



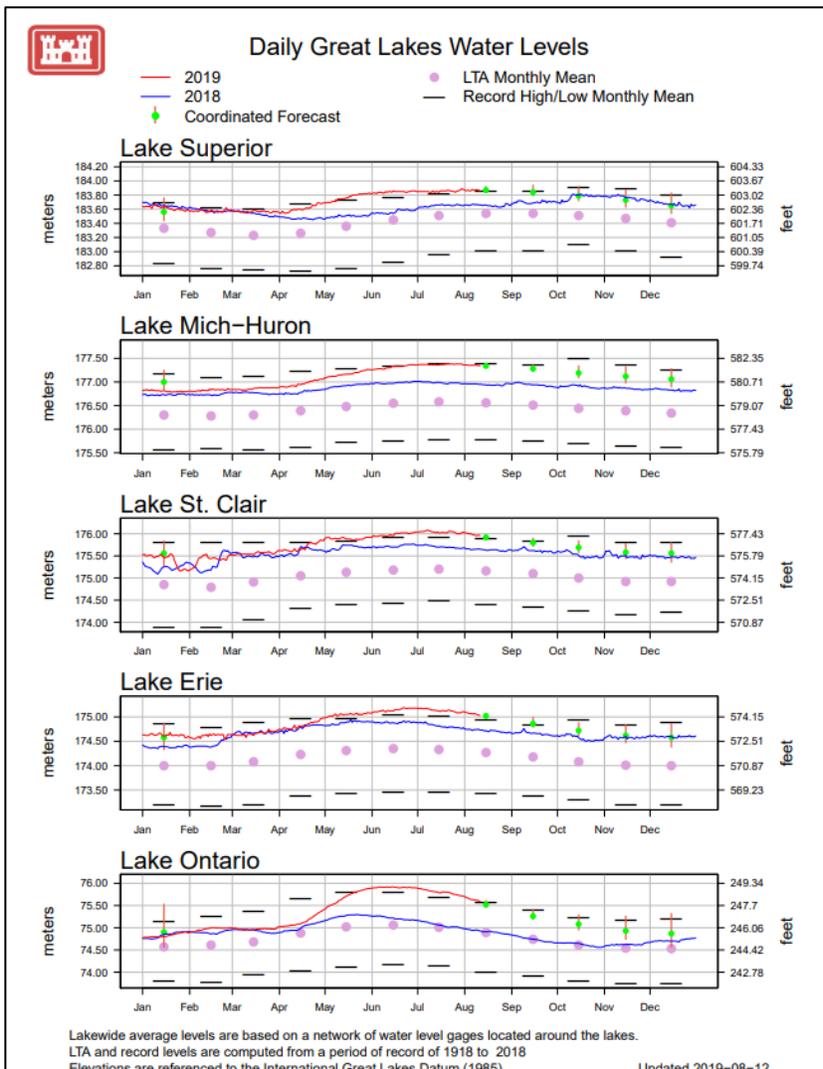
# Water and Climate Update

August 15, 2019

The Natural Resources Conservation Service produces this weekly report using data and products from the [National Water and Climate Center](#) and other agencies. The report focuses on seasonal snowpack, precipitation, temperature, and drought conditions in the U.S.

Precipitation .....	2	Other Climatic and Water Supply Indicators .....	11
Temperature.....	6	Short- and Long-Range Outlooks.....	15
Drought .....	8	More Information .....	18

## Water levels reach record highs across the Great Lakes



According to the U.S. Army Corps of Engineers, water levels across the Great Lakes remain high with the forecasted levels near or above the monthly record highs for August on all lakes.

Lake St. Clair, Erie, and Ontario are forecasted to exceed their highest recorded monthly average for August by 2 to 5 inches, Lake Superior is projected to meet its record, and Lake Michigan-Huron will be 2 inches below its record.

The current lake levels exceed their 2018 values by 8 to 15 inches on all lakes except for Lake Ontario, which is at 27 inches above last year's level.

Lake levels have been high for much of the summer but are projected to have a net decrease by next month.

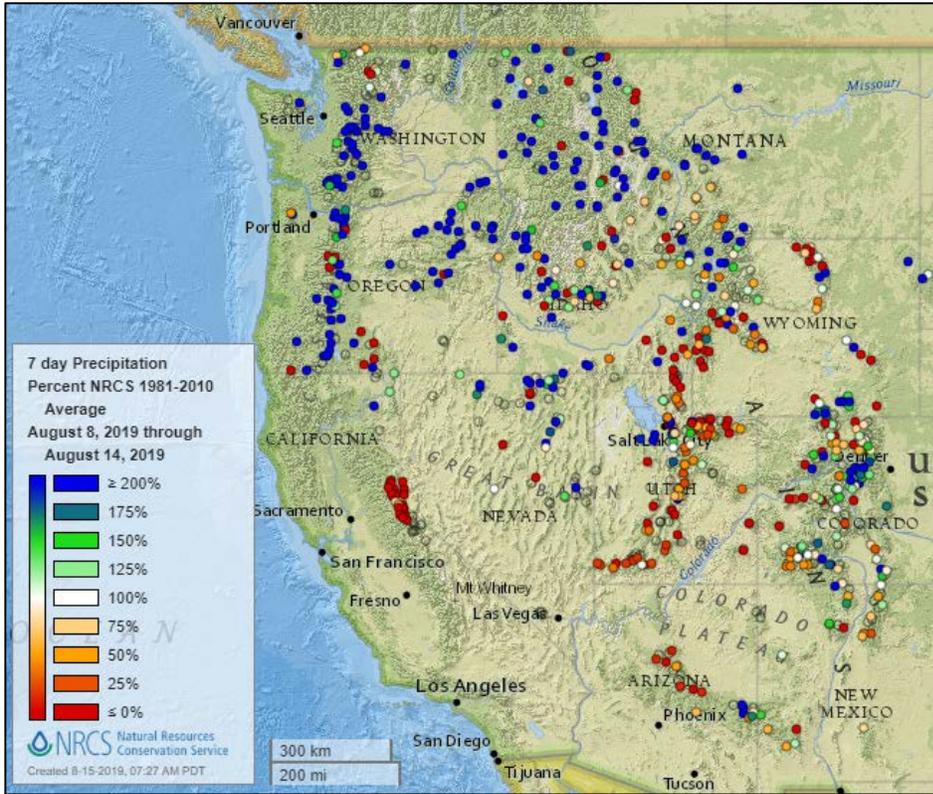
### Related:

[Wet, Wild And High: Lakes And Rivers Wreak Havoc Across Midwest, South](#) NPR

[Record-Setting Precipitation Leaves U.S. Soils Soggy](#) NASA Earth Observatory

## Precipitation

### Last 7 Days, NRCS SNOTEL Network

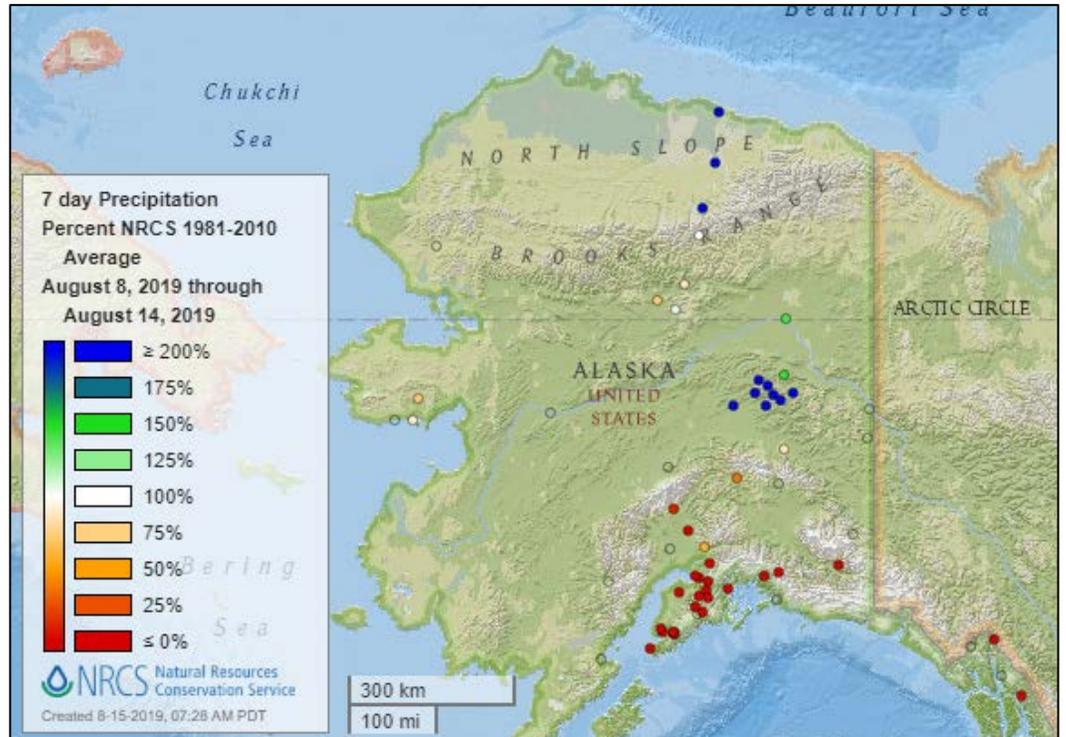


[7-day precipitation percent of average map](#)

**See also:**  
[7-day total precipitation values \(inches\) map](#)

[Alaska 7-day precipitation percent of average map](#)

**See also:**  
[Alaska 7-day total precipitation values \(inches\) map](#)



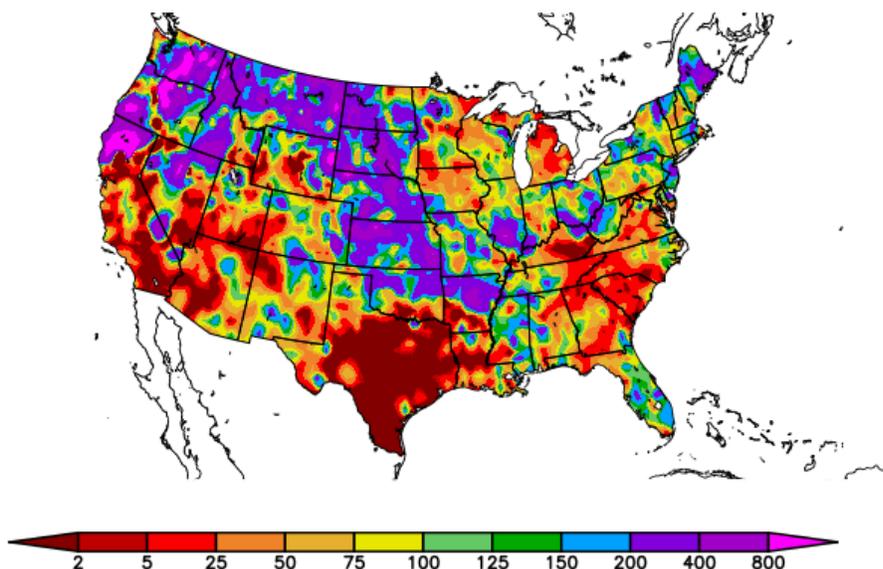
**Last 7 Days, National Weather Service (NWS) Networks**

Source: Regional Climate Centers

[7-day precipitation percent of normal map](#) for the continental U.S.

**See also:** [7-day total precipitation values \(inches\) map](#)

Percent of Normal Precipitation (%)  
8/7/2019 – 8/13/2019



Generated 8/14/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

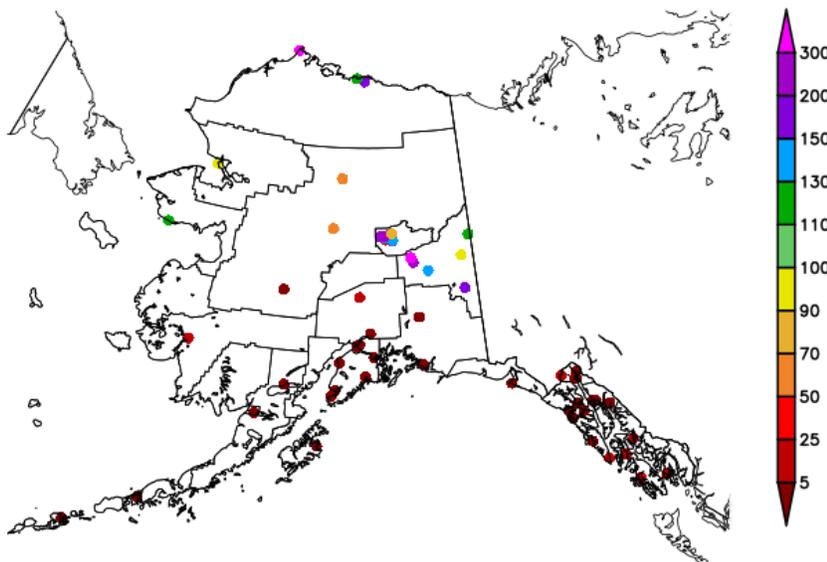
**Last 7 Days, National Weather Service (NWS) Networks**

Source: Regional Climate Centers

[7-day precipitation anomaly map](#) for Alaska.

**See also:** [7-day total precipitation values \(inches\) map](#)

Percent of Normal Precipitation (%)  
8/7/2019 – 8/13/2019



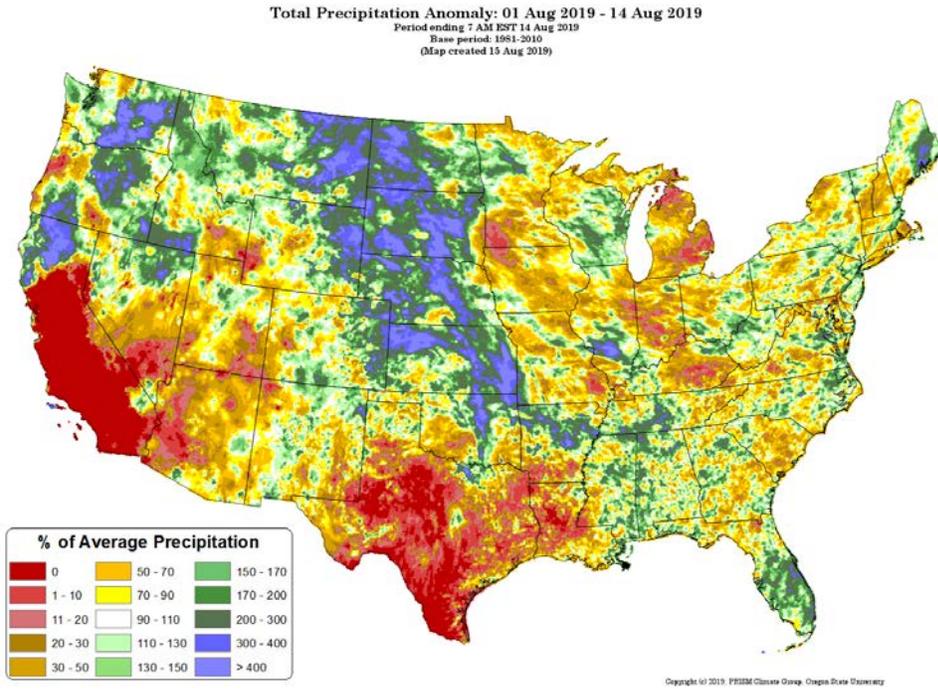
Generated 8/14/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

# Water and Climate Update

## Month-to-Date, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

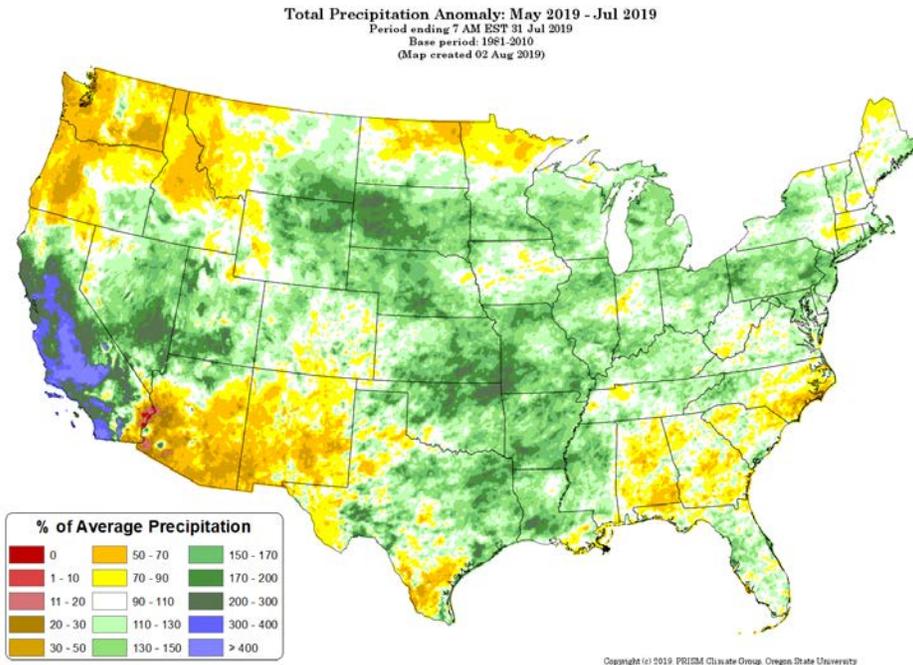


[Month-to-date national total precipitation percent of average map](#)

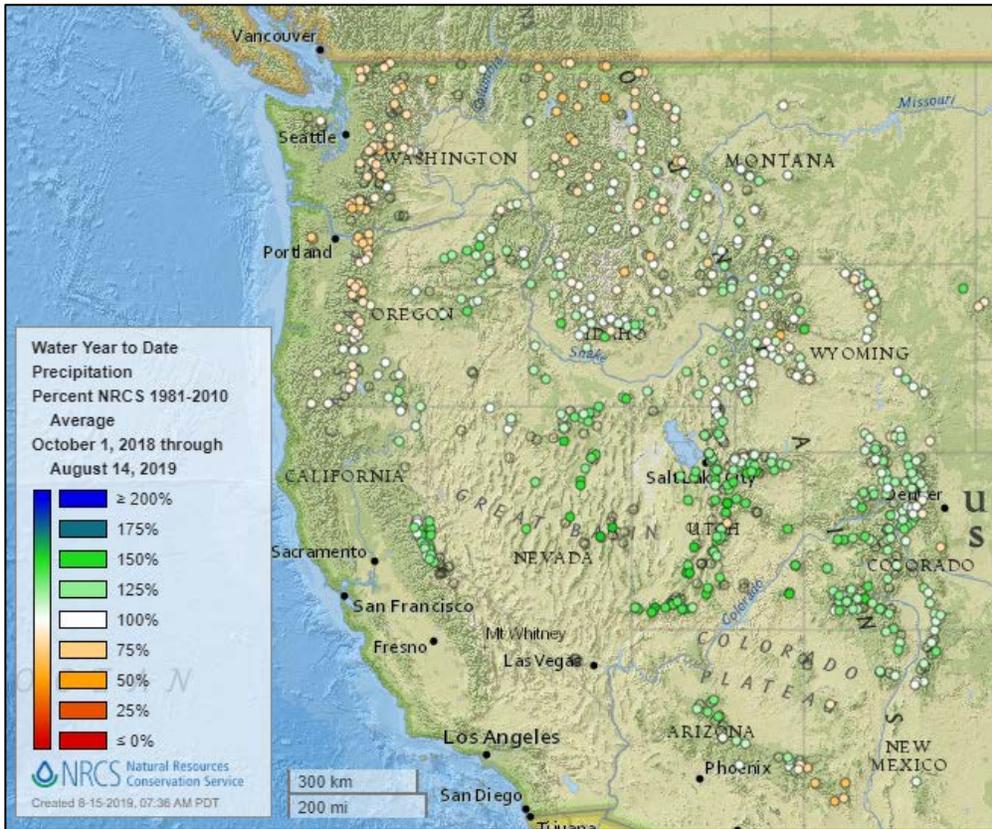
## Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[May through July 2019 total precipitation percent of average map](#)

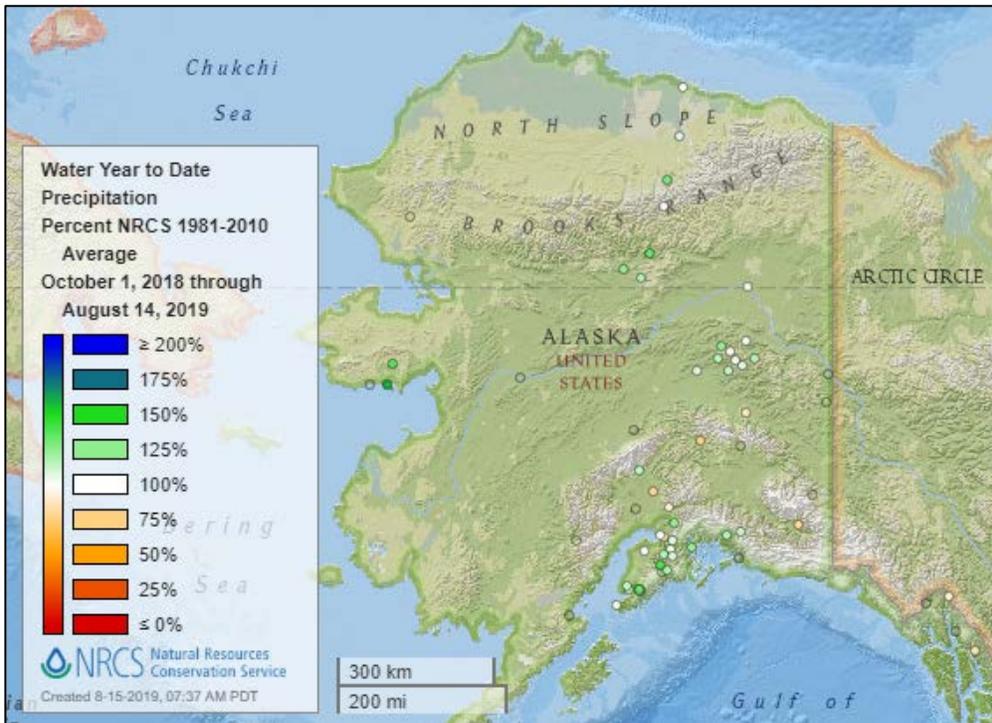


Water Year-to-Date, NRCS SNOTEL Network



[2019 water year-to-date precipitation percent of average map](#)

**See also:**  
[2019 water year-to-date precipitation values \(inches\) map](#)



[Alaska 2019 water year-to-date precipitation percent of average map](#)

**See also:** [Alaska 2019 water year-to-date precipitation values \(inches\) map](#)

## Temperature

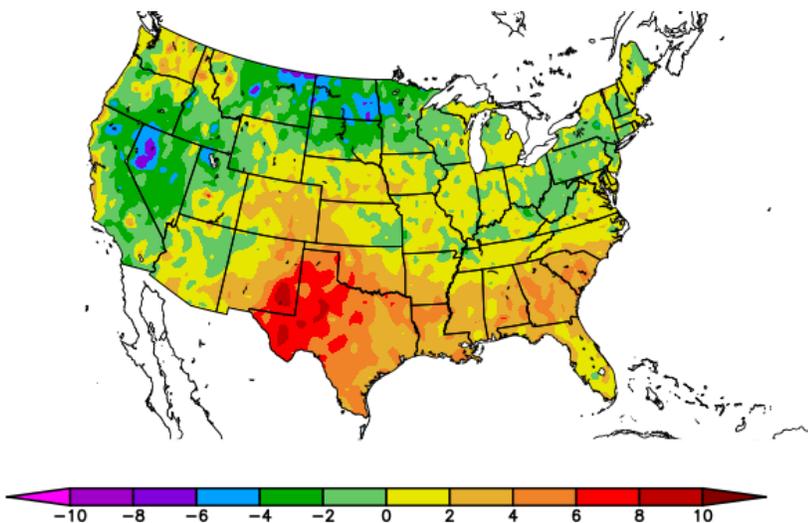
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map](#) for the contiguous U.S.

**See also:** [7-day temperature \(° F\) map](#)

Departure from Normal Temperature (F)  
8/7/2019 – 8/13/2019



Generated 8/14/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

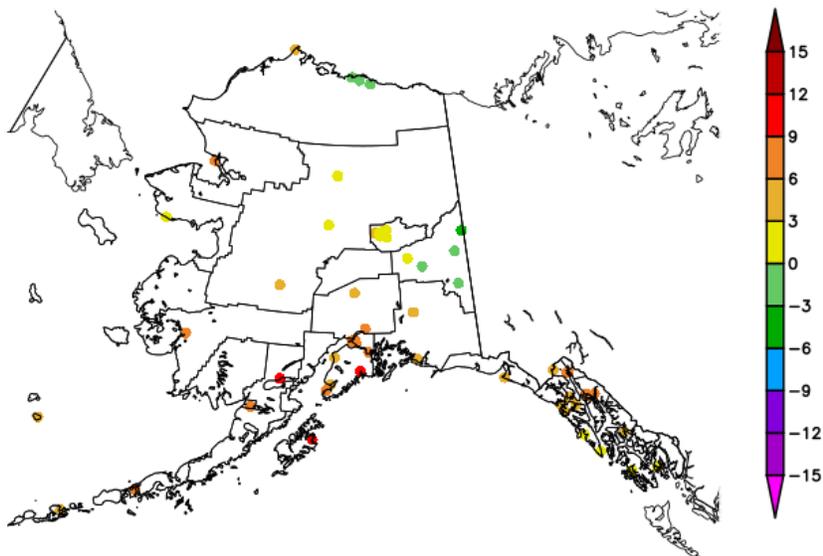
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map](#) for Alaska.

**See also:** [7-day temperature \(° F\) map](#)

Departure from Normal Temperature (F)  
8/7/2019 – 8/13/2019



Generated 8/14/2019 at HPRCC using provisional data.

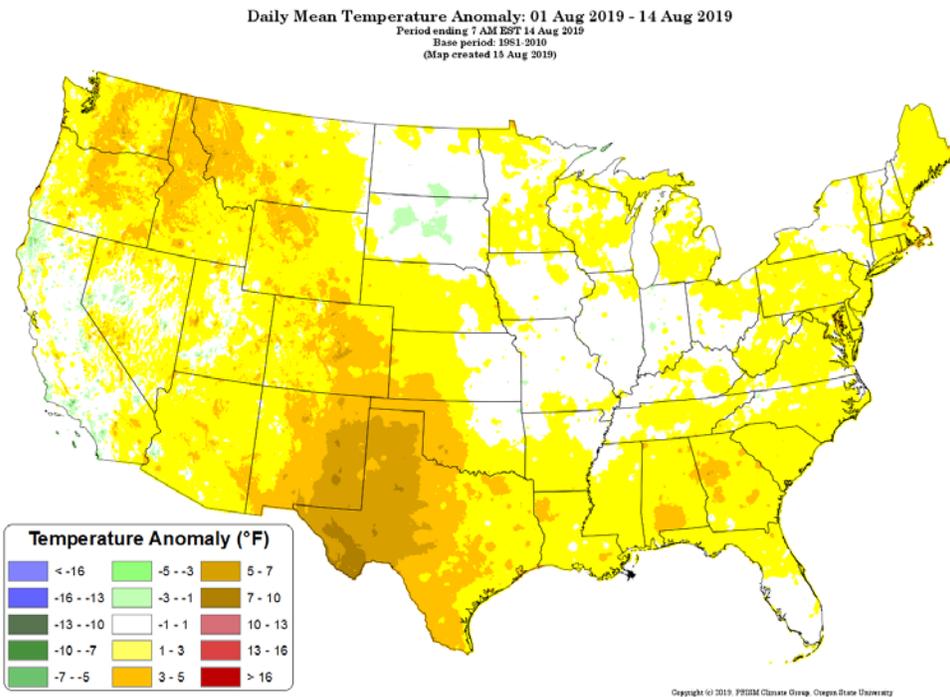
NOAA Regional Climate Centers

# Water and Climate Update

## Month-to-Date, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

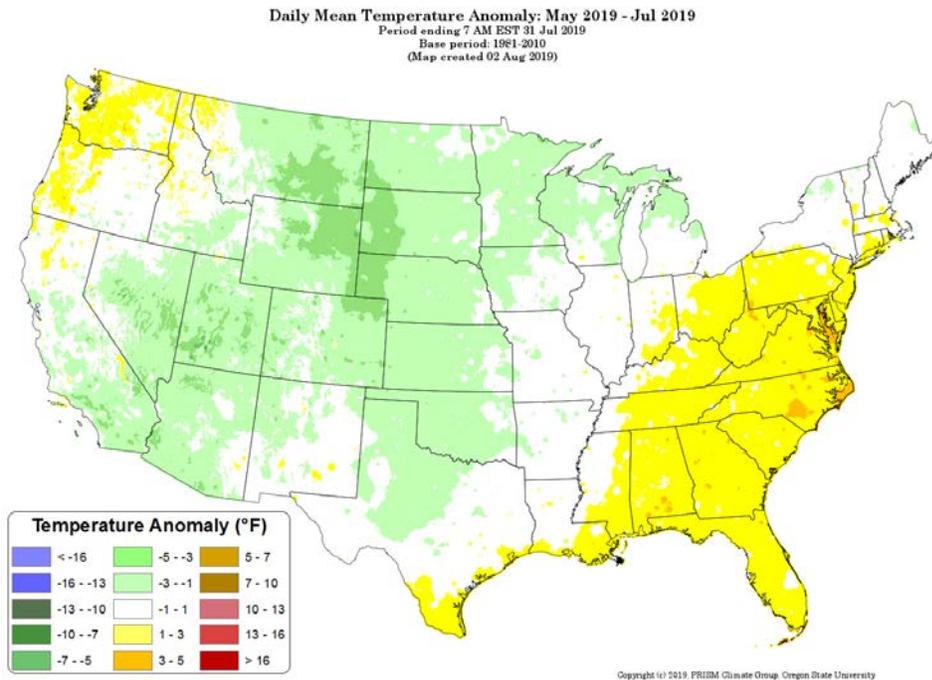
[Month-to-date national daily mean temperature anomaly map](#)



## Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[May through July 2019 daily mean temperature anomaly map](#)



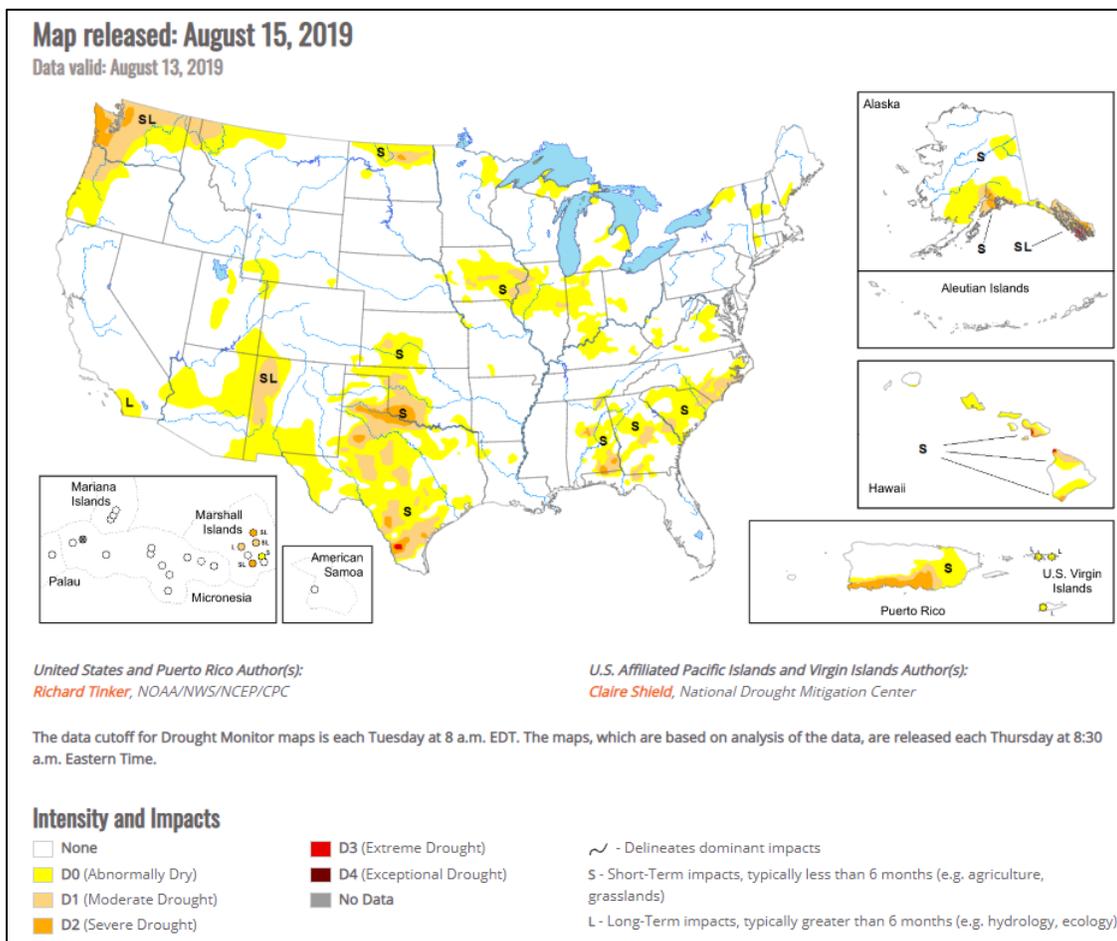
# Drought

## [U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

## [U.S. Drought Portal](#)

Source: NOAA



## Current [National Drought Summary](#), August 15, 2019

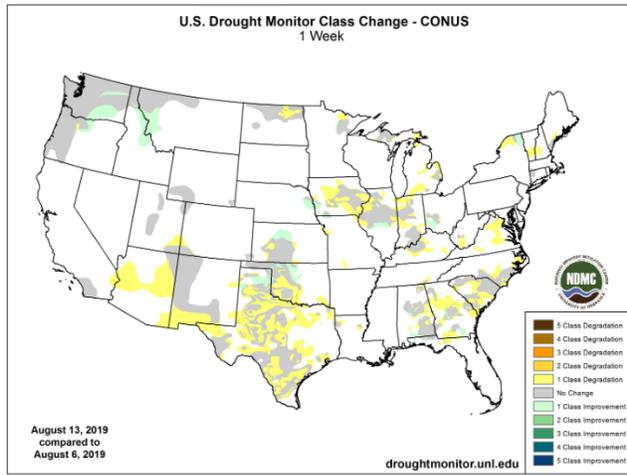
Source: National Drought Mitigation Center

“Rainfall this week was highly variable across the eastern two-thirds of the country, which is not unusual during summer. Heavy rain was common in the High Plains, and from the Texas Panhandle and central Oklahoma northward in the Great Plains. Generally 2 to locally 5 inches of rain soaked the Plains from northern and eastern Kansas northward into the central Dakotas, and similar totals were spottier in central Montana, in the middle Mississippi Valley, across northern Minnesota, from the central Ohio Valley through the central Appalachians, over northern New England, and from the Florida Peninsula into southeastern Georgia. Scattered to isolated amounts of 2 to 3 inches were observed from the western half of Tennessee southward to the central Gulf Coast. Farther east, despite isolated moderate rains, only a few tenths of an inch fell on most of the upper Southeast, southern Appalachians, Carolinas, and middle Atlantic region. Several patches from northern California through the Pacific Northwest and northern Idaho recorded 0.5 to locally 2 inches, but most sites received light rain at best. The central and southern Sections of the Rockies and Intermountain West also observed generally light precipitation while no measurable rainfall was almost universal from the Red River to the Rio Grande in Texas, and in central and southern sections of California. The total area enduring abnormal dryness and drought increased, most noticeably in the Ohio Valley, the Midwest, and Texas. Widespread improvement was limited to a broad swath of Alaska from interior northeastern sections to near the Aleutians.”

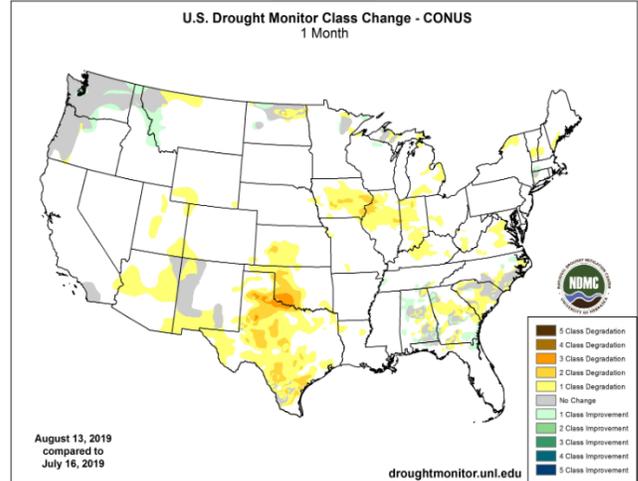
## Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

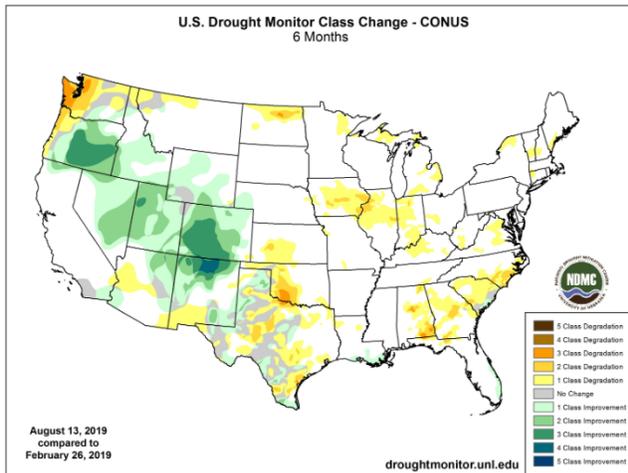
### 1 Week



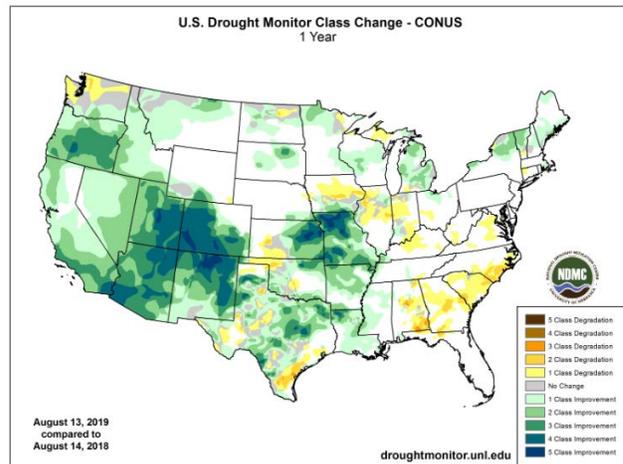
### 1 Month



### 6 Months



### 1 Year



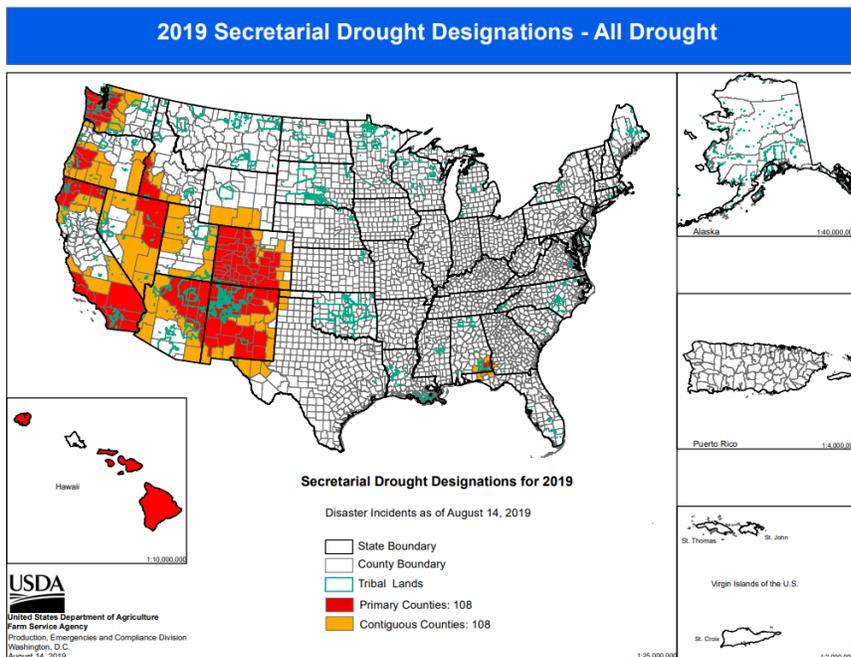
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

### Highlighted Drought Resources

- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)
- [U.S. Population in Drought, Weekly Comparison](#)
- [USDA Disaster and Drought Information](#)

## Secretarial Drought Designations

Source: USDA Farm Service Agency



## Wildfires: USDA Forest Service Active Fire Mapping



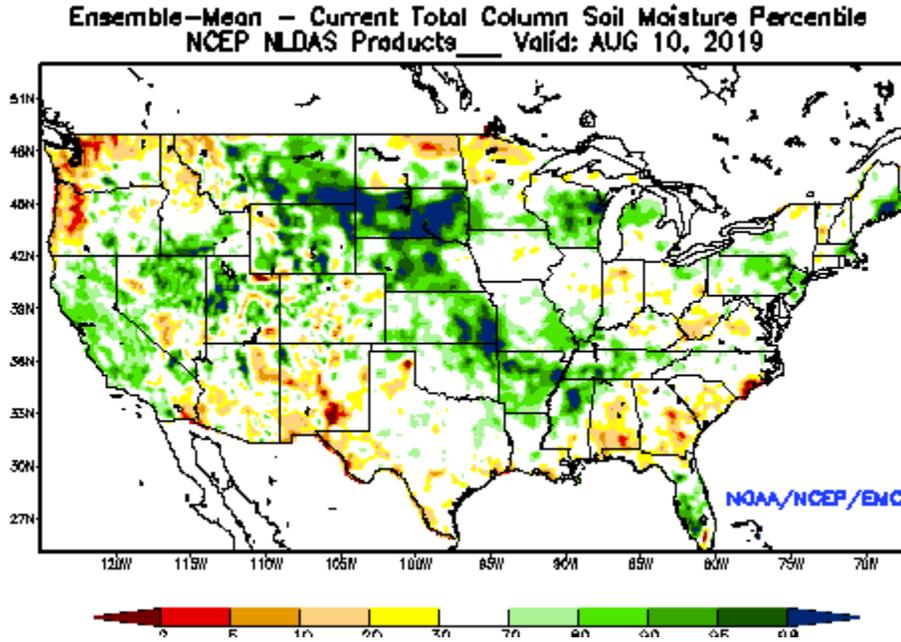
### Highlighted Wildfire Resources

- [National Interagency Fire Center](#)
- [InciWeb Incident Information System](#)
- [Significant Wildland Fire Potential Outlook](#)

## Other Climatic and Water Supply Indicators

### Soil Moisture

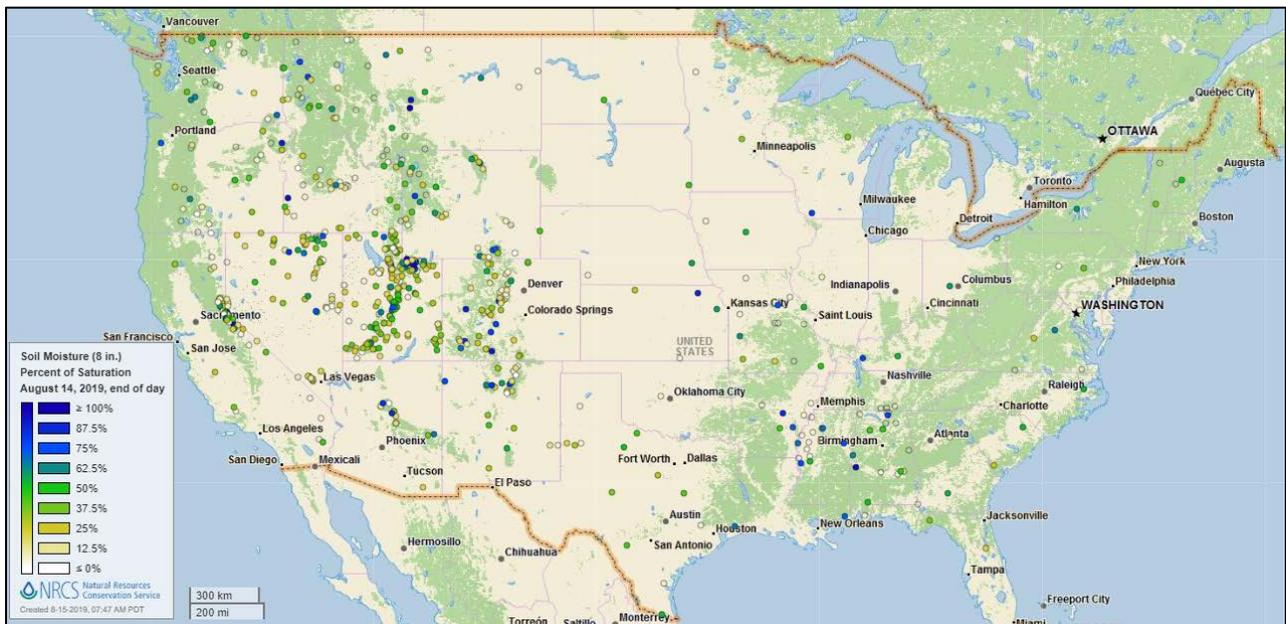
Source: NOAA National Centers for Environmental Prediction



Modeled soil moisture percentiles as of August 10, 2019

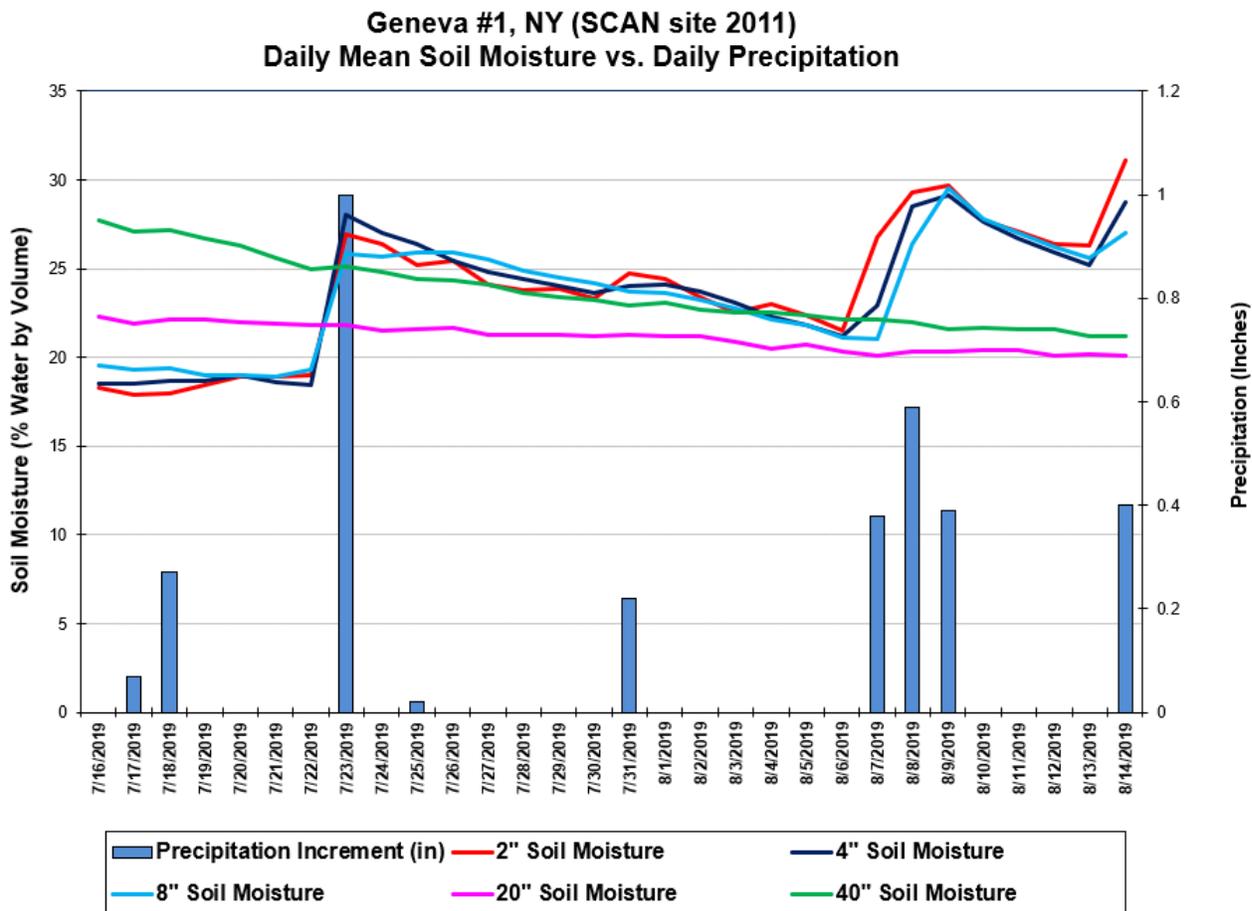
### Soil Moisture Percent of Saturation

Source: NRCS SNOTEL and [Soil Climate Analysis Network](#) (SCAN)



**Soil Moisture Data**

Source: NRCS [Soil Climate Analysis Network](#) (SCAN)



This chart shows the soil moisture and precipitation for the last 30 days at the [Geneva #1 SCAN site](#) in New York. Several precipitation events throughout the month increased soil moisture at the -2", -4", and -8" sensor levels. The -20" inch sensor showed little change from the precipitation events, whereas the -40" sensor showed a gradual decrease in soil moisture during the month.

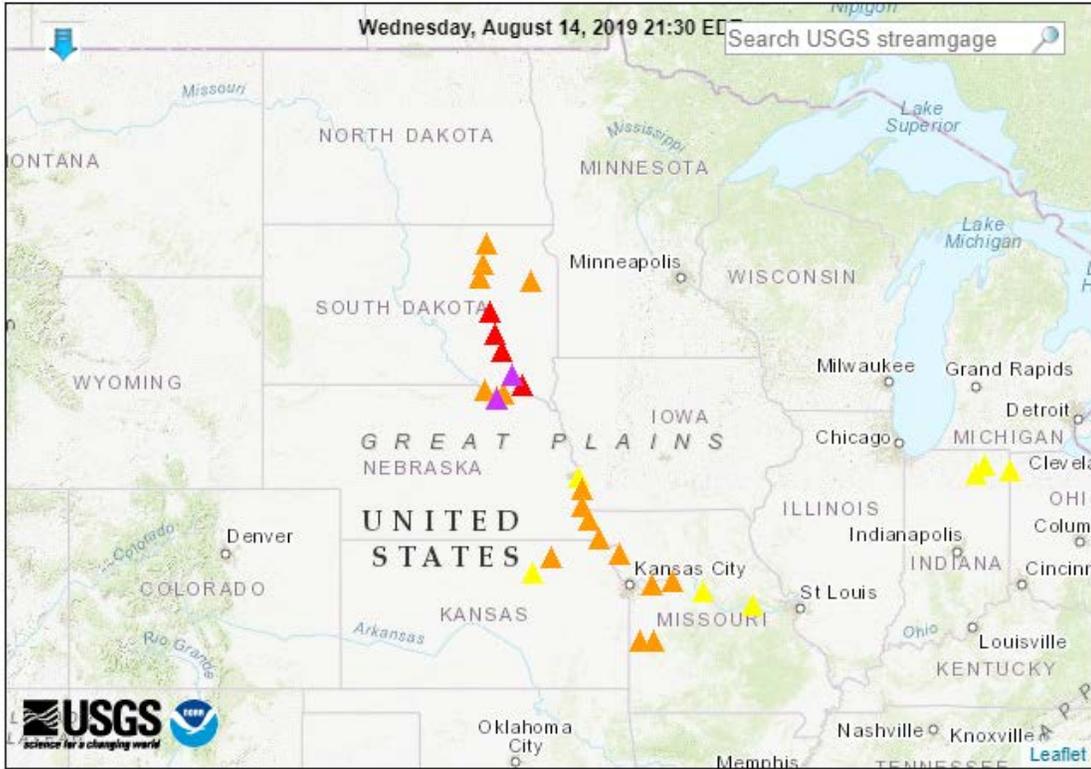
**Soil Moisture Data Portals**

- [CRN Soil Moisture](#)
- [Texas A&M University North American Soil Moisture Database](#)
- [University of Washington Experimental Modeled Soil Moisture](#)

**Streamflow, Drought, Flood, and Runoff**

Source: U.S. Geological Survey

**Map of flood and high flow conditions**  
 (2 in major flood, 4 in moderate flood, 25 in minor flood, 17 in near flood)



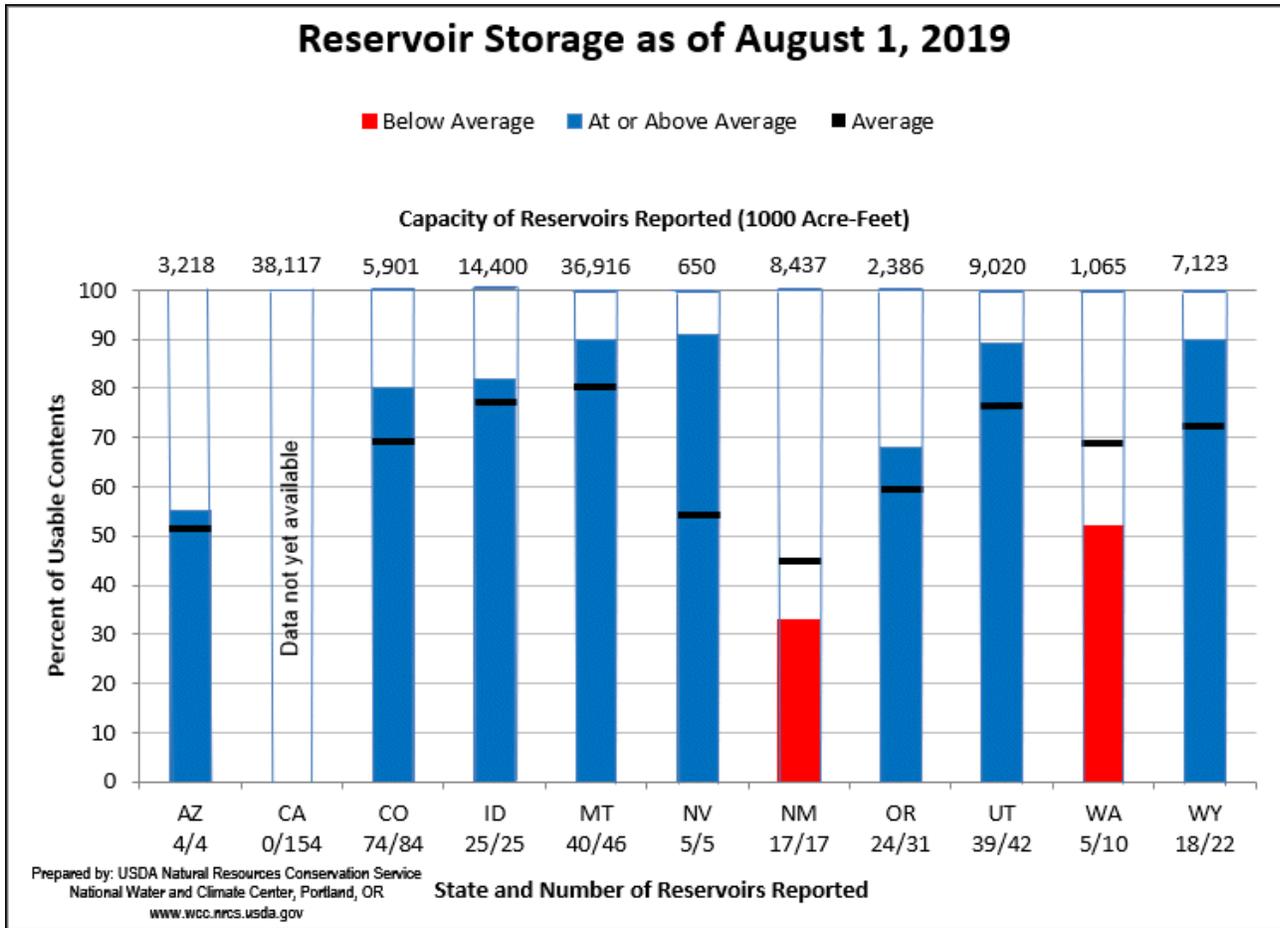
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
			△ Streamgage with flood stage	○ Streamgage without flood stage		

[WaterWatch: Streamflow, drought, flood, and runoff conditions](#)

## Reservoir Storage

### Western States Reservoir Storage

Source: NRCS National Water and Climate Center



August 1, 2019 Reservoir Storage: [Chart](#) | [Dataset](#)

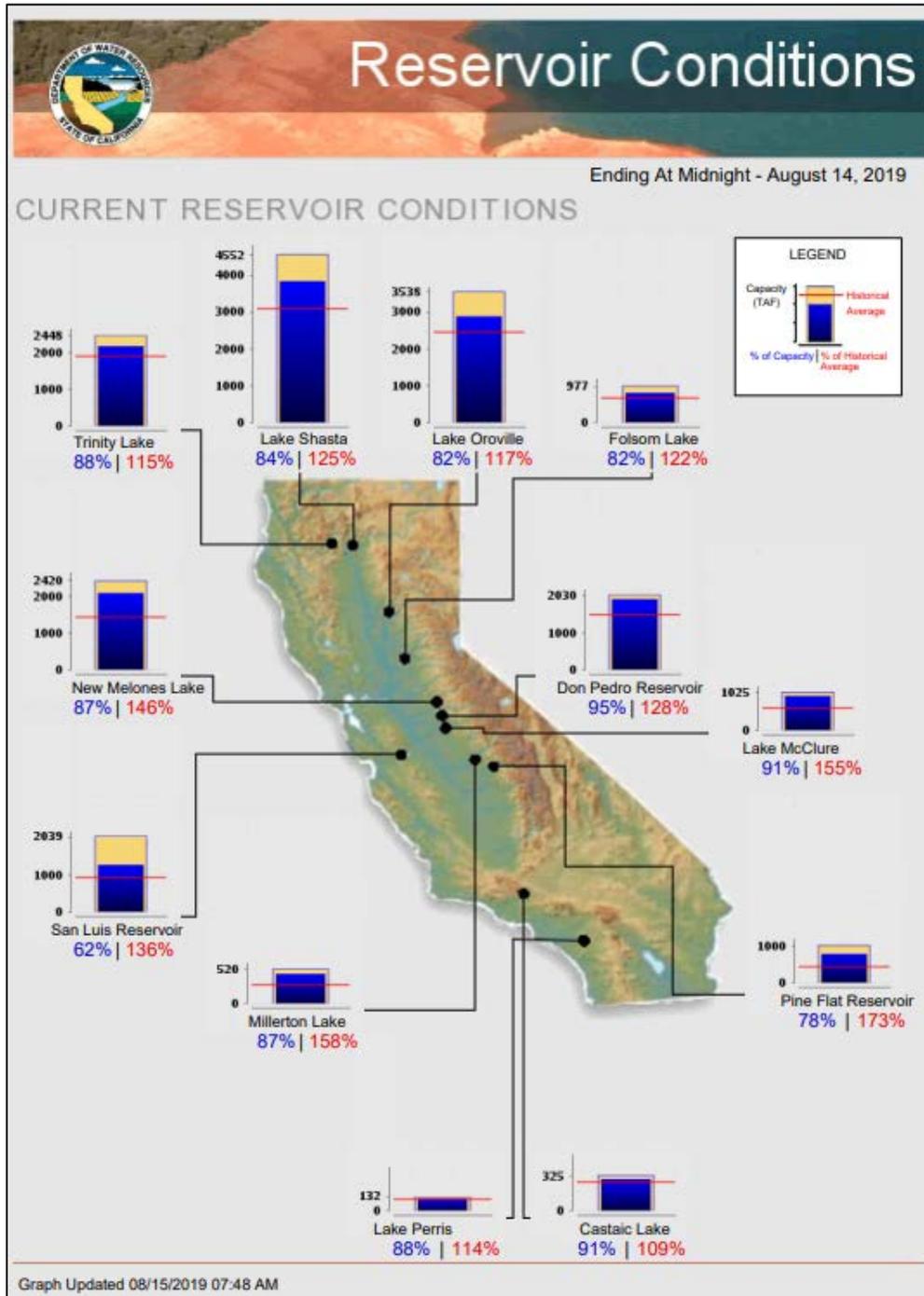
### Hydromet Tea Cup Reservoir Depictions

Source: U.S. Bureau of Reclamation

- [Upper Colorado](#)
- [Pacific Northwest/Snake/Columbia](#)
- [Sevier River Water, Utah](#)
- [Upper Missouri, Kansas, Oklahoma, Texas](#)

Current California Reservoir Conditions

Source: California Department of Water Resources



[Current California Reservoir Conditions](#)

## Short- and Long-Range Outlooks

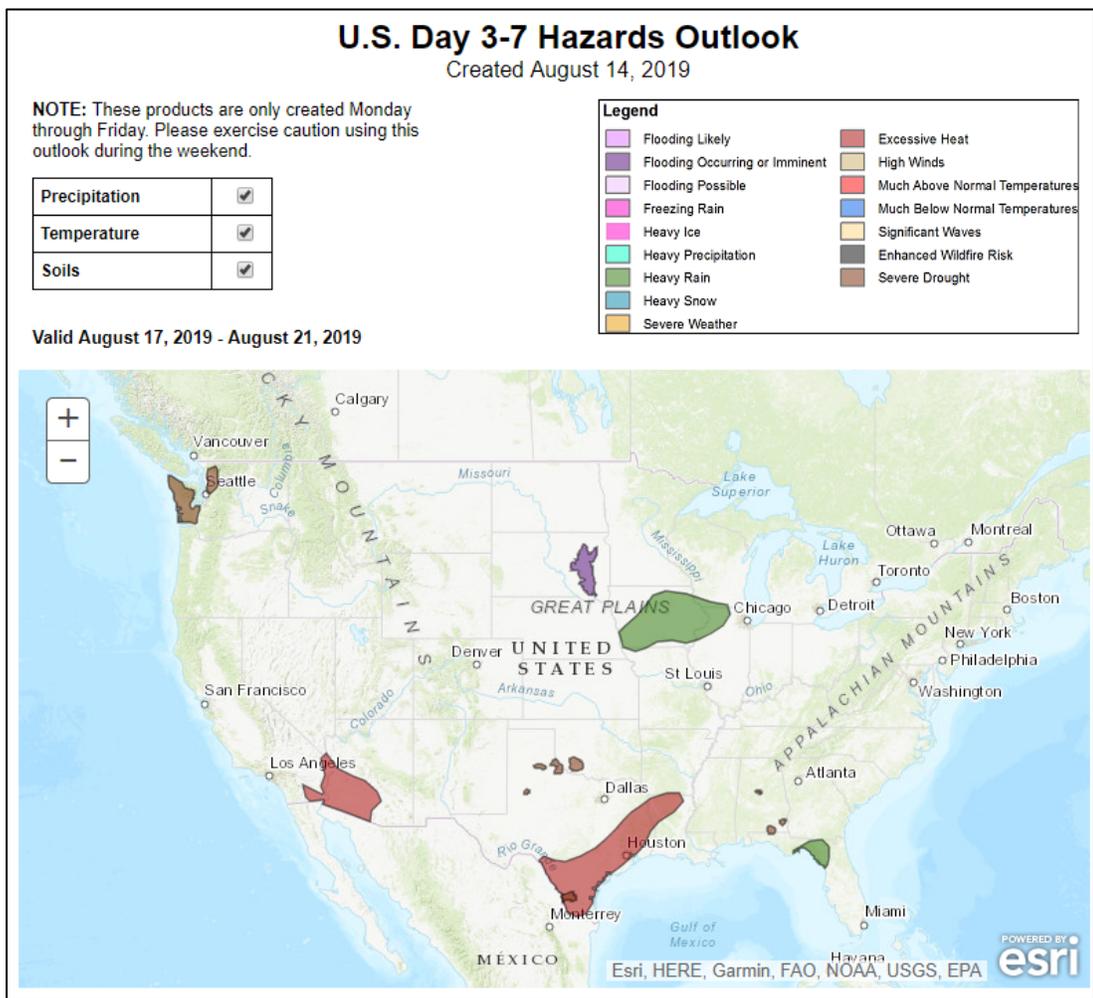
### Agricultural Weather Highlights

Author: Mark Brusberg, Chief Meteorologist, USDA/OCE/WAOB

**National Outlook, Thursday, August 15, 2019:** “Locally heavy rain is expected to linger over the nation’s midsection over the next few days, renewing concerns for flooding in central sections of the Corn Belt. Three-day rainfall totals of 2 to 4 inches are forecast from northeastern Kansas northeastward to Wisconsin and Illinois. Similarly, persistent heavy rain threatens flooding along Florida’s Gulf Coast as showers stall along the Gulf and southern Atlantic Coasts. Elsewhere, rain will gradually end over the northern Plains, allowing a resumption of small grain harvesting, but little additional rain is forecast for Texas and the southern High Plains. In the West, dry, warmer-than-normal weather will continue into the weekend, with highs expected to reach well above 100 °F in Southwestern farming areas and a general lack of monsoon showers over the Four Corners Region. The NWS 6- to 10-day outlook for August 20 – 24 depicts drier-than-normal weather from the central Rockies to the central and southern Plains, and in parts of the Northeast. Near- to above-normal rainfall is forecast elsewhere, with the highest likelihood of wetter conditions in the upper Mississippi Valley and along the Gulf Coast. Warmer-than-normal weather is expected nearly nationwide”

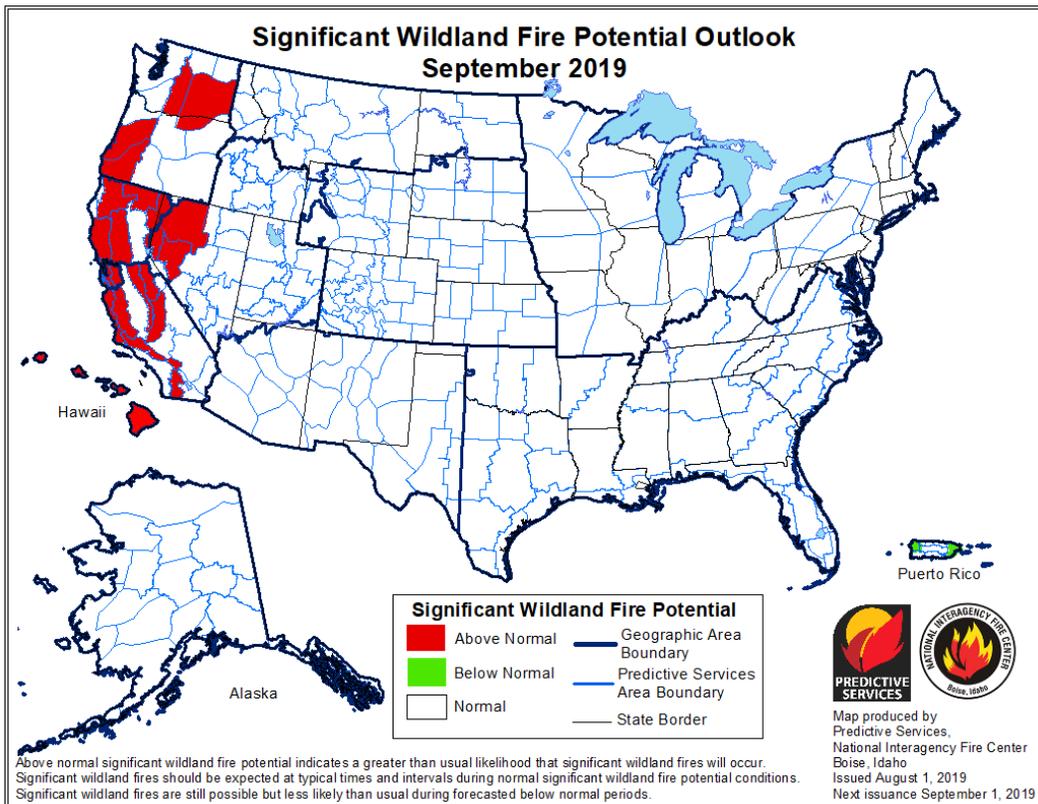
### Weather Hazards Outlook: [August 17 – 21, 2019](#)

Source: NOAA Climate Prediction Center



**Significant Wildland Fire Potential Outlook**

Source: National Interagency Fire Center



**Seasonal Drought Outlook: July 18 – October 31, 2019**

Source: National Weather Service

**U.S. Seasonal Drought Outlook**  
Drought Tendency During the Valid Period

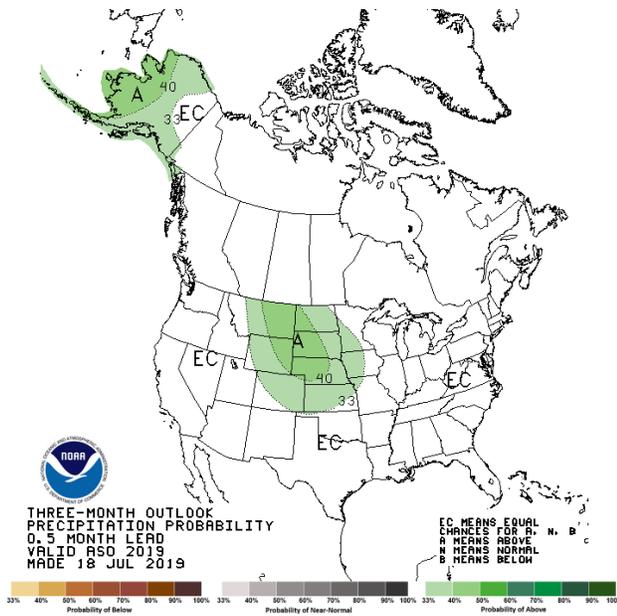
Valid for July 18 - October 31, 2019  
Released July 18



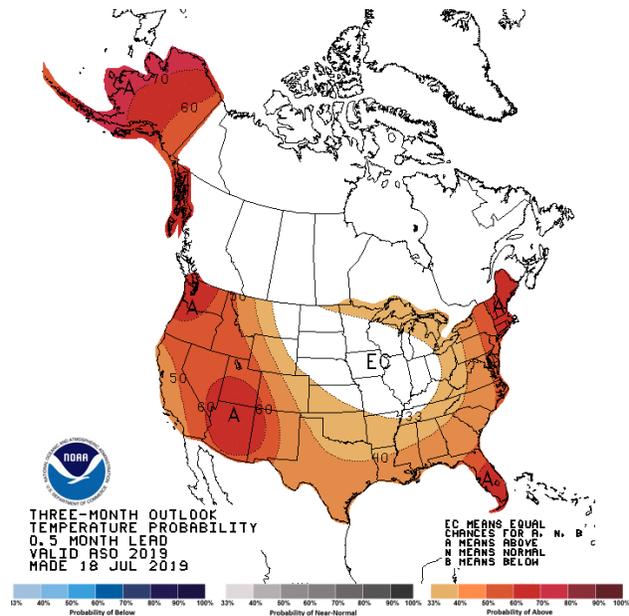
### Climate Prediction Center 3-Month Outlook

Source: National Weather Service

#### Precipitation



#### Temperature



[August-September-October \(ASO\) 2019 precipitation and temperature outlook summaries](#)

### More Information

The NRCS [National Water and Climate Center](#) publishes this weekly report. We welcome your feedback. If you have questions or comments, please [contact us](#).