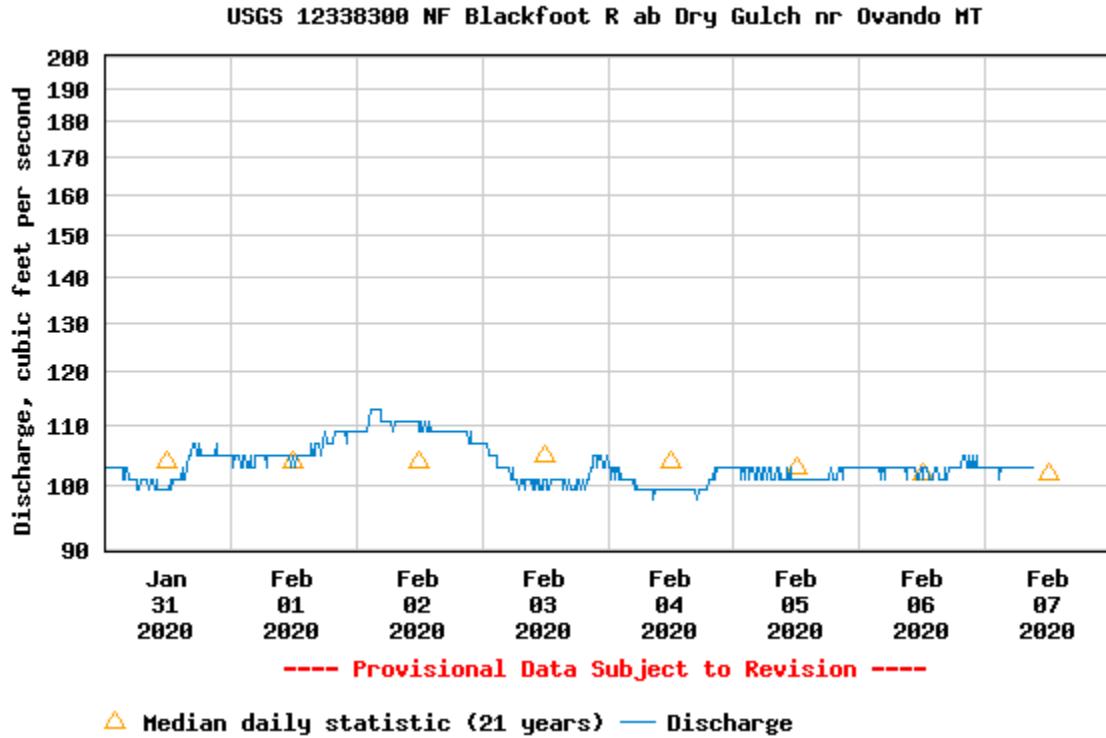
Daily discharge, cubic feet per second -- statistics for Feb 7 based on 79 water years of record [more](#)

Min (1958)	25th percentile	Median	75th percentile	Mean	Most Recent Instantaneous Value Feb 7	Max (2015)
4.00	8	10	14	19	25.3	450

## North Fork Blackfoot

### Discharge, cubic feet per second

Most recent instantaneous value: 103 02-07-2020 09:00 MST



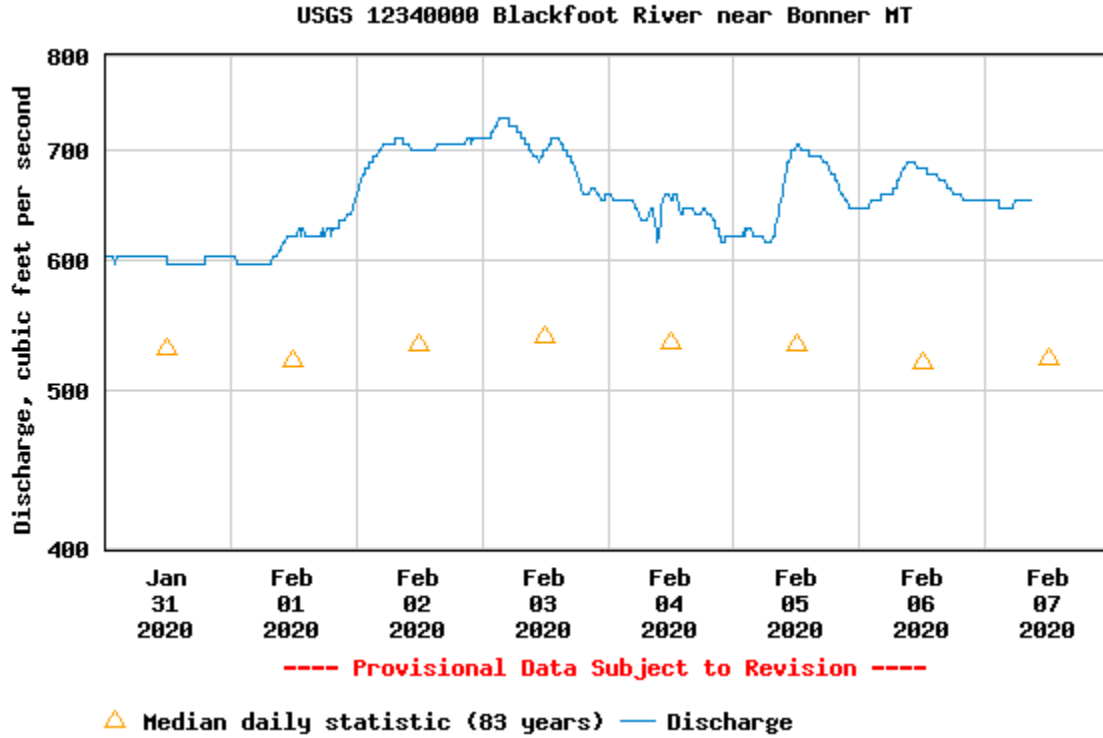
Daily discharge, cubic feet per second -- statistics for Feb 7 based on 21 water years of record [more](#)

Min (2014)	25th percentile	Median	Most Recent Instantaneous Value Feb 7	Mean	75th percentile	Max (2005)
72.0	86	102	103	103	114	154

## Blackfoot River at Bonner

Discharge, cubic feet per second

Most recent instantaneous value: 653 02-07-2020 08:45 MST



Daily discharge, cubic feet per second -- statistics for Feb 7 based on 83 water years of record [more](#)

Min (2014)	25th percentile	Median	Mean	75th percentile	Most Recent Instantaneous Value Feb 7	Max (1963)
240	441	523	578	610	653	2300

# Three-Month Outlook February 7, 2020

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

Higher chance for above average precipitation  
for February through April.

Equal chance for normal, below or above normal  
temperatures from February through April.

