

# Blackfoot Water Supply Report

## January 8, 2021

**Montana Water Supply Report data as of January 8, 2021 (from NRCS):**

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

### **Overview**

Entering the 2021 Water Year on Oct. 1 there was a great deal of excitement about the possible “La Nina” winter forecasted for the fall and winter seasons. October delivered the predicted outcome, well below normal temperatures statewide and above average precipitation for most areas of Montana. Only the eastern border and southwest corner of the state would be missed by passing storms. Ending the month, snowpack was off to a strong start in most mountain locations.

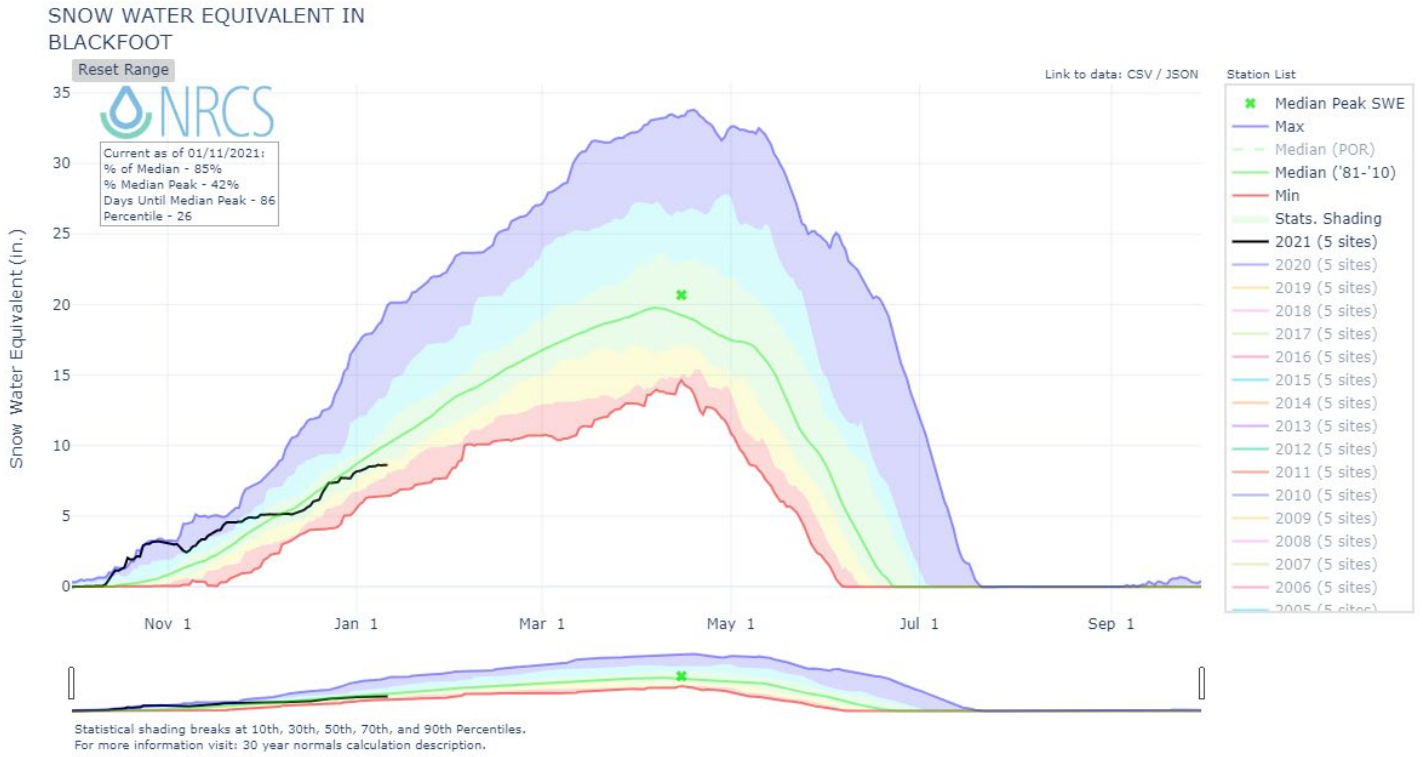
Weather patterns changed in November. The northern half of the state was favored for precipitation while the southern half of the state experienced below normal monthly totals. November air temperature was reported as near to slightly above average for many locations in the western half of Montana, but well above average in the southeast corner of the state. “Unfortunately, as we have seen in previous La Nina years in Montana, a forecasted La Nina winter isn’t a guarantee of cold and wet conditions during every month of the snow season, it’s only an increased probability of that occurring over a given period of time,” reported Lucas Zukiewicz, NRCS water supply specialist in Montana.

The last week of November marked the beginning of a prolonged dry period for almost all mountain locations, with many mountain Snowpack Telemetry (SNOTEL) sites receiving little snowfall between Nov. 20 and Dec. 12. This prolonged dry period caused snowpack percentages to decline across the state, especially at low- to mid-elevation mountain locations. “The weather over the final two weeks of December was more active, and storms before the new year began helped to build the mountain snowpack and stop the decline in percentages,” said Zukiewicz.

Snowpack on Jan. 1 varies widely across Montana. Snowpack in some river basins along the Rocky Mountain Front is above normal for this date while snowpack is near to slightly below normal in other western Montana river basins. “Southwest Montana, which didn’t receive the early boost in snowpack totals during October, is the only region in the state with snowpack that is well below normal for this date,” stated Zukiewicz. Snowpack in the Gallatin, Madison and Jefferson River basins ranges from 66 to 87 percent of normal.

On Jan. 1, around 35 to 45 percent of the seasonal peak snowpack has typically accumulated at mountain locations across the state, leaving plenty of time for snow totals to recover before runoff begins this spring and summer. According to forecasts published Jan. 6 by NOAA’s Climate Prediction Center, the next two weeks are predicted to bring higher probabilities of above normal precipitation to many parts on Montana and the warmer than normal temperatures are likely to persist.

# Blackfoot River Basin Snow Water Equivalent



**Black line: 2021 Water Year**

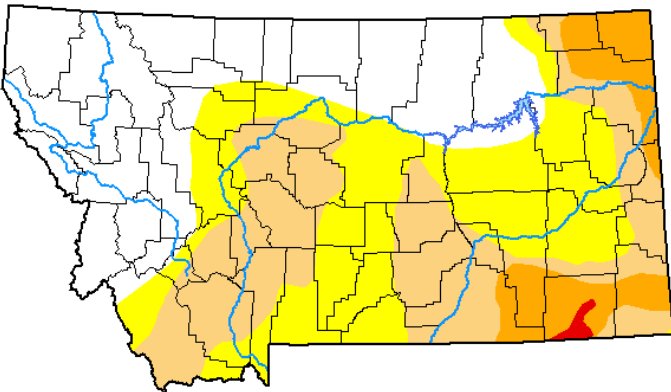
**Green line: 30-year median**

## Reservoir Storage

Reservoir storage is currently above average for this time of year in Western Montana reservoirs and about equal to the levels at this time last year.

<b>UPPER CLARK FORK RIVER BASIN</b>	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current %	Last Year %	Average %	Current %	Last Year %
					Capacity	Capacity	Capacity	Average	Average
East Fork Rock Creek Res	8.5	8.5	7.0	16.0	53%	53%	44%	121%	121%
Georgetown Lake	28.2	28.8	27.8	31.0	91%	93%	90%	101%	104%
Lower Willow Creek Reservoir			1.7	4.9			34%		
Nevada Creek Res	6.4	5.9	4.7	12.6	51%	47%	37%	137%	125%
<b>Basin-wide Total</b>	<b>43.1</b>	<b>43.1</b>	<b>39.5</b>	<b>59.6</b>	<b>72%</b>	<b>72%</b>	<b>66%</b>	<b>109%</b>	<b>109%</b>
<b># of reservoirs</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

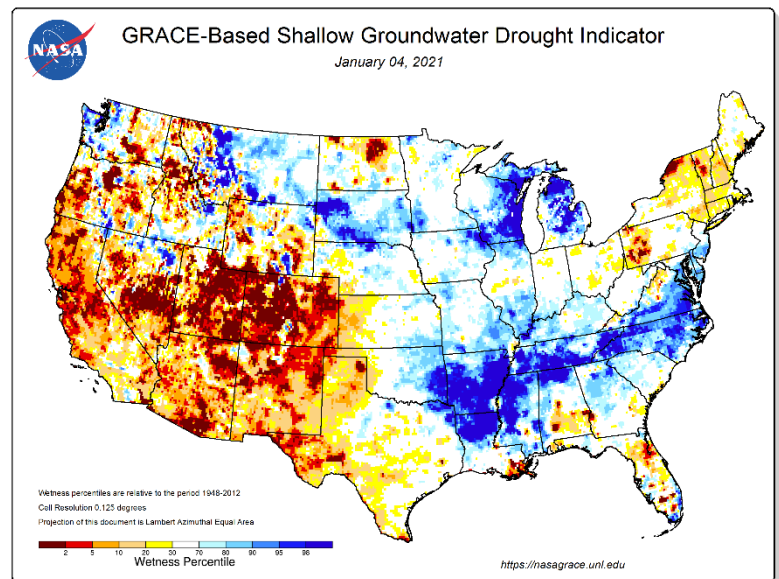
## Montana Drought Monitor – Jan. 5, 2021



### 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 – Jan. 4, 2021



**Montana SNOTEL Snow Water Equivalent: January 7, 2021**

<b>Montana SNOTEL Snow/Precipitation Update Report</b>							
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 Thursday, January 07, 2021							
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	5.8	6.4	91	7.2	8.2	88
Basin Creek	7180	2.3	3.9	59	2.0	4.9	41
Black Pine	7210	3.9	4.7	83	5.2	6.8	76
Combination	5600	2.0	2.2	91	5.0	5.1	98
Copper Bottom	5200	3.9	N/A	*	11.2	8.6	130
Copper Camp	6950	14.0	N/A	*	16.8	16.6	101
Lubrecht Flume	4680	2.4	2.6	92	7.2	5.8	124
Nevada Ridge	7020	6.6	6.5 <sub>c</sub>	102	8.4	8.8 <sub>c</sub>	95
N Fk Elk Creek	6250	3.7	5.0	74	8.8	7.2	122
North Fork Jocko	6330	17.3	18.8	92	25.9	25.5	102
Peterson Meadows	7200	3.6	4.2	86	4.8	5.8 <sub>c</sub>	83
Skalkaho Summit	7250	9.0	9.8	92	14.1	11.7	121
Stuart Mountain	7400	12.7	15.0 <sub>c</sub>	85	14.6	16.2 <sub>c</sub>	90
Warm Springs	7800	10.1	9.5	106	9.9	11.4	87
<b>Basin Index (%)</b>		<b>90</b>			<b>99</b>		

## January 11, 2021, USGS Real Time Flow Conditions

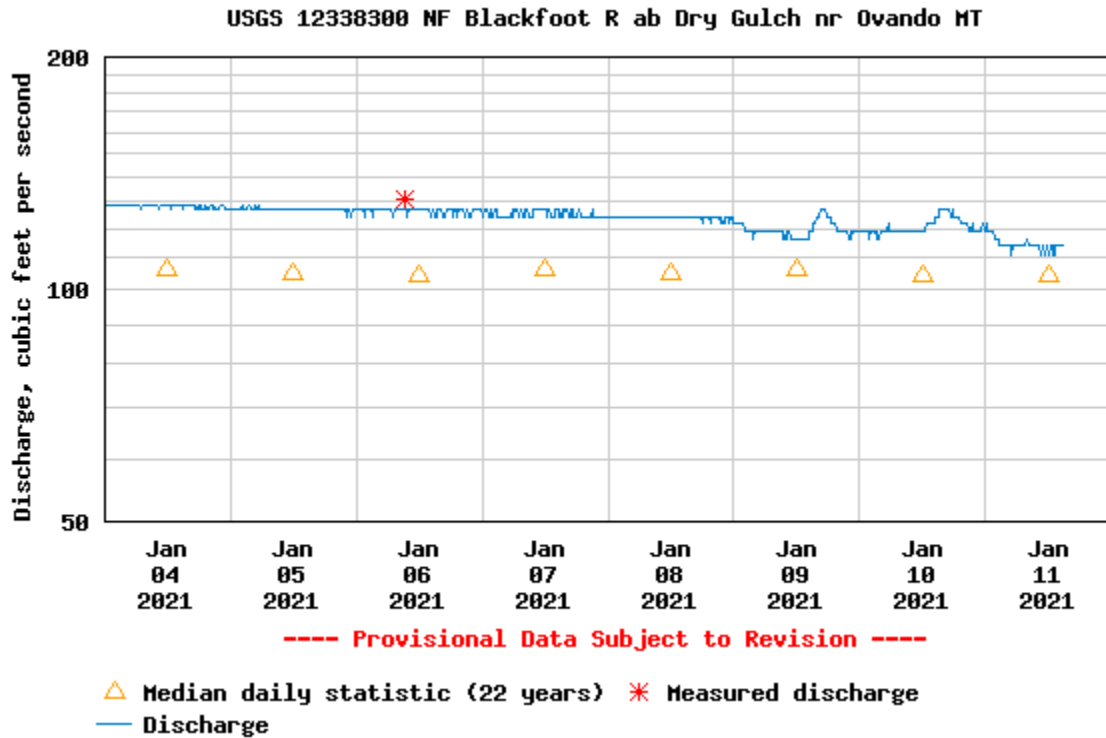
### Nevada Creek above Reservoir

NO READING DUE TO ICE

### North Fork Blackfoot

Discharge, cubic feet per second

Most recent instantaneous value: 114 01-11-2021



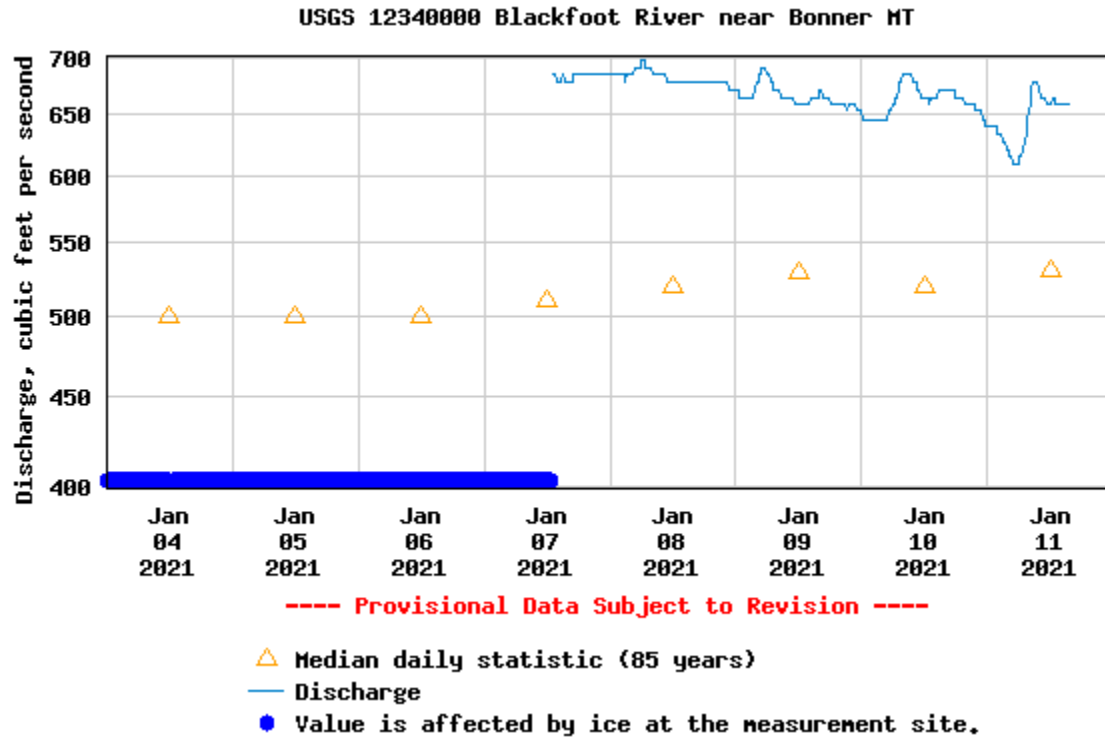
Daily discharge, cubic feet per second -- statistics for Jan 11 based on 22 water years of record [more](#)

Min (2014)	25th percen- tile	Median	Mean	Most Recent Instantaneous Value Jan 11	75th percen- tile	Max (2009)
84.9	94	104	108	114	116	165

## Blackfoot River at Bonner

Discharge, cubic feet per second

Most recent instantaneous value: 659 01-11-2021



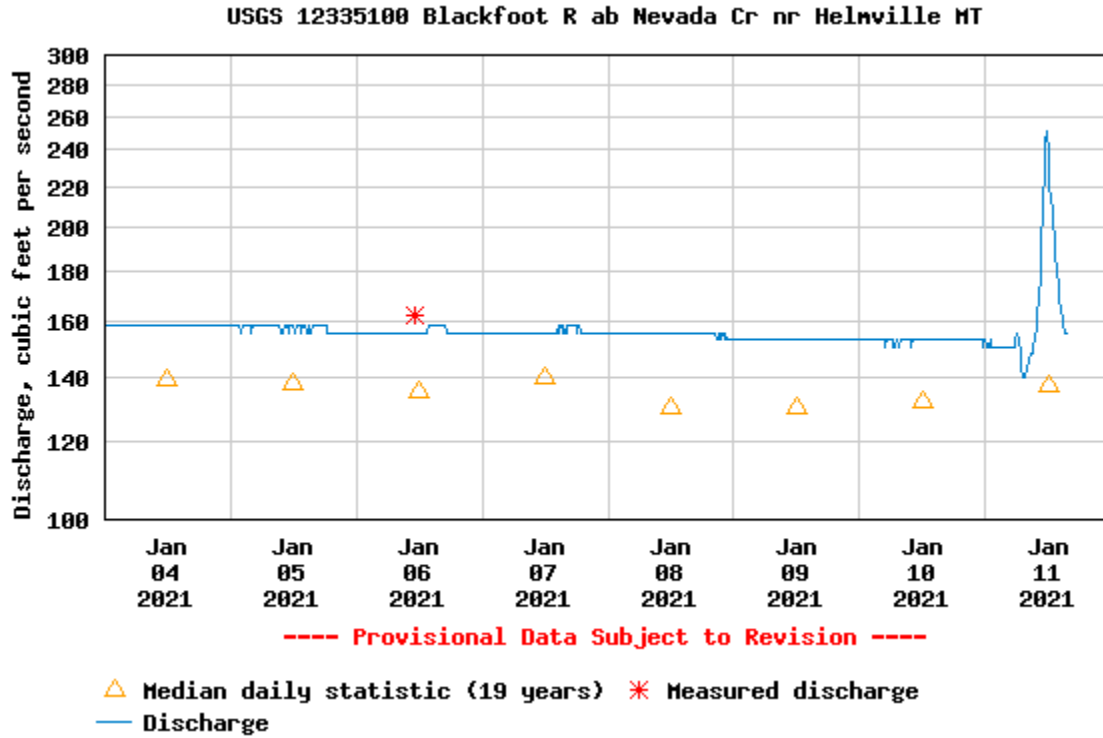
Daily discharge, cubic feet per second -- statistics for Jan 11 based on 85 water years of record [more](#)

Min (2010)	25th percentile	Median	Mean	75th percentile	Most Recent Instantaneous Value Jan 11	Max (2009)
250	420	530	551	643	659	1070

## Blackfoot River above Nevada Creek

### Discharge, cubic feet per second

Most recent instantaneous value: 155 01-11-2021



Daily discharge, cubic feet per second -- statistics for Jan 11 based on 19 water years of record [more](#)

Min (2005)	25th percentile	Mean	Median	75th percentile	Most Recent Instantaneous Value Jan 11	Max (2009)
90.4	120	137	137	151	155	200

# Three-Month Outlook January 7, 2021

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

Higher chance for above average precipitation  
for January through March.

Higher chance for below normal temperatures from  
January through March.

