

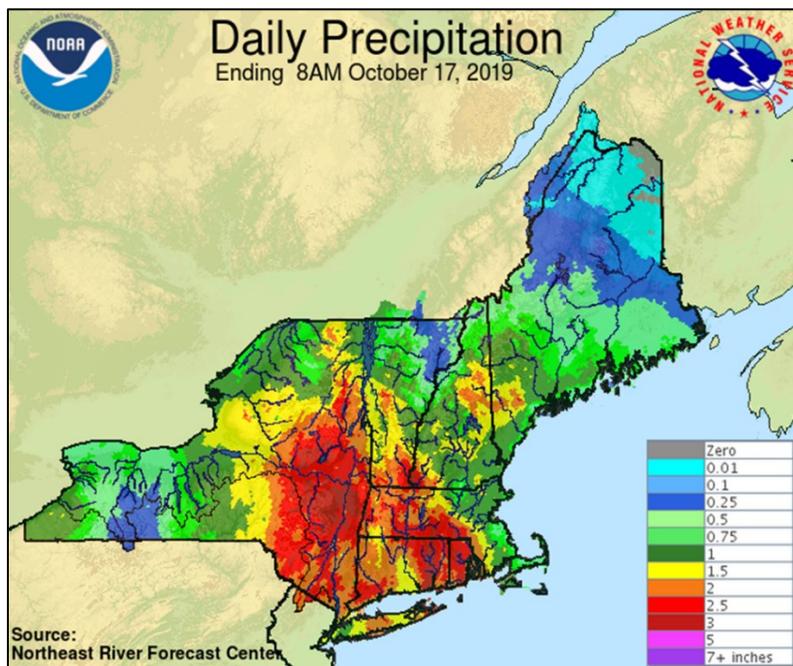
Water and Climate Update

October 17, 2019

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.

Precipitation	2	Other Climatic and Water Supply Indicators	11
Temperature.....	6	Short- and Long-Range Outlooks.....	16
Drought	8	More Information	18

Nor'easter intensifies into bomb cyclone



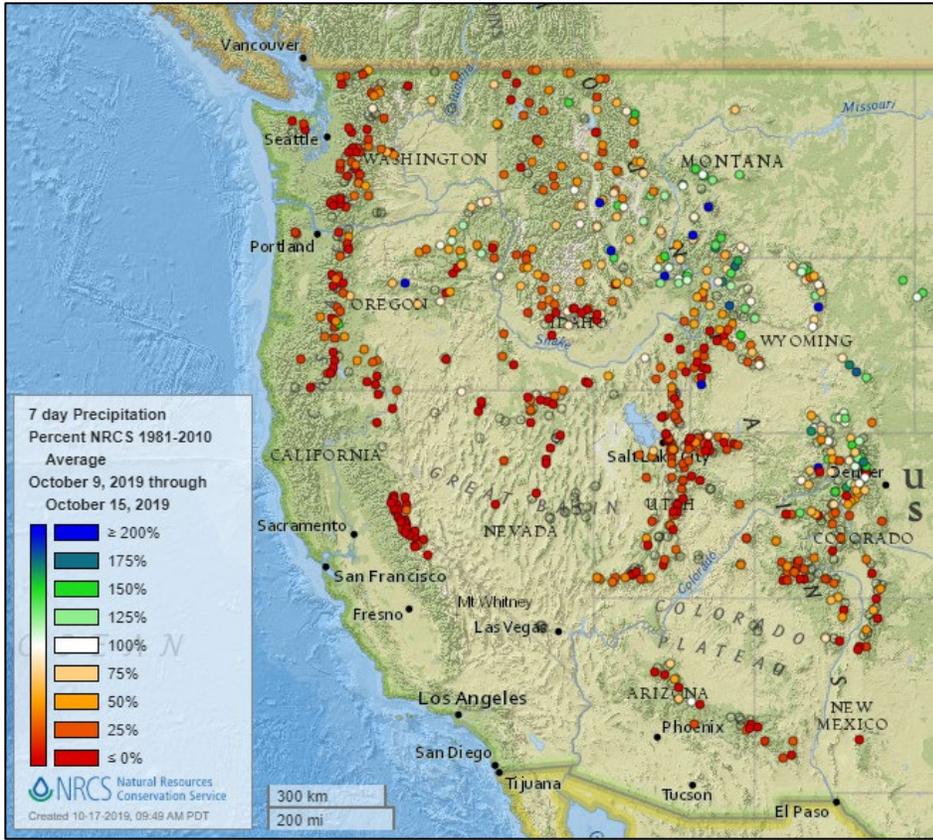
A Nor'easter is intensifying rapidly with the expected barometric pressure drop of 30 millibars in 24 hours, classifying it as a bomb cyclone. The storm has the equivalent strength and low pressure as a tropical storm, or category 2 hurricane. More than 550,000 homes and businesses are without power with wind damage, downed trees, and travel disruption in the area. Gusts were recorded up to 90 mph in Cape Cod, Massachusetts, while the New England extreme weather headquarters at Mount Washington, New Hampshire, recorded a gust of 128 mph. The heaviest rainfall reported was 6.14 inches in Waterford, Connecticut. This is the second strong storm to impact the Northeast in a week. The storm will continue to affect the area today.

Related:

- [NWS NCEP Storm Summary Message](#) - NWS Weather Prediction Center
- [A bomb cyclone is knocking out power and disrupting travel in the Northeast](#) - CNN
- [Bomb cyclone or 'explosive cyclogenesis' knocks out power to 600,000 during a 'wild night'](#) - USA Today
- [A 'bomb cyclone' takes aim at New York and Boston, bringing winds up to 55 mph](#) - NBC News
- [More than 500,000 lose power to bomb cyclone in Northeast](#) - UPI.com

Precipitation

Last 7 Days, NRCS SNOTEL Network



[7-day precipitation percent of average map](#)

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

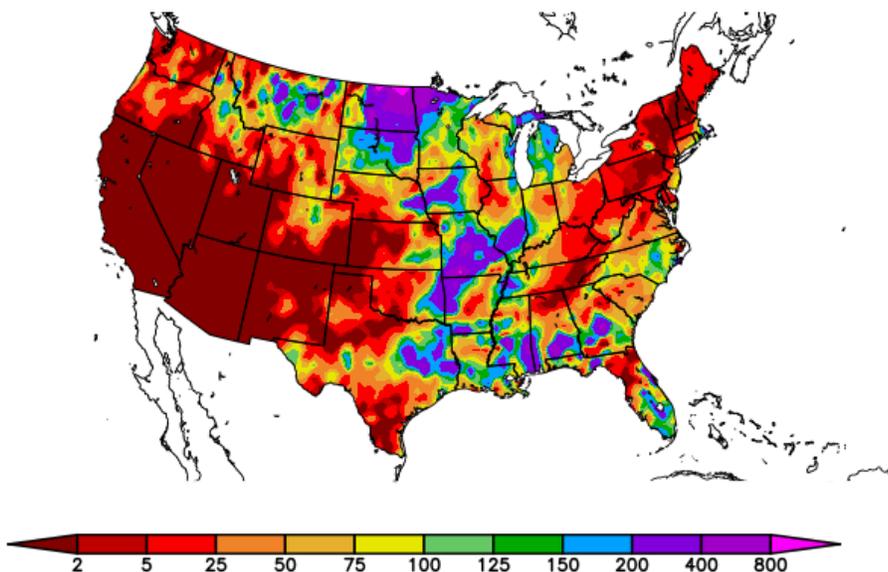
Last 7 Days, National Weather Service (NWS) Networks

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](#)

Percent of Normal Precipitation (%)
10/9/2019 – 10/15/2019



Generated 10/16/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

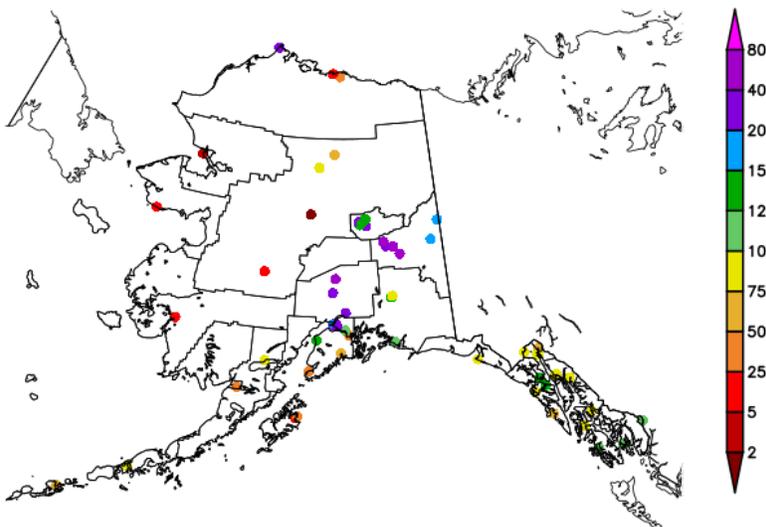
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)
10/9/2019 – 10/15/2019



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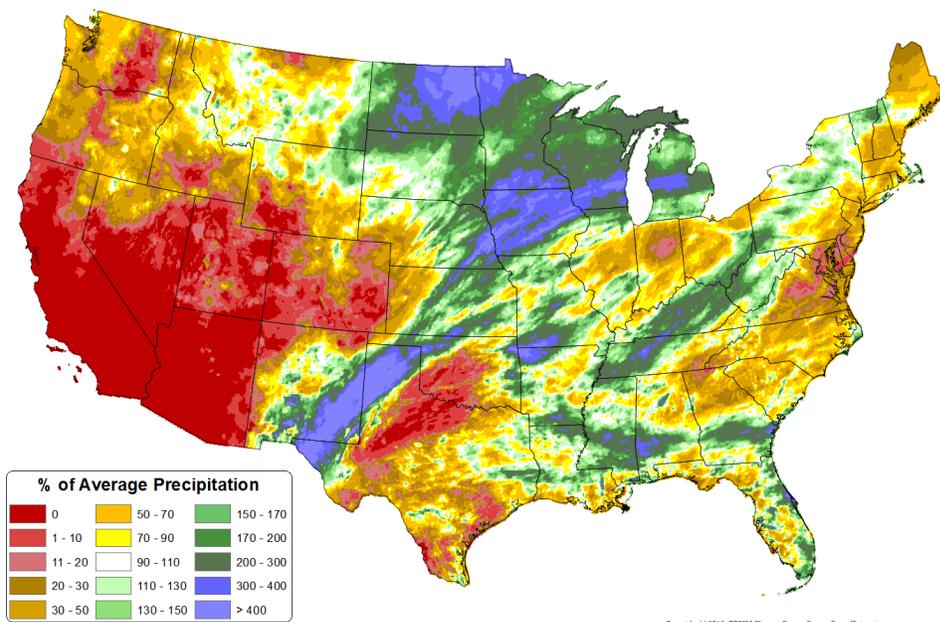
Water and Climate Update

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

Source: PRISM

Total Precipitation Anomaly: 01 Oct 2019 - 16 Oct 2019
Period ending 7 AM EST 16 Oct 2019
Base period: 1981-2010
(Map created 17 Oct 2019)

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

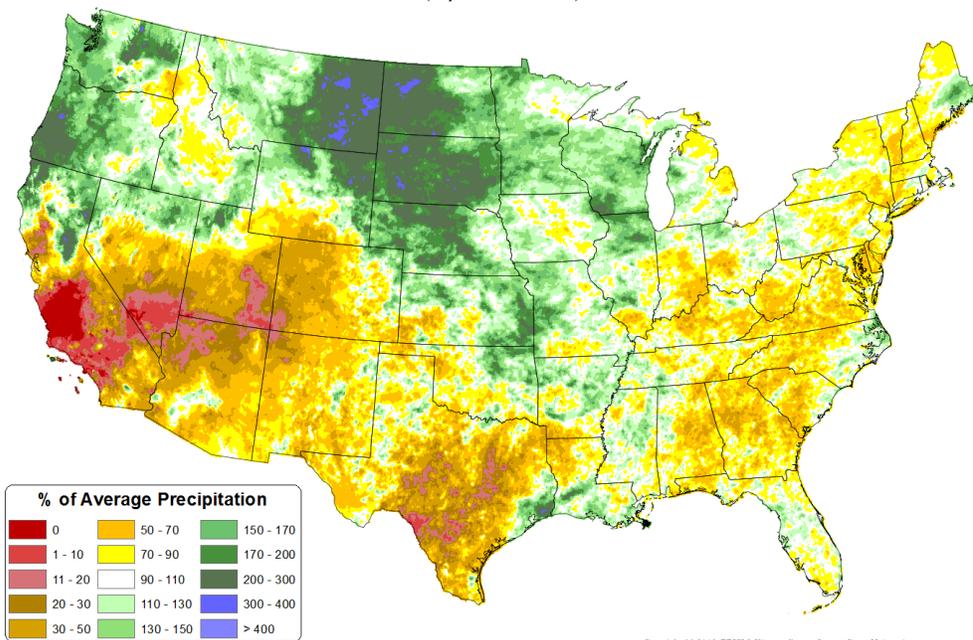


Last 3 Months, All Available Data Including SNOTEL and NWS Networks

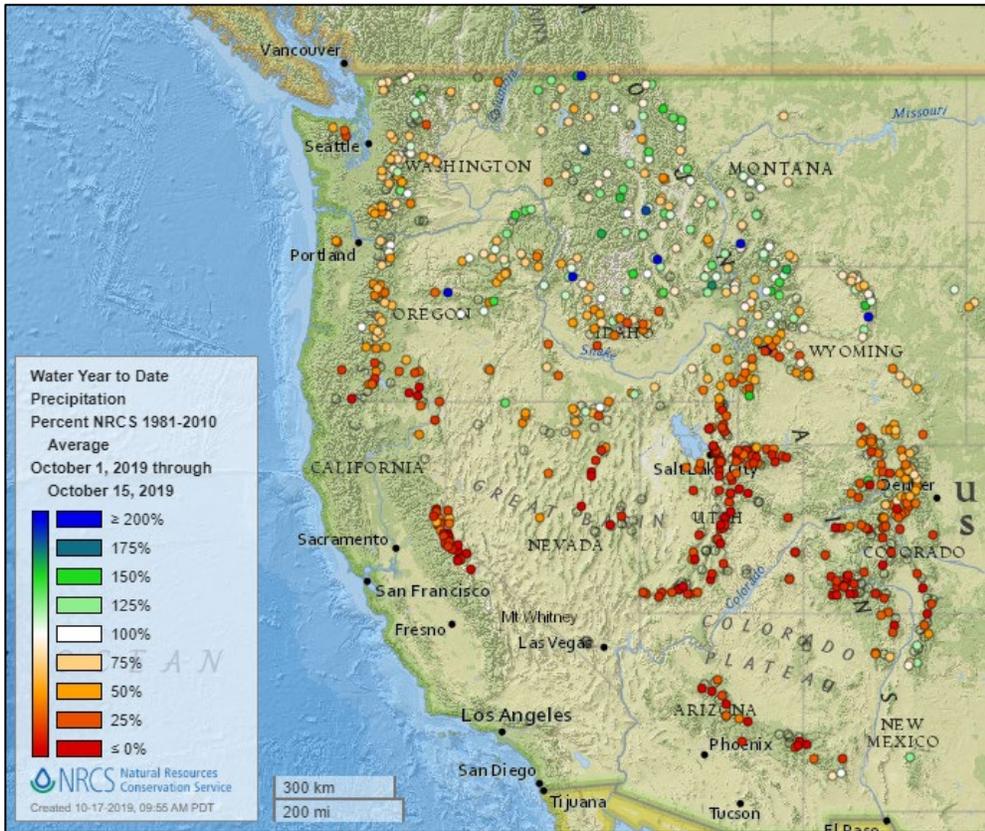
Source: PRISM

[July through September 2019 total precipitation percent of average map](#)

Total Precipitation Anomaly: Jul 2019 - Sep 2019
Period ending 7 AM EST 30 Sep 2019
Base period: 1981-2010
(Map created 02 Oct 2019)



Water Year-to-Date, NRCS SNOTEL Network



[2020 water year-to-date precipitation percent of average map](#)

See also:

[2020 water year-to-date precipitation values \(inches\) map](#)

Temperature

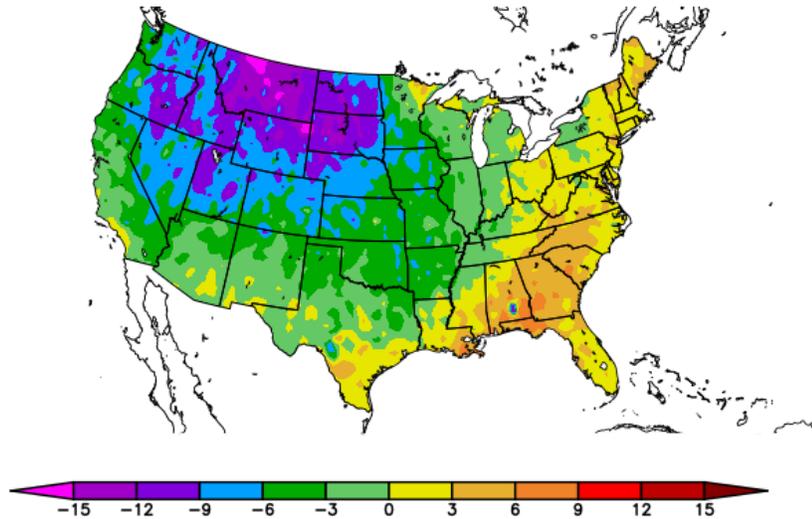
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map](#) for the contiguous U.S.

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

Departure from Normal Temperature (F)
10/9/2019 – 10/15/2019



Generated 10/16/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

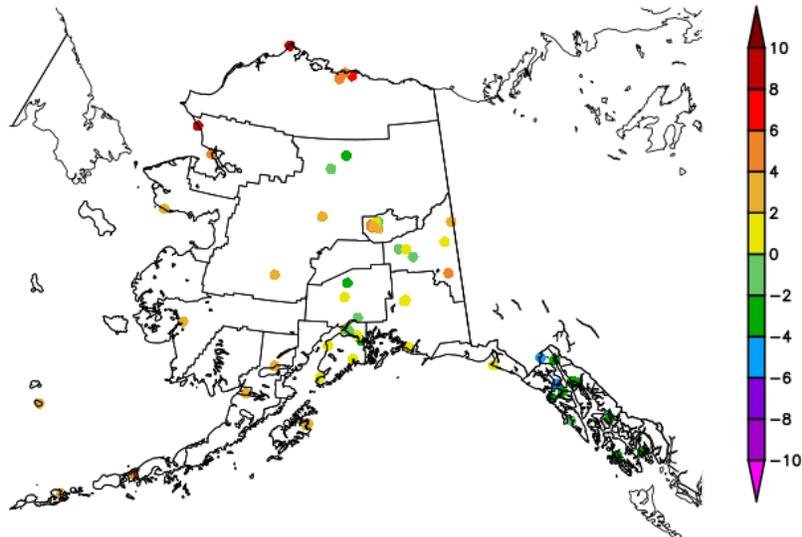
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
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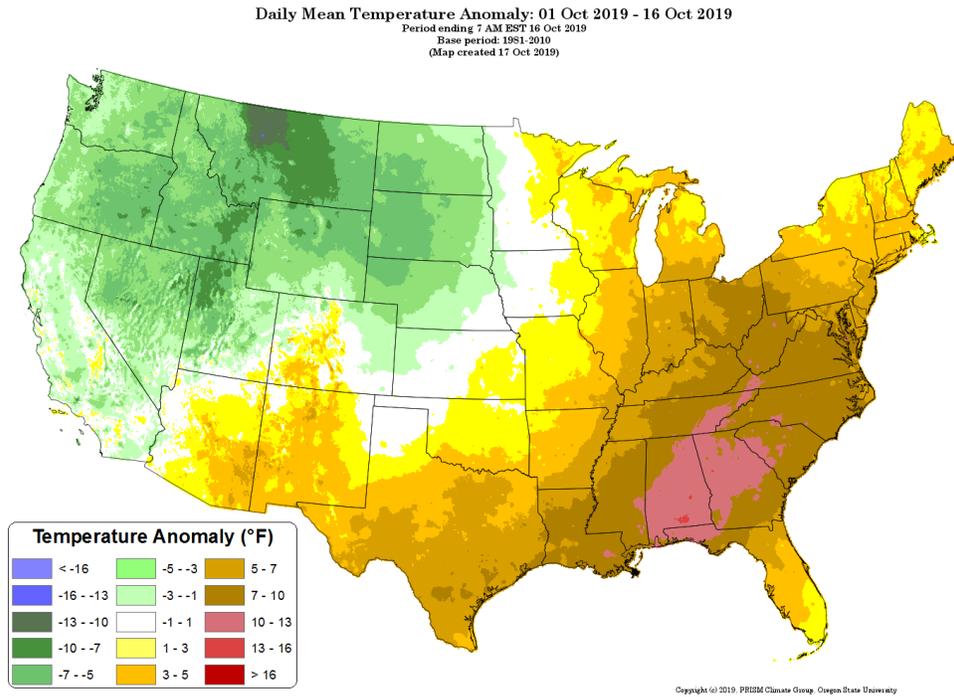
NOAA Regional Climate Centers

Water and Climate Update

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

Source: PRISM

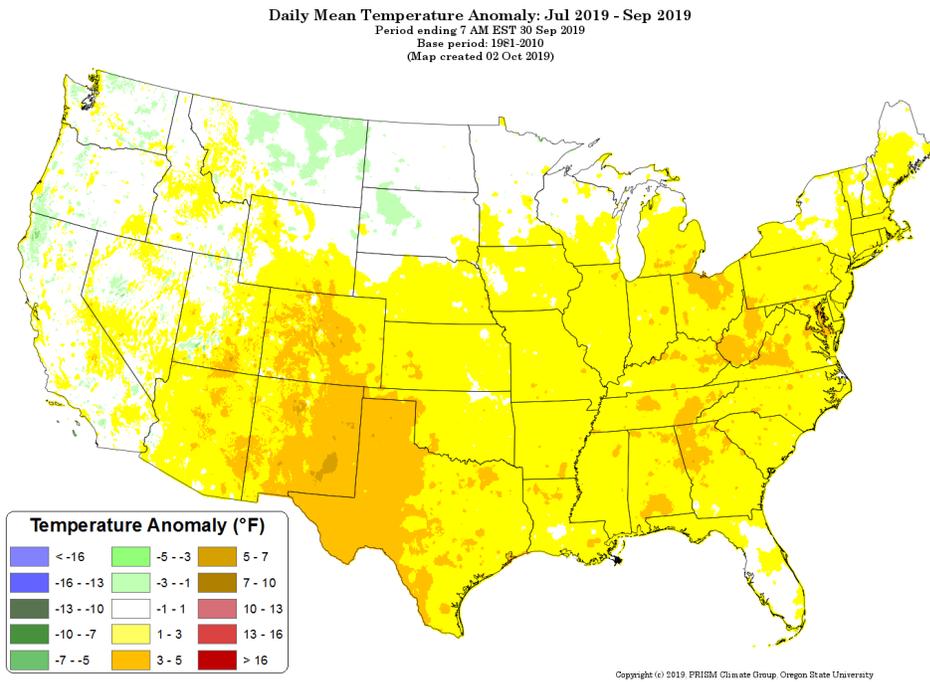
[Month-to-date national daily mean temperature anomaly map](#)



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

Source: PRISM

[July through September 2019 daily mean temperature anomaly map](#)



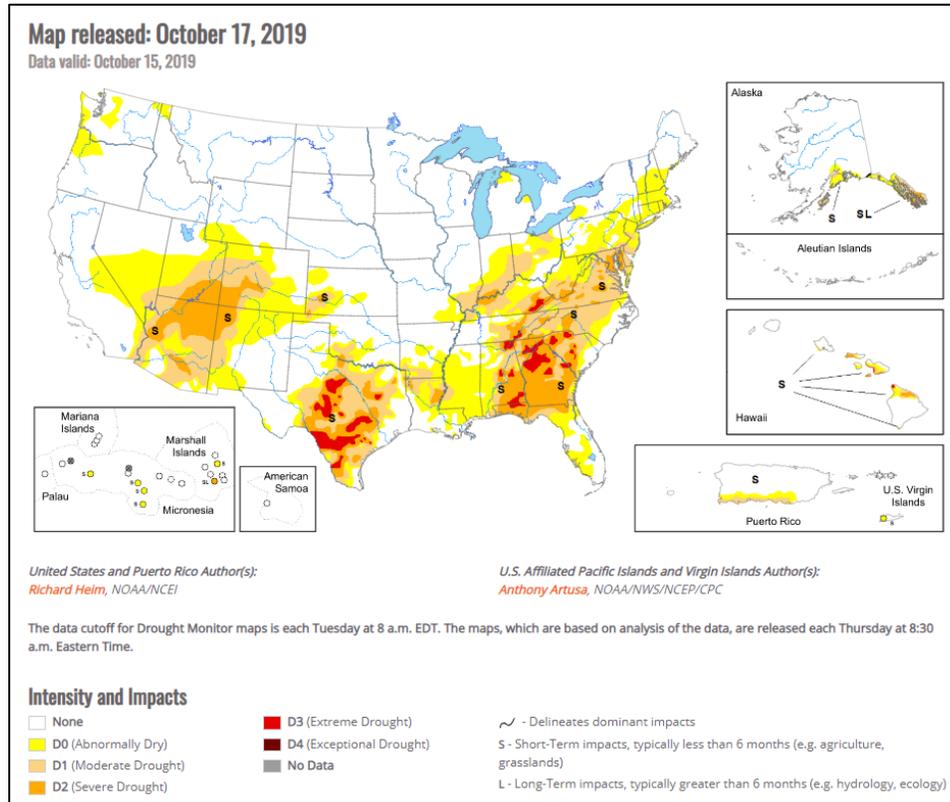
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



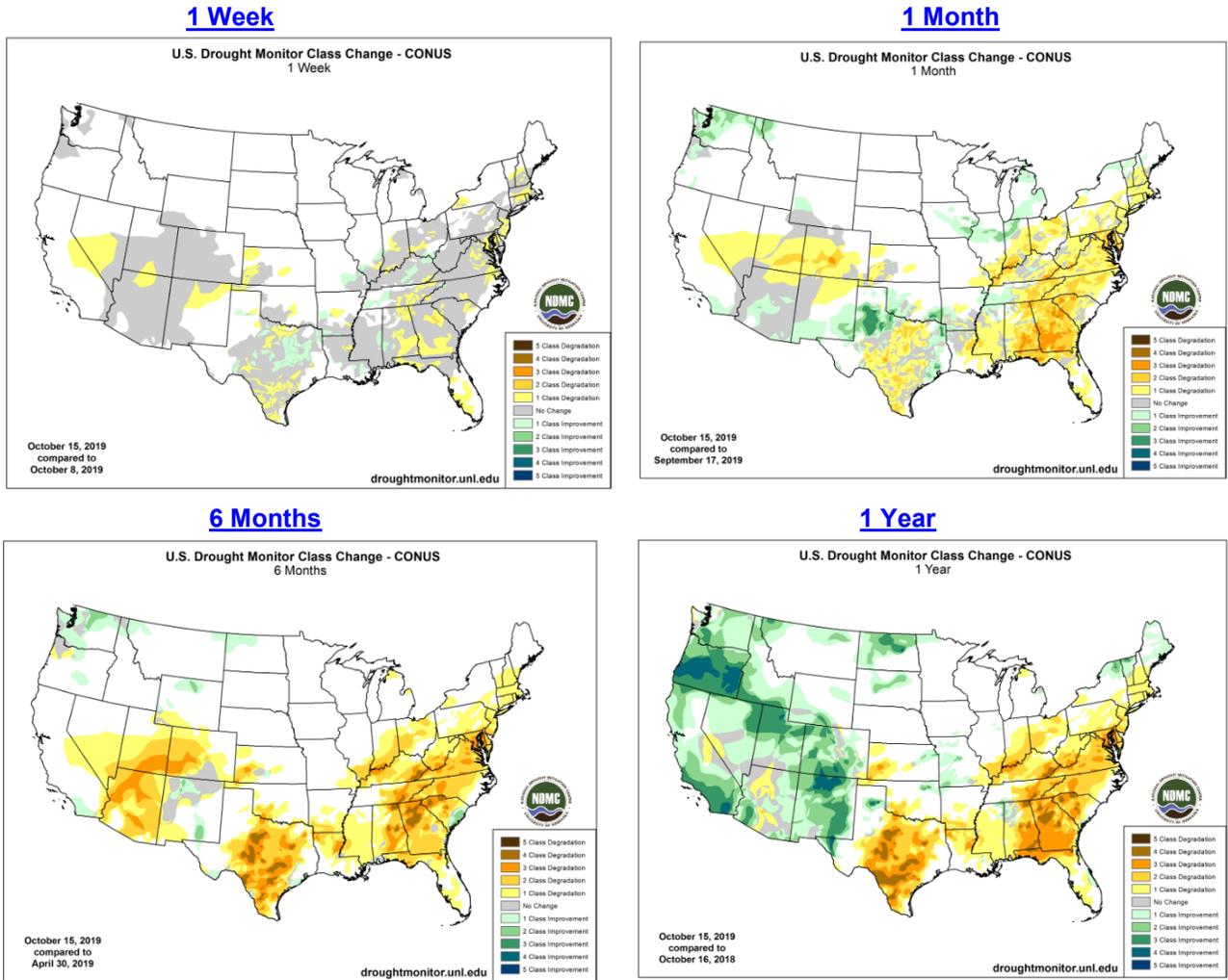
Current [National Drought Summary](#), October 17, 2019

Source: National Drought Mitigation Center

“A large upper-level low pressure system moved in the jet stream flow across the contiguous U.S. (CONUS) during this U.S. Drought Monitor (USDM) week, dragging surface lows and cold fronts along with it. Cooler air followed the fronts, bringing a colder-than-normal week to most of the country west of the Appalachians. Temperatures still averaged warmer than normal across the Southeast and parts of the Northeast. Above-normal precipitation accompanied the fronts and lows across the northern Plains, the central Plains to Mid-Mississippi Valley, and parts of Texas, the Great Lakes, and Southeast. Rain was moving along a stationary front across parts of the Southeast as the USDM week ended. Any rain that falls after the 12Z (7:00 a.m. EST) cutoff for this week’s USDM will be considered for next week’s map. Most of the West, parts of the central to southern Plains, and most of the Tennessee Valley to New England was drier than normal as the USDM week ended, with many of these areas receiving no precipitation. Soils continued to dry out in the Southwest, southern Plains, Ohio Valley, and East, and crops, pasture, and rangeland was in poor to very poor condition in more than 50% of the area in states in these regions. Streamflow was very low or near record low levels across the Southeast to southern New England. Precipitation deficits for the last 4 months of more than 10 inches below normal were common across the Southeast and parts of Texas, and 4-month deficits of 6 inches or more were evident across the Mid-Atlantic and Northeast regions. The dry conditions, coupled with increased evapotranspiration caused by unusually hot temperatures of the last couple months, resulted in very low values for drought indices such as the Standardized Precipitation Index (SPI) and Standardized Precipitation Evapotranspiration Index (SPEI). The streamflow, soil moisture, vegetation conditions, SPI, and SPEI were the basis for changes on this week’s USDM map.”

Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center



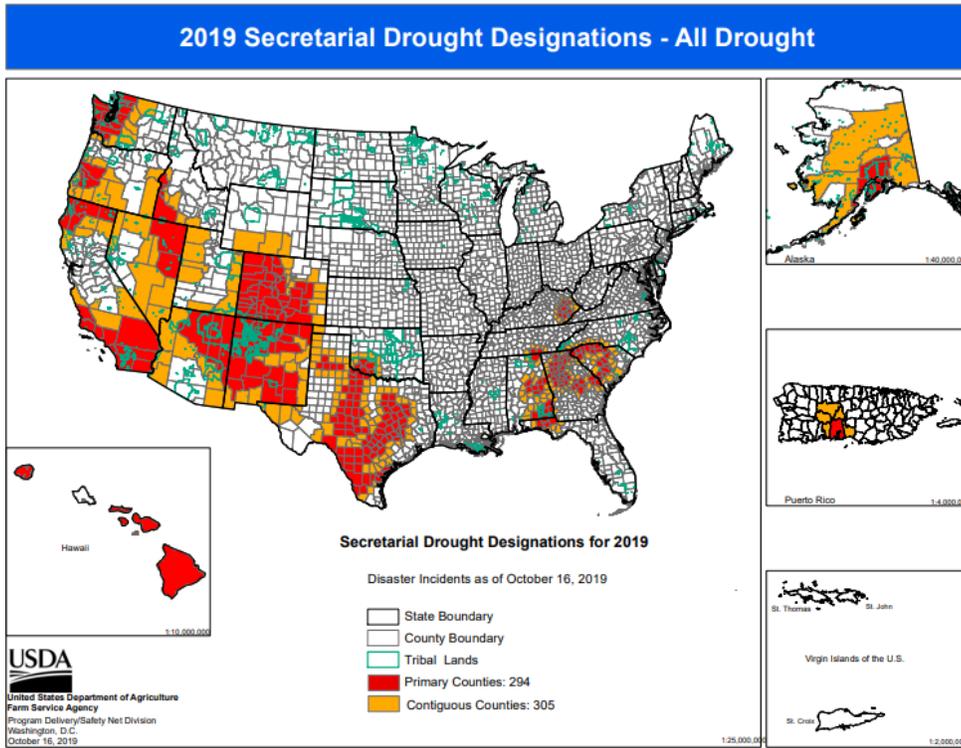
[Changes in Class drought conditions over the last 12 months for the contiguous U.S.](#)

Highlighted Drought Resources

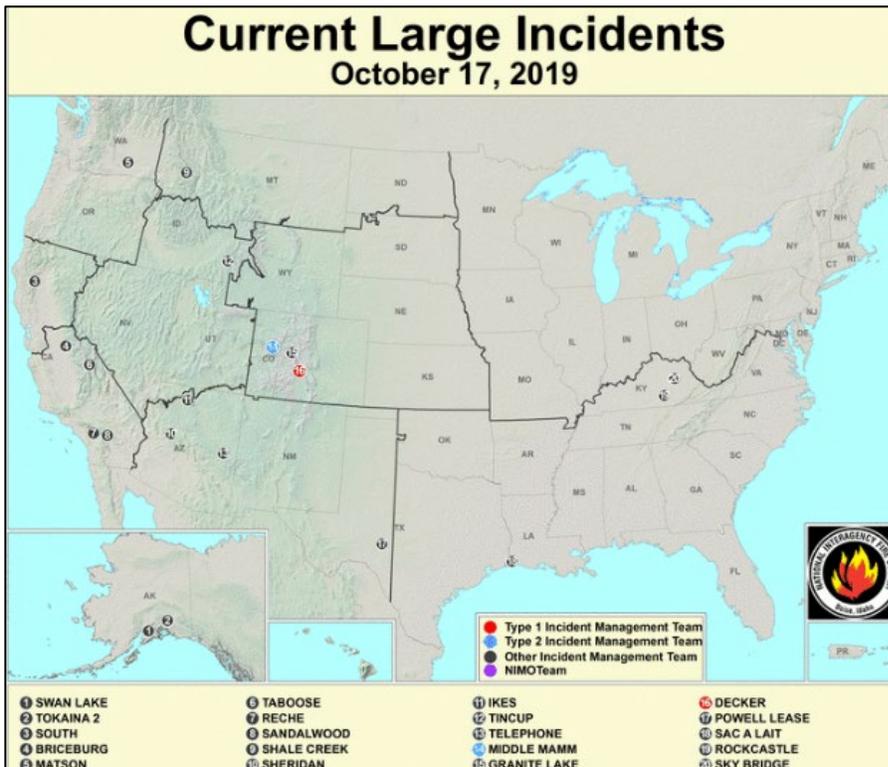
- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)
- [U.S. Population in Drought, Weekly Comparison](#)
- [USDA Disaster and Drought Information](#)

Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: USDA Forest Service Active Fire Mapping



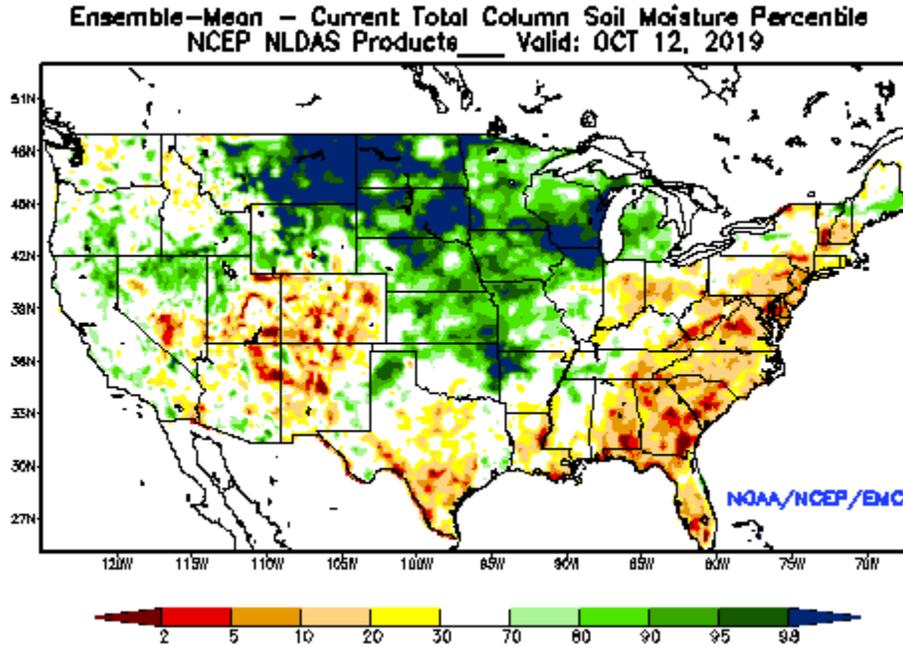
Highlighted Wildfire Resources

- [National Interagency Fire Center](#)
- [InciWeb Incident Information System](#)
- [Significant Wildland Fire Potential Outlook](#)

Other Climatic and Water Supply Indicators

Soil Moisture

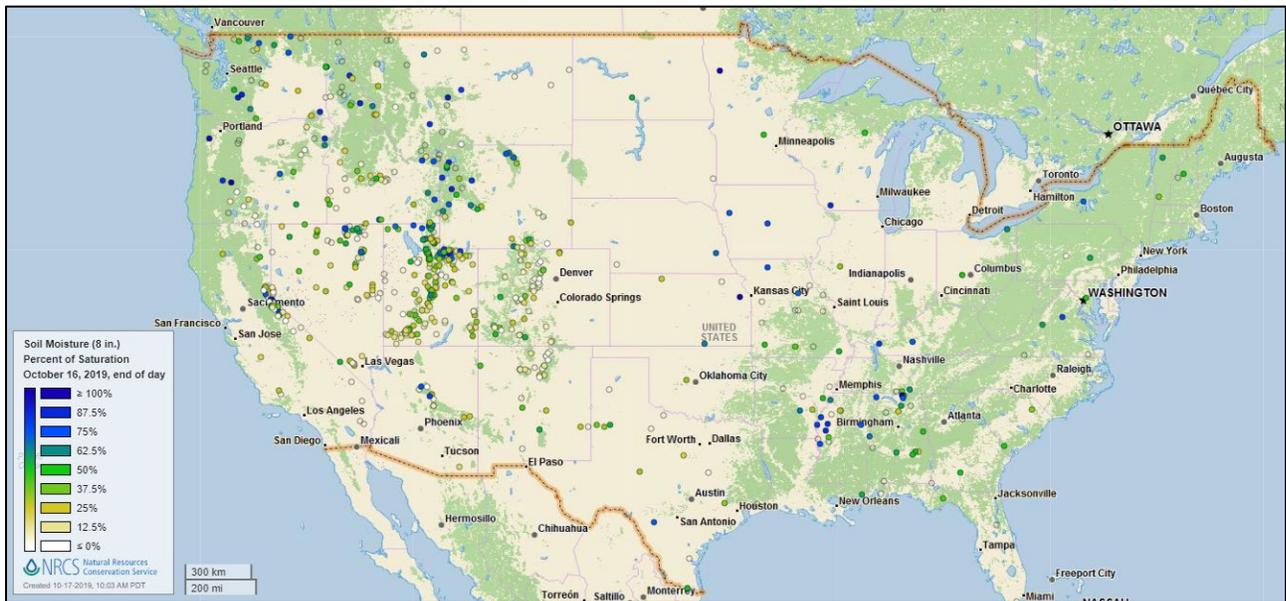
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of October 12, 2019

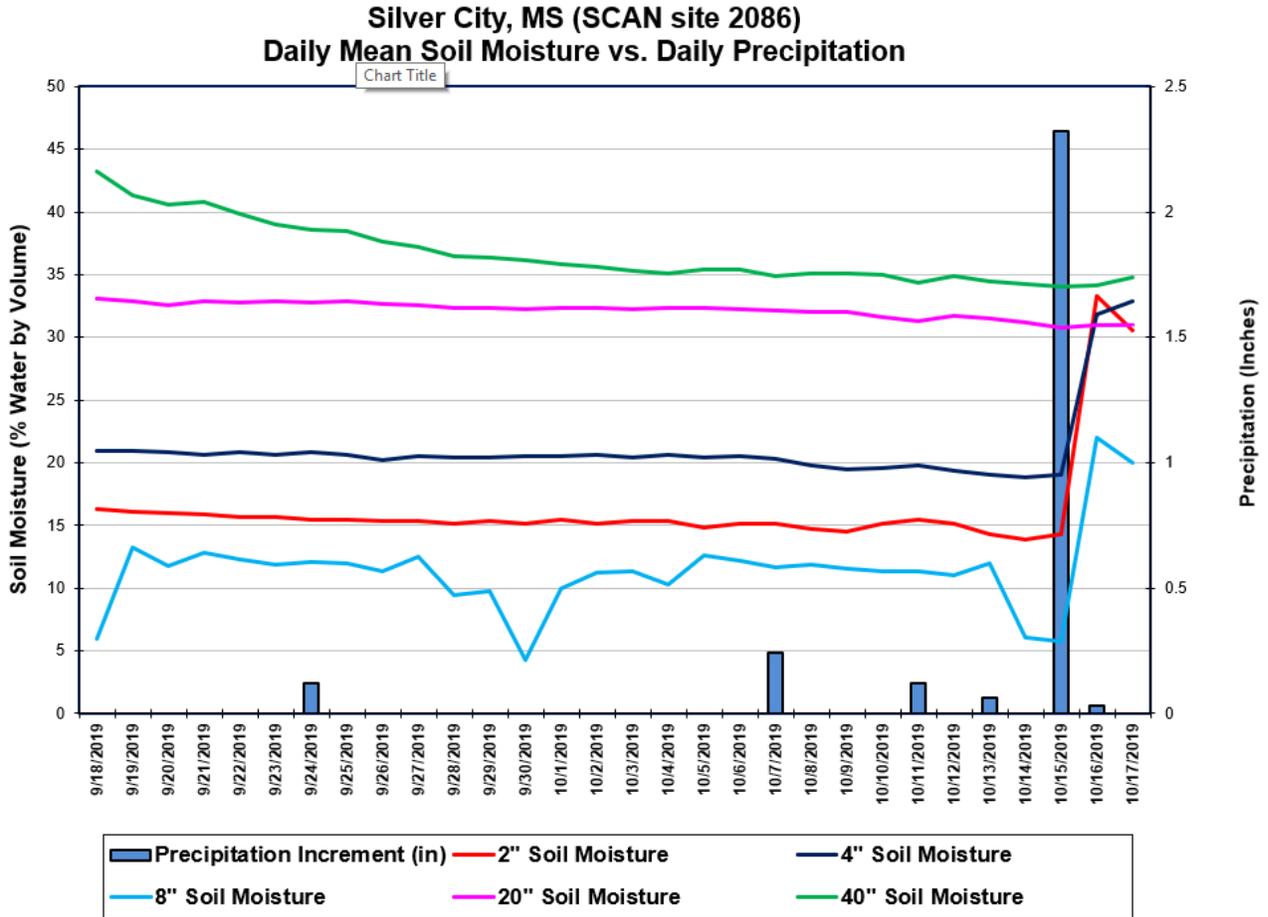
Soil Moisture Percent of Saturation

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



Soil Moisture Data

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



This chart shows the soil moisture and precipitation for the last 30 days at the [Silver City SCAN site](#) in Mississippi. Precipitation on October 15 was 2.32 inches and increased the soil moisture at the -2", -4", and -8" sensor depths. The deeper sensors showed a very slight increase in soil moisture.

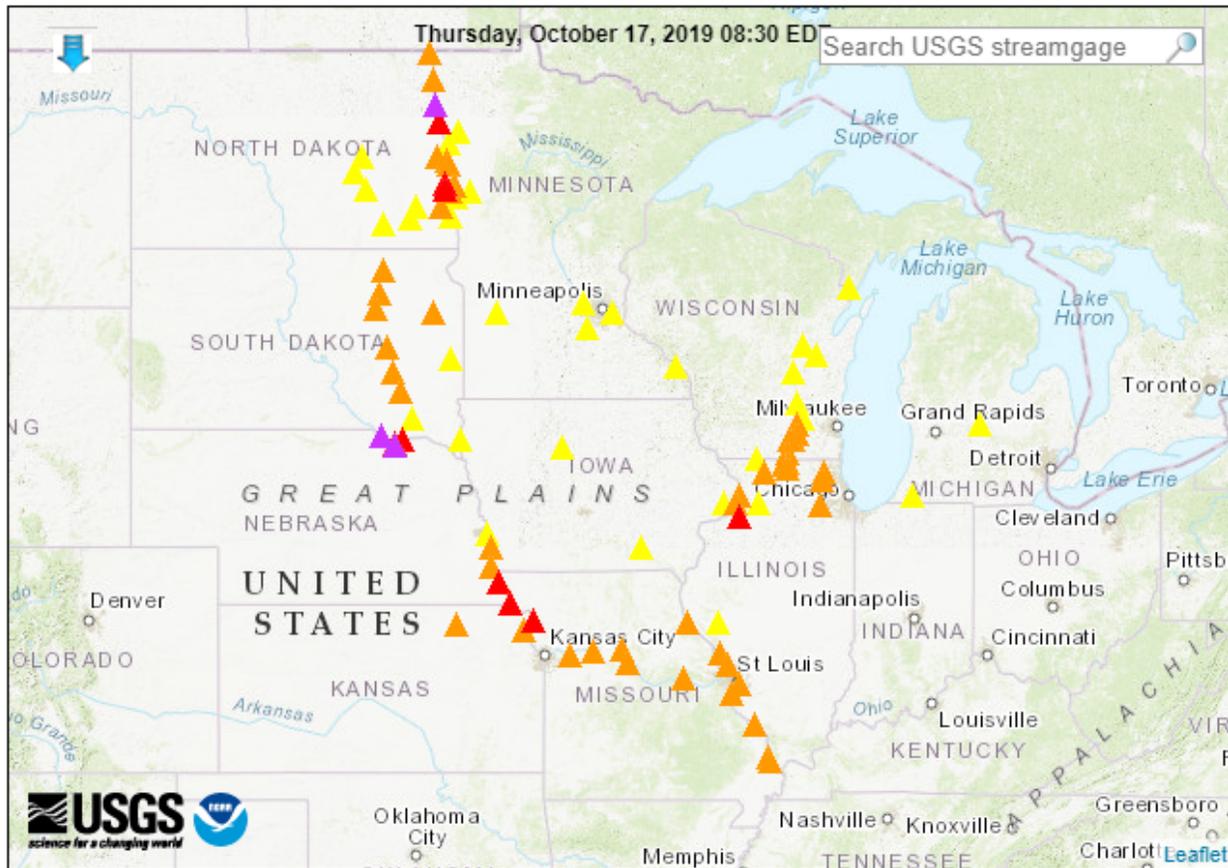
Soil Moisture Data Portals

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

Streamflow, Drought, Flood, and Runoff

Source: U.S. Geological Survey

Map of flood and high flow conditions
 (60 in floods [major: 3, moderate: 9, minor: 48], 43 in near-flood)



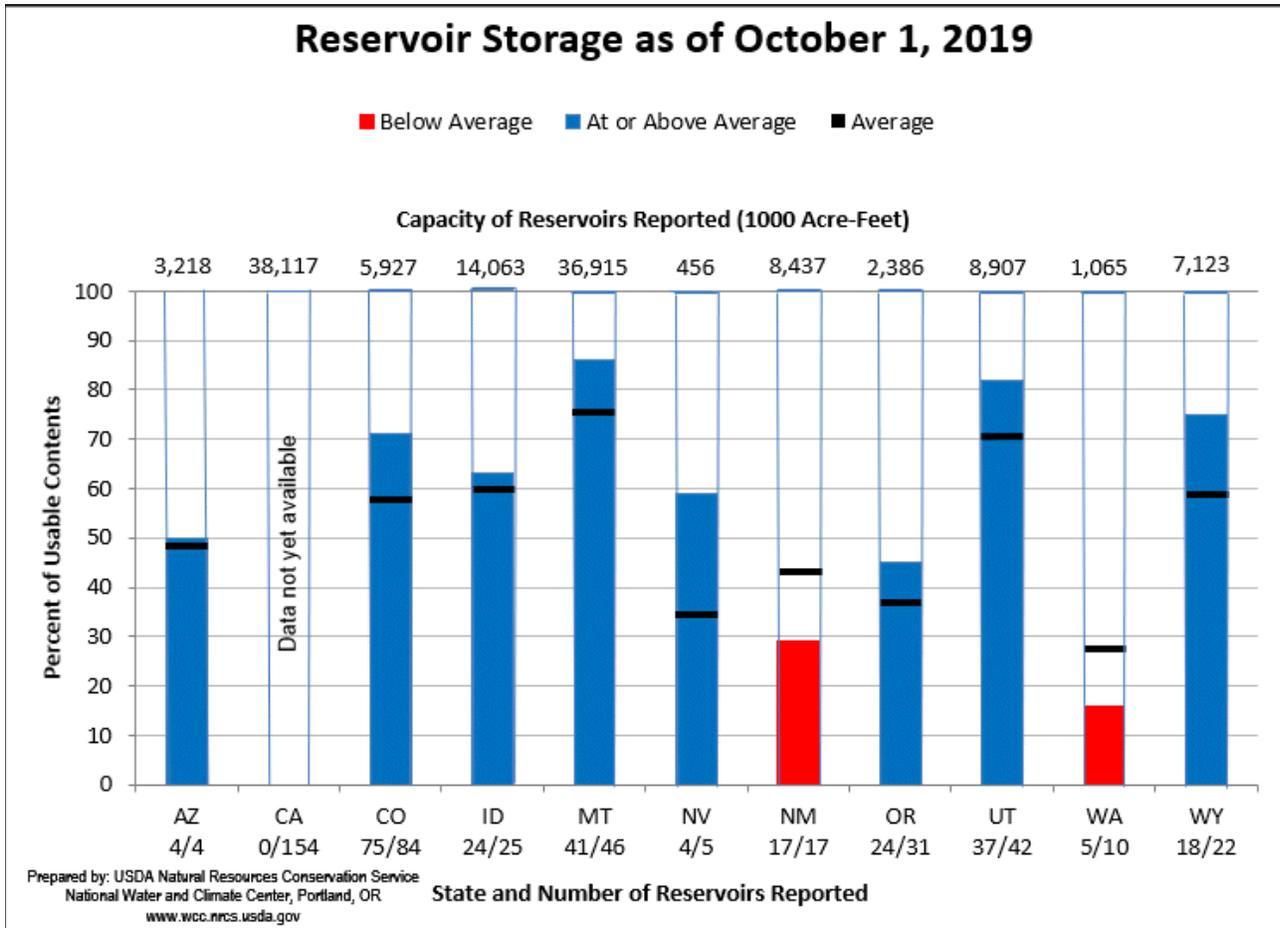
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
Streamgage with flood stage			Streamgage without flood stage			

[WaterWatch: Streamflow, drought, flood, and runoff conditions](#)

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center



October 1, 2019 Reservoir Storage: [Chart](#) | [Dataset](#)

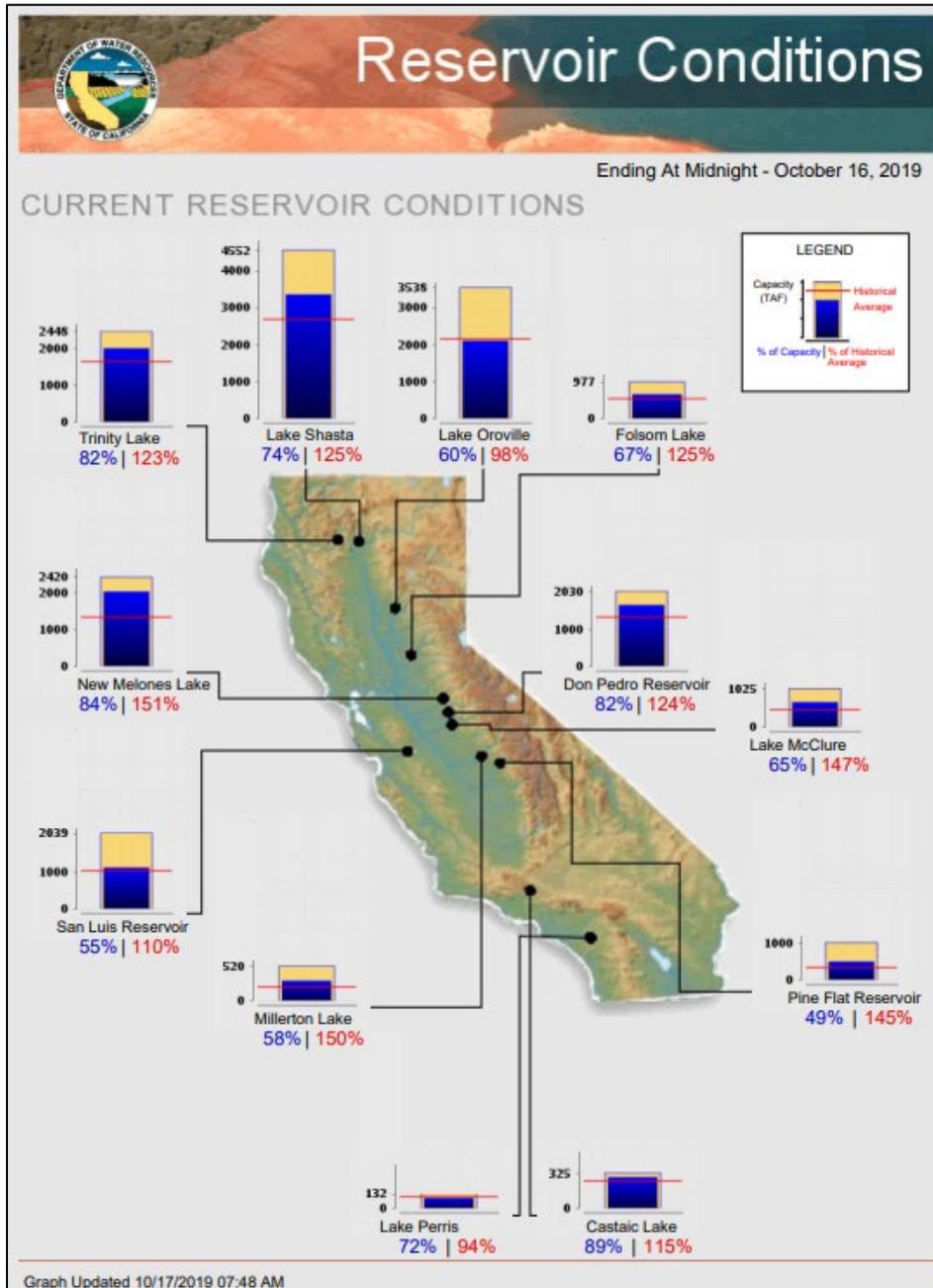
Hydromet Tea Cup Reservoir Depictions

Source: U.S. Bureau of Reclamation

- [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

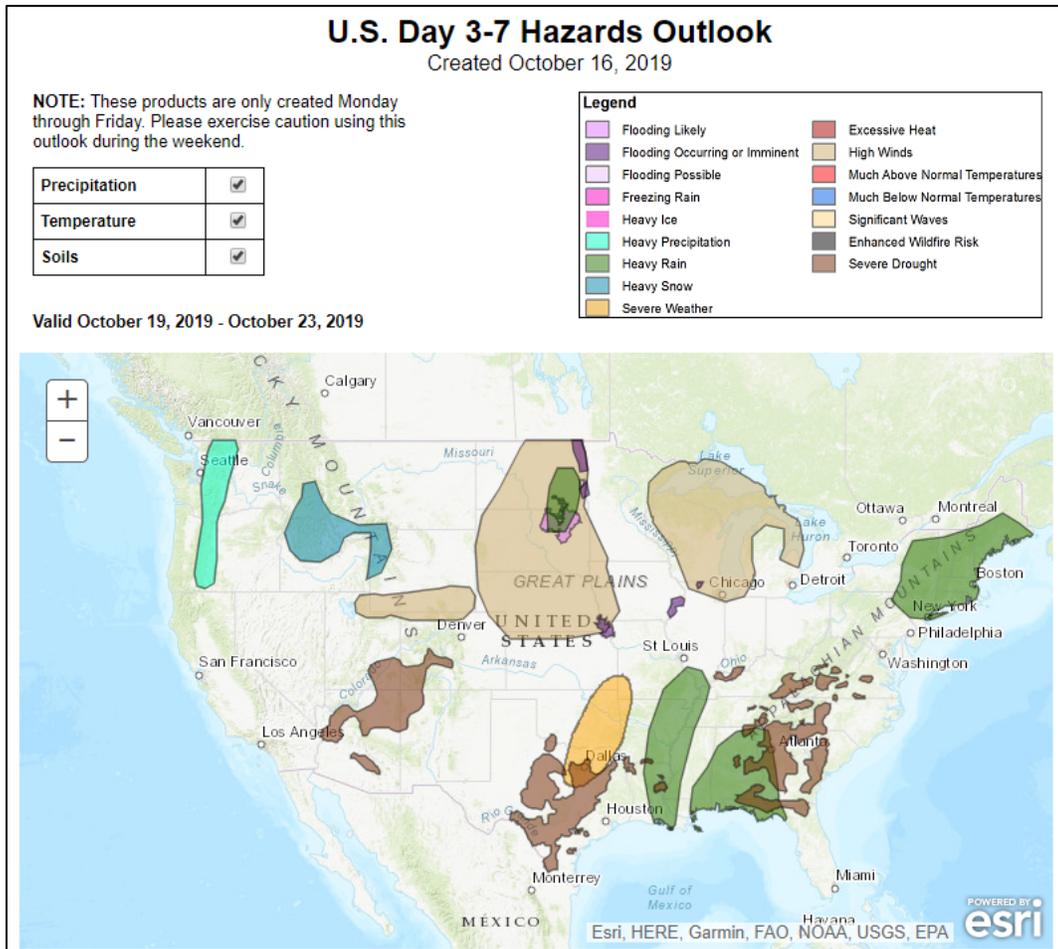
Agricultural Weather Highlights

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

National Outlook, Thursday, October 17, 2019: “For the remainder of today, rainy, windy weather will dominate the Northeast. Meanwhile, a developing disturbance over the Gulf of Mexico will likely become a tropical storm during the next few days while drifting northeastward. That system will provide another round of Southeastern drought relief, starting late Friday and continuing into the weekend. Farther west, a series of Pacific storms will maintain cool, showery weather from the Pacific Northwest to the northern Rockies. Significant snow will fall at higher elevations of the Northwest. Late in the weekend, a low-pressure system will intensify over the nation’s mid-section and move northeastward, delivering another round of rain and snow across the northern Plains and upper Midwest. In contrast, mostly dry weather will prevail during the next 5 days from central and southern California to the southern High Plains. The NWS 6- to 10-day outlook for October 22 – 26 calls for below-normal temperatures from the Rockies to the Mississippi Valley, while warmer-than-normal weather will prevail in the Far West and along the Atlantic Seaboard. Meanwhile, near- or below-normal precipitation from California and Oregon to the southern half of the Plains should contrast with wetter-than-normal conditions across the North and east of the Mississippi River.”

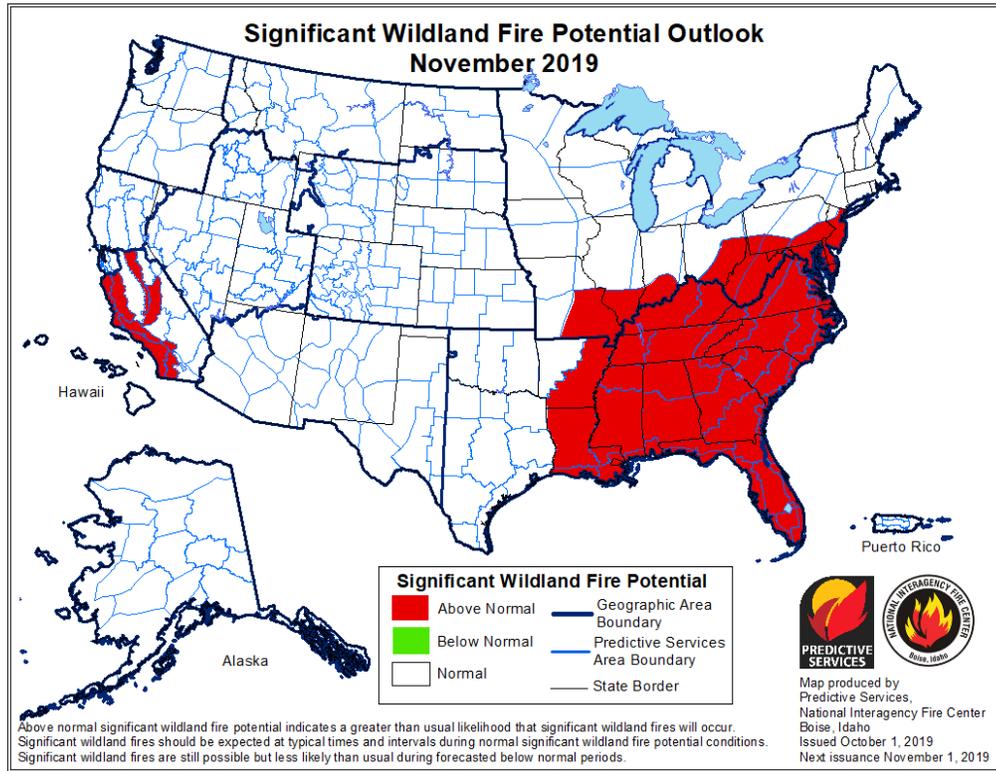
Weather Hazards Outlook: [October 19 – October 23, 2019](#)

Source: NOAA Climate Prediction Center



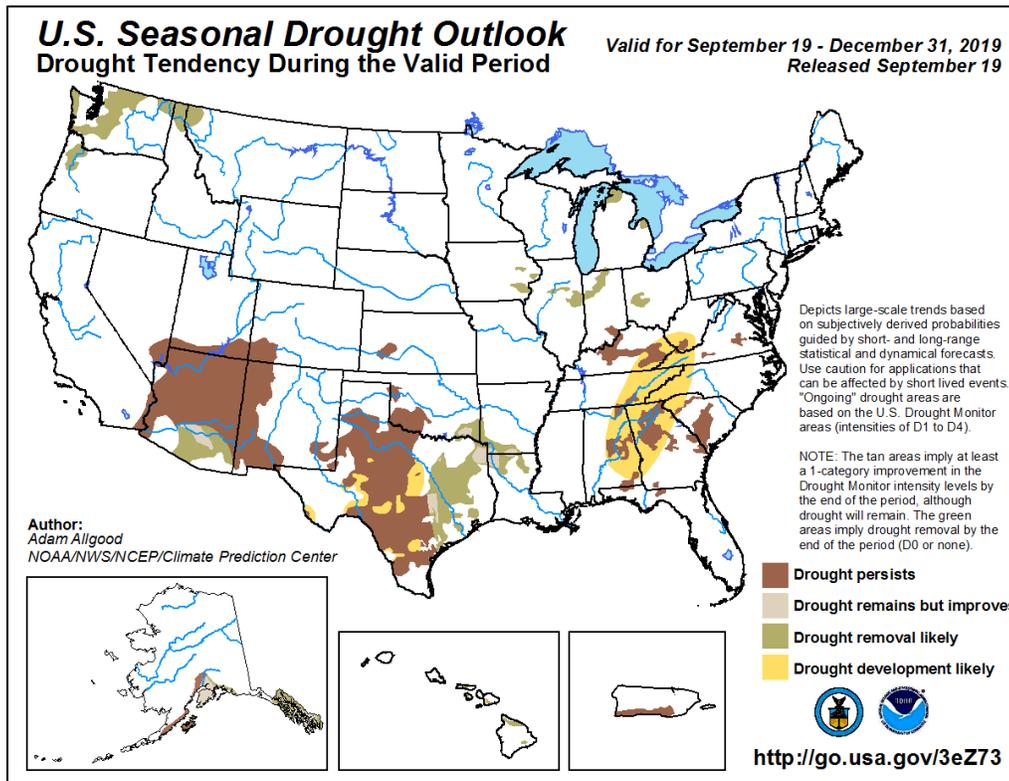
Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center



Seasonal Drought Outlook: [September 19 – December 31, 2019](#)

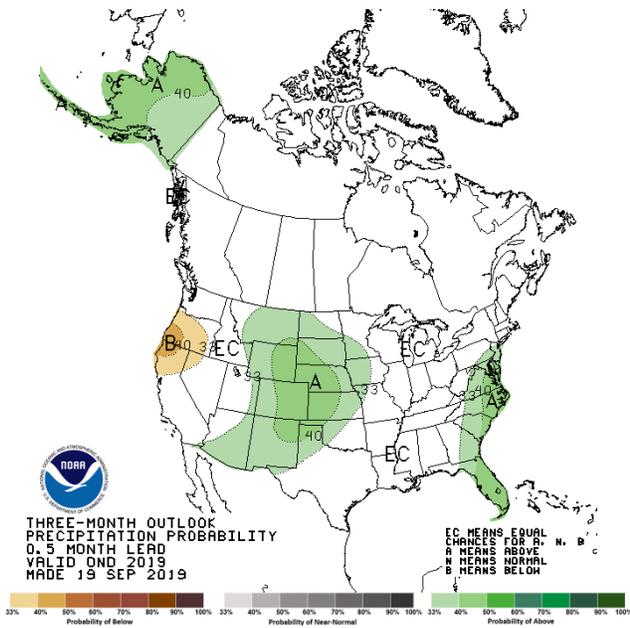
Source: National Weather Service



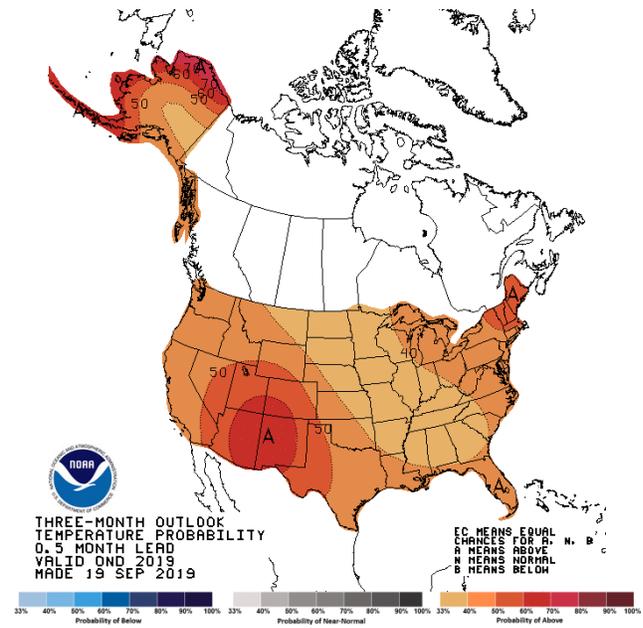
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



[October-November-December \(OND\) 2019 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](#).