

Blackfoot Water Supply Report

June 7, 2021

Montana Water Supply Report data as of June 7, 2021 (from NRCS):

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

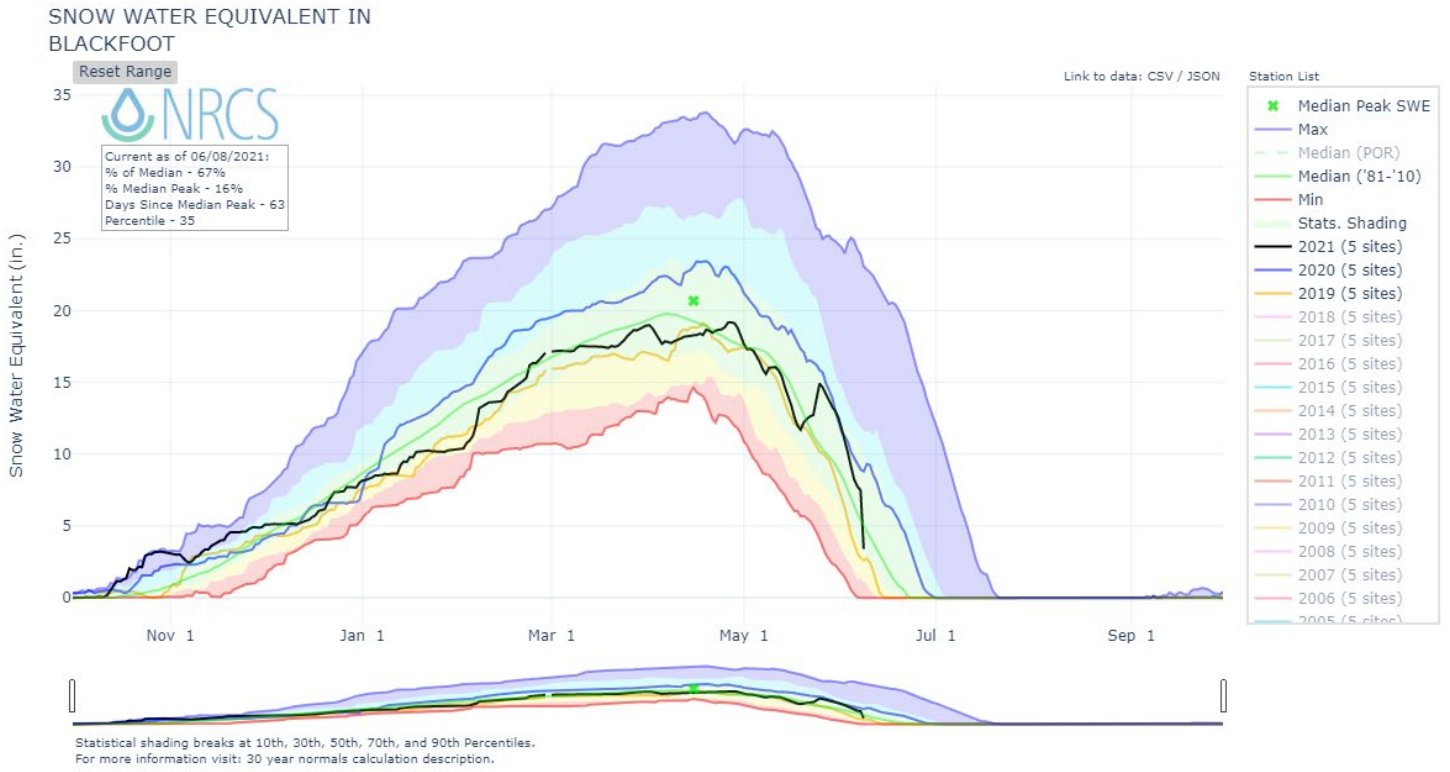
Following two months of well below average precipitation, rain and snow was welcomed across much of Montana during May. Two mid-month storms brought significant precipitation to the Rocky Mountain Front and portions of the Flathead River Basin according to data from the USDA's Natural Resources Conservation Service (NRCS). SNOTEL sites near Seeley Lake and Lincoln, Mont., received record amounts of May precipitation. Overall, the recent precipitation was beneficial and added much needed snow to the remaining upper elevation snowpack across the region. Unfortunately, other portions of Montana received well below average precipitation including portions of the Clark Fork River basin, northeastern Beartooths, and Central Montana from Wyoming's Bighorns north to Glasgow. The good news is according to the National Weather Service, "This ranked as the 15th wettest May on record for Montana, and the wettest since 2018."

Water users across Montana have seen stream levels rise over the last month, and a substantial portion of this year's snowpack has melted as of June 1. "The snowpack in the state peaked early and at below average levels in most locations," said Mage Hultstrand, Acting NRCS Montana Water Supply Specialist. A couple locations did peak above average such as the Upper Clark Fork, Upper Bitterroot, and Bighorns, which will result in sustained streamflow this summer. Mid-to-low elevation snowpack melted out weeks ago, slightly ahead of schedule. These melt-outs can be attributed to warm temperatures in April that caused above average melt rates. May weather patterns were more favorable to slowing snow melt rates. However, the first week of June brought the hottest temperatures of the year and rapid melt of all high elevation snow. This rapid melt drove many rivers to their annual snowmelt peak.

As the remaining snowpack melts in the coming months, streams will run out of snow water and begin their decline into summer. June 1 streamflow forecasts vary widely across the state. While May precipitation increased forecasted streamflow volumes for much of the Flathead and Rocky Mountain Front Range river basins, many southwest Montana river basins remained below average or even declined.

According to NOAA's Climate Prediction Center, the next several weeks have the potential for warmer than normal temperatures and, according to the 8-14 day and 30-day models, below normal precipitation. The long-range forecast also calls for a continuation of conditions seen throughout much of this year: increased chances of warmer and drier weather than normal. Current water year precipitation (October 1, 2020, to current) is near to below average in most locations.

BLACKFOOT RIVER BASIN SNOW WATER EQUIVALENT (June 2, 2021)



Black line: 2021 Water Year

Green line: 30-year median

Blue line: 2020 Water Year

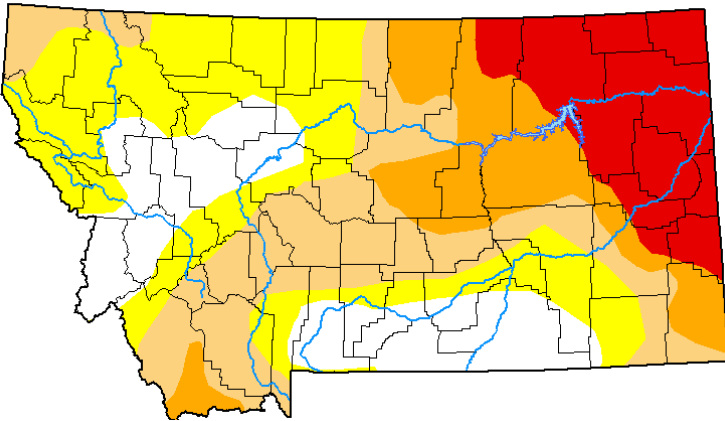
Gold line: 2019 Water Year

Reservoir Storage

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

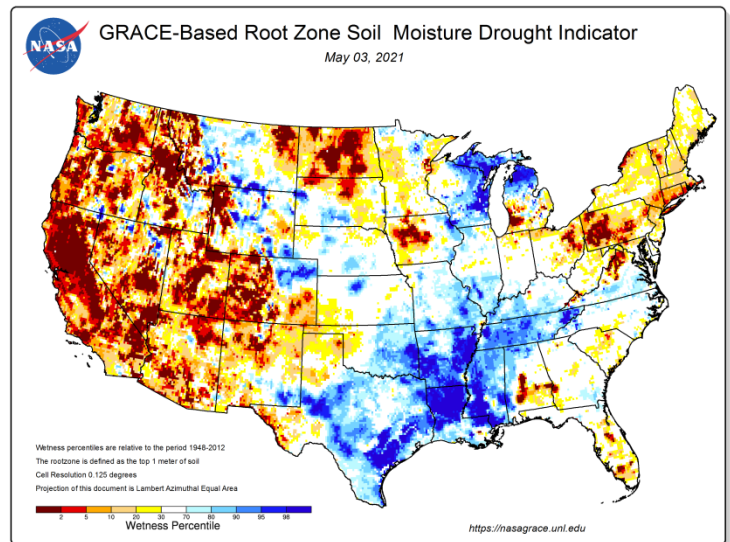
UPPER CLARK FORK RIVER BASIN	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
East Fork Rock Creek Res	11.2	13.9	10.6	16.0	70%	86%	66%	105%	131%
Georgetown Lake	28.5	30.2	29.1	31.0	92%	97%	94%	98%	104%
Lower Willow Creek Reservoir			4.7	4.9			96%		
Nevada Creek Res	11.5	11.4	10.9	12.6	91%	90%	87%	105%	105%
Basin-wide Total	51.1	55.5	50.6	59.6	86%	93%	85%	101%	110%
# of reservoirs	3	3	3	3	3	3	3	3	3

Montana Drought Monitor – June 1, 2021









National Root Zone Soil Moisture – May 3, 2021

WEBSITE DOWN – Updated data unavailable



Drought Intensities

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

Montana SNOTEL Snow Water Equivalent: June 8, 2021

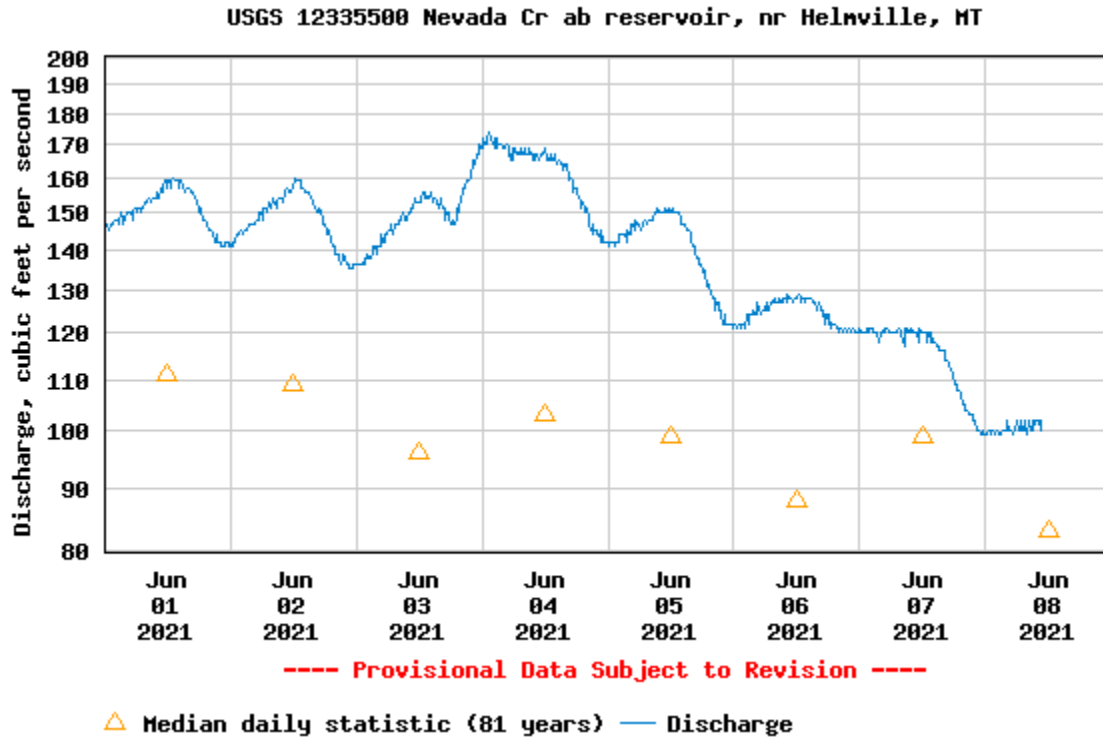
Montana SNOTEL Snow/Precipitation Update Report							
Based on Mountain Data from NRCS SNOTEL Sites							
Provisional data, subject to revision							
Data based on the first reading of the day (typically 00:00) for Tuesday, June 08, 2021							
Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
UPPER CLARK FORK RIVER BASIN							
Barker Lakes	8250	4.7	6.7	70	18.3	25.7	71
Basin Creek	7180	0.0	0.0	*	10.5	17.4	60
Black Pine	7210	0.0	0.0	*	19.2	19.4	99
Combination	5600	0.1	0.0	*	13.9	14.0	99
Copper Bottom	5200	0.0	N/A	*	23.5	19.8	119
Copper Camp	6950	0.0	N/A	*	34.5	38.8	89
Lubrecht Flume	4680	0.0	0.0	*	15.0	14.6	103
Nevada Ridge	7020	0.2	0.0 _c	*	22.3	22.0 _c	101
N Fk Elk Creek	6250	0.0	0.0	*	20.0	19.9	101
North Fork Jocko	6330	- _M	11.1	*	58.2	56.8	102
Peterson Meadows	7200	0.0	0.0	*	16.2	19.6 _c	83
Skalkaho Summit	7250	0.0	3.5	0	30.2	29.6	102
Stuart Mountain	7400	13.4	14.1 _c	95	34.3	39.5 _c	87
Warm Springs	7800	12.2	13.2	92	25.9	31.4	82
Basin Index (%)		82*			93		

June 08, 2021, USGS Real Time Flow Conditions

Nevada Creek above Reservoir

Discharge, cubic feet per second

Most recent instantaneous value: 102 06-08-2021 10:45 MDT



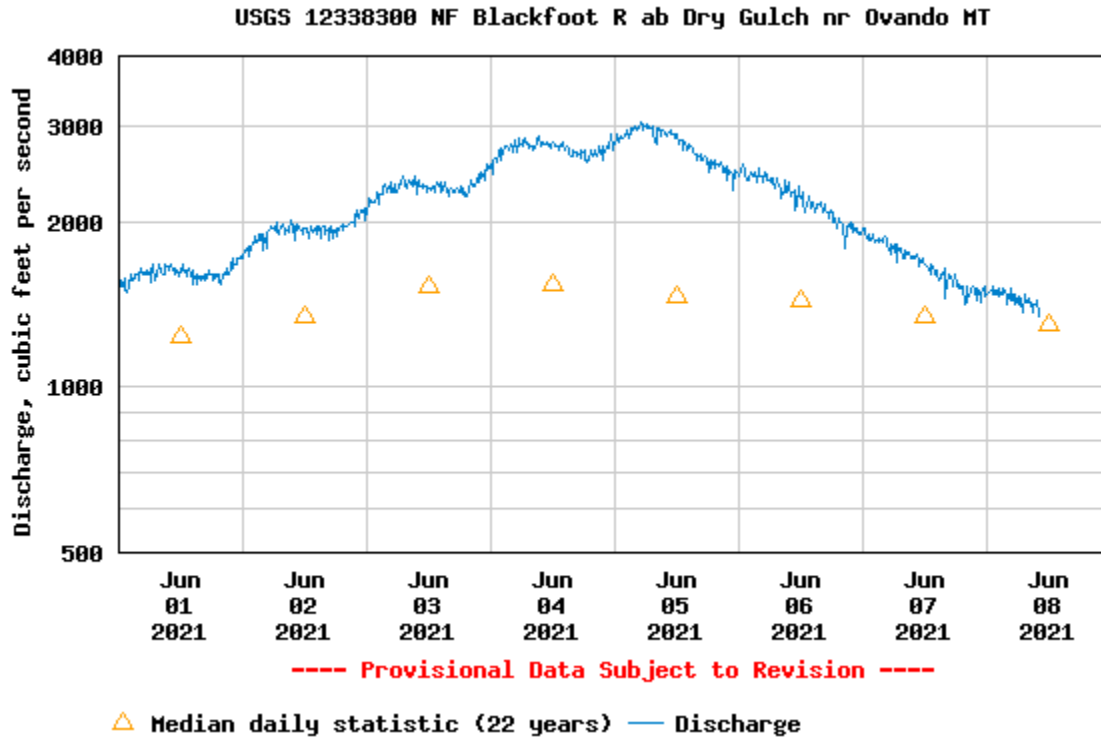
Daily discharge, cubic feet per second -- statistics for Jun 8 based on 81 water years of record [more](#)

Min (1973)	25th percentile	Median	Most Recent Instantaneous Value Jun 8	Mean	75th percentile	Max (2011)
12.0	46	83	102	116	140	655

North Fork Blackfoot

Discharge, cubic feet per second

Most recent instantaneous value: 1350 06-08-2021 10:00 MDT



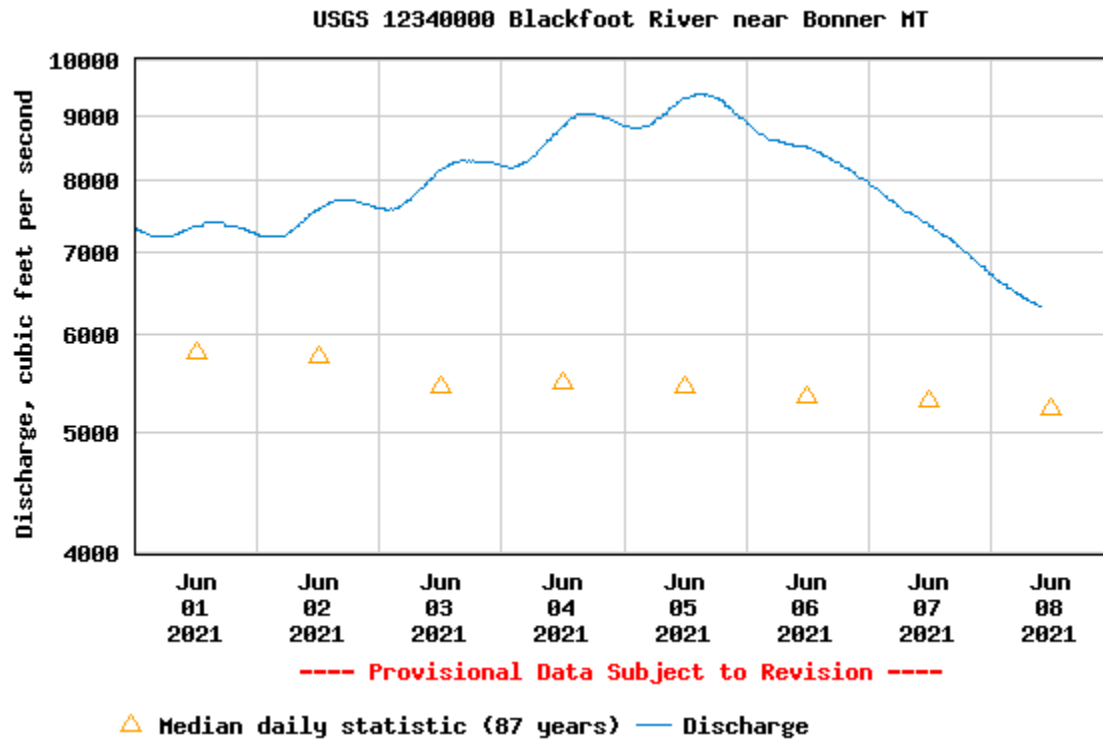
Daily discharge, cubic feet per second -- statistics for Jun 8 based on 22 water years of record [more](#)

Min (1998)	25th percentile	Median	Most Recent Instantaneous Value Jun 8	Mean	75th percentile	Max (2011)
679	1070	1300	1350	1490	1820	4360

Blackfoot River at Bonner

Discharge, cubic feet per second

Most recent instantaneous value: 6330 06-08-2021 09:45 MDT



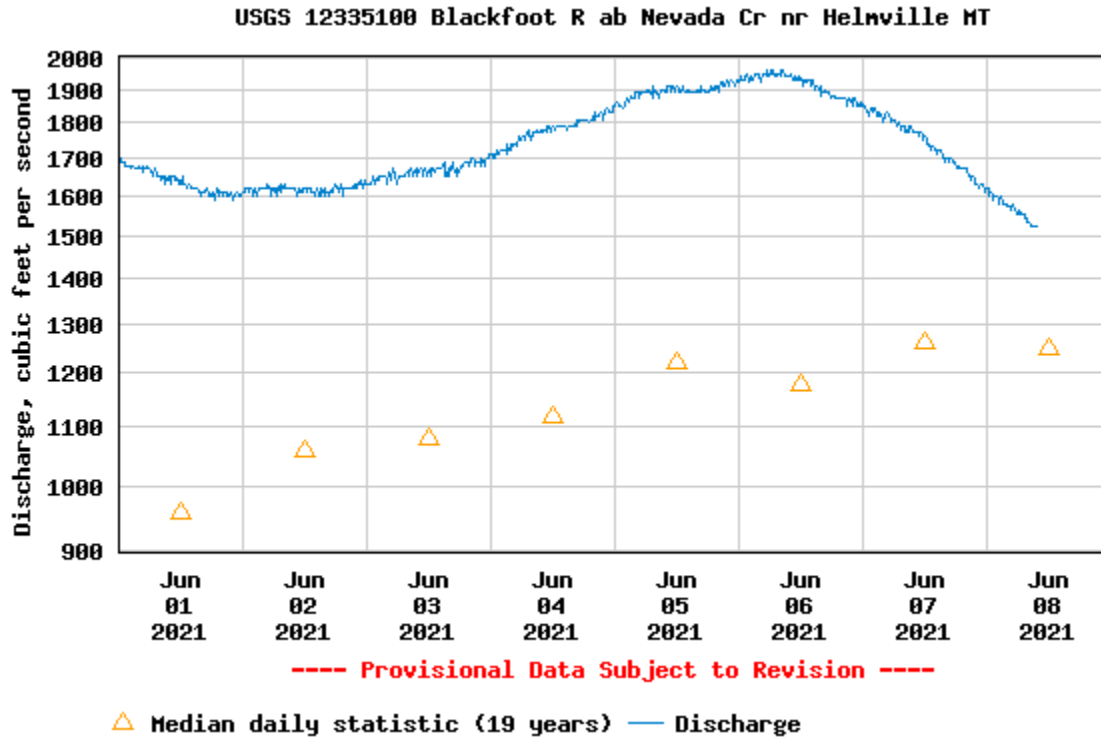
Daily discharge, cubic feet per second -- statistics for Jun 8 based on 87 water years of record [more](#)

Min (1987)	25th percen- tile	Median	Mean	Most Recent Instantaneous Value Jun 8	75th percen- tile	Max (2011)

Blackfoot River above Nevada Creek

Discharge, cubic feet per second

Most recent instantaneous value: 1520 06-08-2021 09:45 MDT



Daily discharge, cubic feet per second -- statistics for Jun 8 based on 19 water years of record [more](#)

Min (2001)	25th percentile	Mean	Median	75th percentile	Most Recent Instantaneous Value Jun 8	Max (2011)
543	817	1250	1250	1490	1520	3440

Three-Month Outlook June 2021

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

Higher chance for below average precipitation
for June through August.

Higher chance for normal to above normal
temperatures from June through August.

