

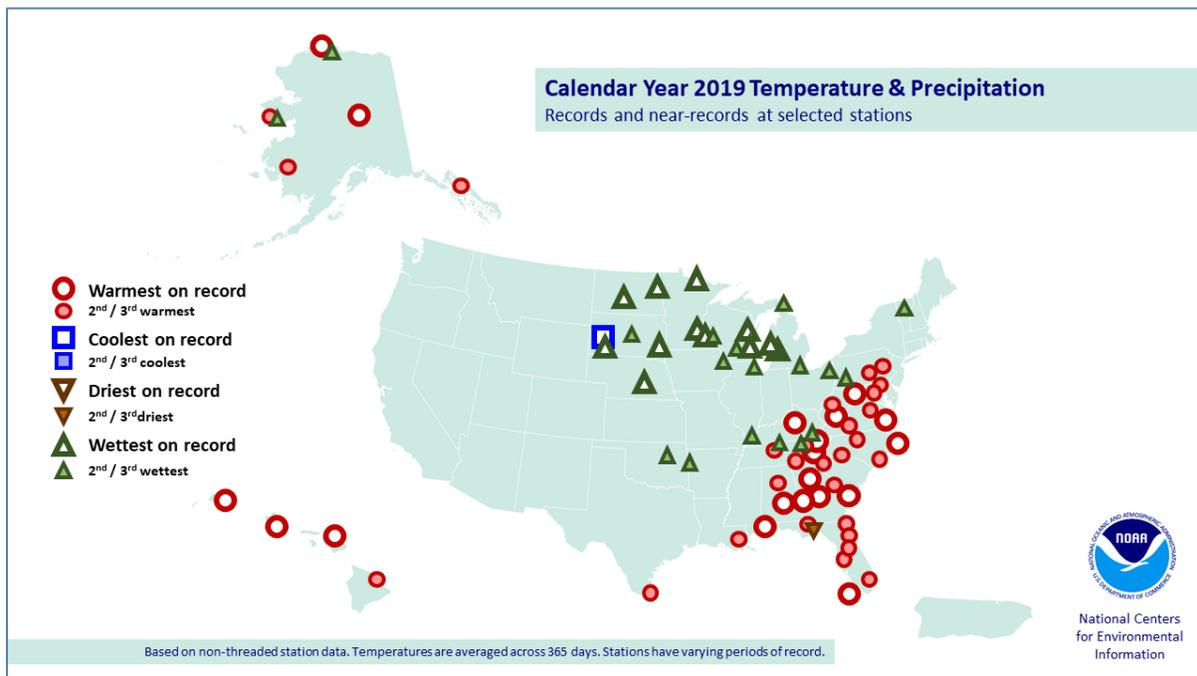
Water and Climate Update

January 23, 2020

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	13
Precipitation	4	Short- and Long-Range Outlooks.....	18
Temperature.....	8	More Information	20
Drought	10		

2019 national climate records reported

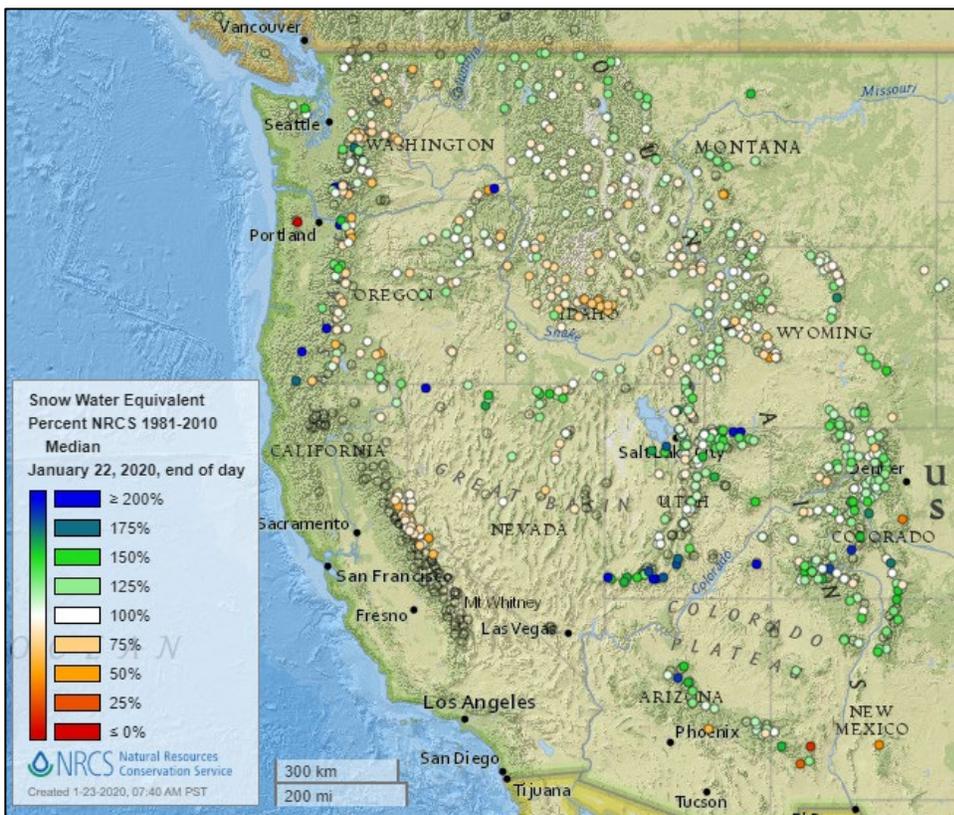


NOAA’s annual [Climate Report](#) of the weather in 2019 was released this week. Globally, it was the second warmest year on record based on temperatures taken at 20,000 land-based stations and ocean sensors. In the contiguous U.S., the 2019 average temperature was 52.7°F, in the top one-third of the record, but the coolest since 2014. Below average temperatures were observed across the northern Great Plains, whereas above normal temperatures were recorded in the Southeast and Mid-Atlantic states. The average precipitation across the country totaled 34.78 inches, which is 4.84 inches above normal, making it the second wettest year on record. Record precipitation was recorded in the northern Great Plains, parts of the central Great Plains, and the Great Lakes.

Related:

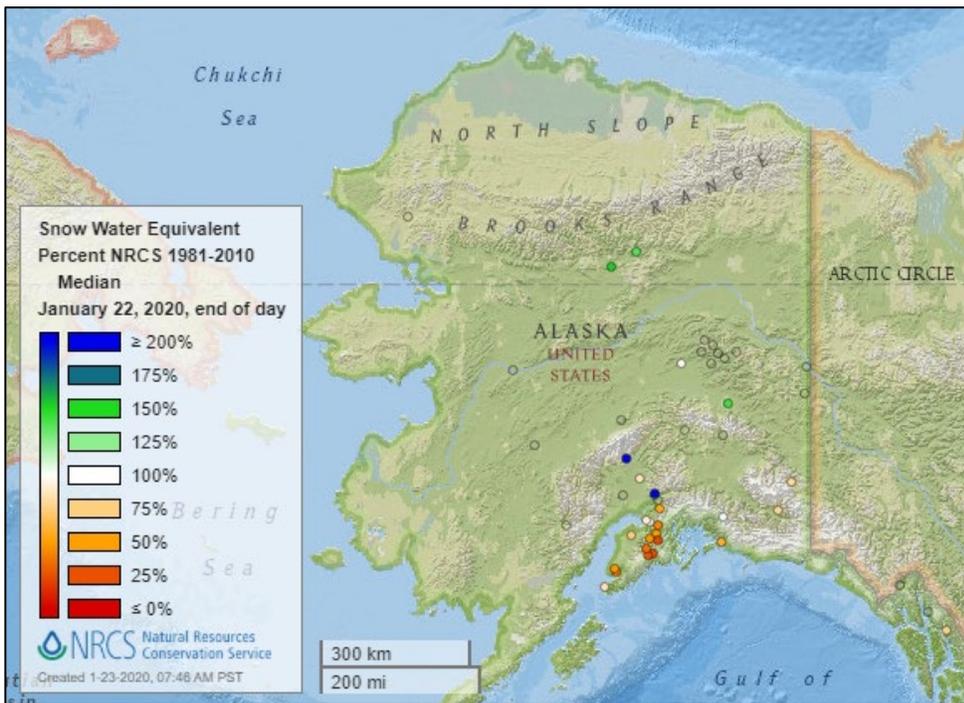
- [NASA, NOAA Analyses Reveal 2019 Second Warmest Year on Record](#) - NASA
- [Another Scorchers: 2019 Was the Second-Hottest Year on Record](#) - EOS
- [Extreme weather and climate disasters cost the U.S. billions in 2019, NOAA reports](#) – CBS News
- [2019 Was The 2nd-Hottest Year On Record, According To NASA And NOAA](#) - NPR
- [2019 was the second-warmest year on record, NASA and NOAA say](#) – Los Angeles Times on MSN
- [2019 Was Second-Wettest Year on Record in the U.S., Warmest Year in Alaska, NOAA Says](#) – The Weather Channel

Snow



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

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

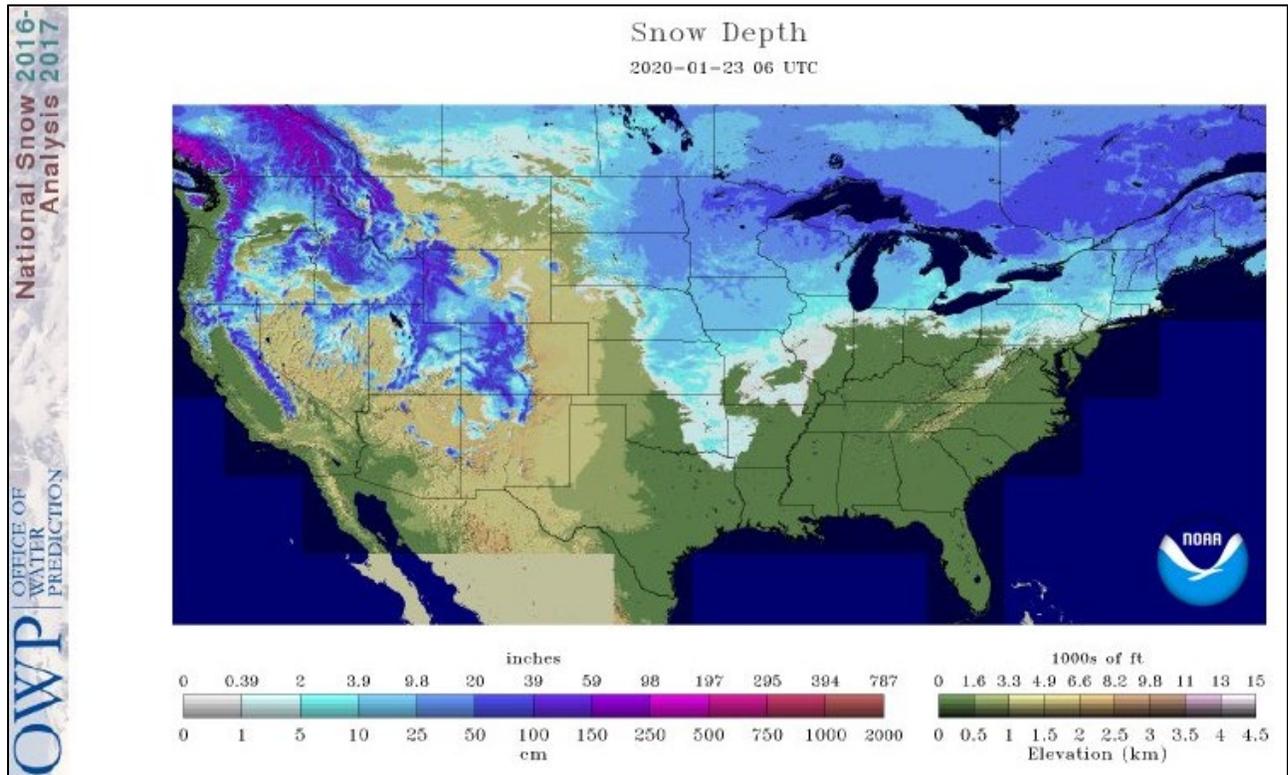


[Alaska snow water equivalent percent of median map](#)

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

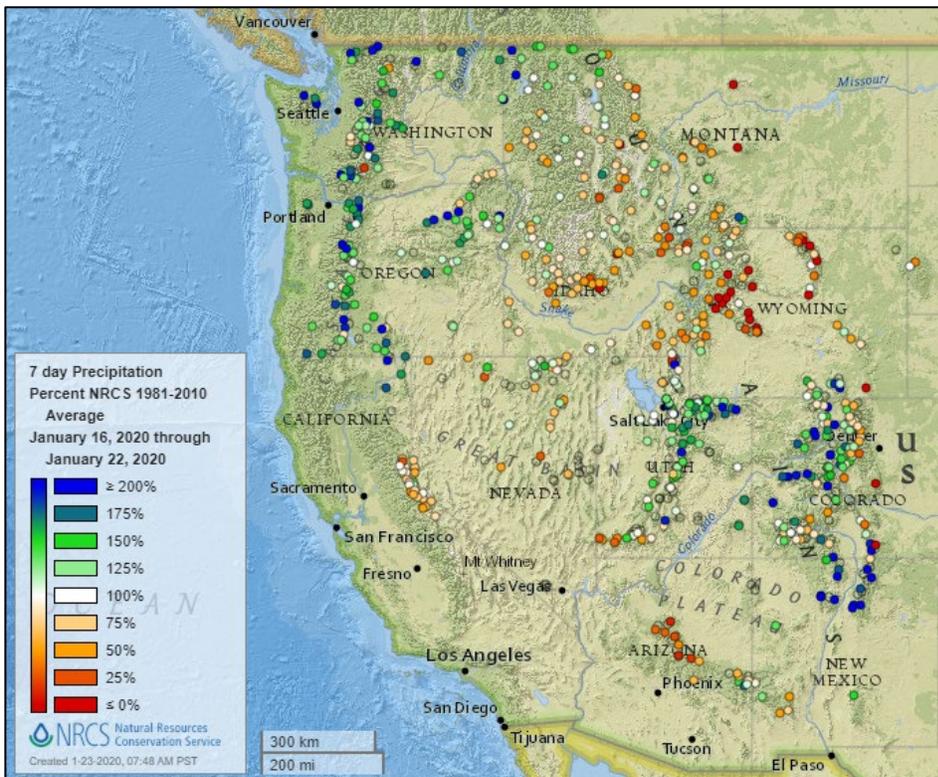
Current Snow Depth, National Weather Service Snow Analysis

Source: NOAA Office of Water Prediction



Precipitation

Last 7 Days, NRCS SNOTEL Network

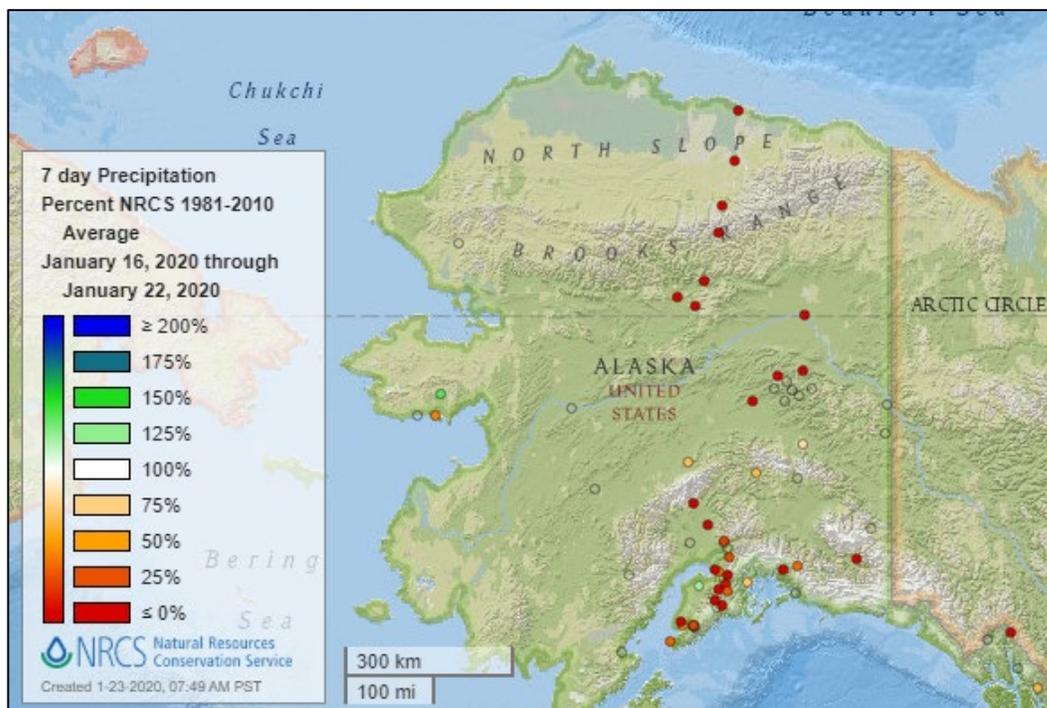


[7-day precipitation percent of average map](#)

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](#)



Water and Climate Update

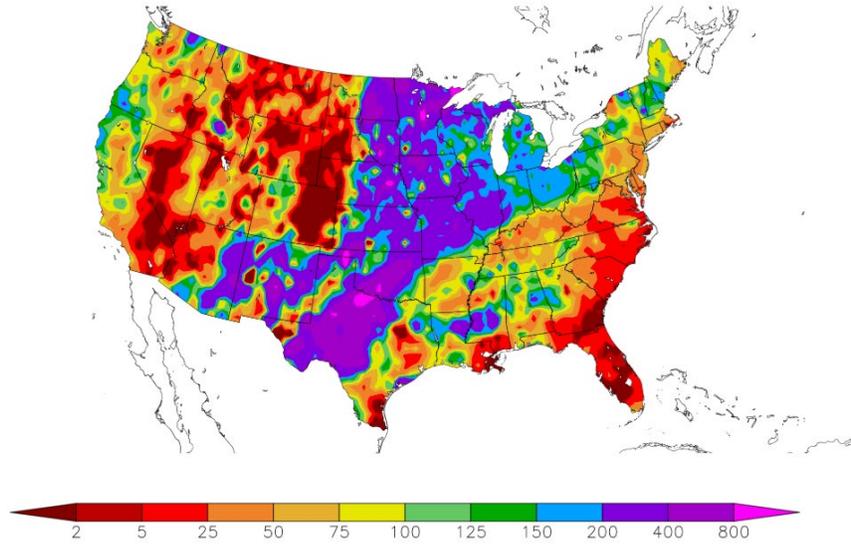
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
1/15/2020 – 1/21/2020



Generated 1/22/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

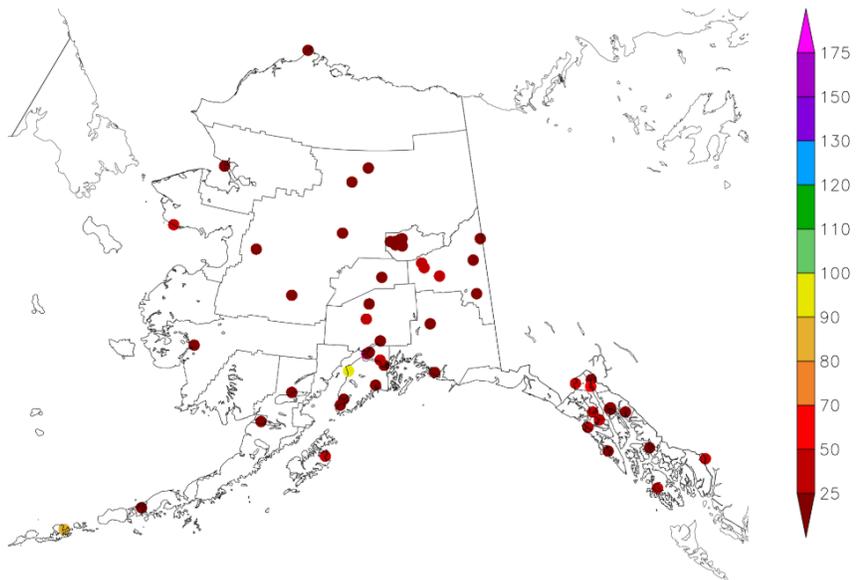
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)
1/15/2020 – 1/21/2020



Generated 1/22/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

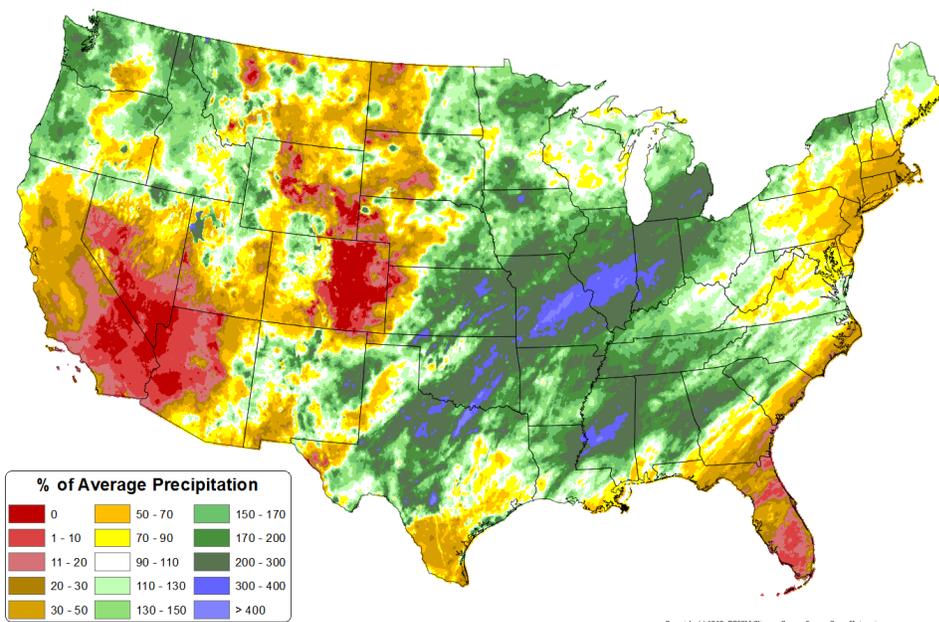
Water and Climate Update

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

Source: PRISM

Total Precipitation Anomaly: 01 Jan 2020 - 22 Jan 2020
Period ending 7 AM EST 22 Jan 2020
Base period: 1981-2010
(Map created 23 Jan 2020)

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

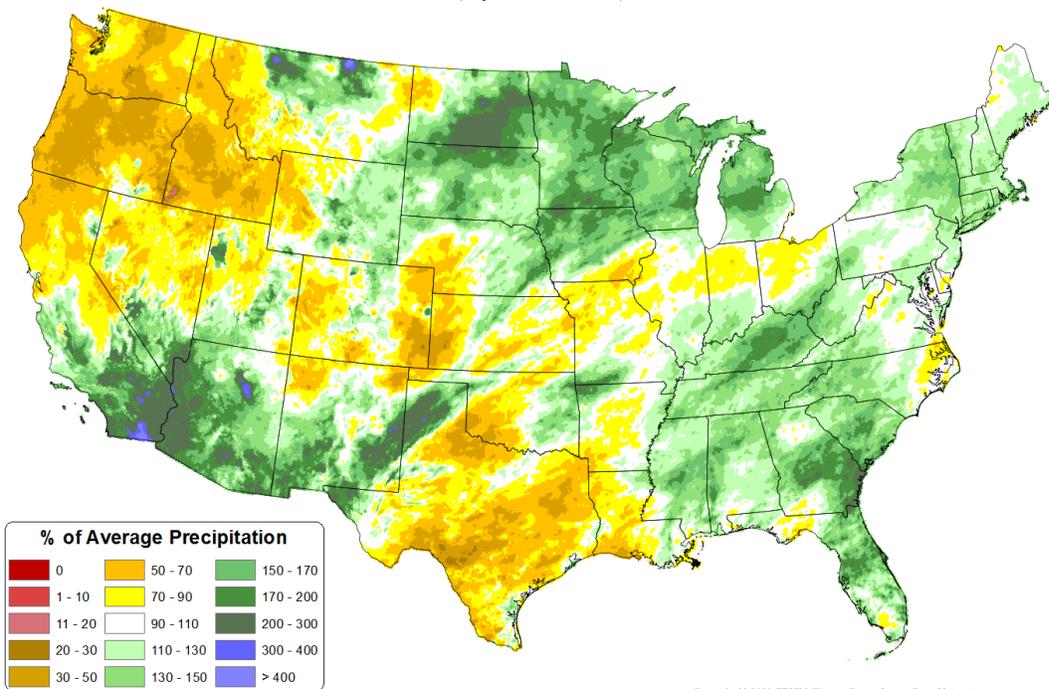


Last 3 Months, All Available Data Including SNOTEL and NWS Networks

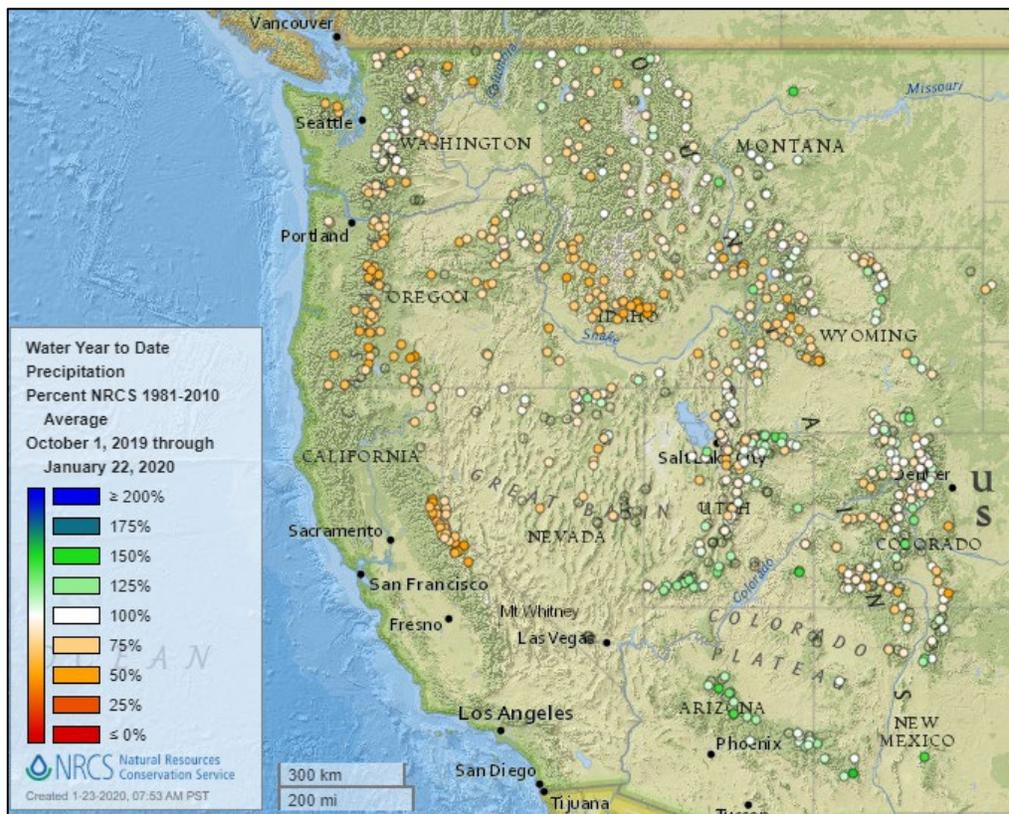
Source: PRISM

[October through December 2019 total precipitation percent of average map](#)

Total Precipitation Anomaly: Oct 2019 - Dec 2019
Period ending 7 AM EST 31 Dec 2019
Base period: 1981-2010
(Map created 06 Jan 2020)

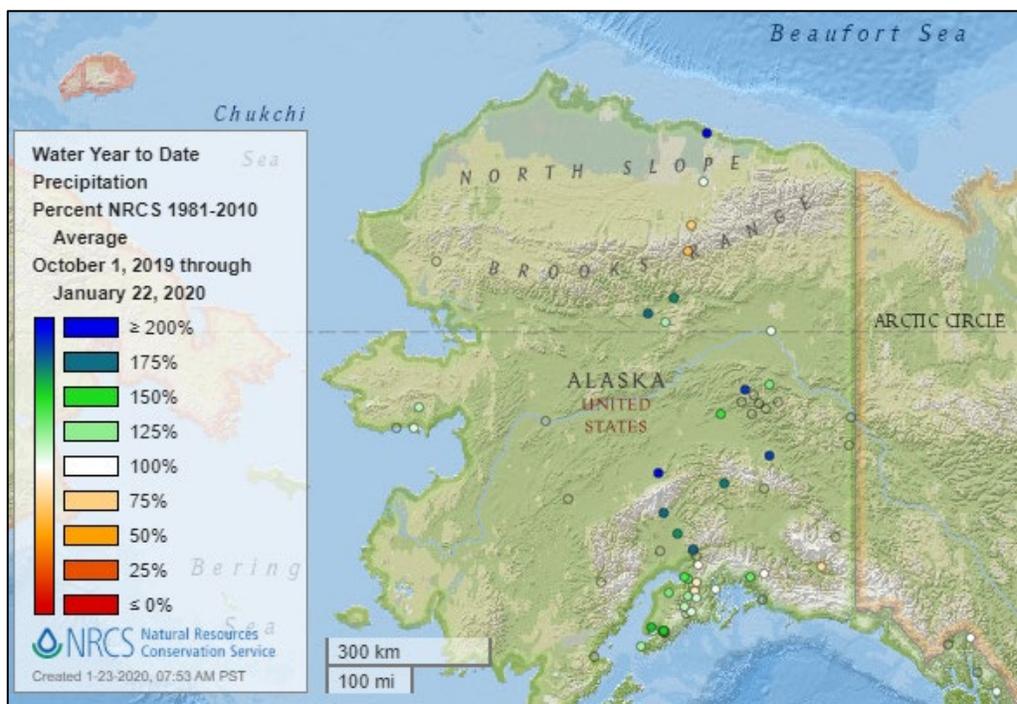


Water Year-to-Date, NRCS SNOTEL Network



[2020 water year-to-date precipitation percent of average map](#)

See also:
[2020 water year-to-date precipitation values \(inches\) map](#)



[Alaska 2020 water year-to-date precipitation percent of average map](#)

See also:
[Alaska 2020 water year-to-date precipitation values \(inches\) map](#)

Temperature

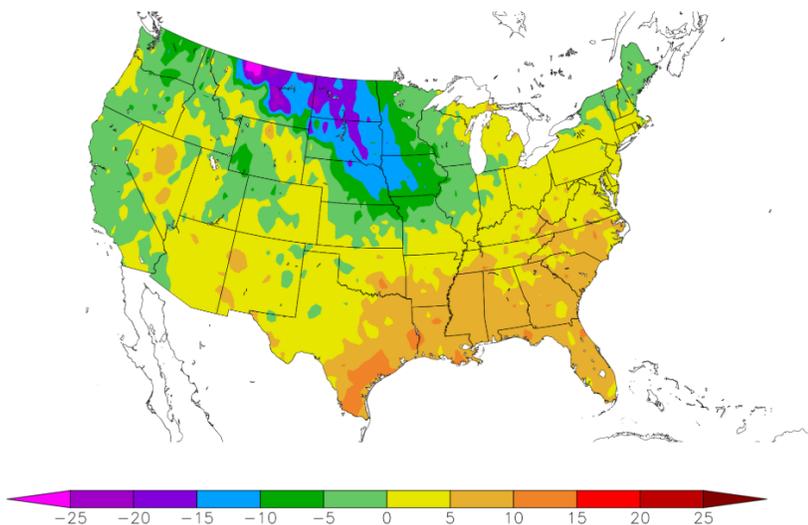
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
1/15/2020 – 1/21/2020



Generated 1/22/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

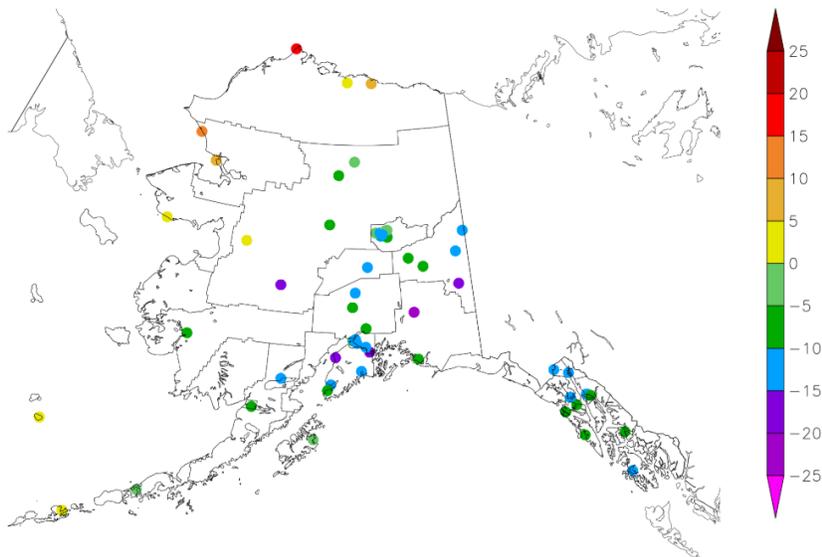
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
1/15/2020 – 1/21/2020



Generated 1/22/2020 at HPRCC using provisional data.

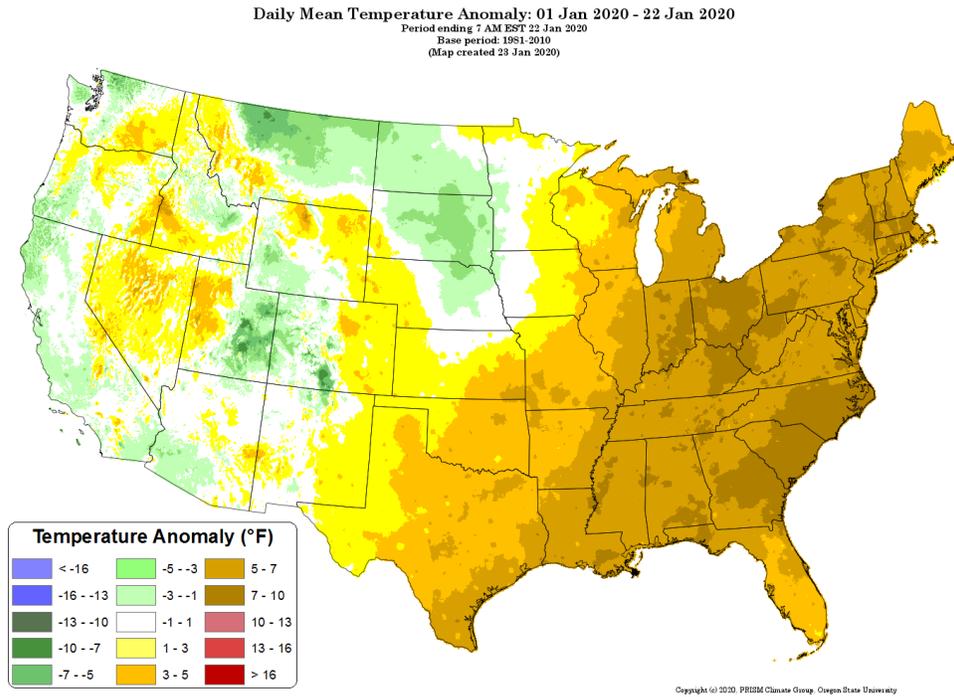
NOAA Regional Climate Centers

Water and Climate Update

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

Source: PRISM

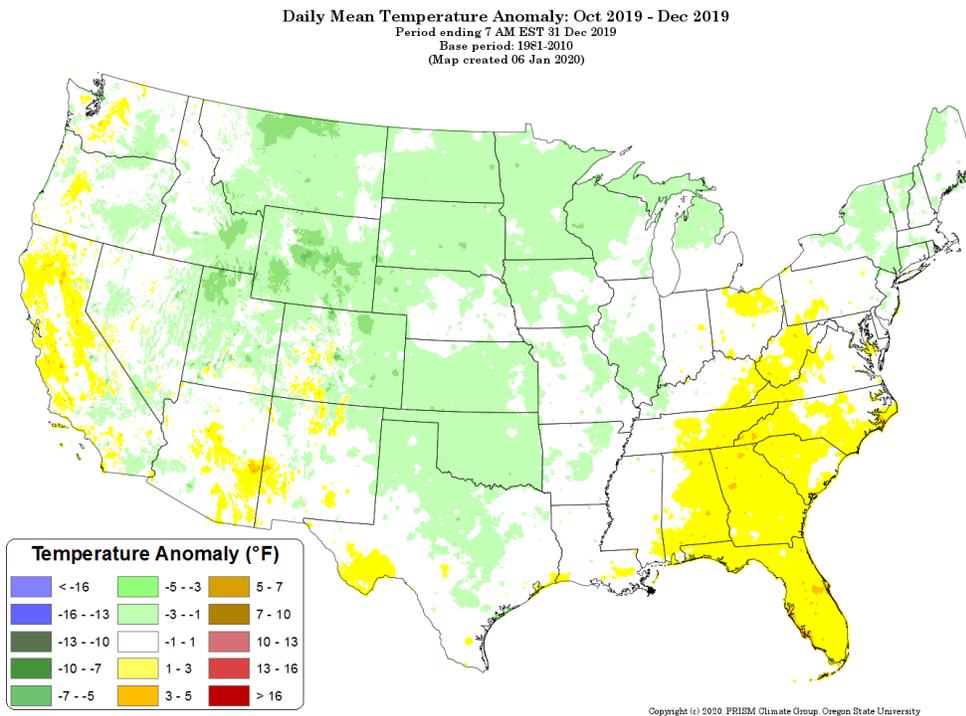
[Month-to-date national daily mean temperature anomaly map](#)



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

Source: PRISM

[October through December 2019 daily mean temperature anomaly map](#)



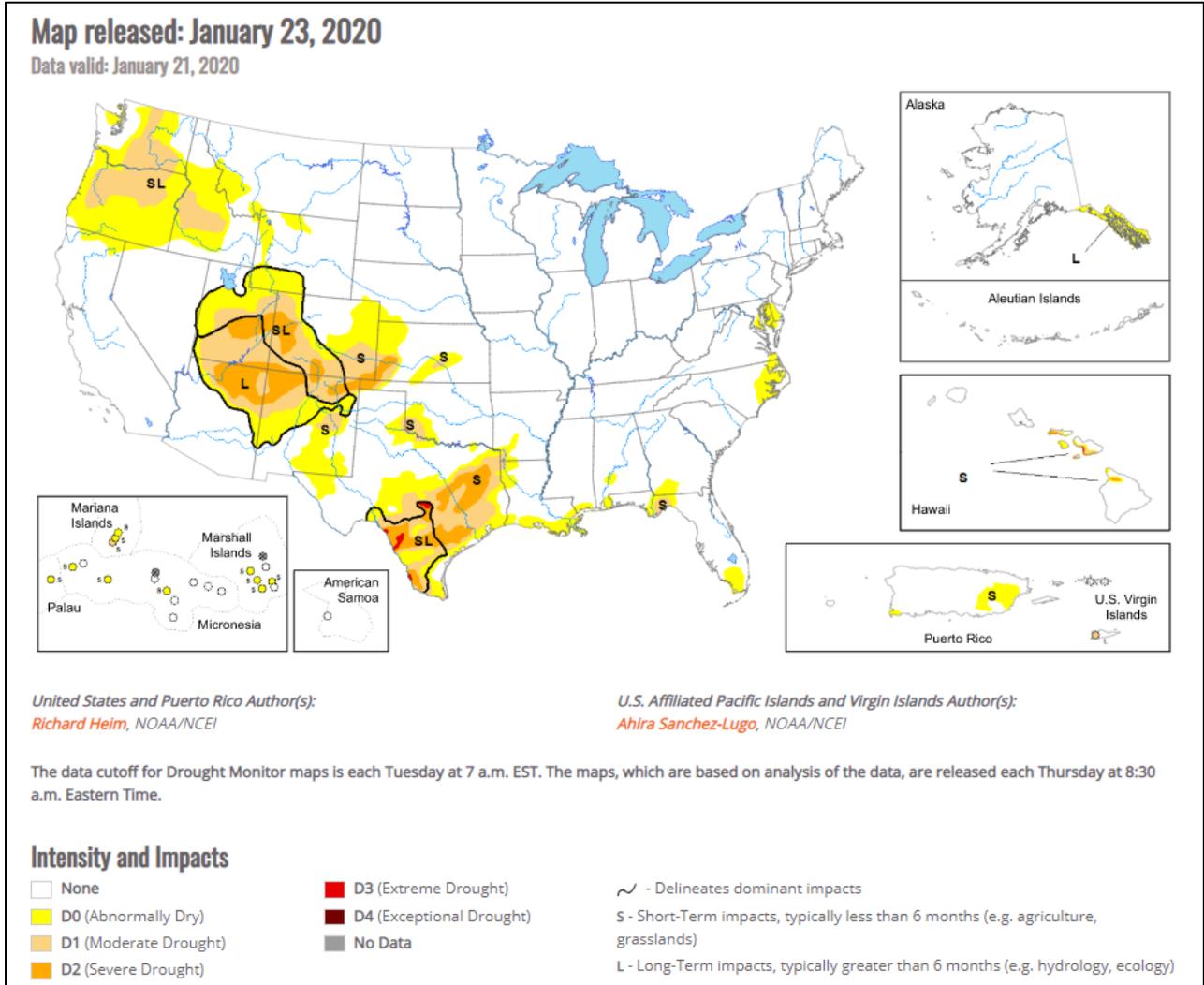
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), January 23, 2020

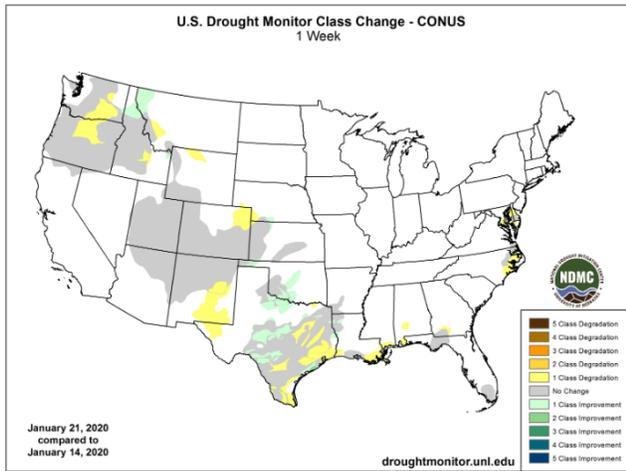
Source: National Drought Mitigation Center

“Pacific weather systems migrated across the contiguous U.S. (CONUS) in a fairly westerly jet stream flow during this U.S. Drought Monitor (USDM) week. East of the Rockies, they tapped Gulf of Mexico moisture and dropped above-normal precipitation in a storm track that stretched from Texas to the Great Lakes. The jet stream flow amplified as the week progressed, producing a strong trough over the eastern CONUS with a ridge migrating across the West into the central CONUS. Cold arctic air was directed by the trough into the East behind surface frontal low pressure systems. The Pacific fronts dropped precipitation along the coastal ranges, but the air masses quickly dried out as they crossed the interior West, resulting in below-normal precipitation from the High Plains west to the coastal ranges. The Gulf of Mexico and Atlantic coasts were mostly drier than normal. Weekly temperatures were warmer than normal from Texas to the Mid-Atlantic, and colder than normal along the West Coast and northern to central Plains. Drought and abnormal dryness expanded across parts of the West, southern Plains and Gulf Coast, and Mid-Atlantic coast, but contracted in parts of the northern Rockies and southern to central Plains, as well as Hawaii and the Alaska panhandle.”

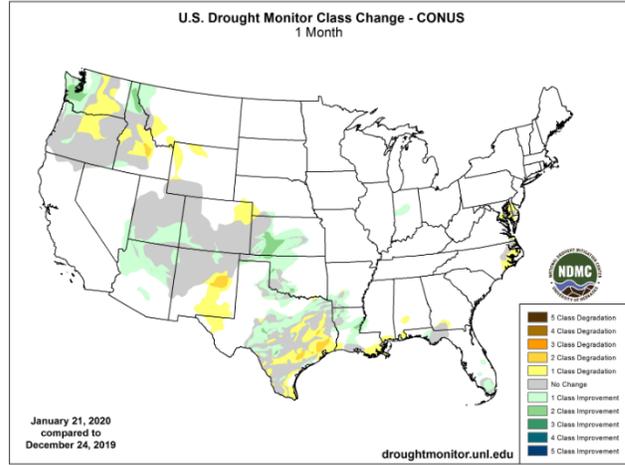
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

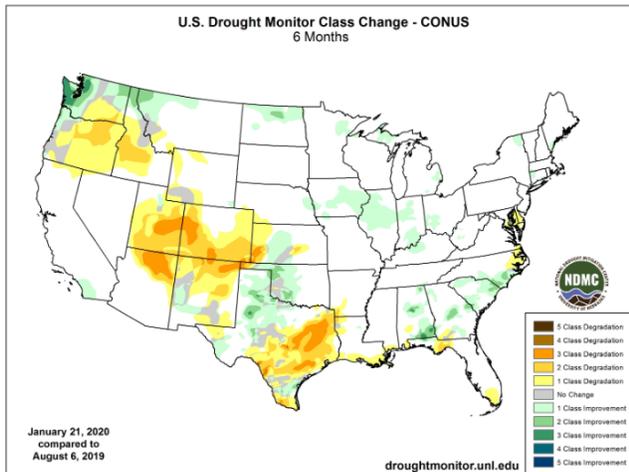
1 Week



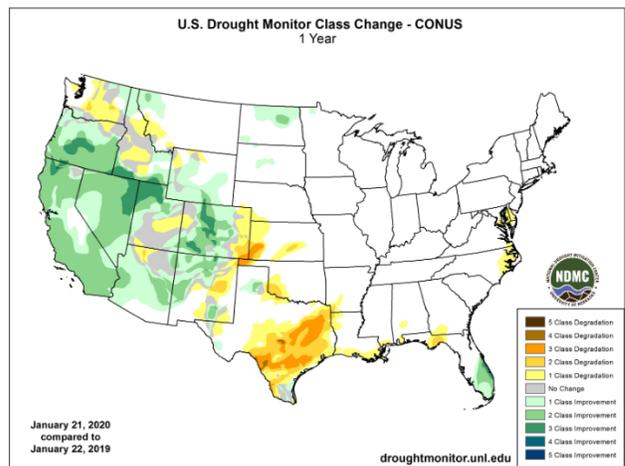
1 Month



6 Months



1 Year



[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

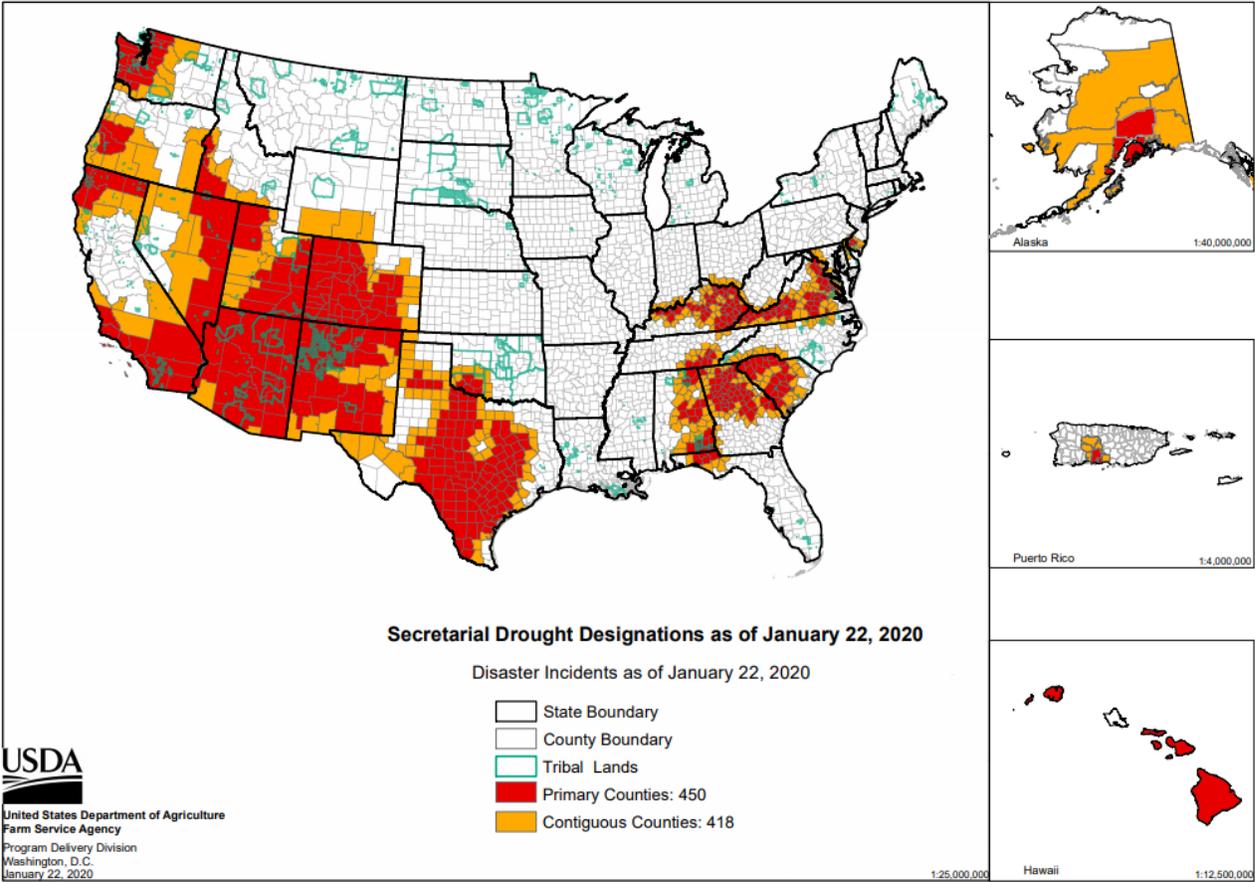
Highlighted Drought Resources

- [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

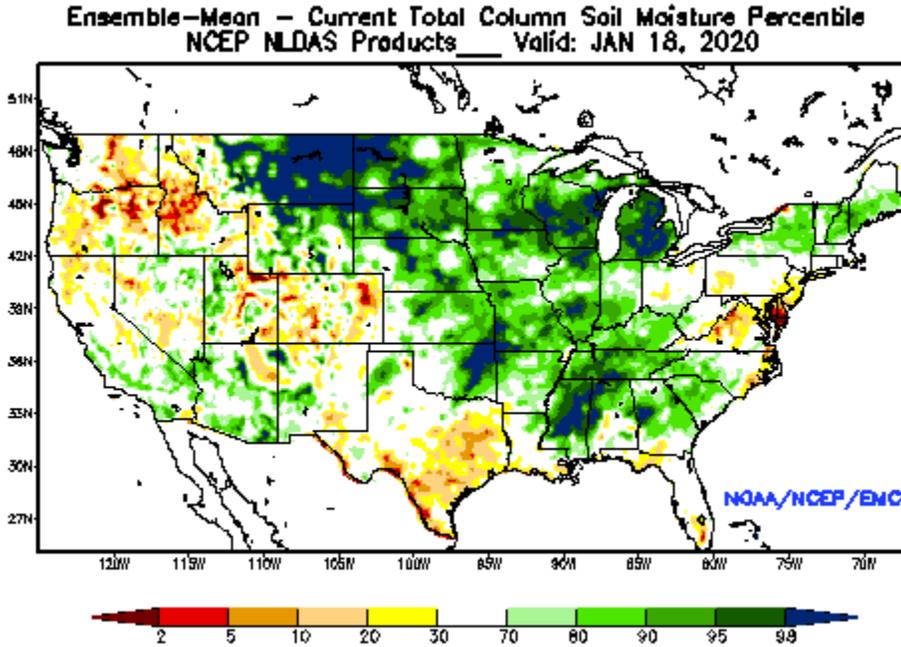
2019 Secretarial Drought Designations - All Drought



Other Climatic and Water Supply Indicators

Soil Moisture

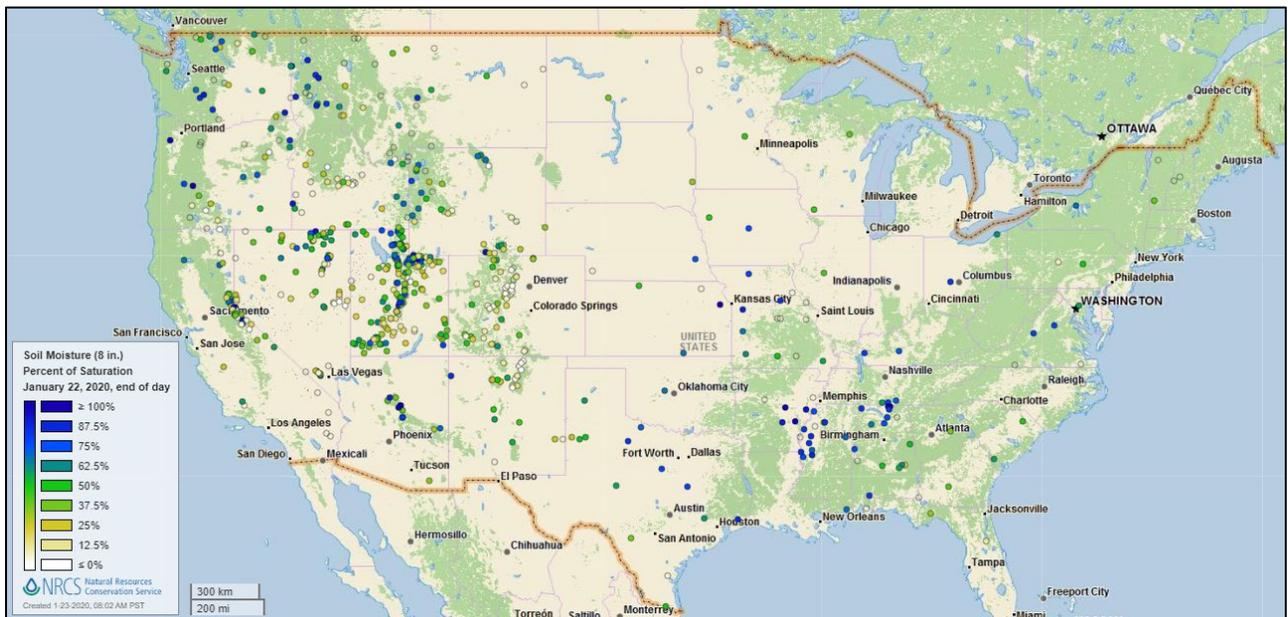
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of January 18, 2020

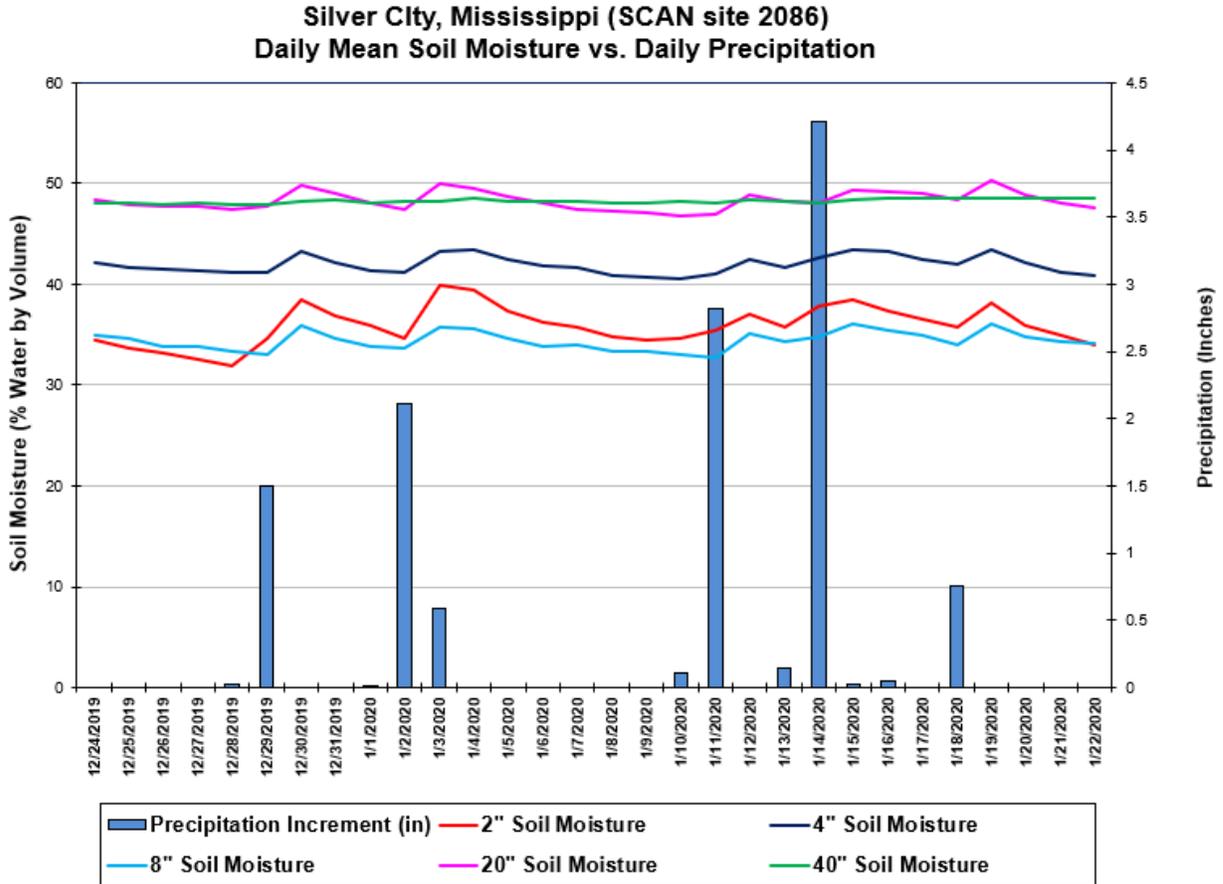
Soil Moisture Percent of Saturation

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



Soil Moisture Data

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



This chart shows the soil moisture and precipitation for the last 30 days at the [Silver City](#) SCAN site in Mississippi. Several precipitation events throughout the month resulted in increased soil moisture at the -2", -4", -8", and -20" sensor depths.

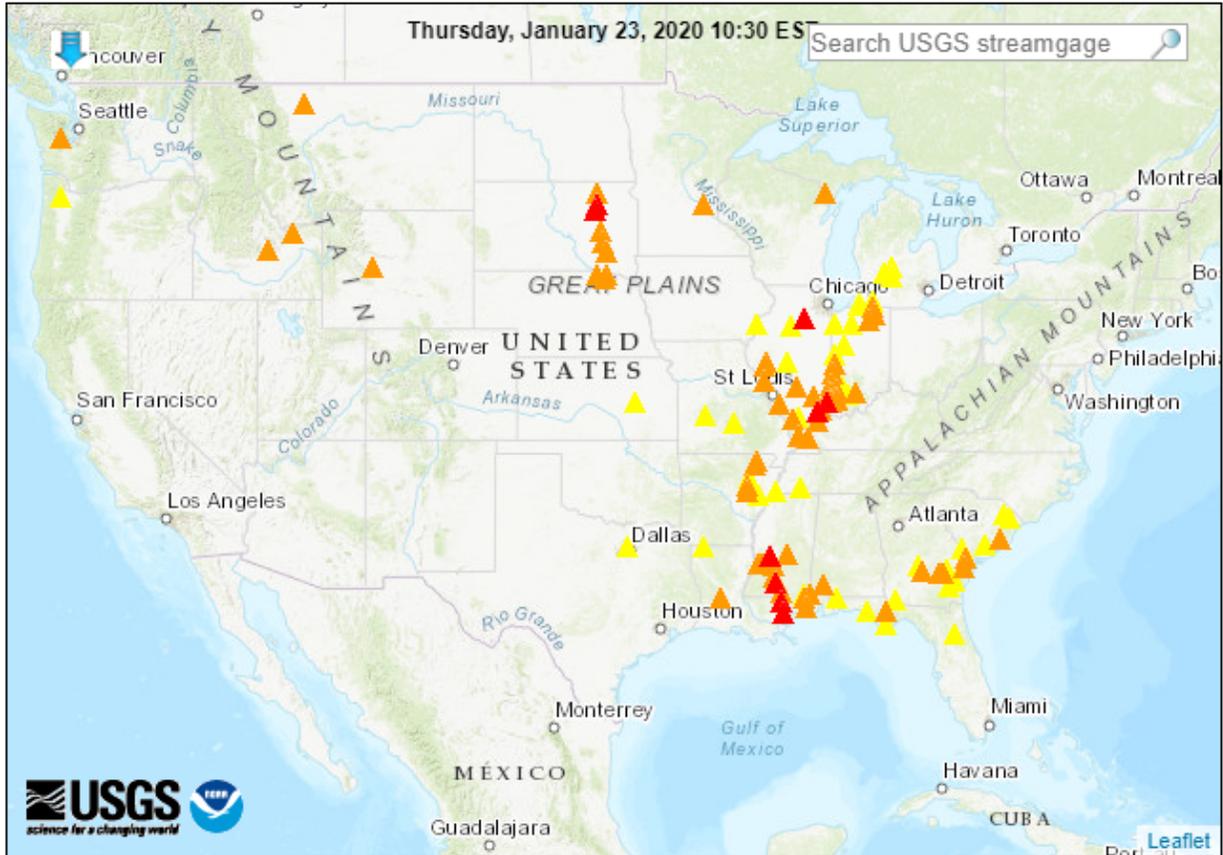
Soil Moisture Data Portals

- [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

Map of flood and high flow conditions
 (70 in floods [moderate: 9, minor: 61], 40 in near-flood)



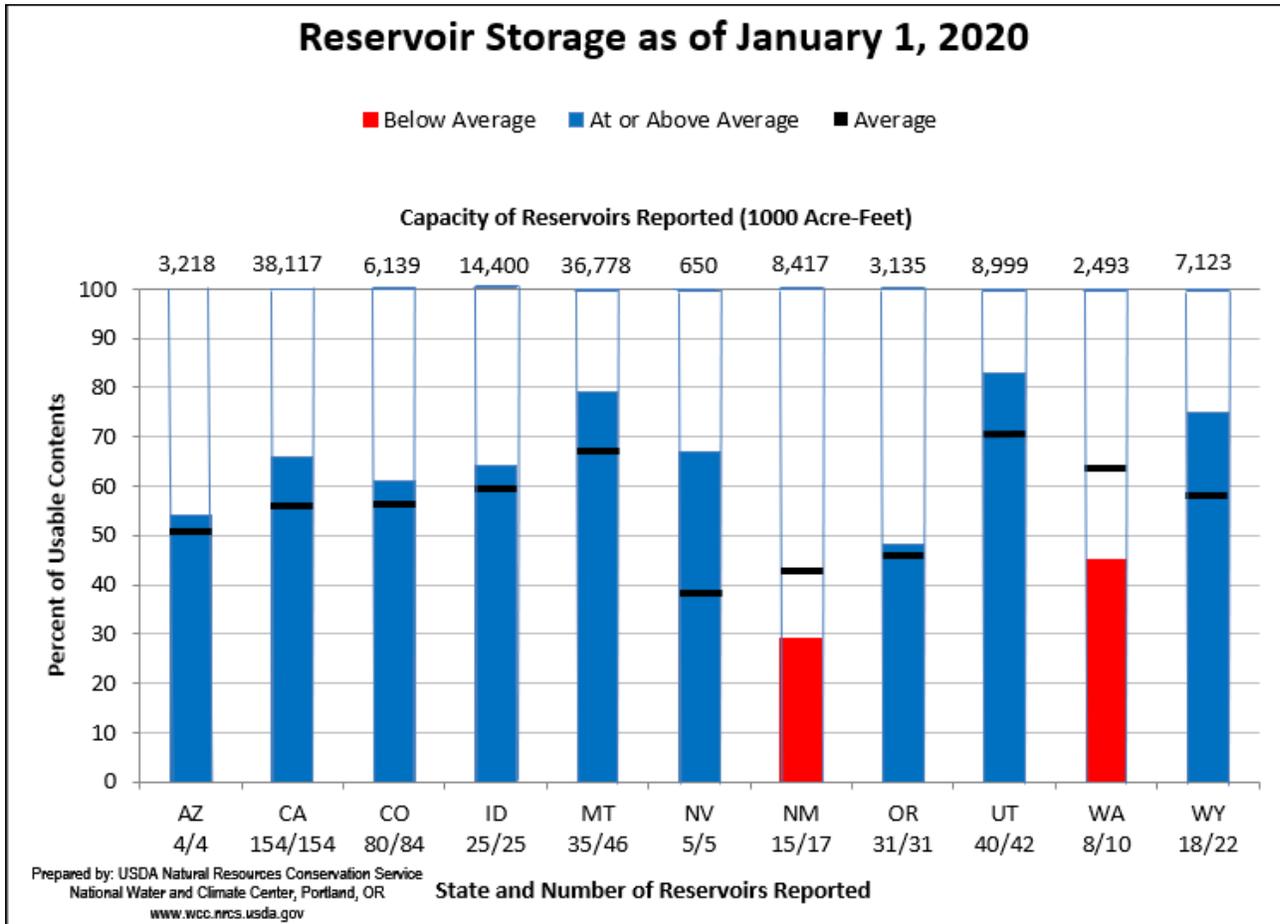
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
△ Streamgage with flood stage			○ Streamgage without flood stage			

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

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center



January 1, 2020 Reservoir Storage: [Chart](#) | [Dataset](#)

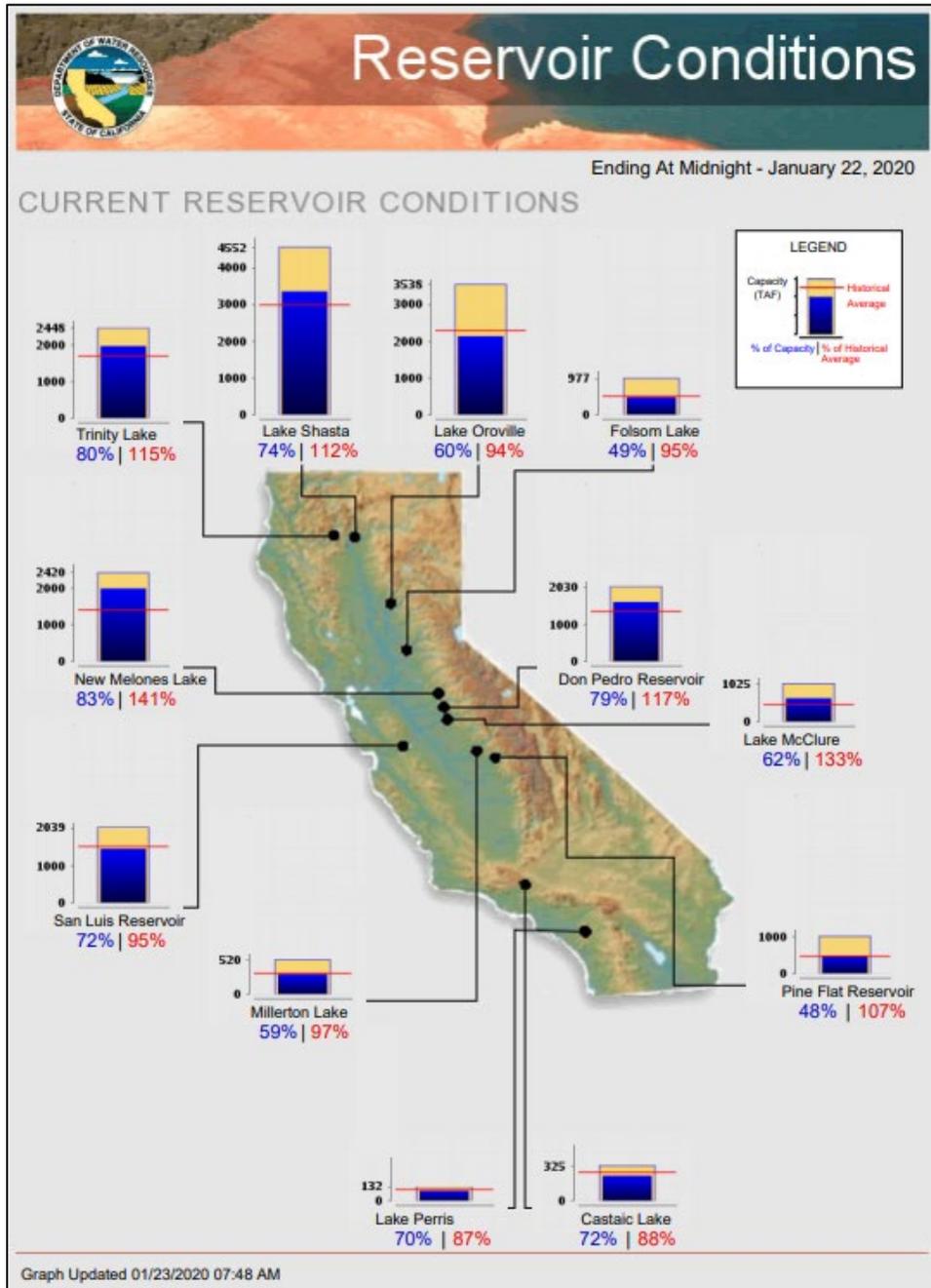
Hydromet Tea Cup Reservoir Depictions

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](#)

Short- and Long-Range Outlooks

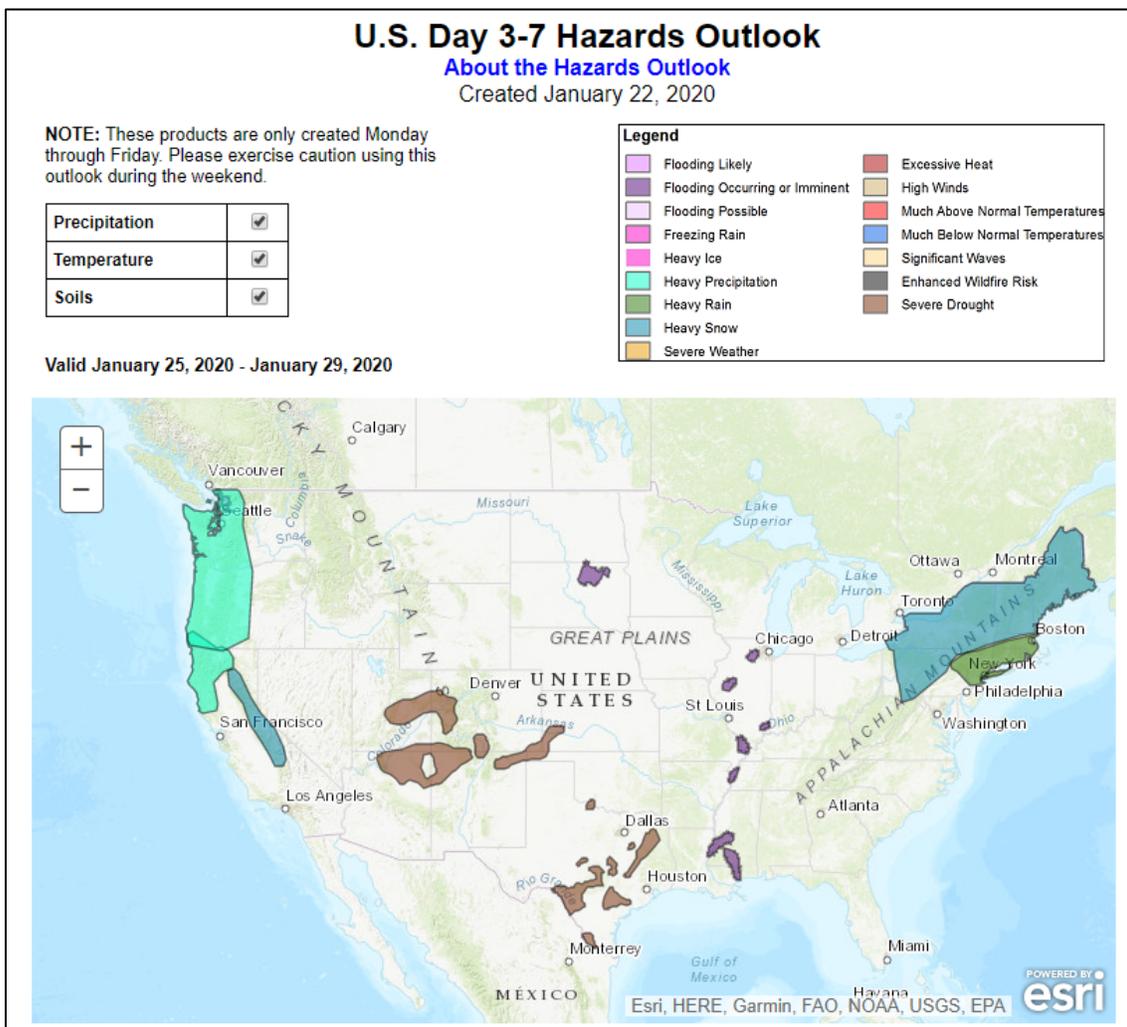
Agricultural Weather Highlights

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

National Outlook, Thursday, January 23, 2020: “A storm system will linger across the Midwest through Saturday before reaching New England on Sunday. A mix of rain and wintry precipitation will accompany the slow-moving storm. Meanwhile, rain will end on Friday across the South, where 1- to 2-inch totals may occur in the southern Appalachians. In contrast, mostly dry weather will prevail during the next 5 days from southern California to the southern High Plains. Stormy weather will prevail, however, across the northern half of the western U.S., with late-week precipitation becoming heavy in northern California and the Pacific Northwest. In western Washington, local flooding could develop later today into Friday. The NWS 6- to 10-day outlook for January 28 – February 1 calls for warmer-than-normal weather nationwide, except for near- or below-normal temperatures in parts of the Southwest. Meanwhile, wetter-than-normal conditions will dominate most areas of the country, including the Plains, Ohio Valley, Southeast, and Northwest, while near- or below-normal precipitation will be limited to a small area from central and southern California into parts of the Southwest, as well the nation’s northern tier from Lake Superior to Maine.”

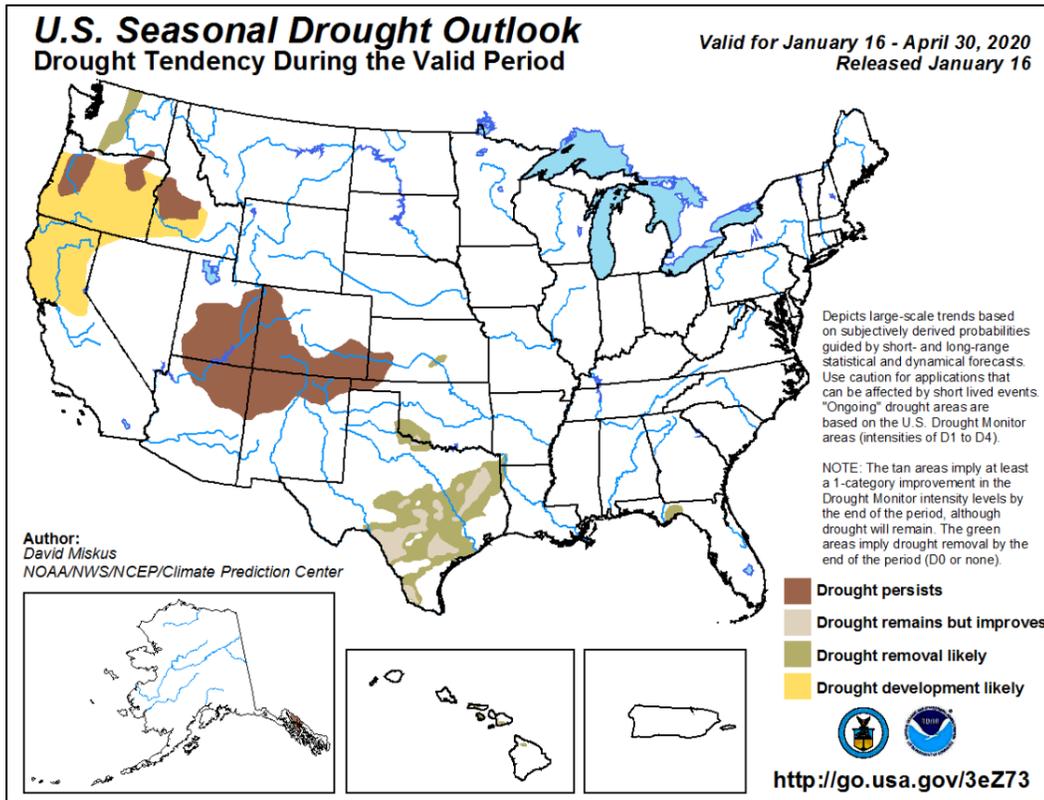
Weather Hazards Outlook: [January 25 - 29, 2020](#)

Source: NOAA Climate Prediction Center



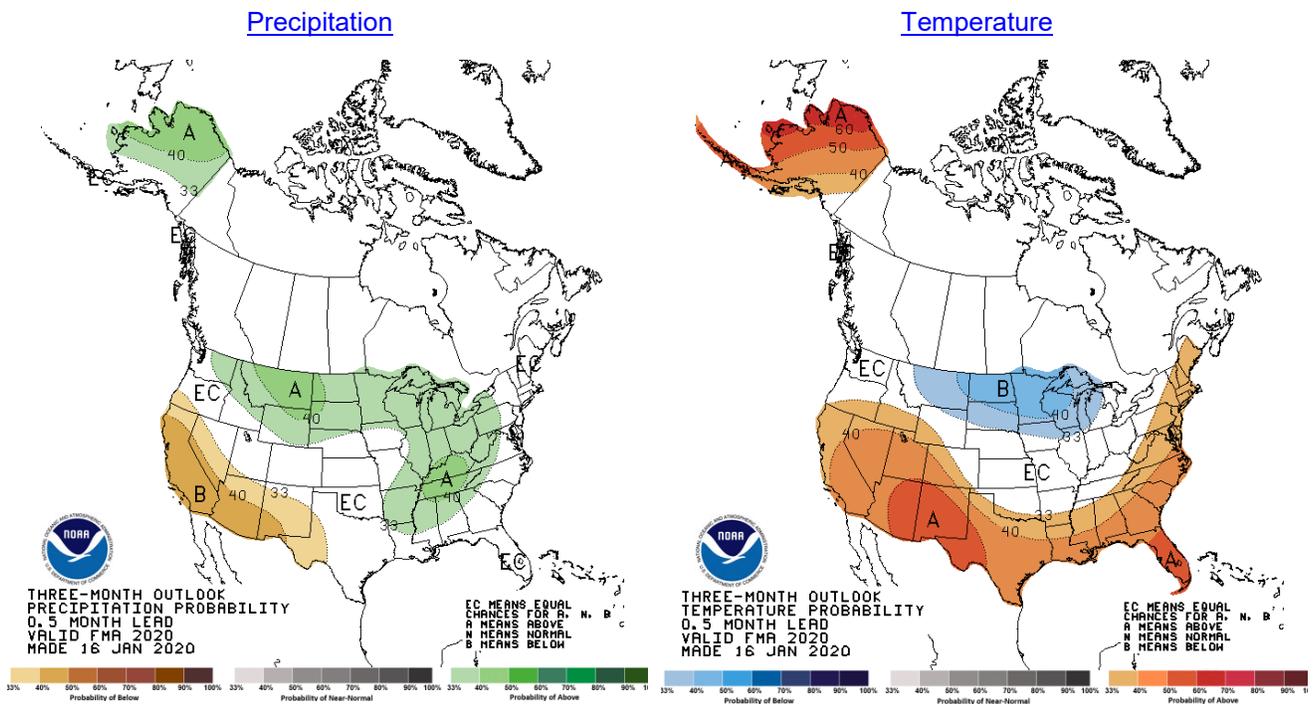
Seasonal Drought Outlook: [January 16 – April 30, 2020](#)

Source: National Weather Service



Climate Prediction Center 3-Month Outlook

Source: National Weather Service



[February-March-April \(FMA\) 2020 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](#).