

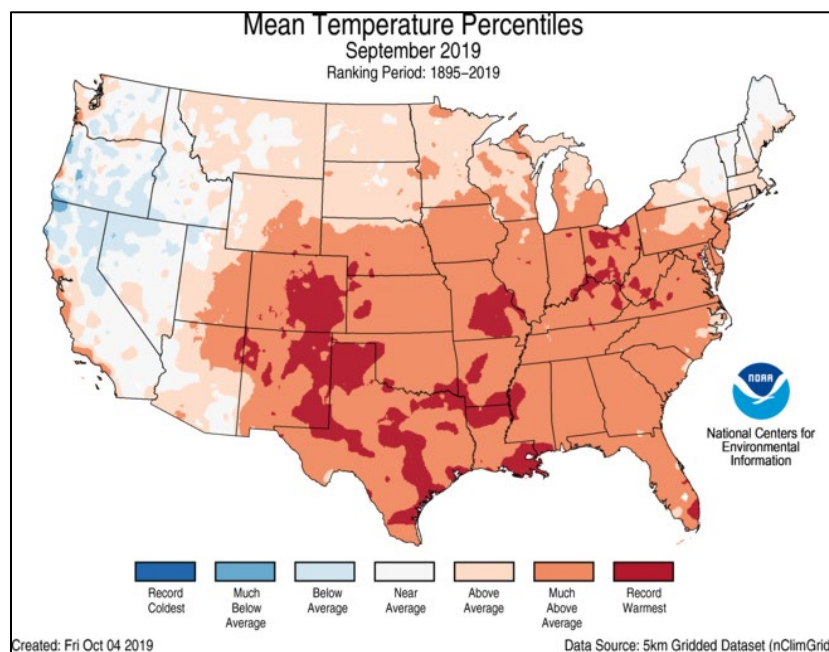
Water and Climate Update

October 10, 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
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Record high temperatures in September and early October



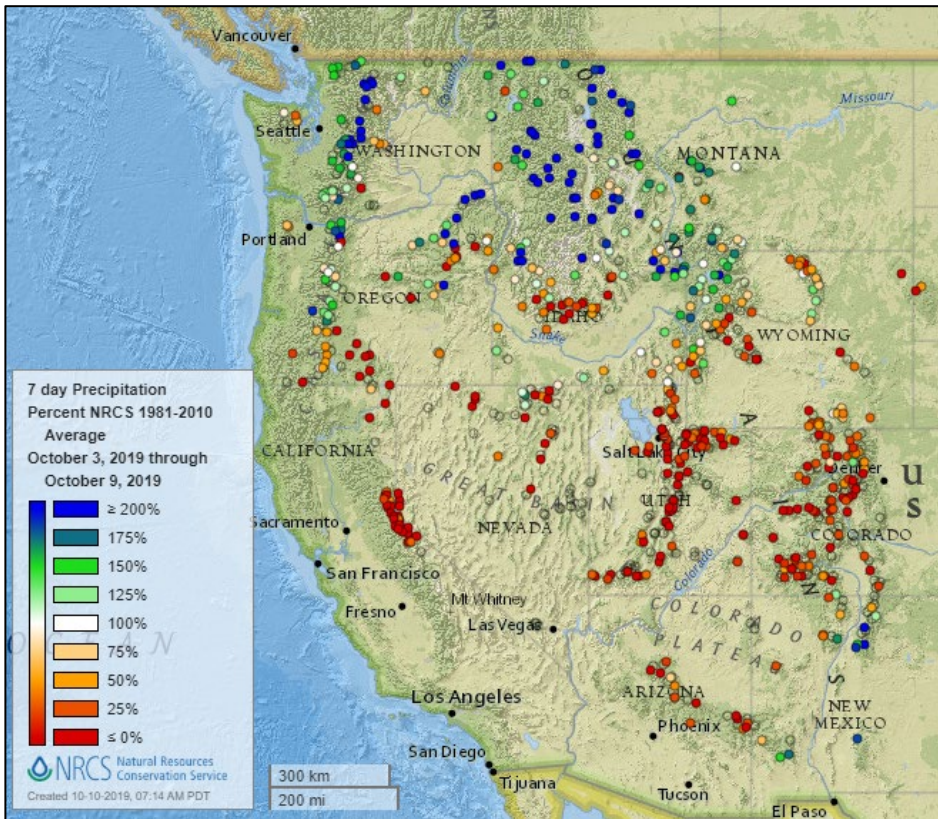
September 2019 recorded the second highest monthly temperature for the contiguous U.S. in the 125-year period of record. Record heat was reported across many areas of the Midwest and Ohio Valley, with much above average temperatures reported over a large section of the country. Only the West reported average or below average conditions. October started with a record heatwave in the East where all-time high temperatures for the month were topped. Temperatures in many locations were more than 20°F above normal with many areas warmer than the highest mid-summer temperatures.

Related:

- [Assessing the U.S. Climate in September 2019](#) – NCEI
- [September ties for second-warmest on record for Lower 48](#) – Washington Post
- [Exceptional October heatwave topples records for another day...](#) – Washington Post
- [Record-breaking heat threatens southern crops](#) - CBS
- [Four days of record heat in Knoxville: Not since 1884 has it been this hot in October](#) – WBIR (TN)
- [103 Degrees In Alabama This Week - Is It Real And Does It Matter?](#) - Forbes
- [School Closings Due to Heat: October Heat Wave Prompts Closures in Columbus, Ohio](#) - Newsweek
- [Hottest October day EVER for Louisville to begin the month!](#) – WHAS11 (KY)
- [Blistering heat and little rain is causing a 'flash drought' in the South](#) – USA Today

Precipitation

Last 7 Days, NRCS SNOTEL Network

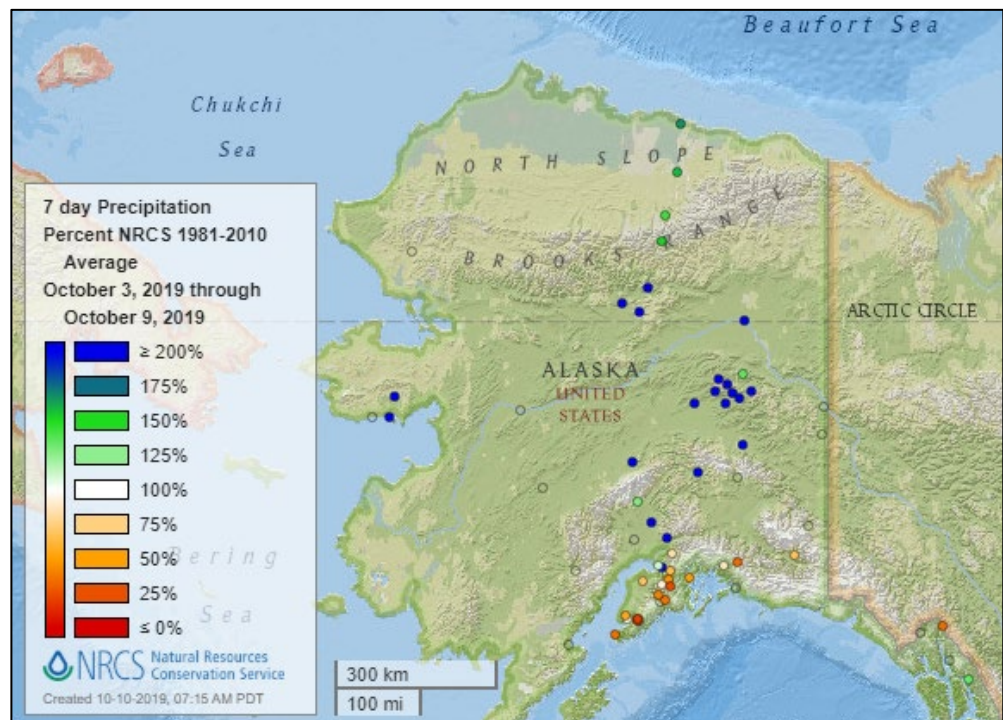


[7-day precipitation percent of average map](#)

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](#)



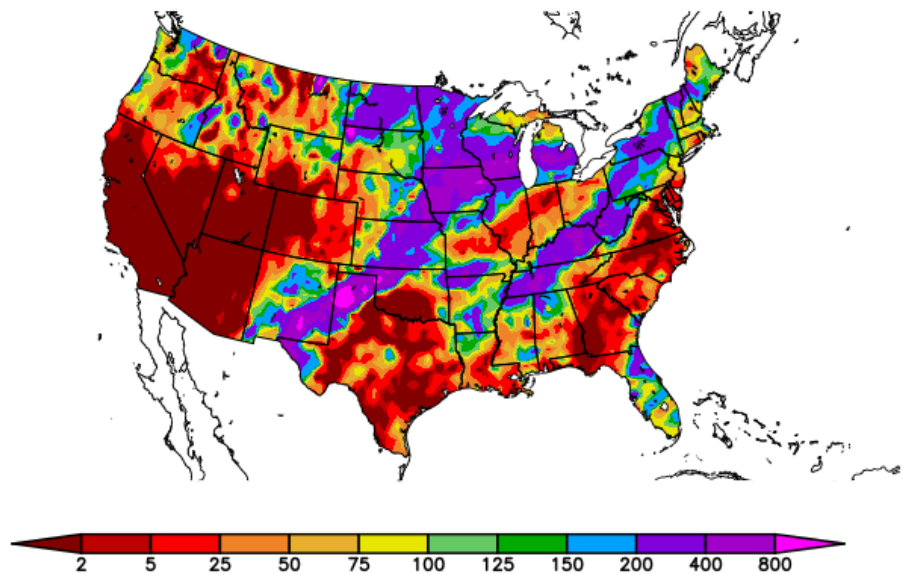
Last 7 Days, National Weather Service (NWS) Networks

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](#)

Percent of Normal Precipitation (%)
10/2/2019 – 10/8/2019



Generated 10/9/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

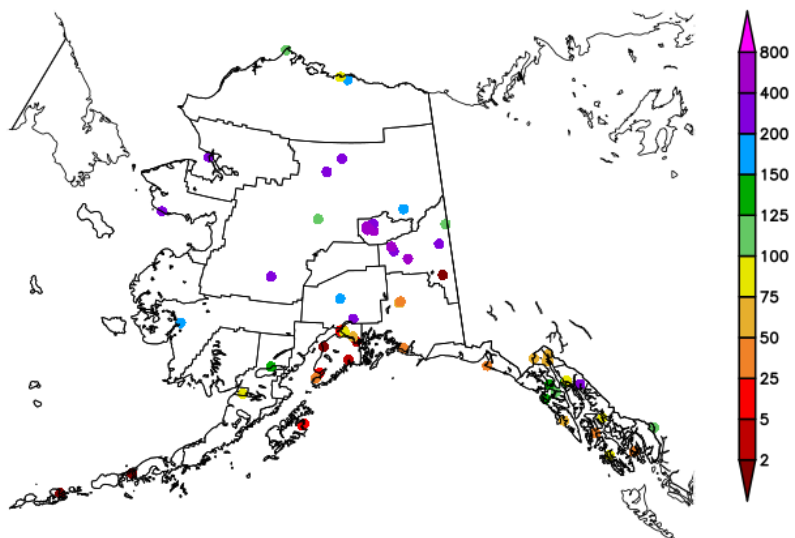
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)
10/2/2019 – 10/8/2019

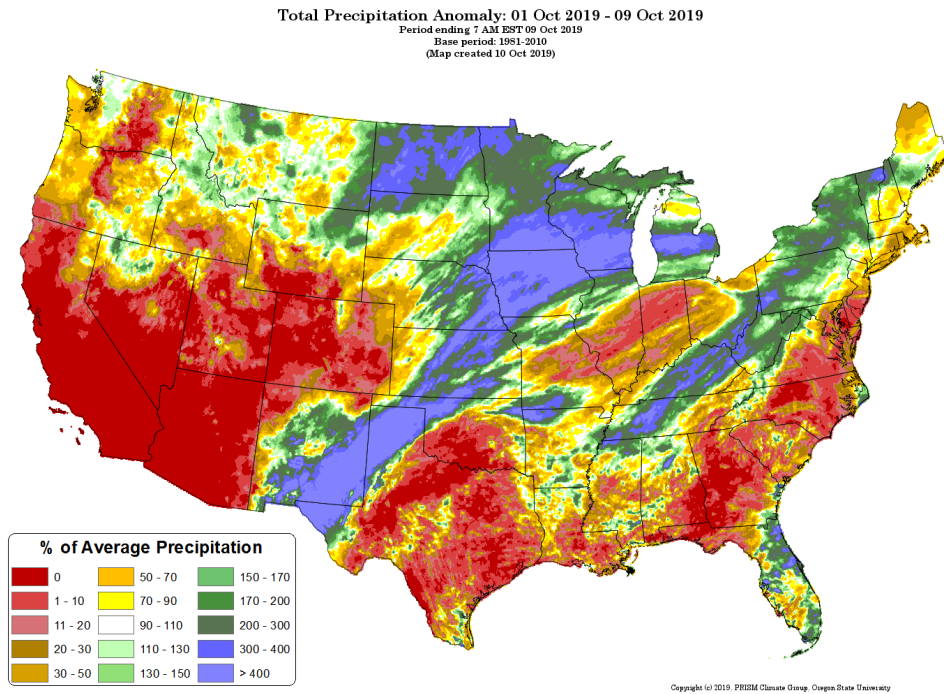


Generated 10/9/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Source: PRISM

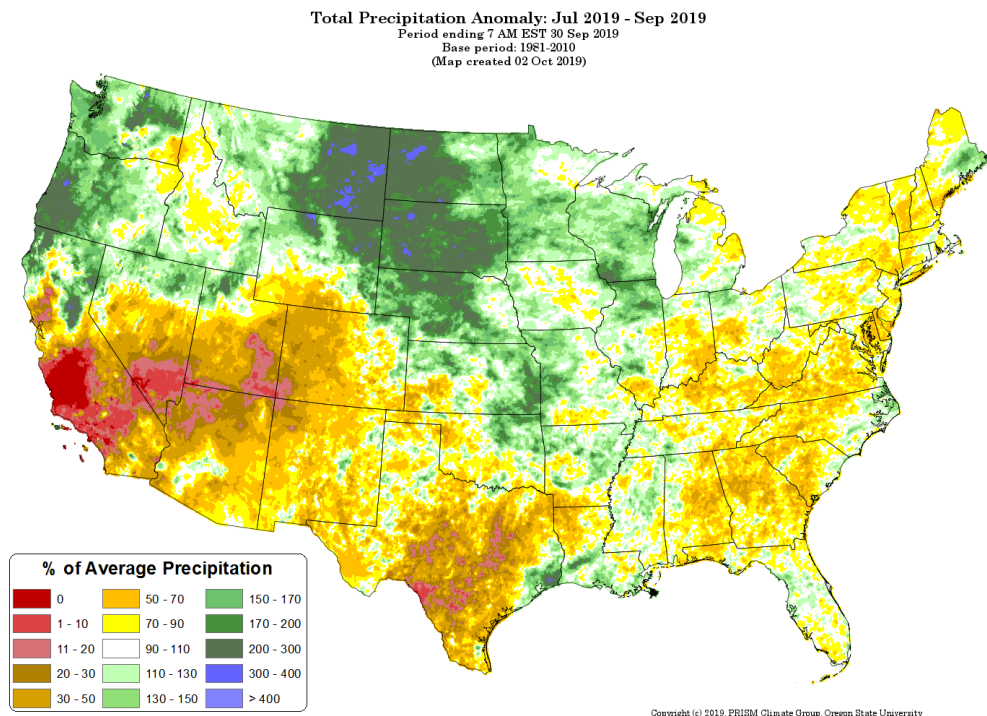


[Month-to-date national total precipitation percent of average map](#)

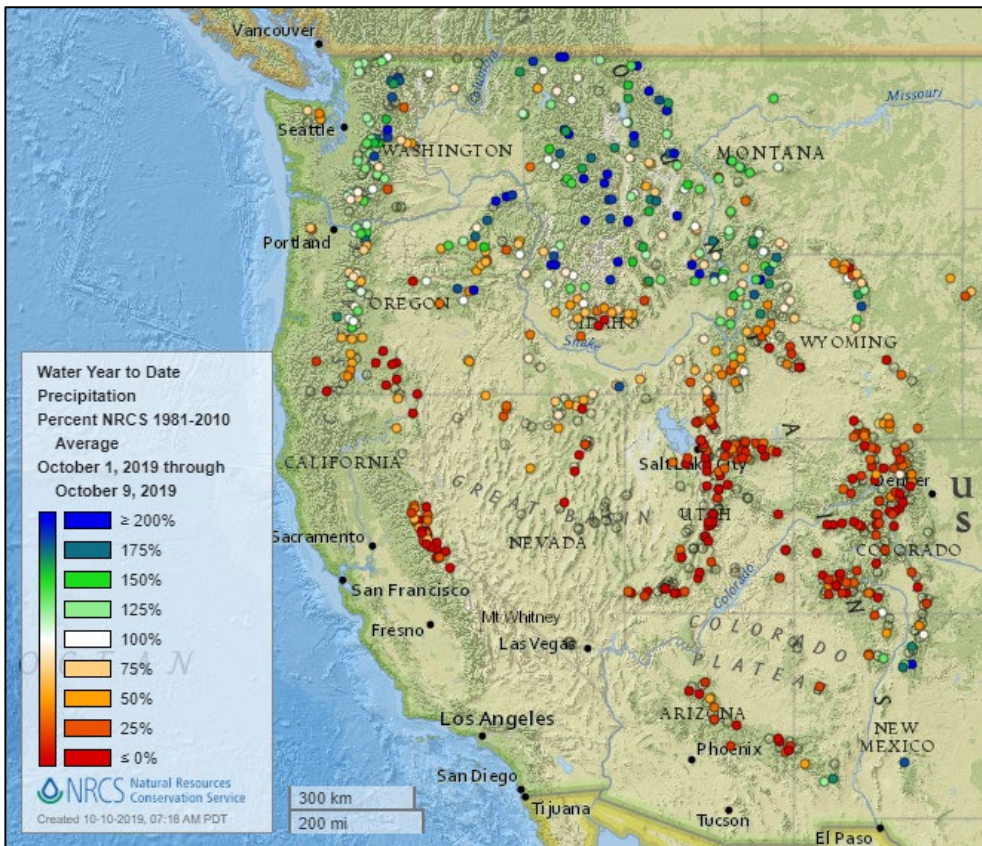
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

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



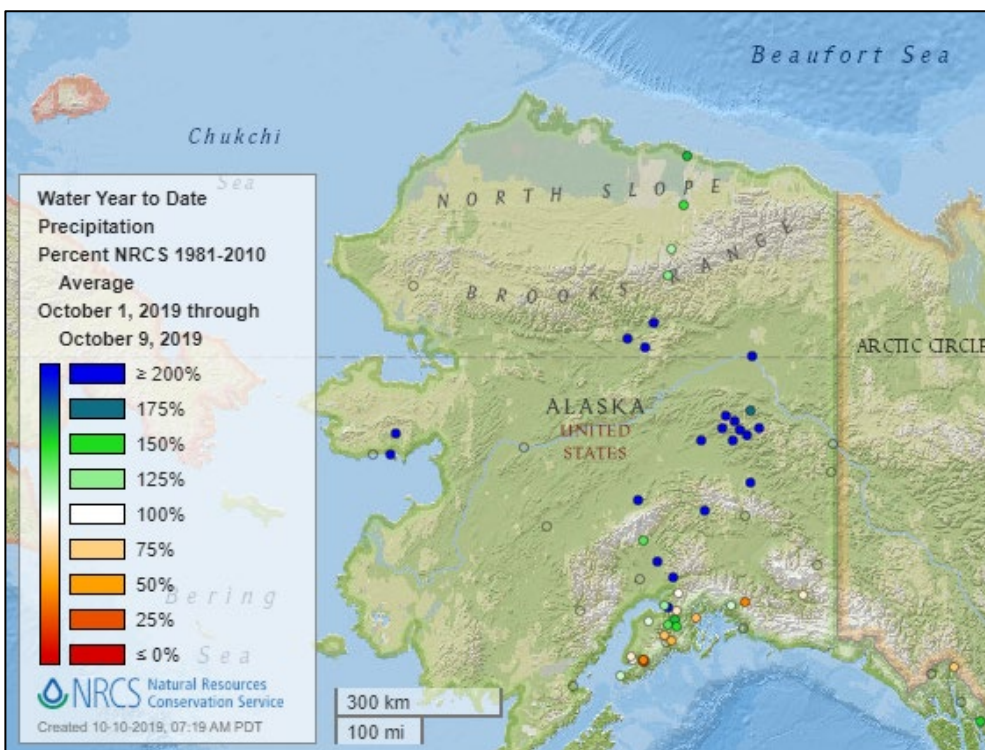
Water Year-to-Date, NRCS SNOTEL Network



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

See also:

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



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

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

Temperature

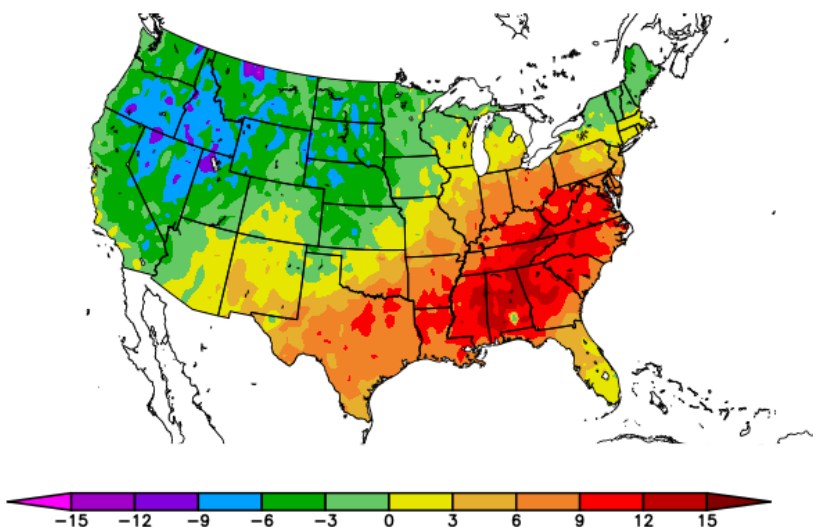
Last 7 Days, National Weather Service (NWS) Networks

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)
10/2/2019 – 10/8/2019



Generated 10/9/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

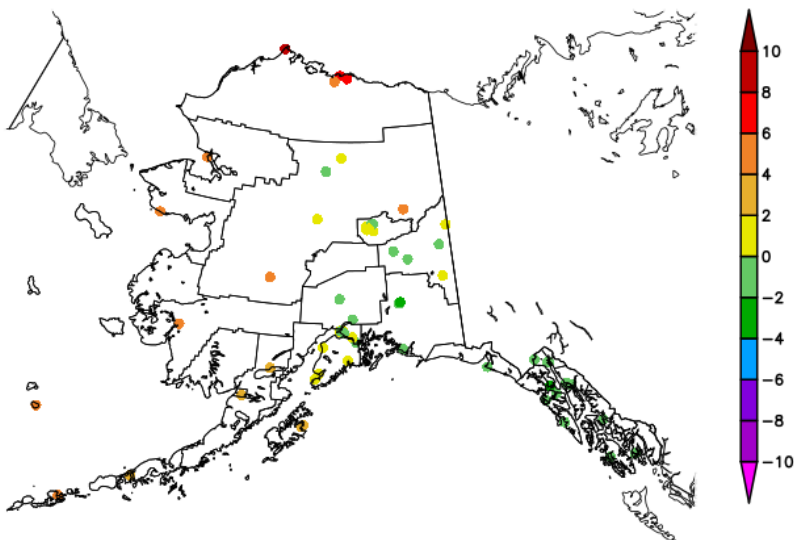
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
10/2/2019 – 10/8/2019



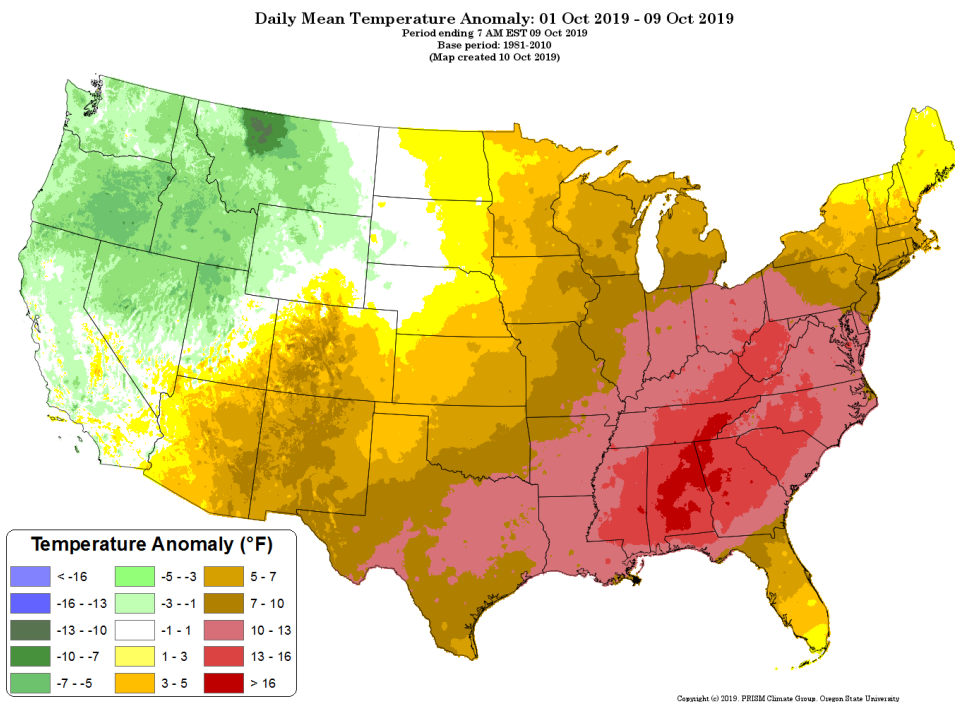
Generated 10/9/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

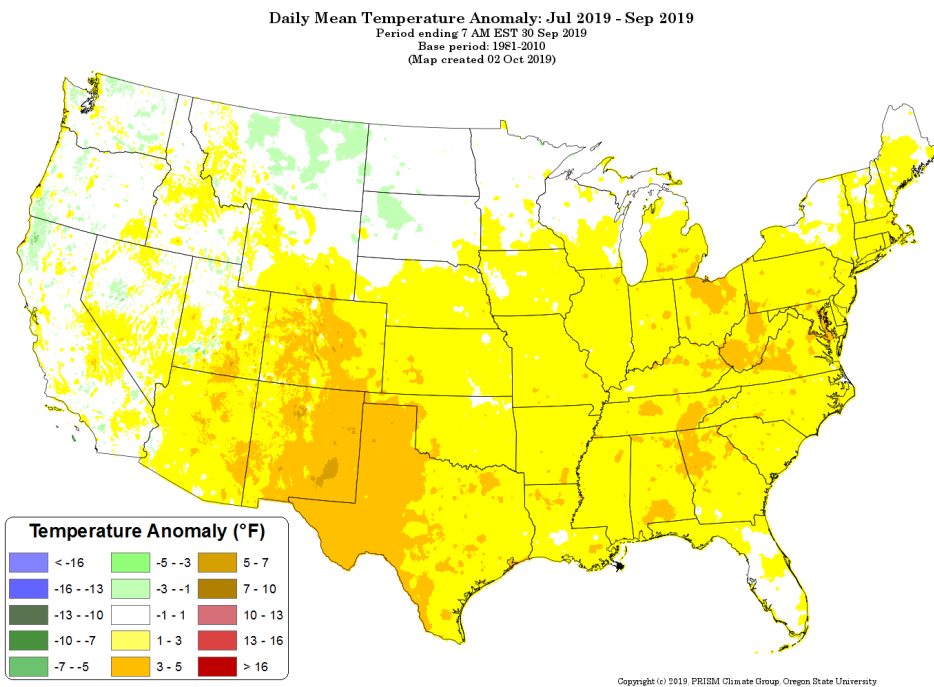
Source: PRISM

[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](#)

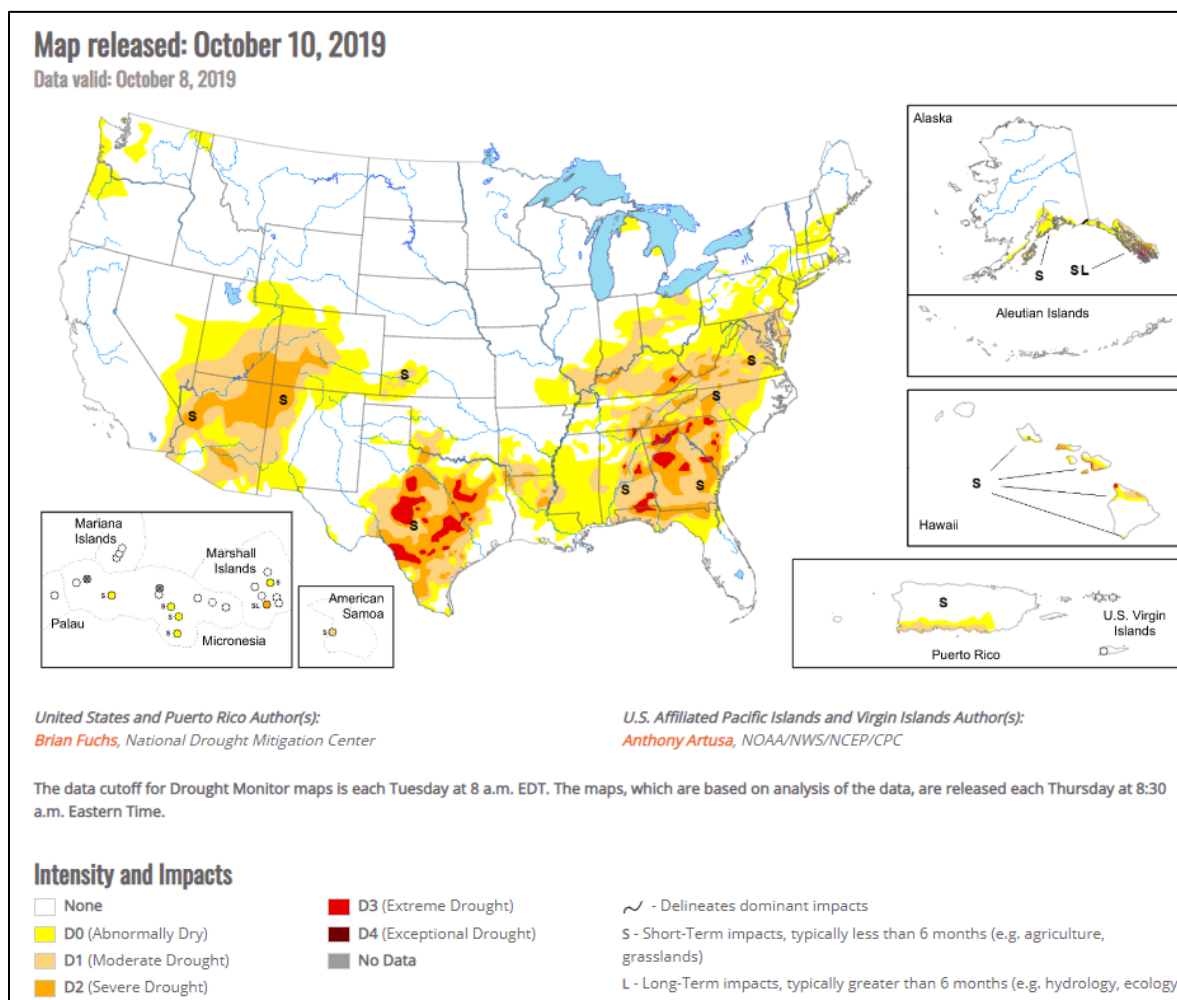
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), October 10, 2019

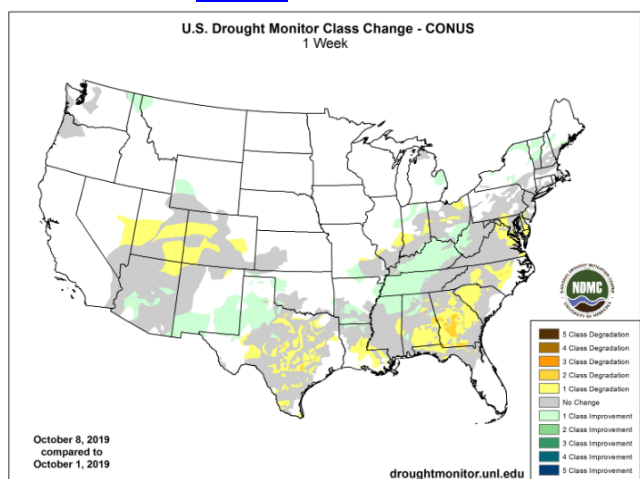
Source: National Drought Mitigation Center

“The flash drought in the southern portions of the United States, especially over the Southeast and Texas, remains the prominent feature this week. As conditions continue to dry out coinciding with record warmth, deteriorations are widespread and rapidly occurring. Temperatures were varied over the United States this week, and much of the West, upper Midwest, and central and northern Plains were cooler than normal, with temperatures 3 to 6 below normal widespread. It was even cooler over Great Basin with temperatures 6 to 9 degrees below normal. In contrast, temperatures over the Southeast were generally 9 to 12 degrees above normal coming off a month when many locations set records for the warmest September on record. Temperatures were generally 6 to 9 degrees above normal in Texas and into the Midwest as well. Two prominent rain events came through the country in the last week. The first occurred at the beginning of the period when much of eastern New Mexico, west Texas and the Texas panhandle received rain and thunderstorms. A significant rain event moved through the southern Midwest and into the South, not only putting a stop to further drought development but also allowing for widespread improvements. Unfortunately, these rains did not get into the Southeast, where another hot and dry week continues to raise havoc on the region, especially to those involved in agriculture.”

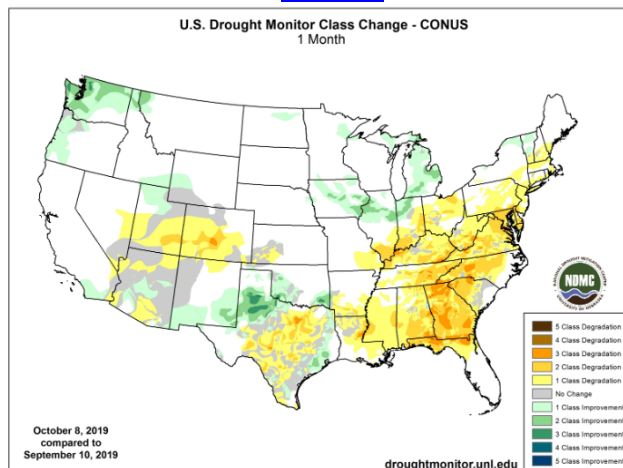
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

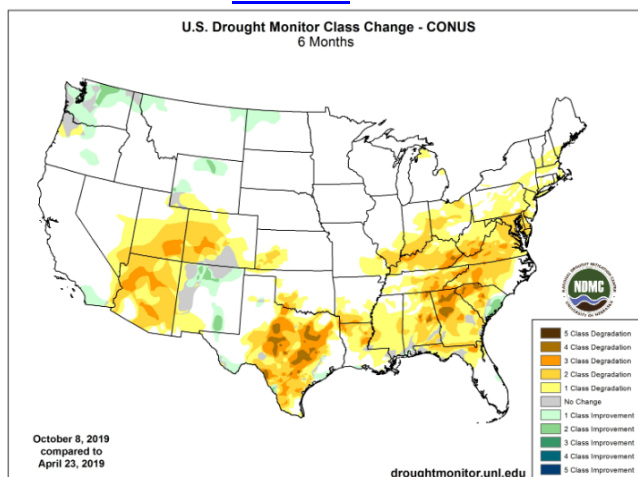
1 Week



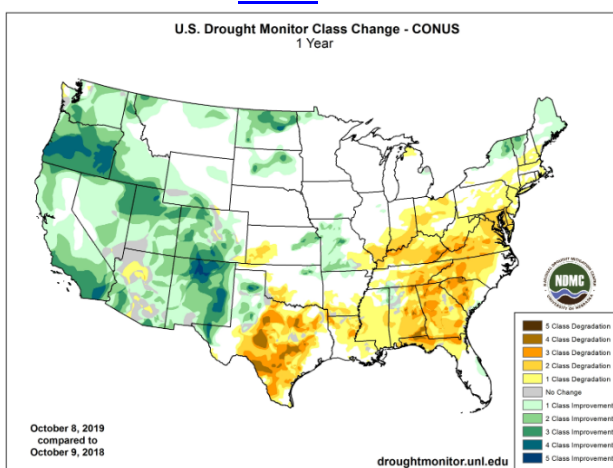
1 Month



6 Months



1 Year



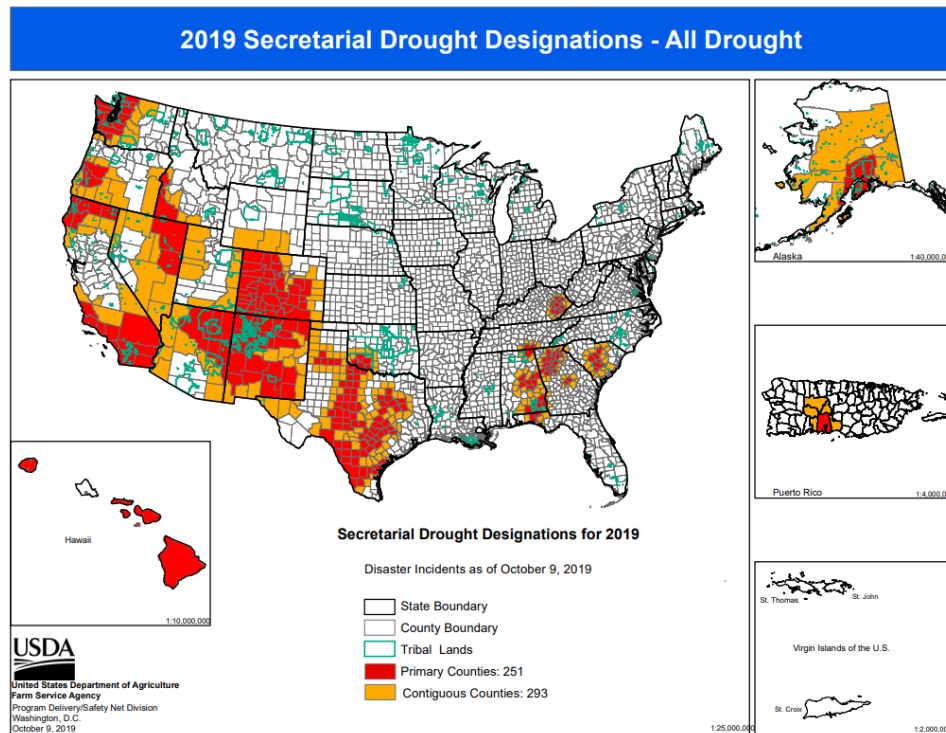
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

Highlighted Drought Resources

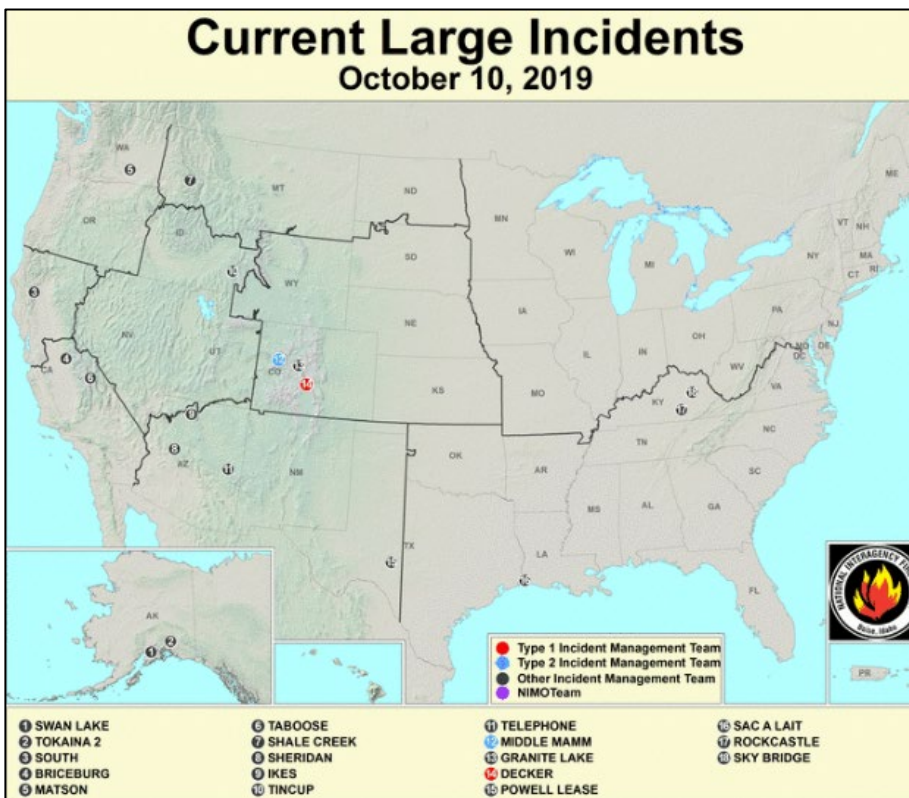
- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)
- [U.S. Population in Drought, Weekly Comparison](#)
- [USDA Disaster and Drought Information](#)

Secretarial [Drought Designations](#)

Source: USDA Farm Service Agency



Wildfires: [USDA Forest Service Active Fire Mapping](#)



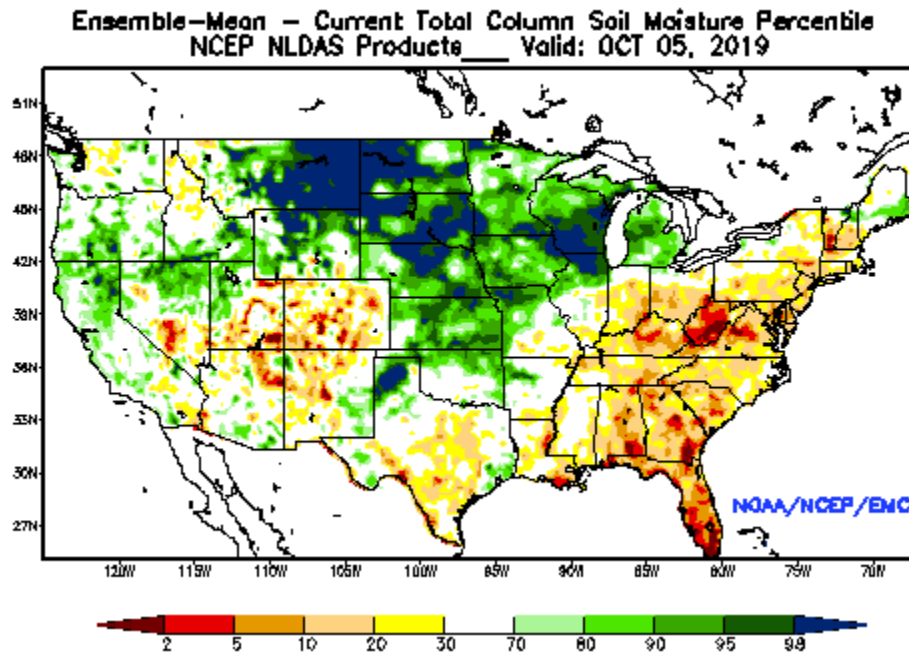
Highlighted Wildfire Resources

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

Other Climatic and Water Supply Indicators

Soil Moisture

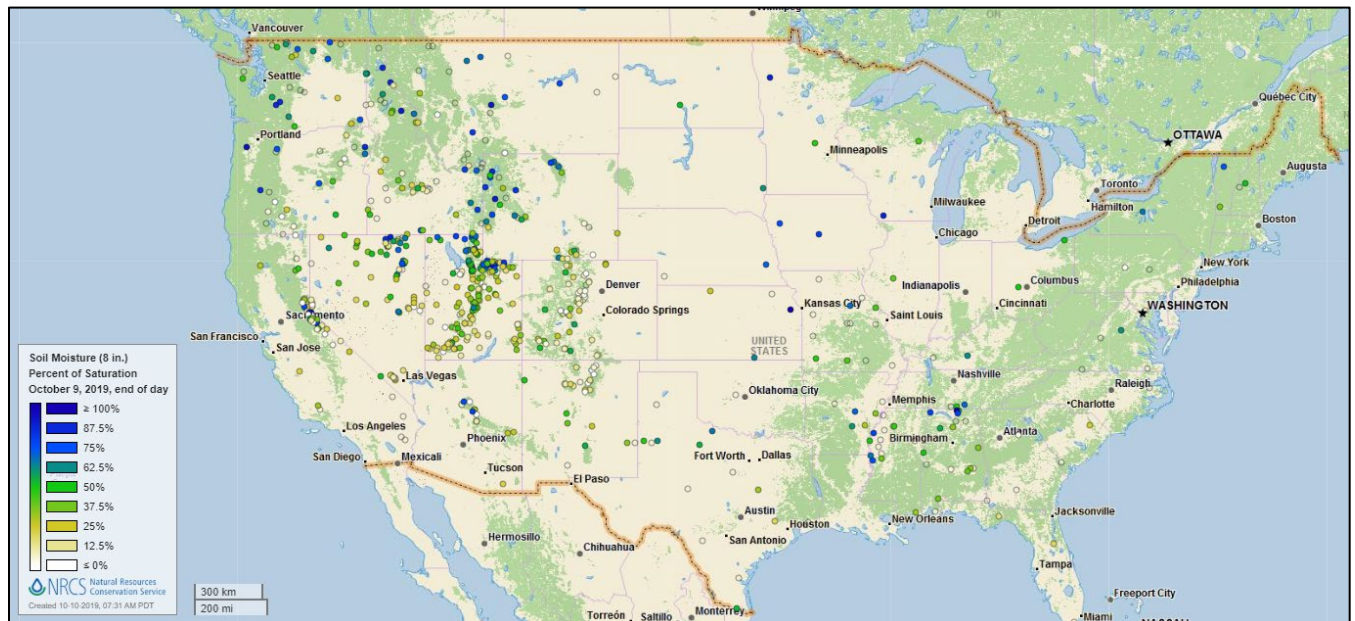
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of October 5, 2019

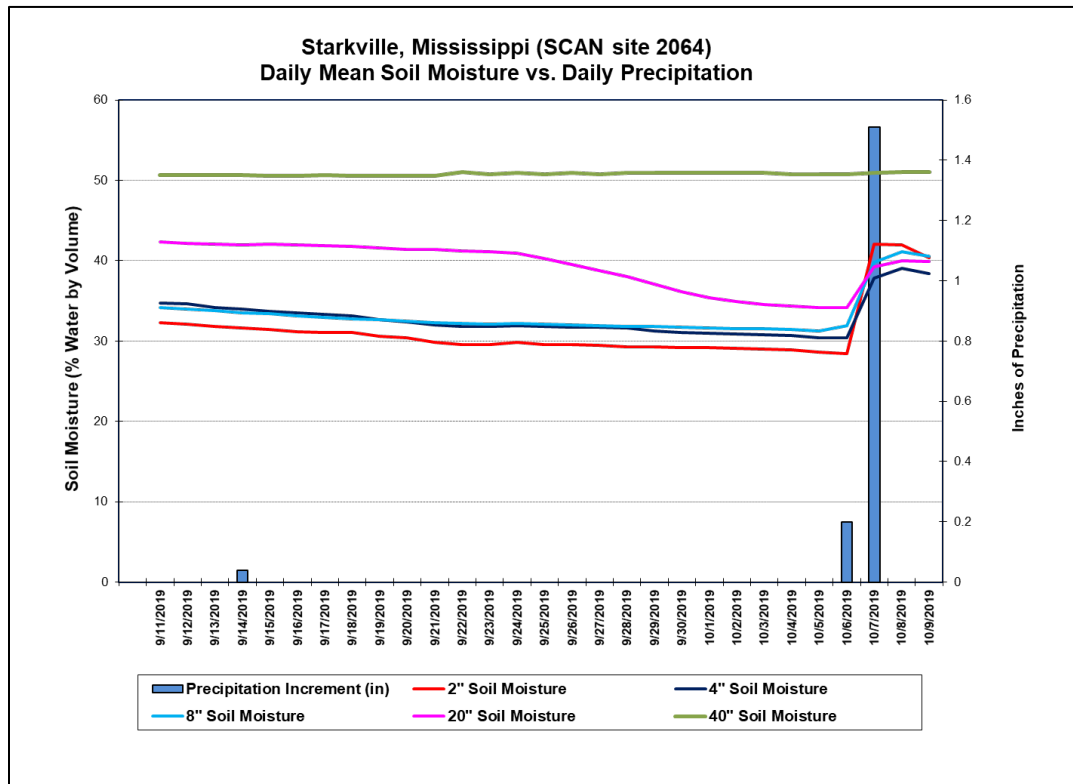
Soil Moisture Percent of Saturation

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 [Starkville SCAN site](#) in Mississippi. Precipitation on October 6 and 7 was 1.71 inches and increased the soil moisture at all sensor depths, with the exception of the -40\" sensor.

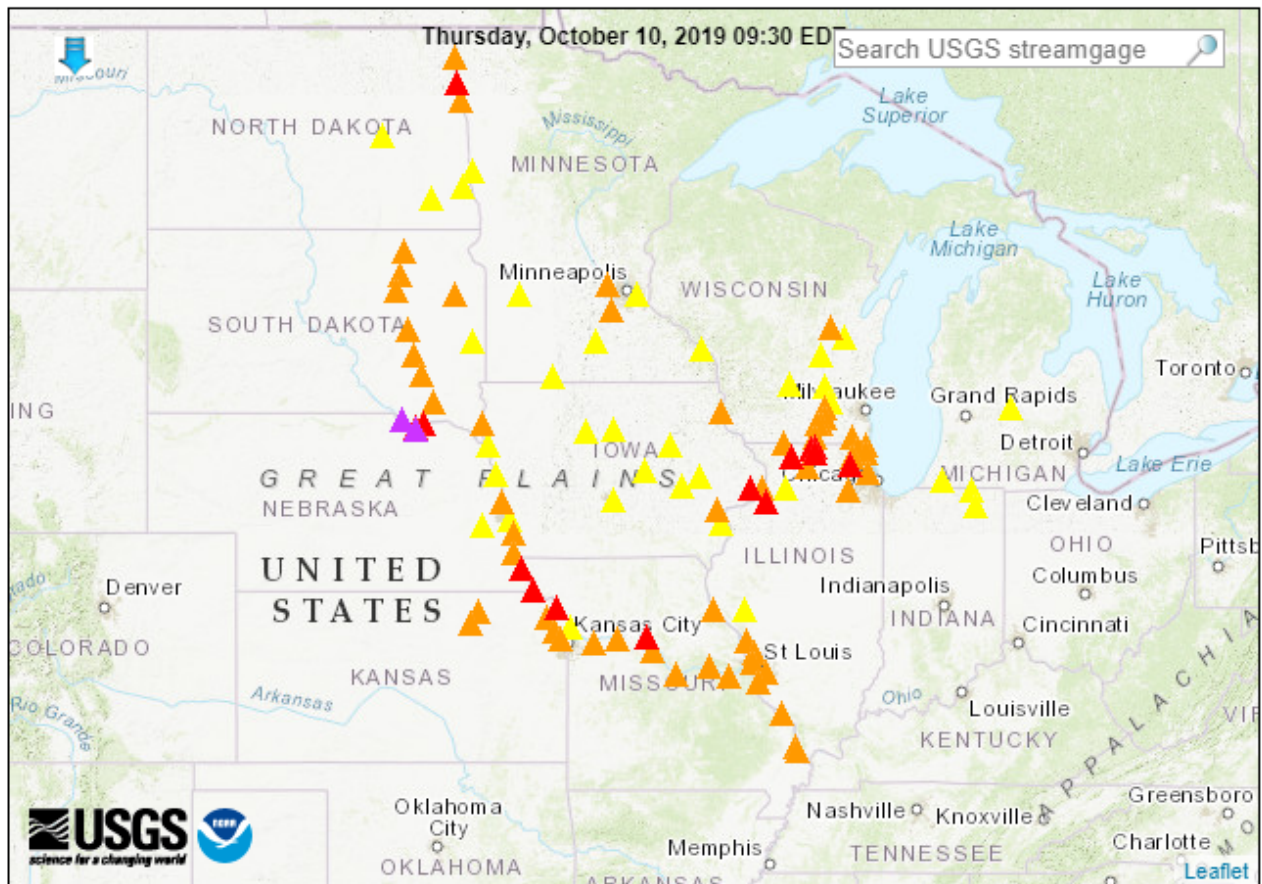
Soil Moisture Data Portals

- [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 (75 in floods [major: 2, moderate: 14, minor: 59], 35 in near-flood)



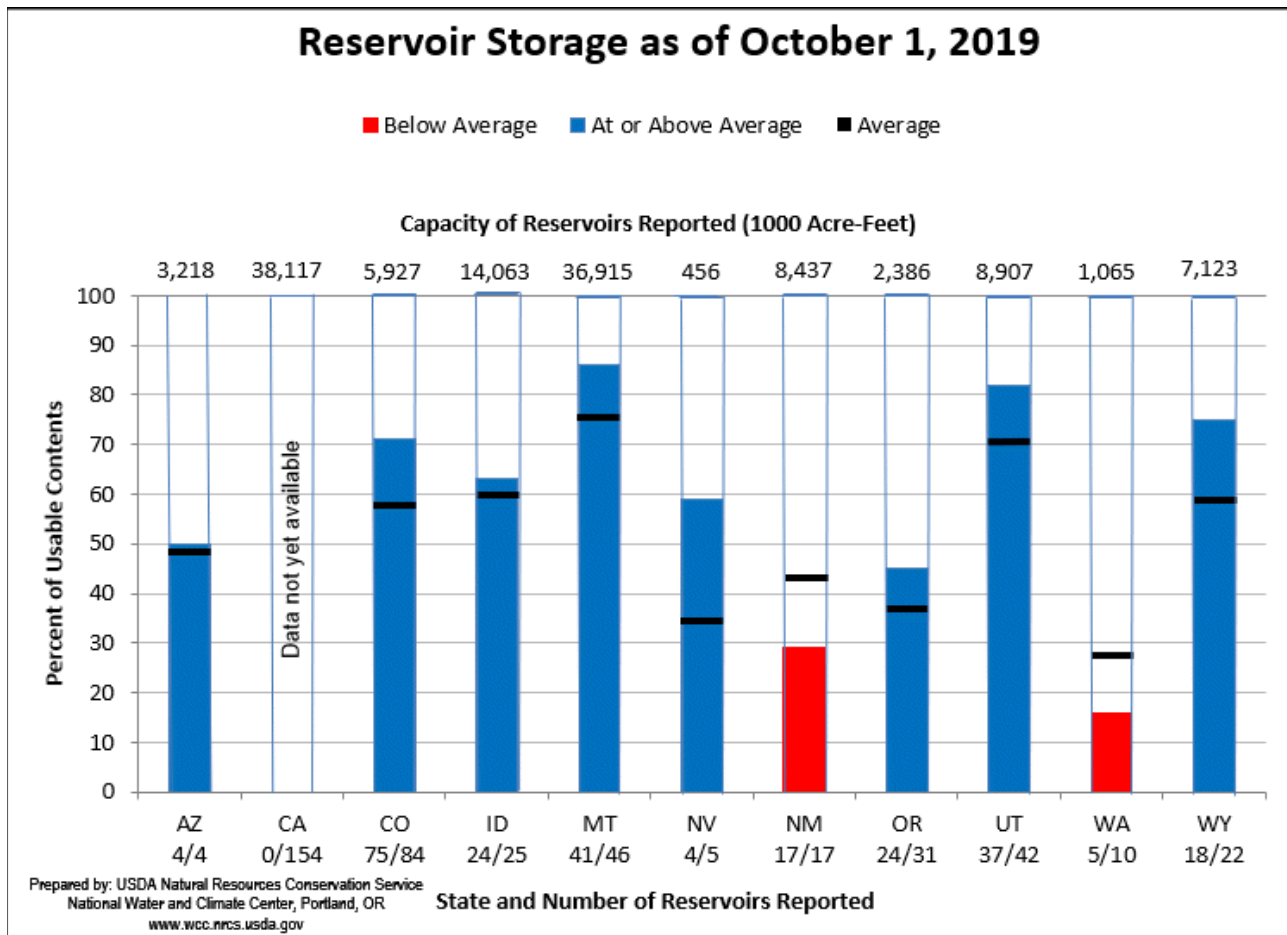
Explanation - Percentile classes						
<95	95-98	≥ 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
▲ Streamgage with flood stage ○ Streamgage without flood stage						

[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](#)

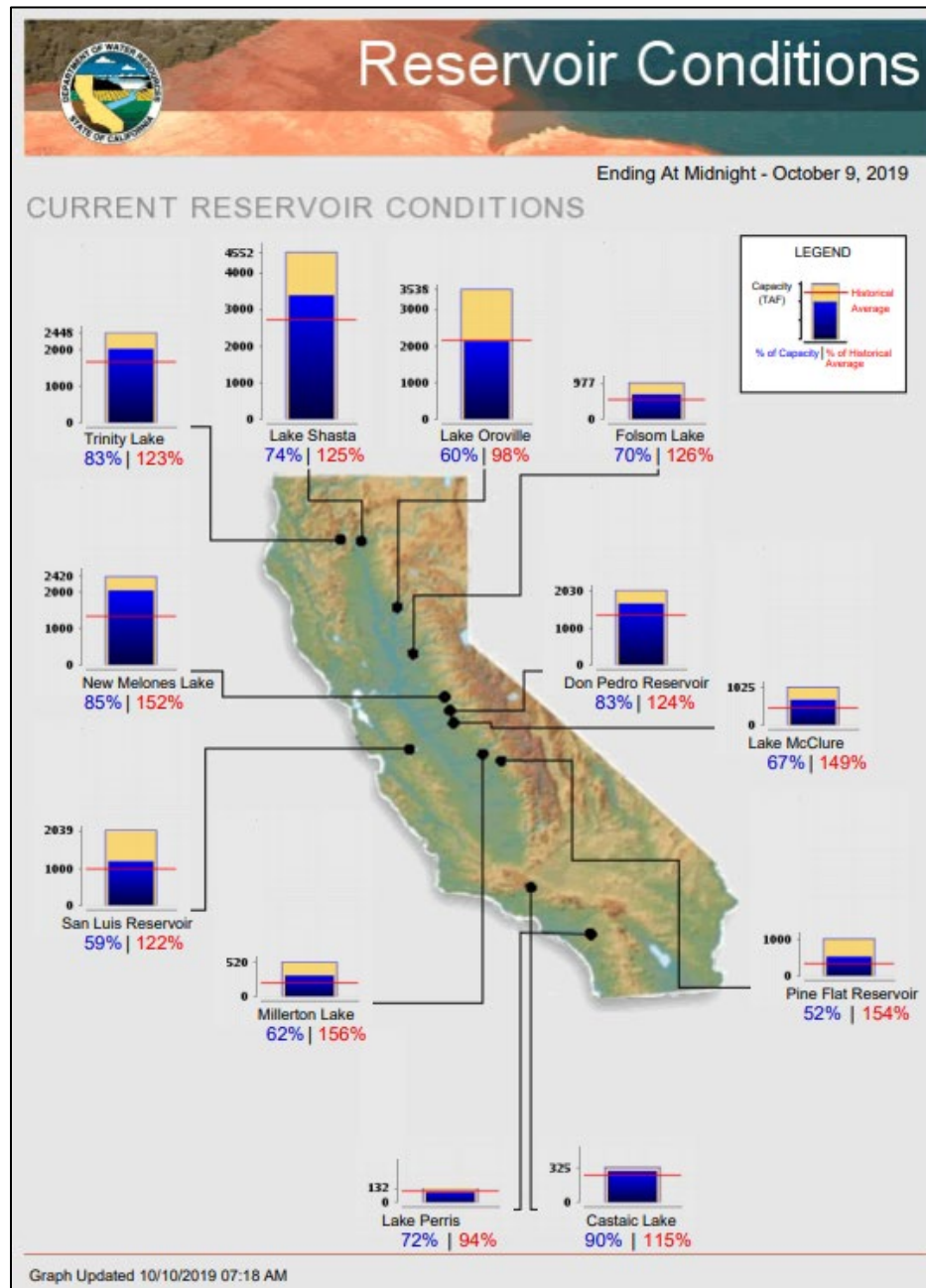
Hydromet Tea Cup Reservoir Depictions

Source: U.S. Bureau of Reclamation

1. [Upper Colorado](#)
2. [Pacific Northwest/Snake/Columbia](#)
3. [Sevier River Water, Utah](#)
4. [Upper Missouri, Kansas, Oklahoma, Texas](#)

Current California Reservoir Conditions

Source: California Department of Water Resources



[Current California Reservoir Conditions](#)

Short- and Long-Range Outlooks

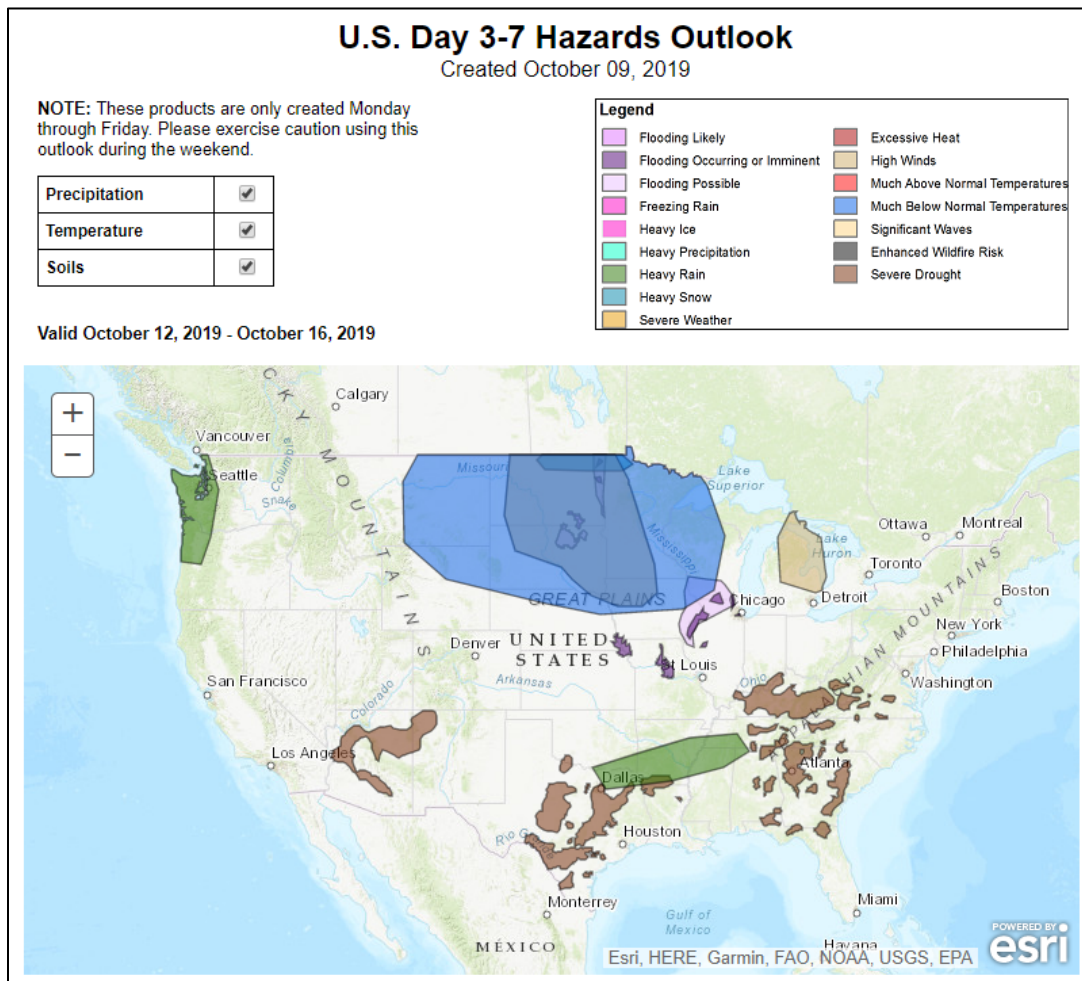
Agricultural Weather Highlights

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

National Outlook, Wednesday, October 19, 2019: “A winter-like storm will continue to evolve during the next few days. Later today and early Thursday, a low-pressure system will cross the central Rockies and central Plains. On Friday and Saturday, the storm will stall in the vicinity of northern Minnesota, leading to a prolonged period of wind-driven snow across the northern Plains and far upper Midwest. In the storm’s wake, weekend freezes can be expected along and northwest of a line from Texas’ northern panhandle to southeastern Wisconsin, effectively ending the 2019 growing season in those areas. Farther east, a low-pressure system lurking near the East Coast could result in heavy rain in southern coastal New England, as well as gusty winds and heavy surf across a broader area of the Atlantic Seaboard. Elsewhere, an elevated wildfire threat will persist for several days in parts of California, while cold weather will linger into next week across the northern Plains and Midwest. The NWS 6- to 10-day outlook for October 14 – 18 calls for the likelihood of below-normal temperatures from the Pacific Northwest into the Midwest, while warmer-than-normal weather will prevail across much of the nation’s southern tier and along the Atlantic Seaboard. Meanwhile, near- or above-normal precipitation across most of the country, including the Southeast and Pacific Northwest, should contrast with drier-than-normal conditions across an area centered over central and southern sections of the Rockies and Plains.”

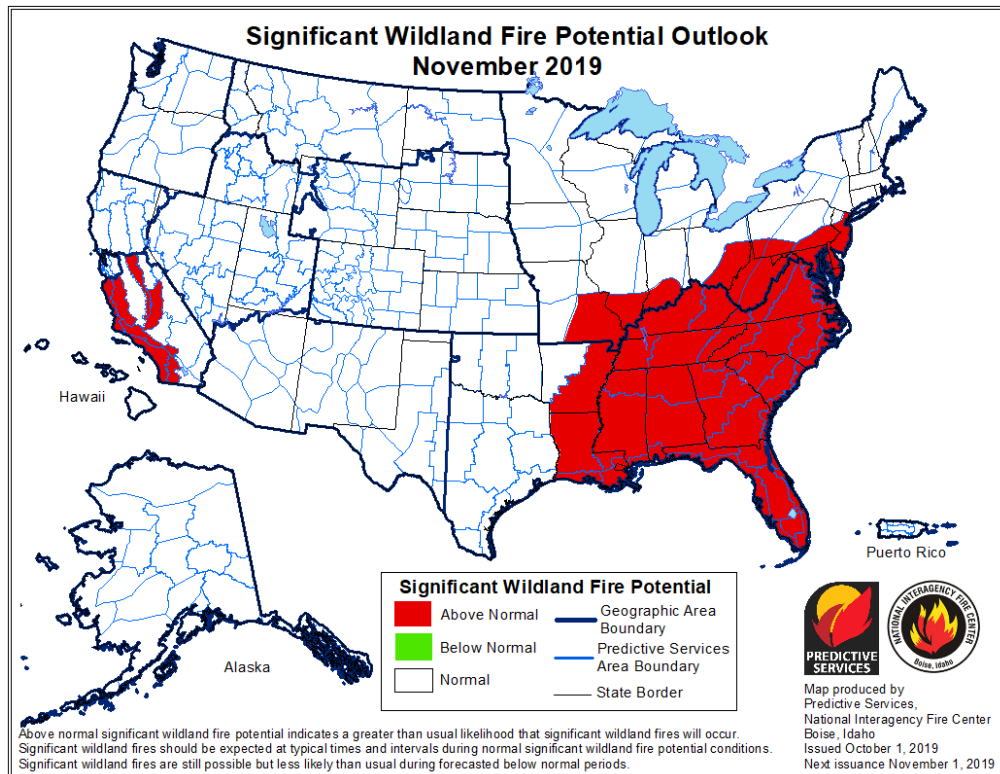
Weather Hazards Outlook: [October 12 – October 16, 2019](#)

Source: NOAA Climate Prediction Center



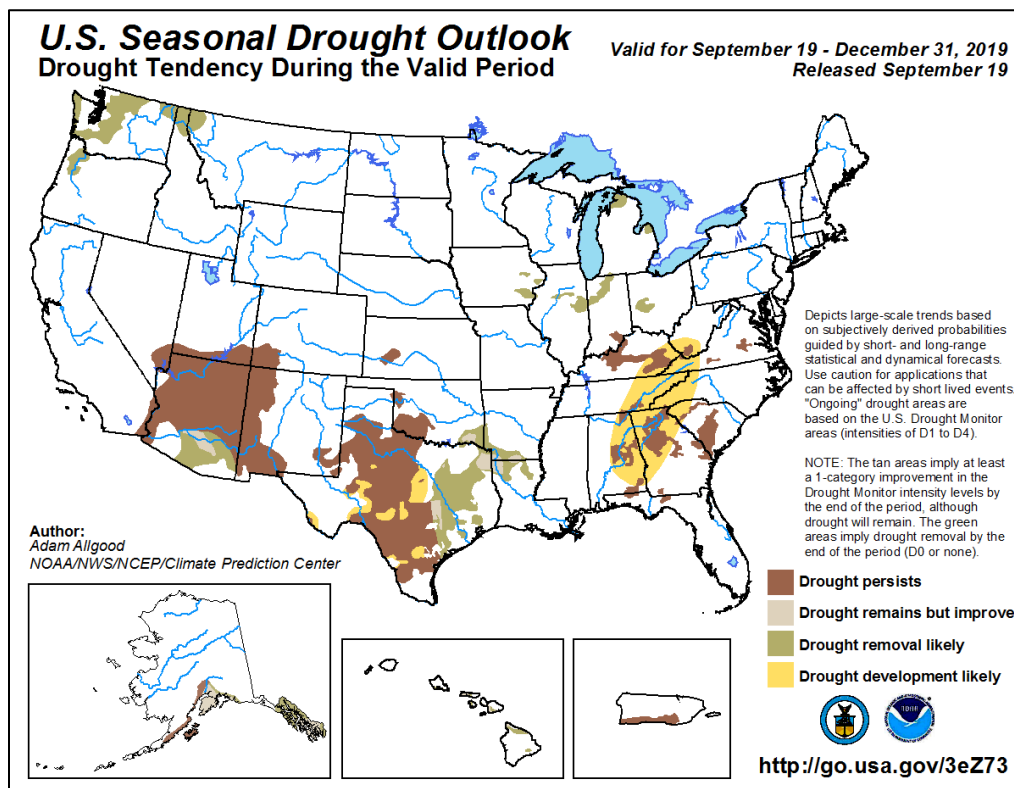
Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center



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

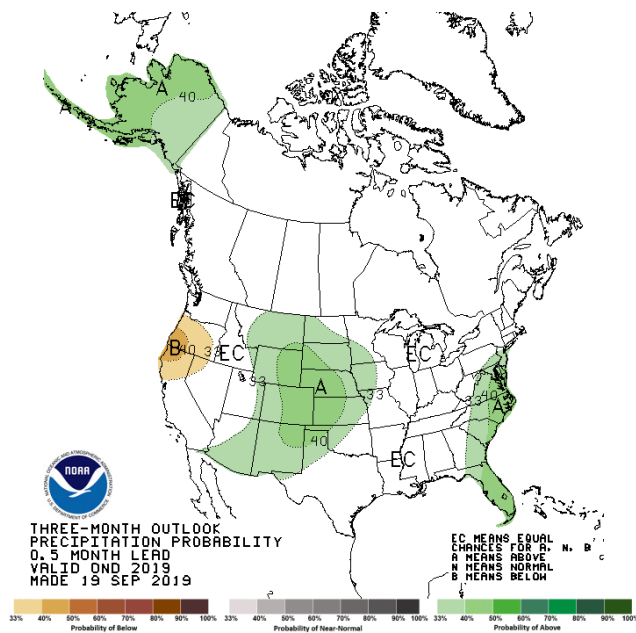
Source: National Weather Service



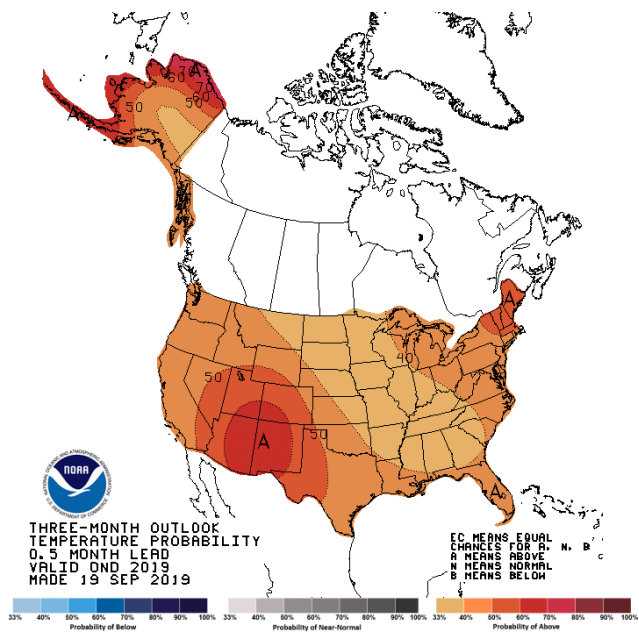
Climate Prediction Center 3-Month Outlook

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](#).