

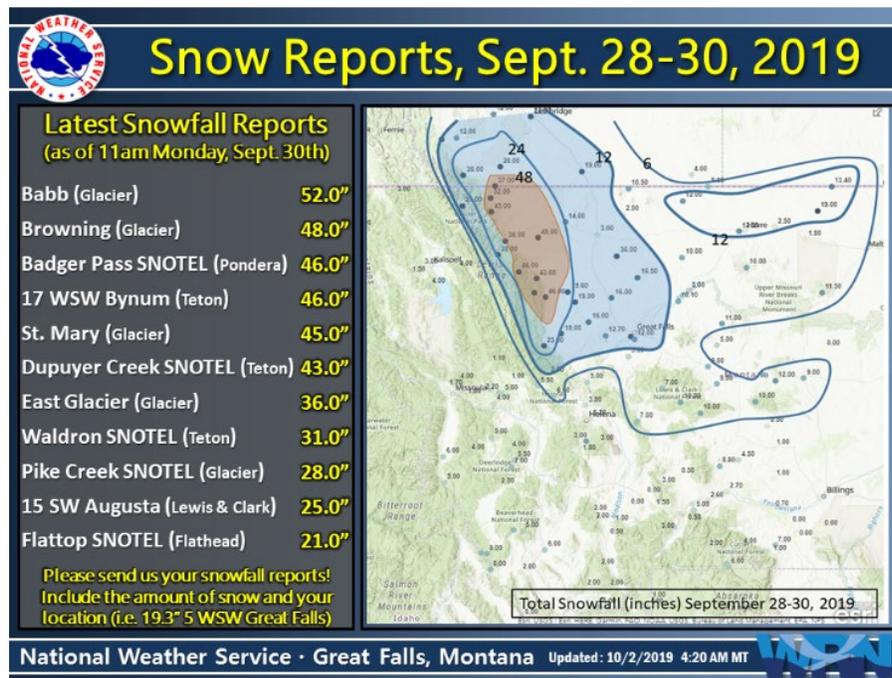
# Water and Climate Update

October 3, 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.....	15
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## Early record snow blankets the western mountains



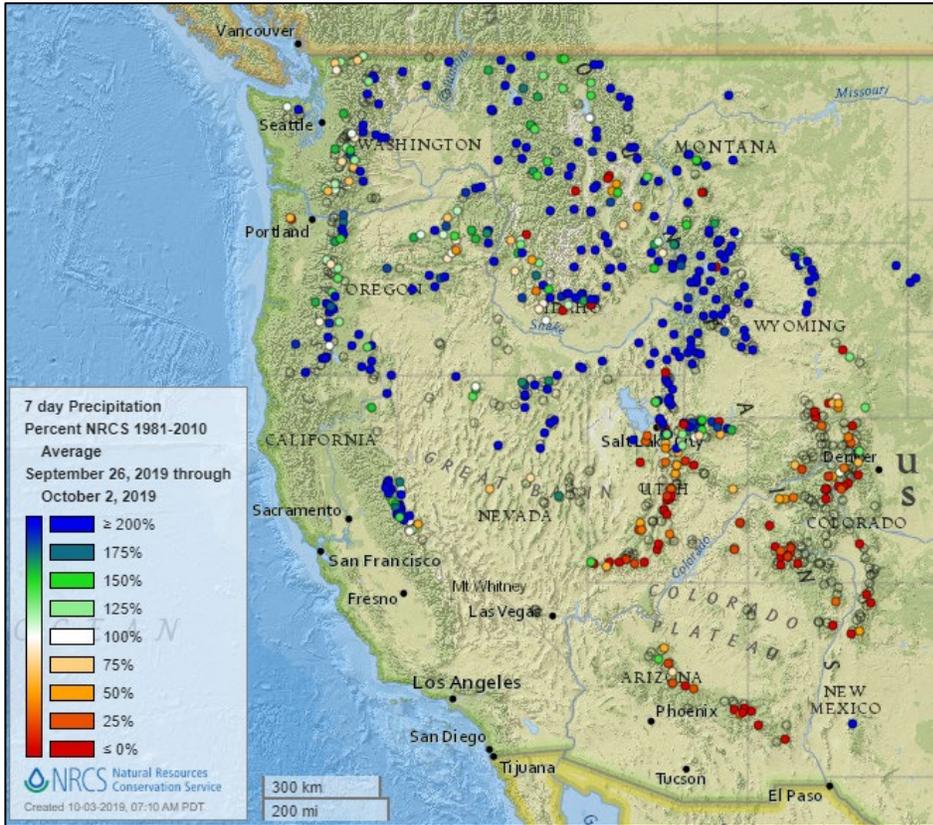
One week into autumn, record cold temperatures and winter-like snowfall blanketed the mountains of the West. Heavy snow made mountain travel difficult, with all the major mountain ranges getting at least a dusting of snow. The northern Rockies in Montana bore the brunt of the storm. One National Weather Service (NWS) station, Babb, in the northern Rockies of Montana reported 52 inches of snowfall from the winter storm. Five SNOTEL sites, shown in the NWS graphic above, had snowfall in excess of 20 inches.

### Related:

- [Montana snowstorm: Feet of snow have fallen and it's not even October yet](#) – CNN
- [Montana farmers and ranchers digging out after heavy September snow](#) – KRTV (MT)
- [Historic September snowstorm hits Montana as governor declares "winter storm emergency"](#) - CBS
- [Storm: Teton County digs out after blizzard](#) – Choteau Acantha (MT)
- [Uncharacteristic autumn snowstorm brings massive amount of snowfall to Northern Rockies](#) – Idaho State Journal
- [Winter already? All-time snow records fall in Spokane; Cascades get first snow, too](#) – Seattlepi.com (WA)
- [September snow piles up in Oregon's Cascades; Timberline Lodge gets 11 inches](#) – Oregonian (OR)

# Precipitation

## Last 7 Days, NRCS SNOTEL Network

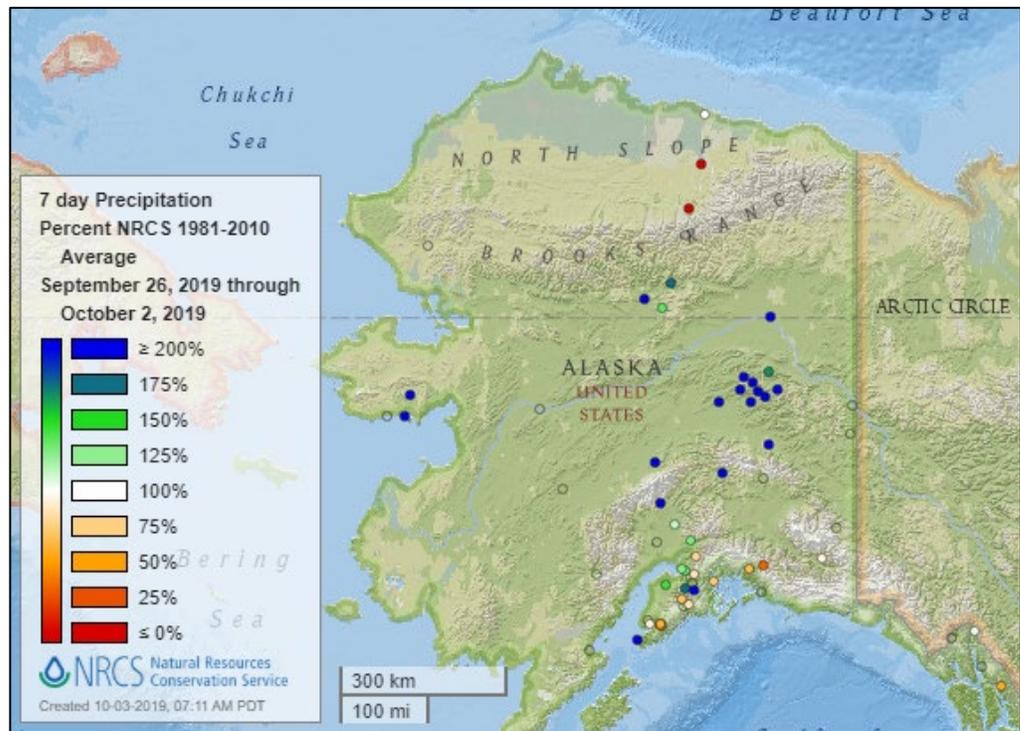


[7-day precipitation percent of average map](#)

**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](#)



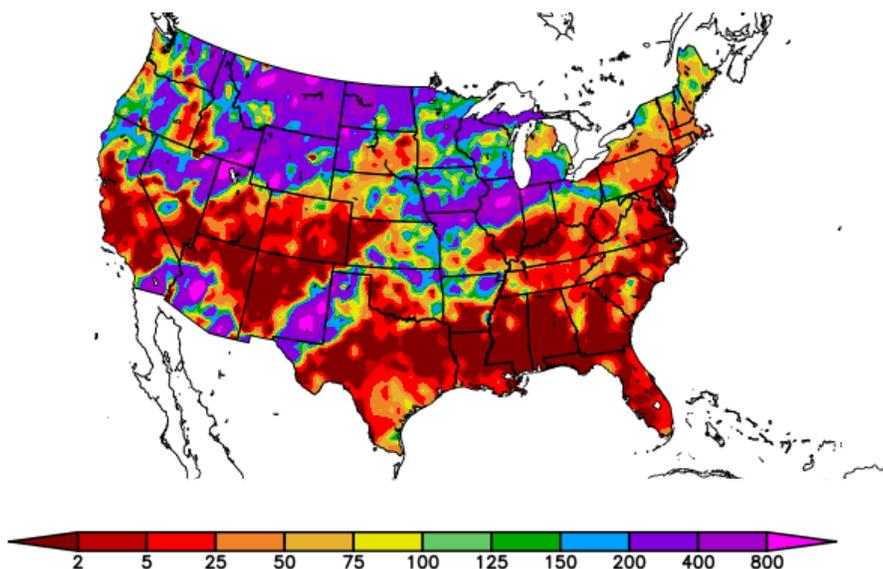
**Last 7 Days, National Weather Service (NWS) Networks**

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 (%)  
9/25/2019 – 10/1/2019



Generated 10/2/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

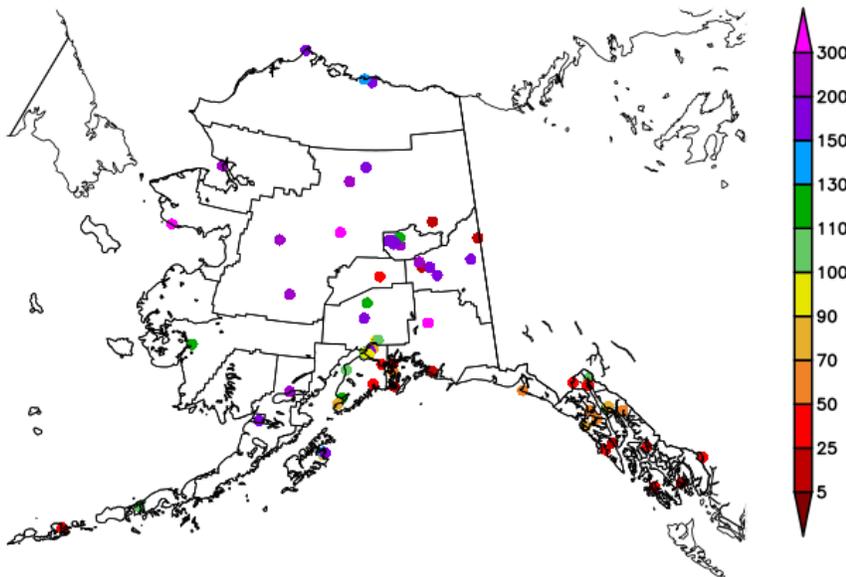
**Last 7 Days, National Weather Service (NWS) Networks**

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)  
9/25/2019 – 10/1/2019



Generated 10/2/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

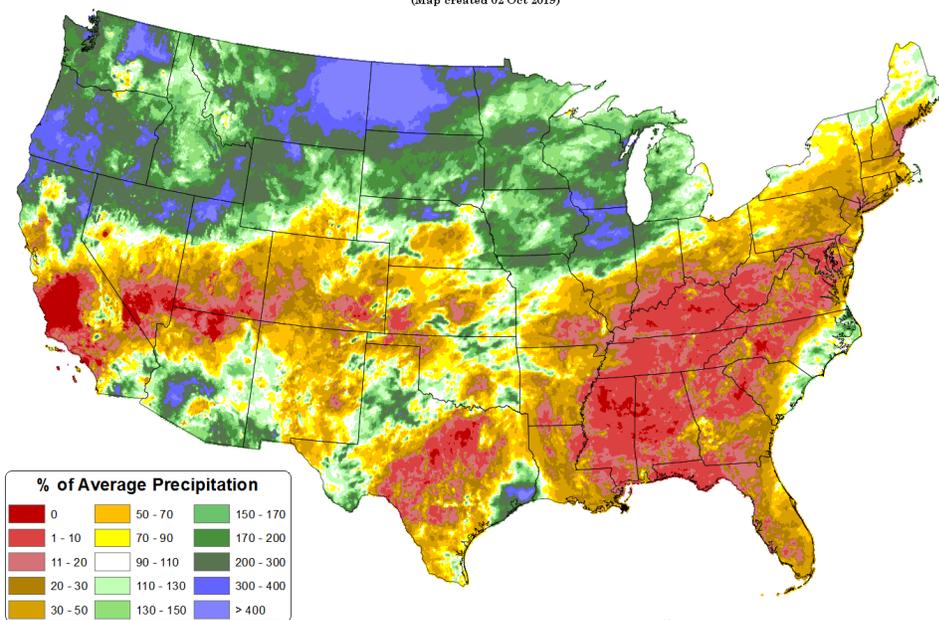
Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

Total Precipitation Anomaly: Sep 2019

Period ending 30 Sep 2019  
Base period: 1981-2010  
(Map created 02 Oct 2019)

[Previous month national total precipitation percent of average map](#)



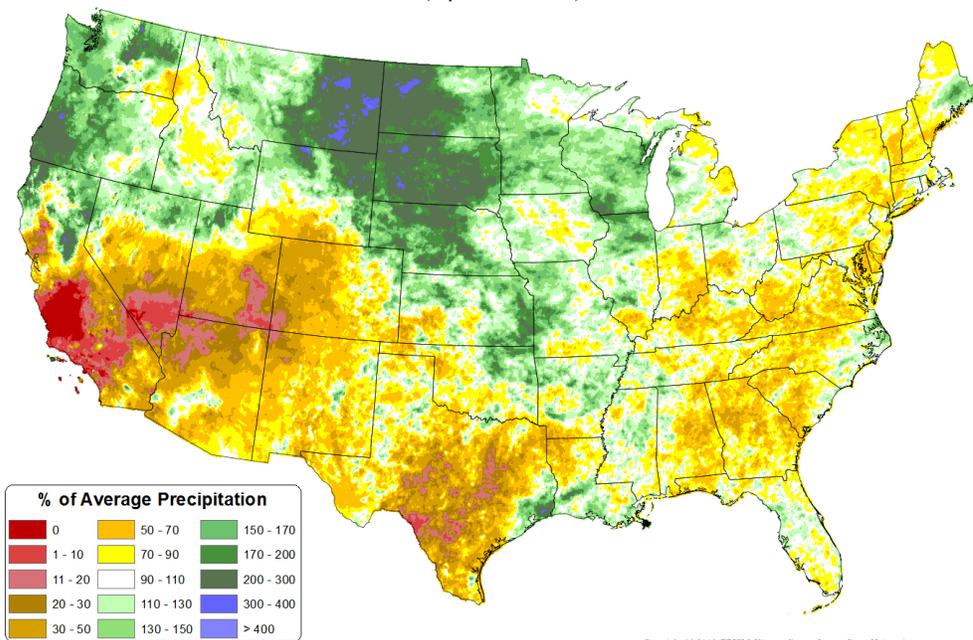
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

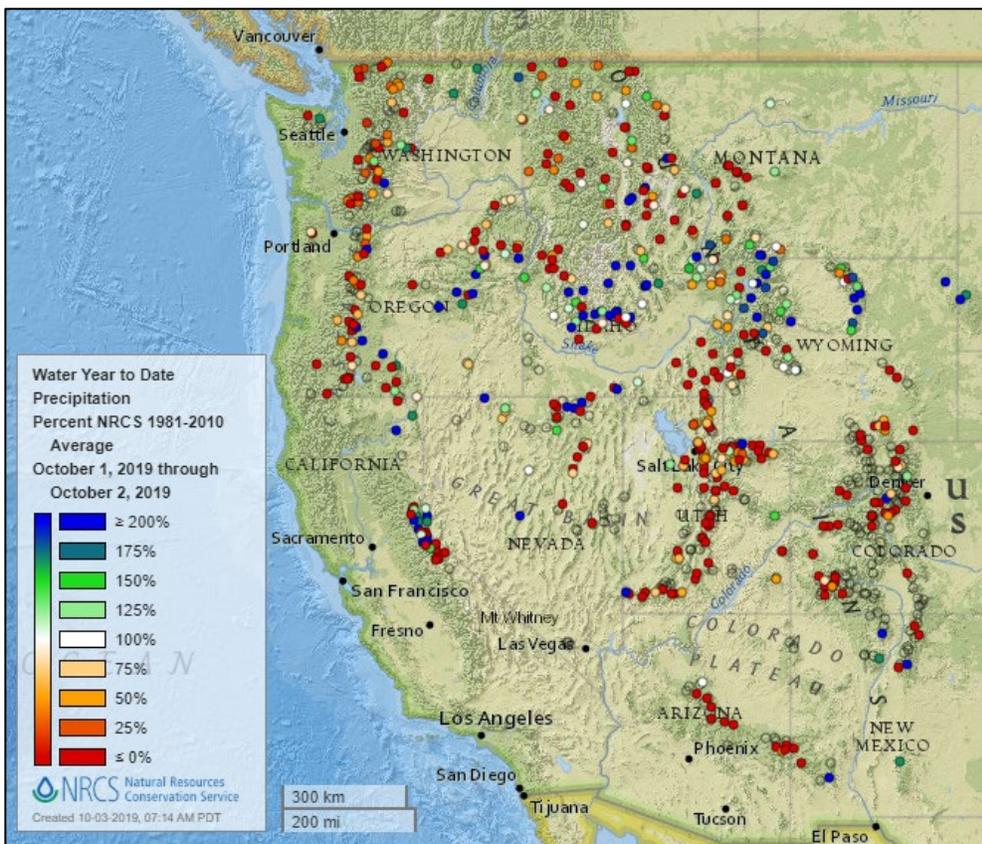
[July through September 2019 total precipitation percent of average map](#)

Total Precipitation Anomaly: Jul 2019 - Sep 2019

Period ending 7 AM EST 30 Sep 2019  
Base period: 1981-2010  
(Map created 02 Oct 2019)

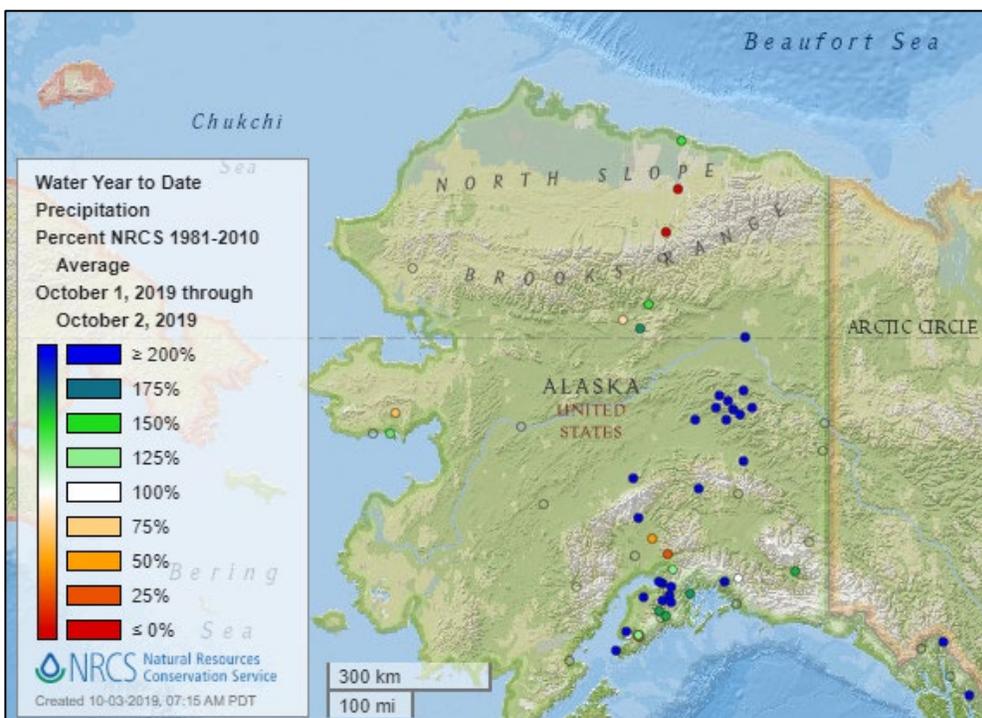


Water Year-to-Date, NRCS SNOTEL Network



[2020 water year-to-date precipitation percent of average map](#)

**See also:**  
[2020 water year-to-date precipitation values \(inches\) map](#)



[Alaska 2020 water year-to-date precipitation percent of average map](#)

**See also:** [Alaska 2020 water year-to-date precipitation values \(inches\) map](#)

## Temperature

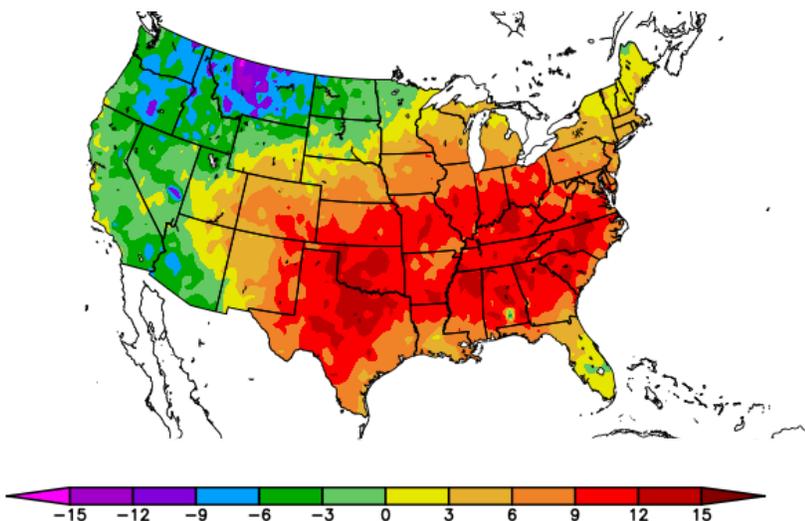
### Last 7 Days, National Weather Service (NWS) Networks

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)  
9/25/2019 – 10/1/2019



Generated 10/2/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

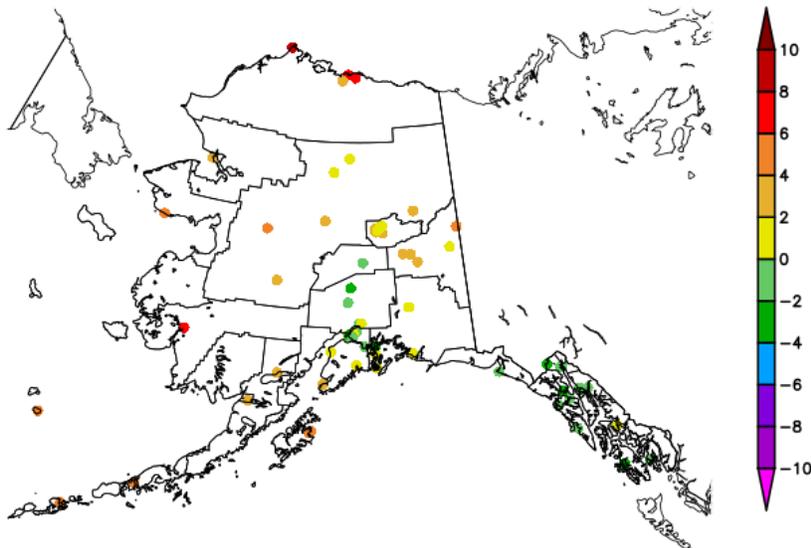
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)  
9/25/2019 – 10/1/2019



Generated 10/2/2019 at HPRCC using provisional data.

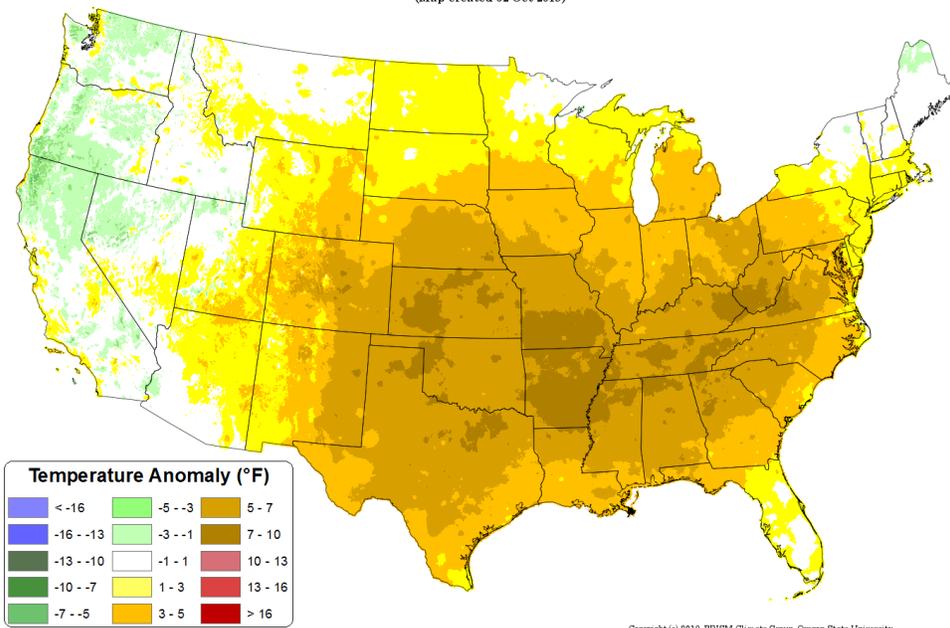
NOAA Regional Climate Centers

Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[Previous month national daily mean temperature anomaly map](#)

Daily Mean Temperature Anomaly: Sep 2019  
Period ending 7 AM EST 30 Sep 2019  
Base period: 1981-2010  
(Map created 02 Oct 2019)

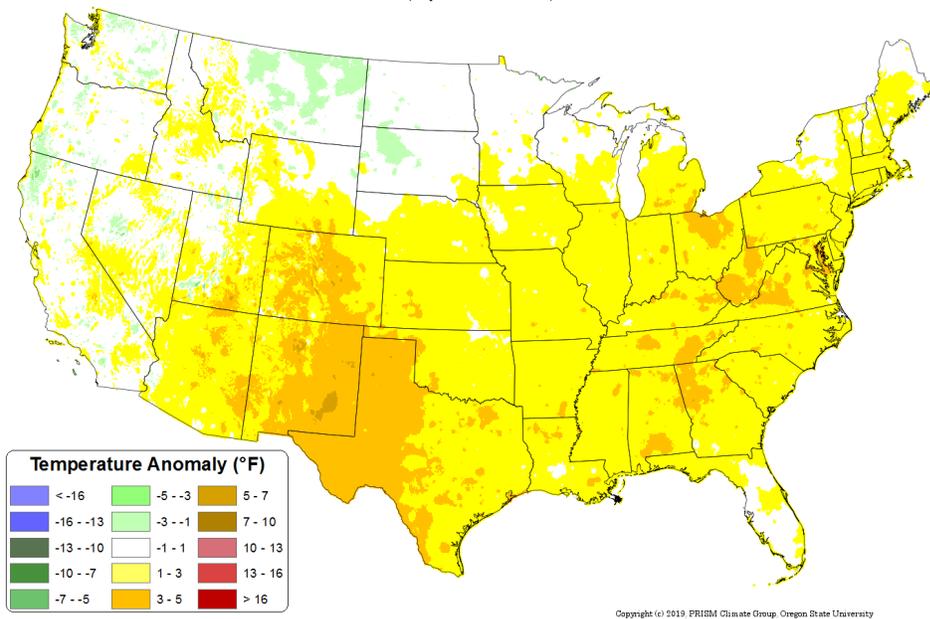


Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

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

Daily Mean Temperature Anomaly: Jul 2019 - Sep 2019  
Period ending 7 AM EST 30 Sep 2019  
Base period: 1981-2010  
(Map created 02 Oct 2019)



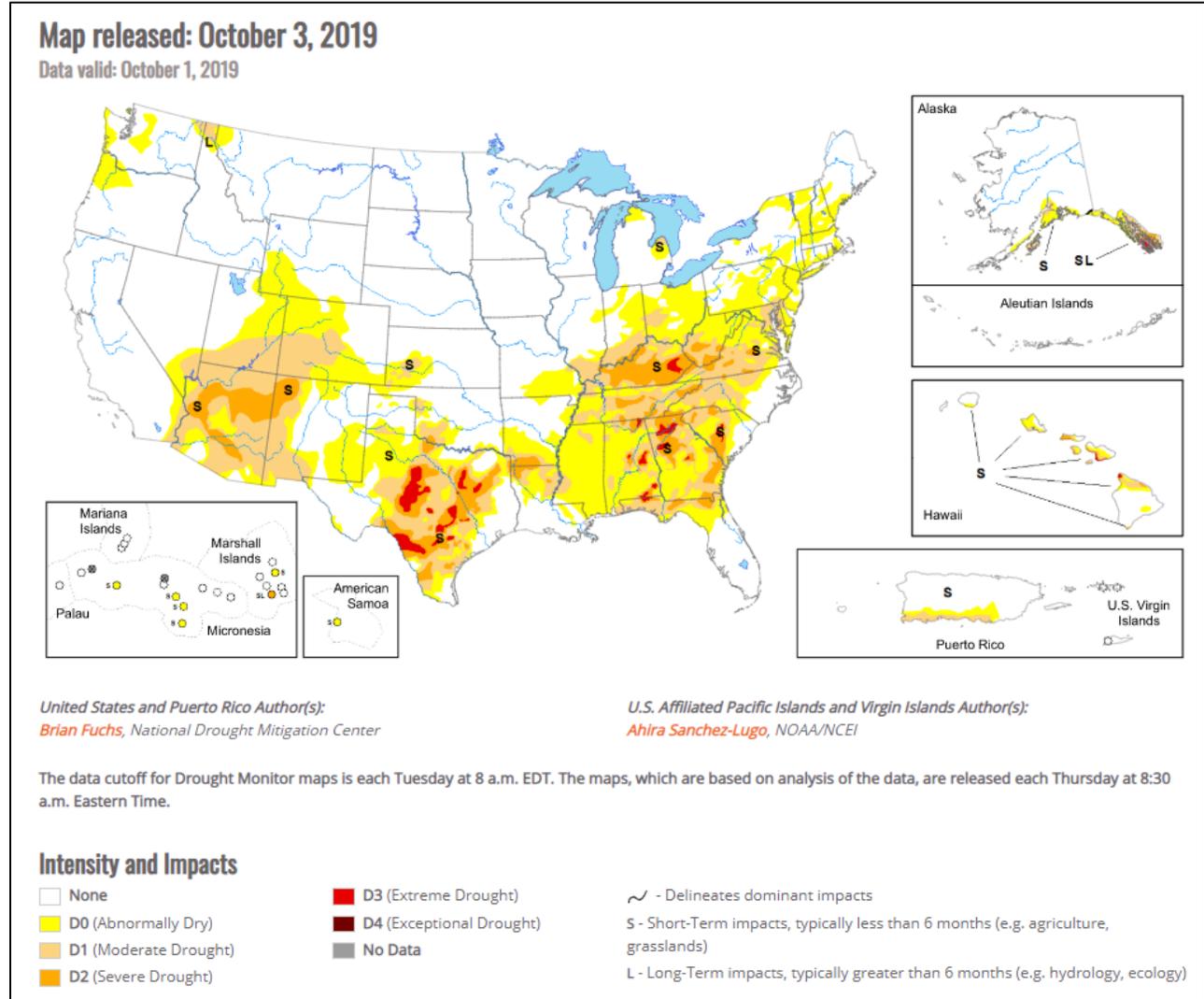
# Drought

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

Source: National Drought Mitigation Center

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

Source: NOAA



## Current [National Drought Summary](#), October 3, 2019

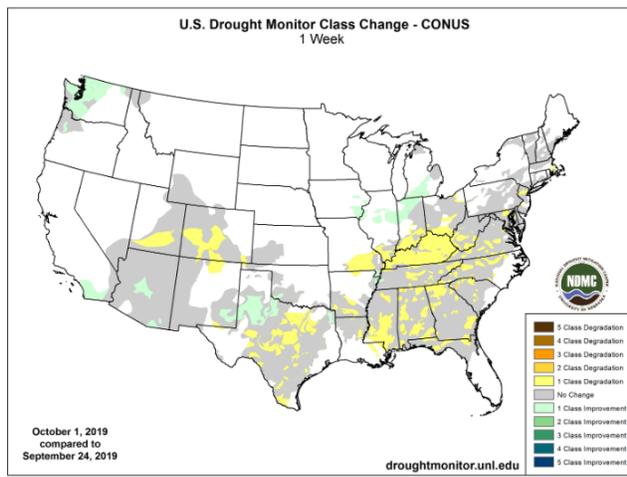
Source: National Drought Mitigation Center

“Warmer than normal temperatures dominated the eastern two-thirds of the country, with many areas having temperatures that were 9 to 15 degrees above normal. Cooler than normal temperatures dominated the western portions of the country into the northern Rocky Mountains. Very dry conditions also dominated regions in the southern Plains, southern Midwest and along most of the east coast. The heat and dryness have continued setting the stage for rapidly developing drought, impacting mainly agricultural sectors right now.”

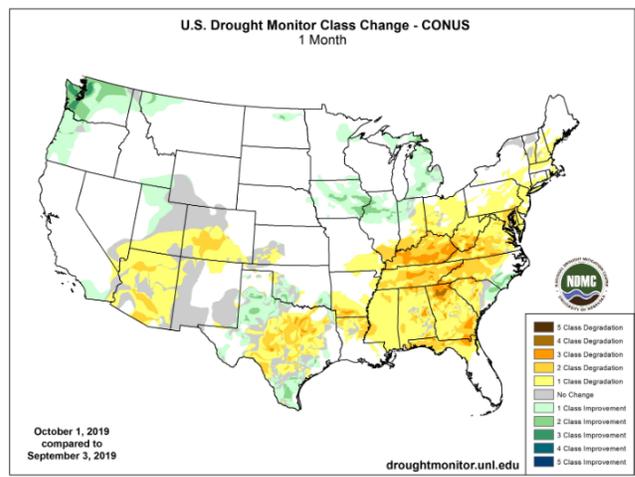
## Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

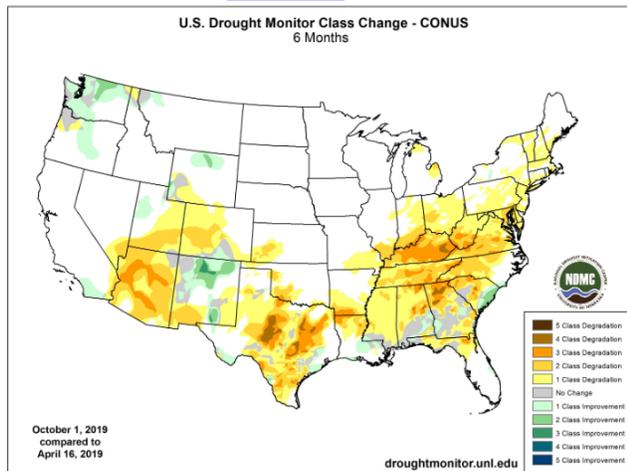
### 1 Week



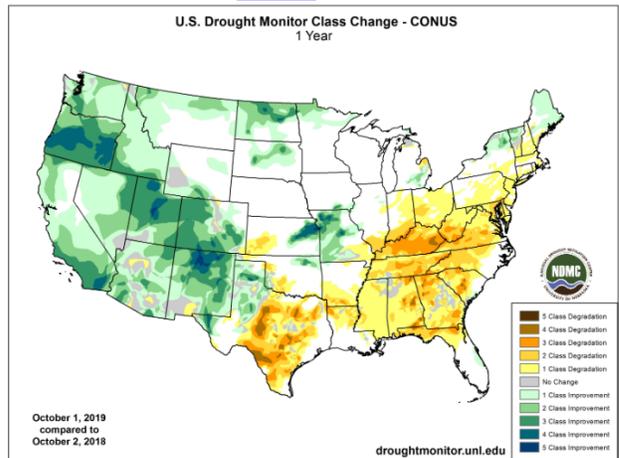
### 1 Month



### 6 Months



### 1 Year



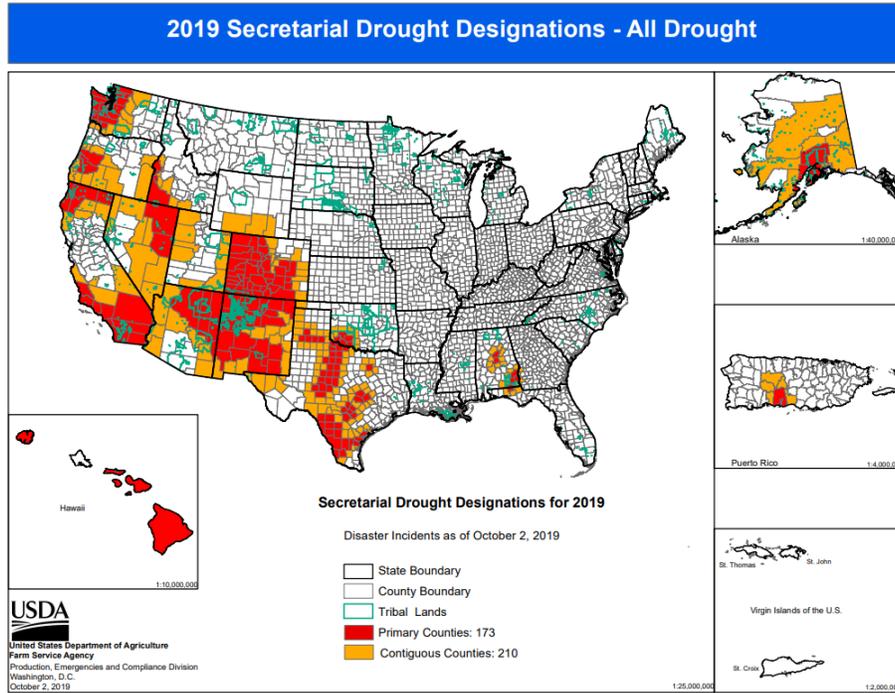
[Changes in Class drought conditions over the last 12 months for the contiguous U.S.](#)

## Highlighted Drought Resources

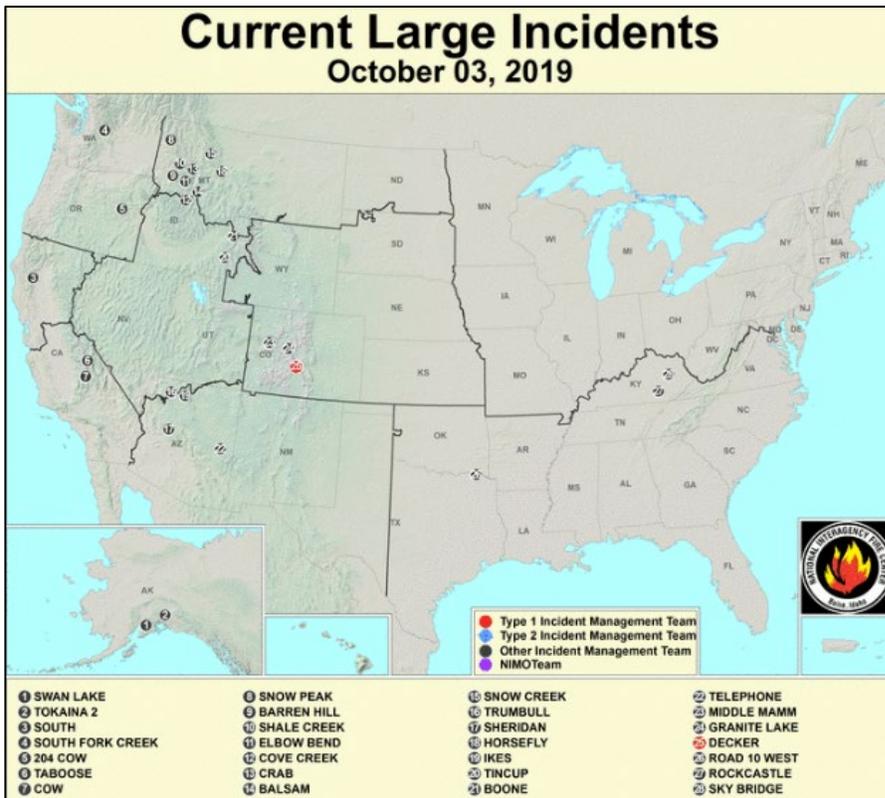
- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)
- [U.S. Population in Drought, Weekly Comparison](#)
- [USDA Disaster and Drought Information](#)

**Secretarial Drought Designations**

Source: USDA Farm Service Agency



**Wildfires: USDA Forest Service Active Fire Mapping**



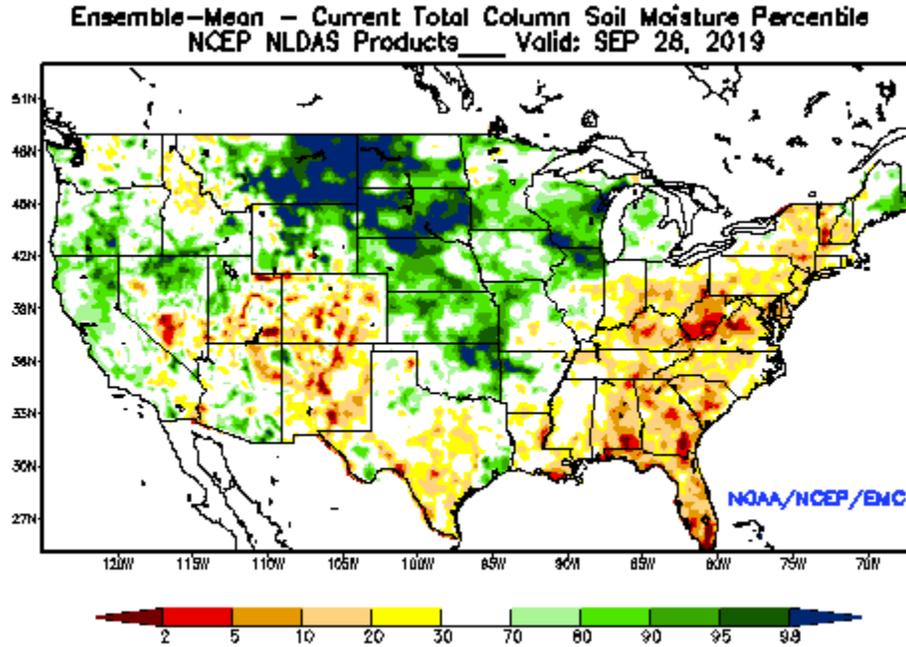
**Highlighted Wildfire Resources**

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

## Other Climatic and Water Supply Indicators

### Soil Moisture

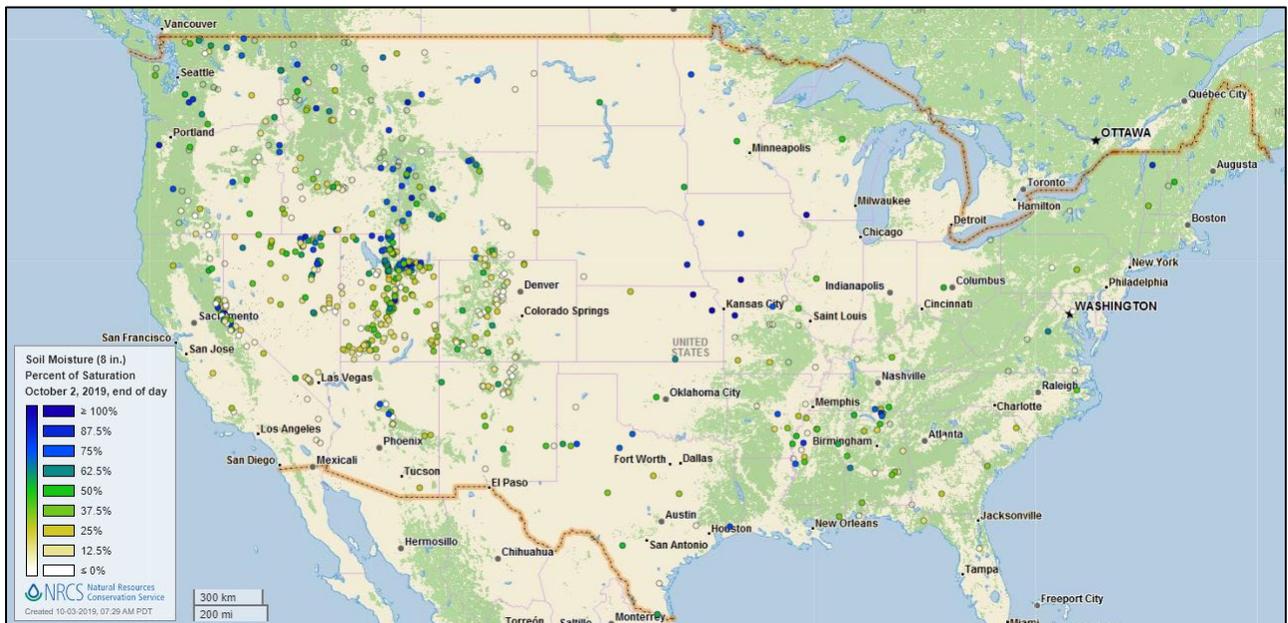
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of September 28, 2019

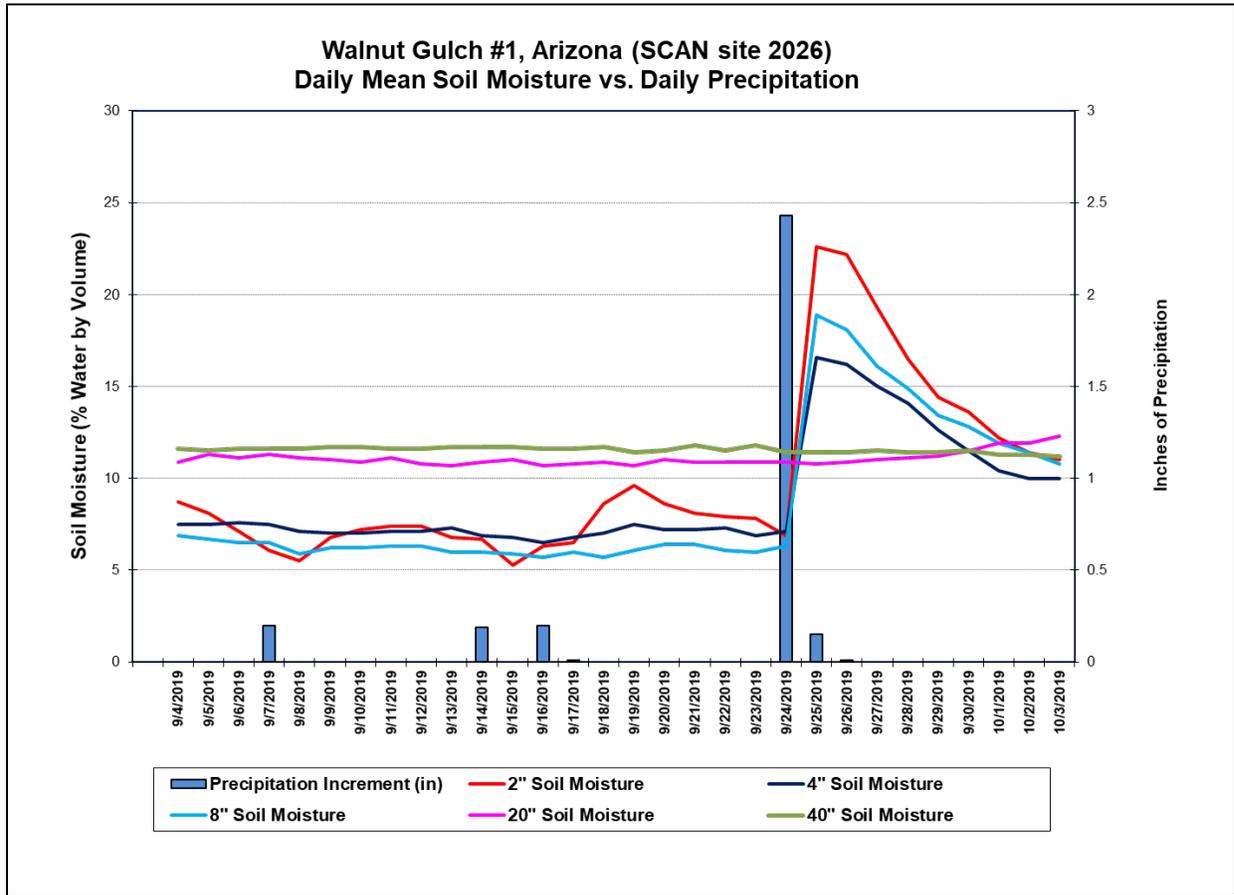
### Soil Moisture Percent of Saturation

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 [Walnut Gulch #1 SCAN site](#) in southern Arizona. A seasonal monsoon on September 24 and 25 resulted in 2.58 inches of precipitation. This increased soil moisture at the -2", -4" and -8" sensor levels.

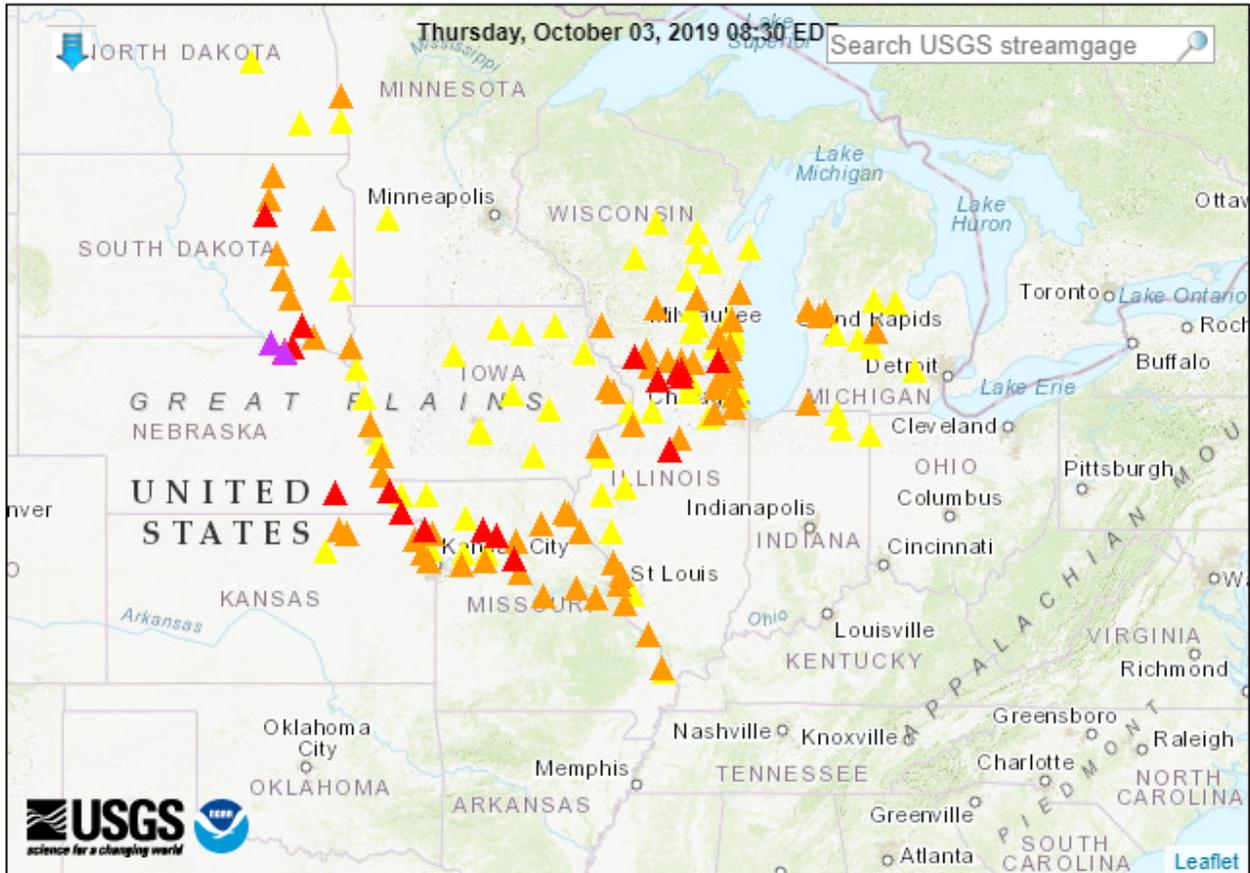
**Soil Moisture Data Portals**

- [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**  
 (87 in floods [major: 2, moderate: 18, minor: 67], 65 in near-flood)



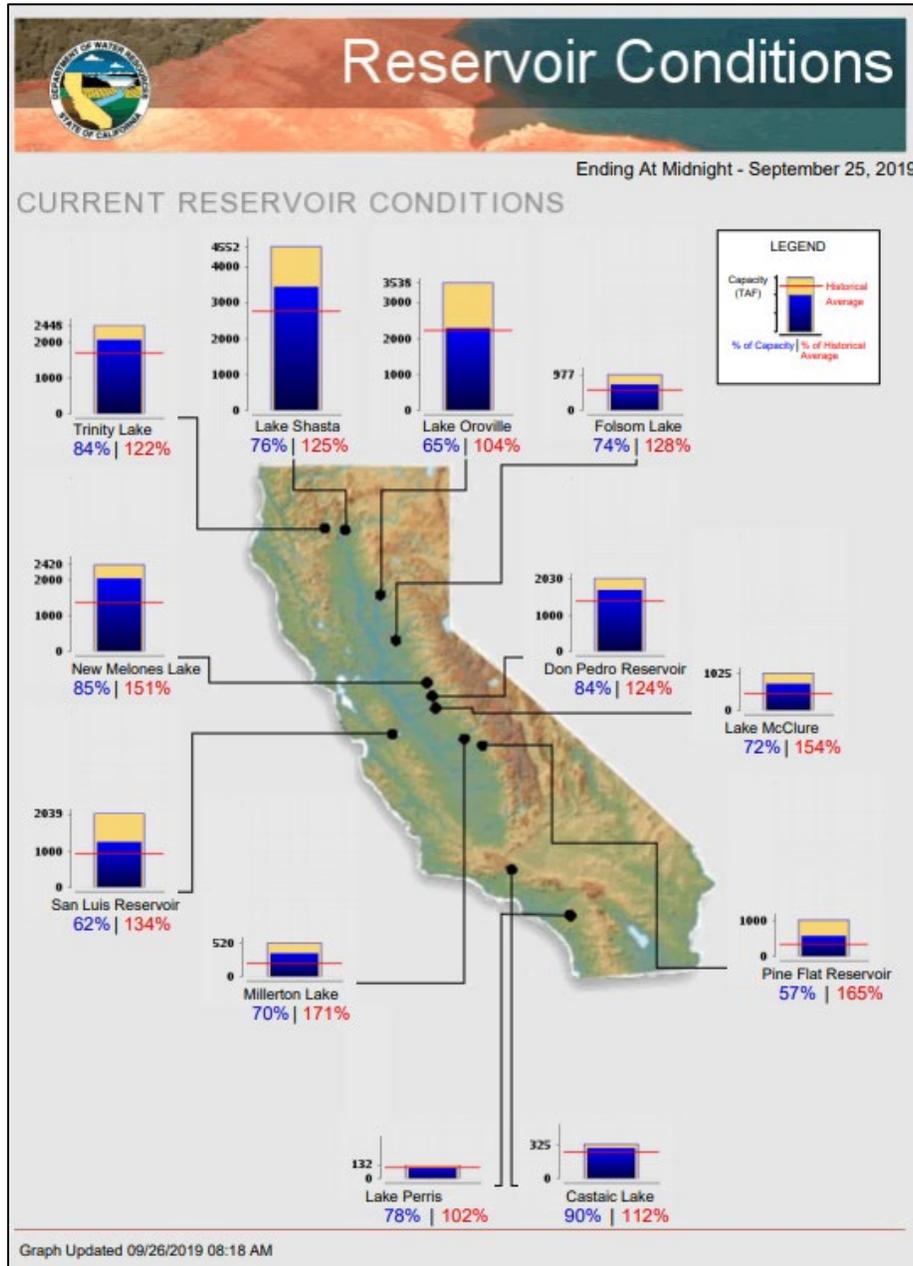
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
▲ Streamgage with flood stage			○ Streamgage without flood stage			

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

## Reservoir Storage

### Current California Reservoir Conditions

Source: California Department of Water Resources



### [Current California Reservoir Conditions](#)

### 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](#)

## Short- and Long-Range Outlooks

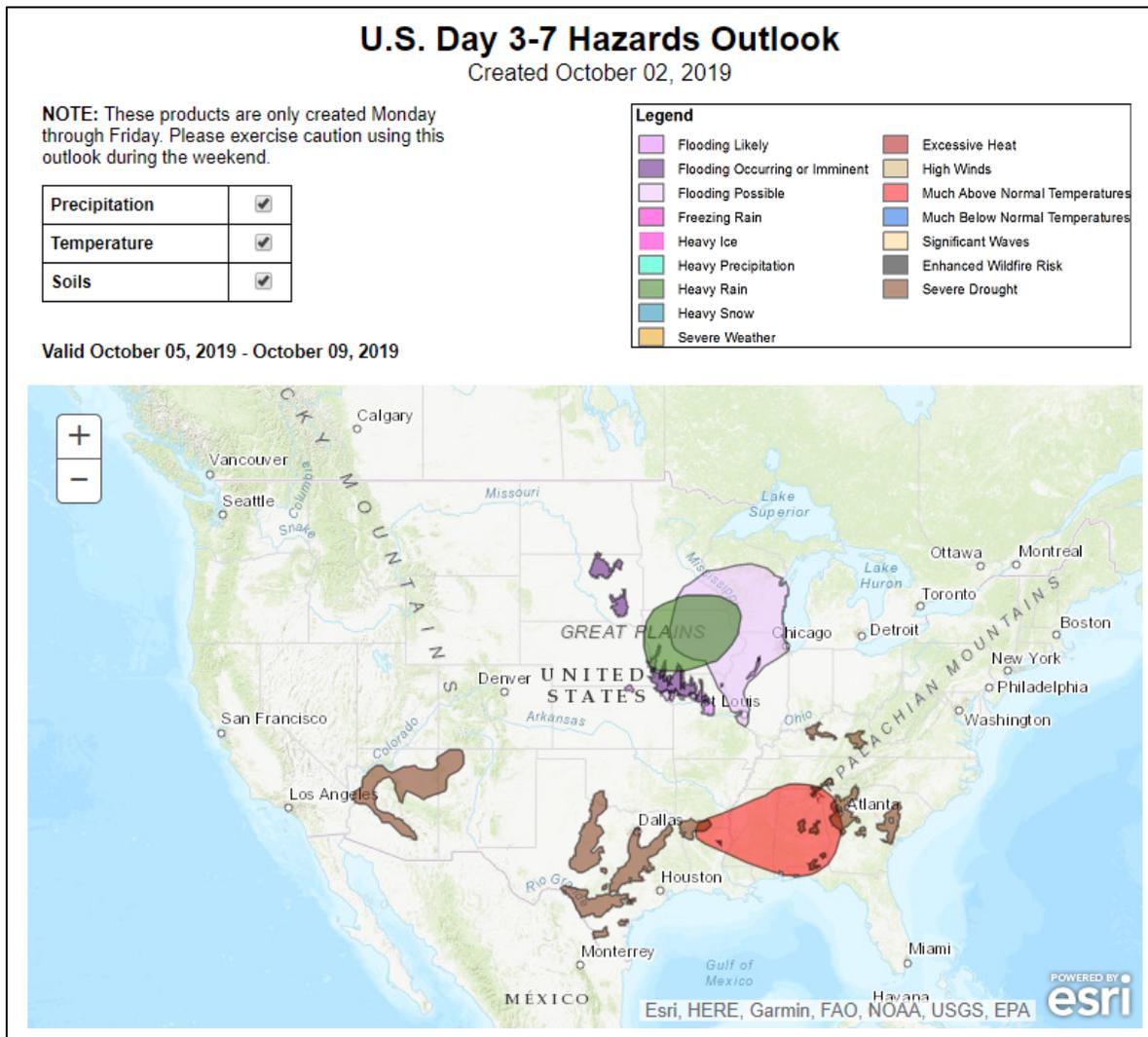
### Agricultural Weather Highlights

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

**National Outlook, Thursday, October 3, 2019:** “Record-setting heat across the South and East will be replaced by somewhat cooler conditions during the weekend. By early next week, near- or above-normal temperatures will return across many parts of the country, but a new surge of cold air will arrive in the Northwest. Most areas across the eastern half of the U.S. will receive some rain during the next 5 days, but amounts will be highly variable. The area with the greatest chance of experiencing relief from short-term dryness will extend from the Tennessee Valley into the Northeast, where totals could reach 1 to 3 inches or more. Heavy rain may also occur across the upper Midwest, where some rivers are already running high. In the West, precipitation should be limited to the southern Rockies and the Northwest. The NWS 6- to 10-day outlook for October 8 – 12 calls for near- or above-normal temperatures nationwide, except for cooler-than-normal conditions in the Northwest and parts of the mid-South. Meanwhile, above-normal precipitation along the Atlantic Seaboard and from the Pacific Northwest to Montana should contrast with drier-than-normal weather in most other areas, including large sections of the Plains, Southwest, Midwest, and mid-South.”

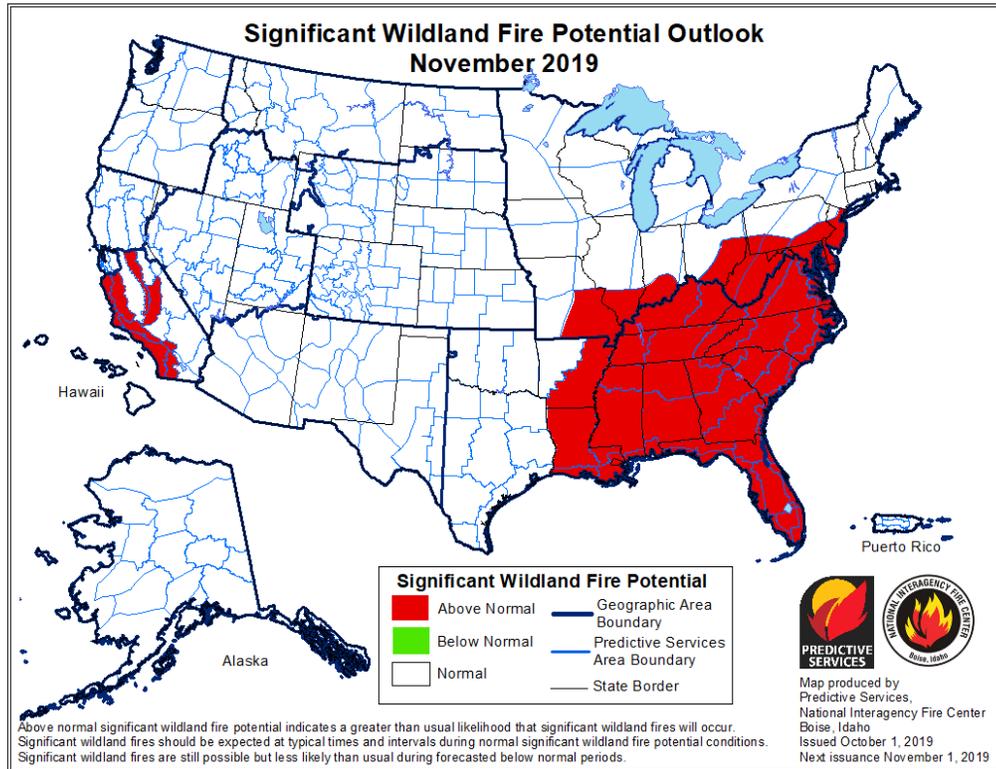
### Weather Hazards Outlook: [October 5 – October 9, 2019](#)

Source: NOAA Climate Prediction Center



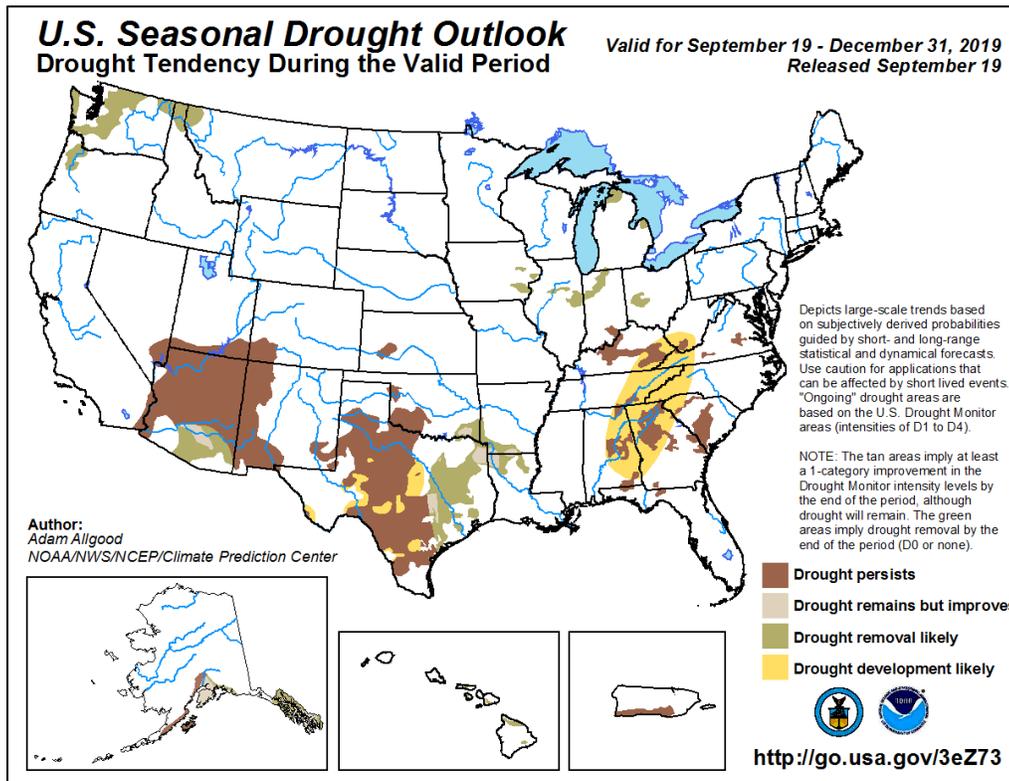
**Significant Wildland [Fire Potential Outlook](#)**

Source: National Interagency Fire Center



**Seasonal Drought Outlook: [September 19 – December 31, 2019](#)**

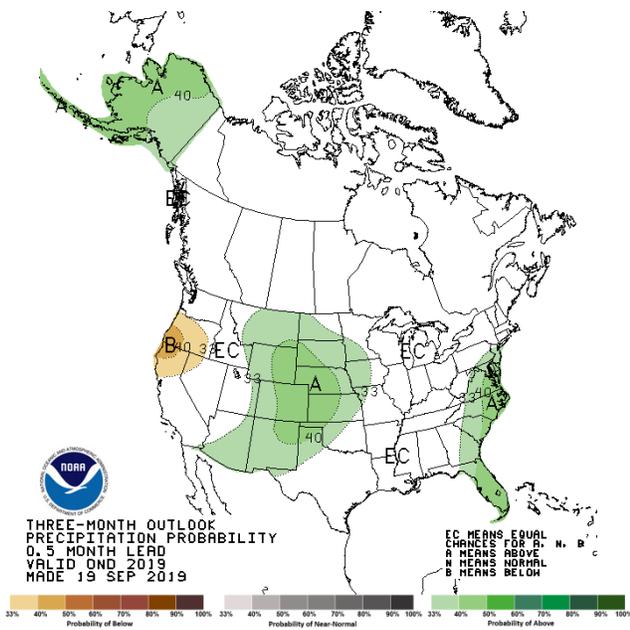
Source: National Weather Service



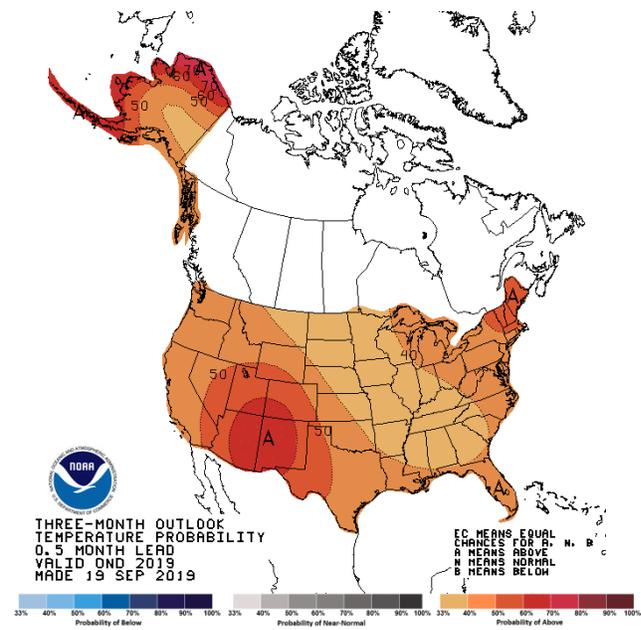
### Climate Prediction Center 3-Month Outlook

Source: National Weather Service

#### [Precipitation](#)



#### [Temperature](#)



[October-November-December \(OND\) 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](#).