

Water and Climate Update

October 15, 2015

The Natural Resources Conservation Service produces this weekly report using data and products from the National Water and Climate Center and information provided by other agencies. The report focuses on current precipitation, seasonal snowpack, temperature, and drought conditions in the U.S.

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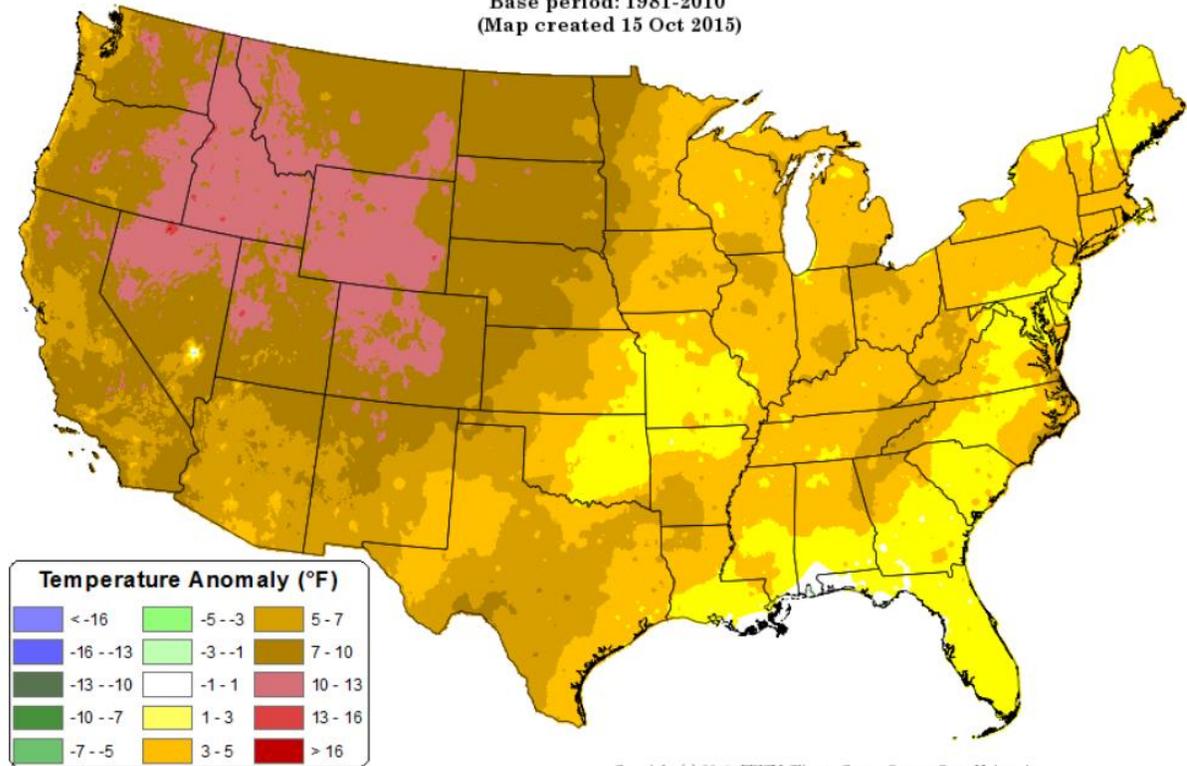
Weekly Highlight: Warm temperatures in October are recorded across the U.S.

Daily Mean Temperature Anomaly: 01 October 2015 - 14 October 2015

Period ending 7 AM EST 14 Oct 2015

Base period: 1981-2010

(Map created 15 Oct 2015)

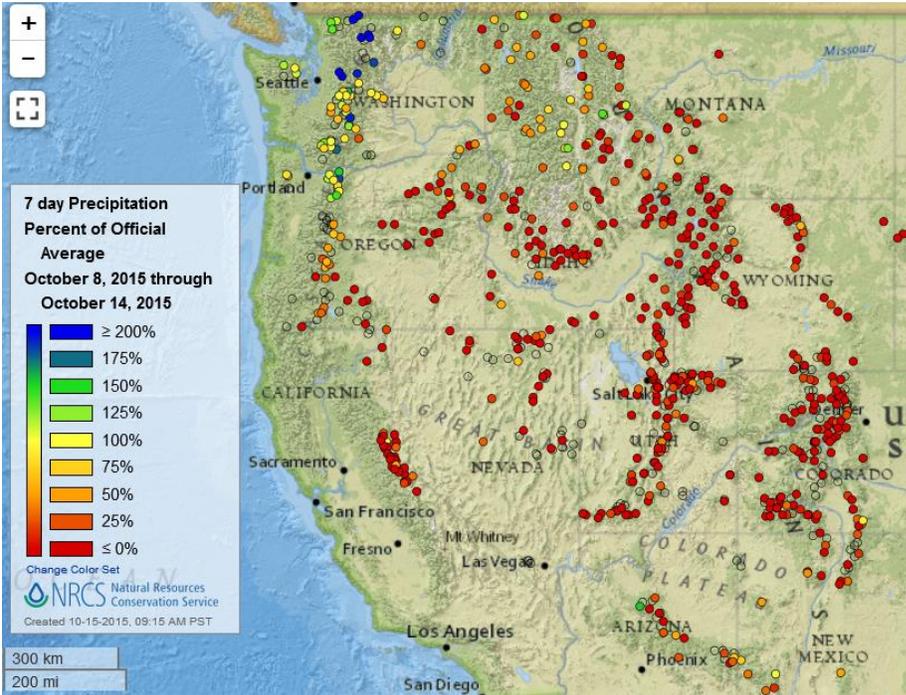


Copyright (c) 2015, PRISM Climate Group, Oregon State University

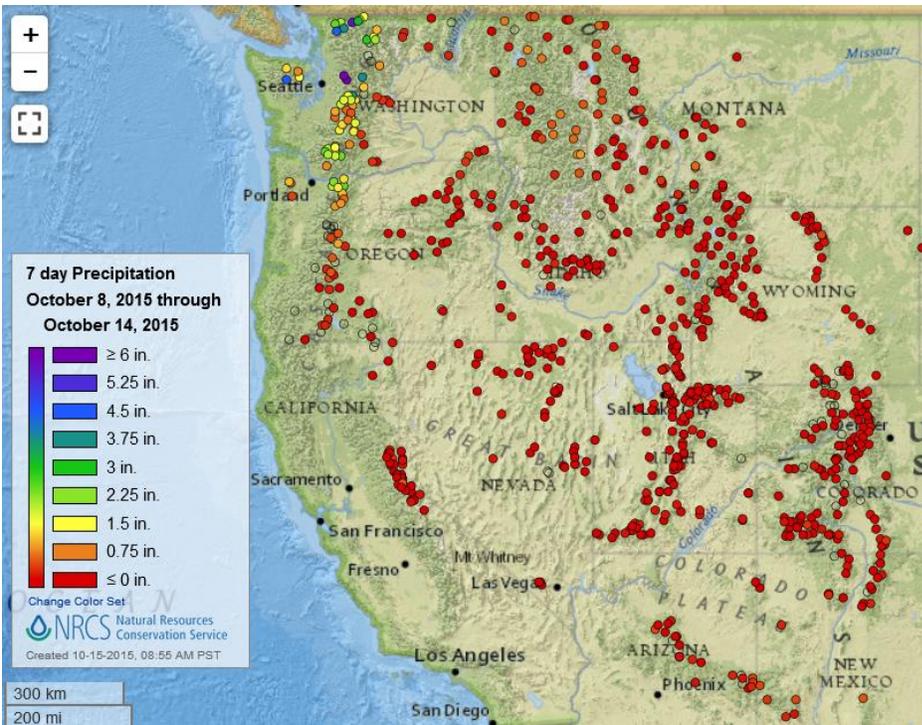
For October 2015, the national [daily mean temperature anomaly](#) map shows above normal temperatures across the West with some temperatures topping 16 degrees F. The rest of the country was also above normal with the exception of the central Gulf Coast where normal temperatures were reported.

Precipitation

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

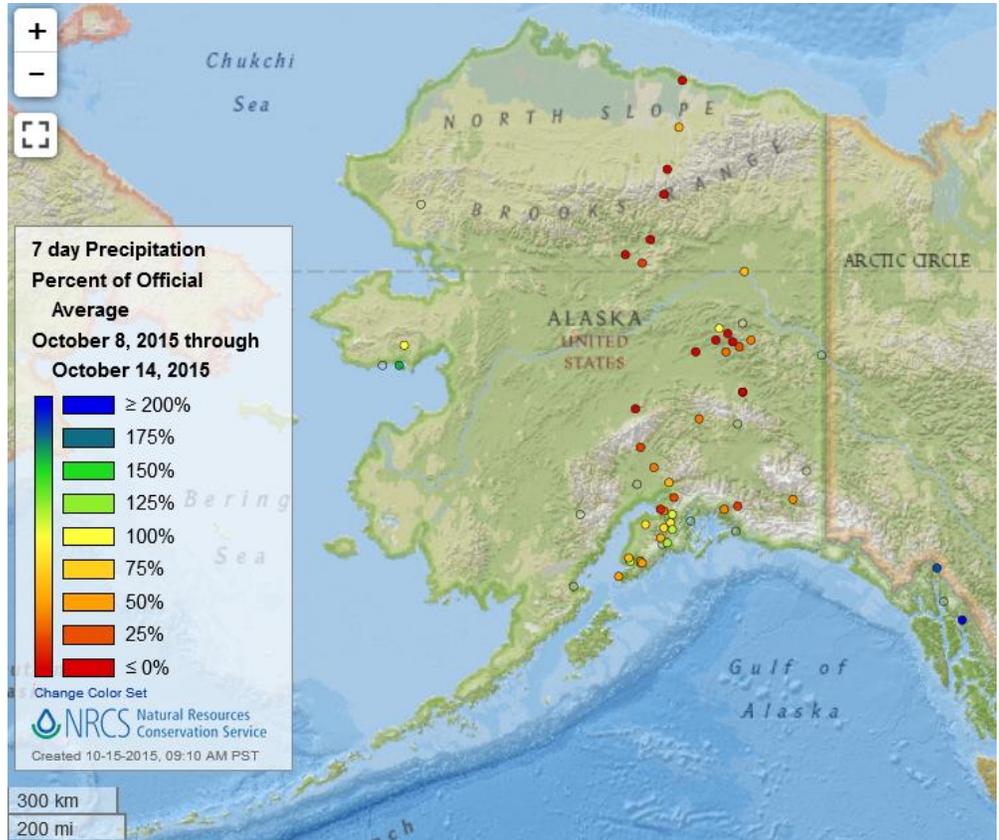


The 7-day [precipitation percent of average](#) map shows mainly dry conditions across the West. The precipitation that was above average fell in the far northwest in the Cascades of Washington, northwestern Oregon and a few stations in western Montana. Some above average precipitation also fell in central Arizona.

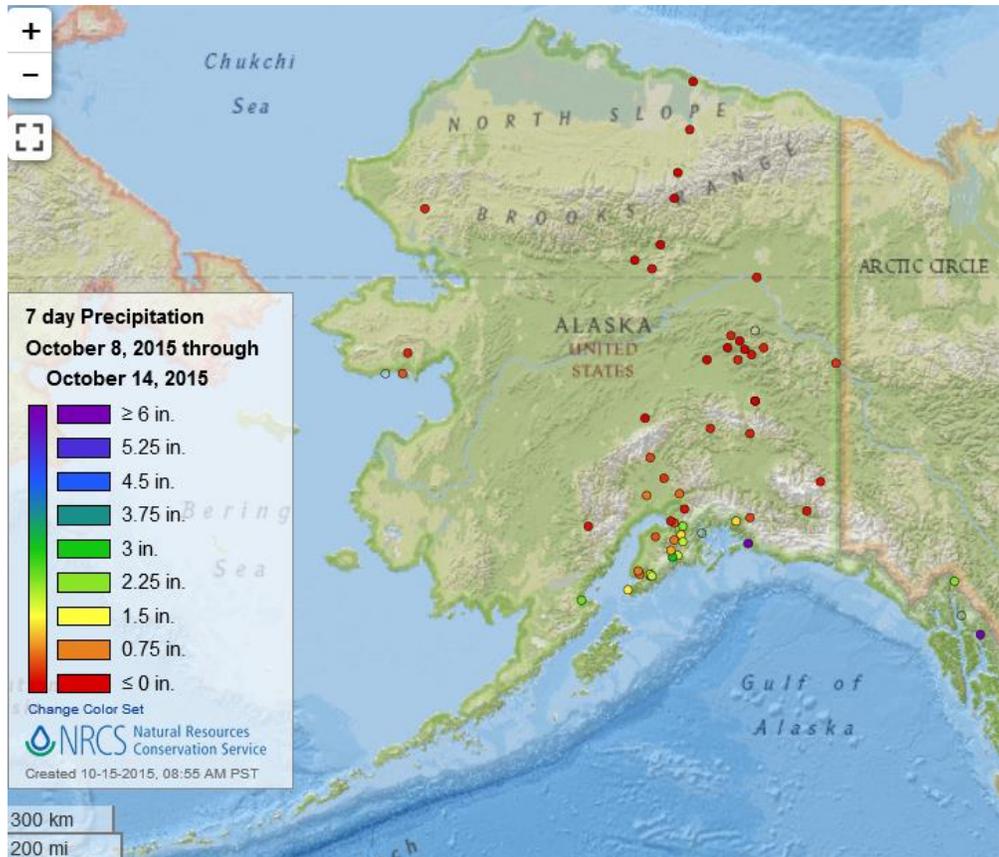


The [total precipitation](#) map shows mainly dry conditions for most of the West. The areas of above average precipitation are mostly in the northern Cascades and range from the 1- to 6-inch range. There was also some precipitation reported less than 0.75 inches in northern Idaho, western Montana and in Arizona and New Mexico.

The Alaska [precipitation percent of average](#) map for the last seven days shows most of Alaska reported average to below average for the week. The exception was Southeast, where the precipitation was nearly twice average.



The Alaska [total precipitation](#) map shows amounts generally dry for the interior regions and less than 3 inches in the coastal areas. 2 stations along the coast in southern and Southeast had nearly 6 inches for the week.

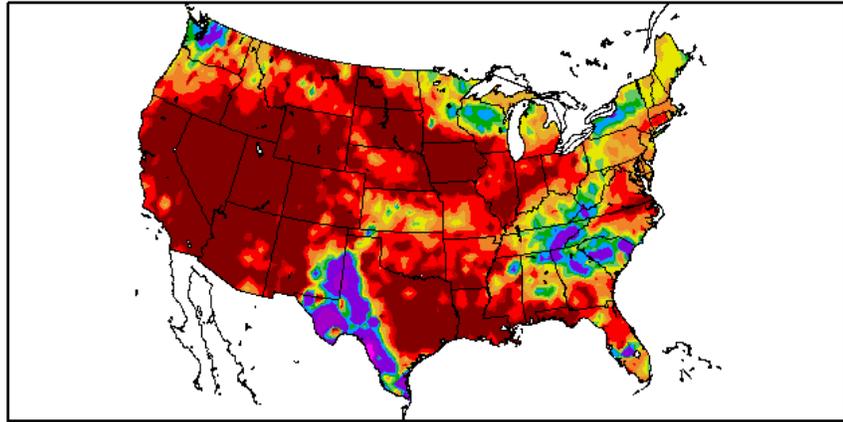


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

The [percent of normal precipitation](#) map shows well above average precipitation in the Southeast, Northwest and in Texas and New Mexico. In contrast, much of the West, Lower Mississippi Valley and central Plains were dry.

Percent of Normal Precipitation (%)
10/8/2015 - 10/14/2015

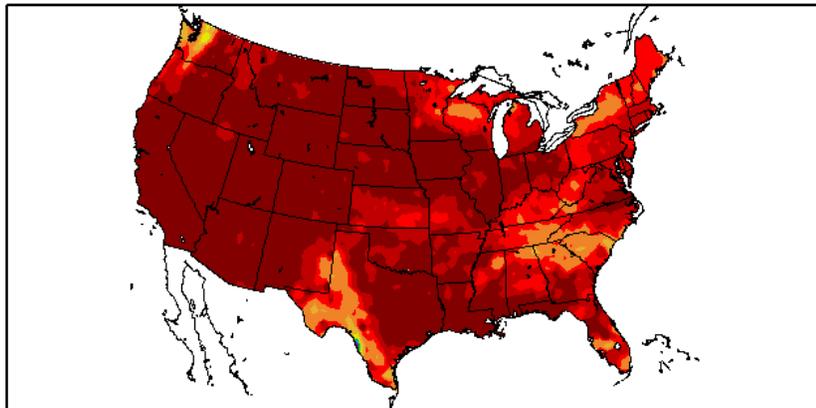


Generated 10/15/2015 at HPRCC using provisional data.

Regional Climate Centers

The [7-day total precipitation](#) map shows the largest rainfall in southwest Texas and other areas receiving precipitation were in the Pacific Northwest, the northern Plains, the Northeast and the Southeast. Large areas of the country were dry.

Precipitation (in)
10/8/2015 - 10/14/2015



Generated 10/15/2015 at HPRCC using provisional data.

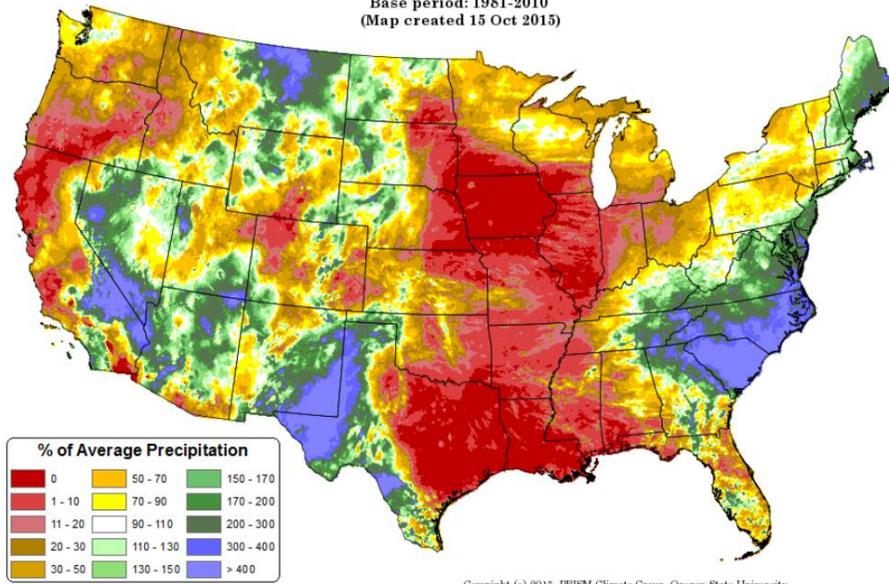
Regional Climate Centers

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

Source: PRISM

Total Precipitation Anomaly: 01 October 2015 - 14 October 2015

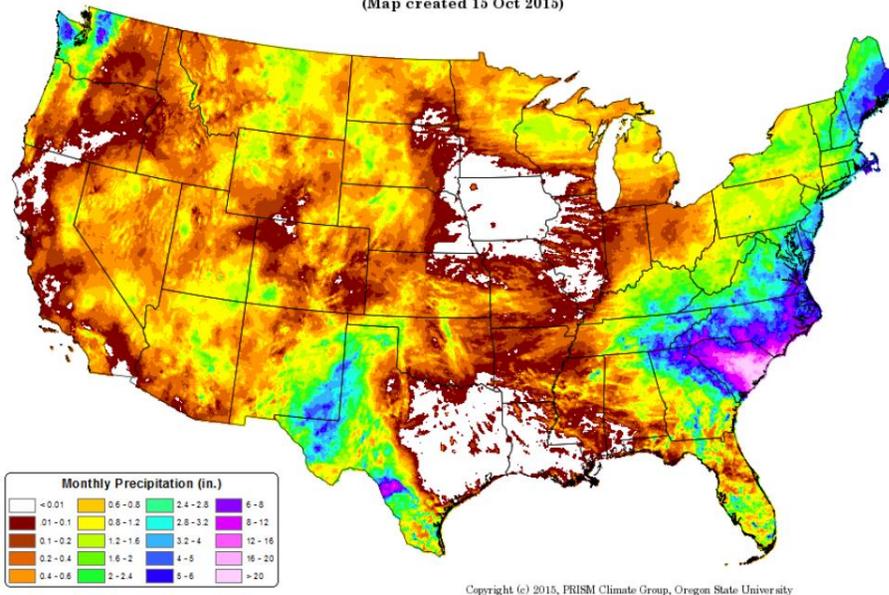
Period ending 7 AM EST 14 Oct 2015
Base period: 1981-2010
(Map created 15 Oct 2015)



For the month of October, the national [total precipitation anomaly](#) map shows very high percent of average precipitation fell in the Carolinas, areas of the Southwest from California to Texas, and central Montana. The central U.S. was mainly dry for the week.

Total Precipitation: 01 October 2015 - 14 October 2015

Period ending 7 AM EST 14 Oct 2015
(Map created 15 Oct 2015)



The October month-to-date [total precipitation](#) map shows a very high precipitation total in the Carolinas where up to 20 inches of rain fell from the storms during the first week of the month. Other areas that received precipitation were in the Northeast, Northwest and Southwest into Texas. The central U.S. and some areas of the West have been dry.

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

Note: Because the 2016 Water Year began on October 1, the water year-to-date this week coincides exactly with the month-to-date. Therefore, water year-to-date maps will not be included until November.

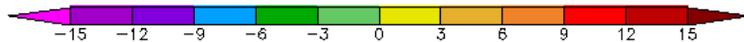
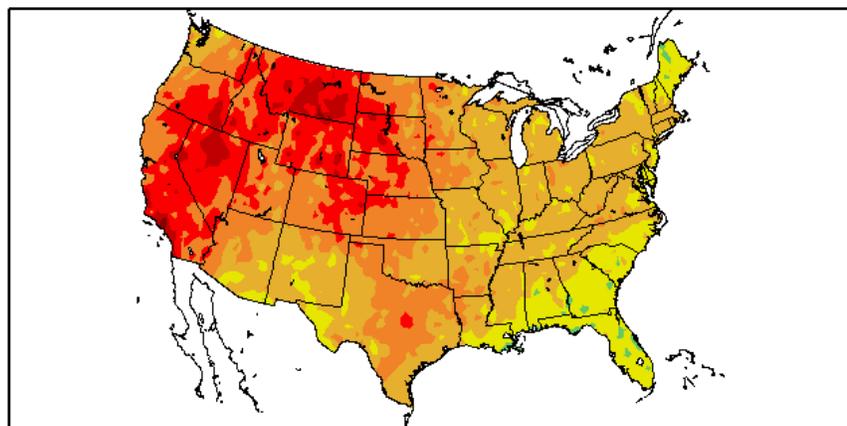
Temperature

Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

The map of the [average temperature anomalies](#) for the past week shows much of the West was very warm with readings of 9 to 15 degrees above normal. The rest of the country also reported above normal temperatures for the week. A few stations in the Southeast and in northern New England were near normal.

Departure from Normal Temperature (F)
10/8/2015 – 10/14/2015



Generated 10/15/2015 at HPRCC using provisional data.

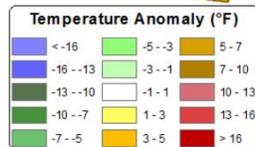
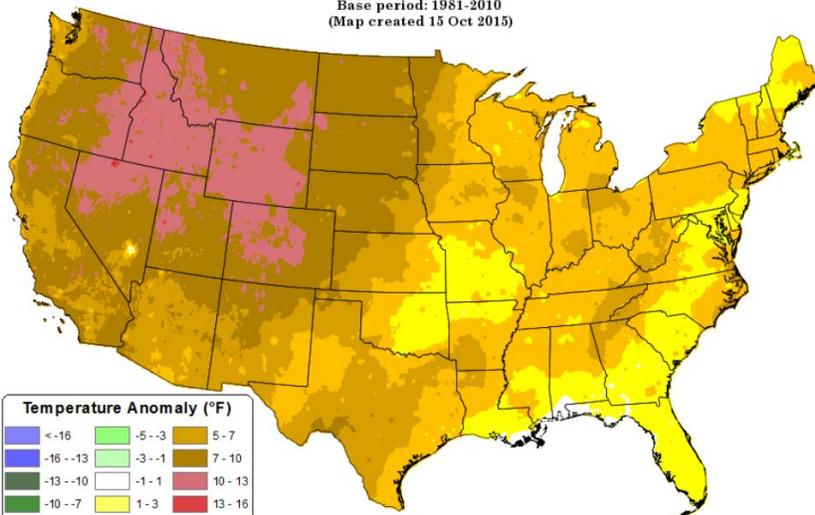
Regional Climate Centers

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

Source: PRISM

For October 2015, the national [daily mean temperature anomaly](#) map shows above normal temperatures across the West with some temperatures topping 16 degrees F. The rest of the country was also above normal with the exception of the central Gulf Coast where normal temperatures were reported.

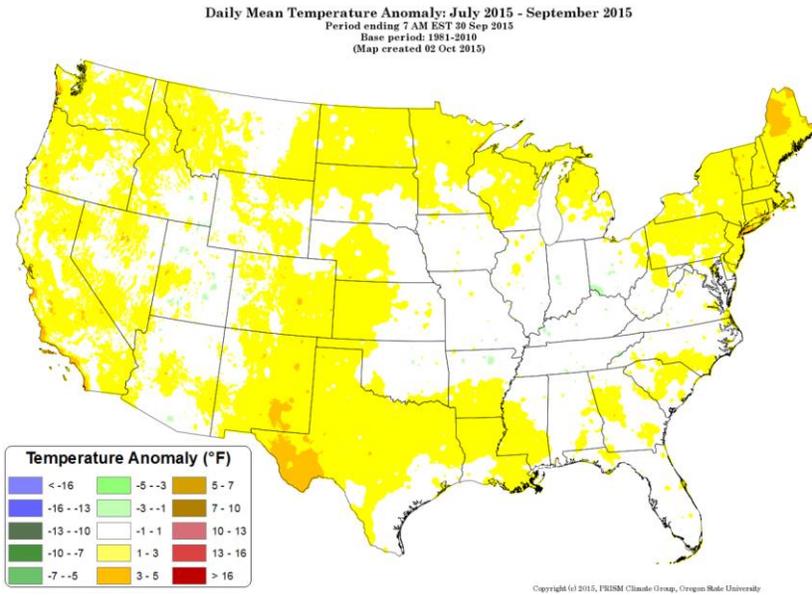
Daily Mean Temperature Anomaly: 01 October 2015 - 14 October 2015
Period ending 7 AM EST 14 Oct 2015
Base period: 1981-2010
(Map created 15 Oct 2015)



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

Source: PRISM

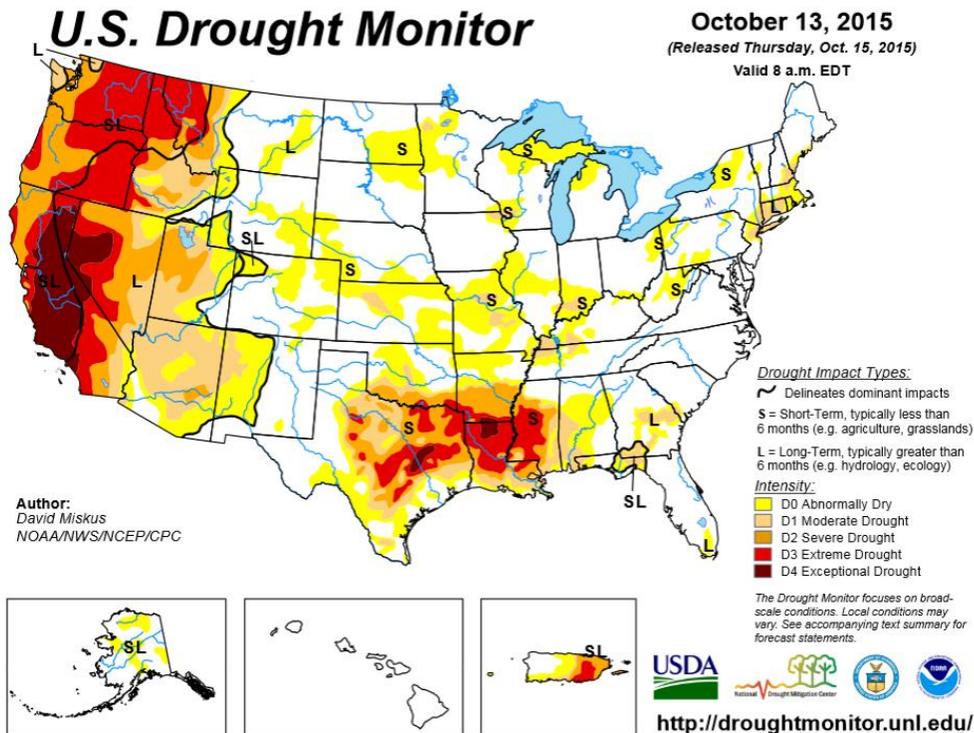


The July through September national **daily mean temperature anomalies** shows areas that were either above average or near average. The above average areas occurred across the country, with the warmest temperatures in the Southwest, western Texas, California coast, and Northeast.

Drought

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

[U.S. Drought Monitor](#) See map below. Exceptional levels of drought continue in California and Nevada with extreme drought continuing in the Pacific Northwest, the south-central U.S., and the eastern half of Puerto Rico.



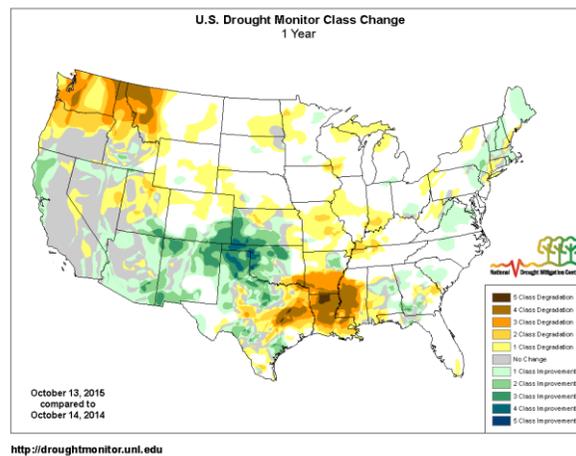
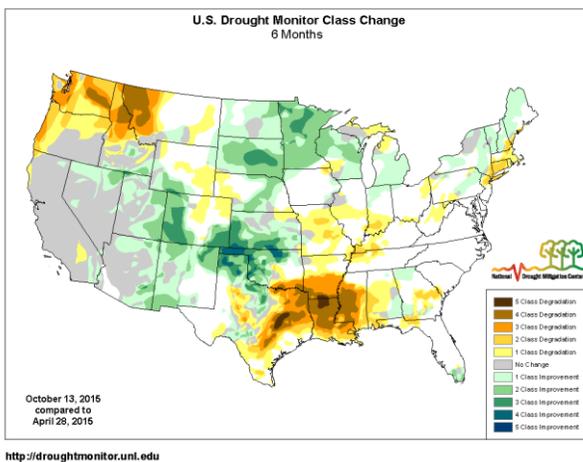
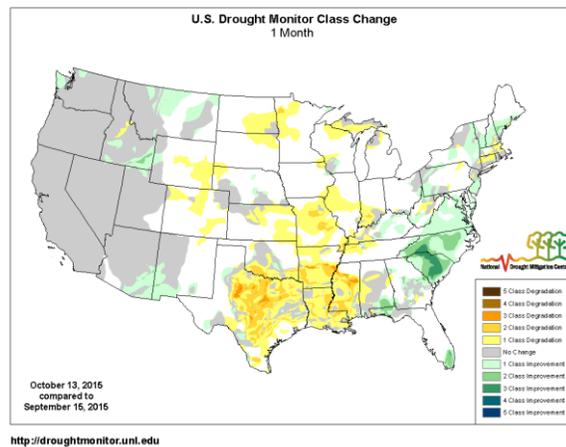
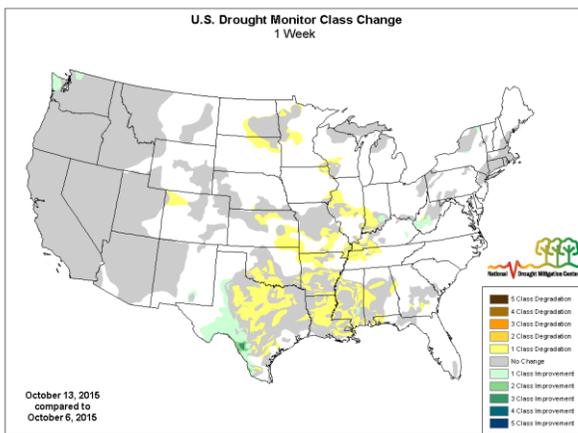
Current National [Drought Summary](#), October 13, 2015

Author: David Miskus, NOAA/NWS/NCEP/CPC

“A more tranquil weather pattern emerged this week, with light to moderate precipitation falling on the Pacific Northwest, southern High Plains and Rio Grande Valley, western Tennessee Valley, southern Appalachians, and South Carolina, and most of New England. Heavier totals (more than 2 inches) were limited to extreme western Washington, parts of the Rio Grande Valley and southern High Plains, central South Carolina, and along the southeastern Alaskan coast. Elsewhere in the lower 48 States, mostly dry and warm weather was observed, with temperatures averaging more than 6 degrees Fahrenheit above normal across the Far West and the northern halves of the Rockies and Plains. The first 12 days of October have seen little or no rain from eastern Texas to Mississippi and northward from the eastern Dakotas into southern Minnesota and Wisconsin. Unfortunately, this dry pattern has persisted for at least 3 consecutive months in the southern Great Plains and Delta, leading to severe to extreme short-term drought. While a limited period of dry and warm conditions is ideal for the maturation, dry down, and harvesting of summer crops, too much time under such conditions degrades topsoil moisture, pasture conditions, and winter grains growth while creating ideal wild fire conditions.”

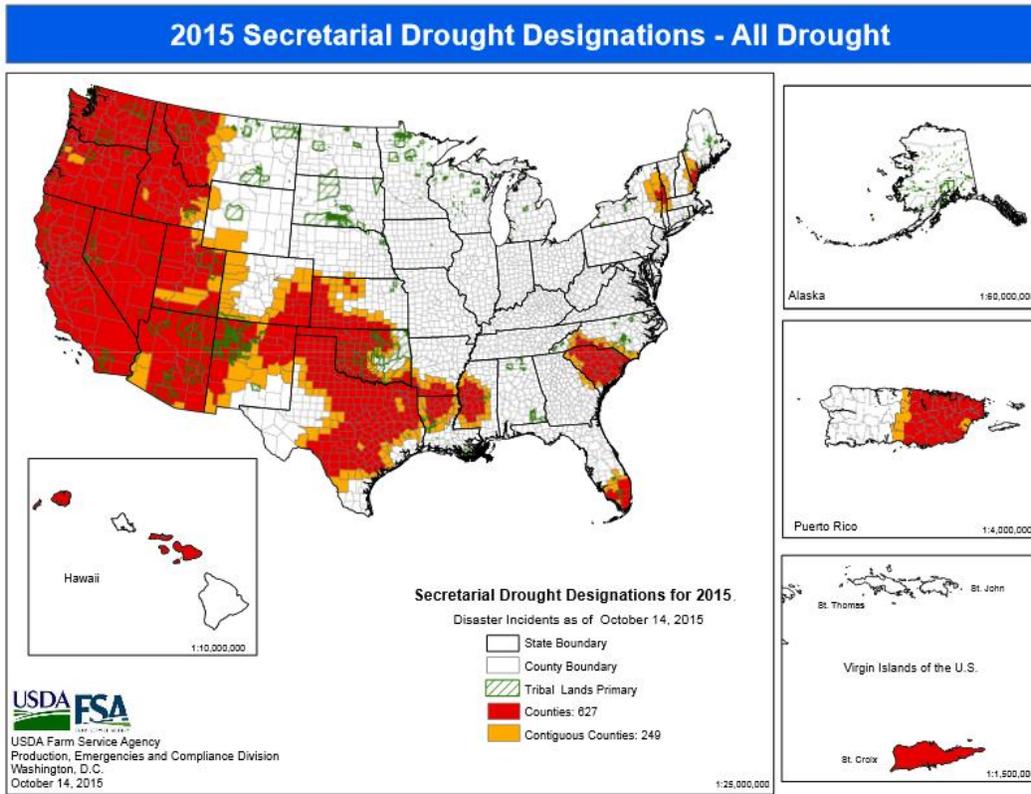
Detailed regional drought narratives for the week are [here](#).

Changes in Drought Monitor Categories over Time



Persistent, dry conditions are particularly notable in the Northwest and parts of the South and Southeast. Conditions have improved significantly in the southern Great Plains and the Southwest during the past 6-12 months and in the Carolinas during the past month.

2015 USDA Drought Designations



[Drought Designations as of October 14, 2015](#)

[USDA Disaster and Drought Information](#)

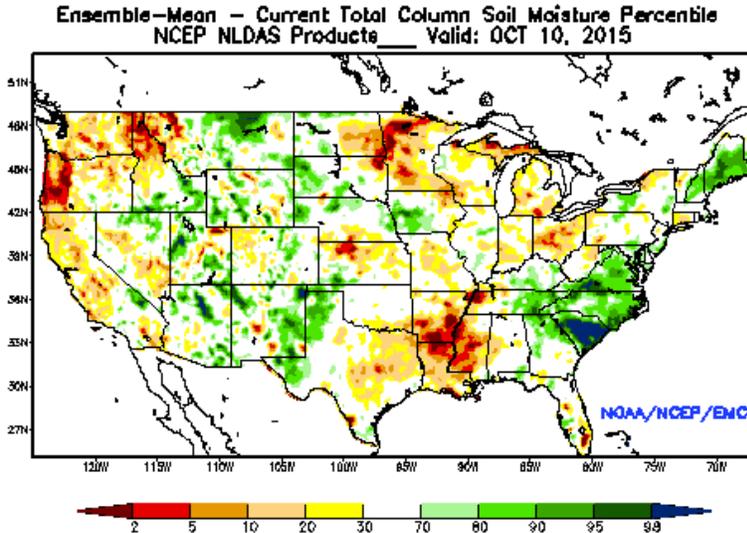
[U.S. Population in Drought, Weekly Comparison](#)

Highlighted Drought Resources

- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)

Other Climatic and Water Supply Indicators

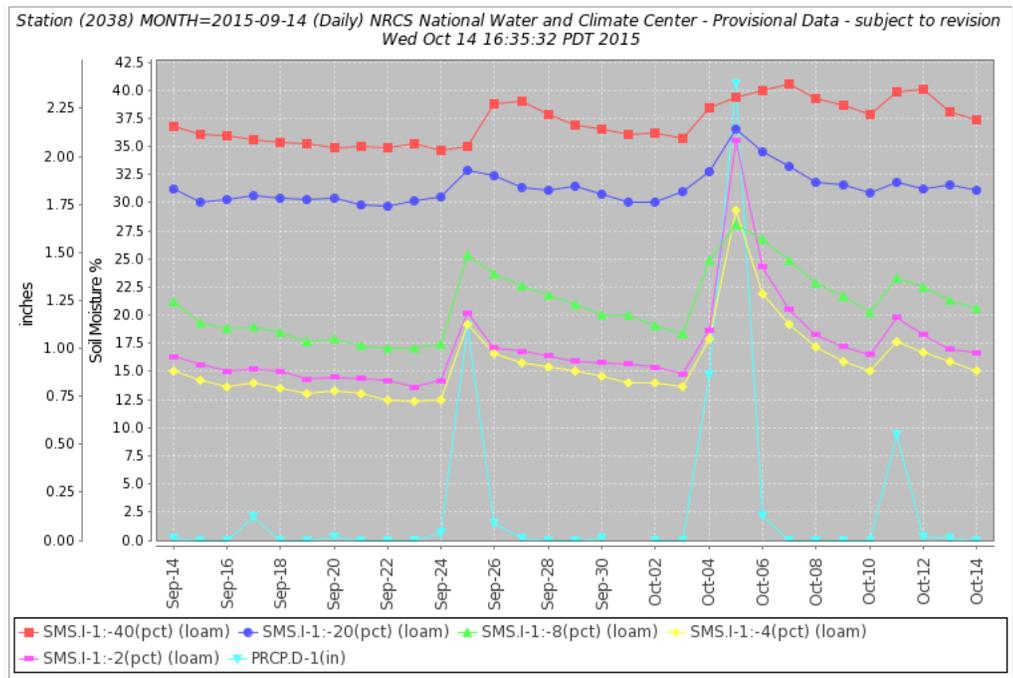
Soil Moisture



The modeled [soil moisture percentiles](#) as of October 10, 2015 show dryness in the far West, the upper Midwest, and areas in the South. Areas of above average soil moisture include much of the Rocky Mountains, the northern Plains, and much of the eastern seaboard. Extreme soil moisture due to flooding is extensive in South Carolina.

[University of Washington Experimental Modeled Soil Moisture](#)

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

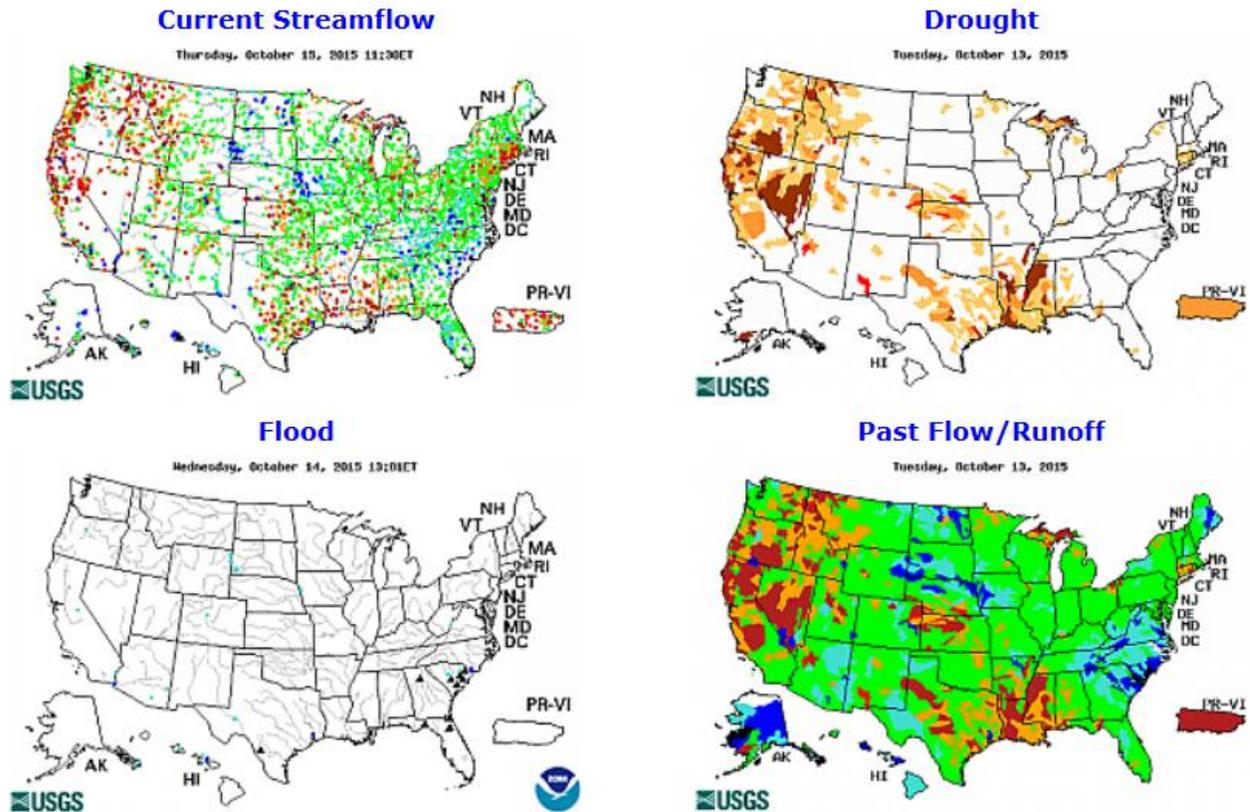


This graph shows soil moisture (2-, 4-, 8-, 20-, and 40-inch depth) and precipitation for the last 30 days at the SCAN site [Youmans Farm \(2038\)](#) in South Carolina. The very large precipitation amounts on September 25, during October 3-6, and on October 11 have caused an increase in soil moisture at all depths.

Soil Moisture Data Portals

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

Streamflow



[Streamflow](#) remains below normal in parts of the far West parts of the Northeast, the South, and Puerto Rico. High flows and flooding have occurred in the Southeast, centered on the Carolinas. Other areas with much above normal flows are in Alaska, Hawaii, and a few scattered areas in the West and Plains.

From the USGS web site, select any individual map to enlarge and display a legend.

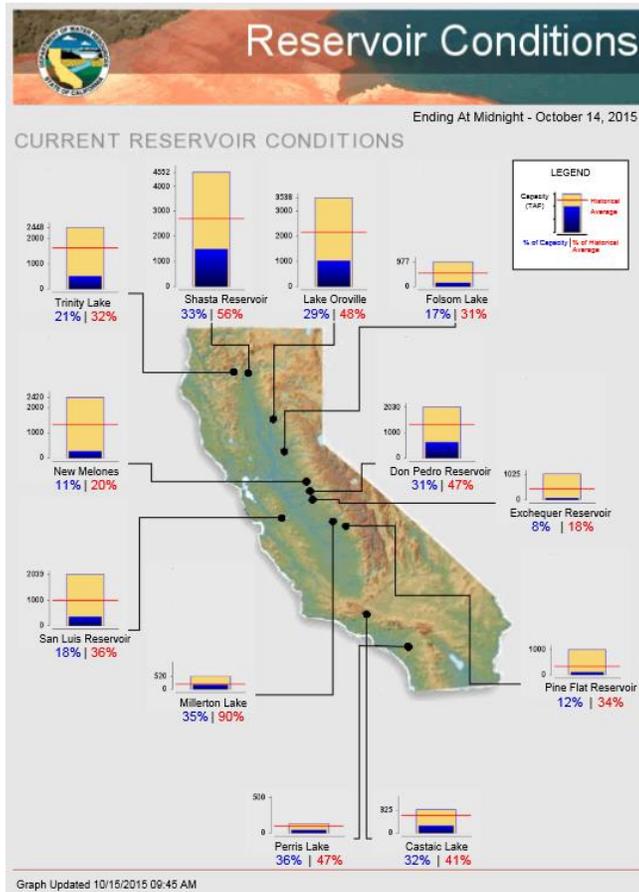
Current Reservoir Storage

[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



Short- and Long-Range Forecasts

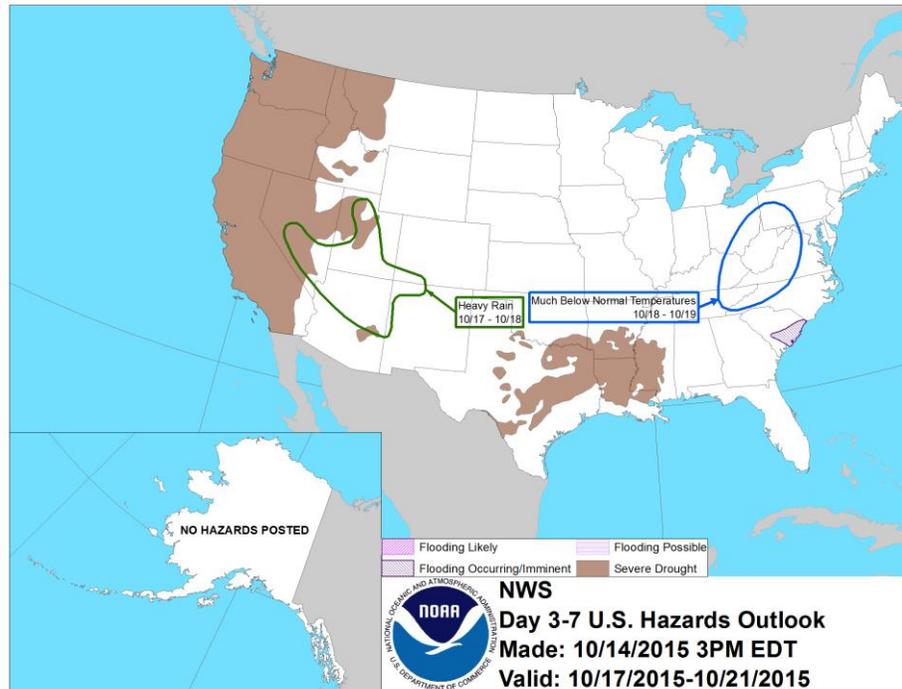
Agricultural Weather Highlights

Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C.

National Outlook, October 8, 2015: “Showers and thunderstorms will continue to spread from southern California into the Great Basin and the Southwest, with 5-day rainfall totals reaching 1 to 3 inches. During the weekend, scattered showers—associated with a cold front—will overspread the Northwest. In contrast, mostly dry weather will prevail during the next 5 days across the Plains and South. Meanwhile, scattered showers will accompany a series of cold fronts from the Great Lakes States into New England. Some snow showers may occur in those regions during the weekend, while much of the Midwest and Northeast will experience season-ending freezes. Elsewhere, record-setting warmth will gradually shift from the western U.S. to the nation’s mid-section. The NWS 6- to 10-day outlook for October 20 – 24 calls for the likelihood of warmer-than-normal weather nationwide, except for near-normal temperatures in parts of the Southwest and the southern Atlantic States. Meanwhile, above-normal precipitation across the majority of the U.S. will contrast with drier-than-normal conditions in parts of northern and central California, as well as the middle and northern Atlantic States.”

National Weather Hazards

The outlook for [weather hazards](#) over the next week includes continued flooding in South Carolina. Much below normal temperatures are expected in an area centered over West Virginia (10/18-19). Heavy rain is expected in the Southwest (10/17-18). Continued drought covers much of the far West and parts of the South.



Seasonal Drought Outlook

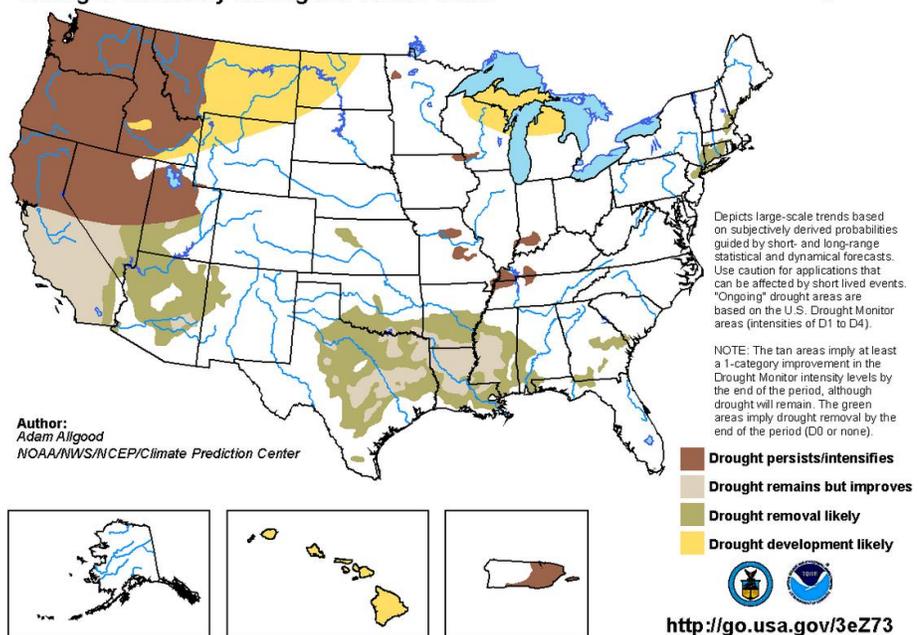
During the next three months, [drought](#) will persist or intensify over the West, parts of the central U.S., and eastern Puerto Rico.

Drought remains, but is improving, in parts of the Southwest, and the South.

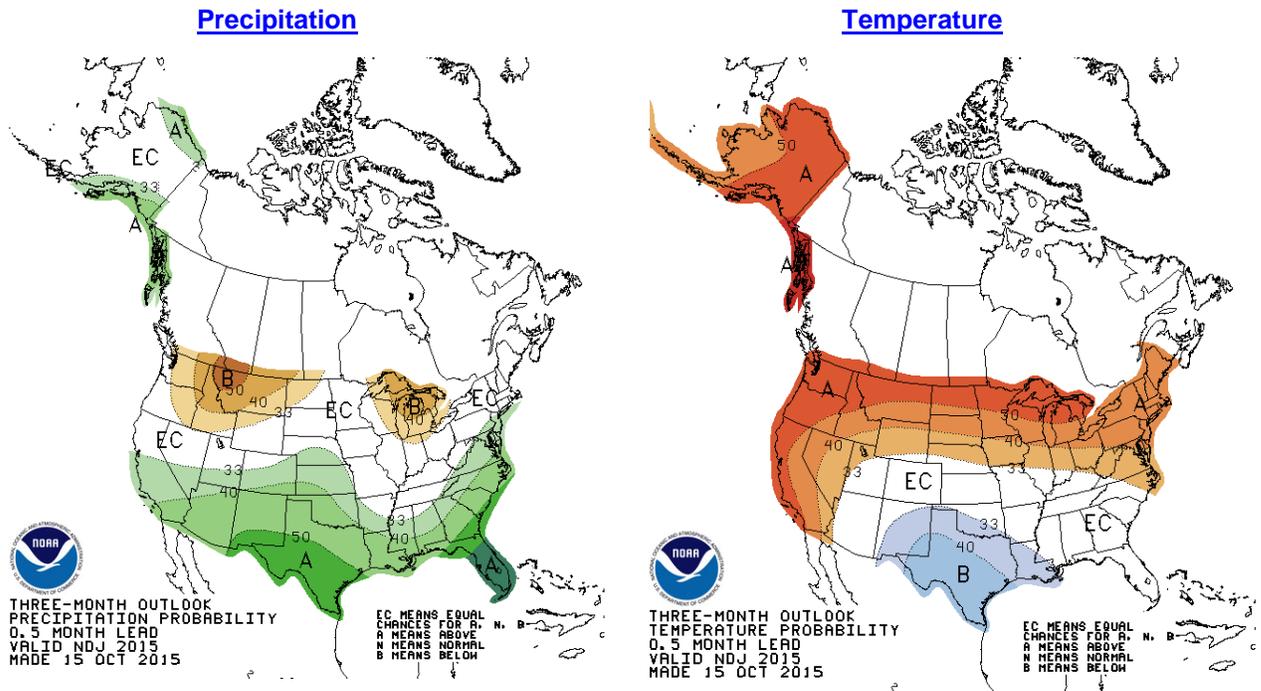
Drought removal is likely in the parts of the Southwest, South and New England.

Drought development is likely from eastern Idaho to central North Dakota, in northern Wisconsin and Michigan, and across Hawaii.

U.S. Seasonal Drought Outlook Valid for October 15 - January 31, 2016
Drought Tendency During the Valid Period Released October 15, 2015



NWS Climate Prediction Center 3-Month Outlook



Outlook Summary

NWS Climate Prediction Center:

“[The October-November-December \(OND\) 2015 precipitation outlook](#) indicates enhanced probabilities of above-median precipitation amounts for central and southern California, the Southwest, parts of the central and southern Plains, the lower Mississippi valley, the southeast northward to the Mid-Atlantic. Above-median precipitation amounts are also most likely for the southern and northern coasts of Alaska. Below-median precipitation amounts are most likely for parts of the Pacific Northwest, northern Rockies and Great Lakes.”

“[The October-November-December \(OND\) 2015 temperature outlook](#) indicates enhanced probabilities of above-normal temperatures for the far West, across the northern contiguous U.S. to the Northeast, and southward to the Mid-Atlantic. Within the contiguous U.S., the chances of above-normal temperatures are greatest along the Pacific coast and along the northern tier from the Pacific Northwest to the Great Lakes with probabilities exceeding 50 percent. Below-normal temperatures are favored from New Mexico to Louisiana while above-normal temperatures are also most likely for Alaska.”

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](#).