

Water and Climate Update

December 14, 2017

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.

Snow	2	Other Climatic and Water Supply Indicators	12
Precipitation	3	Short- and Long-Range Outlooks.....	15
Temperature.....	7	More Information	17
Drought	9		

Fires rage on in southern California



Photo courtesy: NASA

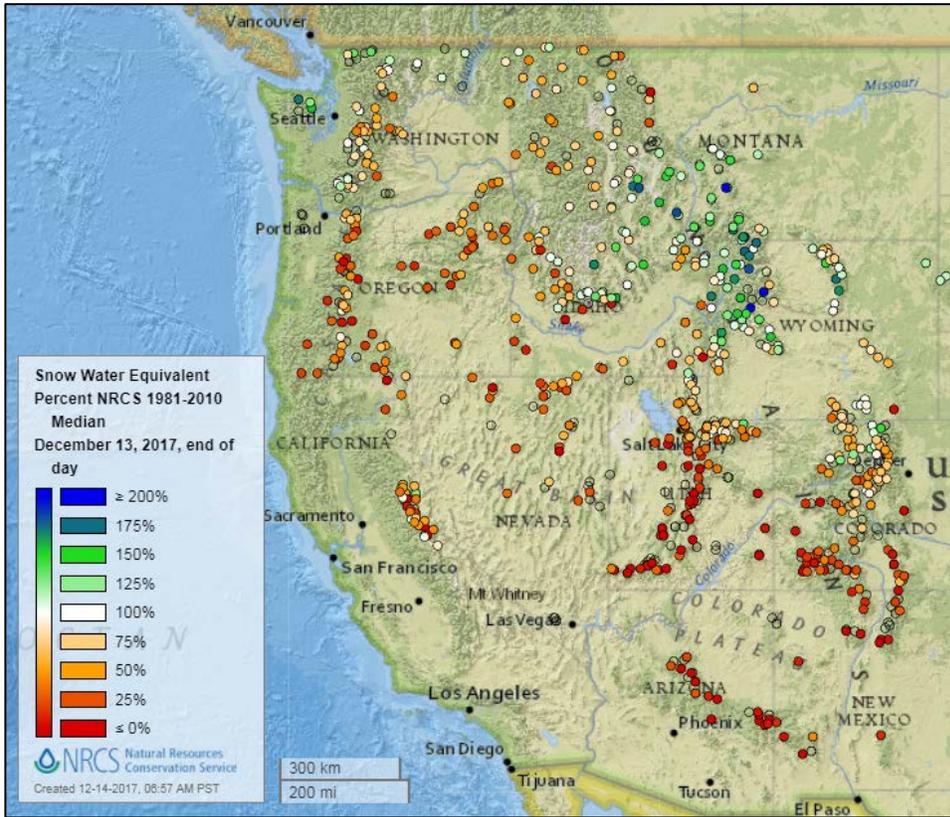
According to the [National Interagency Fire Center](#), there are currently eight active fires involving almost 310,000 acres across the U.S. Firefighters continue to battle many large fires in southern California. According to [Cal Fire](#), the Thomas Fire, the fourth largest fire in California history, has been burning for 11 days and continues to grow, topping 242,500 acres in size. There are currently 8,144 firefighters working to contain this fire. In all, 972 structures have been destroyed, another 258 damaged, and 18,000 are threatened. The current efforts have 30% of the fire contained. Strong, off-shore Santa Ana winds, very low humidity, extremely dry fuels, and long-term drought in the area have contributed to the fire's intensity and rapid spread. [Cal Fire Incident Information](#).

Related:

- [Thomas Fire General Information - State of California](#) (Cal Fire – Thomas Fire)
- [Fierce winds to intensify as California wildfire grows](#) (Reuters)
- [Fire crews on the front lines in battle against California's raging Thomas fire](#) (ABC News)
- [Firefighters defend homes as huge California wildfire rages on](#) (Reuters)
- [The inferno that won't die: How the Thomas fire became a monster](#) (LA Times)
- [California firefighters gain on blaze amid wind threat](#) (ABC News)

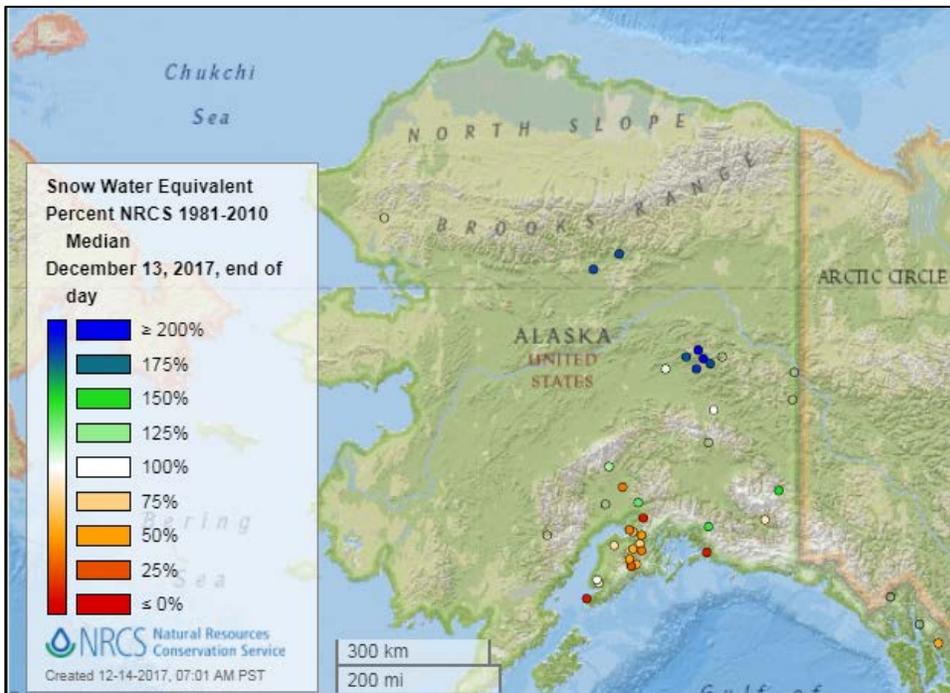
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



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

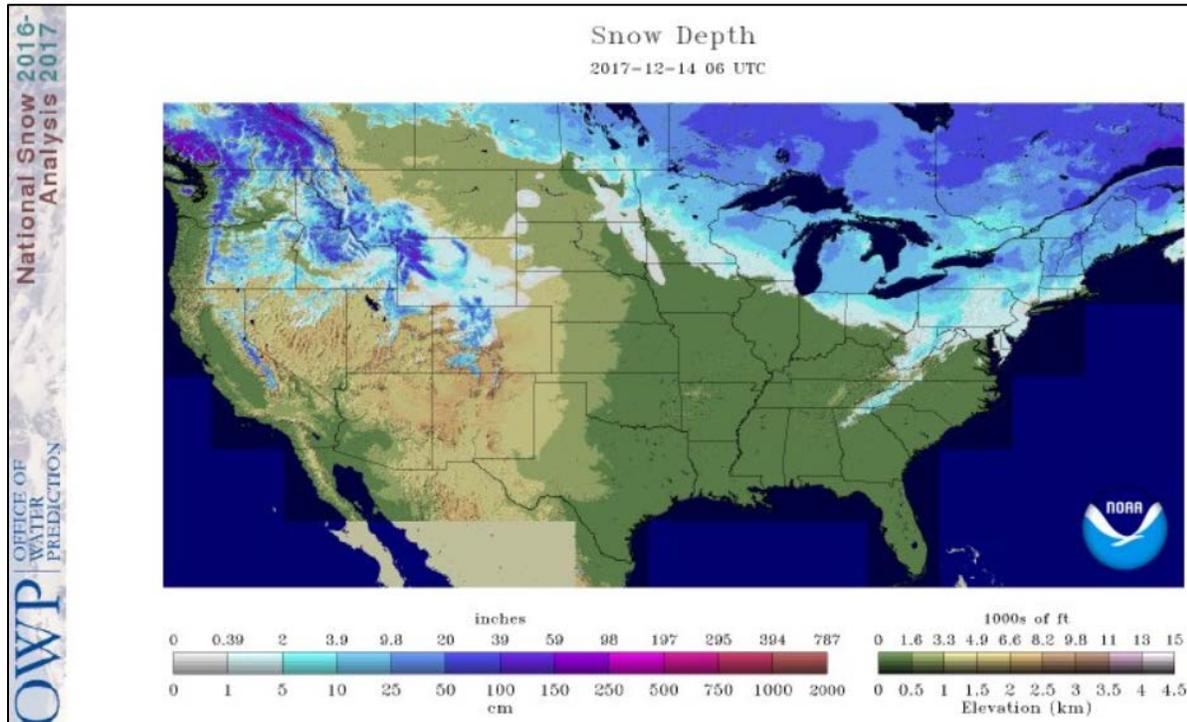
See also:
[Snow water equivalent values \(inches\) map](#)



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

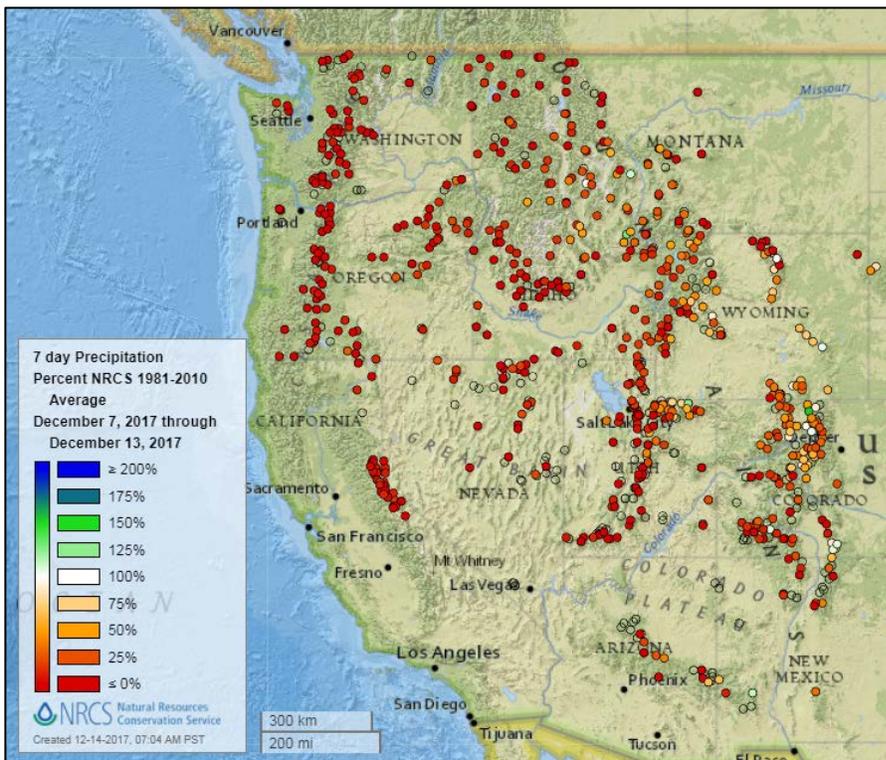
See also:
[Alaska snow water equivalent values \(inches\) map](#)

Current Snow Depth, National Weather Service Snow Analysis



Precipitation

Last 7 Days, NRCS SNOTEL Network



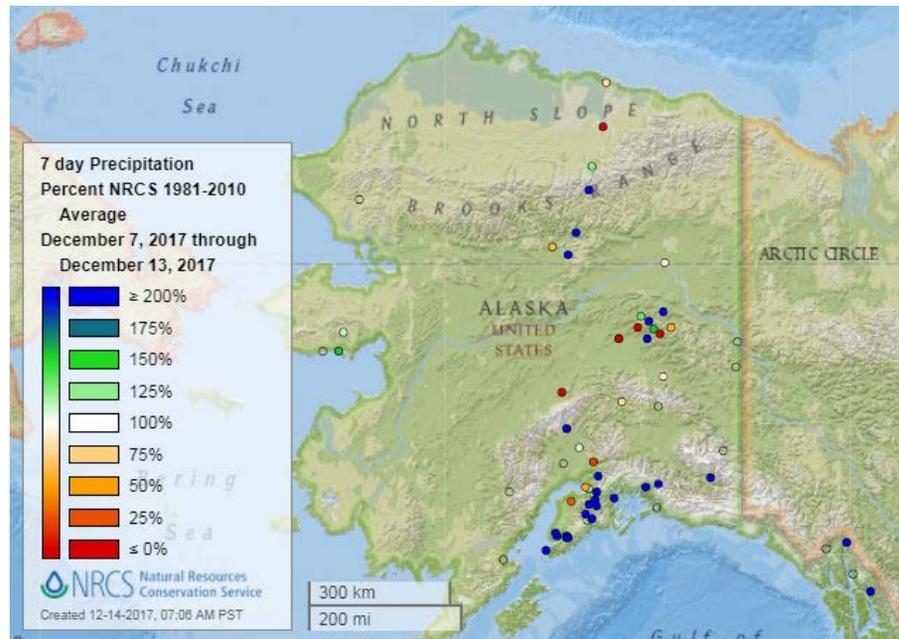
[7-day precipitation percent of average map](#)

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

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

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



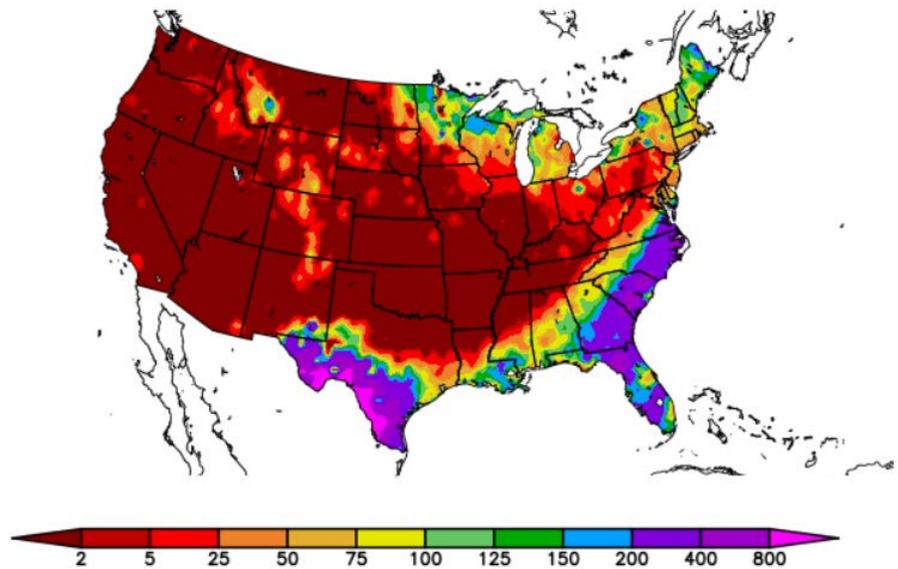
Last 7 Days, National Weather Service (NWS) Networks

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 (%) 12/7/2017 – 12/13/2017



Generated 12/14/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

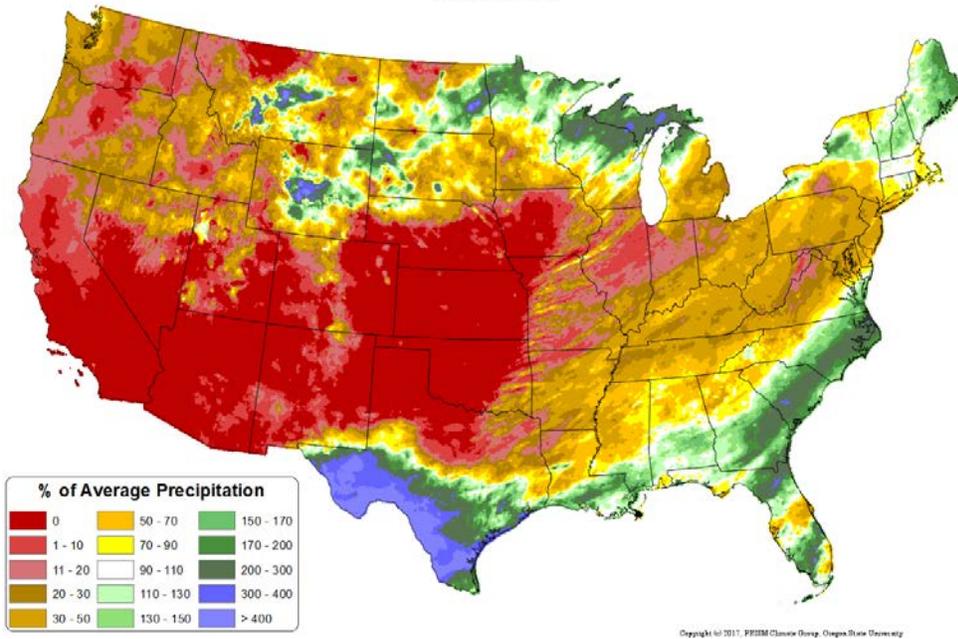
Water and Climate Update

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

Source: PRISM

Total Precipitation Anomaly: 01 December 2017 - 13 December 2017
Period ending 7 AM EST 13 Dec 2017
Base period: 1981-2010
(Map created 14 Dec 2017)

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

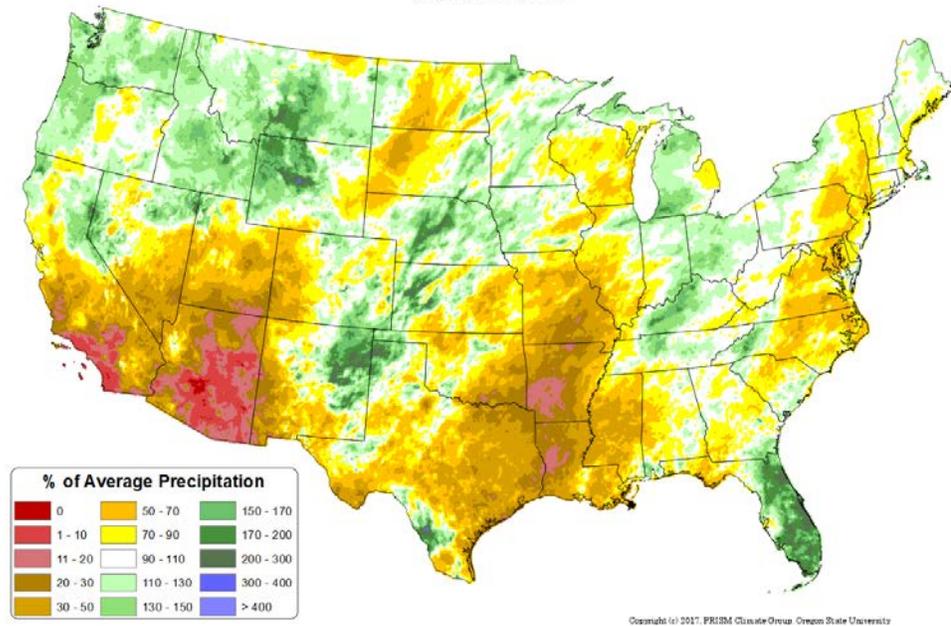


Last 3 Months, All Available Data Including SNOTEL and NWS Networks

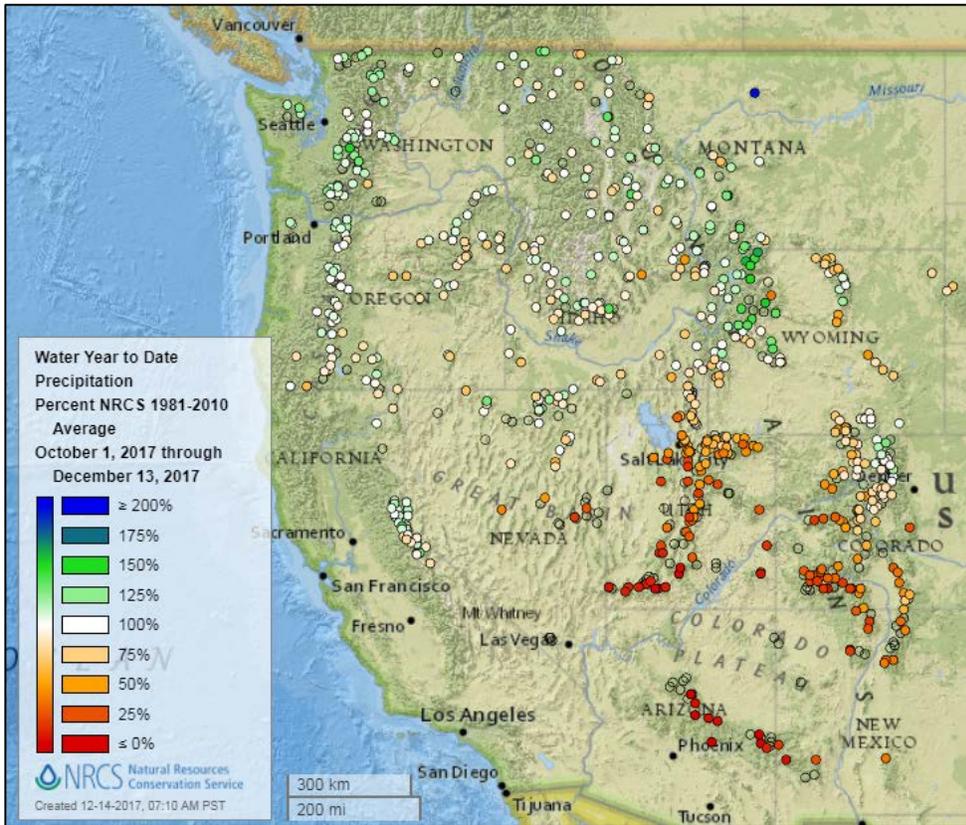
Source: PRISM

[September through November 2017 total precipitation anomaly map](#)

Total Precipitation Anomaly: September 2017 - November 2017
Period ending 7 AM EST 30 Nov 2017
Base period: 1981-2010
(Map created 02 Dec 2017)

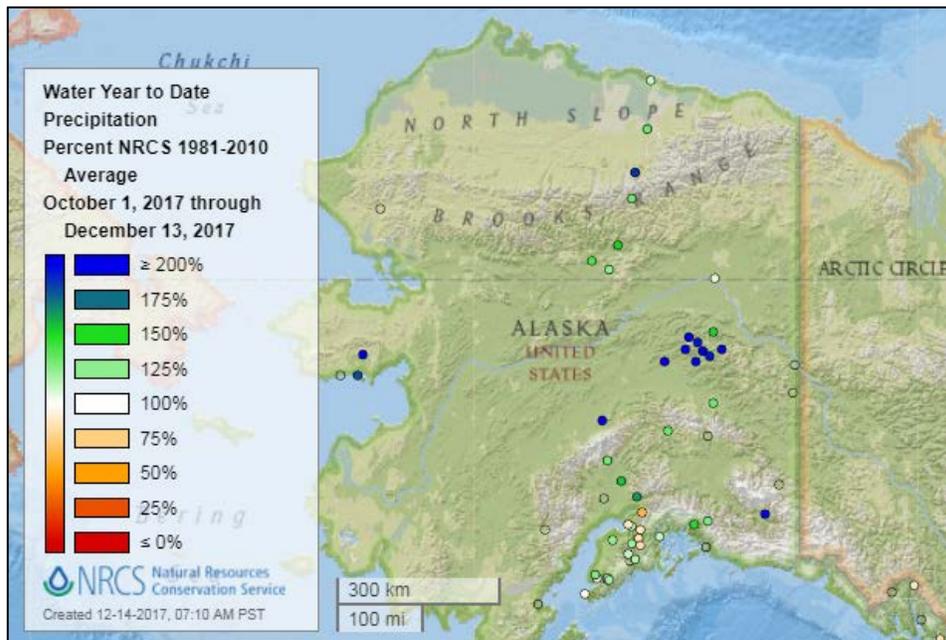


Water Year-to-Date, NRCS SNOTEL Network



[2018 water year-to-date precipitation percent of average map](#)

See also: [2018 water year-to-date precipitation values \(inches\)](#)



[Alaska 2018 water year-to-date precipitation percent of average map](#)

See also: [Alaska 2018 water year-to-date precipitation values \(inches\) map](#)

Temperature

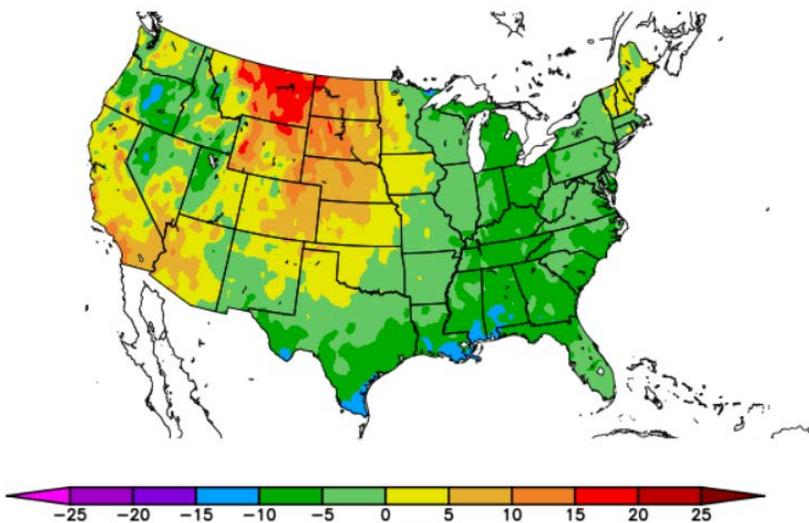
Last 7 Days, National Weather Service (NWS) Networks

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)
12/7/2017 – 12/13/2017



Generated 12/14/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

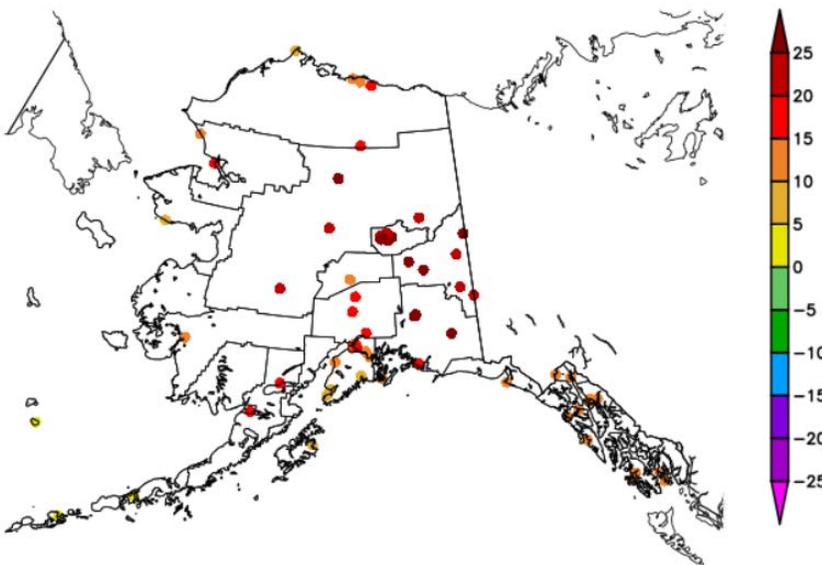
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
12/7/2017 – 12/13/2017



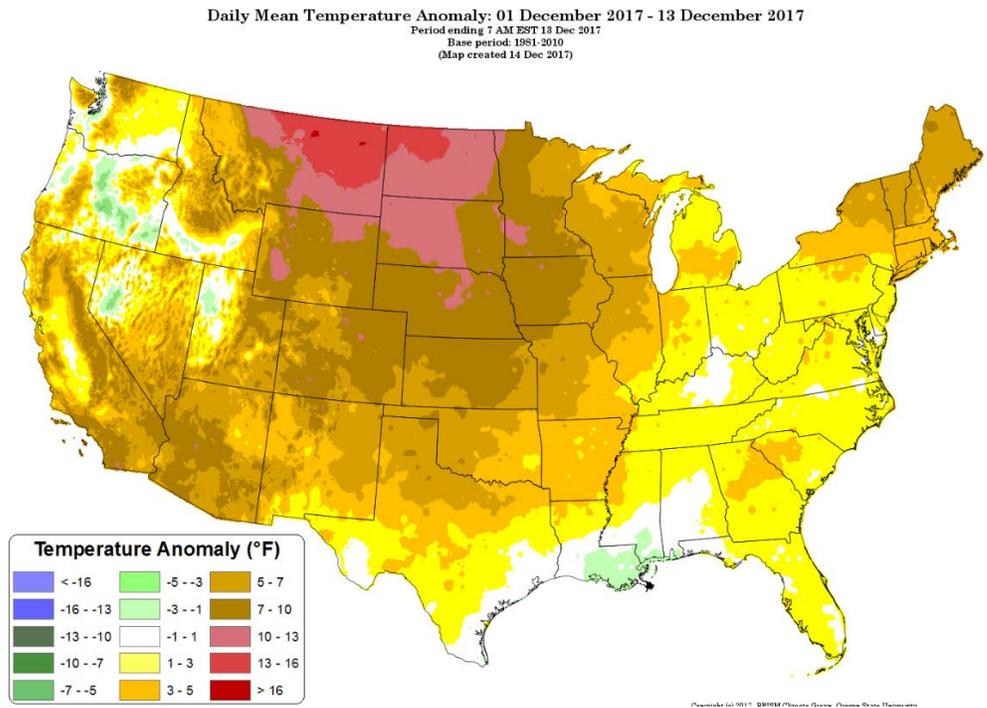
Generated 12/14/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

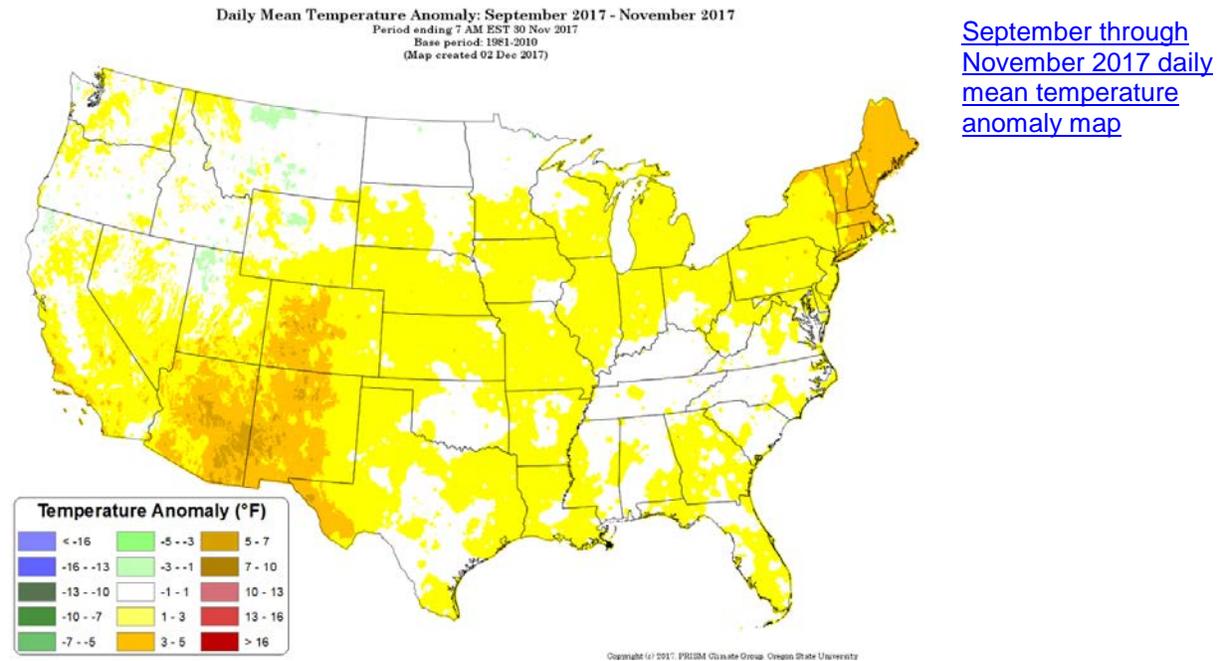
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Month-to-Date, All Available Data Including SNOTEL and NWS Networks Source: PRISM

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



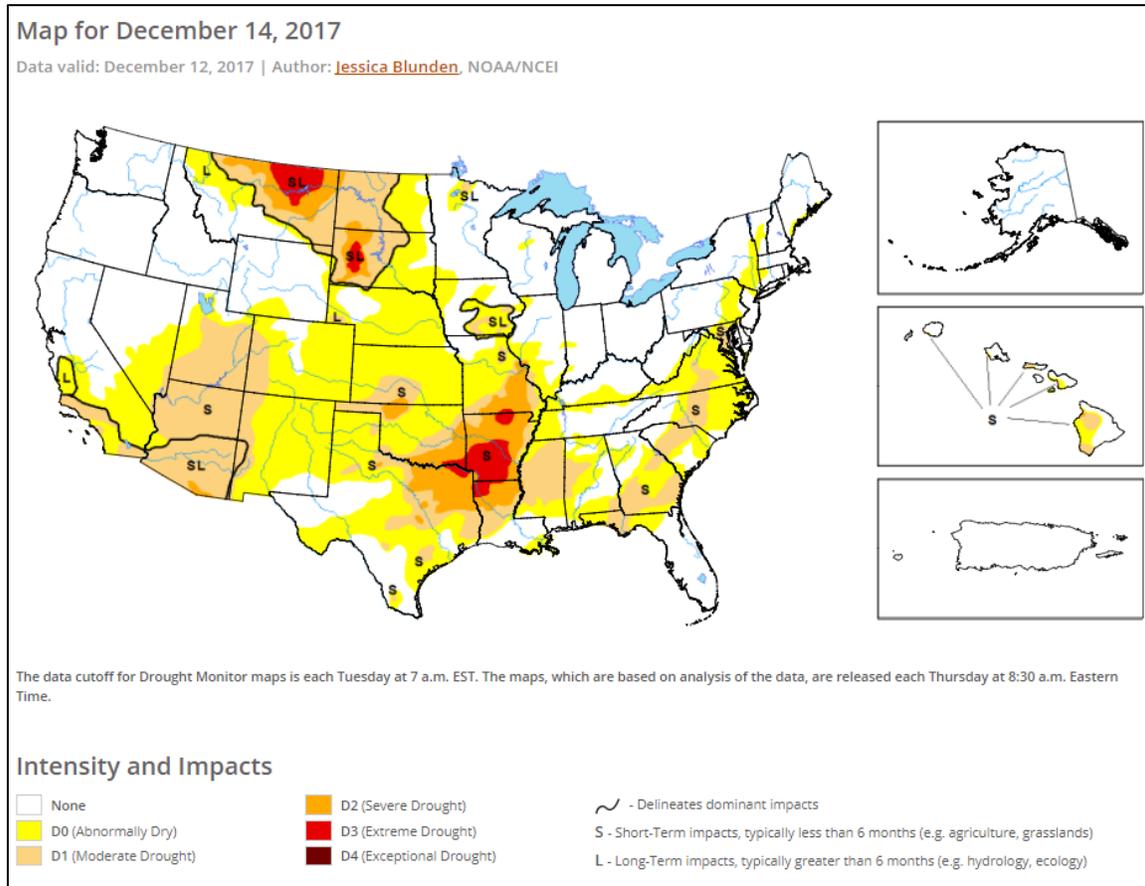
Last 3 Months, All Available Data Including SNOTEL and NWS Networks Source: PRISM



Drought

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

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



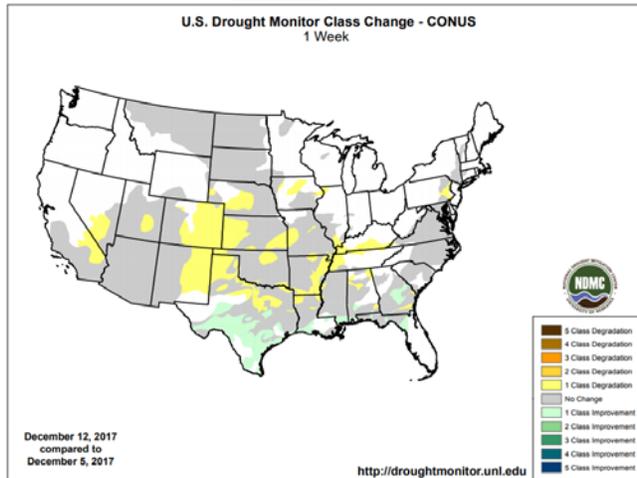
Current [National Drought Summary](#), December 14, 2017

Author: Jessica Blunden, NOAA/NCEI

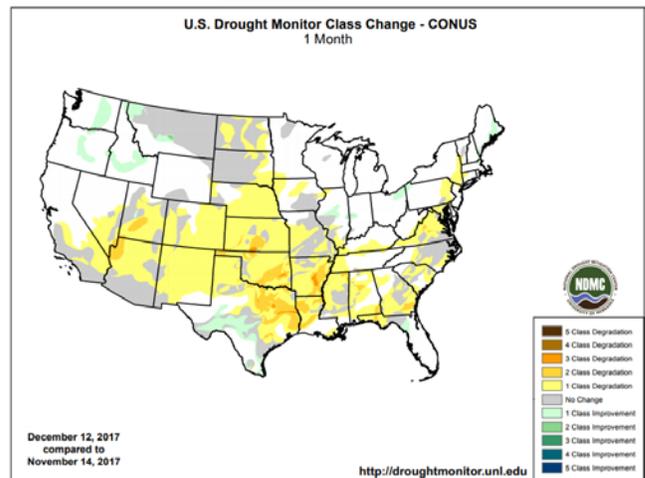
“Conditions were dry and windy across much of the western United States over this past drought week, December 5-12. Wildfires, fueled by strong Santa Ana winds, destroyed hundreds of structures and burned well over 100,000 acres, enhancing the state’s deadliest and costliest wildfire year on record. An unprecedented purple flag (wind) warning was posted on the 8th. Red flag warnings were posted from Colorado to Illinois on the 11th. Daily temperatures were above average across the western two-thirds of the U.S., particularly notable across the Southwest stretching into the High Plains. Snow fell across the South and Southeast, a rarity in many places, including southern Texas eastward into Georgia. The storm unexpectedly dumped more than a foot of snow in parts of northern Georgia and North Carolina, with at least several inches widely reported. The storm continued to track across the mid-Atlantic and Northeast, leaving several inches on the ground there as well. Temperatures were as much as 15-25°F below average from parts of the Southern Plains to the Gulf Coast. Overall, with respect to drought, continued lack of moisture led to more degradation across parts of the West, High Plains, Midwest, and the South. A few areas improved, mainly in some of the far southern areas, where plentiful precipitation fell this past week.”

Changes in Drought Monitor Categories over Time

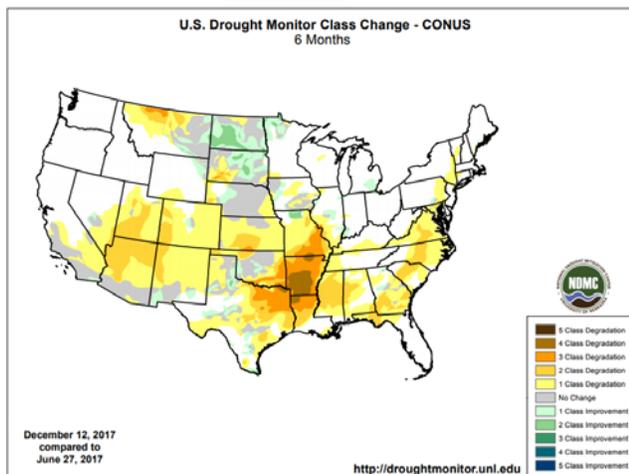
1 Week



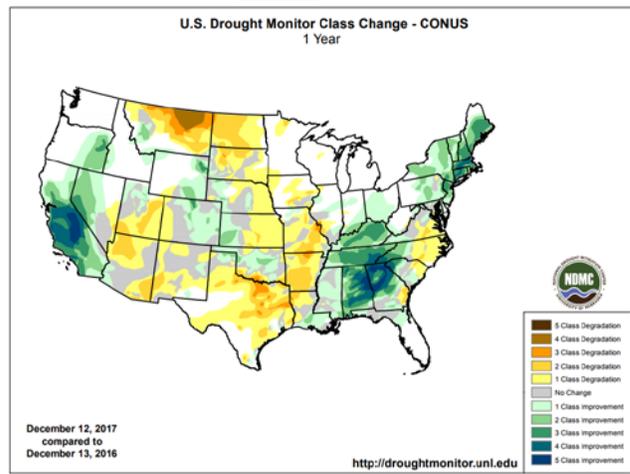
1 Month



6 Months



1 Year

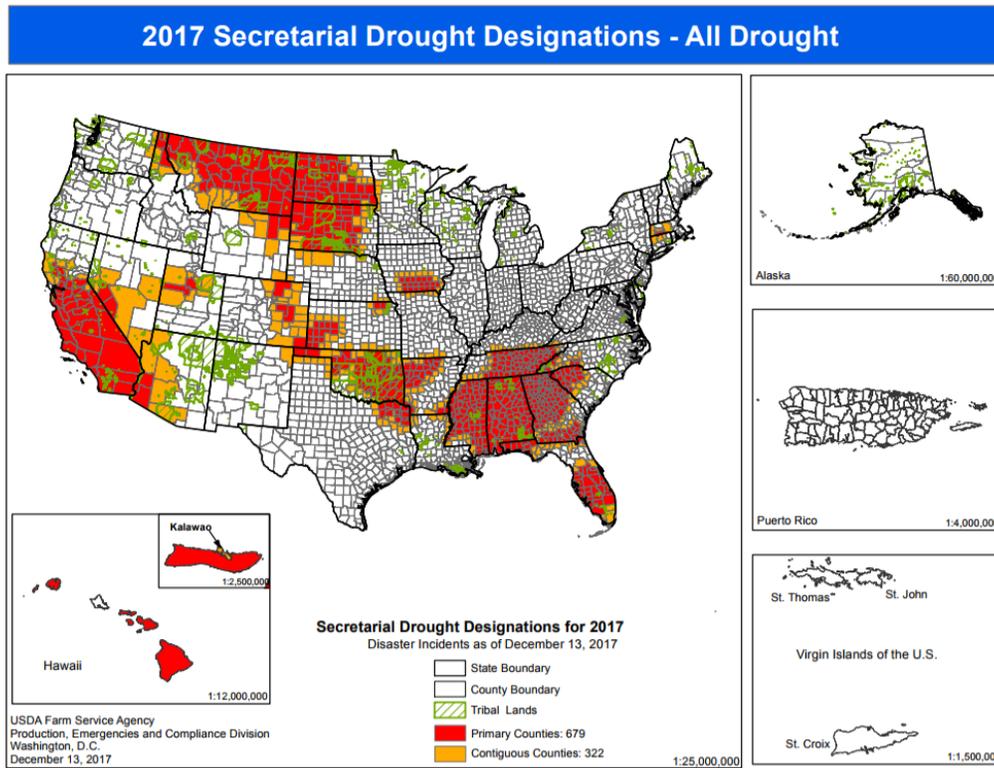


Changes in drought conditions over the last 12 months

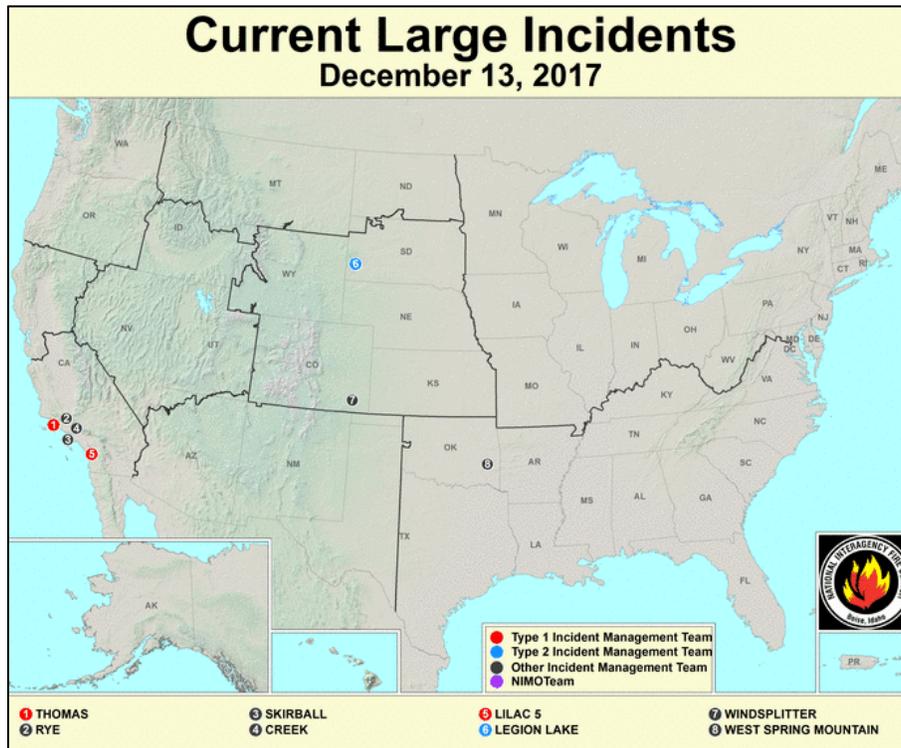
Highlighted Drought Resources

- [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 2017 Secretarial [Drought Designations](#)

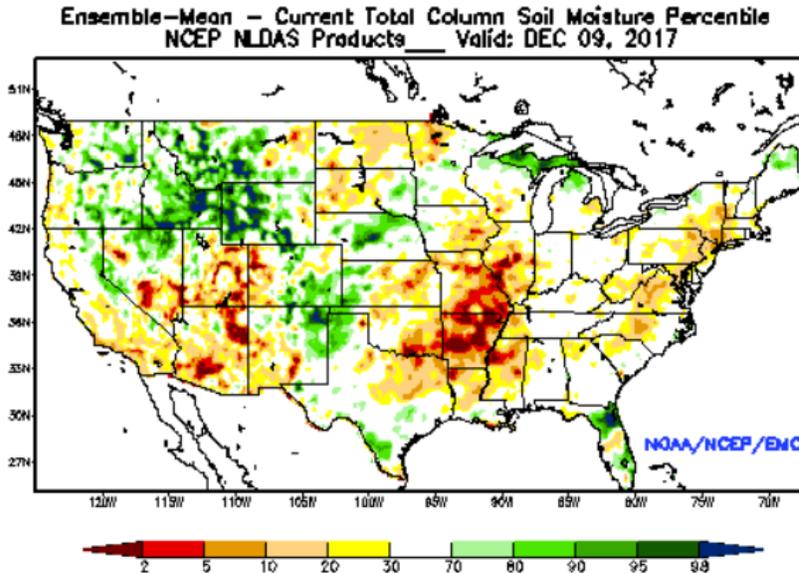


[Wildfires: USDA Forest Service Active Fire Mapping](#)



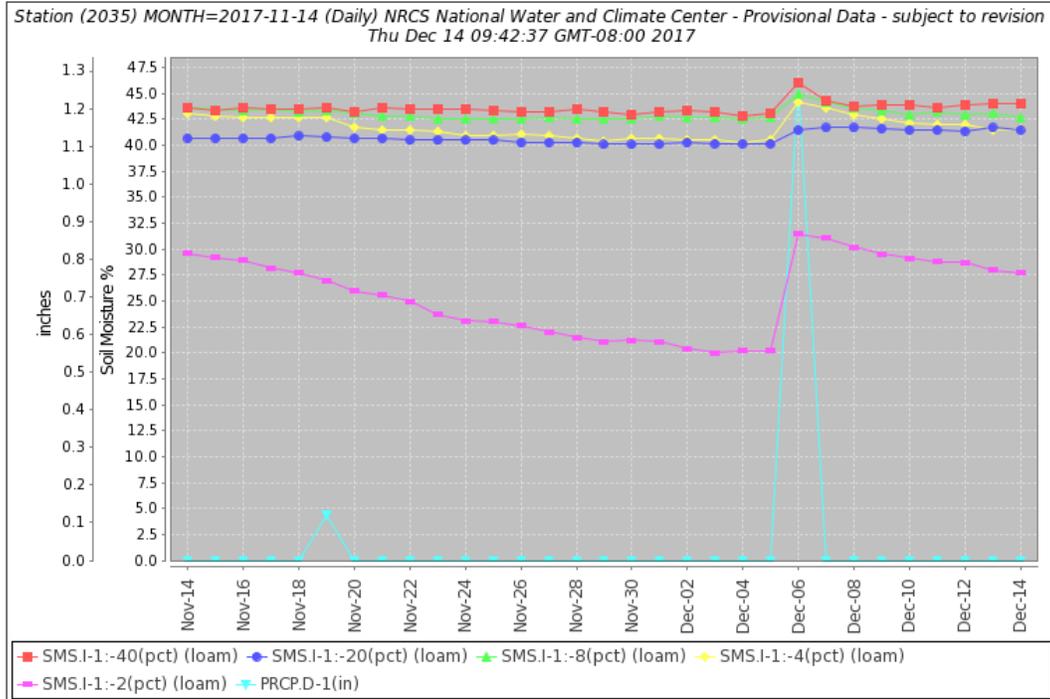
Other Climatic and Water Supply Indicators

Soil Moisture



[Modeled soil moisture percentiles](#) as of December 9, 2017.

Soil Moisture Data: NRCS [Soil Climate Analysis Network \(SCAN\)](#)



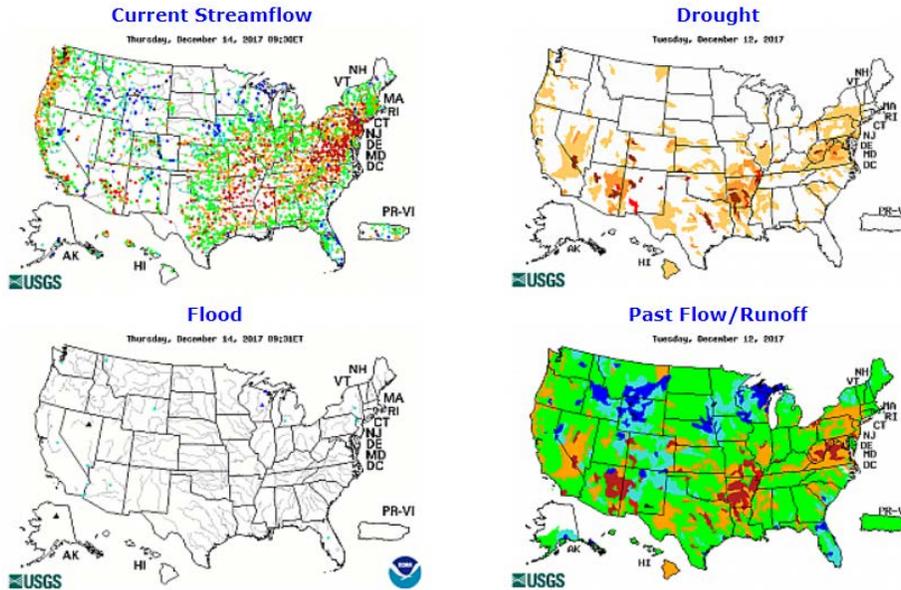
The chart shows precipitation and soil moisture for the last 30 days at the [Vance SCAN Site 2035](#) in Mississippi. The past 30 days show a large precipitation event of 1.27 inches on December 6. This increased the soil moisture at all sensor depths. The 2- and 4-inch depth sensors had steadily decreasing soil moisture during the first part of the month, an increase in soil moisture from the precipitation event, and decreasing soil moisture after the event.

Soil Moisture Data Portals

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

Streamflow

Source: USGS

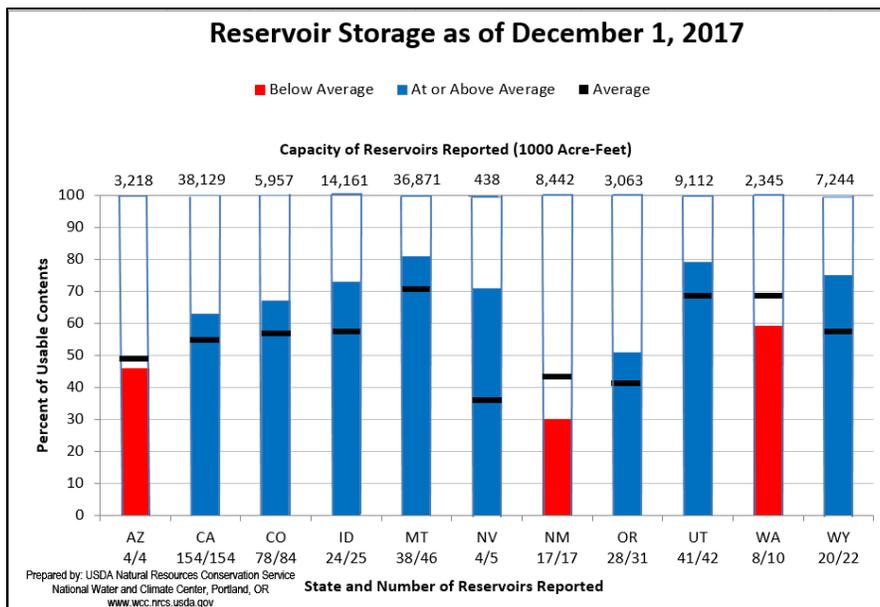


[WaterWatch: Streamflow, drought, flood, and runoff conditions](#)

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center



December 1 Reservoir Storage: [Chart](#) | [Dataset](#)

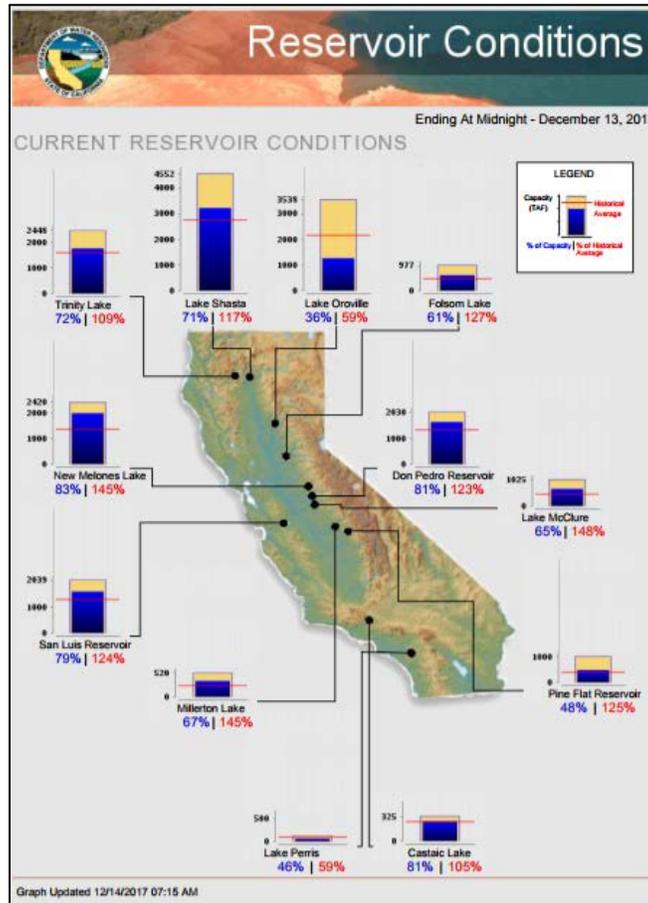
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U.S. Bureau of Reclamation Hydromet Tea Cup Reservoir Depictions

- [Upper Colorado](#)
- [Pacific Northwest/Snake/Columbia](#)
- [Sevier River Water, Utah](#)
- [Upper Missouri, Kansas, Oklahoma, Texas](#)

Current California Reservoir Conditions

Source: California Department of Water Resources



[California Current Reservoir Conditions](#)

Short- and Long-Range Outlooks

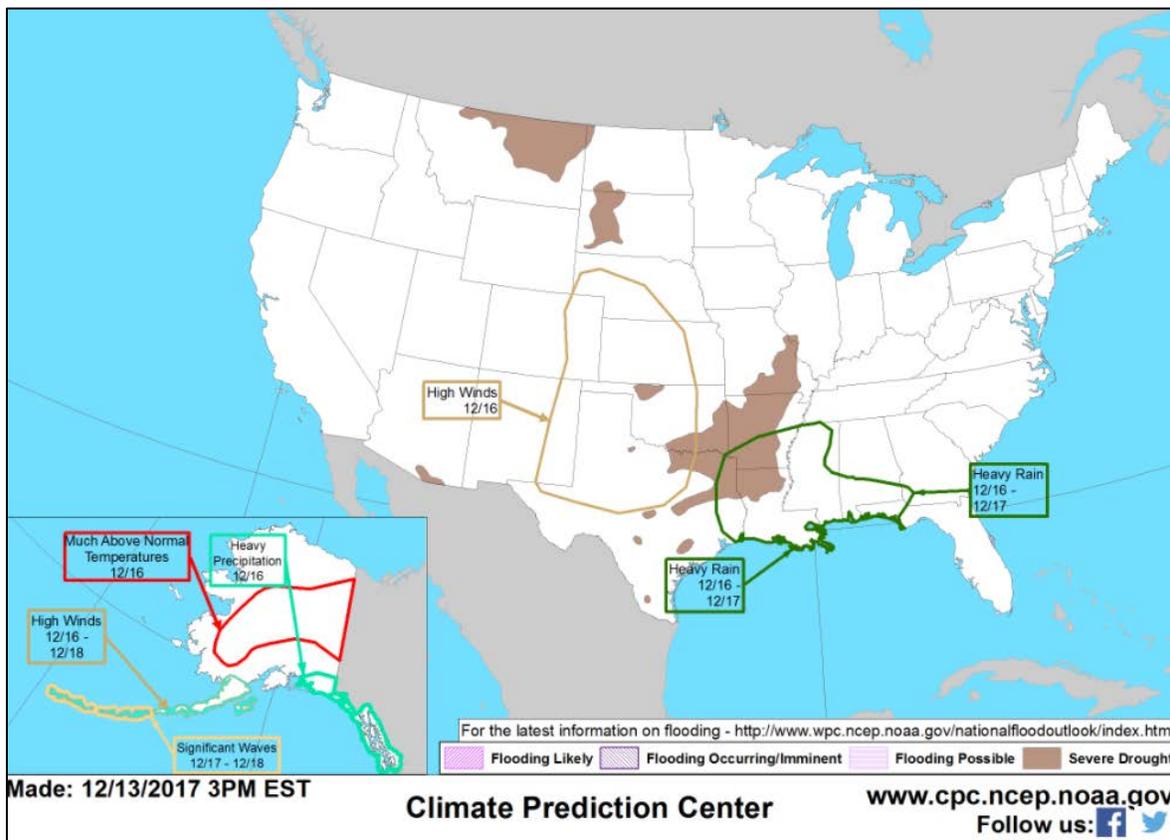
Agricultural Weather Highlights

Author: Mark Brusberg, Chief Meteorologist, USDA/OCE/WAOB

National Outlook, Thursday, December 14: “Fast-moving disturbances will maintain unsettled conditions in the northern U.S., with periods of snow showers expected during the next several days. The heaviest snow should fall in the northern Rockies and downwind of the Great Lakes. In contrast, dry weather will prevail at least into early next week in California and the Great Basin, as well as the central and southern High Plains. During the weekend, rain will overspread the Southeast, with 1- to 2-inch totals possible in the central Gulf Coast States. Meanwhile, mild air—currently covering much of the western and central U.S.—will gradually spread into the East. By early next week, cooler-than-normal weather should be limited to southern sections of the Rockies and Plains. Elsewhere, southern California will continue to experience gusty and erratic winds—part of a prolonged “Santa Ana” wind event that began nearly 2 weeks ago. The NWS 6- to 10-day outlook for December 19 – 23 calls for the likelihood of above normal temperatures in the southern half of the U.S., while colder-than-normal conditions will be limited to the nation’s northern tier. Near- to below-normal precipitation across large parts of the country should contrast with wetter-than-normal weather in the Rockies, northern Plains, upper Great Lakes region, and much of the Southeast.”

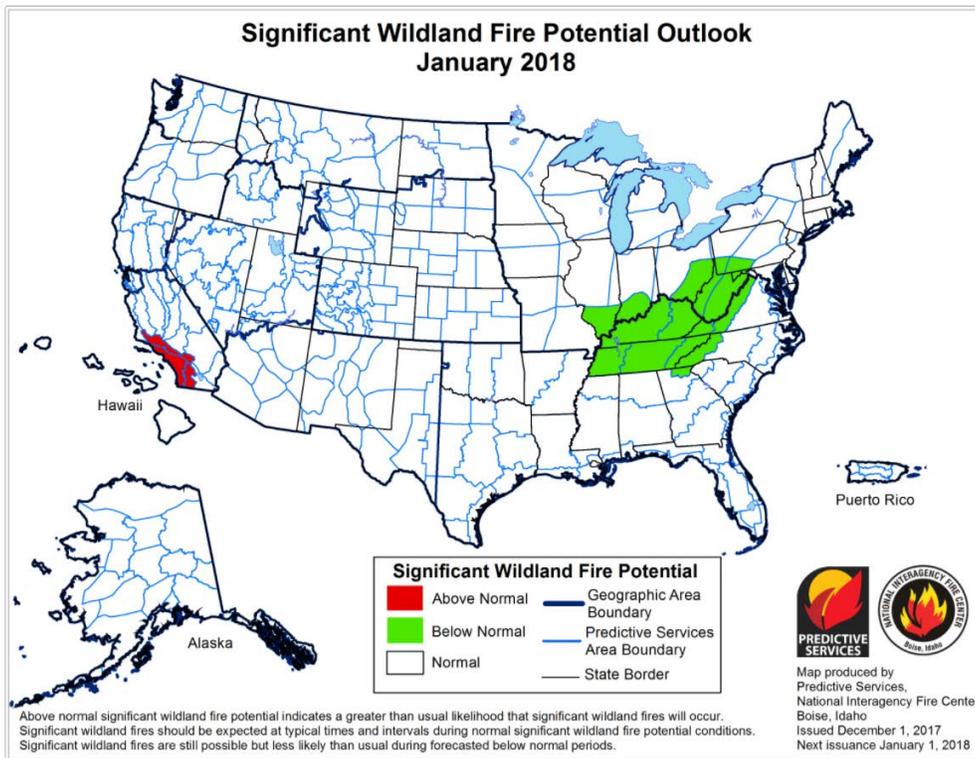
Weather Hazard Outlook December 16 – 20, 2017

Source: Climate Prediction Center



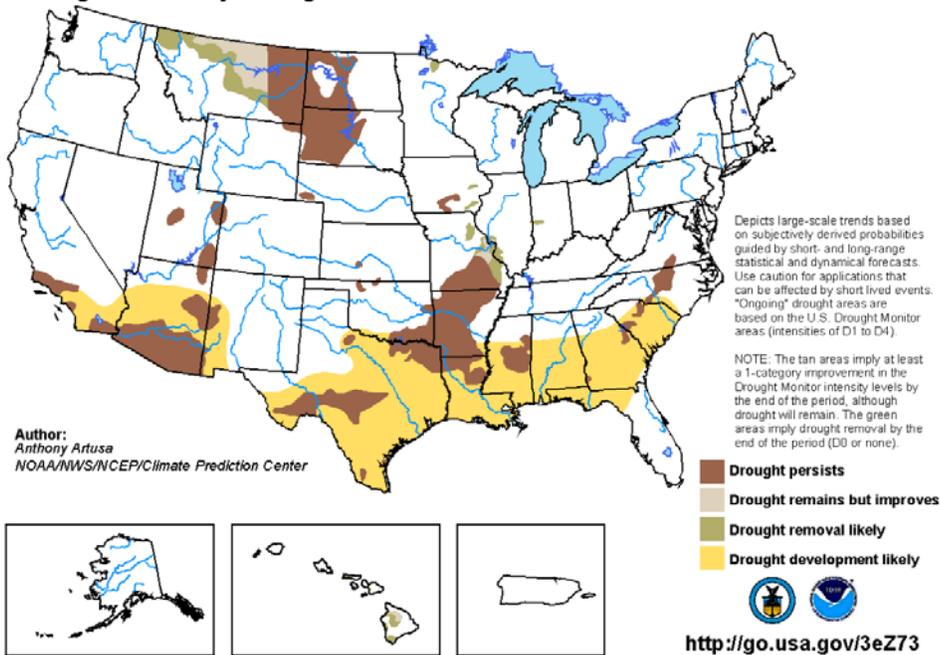
Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center



Seasonal Drought Outlook: [November 16, 2017 - February 28, 2018](#) Source: National Weather Service

U.S. Seasonal Drought Outlook Valid for November 16 - February 28, 2018
Drought Tendency During the Valid Period Released November 16, 2017

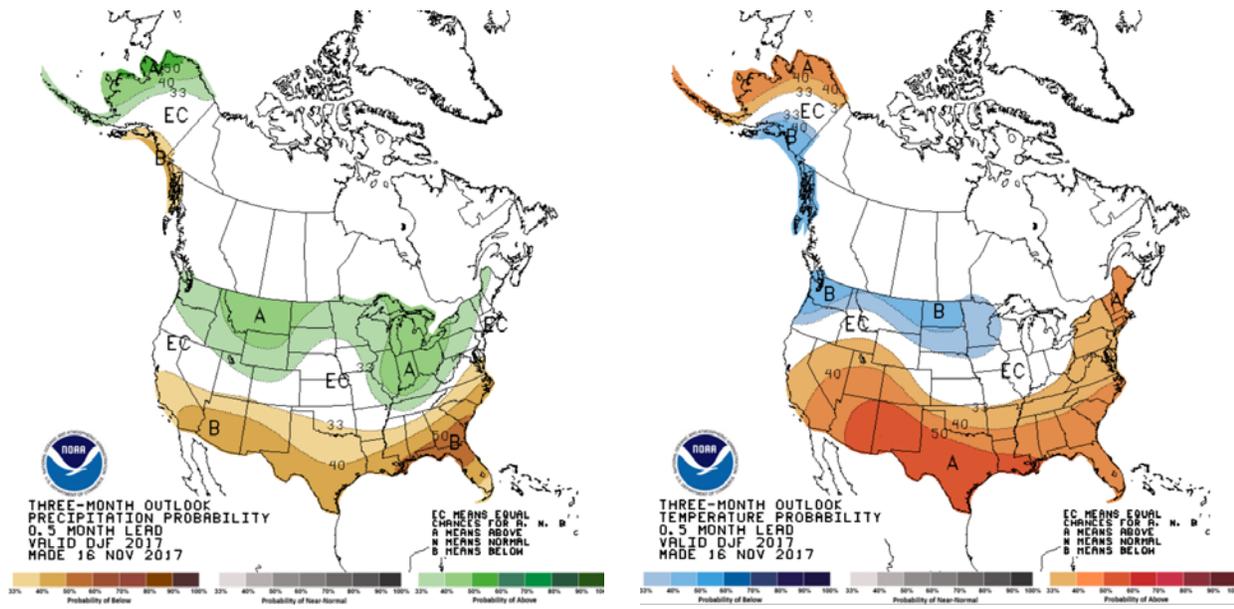


Climate Prediction Center 3-Month Outlook

Source: National Weather Service

[Precipitation](#)

[Temperature](#)



[Dec-Jan-Feb \(DJF\) 2017-2018 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](#).