

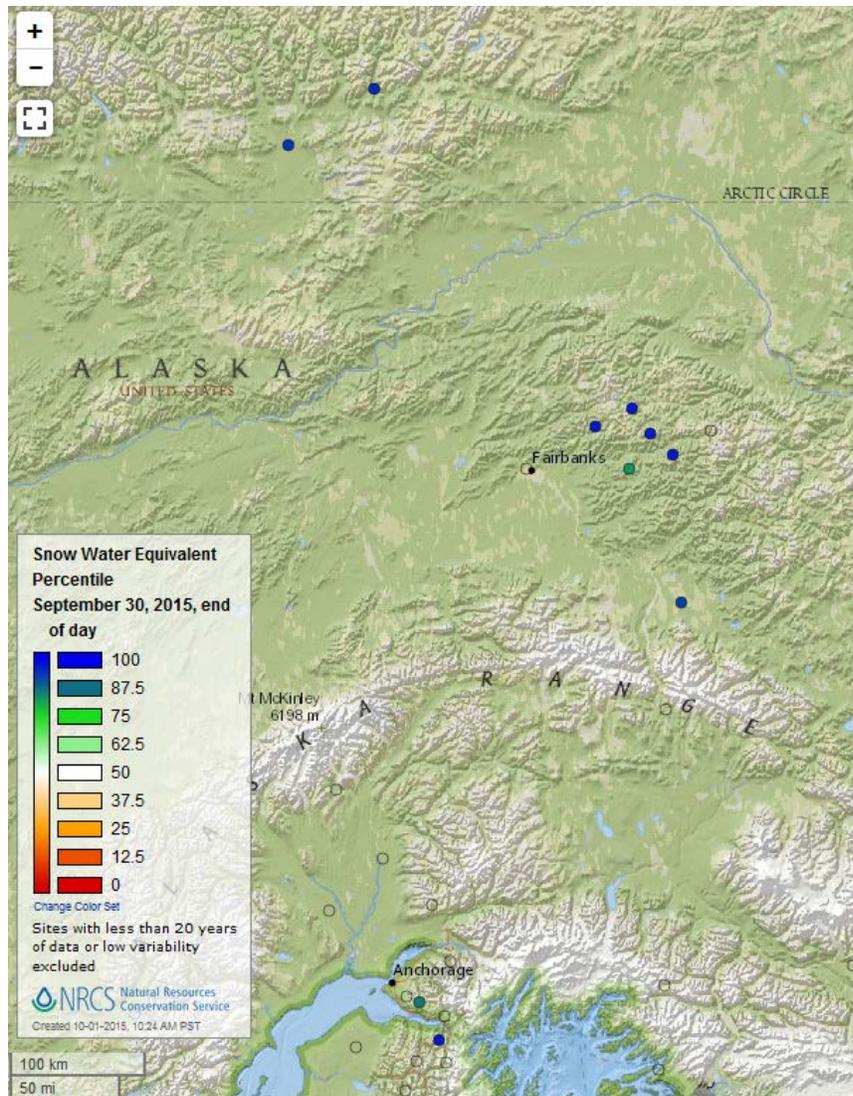
Water and Climate Update

October 1, 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.

Weekly Highlight	1	Drought	8
Precipitation	2	Other Climatic and Water Supply Indicators	11
Temperature.....	7	Short- and Long-Range Forecasts.....	14

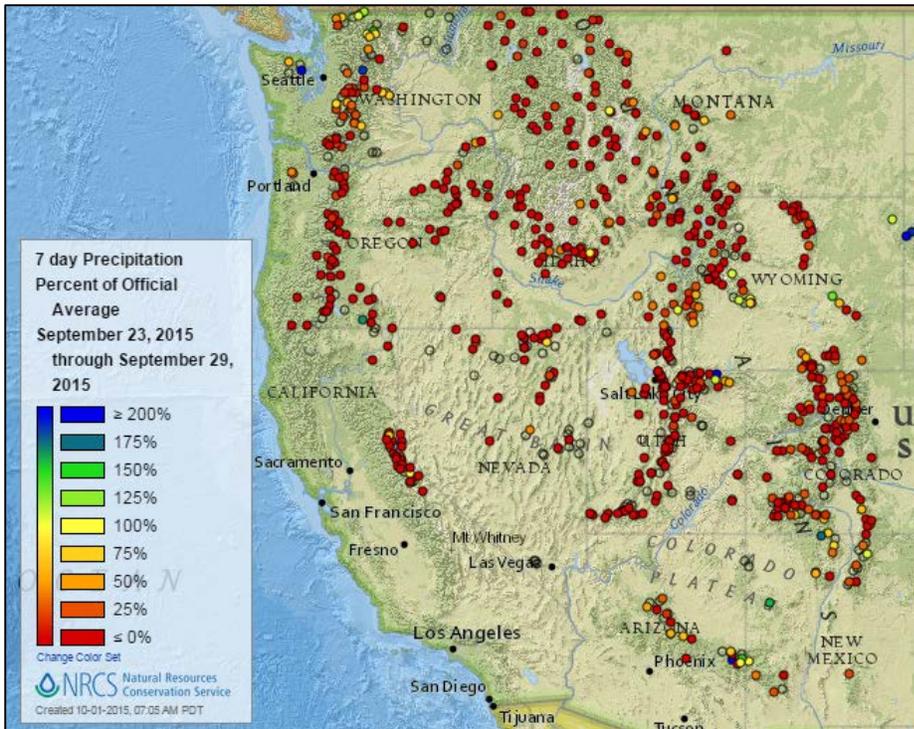
Weekly Highlight: Heavy rain and snow hit Alaska



[“Heavy rain and wet snow wreaked havoc on much of southern Alaska](#) on Tuesday, flooding homes and roads. A large swath of Alaska has been under advisories for storms, heavy rain, wind and flooding since the weekend.”

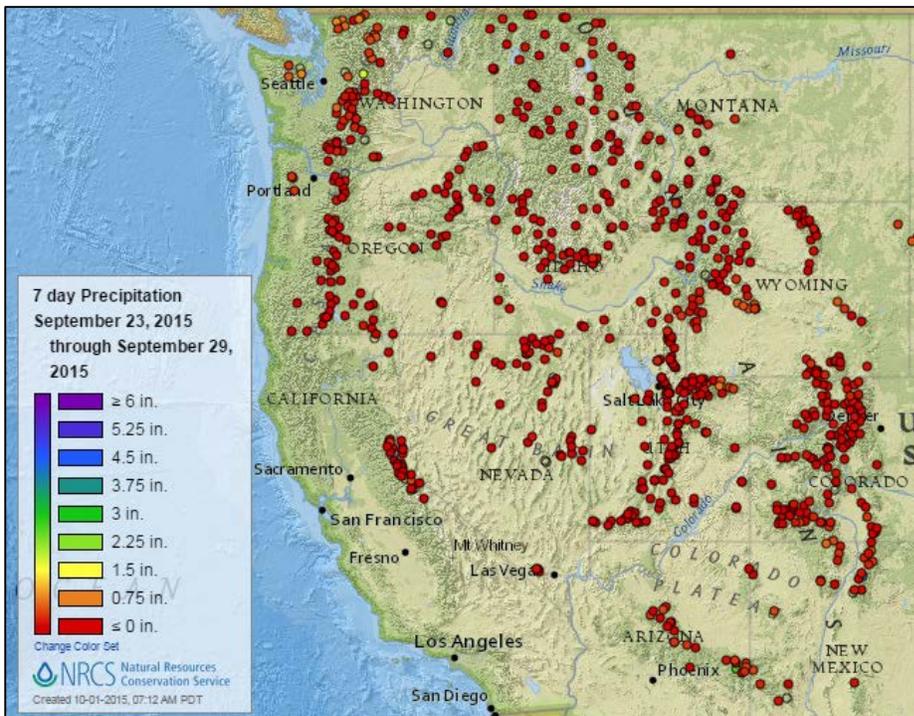
Precipitation

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 southern Oregon, northern Washington, a few areas of Wyoming, the Black Hills in South Dakota, the southern Rockies of northern New Mexico, and eastern Arizona.

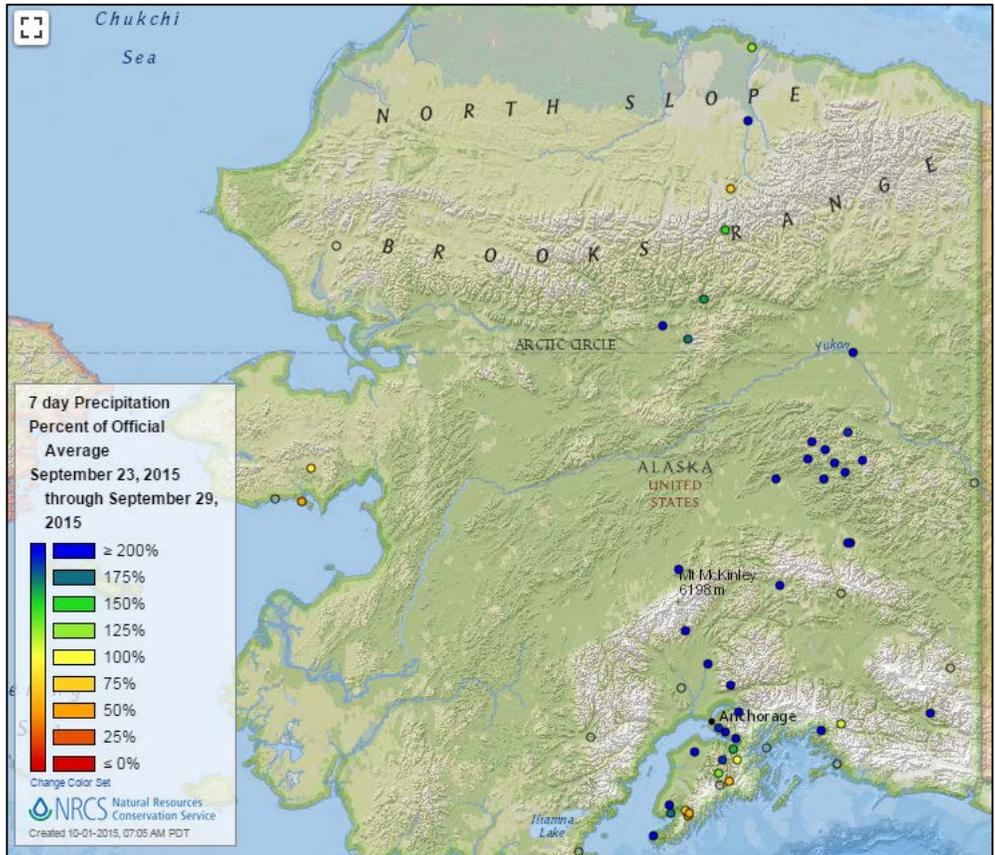
Most of the rest of the West saw little to no precipitation during the week.



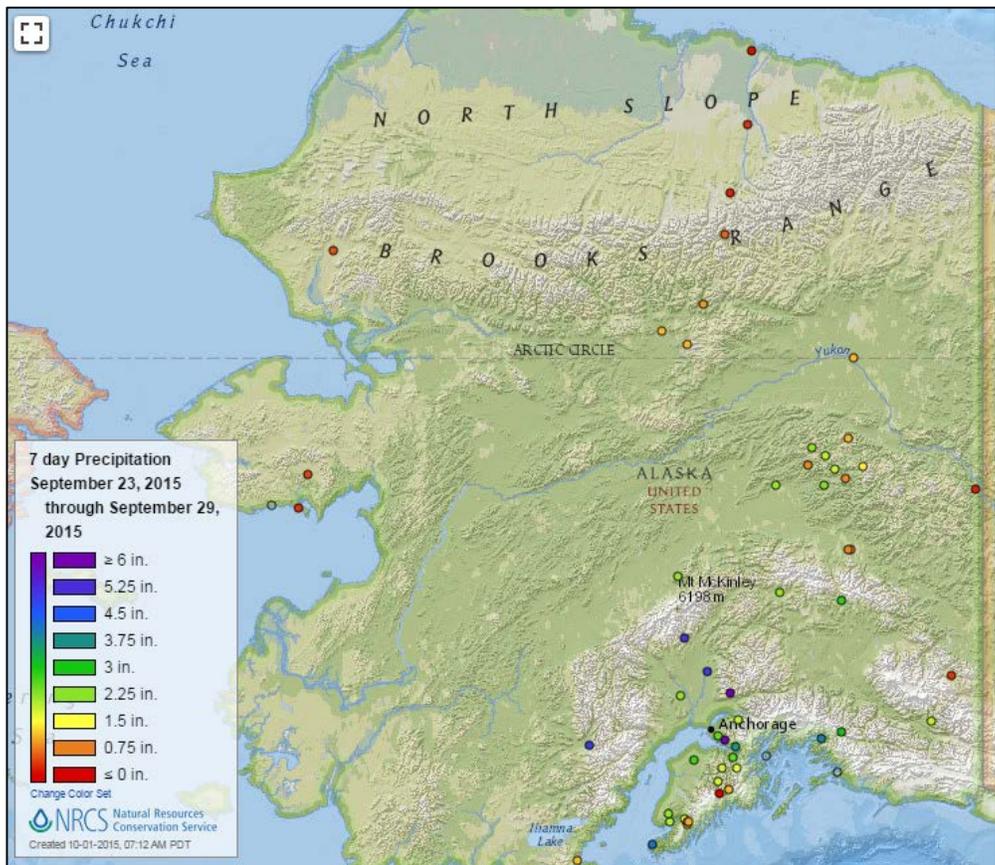
The [total precipitation](#) map shows most areas were dry or had little precipitation for the week. A few scattered precipitation events were localized to northern Washington, Wyoming, New Mexico, and the Black Hills in South Dakota, but most of these sites saw less than one inch of precipitation for the week.

Water and Climate Update

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



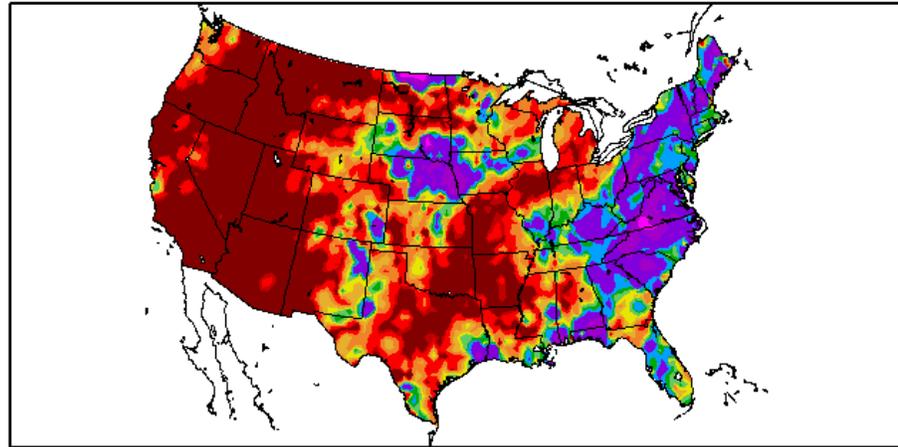
The Alaska [total precipitation](#) map shows generally dry conditions across the northern and western part of the state for the week. The central and southern regions reported 1 to 5 inches for the week. Cool temperature conditions allowed the first snow to fall in Fairbanks and Anchorage this week.



Last 7 Days, Regional Climate Center Map

Percent of Normal Precipitation (%)
9/24/2015 - 9/30/2015

The [percent of normal precipitation](#) map shows heavy precipitation across the East, upper Midwest, and Gulf Coast. The central and western U.S. had a dry week.

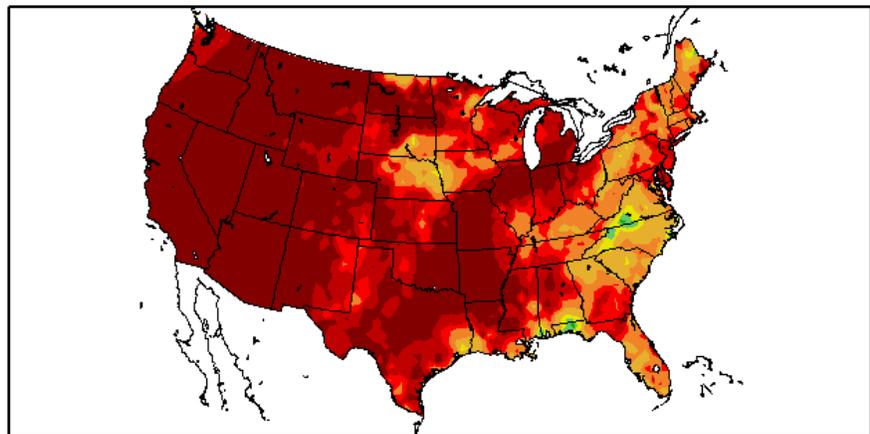


Generated 10/1/2015 at HPRCC using provisional data.

Regional Climate Centers

Precipitation (in)
9/24/2015 - 9/30/2015

The [7-day total precipitation](#) map shows the largest precipitation events occurring in the mid-Atlantic states, Gulf Coast, and in northern Maine. Notable rainfall fell elsewhere in the central and northern Plains.

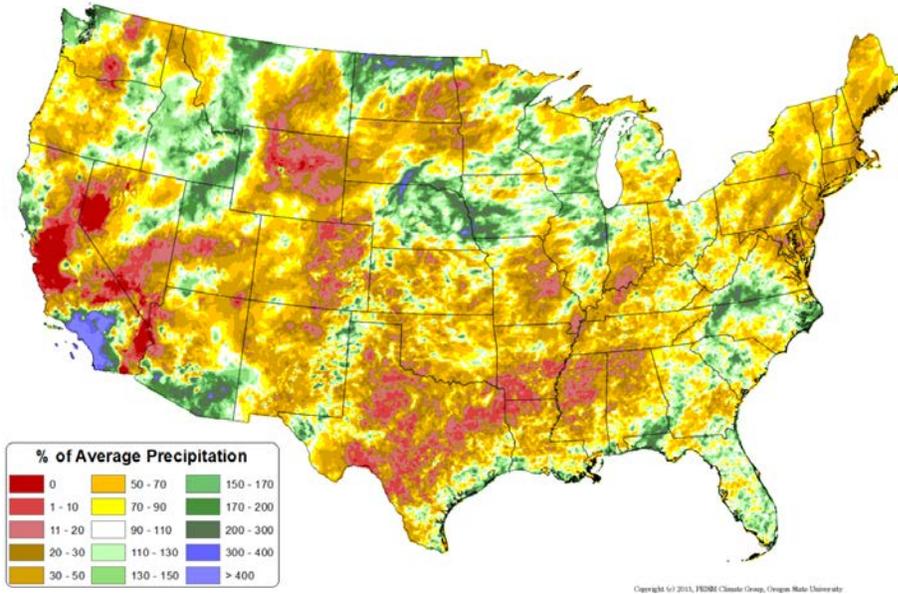


Generated 10/1/2015 at HPRCC using provisional data.

Regional Climate Centers

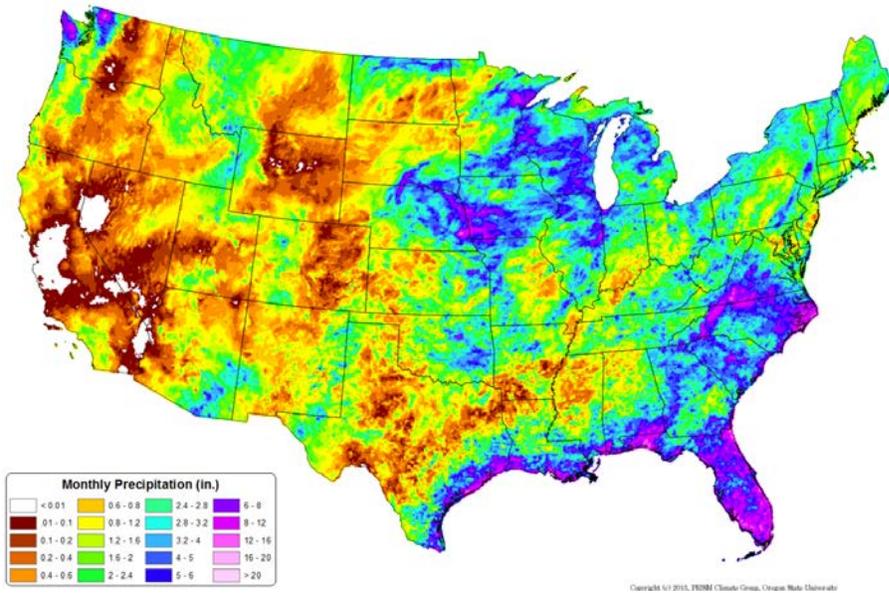
Month-to-Date, PRISM Map

Total Precipitation Anomaly: 01 September 2015 - 29 September 2015
 Period ending 7 AM EST 29 Sep 2015
 Base period: 1981-2010
 (Map created 30 Sep 2015)



For the month of September, the national [total precipitation percent of average](#) shows the largest percent of average in southern California and northern North Dakota topping 400%. This rainfall percent displays the unusual amount of precipitation for these areas during September. Just north of this area in California is the largest national region of no precipitation for the month.

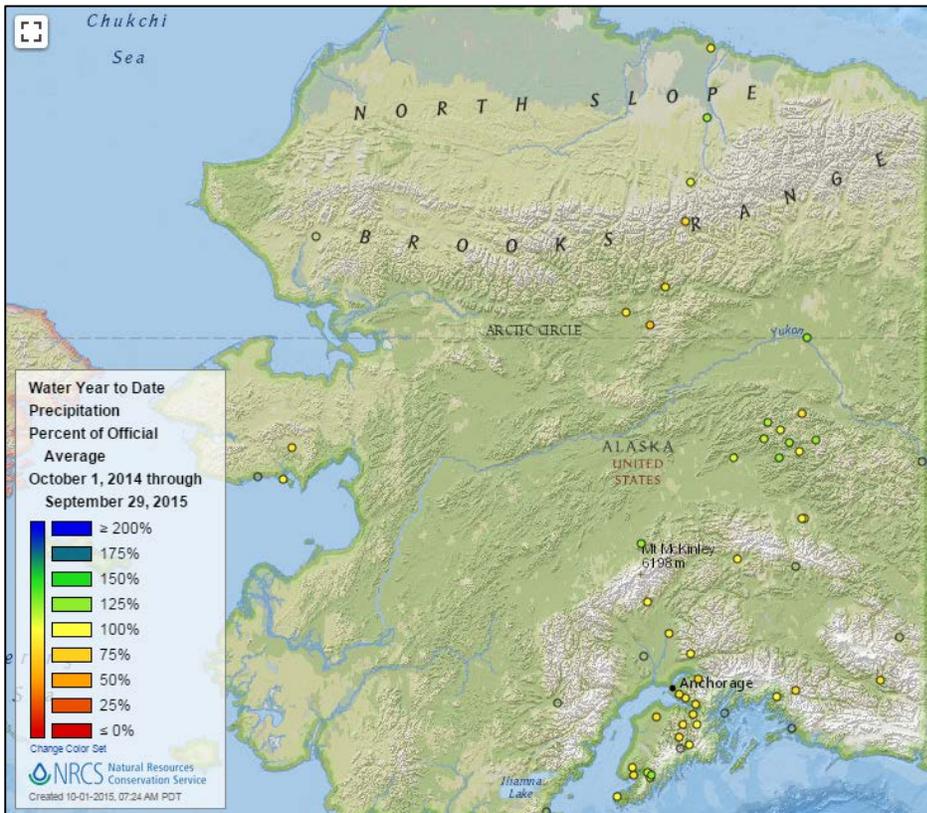
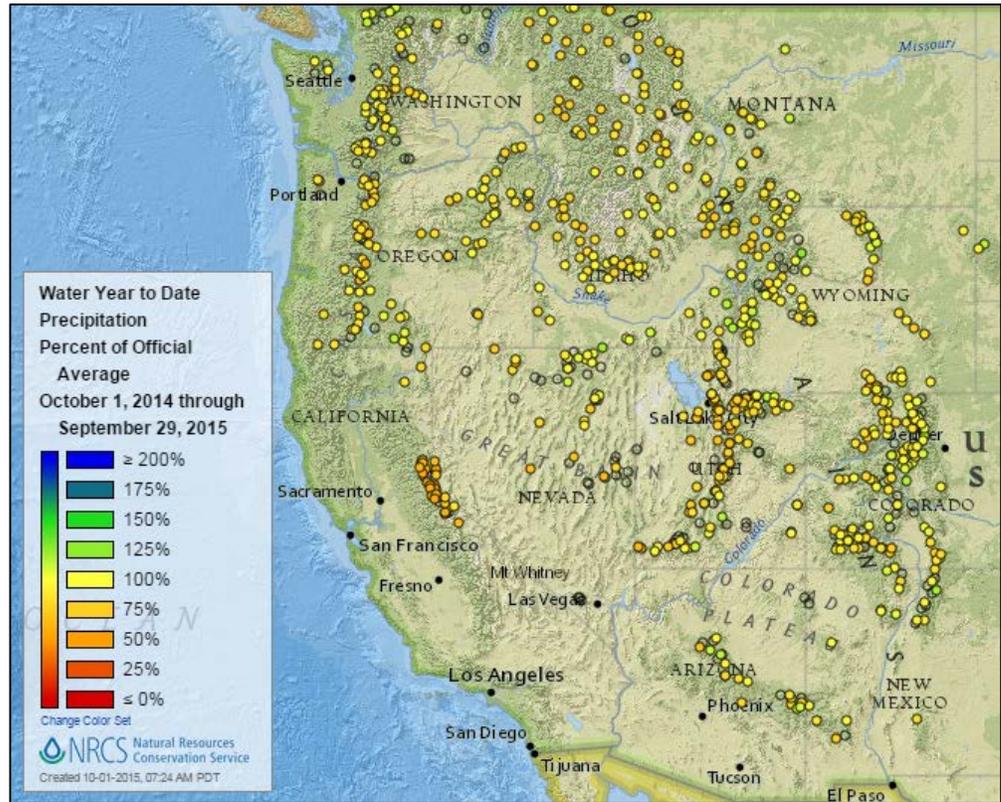
Total Precipitation: 01 September 2015 - 29 September 2015
 Period ending 7 AM EST 29 Sep 2015
 (Map created 30 Sep 2015)



The September month-to-date [total precipitation](#) shows the largest amounts of precipitation fell in the Southeast U.S. along the Gulf Coast from Texas through Florida, and along the Atlantic coast to an area of heavy rainfall in North Carolina and Virginia. Other areas that reported rainfall were scattered in the northern Great Plains and northwest Washington.

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 most of the West. The central Sierra remained the largest area with less than average precipitation for the year.



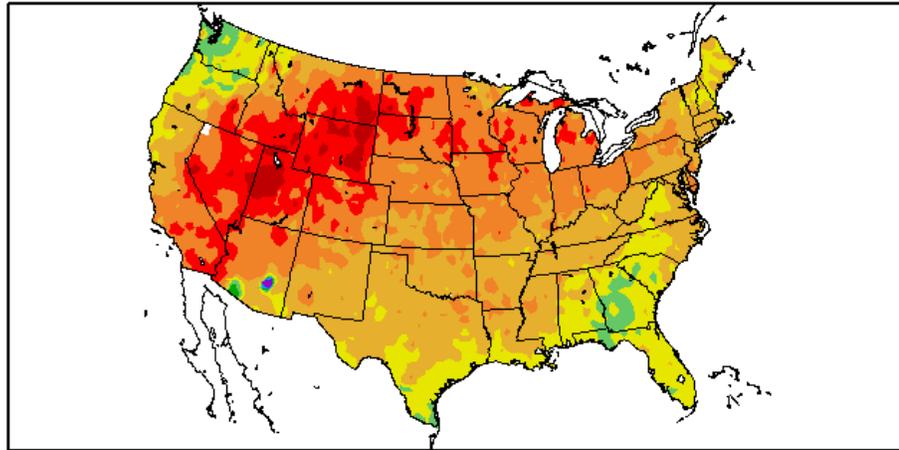
The Alaska [water year-to-date precipitation percent of average](#) map shows near to slightly above normal conditions across the state.

Temperature

Last 7 Days, Regional Climate Center Map

Departure from Normal Temperature (F)
9/24/2015 – 9/30/2015

The map of the [average temperature anomalies](#) for the past week shows mainly normal to slightly below normal temperatures in the Pacific Northwest and Southeast. Most of the country experienced above normal temperatures for the week. Very warm temperatures were reported in the central West to the northern Plains.



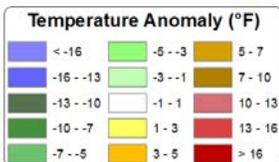
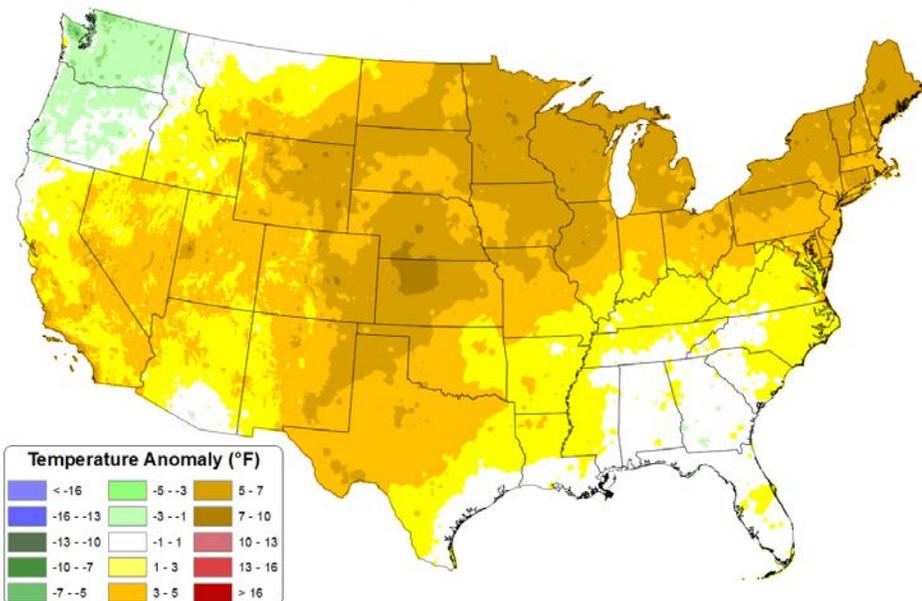
Generated 10/1/2015 at HPRCC using provisional data.

Regional Climate Centers

Month-to-Date, PRISM Map

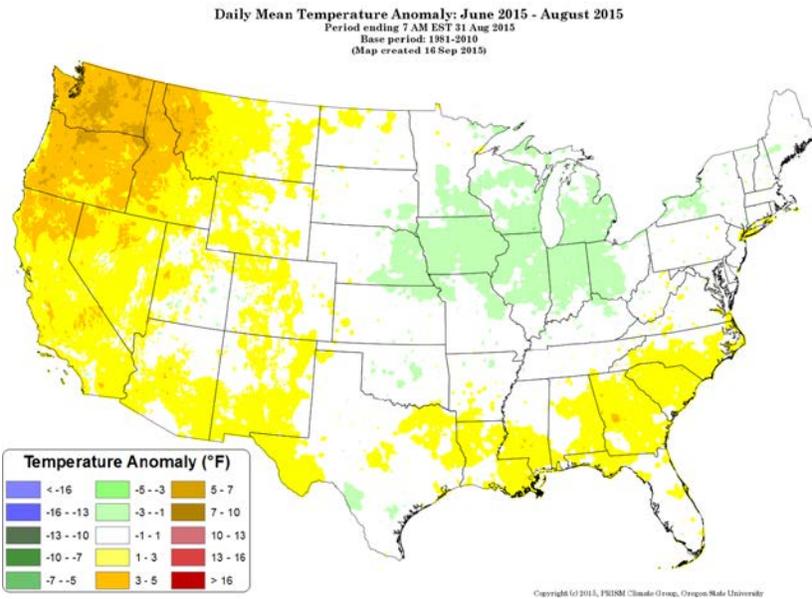
For September 2015, the national [daily mean temperature anomaly](#) map shows cool temperatures in the Pacific Northwest. The remainder of the U.S. saw normal to above normal temperatures for the month, with much above normal temperatures in the central U.S., the Great Lakes, and New England.

Daily Mean Temperature Anomaly: 01 September 2015 - 29 September 2015
Period ending 7 AM EST 29 Sep 2015
Base period: 1981-2010
Map created 30 Sep 2015



Copyright © 2015, PRISM Climate Group, Oregon State University

Last 3 Months, PRISM Map

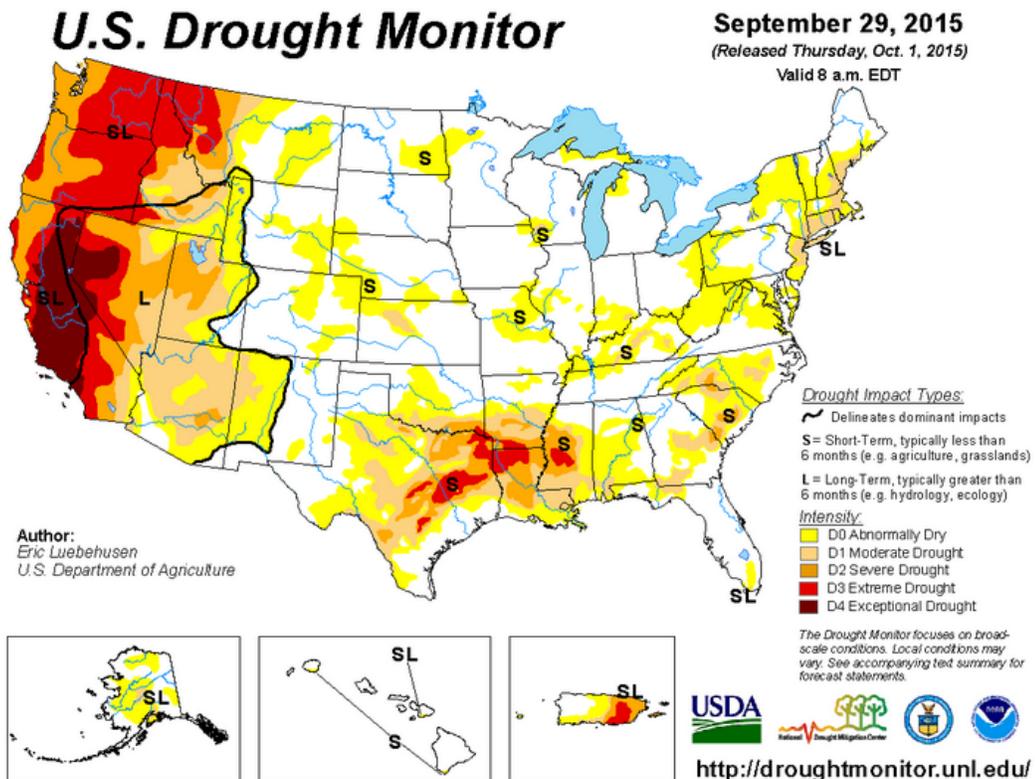


The June through August national [daily mean temperature anomalies](#) for the U.S. show the Pacific Northwest had the largest seasonal departures for the country. Other areas in the South, Southeast, West, and Northeast had slight temperature departures above normal. The upper Midwest reported slight 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.



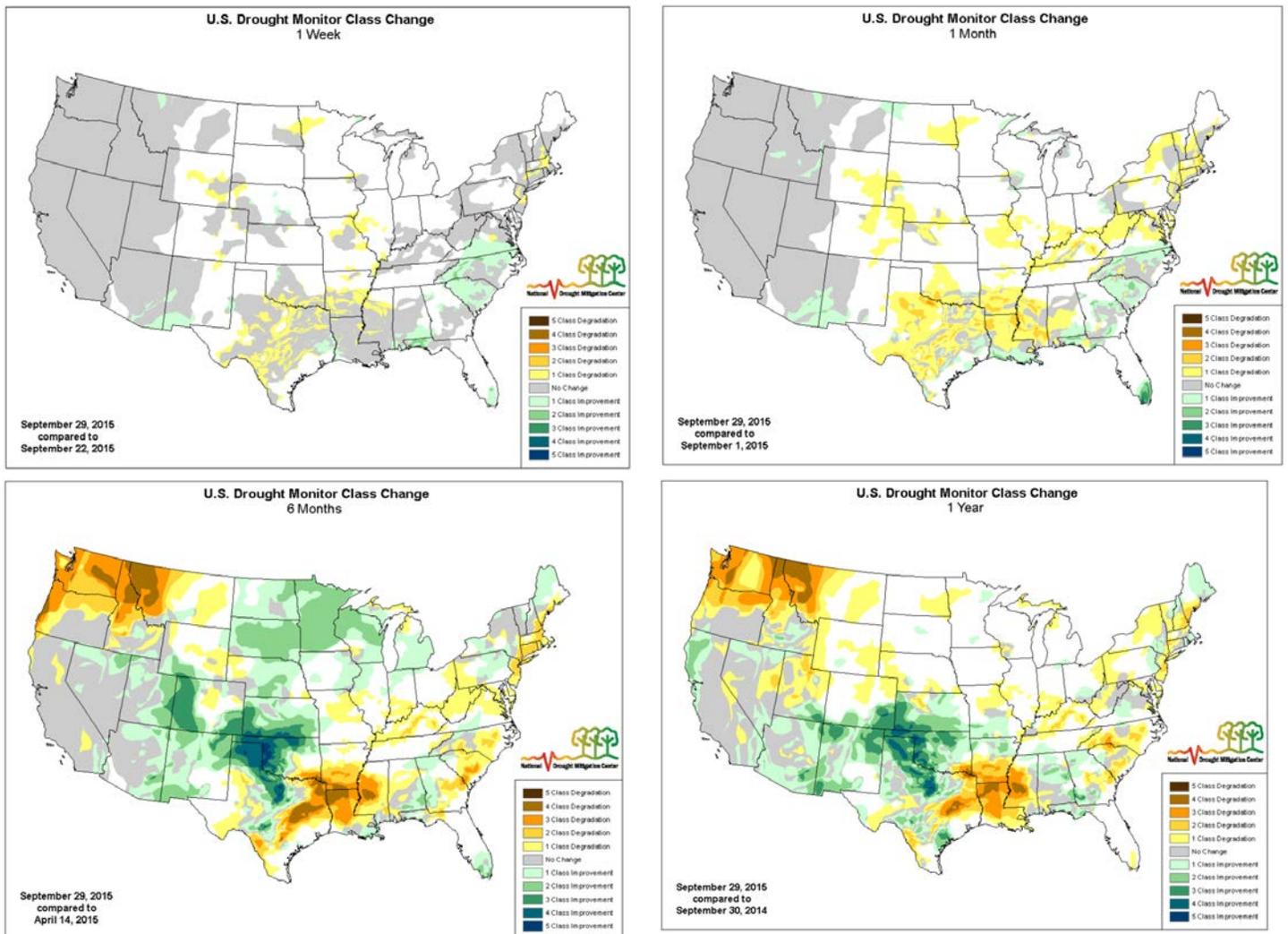
Current National Drought Summary, September 29, 2015

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

“Although increasingly wet weather has been noted over parts of the East, any rain falling after Tuesday morning (8 a.m., EDT) will be incorporated into next week’s U.S. Drought Monitor. For this week’s analysis, above-normal temperatures prevailed across much of the country, though heavy rain and near-normal temperatures were observed over parts of the Gulf Coast and Southeast. In addition, moderate to heavy rain was noted in western portions of the Corn Belt. In contrast, protracted dryness prevailed over the Northeast, while seasonably dry weather continued over the western U.S.”

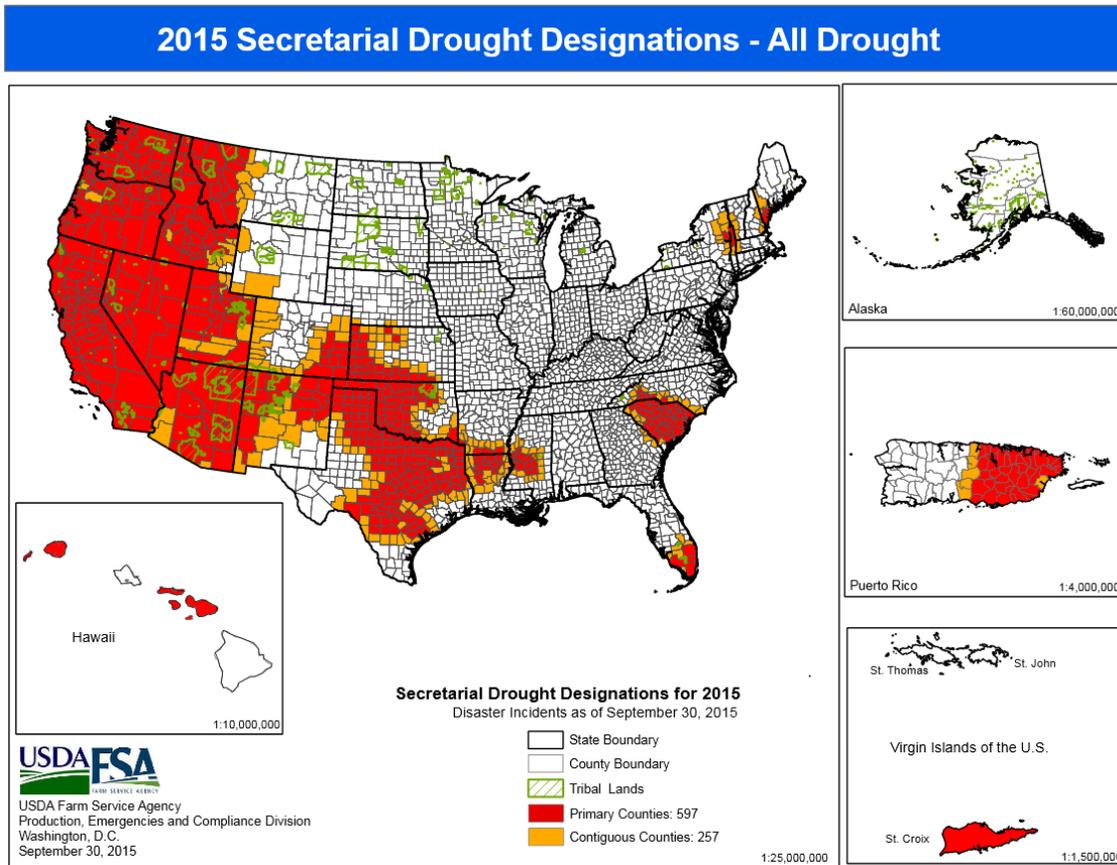
Detailed regional drought narratives for the last week are [here](#).

Changes in Drought Monitor Categories over Time



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

2015 USDA Drought Designations



[Drought Designations as of September 30, 2015](#)

[USDA Disaster and Drought Information](#)

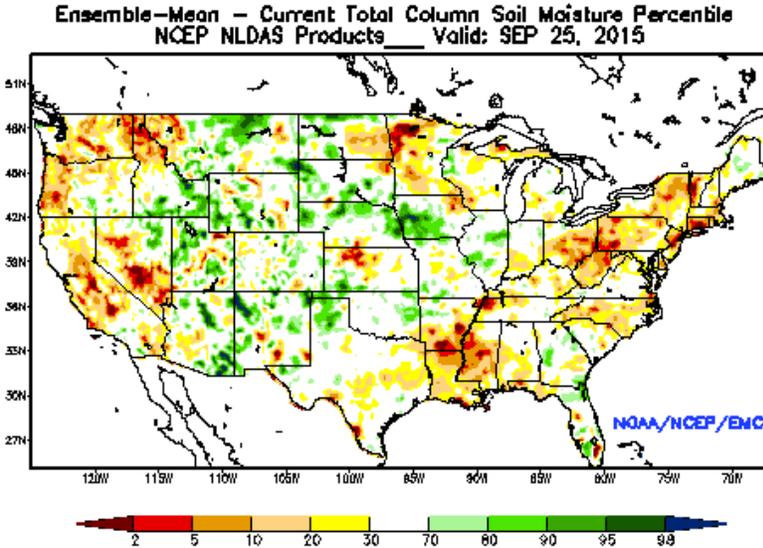
[U.S. Population in Drought, Weekly Comparison](#)

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

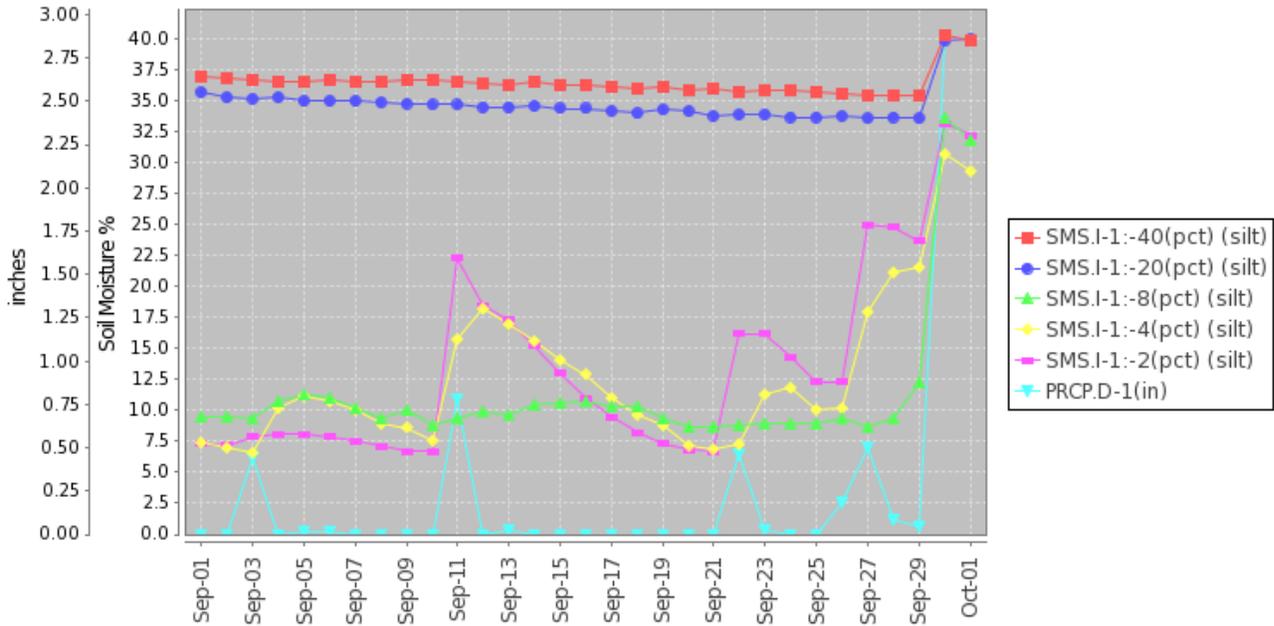


The modeled [soil moisture percentiles](#) as of September 25, 2015 show dryness in the far West, the Northeast, and the South. Areas of above normal soil moisture include much of the Rocky Mountains, the northern Great Plains, and parts of the Mississippi Valley.

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

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

Station (2088) MONTH=2015-09-01 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Thu Oct 01 07:44:16 PDT 2015

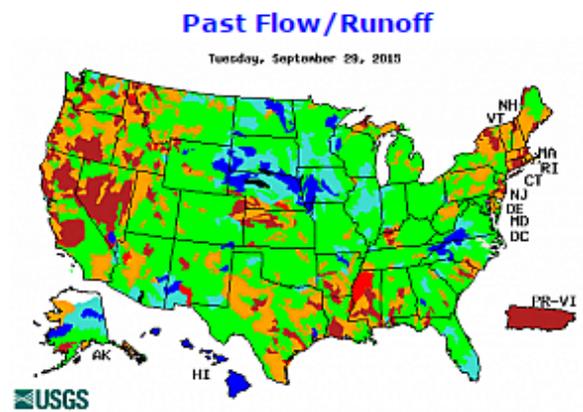
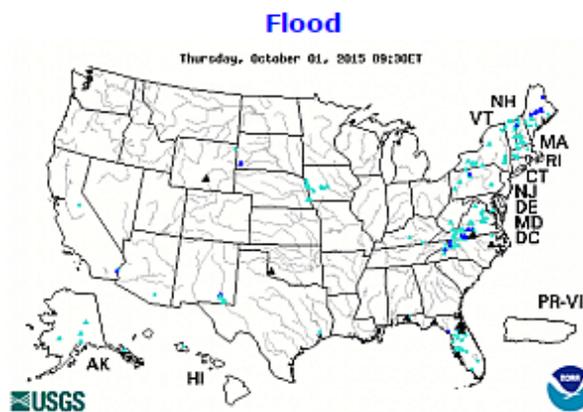
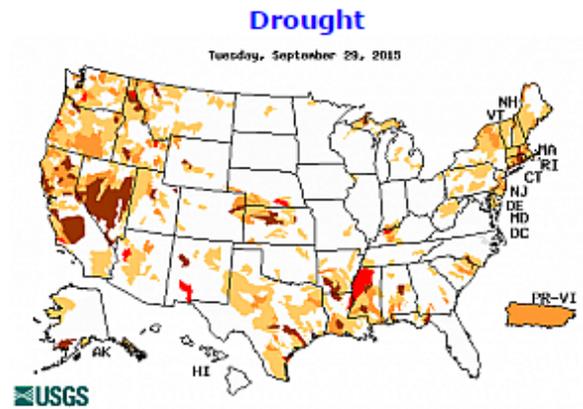
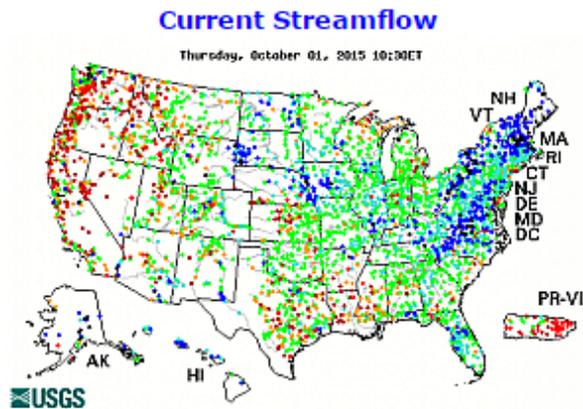


This graph shows soil moisture (2-, 4-, 8-, 20-, and 40-inch depth) and precipitation for the last month at the [Shenandoah SCAN site](#) (station number 2088) in central Virginia. Several precipitation events generated corresponding soil moisture response at the 2-, 4-, and 8-inch sensor depths. All sensors, including the deeper sensors responded to the recent, large precipitation event of 2.8 inches on September 29.

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 and parts of the South. The central and northeast U.S. are reporting high flows from recent heavy storms. Streams at high levels and flood stage are reported at several gages in the Eastern U.S.

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

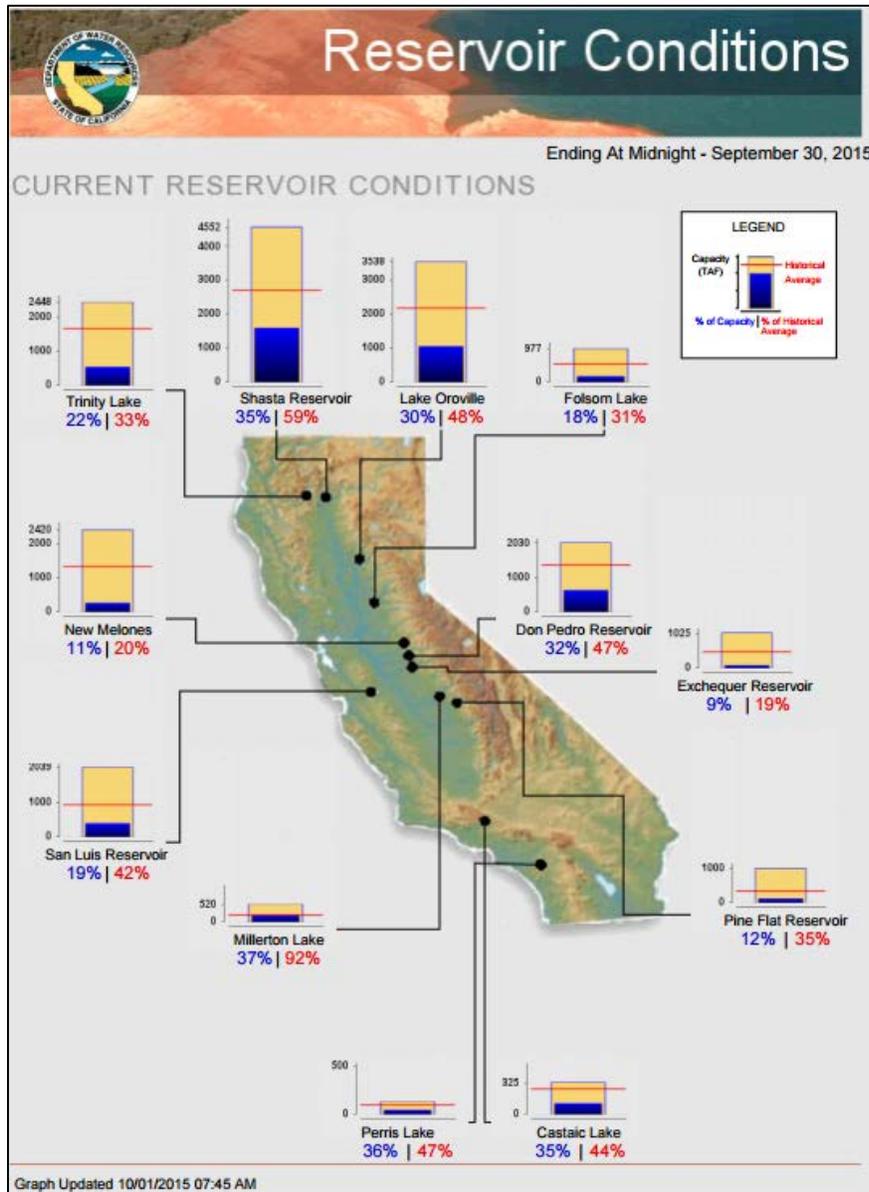
Current Reservoir Storage

[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

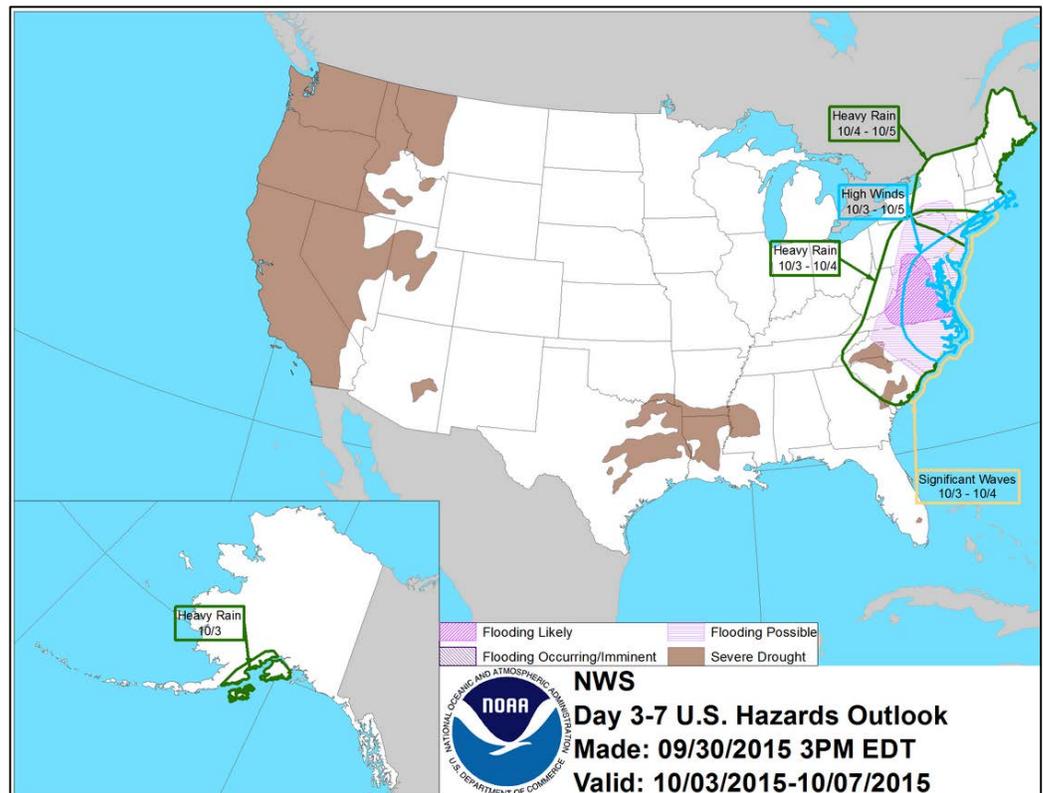
Author: Brad Rippey, USDA Agricultural Meteorologist

National Outlook, October 1, 2015: “Forecast guidance remains mixed on whether Hurricane Joaquin will directly strike the U.S. East Coast. Possible solutions range from a U.S. landfall (from the Carolinas northward) to a relatively harmless pass east of, and parallel to, the Atlantic Seaboard. Regardless of Joaquin’s path, significant, late-week rain can be expected from the Carolinas into the Mid-Atlantic States, in the vicinity of a stalled front. Meanwhile, a storm moving inland across California will reach the Rockies on Friday. A second storm will develop along the Pacific Coast during the weekend, leading to a period of showery weather from California and the Great Basin into the Southwest. Five-day rainfall totals could reach 1 to 3 inches in the Rockies and High Plains, while local amounts in excess of an inch can be expected in other areas of the West. In the East, rainfall totals will be dependent upon Joaquin’s track, but some degree of flooding can be expected in the Mid-Atlantic States and neighboring areas. During the next few days, cooler weather will arrive in most areas of the U.S., although frost and freezes will be mostly confined to the northern Plains and upper Midwest. The NWS 6- to 10-day outlook for October 6 – 10 calls for the likelihood of near- to above-normal temperatures and precipitation across most of the country. Warmth will be most likely across New England and the Pacific Northwest, while drier-than-normal weather will be confined to the lower Southeast.”

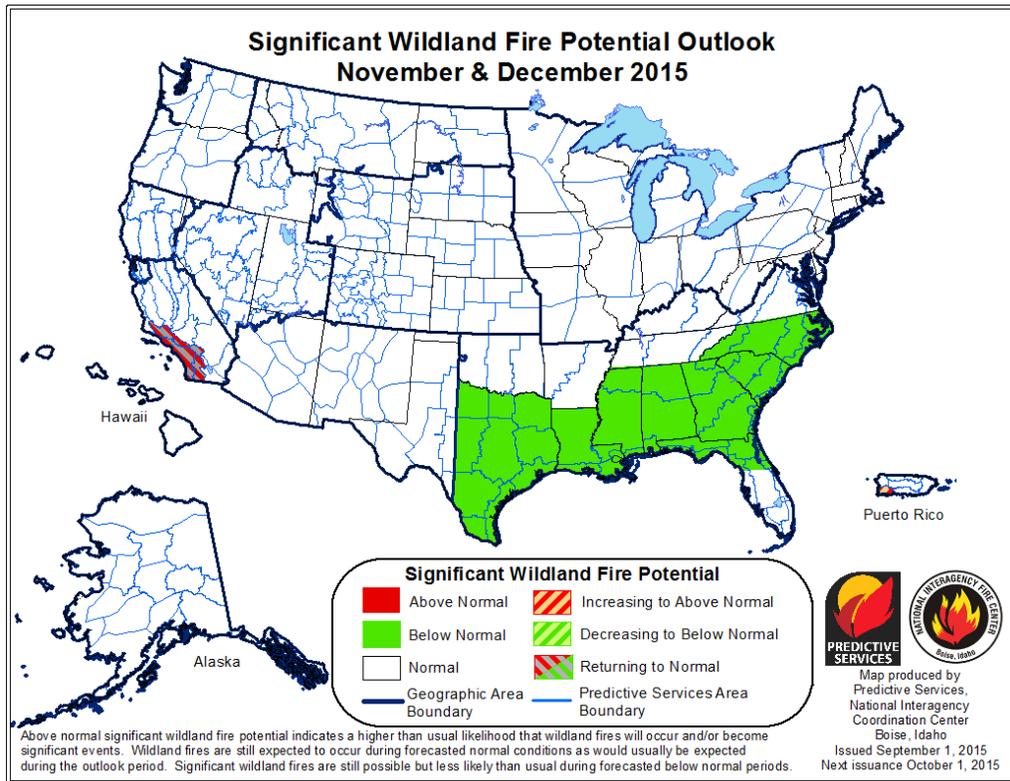
National Weather Hazards

The outlook for [weather hazards](#) over the next week forecasts heavy rain across the Northeast (10/3-10/5) where predictions of hurricane Joaquin are expected to make landfall. High winds are also expected in this area (10/3-10/5) with high waves along the coast (10/3-10/4). A wide area of flooding occurring and likely is centered over Virginia. In Alaska, heavy rain is expected along the south central coast (10/3).

In Alaska, heavy rain is expected along the south central coast (10/3).



Wildland Fire Potential: November & December 2015



In November and December, **fire potential** is increasing to above normal in southwest Puerto Rico. It is returning to normal in southern California. Fire potential is normal to below normal in the remainder of 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.



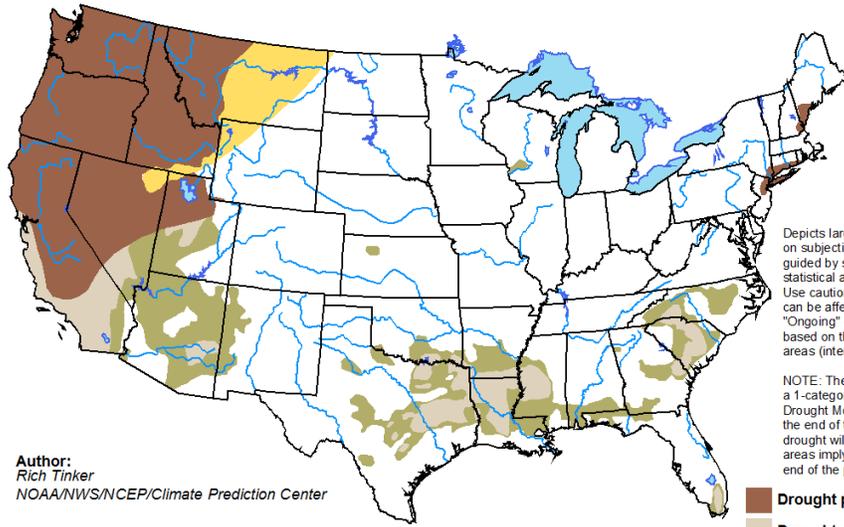
Seasonal Drought Outlook

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.

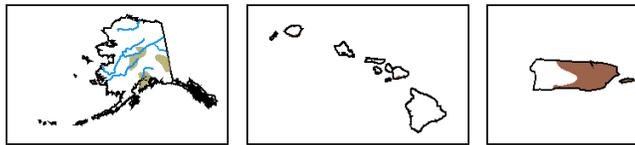
U.S. Seasonal Drought Outlook valid for September 17 - December 31, 2015
Drought Tendency During the Valid Period
Released September 17, 2015



Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

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).

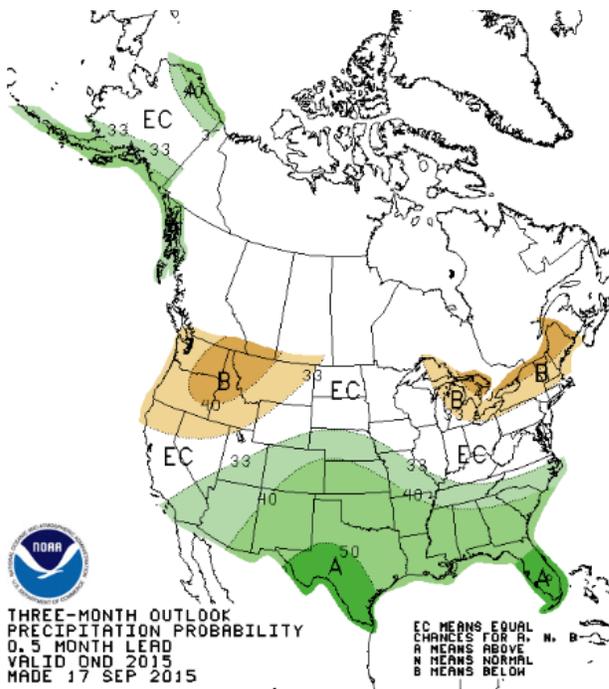
- Drought persists/intensifies
- Drought remains but improves
- Drought removal likely
- Drought development likely



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

Climate Prediction Center 3-Month Outlook

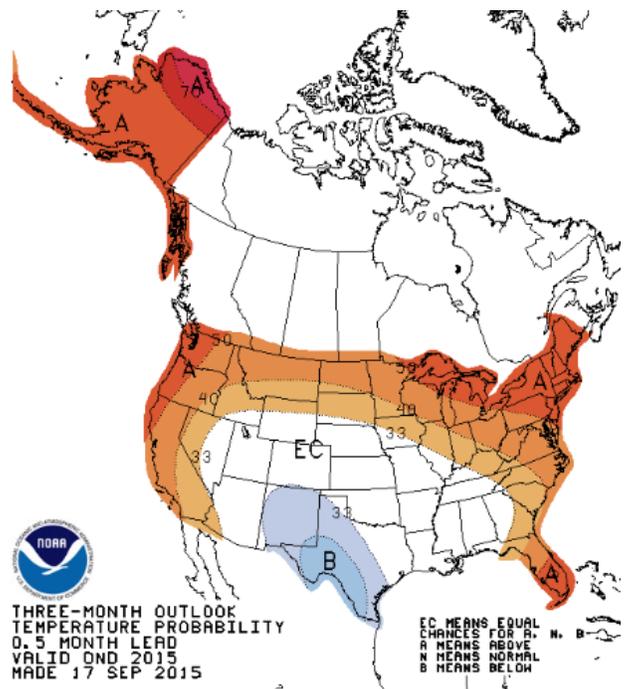
Precipitation



THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID QND 2015
MADE 17 SEP 2015

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

Temperature



THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID QND 2015
MADE 17 SEP 2015

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

Climate Prediction Center 3-Month Outlook Summary

“[The OND 2015 precipitation outlook](#) indicates enhanced probabilities of above-median precipitation amounts for southern California, the Southwest, the central and southern Plains, the lower Mississippi valley, and the Southeast. Above-median precipitation amounts are also most likely for the southern and northern coasts of Alaska. Below-median precipitation amounts are most likely for the Pacific Northwest, and from the eastern Great Lakes into New York state and northern New England.”

“[The October-November-December \(OND\) 2015](#) temperature outlook indicates enhanced probabilities of above-normal temperatures west of the rocky mountains, across the northern contiguous U.S. to the Northeast, and southward along the East Coast. Within the contiguous U.S., the chances of above-normal temperatures are greatest along the Pacific coast in the Northwest, in the Northeast, and for the southern Florida peninsula, with probabilities exceeding 50 percent. Above-normal temperatures are also most likely for Alaska, with probabilities exceeding 70 percent for the north slope. Below-normal temperatures are most likely in New Mexico and parts of west Texas.

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](#).