

Blackfoot Water Supply Report

February 9, 2021

Montana Water Supply Report data as of February 5, 2021 (from NRCS):

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

Overview

While January started off on the right foot, with snow falling at many locations in the state, the remainder of the month was hit-or-miss for mountain and valley snowfall.

Atmospheric circulation patterns early in the month were similar to those experienced throughout much of the winter. Moisture and warm air spilled into the state from the Pacific, favoring the Pacific Northwest and river basins along the Idaho border and northwest Montana. “It was abnormally warm during the first two weeks of the month. Fortunately, a return to more winter-like conditions occurred after January 17, when northwest flow brought in cold air and moisture from the north,” said Lucas Zukiewicz, USDA Natural Resources Conservation Service water supply specialist for Montana. Temperatures during the following week dropped below seasonal normal, and central and north-facing mountain ranges received snowfall.

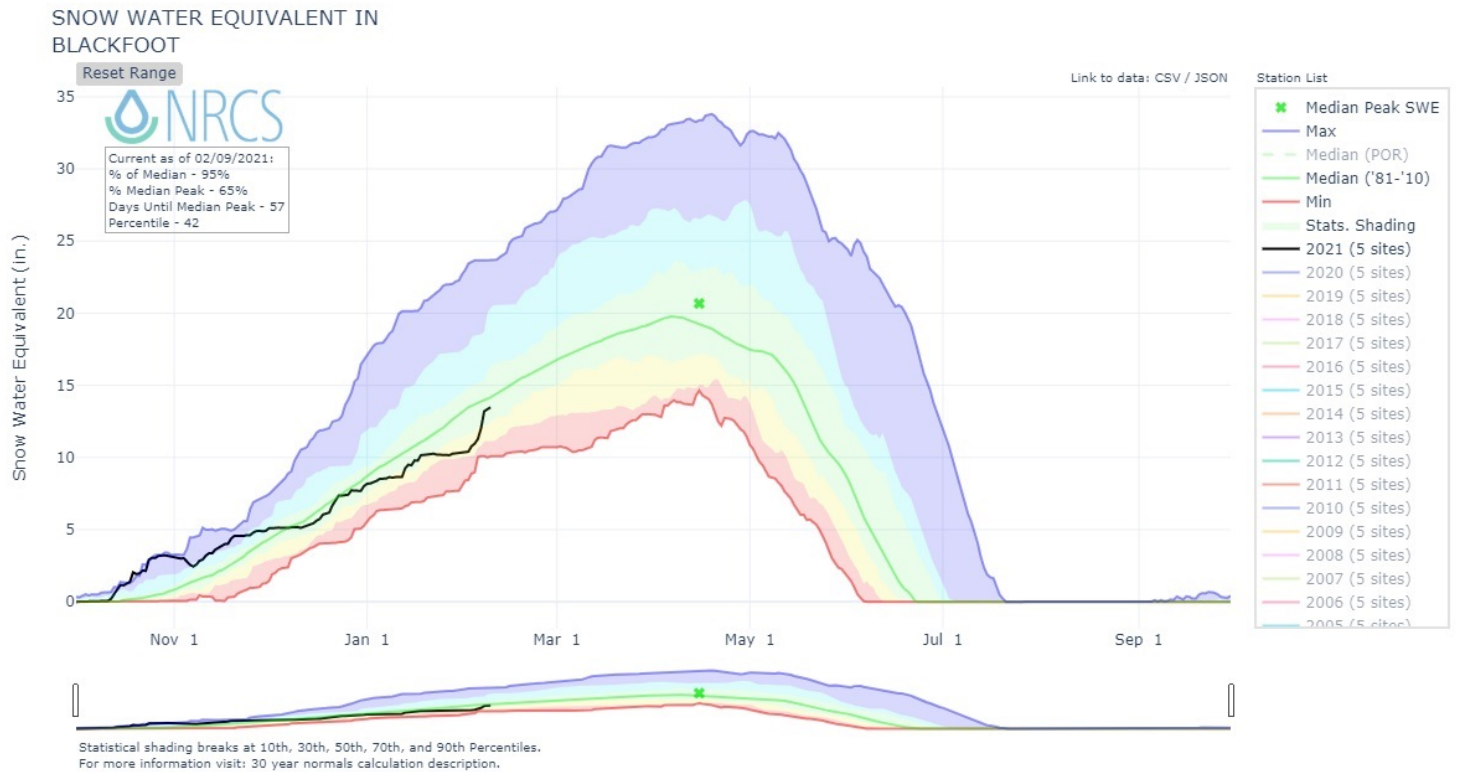
Overall, January snowfall was below normal for all areas of the state, except the central mountain ranges and southwest river basins. This caused snowpack totals to decline for the second month in a row for all river basins except the Madison, Gallatin, and Smith-Judith-Musselshell, which experienced marginal increases.

Padded by the well above average early season October snowfall, many river basins in the state were near to above normal on January 1. January is typically the “wettest” month in northwest Montana with regards to snowfall, but this month’s low snowfall totals caused declines in snowpack in all river basins west of the Divide. Due to those declines, snowpack ranged from 77 to 86 percent of normal on February 1 in west-side river basins.

UPDATE FROM NRCS, FEB. 9:

While one storm doesn’t make a winter, it certainly can improve conditions quickly. Storm snow water equivalent totals were IMPRESSIVE in many areas, though the far southwest corner of the state was left yearning for the gluttony of snow other parts of the state were receiving. Many river basins experienced significant increases in snowpack percentages over a very short period, helping them recover from below normal to near or above normal in just eight days. While there is certainly a lot of time left before peak snowpack is reached later in the spring, this is certainly putting the right foot forward towards ensuring water resources during runoff season.

BLACKFOOT RIVER BASIN SNOW WATER EQUIVALENT



Black line: 2021 Water Year

Green line: 30-year median

FEB. 1 – FEB. 9 CHANGE IN SNOWPACK PERCENTAGES

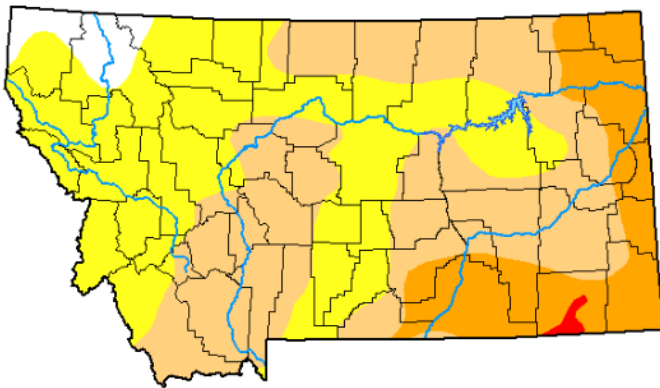
| River Basin Name | Feb 1 SWE % normal | Feb 9 SWE % normal | SWE % Change |
|---------------------|--------------------|--------------------|--------------|
| Beaverhead | 78% | 89% | +11% |
| Big Hole | 83% | 102% | +19% |
| Bitterroot | 83% | 103% | +20% |
| Blackfoot | 78% | 95% | +17% |
| Flathead Lake | 90% | 104% | +14% |
| Flint | 89% | 124% | +35% |
| Gallatin ab Gateway | 79% | 95% | +16% |

Reservoir Storage

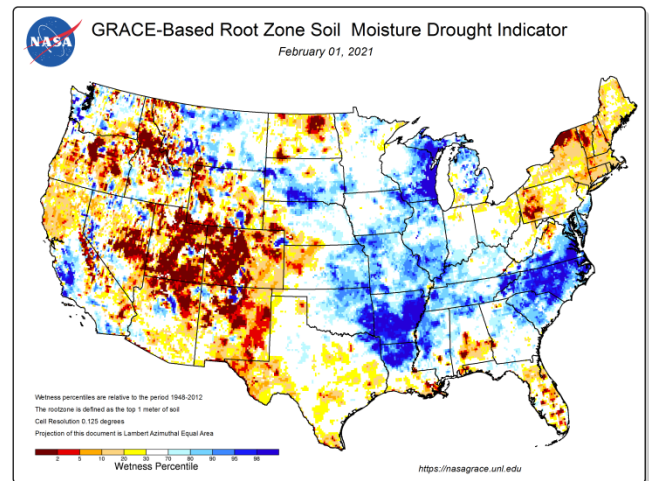
Reservoir storage is currently above average for this time of year in Western Montana reservoirs and about equal to the levels at this time last year.

| 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 | 9.0 | 9.0 | 7.5 | 16.0 | 56% | 56% | 47% | 120% | 120% |
| Georgetown Lake | 28.2 | 29.4 | 27.8 | 31.0 | 91% | 95% | 90% | 101% | 106% |
| Lower Willow Creek Reservoir | | | 1.9 | 4.9 | | | 38% | | |
| Nevada Creek Res | 7.0 | 6.4 | 5.0 | 12.6 | 55% | 51% | 40% | 139% | 127% |
| Basin-wide Total | 44.2 | 44.8 | 40.3 | 59.6 | 74% | 75% | 68% | 110% | 111% |
| # of reservoirs | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

Montana Drought Monitor – Feb. 2, 2021



National Root Zone Soil Moisture – Feb. 1, 2021



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: February 9, 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, February 09, 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 | 9.4 | 8.5 | 111 | 10.5 | 10.4 | 101 |
| Basin Creek | | 7180 | 4.1 | 4.8 | 85 | 3.2 | 6 | 53 |
| Black Pine | | 7210 | 8.3 | 6.6 | 126 | 8.8 | 9 | 98 |
| Combination | | 5600 | 4.2 | 3.4 | 124 | 7.1 | 6.5 | 109 |
| Copper Bottom | | 5200 | 5 | N/A | * | 13.3 | 11.6 | 115 |
| Copper Camp | | 6950 | 19.3 | N/A | * | 20 | 22.8 | 88 |
| Lubrecht Flume | | 4680 | 5 | 4 | 125 | 10 | 7.3 | 137 |
| Nevada Ridge | | 7020 | 9.8 | 9.4 _c | 104 | 11.2 | 11.4 _c | 98 |
| N Fk Elk Creek | | 6250 | 7.5 | 7.2 | 104 | 12.5 | 9.5 | 132 |
| North Fork Jocko | | 6330 | 25 | 28.5 | 88 | 33.7 | 35.2 | 96 |
| Peterson Meadows | | 7200 | 6.6 | 5.8 | 114 | 7.6 | 7.5 _c | 101 |
| Skalkaho Summit | | 7250 | 14.6 | 14.7 | 99 | 18.7 | 15.7 | 119 |
| Stuart Mountain | | 7400 | 20.3 | 21.7 _c | 94 | 20.5 | 22.6 _c | 91 |
| Warm Springs | | 7800 | 16.5 | 13 | 127 | 15.6 | 15.1 | 103 |
| Basin Index (%) | | 103 | | | 101 | | | |

February 9, 2021, USGS Real Time Flow Conditions

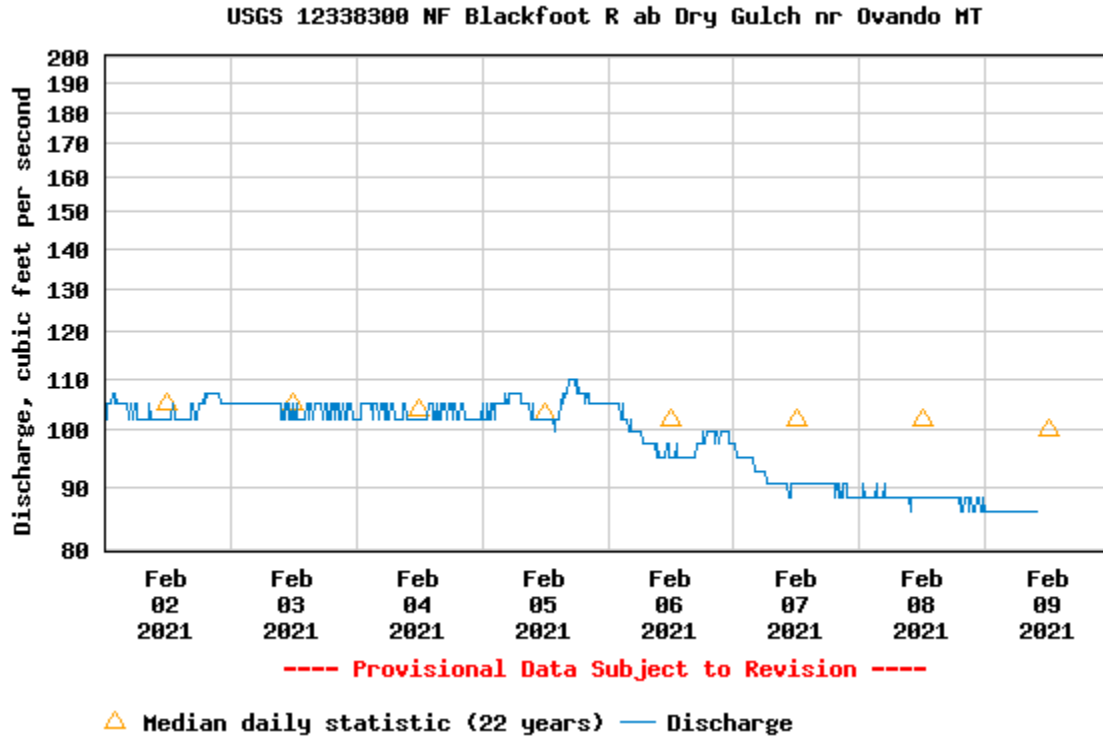
Nevada Creek above Reservoir

NO READING DUE TO ICE

North Fork Blackfoot

Discharge, cubic feet per second

Most recent instantaneous value: 86 02-09-2021



Daily discharge, cubic feet per second -- statistics for Feb 9 based on 22 water years of record [more](#)

| Min (2014) | 25th percentile | Median | Mean | Most Recent Instantaneous Value Jan 11 | 75th percentile | Max (2009) |
|------------|-----------------|--------|------|--|-----------------|------------|
| 78.3 | 86.0 | 86 | 100 | 104 | 115 | 164 |

Blackfoot River at Bonner

NO READING DUE TO ICE

Blackfoot River above Nevada Creek

NO READING DUE TO ICE

Three-Month Outlook February 2021

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

Higher chance for above average precipitation for February through April.

Higher chance for normal to below normal temperatures from February through April.

