

## Northern Plains - Current Drought Conditions

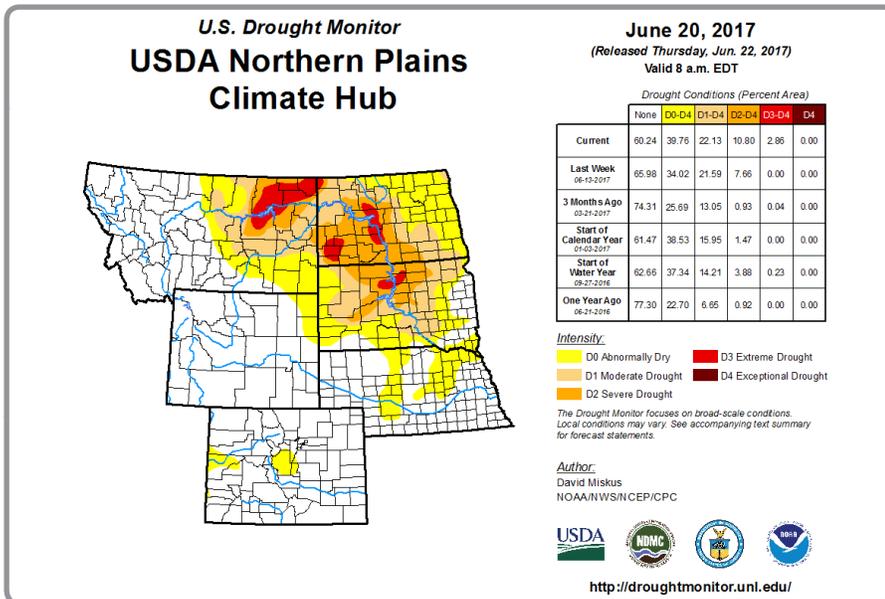
### Highlights for the Region

Over the past month, drought conditions have rapidly developed and intensified across the Northern Plains. According to the latest release of the U.S. Drought Monitor on June 20th, approximately 22% of the region is now in drought. This impacts nearly 650,000 people in the region.

Due to mounting precipitation deficits, above-normal temperatures, and windy conditions, Extreme Drought (D3) was introduced to areas of eastern Montana, western North Dakota, and north-central South Dakota this week.

Short-term dryness caused Abnormally Dry (D0) conditions to expand into areas of central and southeastern Montana, north-central Nebraska, and northeastern Wyoming. These are areas to monitor closely for potential drought development.

South Dakota Governor Dennis Daugaard issued an emergency drought declaration on June 16th, while North Dakota Governor Doug Burgum declared a drought emergency for 26 counties on June 23rd.



The U.S. Drought Monitor, established in 1999, is a weekly map of drought conditions that is produced jointly by the National Oceanic and Atmospheric Administration, the U.S. Department of Agriculture, and the National Drought Mitigation Center (NDMC) at the University of Nebraska-Lincoln. The U.S. Drought Monitor website is hosted and maintained by the NDMC. <http://droughtmonitor.unl.edu>

## Northern Plains - Climate Overview for Last 30 Days

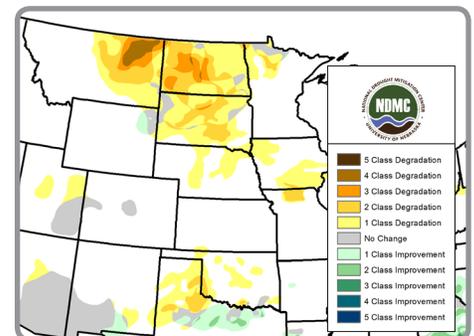
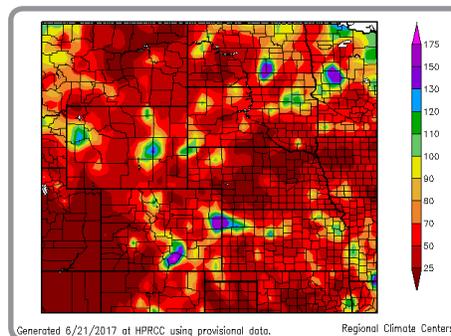
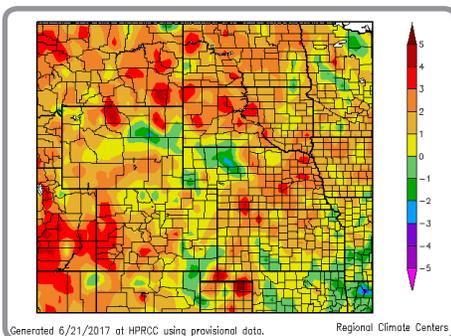
### Temperature and Precipitation Anomalies

Departure from Normal Temperature (°F)  
May 22 - June 20, 2017

Percent of Normal Precipitation (%)  
May 22 - June 20, 2017

### Drought Expansion

U.S. Drought Monitor Class Change  
1 Month: May 23 - June 20, 2017



Temperatures since late May have been above normal for the majority of the Northern Plains, with several areas experiencing temperatures of at least 2-3°F above normal. June started off quite hot with numerous stations in Montana and the Dakotas setting new daily records due to widespread temperatures in the 90-100°F range. Despite a cool down over the past week, month-to-date temperature rankings indicate that this has been one of the top 15 warmest first three weeks of June on record for these drought-stricken areas.

Precipitation over the past month has been much below normal for the majority of the region, with many locations receiving less than 50% of normal precipitation. Recent rains offered some relief in the eastern Dakotas; however, other drought-affected areas missed out. Year-to-date precipitation indicates that much of the affected region has deficits of at least 3-6 inches. Because late spring and early summer is usually the wettest time of the year for this region, below-normal precipitation during this key time period can have lasting impacts.

Since the May 23rd release of the U.S. Drought Monitor, drought conditions have expanded and intensified rapidly. At the time of the May 23rd release, nearly 2% of the region was depicted in Moderate Drought (D1) and this area was restricted to north-central South Dakota/south-central North Dakota and a small area of northeastern Wyoming. Now, about 22% of the region is in drought, with some areas having a three- or four-category class change over this time period. These changes are noteworthy, as the U.S. Drought Monitor is only updated once every week.

# Northern Plains - Drought Impacts

## Impacts to Crops

Impacts have been reported from a number of sectors, with agriculture topping the list. Both winter and spring wheat have been hit particularly hard with many producers reporting crop failures and stunted growth.

For this time of the year, spring wheat is in its worst condition in over 20 years. The percentage in poor to very poor condition was 24% in North Dakota, 37% in Montana, and 64% in South Dakota, according to the USDA's Crop Progress and Condition reports released at the start of the week.

Corn and soybean operations have also been impacted as some fields have shown uneven emergence and/or exhibited slow growth.



Above: (Left) Cracks in wheat field in Valley County, Montana, photo courtesy Mike Fransen, and (Right) Dry pastureland in Mercer County, North Dakota, photo courtesy Extension Agent Craig Askim.

## Impacts to Cattle

Cattle sales are up across the northern tier of the region due to a combination of feed shortages and poor pastureland growth. Cow/calf pairs are being sold, which indicates the culling of herds. Poor water quality in stock ponds has also been reported, and on feedlots, certain livestock illnesses, like dust pneumonia, have emerged.

The states of Montana, North Dakota, and South Dakota all have ways to connect ranchers in need of hay with those who have hay to sell.

MT: <http://agr.mt.gov/Hay-Hotline>  
 ND: 701-425-8454; <http://arcg.is/2t6sl1Z>  
 SD: [www.facebook.com/groups/560422267324542](http://www.facebook.com/groups/560422267324542)



## Report Your Impacts

Are you experiencing drought impacts in your area? Please report them to the National Drought Mitigation Center's Drought Impact Reporter. Started in 2005, this database is used by the U.S. Drought Monitor authors to better understand the conditions on the ground.



<http://droughtreporter.unl.edu/map/>

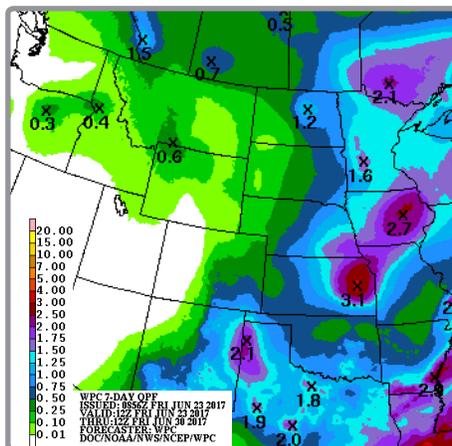


# Northern Plains - Short- and Long-term Outlooks

## Weather, Climate, and Wildfire Outlooks

Short-term outlooks indicate little relief to current drought conditions. The Quantitative Precipitation Forecast map to the right depicts the amount of liquid precipitation expected to fall over the next 7-day period. For the Northern Plains, relatively small amounts of rainfall are expected, with the heaviest rainfall concentrated in the east. But, cooler conditions are also anticipated, which could ease some impacts. In the longer-term, the NOAA Climate Prediction Center extended outlooks indicate enhanced odds for wetter conditions in portions of eastern Montana and western North Dakota in July.

According to the National Interagency Fire Center, there is a normal risk for significant wildland fires for the drought-impacted areas of the region. But, several county-level burn bans are in effect, as small fires can easily start from dry grass. Conditions should be monitored as the summer progresses, as larger fires are more common later on in the year.



### Need a Forecast?

Your local National Weather Service Weather Forecast Office can provide you with the most up-to-date forecasts available. Visit them here: <http://www.weather.gov>.

### Stay Tuned and In Touch

Please stay tuned for the next Northern Plains drought webinar, which will be convening in early July. If you need information in the meantime, please reach out to any of the partners listed to the right or contact your local State Climatologist directly:

Montana: Kelsey Jencso, [state.climatologist@umontana.edu](mailto:state.climatologist@umontana.edu)  
 North Dakota: Adnan Akyuz, [adnan.akyuz@ndsu.edu](mailto:adnan.akyuz@ndsu.edu)  
 South Dakota: Laura Edwards, [laura.edwards@sdstate.edu](mailto:laura.edwards@sdstate.edu)

## Partners

High Plains Regional Climate Center  
<https://hprcc.unl.edu>

National Drought Mitigation Center  
[www.drought.unl.edu](http://www.drought.unl.edu)

National Integrated Drought Information System  
[www.drought.gov](http://www.drought.gov)

National Centers for Environmental Information  
[www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

National Weather Service  
<http://www.weather.gov>

Montana Department of Natural Resources & Conservation  
<http://dnrc.mt.gov/>

Montana State Climate Office  
<http://climate.umt.edu/>

North Dakota State Climate Office  
<https://www.ndsu.edu/ndscfo/>

South Dakota State Climate Office  
<https://climate.sdstate.edu/>

South Dakota State University Extension  
<http://igrow.org/>

USDA Northern Plains Regional Climate Hub and University of Wyoming Extension  
[www.climatehubs.oce.usda.gov/northernplains](http://www.climatehubs.oce.usda.gov/northernplains)

