

Blackfoot Water Supply Report

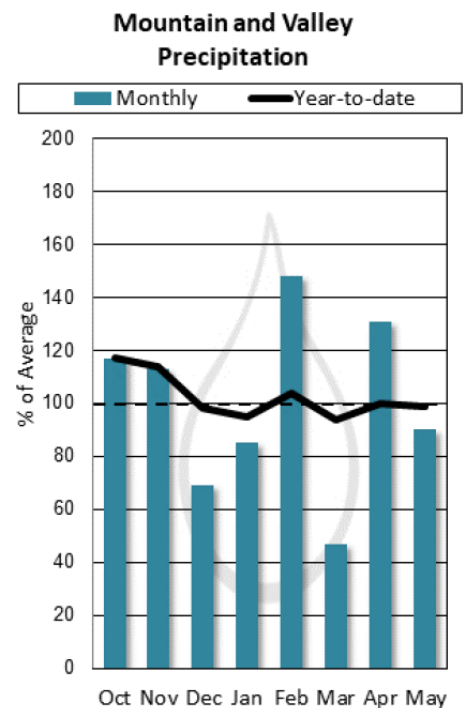
June 7, 2019

Montana Water Supply Report as of June 1st, 2019 (from NRCS):
<https://www.nrcs.usda.gov/wps/portal/nrcs/mt/snow/waterproducts/basin/>

Overview

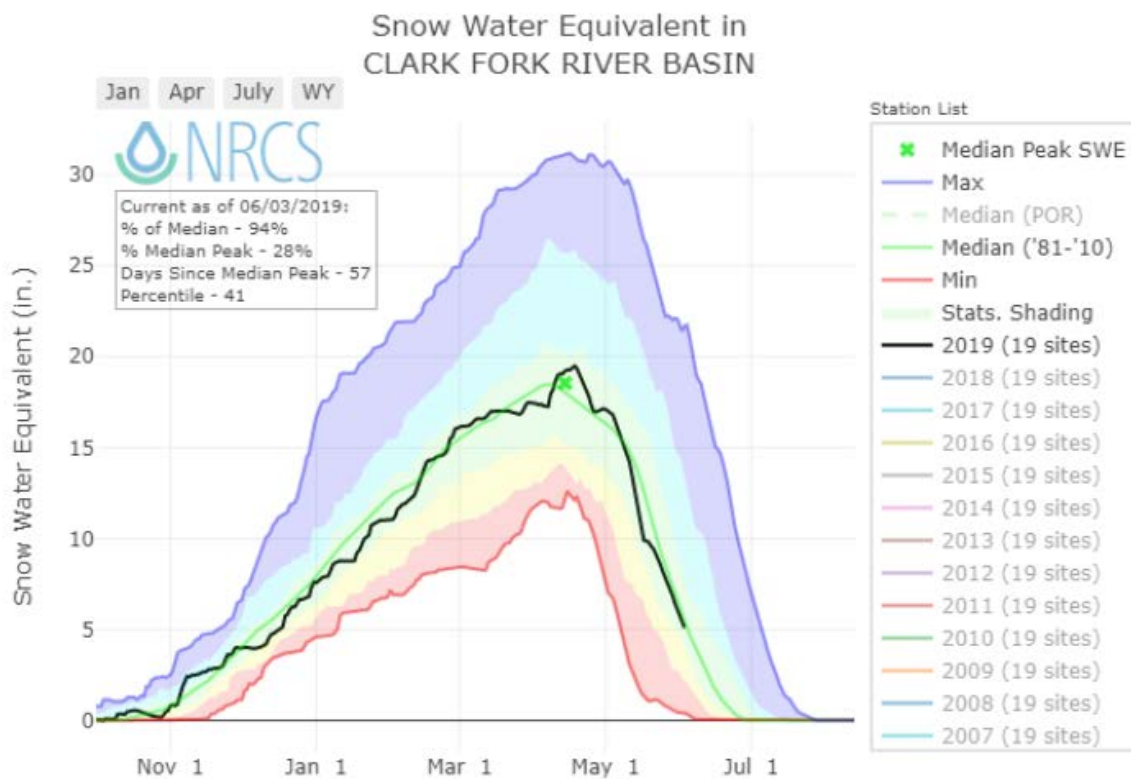
Let's start this month's report with the most interesting subject possible, statistics. It bears discussing because looking at snowpack percentages on June 1st can be a little misleading. When looking at snowpack totals in this report, or on the online maps and reports, it's important to remember that it is being compared to this date, and not the peak snowpack for the year. The snow has been actively melting throughout May, and high percentages shouldn't be cause for alarm. In some basins, mostly west of the Divide, most of the snowpack has typically melted at monitoring locations with about one-third to half of the basin-wide annual peak snowpack remaining to melt at higher elevations. In southern Montana, where higher elevation helps to sustain snowpack a bit longer, about half of the snowpack is typically remaining to melt at mid and high elevations. Putting these statistics into context, this month snowpack percentages are below average for this date in northwest river basins, meaning that melt out is ahead of schedule, amplified by the above average temperatures during the month of May. Snowpack in central and southern basins benefitted by the cool weather during the third week of May, which helped to prolong snowmelt, resulting in snowpack that is above normal for June 1st. So, there is good news and bad news hidden in these numbers. Well-above average temperatures during the last week of May (and first week of June) have once again accelerated snowmelt in the mountains. Rivers on the east side of the Divide are once again on the rise and will likely experience their snowmelt-driven peak flows during the next 7-14 days.

Upper Clark Fork Basin



Upper Clark Fork River Basin Overview

Most low and mid-elevations melted out during the month of May in the Upper Clark Fork River basins, causing rivers to rise across the region. Snowmelt driven peak flows (flows driven only by snowmelt) likely occurred on many rivers during the third week of the month, but rivers have remained high through the end of the month. Snowpack on June 1st remains at the high elevations in the basin, which will help to sustain flows over the coming month, is slightly below normal for the basin overall, but above normal in some of the sub-basins in the headwaters of the Clark Fork. Precipitation during May was variable, with some sites reporting well below average precipitation, while others reported above average precipitation. This was likely due to the convective nature of storms this spring (thunderstorms and not large fronts). June is the last “wet” month in the region before more typical summer weather patterns play out and will play an important role in the flows later in the summer months.



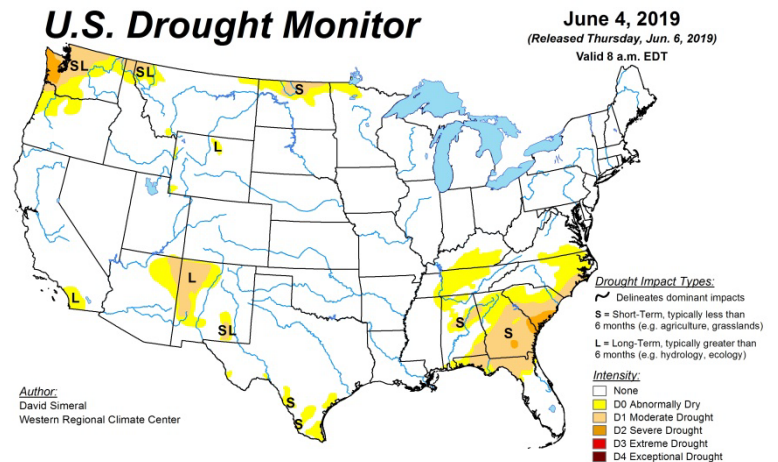
Reservoir Storage

As of June 1st, most reservoirs across the state are approaching full, or are full and spilling. The snowpack this year was sufficient to fill most reservoirs, and summer water supply from reservoirs looks to be adequate in most locations.

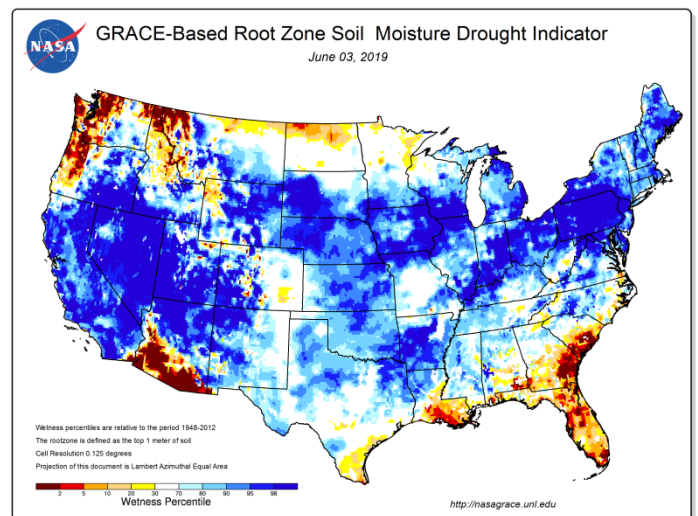
Reservoir Storage

| 6/1/2019 | % Average | % Capacity | % Last Year |
|----------------------|------------------|-------------------|--------------------|
| Columbia River Basin | 107 | 79 | 93 |
| Kootnenai in Montana | 106 | 69 | 88 |
| Flathead in Montana | 109 | 89 | 98 |
| Upper Clark Fork | 108 | 93 | 92 |
| Bitterroot | 108 | 106 | 100 |
| Lower Clark Fork | 102 | 98 | 100 |

U.S. Drought Monitor – June 4, 2019



National Root Zone Soil Moisture – June 3, 2019

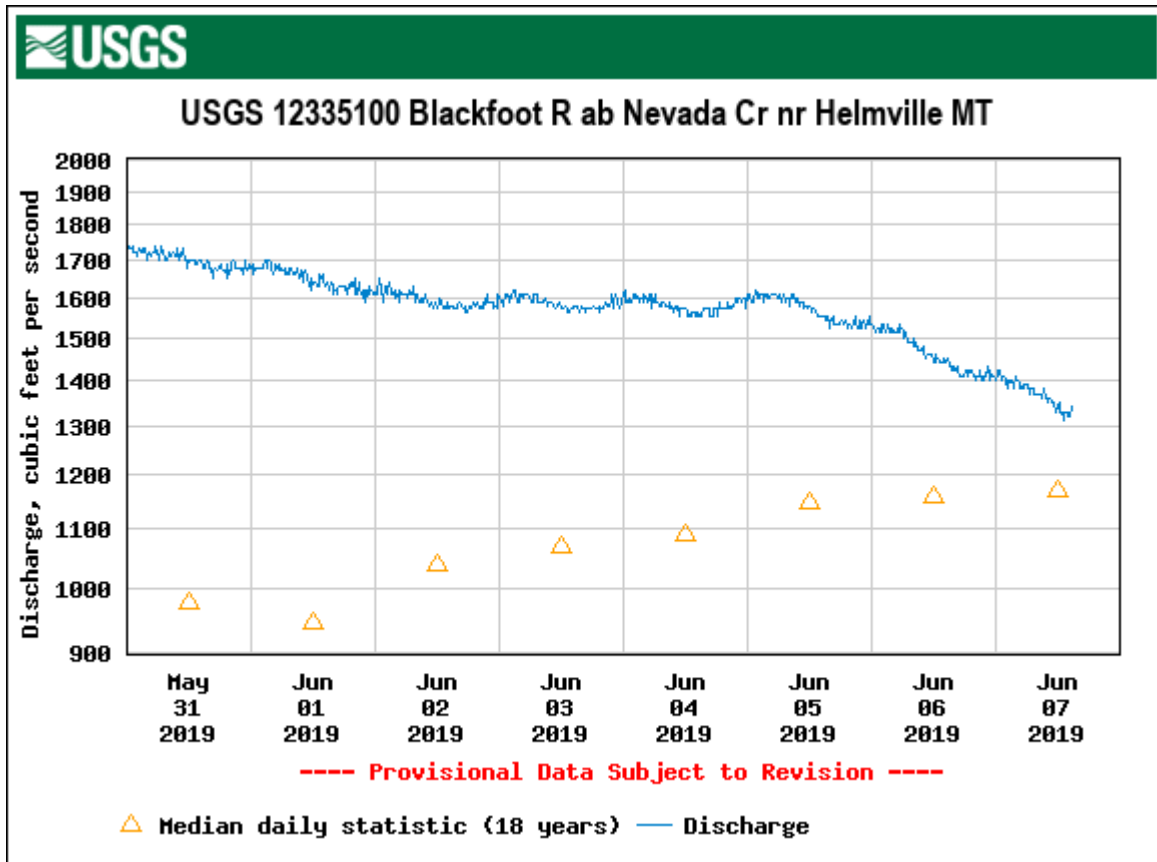


June 7, 2019, USGS Real Time Flow Conditions

Blackfoot River Above Nevada Creek

Daily discharge, cubic feet per second -- statistics for Jun 7 based on 18 years of record [more](#)

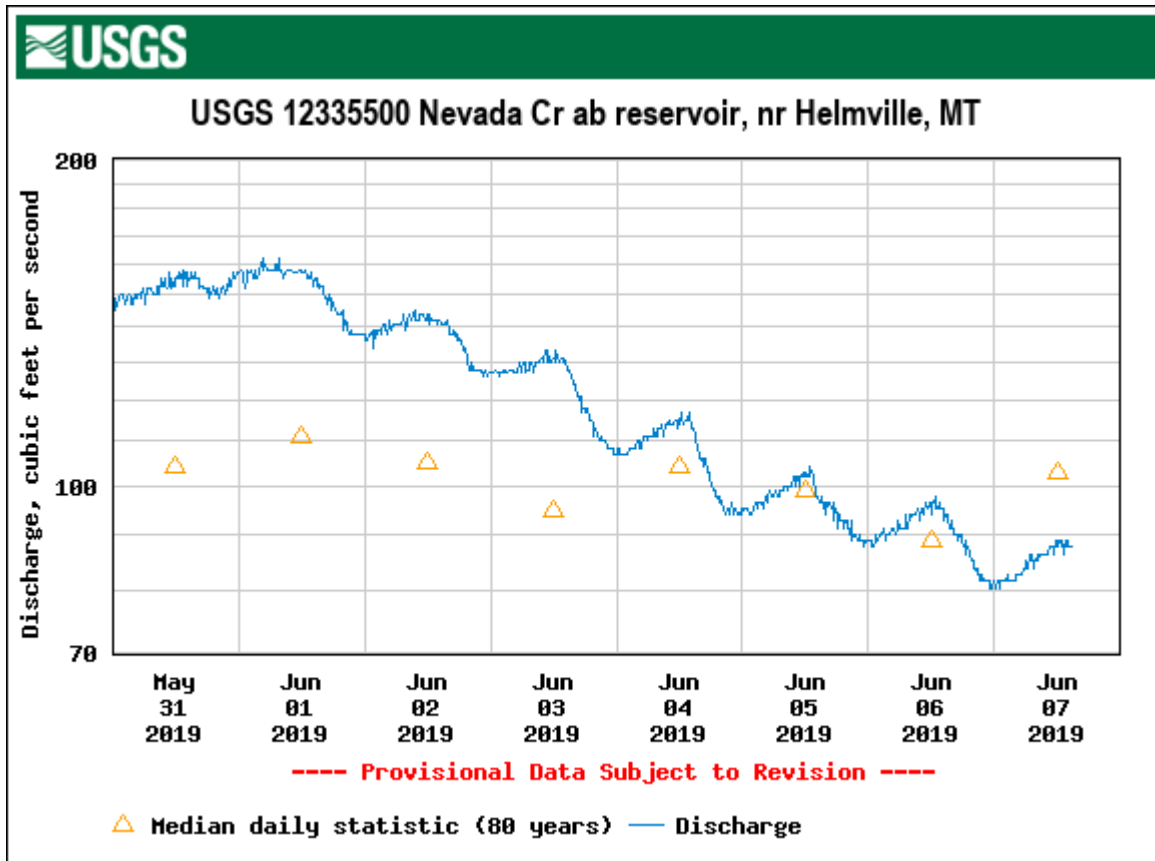
| Min (2001) | 25th percentile | Median | Mean | Most Recent Instantaneous Value Jun 7 | 75th percentile | Max (2011) |
|------------|-----------------|--------|------|---------------------------------------|-----------------|------------|
| 575 | 854 | 1170 | 1250 | 1340 | 1600 | 2810 |



Nevada Creek Above Reservoir

Daily discharge, cubic feet per second -- statistics for Jun 7 based on 80 years of record [more](#)

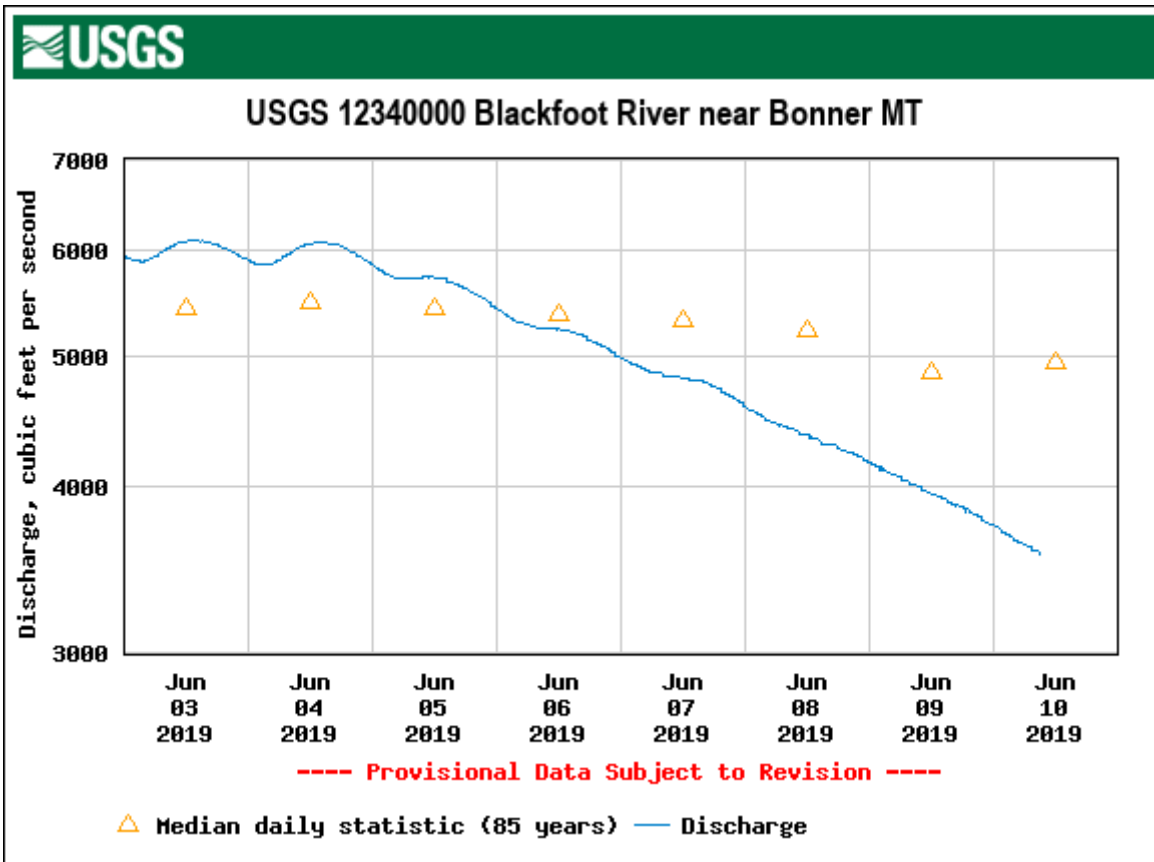
| Min (1973) | 25th percentile | Most Recent Instantaneous Value Jun 7 | Median | Mean | 75th percentile | Max (1975) |
|------------|-----------------|---------------------------------------|--------|------|-----------------|------------|
| 12.0 | 46 | 87.7 | 103 | 121 | 163 | 554 |



Blackfoot River at Bonner

Daily discharge, cubic feet per second -- statistics for Jun 7 based on 85 years of record [more](#)

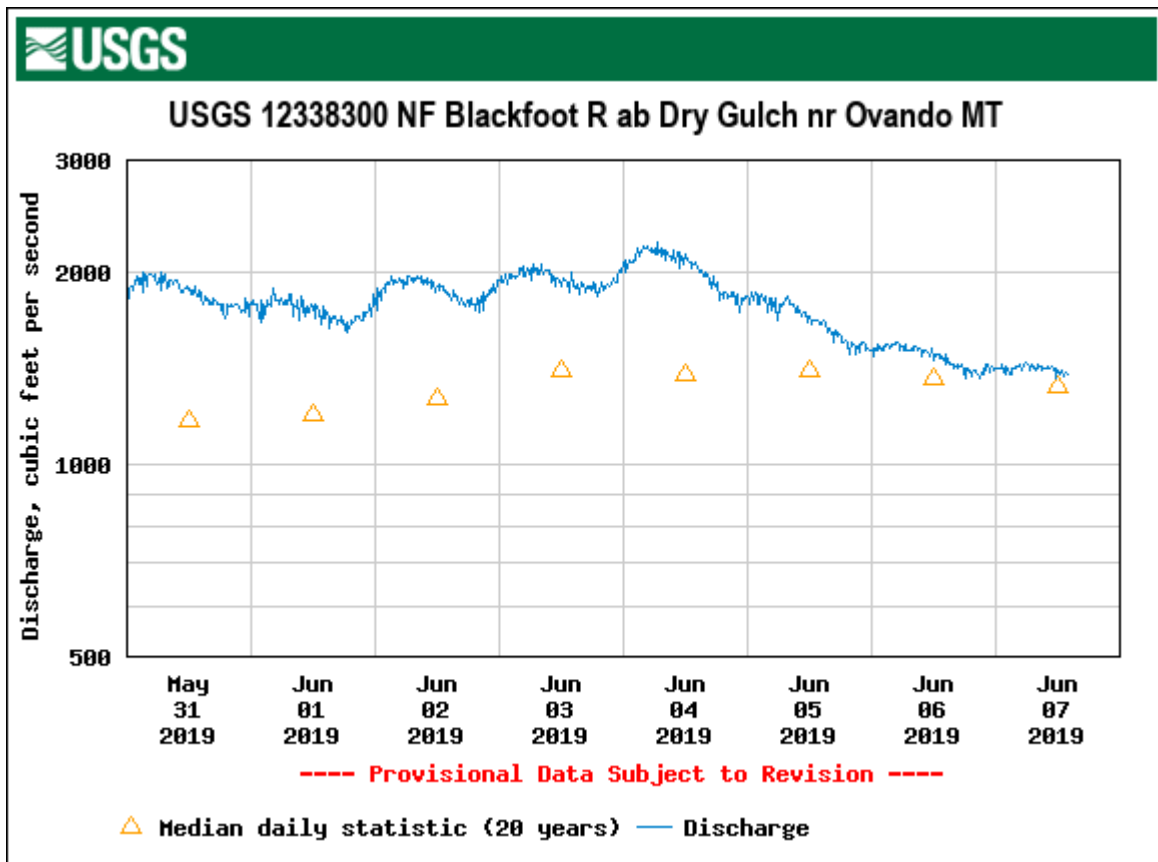
| Min (1987) | 25th percentile | Most Recent Instantaneous Value Jun 7 | Median | Mean | 75th percentile | Max (2011) |
|------------|-----------------|---------------------------------------|--------|------|-----------------|------------|
| 1340 | 4120 | 4790 | 5320 | 5890 | 7000 | 14100 |



North Fork Blackfoot above Dry Gulch near Ovando

Daily discharge, cubic feet per second -- statistics for Jun 7 based on 20 years of record [more](#)

| Min (1998) | 25th percentile | Median | Most Recent Instantaneous Value Jun 7 | Mean | 75th percentile | Max (2011) |
|------------|-----------------|--------|---------------------------------------|------|-----------------|------------|
| 713 | 1100 | 1330 | 1390 | 1550 | 1980 | 4000 |



Three-Month Outlook June 7, 2019

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

Higher chance for above average precipitation
for June through August.

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

