United States Department of Agriculture

Water and Climate Update

October 8, 2020

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.

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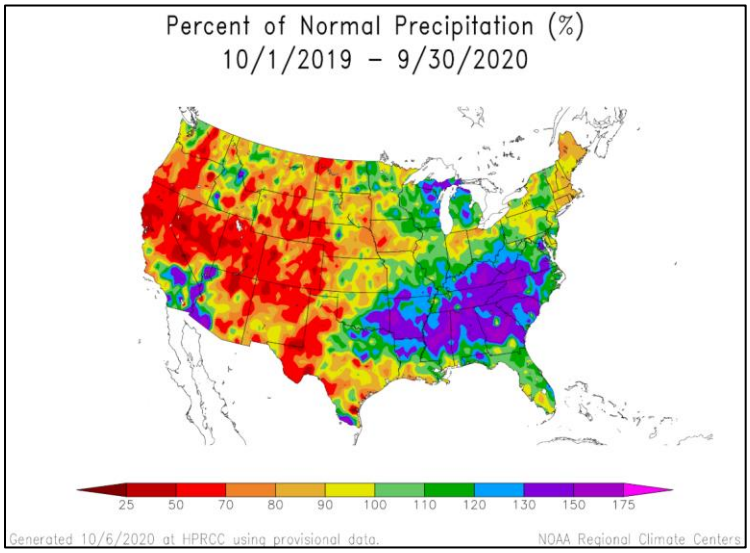
Water Year 2020 was dry in the West, Plains, and Northeast



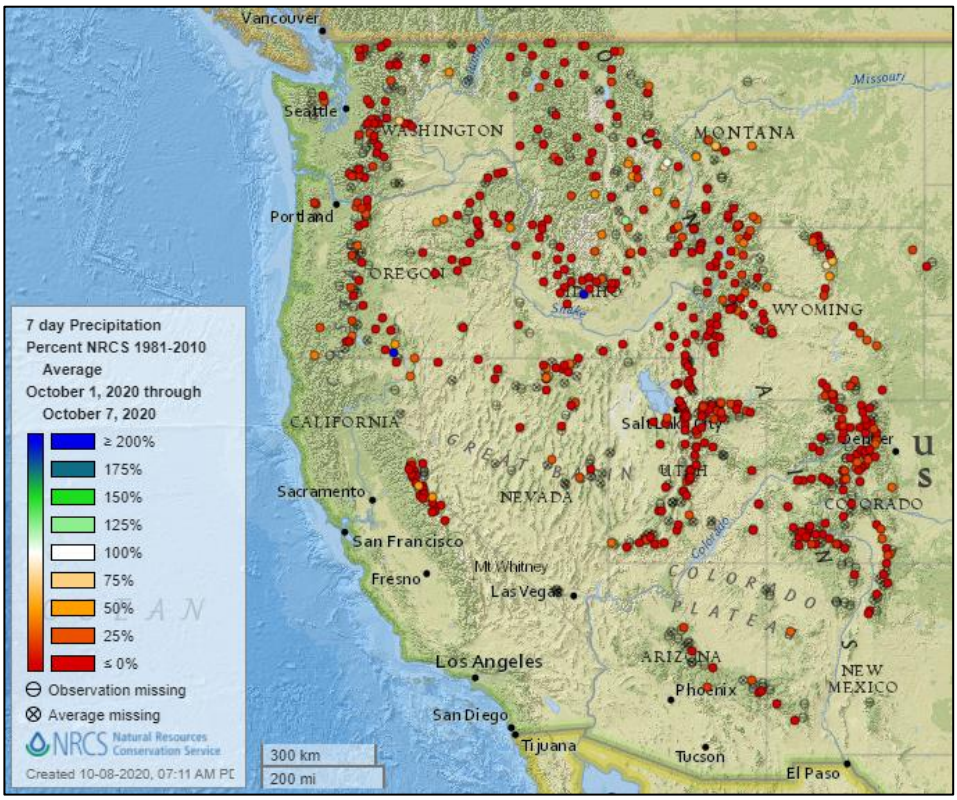
The West, Plains, and Northeast had a dry to very dry Water Year 2020 which ended on September 30. Notable events in the West were the record summer heat, the increasing drought, and wildfires. Northern California precipitation indices ranged from 62-65% of normal precipitation, while in contrast southern California was wetter than normal. Across the rest of the West and Plains the dry hot summer increased the drought conditions and impacts. Colorado had the hottest August on record. Salt Lake City, Utah recorded the 9th driest water year where records go back to 1874. Nebraska reported the driest August in 126 years. The Northeast also experienced a very dry water year with low water levels and drought conditions.

Related:

New 'rainfall year' begins 30 inches short – Sonoma Index-Tribune (CA)
California's dry water year has affected wildfire season and water storage – Action News Now (CA)
Water Year 2020 Summary information – CA Department of Water Resources (CA)
Water year ends below two-thirds mark – Elko Daily Free Press (NV)
August Was Colorado's Hottest On Record… – CPR News (CO)
Utah's meager water year gasps to a close with 100% of state in drought – Standard Examiner (UT)
Weather whiplash hits Nebraska as state goes from record wet to record dry – Omaha World Herald (NE)
Salem and Eugene had two of the driest water years on record, setting stage for wildfires – Statesman Journal (OR)
Drought conditions continue across Maine – Penobscot Bay Pilot (ME)

Precipitation

Last 7 Days, NRCS SNOTEL Network

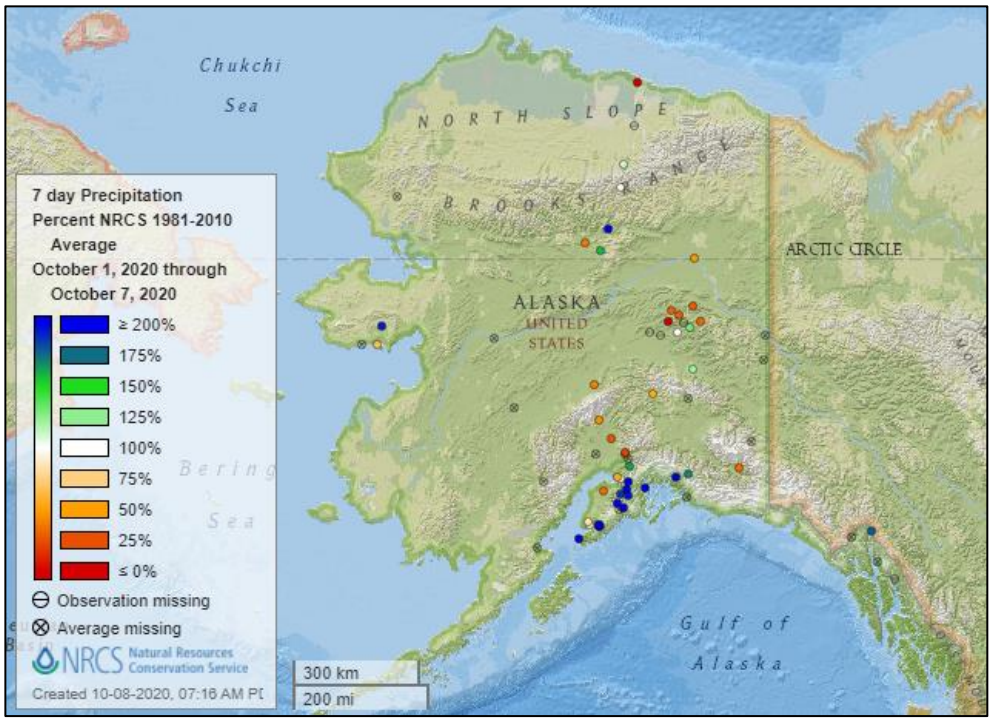


[7-day precipitation percent of average map]

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]

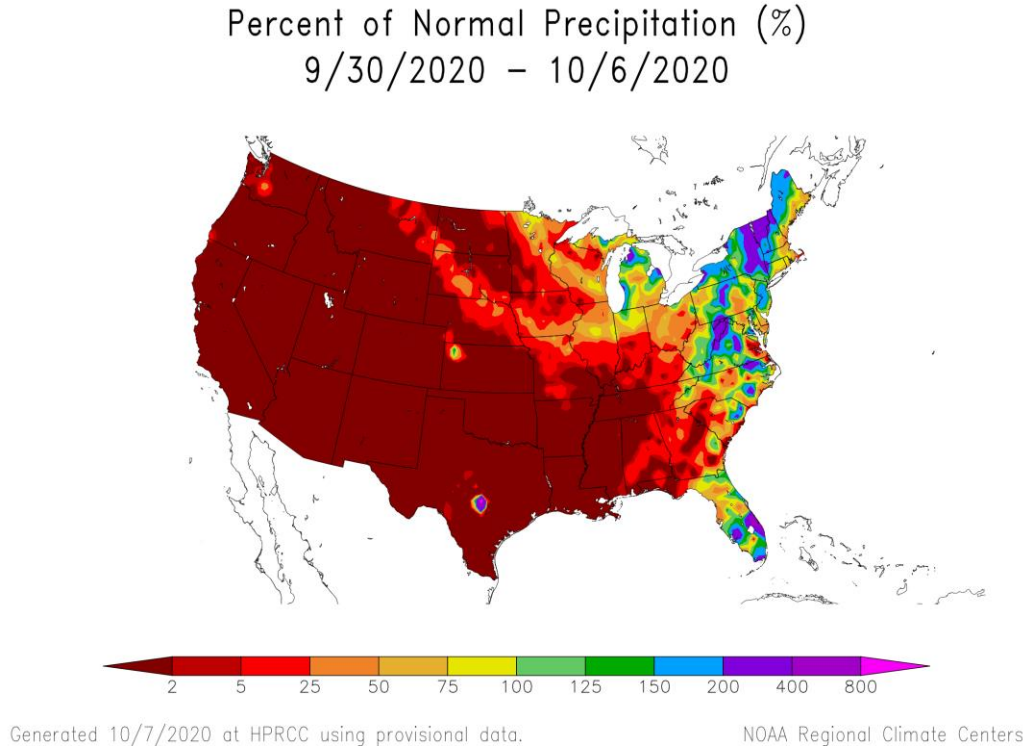


Last 7 Days, National Weather Service (NWS) Networks

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

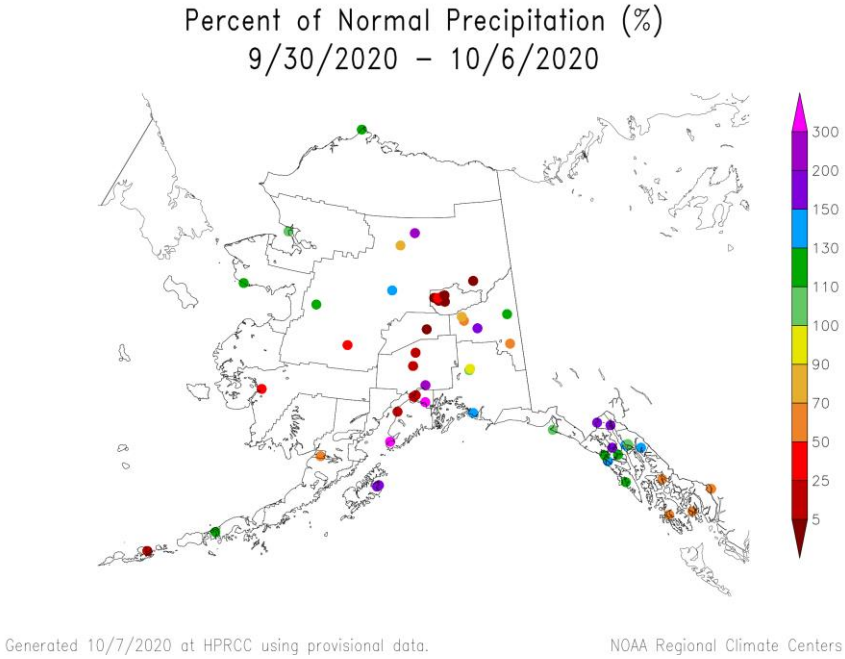


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

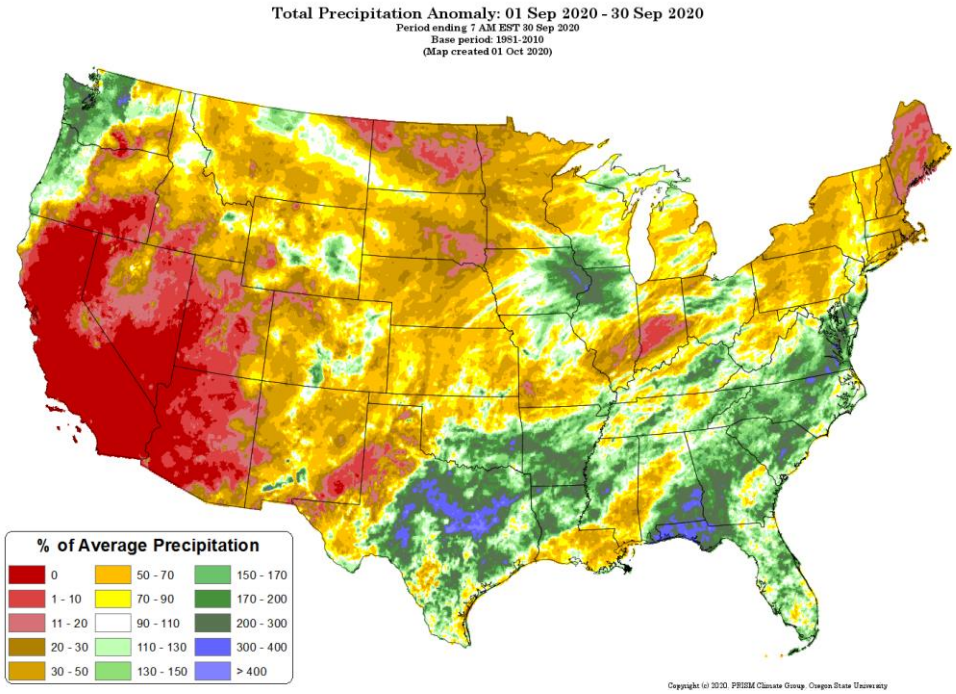
7-day precipitation anomaly map for Alaska.

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



Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

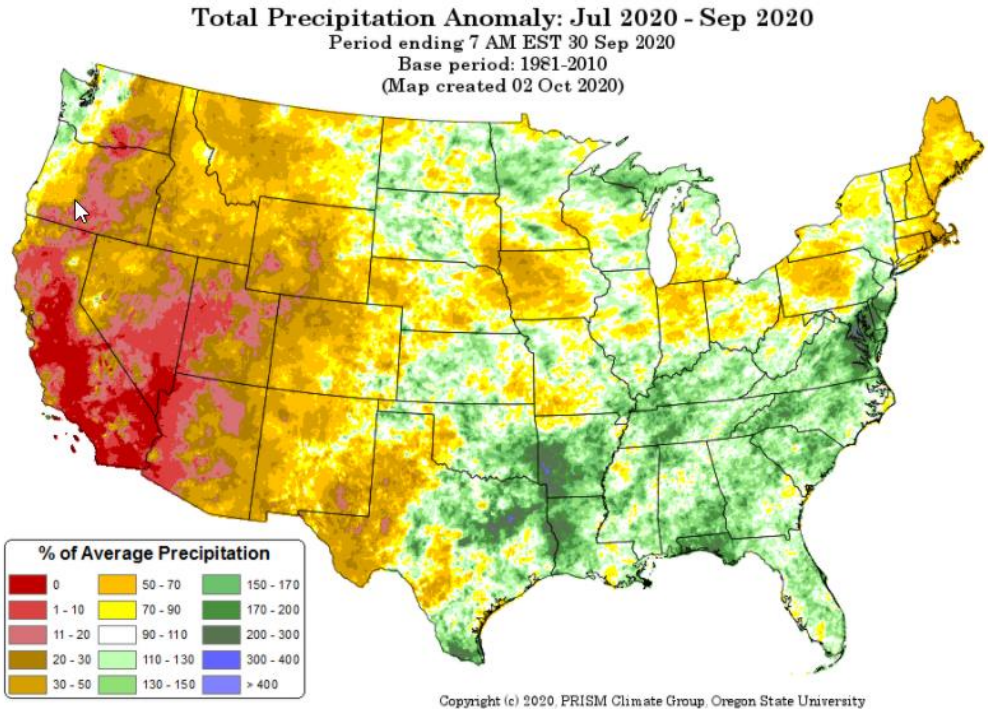


Previous month national total precipitation percent of average map

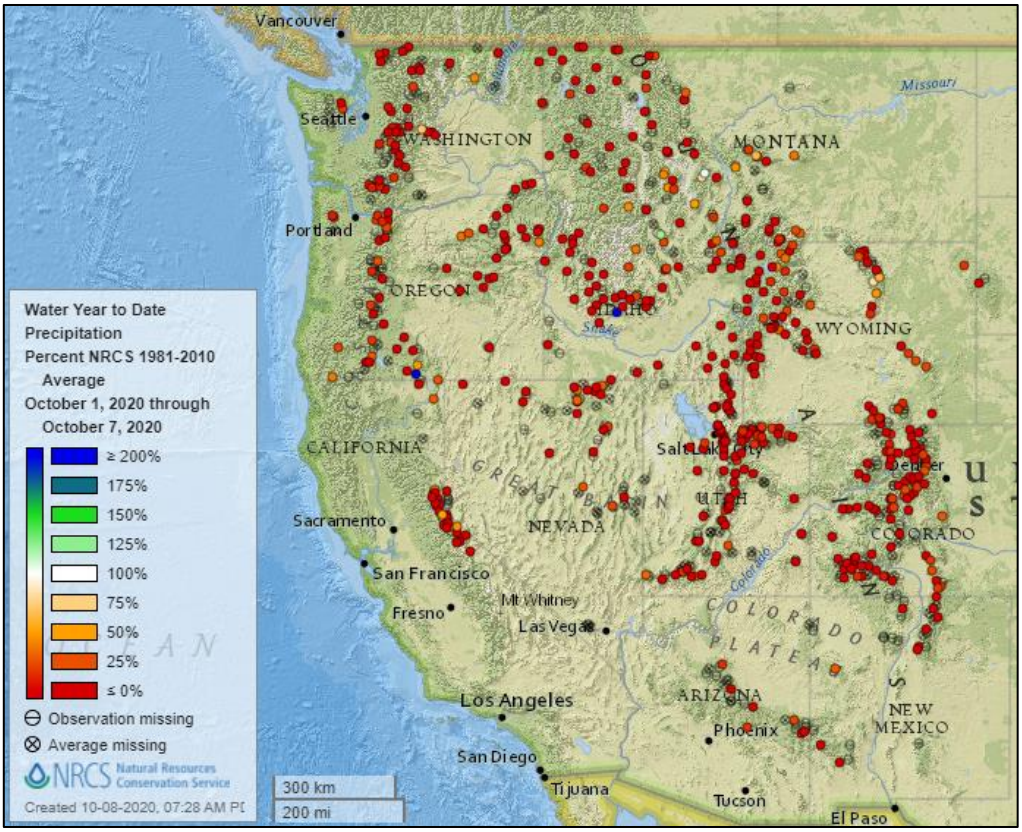
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

July through September precipitation percent of average map

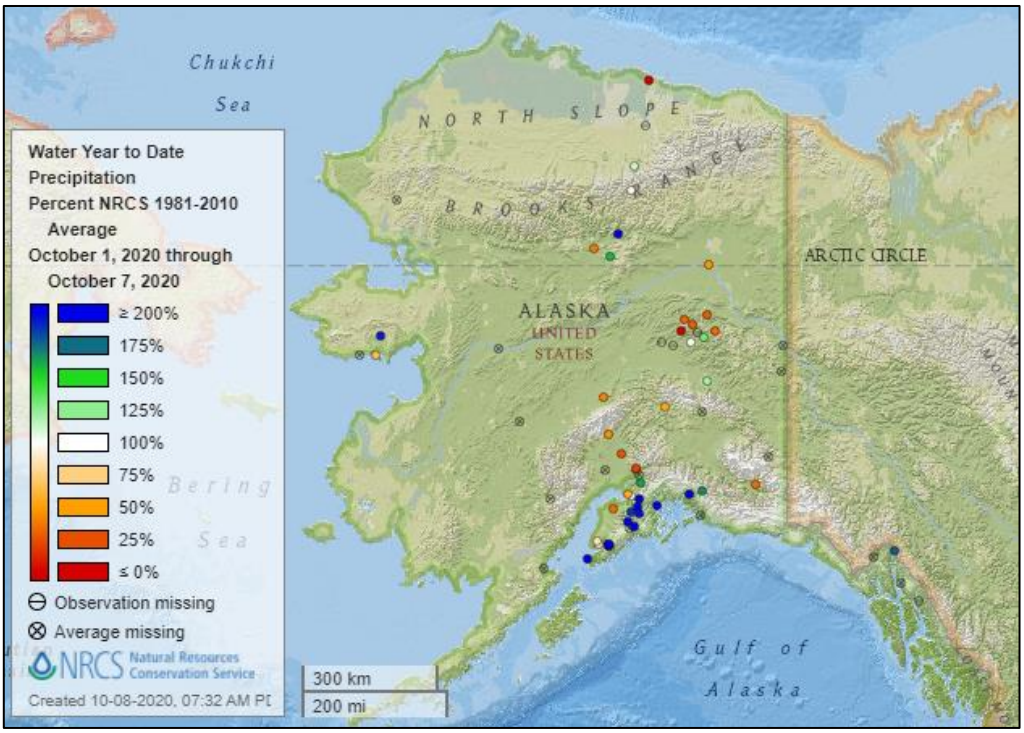


Water Year-to-Date, NRCS SNOTEL Network



[2021 water year-to-date precipitation percent of average map]

See also:
[2021 water year-to-date precipitation values (inches) map]



[Alaska 2021 water year-to-date precipitation percent of average map]

See also:
[Alaska 2021 water year-to-date precipitation values (inches) map]

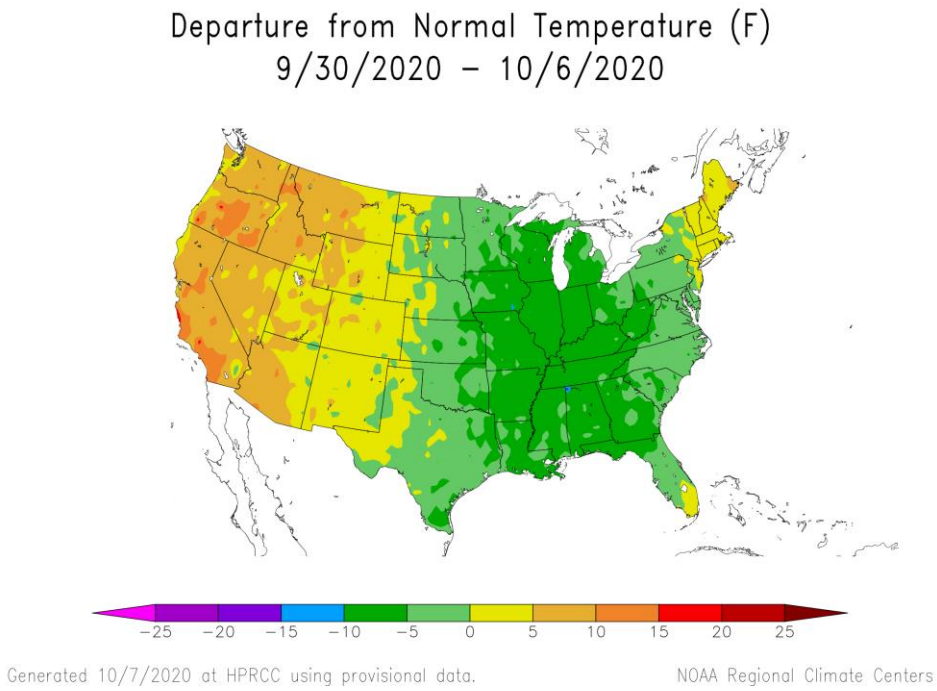
Temperature

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

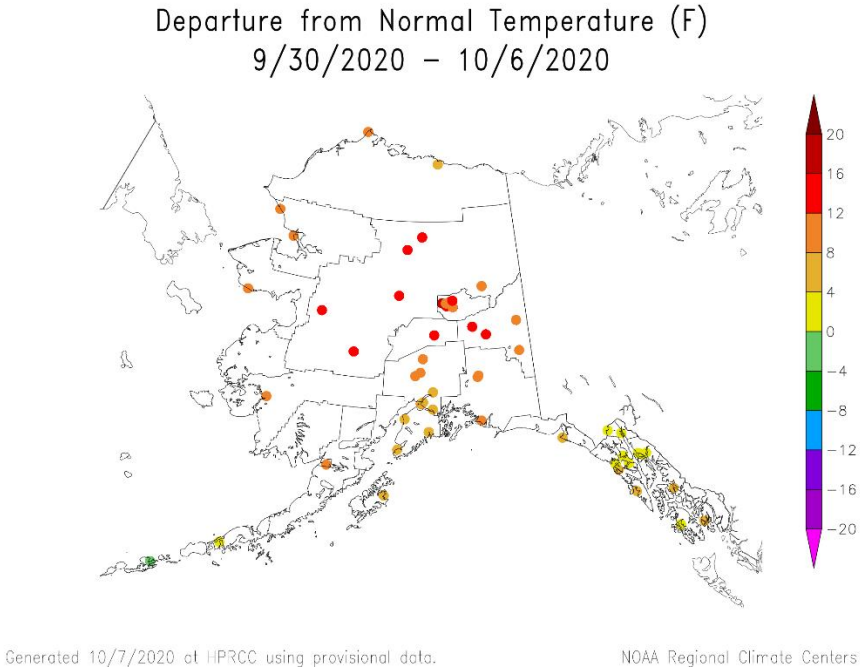


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

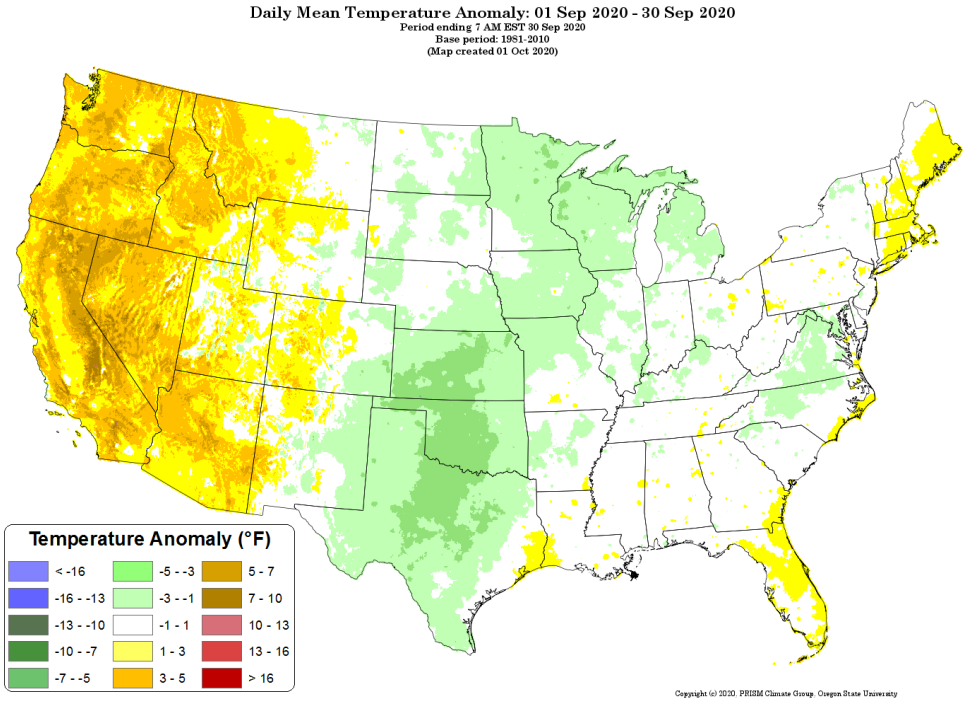
See also: 7-day temperature (° F) map



Previous Month, All Available Data Including SNOTEL and NWS Networks

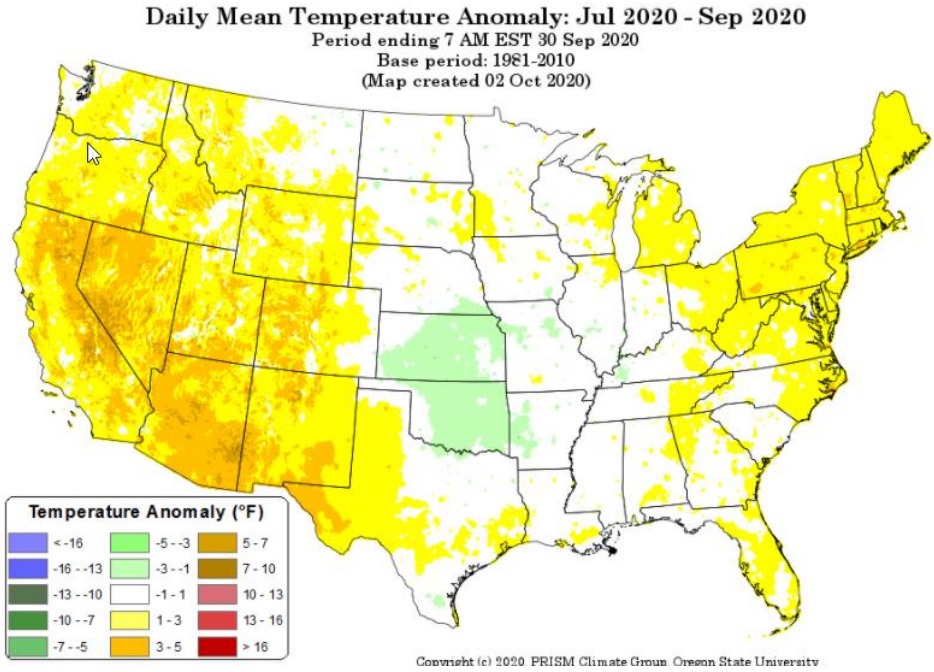
Source: PRISM

[Previous month national daily mean temperature anomaly map]



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

Source: PRISM

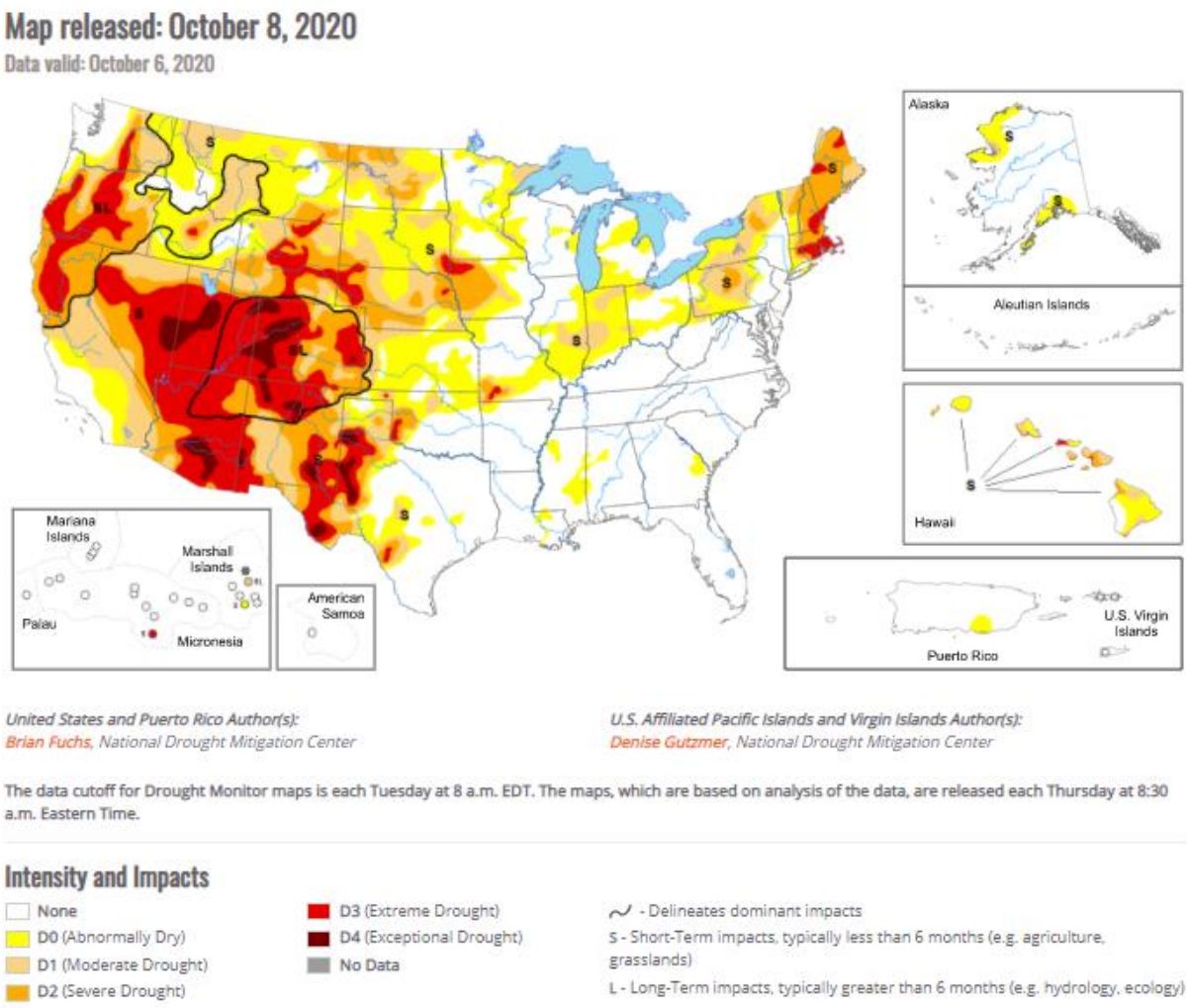


[July through September 2020 daily mean temperature anomaly map]

Drought

U.S. Drought Monitor
Source: National Drought Mitigation Center

U.S. Drought Portal
Source: NOAA



Current National Drought Summary, October 6, 2020

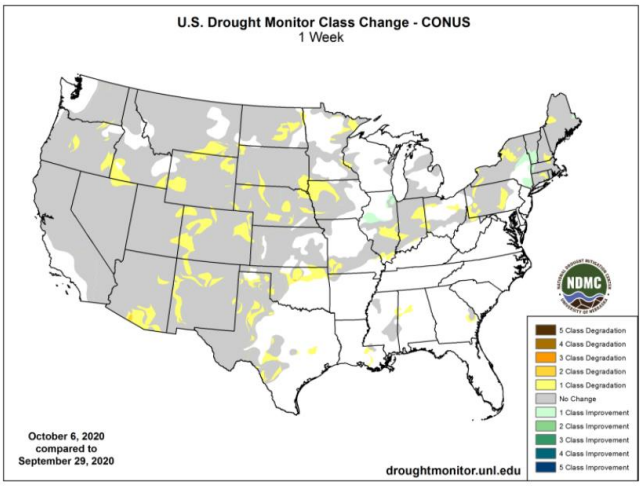
Source: National Drought Mitigation Center

"Temperatures for the week were below normal over much of the Plains, Midwest, South, Southeast and Mid-Atlantic, with departures of 5-10 degrees below normal for many locations. The West continued to be warm with temperatures near normal to slightly above through the Rocky Mountains and 5-10 degrees above normal over the West Coast. Temperatures in New England were also slightly above normal, with the greatest departures in Maine. Below-normal precipitation dominated almost the entire country. Precipitation amounts were greatest over the eastern seaboard, with the Northeast recording the most rain. Almost no precipitation was recorded in the western two-thirds of the country. In the next several days, eyes will be on Hurricane Delta and where it will make landfall along the Gulf Coast. Current projections are taking the storm ashore in Louisiana."

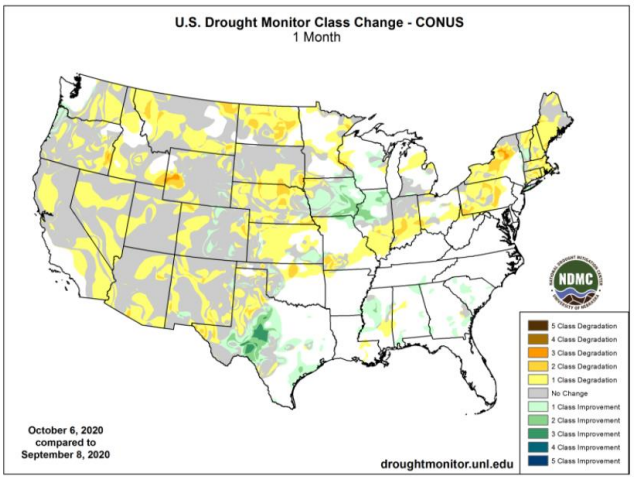
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

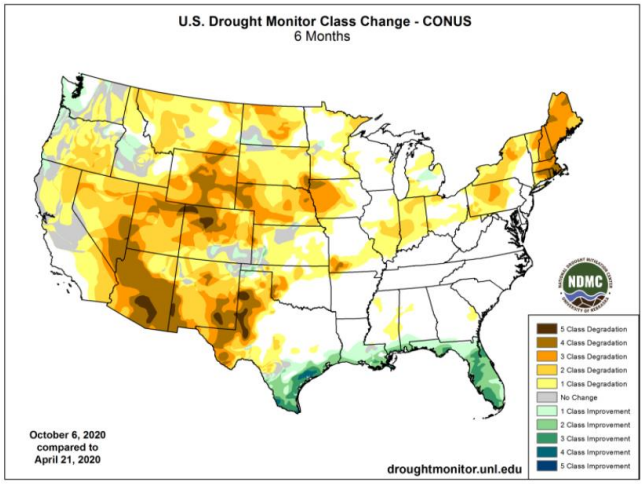
1 Week



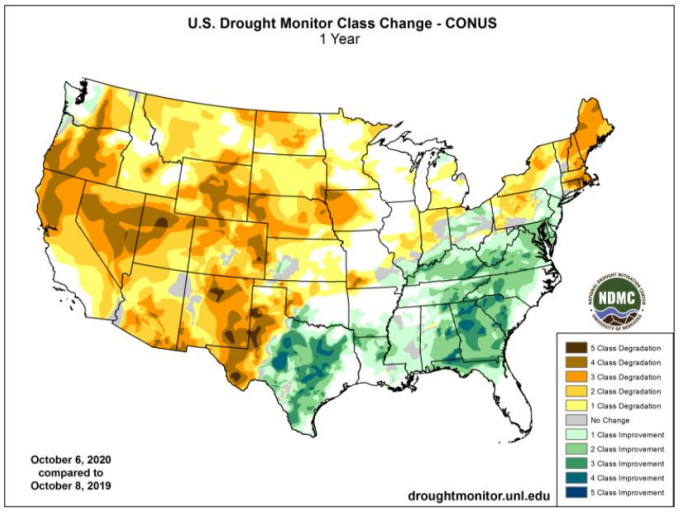
1 Month



6 Months



1 Year



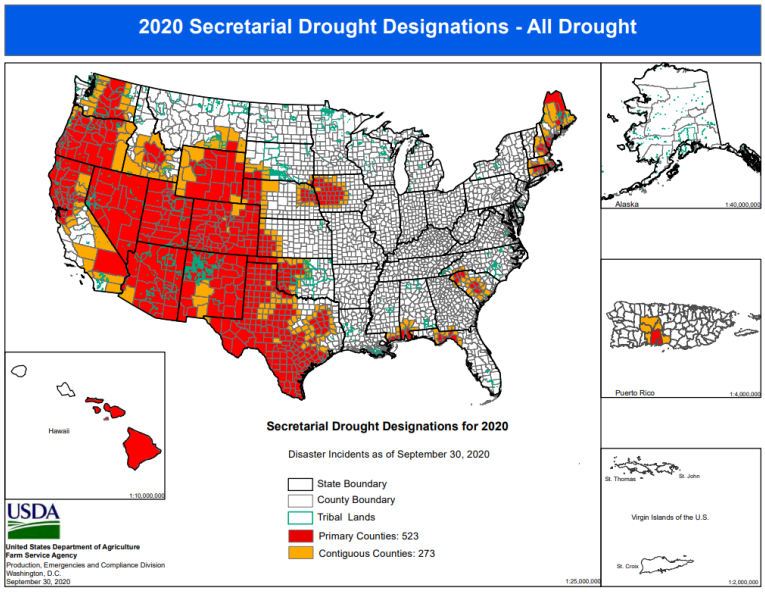
Changes in drought conditions over the last 12 months for the contiguous U.S.

Highlighted Drought Resources

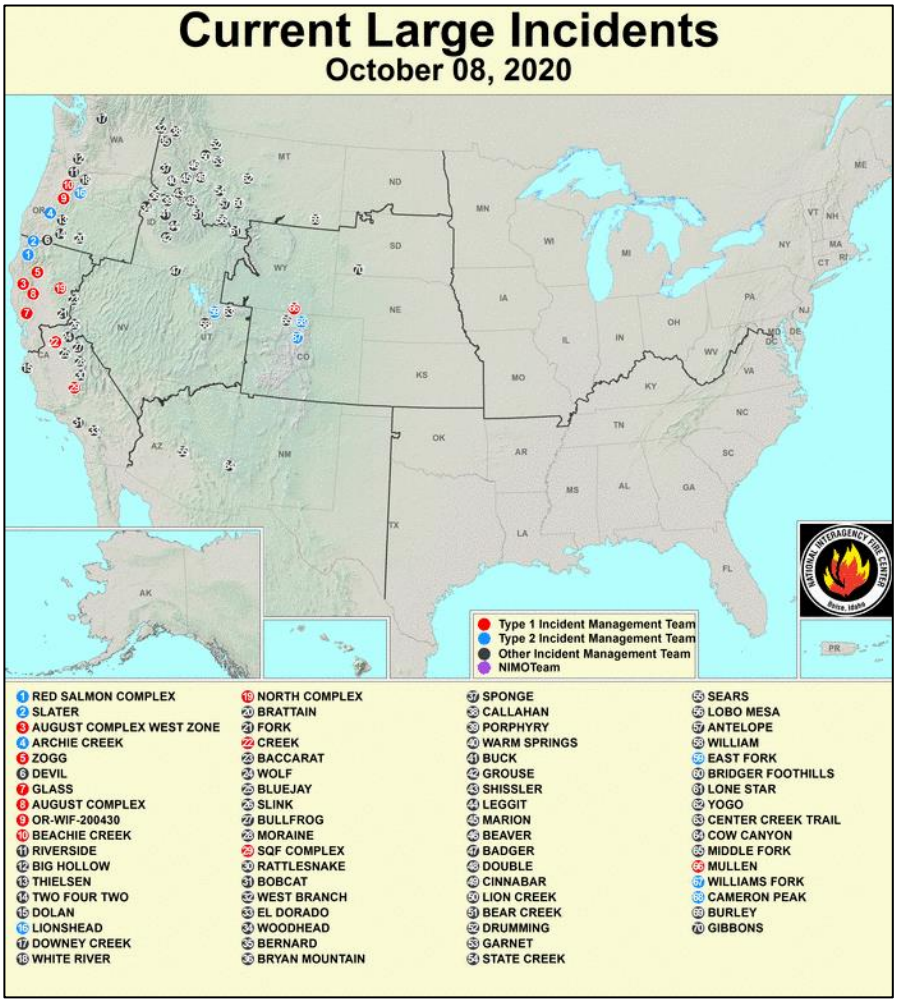
- Drought Impact Reporter
- Quarterly Regional Climate Impacts and Outlook
- U.S. Drought Portal Indicators and Monitoring
- U.S. Population in Drought, Weekly Comparison
- USDA Disaster and Drought Information

Secretarial [Drought Designations]

Source: USDA Farm Service Agency



Wildfires: [USDA Forest Service Active Fire Mapping]



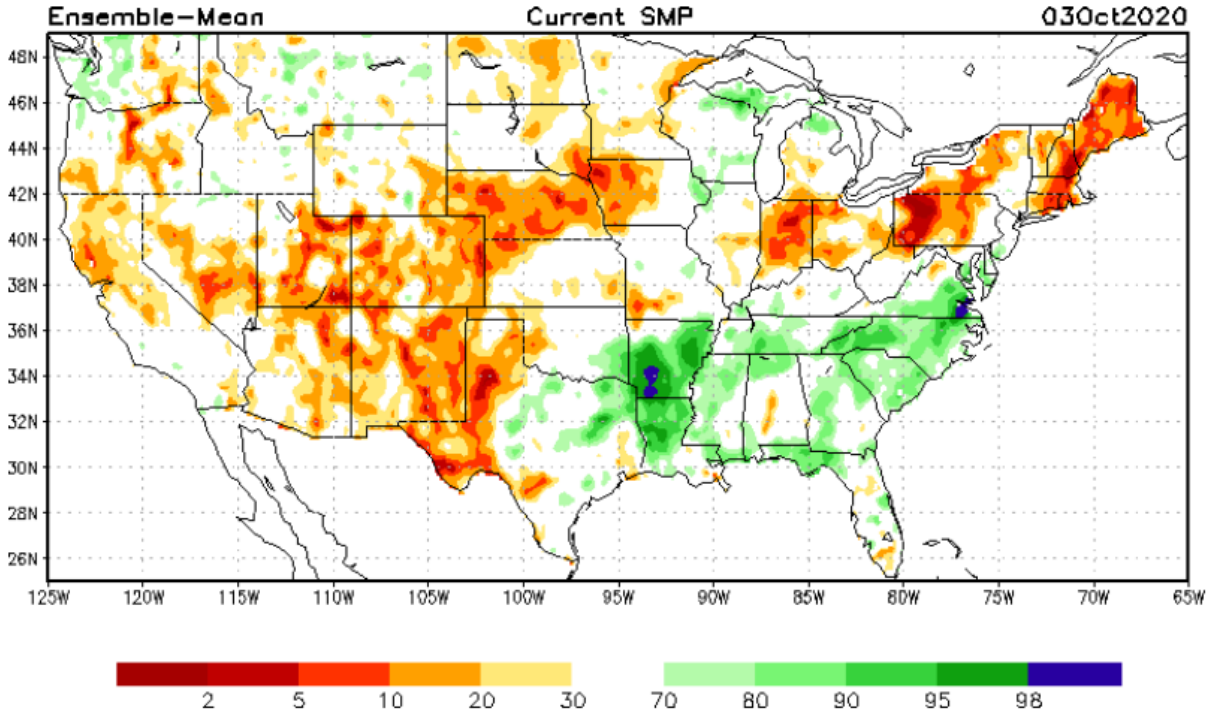
Highlighted Wildfire Resources

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

Other Climatic and Water Supply Indicators

Soil Moisture

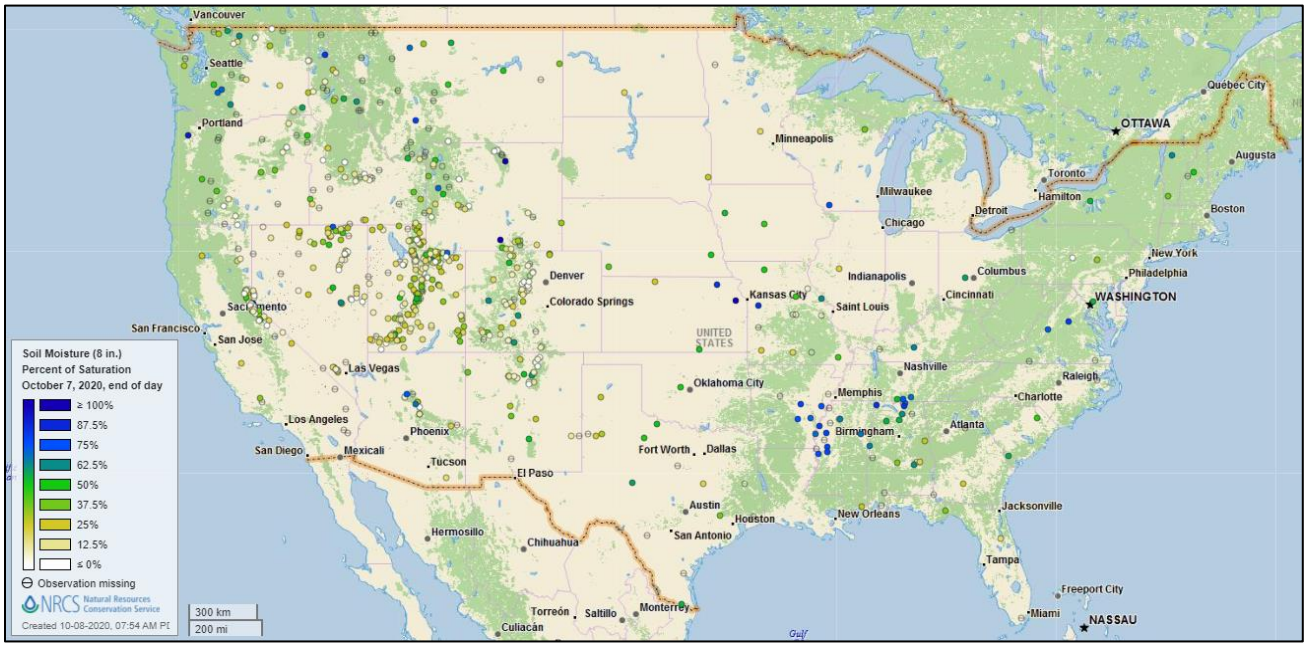
Source: NOAA National Centers for Environmental Prediction



Modeled soil moisture percentiles as of October 3, 2020

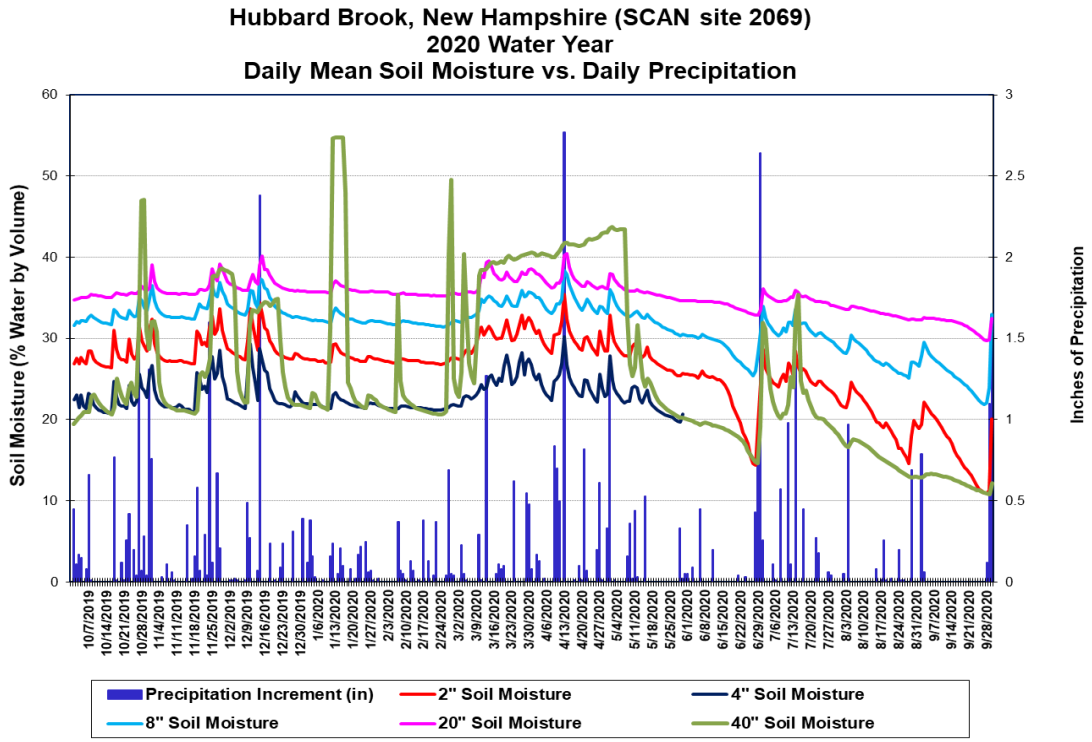
Soil Moisture Percent of Saturation

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



Soil Moisture

Source: NRCS Soil Climate Analysis Network (SCAN)



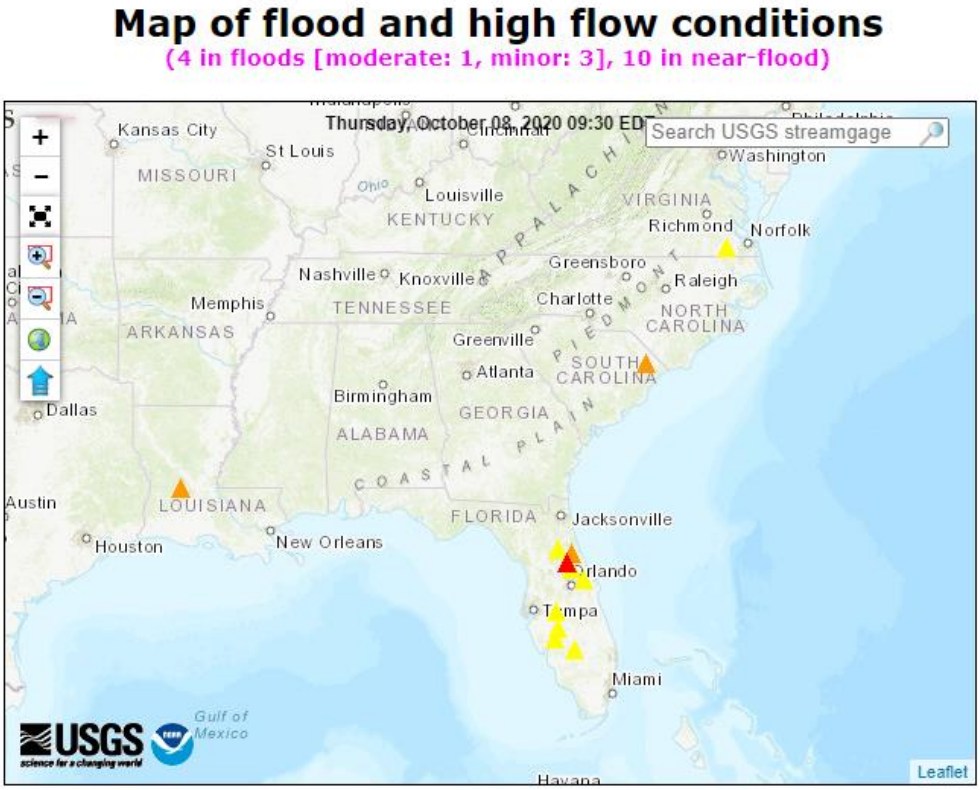
This chart shows the precipitation and soil moisture for the last water year at the Hubbard Brook SCAN site in New Hampshire. The 2020 water year total precipitation was 50.51 at the station. The overall soil moisture has decreased over the summer.

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

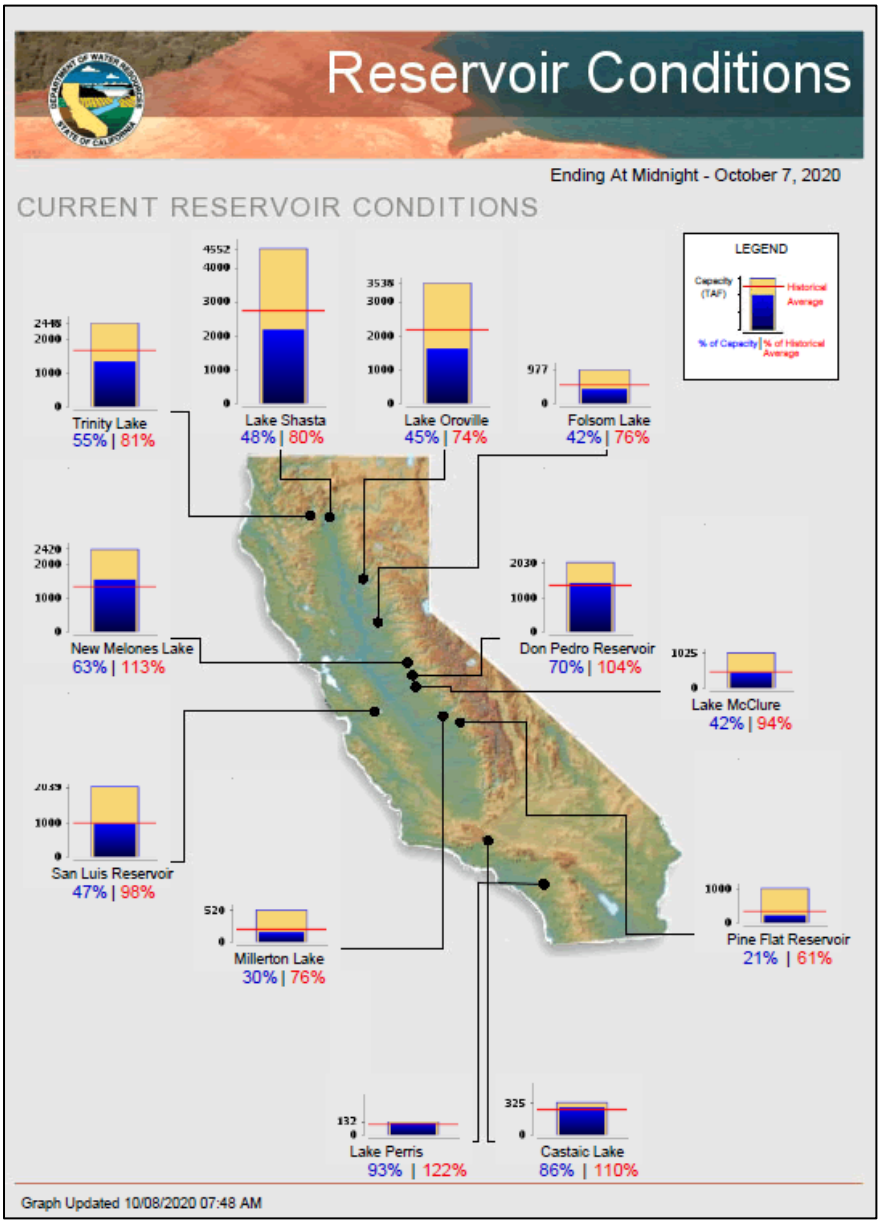


Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
△ Streamgage with flood stage ○ Streamgage without flood stage						

WaterWatch: Streamflow, drought, flood, and runoff conditions

Reservoir Storage

Current California Reservoir Conditions
Source: California Department of Water Resources



Current California Reservoir Conditions

Hydromet Teacup Reservoir Depictions
Source: U.S. Bureau of Reclamation

- Upper Colorado
- Pacific Northwest/Snake/Columbia
- Sevier River Water, Utah
- Upper Missouri, Kansas, Oklahoma, Texas

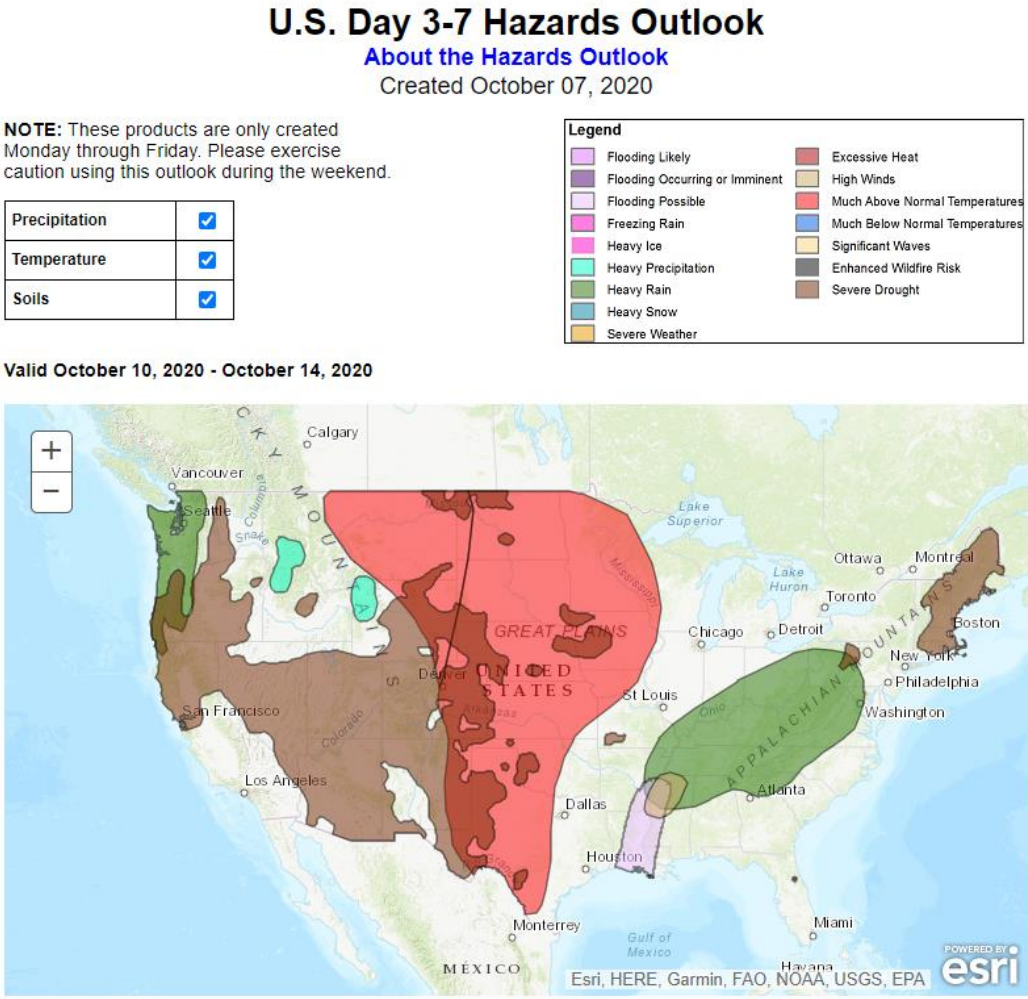
Agricultural Weather Highlights

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

National Outlook, Thursday, October 8, 2020: **"**Hurricane Delta is bound for the Louisiana coast, with landfall expected on Friday afternoon or evening. Delta's arrival will occur in proximity to, and just six weeks after, Category 4 Hurricane Laura devastated southwestern Louisiana with 150 mph winds. Although Delta is not expected to become as strong as Laura, recovery efforts are still ongoing across the hardest-hit areas, resulting in higher-than-usual vulnerability to high winds, heavy rain, and a coastal storm surge. As Hurricane Delta moves inland across Louisiana, rainfall could total 5 to 10 inches, with locally higher amounts. Totals of 3 to 6 inches or more are expected in the Mississippi Delta, while 1- to 3-inch totals may occur as far north as the Ohio Valley and the mid-Atlantic. Meanwhile, a pattern change in the Northwest will result in much-needed rain, starting on Friday. However, mostly dry conditions will persist across large sections of California, the Great Basin, and the Southwest, despite the arrival of cooler air. As cooler air overspreads the West, warmth will expand eastward, resulting in several days of summer-like weather across the Plains and Midwest. By early next week, however, a cold front will sweep across the Plains and Midwest, preceded and accompanied by scattered showers. The NWS 6- to 10-day outlook for October 13 – 17 calls for near- or above-normal temperatures nationwide. The likelihood of warm weather will be greatest in the Northeast and Far West. Meanwhile, near- or below-normal precipitation in the lower Southeast and from the Pacific Coast to the Plains will contrast with wetter-than normal weather across much of the eastern one-third of the U.S."

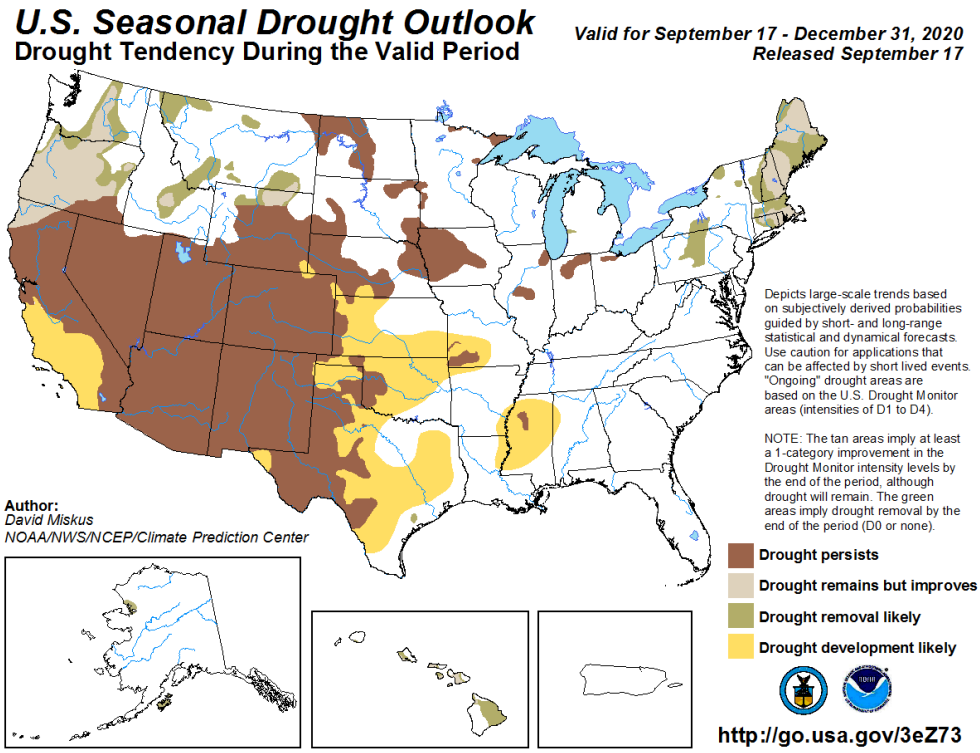
Weather Hazards Outlook: October 10 - 14, 2020

Source: NOAA Weather Prediction Center



Seasonal Drought Outlook: September 17 – December 31, 2020

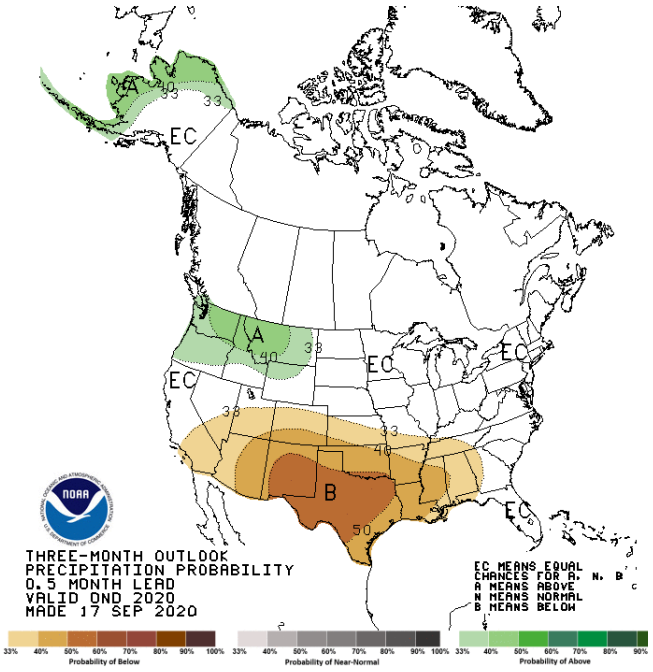
Source: National Weather Service



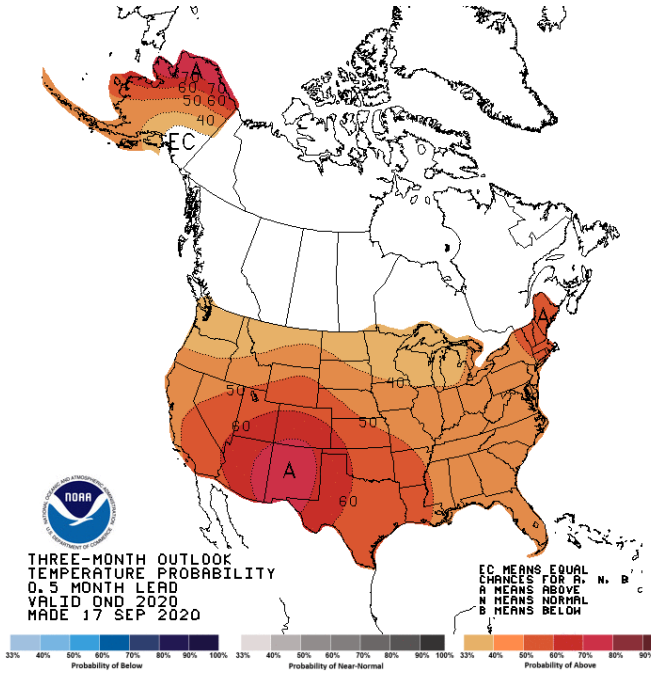
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



October-November-December (OND) 2020 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.