

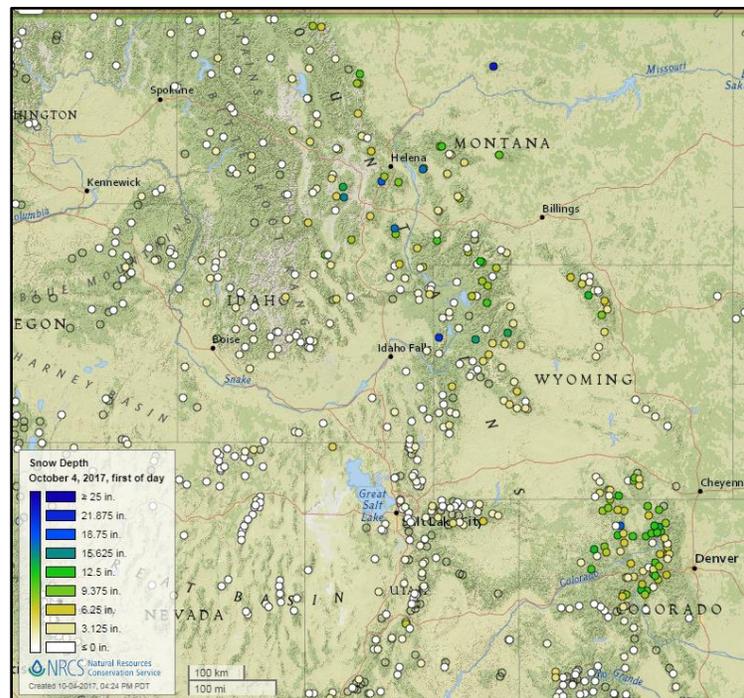
# Water and Climate Update

October 5, 2017

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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## Heavy snow in the Rocky Mountains starts the water year



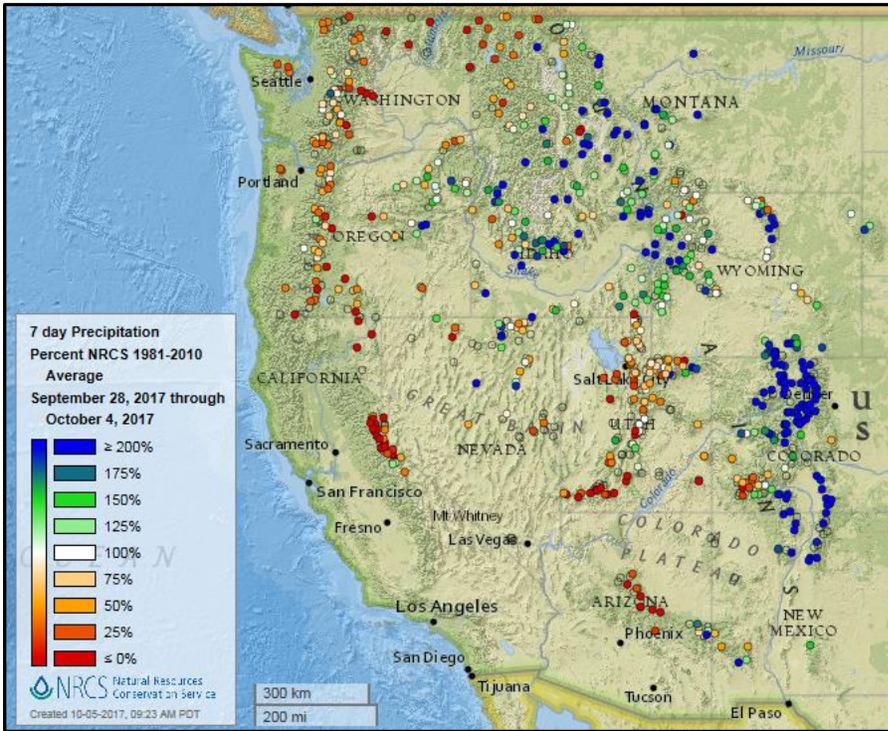
In the map above, SNOTEL stations reported widespread snow at many locations in the northern and central Rocky Mountains to start the 2018 water year. Power outages and down trees resulted from the early October blizzard in Montana. Havre, Montana, reported 13 inches of heavy wet snow that broke an October record for the area set in 1898. The highest snow depth reported was in Rocky Boy, Montana, with 30 inches of snow and drifts to 8 feet. Northern Colorado reported 18 inches of snow near Steamboat Springs and power outages to thousands of customers.

**Related:**

- [First Blizzard of the Season Breaks October Snow Record in Havre, Montana; Up to 30 Inches Reported](#)
- [Snow knocks out 200 power poles on Montana Hi-Line; now wind's on way](#)
- [The Latest: Up to 30 inches of snow in northern Montana](#)
- [Fall storm brings up to 18 inches of snow to Colorado peaks](#)
- [Fall color meets an early winter snowstorm in the Rockies](#)

## Precipitation

### Last 7 Days, Western Mountain Sites (NRCS SNOTEL Network)

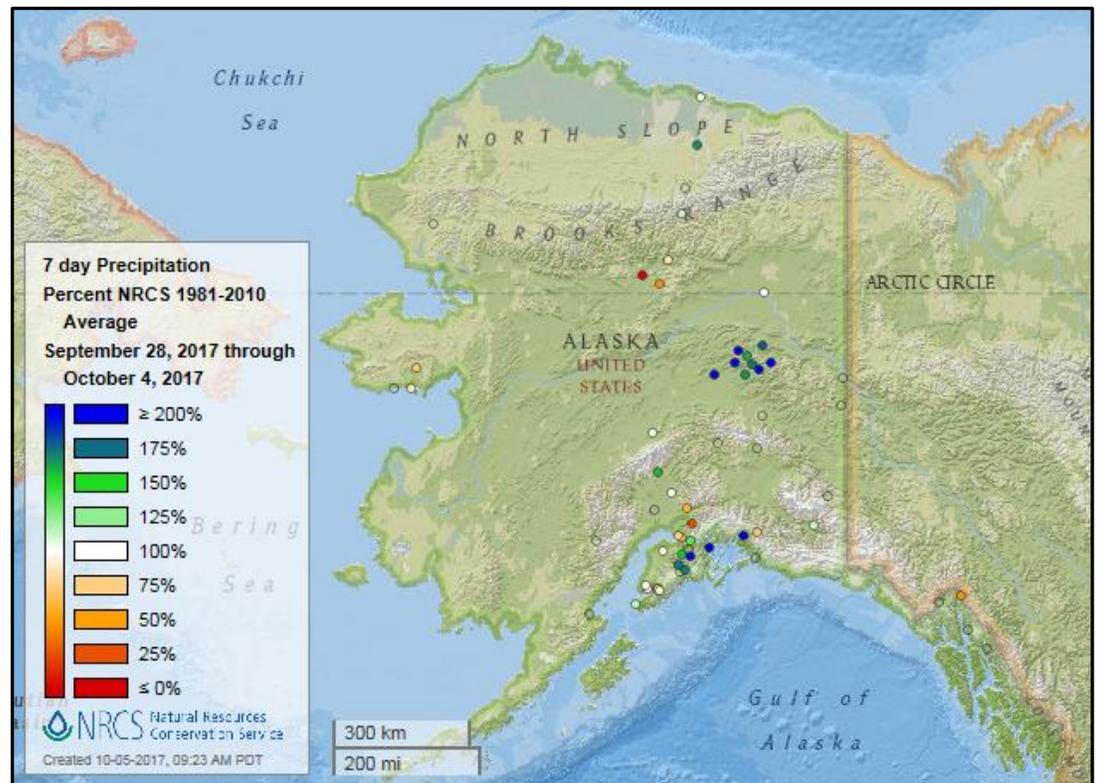


[7-day precipitation percent of average map](#)

**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](#)



# Water and Climate Update

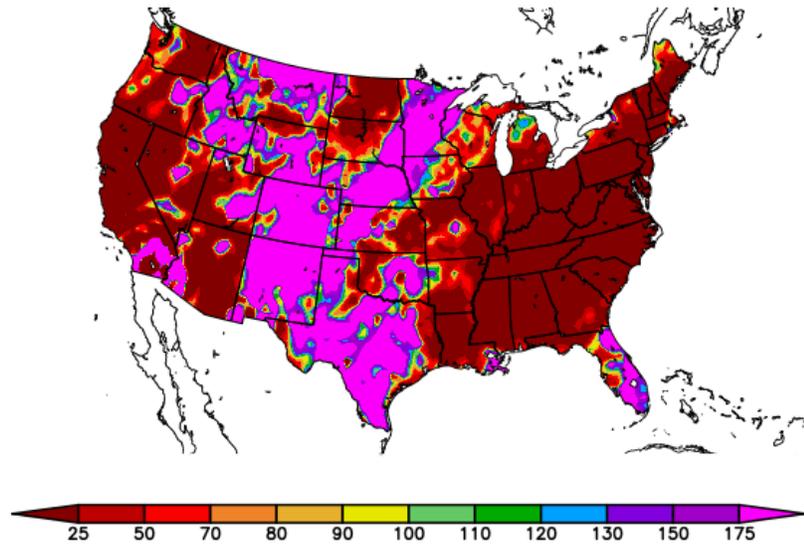
## Last 7 Days, National Weather Service (NWS) Networks

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 (%) 9/28/2017 - 10/4/2017



Generated 10/5/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

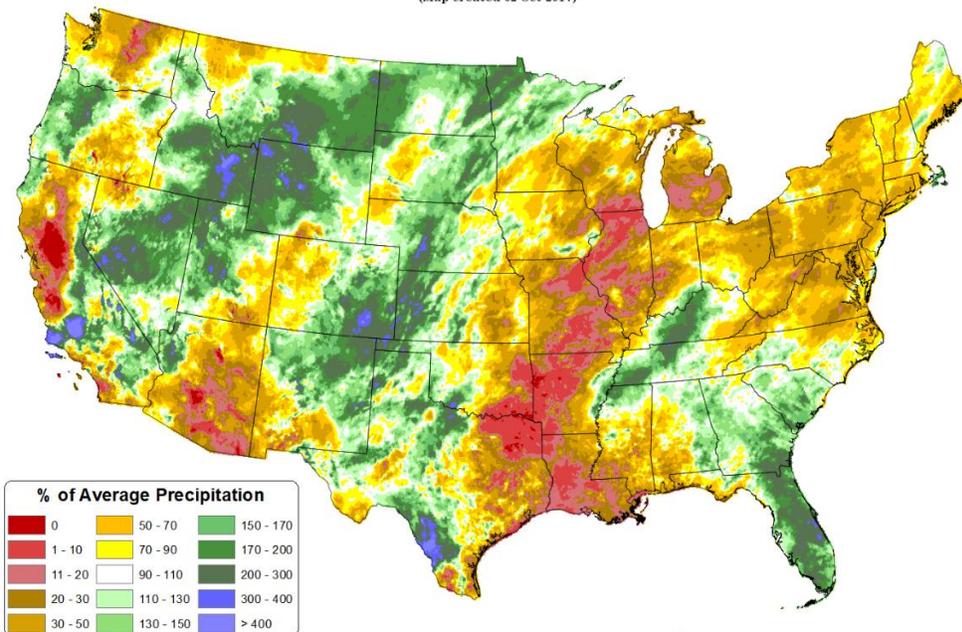
## Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

### Total Precipitation Anomaly: September 2017

Period ending 30 Sep 2017  
Base period: 1981-2010  
(Map created 02 Oct 2017)

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



Copyright (c) 2017 PRISM Climate Group, Oregon State University

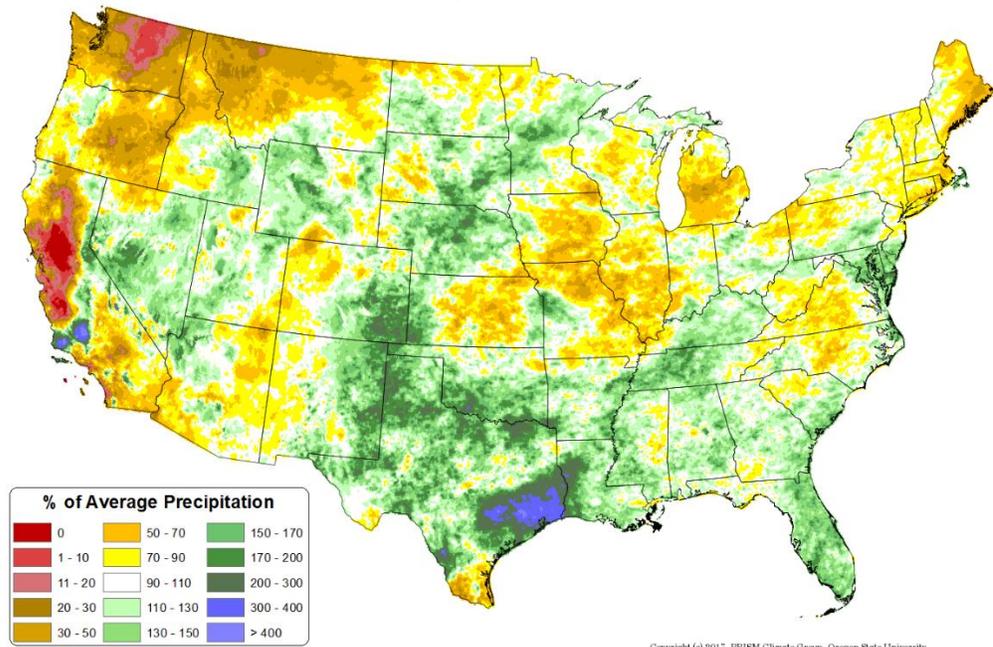
# Water and Climate Update

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

Source: PRISM

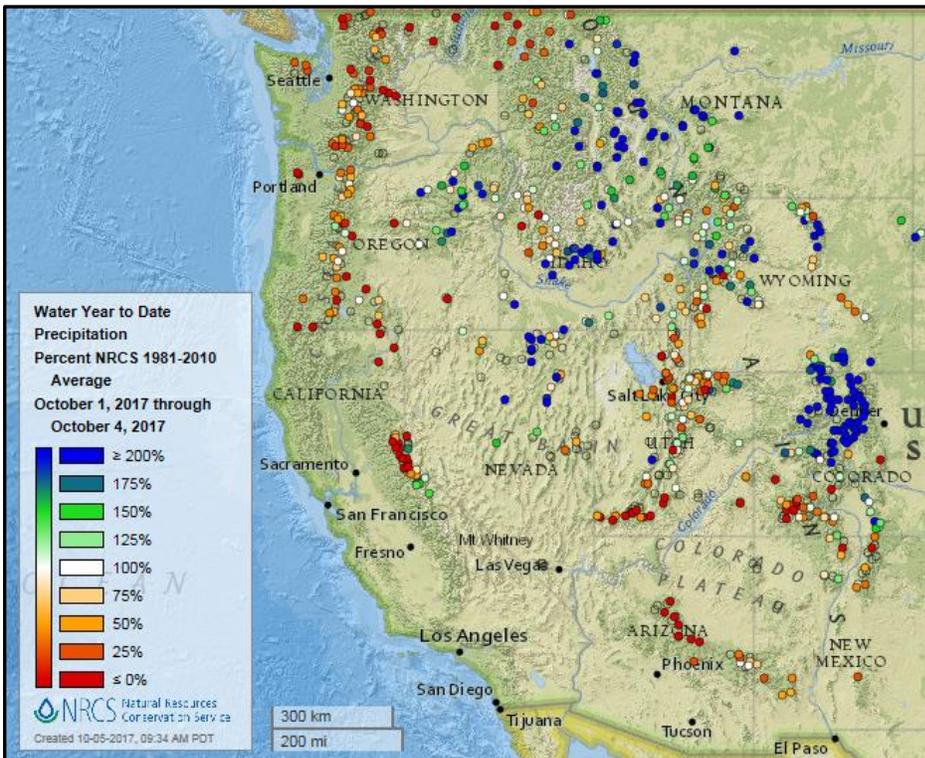
[July through September 2017 total precipitation anomaly map](#)

Total Precipitation Anomaly: July 2017 - September 2017  
Period ending 7 AM EST 30 Sep 2017  
Base period: 1981-2010  
(Map created 02 Oct 2017)



Copyright © 2017, PRISM Climate Group, Oregon State University

## Water Year-to-Date, Western Mountain Sites (NRCS SNOTEL Network)

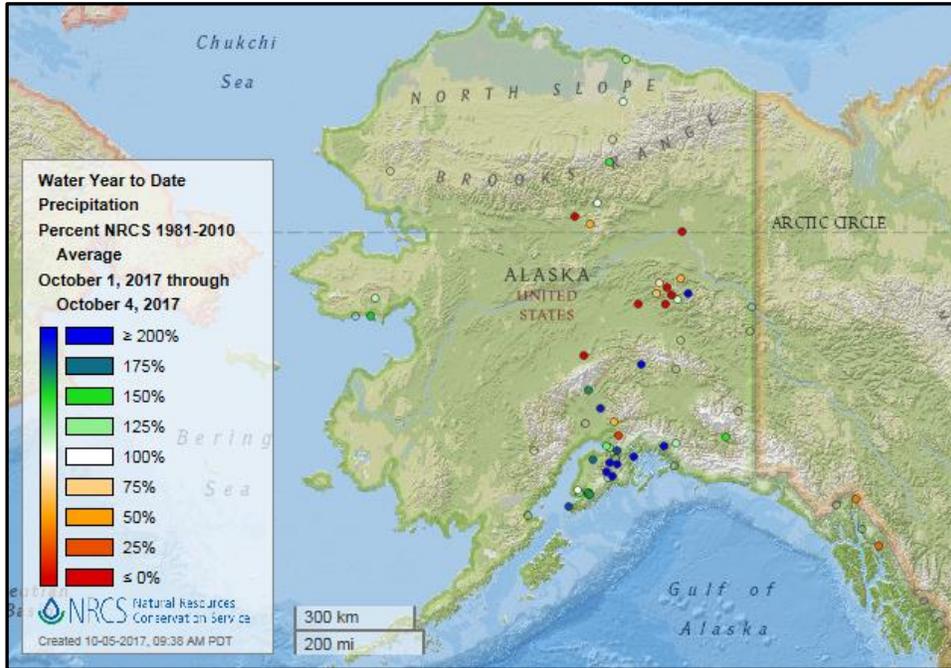


**Note:** It's the beginning of the 2018 Water Year

[2018 water year-to-date precipitation percent of average map](#)

**See also:** [2018 water year-to-date precipitation values \(inches\)](#)

# Water and Climate Update



[Alaska 2018 water year-to-date precipitation percent of average map](#)

**See also:** [Alaska 2018 water year-to-date precipitation values \(inches\) map](#)

## Temperature

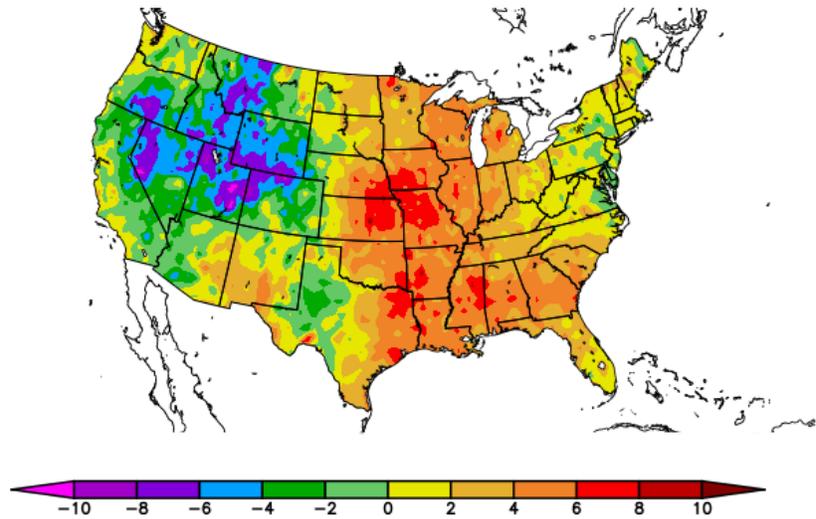
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)  
9/28/2017 – 10/4/2017



Generated 10/5/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

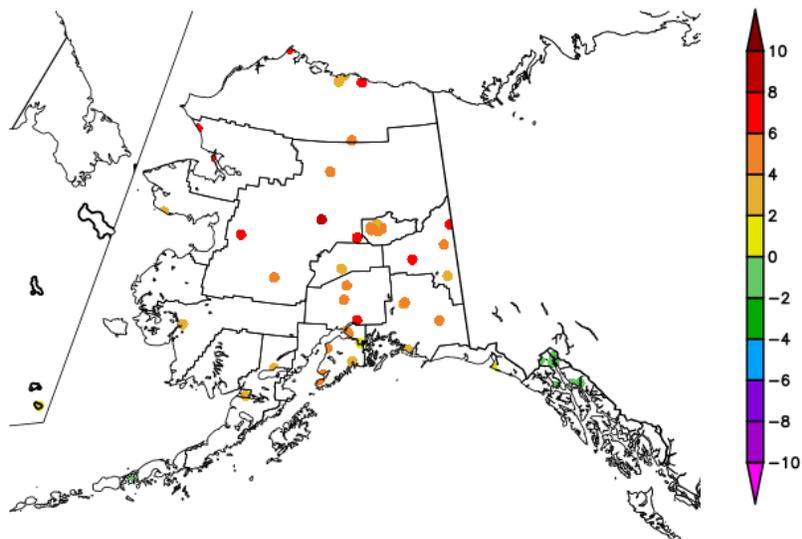
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)  
9/28/2017 – 10/4/2017



Generated 10/5/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

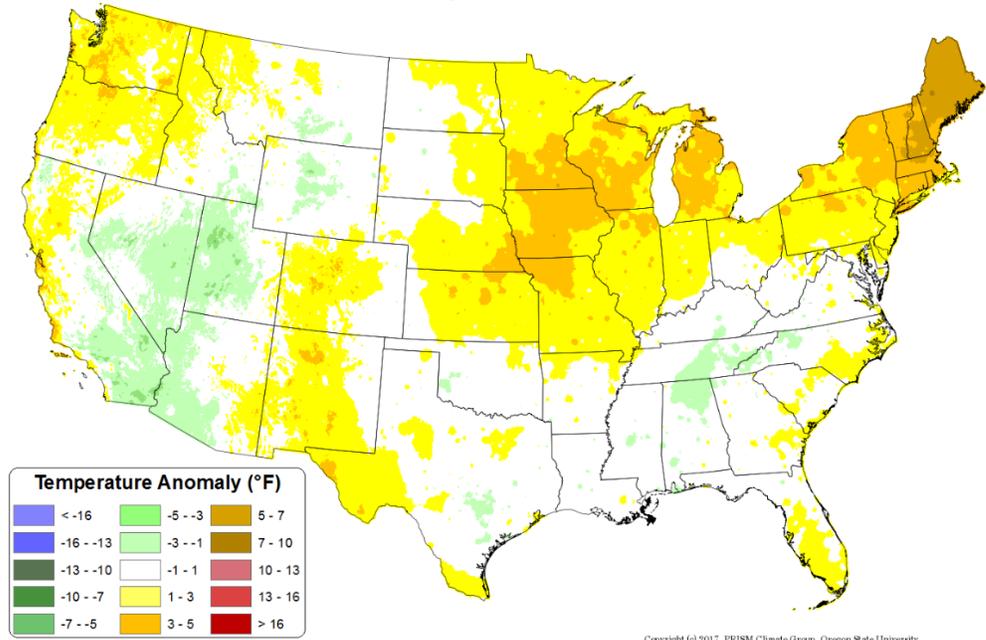
# Water and Climate Update

Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

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

Daily Mean Temperature Anomaly: September 2017  
Period ending 7 AM EST 30 Sep 2017  
Base period: 1981-2010  
(Map created 02 Oct 2017)

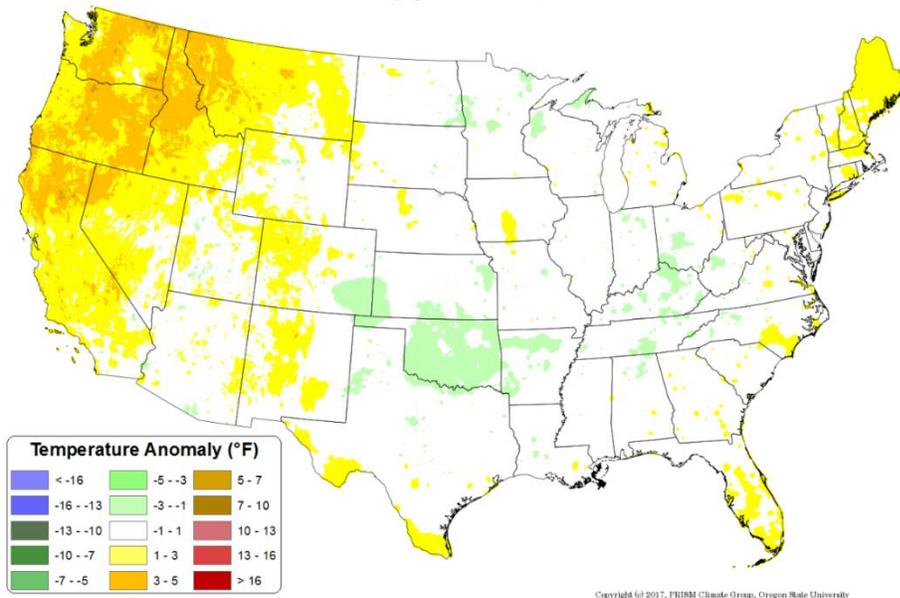


Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

Daily Mean Temperature Anomaly: July 2017 - September 2017  
Period ending 7 AM EST 30 Sep 2017  
Base period: 1981-2010  
(Map created 02 Oct 2017)

[July through September 2017 daily mean temperature anomaly map](#)



## Drought and Wildfires

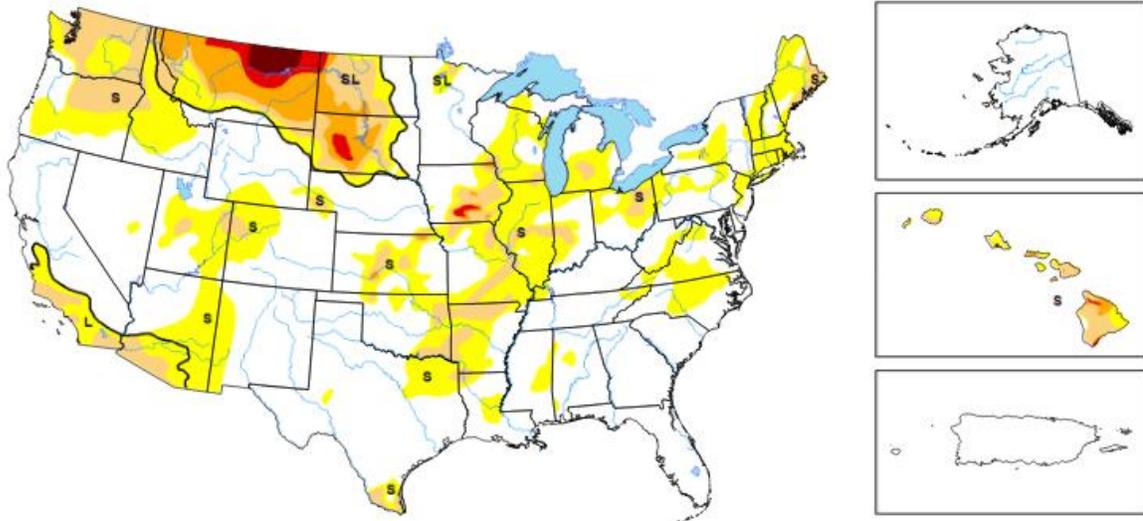
[U.S. Drought Monitor](#) Select map below.

[U.S. Drought Portal](#) Comprehensive drought resource.

**NEW LOOK!** [Drought center launches fresh look for USDM site](#)

Map for October 5, 2017

Data valid: October 3, 2017 | Author: [Anthony Artusa](#), NOAA/NWS/NCEP/CPC



The data cutoff for Drought Monitor maps is each Tuesday at 8 a.m. EDT. The maps, which are based on analysis of the data, are released each Thursday at 8:30 a.m. Eastern Time.

### Intensity and Impacts

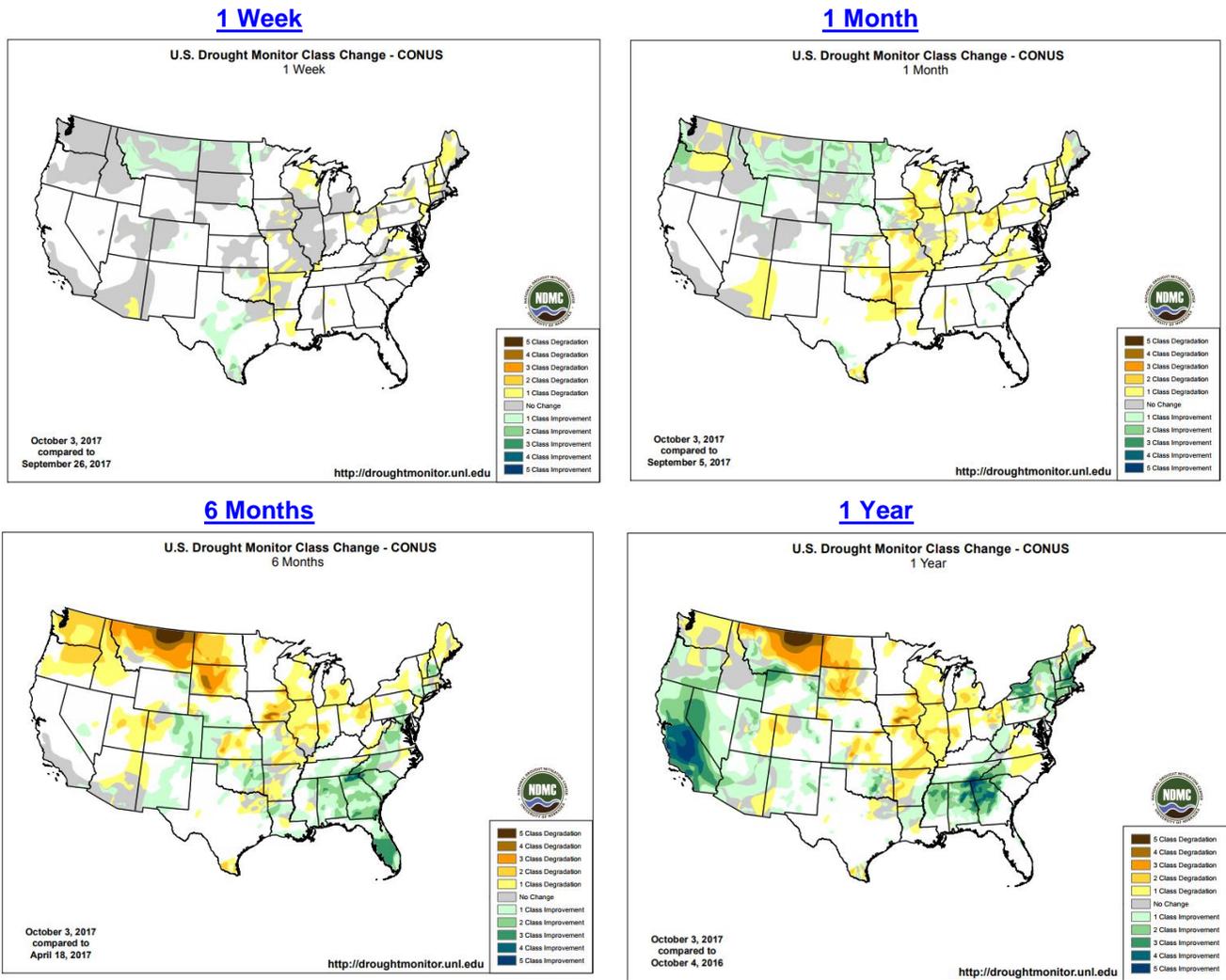


## Current National [Drought Summary](#), October 3, 2017

Author: Anthony Artusa, NOAA/NWC/NCEP/CPC

“A cold front approached the Eastern Seaboard early in the drought week, which drove Tropical Storm Maria farther away from the mid-Atlantic coast, keeping substantial impacts to a minimum. About the same time, the western edge of this cold front moved through southern Texas and New Mexico, bringing significant upslope precipitation (0.5-3.0 inches, locally greater) to the southern Great Plains and adjacent Rockies. Another cold front then moved southeastward out of central Canada, accompanied by primarily light precipitation (0.75-inch or less) to the Great Lakes region and Northeast. Towards the end of the drought week, yet another cold front progressed eastward across the Rockies, and the northern halves of the Great Plains and Mississippi Valley, bringing 1-2 inches of rain to much of the region.”

## Changes in Drought Monitor Categories over Time

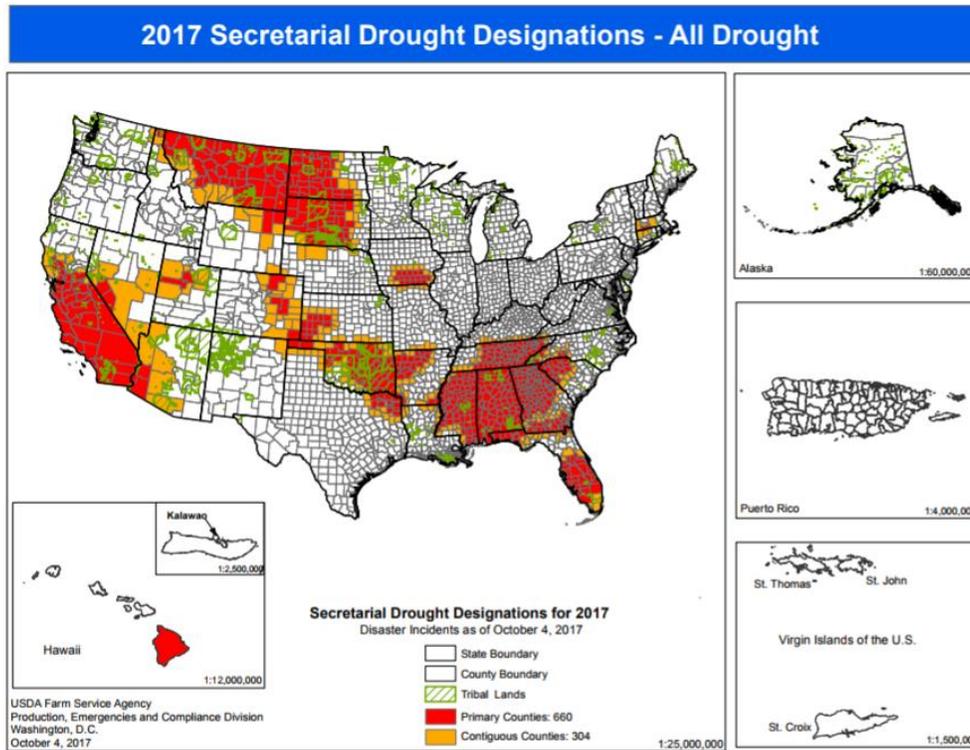


### [Changes in drought conditions over the last 12 months](#)

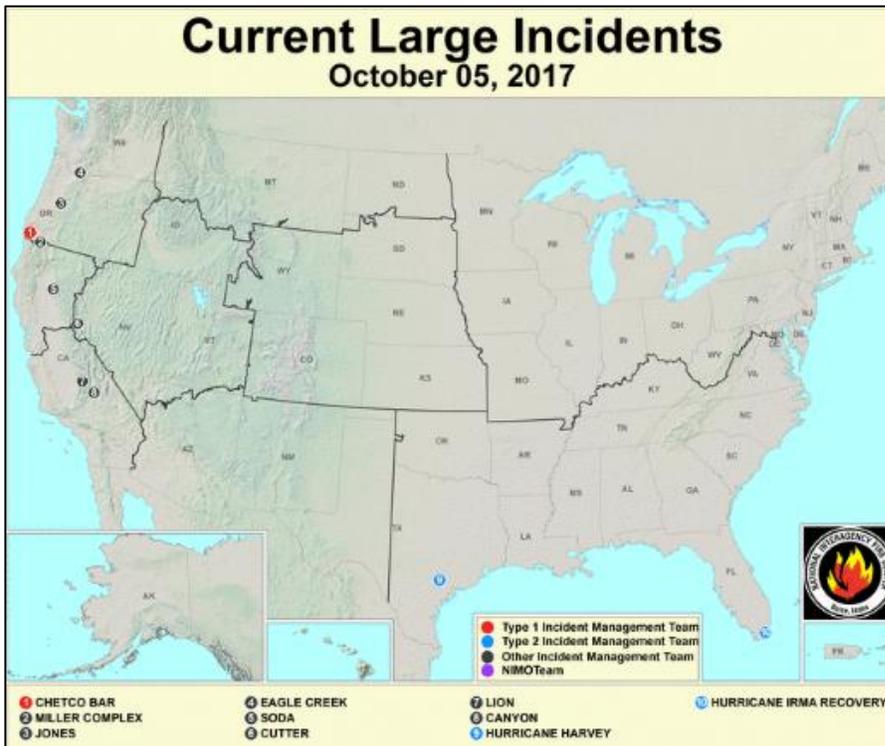
### Highlighted Drought Resources

- [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](#)

USDA 2017 Secretarial [Drought Designations](#)



Wildfires: [USDA Forest Service Active Fire Mapping](#)

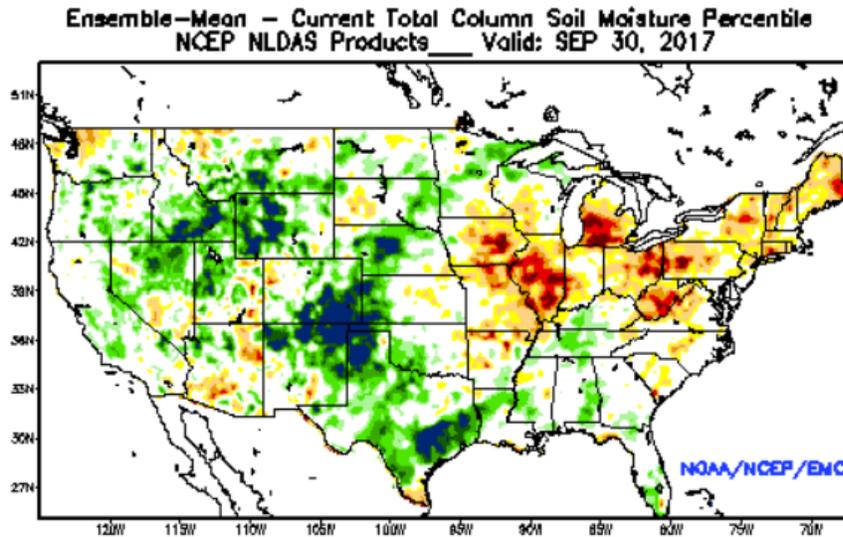


Highlighted Wildfire Resources

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

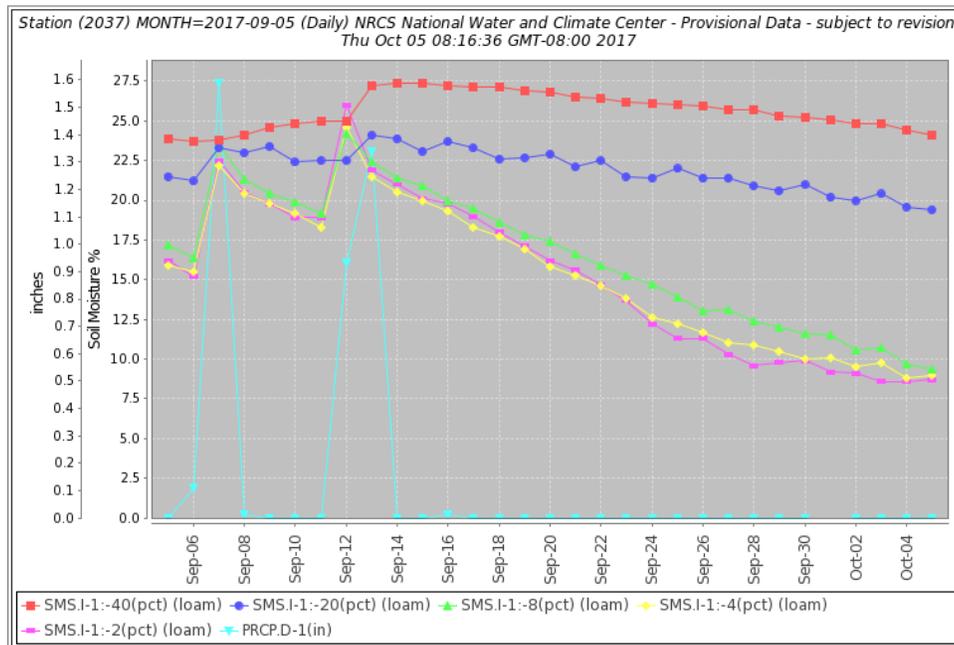
## Other Climatic and Water Supply Indicators

### Soil Moisture



[Modeled soil moisture percentiles](#) as of September 30, 2017.

### Soil Moisture Data: NRCS [Soil Climate Analysis Network \(SCAN\)](#)



The chart shows precipitation and soil moisture for the last 30 days at the [Pee Dee SCAN site 2037](#) in South Carolina. Precipitation over the last 30 days shows dry conditions since September 13, and a rapid drying of the 2-, 4-, and 8- inch sensor depths and a slow and steady decline at the 20- and 40- inch depths at the station.

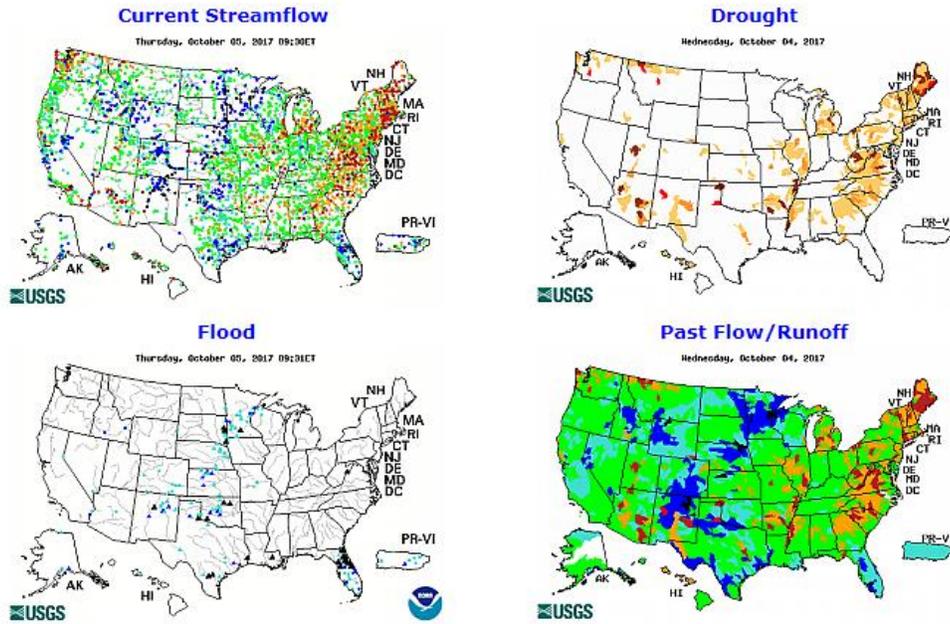
### Soil Moisture Data Portals

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

# Water and Climate Update

## Streamflow

Source: USGS

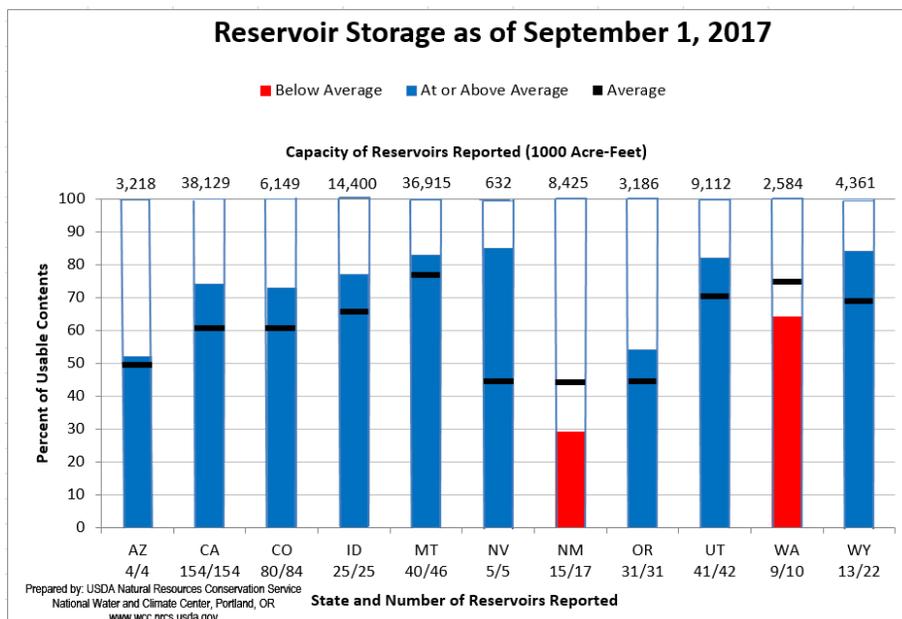


[Flood and high flow conditions interactive map](#)

## Reservoir Storage

### Western States Reservoir Storage

Source: NRCS National Water and Climate Center



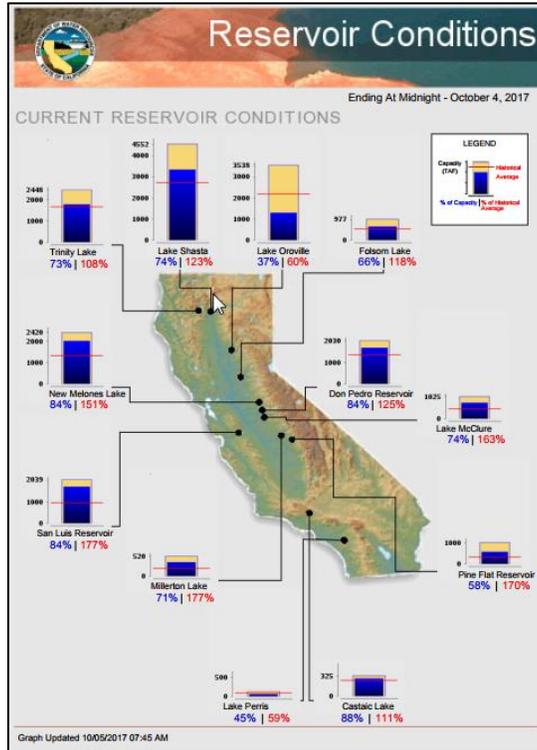
[National Water and Climate Center Reservoir Data](#)

U.S. Bureau of Reclamation Hydromet Tea Cup Reservoir Depictions

- [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



[California Current Reservoir Conditions](#)

## Short- and Long-Range Outlooks

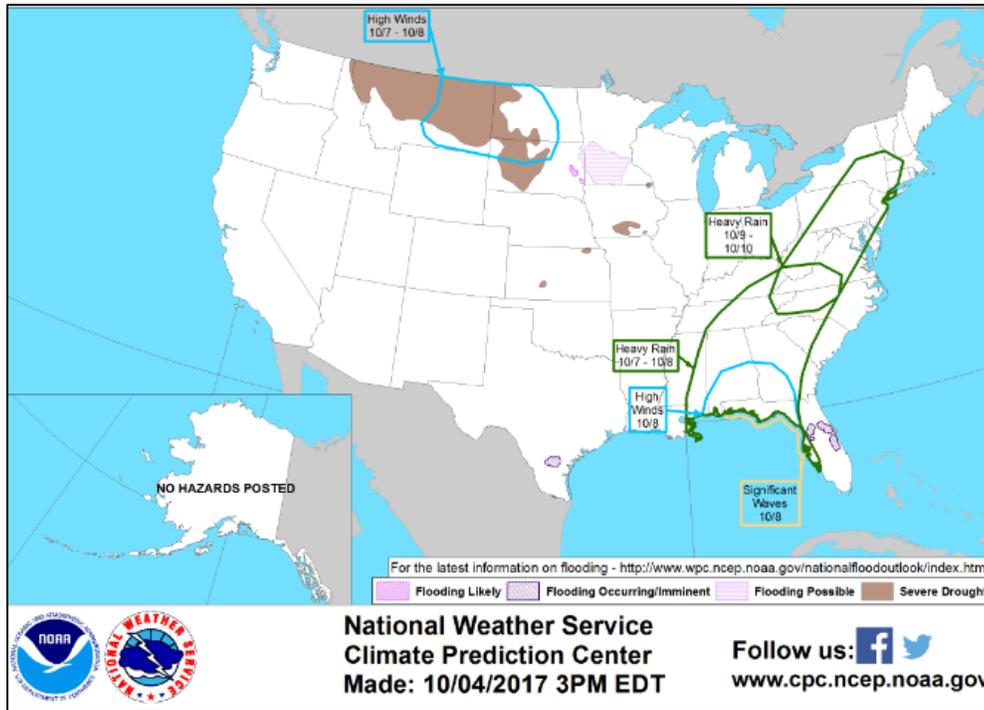
### Agricultural Weather Highlights

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

[National Outlook, Thursday, October 5, 2017](#): "Tropical Storm Nate, currently centered over the western Caribbean Sea near the coast of Nicaragua, should accelerate northward and further strengthen after moving away from land. Nate could reach the U.S. Gulf Coast as a hurricane late Saturday or Sunday, with landfall expected to occur somewhere between central Louisiana and western Florida. Although Nate's forward speed should limit the potential for extensive flooding, some heavy rain (2 to 4 inches or more) can still be expected along the storm's path. Meanwhile, locally heavy showers should linger into Friday across Florida's peninsula, where an additional 2 to 4 inches of rain may occur. Farther west, a new round of precipitation across the nation's mid-section will result in 2 to 4 inches of rain through Friday from the central Plains into the upper Midwest. In contrast, dry weather will prevail in California, the Great Basin, and the Desert Southwest. Elsewhere, another surge of cold air will overspread the western and central U.S., starting on Sunday. The NWS 6- to 10-day outlook for October 10 – 14 calls for below-normal temperatures from the Rockies into the Mississippi Valley, while warmer-than-normal weather should prevail in the eastern U.S., as well as California and the Desert Southwest. Meanwhile, below-normal precipitation in most areas from the Pacific Coast to the Mississippi River should contrast with wetter-than-normal conditions in the East"

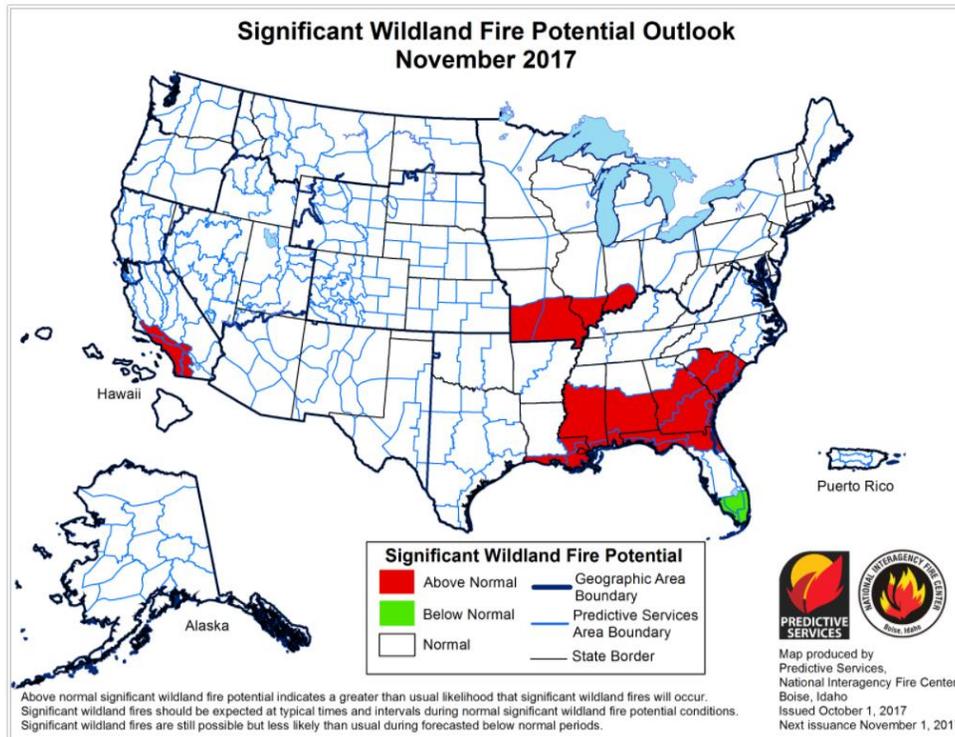
Weather Hazard Outlook [October 7 - 11, 2017](#)

Source: Climate Prediction Center



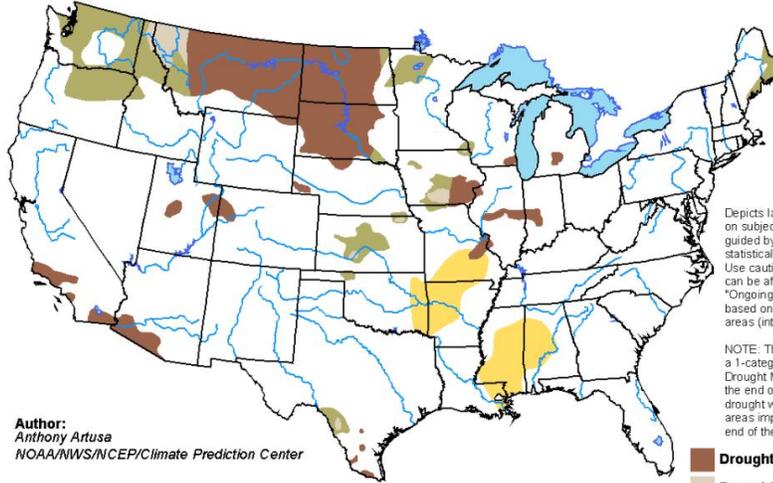
Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center



Seasonal Drought Outlook: [September 21 - December 31, 2017](#) Source: National Weather Service

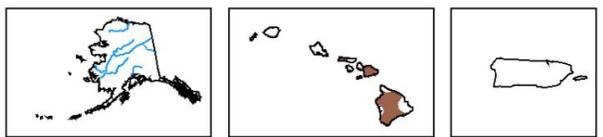
**U.S. Seasonal Drought Outlook** valid for September 21 - December 31, 2017  
Drought Tendency During the Valid Period Released September 21, 2017



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:  
Anthony Artusa  
NOAA/NWS/NCEP/Climate Prediction Center



- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



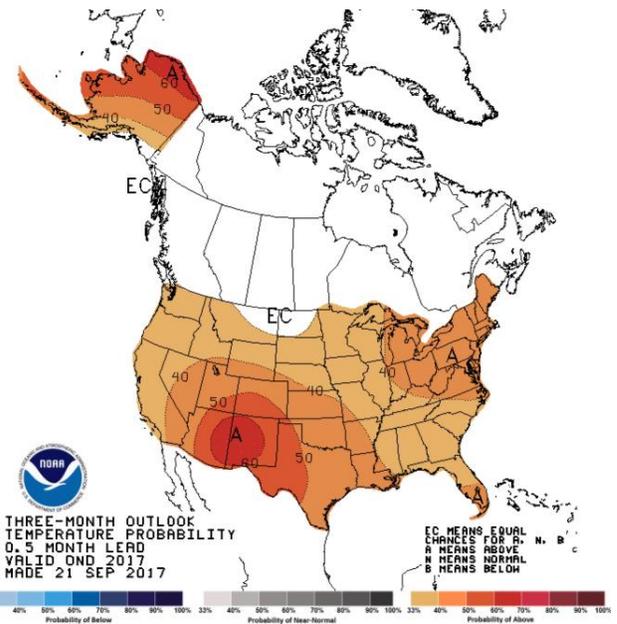
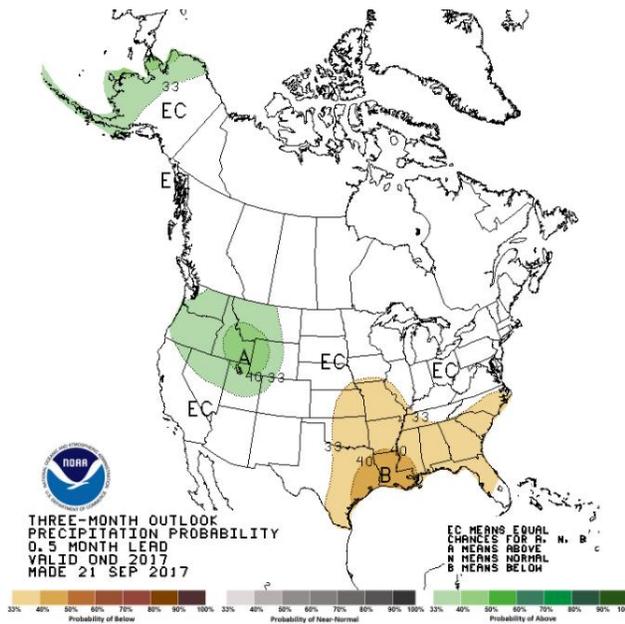
<http://go.usa.gov/3eZ73>

**Climate Prediction Center 3-Month Outlook**

Source: National Weather Service

Precipitation

Temperature



[Oct-Nov-Dec \(OND\) 2017 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](#).