

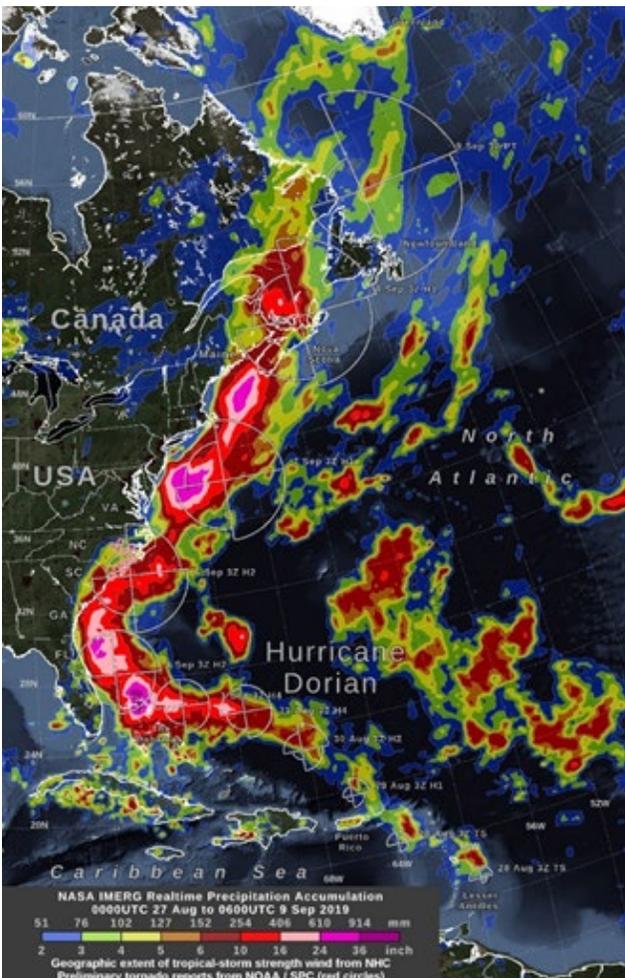
Water and Climate Update

September 12, 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

NASA IMERG satellite total rainfall estimates from Hurricane Dorian



This NASA graphic of the total rainfall from Hurricane Dorian shows that the majority of the heavy rainfall fell over water off the east coast of the U.S.

NASA: “This graphic shows precipitation that fell during the almost two-week period from August 27 to the early hours of September 9. The near-realtime rain estimates come from the NASA IMERG algorithm, which combines observations from a fleet of satellites, in near-realtime, to provide near-global estimates of precipitation every 30 minutes.”

When Dorian stalled over the northern islands of the Bahamas, the area received over 36 inches. The subsequent storm track and highest rainfall totals were primarily a few miles off the eastern seaboard, where 16 to over 24 inches of rainfall was reported.

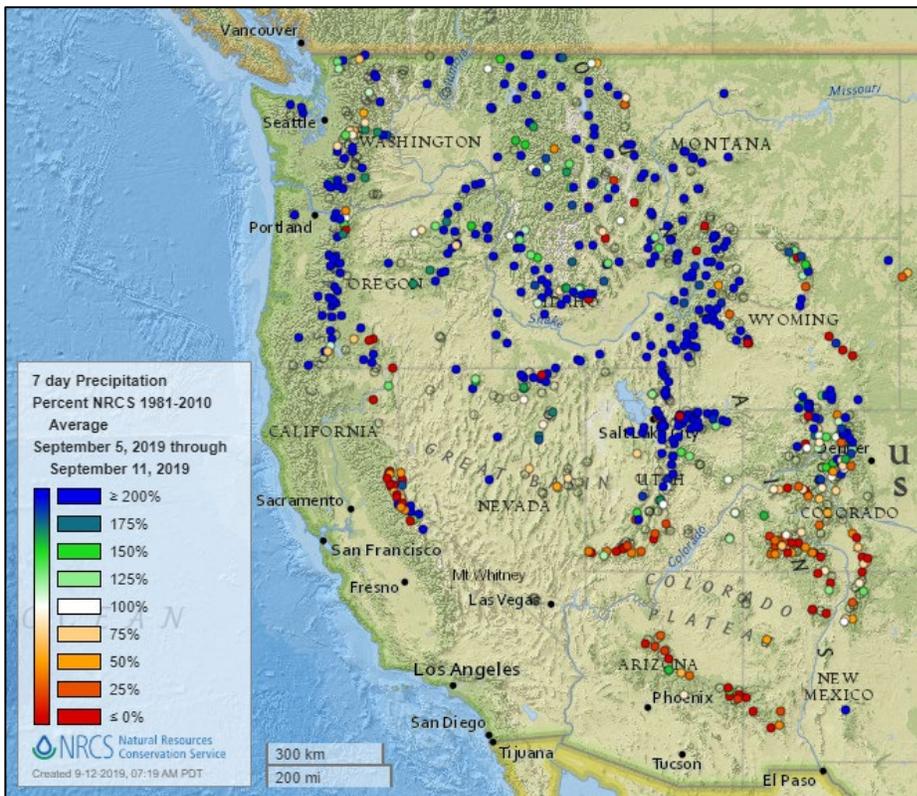
The areas in South Carolina where Dorian made landfall had less than 10 inches of precipitation, and other states had less than 4 inches. In the Northeast, the eastern tip of Maine had over 6 inches of rainfall and the Canadian maritime provinces, especially Nova Scotia, received up to 16 inches.

Related:

- [IMERG Measures Rainfall in Hurricane Dorian](#) – NASA
- [How much rain did you get from Dorian? Here are the rainfall totals for the past week](#) – Charlotte Observer (NC)
- [Wind, Rain as Hurricane Dorian Brushes New England](#) – NBC Connecticut (CT)
- [Down East Maine lashed by rain, wind as Dorian passes offshore](#) – Portland Press Herald (ME)
- [Hurricane Dorian ravages Canada’s maritime provinces](#) – rcinet.ca (Canada)

Precipitation

Last 7 Days, NRCS SNOTEL Network

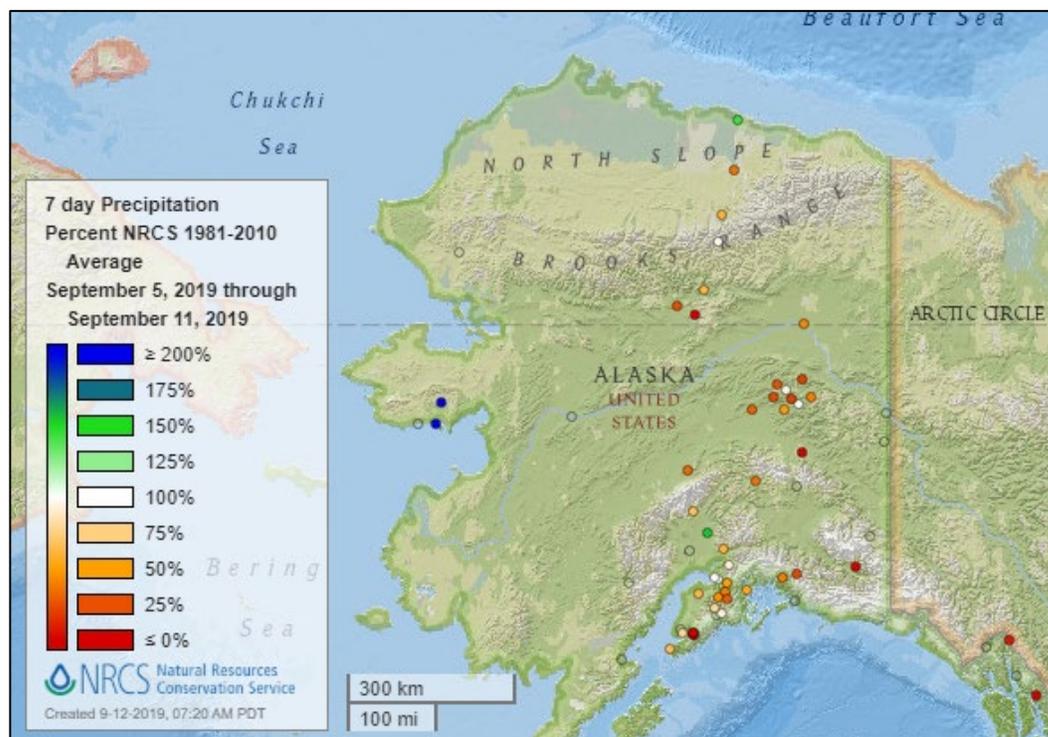


[7-day precipitation percent of average map](#)

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](#)



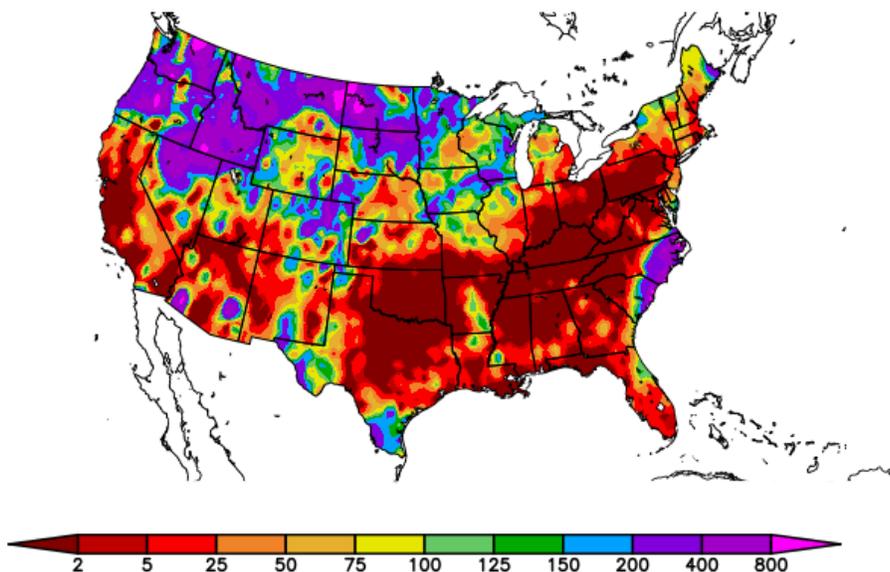
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
9/4/2019 – 9/10/2019



Generated 9/11/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

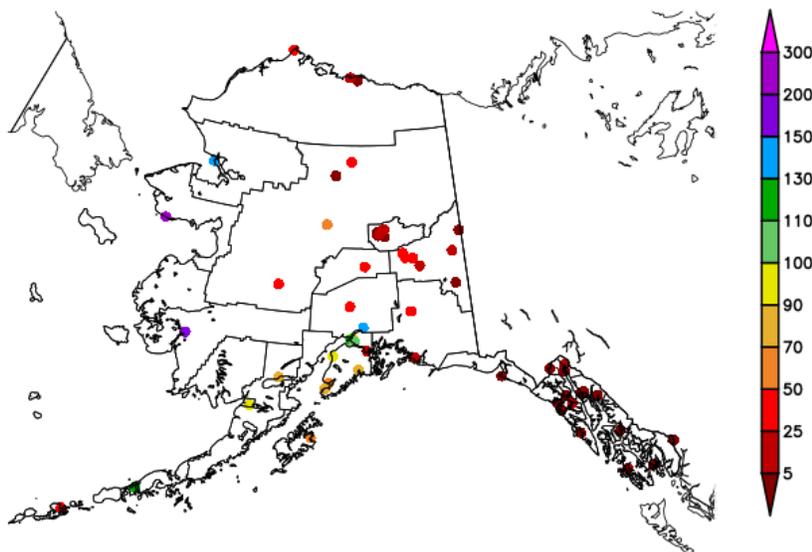
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)
9/4/2019 – 9/10/2019



Generated 9/11/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

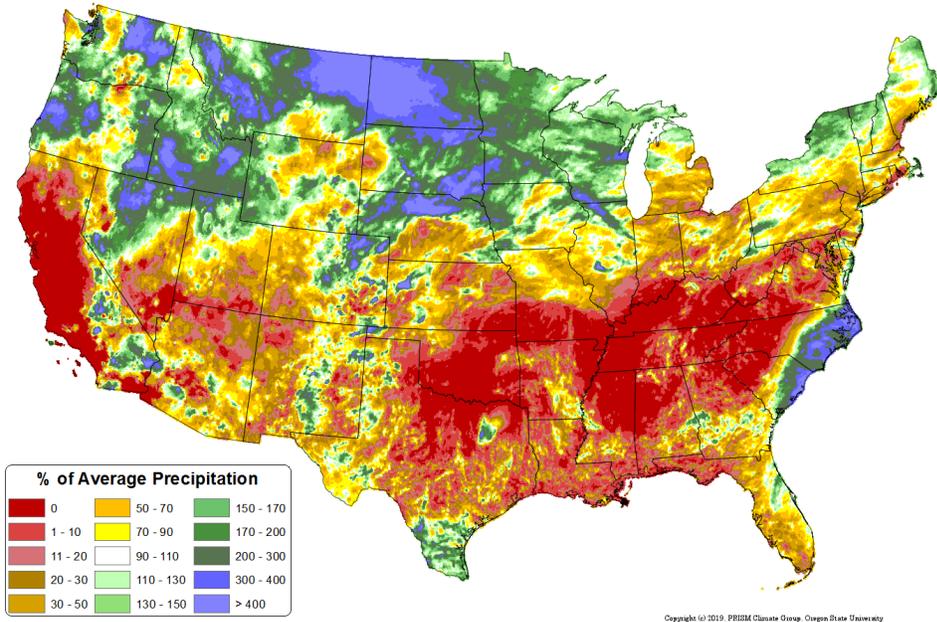
Water and Climate Update

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

Source: PRISM

Total Precipitation Anomaly: 01 Sep 2019 - 11 Sep 2019
Period ending 7 AM EST 11 Sep 2019
Base period: 1981-2010
(Map created 12 Sep 2019)

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



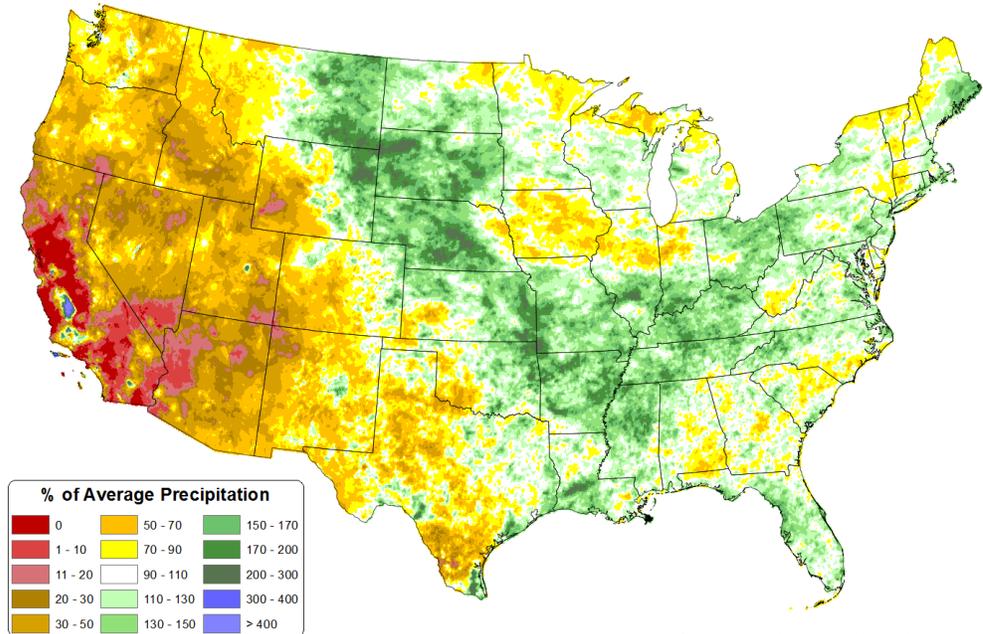
Copyright (c) 2019, PRISM Climate Group, Oregon State University

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

Source: PRISM

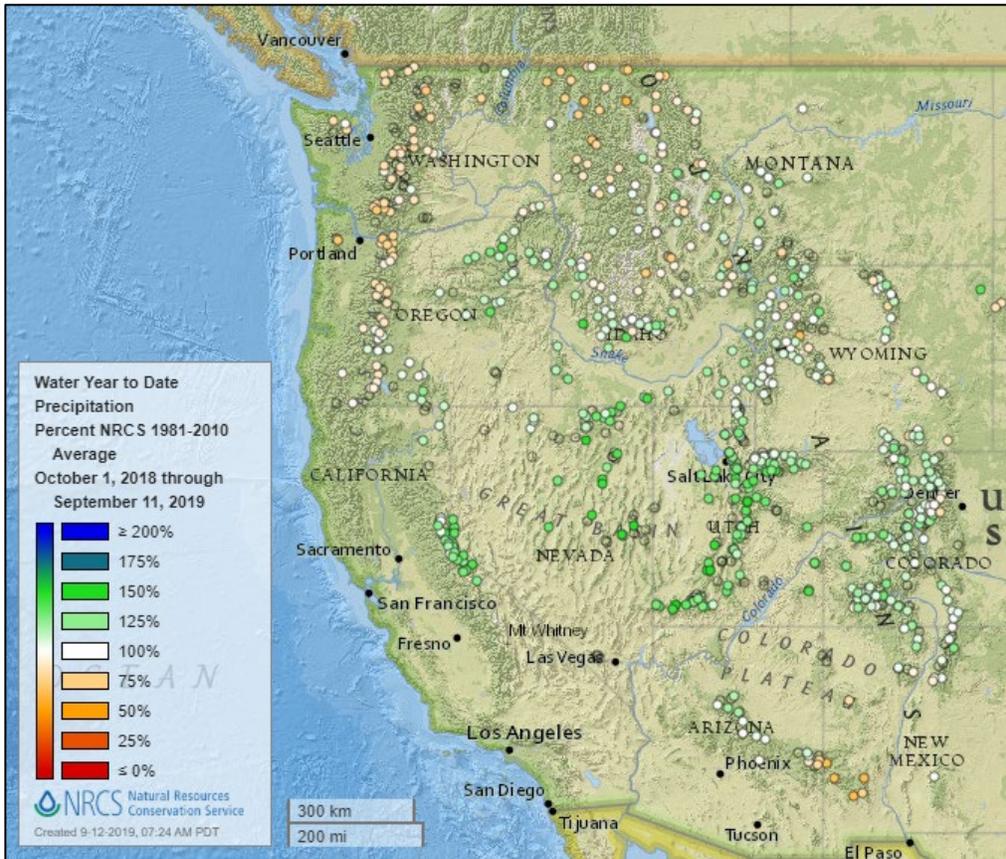
[June through August 2019 total precipitation percent of average map](#)

Total Precipitation Anomaly: Jun 2019 - Aug 2019
Period ending 7 AM EST 31 Aug 2019
Base period: 1981-2010
(Map created 03 Sep 2019)



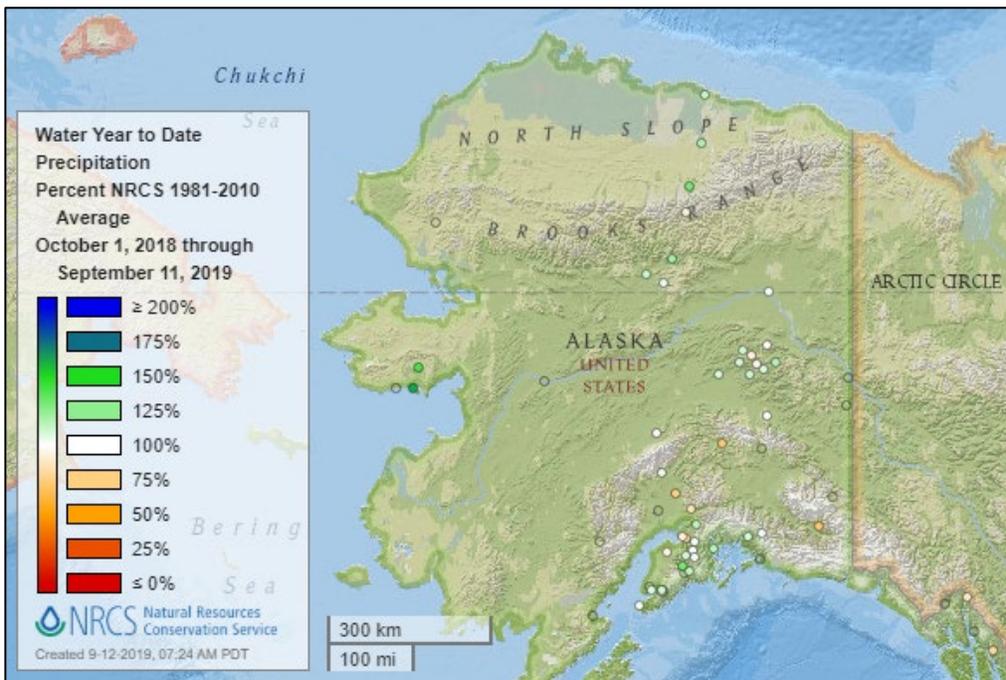
Copyright (c) 2019, PRISM Climate Group, Oregon State University

Water Year-to-Date, NRCS SNOTEL Network



[2019 water year-to-date precipitation percent of average map](#)

See also:
[2019 water year-to-date precipitation values \(inches\) map](#)



[Alaska 2019 water year-to-date precipitation percent of average map](#)

See also:
[Alaska 2019 water year-to-date precipitation values \(inches\) map](#)

Temperature

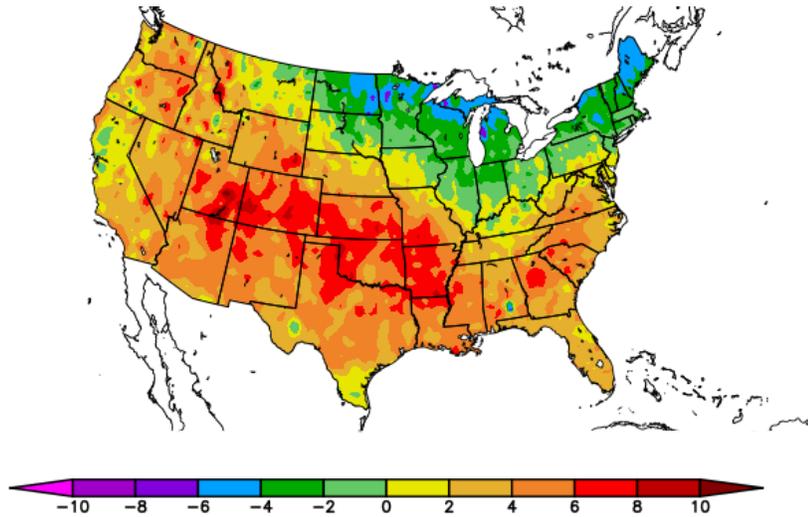
Last 7 Days, National Weather Service (NWS) Networks

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)
9/4/2019 – 9/10/2019



Generated 9/11/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

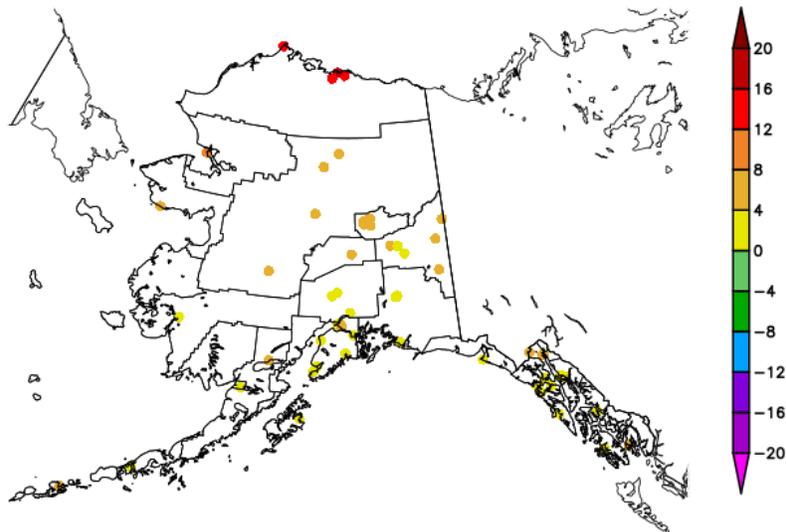
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
9/4/2019 – 9/10/2019



Generated 9/11/2019 at HPRCC using provisional data.

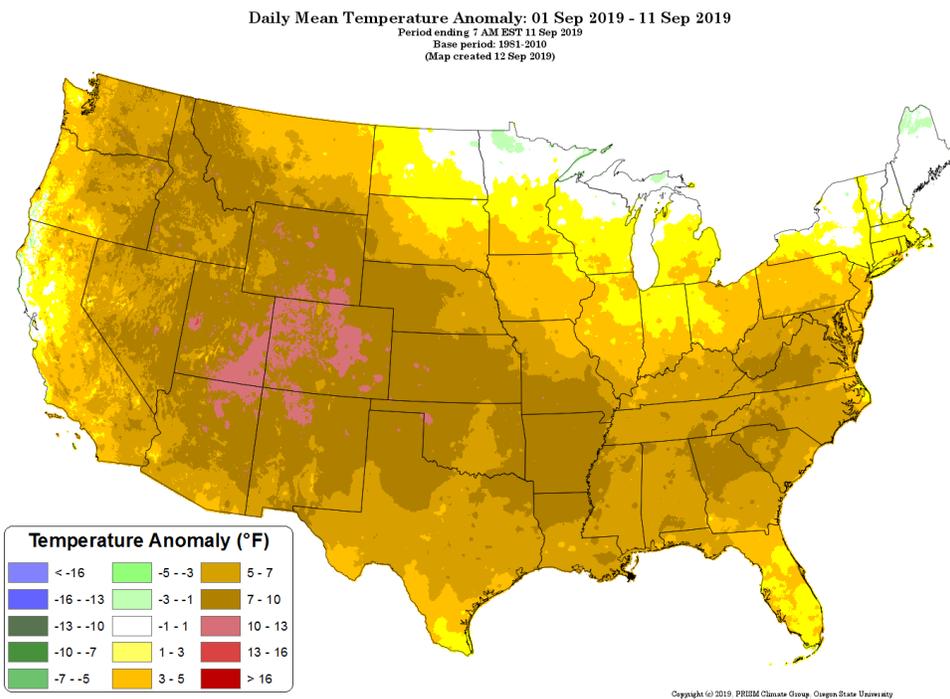
NOAA Regional Climate Centers

Water and Climate Update

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

Source: PRISM

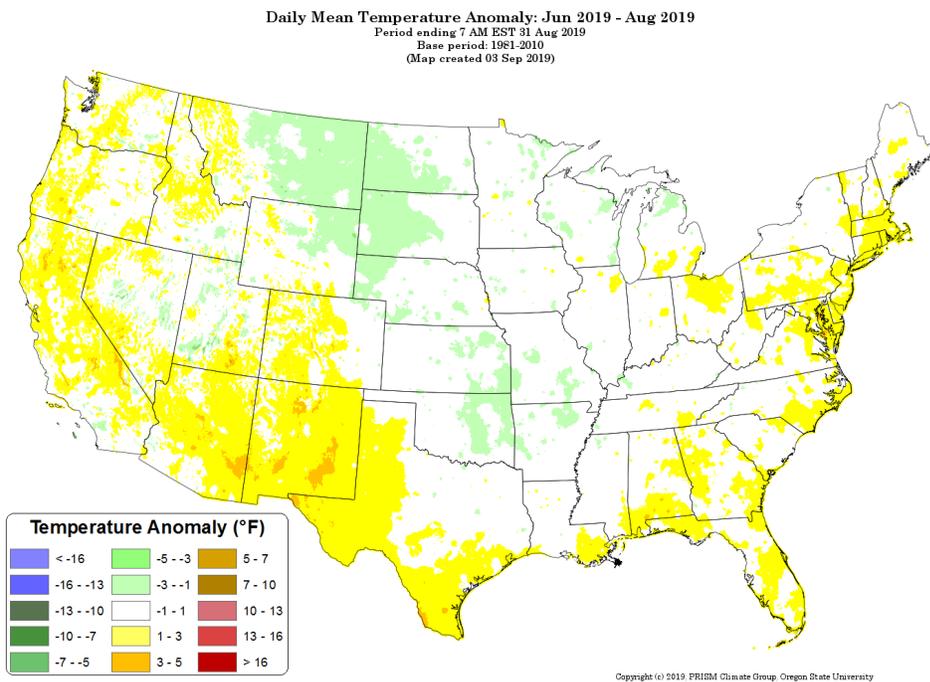
[Month-to-date national daily mean temperature anomaly map](#)



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

Source: PRISM

[June through August 2019 daily mean temperature anomaly map](#)



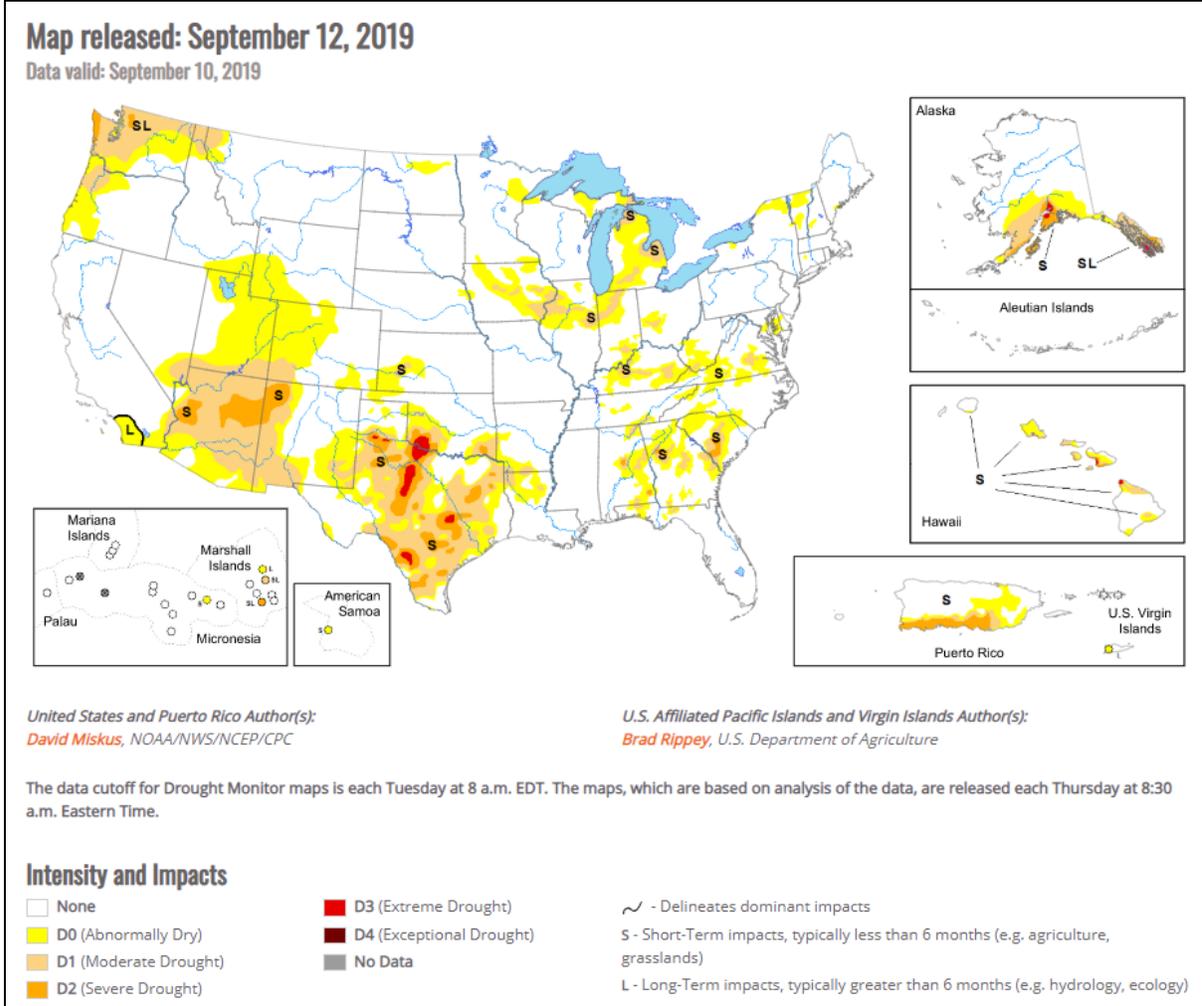
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

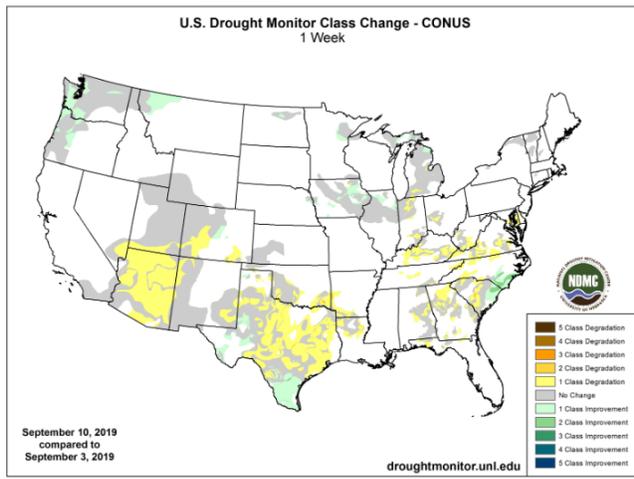
Source: NOAA



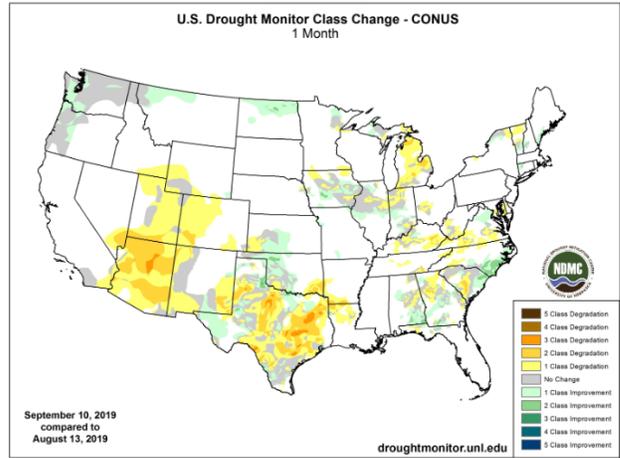
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

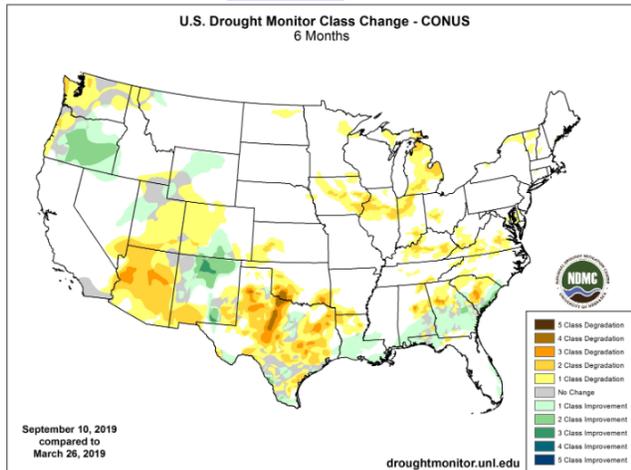
1 Week



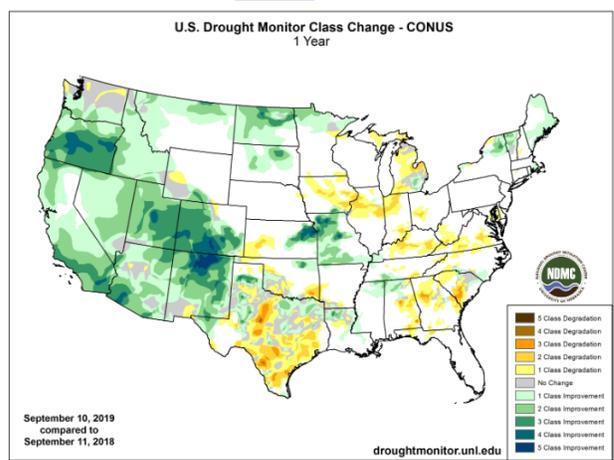
1 Month



6 Months



1 Year



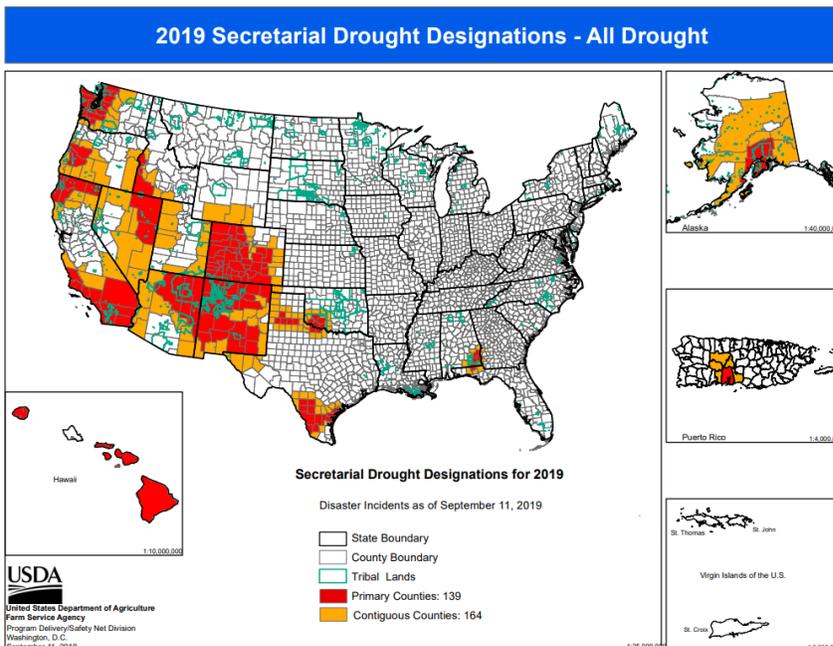
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

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



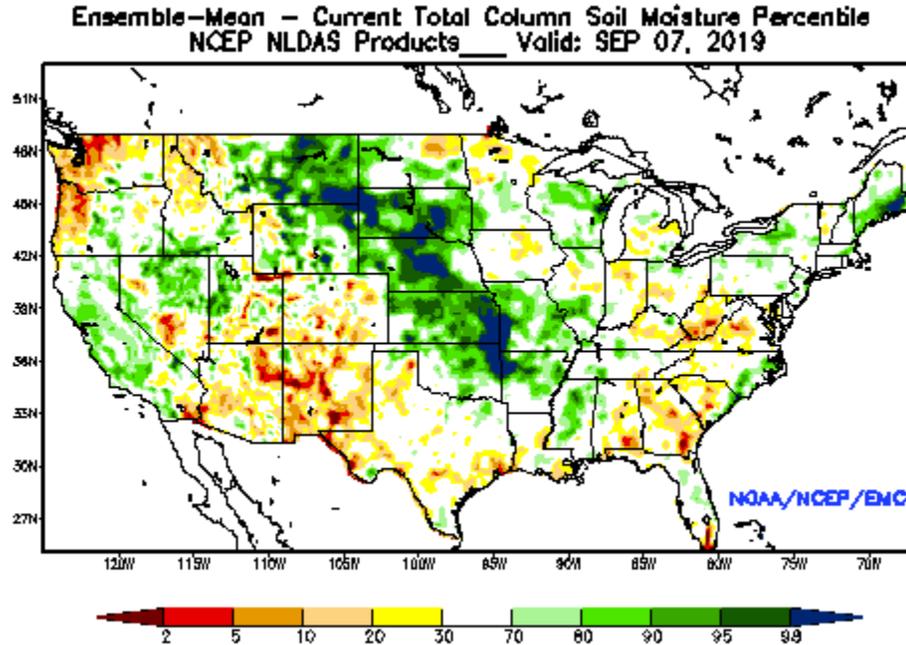
Highlighted Wildfire Resources

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

Other Climatic and Water Supply Indicators

Soil Moisture

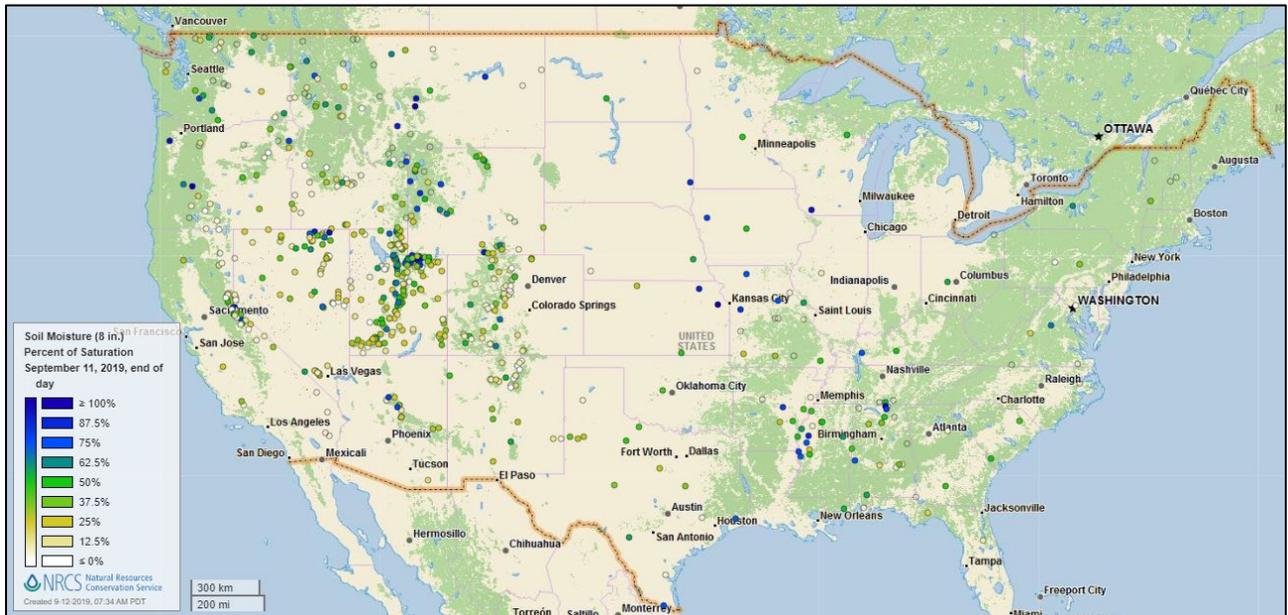
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of September 7, 2019

Soil Moisture Percent of Saturation

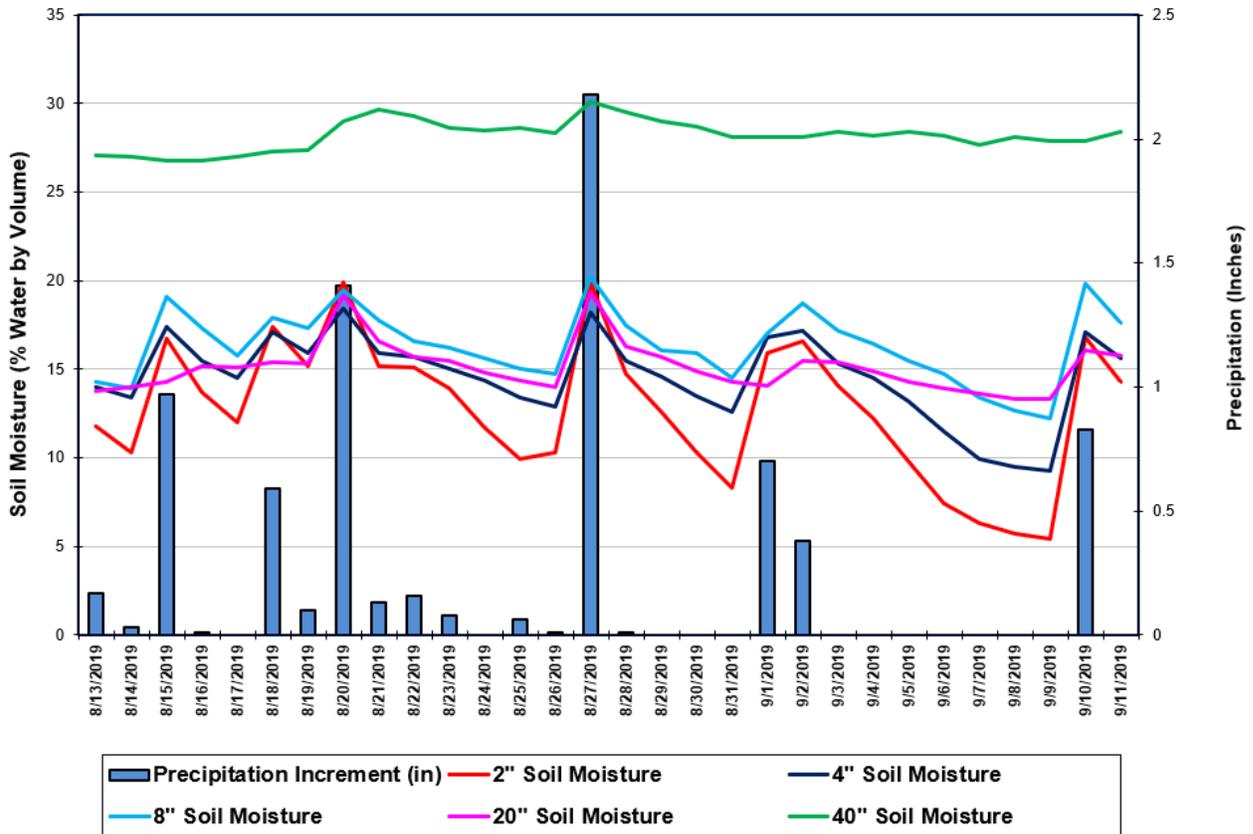
Source: NRCS SNOTEL and [Soil Climate Analysis Network](#) (SCAN)



Soil Moisture Data

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

**Little River, GA (SCAN site 2027)
Daily Mean Soil Moisture vs. Daily Precipitation**



This chart shows the soil moisture and precipitation for the last 30 days at the [Little River SCAN site](#) in Georgia. Several precipitation events throughout the month increased soil moisture at the -2", -4", -8", and -20" sensor levels. The larger rainfall events on August 20 and 27 also increased the soil moisture at the -40" sensor level.

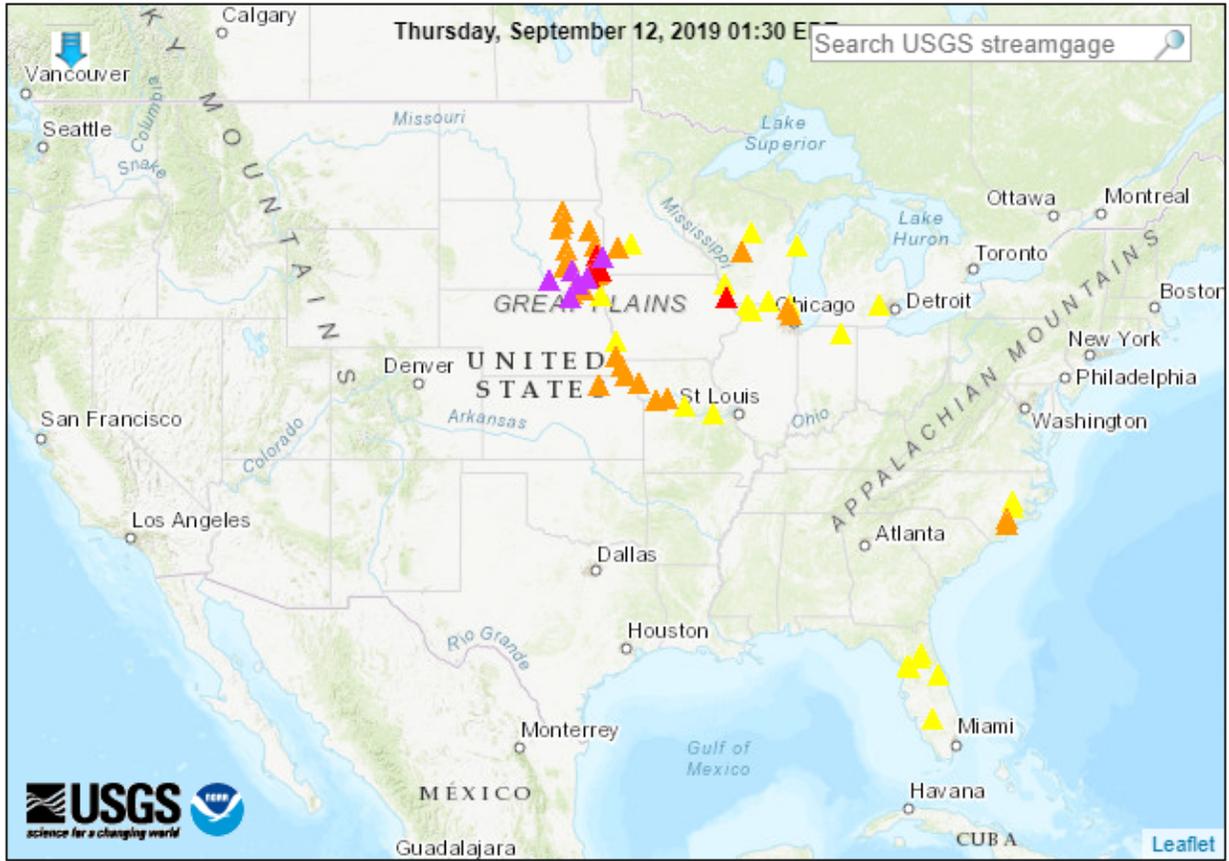
Soil Moisture Data Portals

- [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
 (39 in floods [major: 6, moderate: 6, minor: 27], 23 in near-flood)



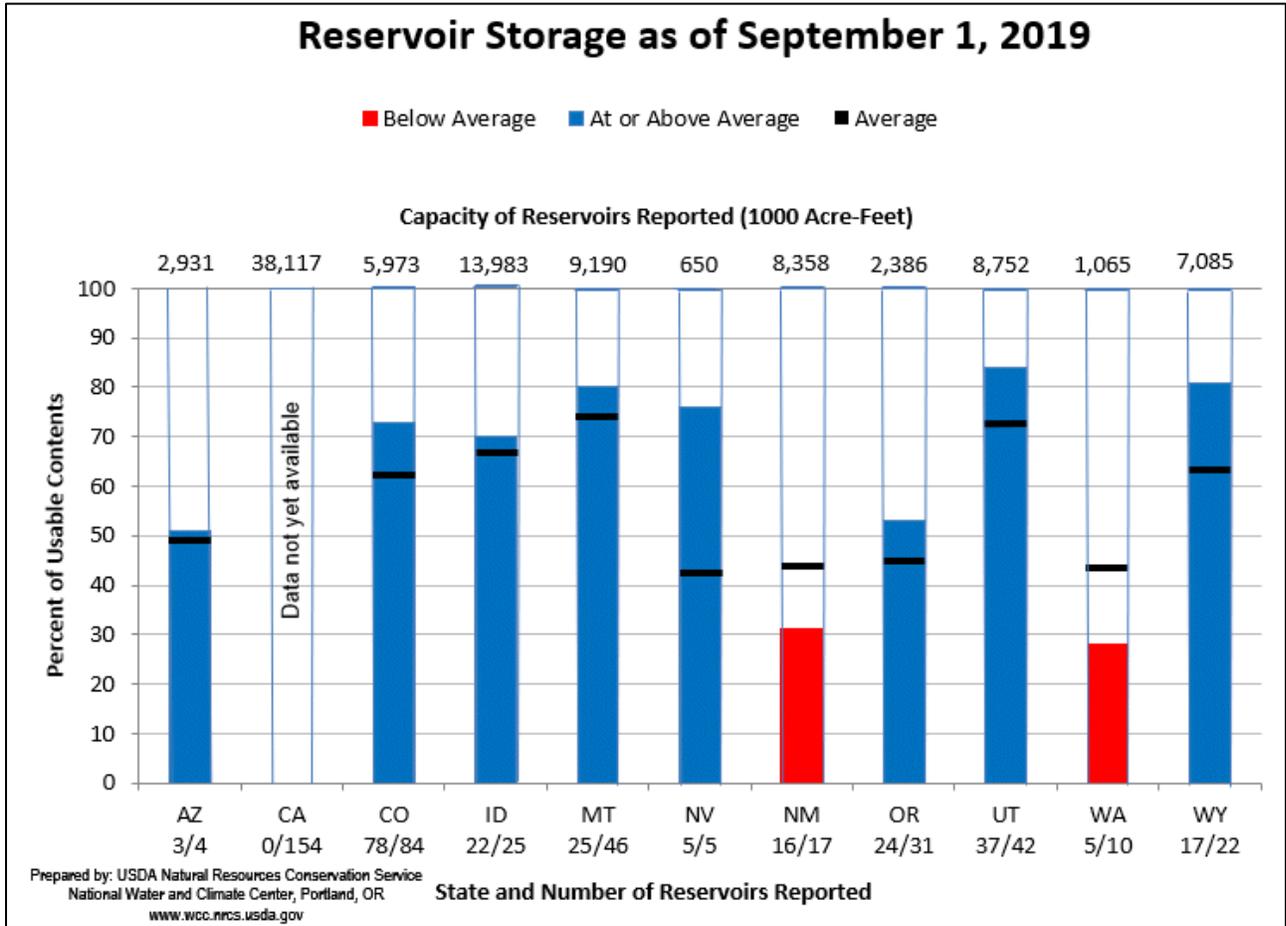
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
Streamgage with flood stage			Streamgage without flood stage			

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

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center



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

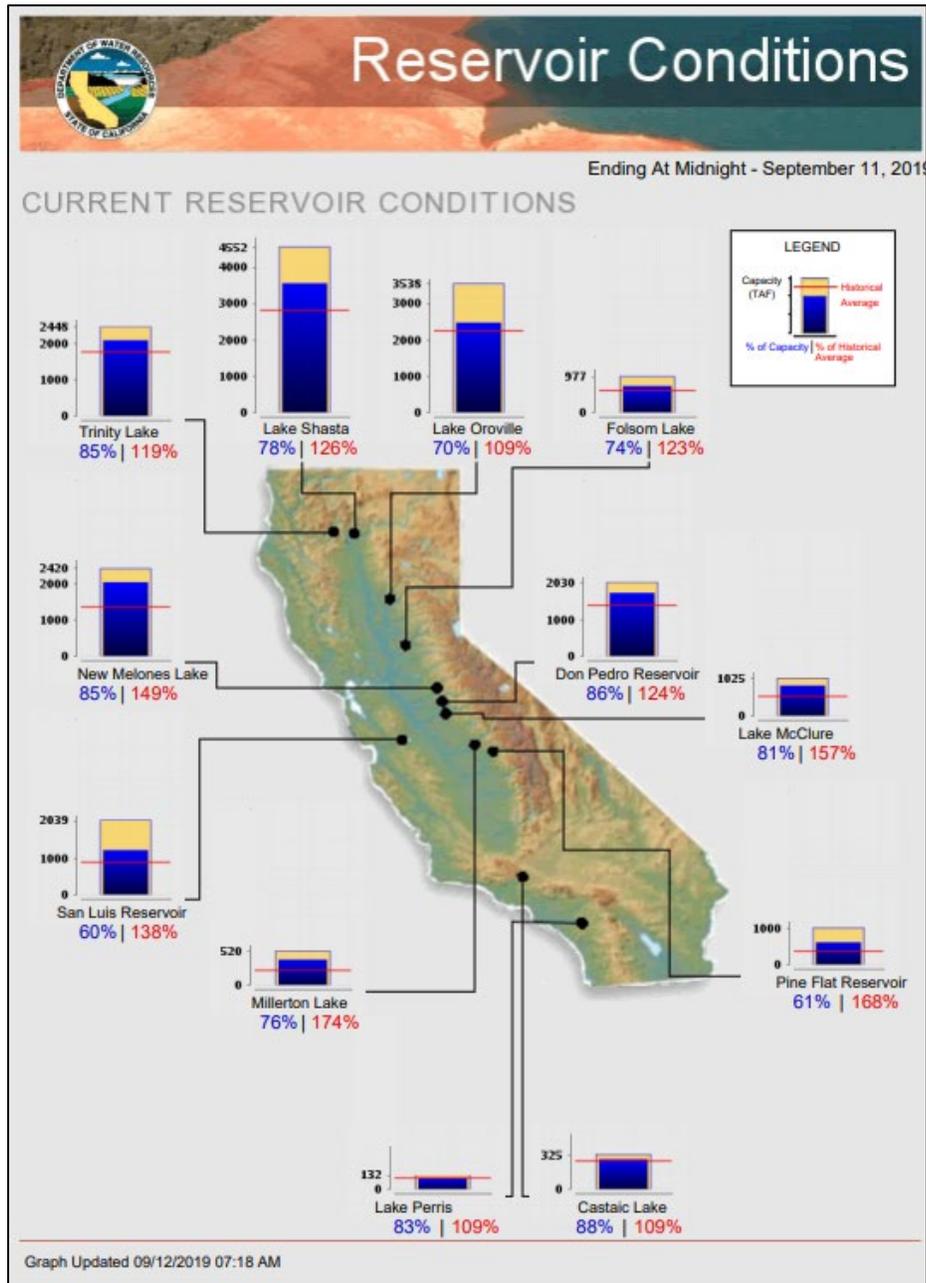
Hydromet Tea Cup Reservoir Depictions

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

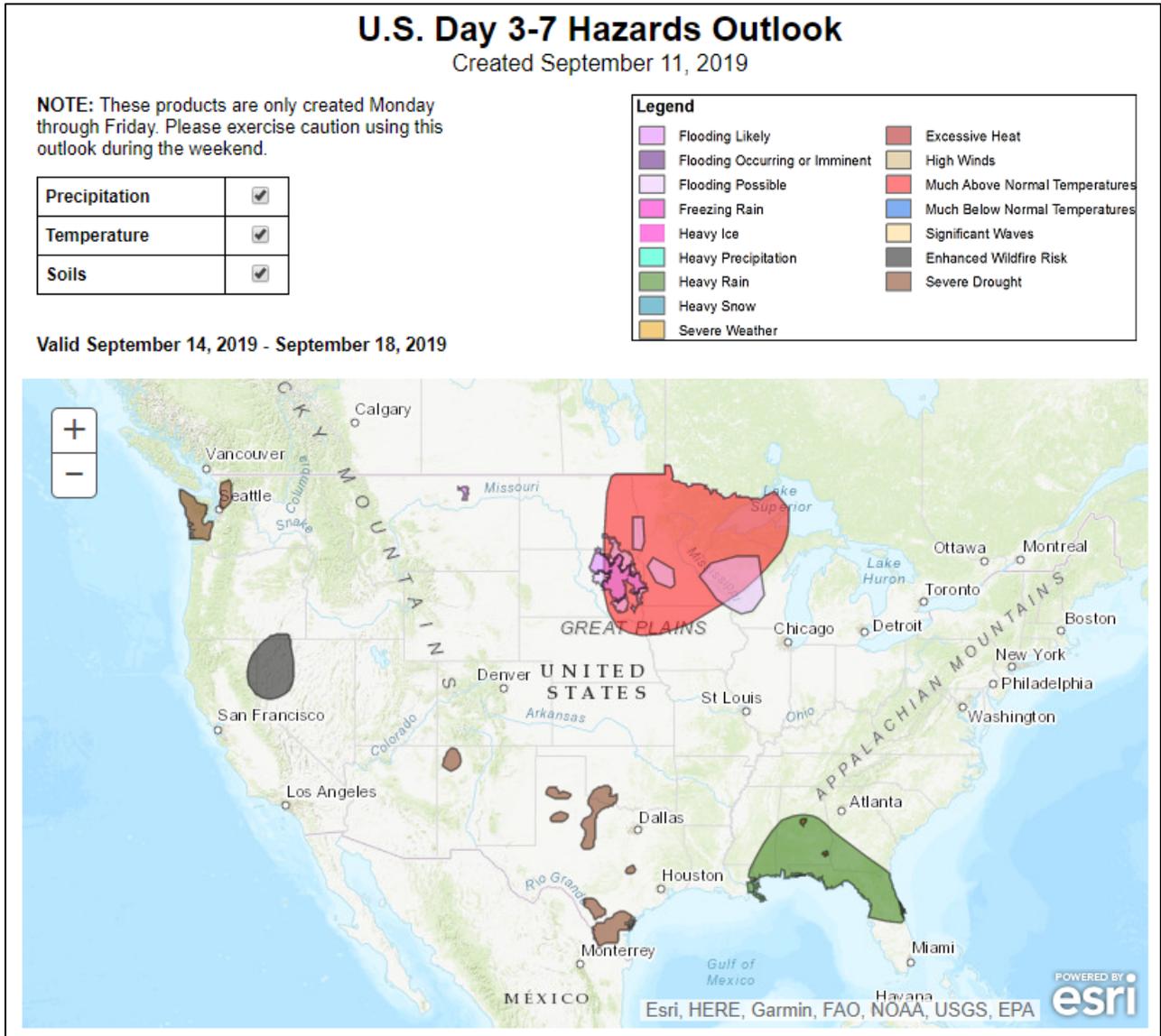
Agricultural Weather Highlights

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

National Outlook, Wednesday, September 11, 2019: “Heavy rain will gradually shift eastward across the North, reaching the lower Great Lakes region by Friday. Additional rainfall totals of 1 to 3 inches or more can be expected across the north-central U.S. Occasional showers will develop during the second half of the week in other areas, including parts of the East, Pacific Northwest, and southern Plains. Locally heavy showers will lurk along and near the Gulf Coast, while Florida’s peninsula may receive heavy rain. By week’s end, summer-like warmth will cover much of the country. During the weekend, however, cool air will overspread the Pacific Northwest. The NWS 6- to 10-day outlook for September 16 – 20 calls for the likelihood of above-normal temperatures across the central and eastern U.S., while cooler-than-normal conditions will prevail in the West. Meanwhile, near- or above-normal rainfall across most of the country should contrast with drier-than-normal weather in the middle and northern Atlantic States.”

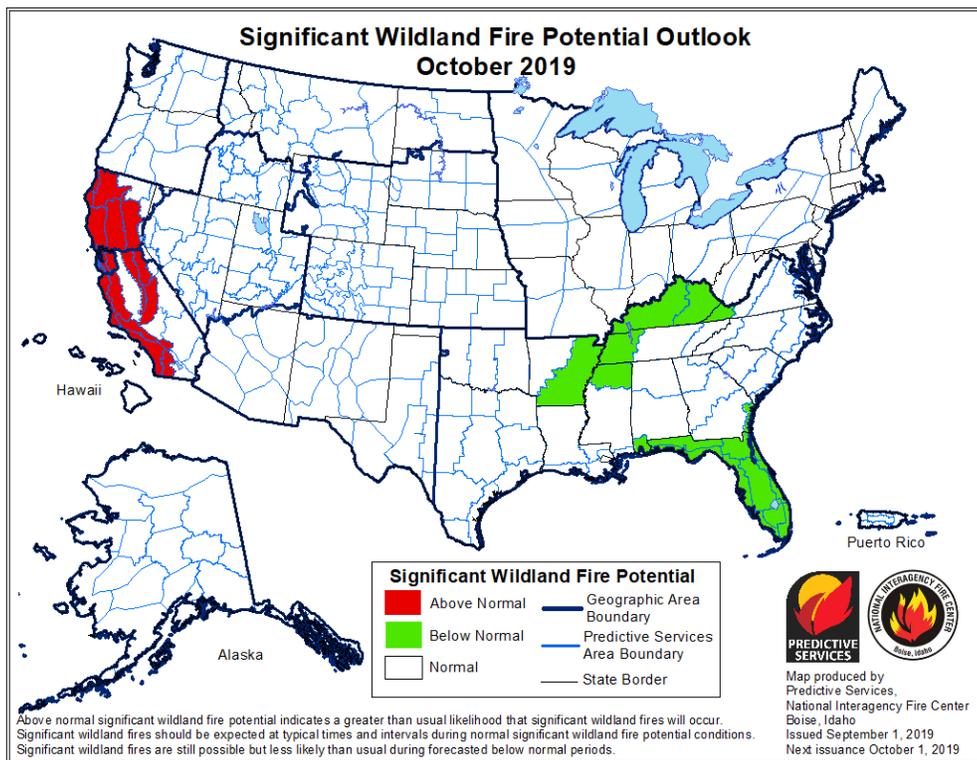
Weather Hazards Outlook: [September 14 – 18, 2019](#)

Source: NOAA Climate Prediction Center



Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center

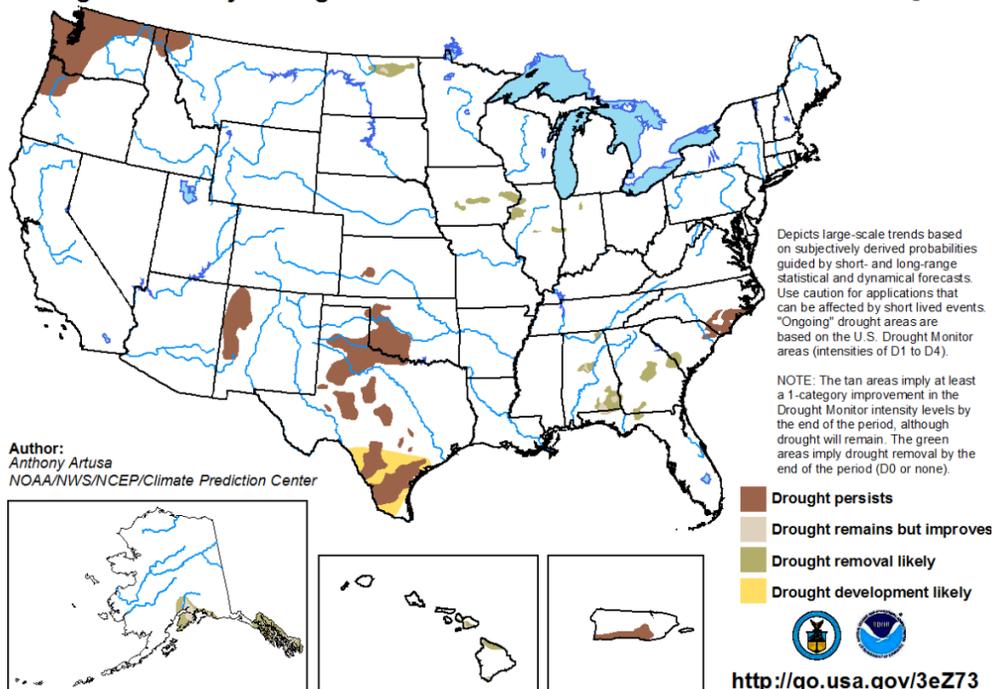


Seasonal Drought Outlook: [August 15 – November 30, 2019](#)

Source: National Weather Service

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

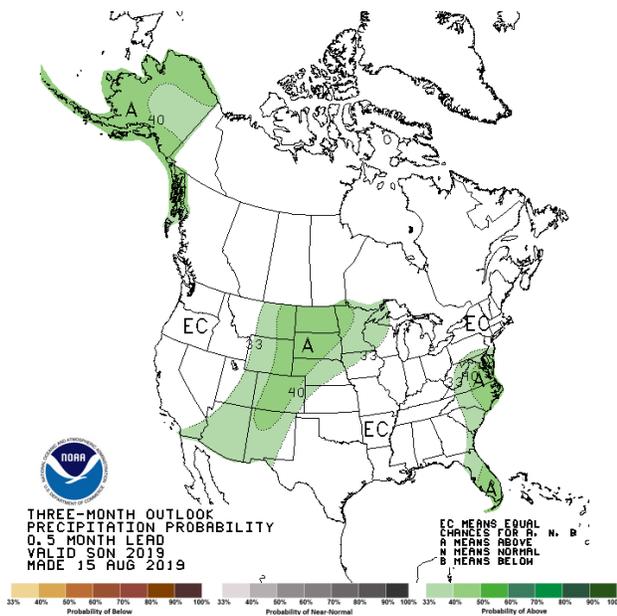
Valid for August 15 - November 30, 2019
Released August 15



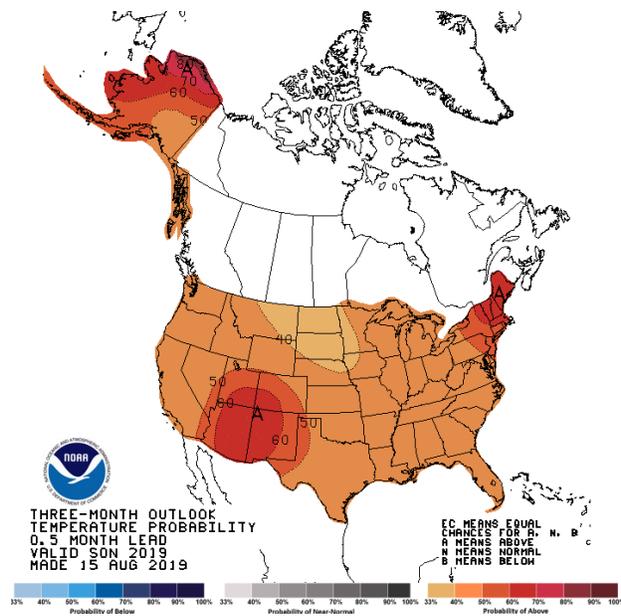
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



[September-October-November \(SON\) 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](#).