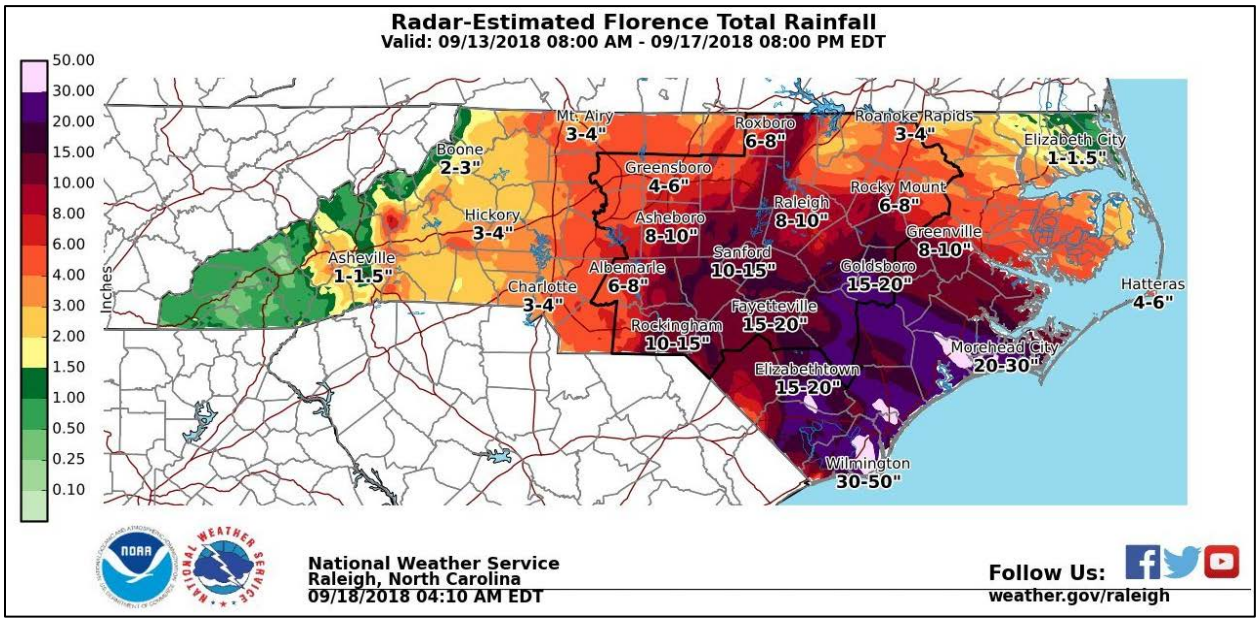
United States Department of Agriculture

Water and Climate Update

September 20, 2018

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.

Hurricane Florence breaks rainfall records in the Carolinas



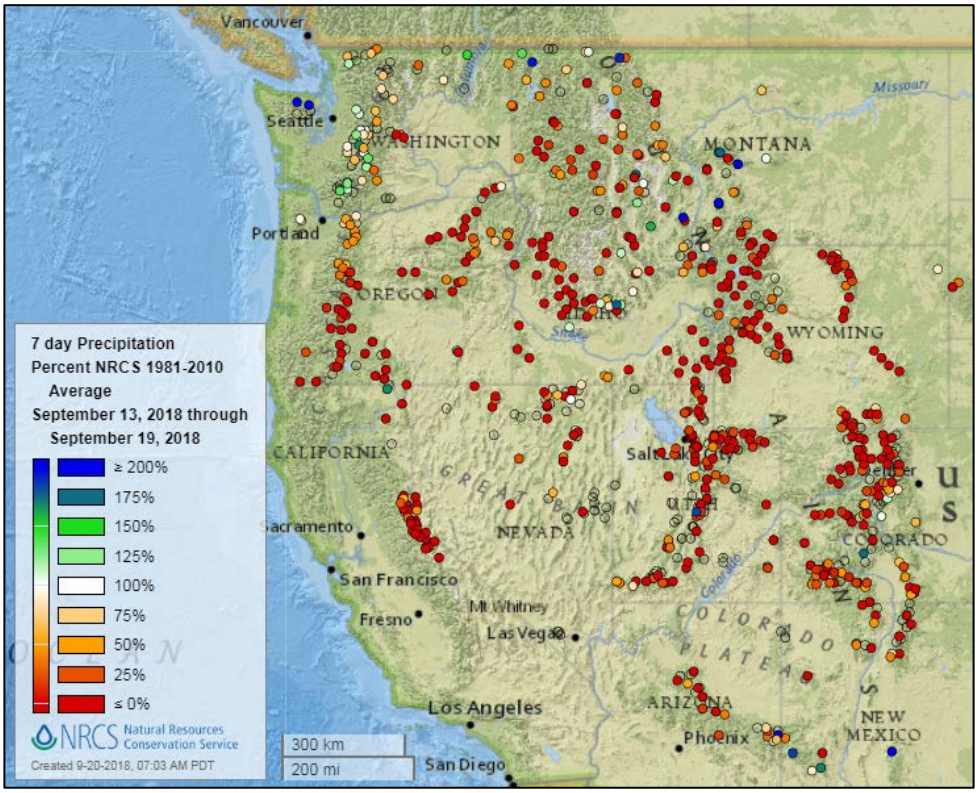
The impact of Hurricane Florence continues along coastal North Carolina and northern South Carolina. Wind and heavy rain hammered the state for days, as the storm moved slowly inland. The highest rainfall amounts were 30–50 inches in Wilmington, 20-30 inches in Morehead, and 15-20 inches in a wider area. Flooding in the area is historic and rivers are continuing to rise, with evacuations still in place, damage mounting, and many roads closed. Agricultural operations were especially hard hit in the area.

Related:

NASA Already Has Satellite Data on Hurricane Florence Rain Totals – Newsweek
Florence gone but its flooding a crisis in parts of North Carolina -- live updates – CBS News
Florence aftermath is a 'nightmare' of swollen rivers, flooding and rising deaths – WGHP (NC)
Fear near Cape Fear rises with the river, and the death toll from Florence keeps growing – KTVQ
Rain from Florence impacts local farmers WHSV (VA)
Rainfall totals from Florence – WDBJ (VA)
Florence death toll climbs to 37; President Trump visits stricken area – WCTI12 (NC)

Precipitation

Last 7 Days, NRCS SNOTEL Network

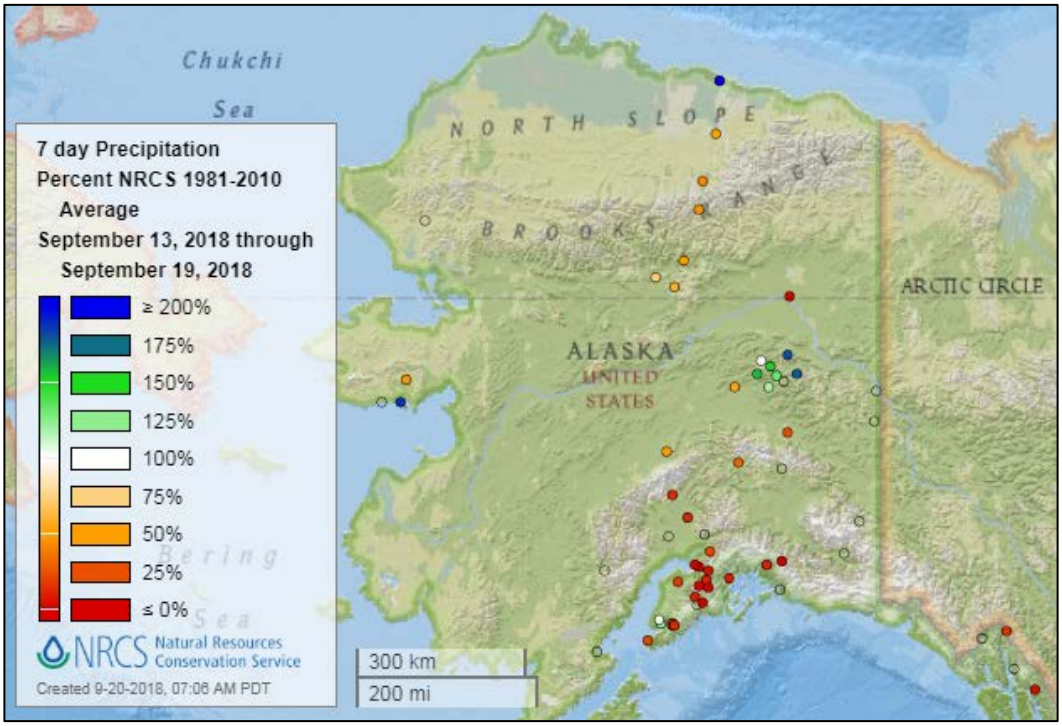


[7-day precipitation percent of average map]

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]

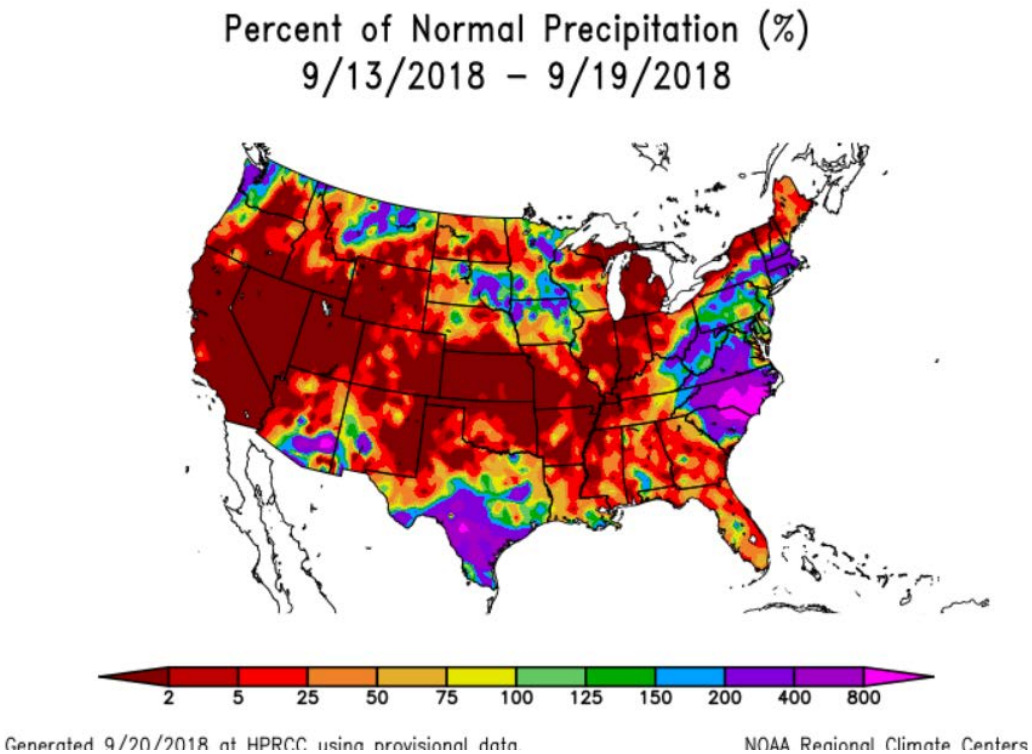


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

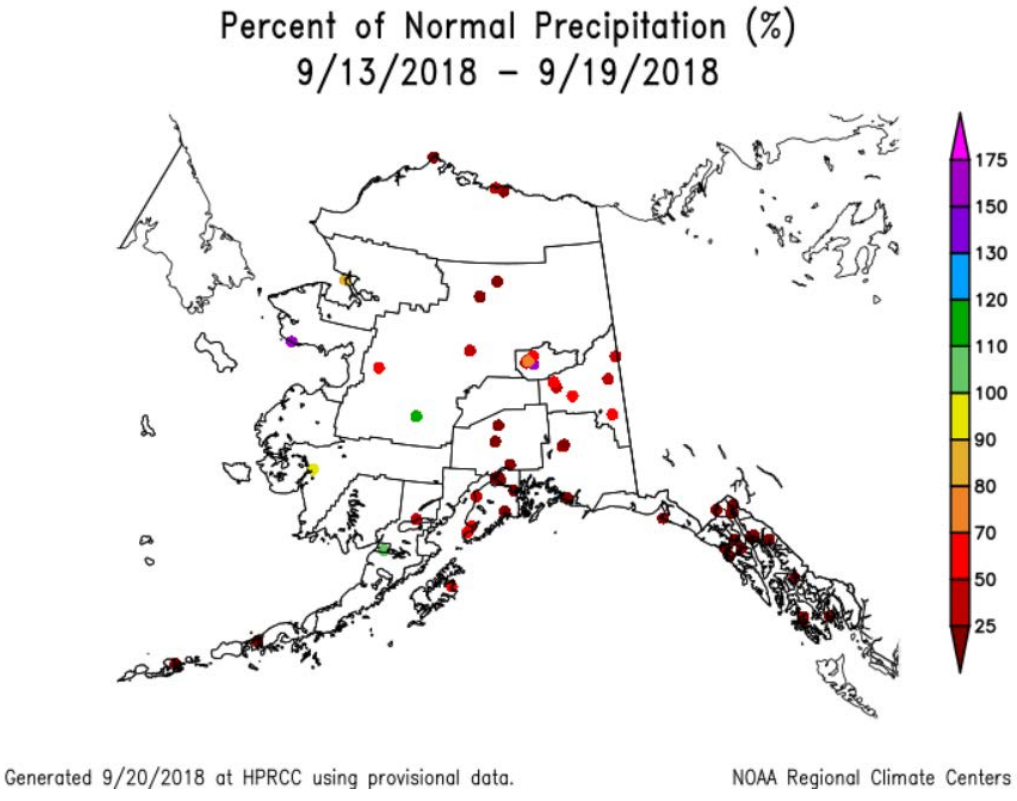


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

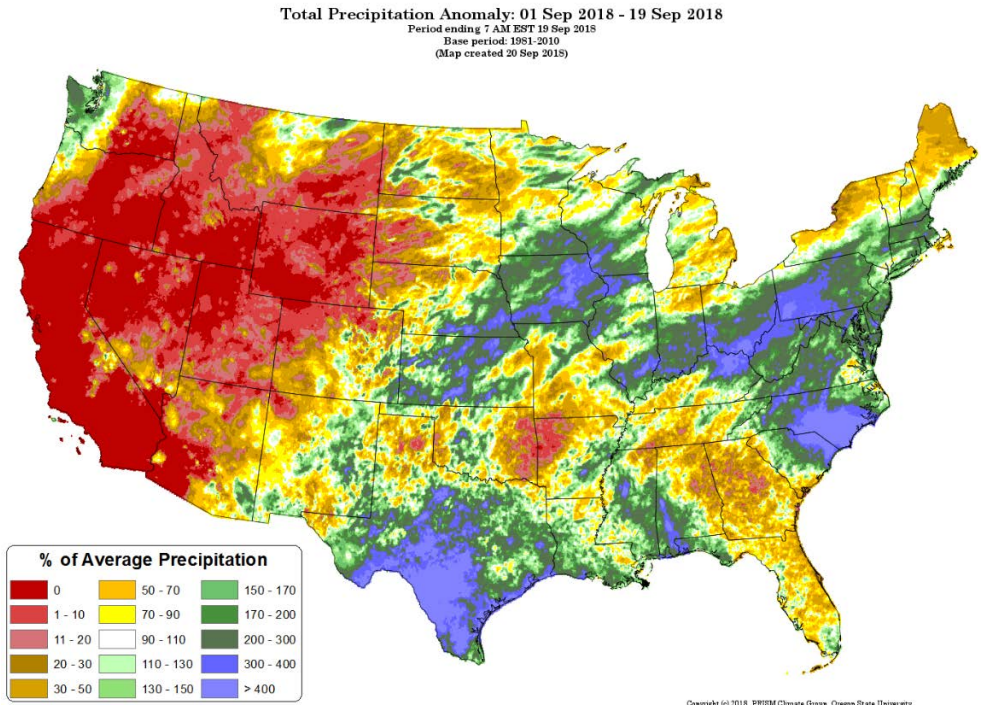
[7-day precipitation anomaly map](#) for Alaska.

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



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

Source: PRISM

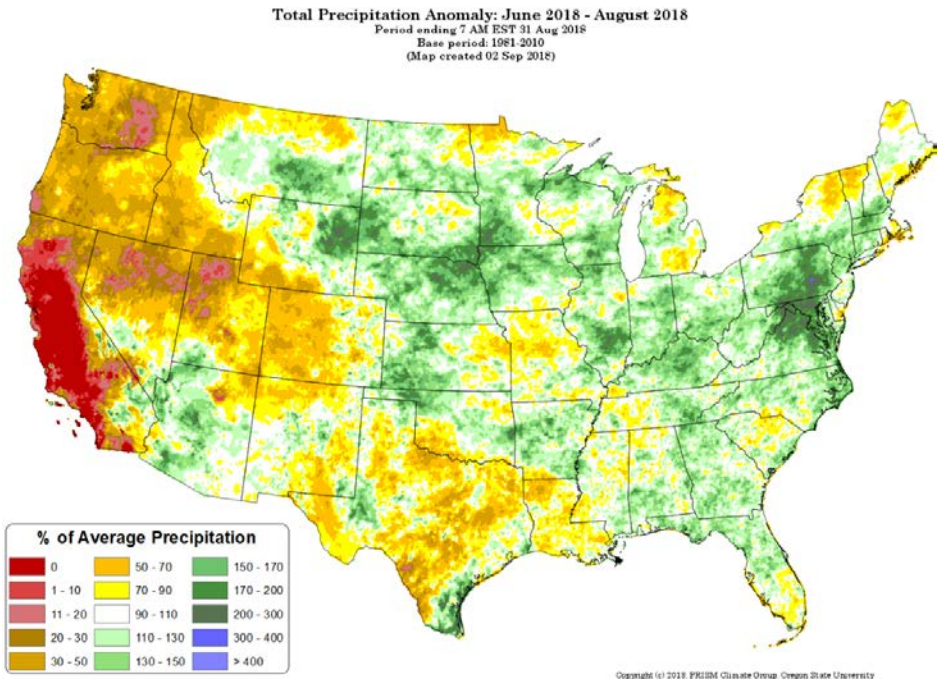


[Month-to-date national total precipitation percent of average map]

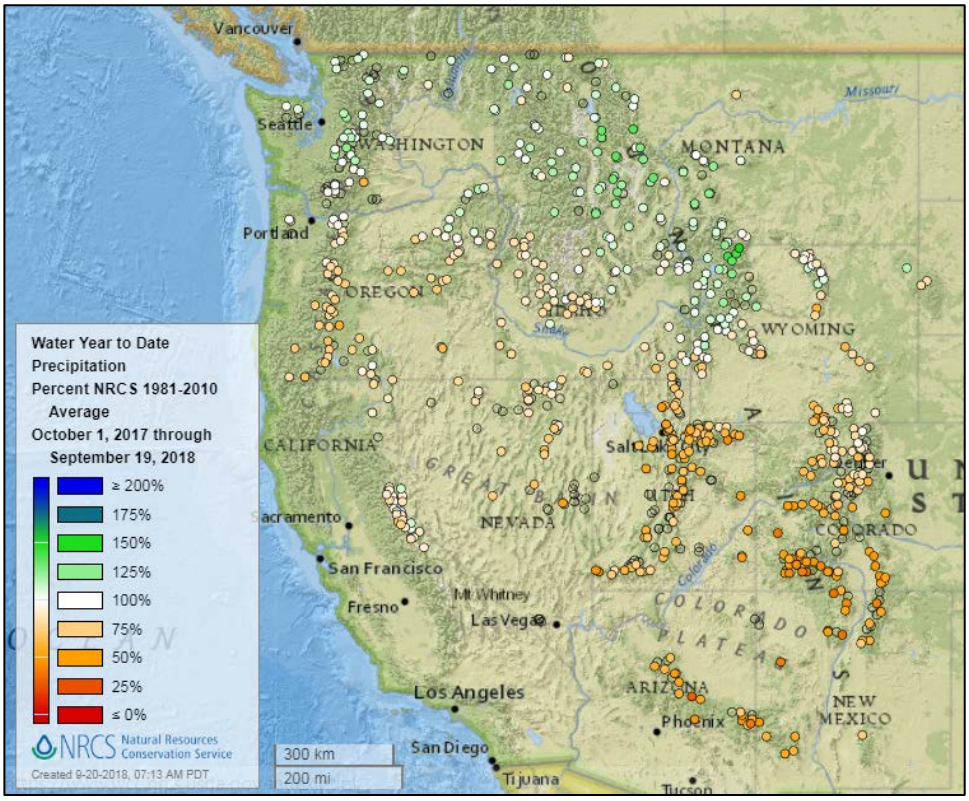
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[June through August 2018 total precipitation percent of average map]

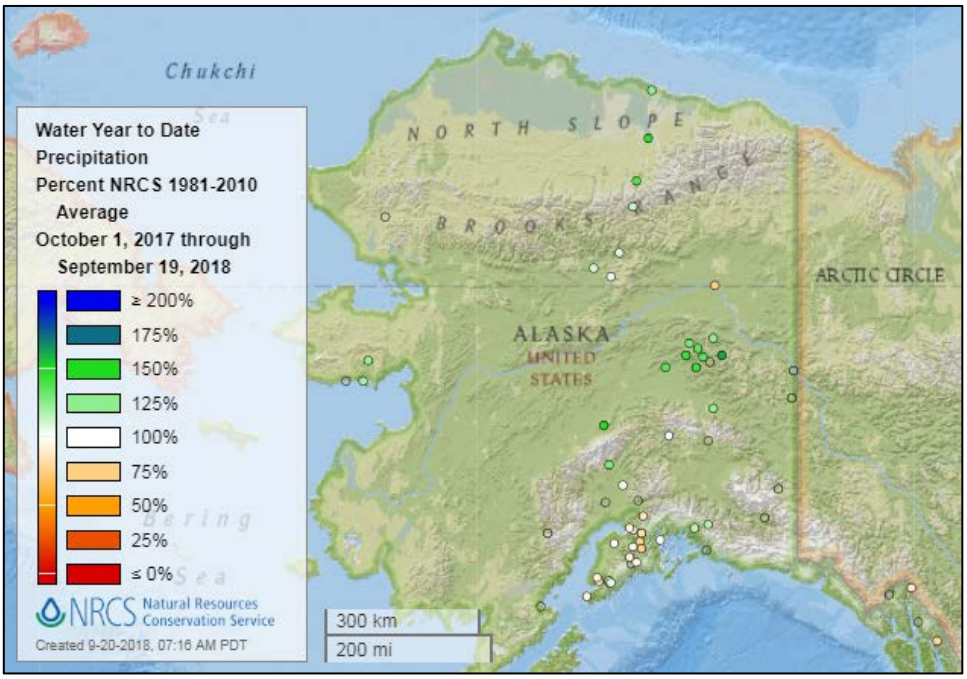


Water Year-to-Date, NRCS SNOTEL Network



[2018 water year-to-date precipitation percent of average map]

See also: [2018 water year-to-date precipitation values (inches) map]



[Alaska 2018 water year-to-date precipitation percent of average map]

See also: [Alaska 2018 water year-to-date precipitation values (inches) map]

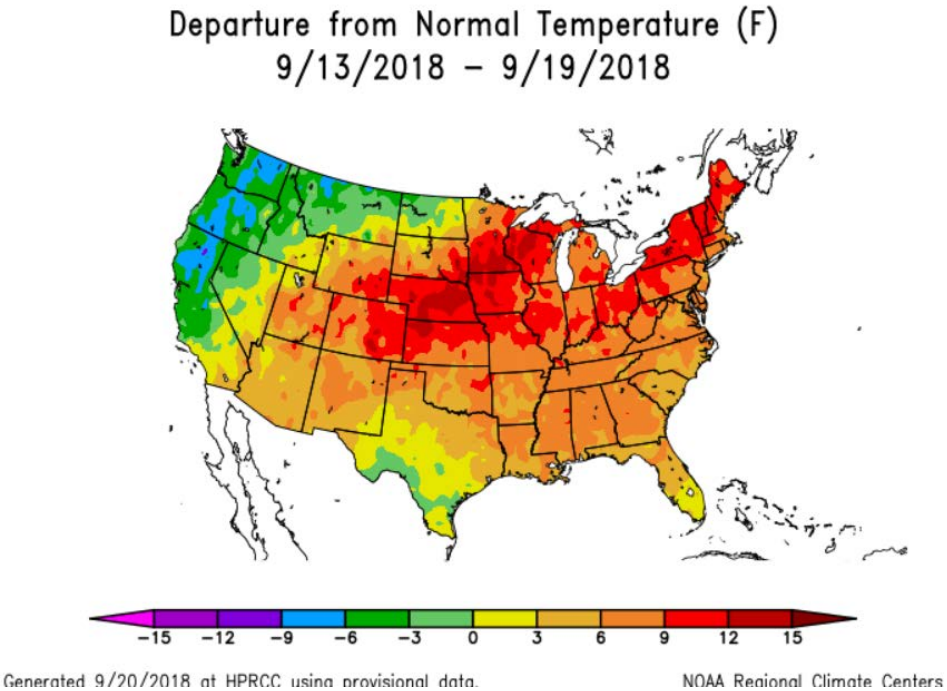
Temperature

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]

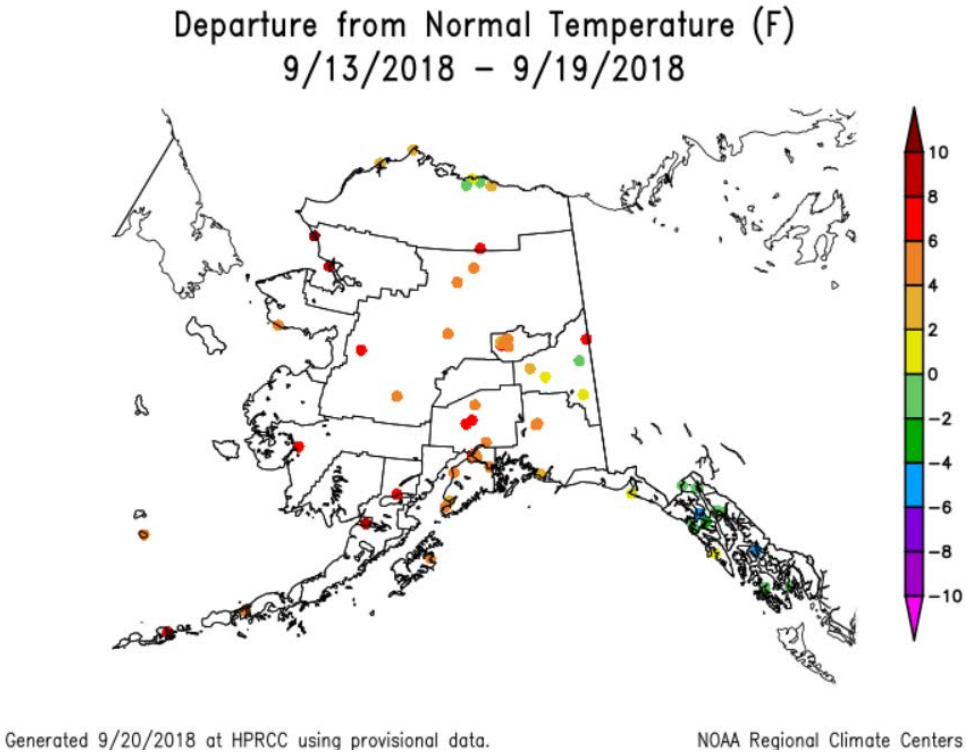


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map] for Alaska.

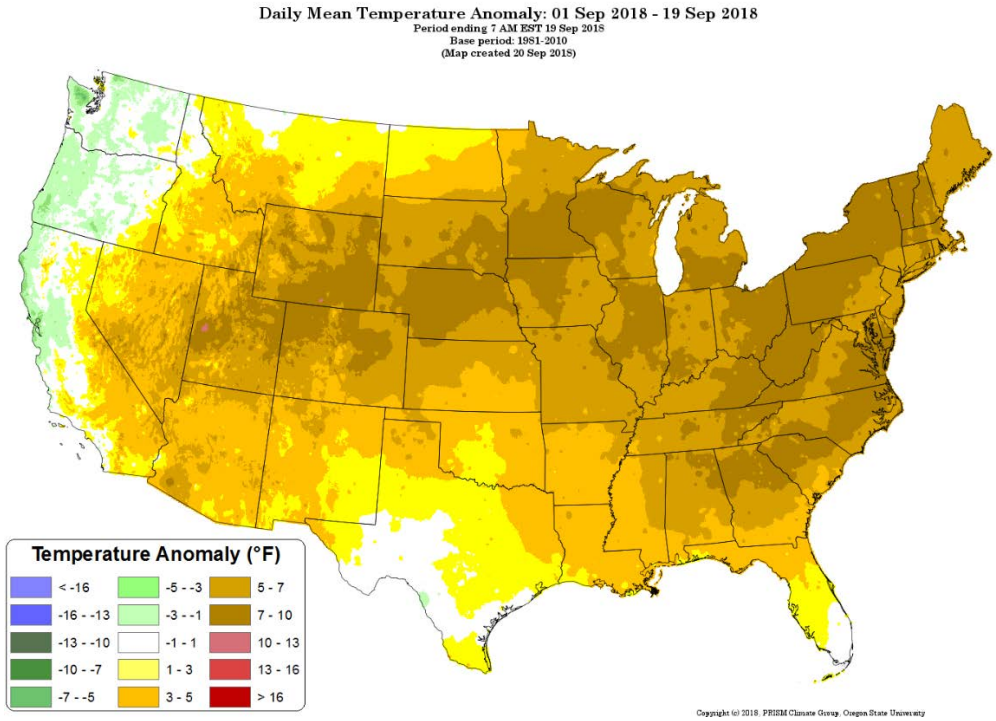
See also: [7-day temperature (° F) map]



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

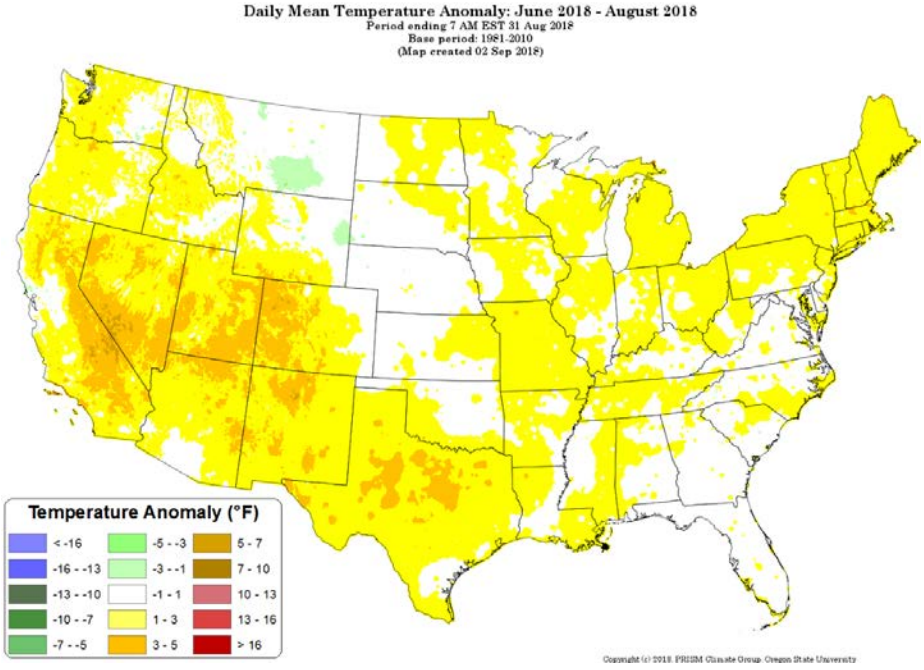
Source: PRISM

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



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

Source: PRISM

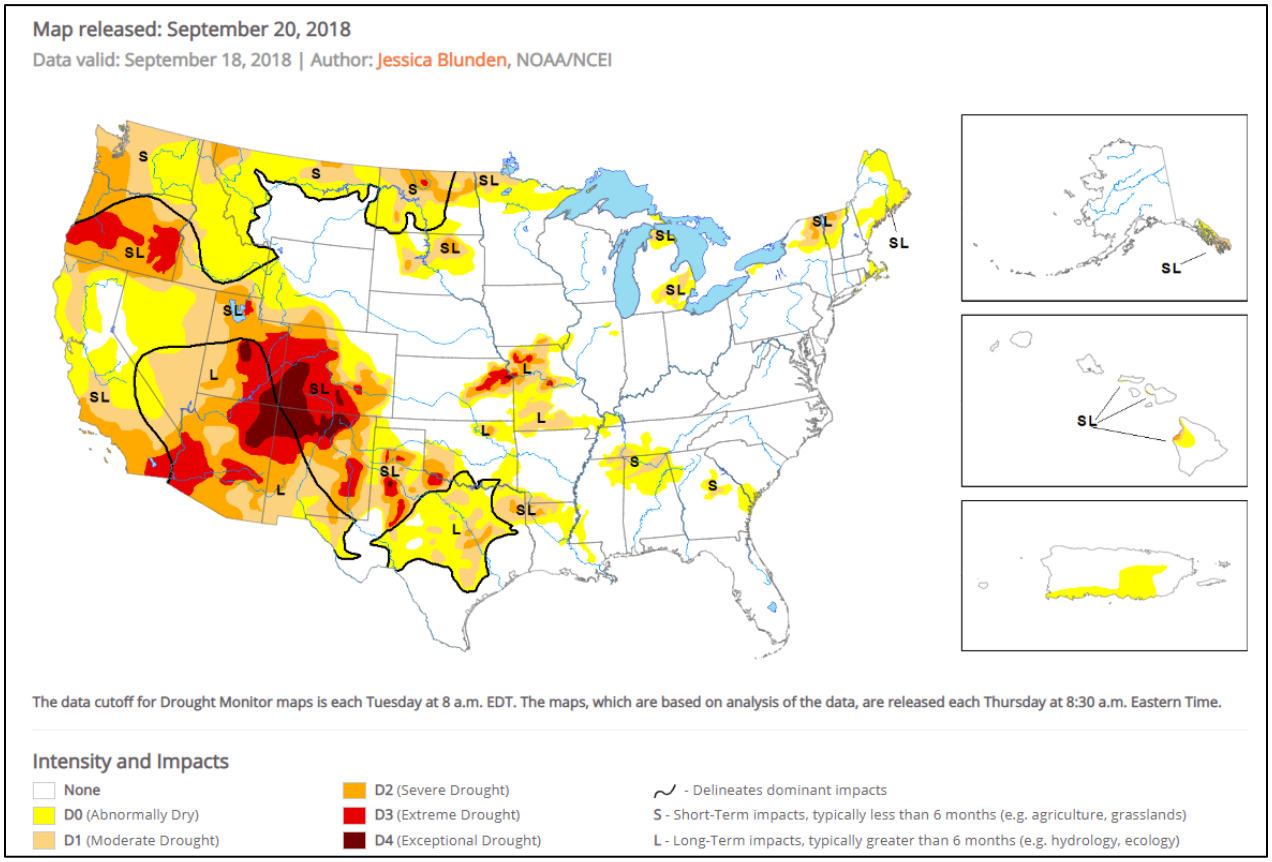


[June through August 2018 daily mean temperature anomaly map]

Drought

U.S. Drought Monitor Select map below.

U.S. Drought Portal Comprehensive drought resource.



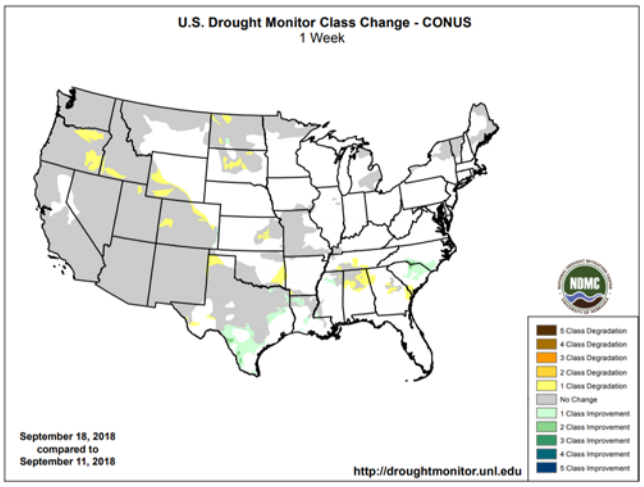
Current National Drought Summary, September 20, 2018

Author: Jessica Blunden, NOAA/NCEI

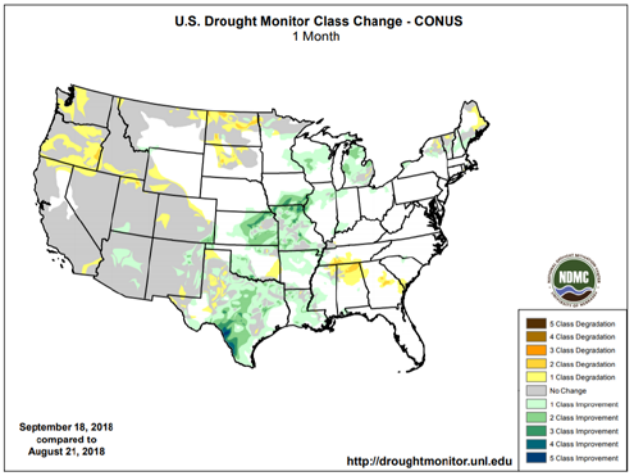
“Three tropical systems drenched three separate drought areas this past week, with Hurricane Florence affecting the Carolinas with record rainfall, a low pressure system in the western Gulf of Mexico bringing rain to parts of Texas and Louisiana, and Tropical Storm Olivia bringing yet more rain to Hawaii. Drought conditions improved or were alleviated across these regions. Some showers and thunderstorms were seen across the Plains, but not enough to improve drought conditions. Unfortunately, many areas experiencing severe to exceptional drought saw little to no rainfall, with the dryness often accompanied by warmer-than-normal temperatures for this time of year, exacerbating conditions. Notably, eastern Oregon, northern Utah, and western Colorado all saw expansion of extreme or exceptional drought.”

Changes in Drought Monitor Categories over Time

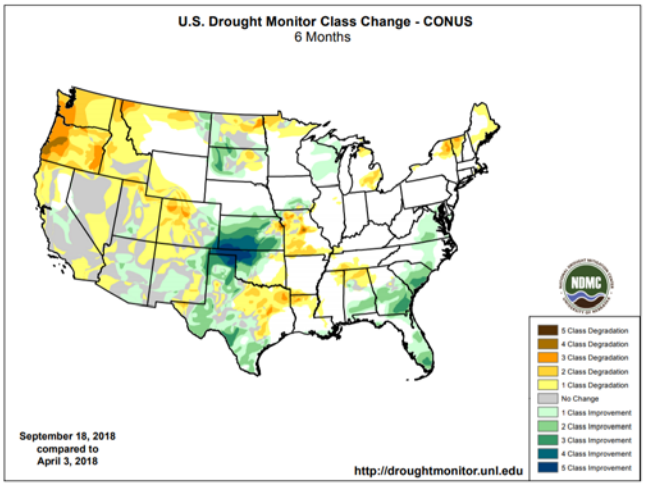
1 Week



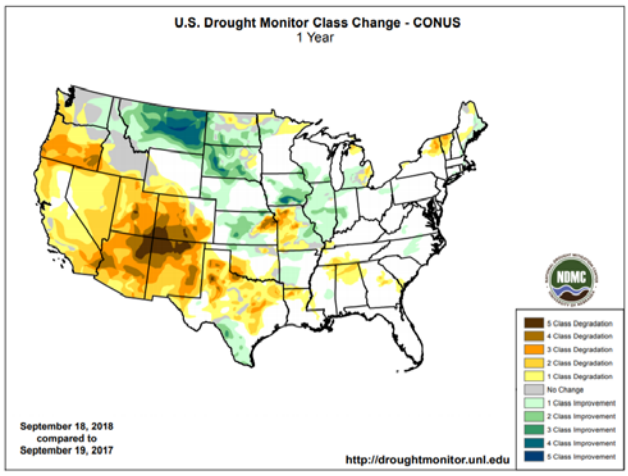
1 Month



6 Months



1 Year

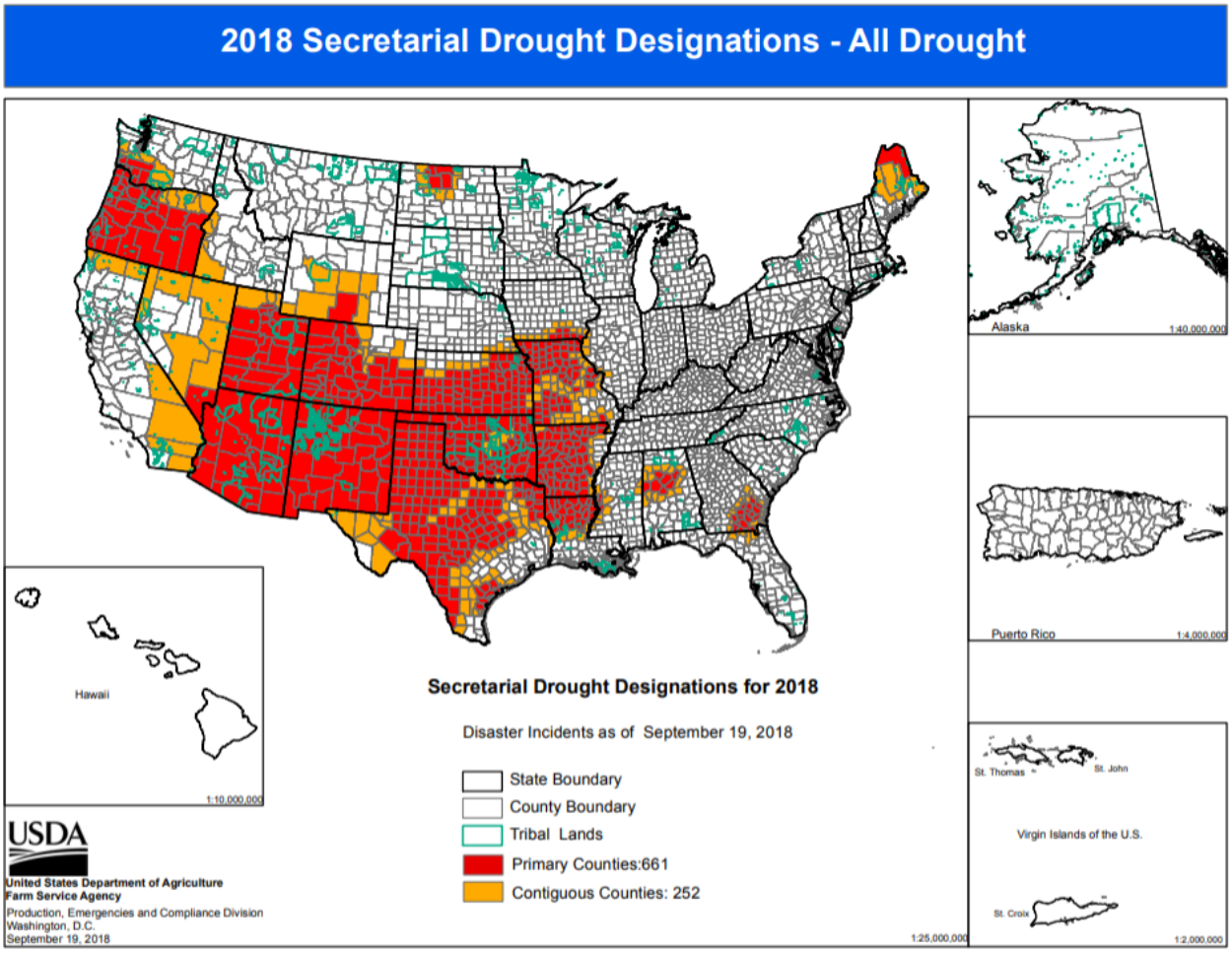


Changes in drought conditions over the last 12 months

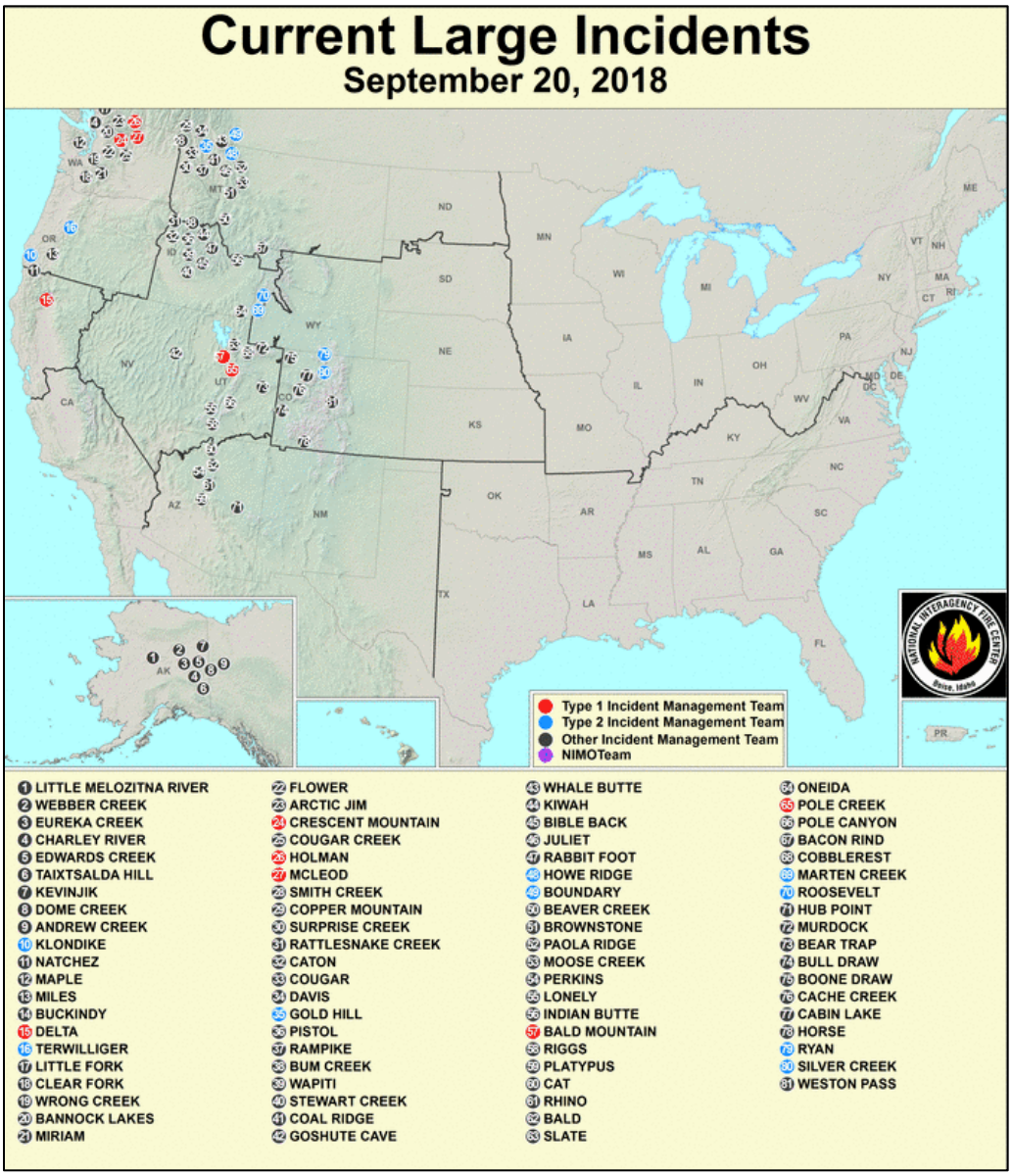
Highlighted Drought Resources

- 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

USDA 2018 Secretarial Drought Designations



Wildfires: [USDA Forest Service Active Fire Mapping]



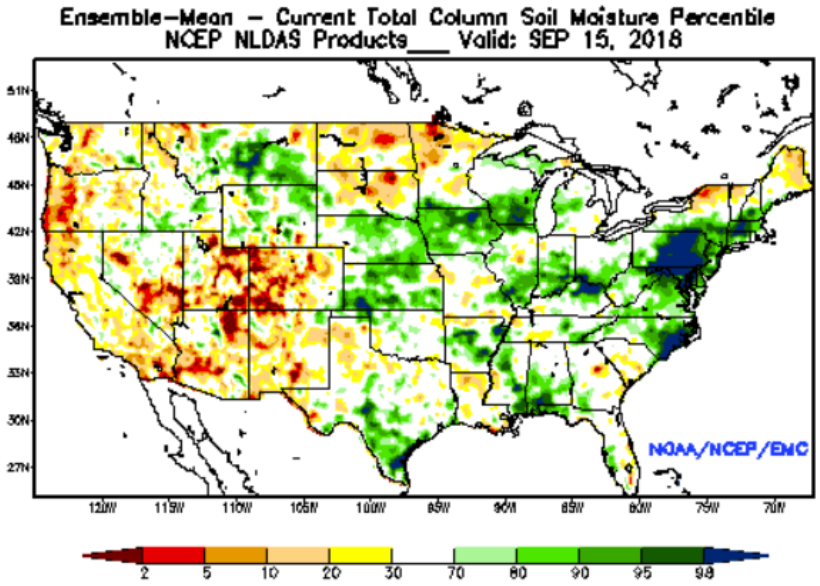
Highlighted Wildfire Resources

- National Interagency Fire Center
- InciWeb Incident Information System
- Significant Wildland Fire Potential Outlook

Other Climatic and Water Supply Indicators

Soil Moisture

Source: NOAA National Centers for Environmental Prediction



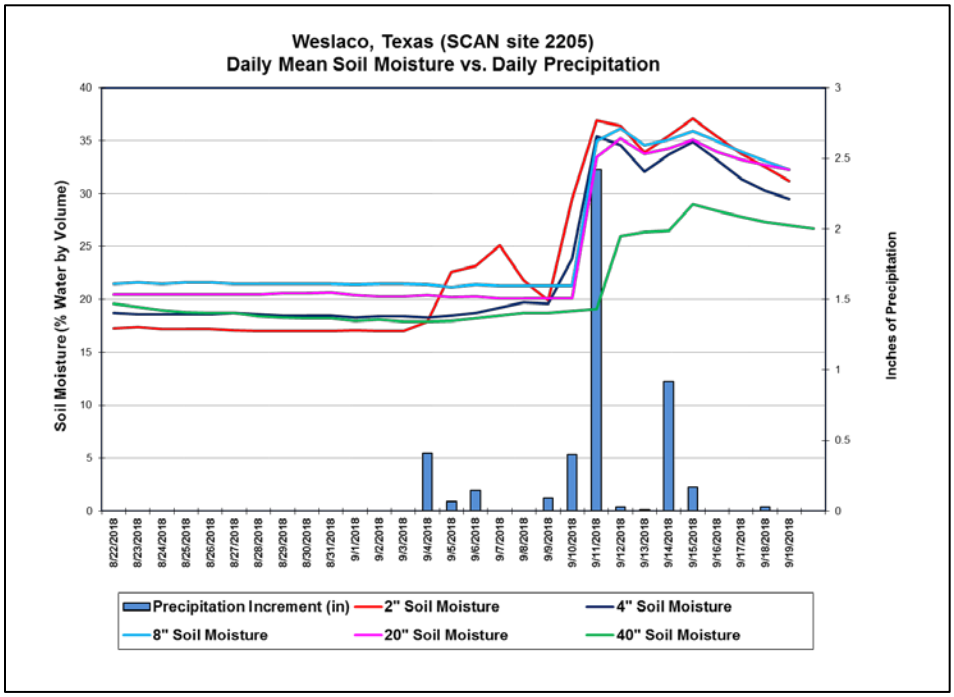
[Modeled soil moisture percentiles](#) as of September 15, 2018

Soil Moisture Data Portals

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

Soil Moisture Data

Source: NRCS [Soil Climate Analysis Network](#) (SCAN)

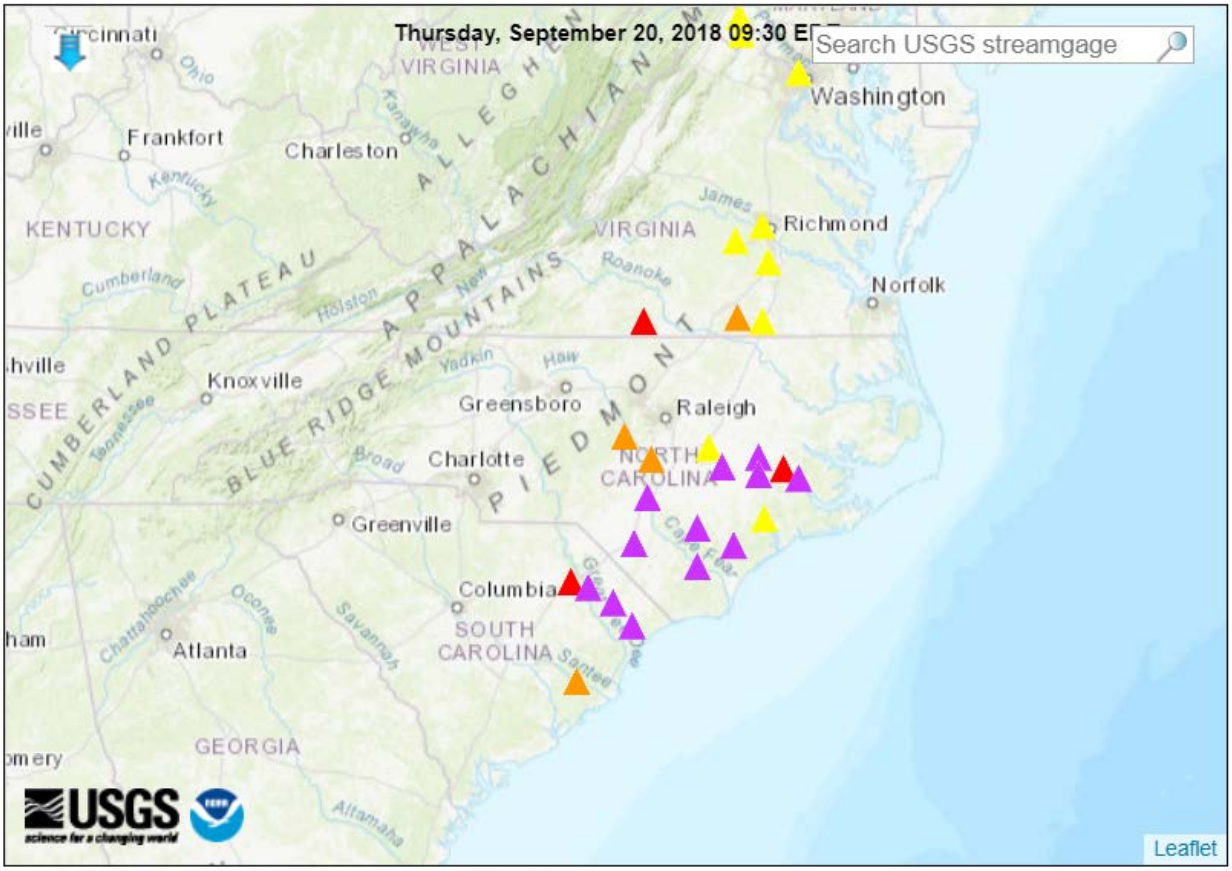


This chart shows the precipitation and soil moisture for the last 30 days at the [Weslaco SCAN site 2205](#), in Texas. The heavy precipitation on September 9-11 saw the soil moisture levels increase at all depths.

Streamflow

Source: USGS

Map of flood and high flow conditions



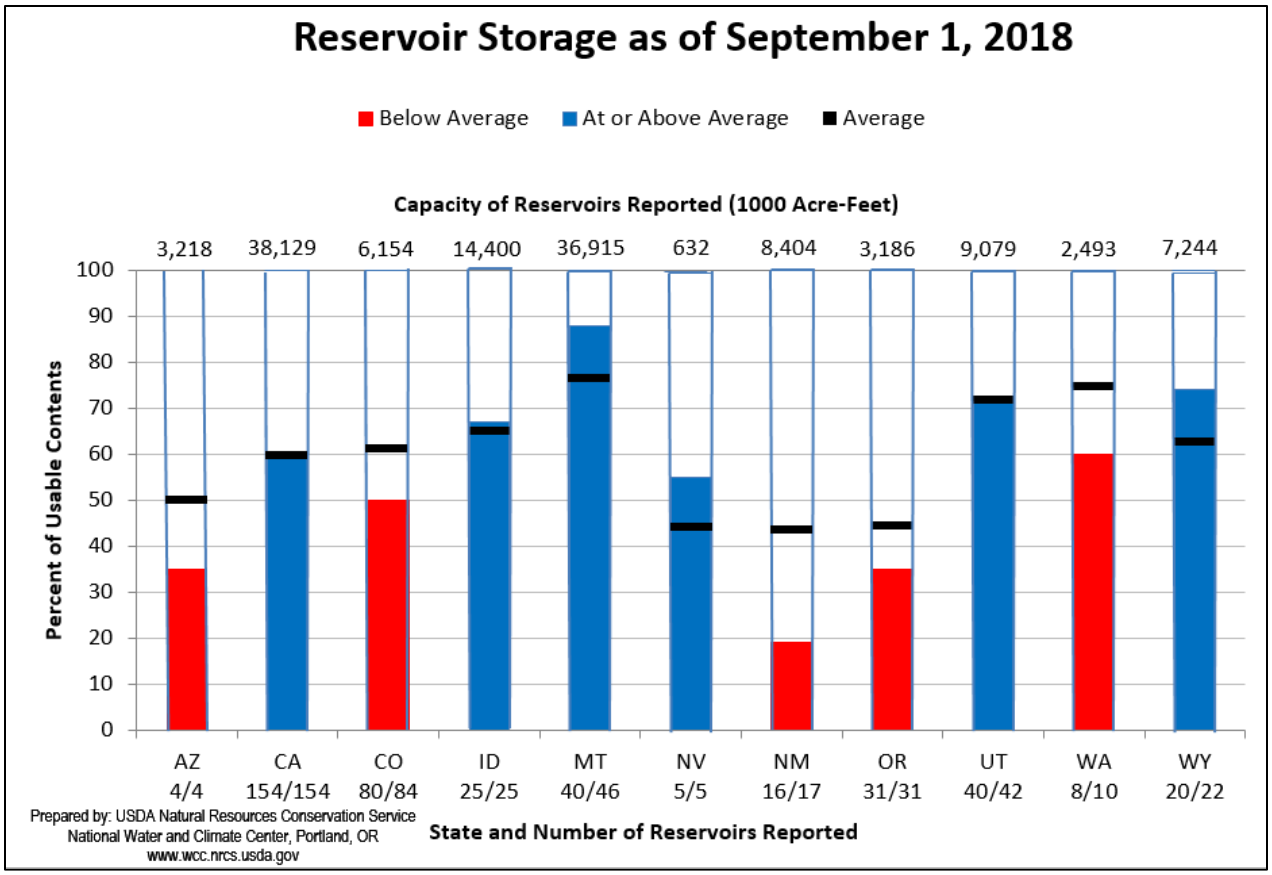
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
△ Streamgage with flood stage ○ Streamgage without flood stage						

[WaterWatch: Streamflow, drought, flood, and runoff conditions]

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center

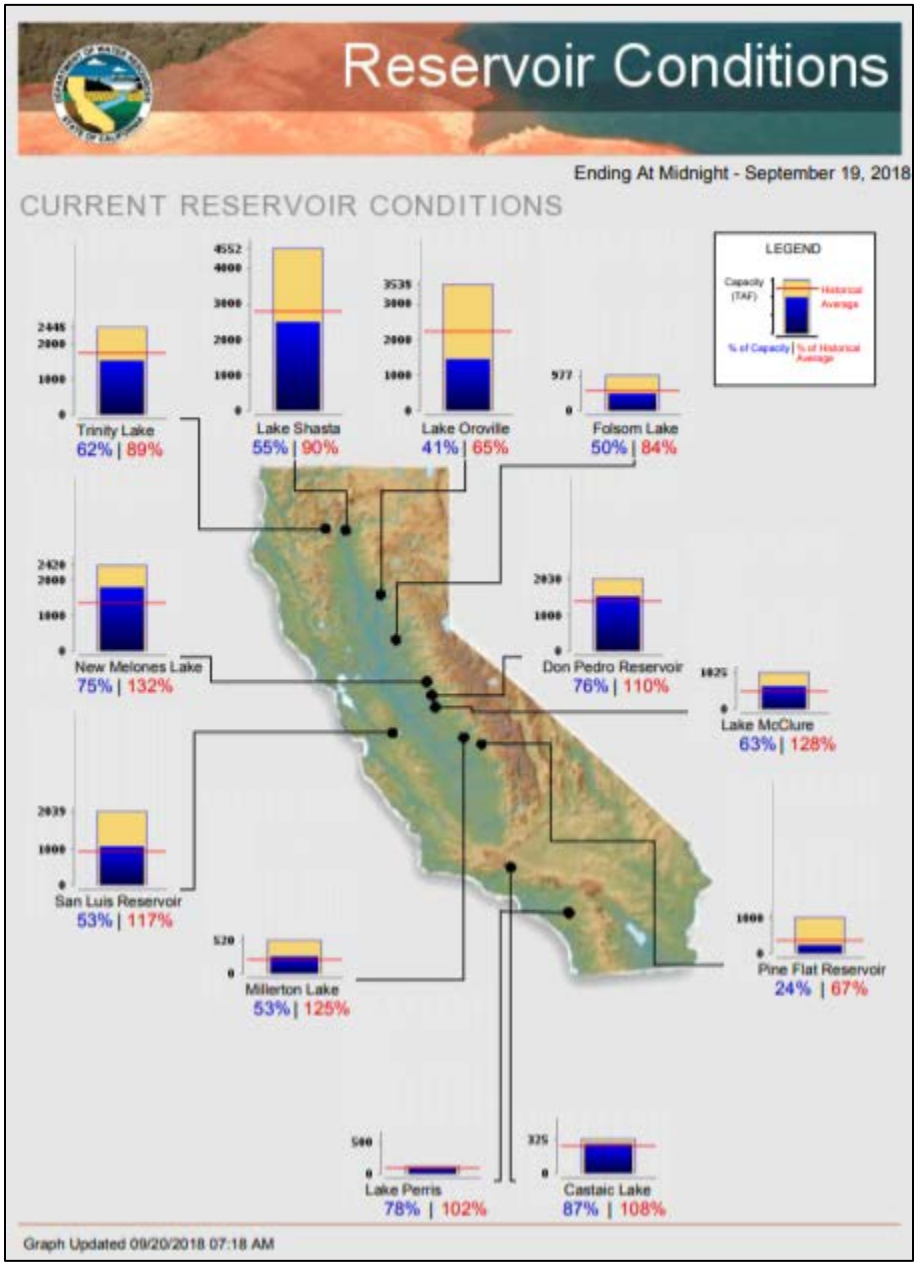


September 1, 2018 Reservoir Storage: Chart | Dataset

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

Current California Reservoir Conditions Source: California Department of Water Resources



Current California Reservoir Conditions

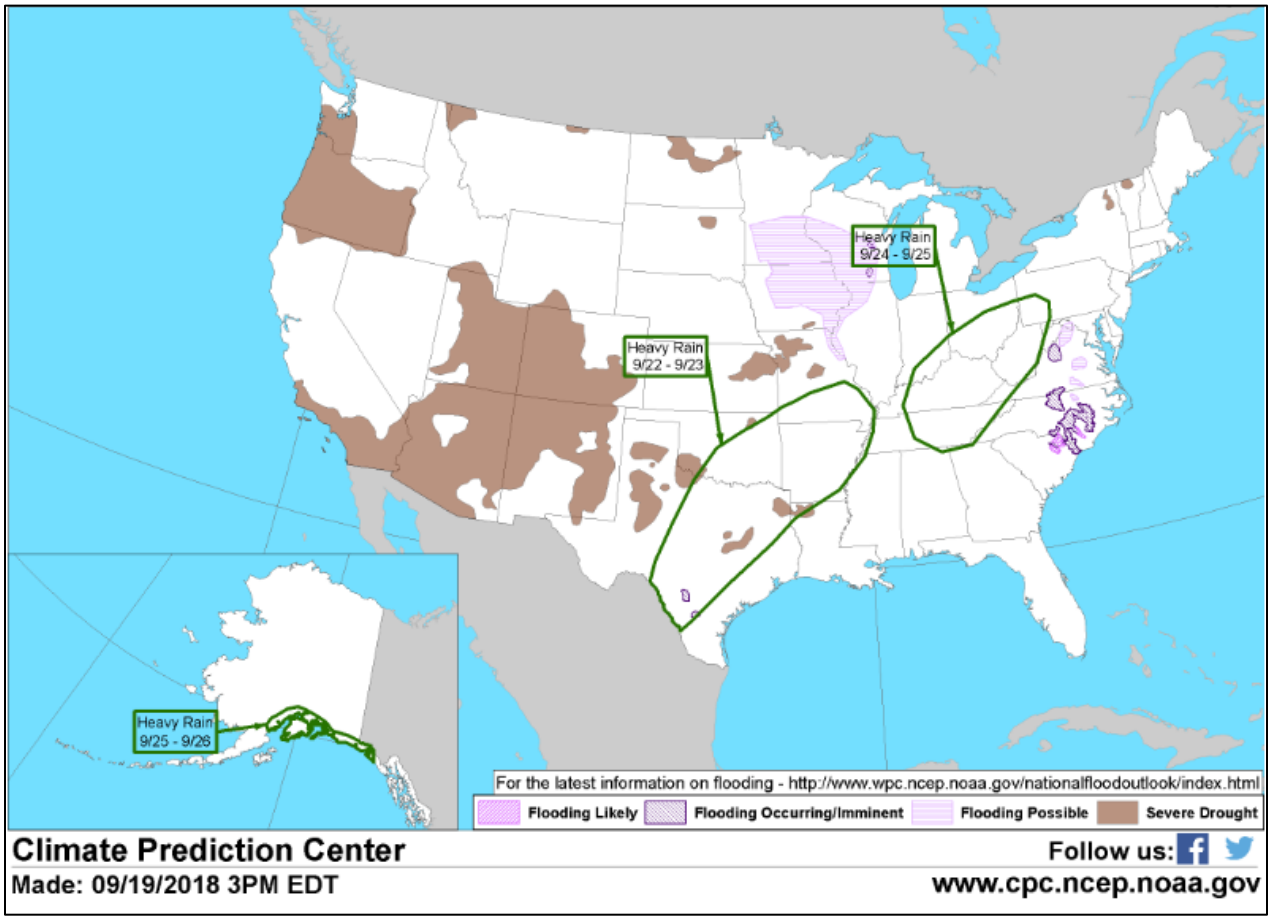
Short- and Long-Range Outlooks

Agricultural Weather Highlights

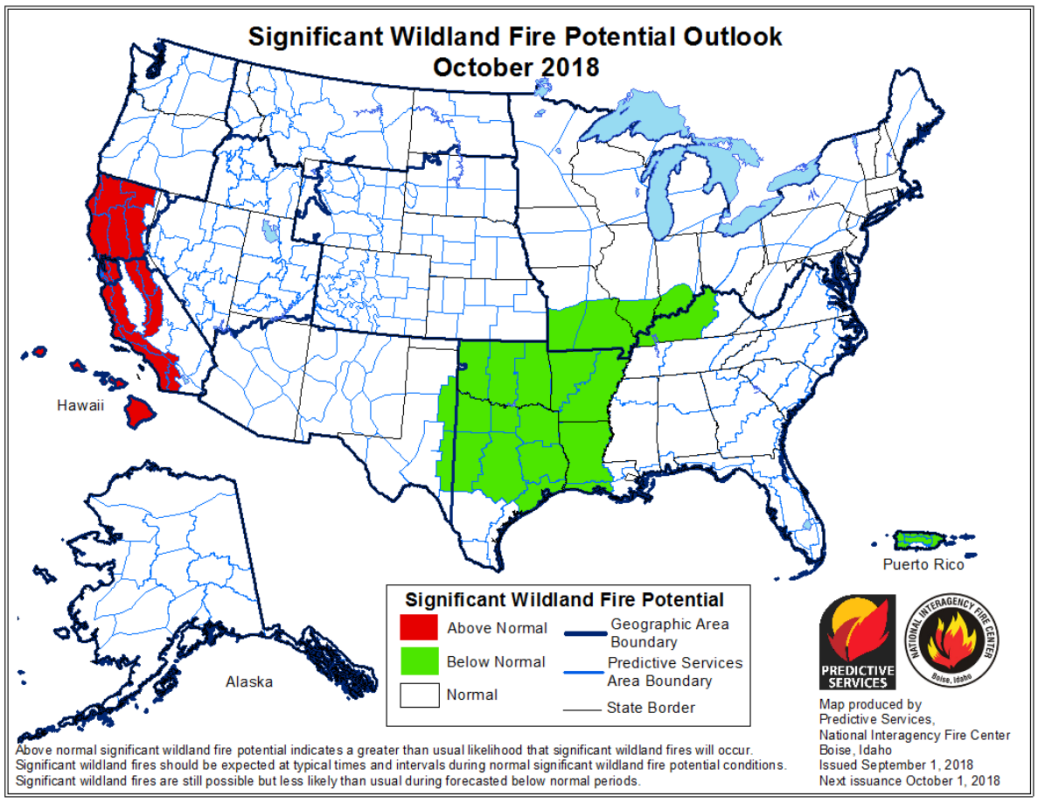
Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, Thursday, September 20: "Cool air will continue to lurk across the nation's northern tier and will make a brief, late-week surge across the Plains and Midwest. Meanwhile, tropical moisture associated with the remnants of T.D. Nineteen-E will be absorbed by a cold front, helping to generate locally heavy showers. Five-day rainfall totals could reach 1 to 3 inches in the upper Great Lakes region, and 2 to 6 inches from the southern Plains into the lower Ohio Valley. Many other areas of the central and eastern U.S., as well as the Pacific Northwest, will experience occasional showers, but California and the Great Basin will remain dry. The NWS 6- to 10-day outlook for September 25 – 29 calls for below-normal temperatures across the Plains and upper Midwest, while warmer-than-normal weather will prevail in the East and the Far West. Meanwhile, near- to below-normal precipitation in the West should contrast with wetter-than-normal conditions throughout the central and eastern U.S."

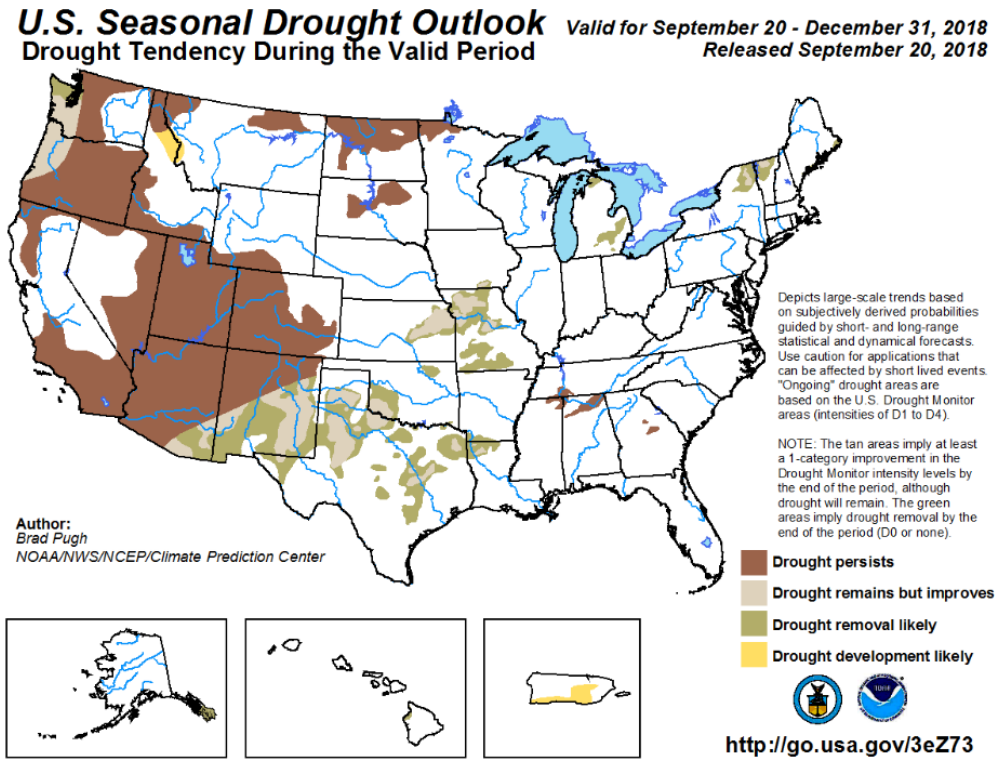
Weather Hazard Outlook September 22 – 26, 2018 Source: Climate Prediction Center



Significant Wildland Fire Potential Outlook Source: National Interagency Fire Center



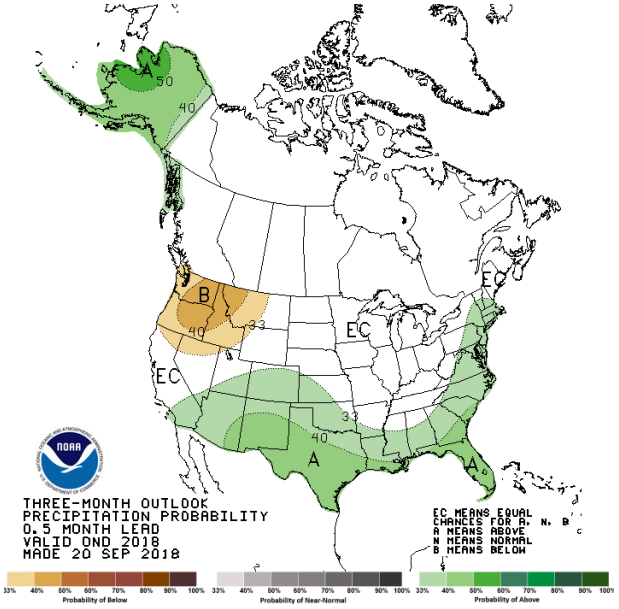
Seasonal Drought Outlook: September 20 - December 31, 2018 Source: National Weather Service



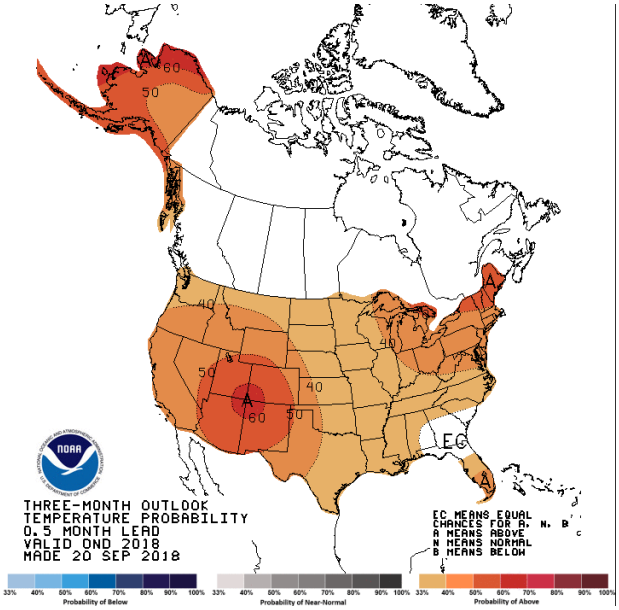
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



October-November-December (OND) 2018 precipitation and temperature outlook summaries

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.