United States Department of Agriculture

Water and Climate Update

January 14, 2021

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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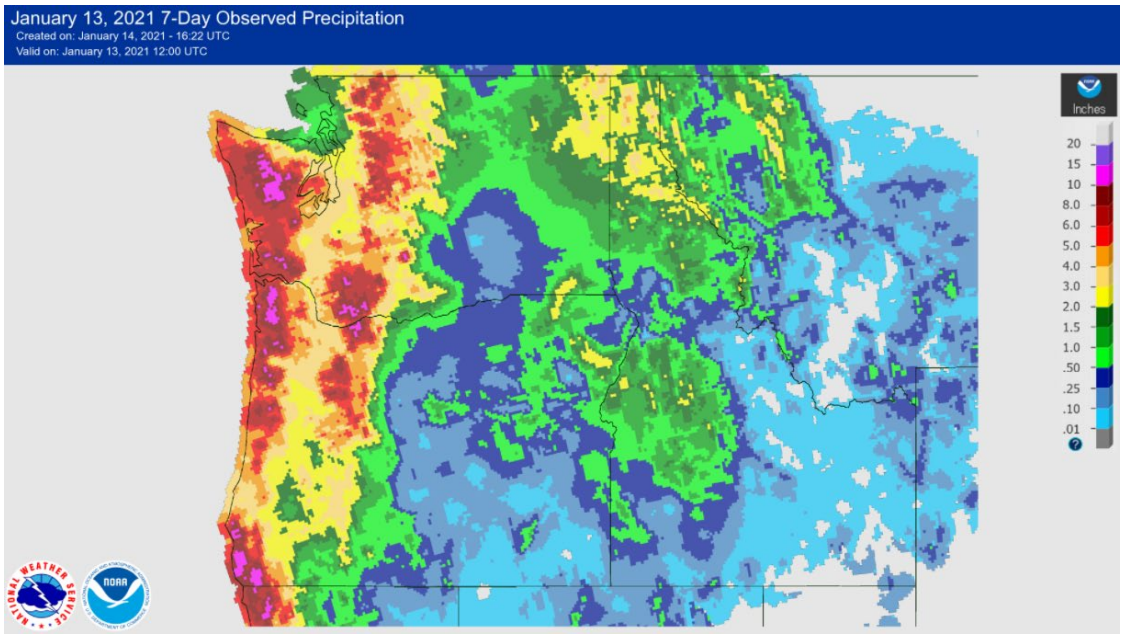
Powerful atmospheric river slams the Pacific Northwest

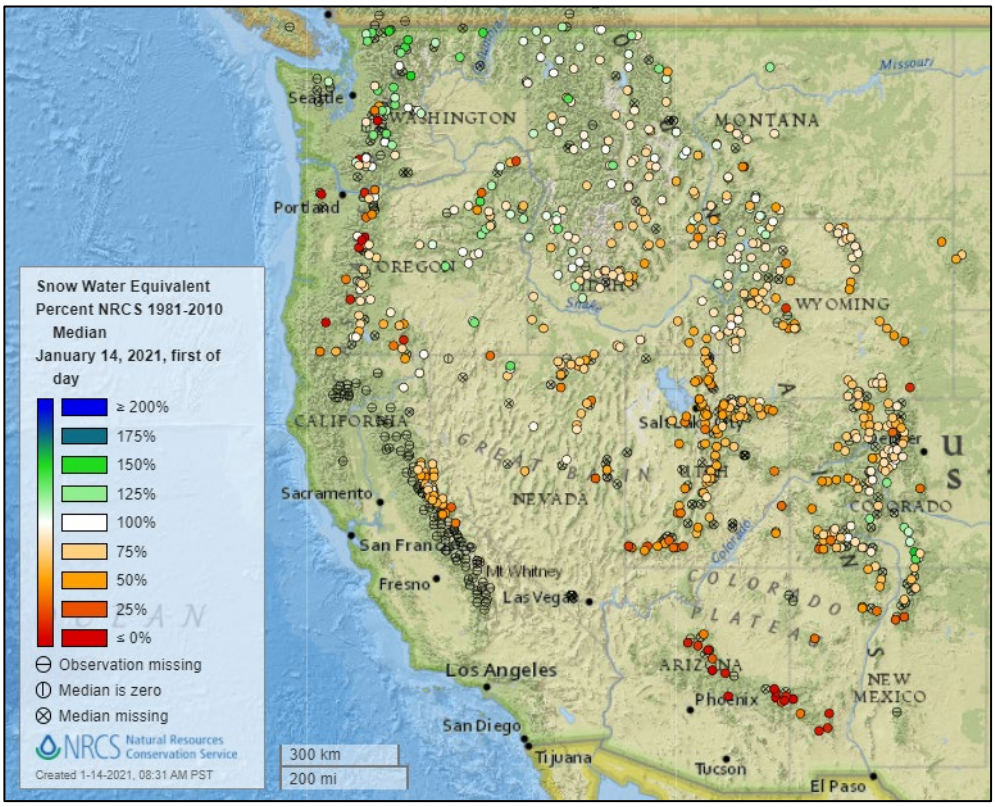


A powerful atmospheric river aimed at the Pacific Northwest this week brought high winds and torrential rain. Rainfall totals at NRCS SNOTEL sites topped nine inches at several stations in the western Cascade Mountains of Oregon and Washington. Flood warnings are in effect for much of the region. Wind gusts topped 60 mph. Saturated soil and high winds caused many downed trees, leaving hundreds of thousands of homes and businesses without power in the region.

Related:

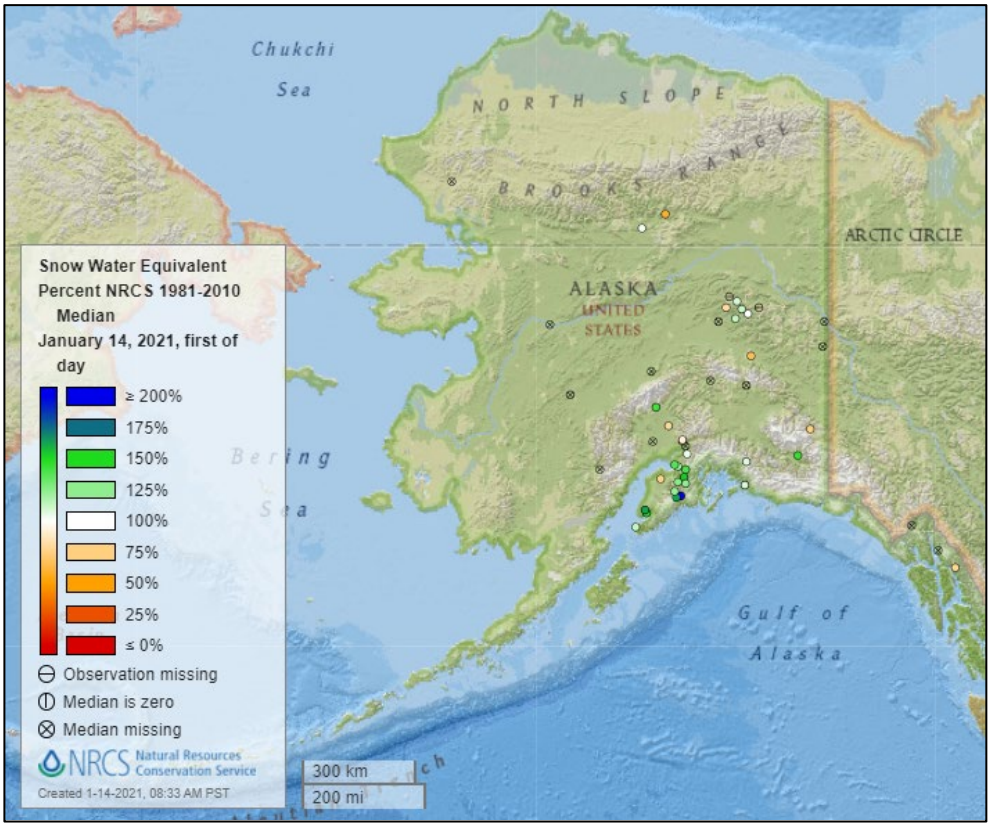
Wind storm hits Pacific Northwest with 50-70 mph gusts, leaves 500,000 without power – USA Today
Storms cut power for hundreds of thousands in Washington and Oregon – CNN on MSN.com
Wild weather with 70 mph winds whips Seattle and Western Washington, with road closures and power outages – Seattle Times (WA)
Pacific Northwest storm causes wind damage, landslide, power outages – OPB (OR)
Thousands without power as heavy rain slams western Oregon, SW Washington – KGW8 (OR)
Northwest Storm Kills 1, Causes Landslide and Power Outages – U.S. News & World Report
Northwest storm causes wind damage, landslide, power outages – Associated Press
Atmospheric river wallops Pacific Northwest with flooding, landslides and power outages – The Washington Post on MSN.com

Snow



[Snow water equivalent percent of median map]

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

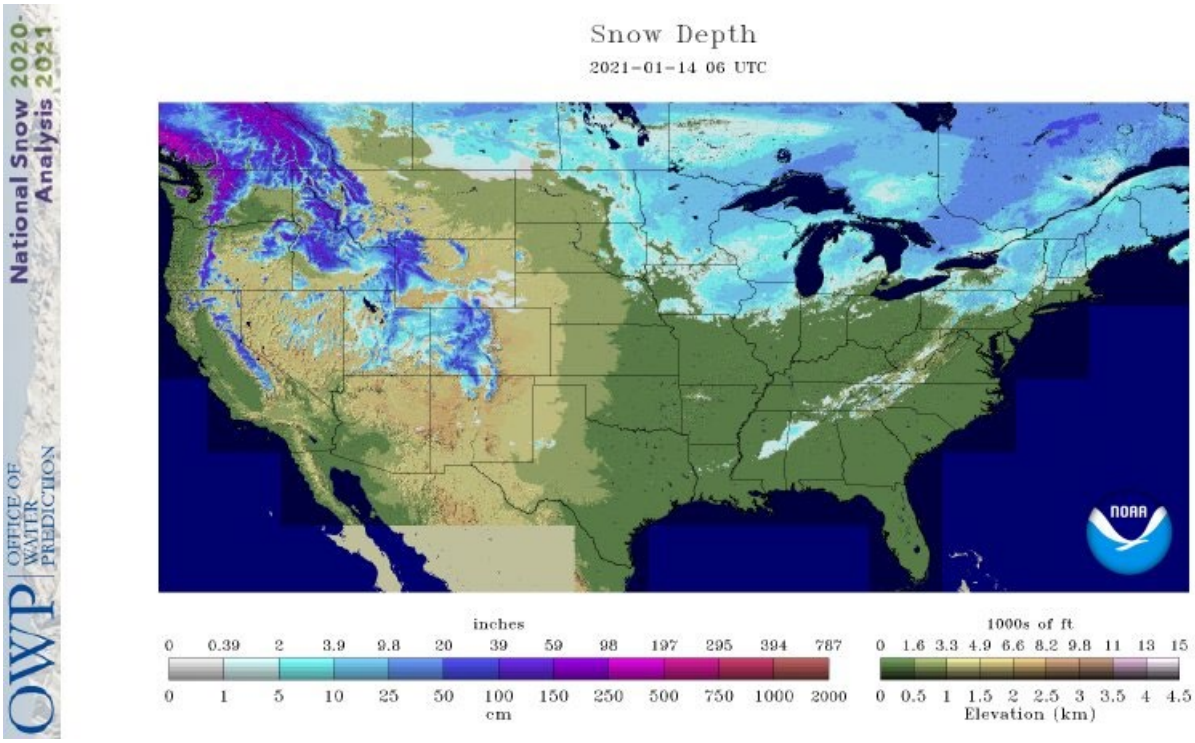


[Alaska snow water equivalent percent of median map]

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

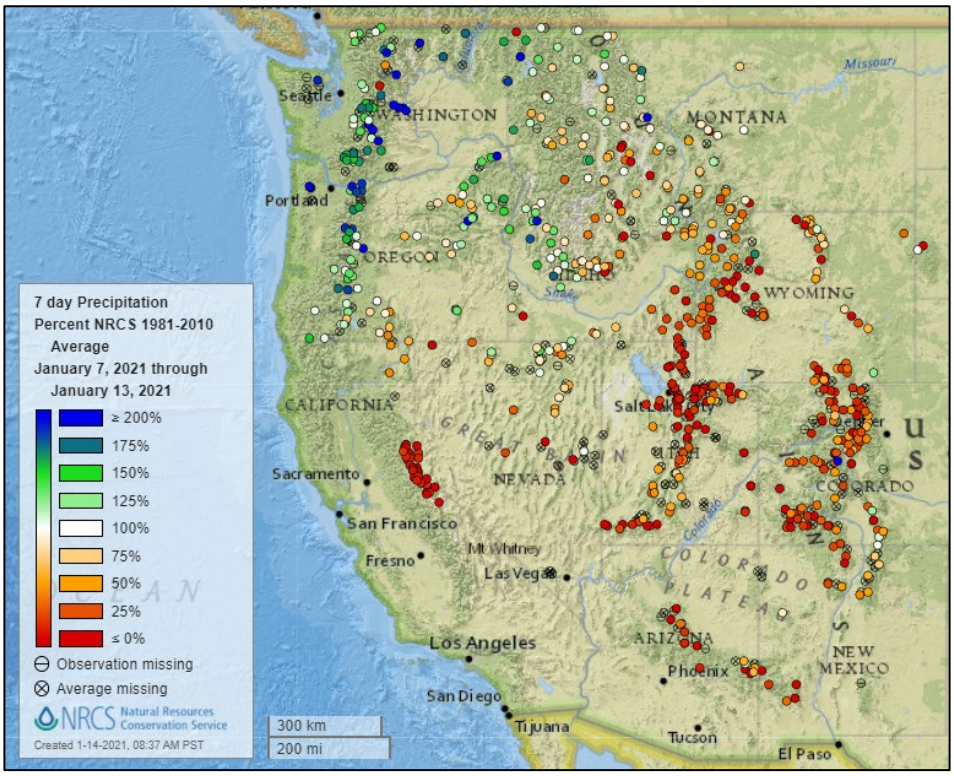
Current Snow Depth, National Weather Service Snow Analysis

Source: NOAA Office of Water Prediction



Precipitation

Last 7 Days, NRCS SNOTEL Network

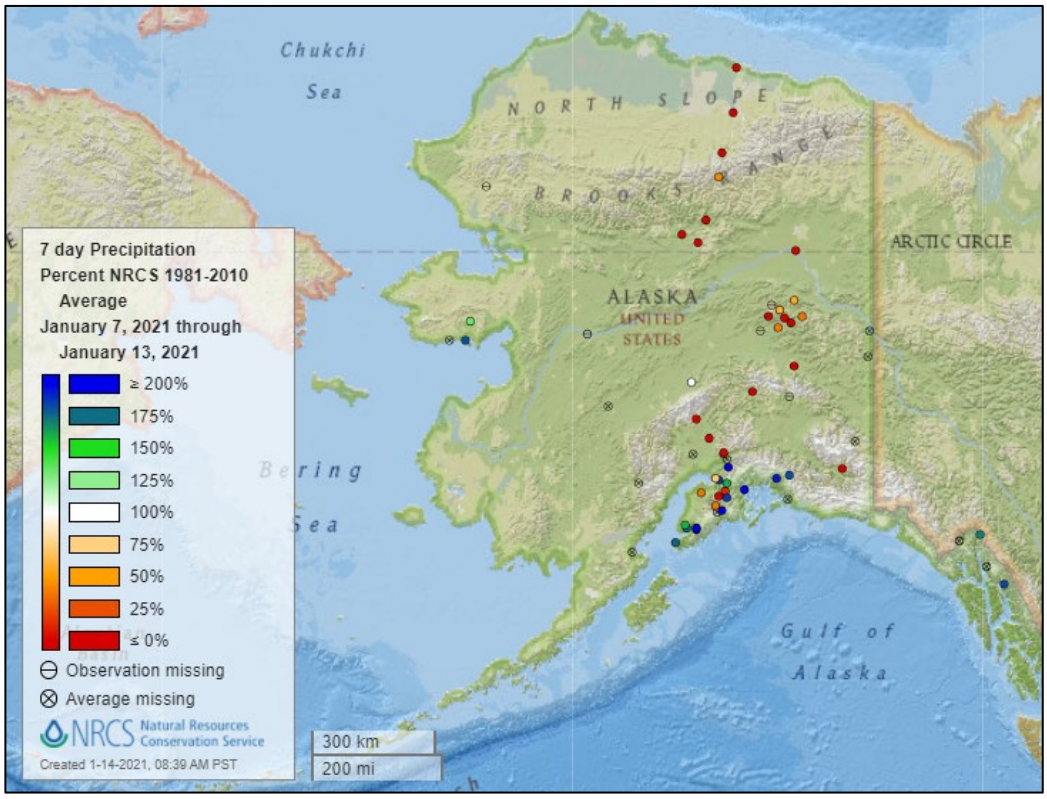


[7-day precipitation percent of average map]

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]

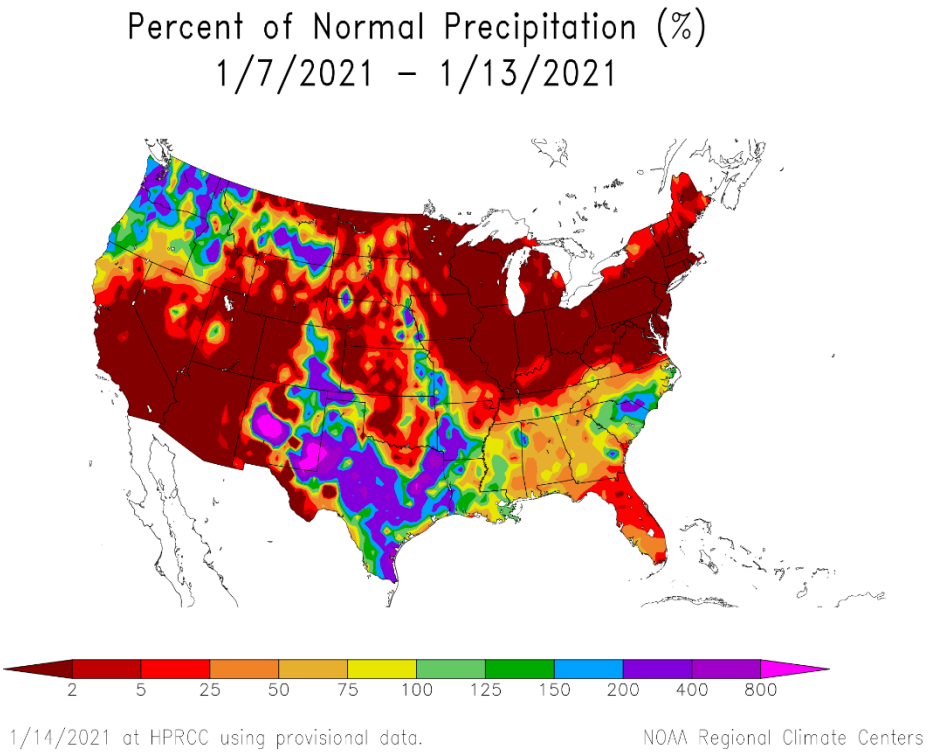


Last 7 Days, National Weather Service (NWS) Networks

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

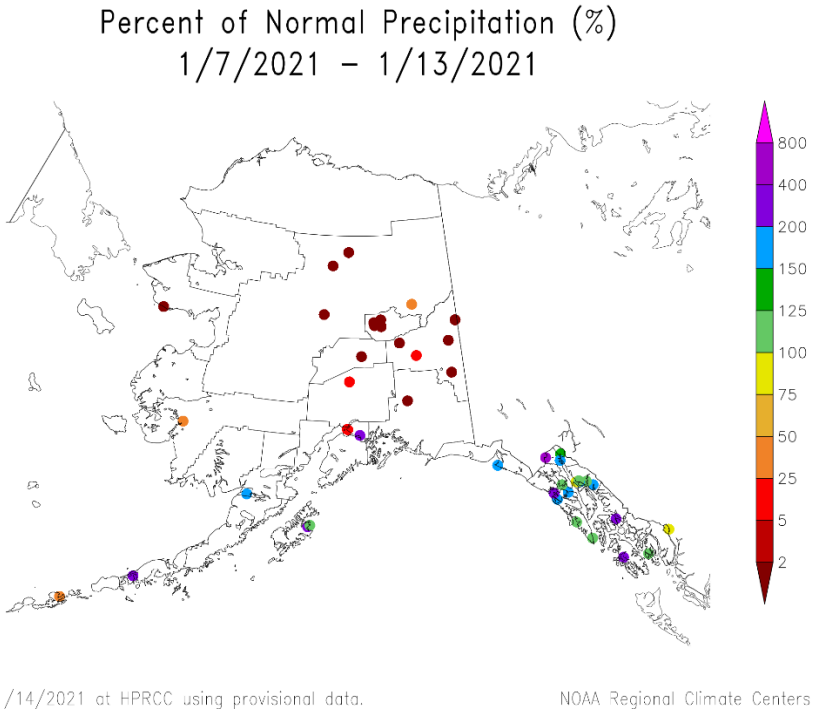


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

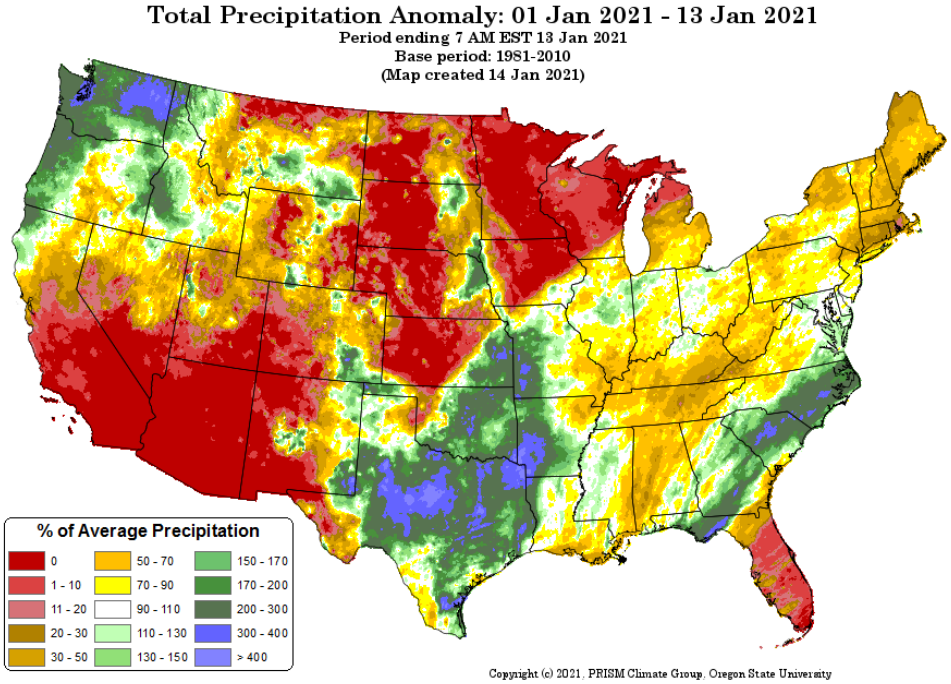
7-day precipitation anomaly map for Alaska.

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



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

Source: PRISM

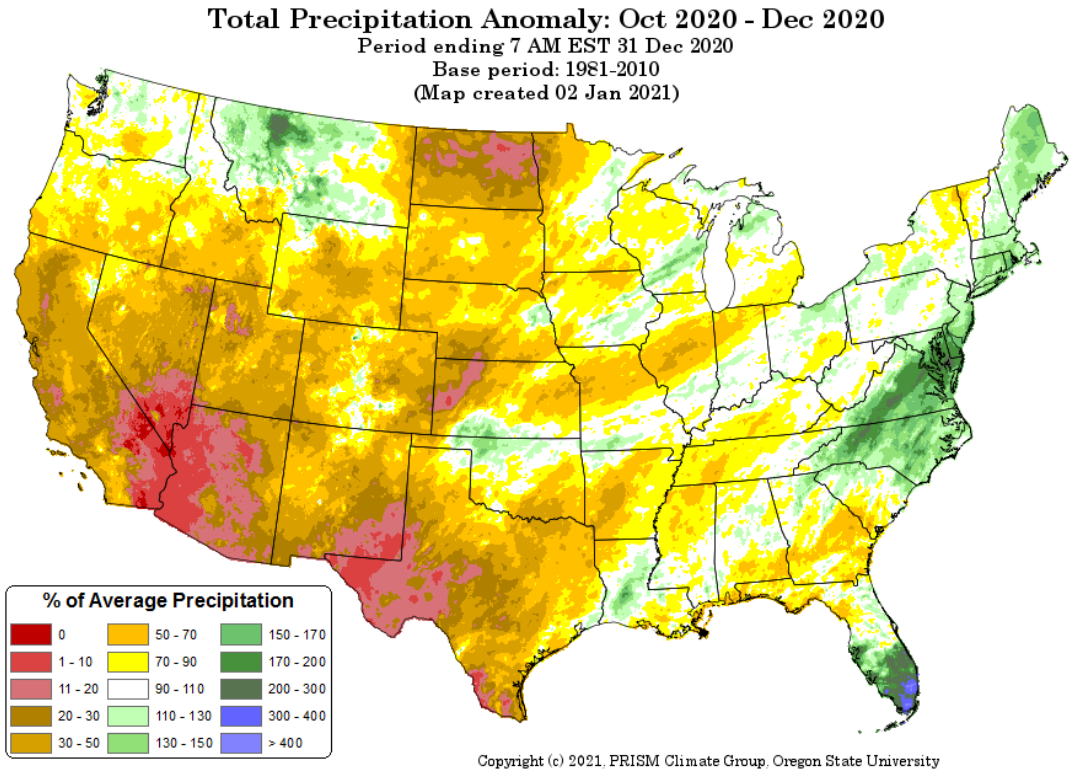


Month-to-date national total precipitation percent of average map

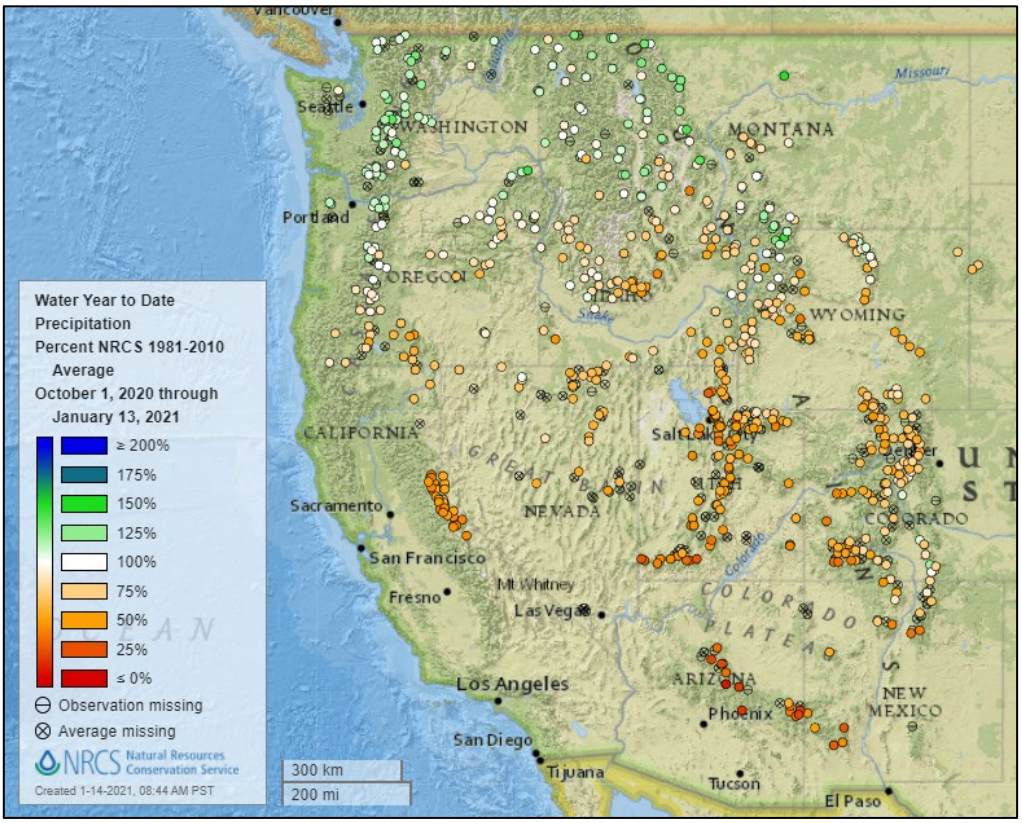
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

October through December precipitation percent of average map

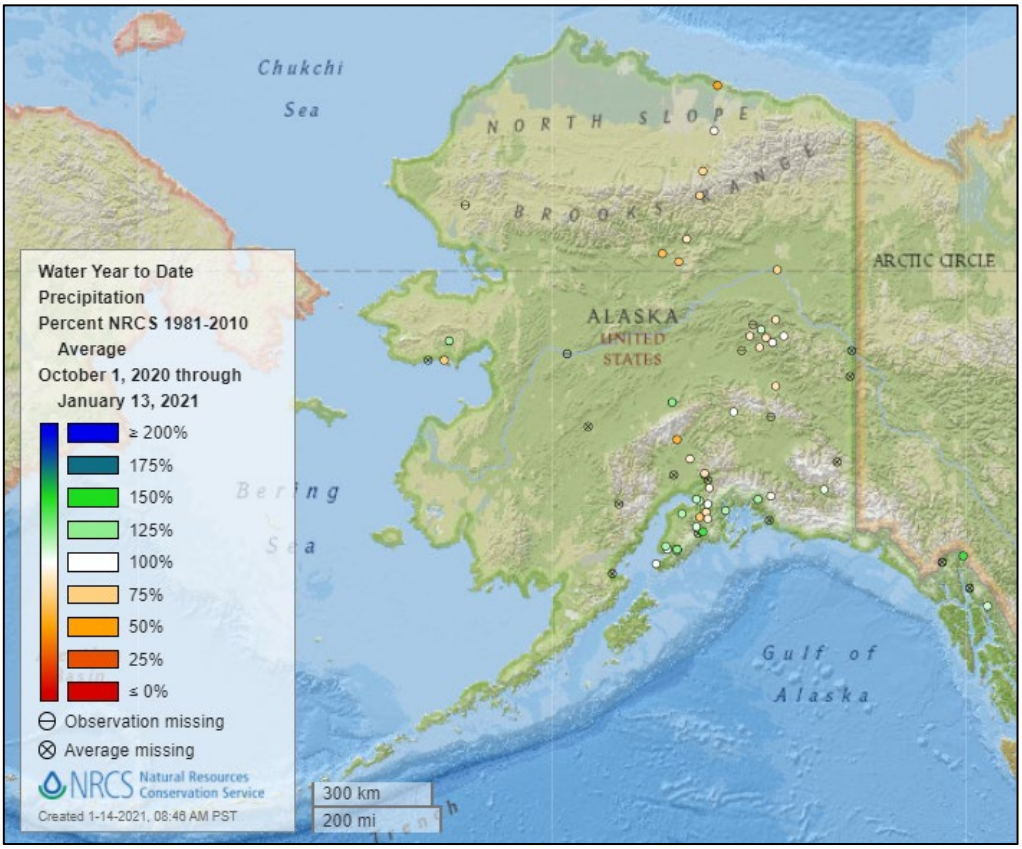


Water Year-to-Date, NRCS SNOTEL Network



[2021 water year-to-date precipitation percent of average map]

See also:
[2021 water year-to-date precipitation values (inches) map]



[Alaska 2021 water year-to-date precipitation percent of average map]

See also:
[Alaska 2021 water year-to-date precipitation values (inches) map]

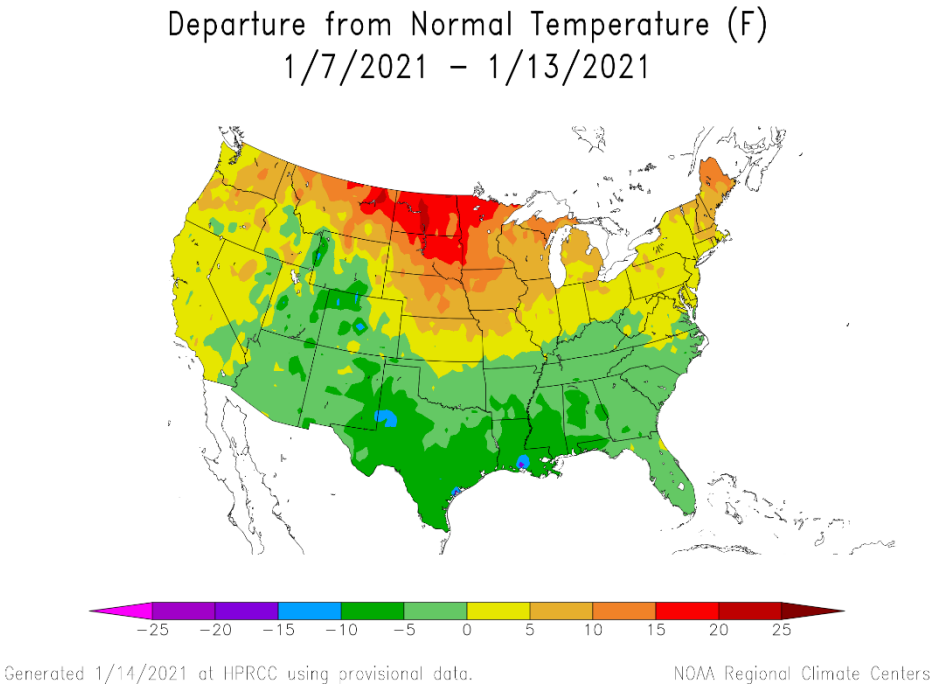
Temperature

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

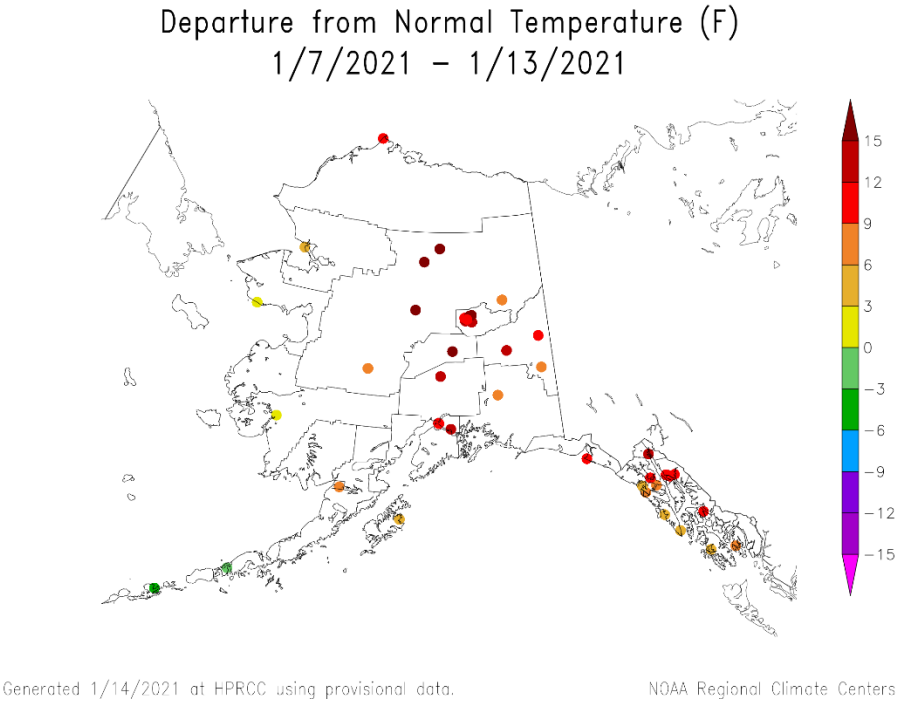


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

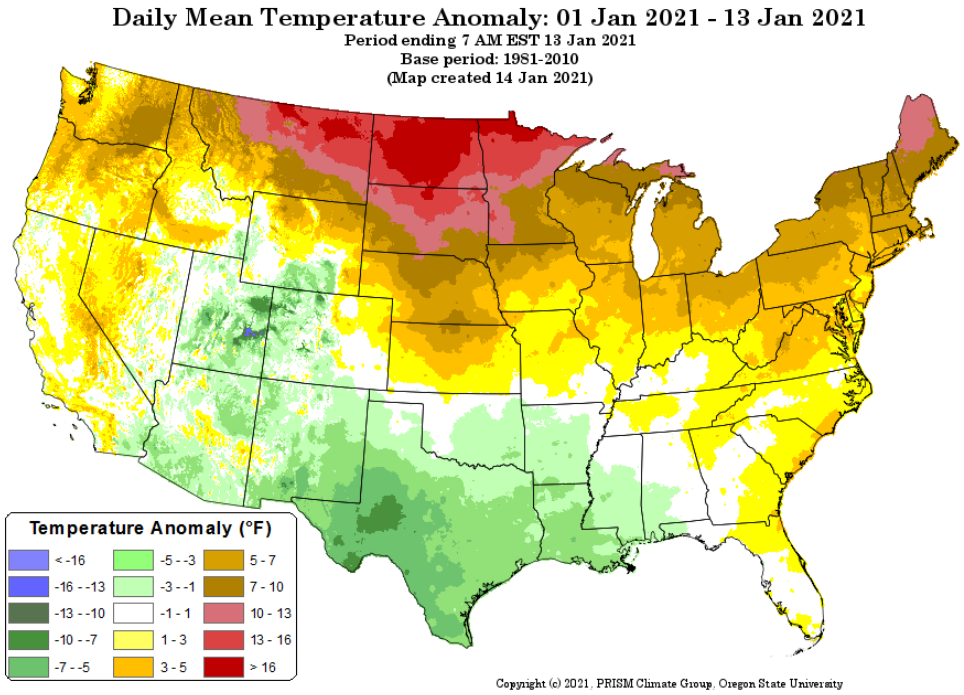
See also: 7-day temperature (° F) map



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

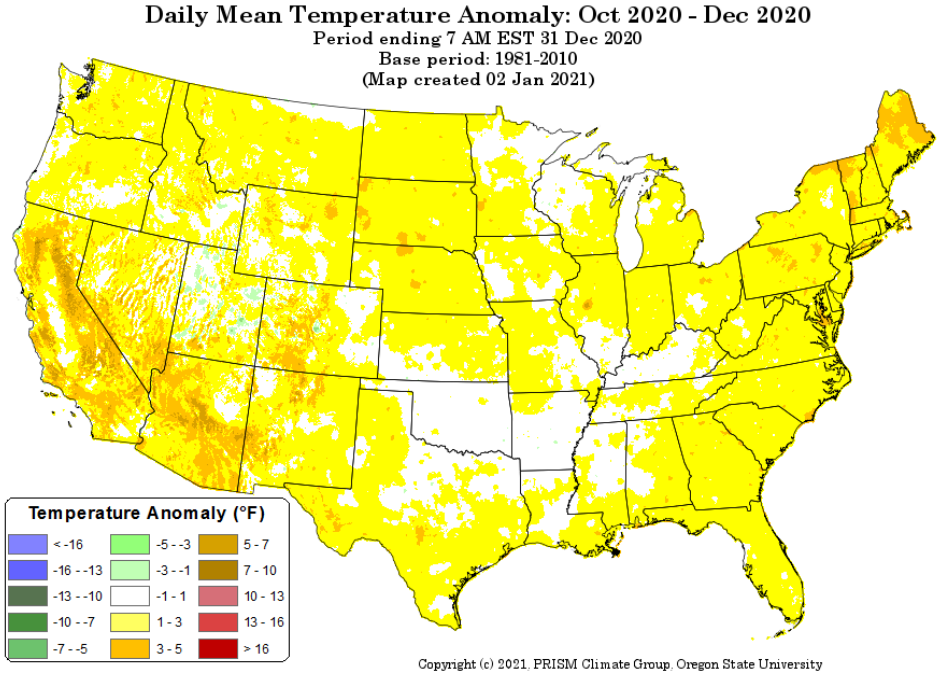
Source: PRISM

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



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

Source: PRISM

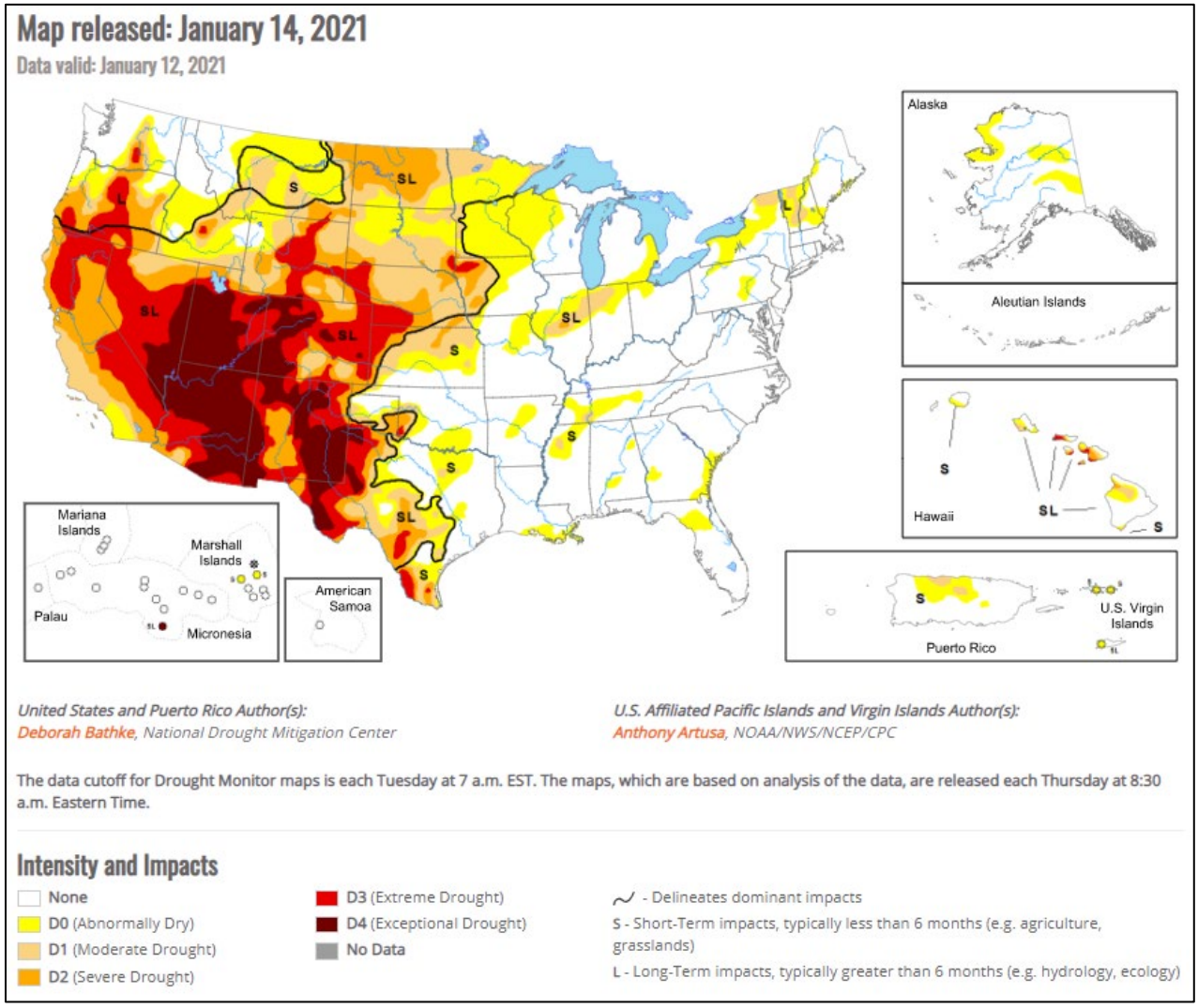


[October through December 2020 daily mean temperature anomaly map]

Drought

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

U.S. Drought Portal
Source: NOAA



Current National Drought Summary, January 14, 2021

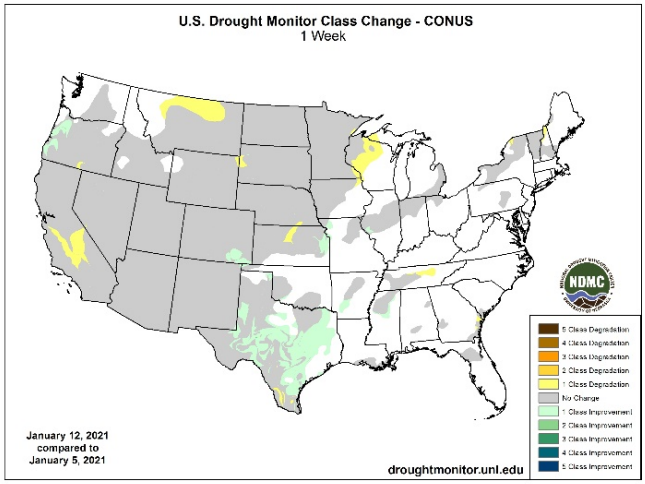
Source: National Drought Mitigation Center

“Storms continued to take aim at the Pacific Northwest this week, bringing multiple rounds of heavy rain along the coast and lower elevations, and snow to the mountains. Many locations along the coast have measured rain nearly every day this year. While the heaviest rains fell outside of most of the region’s current drought areas, parts of western Oregon have received 125% to 300% of normal precipitation since the beginning of the year, helping to chip away at long-term drought conditions. A winter storm brought snow to Rockies and eastern New Mexico before moving eastward. Several locations from far southeastern New Mexico into western, central and eastern Texas, northern Louisiana and Mississippi were blanketed by at least 6 inches of snow. Dryness continued to deteriorate conditions in locations such as Southern California, south-central Oregon, north-central Kansas, and south Texas. In all, the percent area of the Lower 48 experiencing moderate drought or worse stands at 44.85%, down from 45.76% last week.”

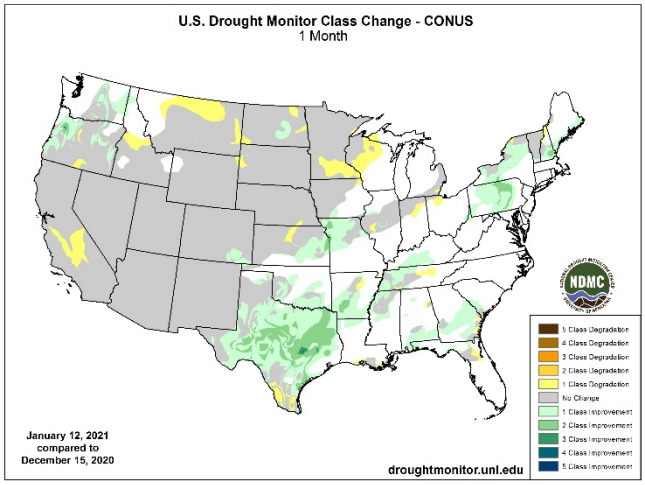
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

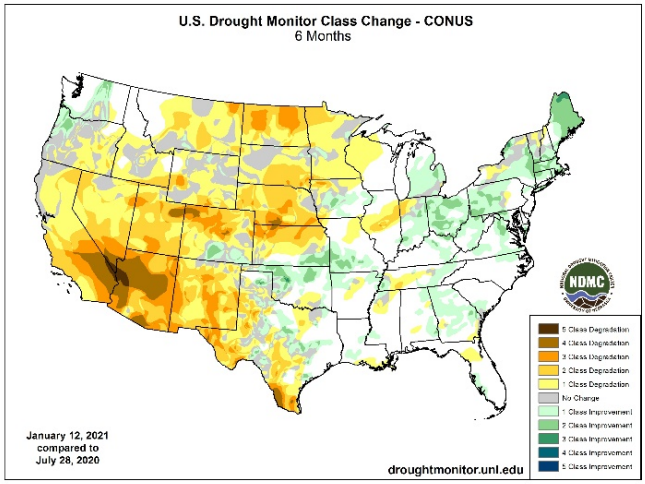
1 Week



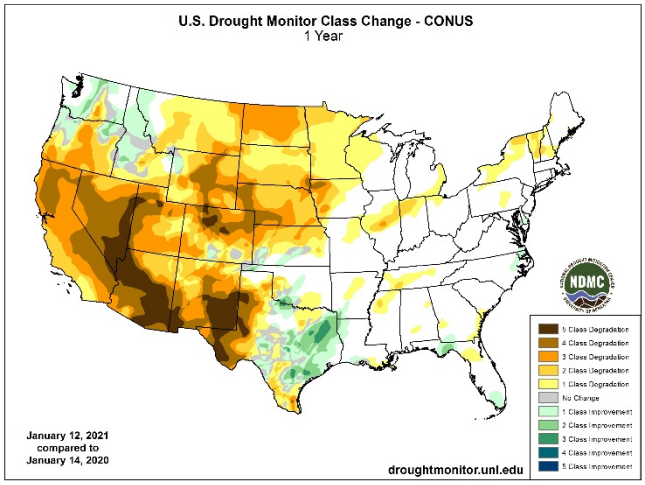
1 Month



6 Months



1 Year



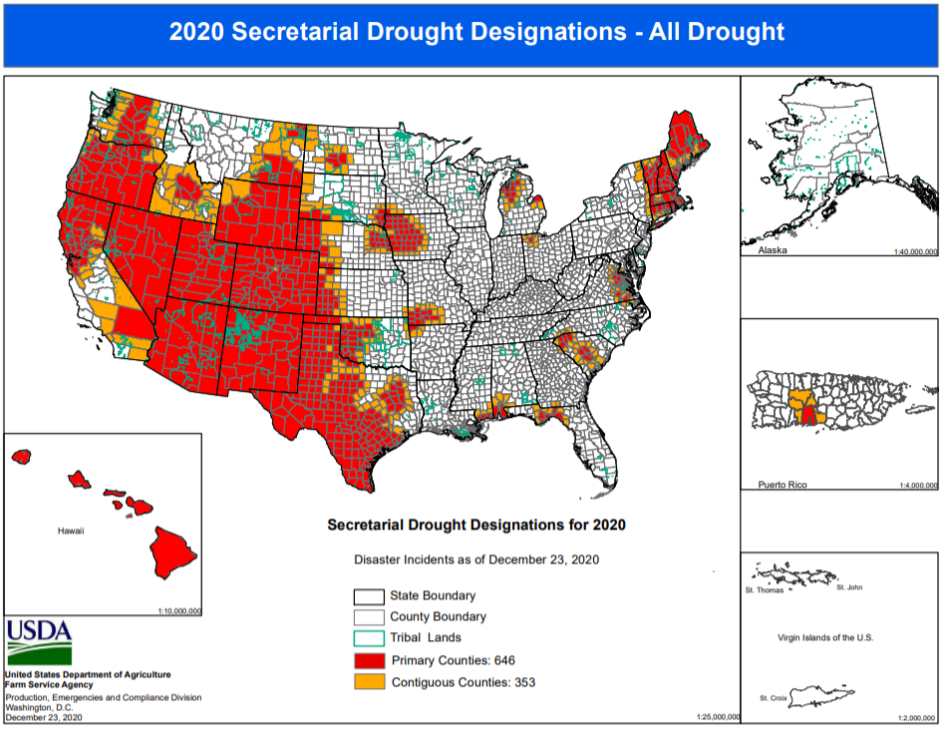
Changes in drought conditions over the last 12 months for the contiguous U.S.

Highlighted Drought Resources

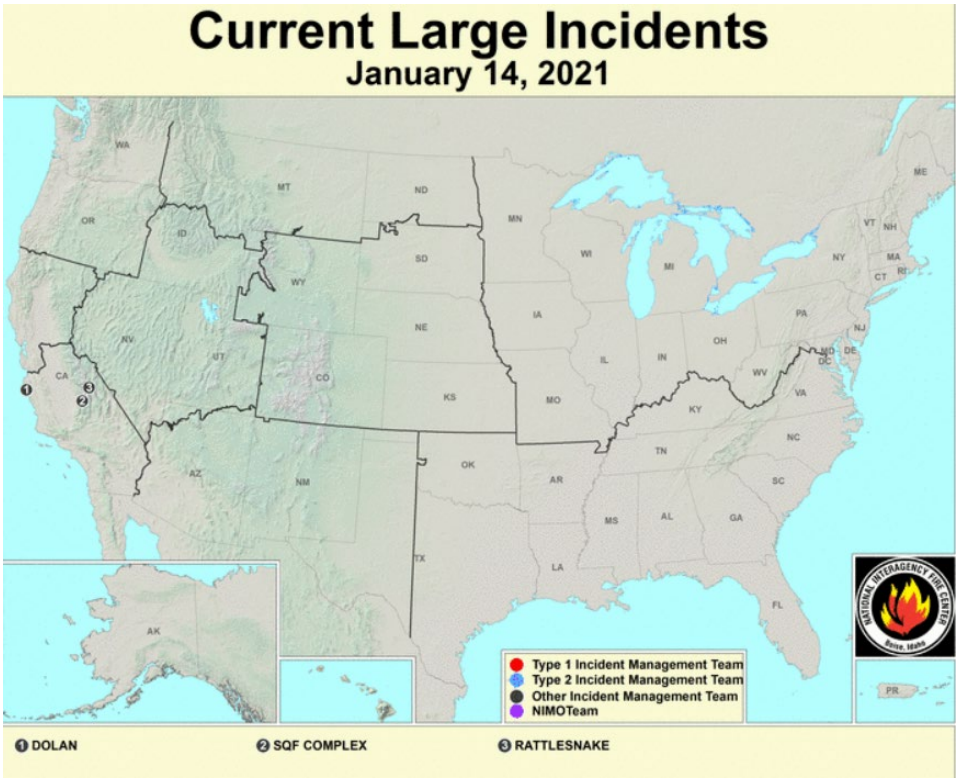
- Drought Impact Reporter
- Quarterly Regional Climate Impacts and Outlook
- U.S. Drought Portal Indicators and Monitoring
- U.S. Population in Drought, Weekly Comparison
- USDA Disaster and Drought Information

Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: USDA Forest Service Active Fire Mapping



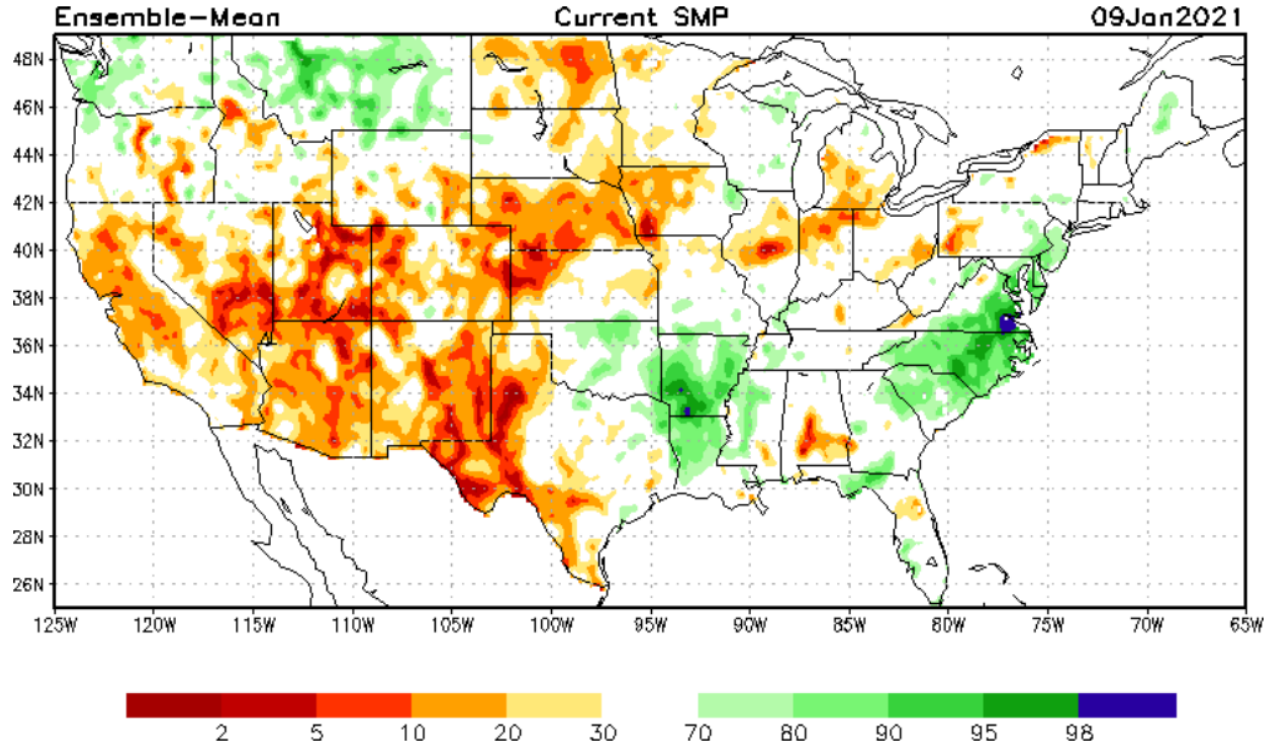
Highlighted Wildfire Resources

- National Interagency Fire Center
- InciWeb Incident Information System
- Significant Wildland Fire Potential Outlook

Other Climatic and Water Supply Indicators

Soil Moisture

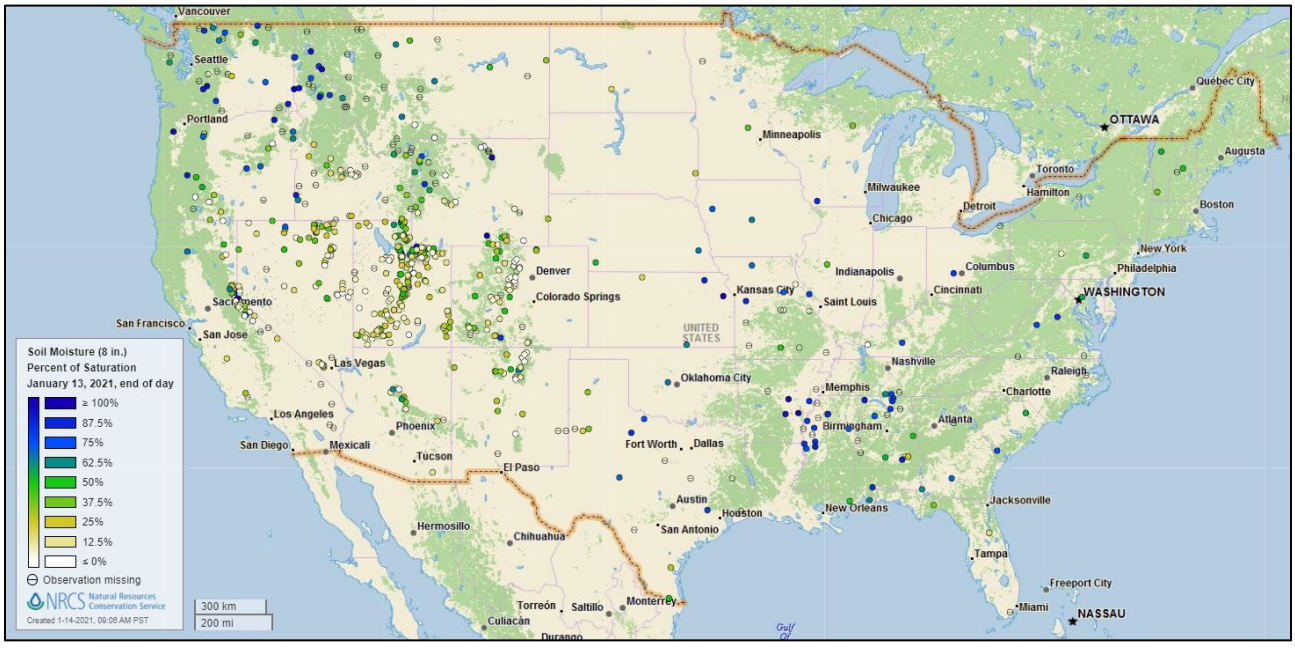
Source: NOAA National Centers for Environmental Prediction



Modeled soil moisture percentiles as of January 09, 2021

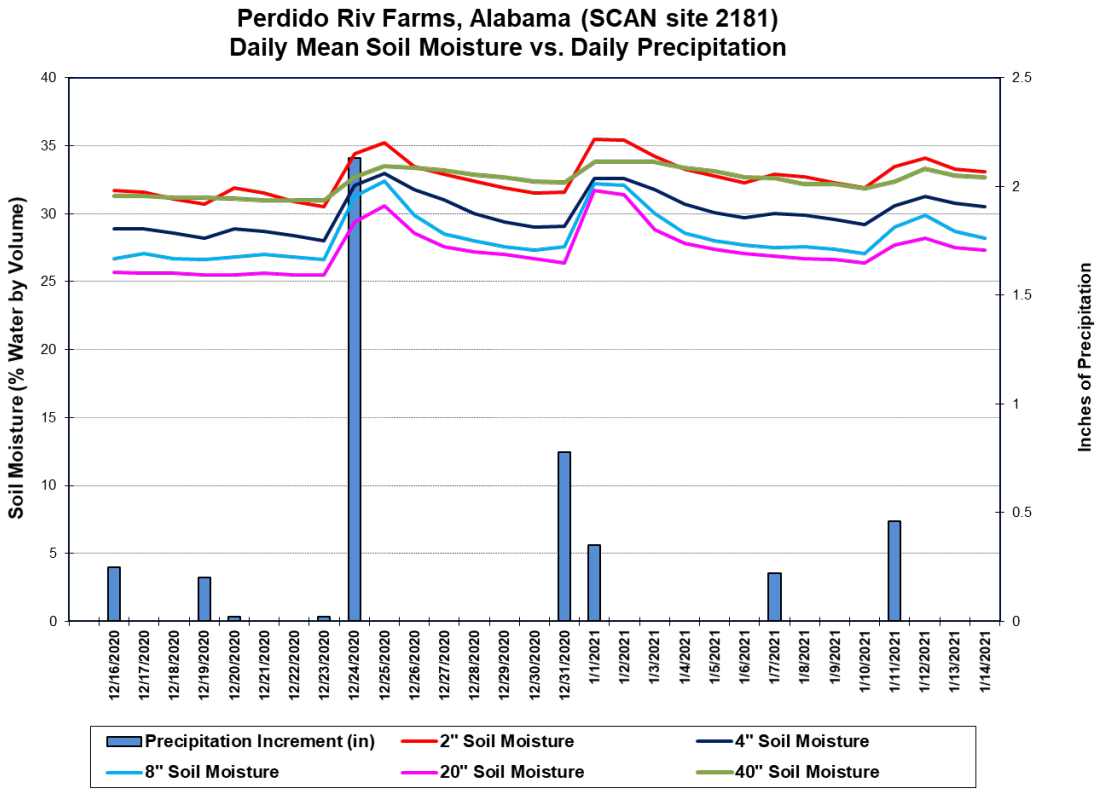
Soil Moisture Percent of Saturation

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



Soil Moisture

Source: NRCS Soil Climate Analysis Network (SCAN)



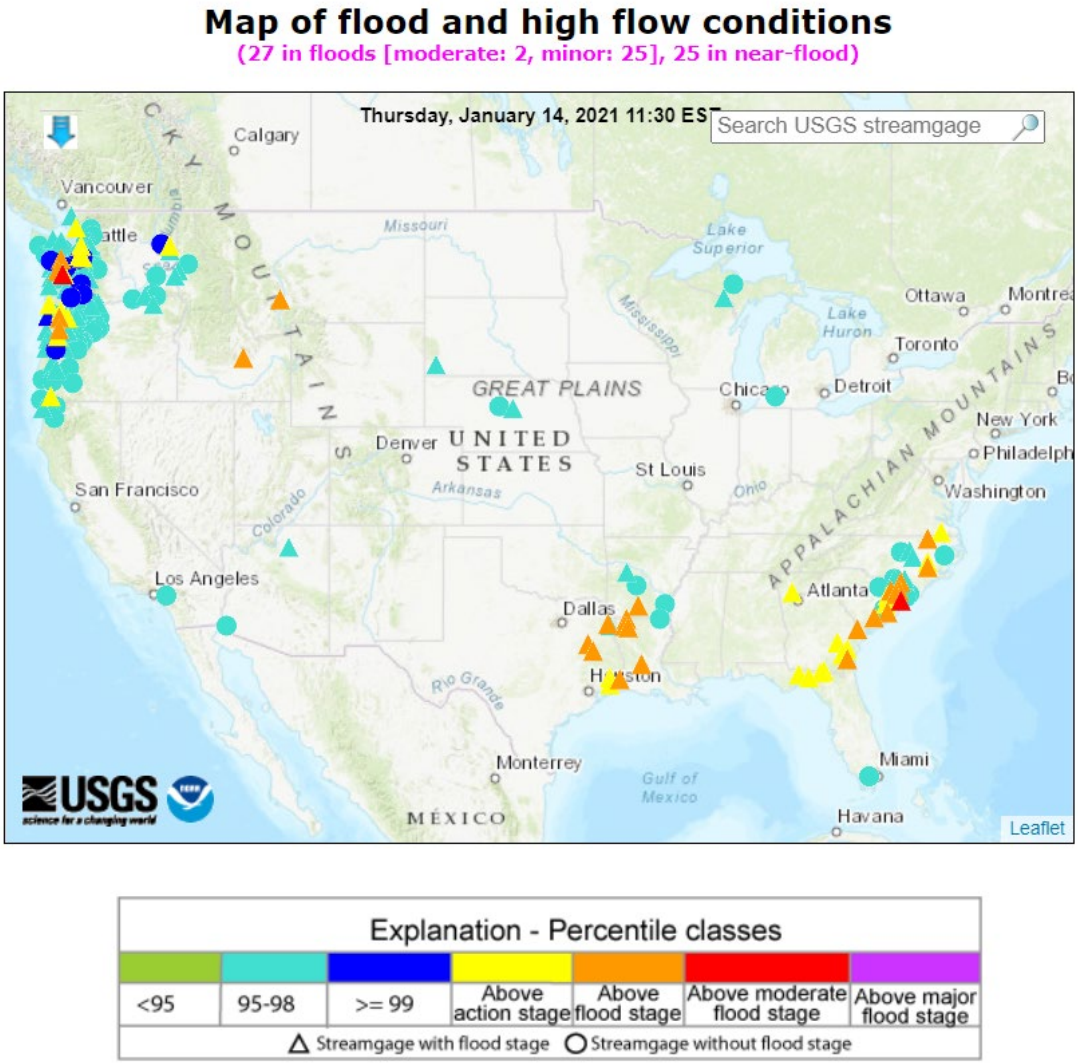
This chart shows the precipitation and soil moisture for the last 30 days at the Perdido Riv Farms SCAN site in Alabama. Frequent precipitation during the month totaled 4.43 inches.

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



WaterWatch: Streamflow, drought, flood, and runoff conditions

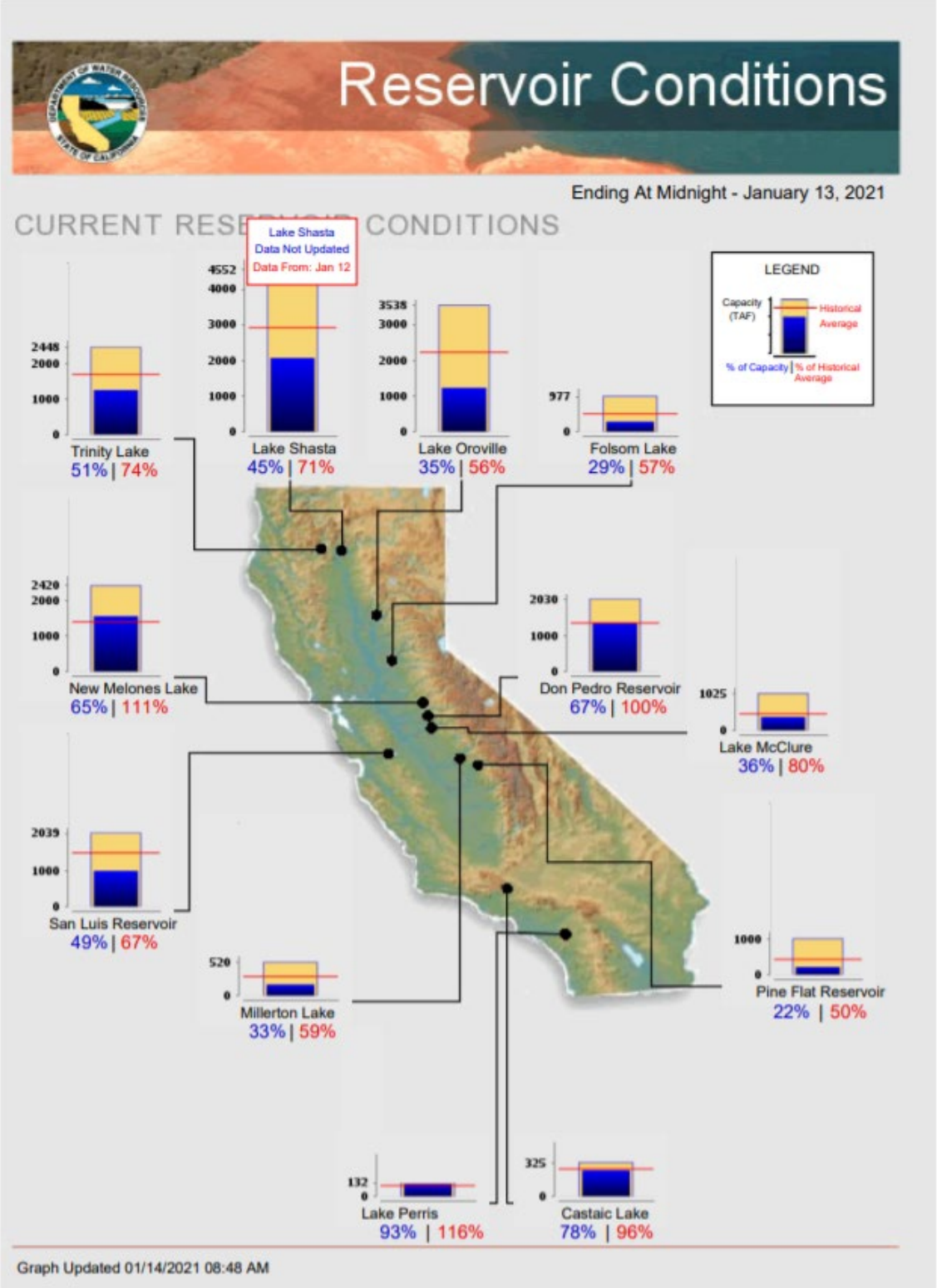
Reservoir Storage

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

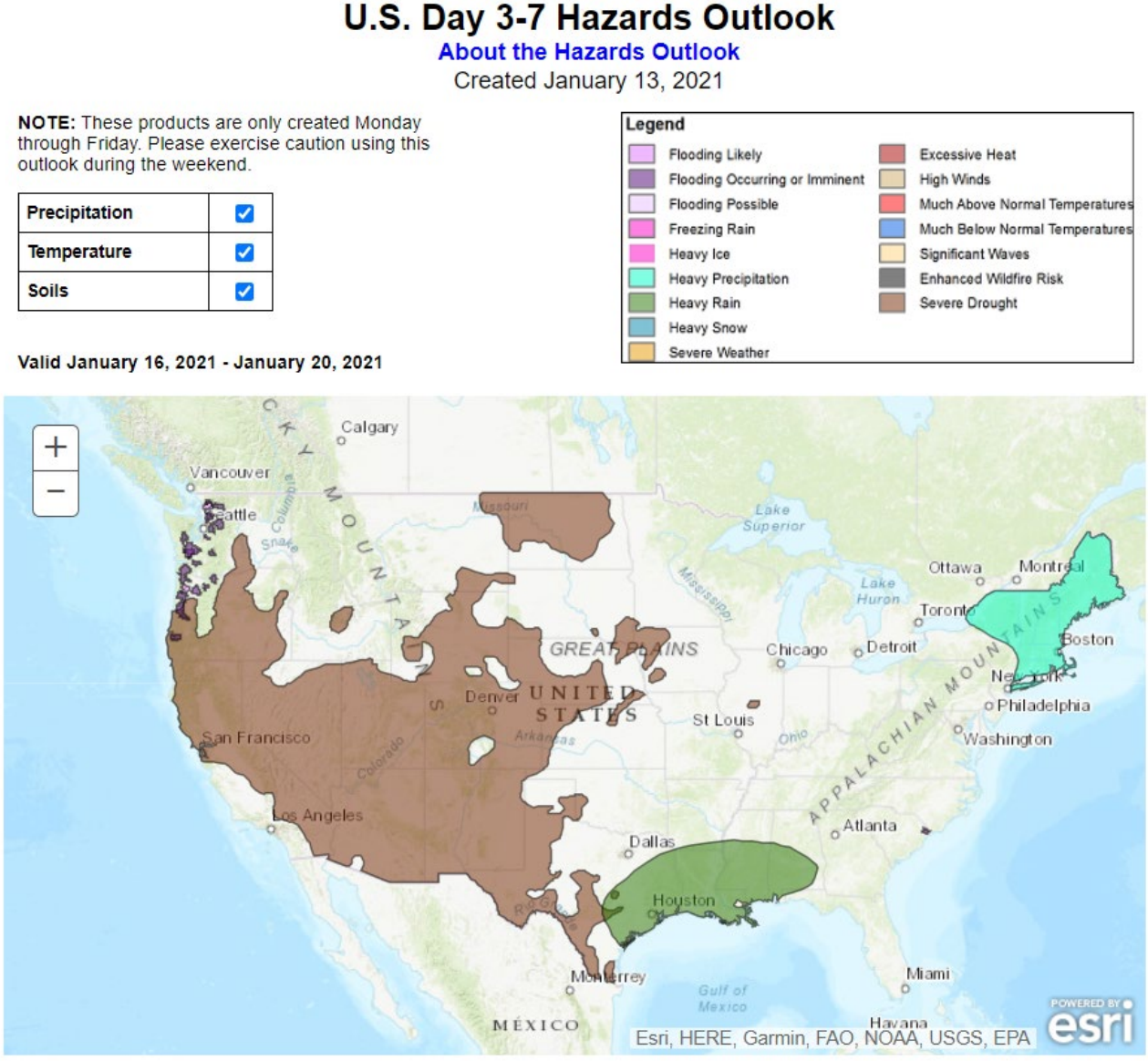
Agricultural Weather Highlights

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

National Outlook, Thursday, January 14, 2021: "Blizzard conditions are expected later today into early Friday across western Iowa, southwestern Minnesota, and eastern South Dakota, as rain changes to snow and winds increase. A broader area, covering all the upper Midwest, will experience some travel disruptions due to wind-driven snow. Midwestern snow showers will linger through the weekend and into early next week, as several weak disturbances will trail the initial cold front. Meanwhile on the Plains, high winds will begin to subside on Friday, followed by a period of tranquil weather. However, some light snow may fall across the northern Plains early next week. During the next several days, only light precipitation will affect the Southeast, Rockies, and Pacific Northwest. Elsewhere, dry weather will continue into next week across California and the Great Basin, as well as the central and southern Plains and the lower Mississippi Valley. The NWS 6- to 10-day outlook for January 19 – 23 calls for likelihood of below-normal temperatures from the Pacific Coast to the High Plains, while warmer-than-normal weather will prevail from the Mississippi Valley eastward. Meanwhile, below-normal precipitation in the Pacific Coast States, northern New England, and peninsular Florida should contrast with wetter-than-normal weather across the remainder of the country."

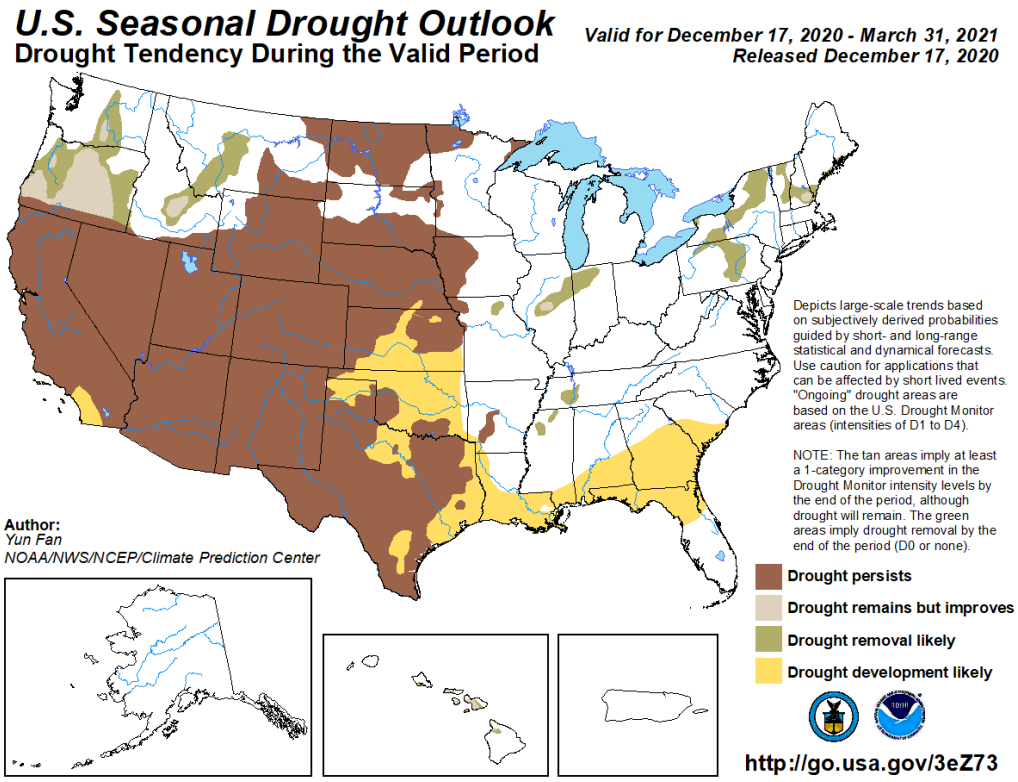
Weather Hazards Outlook: January 16 – 20, 2021

Source: NOAA Weather Prediction Center



Seasonal Drought Outlook: December 17, 2020 – March 31, 2021

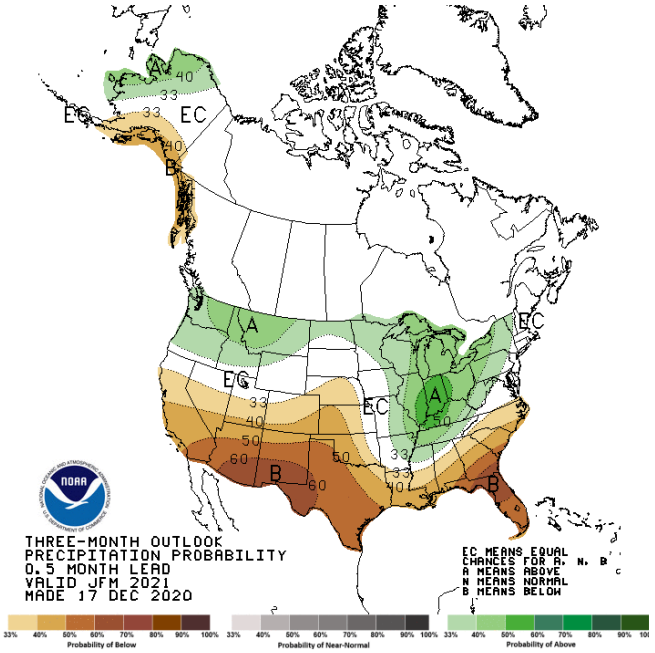
Source: National Weather Service



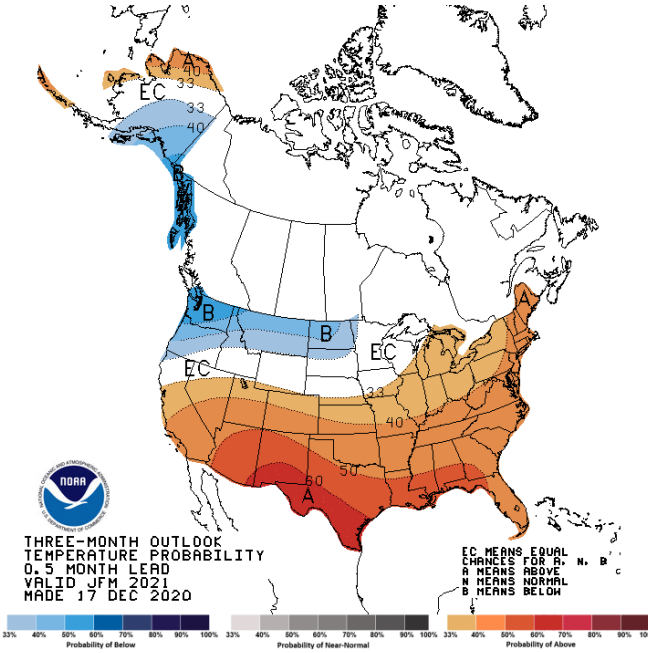
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



January-February-March (JFM) 2021 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.