

Water and Climate Update

September 24, 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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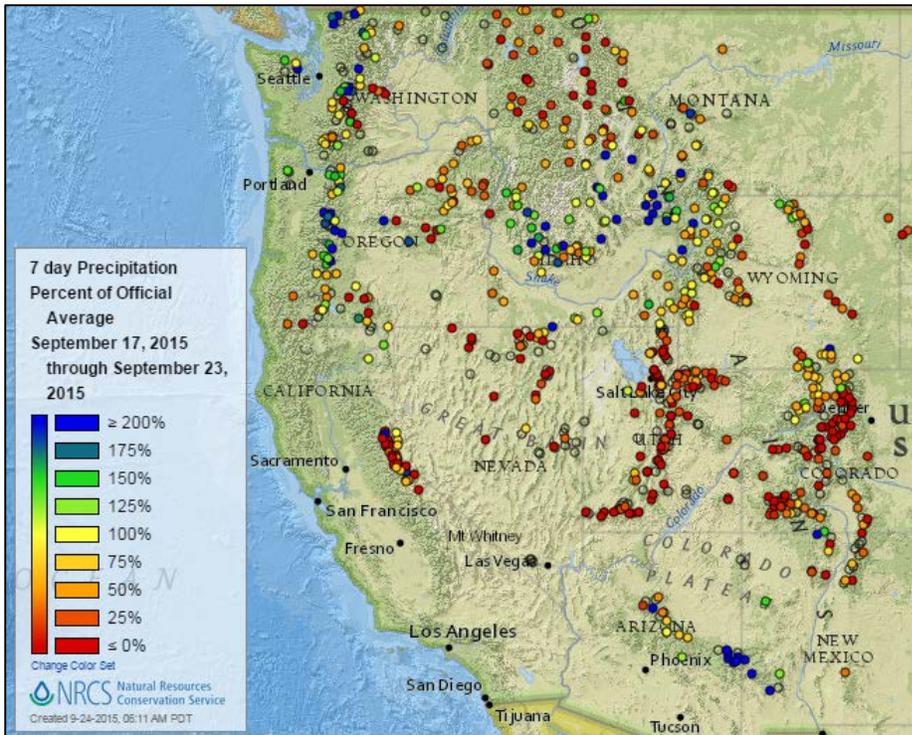
Weekly Highlight: Annual maintenance in full swing at SNOTEL sites across the West



Summer maintenance at Snow Telemetry (SNOTEL) sites sometimes requires replacing aging precipitation gages. This summer, several members of the NWCC Water and Climate Services team assisted the Oregon Data Collection Office as they installed a new 24-foot precipitation gage at the Lone Pine SNOTEL site in central Oregon.

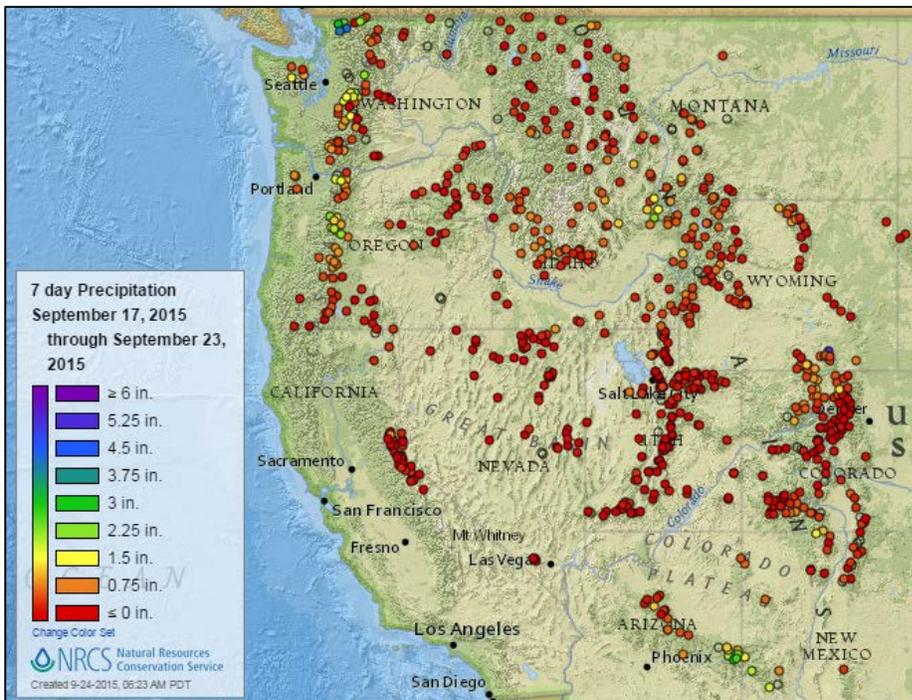
Precipitation

Last 7 Days, Western Mountain Sites (NRCS SNOTEL)



The 7-day [precipitation percent of average](#) map shows high precipitation percentages in isolated areas in the Cascades in northern Oregon and northern Washington, areas north of the Snake River, and along the Arizona-New Mexico border.

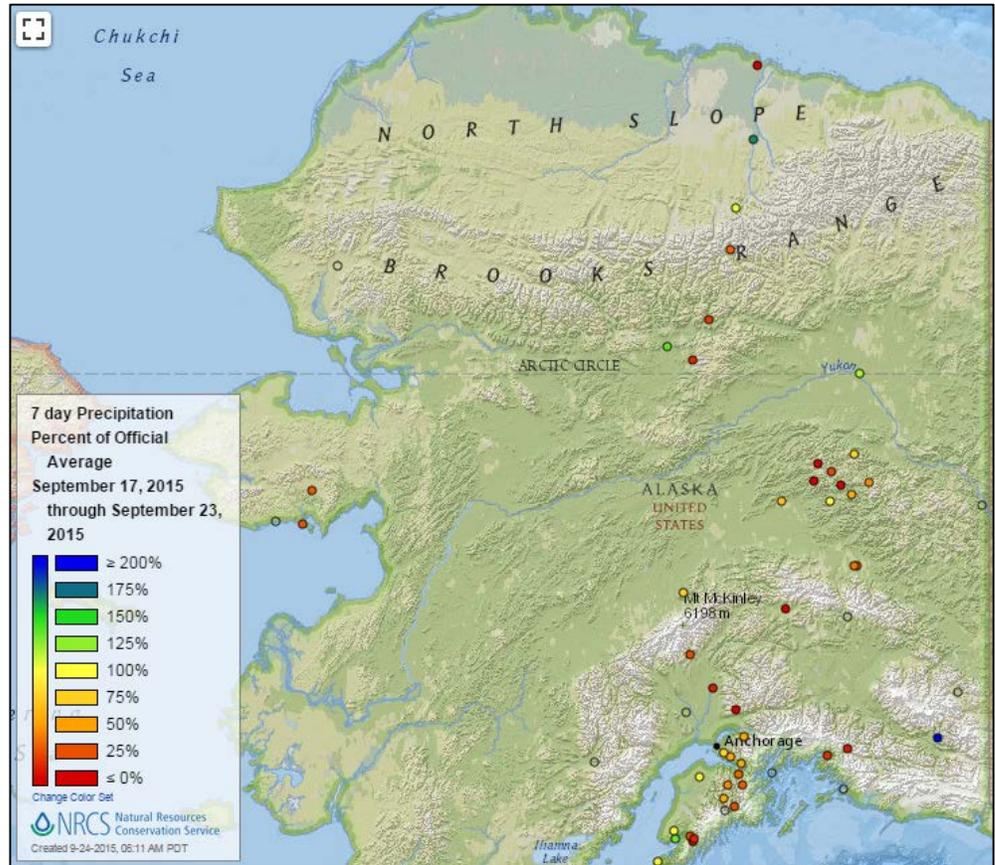
Most of the rest of the West saw little to no precipitation during the week.



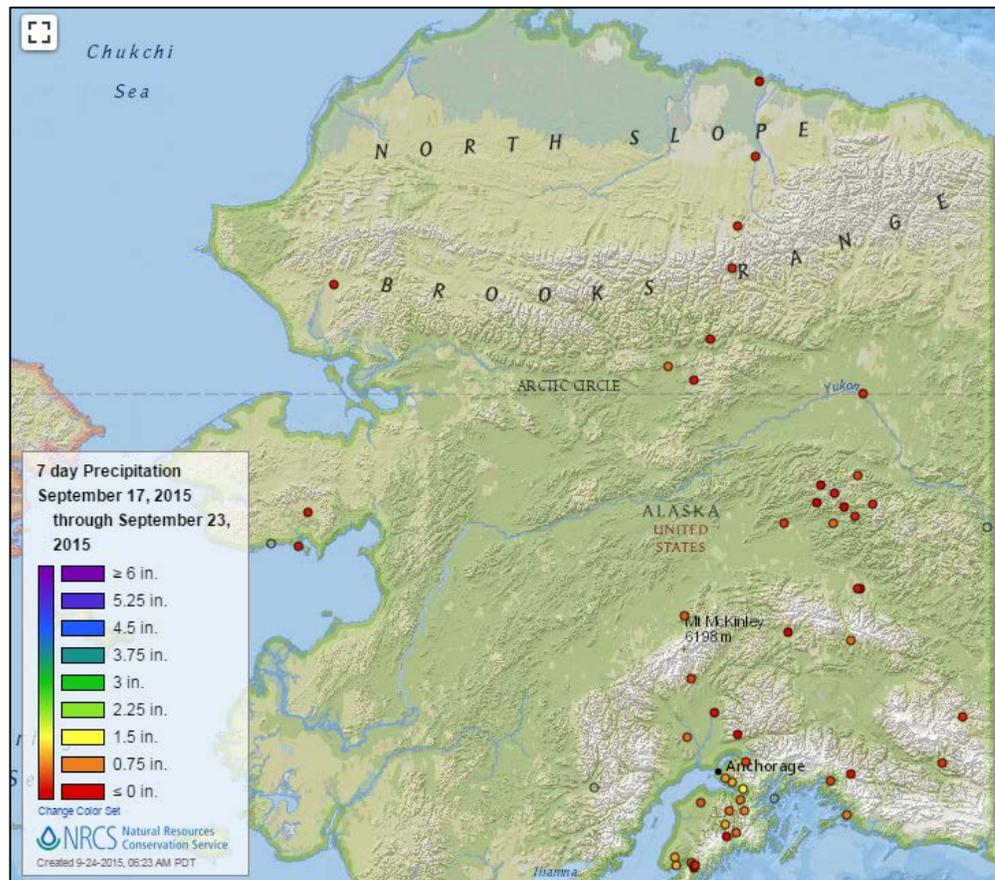
The [total precipitation](#) map illustrates how even small precipitation events can impact the percent of average during this normally dry time of year. Many of the areas shown in the map above have greater than 200% of average for the week, yet may have received less than 1 to 2 inches of precipitation. Only a few sites, mainly along the border of Washington and British Columbia, had precipitation in excess of 3-4 inches for the week.

Water and Climate Update

The Alaska [precipitation percent of average](#) shows high variability across the state. Most locations were well below average for the 7-day period.



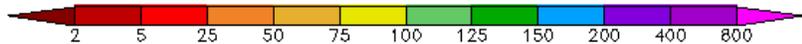
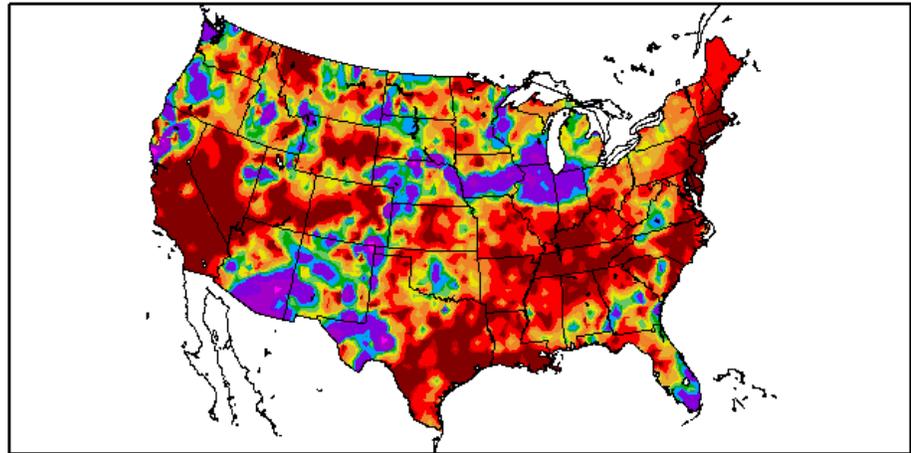
The Alaska [total precipitation](#) map shows generally dry conditions across the state for the week. Only two stations showed precipitation in excess of one inch, whereas most stations reported no measureable precipitation during this period.



Last 7 Days, National Weather Service (NWS) Networks

Percent of Normal Precipitation (%)
9/17/2015 - 9/23/2015

The [percent of normal precipitation](#) map shows precipitation in many areas, including the Cascades, Arizona and New Mexico, Florida, and a band from western Nebraska to northern Indiana. Much of the country, however, is quite dry, including most of the Southeast, New England, California, and basins throughout the western U.S.

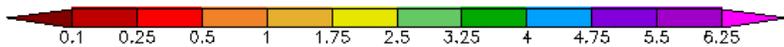
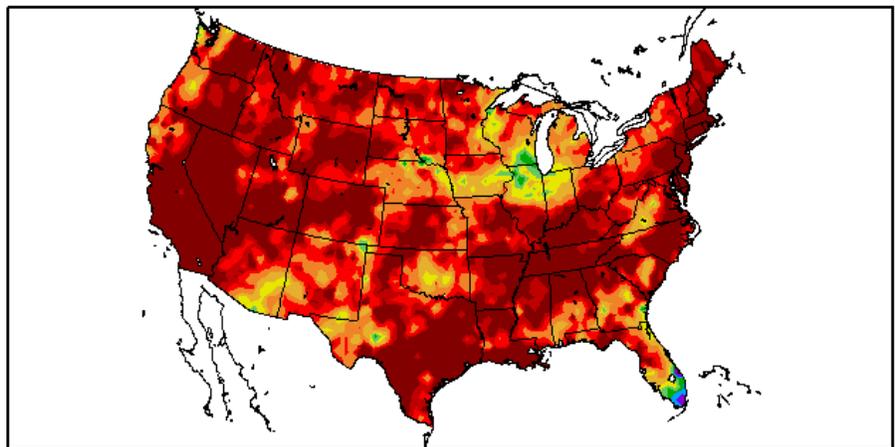


Generated 9/24/2015 at HPRCC using provisional data.

Regional Climate Centers

Precipitation (in)
9/17/2015 - 9/23/2015

In the [7-day total precipitation](#) map again illustrates the difference between percent of average for this time of year and actual precipitation. Although there are pockets of precipitation exceeding 1-2 inches, including larger amounts near Lake Michigan and southern Florida, most of the country saw amounts from zero to less than one inch for the week.

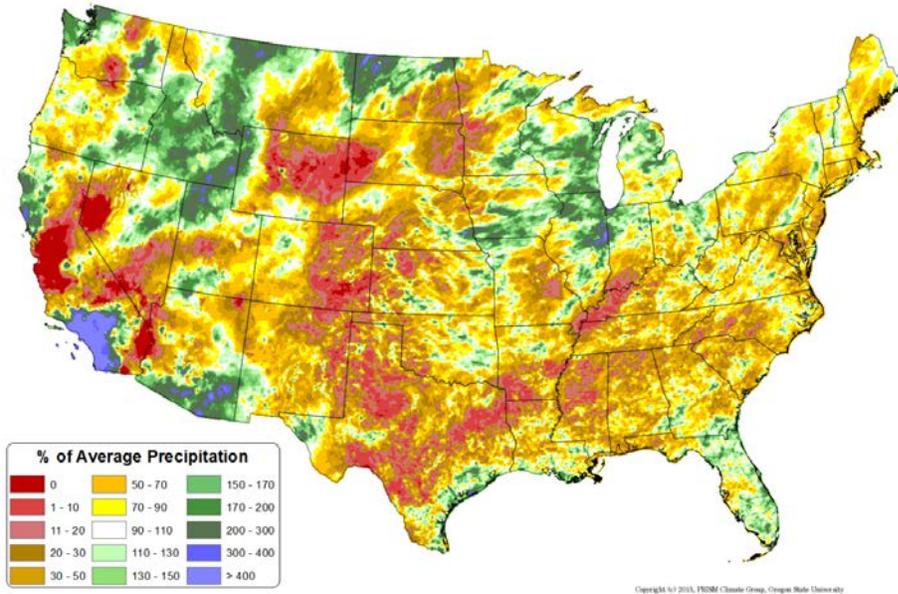


Generated 9/24/2015 at HPRCC using provisional data.

Regional Climate Centers

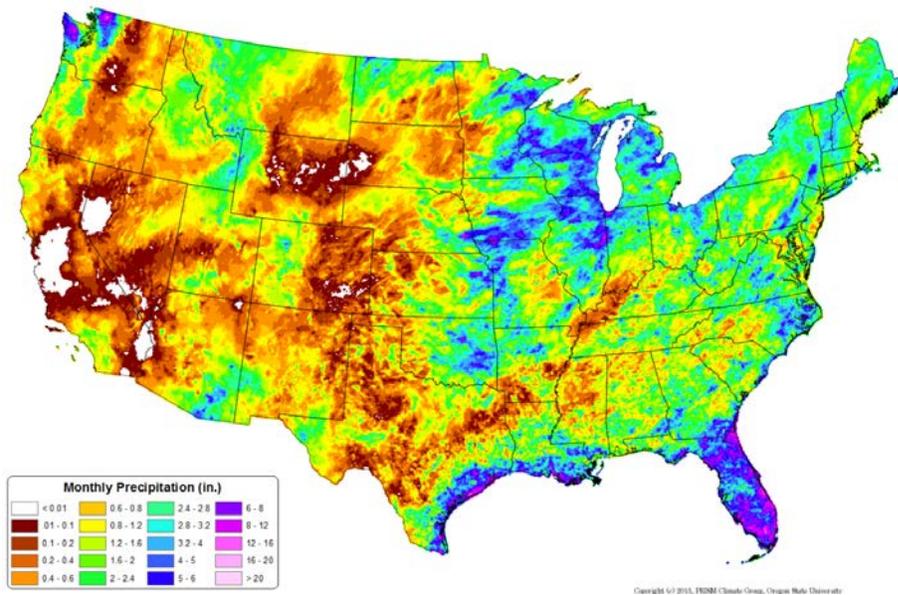
Month-to-Date, PRISM Preliminary, All available data including SNOTEL and NWS

Total Precipitation Anomaly: 01 September 2015 - 22 September 2015
 Period ending 7 AM EST 22 Sep 2015
 Base period: 1981-2010
 (Map created 23 Sep 2015)



For the month of September, the national [total precipitation percent of average](#) shows that rains earlier in the month had a strong impact on southern California, southern Arizona, and along many basins in the northwestern and Great Lakes states. However, most areas across the country were well below average for precipitation for September.

Total Precipitation: 01 September 2015 - 22 September 2015
 Period ending 7 AM EST 22 Sep 2015
 (Map created 23 Sep 2015)

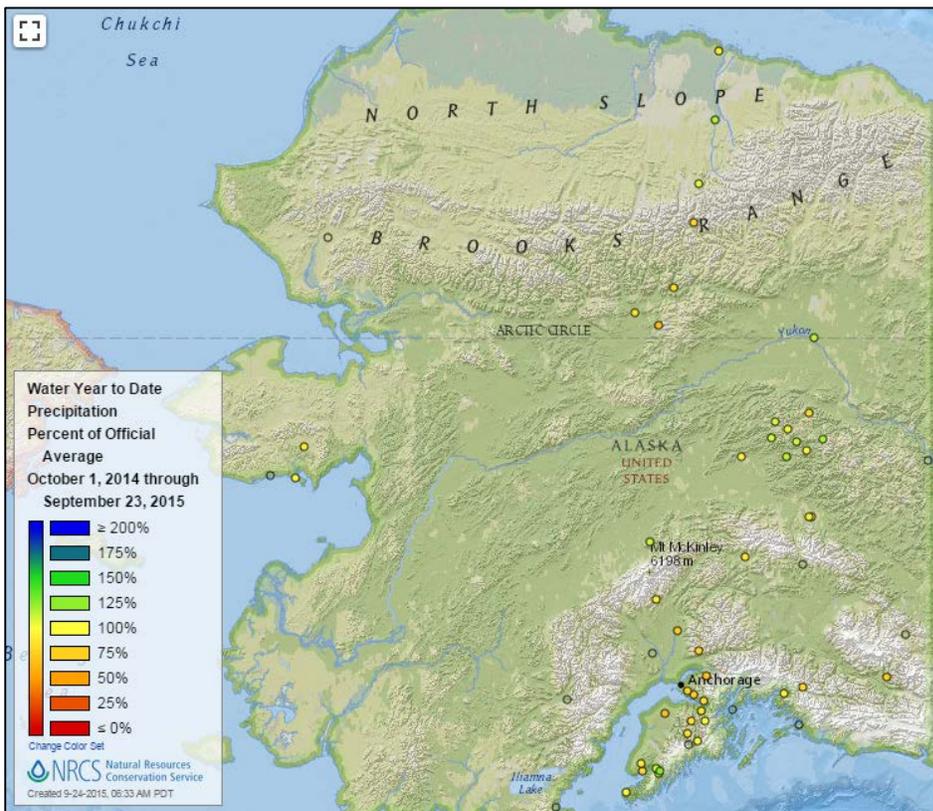
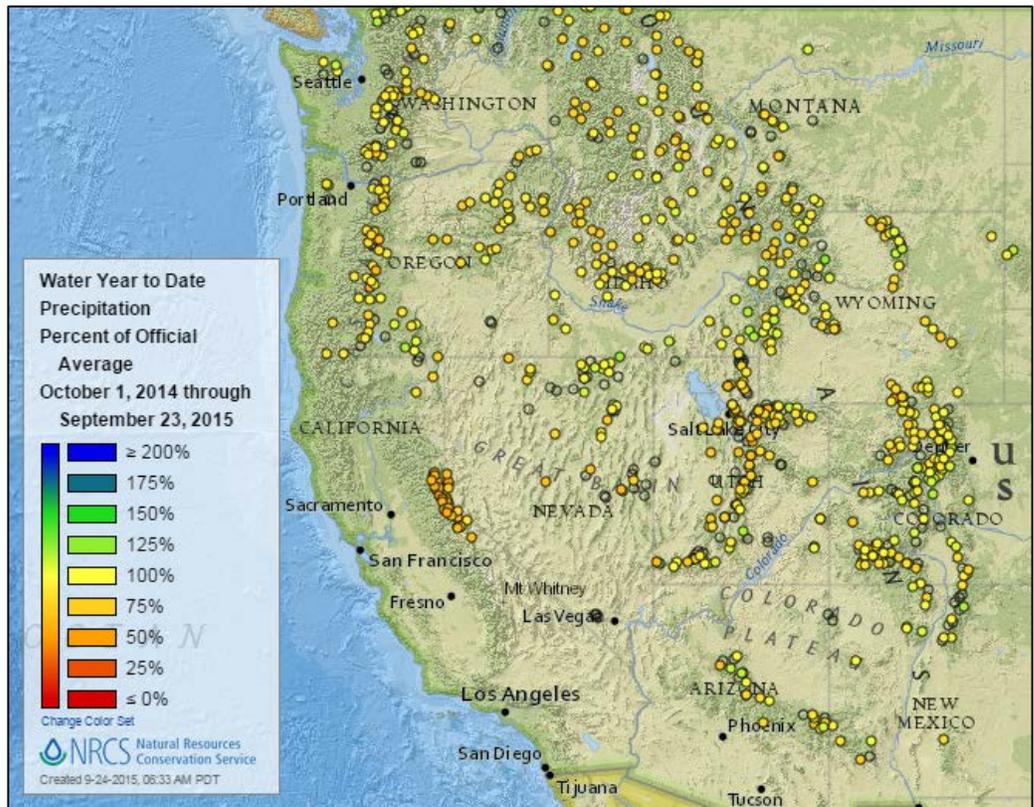


The month-to-date [total precipitation](#) map shows, to a degree, the normal contrast across the continental U.S. of drier conditions in the West progressing to wetter conditions to the East, with the exception of the Pacific Northwest.

However, there also was significant precipitation in southern Arizona, and much of the Great Plains and eastern U.S. received much less precipitation than normal for this time of year.

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

For the [2015 Water Year](#) that began on October 1, 2014, precipitation is now near normal in New Mexico, Colorado, and Wyoming. Other western states continue to have below to average conditions.



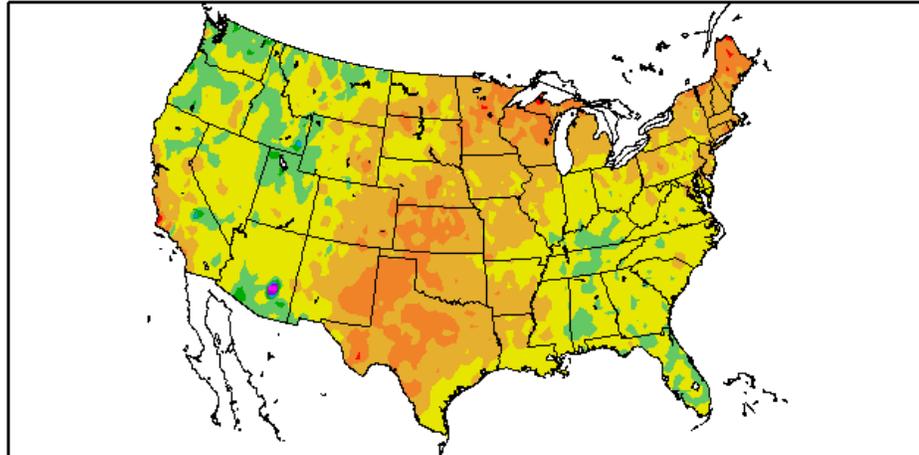
The Alaska [water year-to-date precipitation percent of average](#) map shows below to near normal conditions, varying across this large state.

Temperature

Last 7 Days, National Weather Service (NWS) Networks

Departure from Normal Temperature (F)
9/17/2015 – 9/23/2015

The map of the [average temperature anomalies](#) for the past week shows mainly normal to below normal temperatures across the West and Southeast, whereas the central states and New England experienced above normal temperatures.



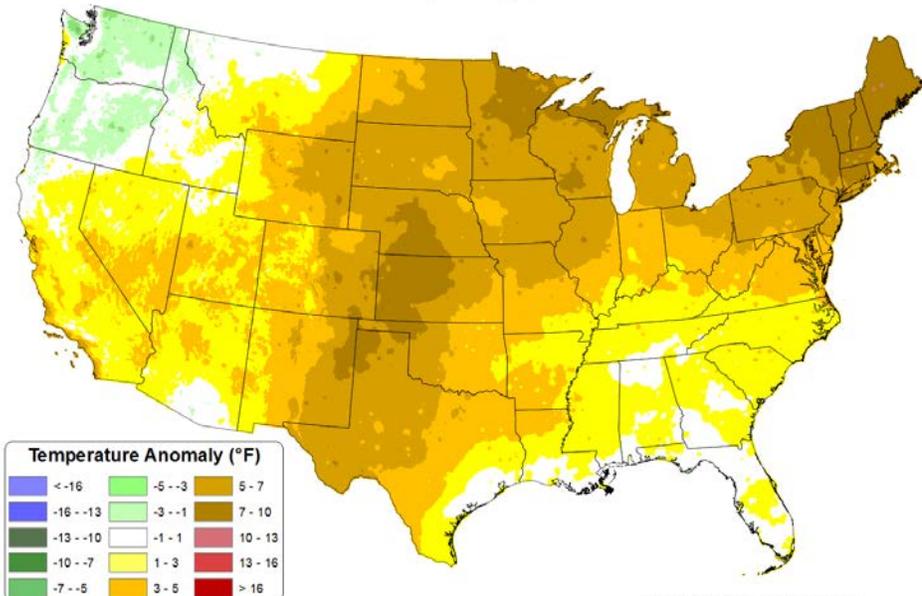
Generated 9/24/2015 at HPRCC using provisional data.

Regional Climate Centers

Month-to-Date, PRISM Preliminary, All available data including SNOTEL and NWS

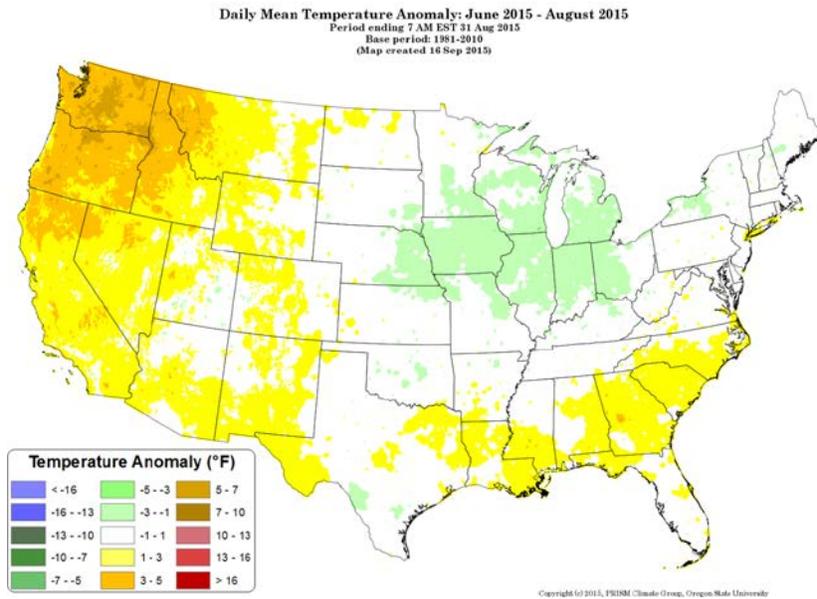
For September 2015, the national [daily mean temperature anomaly](#) map shows cool temperatures in the Pacific Northwest, providing some relief after a summer of warmer than normal temperatures for the region. The remainder of the U.S. saw above normal temperatures for the month, with much above normal temperatures in the central U.S., the Great Lakes, and New England.

Daily Mean Temperature Anomaly: 01 September 2015 - 22 September 2015
Period ending 7 AM EST 22 Sep 2015
Base period: 1961-2010
(Map created 23 Sep 2015)



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Last 3 Months, PRISM Preliminary

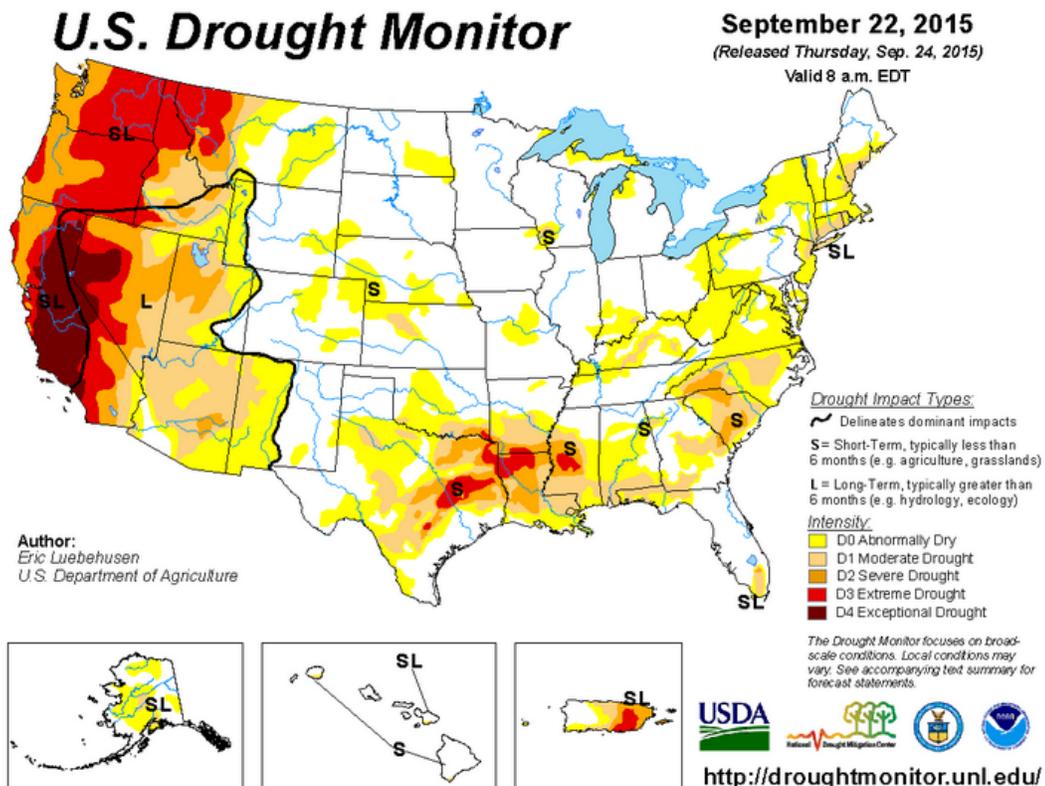


The June through August national [daily mean temperature anomalies](#) for the U.S. show the Pacific Northwest and parts of the Southeast had the largest temperature departures above normal. The upper Midwest reported slight negative departures for the period.

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 Puerto Rico. To view regional drought conditions, select a region on the map. State maps are available from regional maps.



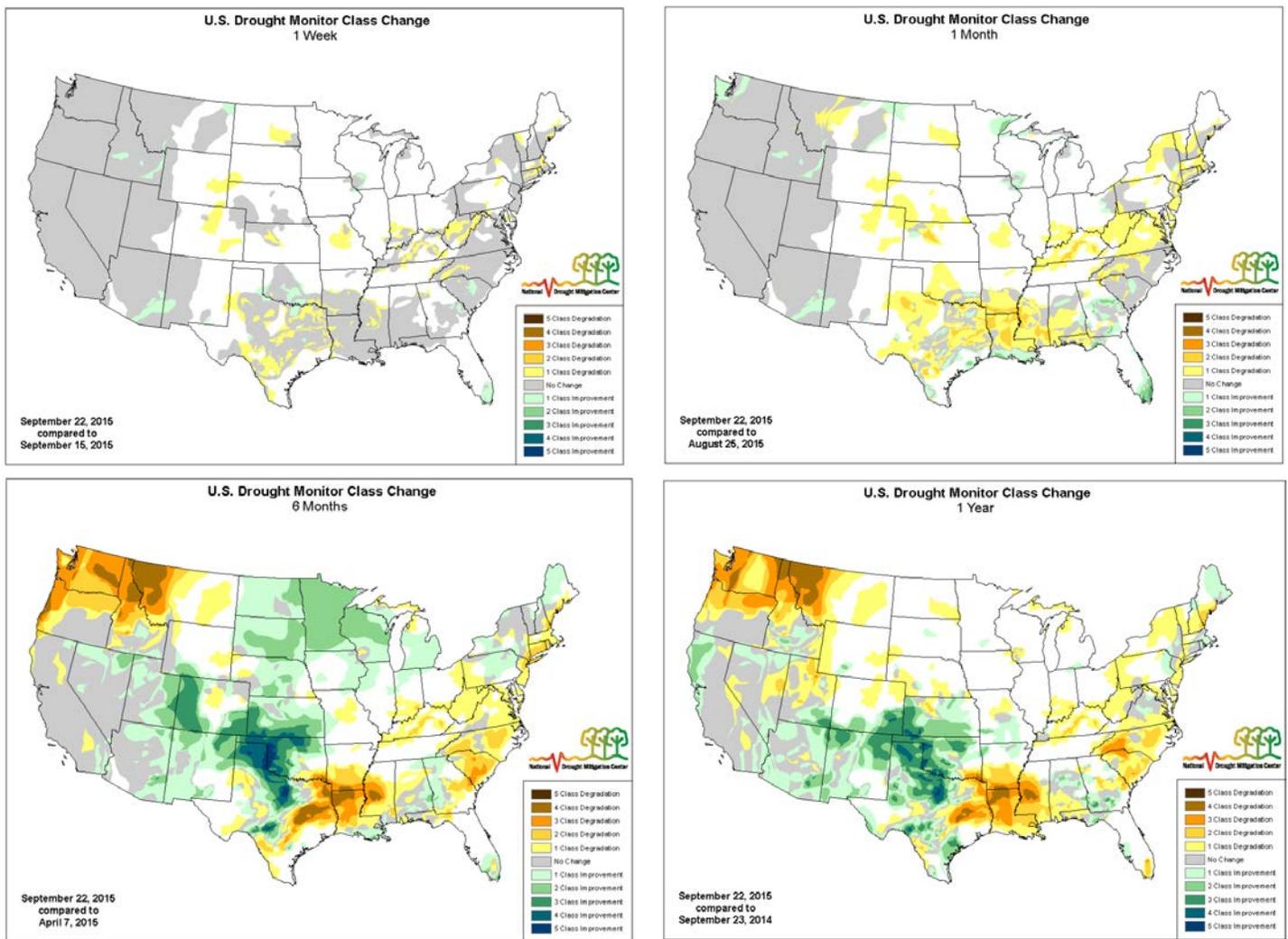
Current National Drought Summary, September 22, 2015

Author: Eric Luebehusen, U.S. Department of Agriculture

“Large sections of the nation experienced dry weather, reducing topsoil moisture but promoting summer crop maturation and harvesting. On the Plains, some producers awaited rain before planting winter wheat. Pastures in portions of the Southern and Mid-Atlantic States continued to suffer from the effects of late-summer and early-autumn dryness. In contrast, locally heavy showers soaked Florida’s peninsula and the immediate southern Atlantic Coast. Significant rain also fell—albeit briefly—in parts of the Midwest, providing localized relief from recent dryness. Above-normal temperatures dominated the Plains and upper Midwest, favoring fieldwork and helping to push summer crops toward maturity. The late-season warmth also extended across the Great Lakes region and into the Northeast. Meanwhile, cool air settled across the southeastern and northwestern U.S. for several days, helping to hold weekly temperatures more than 5°F below normal in a few locations. Elsewhere, locally heavy showers dotted the West, with the most significant rain falling in the lower Southwest, southern California, and the northern Intermountain region. California’s rain, heaviest along and near the coast, fell mostly on September 15 in conjunction with tropical moisture associated with former Hurricane Linda, while Southwestern rainfall was courtesy of Tropical Depression 16E later in the period.”

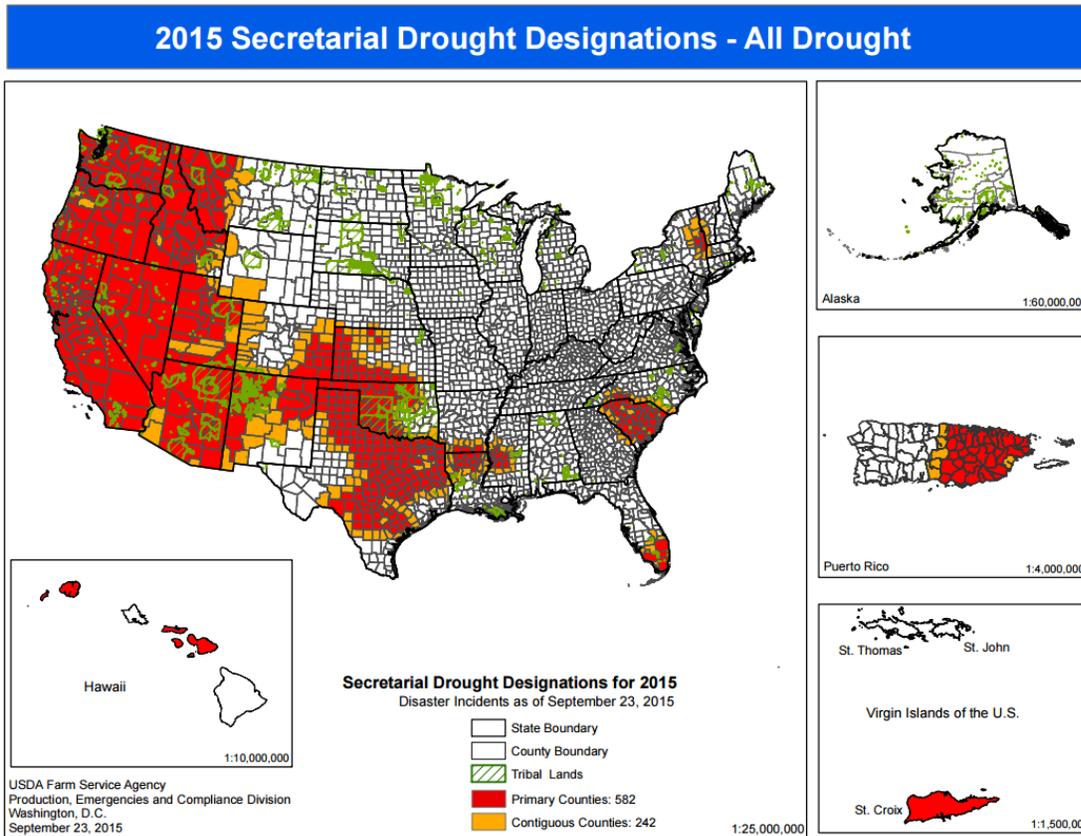
Detailed regional drought narratives for the last week are [here](#).

Changes in Drought Monitor Categories over Time



Persistent dry conditions are particularly notable in the Northwest and parts of the Southeast. [Conditions](#) have improved significantly in the southern Great Plains and the Southwest.

2015 USDA Drought Designations



[Drought Designations as of September 23, 2015](#)

[USDA Disaster and Drought Information](#)

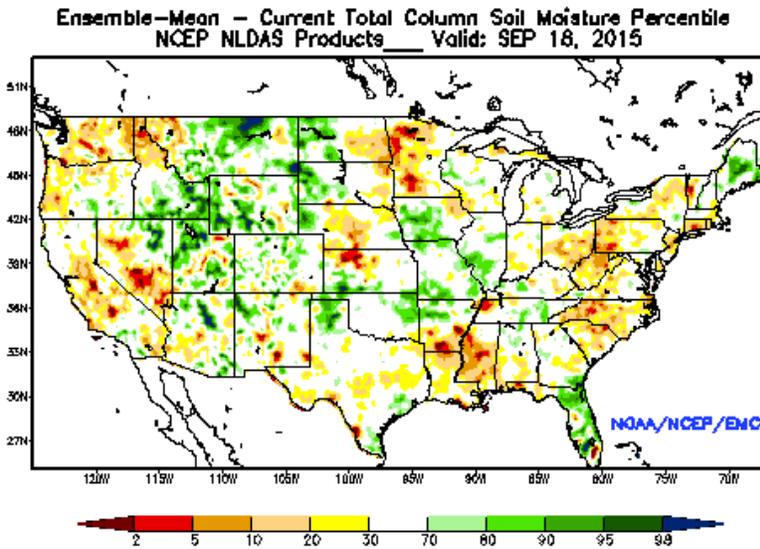
[U.S. Population in Drought, Weekly Comparison](#)

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

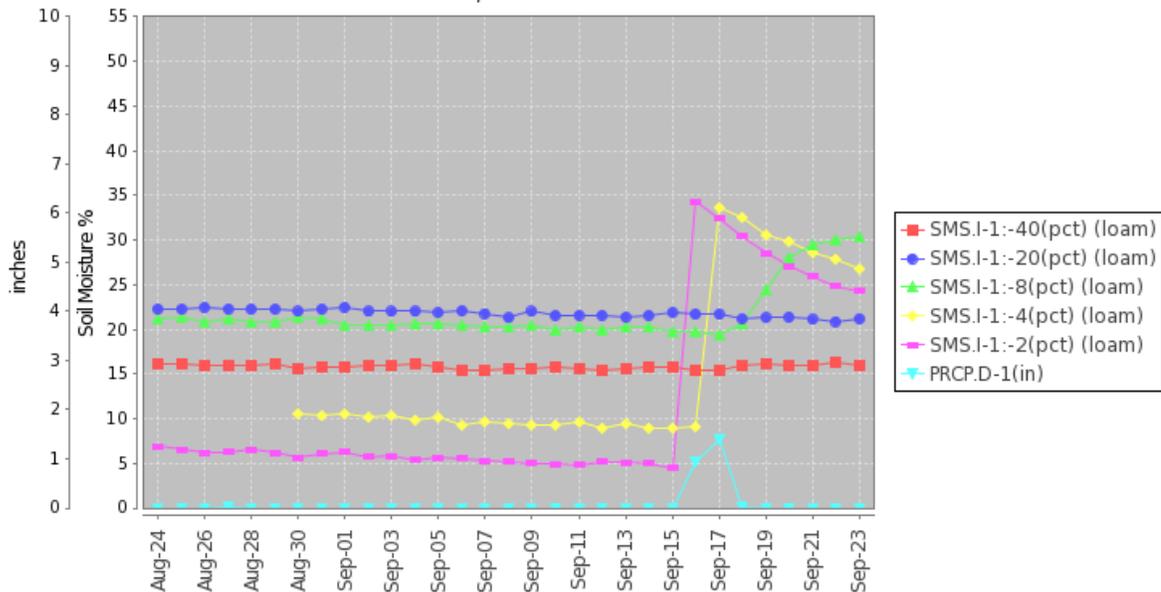


The modeled [soil moisture percentiles](#) as of September 18, 2015 show significant dryness in the far West, parts of the Great Plains, the Northeast, and the South. Areas of above normal soil moisture include much of the Rocky Mountains, the northern Great Plains, the Florida panhandle, and parts of the Mississippi Valley.

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

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

Station (2135) MONTH=2015-08-24 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Wed Sep 23 10:43:35 PDT 2015

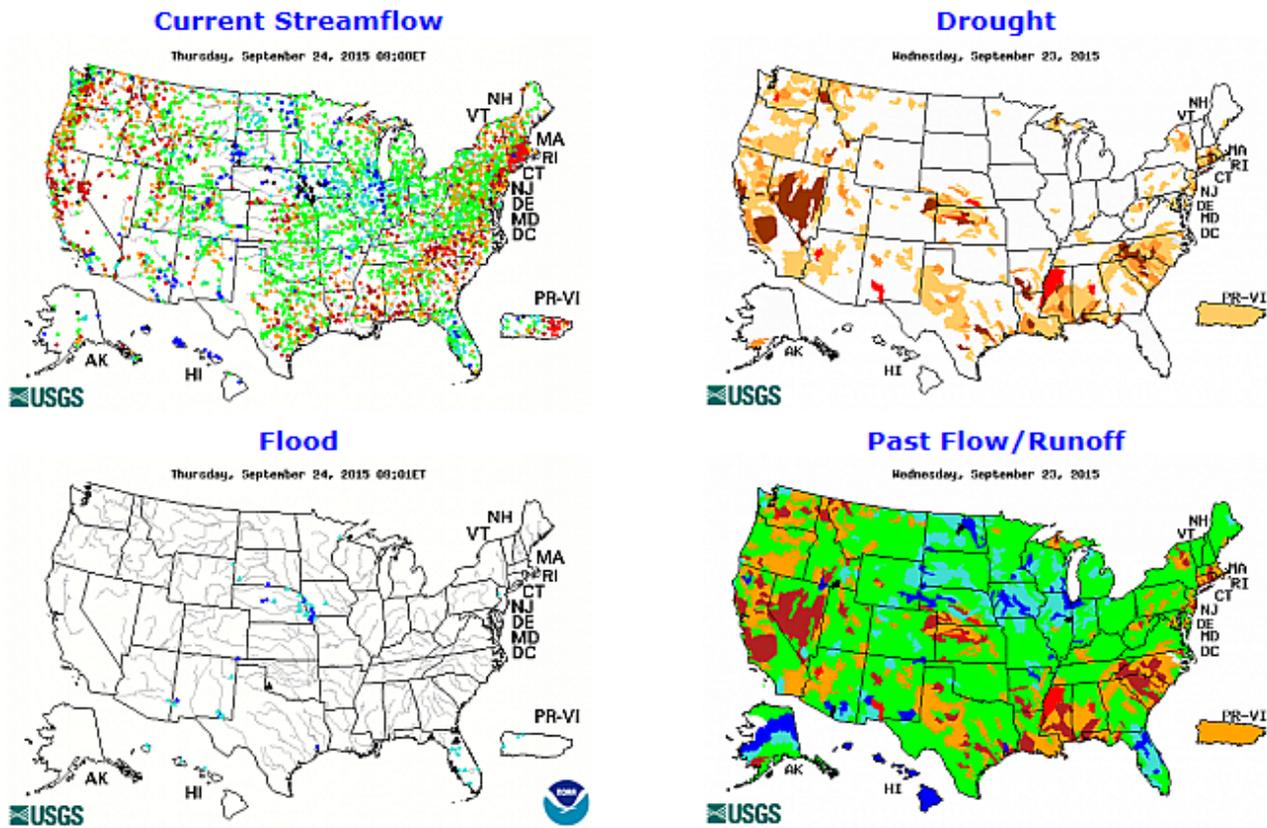


This graph shows soil moisture (2-, 4-, 8-, 20-, and 40-inch depth) and precipitation for the last month at the [Blue Creek SCAN site](#) (station number 2135) in north-central Utah. A precipitation event September 16-17 generated corresponding soil moisture response. Sensors at the 2-, 4-, and 8-inch depths responded to the precipitation event, whereas the response at the deeper sensors was slight. The 20- and 40-inch sensors showed almost no response during this period.

Soil Moisture Data Portals

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

Streamflow



[Streamflow](#) remains below normal in much of the West, parts of the Southeast, and the Mid-Atlantic states, whereas it is above normal in the north-central part of the country. Southern Arizona and New Mexico, as well as Florida, saw increased streamflow this past week.

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

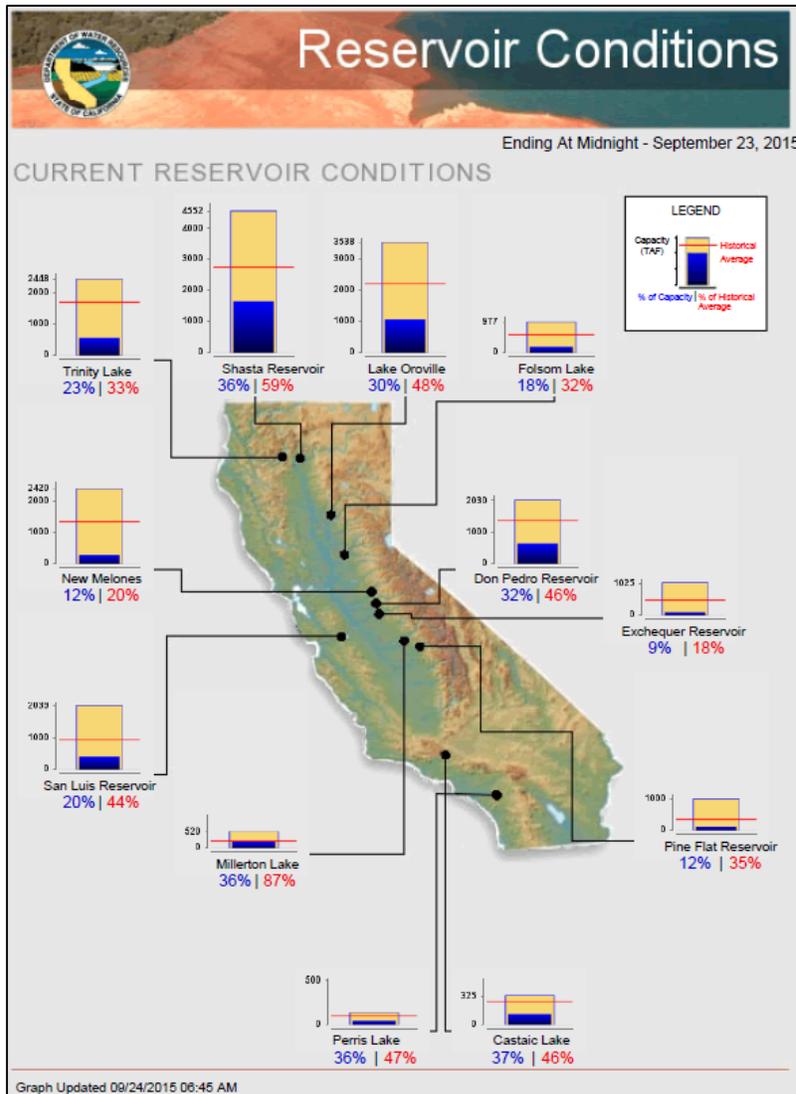
Current Reservoir Storage

[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

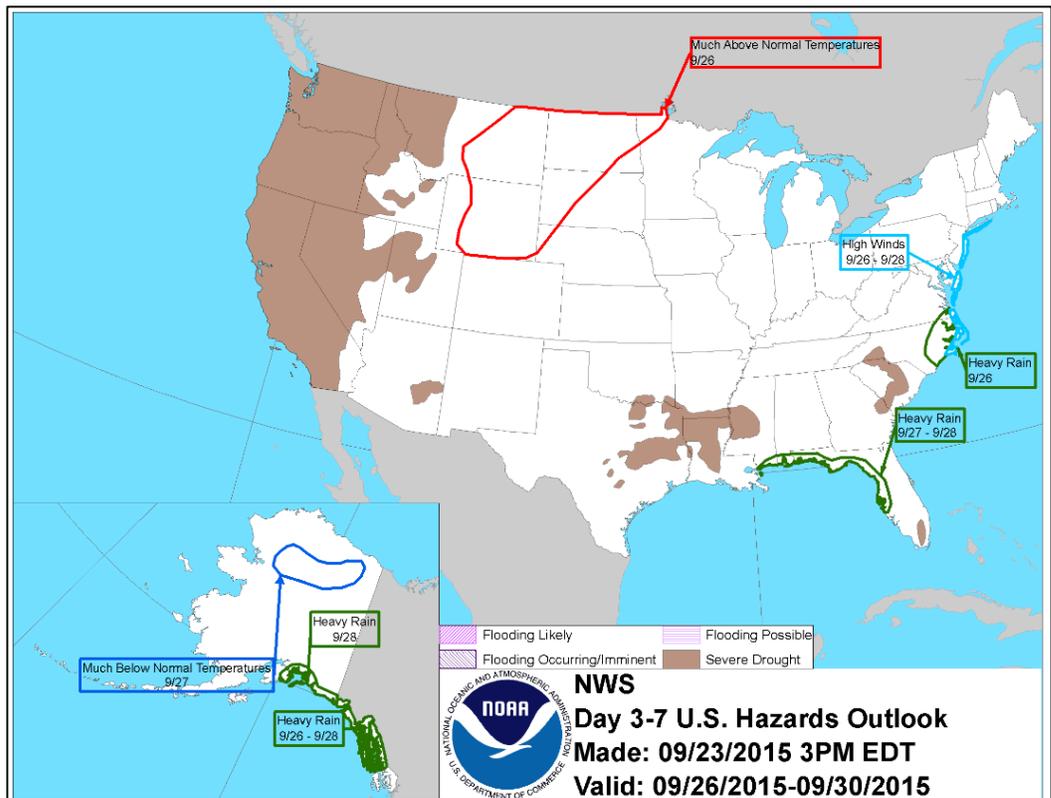
Agricultural Weather Highlights

Author: Brad Rippey, USDA Agricultural Meteorologist

National Outlook, September 24, 2015: "Rain showers across the Plains and upper Midwest will gradually diminish in coverage and intensity, with little precipitation expected in those regions after tonight. Meanwhile, the focus for heavy rain will shift to the middle and southern Atlantic States, where 5-day totals could reach 2 to 6 inches in the Carolinas and environs. By early next week, a new batch of tropical moisture may be drifting northward across the Gulf of Mexico. Elsewhere, dry weather will prevail, except for periodic showers across the nation's northern tier from the Pacific Northwest into the upper Great Lakes region. Late-season warmth will continue to dominate the U.S., except in the Southeast and along the Pacific Coast. The NWS 6- to 10-day outlook for September 29 – October 3 calls for the likelihood of warmer-than-normal weather nationwide, except for near-normal temperatures in the Pacific Coast States. Meanwhile, near- to below-normal precipitation across most of the U.S. will contrast with wetter-than-normal conditions in the Southeast and an area of the nation's mid-section centered on Nebraska and South Dakota."

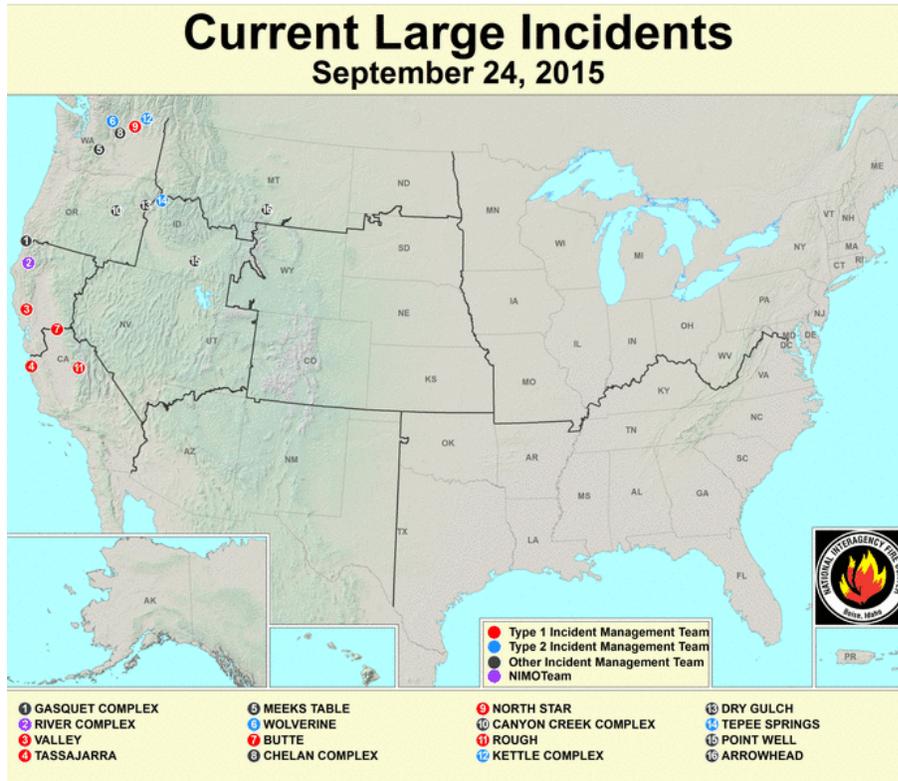
National Weather Hazards

The outlook for [weather hazards](#) over the next week shows the severe drought in the West plus a few scattered areas in the South.



Wildfires

Current Conditions

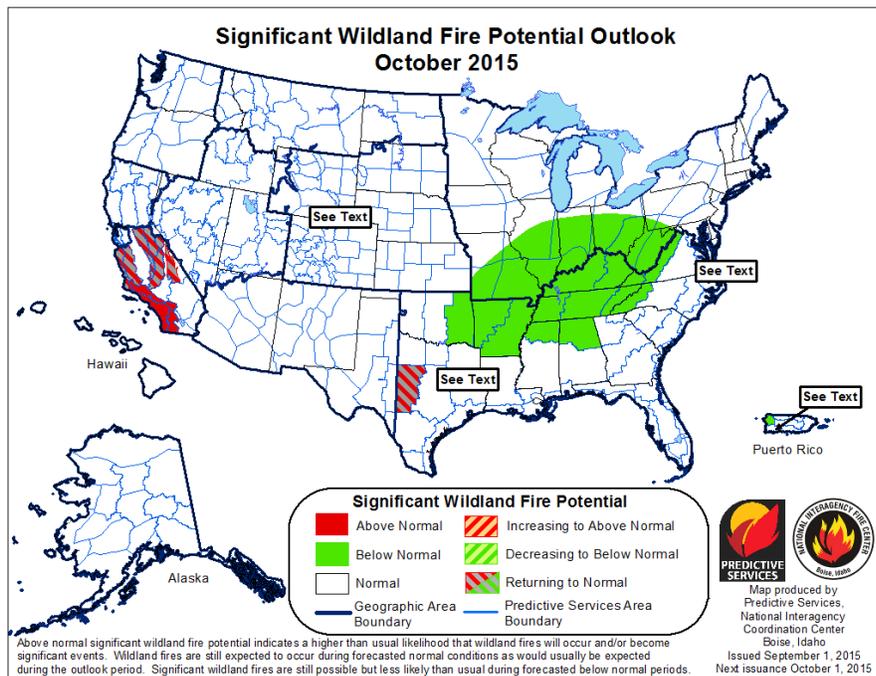


[Current Wildfire Conditions](#)

Many wildfires continue in the Pacific Northwest, northern Rockies, and California.

The number of incidents declined from 28 reported last week to 16 this week, possibly related to cooler and wetter conditions in the Northwest and to the outstanding work of firefighters working to control these fires.

Wildland Fire Potential: October 2015



In October, [fire potential](#) remains above normal in southern California, whereas it is greatly reduced in the remainder the country.

Long-Range Flood Outlook

During the next three months, there is some **flooding potential** in a few scattered locations, primarily in the central part of the country and Florida.



2409 total gauges
[Show locations with 50% or greater chance of flooding during Sep-Oct-Nov \(28\)](#)

- 0 Gauges: > 50% Major Long-Range Flood Risk
- 8 Gauges: > 50% Moderate Long-Range Flood Risk
- 20 Gauges: > 50% Minor Long-Range Flood Risk
- 2281 Gauges: < 50% Long-Range Flood Risk
- 100 Gauges: No forecast within selected timeframe

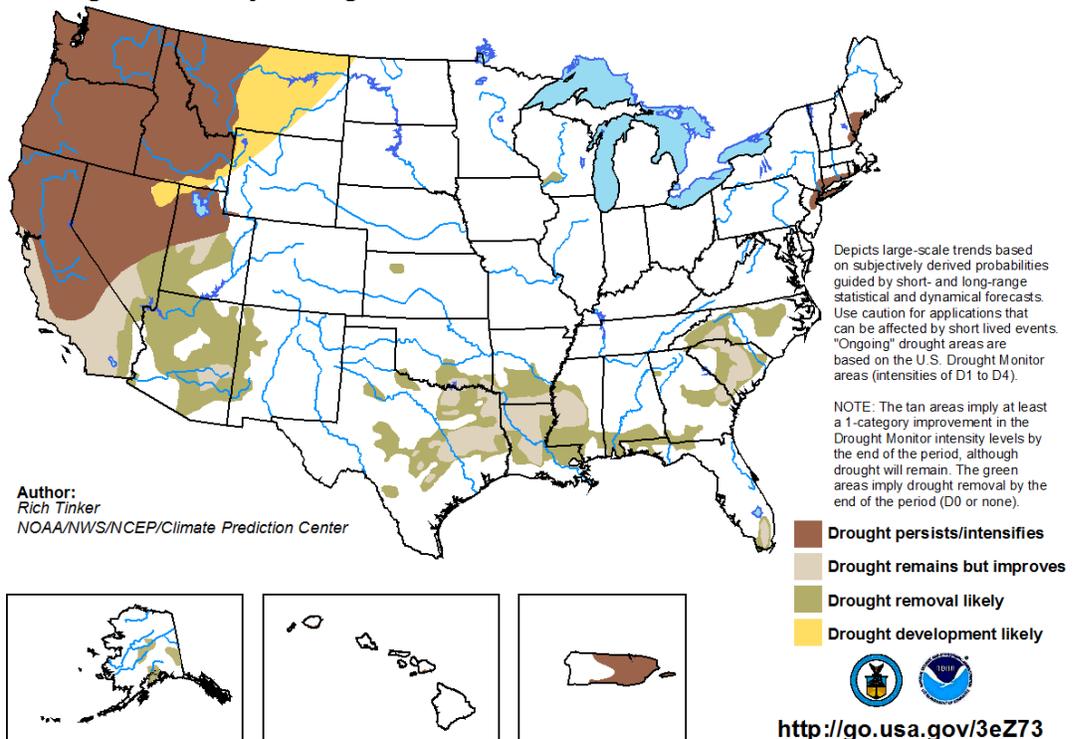
Seasonal Drought Outlook

During the next three months, **drought** will persist or intensify over the West, the Northeast, and Puerto Rico.

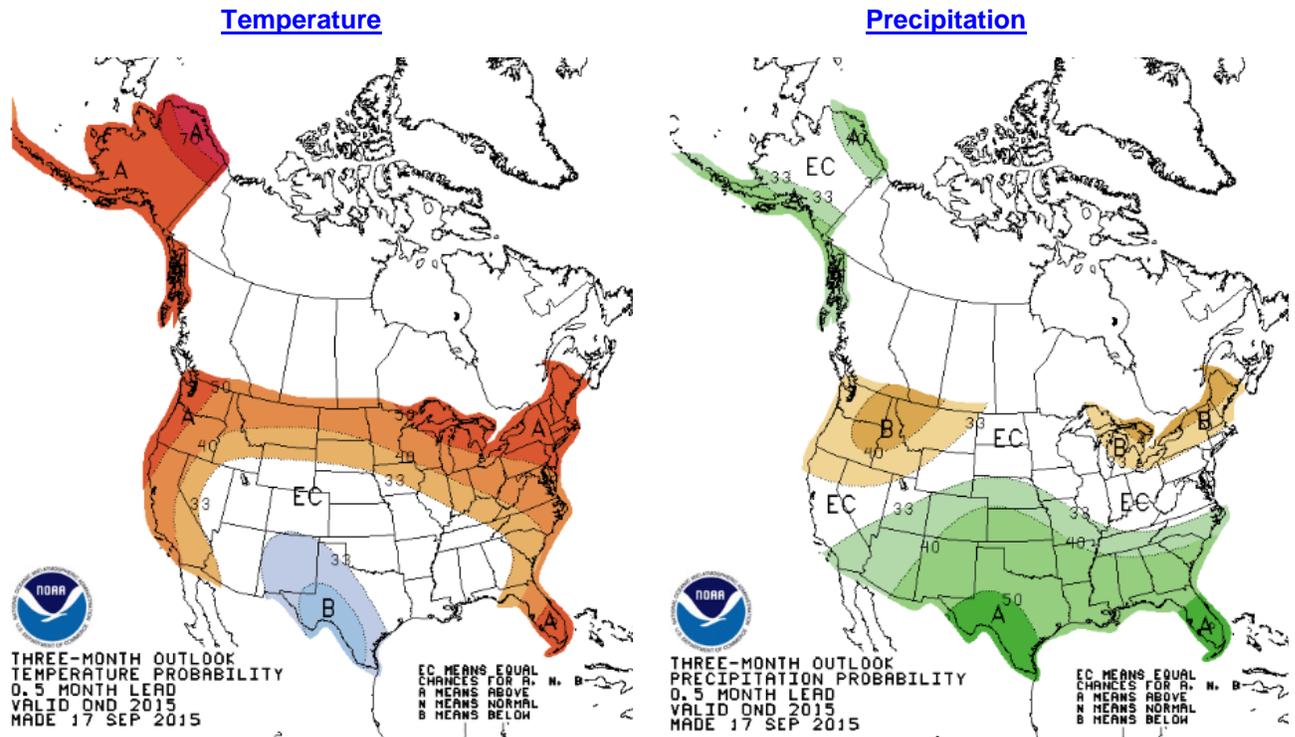
Drought remains, but is improving, in parts of the Southwest and the South.

Drought development is likely in eastern Montana.

U.S. Seasonal Drought Outlook valid for September 17 - December 31, 2015 Drought Tendency During the Valid Period Released September 17, 2015



Climate Prediction Center 3-Month Outlook



During [October-December](#), there is enhanced probability of above normal temperatures in Alaska and in an arc from California across the northern tier states and down to Florida. Below normal temperatures are likely in New Mexico and Texas. Enhanced probability for above normal precipitation is predicted across the southern U.S., and south coastal Alaska, with below normal precipitation in the Pacific Northwest and the Great Lakes area to the Northeast.

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](#).