United States Department of Agriculture

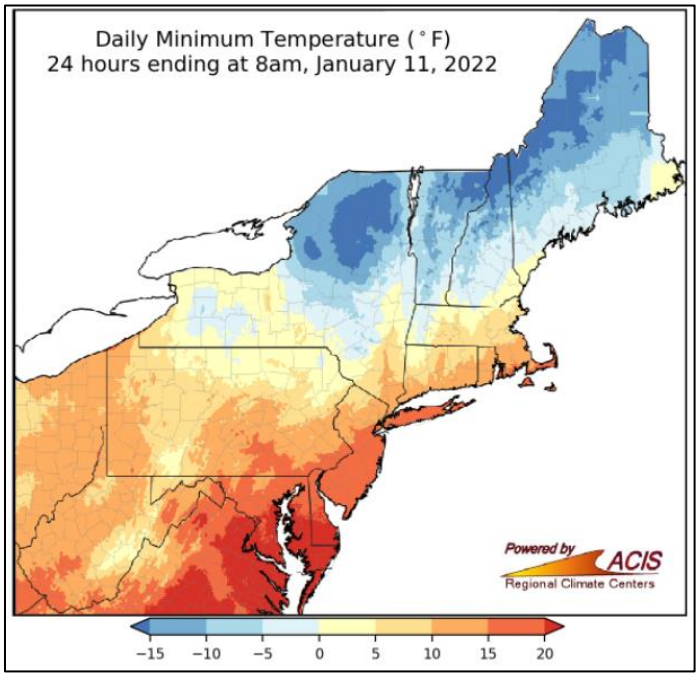
# Water and Climate Update

**January 13, 2022**

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.



## Bitterly cold temperatures impact the Northeast

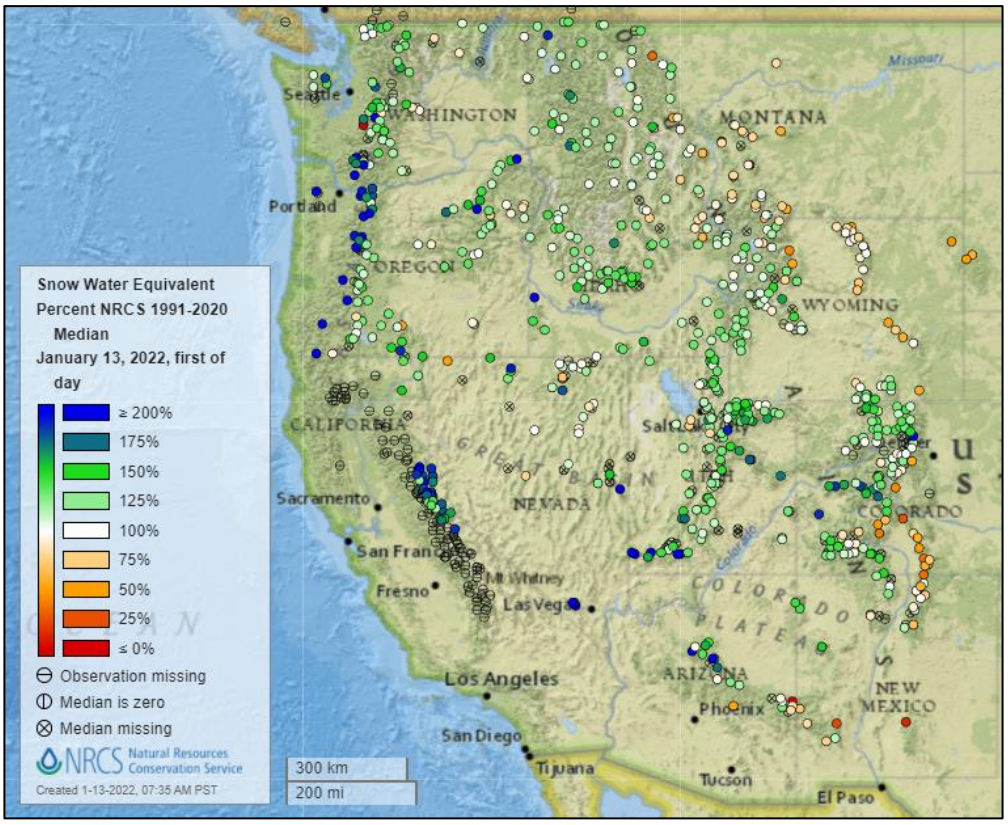



An Arctic blast brought bitter cold temperatures to the Northeast this week. Much of upstate New York and northern New England had the coldest air of the season, with low temperatures below 0°F across the region and wind chill warnings posted for dangerously cold temperatures. Strong winds brought wind chills to northern New York and New England as low as -35 to -45°F. The cold temperatures closed schools, froze water pipes, and resulted in emergency shelters opening throughout the region.

**Related:**

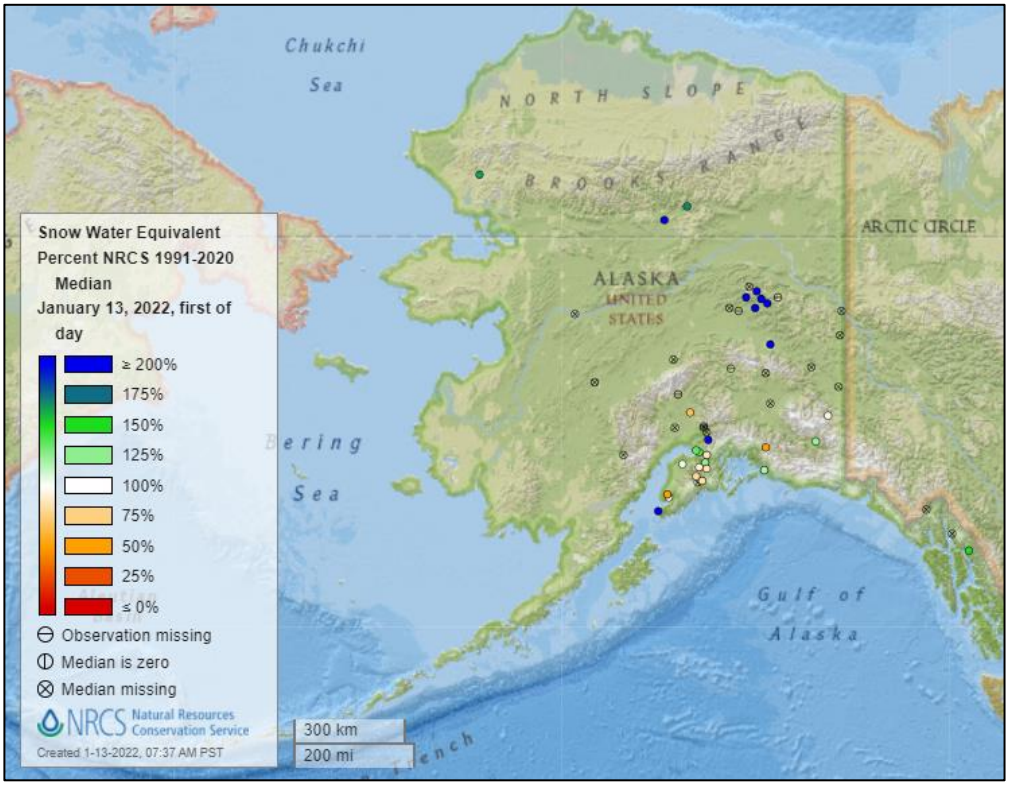
**Coldest air of the season hits Northeast, with wind chill well below zero** – ABC
**The coldest air mass in nearly 3 years settles over New York and Boston today** - CNN
**Brrr! Some schools close as extreme cold grips US Northeast** – Times Union
**Extreme Cold Threatens New York And These Other U.S. Cities** – Forbes
**Philadelphia Weather: Arctic Air, Bone-Chilling Winds To Yield Coldest Day In Last 3 Years** – CBS Local
**Arctic blast bringing coldest air of season to eastern U.S. through Tuesday** – Concord Monitor (NH)
**Arctic Cold, Gusts Bringing Dangerous Wind Chills To Eastern PA** – Patch

## Snow




[Snow water equivalent percent of median map]

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

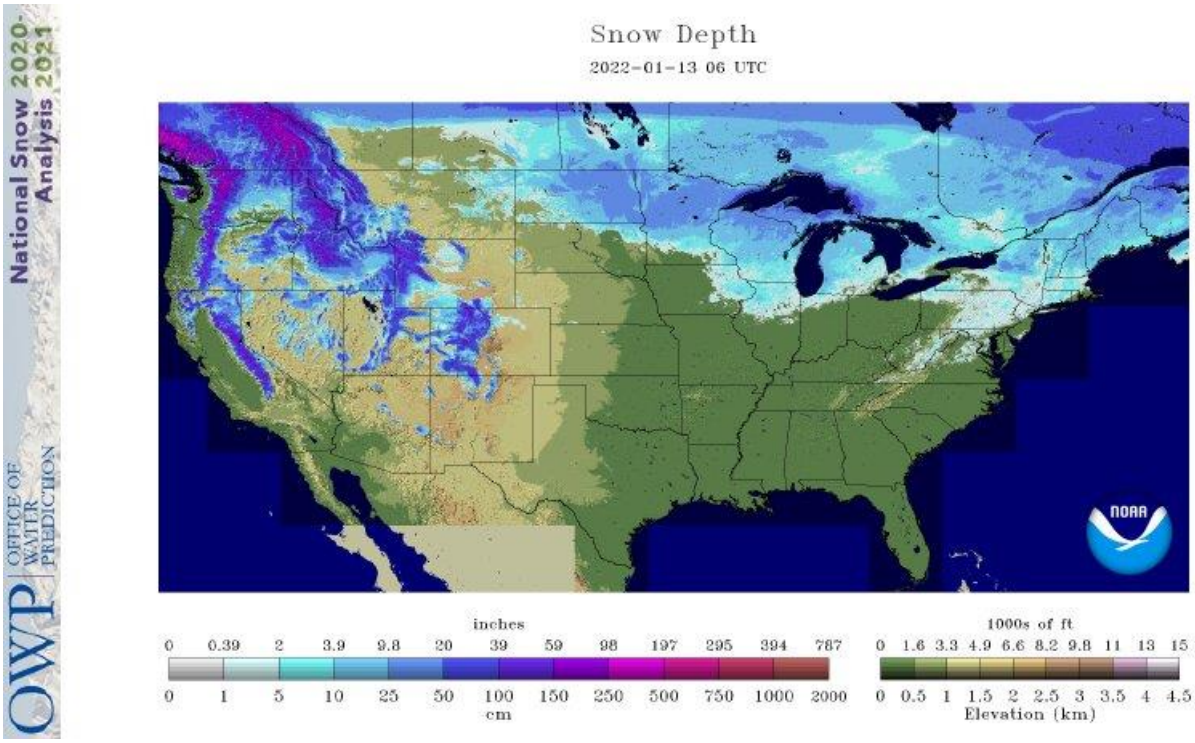



[Alaska snow water equivalent percent of median map]

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

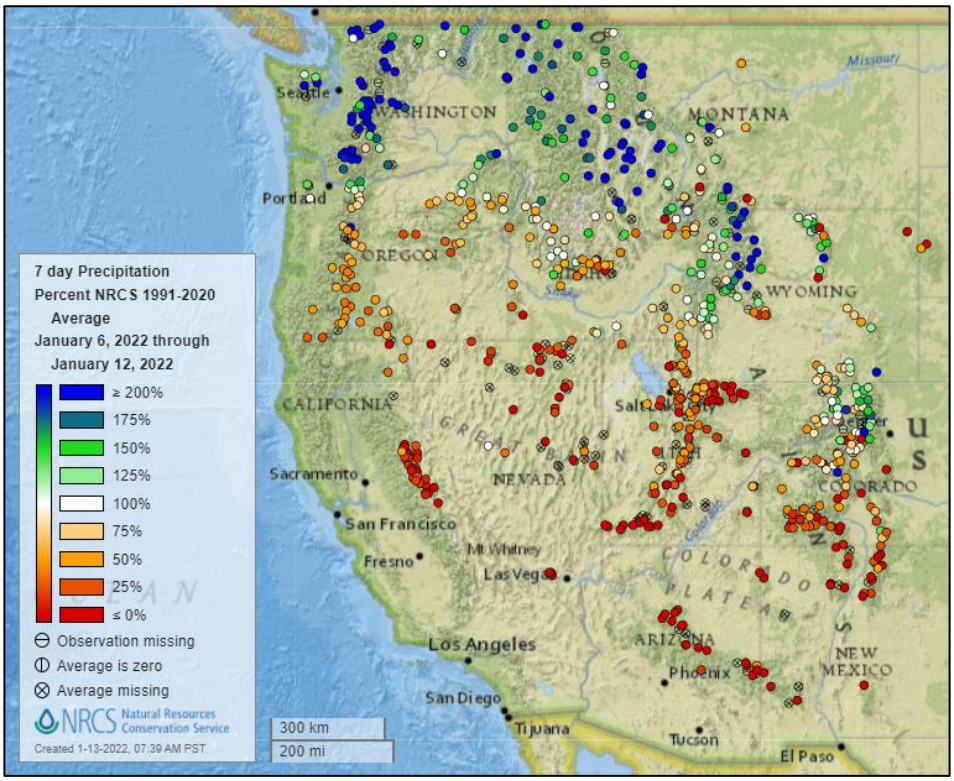
## Current Snow Depth, National Weather Service Snow Analysis

Source: NOAA Office of Water Prediction



# Precipitation

## Last 7 Days, NRCS SNOTEL Network

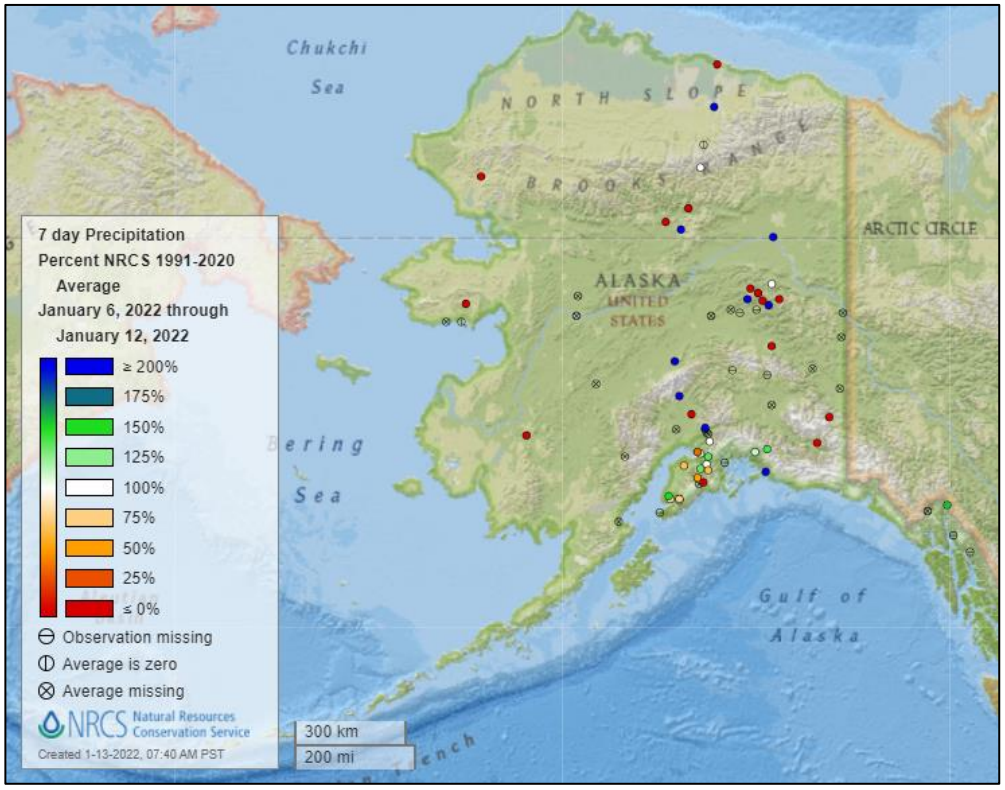



[7-day precipitation percent of average map]

***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]

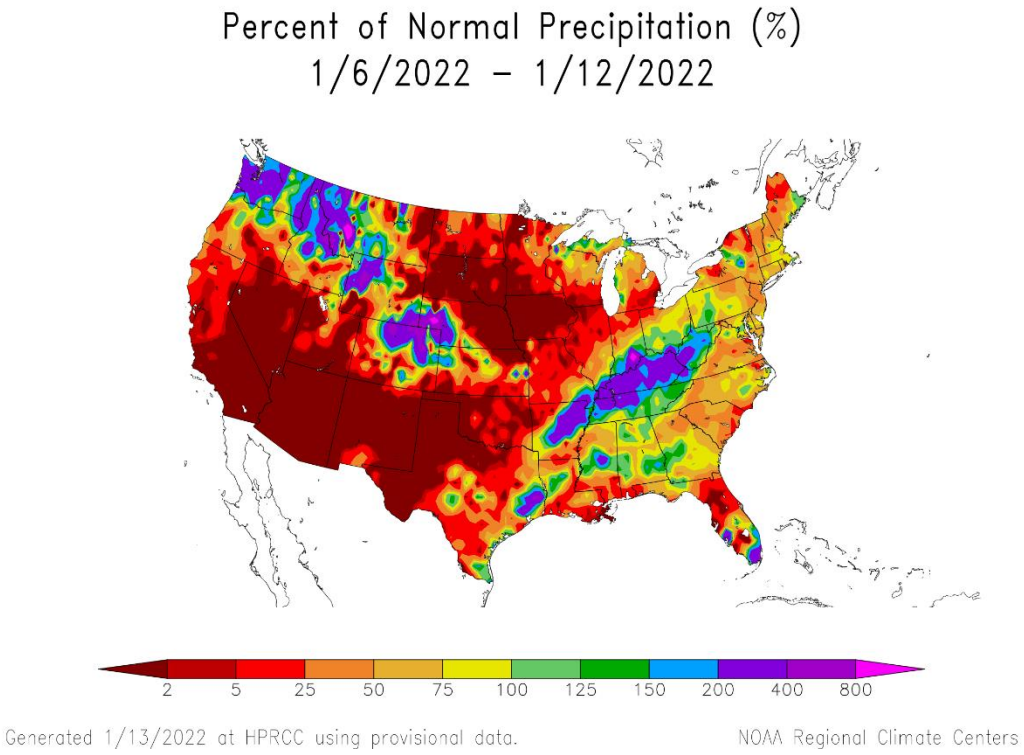


## Last 7 Days, National Weather Service (NWS) Networks

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]

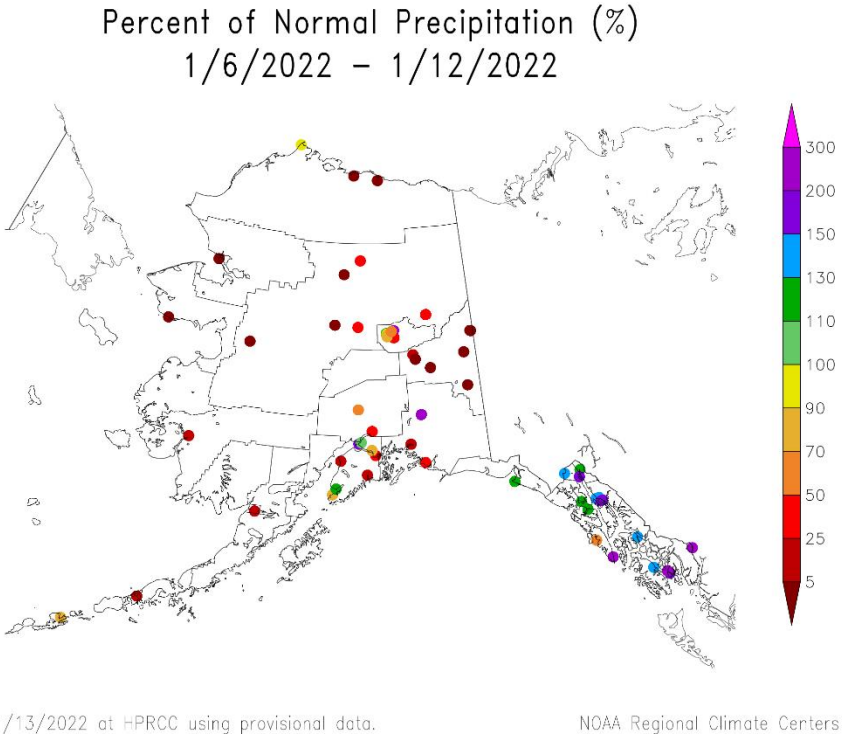



## Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

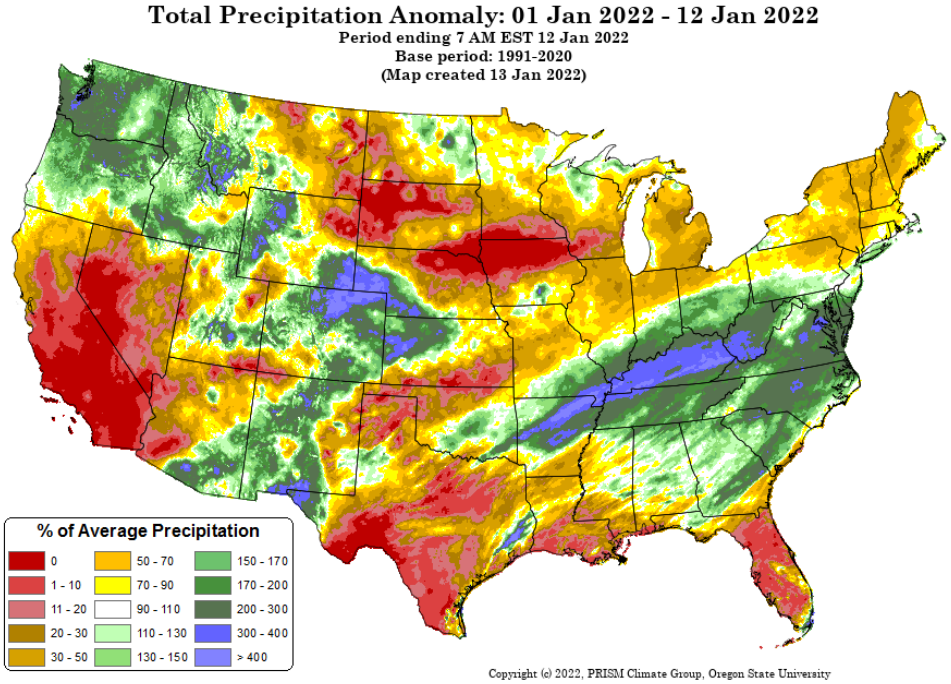
[7-day precipitation anomaly map] for Alaska.

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



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

Source: PRISM

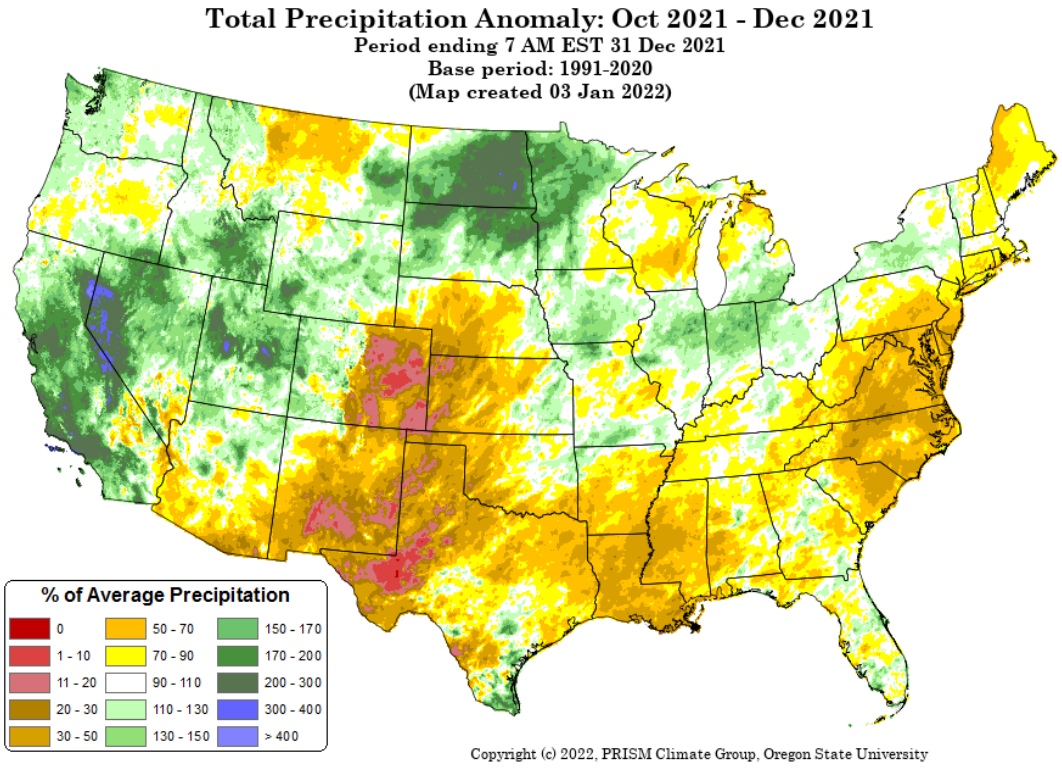



Month-to-date national total precipitation anomaly map

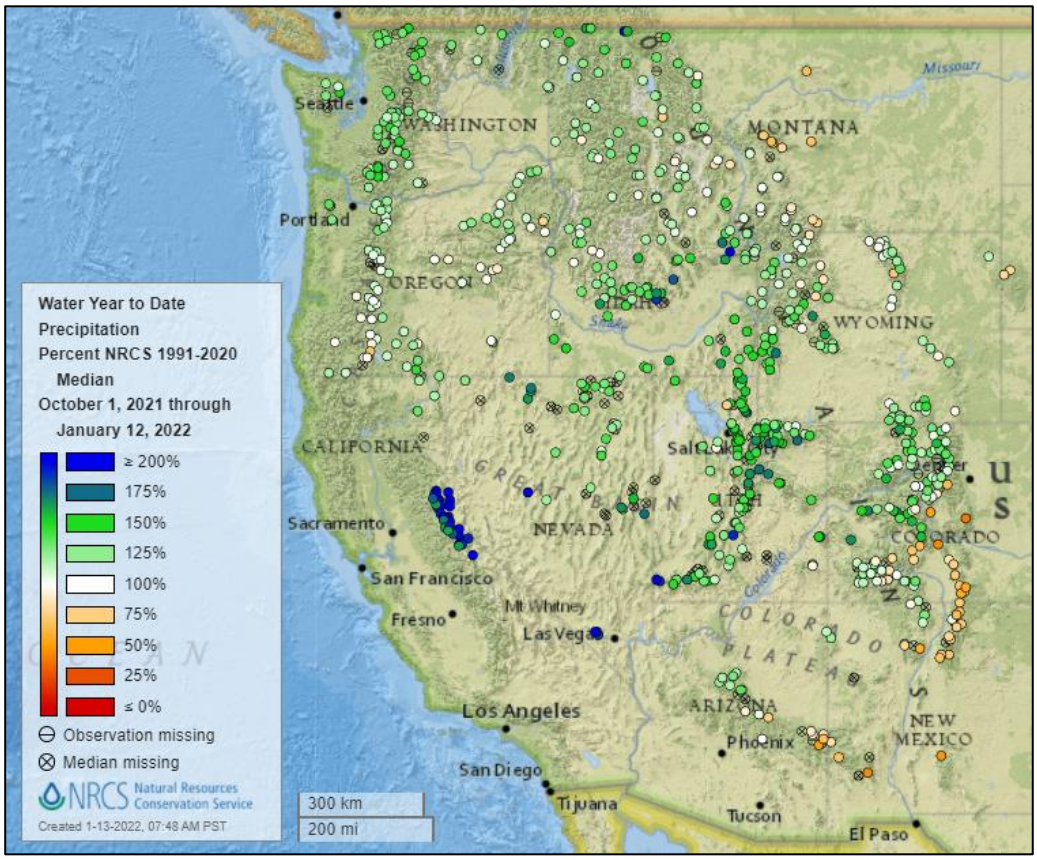
## Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

October through December 2021 precipitation anomaly map



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

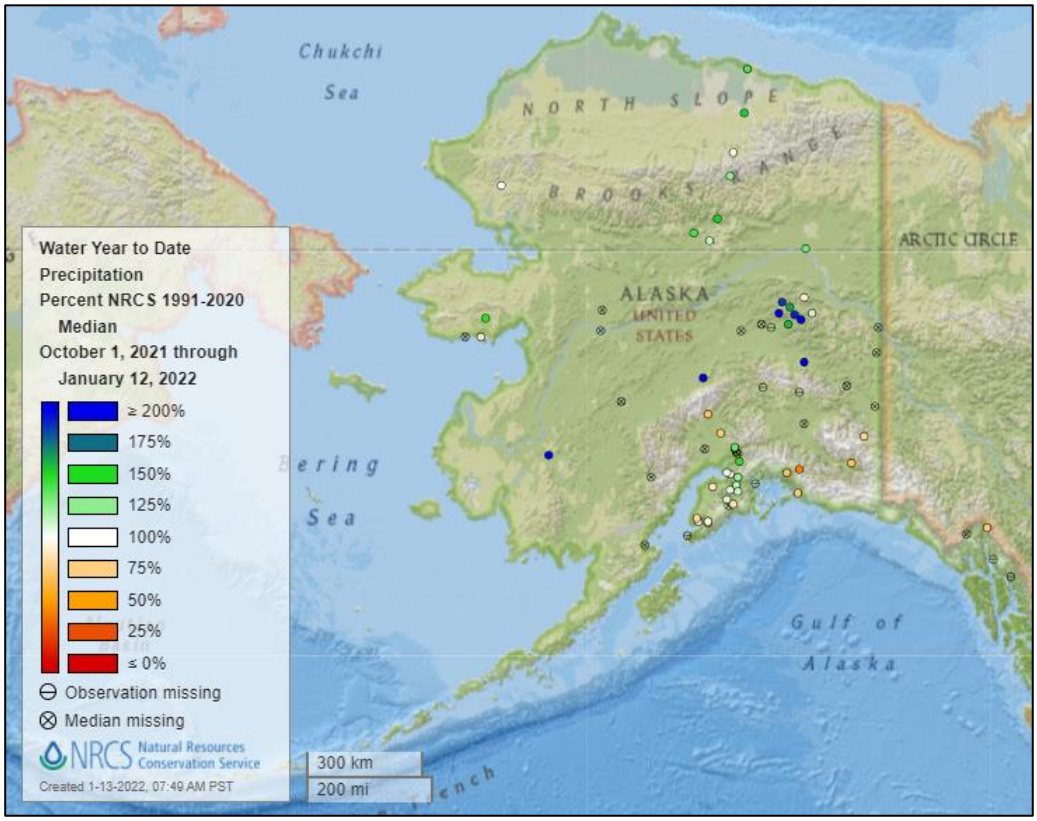



[2022 water year-to-date precipitation percent of median map]

***See also:***

[2022 water year-to-date precipitation percent of average map]

[2022 water year-to-date precipitation values (inches) map]




[Alaska 2022 water year-to-date precipitation percent of median map]

***See also:***

[Alaska 2022 water year-to-date precipitation percent of average map]

[Alaska 2022 water year-to-date precipitation values (inches) map]

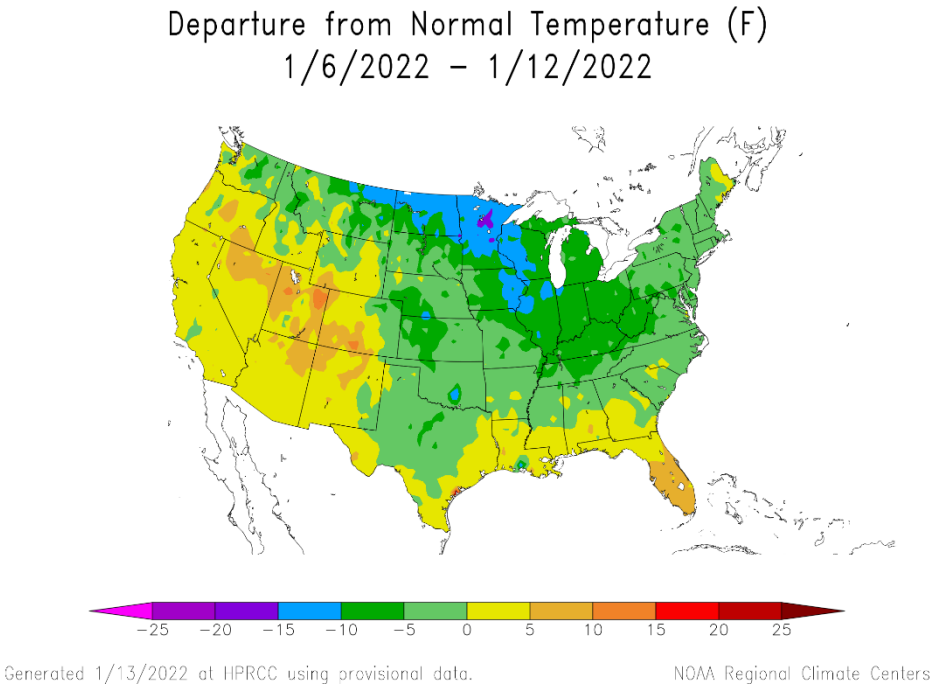
# Temperature

## 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]

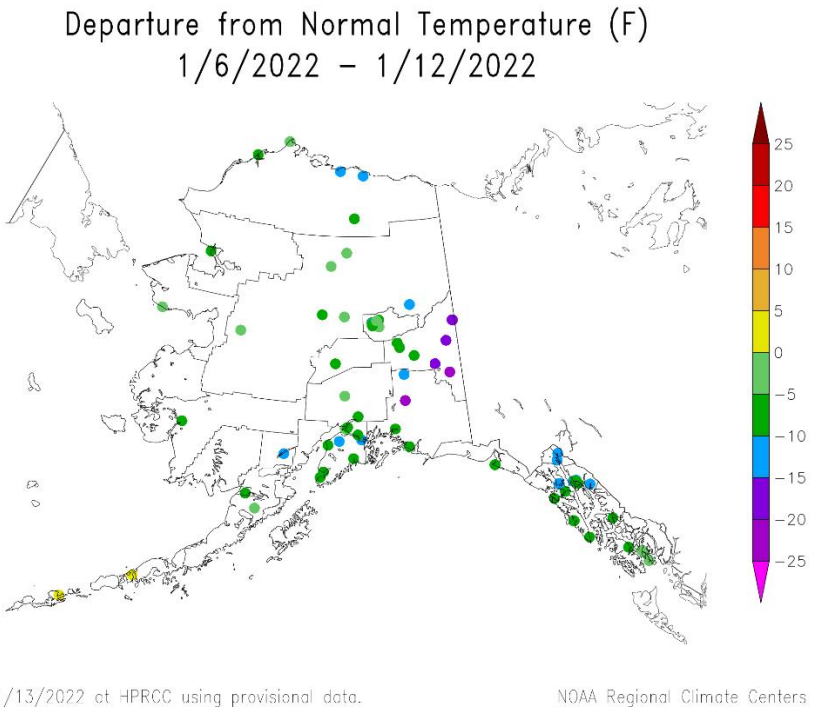



## Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map] for Alaska.

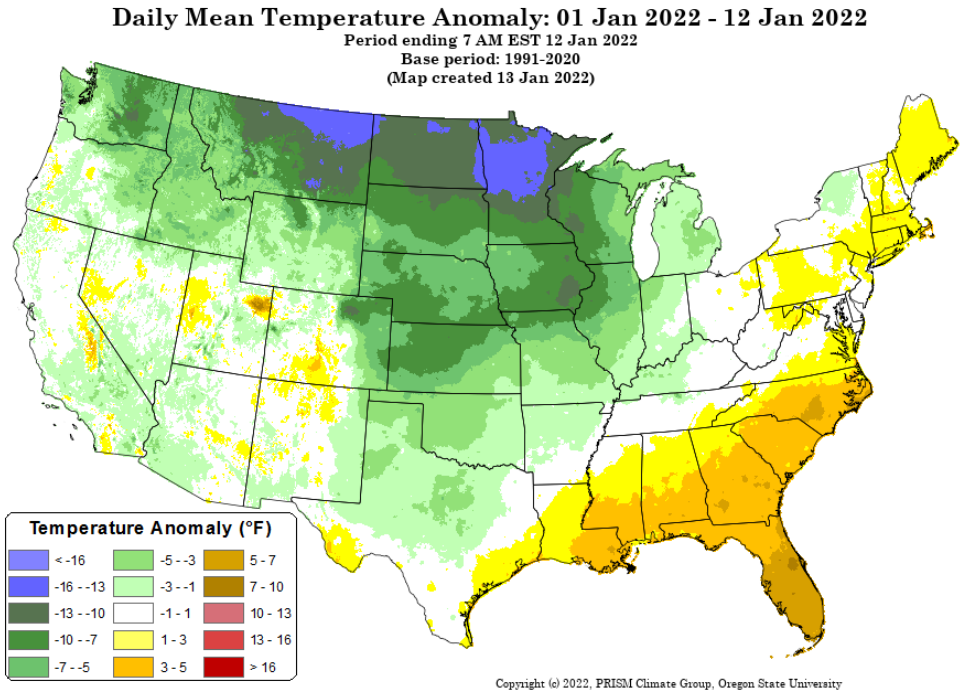
***See also:*** [7-day temperature (° F) map]



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

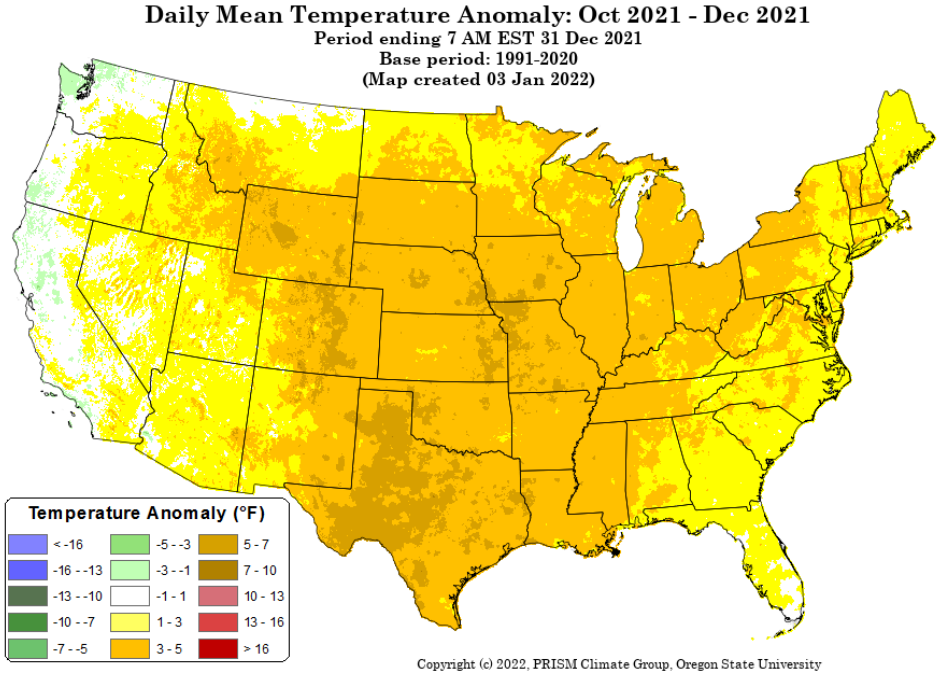
Source: PRISM

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




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

Source: PRISM

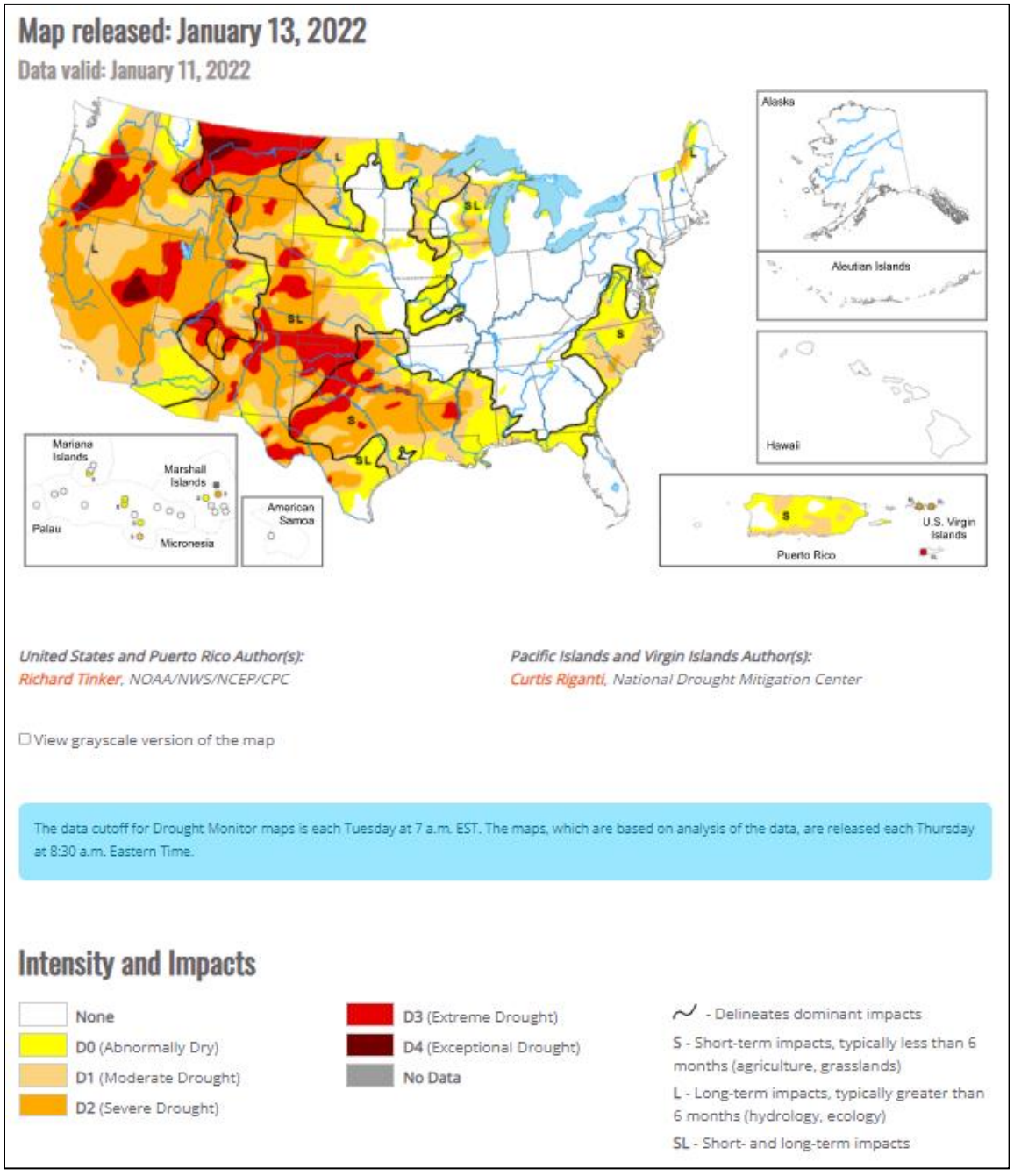



[October through December 2021 daily mean temperature anomaly map]

## Drought

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

**U.S. Drought Portal**
Source: NOAA



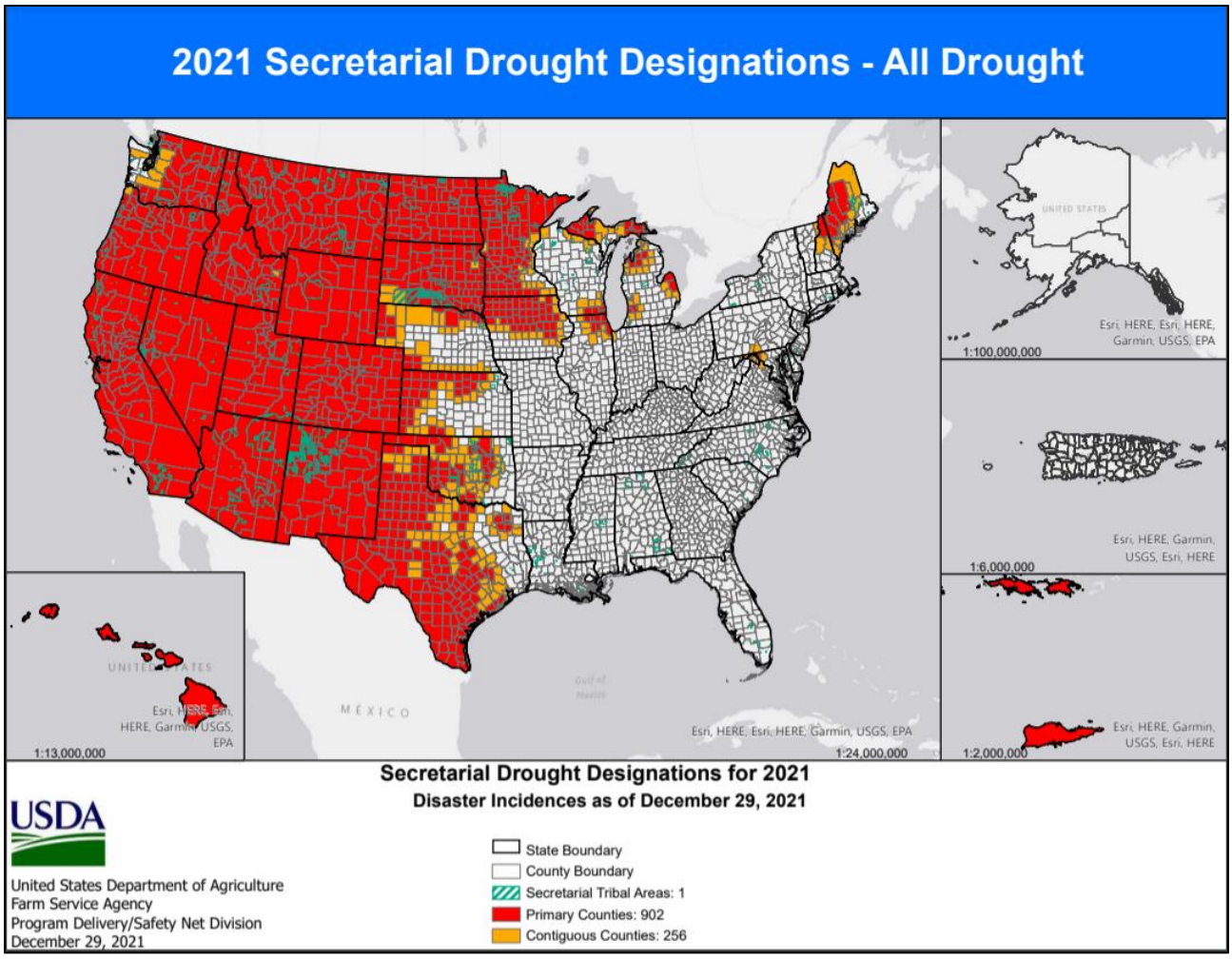
## Current National Drought Summary, January 13, 2022

Source: National Drought Mitigation Center

“Heavy precipitation pelted the northern half of the West Coast again this week. The largest amounts were reported in westernmost Washington and adjacent Oregon, where 6 to 10 inches of precipitation fell. Similar totals – though less widespread – were recorded across the northern half of the Cascades. Amounts decreased moving southward, with coastal areas and higher elevations from central Oregon to northwestern California receiving 2 to locally near 6 inches. Farther east, 2 to 3 inches were common across the Idaho Panhandle and the higher elevations farther south and east, including western Wyoming and north-central Colorado. Farther east, heavy precipitation also pelted the southern Ohio Valley and the lower Mississippi Valley. Generally 2 to 3 inches, with isolated higher amounts, fell on a swath south of the Ohio River, central and northeastern Arkansas, and part of easternmost Texas. Moderate precipitation – 0.5 to 2.0 inches – fell on parts of the Pacific Northwest, the northern Intermountain West, and the central and northern Rockies adjacent to areas with higher amounts. Similar totals also fell on parts of the Great Lakes Region, and in the East from the Ohio River to the Atlantic and Gulf of Mexico coasts. Light to locally moderate precipitation (0.25 to locally over 0.5 inch) dampened most of the Carolinas, Virginia, the interior Northeast, and portions of the central and northern Great Plains. Elsewhere, little if any precipitation fell, including an area from Oklahoma and Texas westward across much of Nevada and southern California. Looking at the 48-states as a whole, there was considerably more improvement than deterioration, as most areas that were dry this week didn’t seem to deteriorate much, if at all.”

## USDA Secretarial Drought Designations

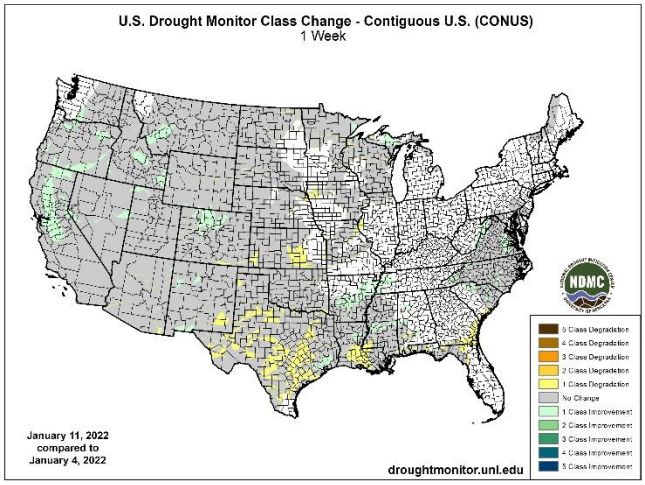
Source: USDA Farm Service Agency



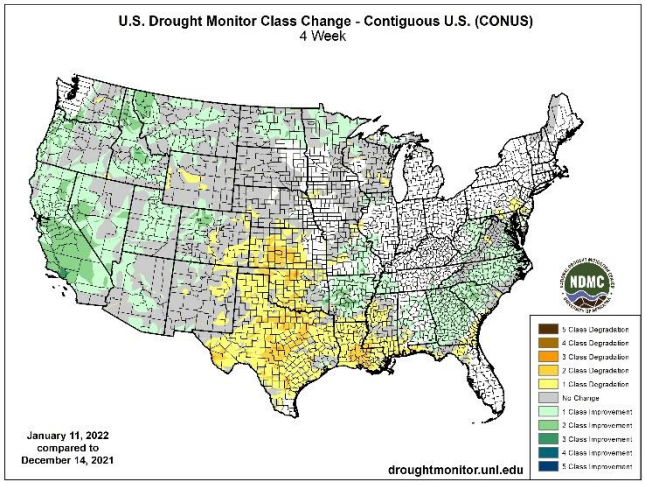
## Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

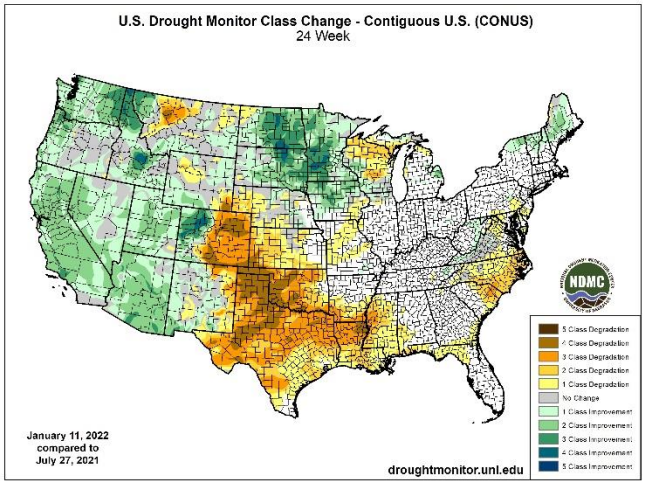
### 1 Week



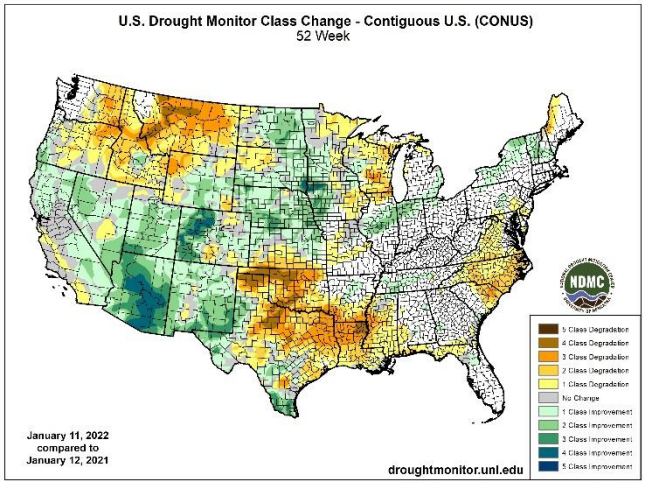

### 1 Month




### 6 Months




### 1 Year




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

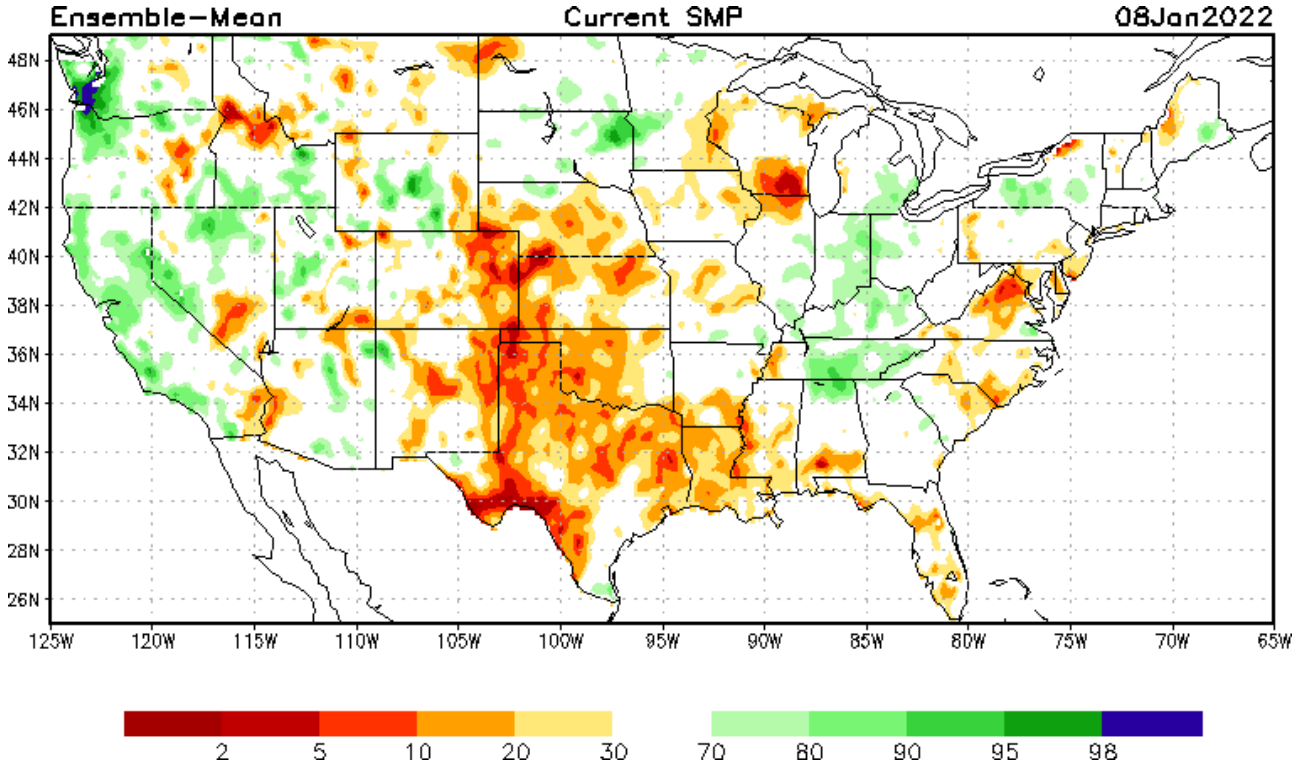
## Highlighted Drought Resources

- 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

# Other Climatic and Water Supply Indicators

## Soil Moisture

Source: NOAA National Centers for Environmental Prediction

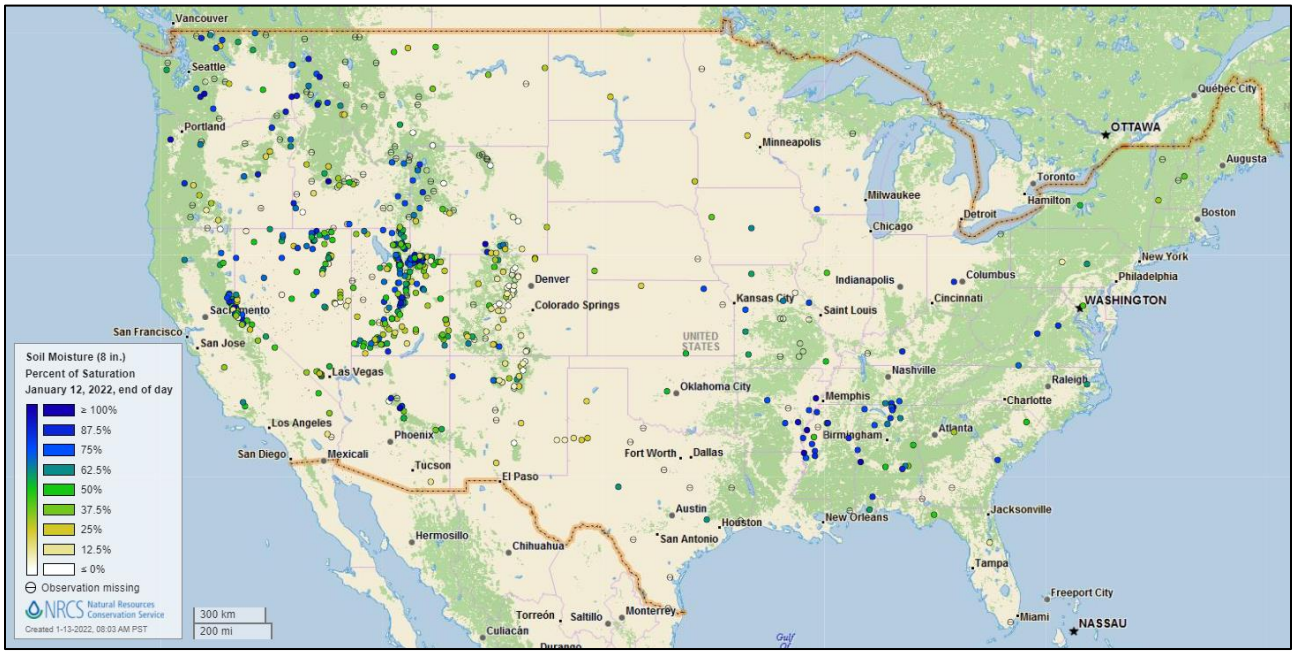



Modeled soil moisture percentiles as of January 8, 2022

## Soil Moisture Percent of Saturation

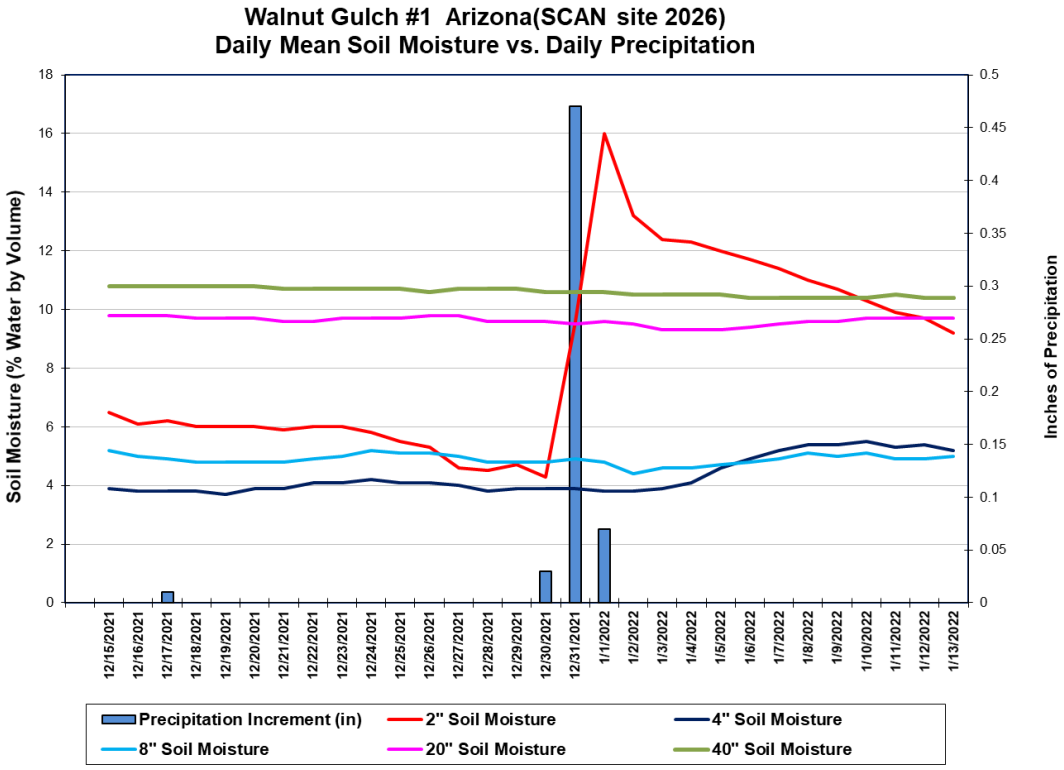
Source: NRCS SNOTEL and Soil Climate Analysis Network (SCAN)

U.S. soil moisture map at 8 inch depth:



## Soil Moisture

Source: NRCS Soil Climate Analysis Network (SCAN)



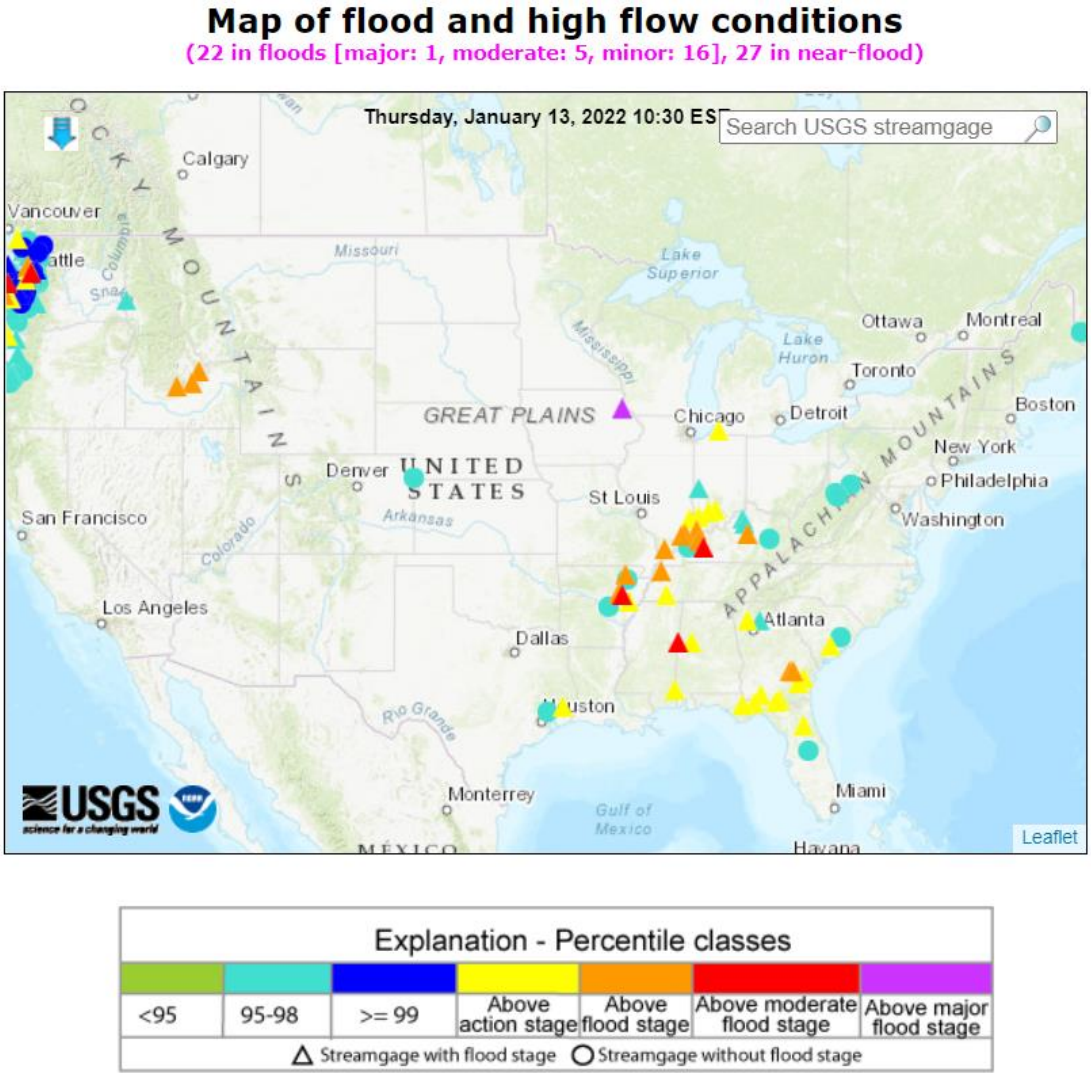

This chart shows the precipitation and soil moisture for the last 30 days at the Walnut Gulch #1 SCAN site in Arizona. The 0.57 inch precipitation event from December 30 to January 1 caused the -2-inch sensor to report a large increase in soil moisture. The -4 and -8-inch sensors reported an increase in soil moisture several days after the event. The deeper sensors had little-to-no change over the period. Total precipitation for the last 30 days was 0.58 inches.

## Soil Moisture Data Portals

- USCRN Soil Moisture
- National Soil Moisture Network
- NOAA Climate Prediction Center Soil Moisture
- NASA Grace

## Streamflow, Drought, Flood, and Runoff

Source: U.S. Geological Survey [WaterWatch Streamflow Map]




[WaterWatch: Streamflow, drought, flood, and runoff conditions]

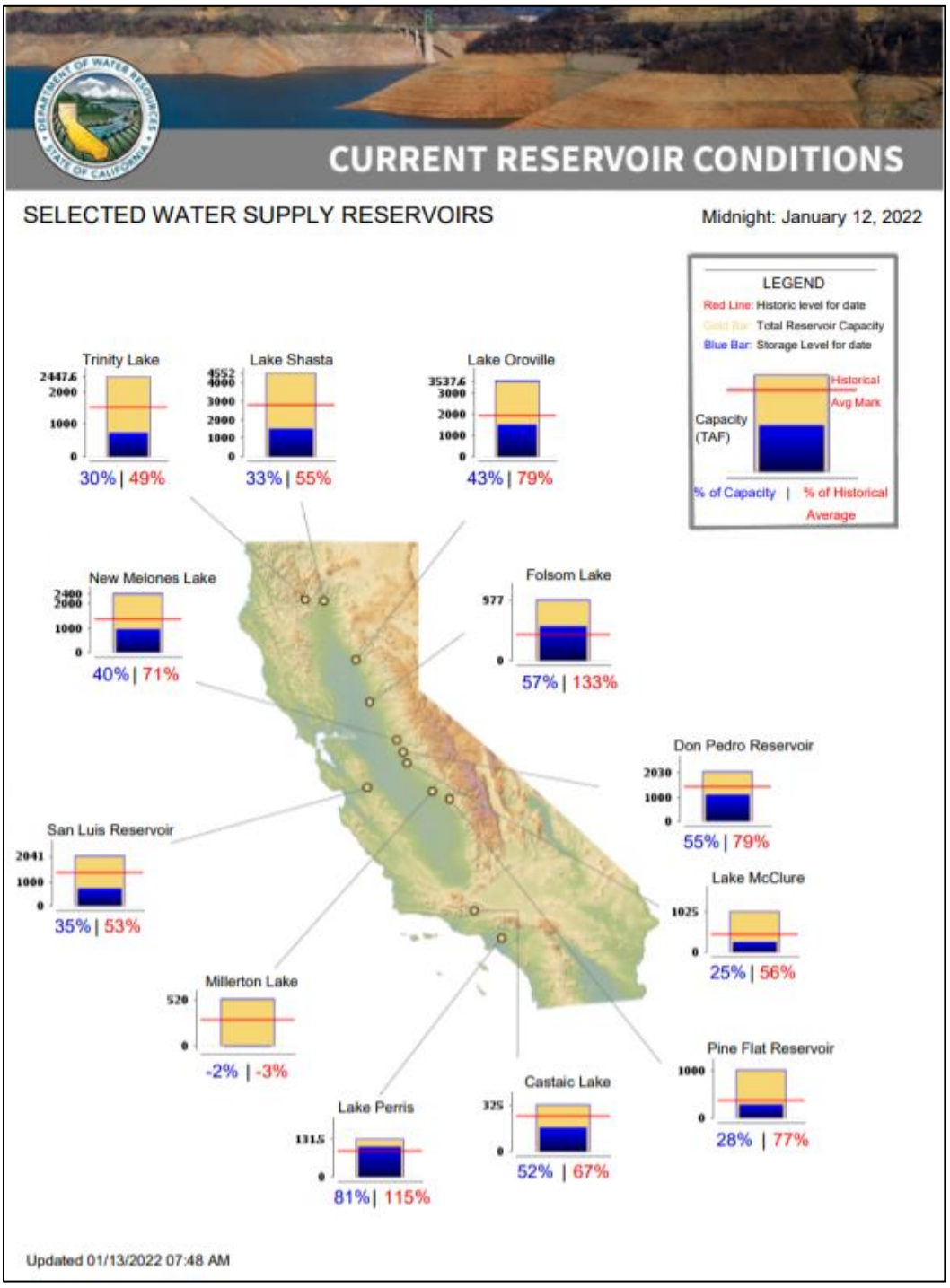
## Reservoir Storage

### 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]

**Current California Reservoir Conditions**
Source: California Department of Water Resources




Current California Reservoir Conditions

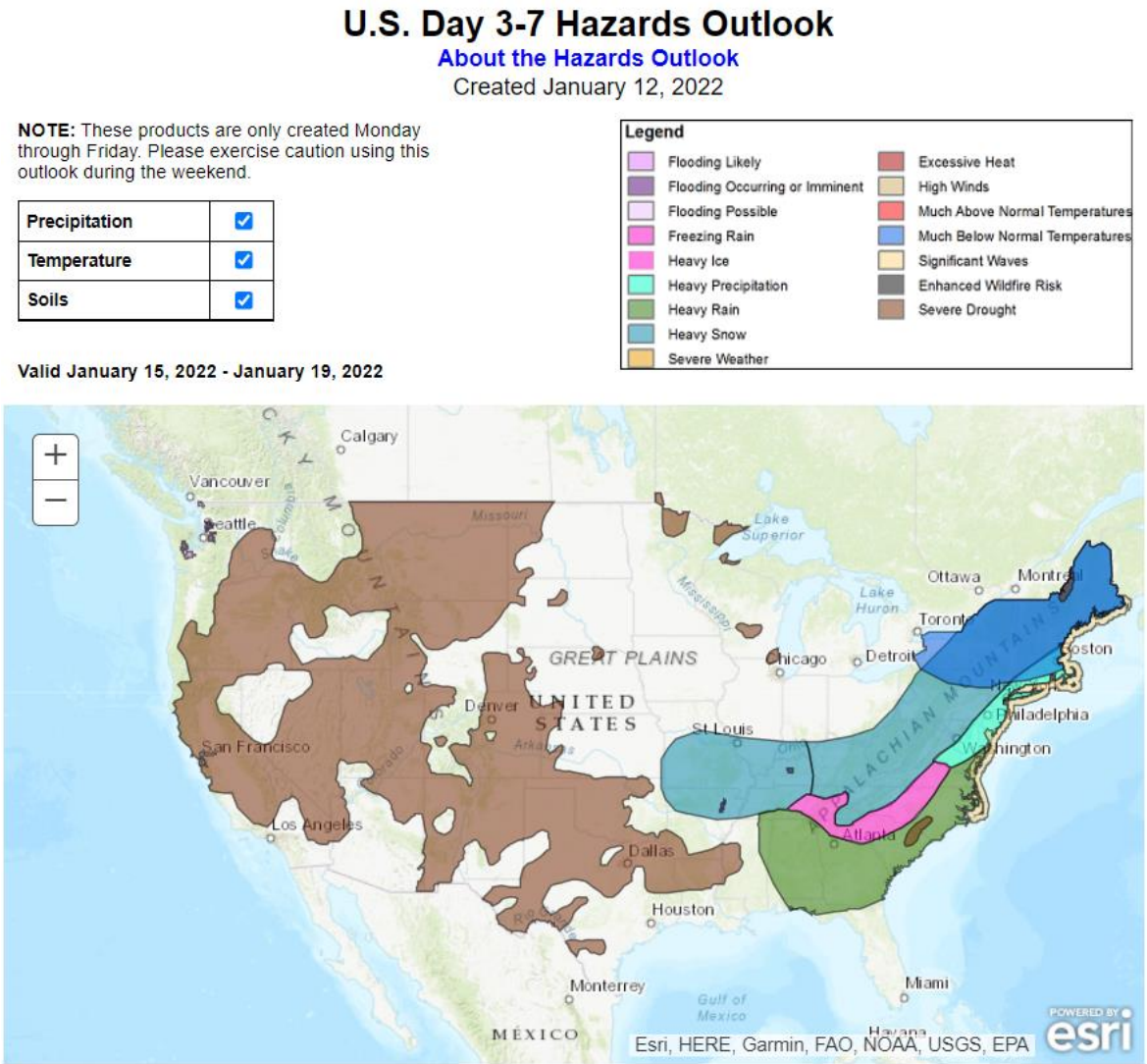
## Agricultural Weather Highlights

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

**National Outlook, Thursday, January 13, 2022:** **“**As a Pacific storm system moves inland, weather conditions will deteriorate across portions of the northern Plains and upper Midwest. By late tonight and early Friday, wind-driven snow will engulf an area stretching from North Dakota into Iowa, with 5- to 10-inch totals possible. Late Friday into Saturday, snow will shift into the mid-South, including the Ozark Plateau. During the weekend, the storm system will cross the Mississippi Delta before turning northeastward toward the middle and northern Atlantic States. Although the storm will move quickly, substantial weekend accumulations should occur in the Appalachians; closer to the Atlantic Seaboard, snow may mix with or change to other precipitation types, including rain, freezing rain, and sleet. Farther west, little or no precipitation will fall during the next 5 days from California to the High Plains. The NWS 6- to 10-day outlook for January 18 – 22 calls for the likelihood of above-normal temperatures across much of the southern and western U.S., while cooler-than-normal conditions will cover areas from the upper Midwest into the middle and northern Atlantic States. Meanwhile, drier-than-normal weather across much of the Pacific Coast States, Great Basin, Four Corners region, central and southern Plains, and Ohio Valley should contrast with wetter-than-normal weather in New England, the northern Plains and upper Midwest, and from southern Texas to the southern Atlantic Coast.”

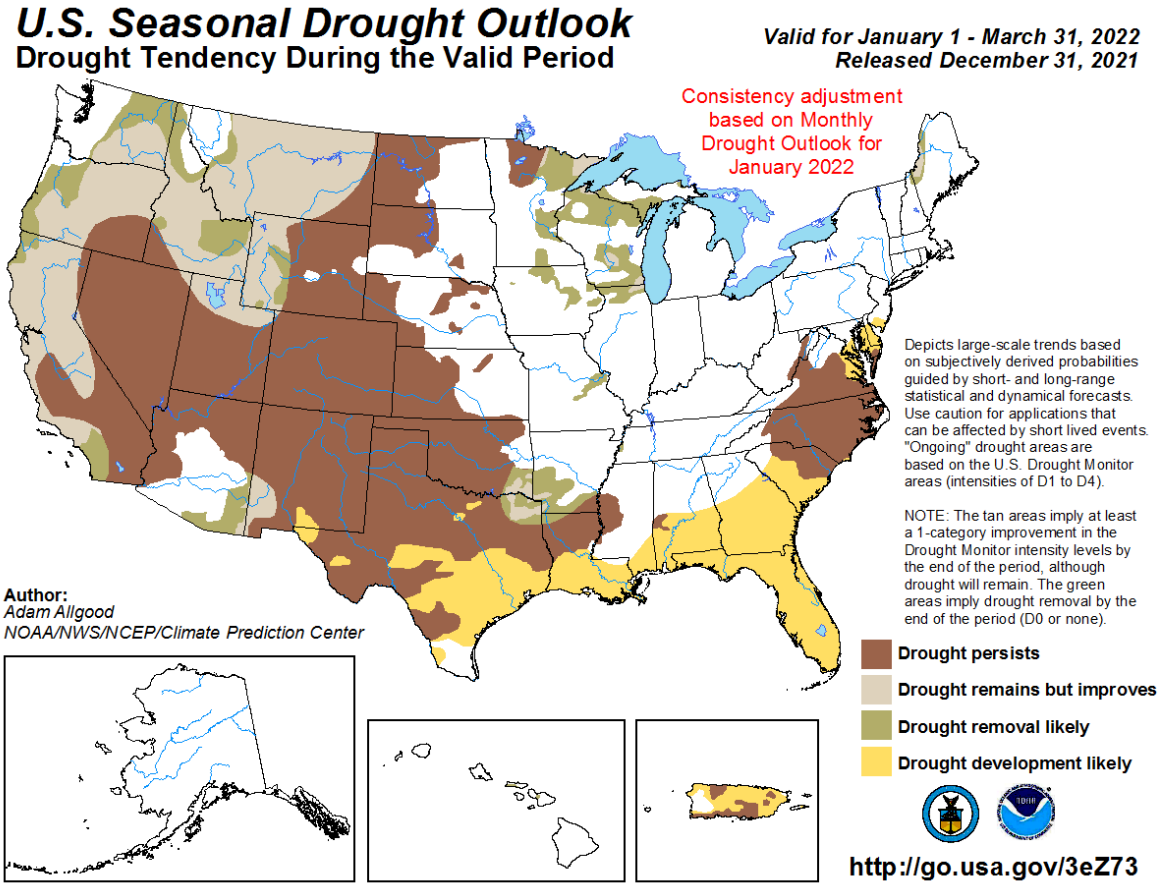
## Weather Hazards Outlook: January 15 – 19, 2022

Source: NOAA Weather Prediction Center



## Seasonal Drought Outlook: January 01 – March 31, 2022

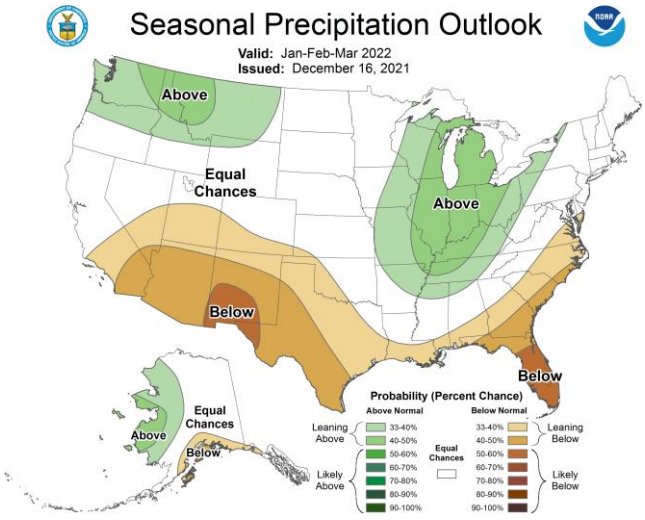
Source: National Weather Service



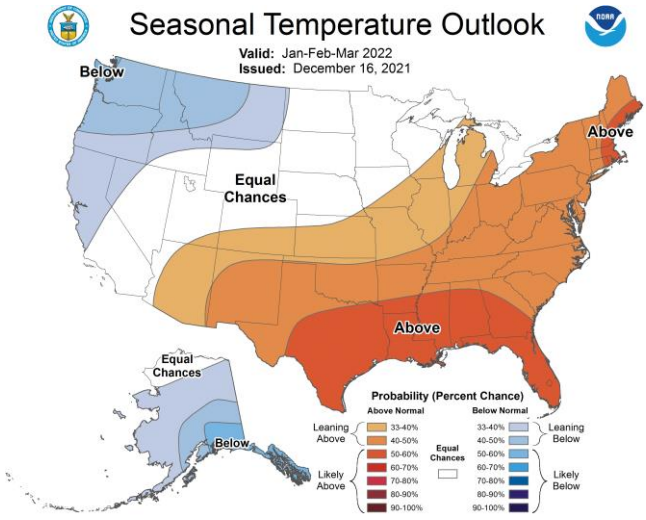

## Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation




Temperature




January-February-March 2022 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.