

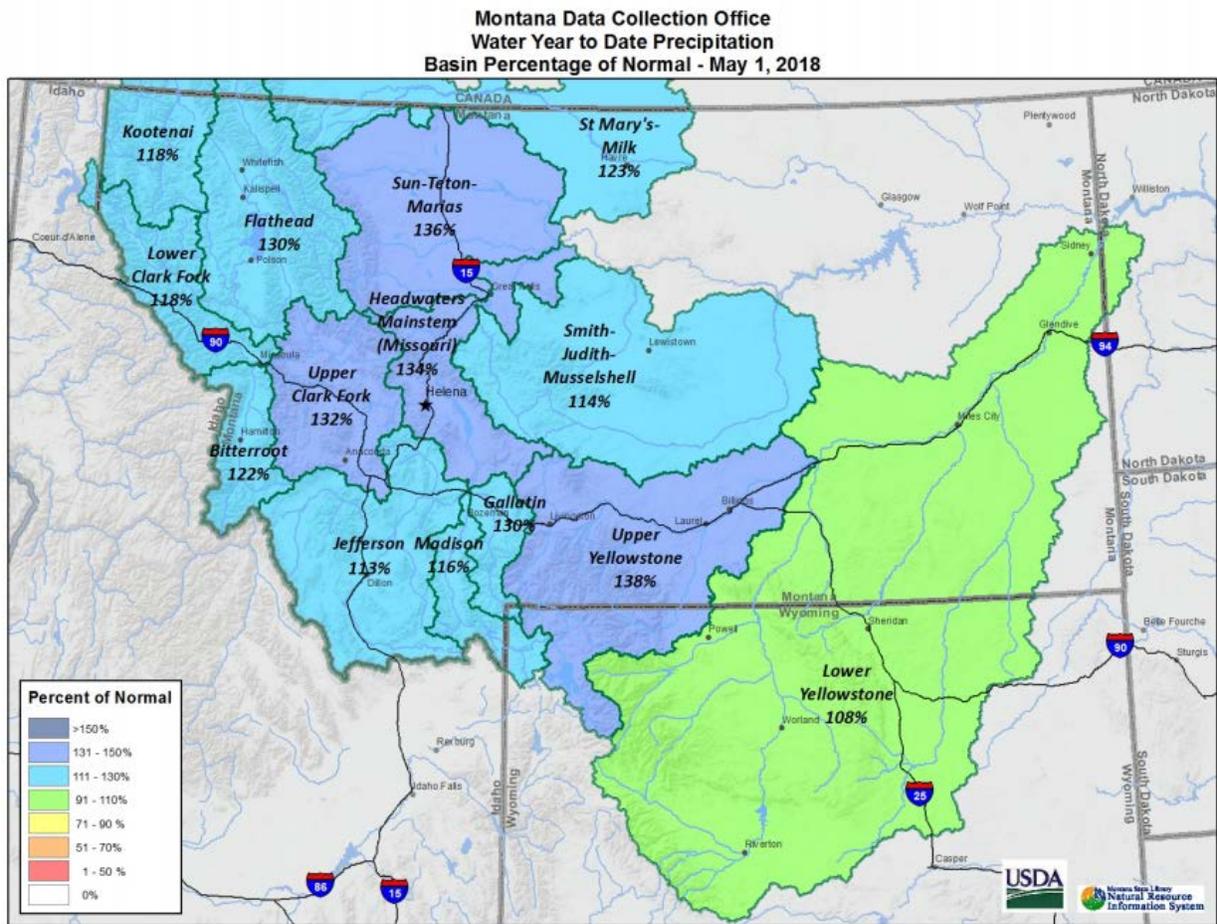


Montana Water Supply Report – Spring 2018

Greetings:

In collaboration with the Governor's Drought and Water Supply Advisory Committee, DNRC Water Planners have compiled this Spring Water Supply Report. This report provides a synopsis of statewide conditions gleaned from multiple sources and offers additional resources with more in-depth information. This information is compiled by DNRC staff with support from other state and federal agency partners to bring together local, state and national expertise in climate science, snowpack and streamflow monitoring and other important drought and flooding indicators.

Water Supply Overview:



Precipitation:

Precipitation in February, March and April was well-above average in many mountain and valley locations across Montana. What stands out in April is the distribution of when precipitation fell, with significant moisture and cool temperatures continuing to build the mountain snowpack in many areas during the first two weeks. Looking at the forecast, as we move through spring, the eastern mountain basins are favored with regard to precipitation, with May and June typically being some of the “wettest” months of the year. On the west side of the Divide, precipitation tapers

down as summer approaches. Water-year to date precipitation is above to well-above average across the state due to good fall precipitation and abundant snowfall this year. It will be interesting to see what spring and summer yield.

Reservoirs: ([Bureau of Reclamation Reservoirs](#), [State Reservoirs](#))

This year has presented a challenge to water managers across the state. Well-above normal to record snowpack has all but assured “adequate” water supply to fill most reservoirs in the state. The Bureau of Reclamation (USBOR) and Army Corps of Engineers (USACE) have been actively managing large reservoir projects across the state in anticipation of the well above normal snowmelt and high stream flows. These projects provide for flood control and water for power, agricultural use and recreation. Snowmelt has been filling the reservoirs at a rapid pace since mid-April, and snowpack remains well above normal for this date above the reservoirs. Once a reservoir fills and spills, water managers have little control of the releases to the river, which could impact people and infrastructure downstream. Other small irrigator-controlled projects across the state share a similar situation this year, and water managers should be aware of the substantial inflows forecasted for most reservoirs. Ultimately, the fill rate of all reservoirs will largely depend on the weather in the future weeks and months. There is still a substantial amount of snowpack remaining in the higher elevations this year.

Streamflow: ([DNRC/USGS/MBMG Gaging Stations](#), [Missouri Basin Forecast Center](#), [Northwest River Forecast Center](#))

Due to the cool and wet weather we experienced this year, snowpack was well above normal in most basins. As mentioned above, snowpack continued to build on our already above normal conditions and low elevation snowmelt did not begin until mid-April. The mild weather during the latter half of April caused many streams and rivers to rise dramatically at the end of the month. Flooding was reported along the Milk River, and the Clark Fork River basin above Missoula was in the minor flood stage as of May 1st and is approaching major flood stage as of this writing. If water users are to take away one point from this information it should be this; snowmelt has only just begun in many areas, and the snowpack that is remaining is well above normal for this date. There is a substantial amount of water left to come. Forecasts for May – July are above normal in the southwestern river basins but increase to well above normal for many basins west of the Divide, along the Rocky Mountain Front, and portions of the Upper Yellowstone. This winter’s snowpack will provide ample runoff this spring and summer, however, water users should continue to keep a close eye on day-to-day and week-to-week weather patterns. A prolonged period of high pressure with abundant sunshine, high daily temperatures, and nights of above freezing temperatures could release a substantial amount of water in a short period.

Drought Watch: ([Montana Drought Information and Montana Drought Impacts Reporter](#))

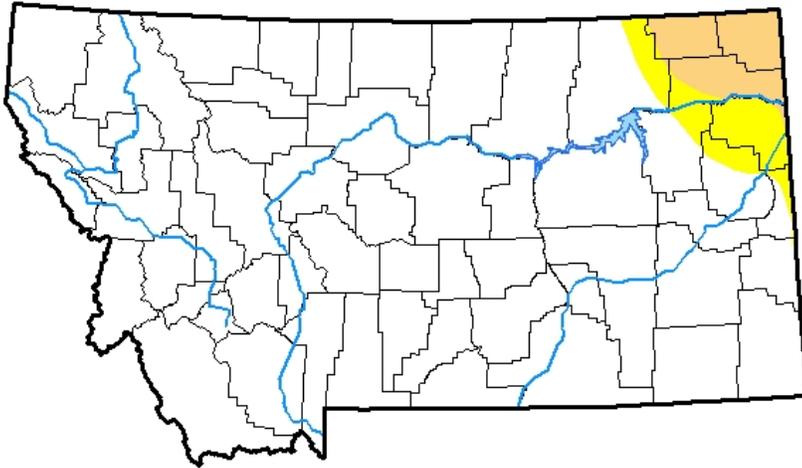
Despite the many reports of flooding and above average to record prairie snowpack across much of the state this winter, abnormally dry to moderate drought conditions persist in northeast Montana. Part of the story is linked to last summer’s exceptionally dry conditions, and despite average- to above average precipitation in some areas, the moisture deficit may be too great to overcome. Some areas in Roosevelt and Daniels county remain well below normal for precipitation through April. Fortunately, May and June are typically the wettest months of the year in this part of the state, so there is still time to make up some of the lost ground. Unfortunately, if the weather in May and June is uncooperative and if temperatures exceed norms, this area of the state could see severe to extreme drought conditions again later this summer. The next 6 to 8 weeks will tell much of the story, so stay tuned. Below is the most recent map from the [U.S. Drought Monitor](#). Additional information on drought, weather and climate is available from the [National Integrated Drought Information System](#) (NIDIS)

U.S. Drought Monitor Montana

May 1, 2018
(Released Thursday, May 3, 2018)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	93.03	6.97	3.52	0.00	0.00	0.00
Last Week <i>04-24-2018</i>	91.13	8.87	3.81	1.12	0.00	0.00
3 Months Ago <i>01-30-2018</i>	57.09	42.91	28.19	14.49	0.00	0.00
Start of Calendar Year <i>01-02-2018</i>	47.47	52.53	42.04	26.75	12.23	0.00
Start of Water Year <i>09-26-2017</i>	6.48	93.52	86.08	69.62	42.74	17.53
One Year Ago <i>05-02-2017</i>	98.51	1.49	0.00	0.00	0.00	0.00



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

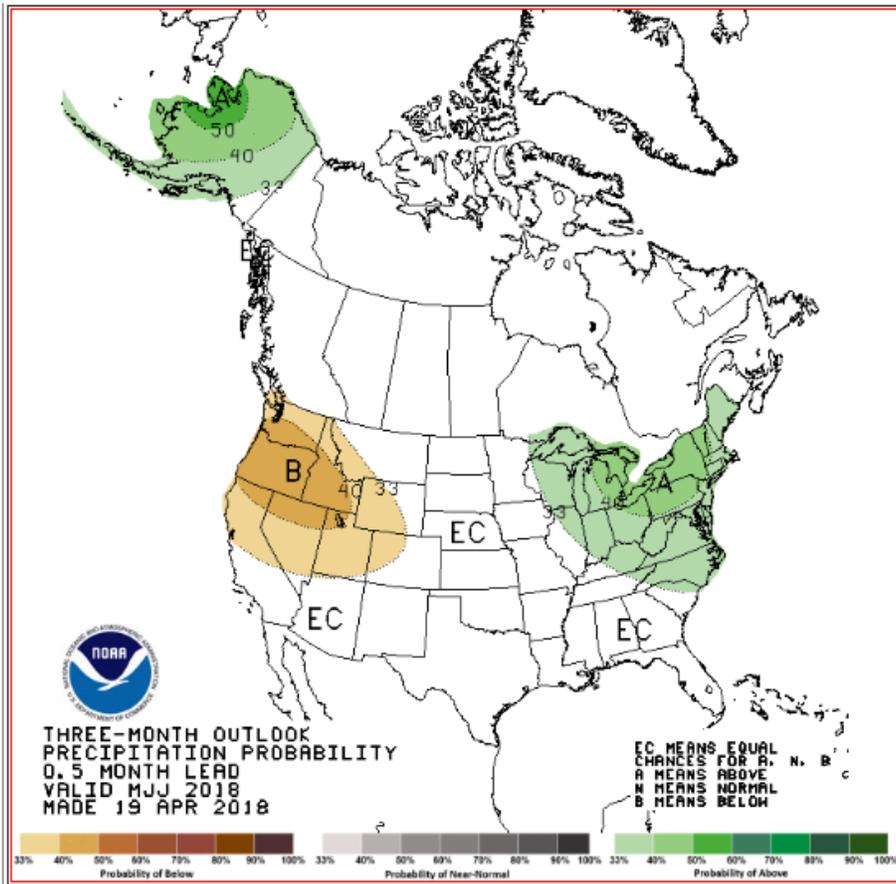
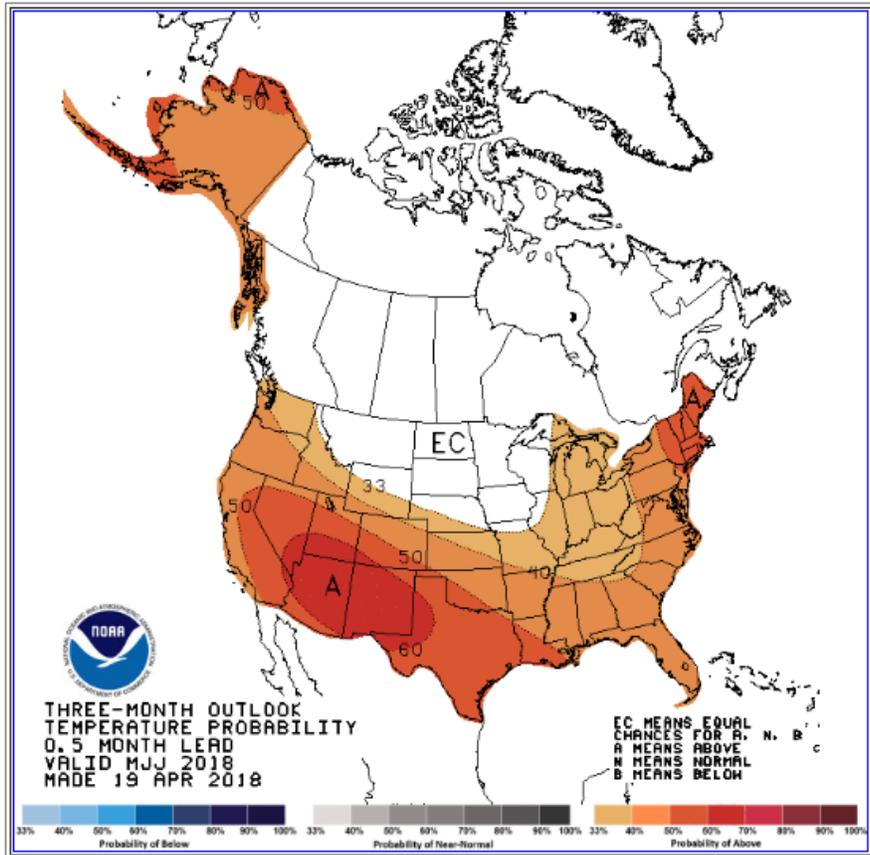
David Simeral
Western Regional Climate Center



<http://droughtmonitor.unl.edu/>

Long Term Forecast:

The [Climate Prediction Center](#), a division of the National Weather Service, provides long-term forecasts for the contiguous United States, Alaska and Hawaii. The current temperature outlook for May, June, and July calls for an equal chance of average, below normal or above normal temperatures. That means that there are not any clear signals on the horizon that indicate the likelihood of one scenario over another. The maps below show the 3-month forecast for both temperature and precipitation.



Much of the information in this report comes from the [NRCS Water Supply Outlook Report](#), U.S. Drought Monitor, Climate Prediction Center, National Integrated Drought Information System and others.

These combined indicators tell the current water supply story in your area. DNRC can help answer questions about water resources in your area or provide information about water management tools like stream gages, near you. DNRC also provides planning assistance and technical support for local water supply planning for your community and in your watershed.

Please don't hesitate to get in touch if you have any questions or feedback, and keep an eye out for the next update in late June. Contact DNRC staff listed below for assistance or additional information.

Lower Missouri Basin

Water Planner - [Michael Downey](#)
State Drought Monitoring

Yellowstone River Basin

Water Planner - [Sara Meloy](#)

Upper Missouri River Basin

Water Planner - [Ann Schwend](#)

Clark Fork & Kootenai River Basins

Water Planner – Vacant

