

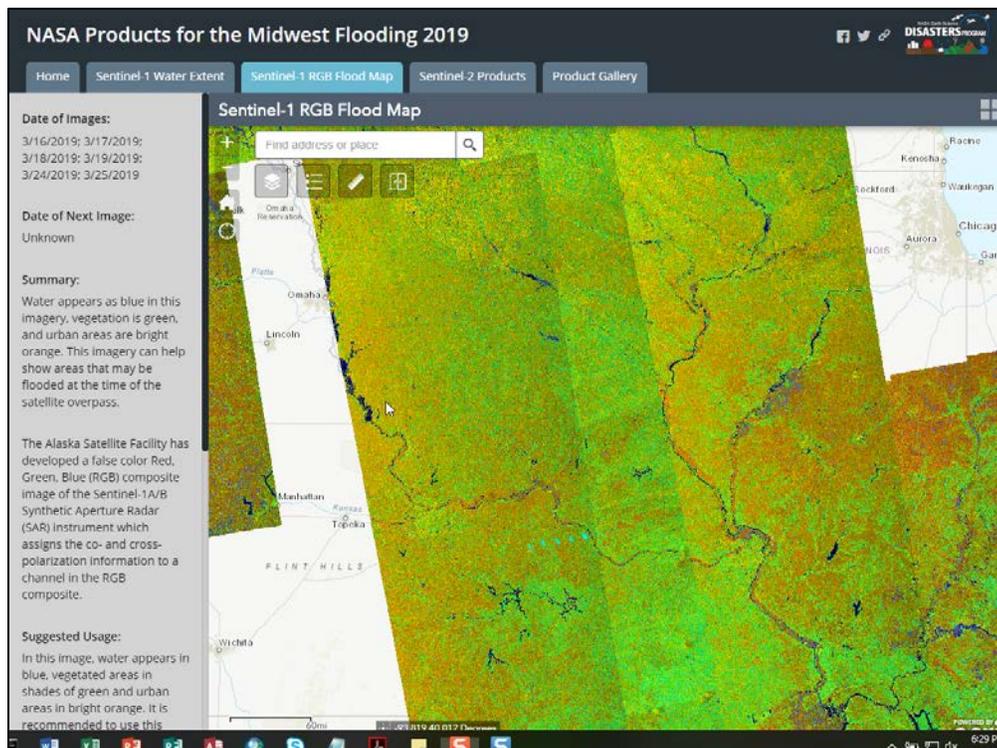
Water and Climate Update

April 4, 2019

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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Precipitation	3	Short- and Long-Range Outlooks.....	18
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Midwest flooding continues as recovery begins



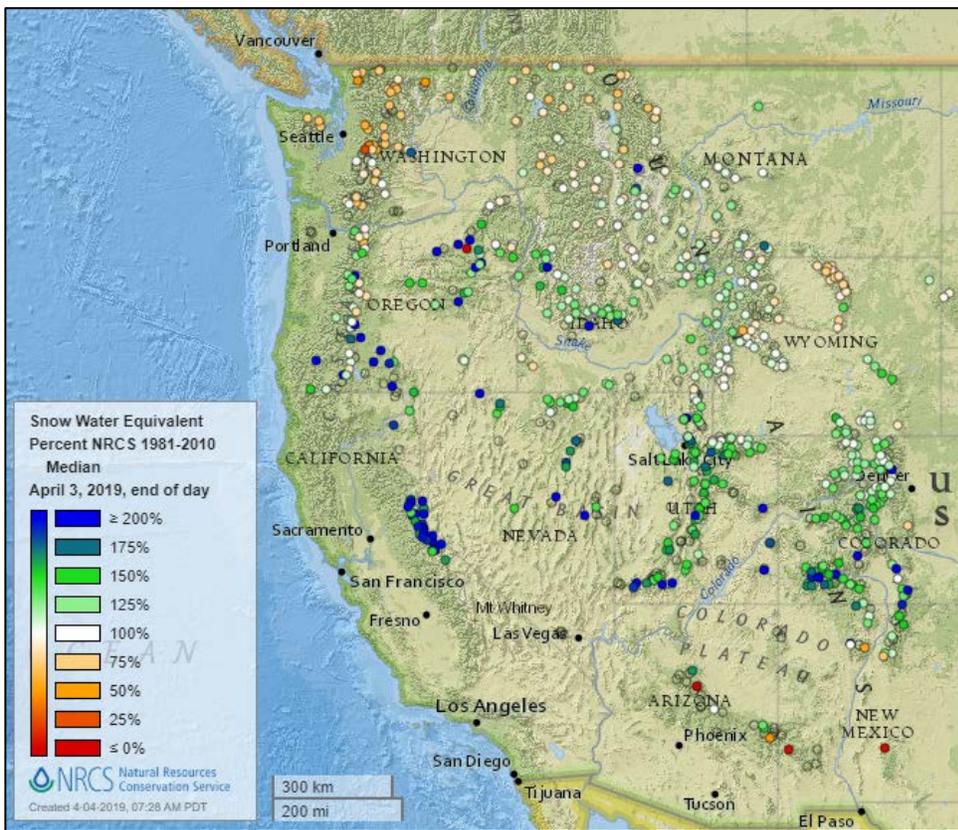
While some areas of the Midwest remain flooded, other areas are working hard at recovery from the recent flood disaster. The [NASA satellite picture](#) shows the areas currently covered in flood water. Many areas have severe levee damage, and the Army Corps of Engineers in the Missouri Basin reported that at least 62 levees have been breached or overtopped. U.S. Department of Agriculture Secretary Sonny Perdue has directed regional, state, and county offices to assist residents, agricultural producers, and impacted communities.

Related:

- [‘Breaches Everywhere’: Flooding Bursts Midwest Levees, and Tough Questions Follow](#) – NY Times
- [USDA Assists Iowa Farmers, Ranchers, and Communities Affected by Recent Flooding](#) - USDA
- [Disaster aid won't cover crops drowned by Midwest floods](#) – Reuters
- [USDA: U.S. crop production unlikely to suffer much from floods](#) – SuccessfulFarming
- [USDA Under Secretary Northey visits Missouri farm to see damage, hear concerns](#) FarmProgress
- [More than 1 million acres of U.S. cropland ravaged by floods](#) – WIFC (WI)

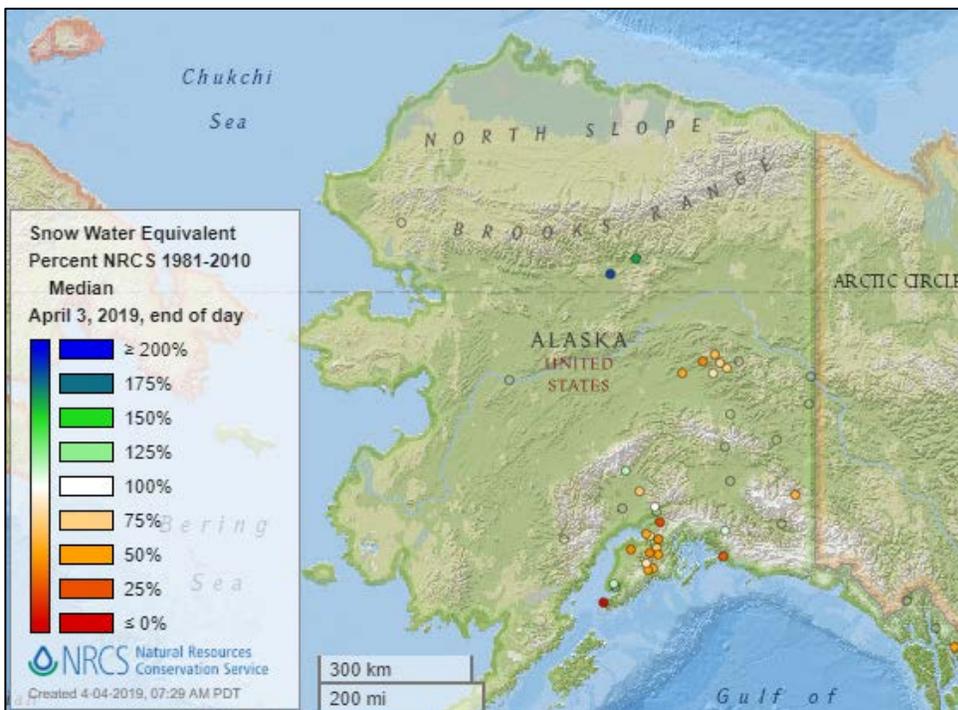
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



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

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

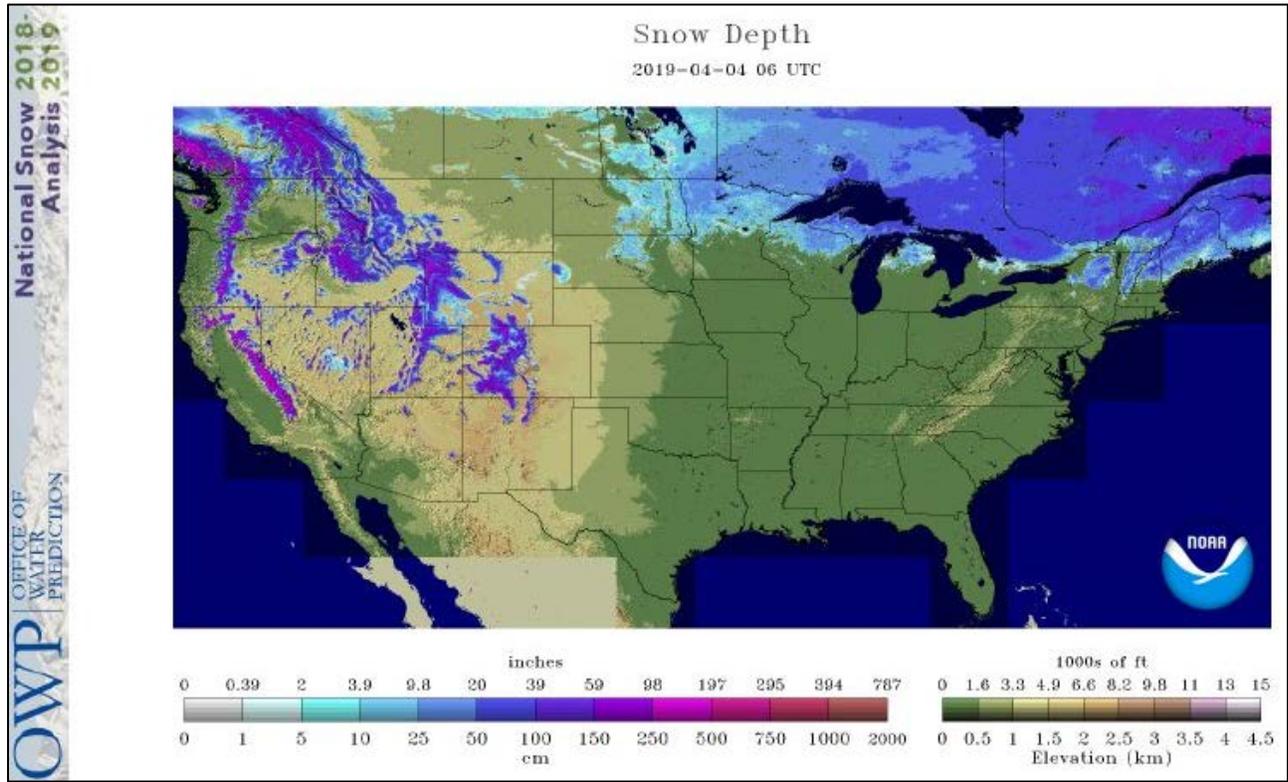


[Alaska snow water equivalent percent of median map](#)

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

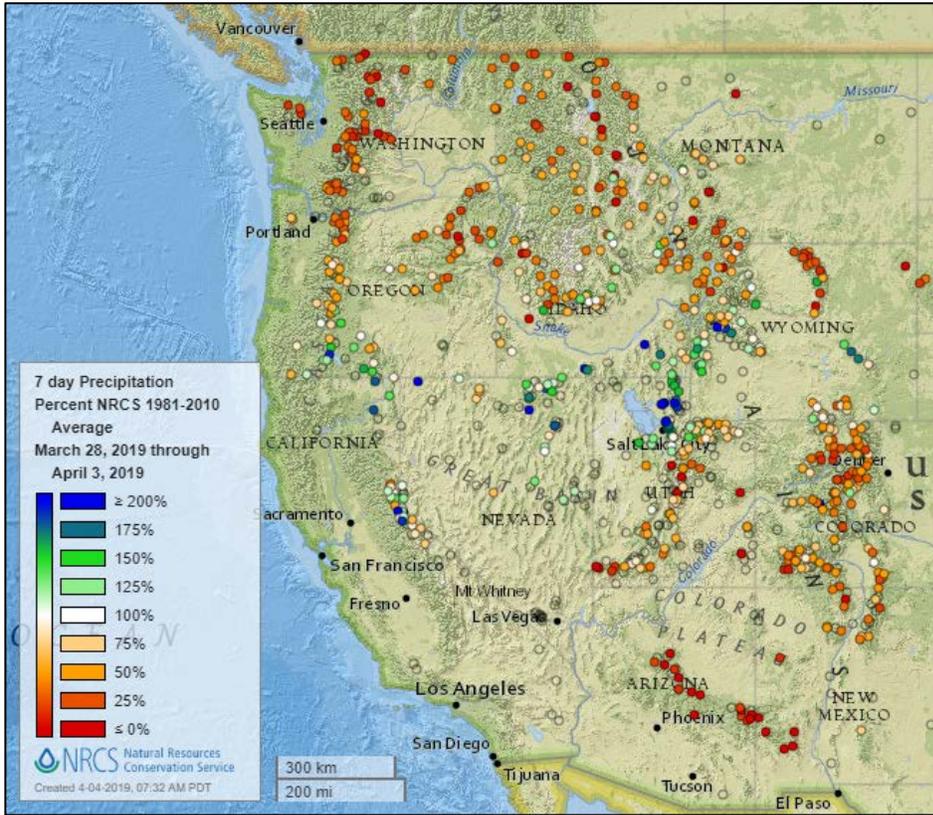
Current Snow Depth

Source: National Weather Service Snow Analysis



Precipitation

Last 7 Days, NRCS SNOTEL Network

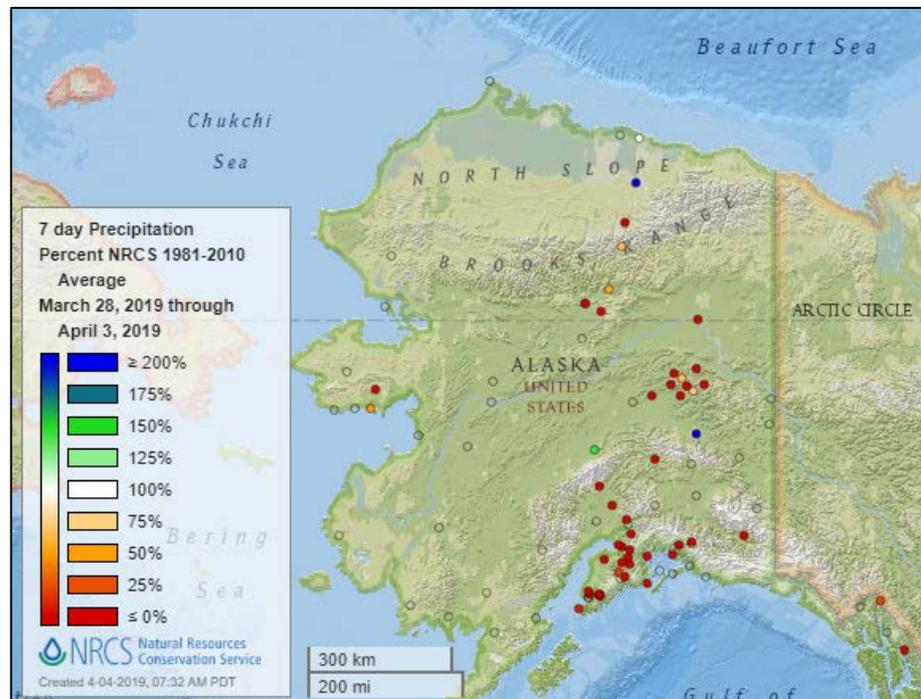


[7-day precipitation percent of average map](#)

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](#)



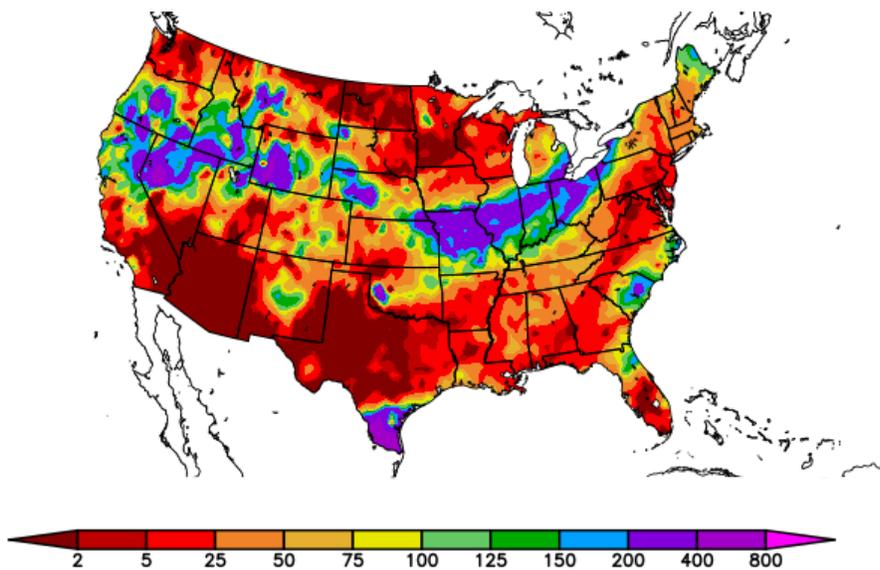
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
3/28/2019 – 4/3/2019



Generated 4/4/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

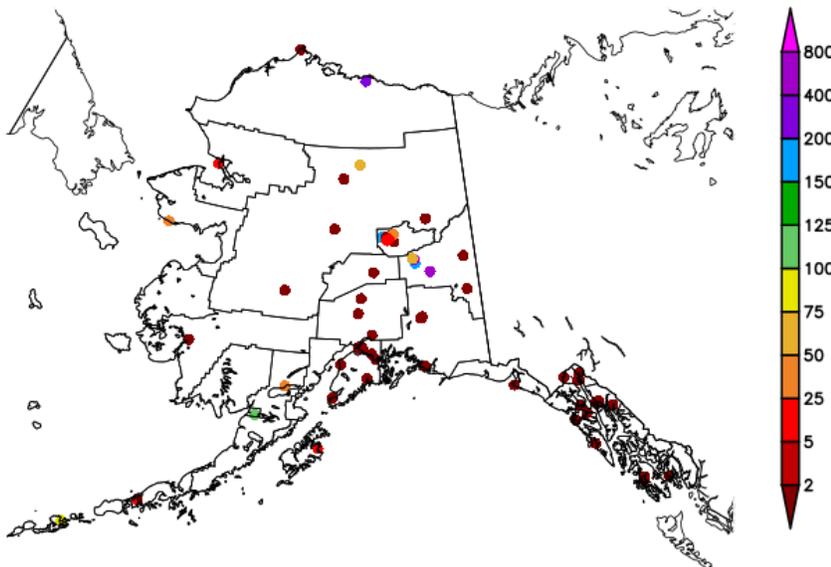
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)
3/28/2019 – 4/3/2019



Generated 4/4/2019 at HPRCC using provisional data.

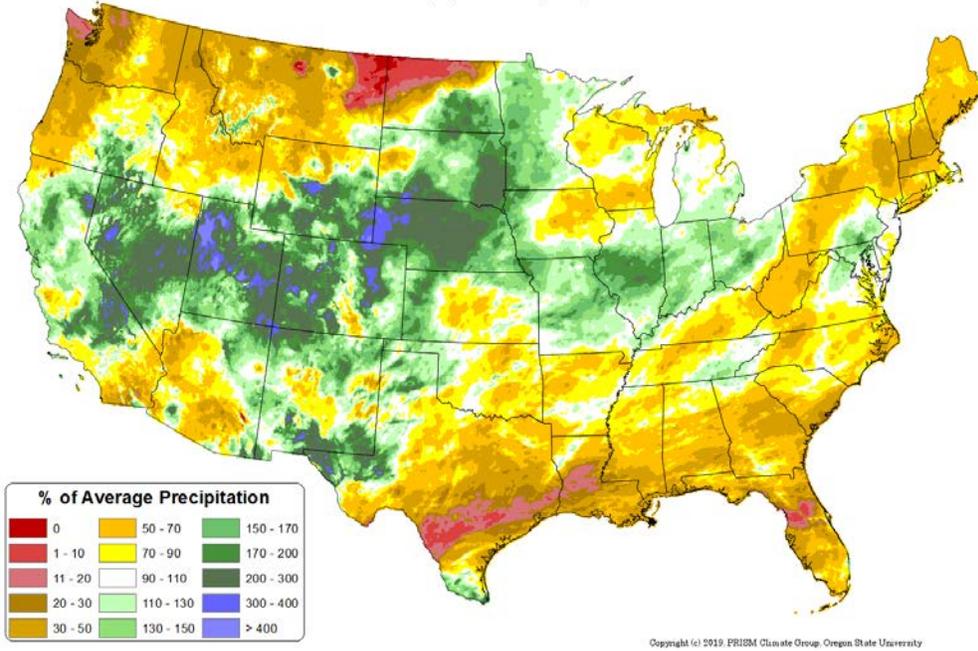
NOAA Regional Climate Centers

Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

Total Precipitation Anomaly: Mar 2019
Period ending 31 Mar 2019
Base period: 1981-2010
(Map created 02 Apr 2019)

[Previous month national total precipitation percent of average map](#)

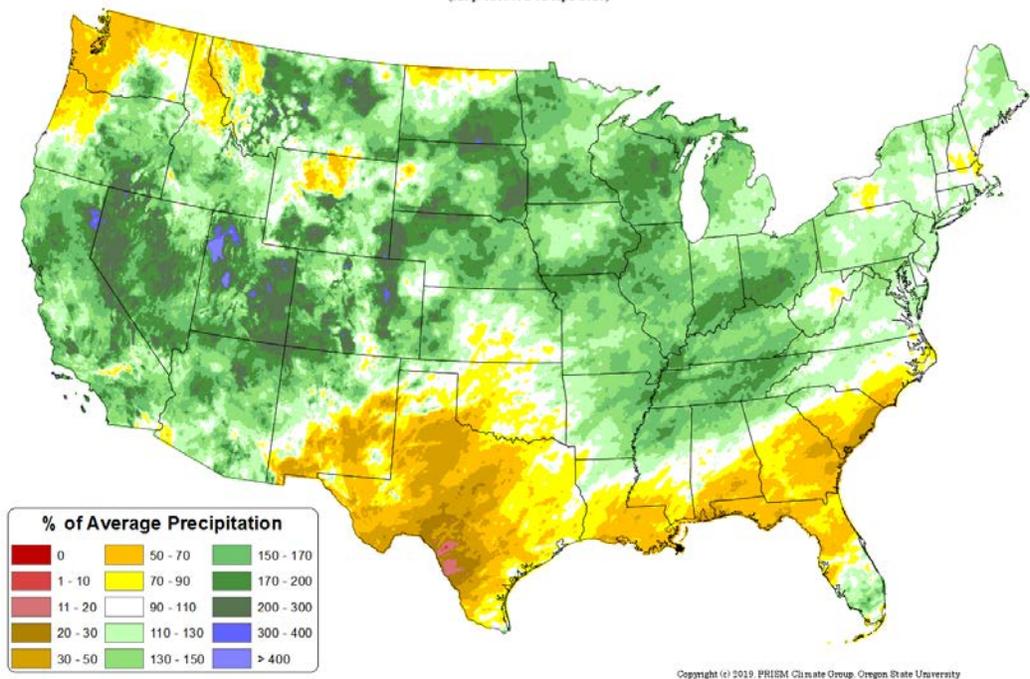


Last 3 Months, All Available Data Including SNOTEL and NWS Networks

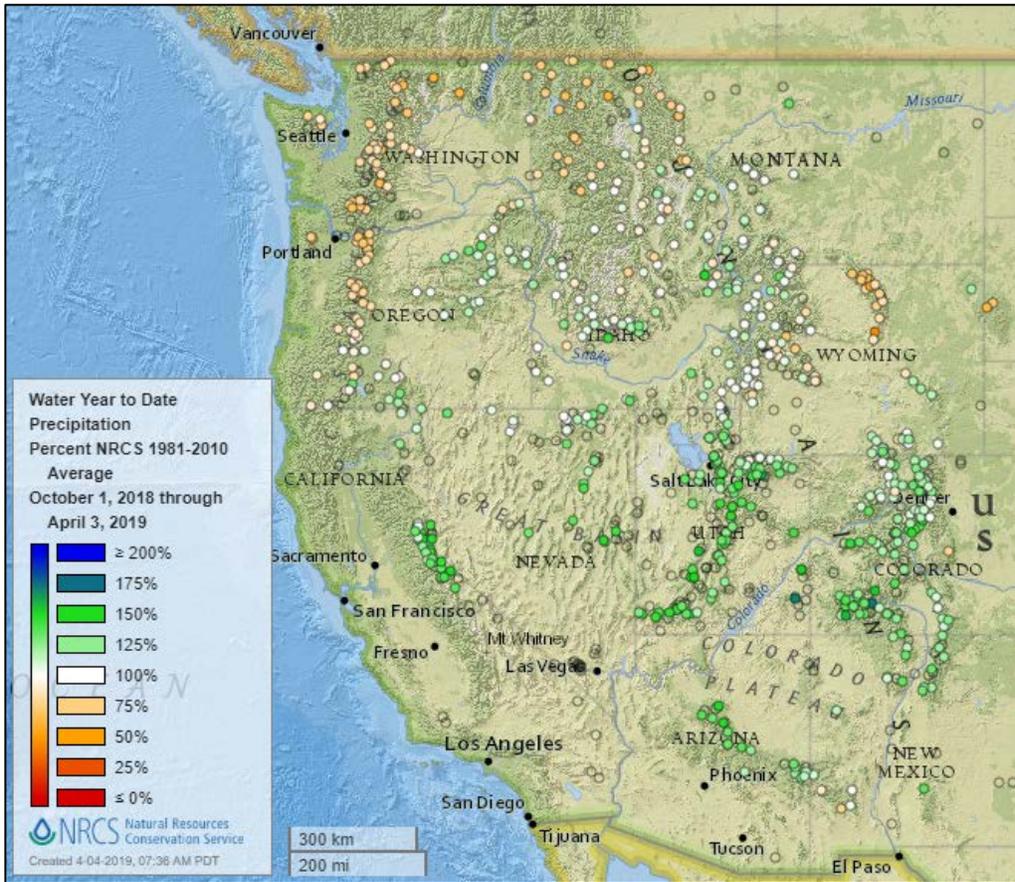
Source: PRISM

[January through March 2019 total precipitation percent of average map](#)

Total Precipitation Anomaly: Jan 2019 - Mar 2019
Period ending 7 AM EST 31 Mar 2019
Base period: 1981-2010
(Map created 02 Apr 2019)

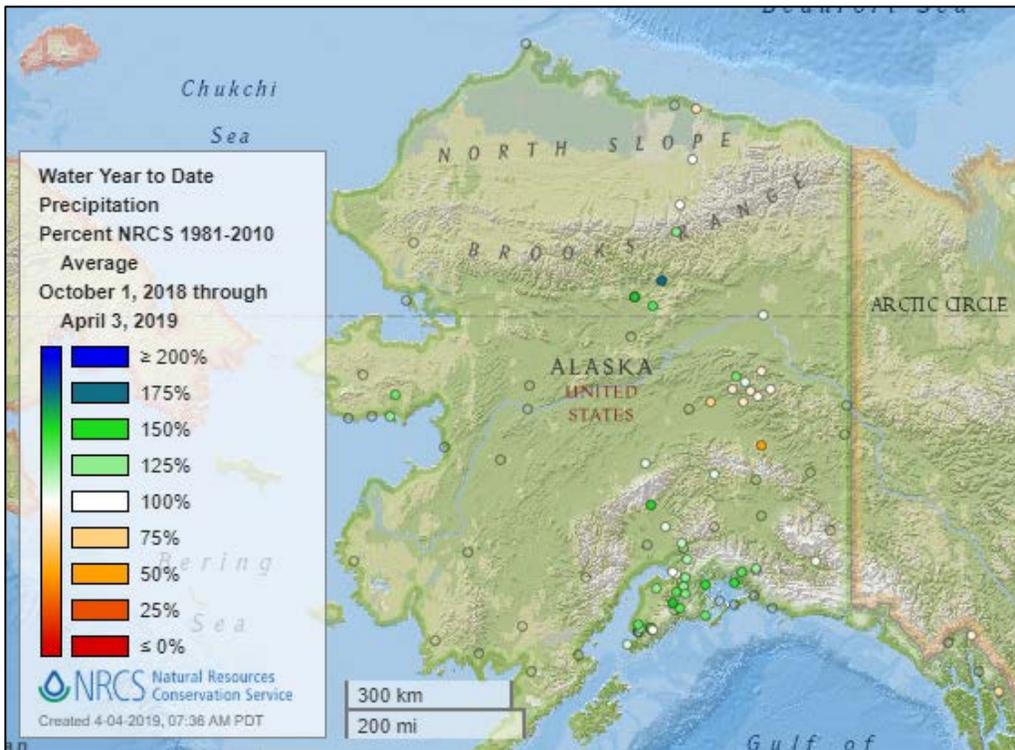


Water Year-to-Date, NRCS SNOTEL Network



[2019 water year-to-date precipitation percent of average map](#)

See also:
[2019 water year-to-date precipitation values \(inches\) map](#)



[Alaska 2019 water year-to-date precipitation percent of average map](#)

See also:
[Alaska 2019 water year-to-date precipitation values \(inches\) map](#)

Temperature

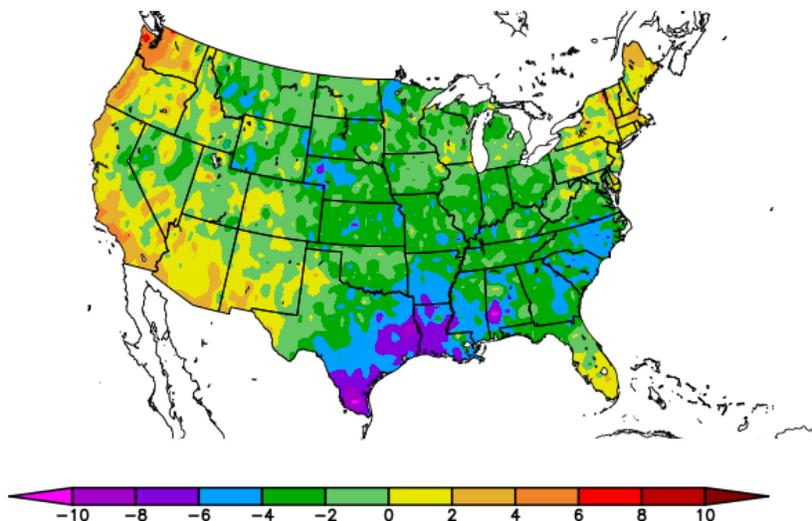
Last 7 Days, National Weather Service (NWS) Networks

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)
3/28/2019 – 4/3/2019



Generated 4/4/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

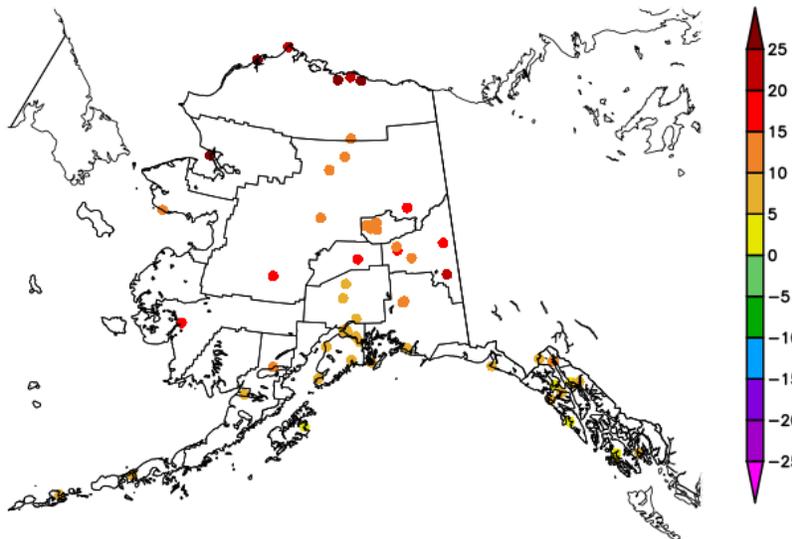
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
3/28/2019 – 4/3/2019



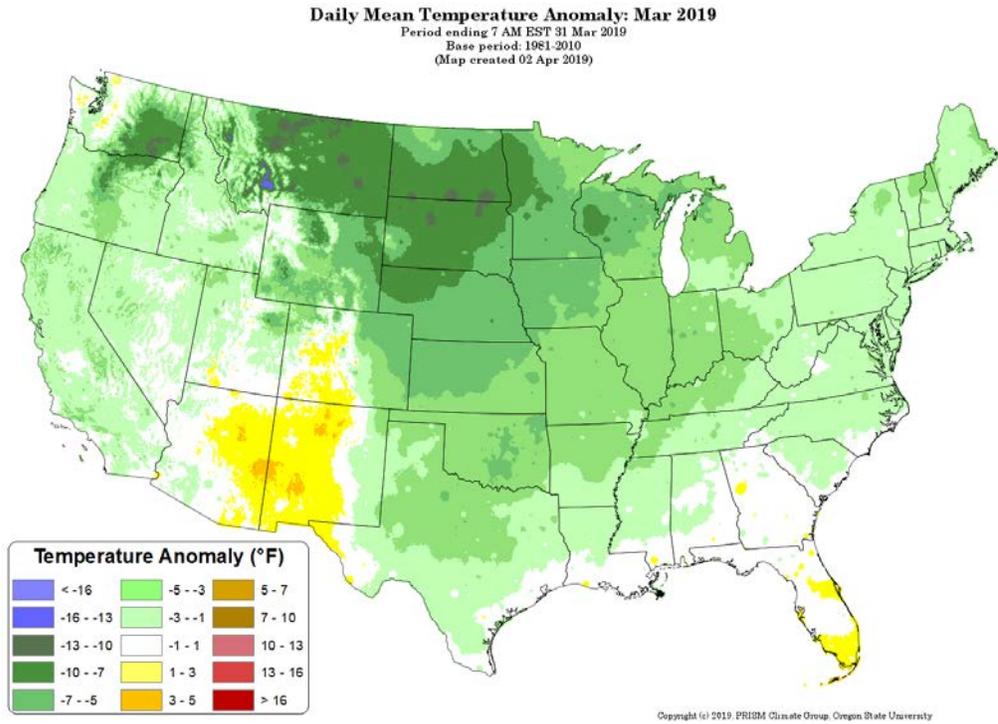
Generated 4/4/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

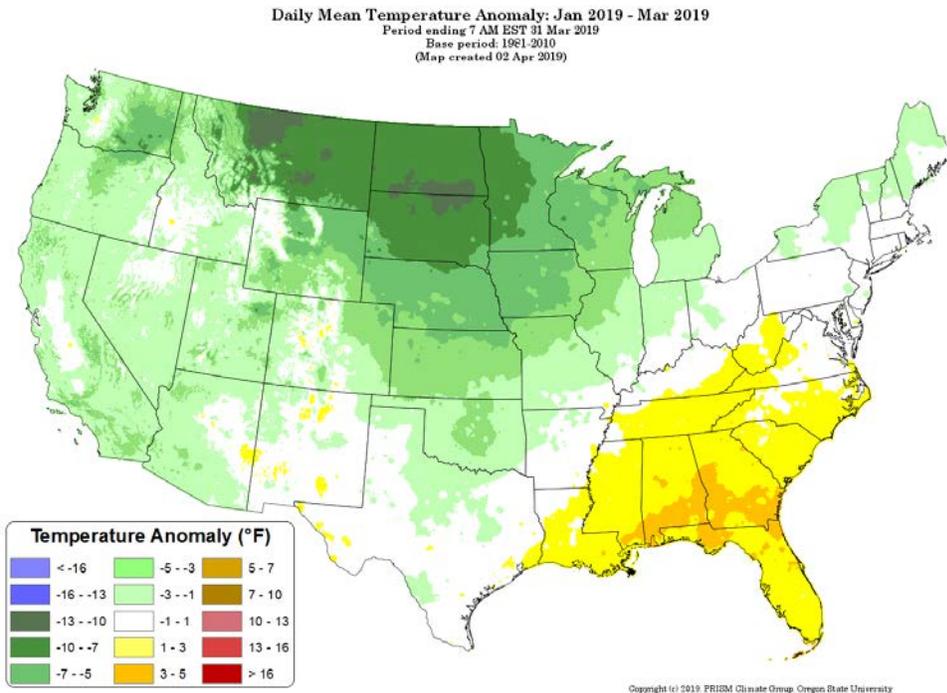
[Previous month national daily mean temperature anomaly map](#)



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

Source: PRISM

[January through March 2019 daily mean temperature anomaly map](#)



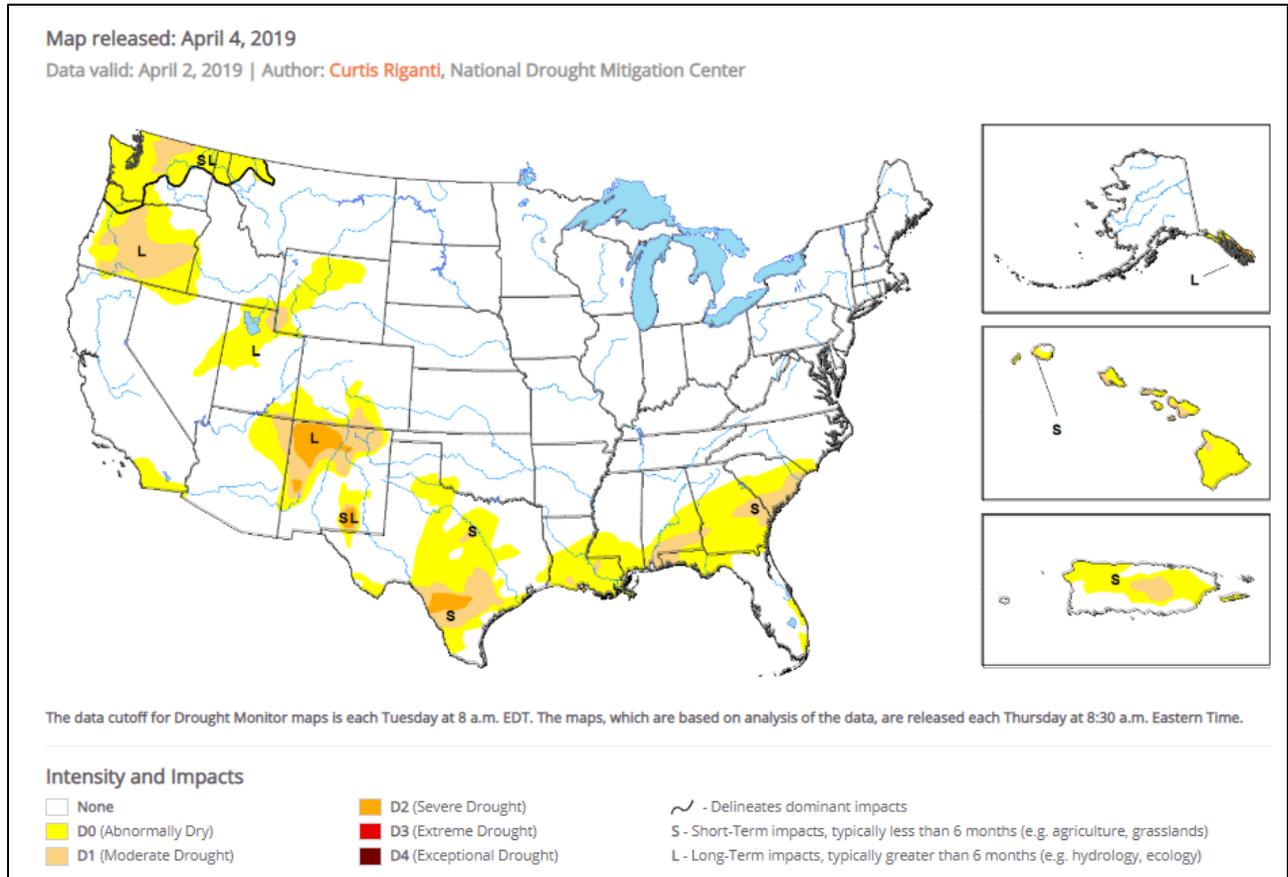
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), April 4, 2019

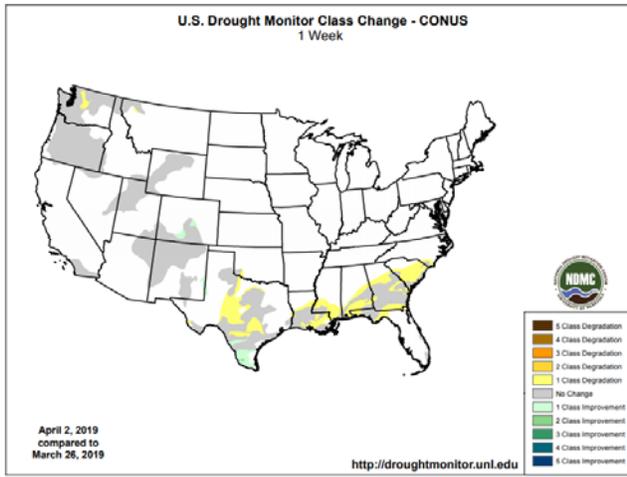
Author: Curtis Riganti, National Drought Mitigation Center

“Large portions of the continental United States remained free of drought or abnormal dryness this week. The Northeast was completely free of drought or abnormal dryness, as was the Midwest, where significant river flooding concerns continued. Short-term dryness continued in parts of central and western Texas, with some moderate and severe drought shifting northward, while widespread rain in southern Texas led to improvements in conditions there. Short-term precipitation deficits in southern Alabama, southern Georgia, southern Louisiana, the Florida Panhandle, and South Carolina led to the expansion of abnormal dryness and moderate drought in some of these areas. Moderate drought was also expanded in parts of north-central Washington in response to short-term precipitation deficits there. Another dry week in Hawaii led to degradation in drought conditions on most of the islands.”

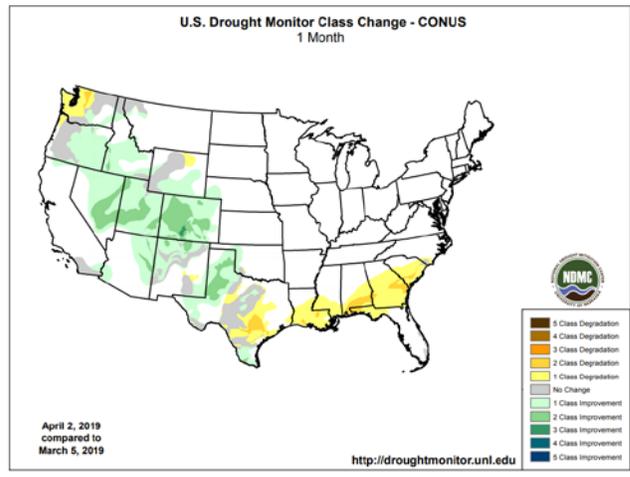
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

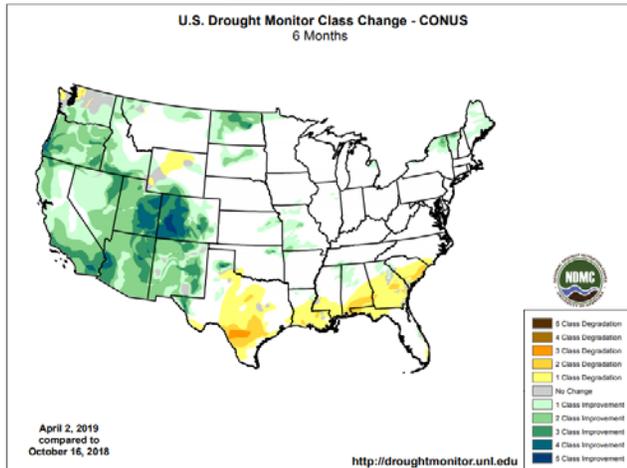
1 Week



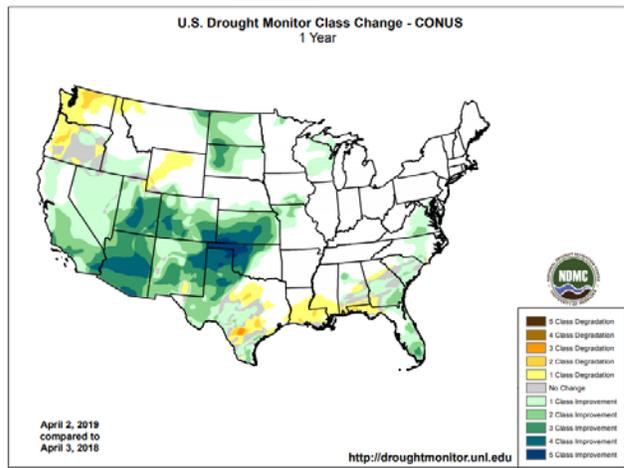
1 Month



6 Months



1 Year



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

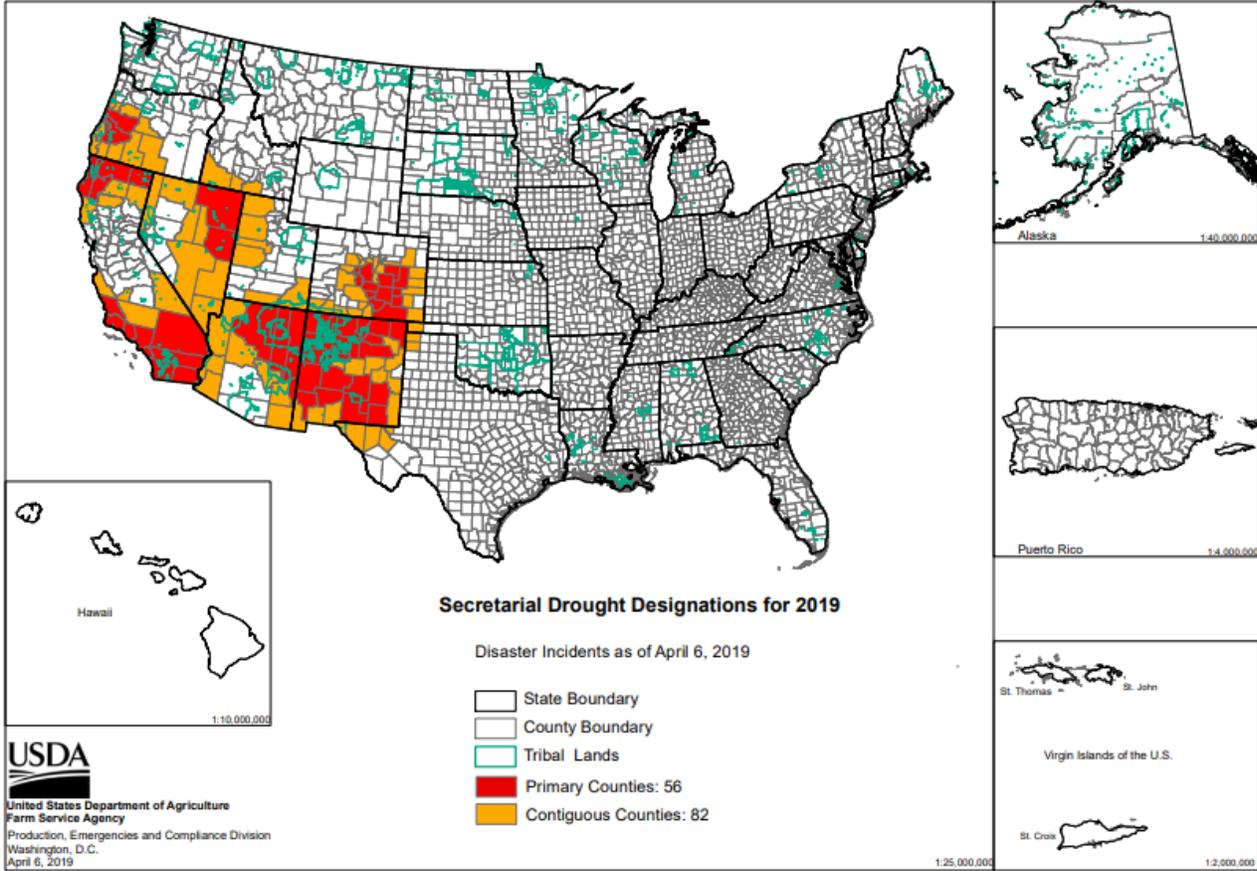
Highlighted Drought Resources

- [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

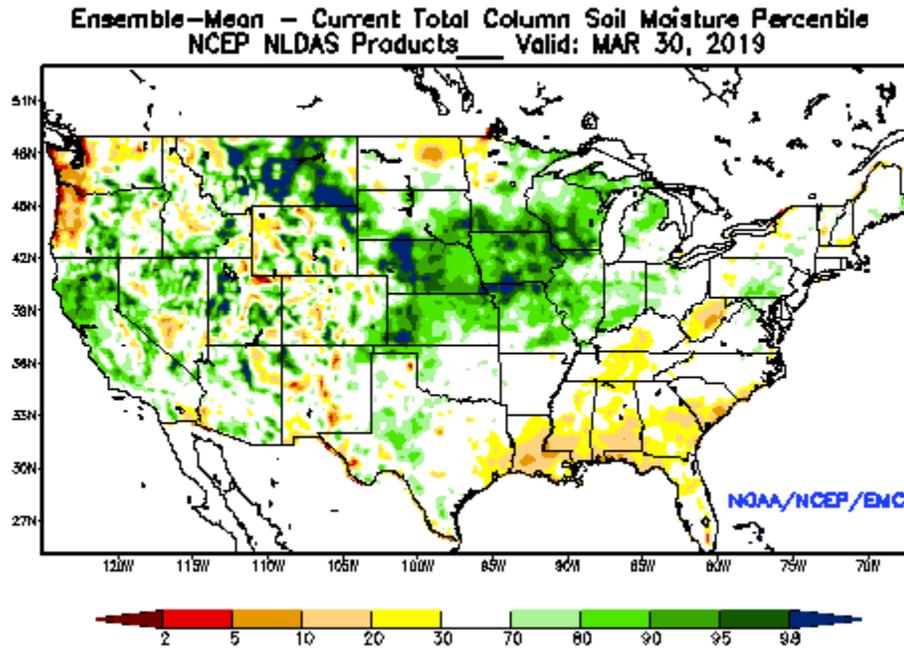
2019 Secretarial Drought Designations - All Drought



Other Climatic and Water Supply Indicators

Soil Moisture

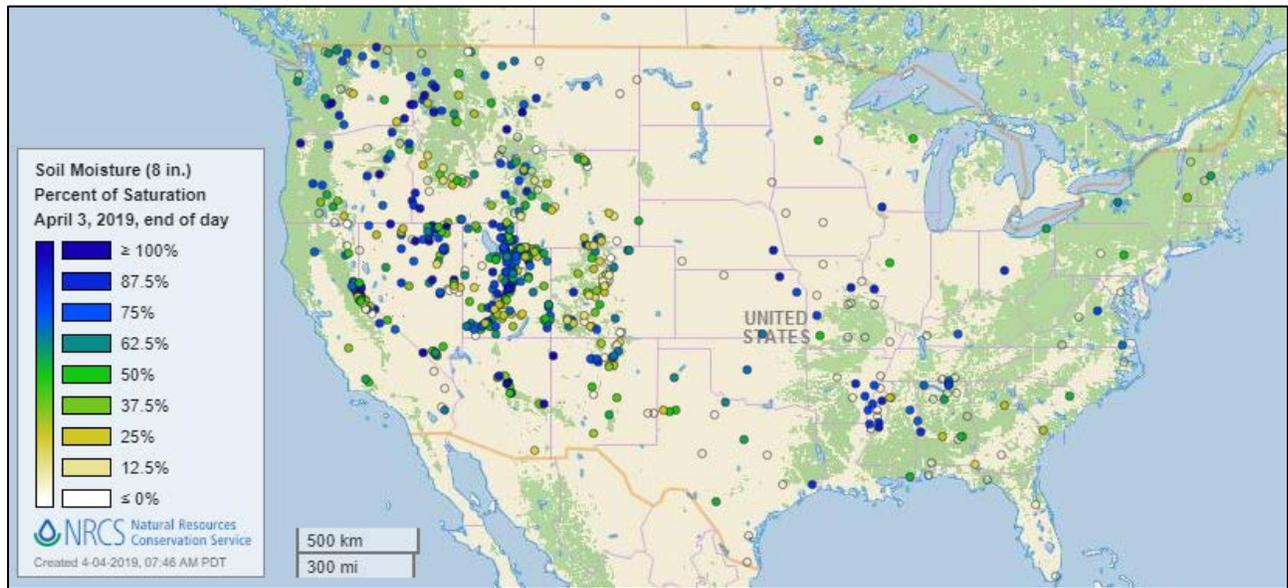
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of March 30, 2019

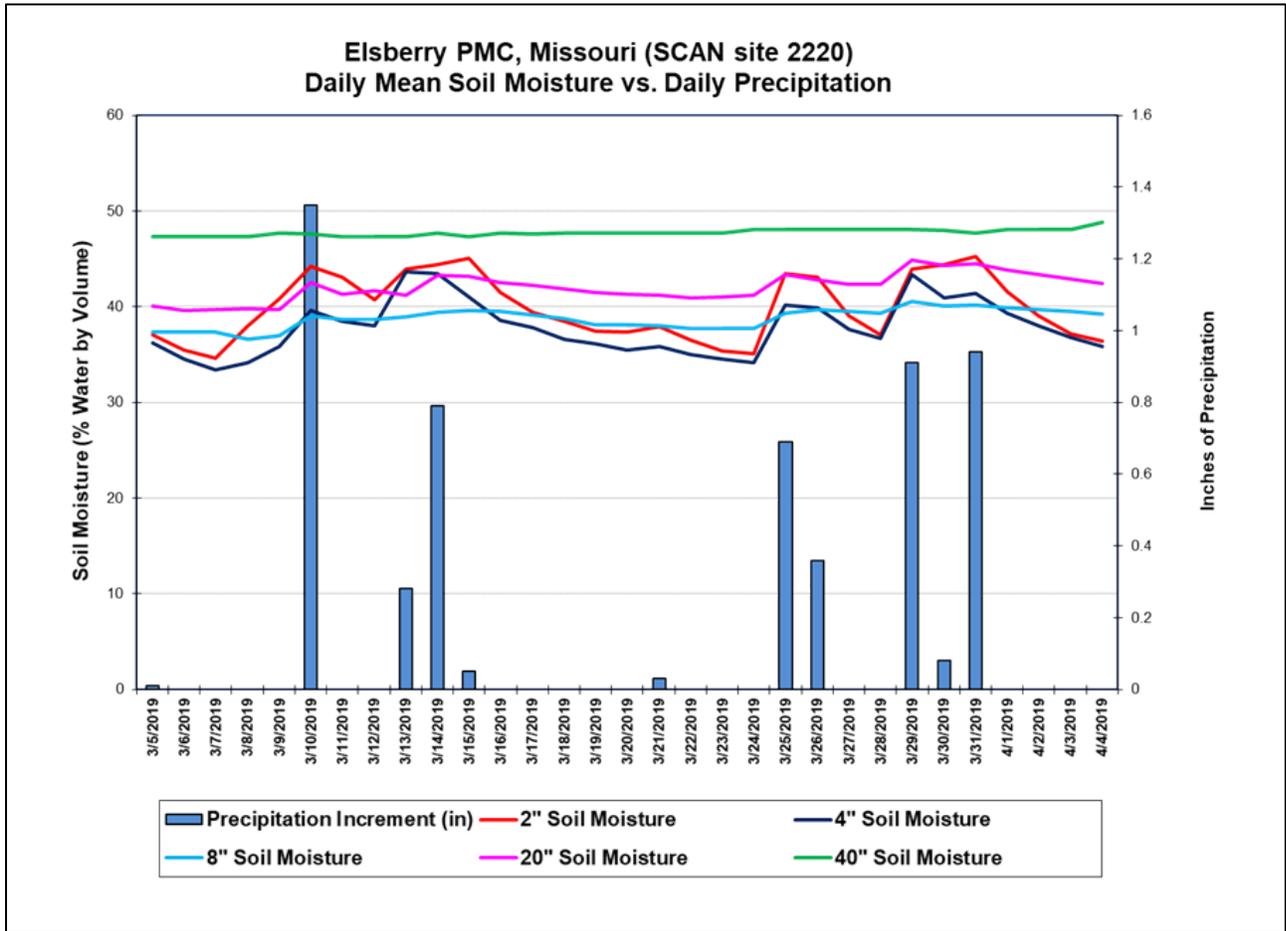
Soil Moisture Percent of Saturation

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



Soil Moisture Data

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



This chart shows the precipitation and soil moisture during the last 30 days at the [Elsberry PMC SCAN site](#) in Missouri. Between March 29-31, accumulated precipitation totaled 1.93 inches followed by an overall increase in soil moisture at the 2-, 4-, 8-, and 20-inch sensor levels.

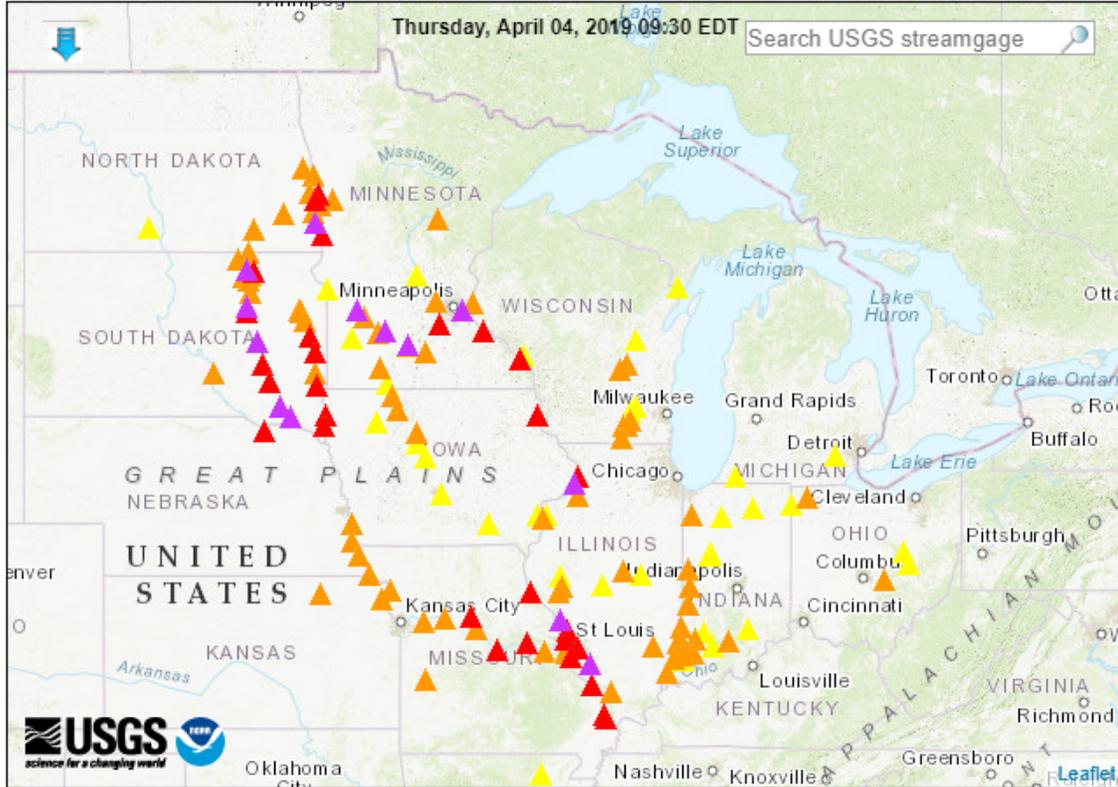
Soil Moisture Data Portals

- [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
 (13 in major flood, 31 in moderate flood, 76 in minor flood, 41 in near flood)



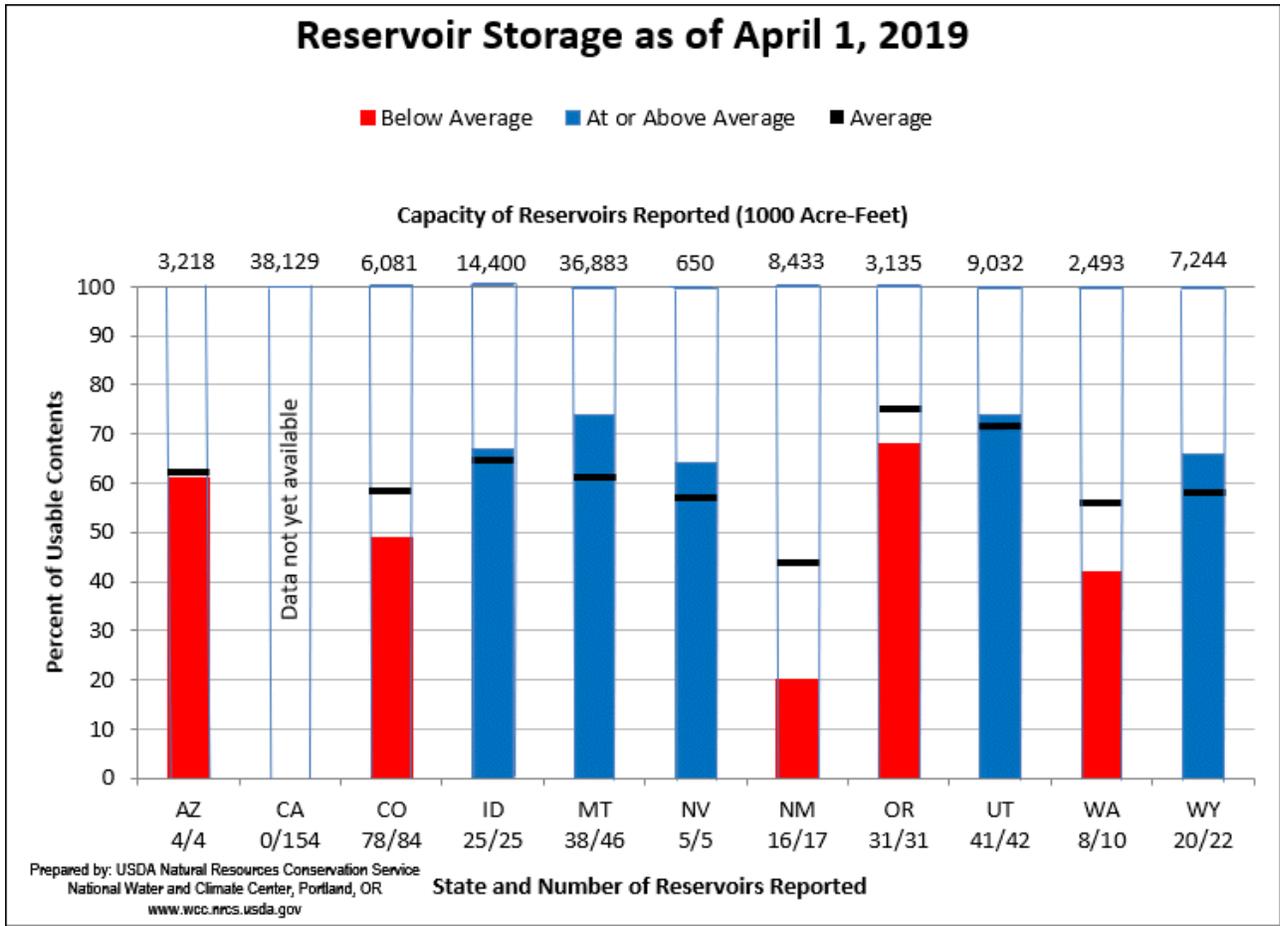
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
			△ Streamgage with flood stage	○ Streamgage without flood stage		

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

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center



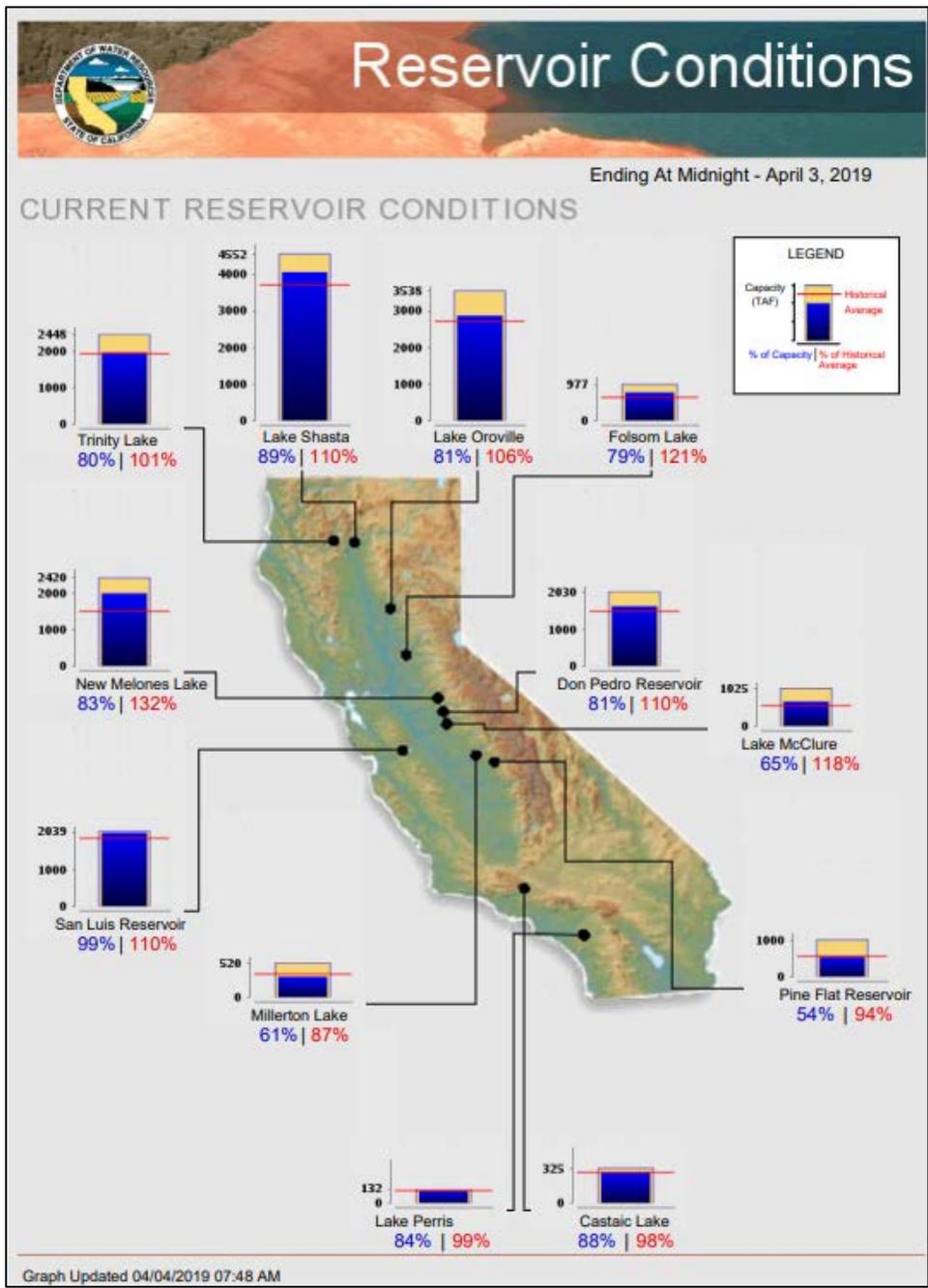
April 1, 2019 Reservoir Storage: [Chart](#) | [Dataset](#)

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

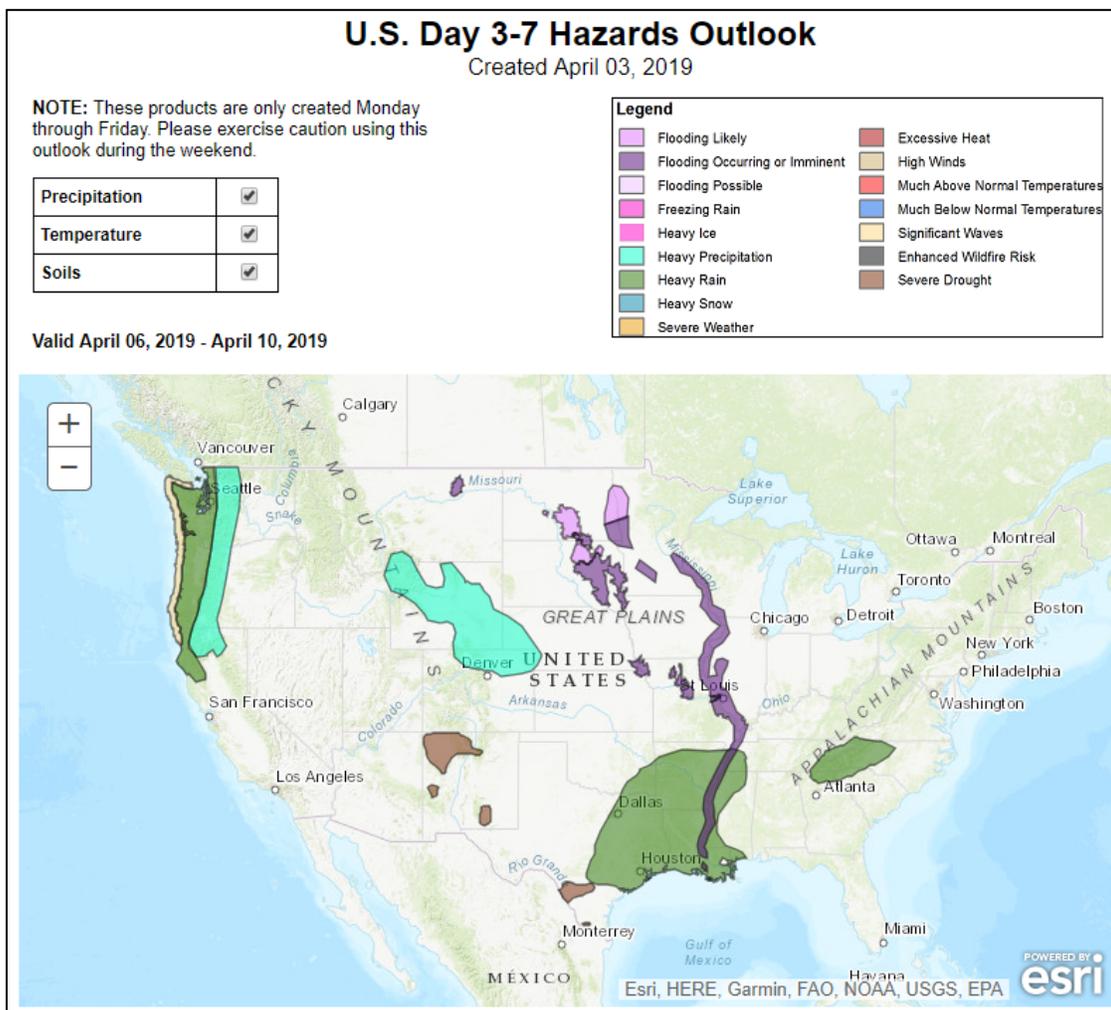
Agricultural Weather Highlights

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

National Outlook, Thursday, April 4, 2019: “For the remainder of today, an intense storm system will graze coastal New England with wind, rain, and wet snow. Meanwhile, a disorganized weather system will cross the Plains today and reach the East by Friday. Rain will accompany the system, with 1- to 2-inch totals possible in parts of the Southeast. By Friday, snow may accumulate in parts of the interior Northeast. During the weekend, additional precipitation will fall across the eastern half of the U.S., with another round of heavy showers expected in parts of the South. Five-day rainfall totals could reach 2 to 4 inches from eastern Texas to Alabama. Elsewhere, heavy precipitation will return late in the week across northern California and the Pacific Northwest. The NWS 6- to 10-day outlook for April 8 – 12 calls for the likelihood of warmer-than-normal weather across the South, while near- or below-normal temperatures will cover the northern half of the U.S. Meanwhile, wetter-than-normal conditions throughout the northern and eastern U.S. will contrast with below-normal precipitation in the south-central U.S., including much of Texas.”

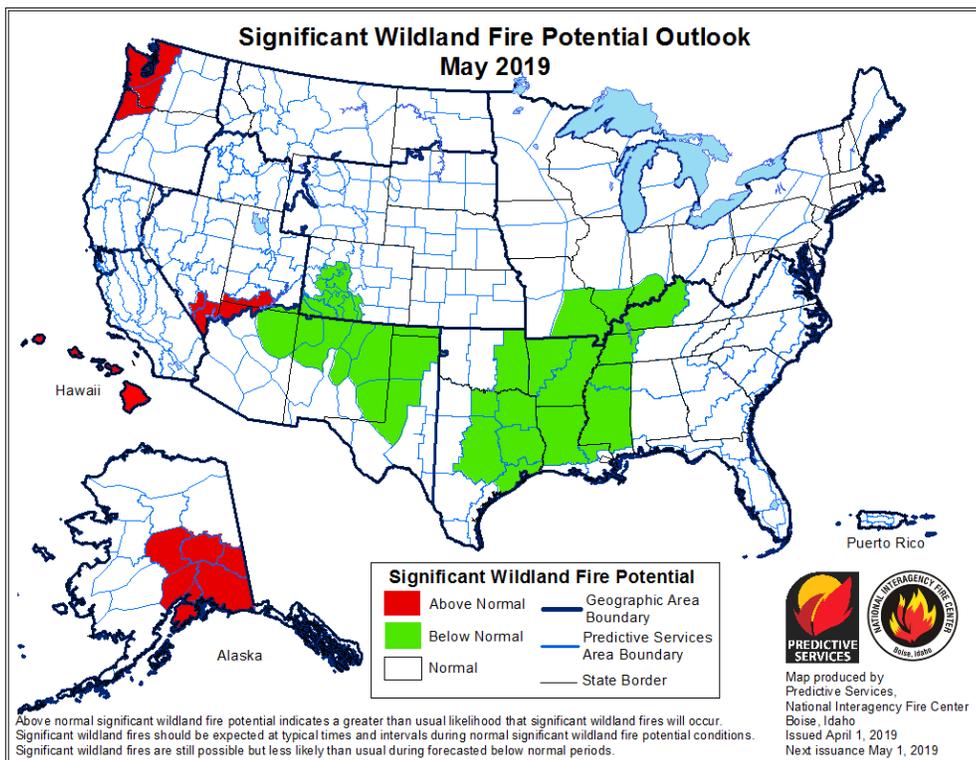
Weather Hazards Outlook: [April 6 – April 10, 2019](#)

Source: NOAA Climate Prediction Center



Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center

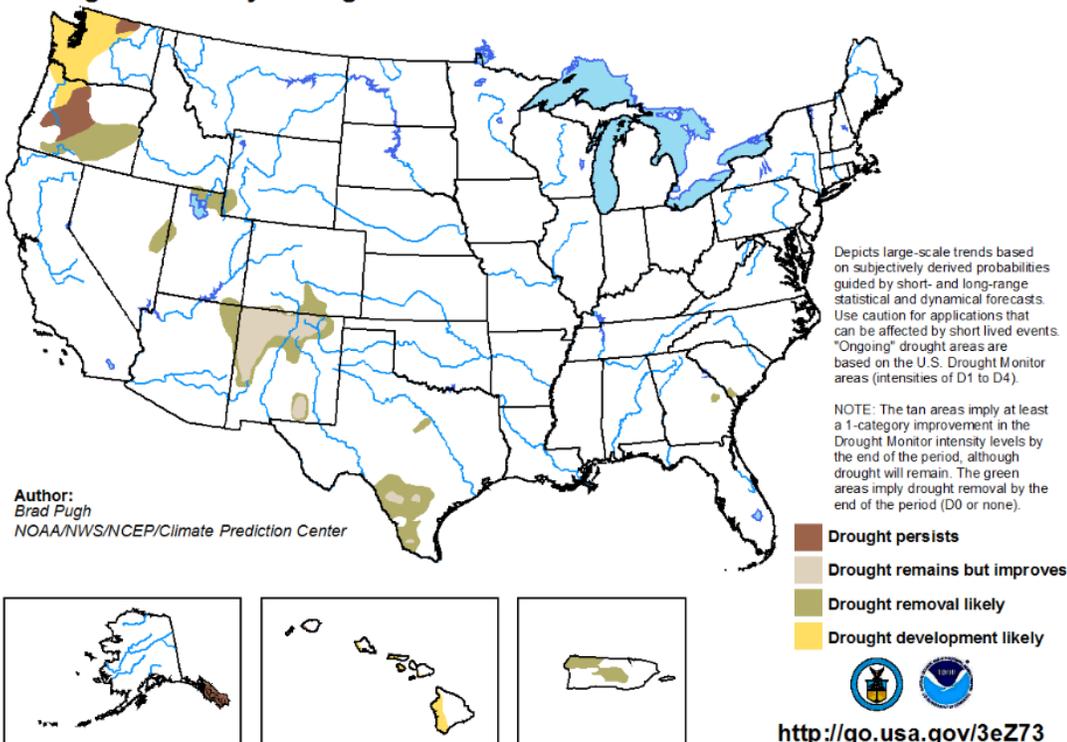


Seasonal Drought Outlook: [March 21 – June 30, 2019](#)

Source: National Weather Service

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

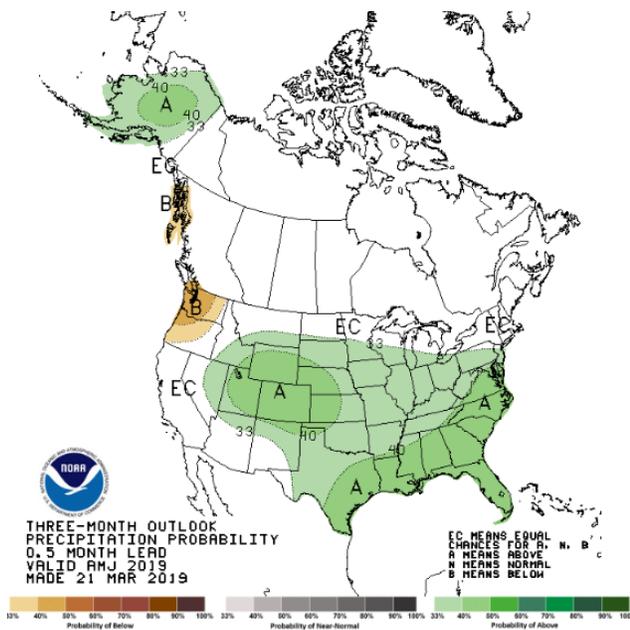
Valid for March 21 - June 30, 2019
Released March 21



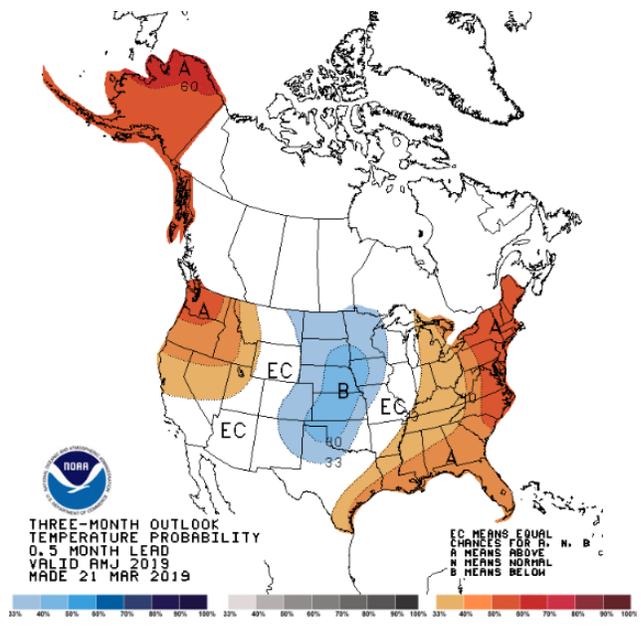
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



[April-May-June \(AMJ\) 2019 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](#).