

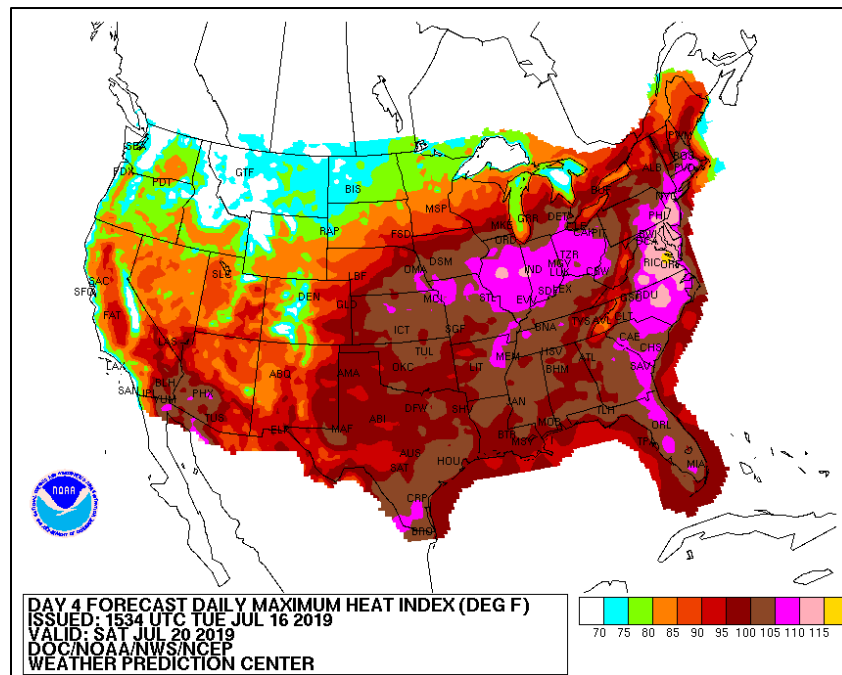
# Water and Climate Update

July 25, 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.

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Temperature.....	6	Short- and Long-Range Outlooks.....	16
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## Heatwave scorches much of the country



A major heatwave this past week covered an immense portion of the U.S., with a large area of the Upper Midwest and Mid-Atlantic states having a heat index over 105° F. The hottest area was over eastern Virginia, where the heat index topped 115° F. About 200 million people were in an excessive heat area. Other impacts were power outages, evacuations of vulnerable people, and opening of cooling centers. Water temperature in the Potomac River was at a record high 94°F, which is distressing to most aquatic life.

### Related:

['It's brutal': Heat wave gripping half the US cancels events](#) – The Register-Herald/AP (NY)

[US heat wave: Triple-digit temps to impact 200 million](#) – Today

[Heat wave descends on the US](#) – CNN

[Heat wave blazes on: At least 3 people in Maryland and Arkansas die due to scorching weather](#) - NBC

[As heat wave breaks across US northeast, thousands left without power](#) – WION

[End in sight for US heat wave that set temperature records](#) - Yahoo

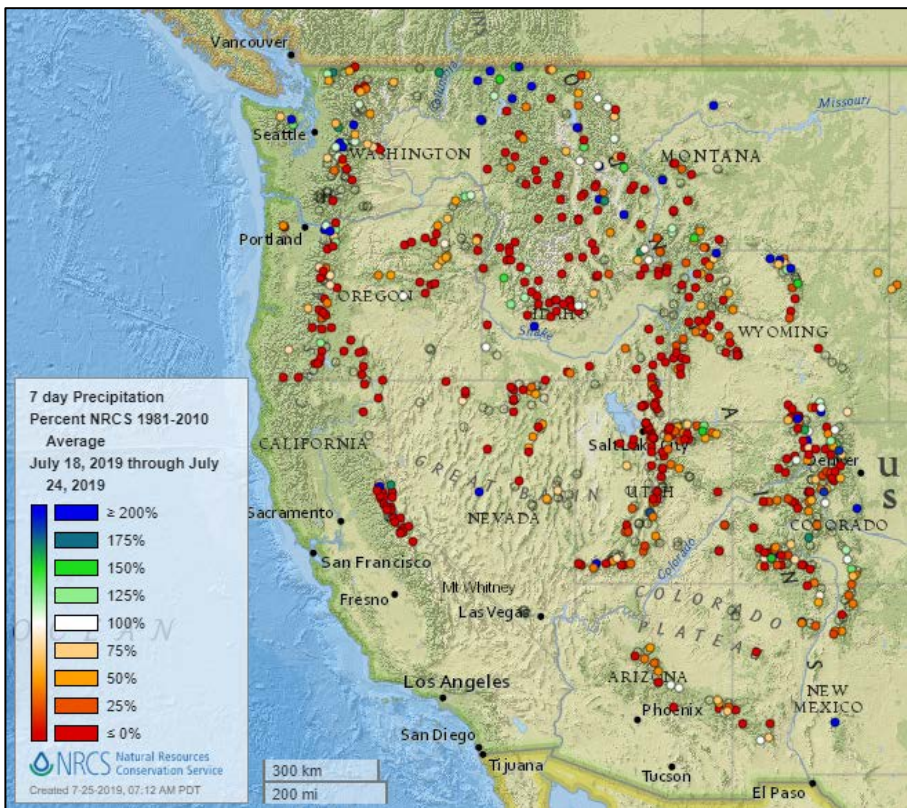
[US Heat Wave Map 2019: List Of States Affected By Excessive Hot Weather](#) – International Business Times

['Potentially deadly' heat wave grips two-thirds of U.S., with dozens of records likely to fall](#) - Washington Post

[In hot water: The Potomac River set a record high temperature of 94 degrees in recent heat wave](#) – Washington Post

## Precipitation

### Last 7 Days, NRCS SNOTEL Network

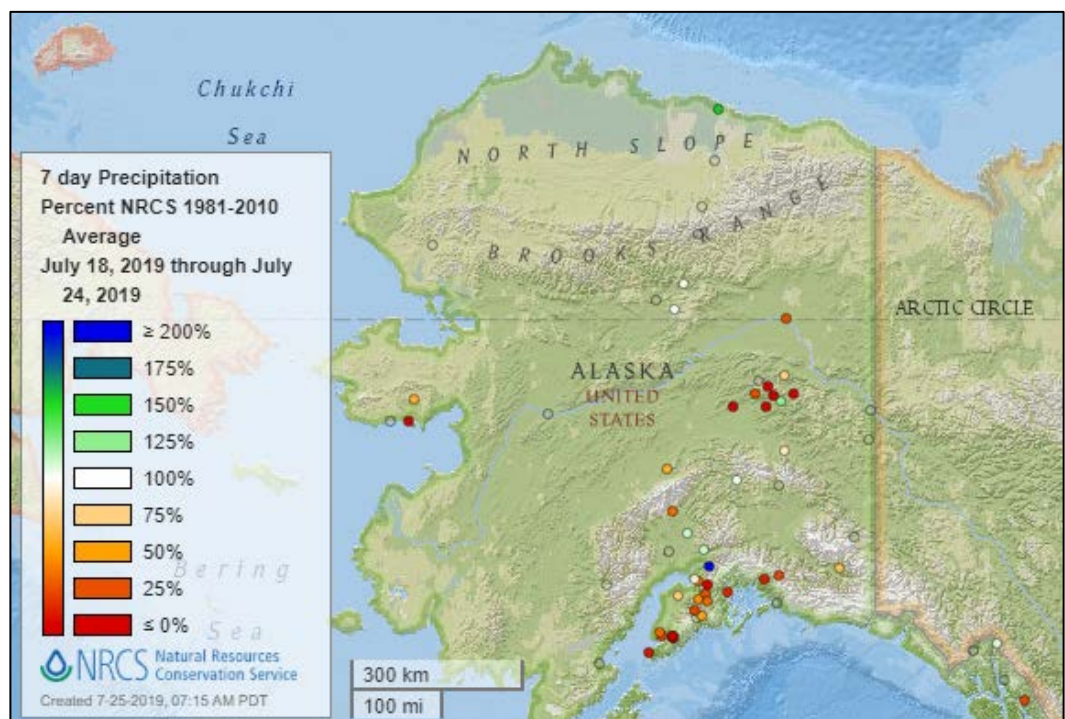


[7-day precipitation percent of average map](#)

**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](#)



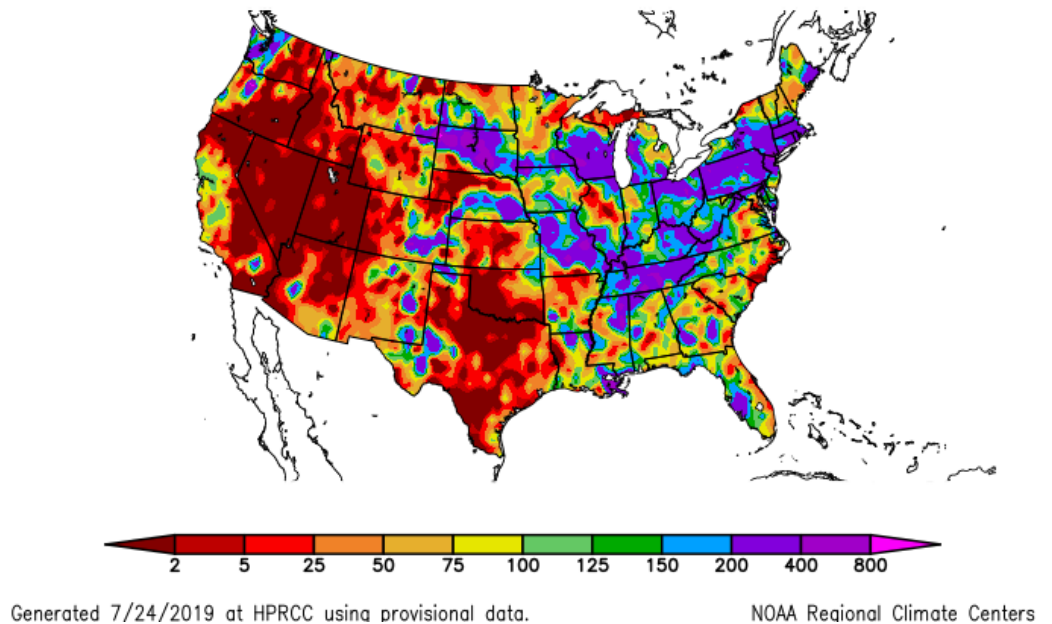
## Last 7 Days, National Weather Service (NWS) Networks

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 (%)  
7/17/2019 – 7/23/2019



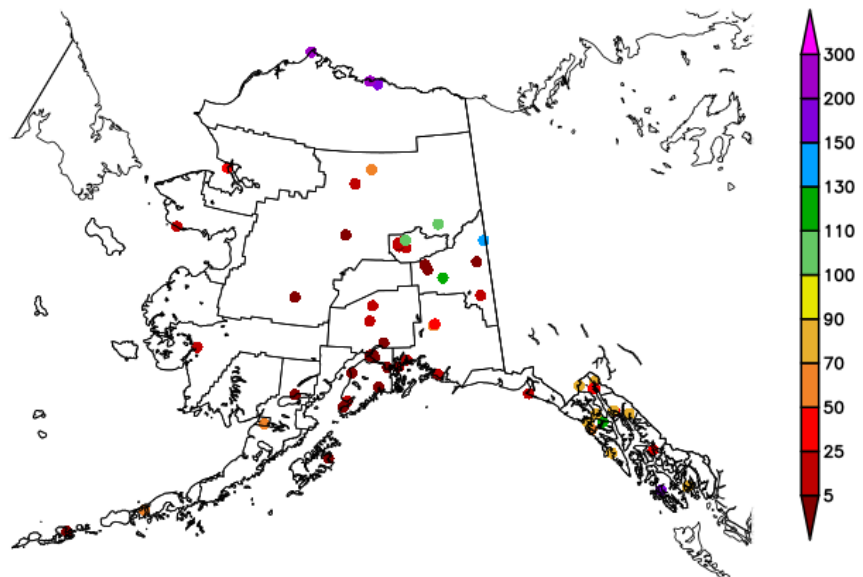
## Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

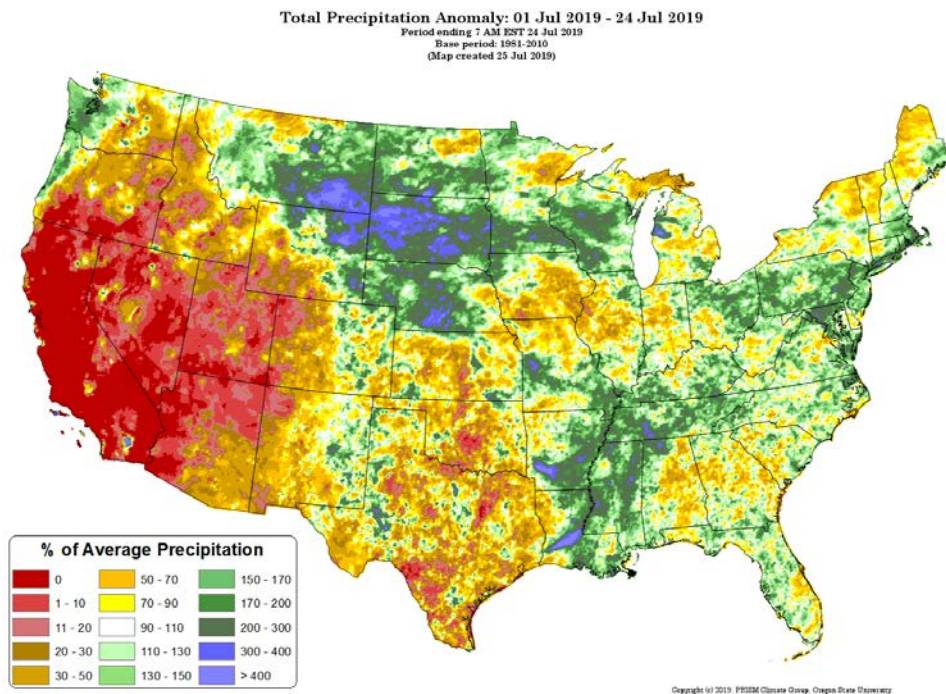
Percent of Normal Precipitation (%)  
7/17/2019 – 7/23/2019





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

Source: PRISM

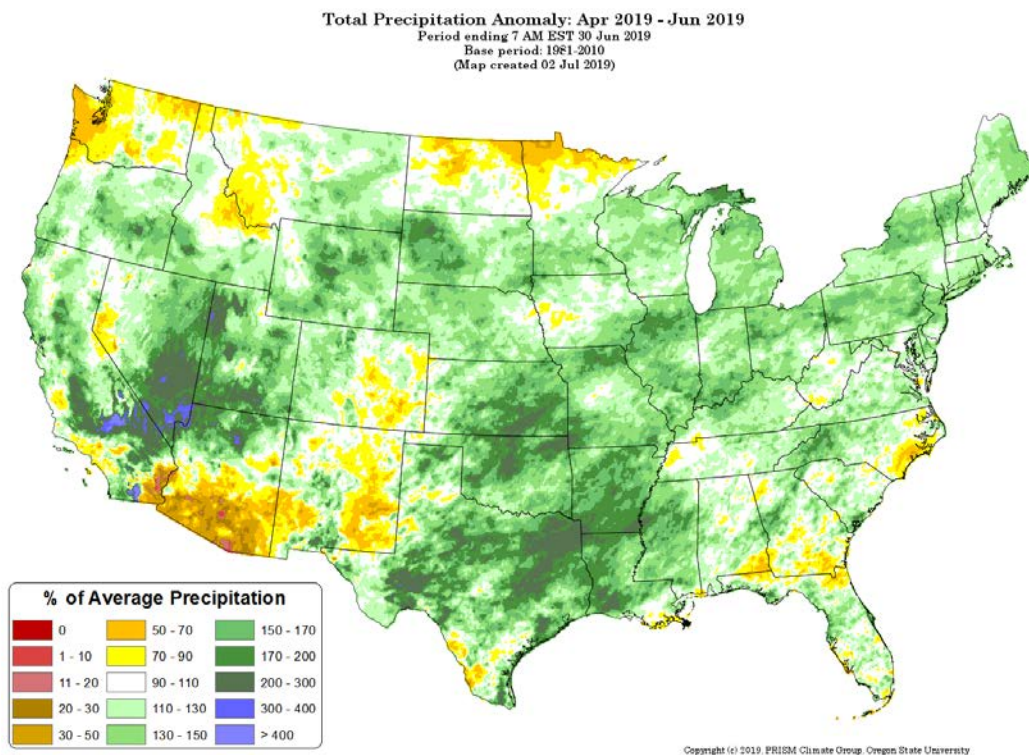


[Month-to-date national total precipitation percent of average map](#)

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

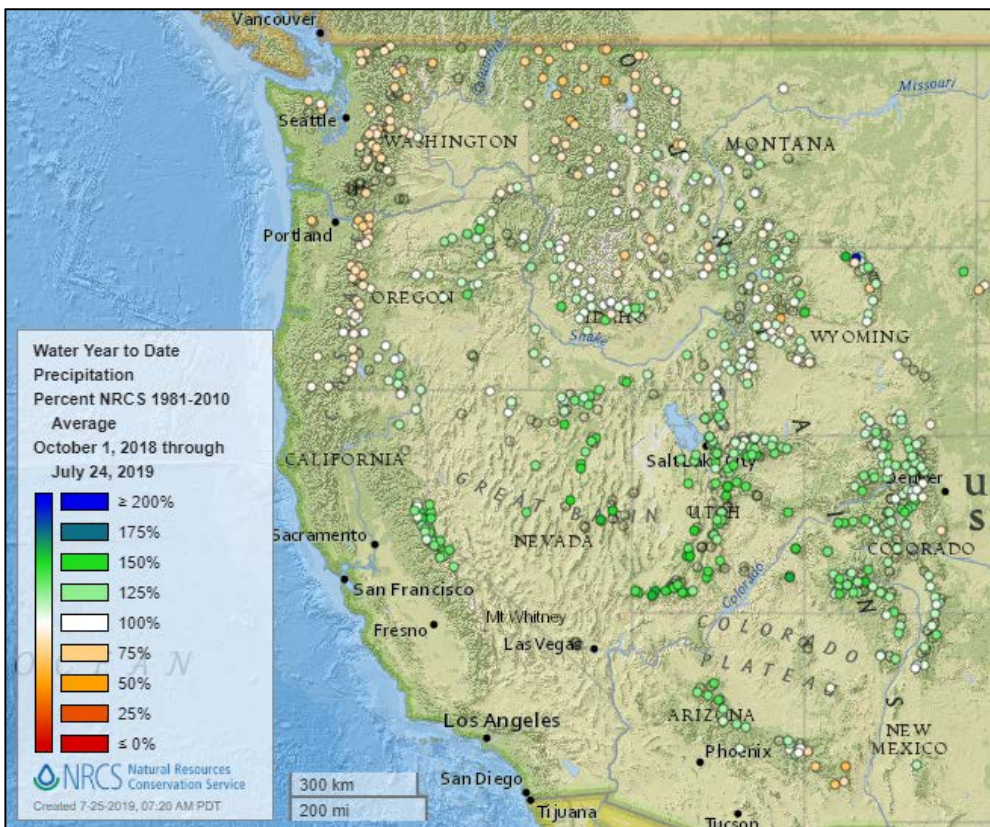
Source: PRISM

[April through June 2019 total precipitation percent of average map](#)



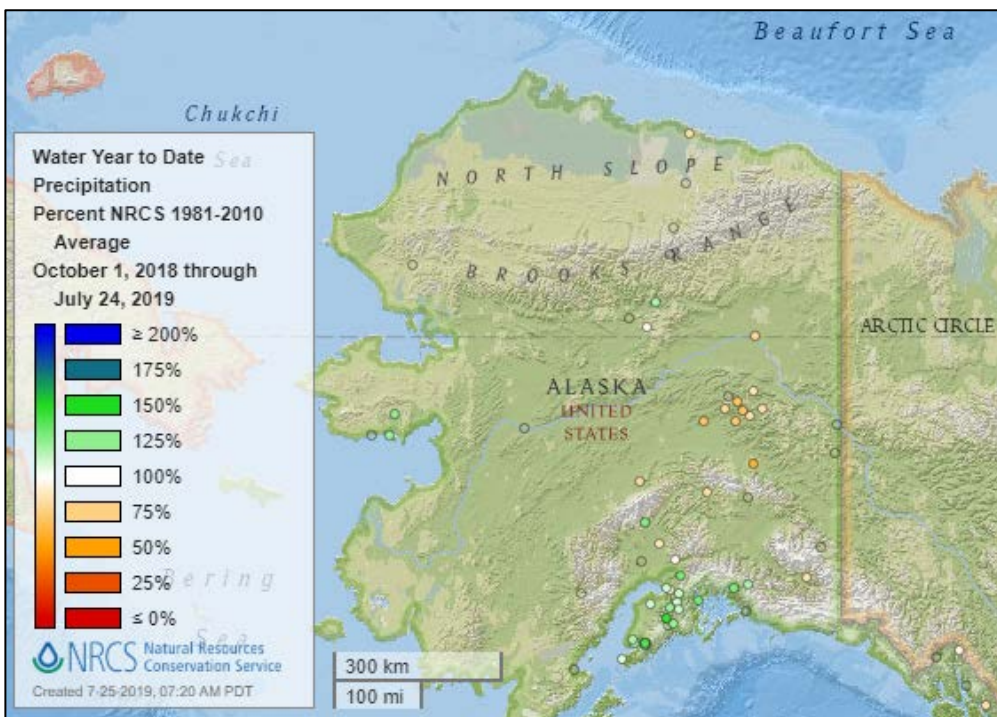


## Water Year-to-Date, NRCS SNOTEL Network



[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

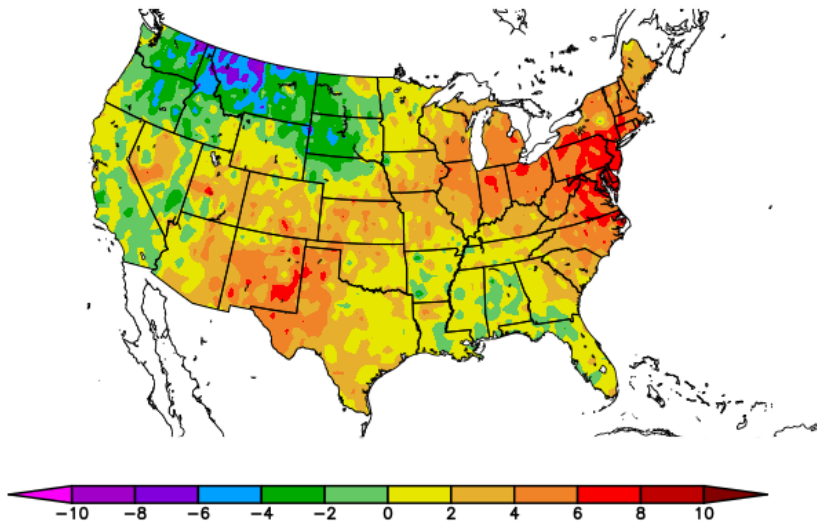
### Last 7 Days, National Weather Service (NWS) Networks

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)  
7/17/2019 – 7/23/2019



Generated 7/24/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

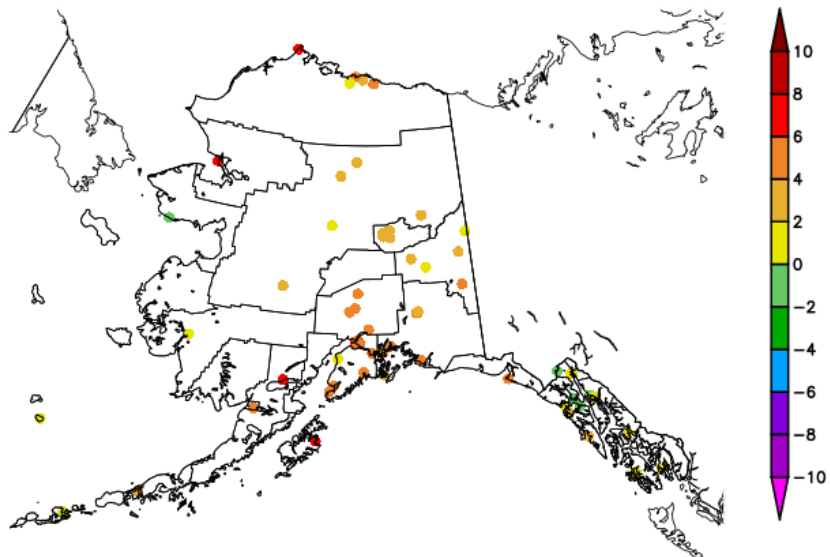
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)  
7/17/2019 – 7/23/2019



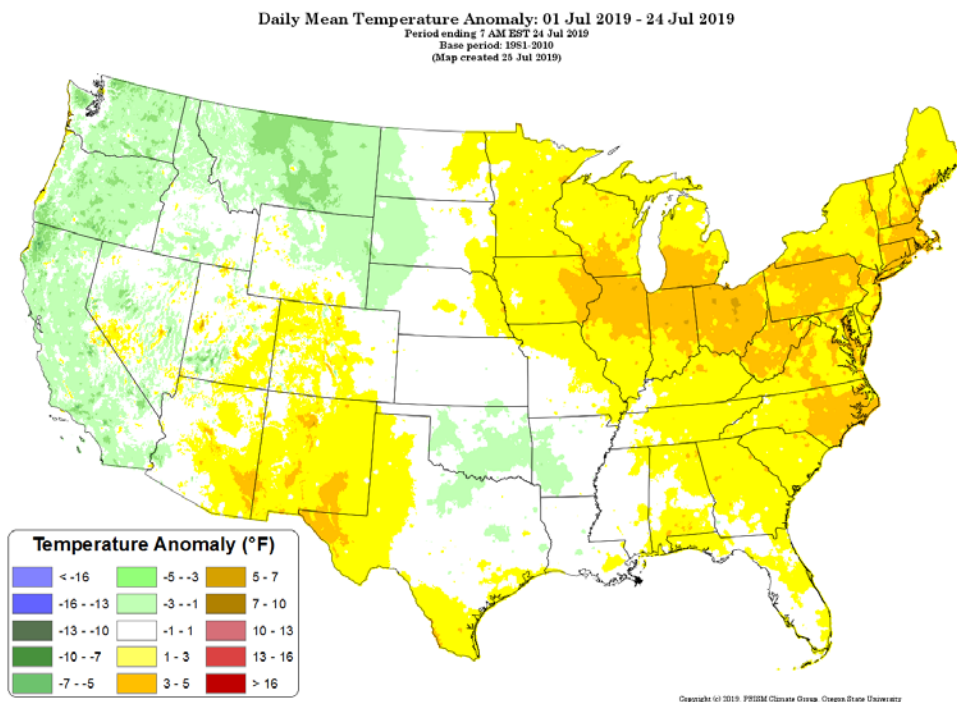
Generated 7/24/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

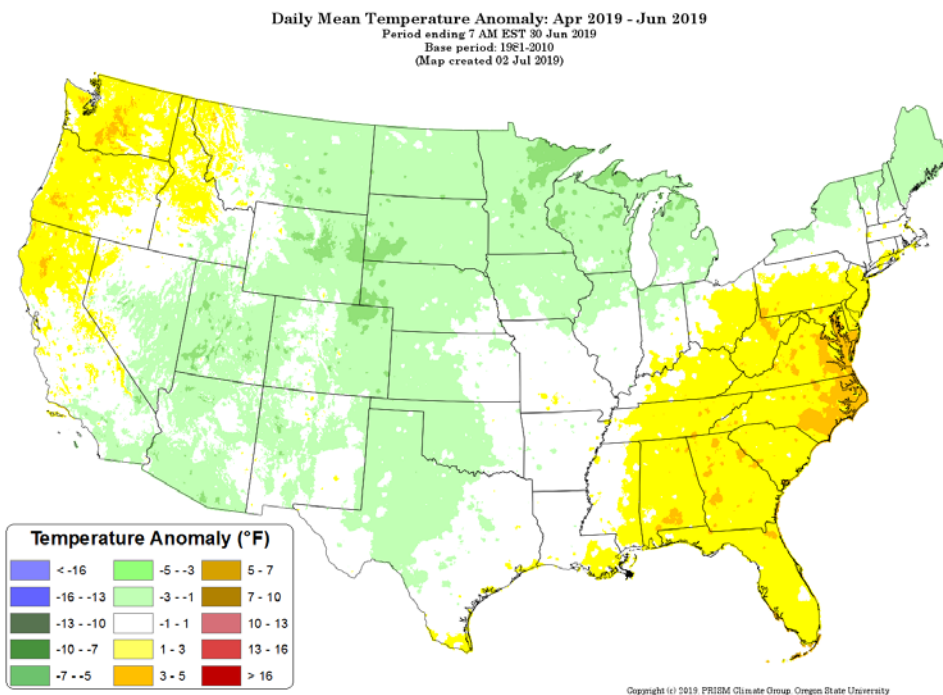
Source: PRISM

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



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

Source: PRISM



[April through June 2019  
daily mean temperature  
anomaly map](#)



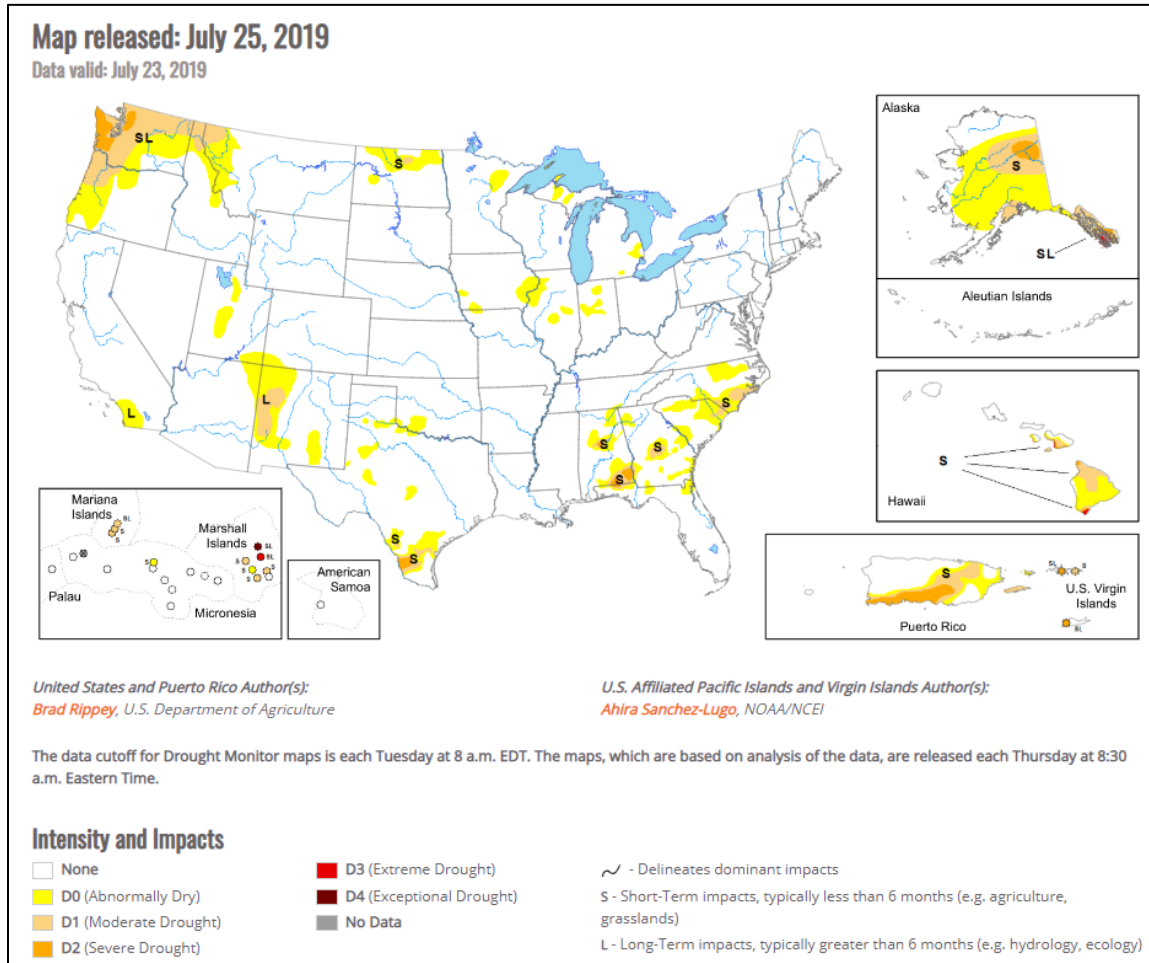
## Drought

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

Source: National Drought Mitigation Center

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

Source: NOAA



### Current [National Drought Summary](#), July 25, 2019

Source: National Drought Mitigation Center

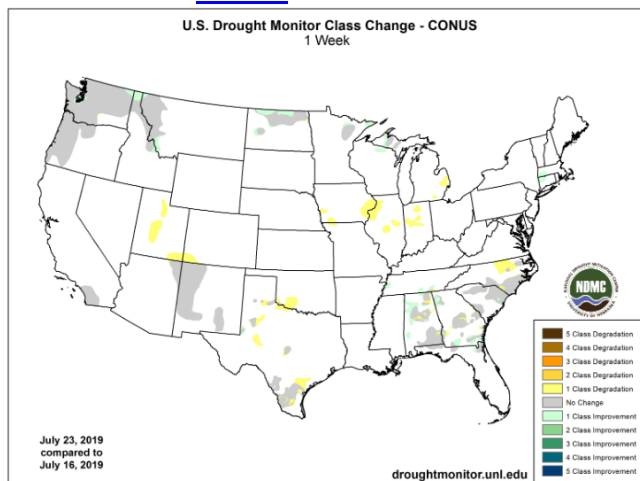
"The remnants of Hurricane Barry drifted northward into the Ohio Valley, delivering widespread rainfall that mostly benefited summer crops but also sparked some flash flooding. Some of the heaviest rain, locally 4 to 8 inches or more, fell in portions of the Mississippi Delta States. Meanwhile, several cold fronts crossed the North, generating showers and locally severe thunderstorms from the northern Plains into the Northeast. Some of the highest totals, as much as 2 to 4 inches or more, fell from South Dakota into Michigan, locally accompanied by high winds, large hail, and isolated tornadoes. Meanwhile, much of the central and eastern U.S. experienced a brief period of heat and high humidity levels, followed by cooler weather and scattered to widespread showers and thunderstorms. Late-planted and poorly rooted Midwestern corn and soybeans were particularly susceptible to heat stress in areas that have recently dried out, following excessive spring wetness and acute planting delays. Temperatures soared to 90°F or higher east of the Rockies, except in parts of the Appalachians and across the nation's northern tier. Readings topped 100°F throughout the central and southern High Plains. Elsewhere, dry weather covered large sections of the West and the southern half of the Plains. However, cold fronts delivered some light precipitation to the northernmost Rockies and Pacific Northwest, while showers associated with the monsoon circulation dotted the central and southern Rockies and the Desert Southwest."



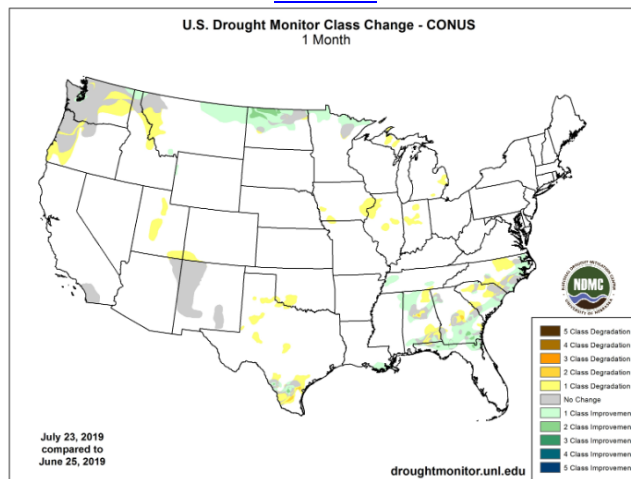
## Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

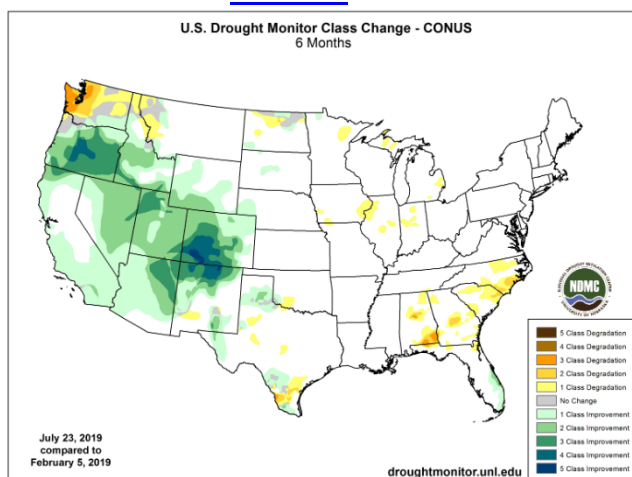
### 1 Week



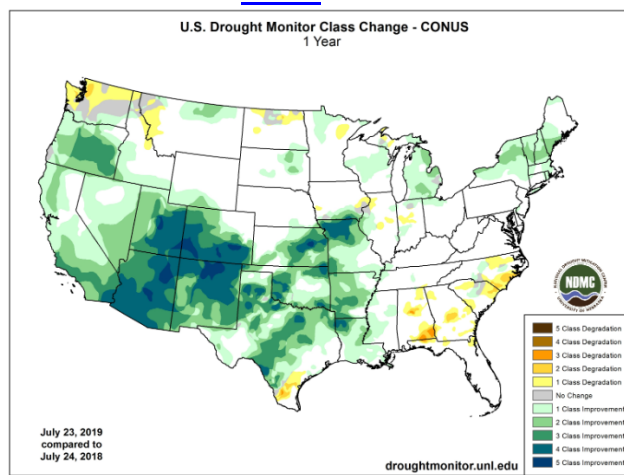
### 1 Month



### 6 Months



### 1 Year



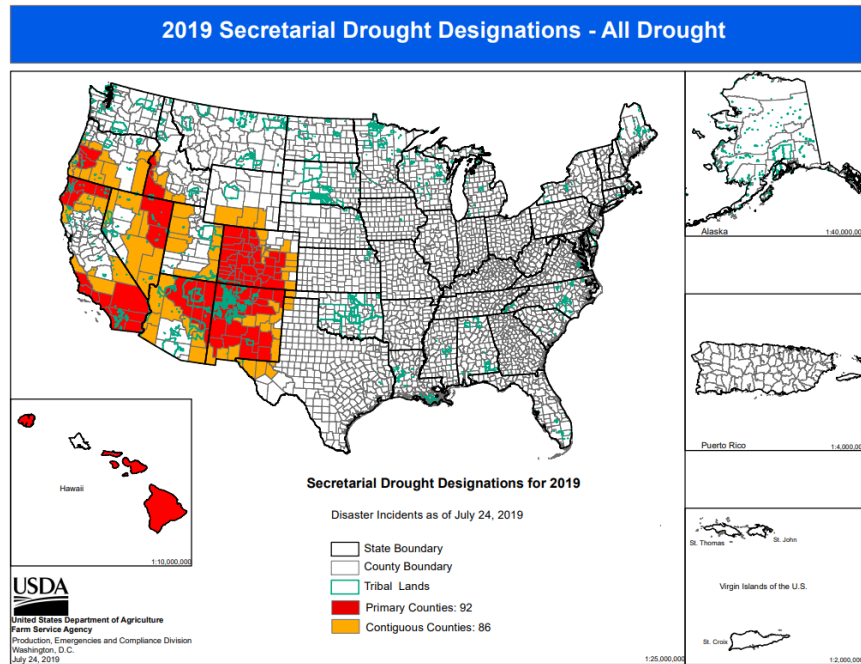
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

## 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



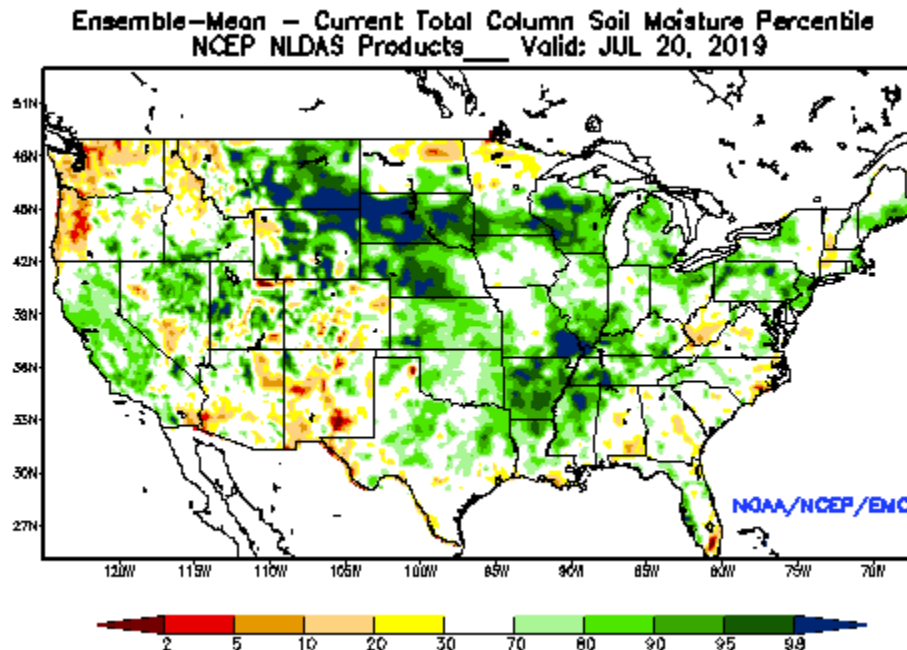
### Highlighted Wildfire Resources

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

## Other Climatic and Water Supply Indicators

### Soil Moisture

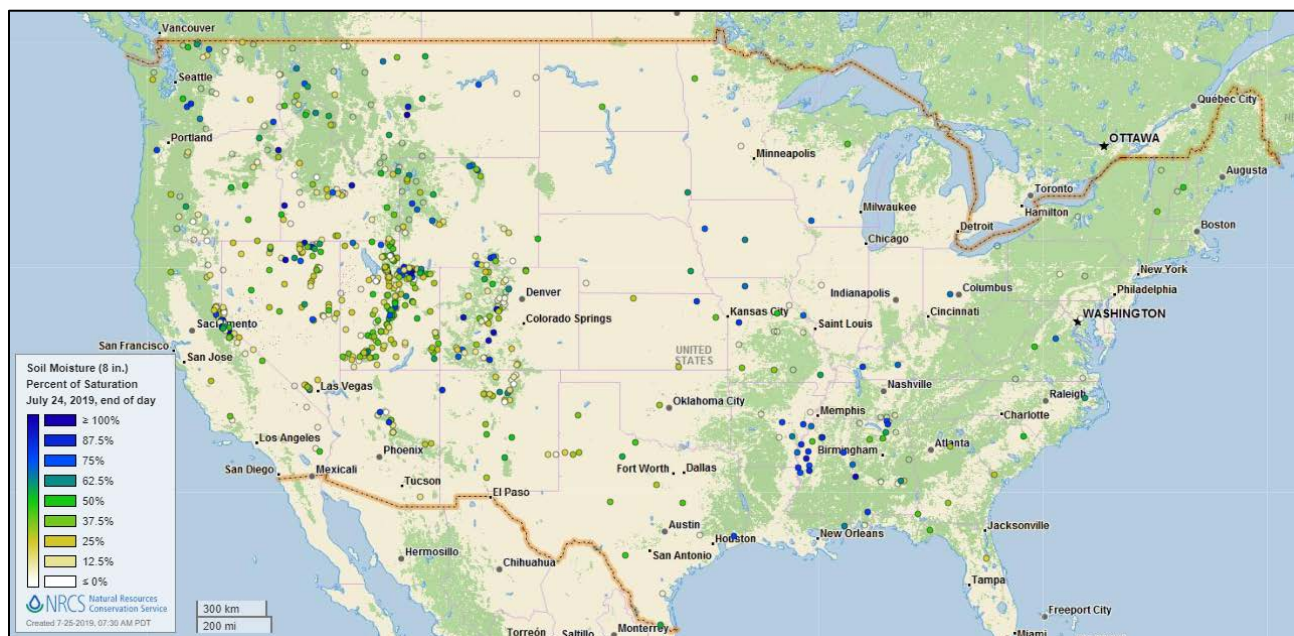
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of July 20, 2019

### Soil Moisture Percent of Saturation

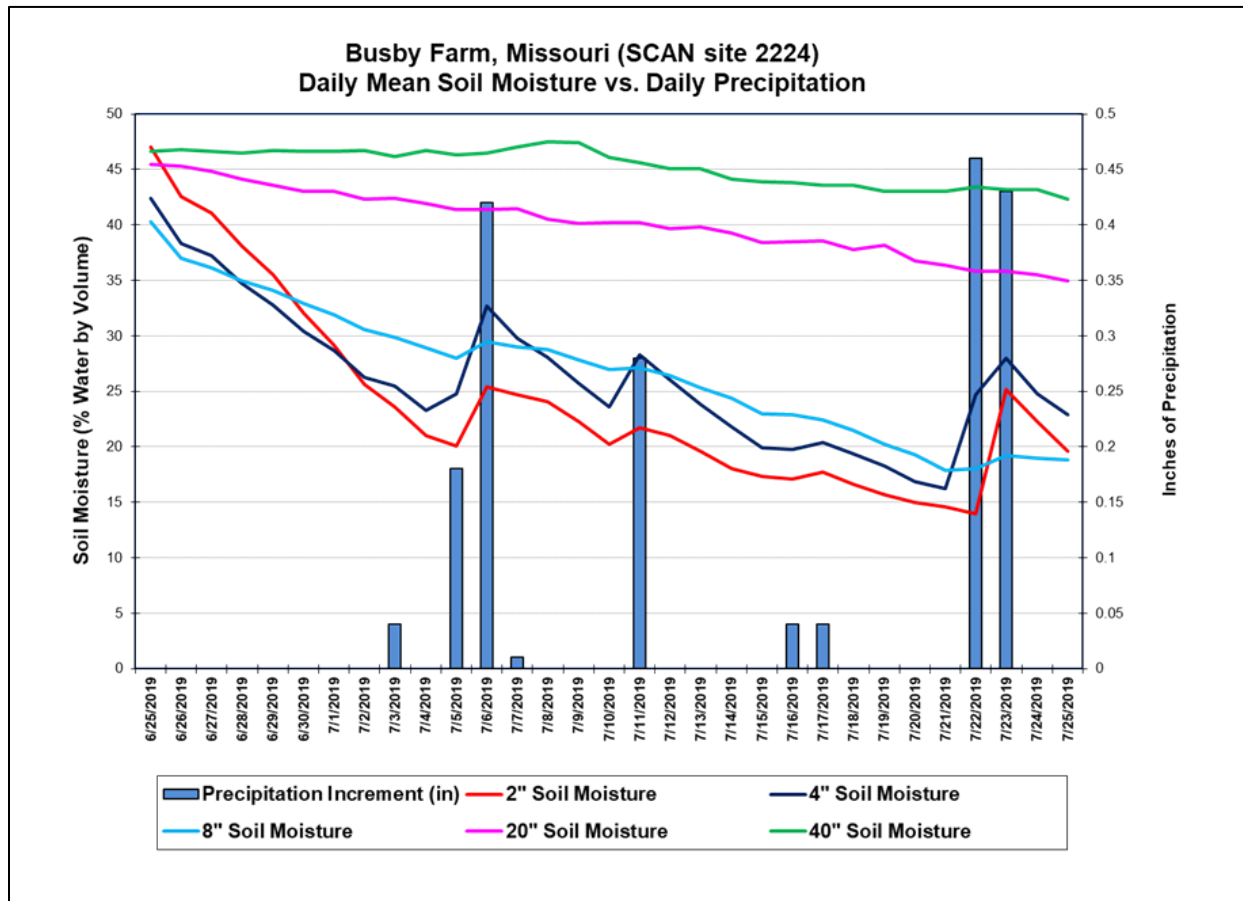
Source: NRCS SNOTEL and [Soil Climate Analysis Network](#) (SCAN)





## 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 [Busby Farm SCAN site 2224](#) in Missouri. Between 7/22/19 - 7/23/19, accumulated precipitation totaled 0.89 inches and soil moisture increased at the -2", -4", and -8" sensor levels. However, there is a soil moisture decreasing trend at all sensor levels during the 30-day period.

## Soil Moisture Data Portals

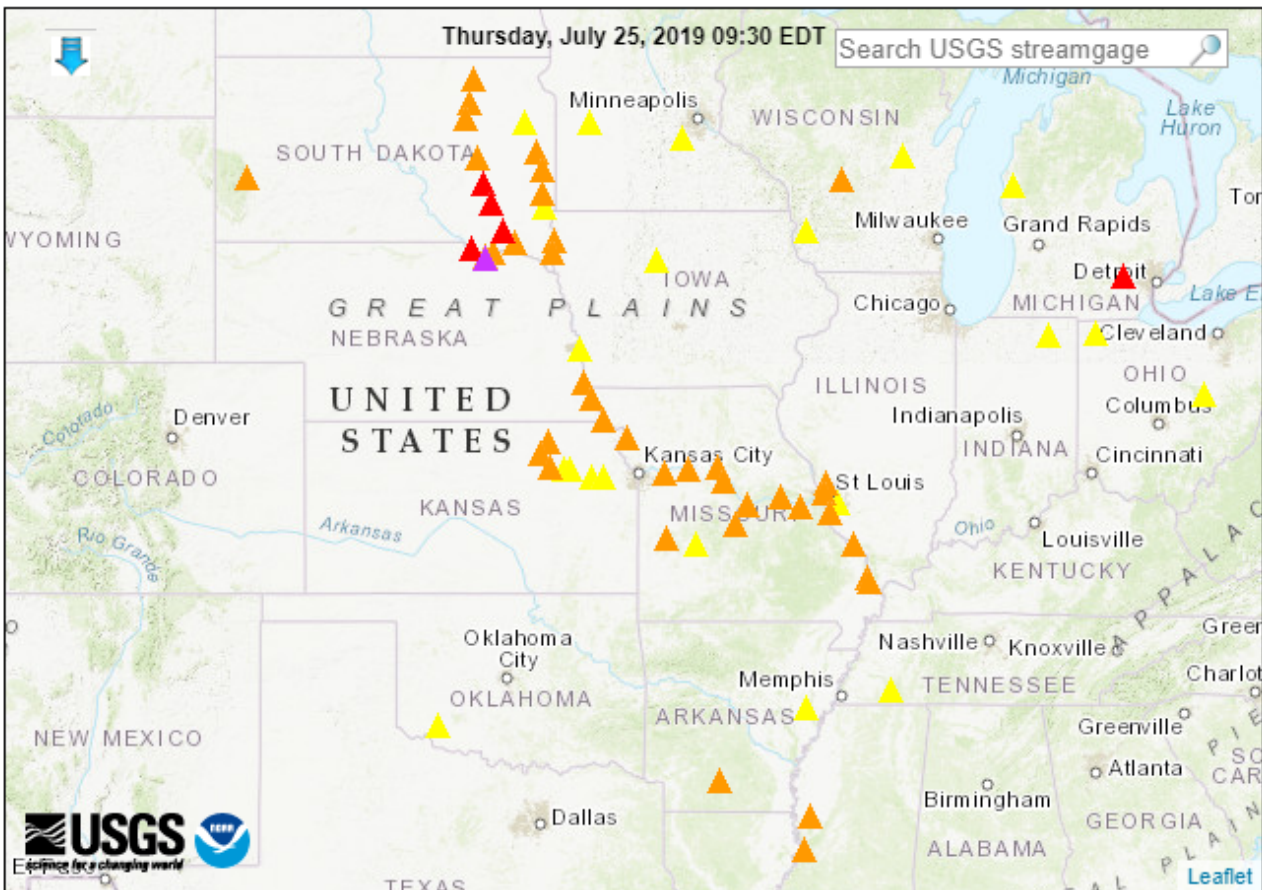
- [CRN Soil Moisture](#)
- [Texas A&M University North American Soil Moisture Database](#)
- [University of Washington Experimental Modeled Soil Moisture](#)

## Streamflow, Drought, Flood, and Runoff

Source: U.S. Geological Survey

### Map of flood and high flow conditions

(1 in major flood, 6 in moderate flood, 42 in minor flood, 26 in near flood)



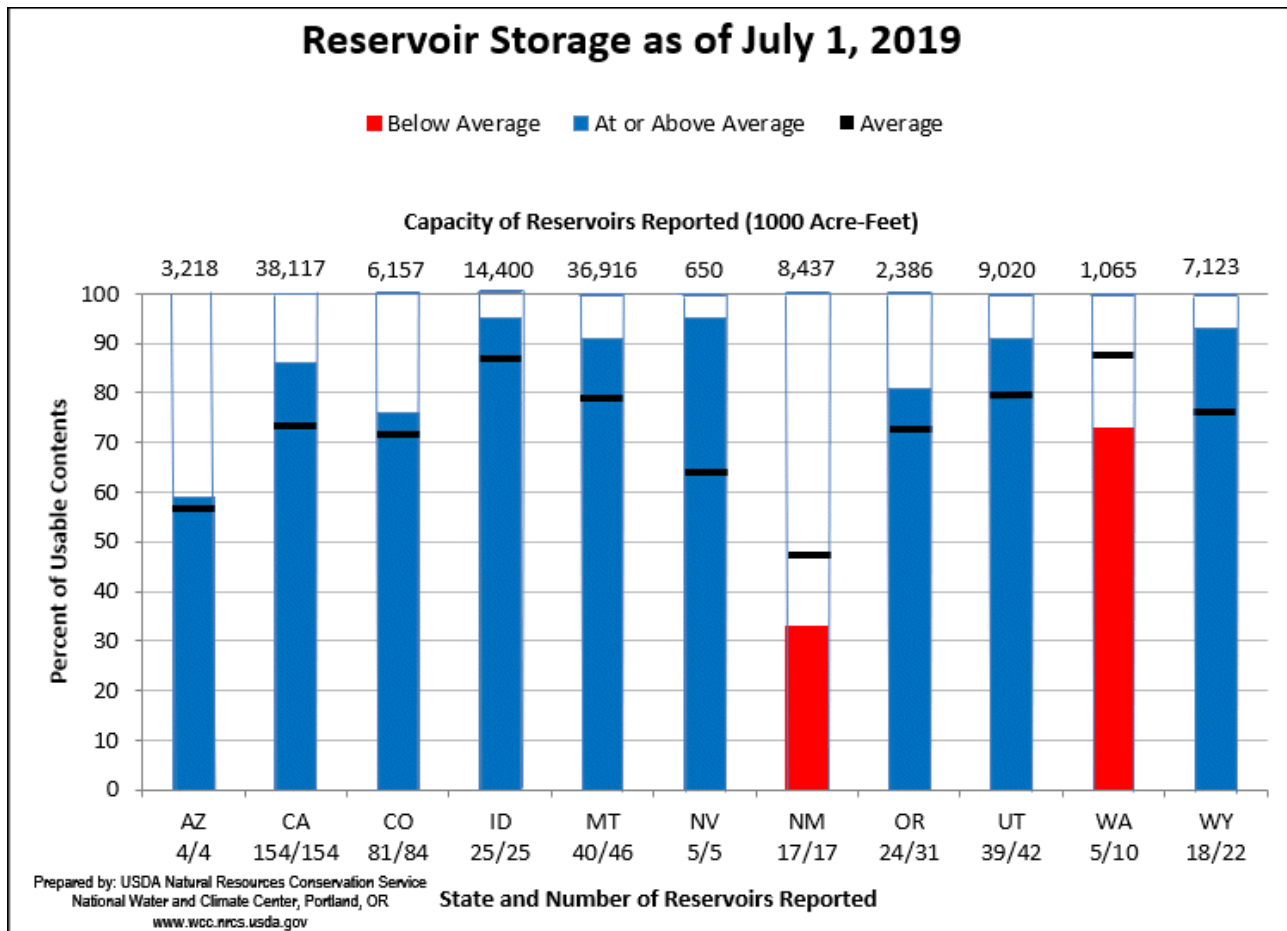
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
△ Streamgage with flood stage			○ Streamgage without flood stage			

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

## Reservoir Storage

### Western States Reservoir Storage

Source: NRCS National Water and Climate Center



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

### Hydromet Tea Cup Reservoir Depictions

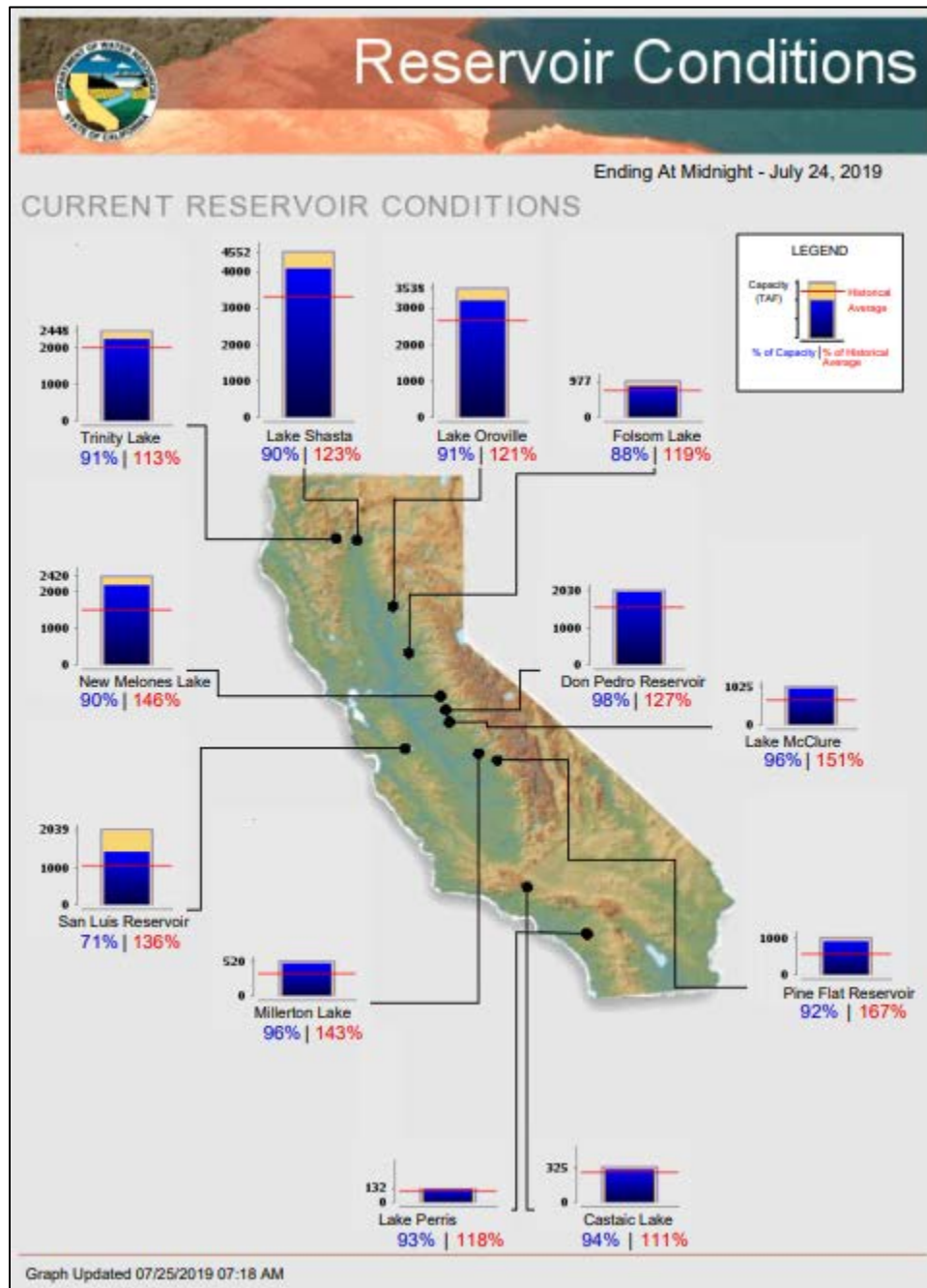
Source: U.S. Bureau of Reclamation

- [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

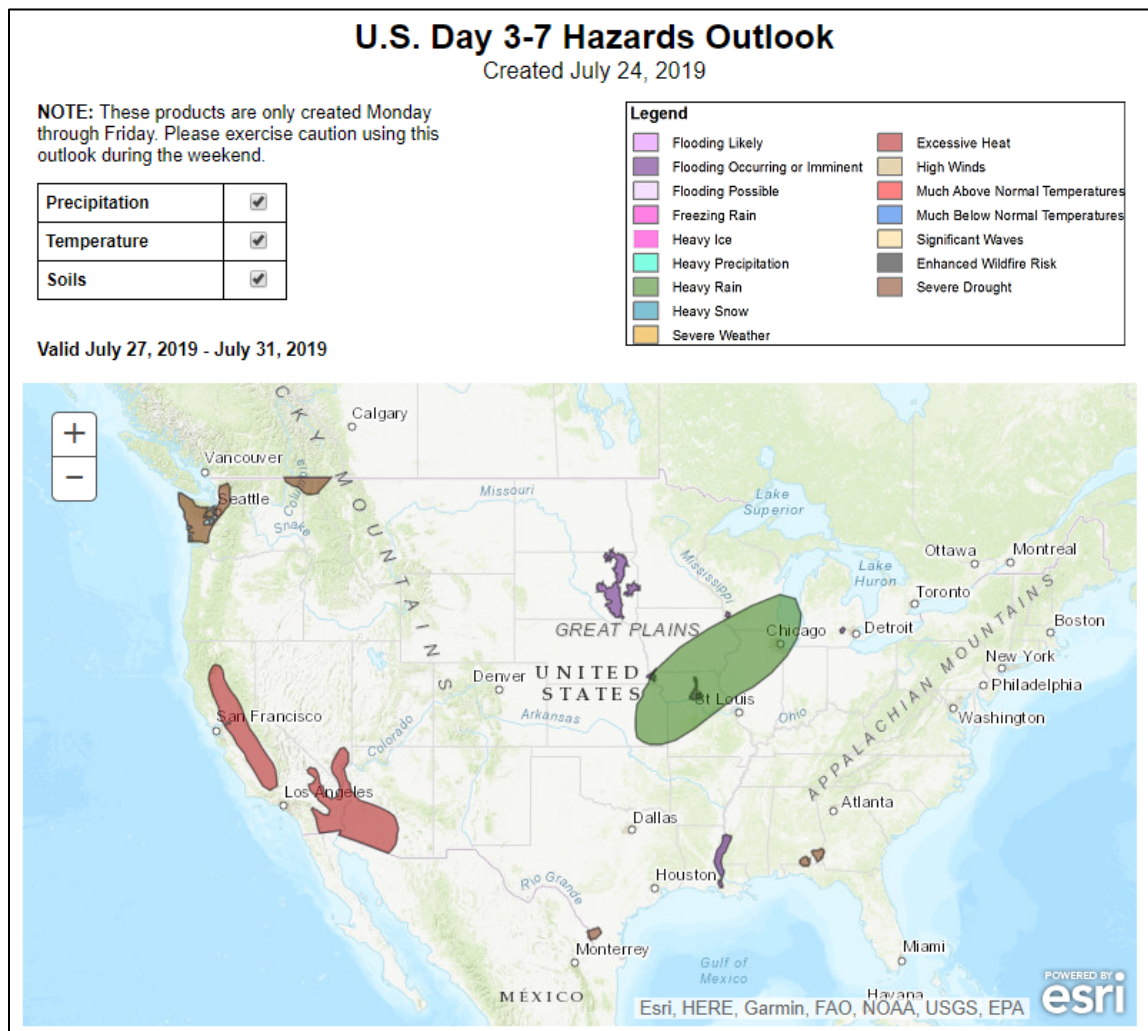
### Agricultural Weather Highlights

Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB

**National Outlook, Wednesday, July 25, 2019:** “Showers and thunderstorms will linger through the weekend across Florida and along the Gulf Coast. Meanwhile, a pair of cold fronts crossing the northern U.S. will draw moisture associated with the Southwestern monsoon circulation northward, leading to occasional showers from the Great Basin and the Four Corners States northeastward across the northern Plains, the Midwest, and the Great Lakes region. Elsewhere, dry weather will prevail during the next 5 days from the central and southern Appalachians to the northern and middle Atlantic coast, while hot weather will be mostly confined to the Great Basin and Intermountain West. The NWS 6- to 10- day outlook for July 30 – August 3 calls for near- or above-normal temperatures nationwide, except for cooler-than-normal conditions in northern Washington and the lower Mississippi Valley. Meanwhile, near- or below-normal rainfall across much of the Plains and Northwest should contrast with wetter-than-normal weather in the Southwest and a broad area covering the mid-South, Ohio and Tennessee Valleys, the lower Great Lakes region, and the Northeast.”

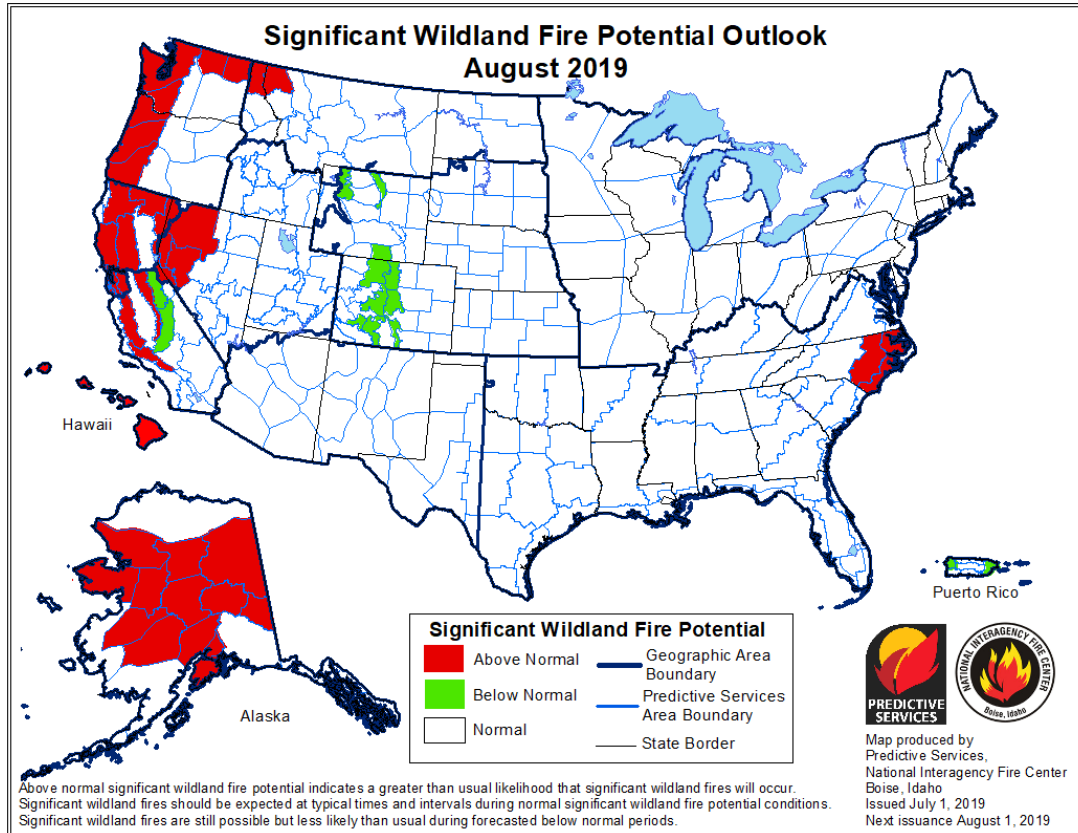
### Weather Hazards Outlook: July 27 – July 31, 2019

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

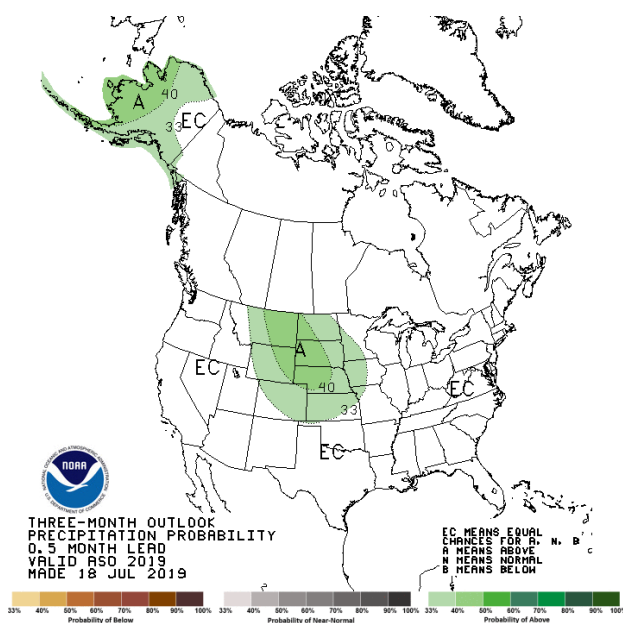




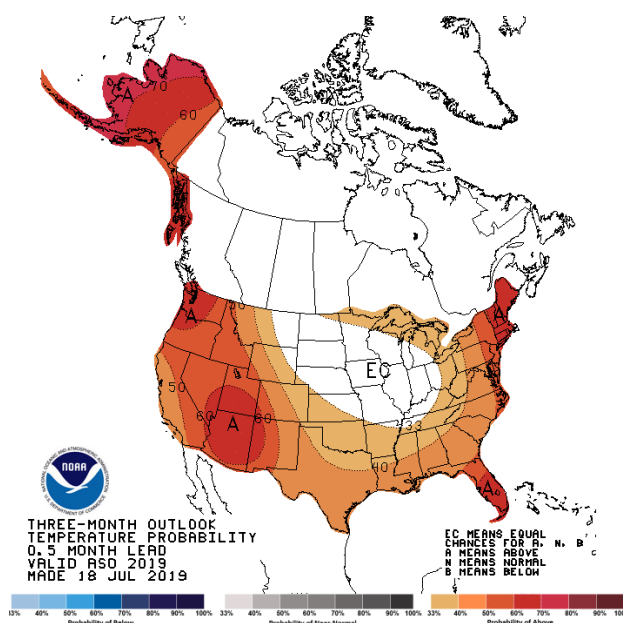
## Climate Prediction Center 3-Month Outlook

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](#).