



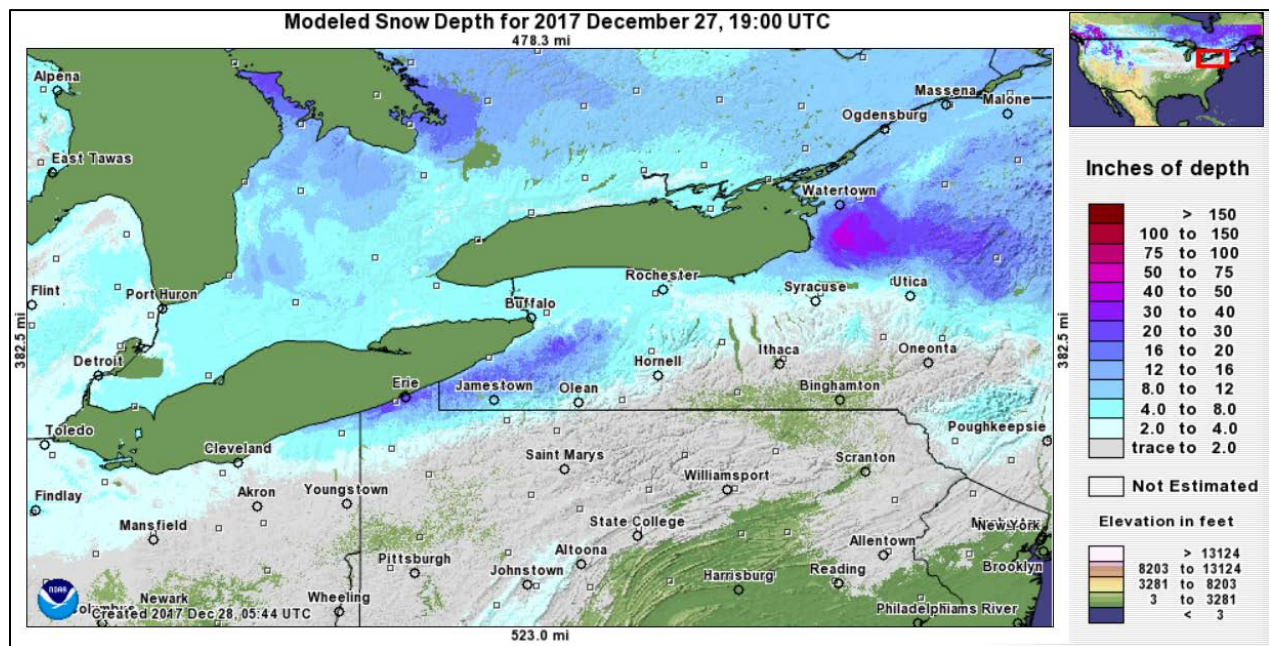
## Water and Climate Update

December 28, 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.

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### Record lake-effect snow in Erie, Pennsylvania



Beginning December 24, the Northeast has seen record amounts of lake-effect snow. A one-day total of 34 inches fell in Erie, Pennsylvania on December 25, setting a new state record. The storm dropped an additional 24.5 inches on December 26, for a three-day total of 62.9 inches, another state record. Parts of upstate New York were also hard hit, with Lorraine, New York reporting nearly 72 inches of snow.

#### Related:

[Erie, Pennsylvania, pummeled by record 5 feet of snow](#) - CNBC

[Historic storm drops 60 inches of snow on Erie](#) - GoErie.com

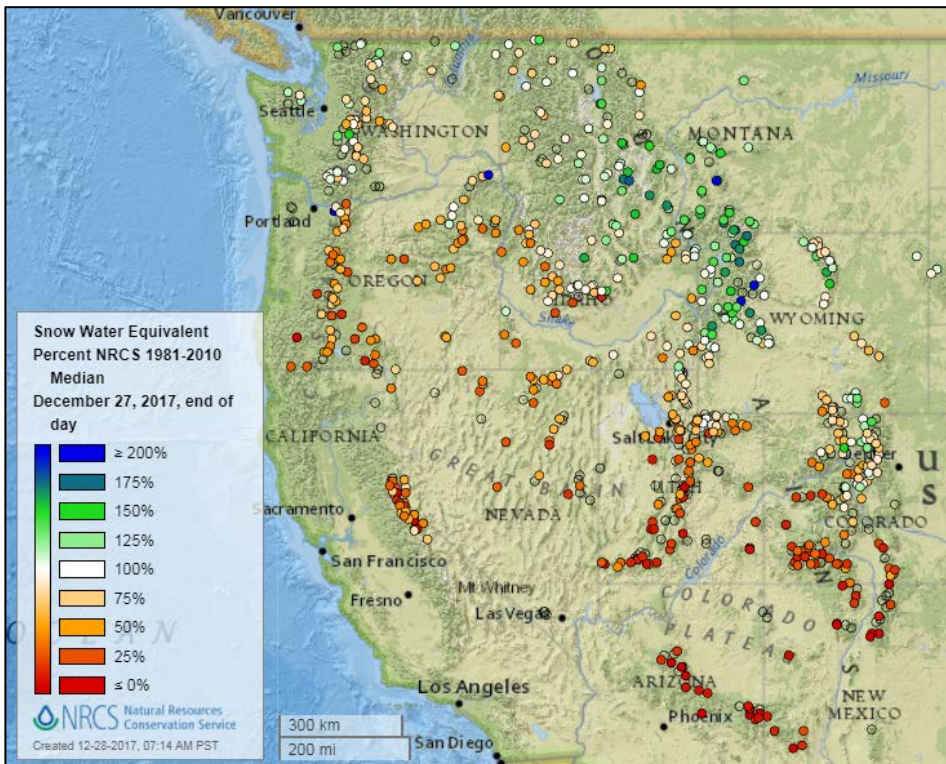
[63 inches of snow in 4 days: Erie, Pennsylvania shatters records](#) - WGN-TV

[Bitter cold hits northern US as Erie, Pennsylvania, digs out from colossal snowfall](#) - CBS

[Polar Vortex demystified: U.S. bitter cold, explained](#) - The Weather Network

## Snow

### Current Snow Water Equivalent, NRCS SNOTEL Network



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

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

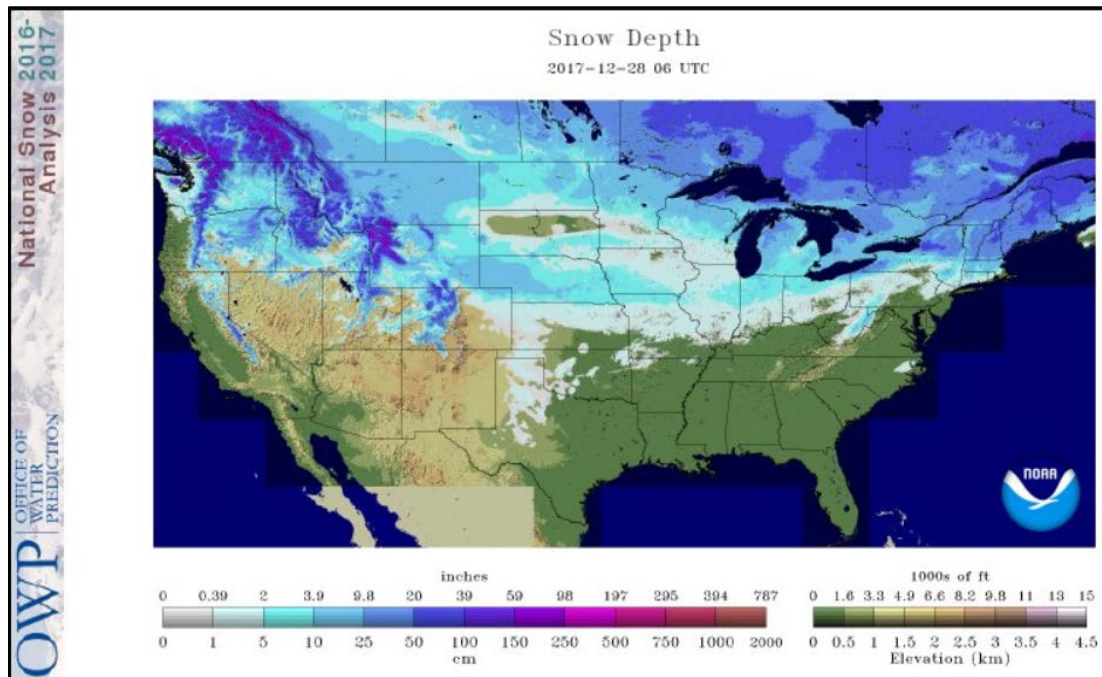


[Alaska snow water equivalent percent of median map](#)

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

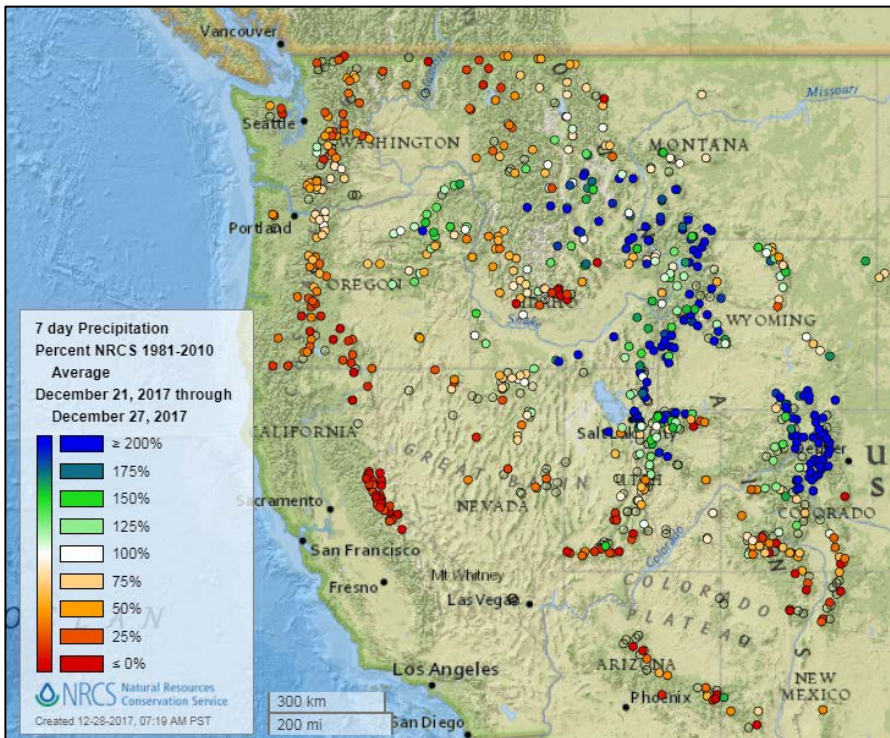


Current Snow Depth, National Weather Service Snow Analysis



## Precipitation

### Last 7 Days, NRCS SNOTEL Network

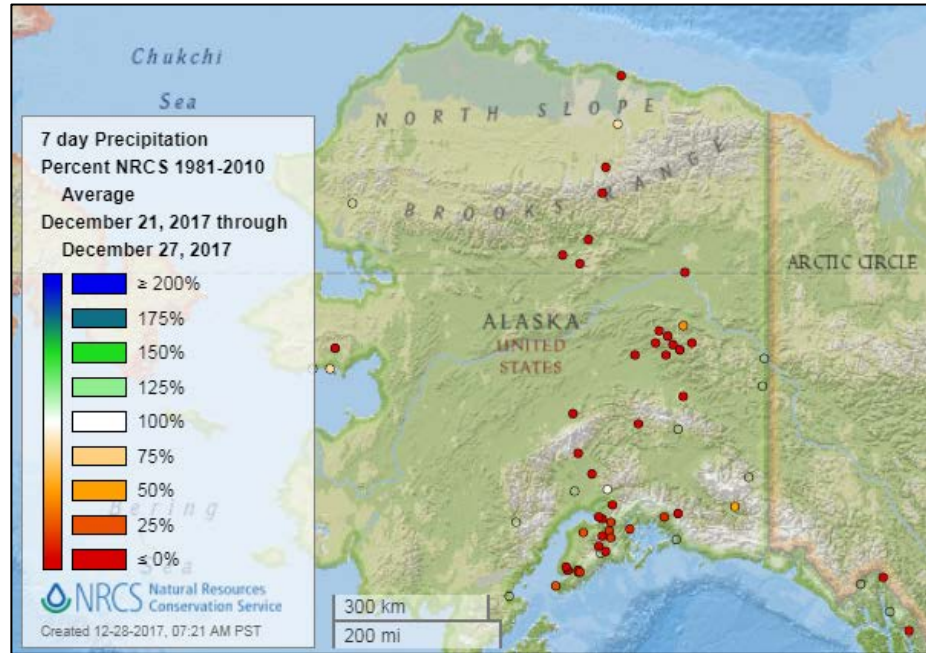


[7-day precipitation percent of average map](#)

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

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

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



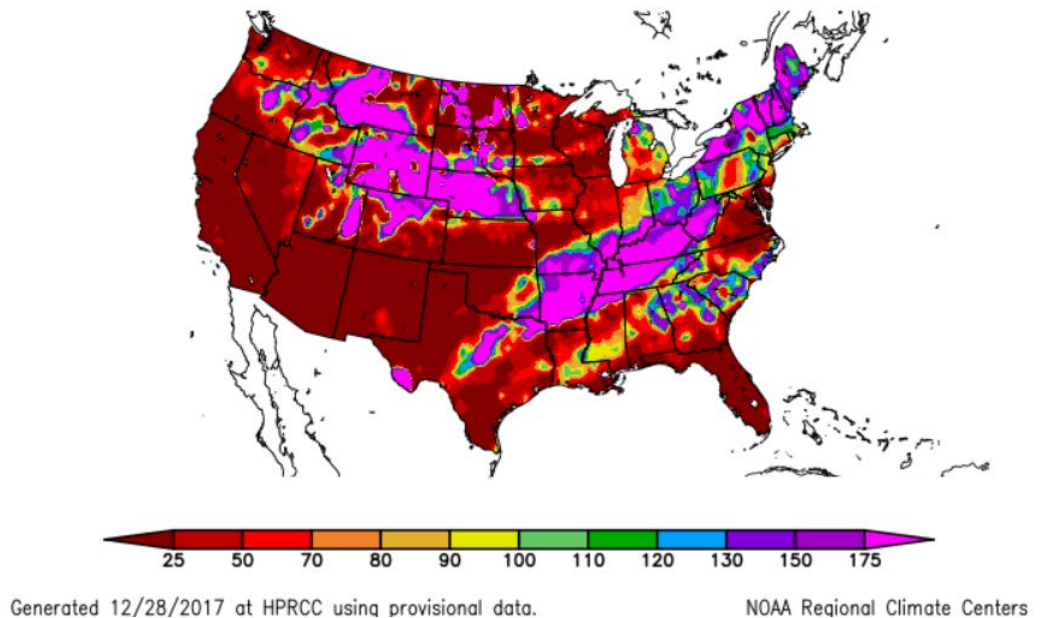
## Last 7 Days, National Weather Service (NWS) Networks

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 (%)  
12/21/2017 – 12/27/2017

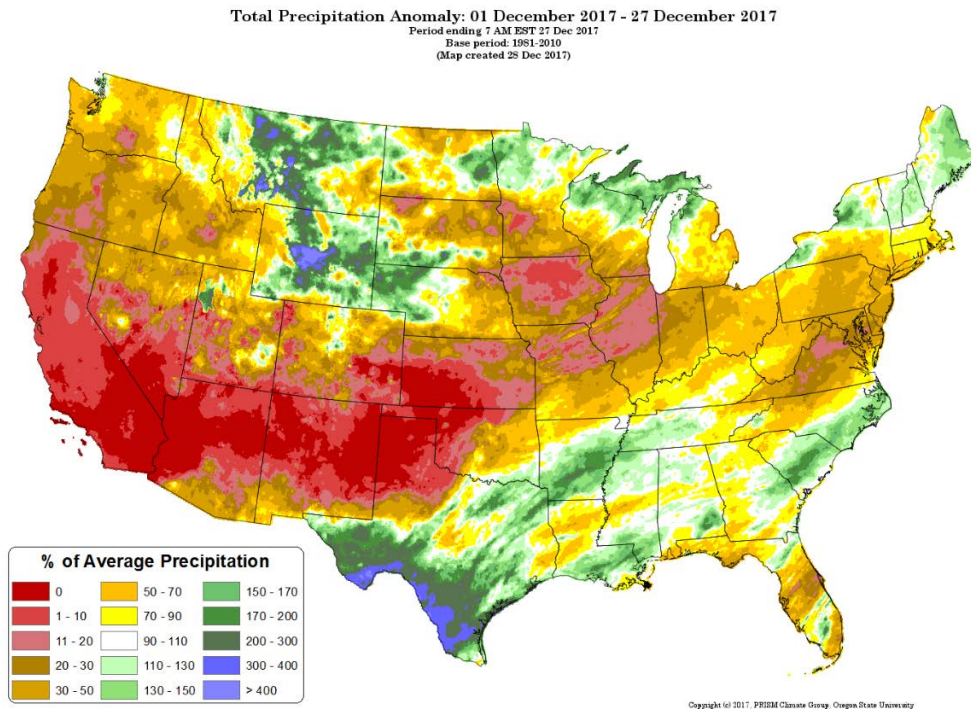




## Water and Climate Update

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

Source: PRISM

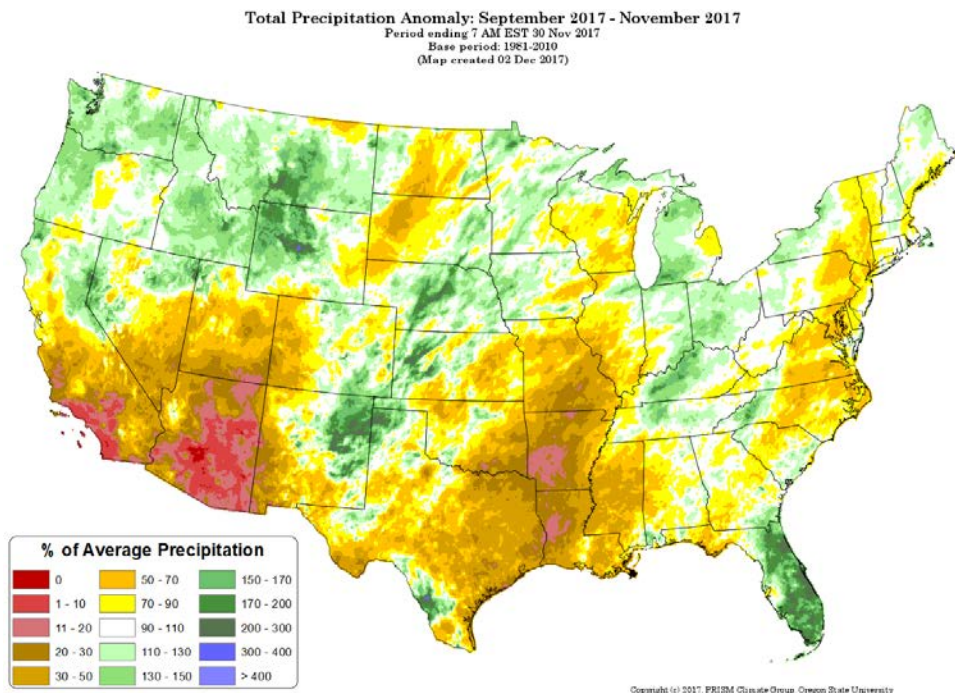


[Month-to-date national precipitation percent of average map](#)

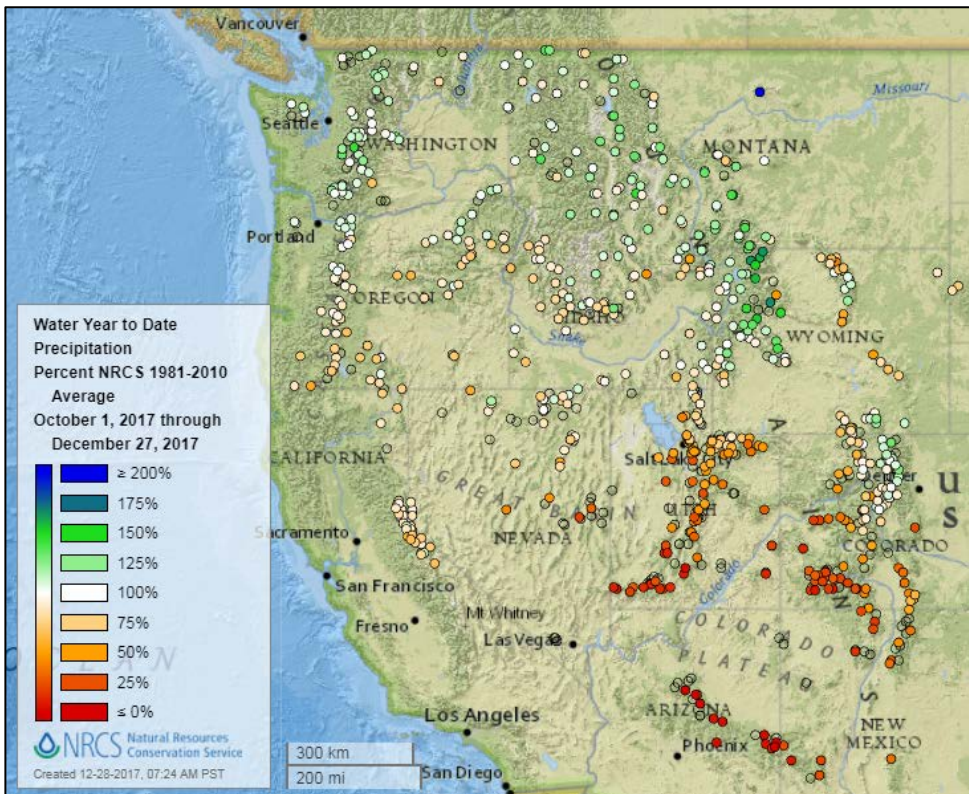
### Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[September through November 2017 total precipitation percent of average map](#)

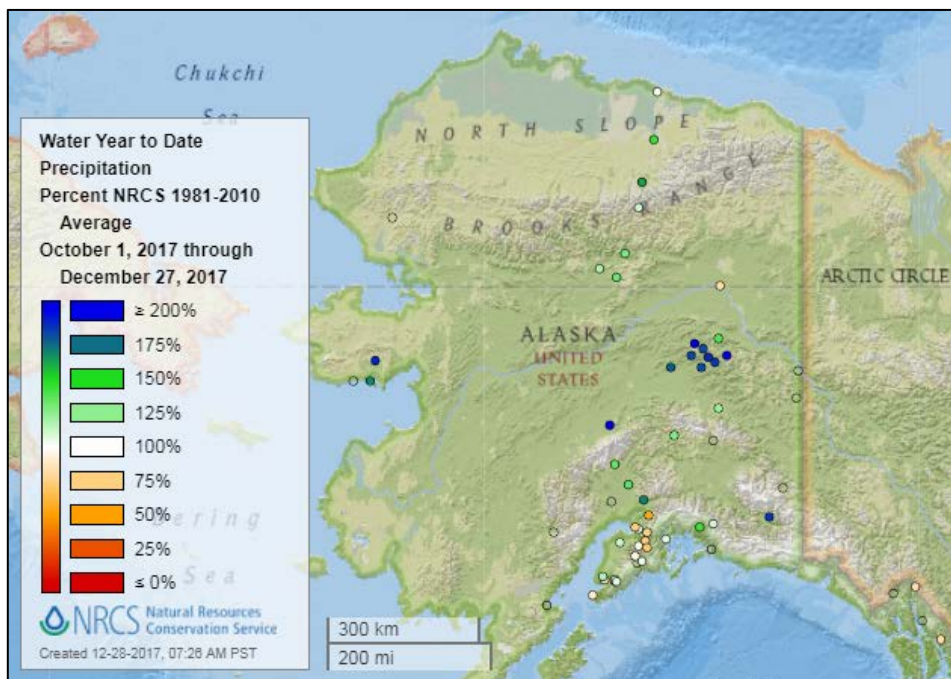


## Water Year-to-Date, NRCS SNOTEL Network



[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

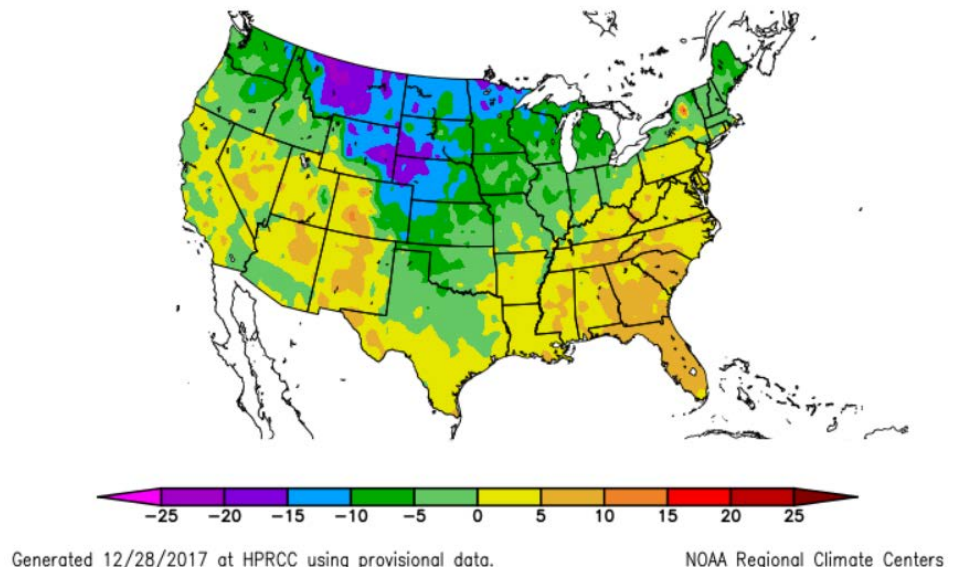
### Last 7 Days, National Weather Service (NWS) Networks

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) 12/21/2017 – 12/27/2017



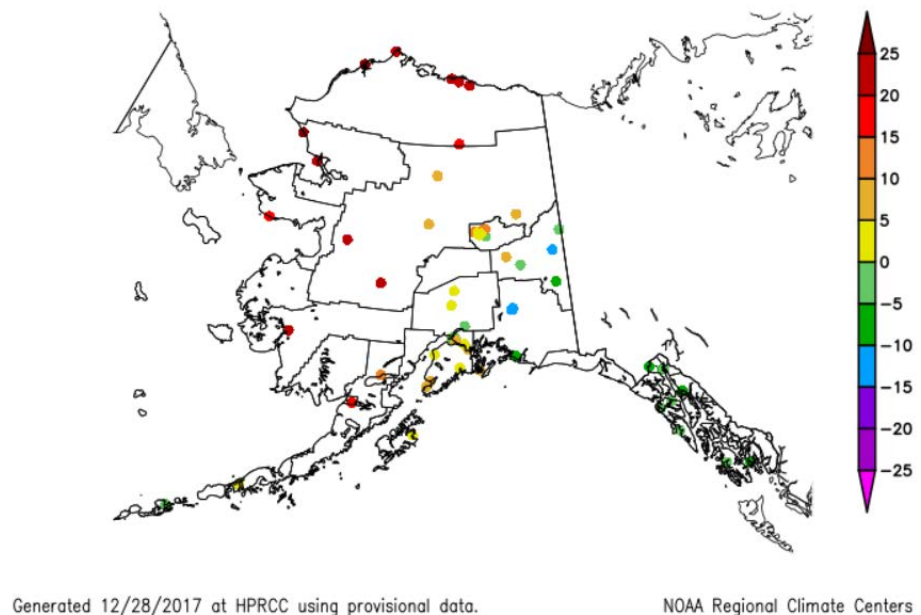
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

#### Departure from Normal Temperature (F) 12/21/2017 – 12/27/2017

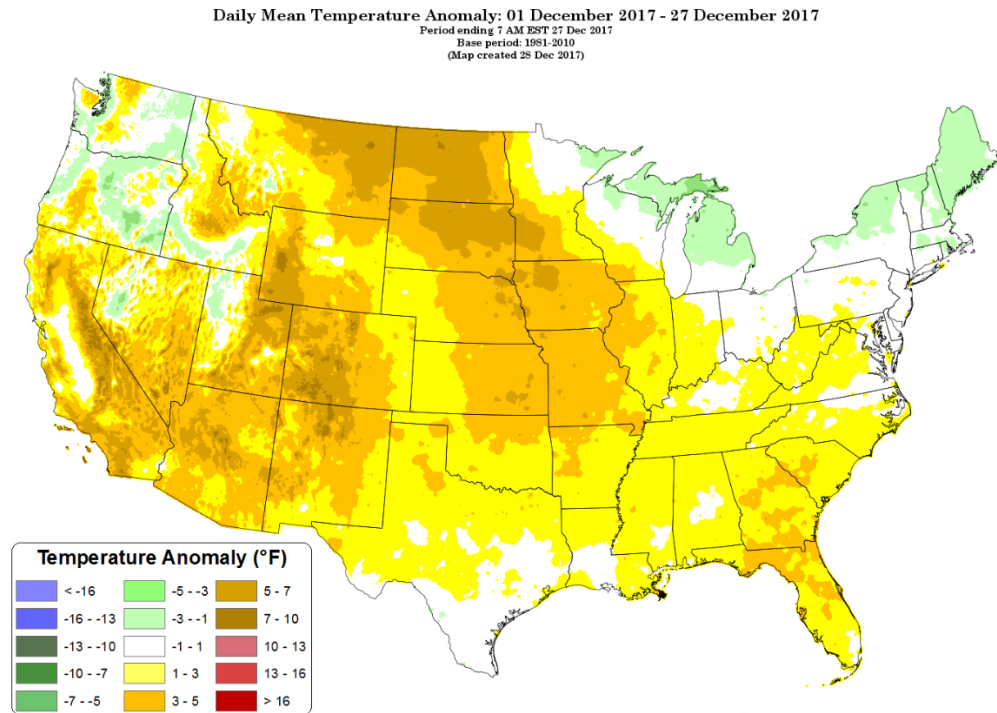


## Water and Climate Update

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

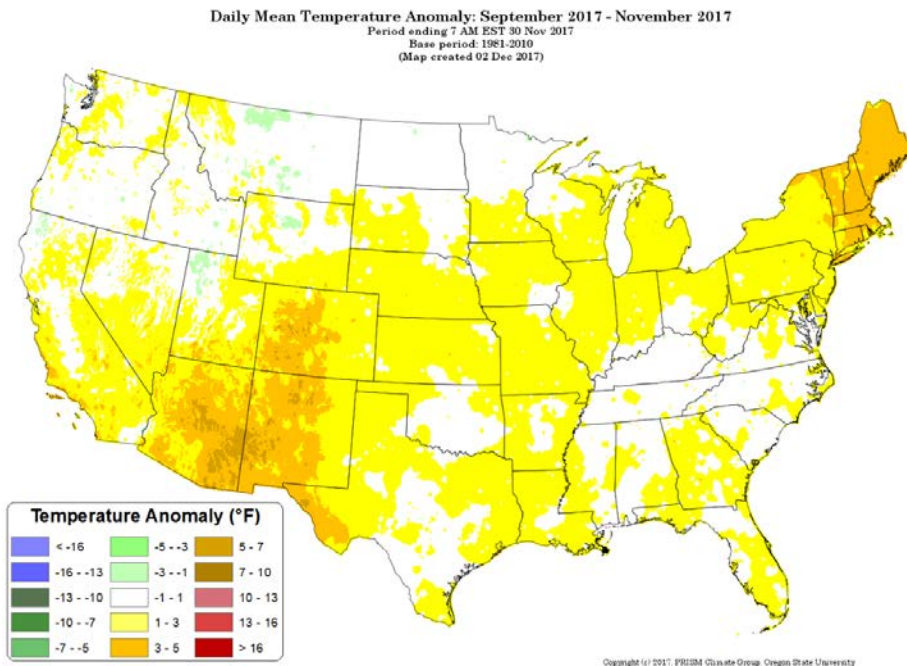
Source: PRISM

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



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

Source: PRISM



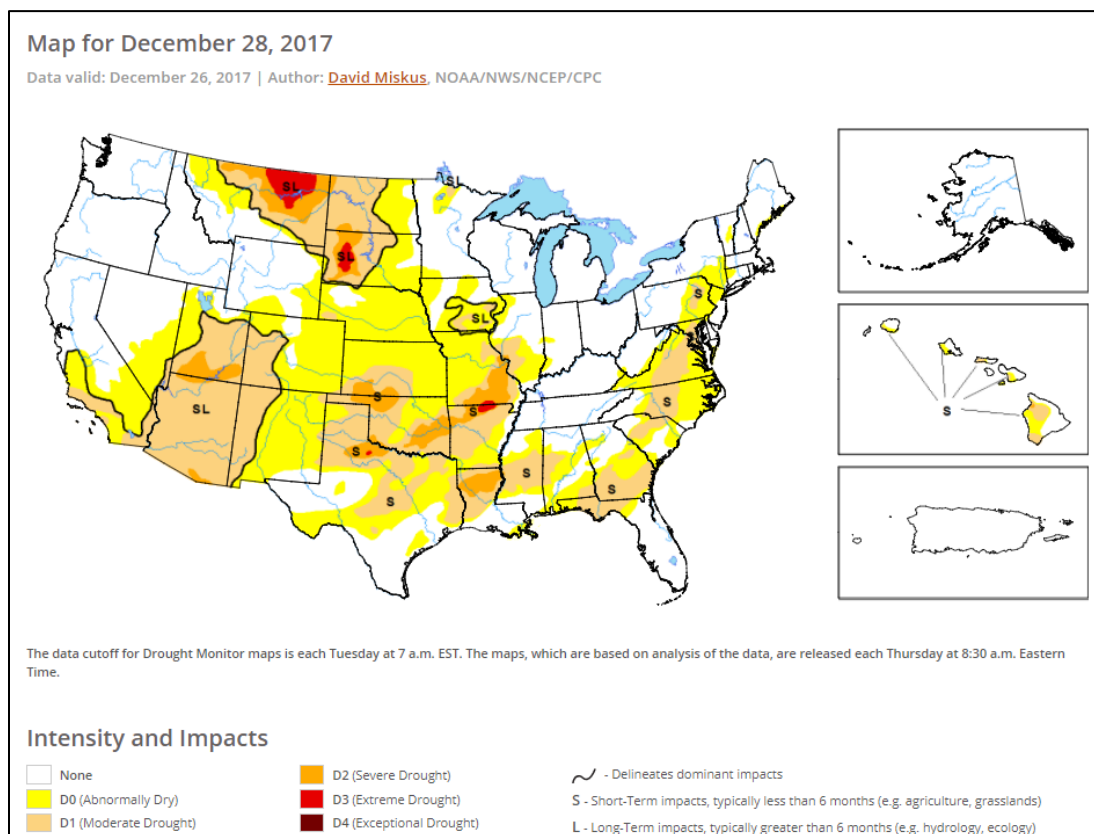
[September through November 2017 daily mean temperature anomaly map](#)



## Drought

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

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



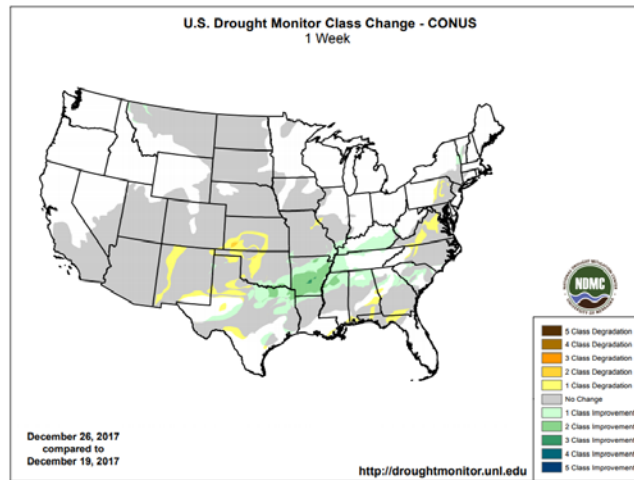
### Current [National Drought Summary](#), December 28, 2017

Author: David Miskus, NOAA/NWS/NCEP/CPC

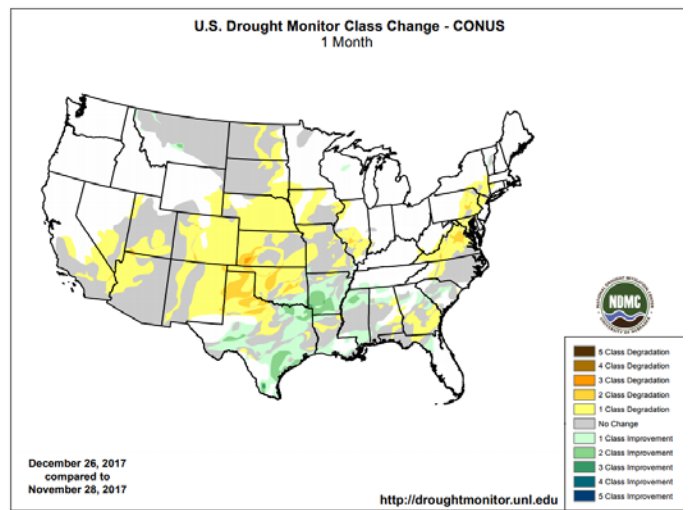
“A series of storm systems tracked across the lower 48 States, dropping light to moderate precipitation on the Northwest and northern half of the Rockies, which eventually entrained ample Gulf moisture into the system while over the lower Mississippi Valley. As a result, widespread moderate to heavy rains (2-6 inches, locally to 10 inches) fell from northeastern Texas northeastward into the southern and central Appalachians, with the greatest totals reported in central Arkansas and western Tennessee. As the systems trekked farther eastward, light to moderate precipitation also fell on the Northeast and the Carolinas as frigid conditions gradually replaced the mild air from earlier in the week across the eastern two-thirds of the Nation. Dry conditions prevailed across the Southwest, southern third of the High Plains, along the Gulf Coast, and in parts of the mid-Atlantic. In Hawaii, very heavy rains (4-10 inches) during December 20-21 in the central islands (western Maui, Lihue, eastern Molokai) interrupted what had been a relatively quiet (dry) December.”

## Changes in Drought Monitor Categories over Time

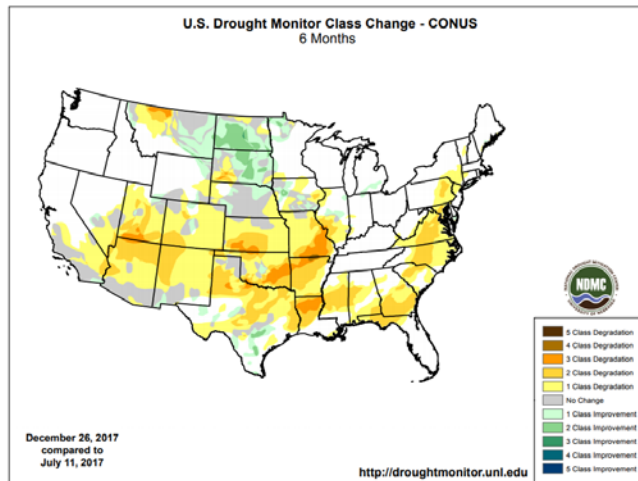
### 1 Week



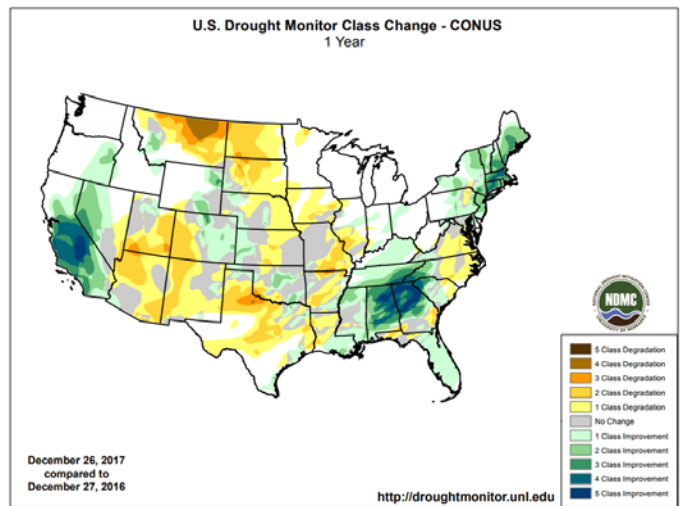
### 1 Month



### 6 Months



### 1 Year



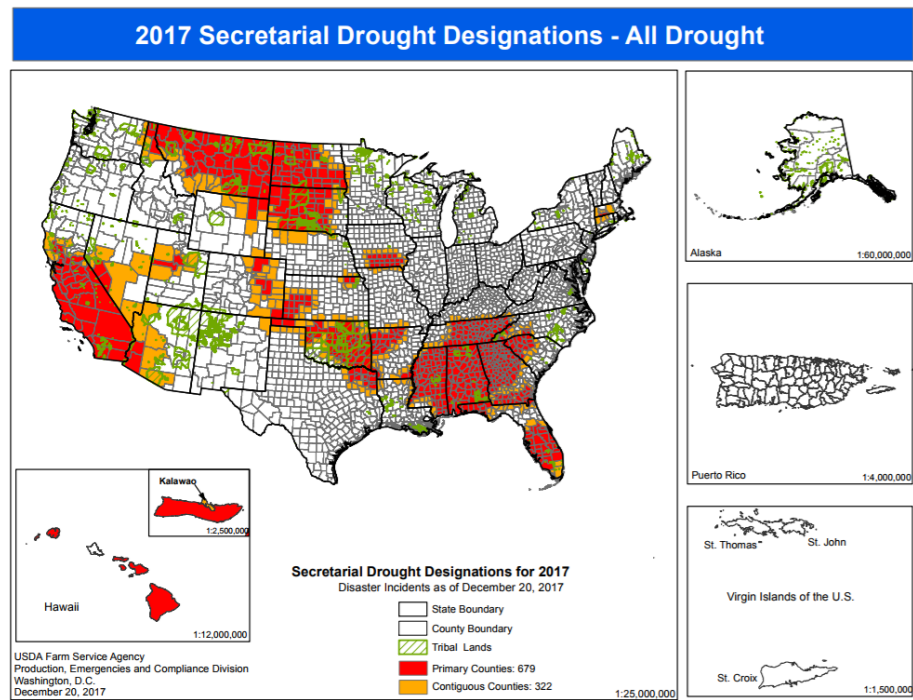
### Changes in drought conditions over the last 12 months

#### 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](#)

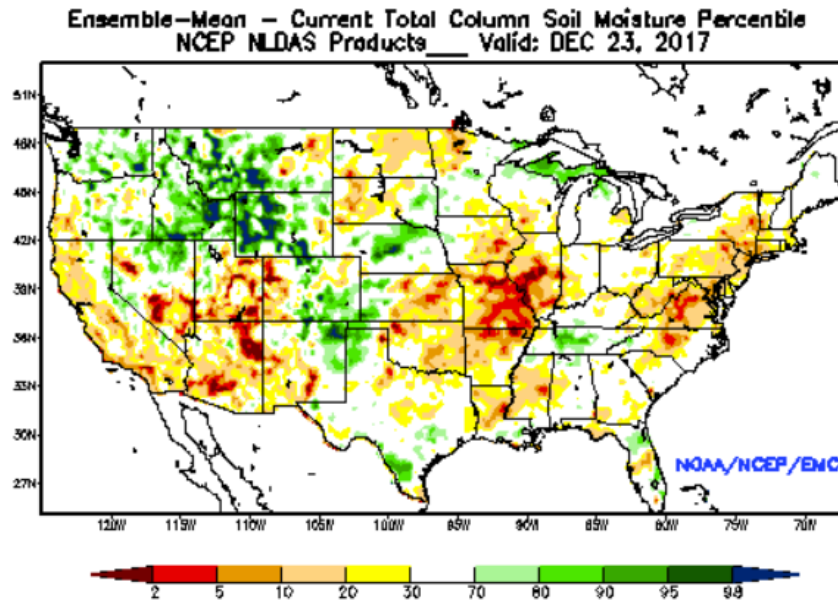


## USDA 2017 Secretarial [Drought Designations](#)



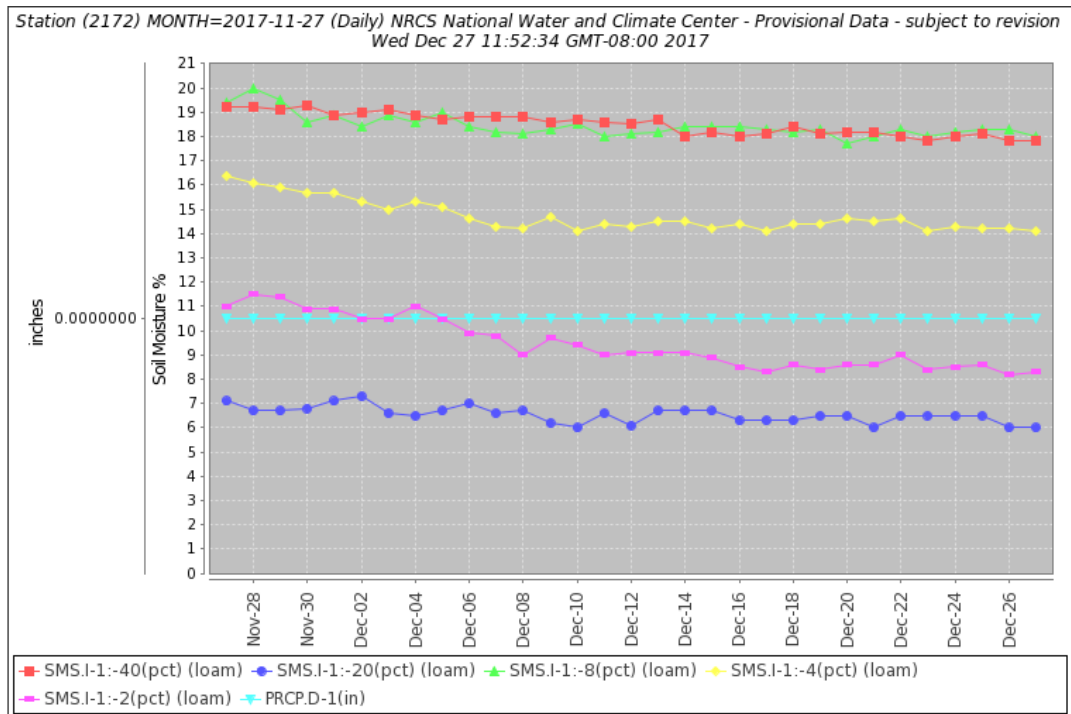
## Other Climatic and Water Supply Indicators

### Soil Moisture



[Modeled soil moisture percentiles](#) as of December 23, 2017.

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



The chart shows precipitation and soil moisture for the last month at the [Alcalde SCAN site 2172](#) in New Mexico. The past 30 days show very dry conditions and no reported precipitation. All the soil moisture sensors show a slow, steady decline.



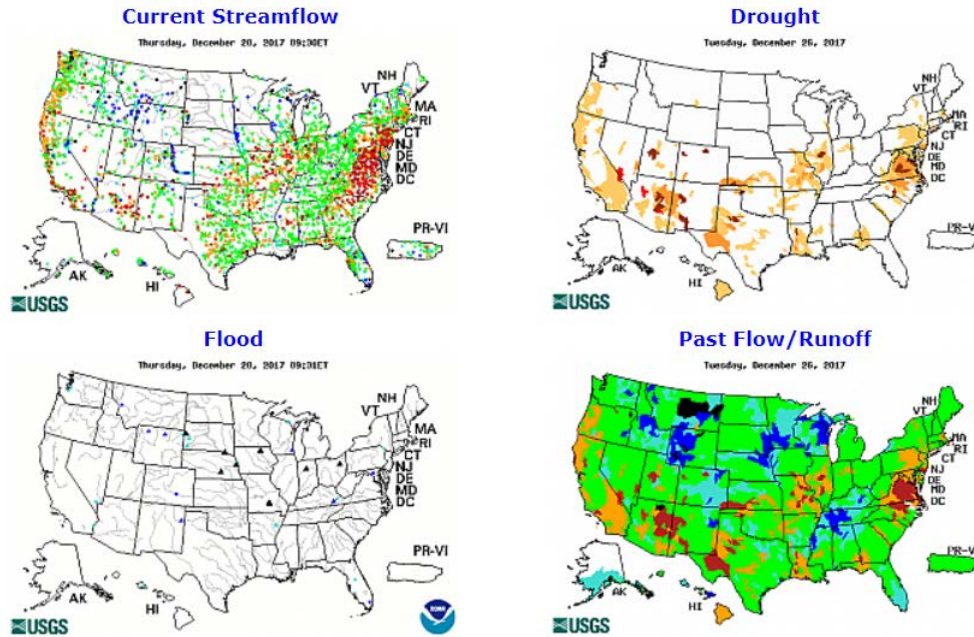
## Water and Climate Update

### 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

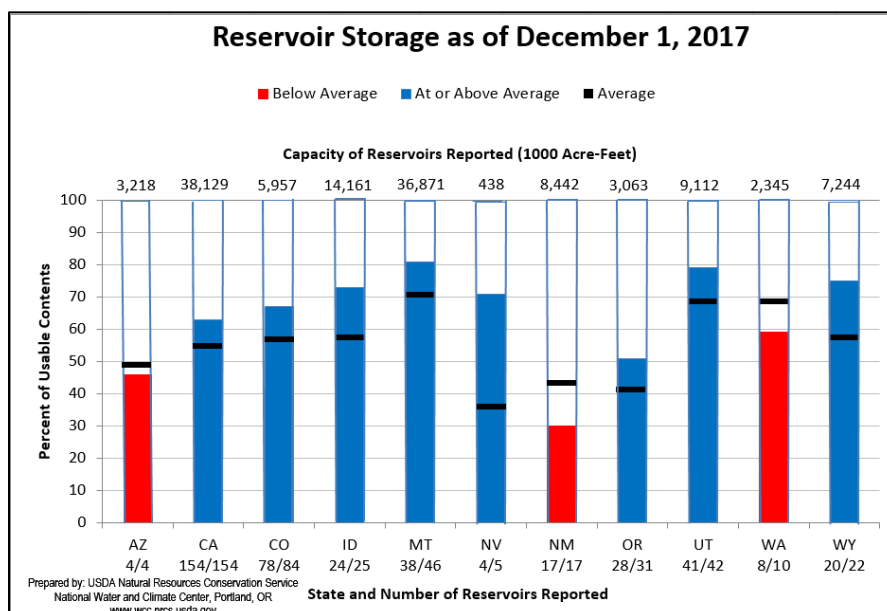


[WaterWatch: Streamflow, drought, flood, and runoff conditions](#)

### Reservoir Storage

#### Western States Reservoir Storage

Source: NRCS National Water and Climate Center



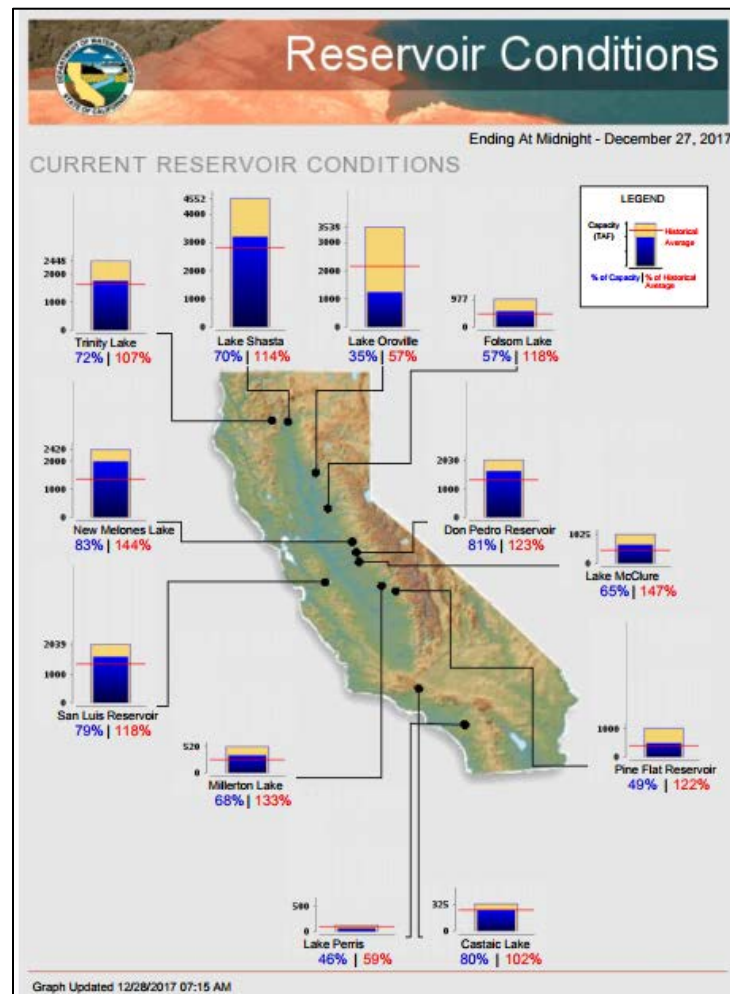
December 1 Reservoir Storage: [Chart](#) | [Dataset](#)

### 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

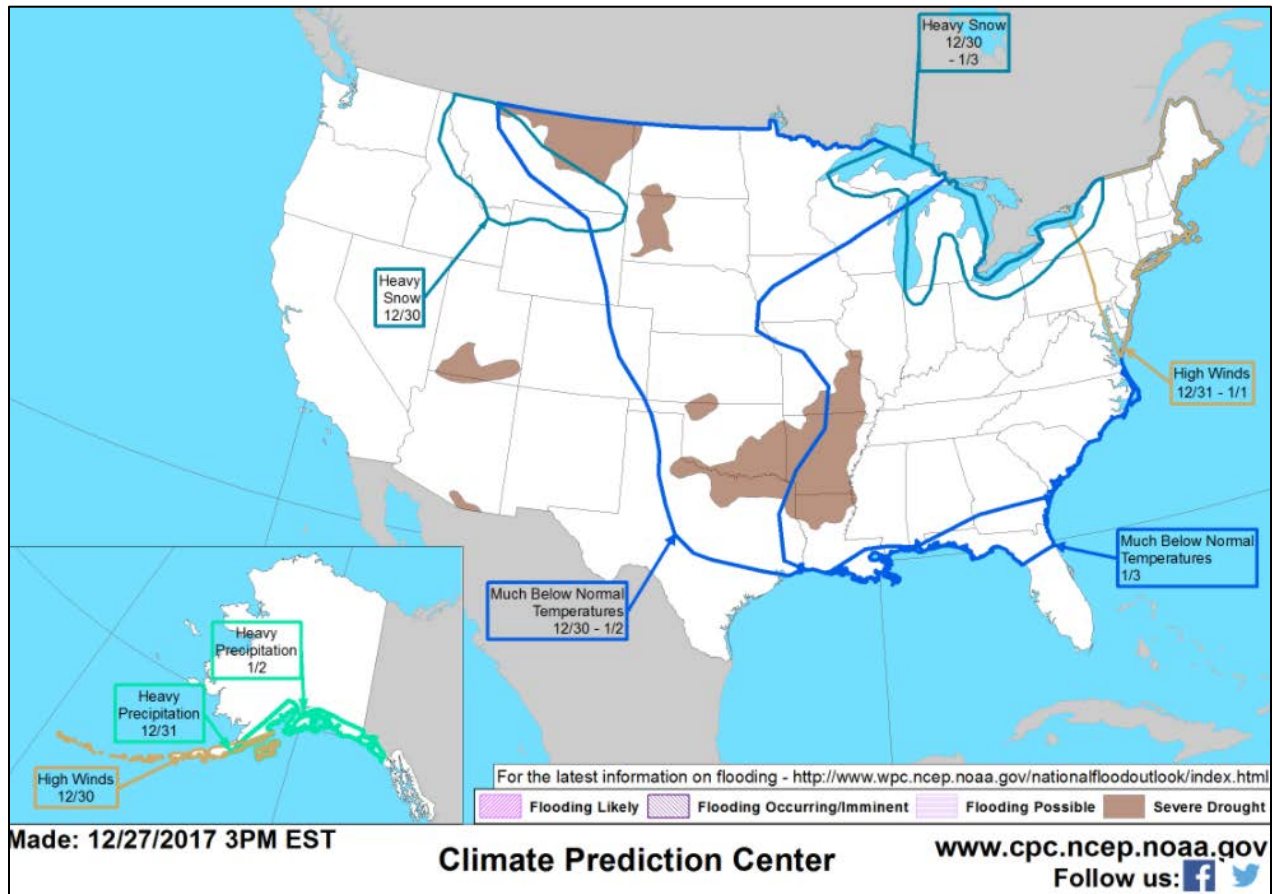
### Agricultural Weather Highlights

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

**National Outlook, Thursday, December 28:** “A holiday weekend blast of dangerously cold air will engulf the Plains, Midwest, and Northwest, as well as most other areas east of the Rockies. The frigid weather pattern across the central and eastern U.S. will persist into next week, with only southern Florida expected to be spared from sub-freezing temperatures. Weekend temperatures could plunge to -20 to -30°F in the north-central U.S., and may dip below 0°F as far south as Texas’ northern panhandle. Livestock, as well as winter wheat without a protective snow cover, could suffer adverse effects from the harsh cold wave. During the next 5 days, significant precipitation should be limited to the Deep South, the Northwest, and areas downwind of the Great Lakes. As the New Year begins, some of the Southern precipitation could include snow, sleet, and freezing rain. The NWS 6- to 10-day outlook for January 2 – 6, 2018, calls for the likelihood of below-normal temperatures east of the Rockies, while warmer-than-normal weather will be confined to California, Nevada, Utah, and Arizona. Meanwhile, near- to below-normal across most of the U.S. should contrast with wetter-than-normal weather along and near the Gulf Coast, including Florida’s peninsula.”

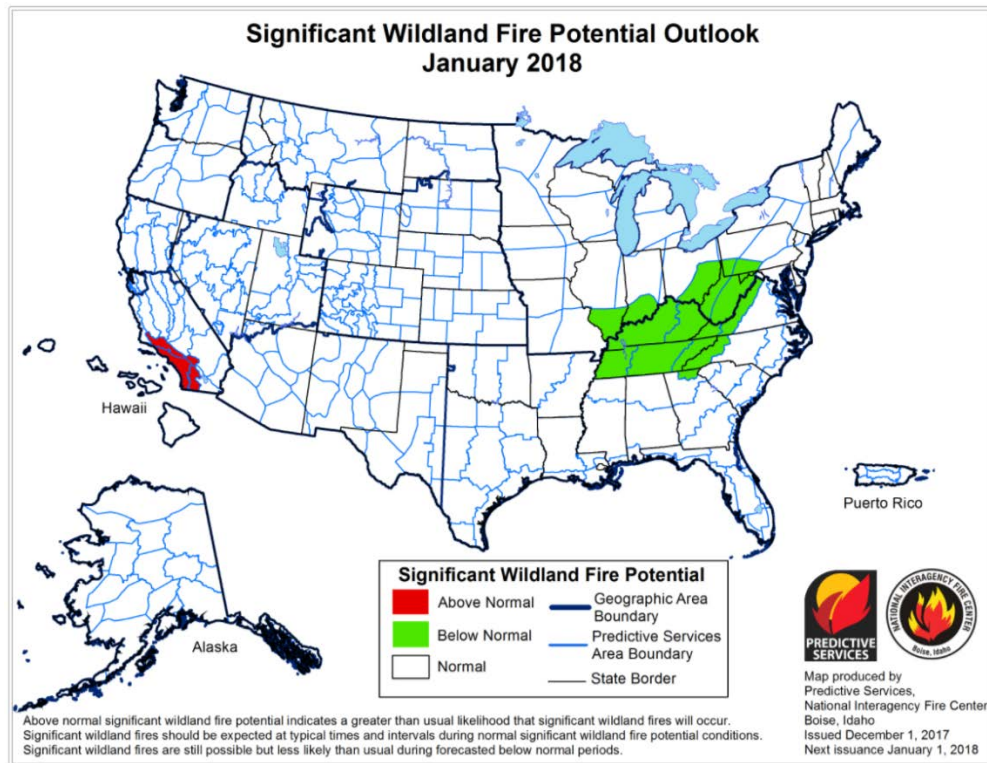
### Weather Hazard Outlook December 30, 2017 – January 3, 2018

Source: Climate Prediction Center

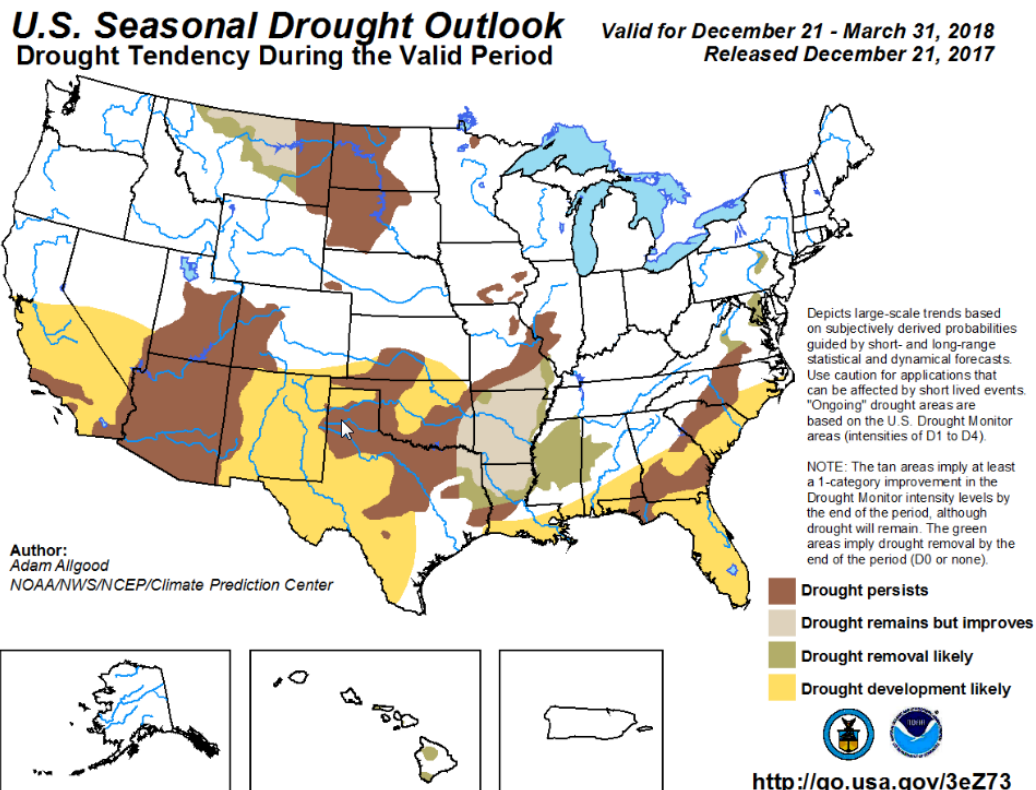


Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center



Seasonal Drought Outlook: [December 21, 2017 – March 31, 2018](#) Source: National Weather Service

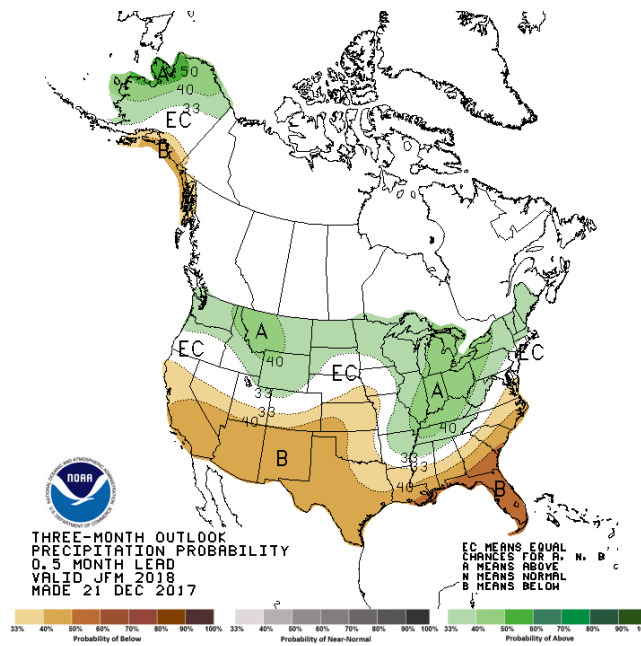




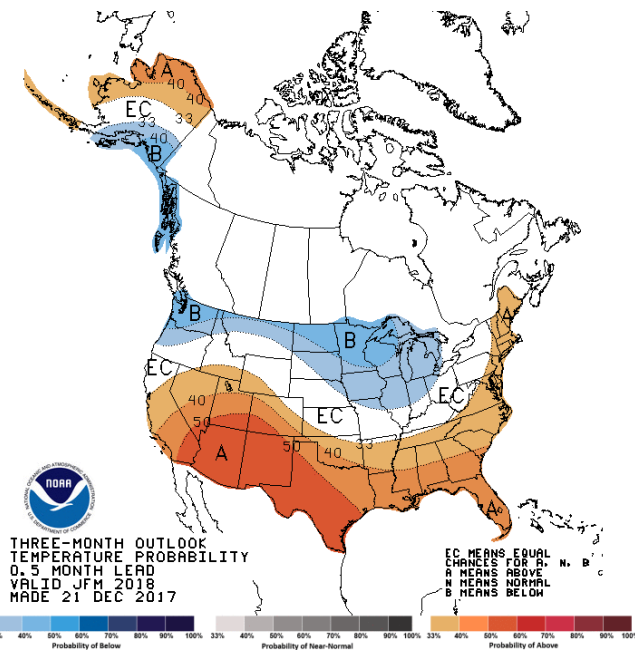
## Climate Prediction Center 3-Month Outlook

Source: National Weather Service

### Precipitation



### Temperature



### Jan-Feb-Mar (JFM) 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](#).