

Blackfoot Water Supply Report

March 9, 2022

Montana Water Supply Report data as of March 9, 2022 (from NRCS):

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

Overview

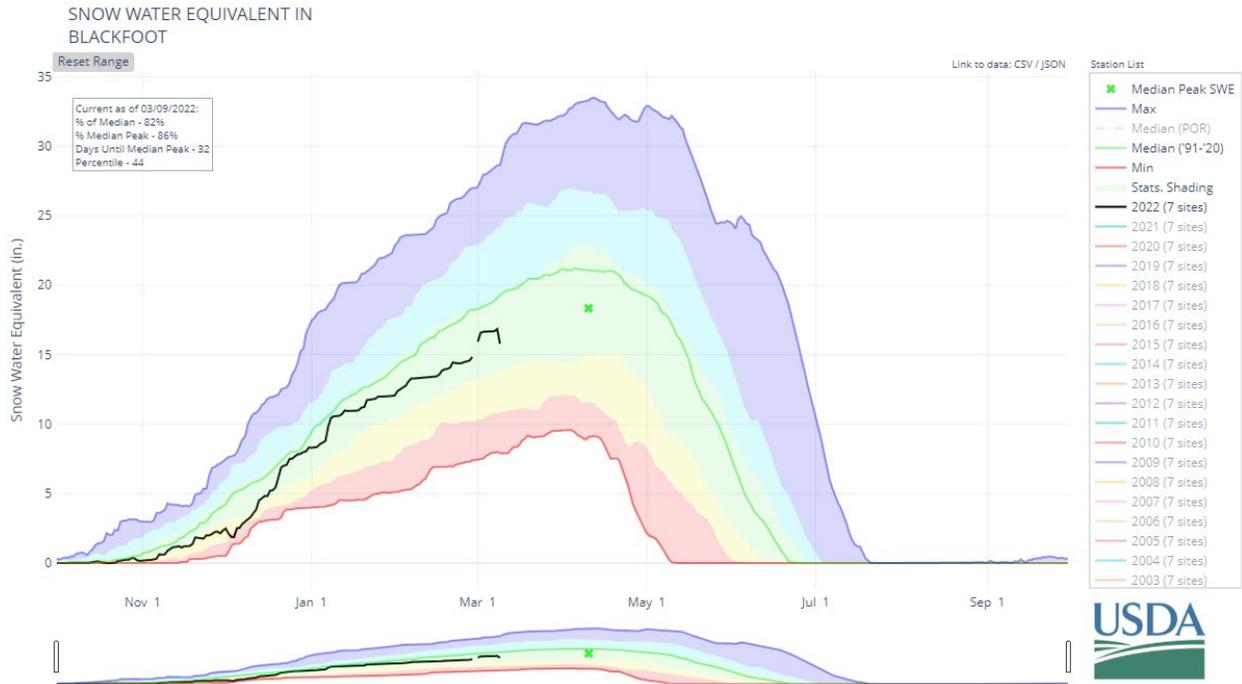
Despite another round of promising weather outlooks, February did not bring the anticipated storms and was, overall, disappointingly dry. The main culprit was a stubborn ridge of high pressure off the West Coast that blocked Pacific moisture from flowing to the Rocky Mountain region. Southwest Montana only received 50-80% of its typical precipitation and even set record low accumulations for February, according to USDA Natural Resources Conservation Service (NRCS) SNOTEL period of record data. Northwest Montana near the Continental Divide was one exception, receiving more than five inches of precipitation during the last several days of February.

Due to the overall lack of February precipitation, most snowpack percentages decreased from February 1. Montana's current snowpack percent of normal ranges from 77% to 107%, with the Smith-Judith-Musselshell at the lower end of that range and the Kootenai and St. Marys at the upper end. "Last year much of the seasonal snowpack was recovered during February and we all hoped for the same this year. Unfortunately, the snowpack was overall in better shape on March 1 last year than it is now," said Larson.

Basins currently lacking snow will need well above normal precipitation over the next couple of months to meet their typical snowpack peaks. "While the chances of meeting those peaks becomes less likely as the season progresses, it is not impossible to recover from a well below normal March 1 snowpack and it has happened before," said Larson. In general, March and April are large contributors to water year precipitation, particularly east of the Continental Divide. The National Oceanic and Atmospheric Administration's Climate Prediction Center does give hope for potential improvement to conditions over the next few weeks. The 6-10 day outlook also shows promise, with good chances for below average temperatures and above average precipitation across Montana.

March 1 streamflow forecasts generally follow the snowpack pattern across the state indicating below normal streamflows for April through July in southwest Montana and near to above normal west of the Continental Divide and in the streams along the Rocky Mountain Front. "The next couple of months will determine if basins with below normal snowpacks can add to their mountain reservoirs, reach normal peaks, and improve the outlook for streamflow this spring and summer," said Larson. Additionally, springtime weather will be a major factor in streamflow. If spring weather warms up quickly, streams could peak early and have less water to deliver through the summer. Conversely, if it stays cool – and if more snow arrives next week as predicted – the water supply picture could be better.

Blackfoot River Basin Snow Water Equivalent



Black line: 2021/2022 Water Year

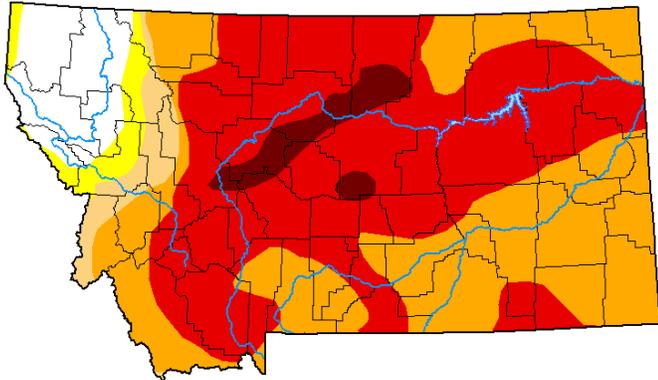
Green line: 30-year median

Reservoir Storage

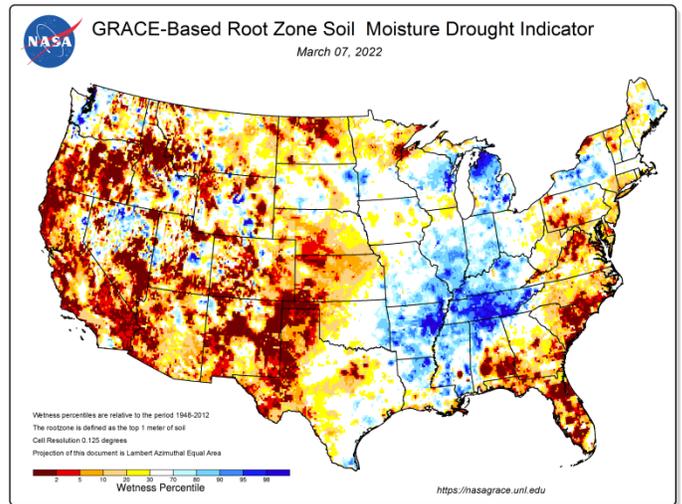
Reservoir storage is currently below average for this time of year in Western Montana reservoirs and below to the levels at this time last year.

Upper Clark Fork	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Georgetown Lake	27.0	28.5	28.5	31.0	87%	92%	92%	95%	100%
Nevada Creek Res	5.3	7.6	6.3	12.6	42%	60%	50%	83%	120%
Lower Willow Creek Reservoir				4.9					
Silver Lake				0.0					
East Fork Rock Creek Res	8.4	9.4	8.8	16.0	53%	59%	55%	96%	107%
Basin Index					68%	76%	73%	93%	104%
# of reservoirs					3	3	3	3	3

Montana Drought Monitor – Mar. 3, 2022



National Root Zone Soil Moisture – Mar. 7, 2022



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: March 9, 2022

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 Wednesday, March 09, 2022							
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	10.9	11.6	94	11.8	12.8	92
Basin Creek	7180	5.0	6.4	78	6.6	7.2	92
Black Pine	7210	9.9	9.4	105	9.6	11.3	85
Combination	5600	3.9	4.4	89	6.9	8.4	82
Copper Bottom	5200	5.1	8.4	61	15.7	13.8	114
Copper Camp	6950	-M	35.6 ₍₁₇₎	*	27.7	24.1 ₍₁₇₎	115
Lubrecht Flume	4680	5.4	4.9	110	10.6	9.4	113
Nevada Ridge	7020	10.4	13.2 ₍₂₆₎	79	12.1	14.2 ₍₂₆₎	85
N Fk Elk Creek	6250	8.8	9.8	90	12.9	12.0	108
North Fork Jocko	6330	39.3	34.6	114	30.9	43.8	71
Peterson Meadows	7200	7.0	8.4	83	9.4	10.4 ₍₂₂₎	90
Skalkaho Summit	7250	17.4	18.5	94	19.5	19.8	98
Stuart Mountain	7400	25.7	28.3 ₍₂₆₎	91	26.2	28.2 ₍₂₆₎	93
Warm Springs	7800	17.7	18.0	98	18.6	19.0	98
Basin Index (%)		95			93		

March 09, 2022 USGS Real Time Flow Conditions

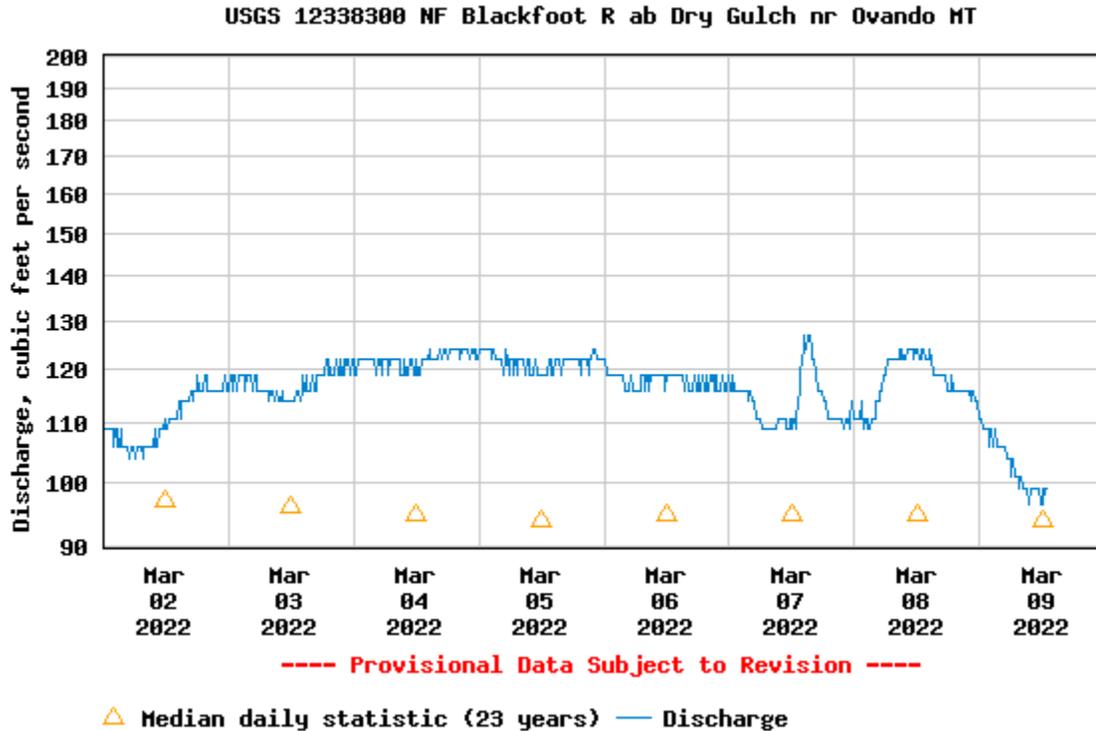
Nevada Creek above Reservoir

NO READING DUE TO ICE

North Fork Blackfoot

Discharge, cubic feet per second

Most recent instantaneous value: 98.8 03-09-2022 13:00 MST



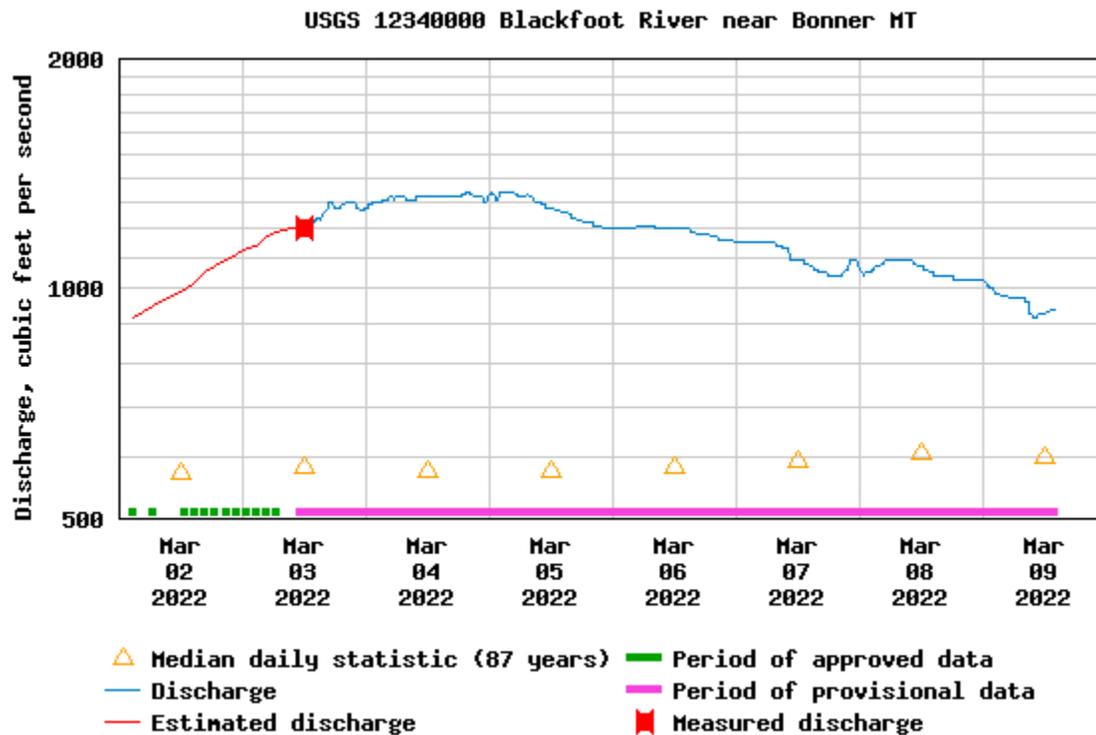
Daily discharge, cubic feet per second -- statistics for Mar 9 based on 23 water years of record [more](#)

Min (2001)	25th percentile	Median	Most Recent Instantaneous Value Mar 9	Mean	75th percentile	Max (2015)
73.0	83	94	98.8	99	110	161

Blackfoot River at Bonner

Discharge, cubic feet per second

Most recent instantaneous value: 941 03-09-2022 13:45 MST



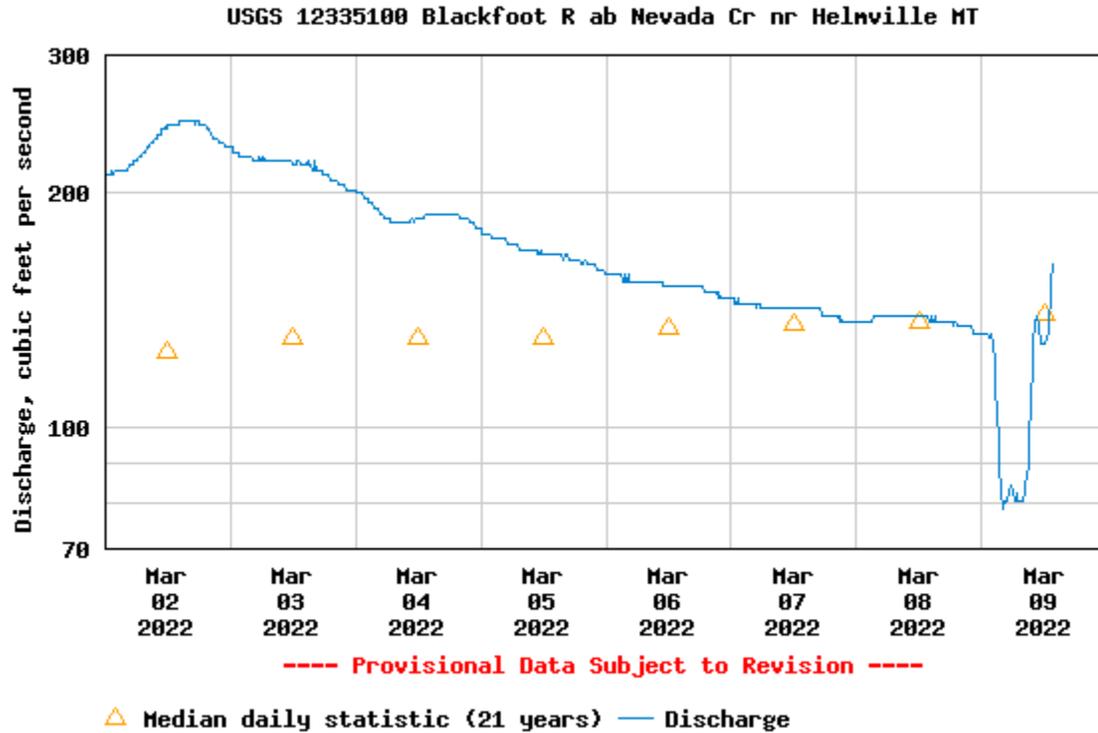
Daily discharge, cubic feet per second -- statistics for Mar 9 based on 87 water years of record [more](#)

Min (2003)	25th percentile	Median	Mean	75th percentile	Most Recent Instantaneous Value Mar 9	Max (1986)
397	506	603	665	759	941	3060

Blackfoot River above Nevada Creek

Discharge, cubic feet per second

Most recent instantaneous value: 162 03-09-2022 13:45 MST



Daily discharge, cubic feet per second -- statistics for Mar 9 based on 21 water years of record [more](#)

Min (2019)	25th percentile	Mean	Median	75th percentile	Most Recent Instantaneous Value Mar 9	Max (2015)
84.1	123	139	140	153	162	194

Three-Month Outlook: March 2022

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

Higher chance for above average precipitation for March through May.

Higher chance for normal to below normal temperatures from March through May.

