

Water and Climate Update

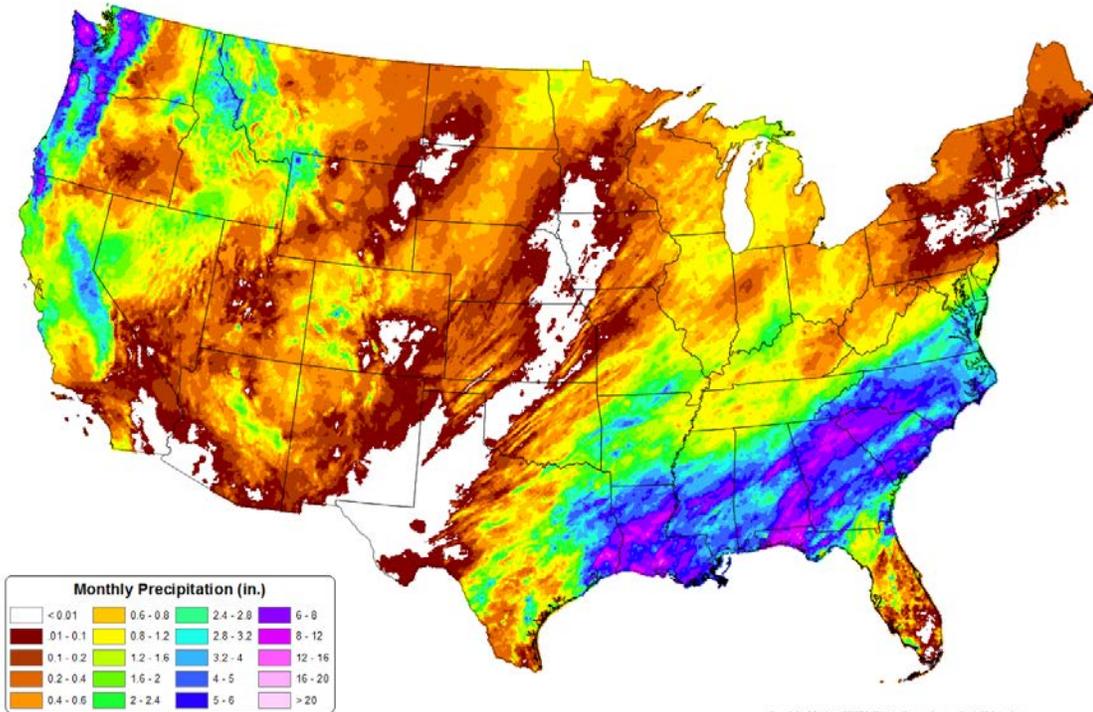
November 12, 2015

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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Weekly Highlight: Heavy precipitation and flooding continue across the Southeast

Total Precipitation: 01 November 2015 - 10 November 2015
 Period ending 7 AM EST 10 Nov 2015
 (Map created 11 Nov 2015)

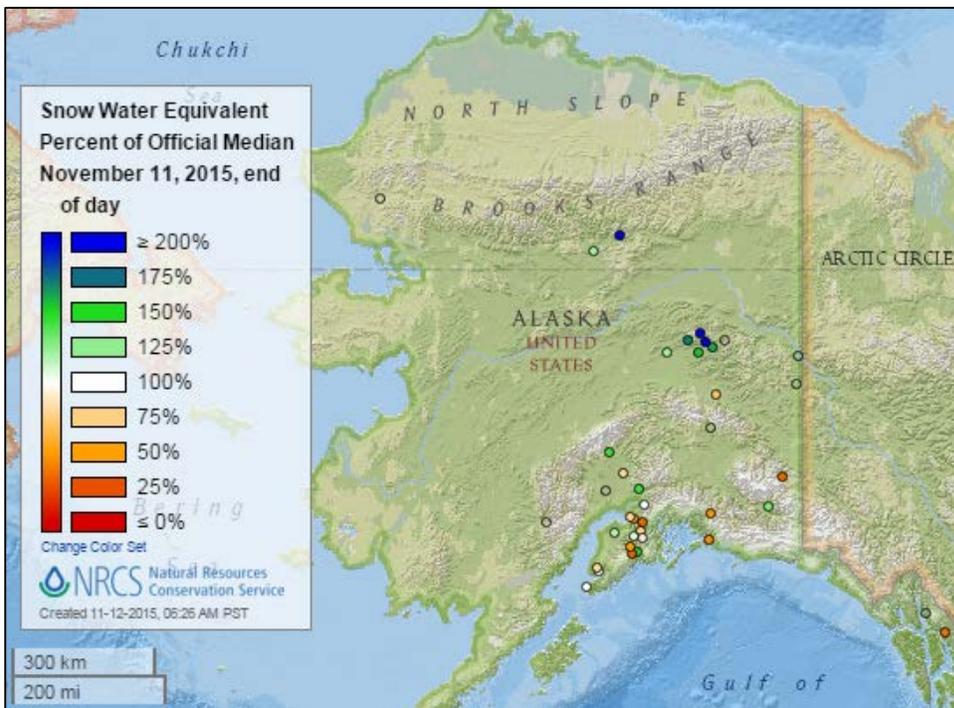
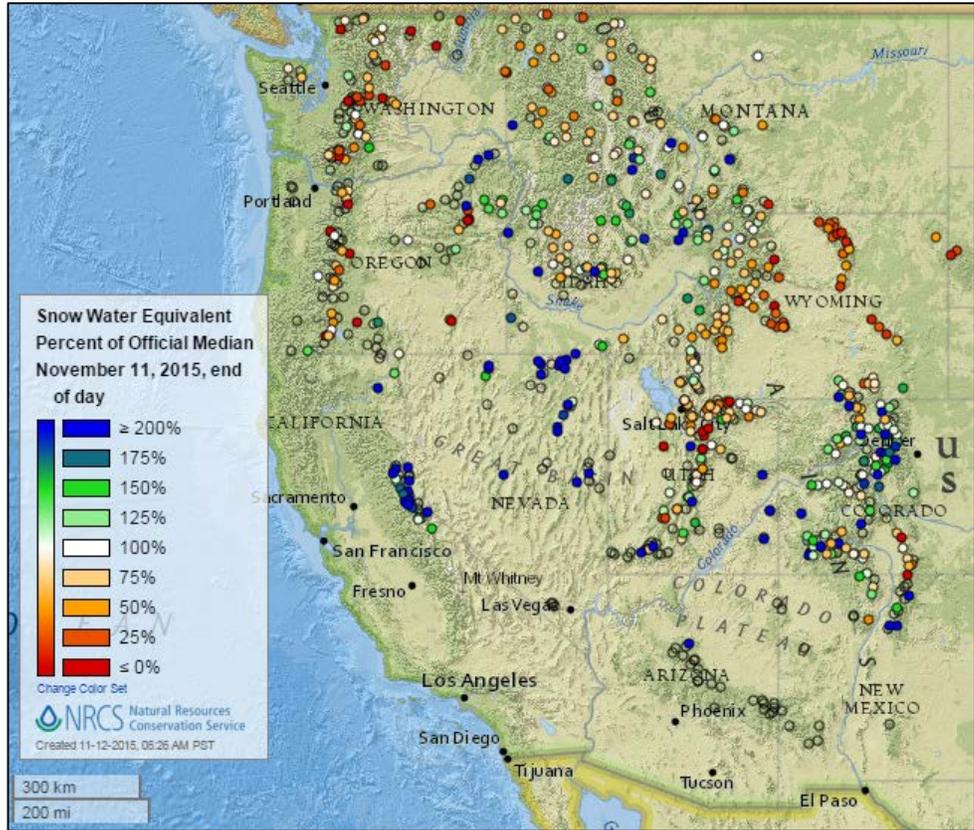


The November month-to-date [total precipitation map](#) shows heavier amounts in the Pacific Northwest and the Southeast. Southeast precipitation totals exceeded 8 inches in many areas, and flooding continues across the region.

Snow

Current Snow Water Equivalent, Western Mountain Sites (NRCS SNOTEL Network)

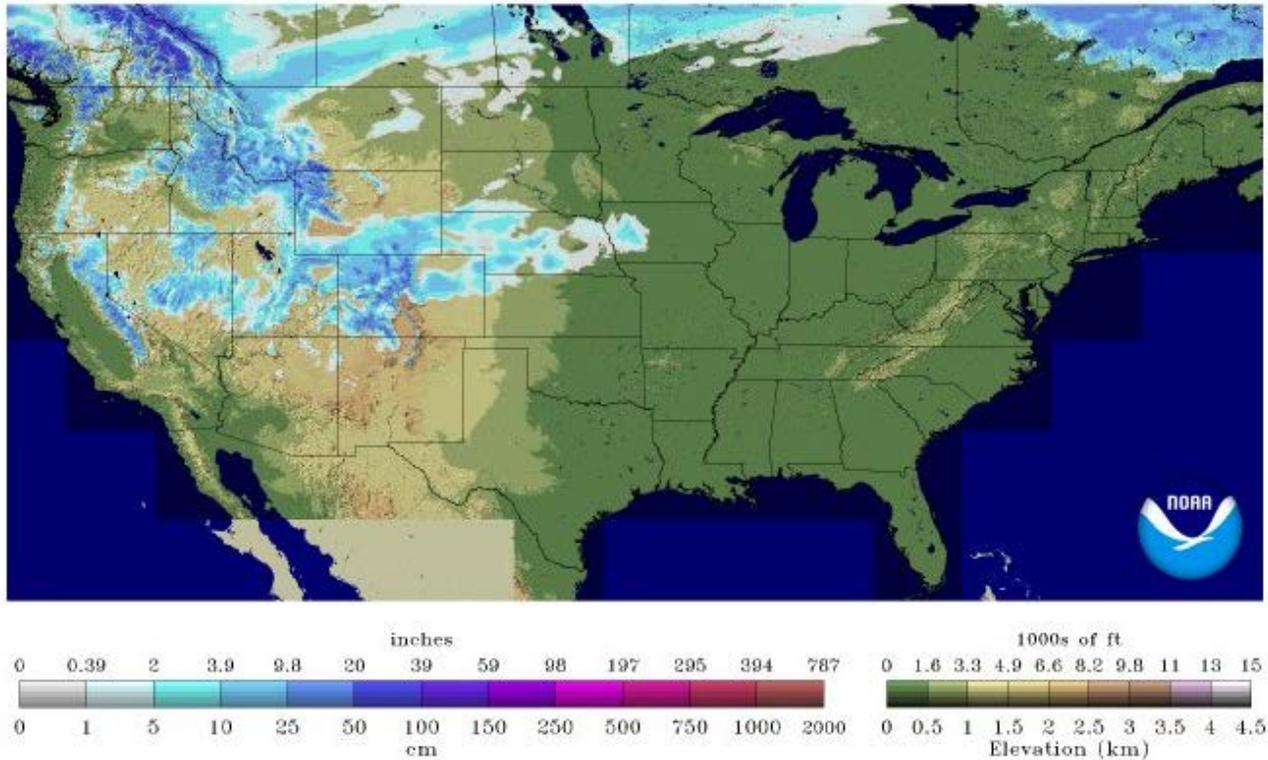
The current [snow water equivalent percent of median](#) map shows a few areas where snow has begun its winter accumulation. These areas include a few sites in the Cascades in Oregon and Washington, the Sierra in California, and the Rockies in Idaho, Montana, Nevada, and Colorado. The percent of median value can be misleading at this time of year, as medians are very small.



The current [snow water equivalent percent of median](#) map for Alaska shows a number of sites have begun accumulating snow. The percent of median can be misleading for this early in the season.

Current Snow Depth, National Weather Service (NWS) Networks

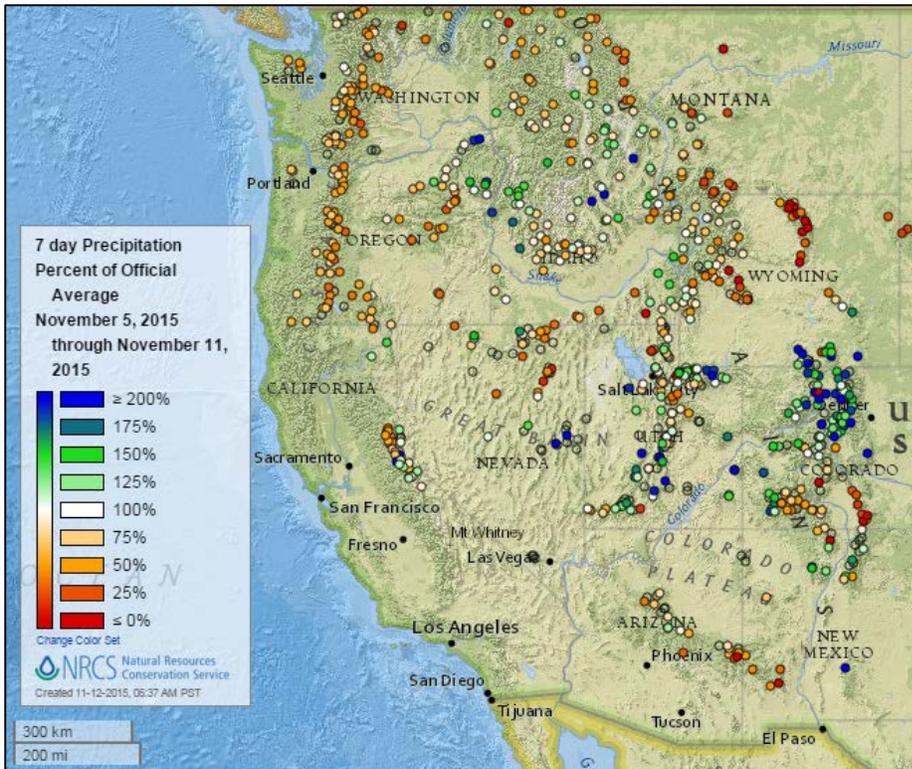
Snow Depth
2015-11-12 06 UTC



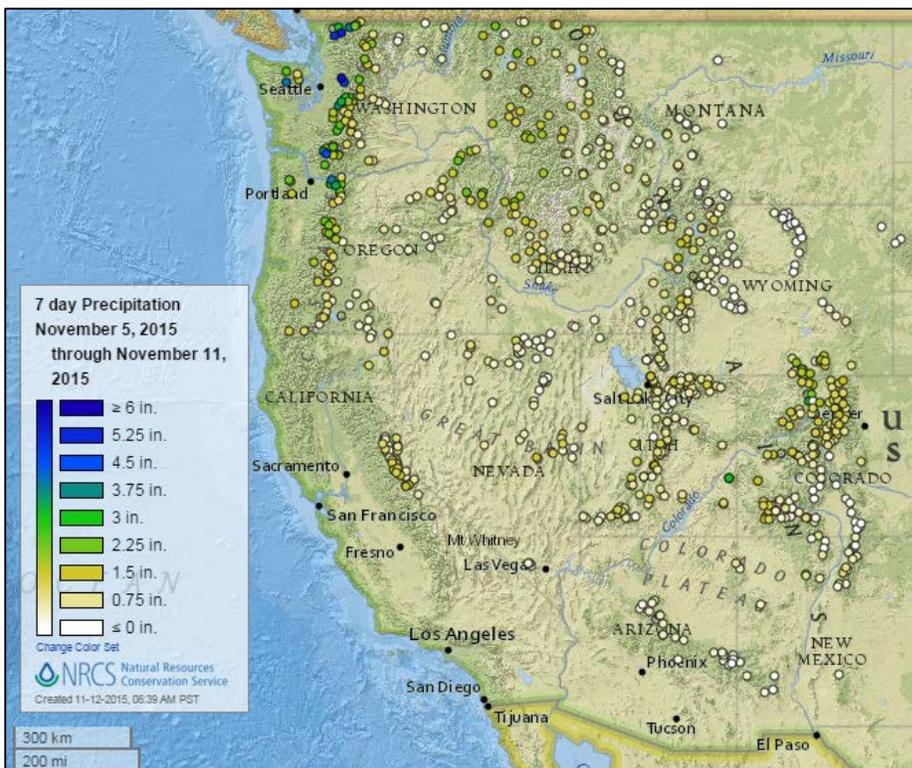
The National Water Center's current [snow depth](#) map for the continental U.S. shows areas of several inches of accumulation in the western mountains and in the central and northern Great Plains.

Precipitation

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

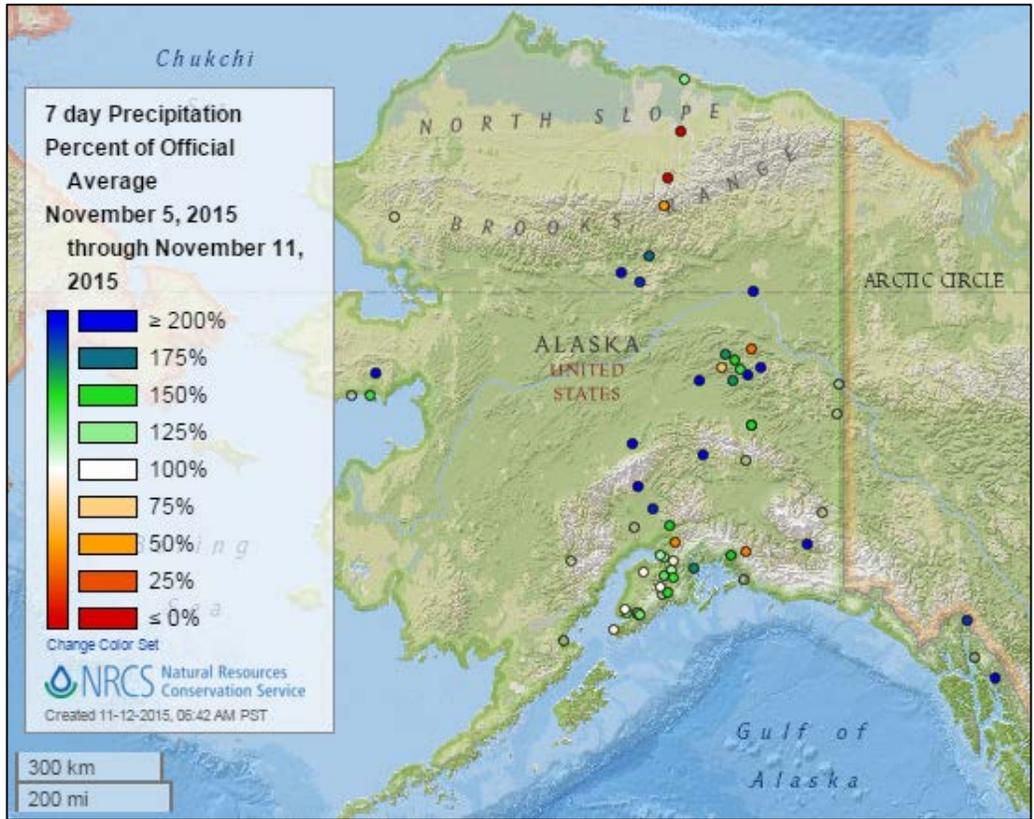


The 7-day [precipitation percent of average](#) map shows areas of large amounts of precipitation in Idaho, Utah, and Colorado. Areas in the Cascades, Sierra Nevada, northern Rockies, and Southwest received less than average precipitation during the week.

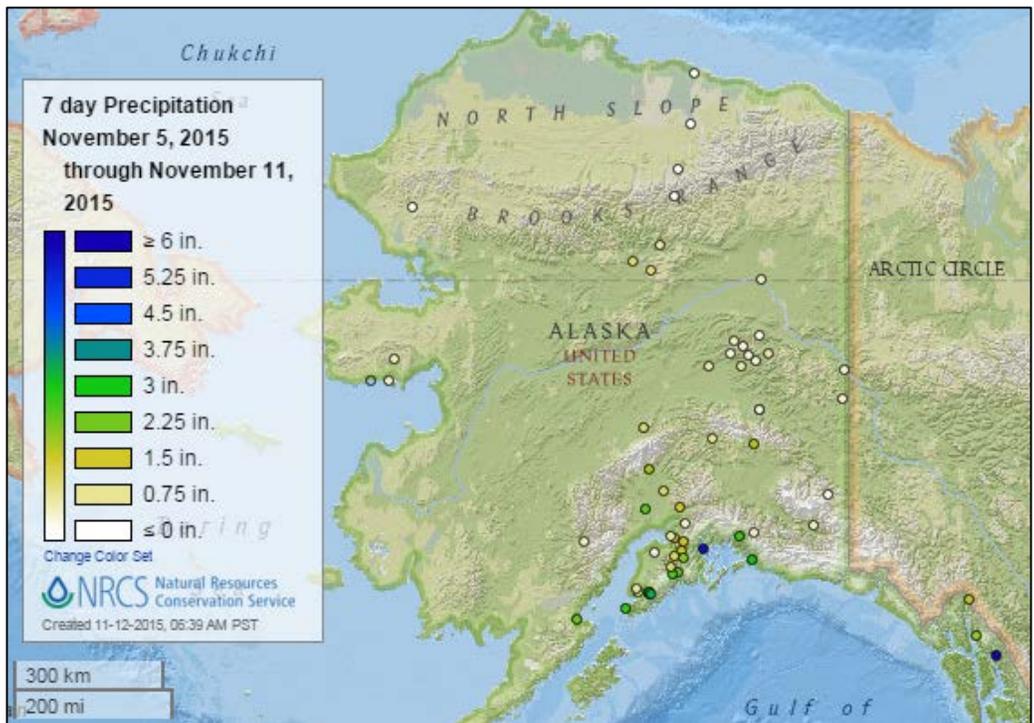


The [total precipitation](#) map shows most areas throughout the West had less than 1.5 inches for the week. The exception was the Cascades of Washington and Oregon, where precipitation greater than 2 inches fell during the week.

The Alaska [precipitation percent of average](#) map for the last seven days shows a wide variety of precipitation conditions across the state. Greater than 200% was reported in southeast Alaska, as well as the central and western regions. In contrast, a few stations on the North Slope and some coastal and interior stations had average or less than average conditions.



The Alaska [total precipitation](#) map shows that areas receiving precipitation generally had 1.5 inches or less in most of the state. There were a few coastal and southeast stations that received over 2 inches.



Last 7 Days, National Weather Service (NWS) Networks

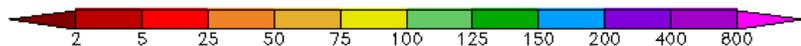
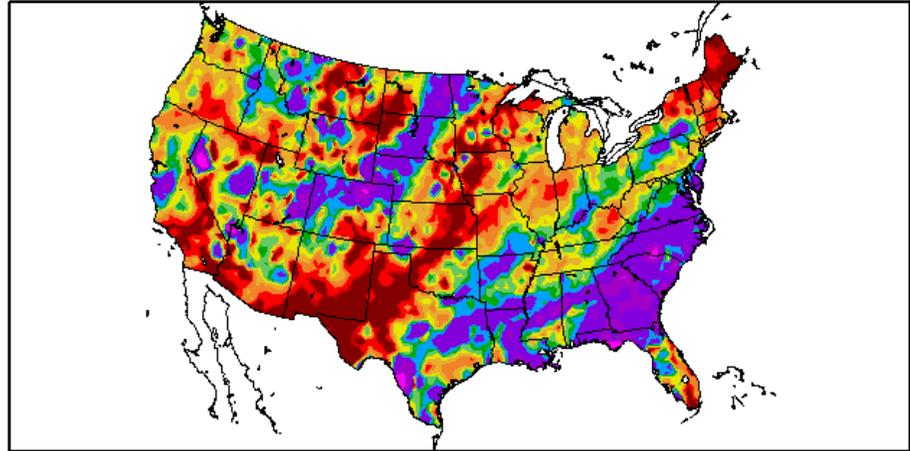
Source: Regional Climate Centers

Percent of Normal Precipitation (%)
11/5/2015 – 11/11/2015

The [percent of normal precipitation](#)

map shows well above normal precipitation across the Southeast, eastern Texas, the northern Great Plains, and a few other areas across the country.

Areas in southern California, much of the southwest, west Texas, the central Plains, and New England were below normal.



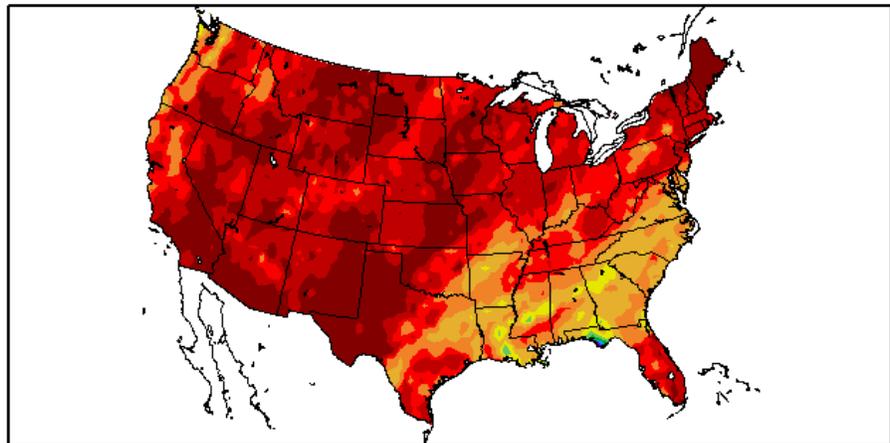
Generated 11/12/2015 at HPRCC using provisional data.

Regional Climate Centers

Precipitation (in)
11/5/2015 – 11/11/2015

The [7-day total precipitation](#)

map shows most of the U.S. had little precipitation for the week. Notable exceptions were the Southeast and Pacific Northwest, where totals for the week were above an inch.



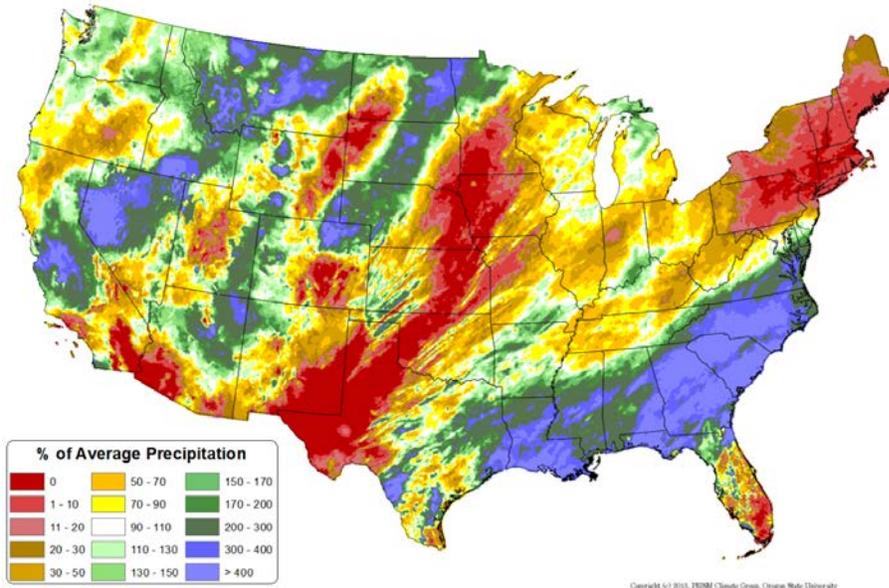
Generated 11/12/2015 at HPRCC using provisional data.

Regional Climate Centers

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

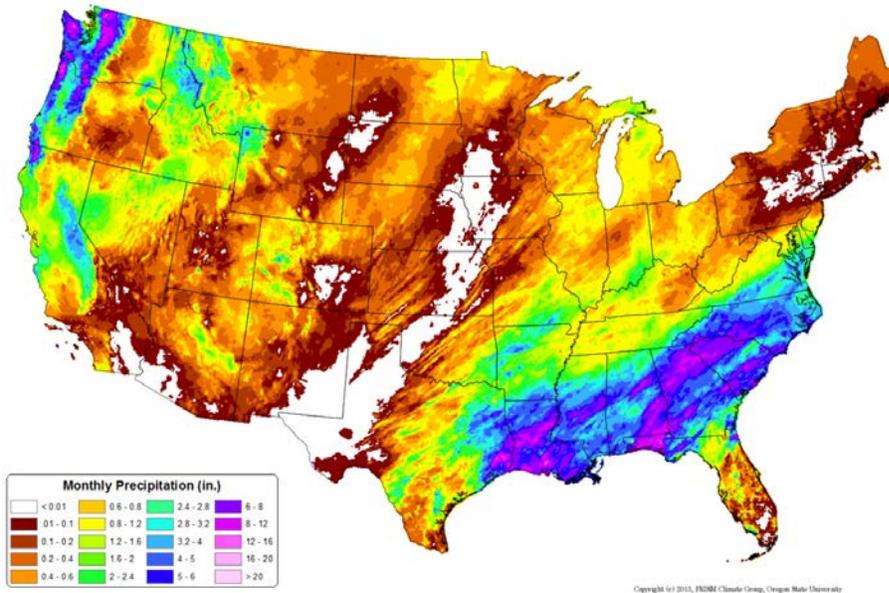
Source: PRISM

Total Precipitation Anomaly: 01 November 2015 - 10 November 2015
 Period ending 7 AM EST 10 Nov 2015
 Base period: 1961-2010
 (Map created 11 Nov 2015)



For the month of November to date, the national [precipitation percent of average](#) map highlights areas of well above average precipitation in the West, the northern Plains, and the Southeast. Parts of the central Plains, the Northeast, the Southwest, as well as southern Florida, have been drier than average.

Total Precipitation: 01 November 2015 - 10 November 2015
 Period ending 7 AM EST 10 Nov 2015
 (Map created 11 Nov 2015)

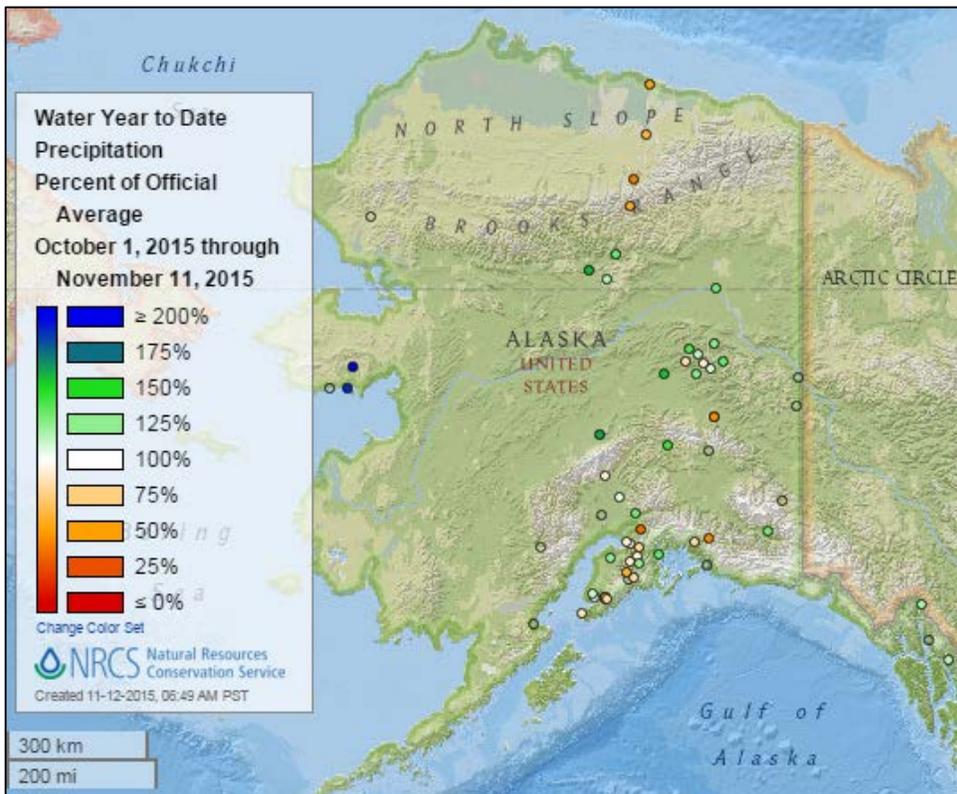
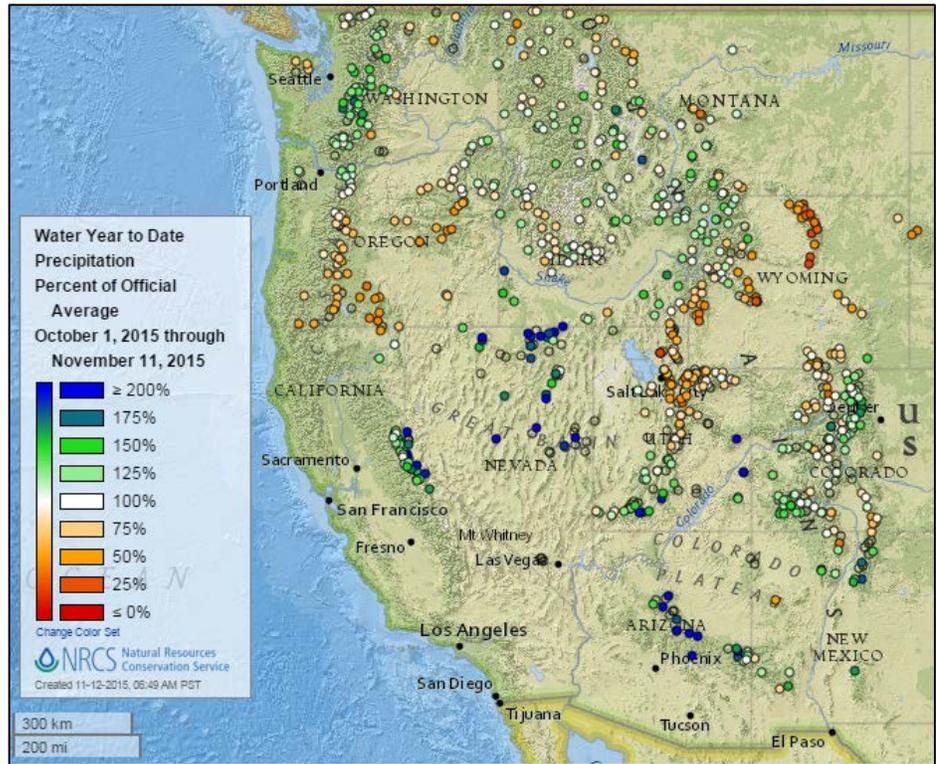


The November month-to-date [total precipitation](#) map shows heavier amounts in the Pacific Northwest and the Southeast. Southeast precipitation totals exceeded 8 inches in many areas, and flooding continues across the region. Lesser amounts or zero precipitation was reported elsewhere.

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

For the [2016 Water Year](#) that began on October 1, 2015, most of the West is near or above average for the period. Above average conditions are reported in California, Nevada, and the Southwest.

Areas below average include Oregon, Wyoming, Utah, and northern Colorado.



The Alaska water year-to-date [precipitation percent of average](#) map shows a mixture of above, near, and below average sites throughout the state.

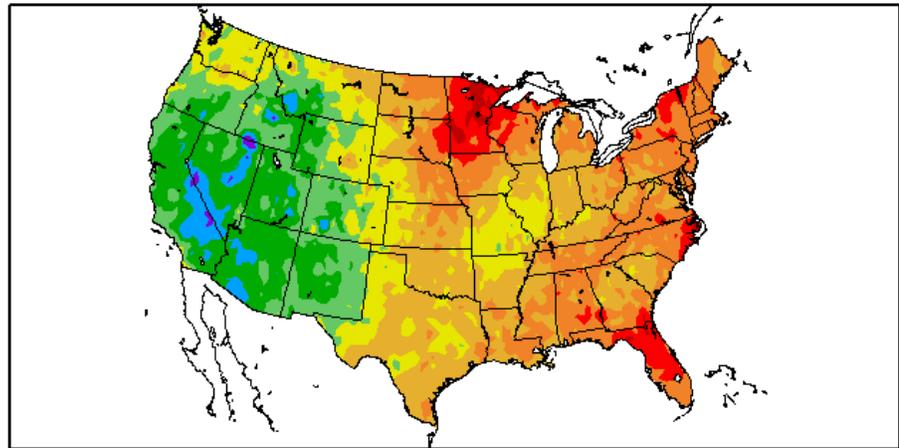
Temperature

Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

Departure from Normal Temperature (F)
11/5/2015 – 11/11/2015

The map of the [average temperature anomalies](#) for the past week shows most of the West reported cool temperatures for the week, with departures in some locations cooler than 9 degrees below normal. Most of the eastern U.S. experienced above average temperatures. Notable warmth was in Minnesota where some temperatures topped 12 degrees above normal.



Generated 11/12/2015 at HPRCC using provisional data.

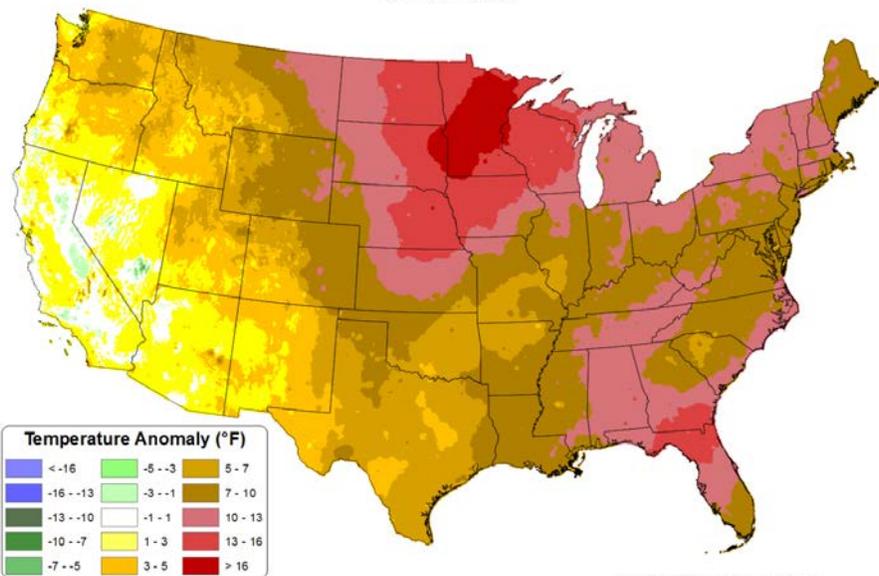
Regional Climate Centers

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

Source: PRISM

For November 2015, the national [daily mean temperature anomaly](#) map shows above normal temperatures throughout the country. Especially warm temperatures were observed in the northern Plains into the Great Lakes region, and in some areas of the Southeast.

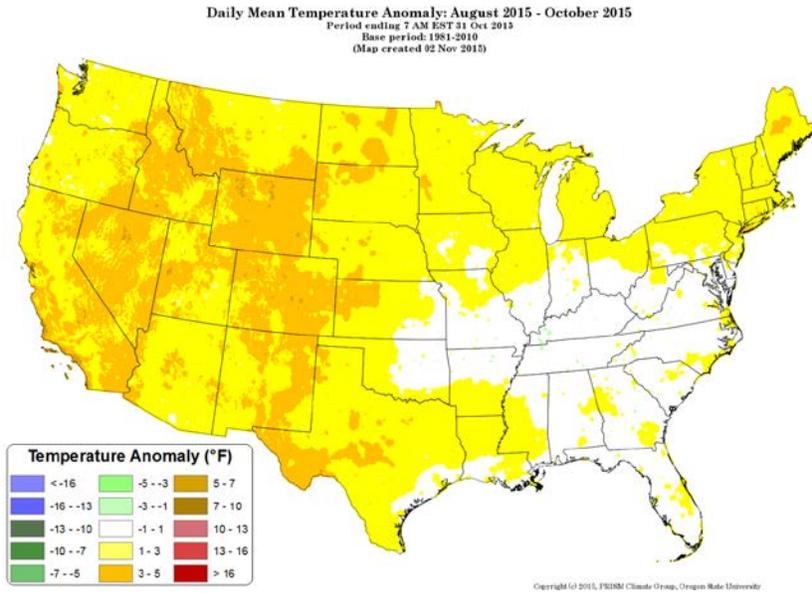
Daily Mean Temperature Anomaly: 01 November 2015 - 10 November 2015
Period ending 7 AM EST 10 Nov 2015
Base period: 1981-2010
(Map created 11 Nov 2015)



Copyright © 2015, PRISM Climate Group, Oregon State University

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

Source: PRISM

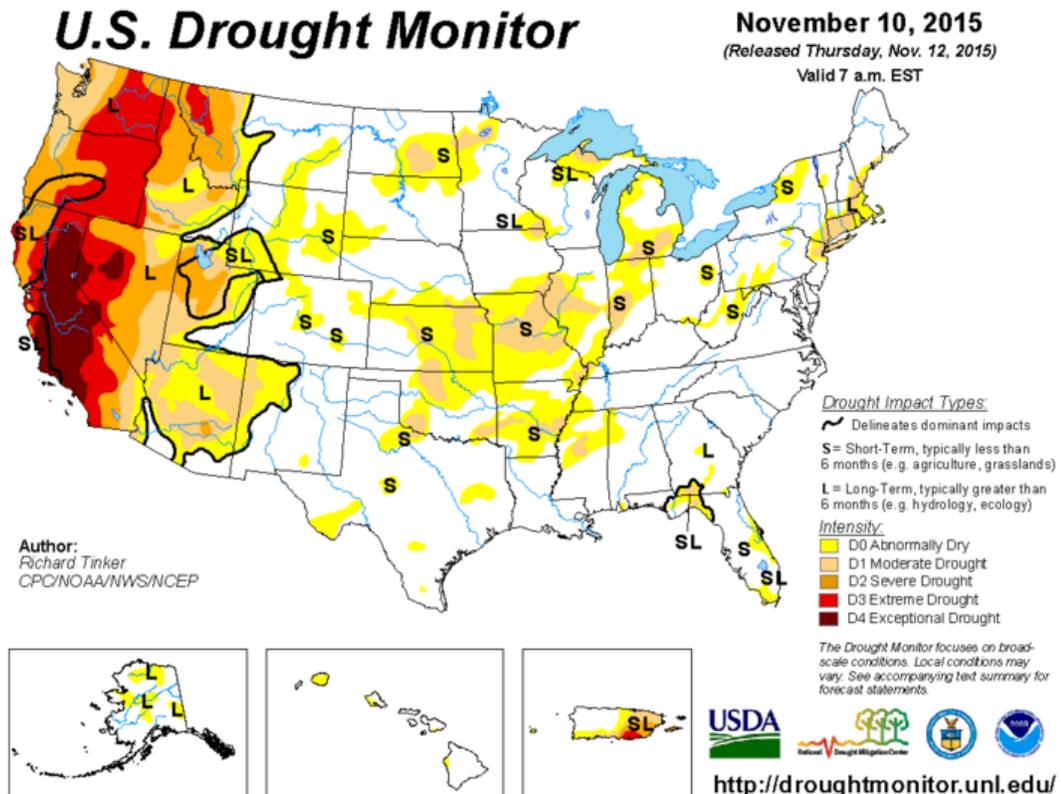


The August through October national [daily mean temperature anomaly](#) map shows all of the eastern U.S. being near normal or somewhat warmer than normal. The West reported slightly warmer conditions.

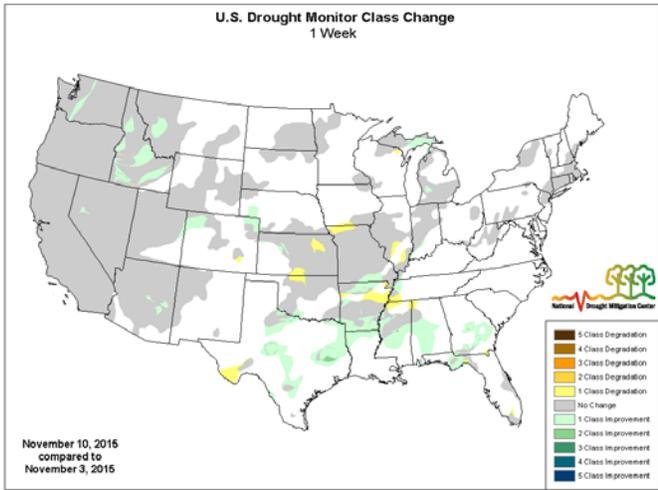
Drought

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

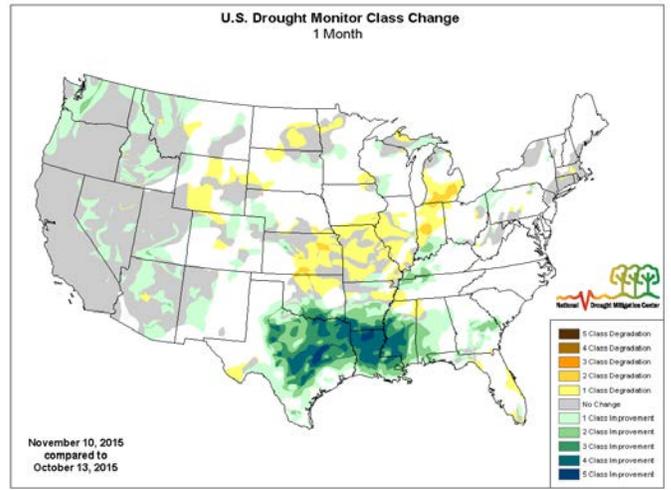
[U.S. Drought Monitor](#) See map below. Drought conditions continue in much of the West. Extreme drought remains in California and Nevada.



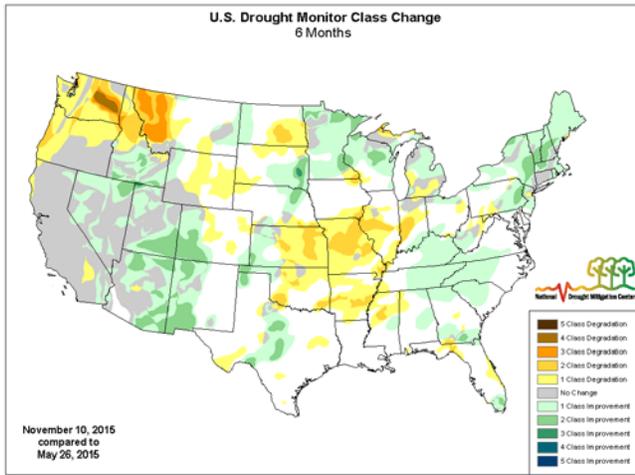
Changes in Drought Monitor Categories over Time



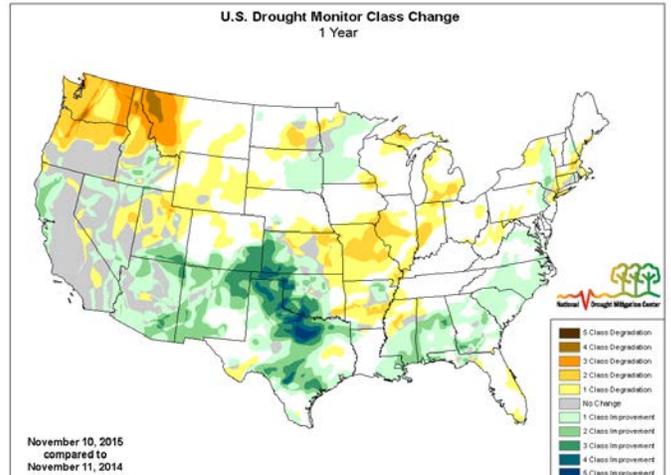
<http://droughtmonitor.unl.edu>



<http://droughtmonitor.unl.edu>



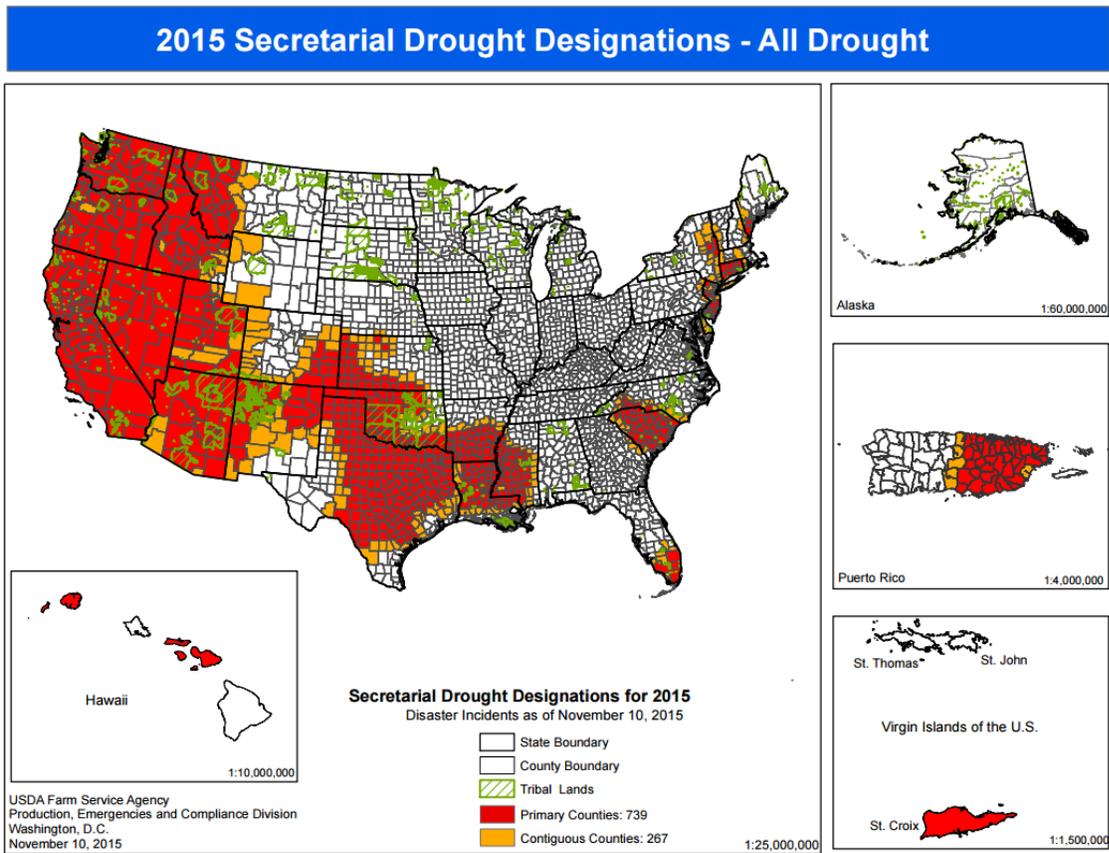
<http://droughtmonitor.unl.edu>



<http://droughtmonitor.unl.edu>

Drought conditions have improved in much of the country especially in the south-central U.S. The West has shown some recent improvement, but long-term drought persists.

2015 USDA Drought Designations



[Drought Designations as of November 10, 2015](#)

[USDA Disaster and Drought Information](#)

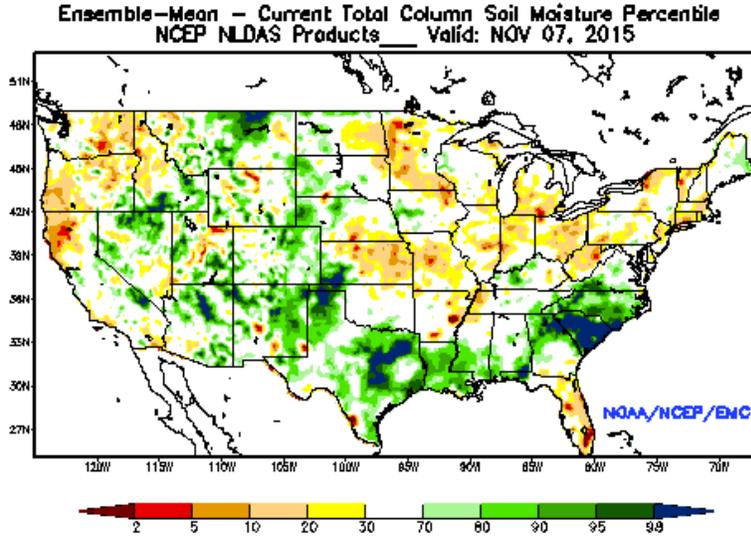
[U.S. Population in Drought, Weekly Comparison](#)

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



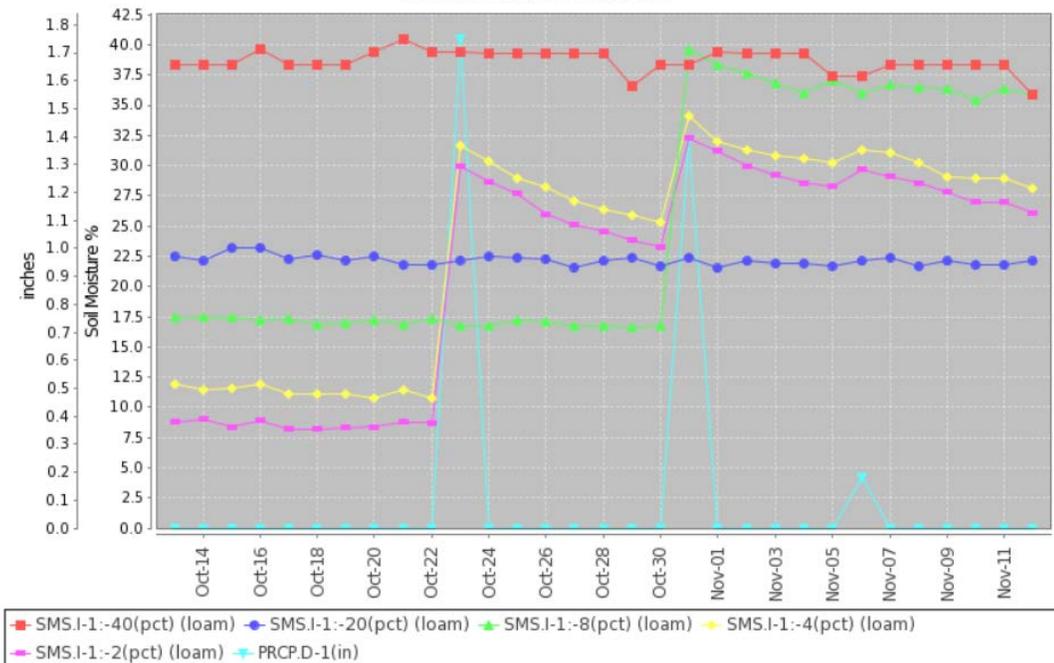
The modeled [soil moisture percentiles](#) as of November 7, 2015 show dryness in the far West, across the Plains to the Northeast, and Florida.

Above average soil moisture was recorded in the Southwest, Great Basin, Rocky Mountains into the Great Plains, along the Gulf Coast, and in the Carolinas.

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

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

Station (2202) MONTH=2015-10-13 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Thu Nov 12 09:33:05 PST 2015



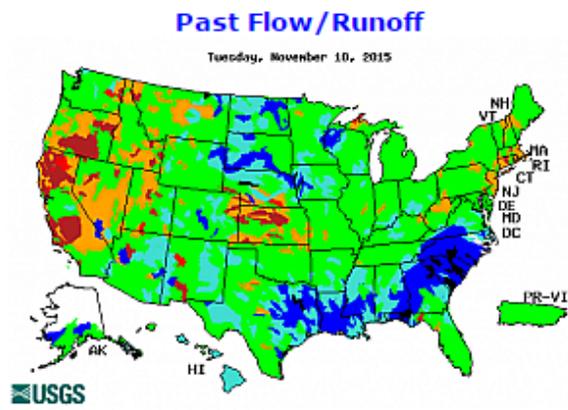
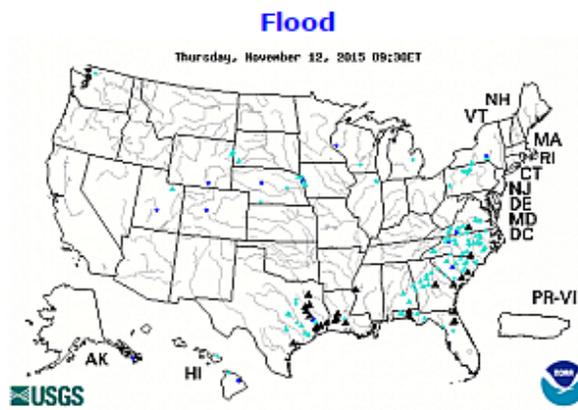
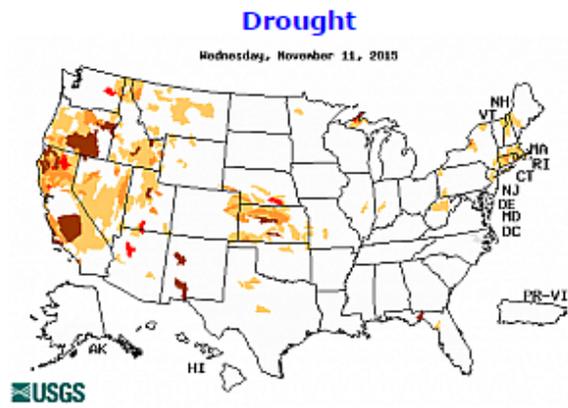
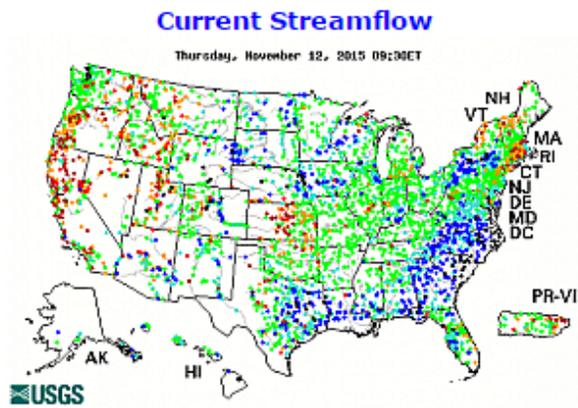
This graph shows soil moisture (2-, 4-, 8-, 20-, and 40-inch depth) and precipitation for the last 30 days at the [Vernon \(2202\)](#) SCAN site in Texas. The precipitation on October 23 and 31 was reflected in the 2-, 4- and 8-inch sensors, but not in the deeper ones.

Soil Moisture Data Portals

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

Streamflow

Source: USGS



Streamflow is notably high in the East and the Southeast. Flooding is occurring from Texas into the mid-Atlantic states.

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:

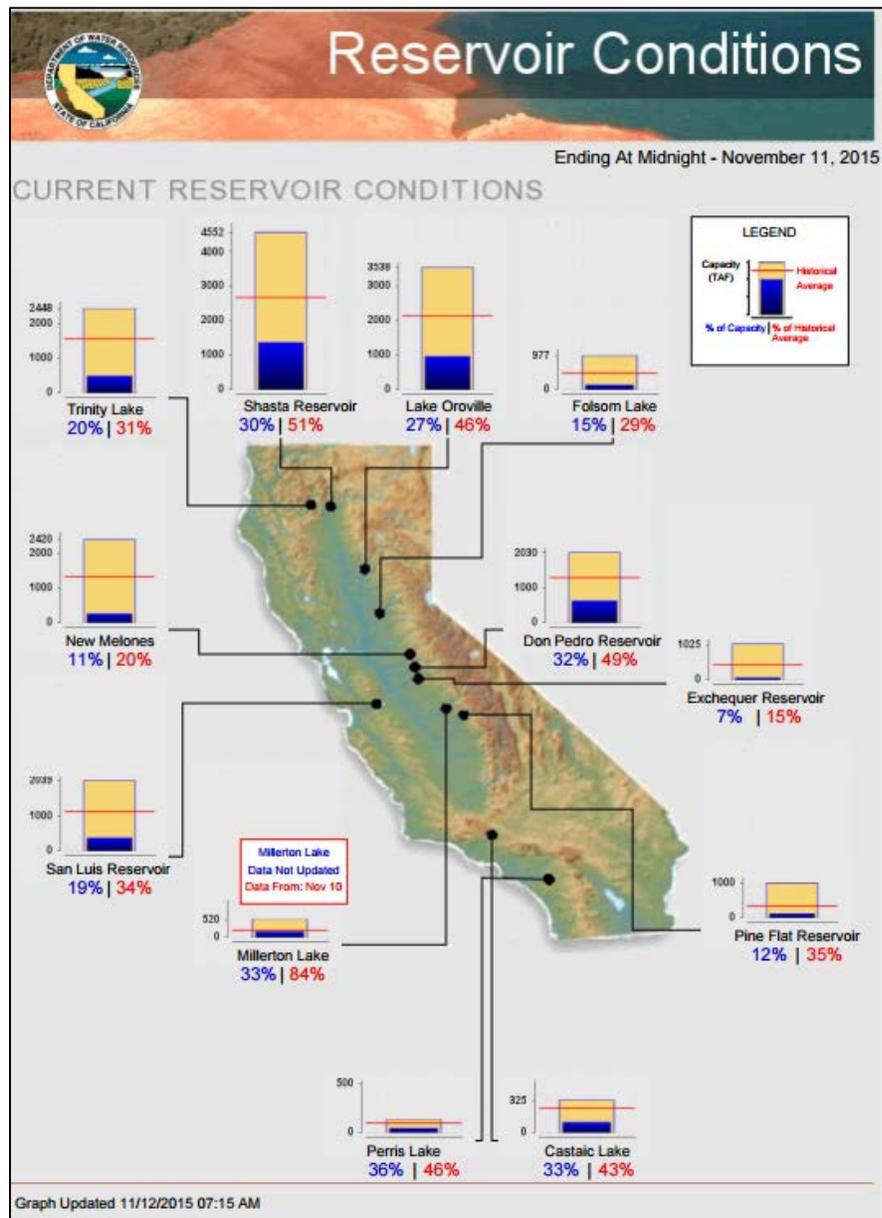
[Upper Colorado](#)

[Pacific Northwest/Snake/Columbia](#)

[Sevier River Water, Utah](#)

[Upper Missouri, Kansas, Oklahoma, Texas](#)

California Reservoir Conditions



Short- and Long-Range Outlooks

Agricultural Weather Highlights

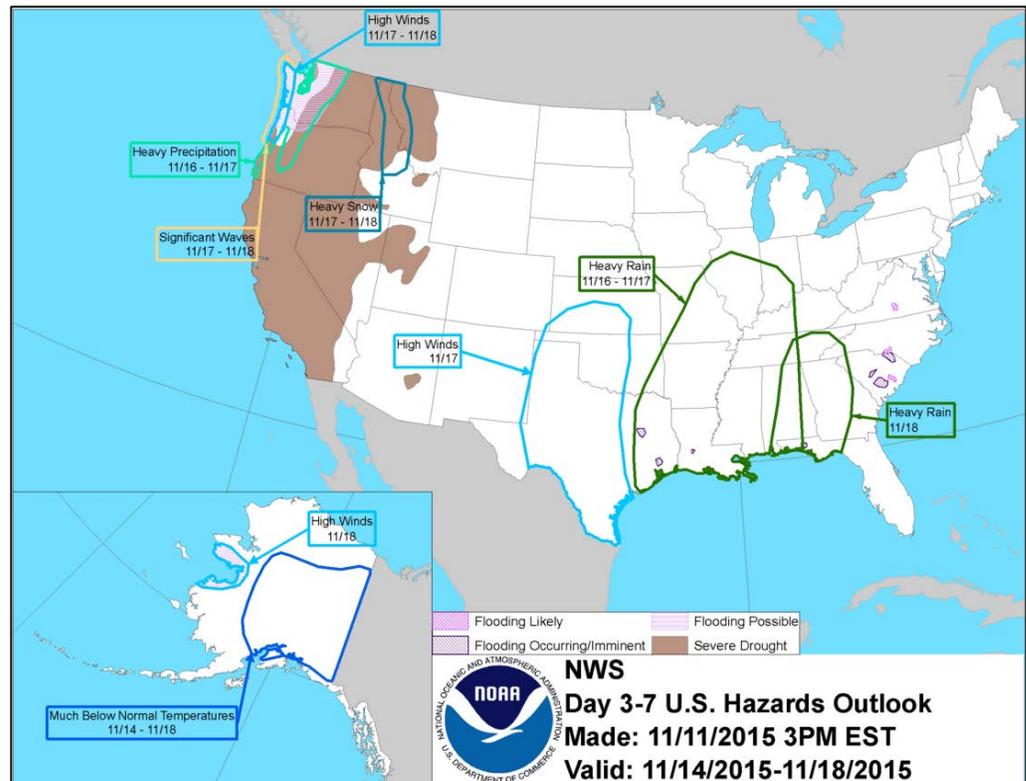
Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C.

National Outlook, November 12, 2015: “A storm system currently centered over the Great Lakes region will drift eastward to the Canadian Maritimes during the weekend. Rain and snow showers, along with high winds, will accompany the slow-moving storm. Meanwhile, an onslaught of Pacific energy will maintain stormy conditions in the Northwest. In fact, 5-day precipitation totals will exceed one foot in parts of western Washington, leading to possible flooding. By early next week, a complex weather system will develop across the nation’s mid-section. By November 16, heavy showers and severe thunderstorms could develop across the southeastern Plains and the western Gulf Coast region, while wind-driven snow is a possibility in central portions of the Rockies and High Plains. The NWS 6- to 10-day outlook for November 17 – 21 calls for the likelihood of above-normal temperatures across the eastern half of the U.S., while colder-than-normal weather will prevail from the Pacific Coast to the Rockies. Meanwhile, wetter-than normal weather will dominate the country, with the greatest likelihood of wet conditions expected across the lower Mississippi Valley.”

National Weather Hazards

The outlook for [weather hazards](#) over the next week is for heavy rain across the Southeast and much of the central Mississippi Valley (11/16-18). High winds are predicted for most of Texas and Oklahoma (11/17). Heavy precipitation, high winds, and significant waves are expected in the Pacific northwest (11/16-18).

In Alaska, much below normal temperatures are predicted (11/14-18). And high winds along the western areas (11/18).

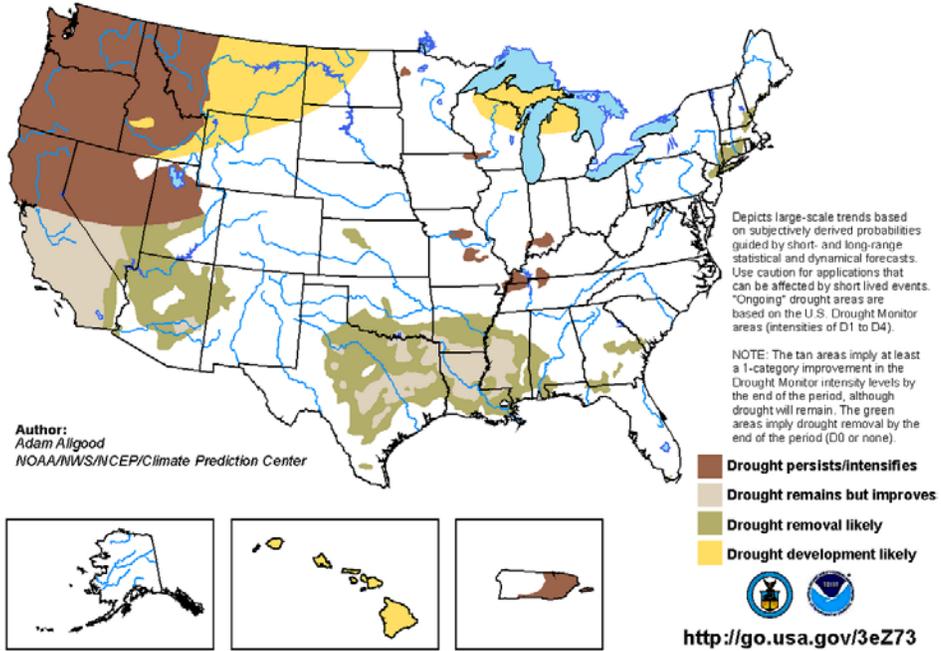


Seasonal Drought Outlook

During the next three months, **drought** will persist in the West, some central U.S. areas, and eastern Puerto Rico. Drought will develop across the Missouri Basin, the Great Lakes region, and Hawaii. The drought in other areas will generally improve.

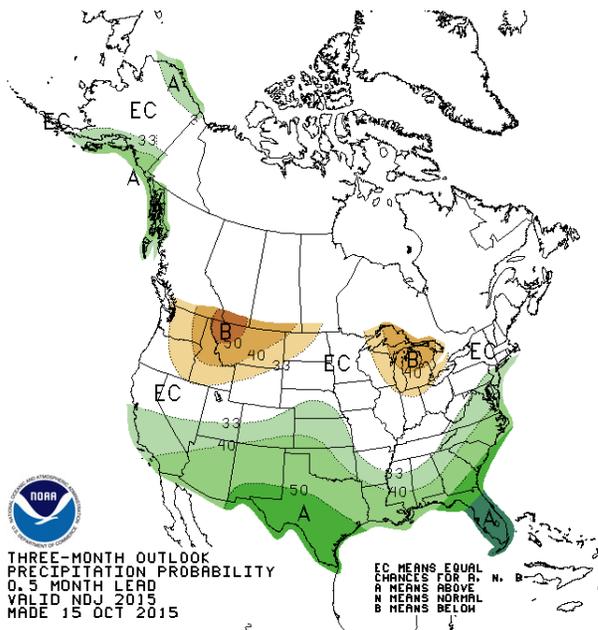
U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

Valid for October 15 - January 31, 2016
Released October 15, 2015

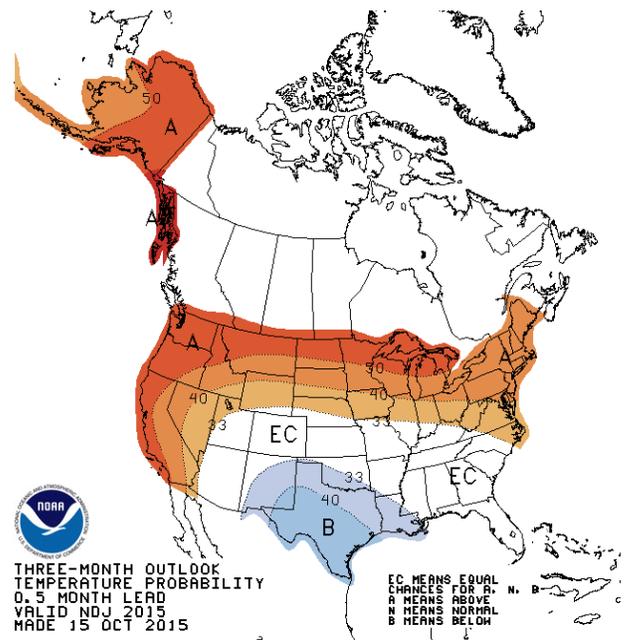


NWS Climate Prediction Center 3-Month Outlook

Precipitation



Temperature



Outlook Summary

NWS Climate Prediction Center:

[“The November-December-January \(NDJ\) 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 November-December-January \(NDJ\) 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](#).