

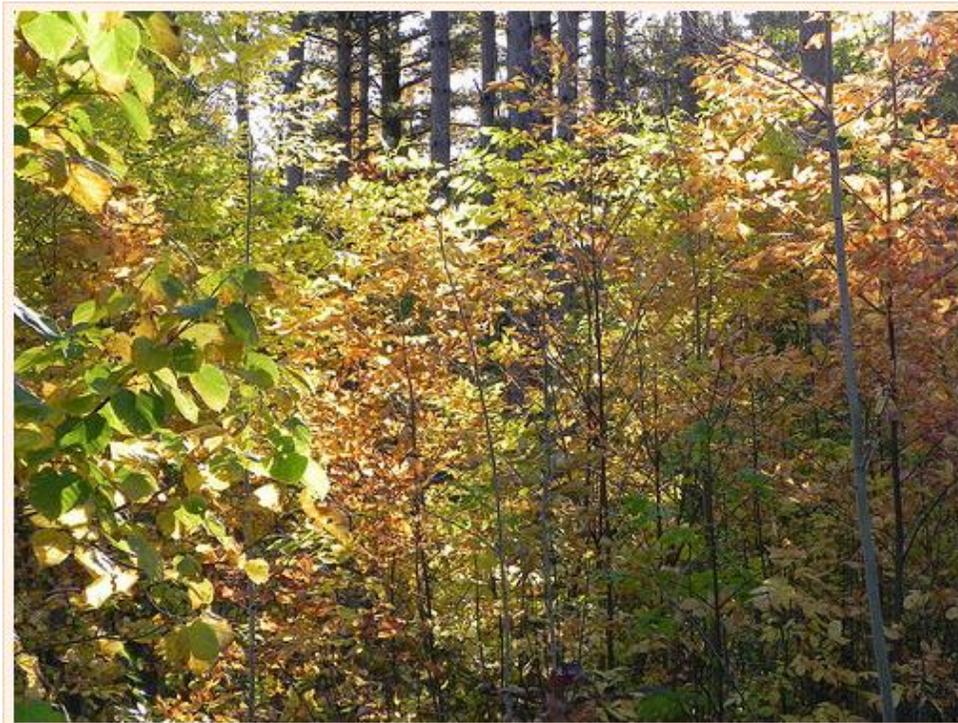
# Water and Climate Update

September 1, 2016

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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## Current drought affects northern forests

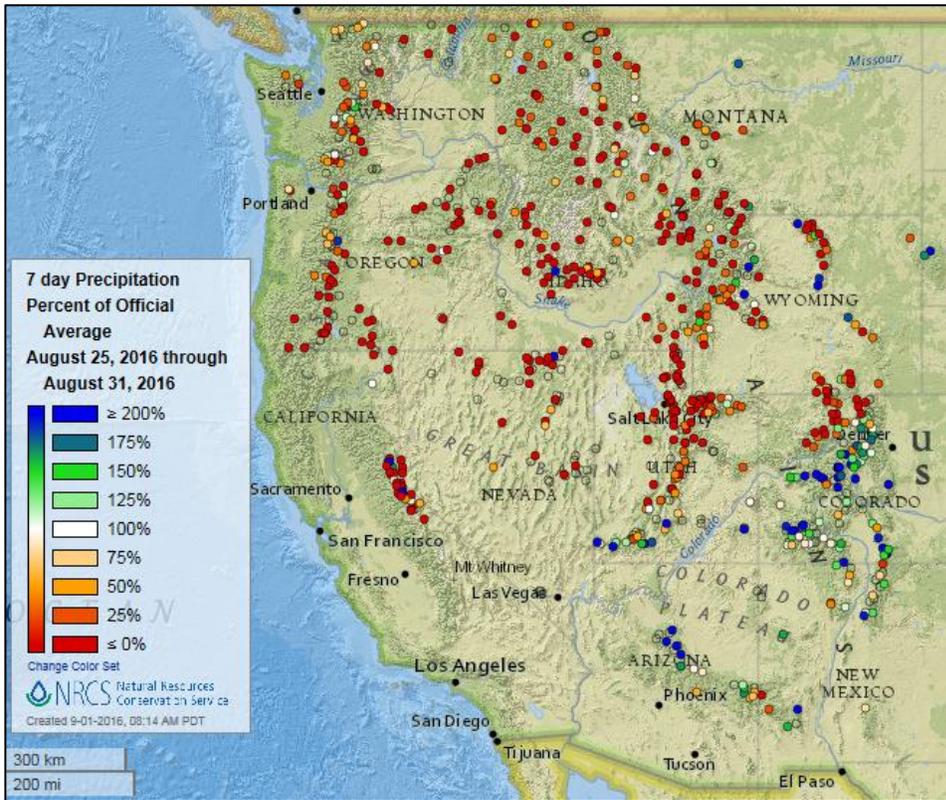


Drought-stressed saplings begin to shed their leaves early in a Michigan forest. Photo credit: US Forest Service

Drought impacts are being felt in the northern forests of the Midwest and Northeast this year. “It turns out that warmer temps and changing rainfall, not necessarily less rainfall annually, are two key ingredients for drought and moisture stress. More extreme precipitation events, longer duration between events, and shifting seasonality of precipitation will likely increase the frequency of drought occurrences and moisture stress over the next century.” [USDA Blog](#) posted by [Chris Swanston, USDA Northern Forests Climate Hub Director, U.S. Forest Service](#), on August 31, 2016

## Precipitation

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

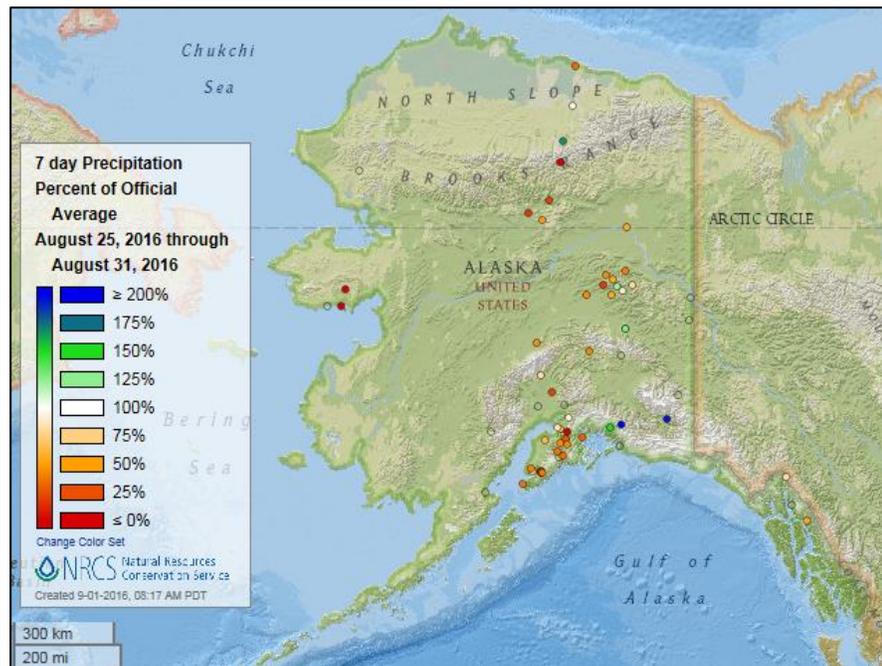


[7-day precipitation percent of average map](#)

**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

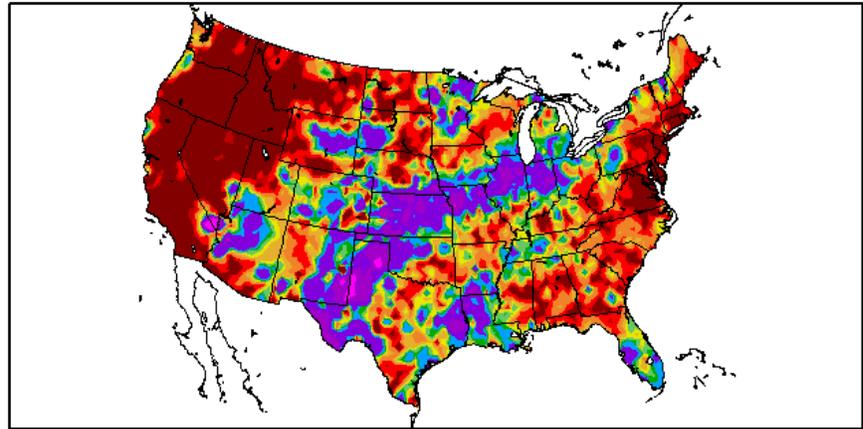
## Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

Percent of Normal Precipitation (%)  
8/25/2016 – 8/31/2016

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



Generated 9/1/2016 at HPRDC using provisional data.

Regional Climate Centers

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

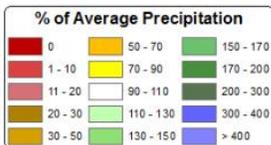
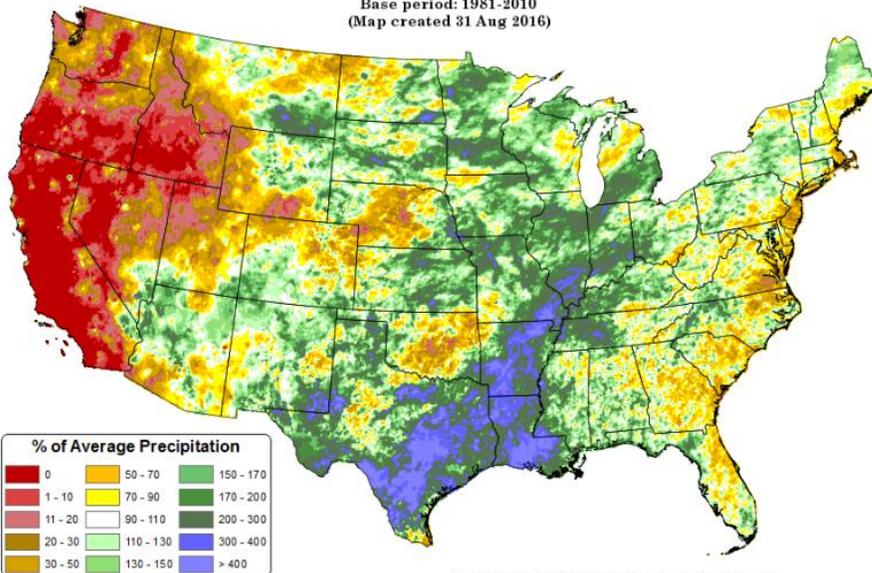
Source: PRISM

Total Precipitation Anomaly: 01 August 2016 - 30 August 2016

Period ending 7 AM EST 30 Aug 2016

Base period: 1981-2010

(Map created 31 Aug 2016)

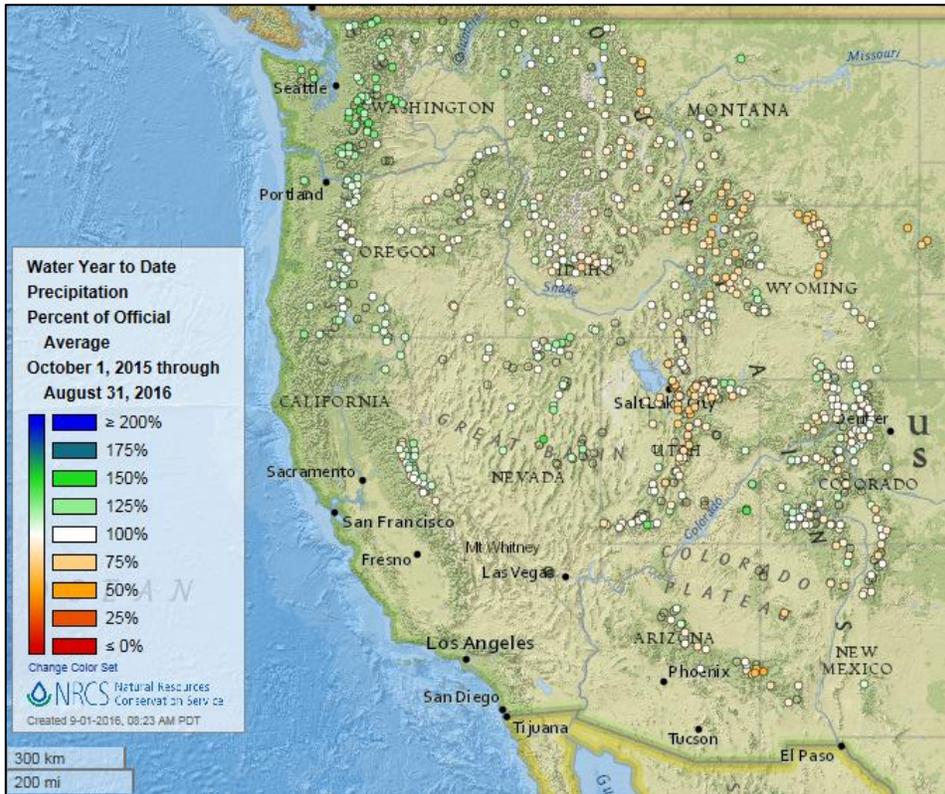


Copyright (c) 2016, PRISM Climate Group, Oregon State University

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

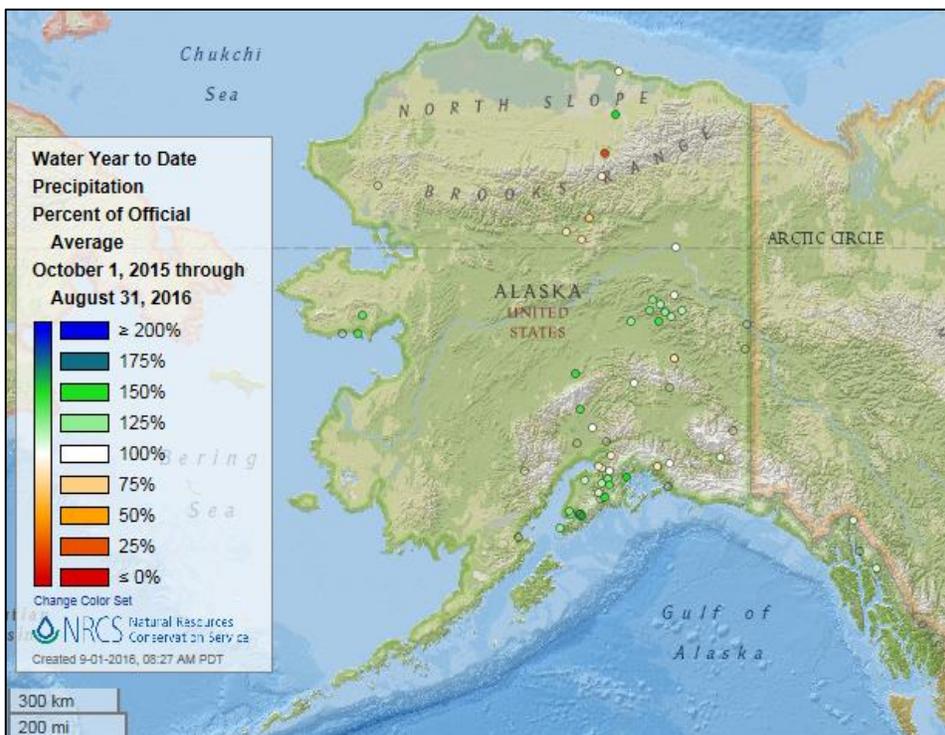
**See also:** [Month-to-date national total precipitation values \(inches\) map](#)

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



[2016 water year-to-date precipitation percent of average map](#)

**See also:** [2016 water year-to-date precipitation values \(inches\)](#)



[Alaska 2016 water year-to-date precipitation percent of average map](#)

**See also:** [Alaska 2016 water year-to-date precipitation values \(inches\) map](#)

## Temperature

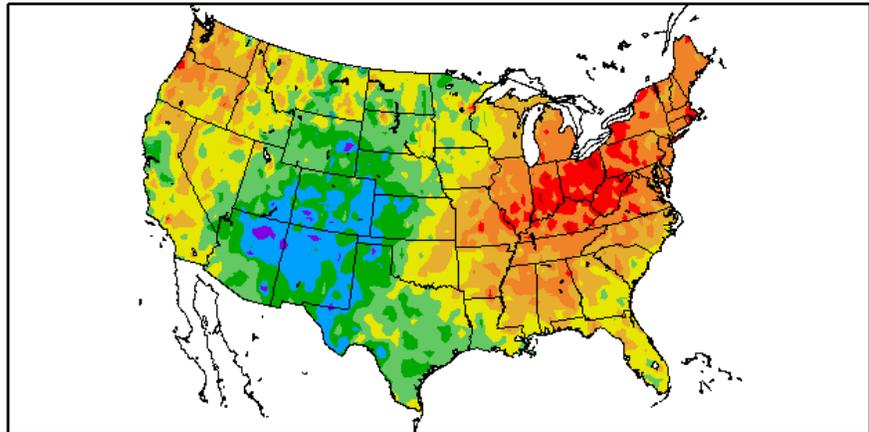
Last 7 Days, National Weather Service (NWS) Networks

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)  
8/25/2016 – 8/31/2016



Generated 9/1/2016 at HPRCC using provisional data.

Regional Climate Centers

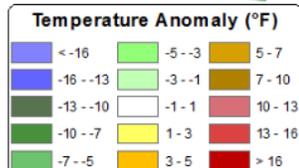
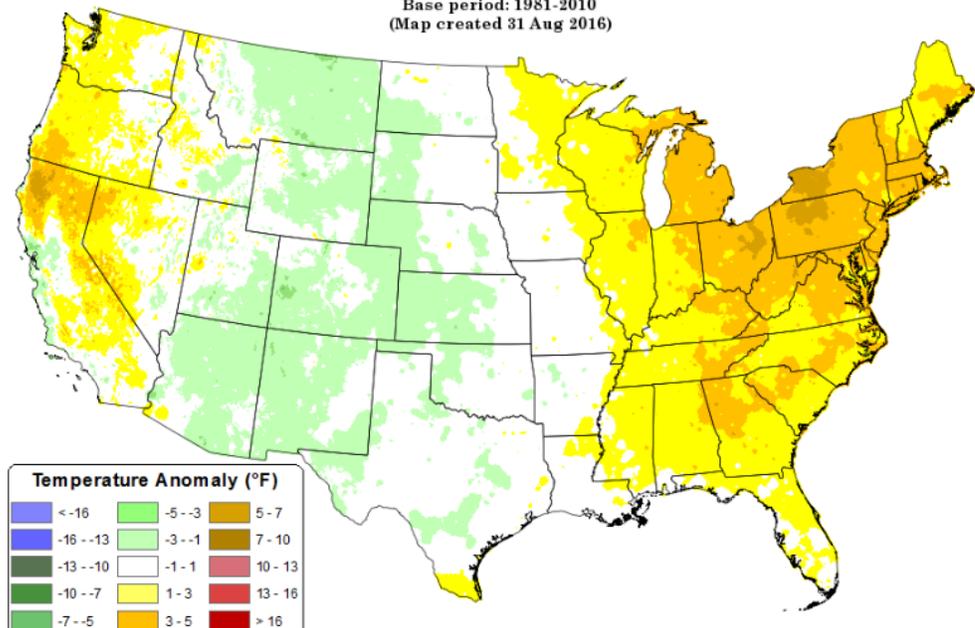
Month-to-Date, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

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

See also: [Month-to-date national daily mean temperature \(° F\) map](#)

Daily Mean Temperature Anomaly: 01 August 2016 - 30 August 2016  
Period ending 7 AM EST 30 Aug 2016  
Base period: 1981-2010  
(Map created 31 Aug 2016)



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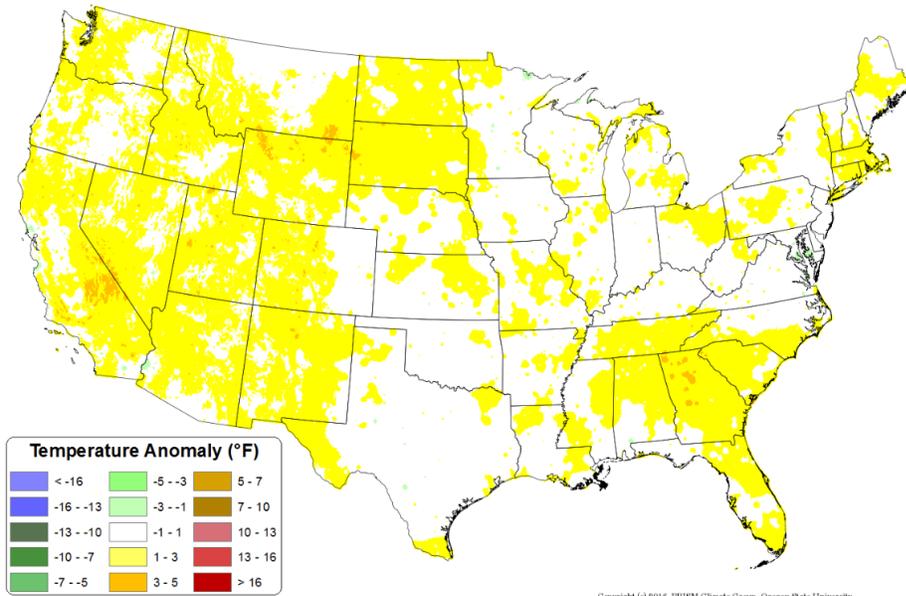
# Water and Climate Update

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

Source: PRISM

Daily Mean Temperature Anomaly: May 2016 - July 2016  
Period ending 7 AM EST 31 Jul 2016  
Base period: 1981-2010  
(Map created 02 Aug 2016)

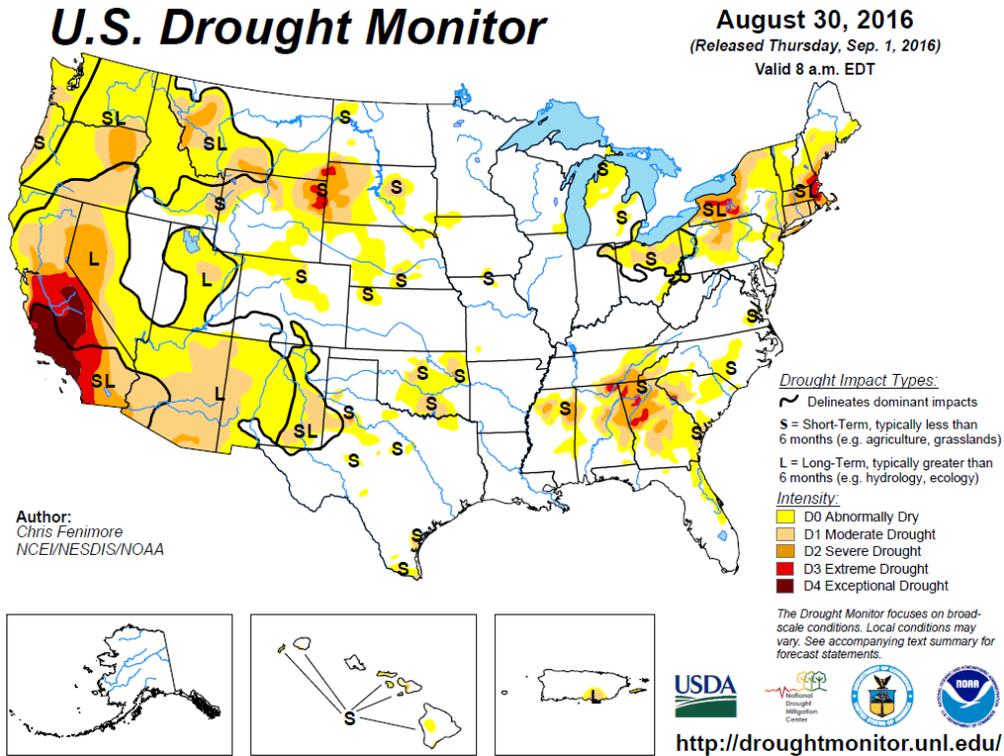
[May through July daily mean temperature anomaly map](#)



Drought

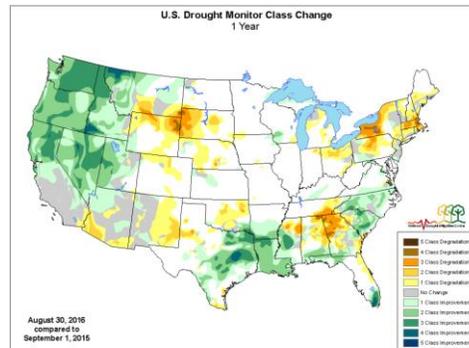
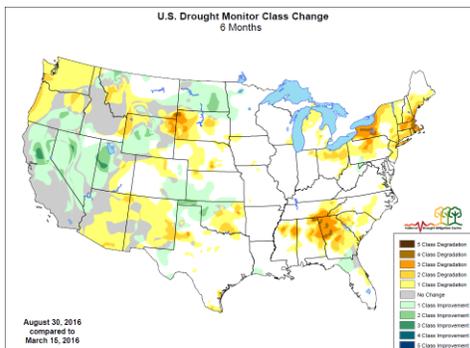
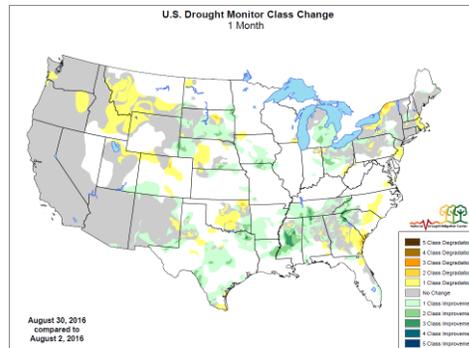
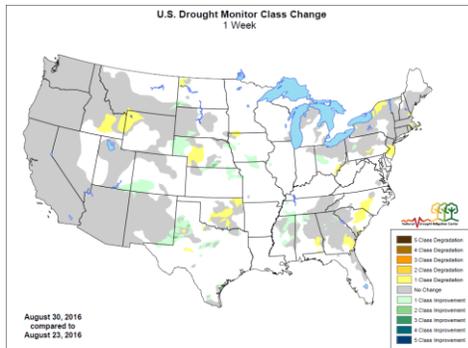
[U.S. Drought Monitor](#) See map below.

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



Changes in Drought Monitor Categories over Time

Click any map to enlarge



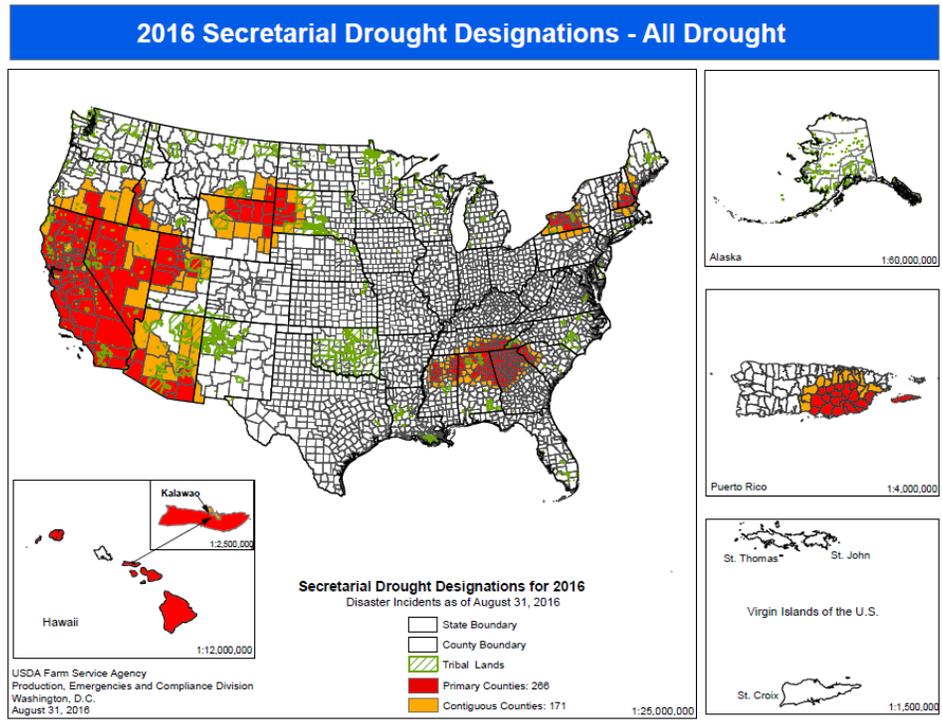
[Changes in drought conditions over the last 12 months](#)

**Current National [Drought Summary](#), August 30, 2016**

Author: Chris Fenimore, NOAA/NESDIS/NCEI

“This U.S. Drought Monitor week saw a swath of above normal precipitation stretching from western Texas northeastward through parts of western Oklahoma, much of Kansas, northwest Missouri and into northern Illinois. A combination of moisture flowing in from the Southwest and Southeast along with a stalled frontal boundary brought abundant precipitation to areas of Texas and New Mexico. The heaviest rains during the period fell in western Texas and southeast New Mexico where at least 5 inches were measured. Approximately 5 inches of rain also fell in northwest Missouri and northeast Iowa. Elsewhere high pressure remained in control along the east and southeast coast line limiting precipitation to nothing more than typical summer time convection, resulting in drier than normal conditions all along the Eastern seaboard. Louisiana continued to experience wetter than normal conditions, further pushing their statewide precipitation total to a possible record amount for August. Virtually no precipitation was observed west of the Rockies. Temperatures for the period ranged from 6-8 degrees below average in the Four Corners region to 6-8 degrees above average in eastern Ohio. Generally speaking, above average temperatures were observed in the eastern half of the Country along with the Northwest, while below average temperatures occurred in the Northern Plains and south into the Southwest and Texas.”

**USDA 2016 Secretarial [Drought Designations](#)**

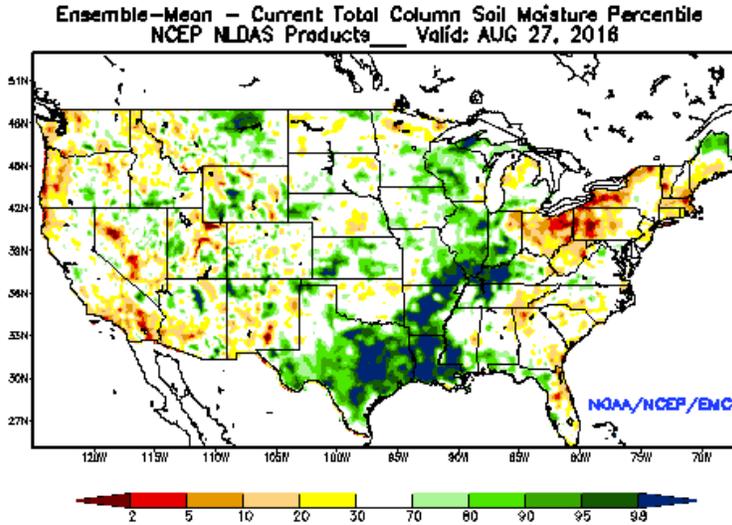


**Highlighted Drought Resources**

- [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](#)

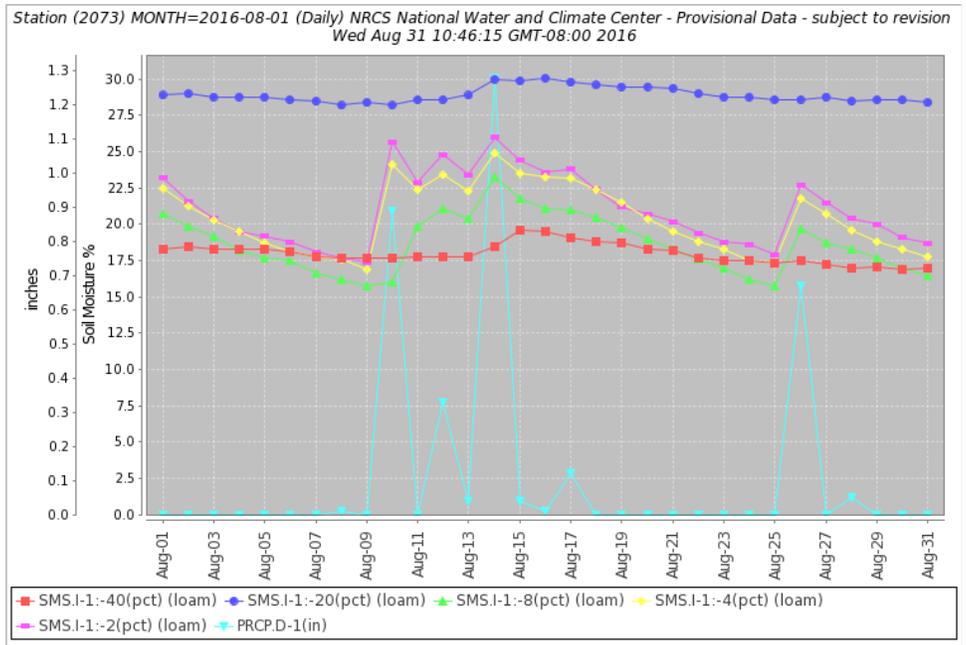
## Other Climatic and Water Supply Indicators

### Soil Moisture



[Modeled soil moisture percentiles](#) as of August 27, 2016.

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



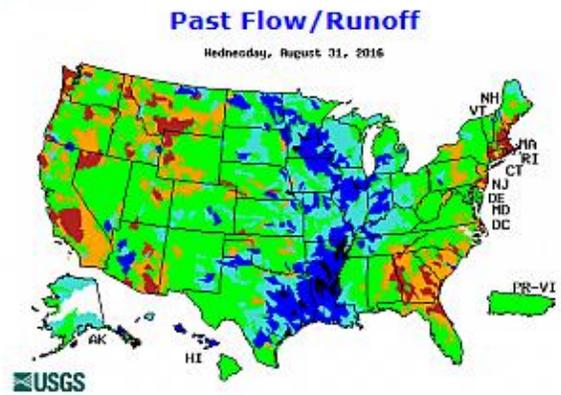
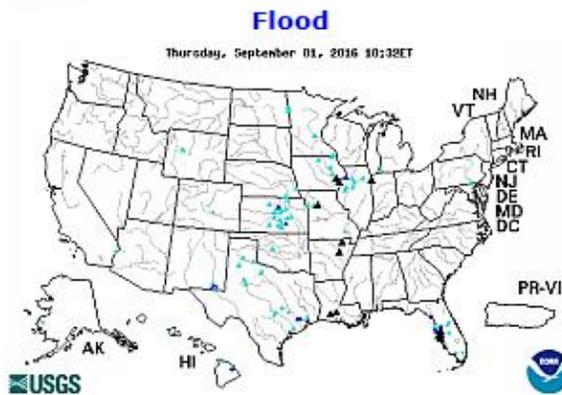
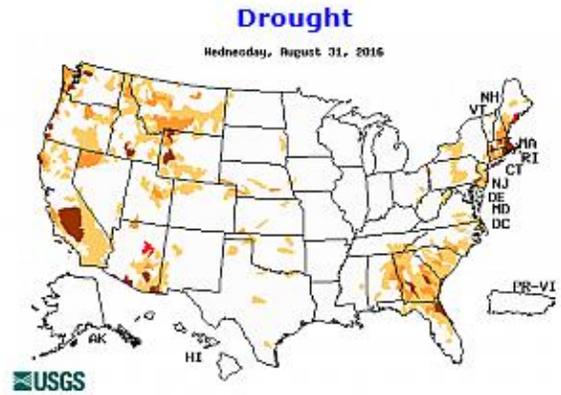
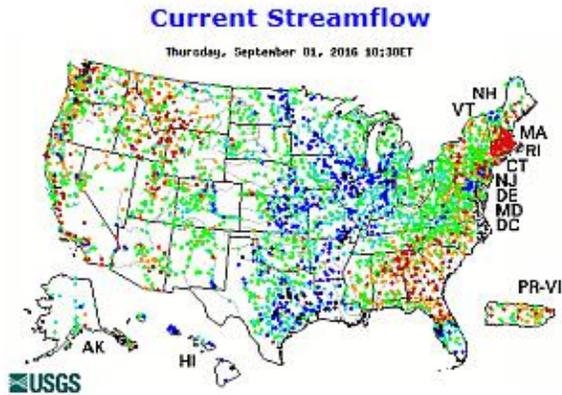
Soil moisture (at 2-, 4-, 8-, 20-, and 40-inch depths) and precipitation for the past 30 days at the [Sunleaf Nursery SCAN site 2073](#) in Ohio. The precipitation events in the last 30 days have increased soil moisture at all soil moisture sensor depths, but most noticeably at the 2-, 4-, and 8-, inch sensors. All soil sensors show drying trends between the larger precipitation events.

#### Soil Moisture Data Portals

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

Streamflow

Source: USGS



Click to enlarge and display legends

[Current streamflow maps](#)

Current Reservoir Storage

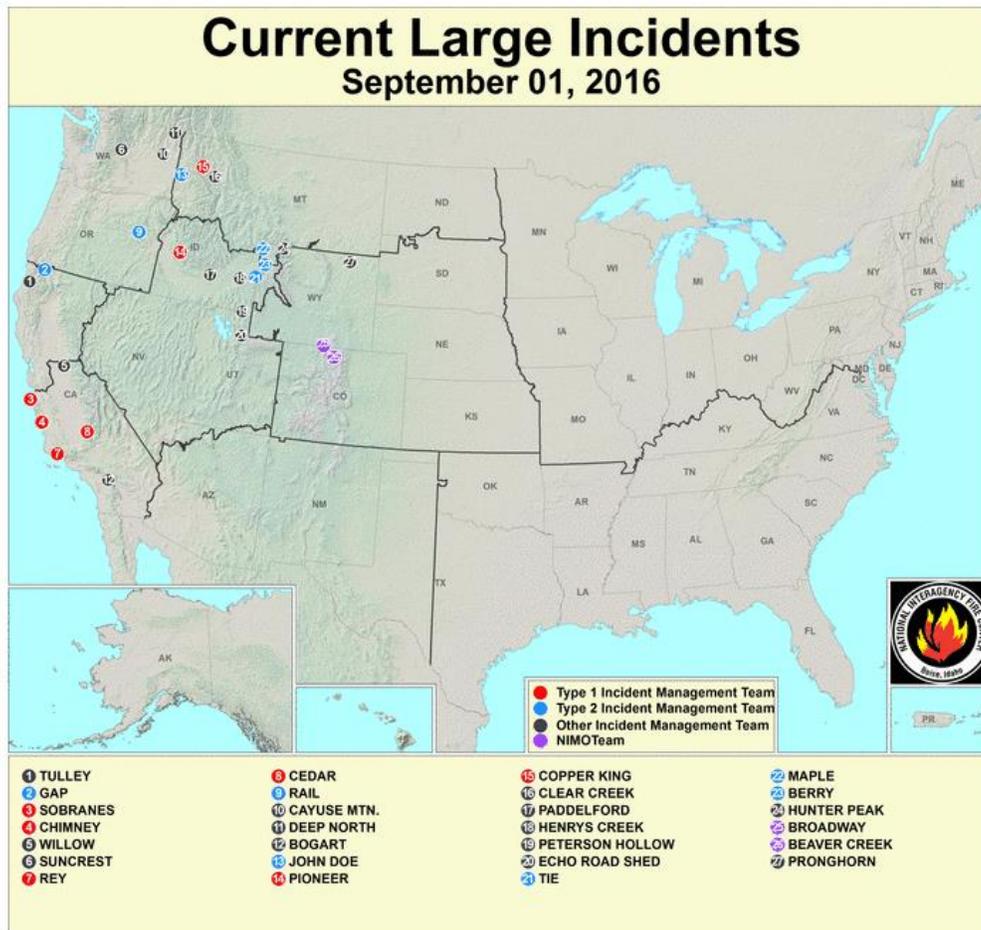
[National Water and Climate Center Reservoir Data](#)

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](#)

[California Reservoir Conditions](#)

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



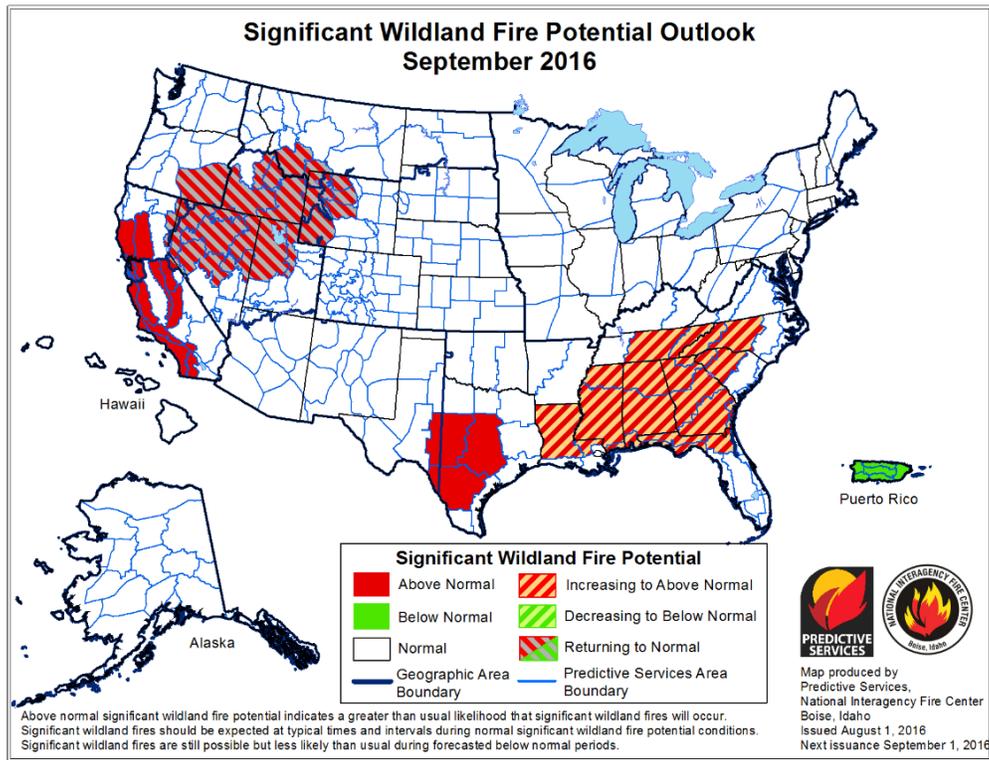
## Short- and Long-Range Outlooks

### Agricultural Weather Highlights

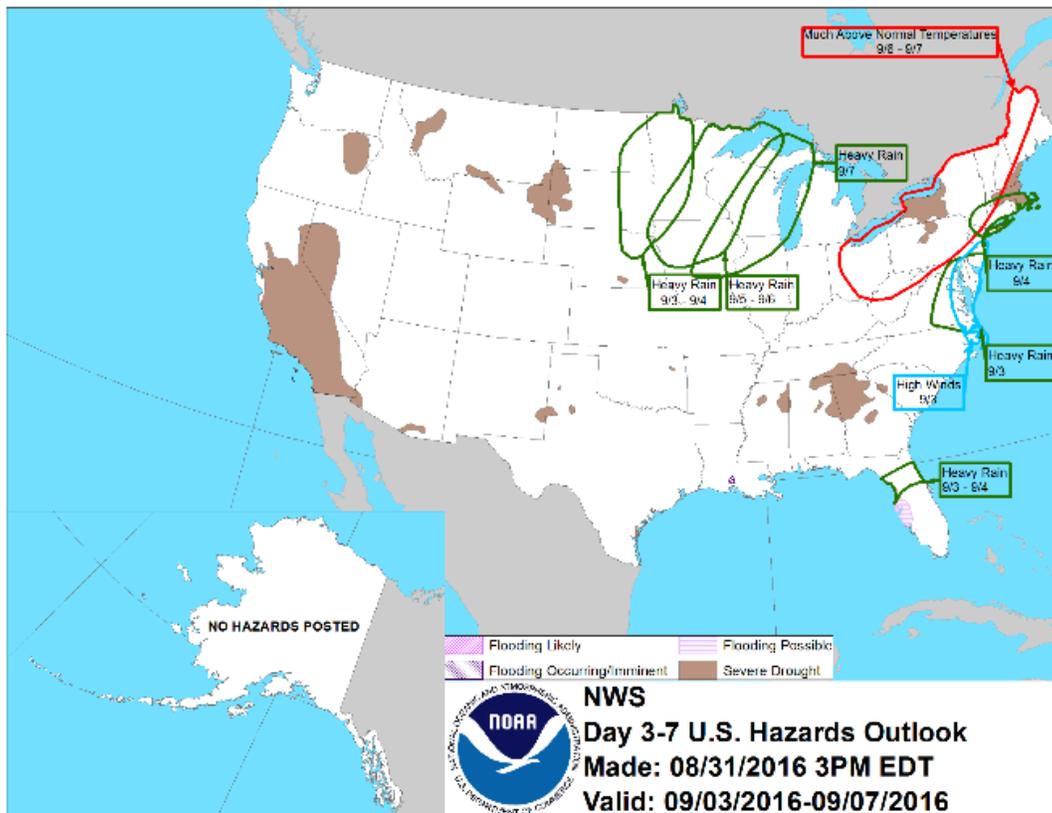
Author: Mark Brusberg , Deputy Chief Meteorologist, USDA/OCE/WAOB, Washington, D.C.

[National Outlook, September 1, 2016](#): "Tropical Storm Hermine is expected to make landfall overnight in northern Florida, with sustained winds near hurricane strength (74 mph or higher). The forecast track, which has greatly fluctuated over the past few days, now takes the center of the storm inland from southern Georgia to the Carolina Coast. This path would generate untimely wind and rain for maturing cotton, with expected rainfall totaling 5 to 10 inches. Meanwhile, drier, generally cooler weather will prevail for the remainder of the week in the Midwest and interior Southeast, aiding summer crop maturation supporting autumn fieldwork, including harvesting of rice in the Deep South. Dry weather is also expected along the West Coast. As rainfall diminishes in the Southwest, scattered showers will redevelop over the central and northern Rockies. The NWS 6- to 10-day outlook for September 6-10 features a continuation of above-normal temperatures from the Great Plains eastward, with cooler conditions in the West centered over the northern Rockies. Mostly dry conditions are expected over the Great Basin and the Four Corners Region, as well as a large area stretching from the Southeast to New England. Near- to above-normal rainfall is expected elsewhere, with the highest likelihood of wetness centered over the upper Mississippi Valley."

Fire Potential Outlook: [September 2016](#)

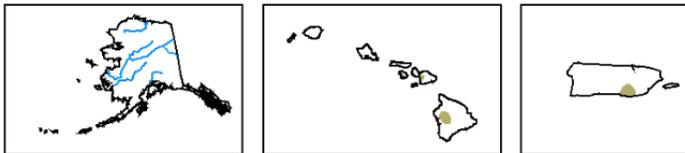
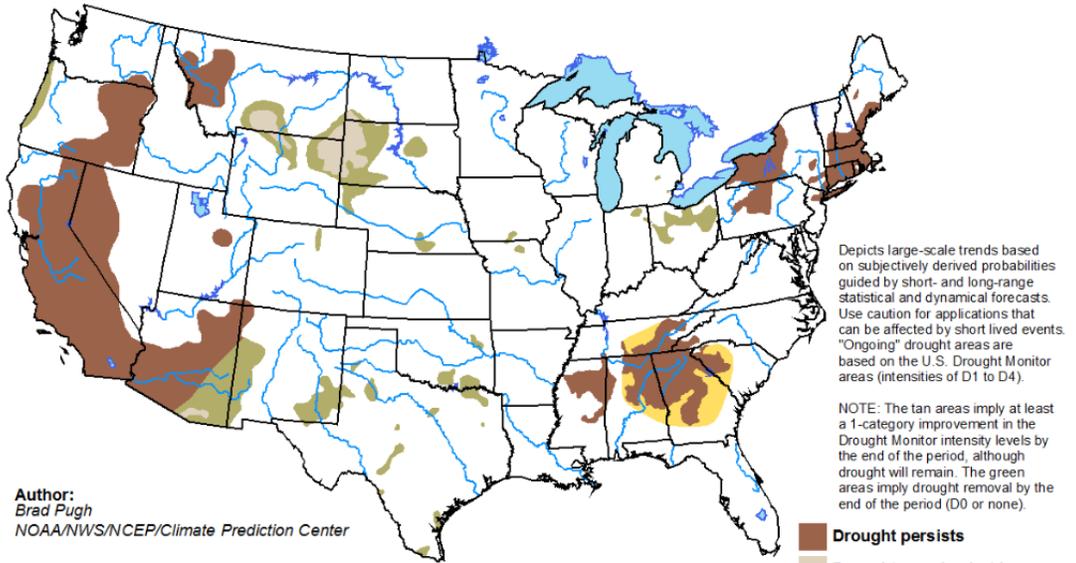


NWS Climate Prediction Center [Weather Hazard Outlook: August 27-31, 2016](#)



Seasonal Drought Outlook: [August 18 – November 30, 2016](#)

**U.S. Seasonal Drought Outlook** Valid for August 18 - November 30, 2016  
 Drought Tendency During the Valid Period Released August 18, 2016



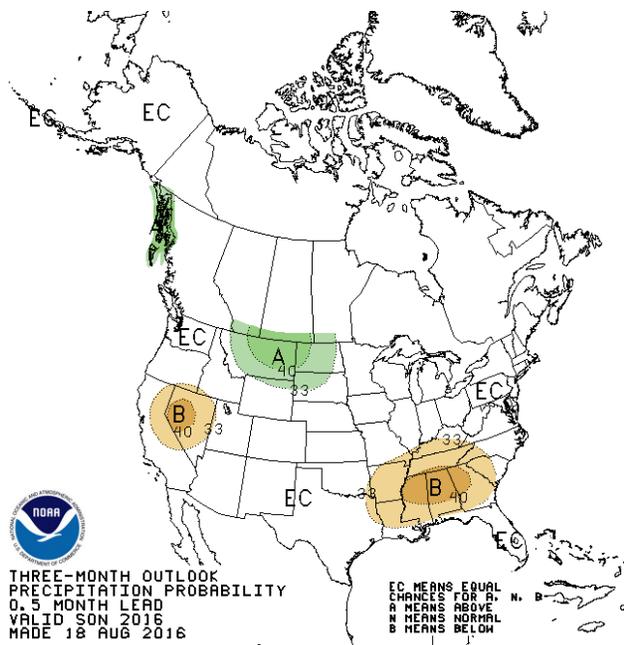
- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



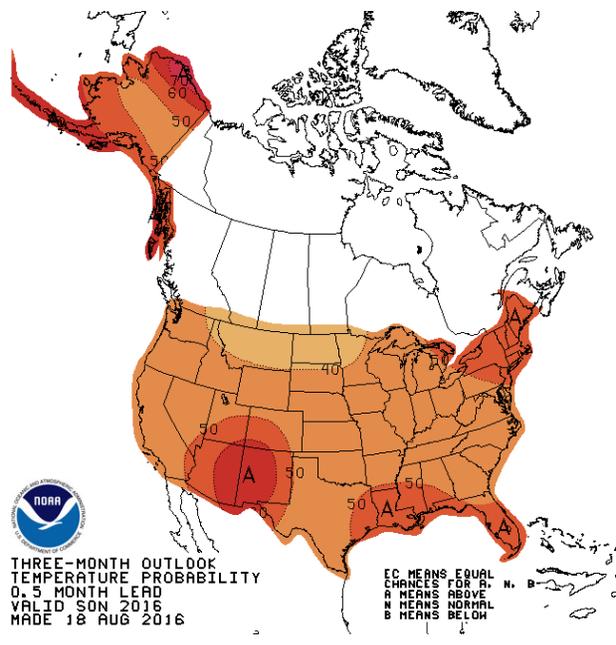
<http://go.usa.gov/3eZ73>

NWS Climate Prediction Center 3-Month Outlook

[Precipitation](#)



[Temperature](#)



[September-October-November \(SON\) 2016 precipitation outlook summary](#)

[September-October-November \(SON\) 2016 temperature outlook summary](#)

## 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](#).