



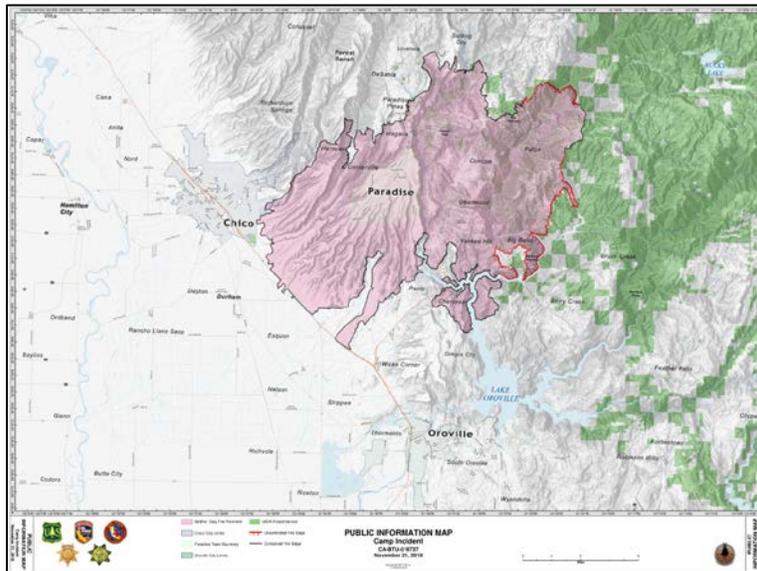
Water and Climate Update

November 21, 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.

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California Camp Fire breaks records



The recent wildfire impact numbers coming from California are staggering. The Camp Fire in Butte County has greatly surpassed any wildfire devastation in California history. 151,272 acres have burned, destroying 12,637 homes, 310 multi-family homes, and 483 commercial buildings. 699 people are currently reported missing, with 79 confirmed deaths. The fire is currently at 70% containment and threatening an additional 14,500 structures. The firefighters on the line number 4,736, down from 5,332 in recent days. The cost to fight this fire is currently over \$82 million.

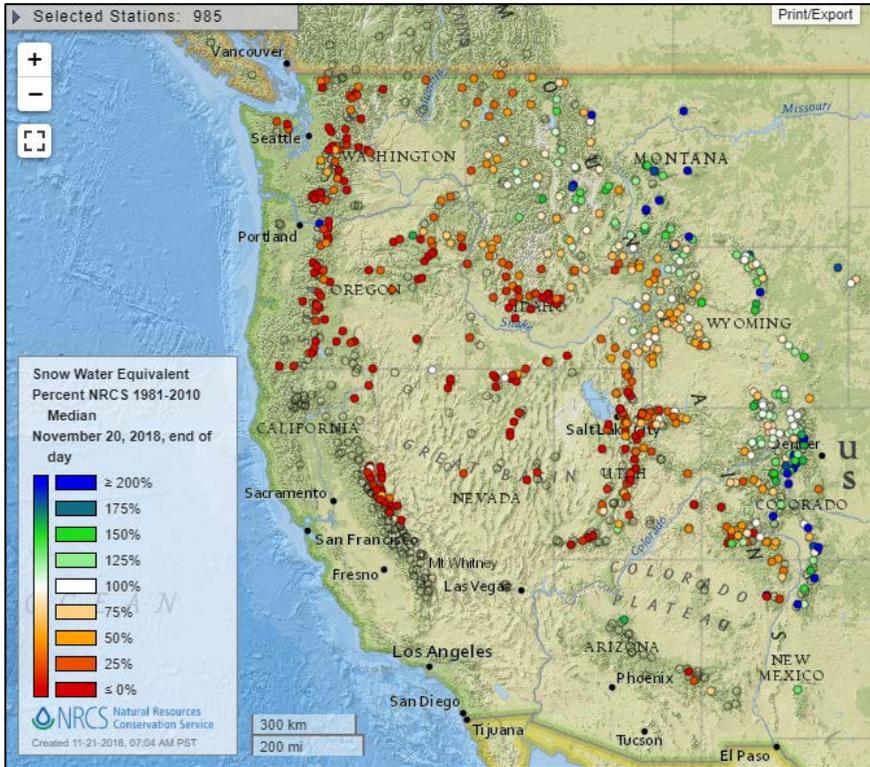
In addition, the Woolsey Fire in Ventura County is 96% contained, having already burned 96,949 acres, with a loss of 1,500 structures. [Post Fire Disaster Assistance](#) from the California NRCS county offices is available to help landowners mitigate damages from wildfire.

Related:

- [Camp Fire 70% contained; 79 dead and 699 missing](#) – KTVU (CA)
- [Cost of battling Camp Fire grows to estimated \\$82.2 million](#) – Record Searchlight (CA)
- [Search for Camp Fire remains intensifies ahead of rain](#) – KTVZ (OR)
- [Winds Pushing Smoke From Camp Fire Into SoCal Prompt Unhealthy Air Quality Advisory](#) – KTLA (CA)
- [California Fires Update: Smoke Map Video Shows Wildfire Pollution Reaching East Coast](#) - Newsweek
- [With rain coming, California fire evacuees brace for relief and danger](#) – Fox5 (CA)

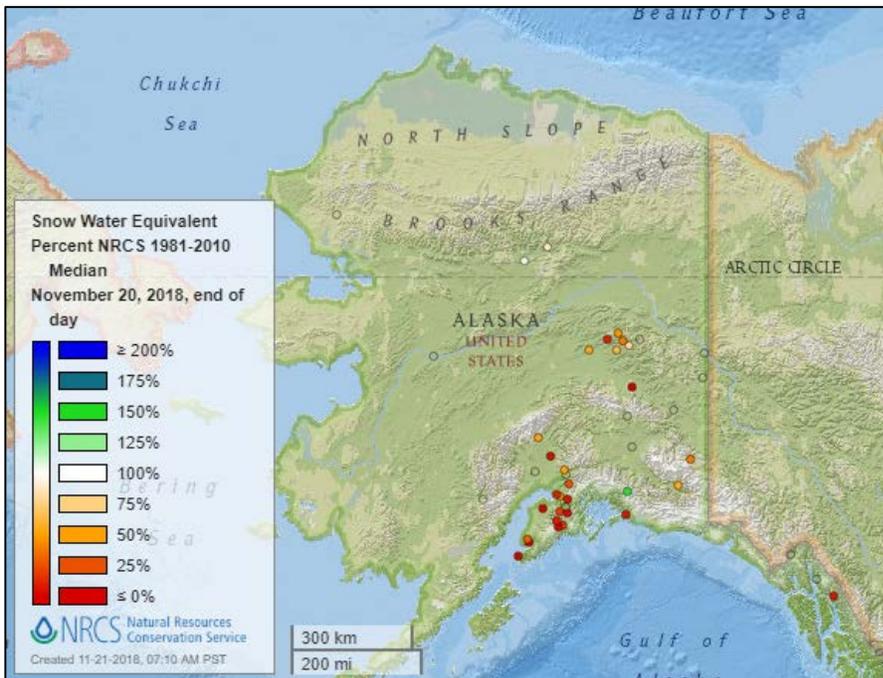
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



[Snow water equivalent percent of median map](#)

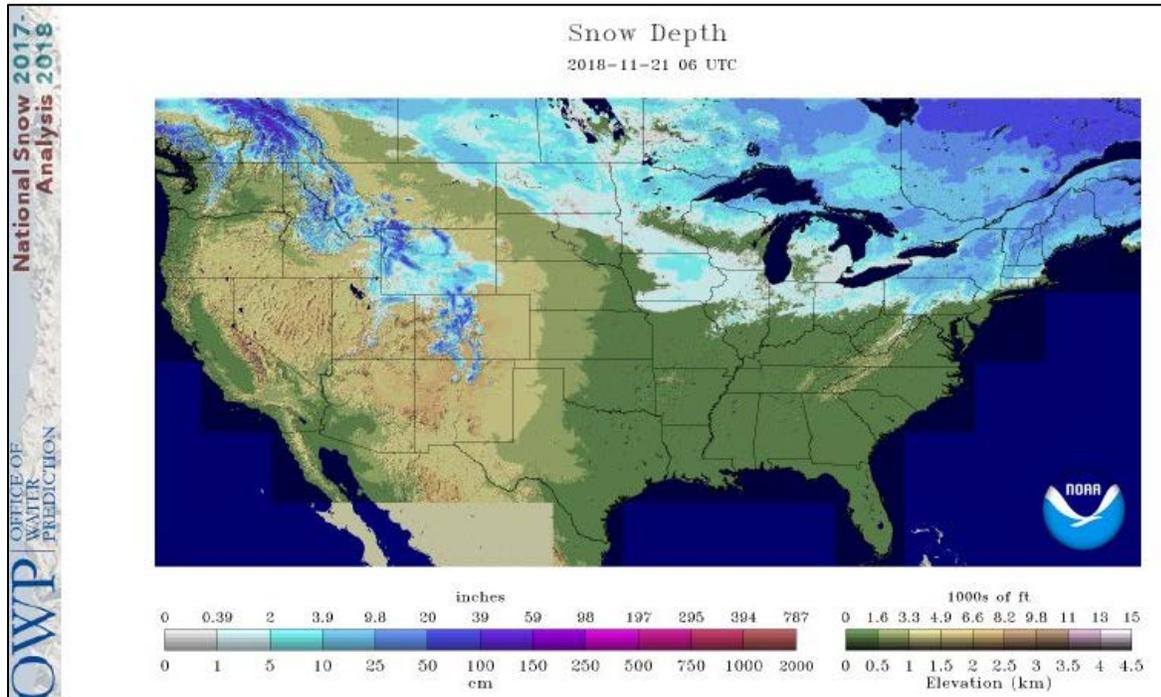
See also:
[Snow water equivalent values \(inches\) map](#)



[Alaska snow water equivalent percent of median map](#)

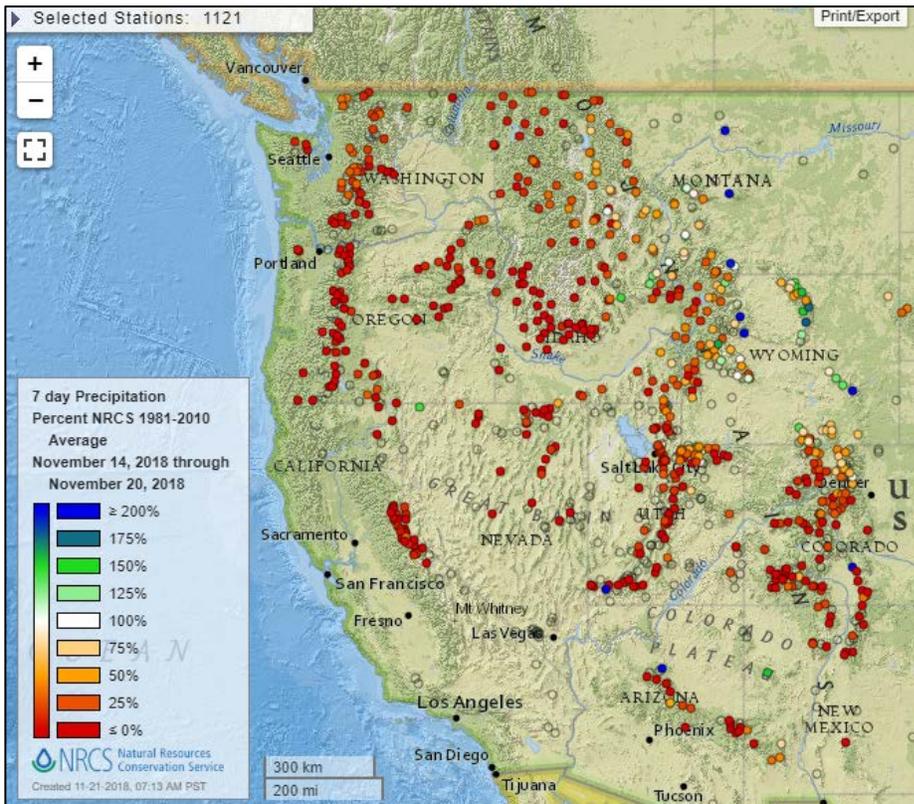
See also:
[Alaska snow water equivalent values \(inches\) map](#)

[Current Snow Depth](#), National Weather Service Snow Analysis



Precipitation

Last 7 Days, NRCS SNOTEL Network



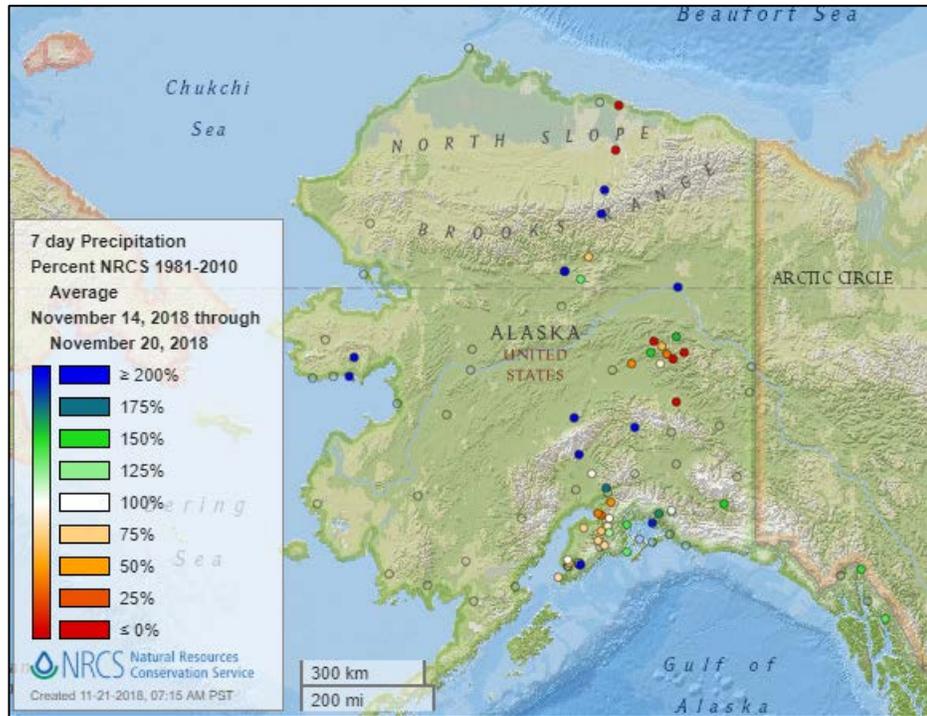
[7-day precipitation percent of average map](#)

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

Water and Climate Update

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

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



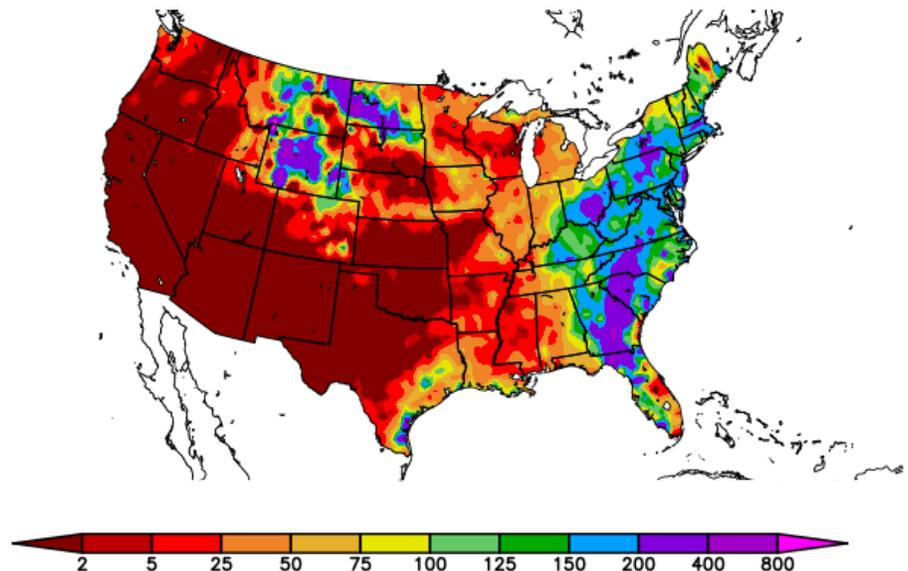
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
11/14/2018 – 11/20/2018



Generated 11/21/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

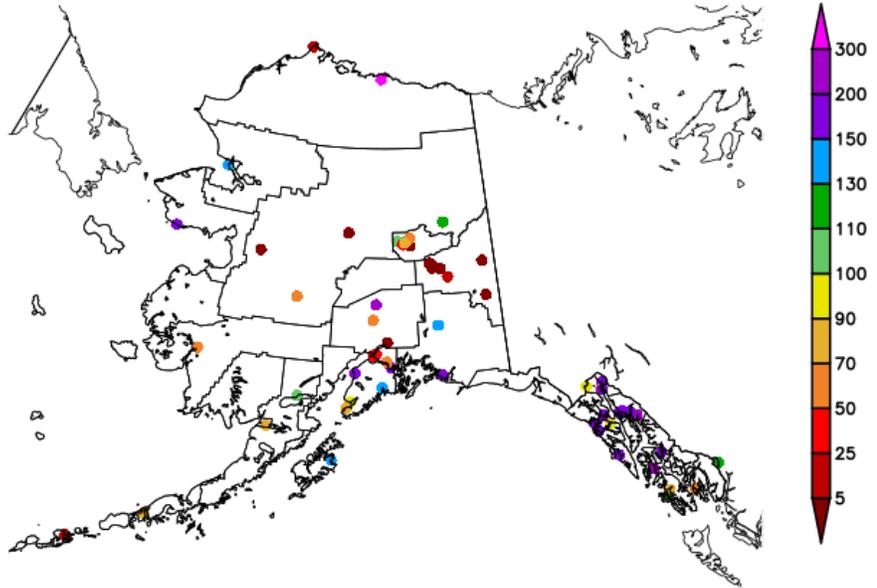
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)
11/14/2018 – 11/20/2018



Generated 11/21/2018 at HPRCC using provisional data.

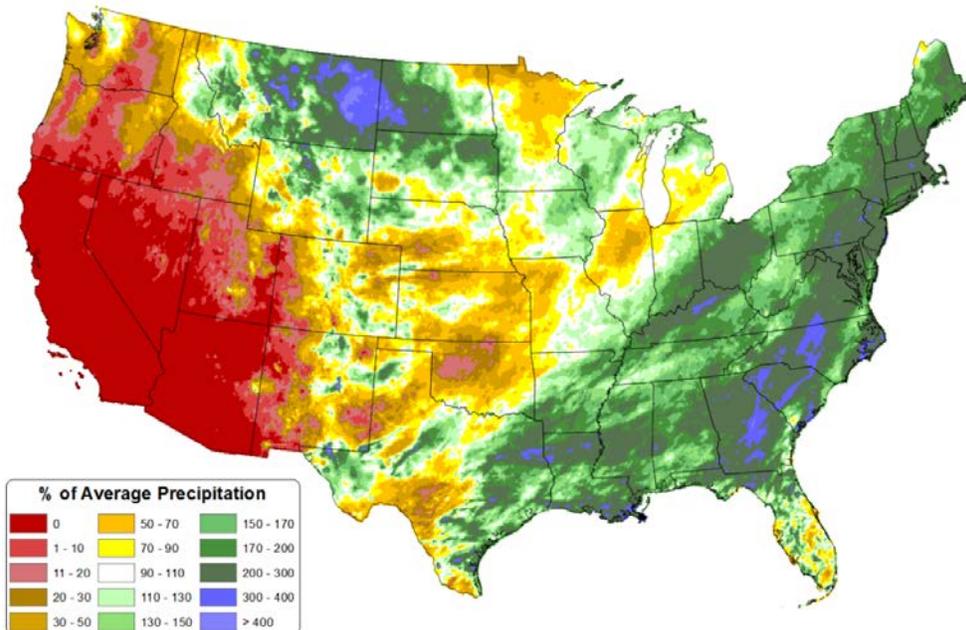
NOAA Regional Climate Centers

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

Source: PRISM

Total Precipitation Anomaly: 01 Nov 2018 - 20 Nov 2018
Period ending 7 AM EST 20 Nov 2018
Base period: 1981-2010
(Map created 21 Nov 2018)

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

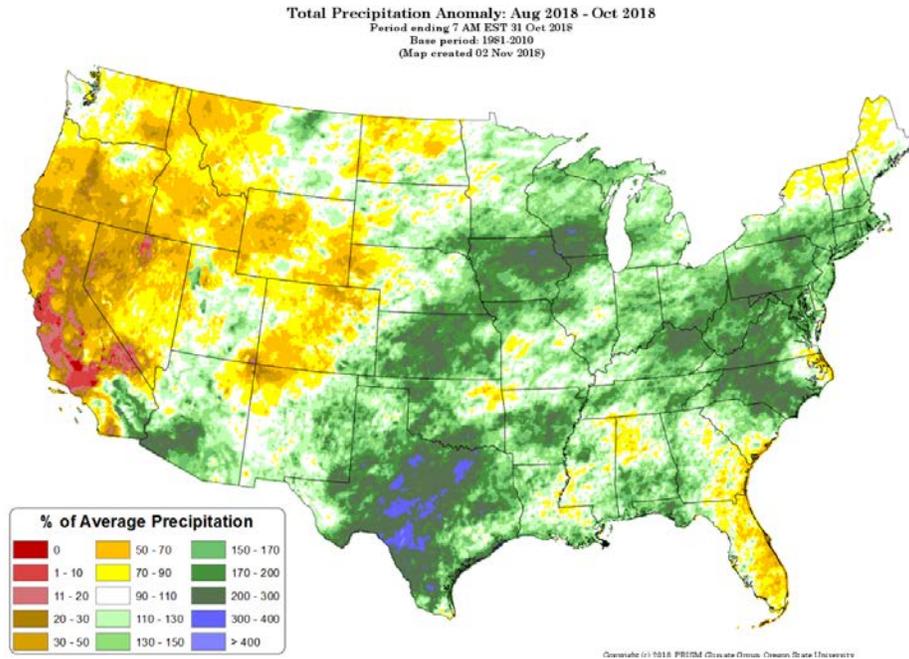


Copyright © 2018 PRISM Climate Group, Oregon State University

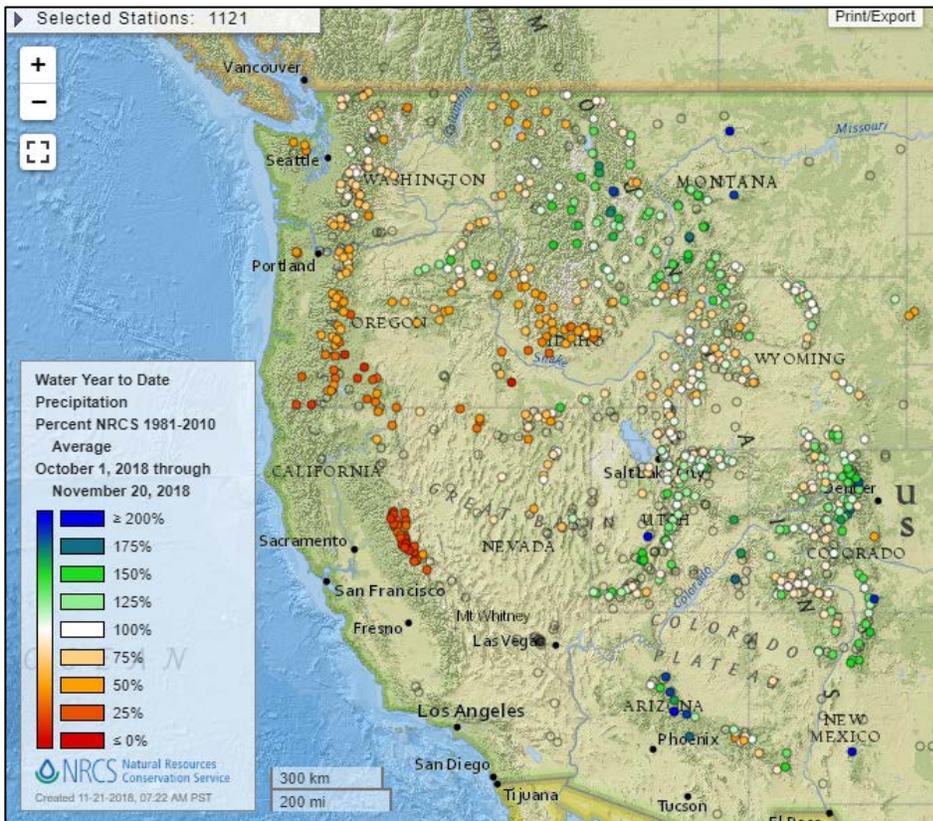
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[August through October 2018 total precipitation percent of average map](#)



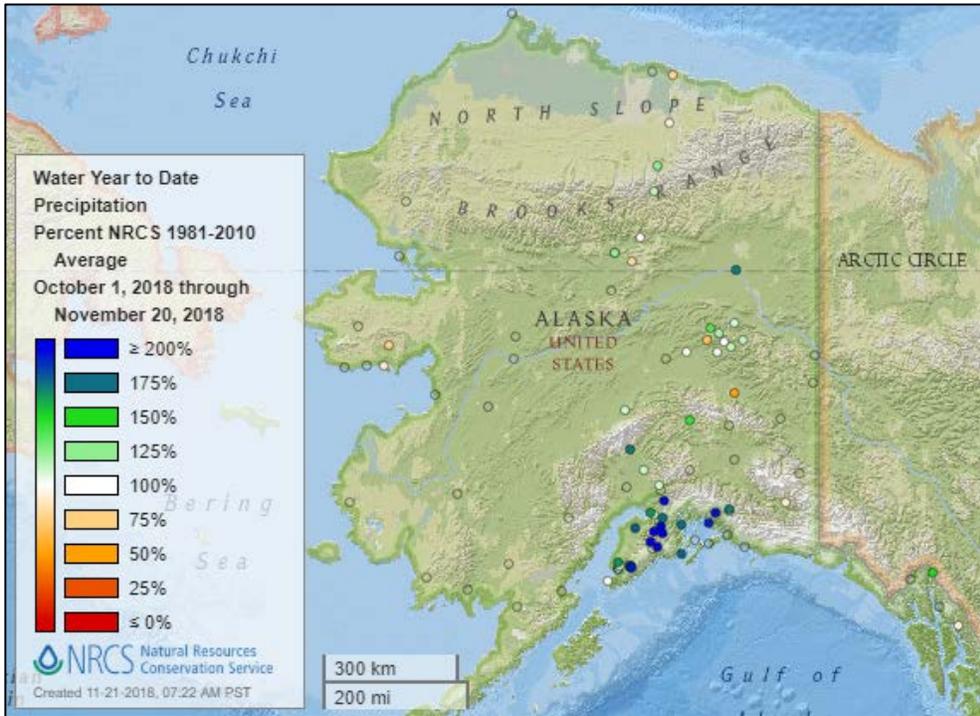
Water Year to Date, NRCS SNOTEL Network



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

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

Water and Climate Update



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

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

Temperature

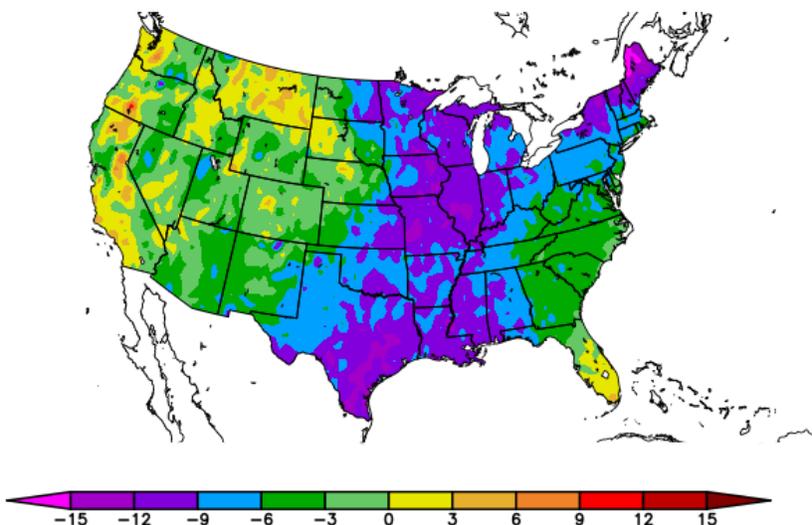
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
11/14/2018 – 11/20/2018



Generated 11/21/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

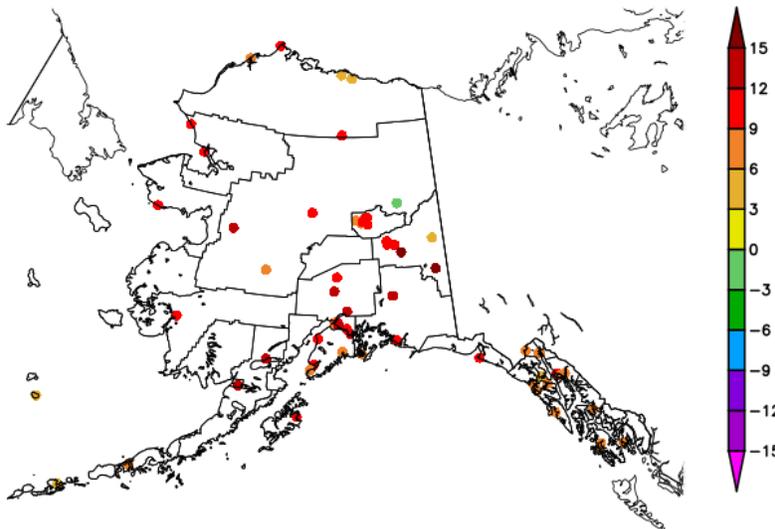
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
11/14/2018 – 11/20/2018



Generated 11/21/2018 at HPRCC using provisional data.

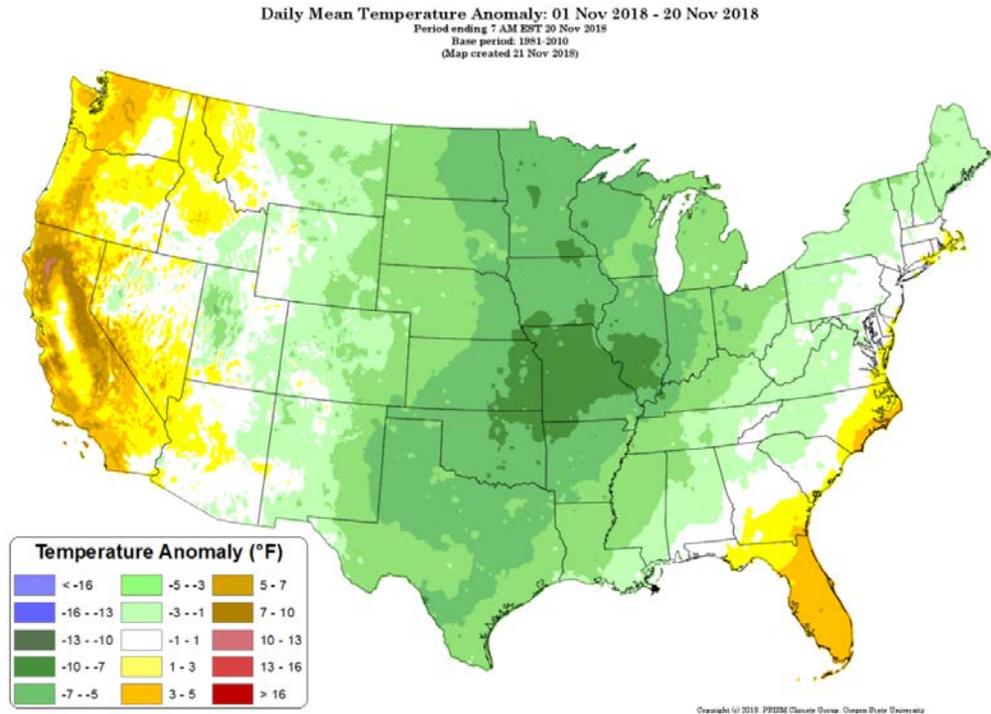
NOAA Regional Climate Centers

Water and Climate Update

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

Source: PRISM

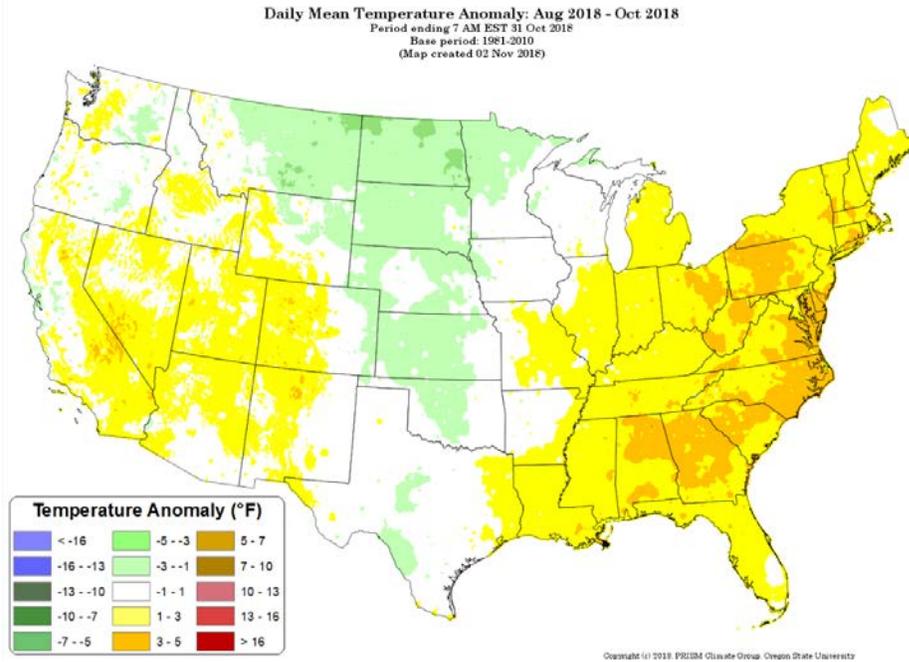
[Month-to-date national daily mean temperature anomaly map](#)



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

Source: PRISM

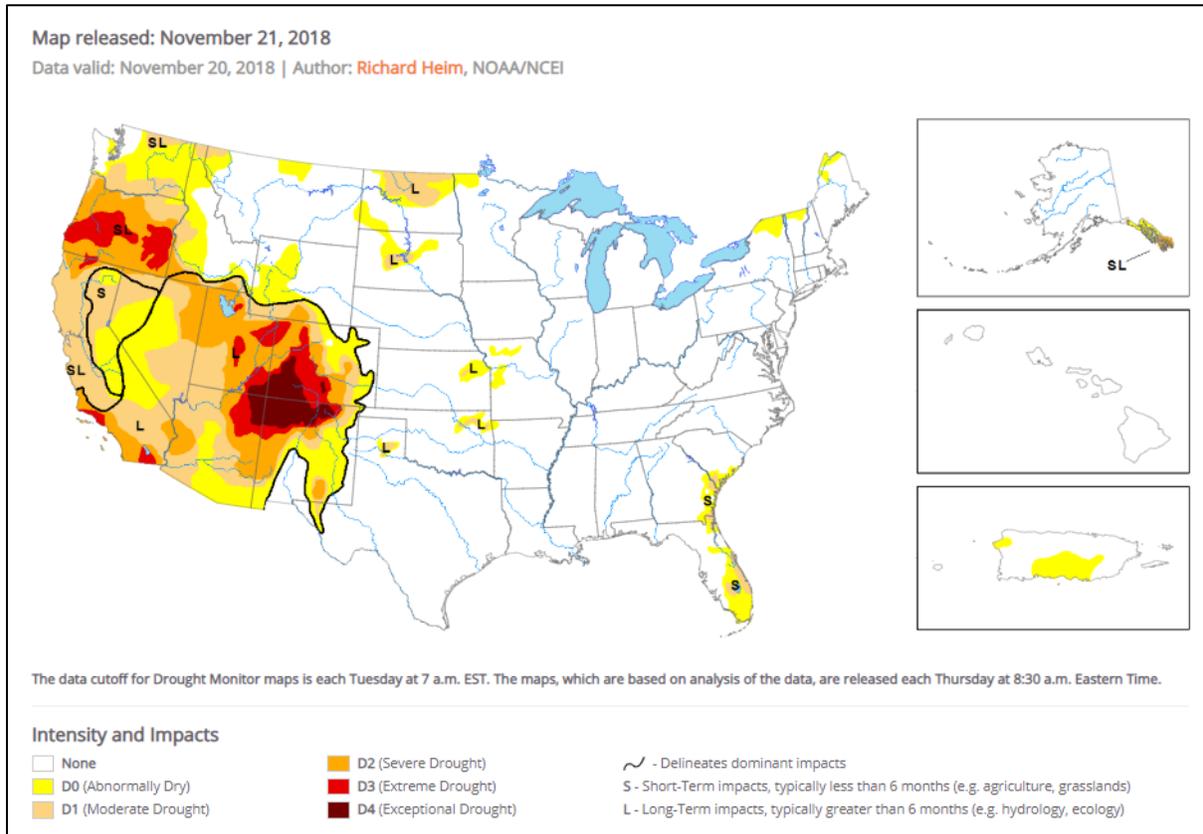
[August through October 2018 daily mean temperature anomaly map](#)



Drought

[U.S. Drought Monitor](#) Select map below.

[U.S. Drought Portal](#) Comprehensive drought resource.



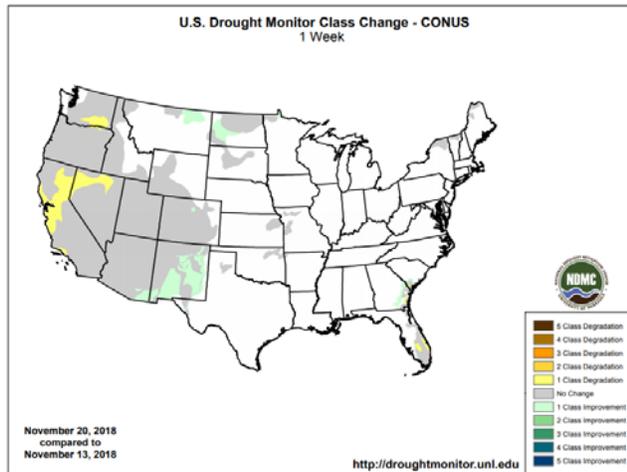
Current [National Drought Summary](#), November 21, 2018

Author: Richard Heim, NOAA/NCEI

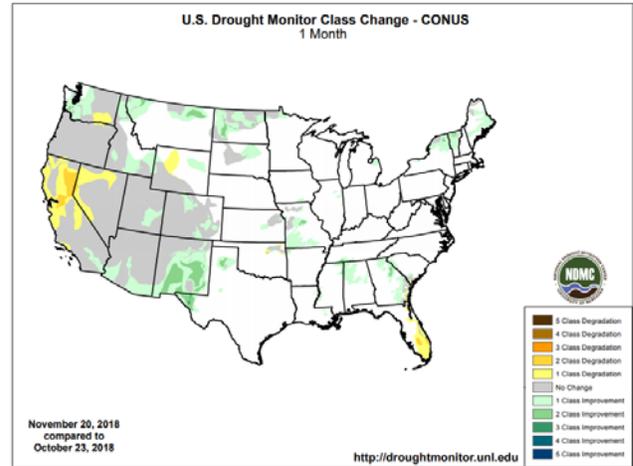
“The upper-level circulation during this U.S. Drought Monitor (USDM) week consisted of a trough over the eastern contiguous U.S. (CONUS) and a ridge over the west coast. The trough, with its northwesterly flow, funneled cold and dry Canadian air masses into the central and eastern CONUS. Below-normal temperatures spread across most of the CONUS, with weekly temperature departures more than 15 degrees below normal across parts of the central Plains to Midwest. The cold fronts were fed by Gulf of Mexico and Atlantic moisture when they reached the southern and eastern coasts. Low pressure systems tracked along the fronts to produce an inch of precipitation along the Gulf Coast, and 1 to locally over 2 inches across much of the country from the Tennessee and Ohio valleys to East Coast. The precipitation in the East was enhanced by a slow-moving upper-level low early in the week. The western ridge deflected Pacific storm systems away from the western CONUS and into southern Canada, making for a very dry week across much of the West with no precipitation recorded. The ridge also enhanced high surface pressure over the Great Basin, which produced strong Santa Ana winds that fanned devastating wildfires over California. As they tracked around the top of the ridge, some of the Pacific systems combined with the Canadian cold fronts to generate areas of precipitation in Washington, the northern and central Rockies, and a few areas in the northern Plains. Other than these few areas of precipitation, the Plains to Mississippi Valley were mostly dry with well less than half an inch of precipitation falling. Drought and abnormal dryness contracted in parts of Montana, North Dakota, and the Southwest. It expanded in a few areas and contracted in others in the Southeast. Moderate or severe drought expanded across a large part of California into Nevada, and in parts of the Pacific Northwest.”

Changes in Drought Monitor Categories over Time

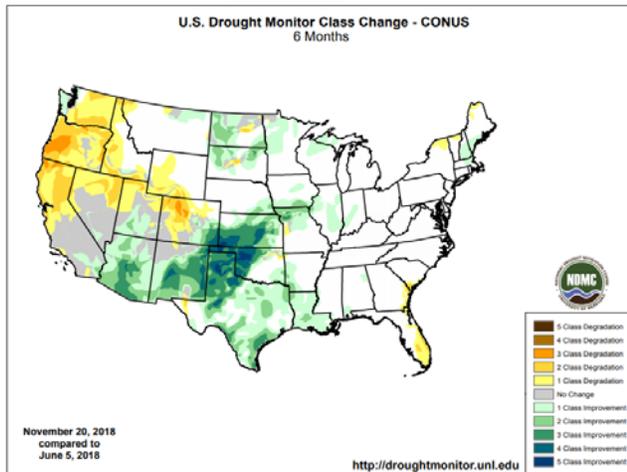
1 Week



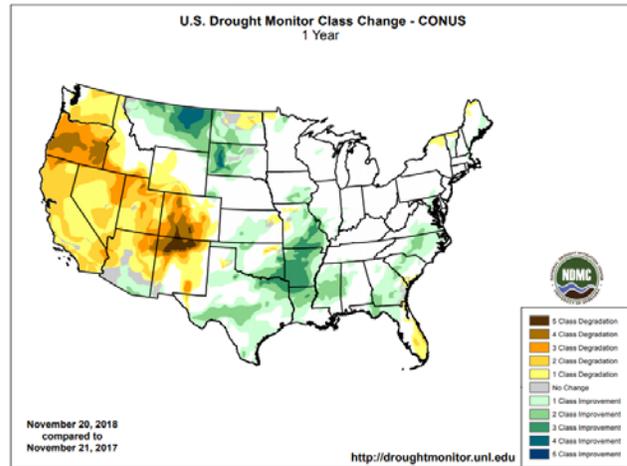
1 Month



6 Months



1 Year

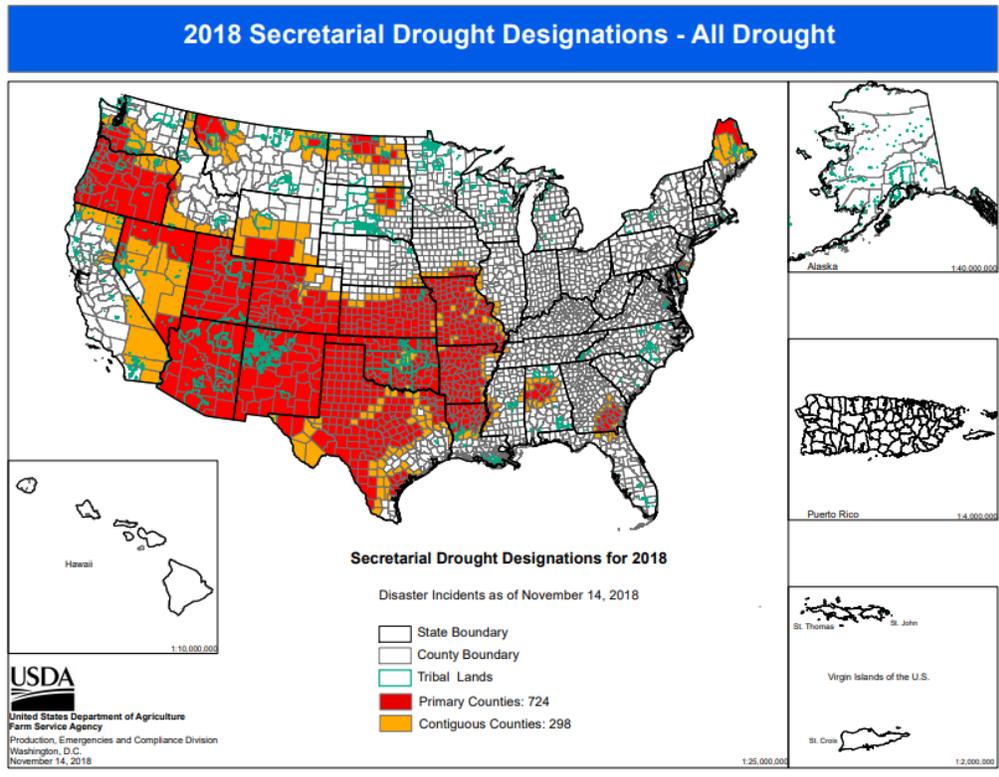


Changes in drought conditions over the last 12 months

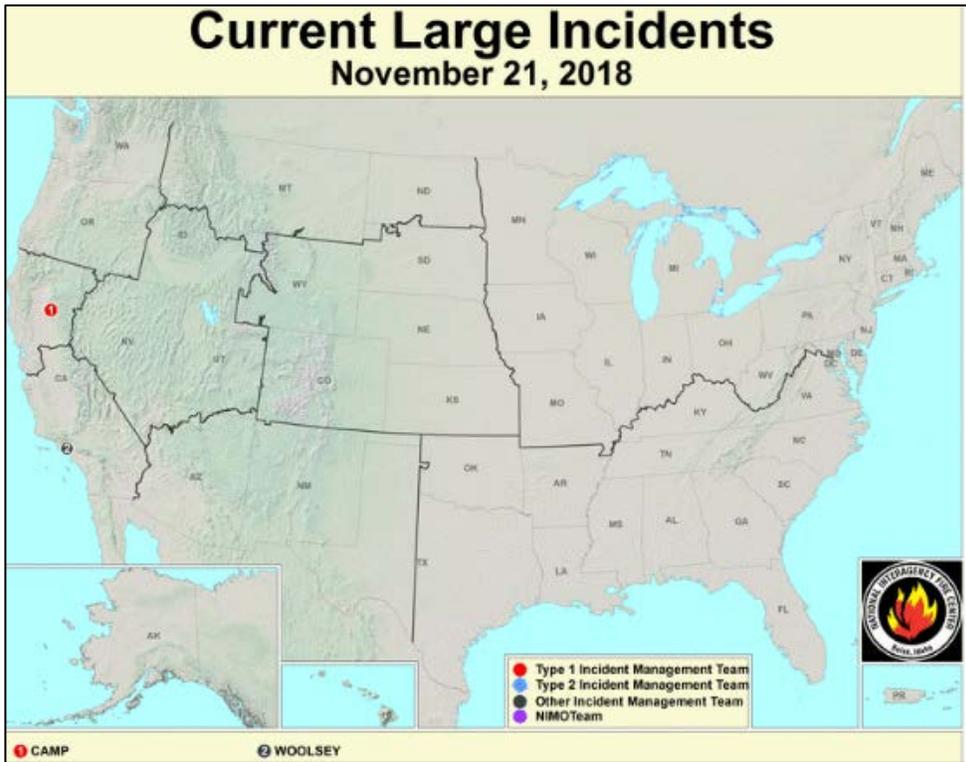
Highlighted Drought Resources

- [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](#)



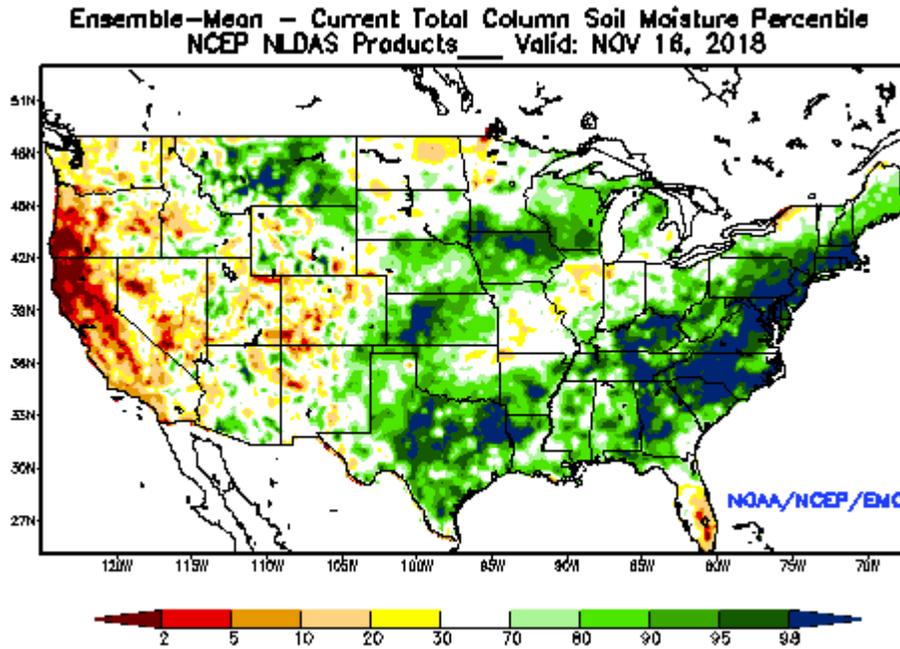
Highlighted Wildfire Resources

- [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



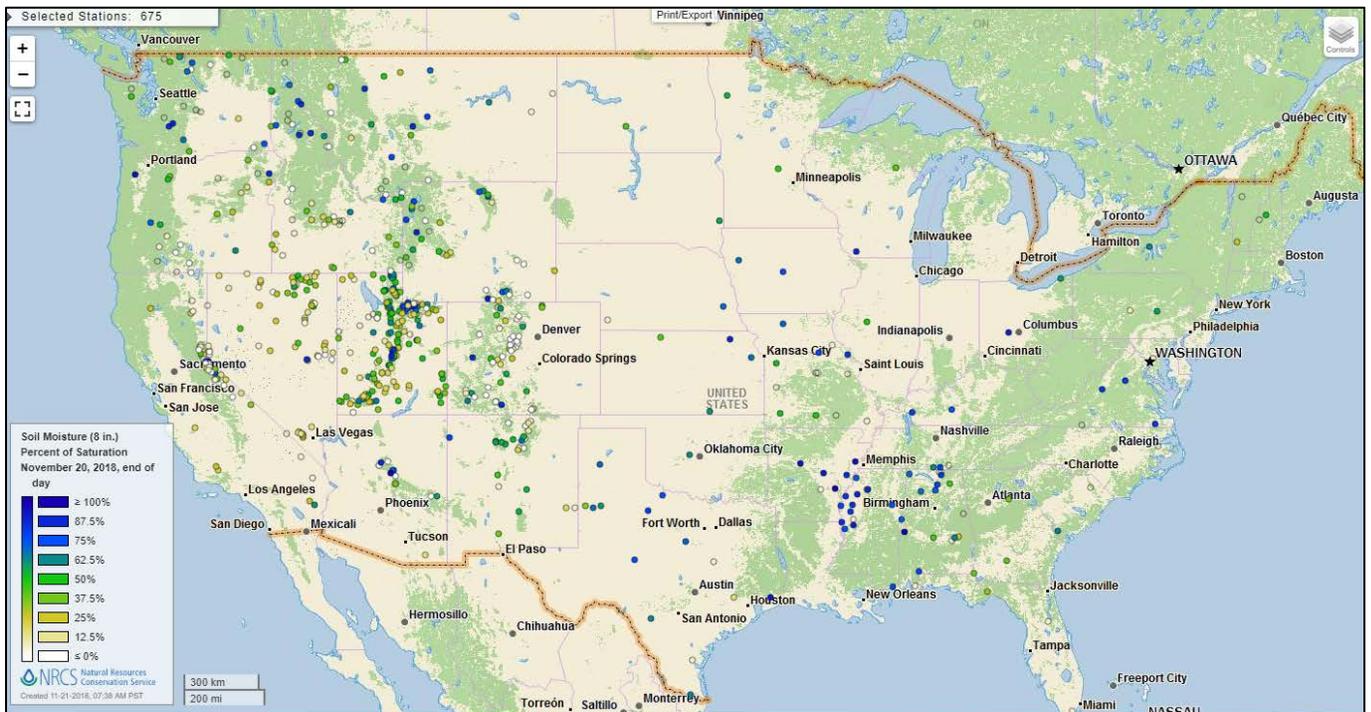
Soil Moisture Data Portals

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

[Modeled soil moisture percentiles](#) as of November 16, 2018

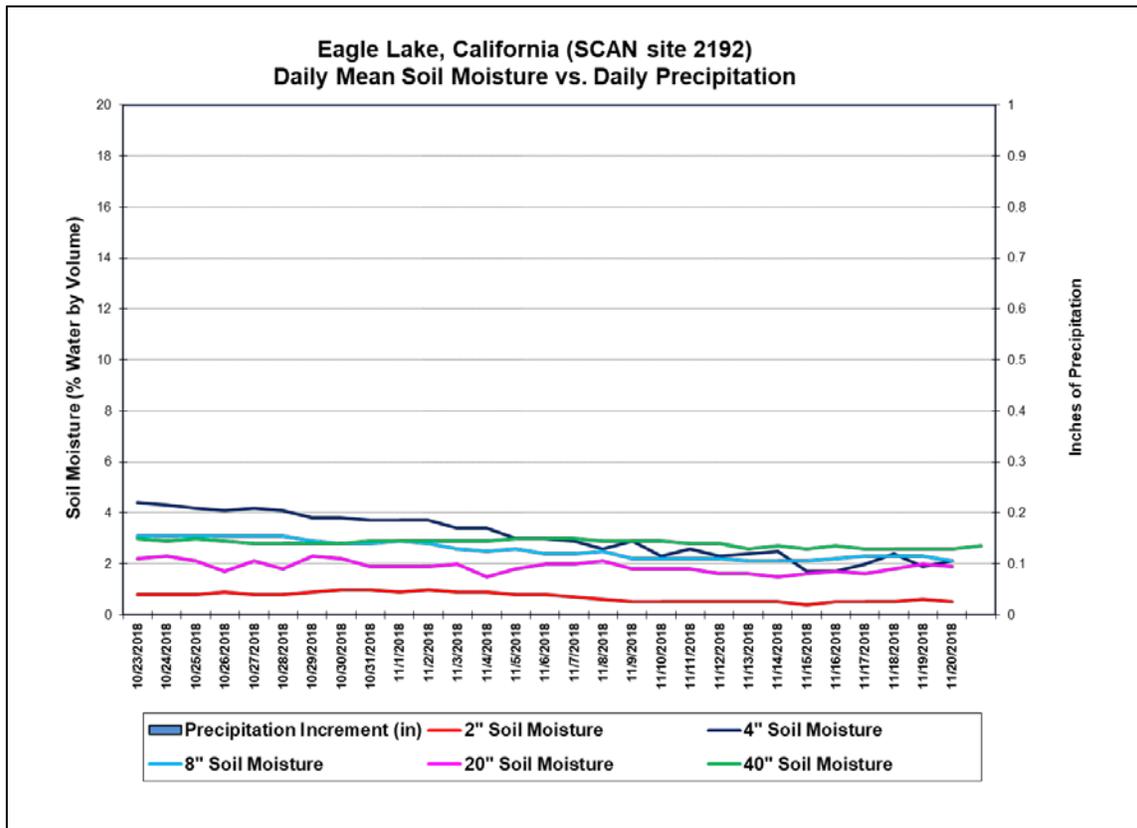
NEW! Soil Moisture Percent of Saturation

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



Soil Moisture Data

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

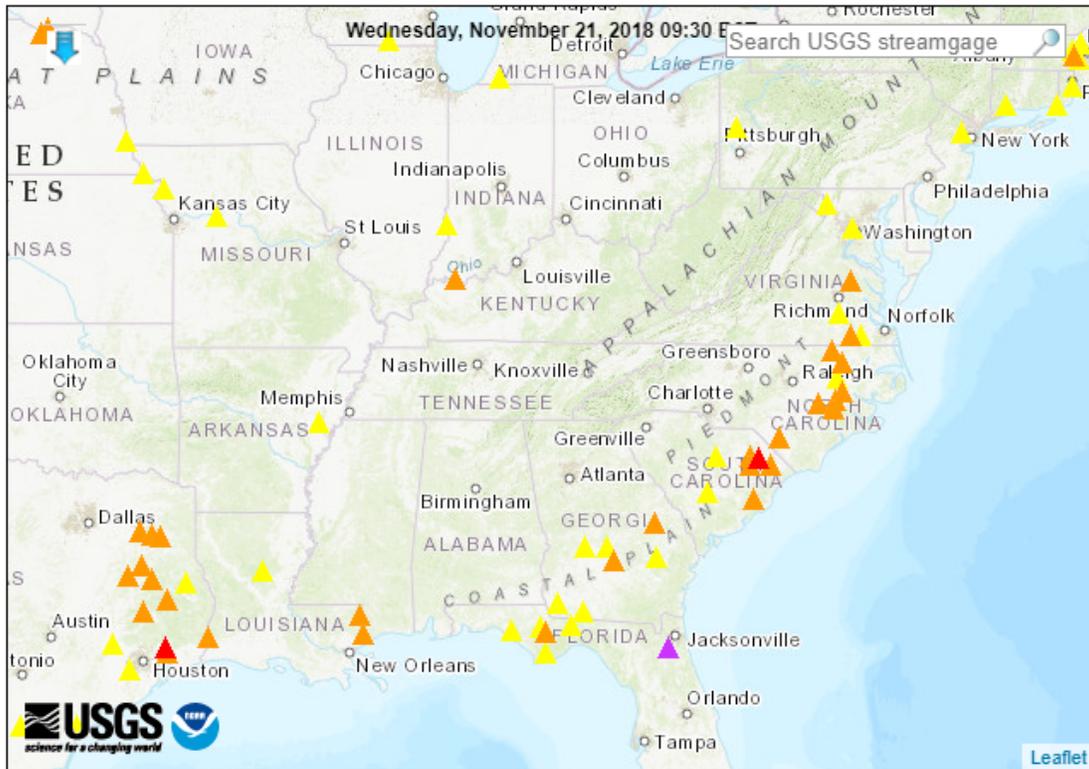


This chart shows precipitation and soil moisture for the last 30 days at the [Eagle Lake SCAN site 2192](#) in California. This site is in northeastern California in an area that has experienced a long period of dry weather. In the last 30 days, this site has received no precipitation and soil moisture at all sensor levels has gradually decreased.

Streamflow

Source: USGS

Map of flood and high flow conditions



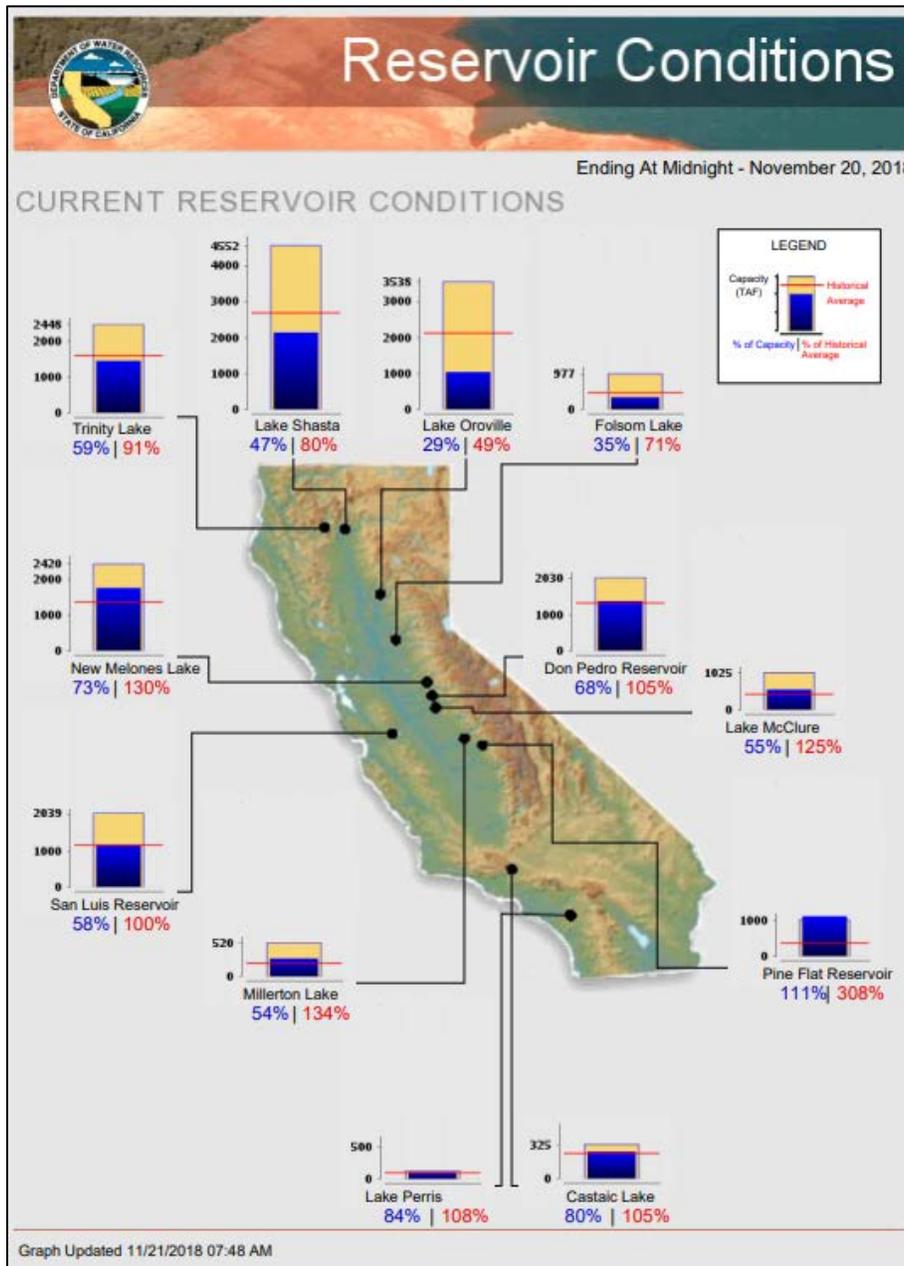
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
▲ Streamgage with flood stage ○ Streamgage without flood stage						

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

Reservoir Storage

Current California Reservoir Conditions

Source: California Department of Water Resources



[Current California Reservoir Conditions](#)

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](#)

Short- and Long-Range Outlooks

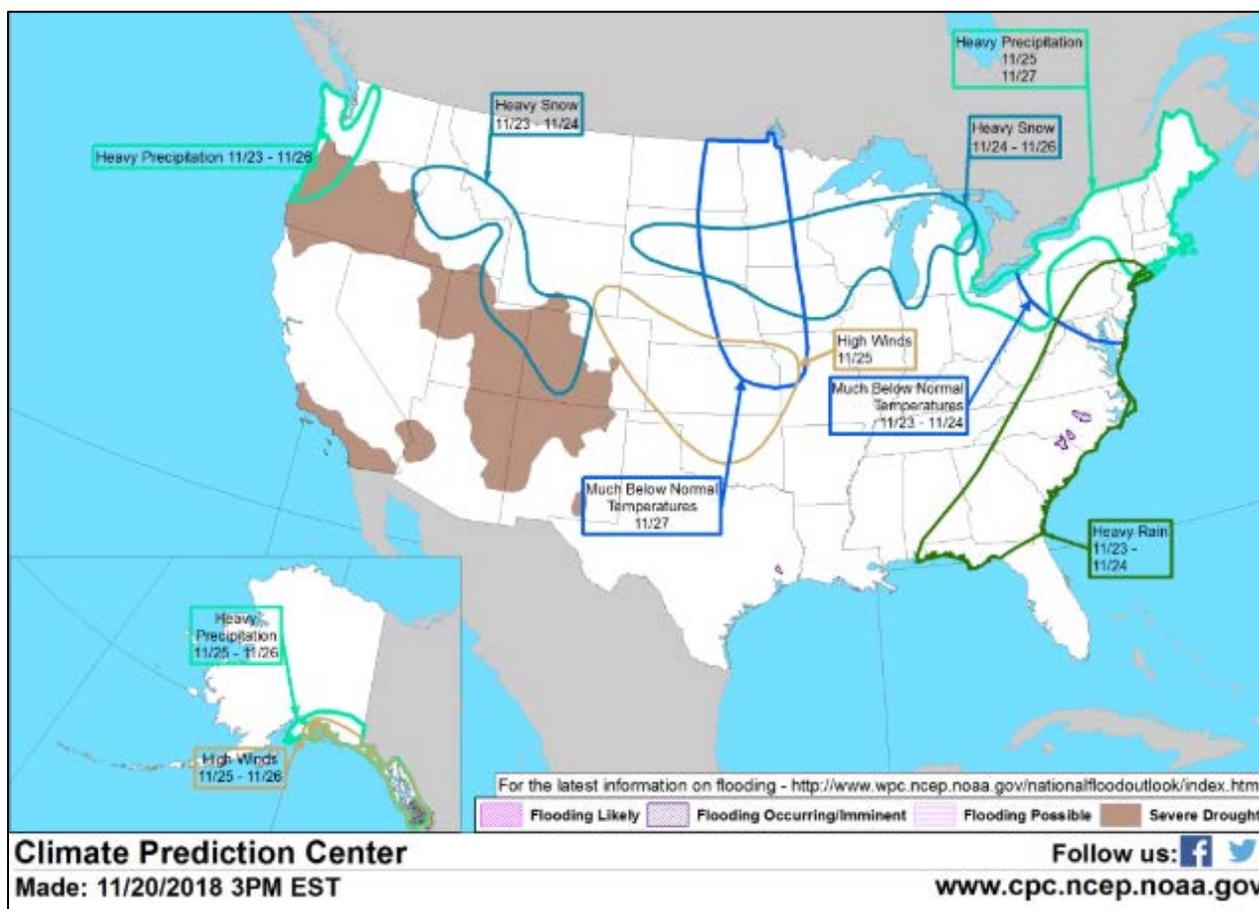
Agricultural Weather Highlights

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

[National Outlook, Wednesday, November 21](#): “A changing weather pattern will feature a pair of Pacific storms; each will traverse the West before crossing the central and eastern U.S. The first storm system will produce widespread, late-week precipitation across the eastern half of the country. The closely trailing second system will reach the Great Plains by Saturday and the Ohio Valley on Sunday. Both storms will produce substantial snowfall from the Cascades and Sierra Nevada to the northern and central Rockies. During the weekend and early next week, a significant snow event could unfold from the northern and central Plains into the Midwest and Northeast. Meanwhile, frigid conditions will engulf the Northeast for Thanksgiving Day, while mild air will overspread the nation’s mid-section. During the weekend, however, colder weather will return to the Rockies, Plains, and western Corn Belt. The NWS 6- to 10-day outlook for November 26 – 30 calls for the likelihood of below-normal temperatures across most of the eastern half of the U.S., while warmer-than-normal weather will prevail in Maine and much of the West. Meanwhile, near- to above-normal precipitation across most of the country, including the North and Far West, will contrast with drier-than-normal conditions from the southern Rockies to the lower Mississippi Valley.”

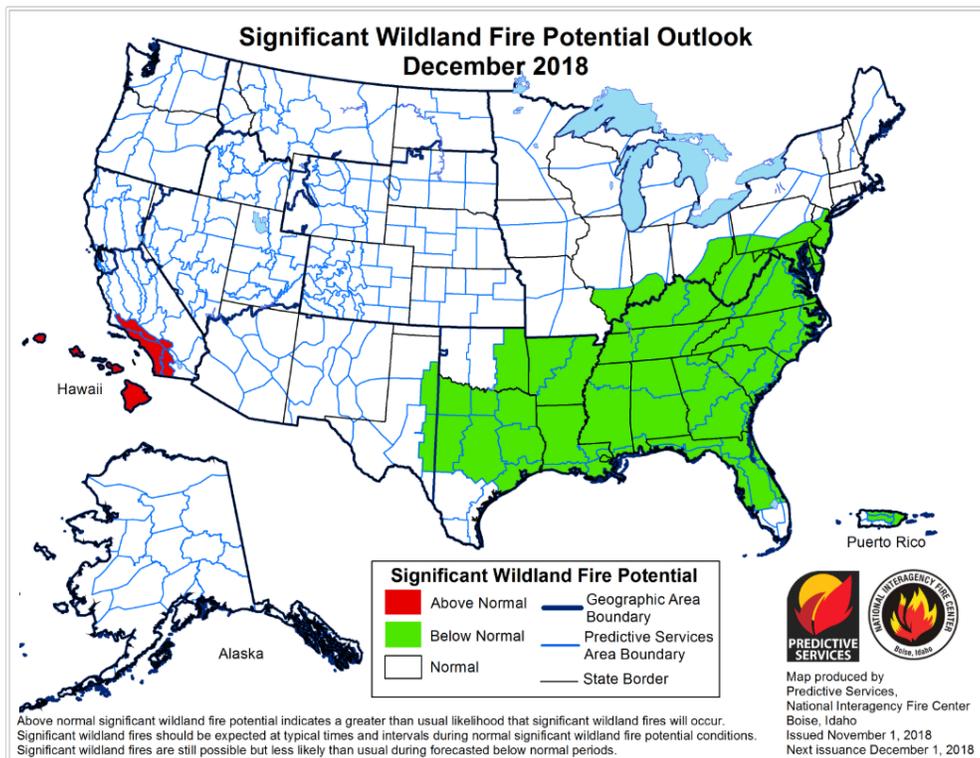
Weather Hazards Outlook [November 23 – 27, 2018](#)

Source: Climate Prediction Center



Significant Wildland [Fire Potential Outlook](#)

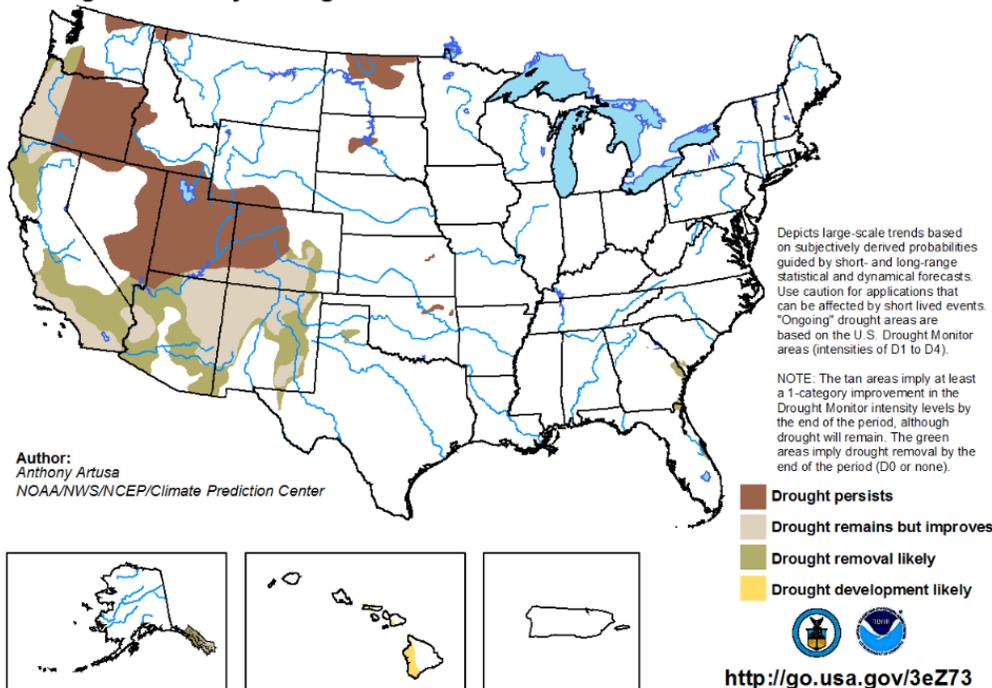
Source: National Interagency Fire Center



Seasonal Drought Outlook: [November 15, 2018 – February 28, 2019](#)

Source: National Weather Service

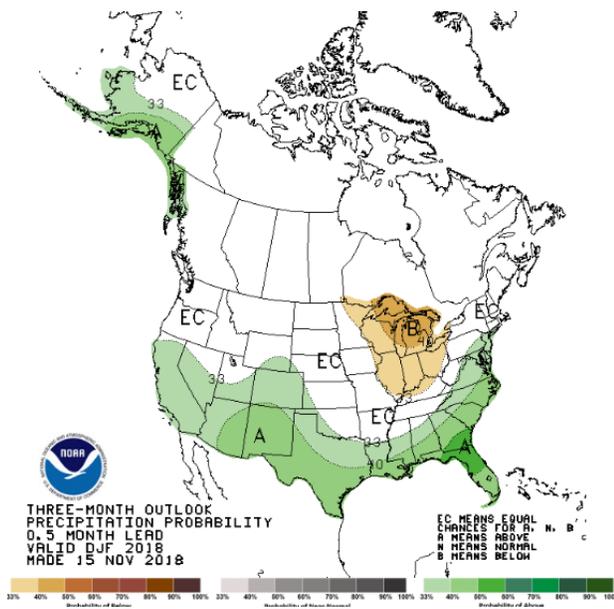
U.S. Seasonal Drought Outlook Valid for November 15, 2018 - February 28, 2019
 Drought Tendency During the Valid Period Released November 15, 2018



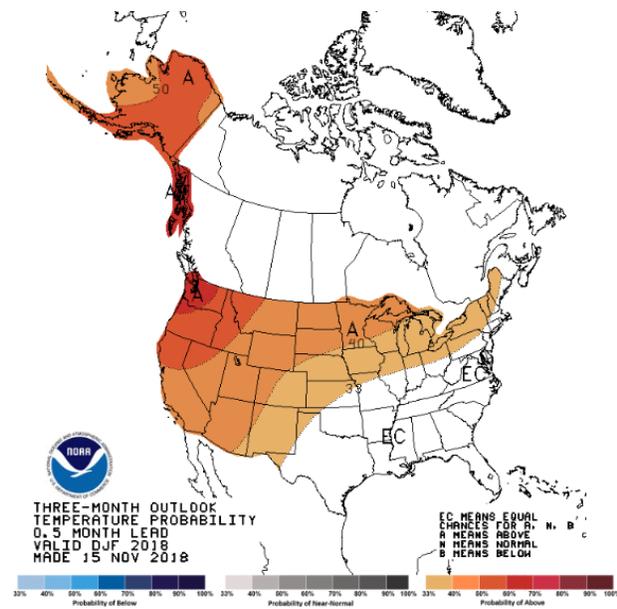
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



[December-January-February \(DJF\) 2018-2019 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](#).