

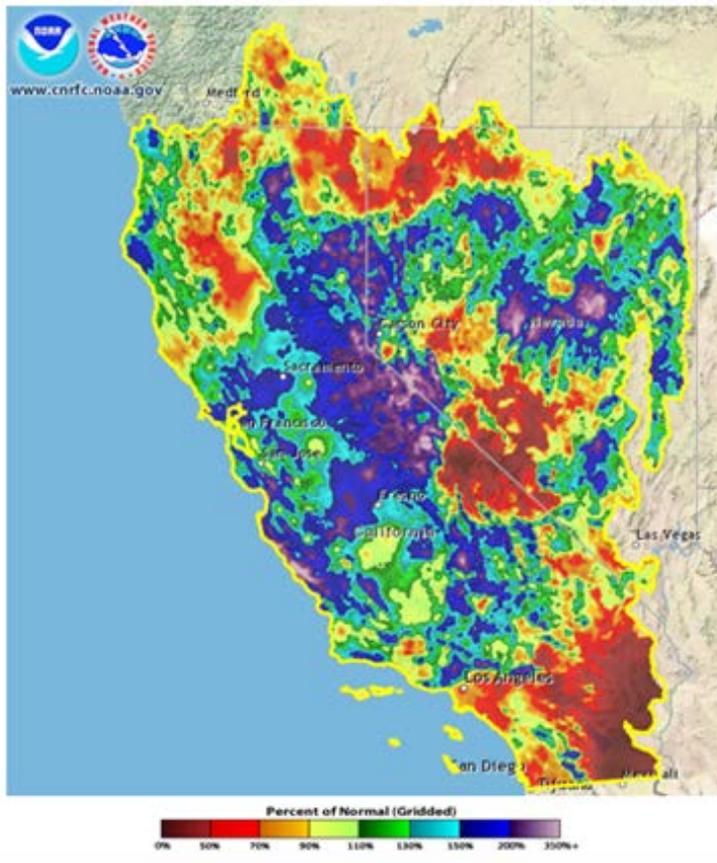
Water and Climate Update

March 22, 2018

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.....	15
Temperature	7	More Information	18
Drought	9		

California starts spring with heavy rain and snowfall



Percent of normal precipitation

Thus far in March, California and much of Nevada have gone from near-record dry conditions to near-record rain and snowfall. The monthly gridded data map from the NOAA California Nevada River Forecast Center shows the [percent of normal precipitation](#) for March.

Heavy rain on burned areas in southern California has prompted officials to urge 30,000 people to evacuate where mudslides have occurred or are expected.

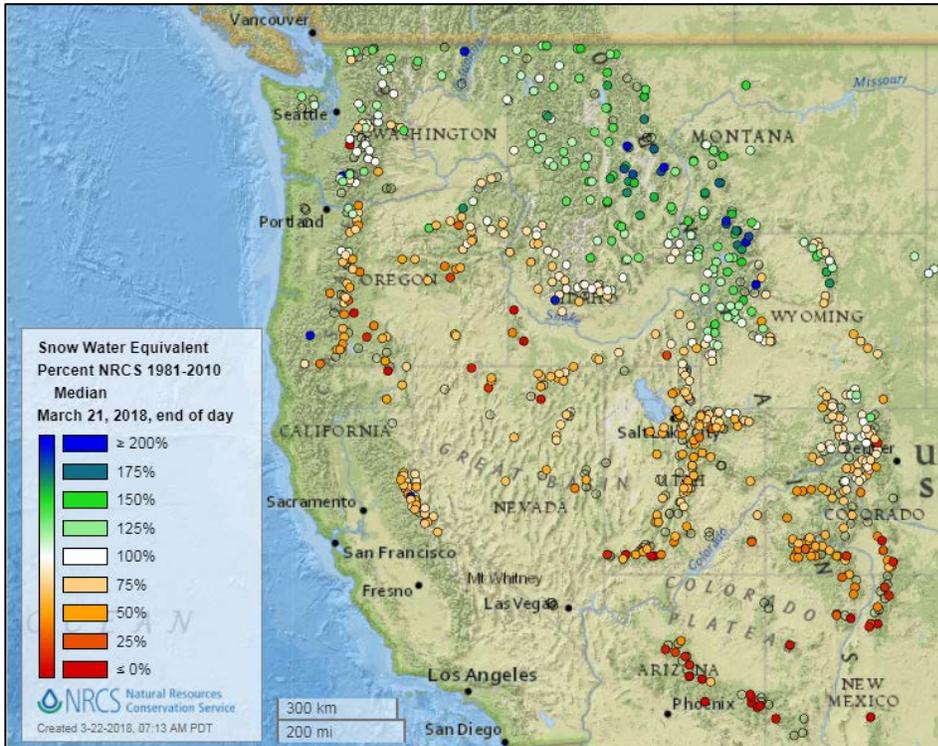
Heavy snow in the Sierra Nevada has dramatically increased the snowpack, with the latest storm adding from six inches to four feet, depending on elevation.

Related:

- ['Atmospheric river' triggers evacuations in Southern California](#) - CNN
- [Over 30000 urged to flee as 'strongest storm of the year' barrels toward Southern California burn areas](#) – LA Times, CA
- [Lake Tahoe snowpack doubles in March — and more on the way](#) -Tahoe Tribune, CA
- [Is it a 'March Miracle'? Atmospheric river heads for Sacramento area](#) – Sacramento Bee, CA
- [California was in for one of the driest winters on record. Then March happened](#) – KPCC, CA

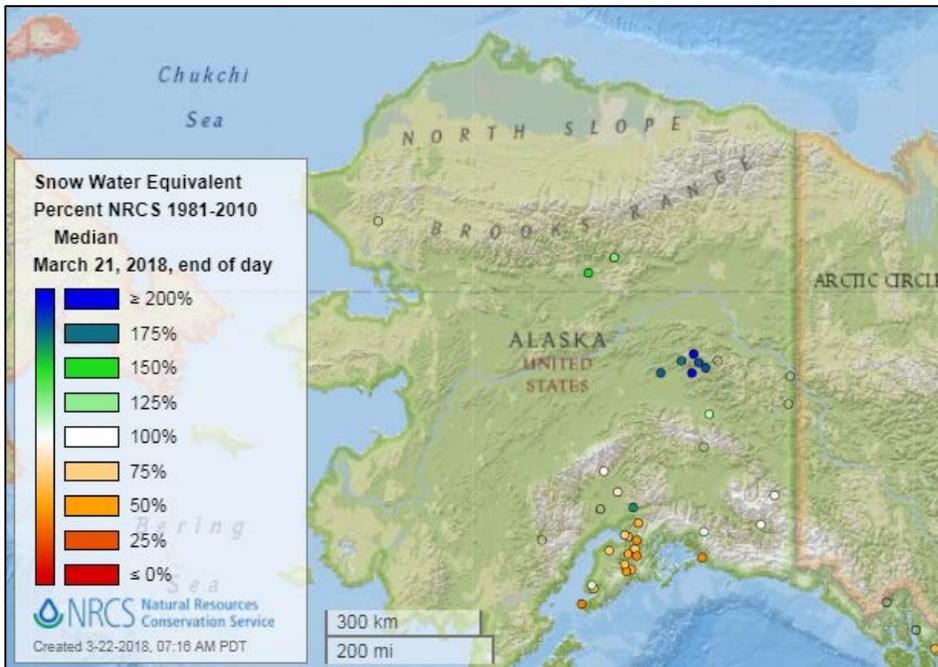
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



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

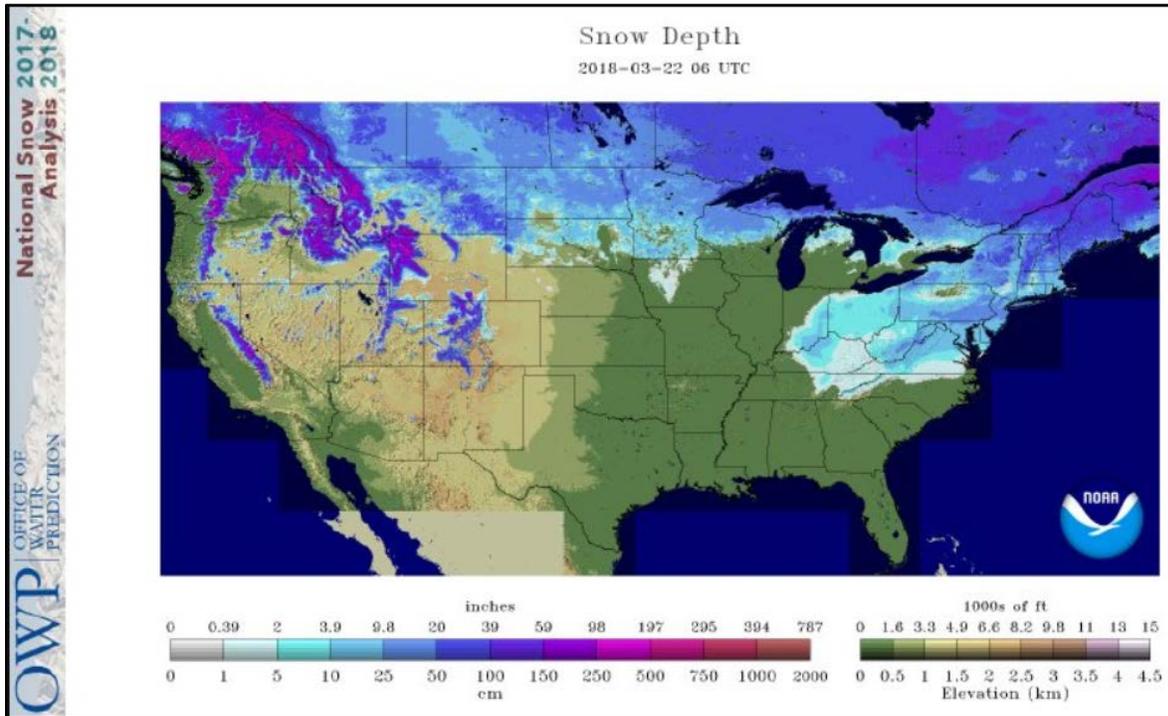
See also:
[Snow water equivalent values \(inches\) map](#)



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

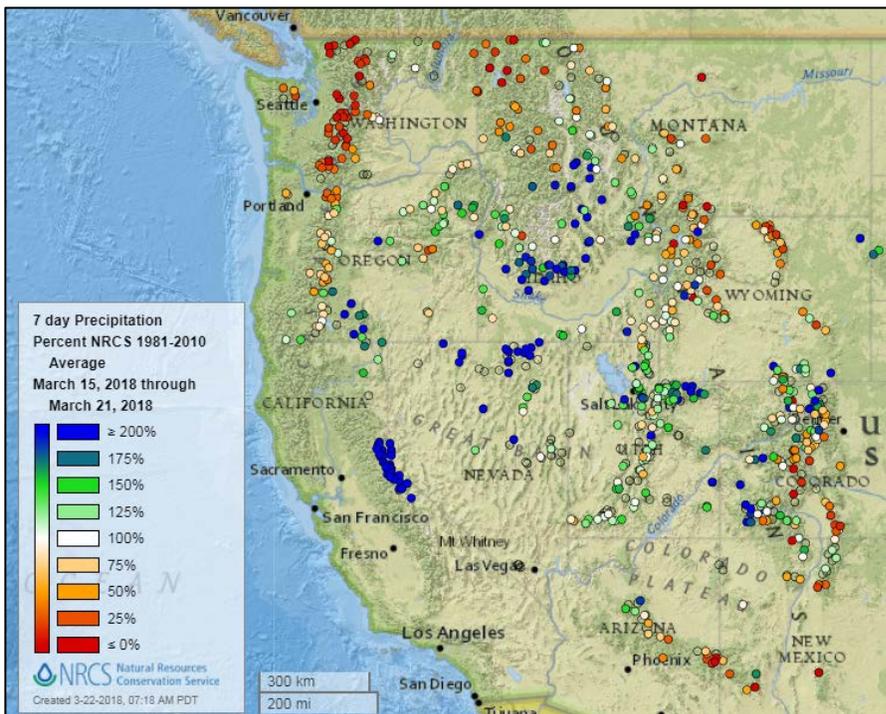
See also:
[Alaska snow water equivalent values \(inches\) map](#)

Current Snow Depth, National Weather Service Snow Analysis



Precipitation

Last 7 Days, NRCS SNOTEL Network



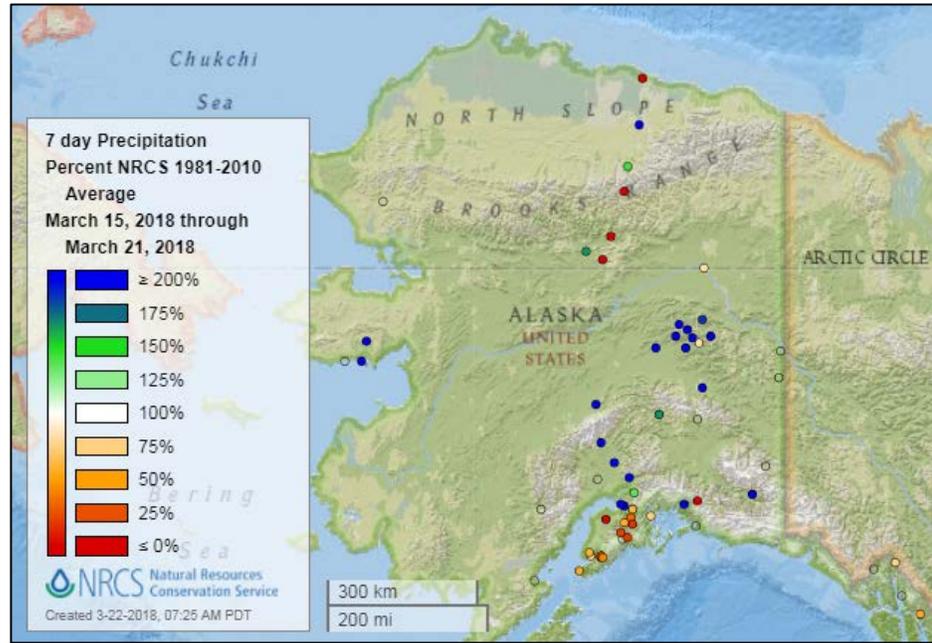
[7-day precipitation percent of average map](#)

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

Water and Climate Update

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

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



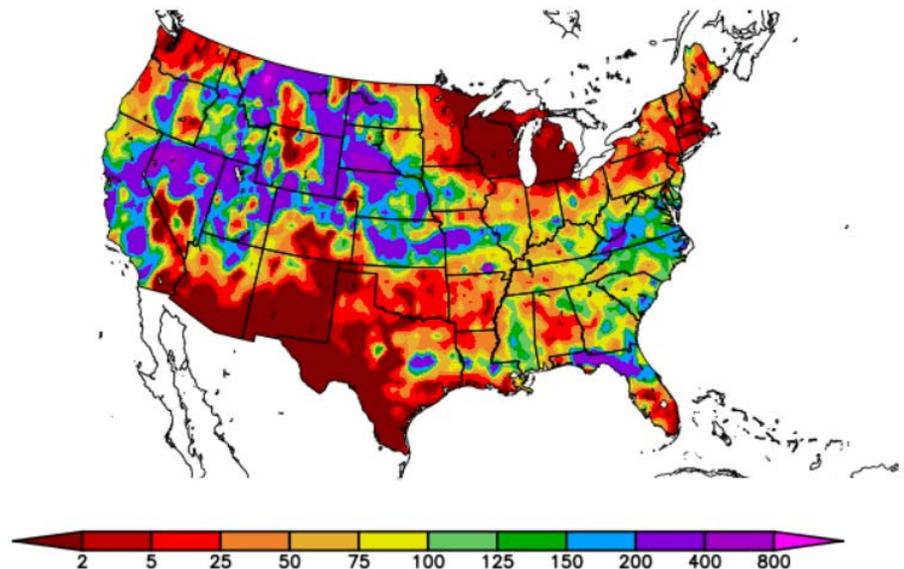
Last 7 Days, National Weather Service (NWS) Networks

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 (%) 3/15/2018 – 3/21/2018



Generated 3/22/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

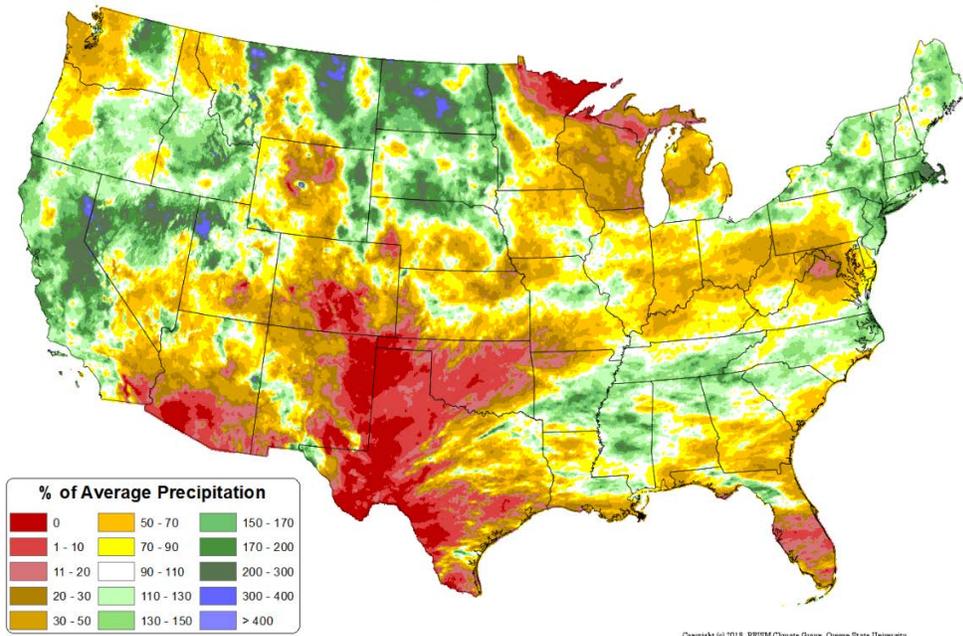
Water and Climate Update

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

Source: PRISM

Total Precipitation Anomaly: 01 March 2018 - 20 March 2018
Period ending 7 AM EST 20 Mar 2018
Base period: 1981-2010
(Map created 21 Mar 2018)

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

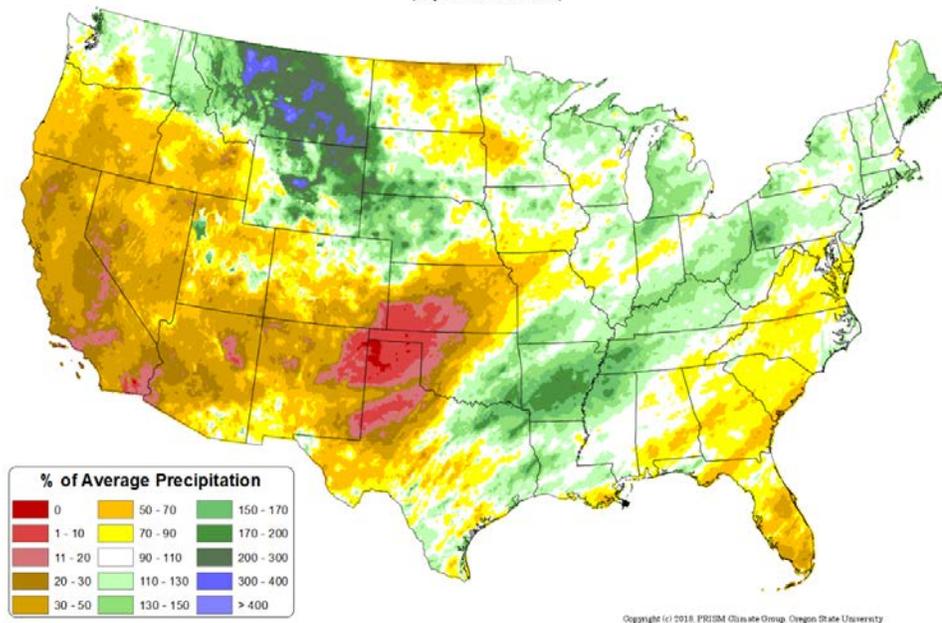


Last 3 Months, All Available Data Including SNOTEL and NWS Networks

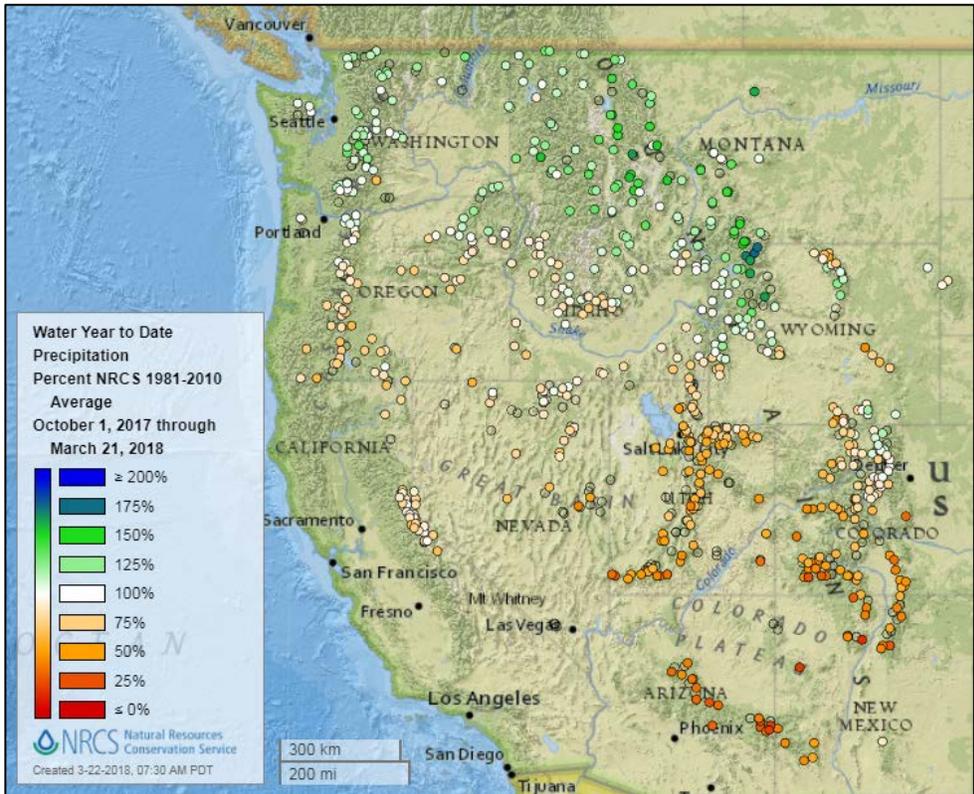
Source: PRISM

[December 2017 through February 2018 total precipitation percent of average map](#)

Total Precipitation Anomaly: December 2017 - February 2018
Period ending 7 AM EST 28 Feb 2018
Base period: 1981-2010
(Map created 02 Mar 2018)

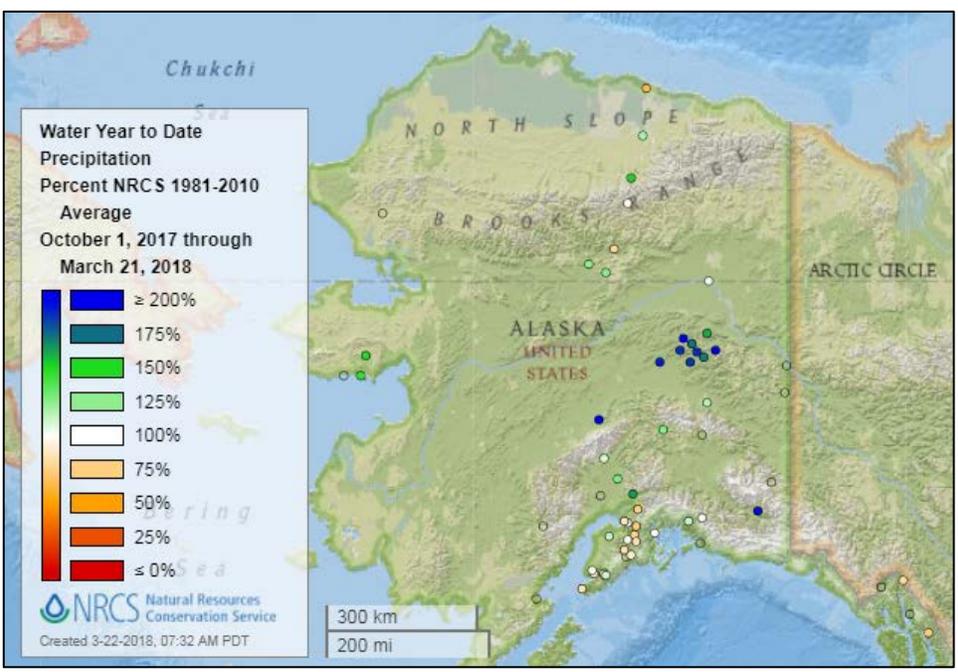


Water Year-to-Date, NRCS SNOTEL Network



[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

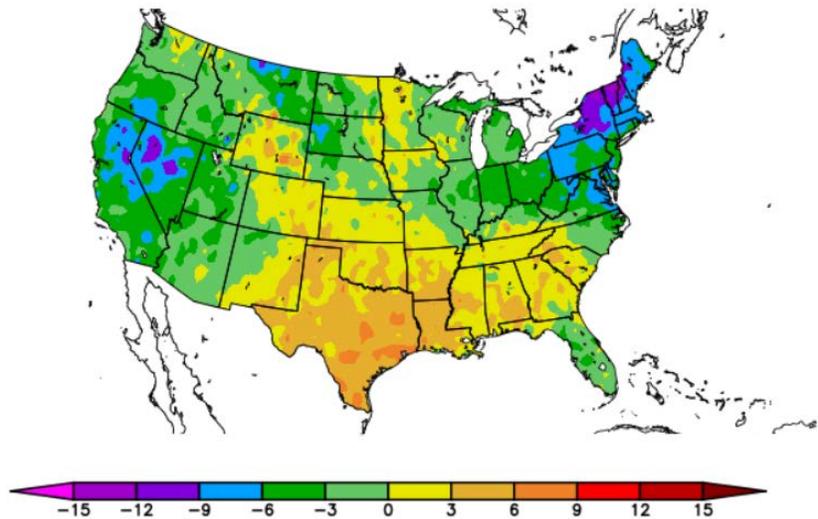
Last 7 Days, National Weather Service (NWS) Networks

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)
3/15/2018 – 3/21/2018



Generated 3/22/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

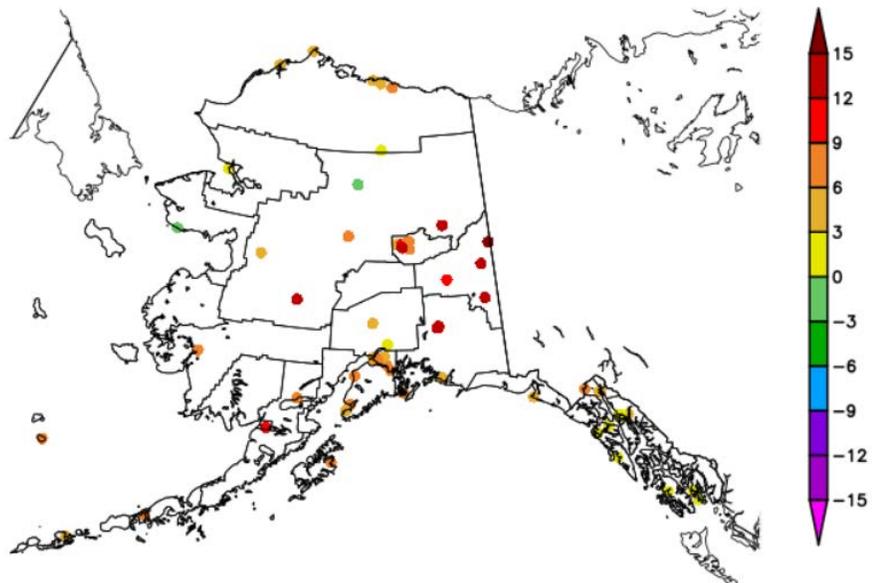
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
3/15/2018 – 3/21/2018



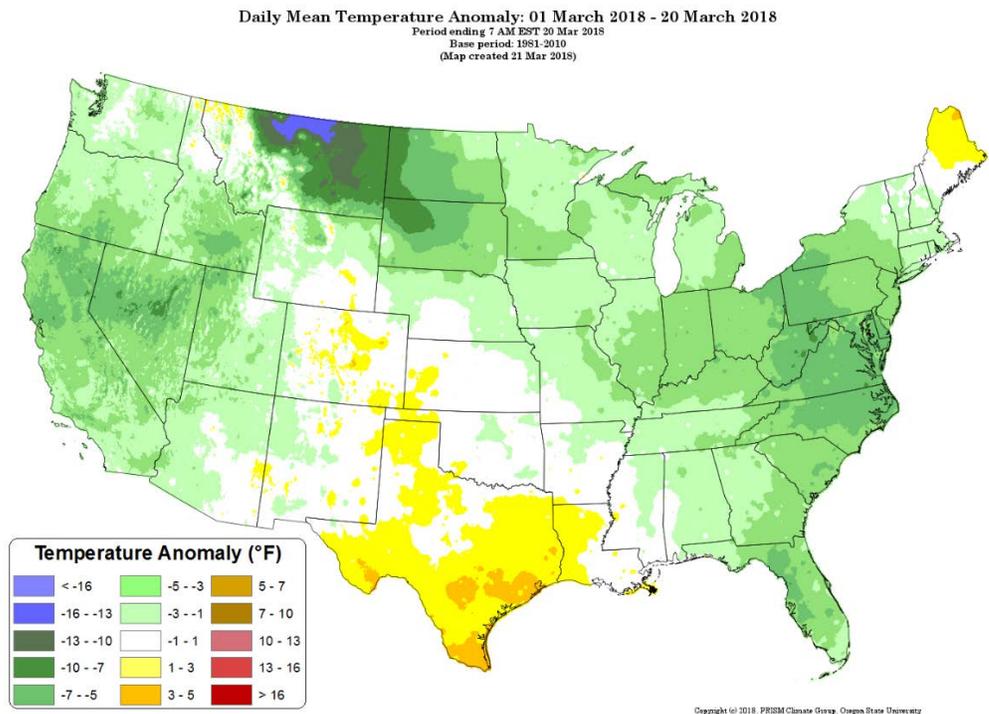
Generated 3/22/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

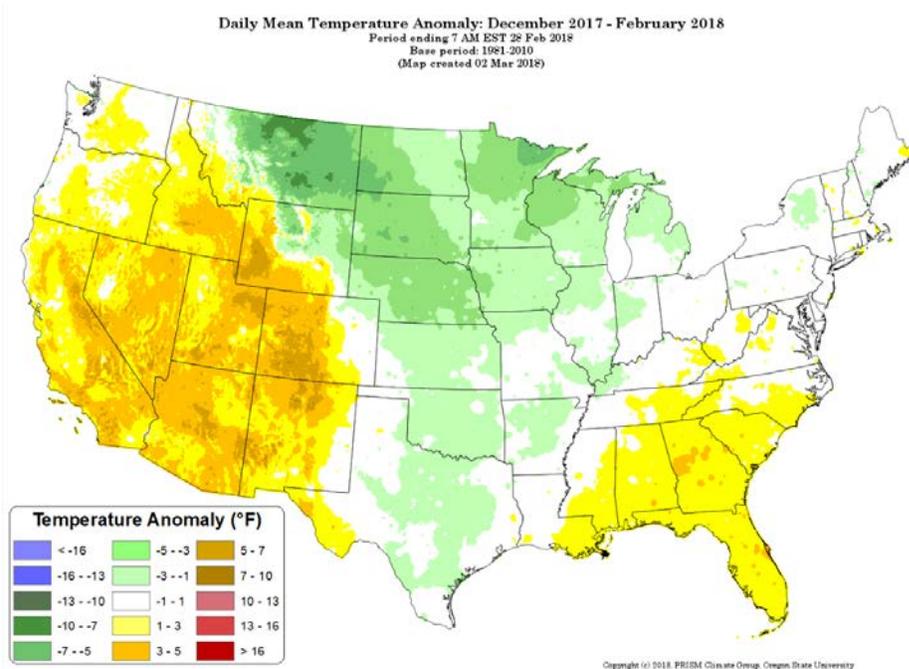
Water and Climate Update

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

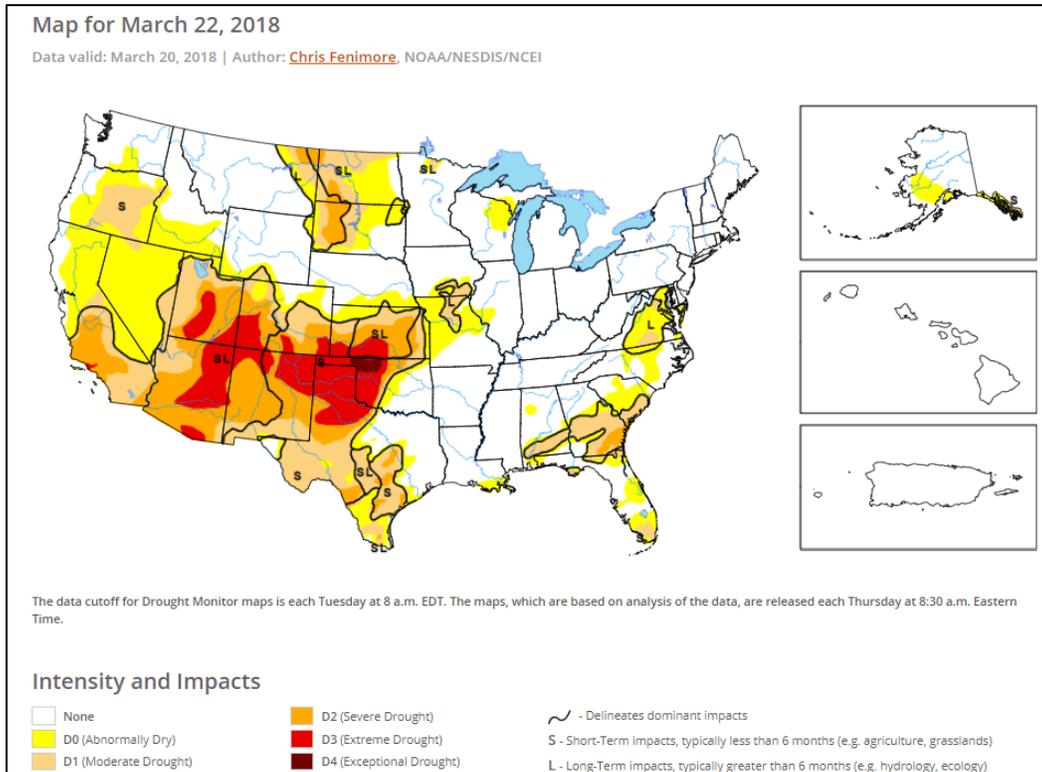


[December 2017 through February 2018 daily mean temperature anomaly map](#)

Drought

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

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



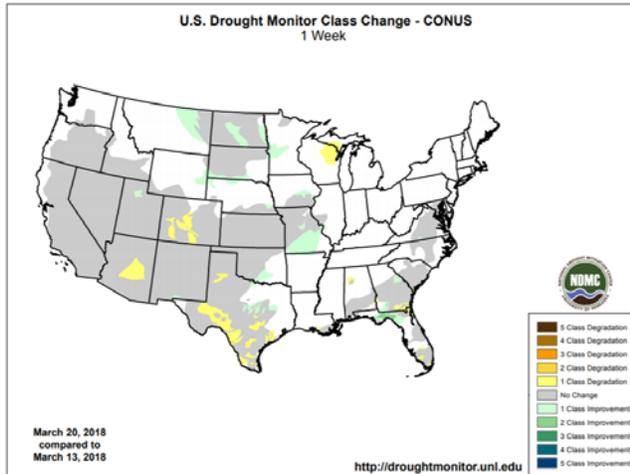
Current [National Drought Summary](#), March 22, 2018

Author: Chris Fenimore, NOAA/NESDIS/NCEI

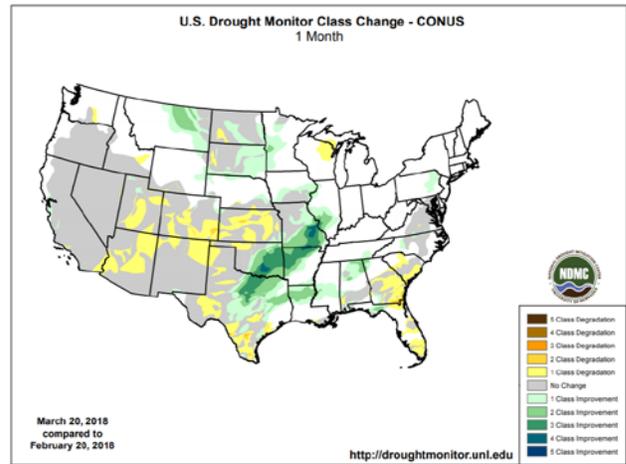
“Moderate precipitation fell in a wide swath covering an area from Kansas and Nebraska, eastward into parts of the Midwest and Mid-Atlantic regions. Additionally, moderate precipitation fell in the South and Southeast. Locally higher amounts fell in northern Florida late in the USDM period. Moisture laden systems continued to provide much needed precipitation to coastal California and the Sierra. Light to moderate precipitation fell in the Northeast, High Plains, and parts of the Rockies. The drought stricken areas of the Four Corners and the Southern Plains saw little to no precipitation.”

Changes in Drought Monitor Categories over Time

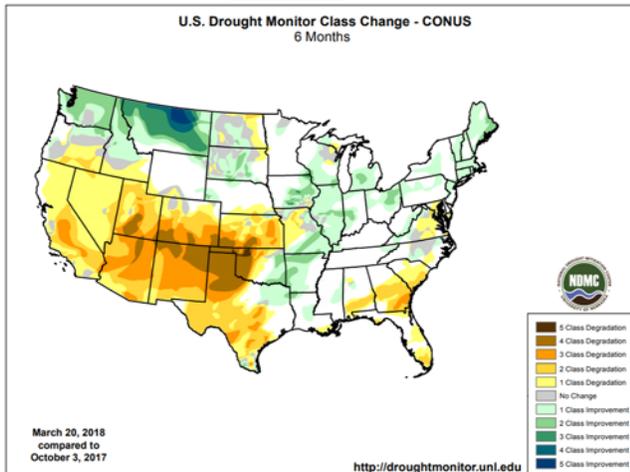
1 Week



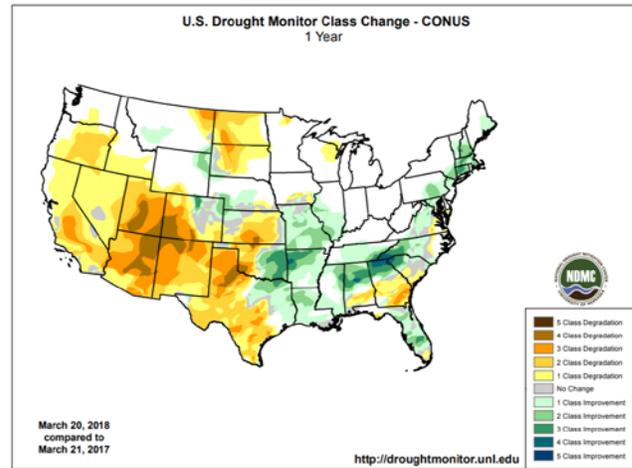
1 Month



6 Months



1 Year



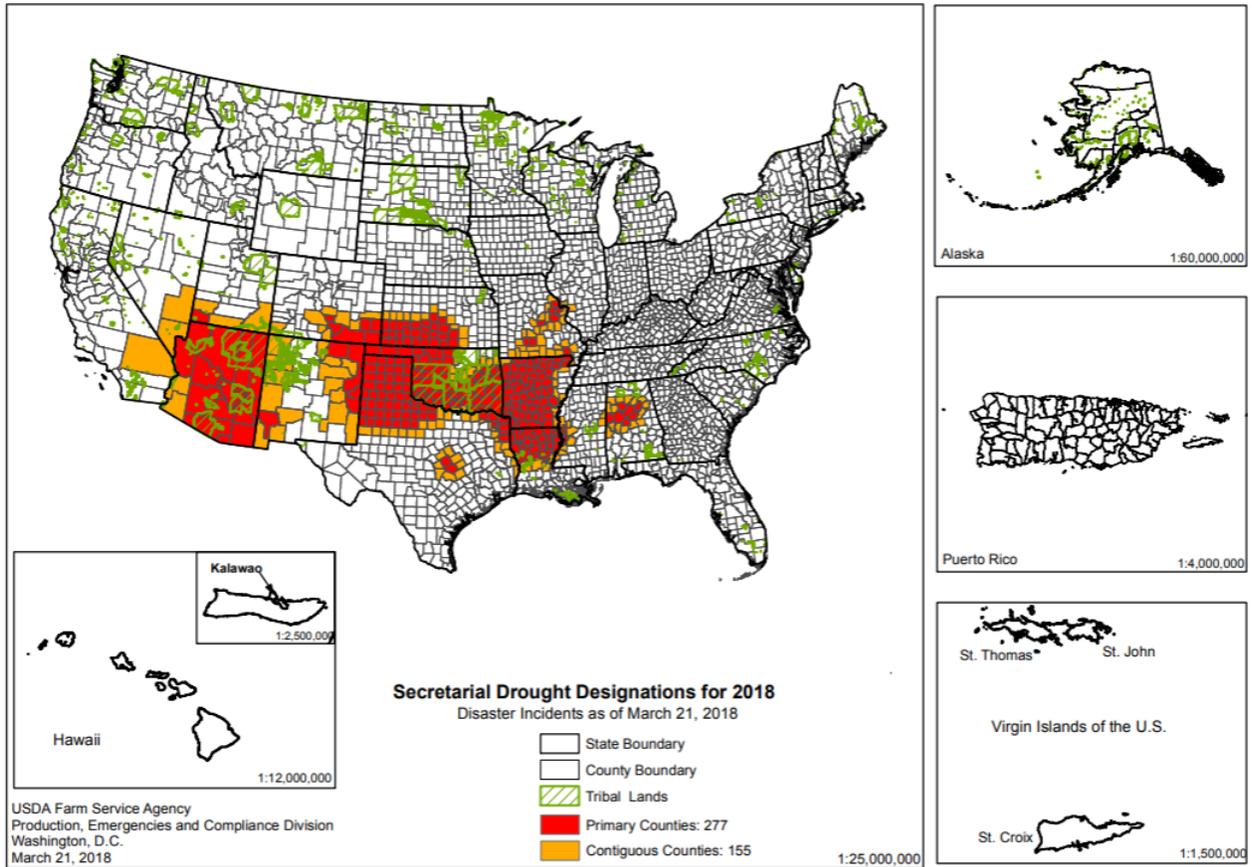
Changes in drought conditions over the last 12 months

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 2018 Secretarial [Drought Designations](#)

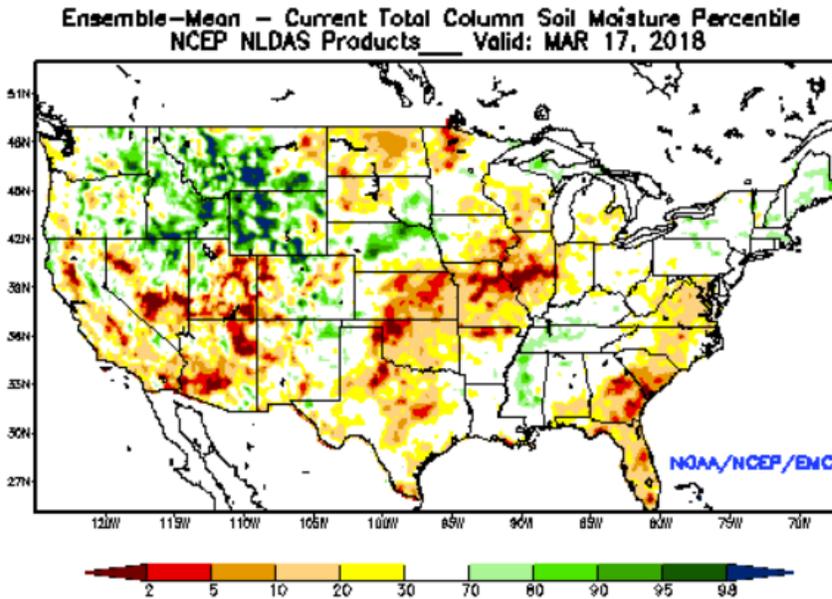
2018 Secretarial Drought Designations - All Drought



Other Climatic and Water Supply Indicators

Soil Moisture

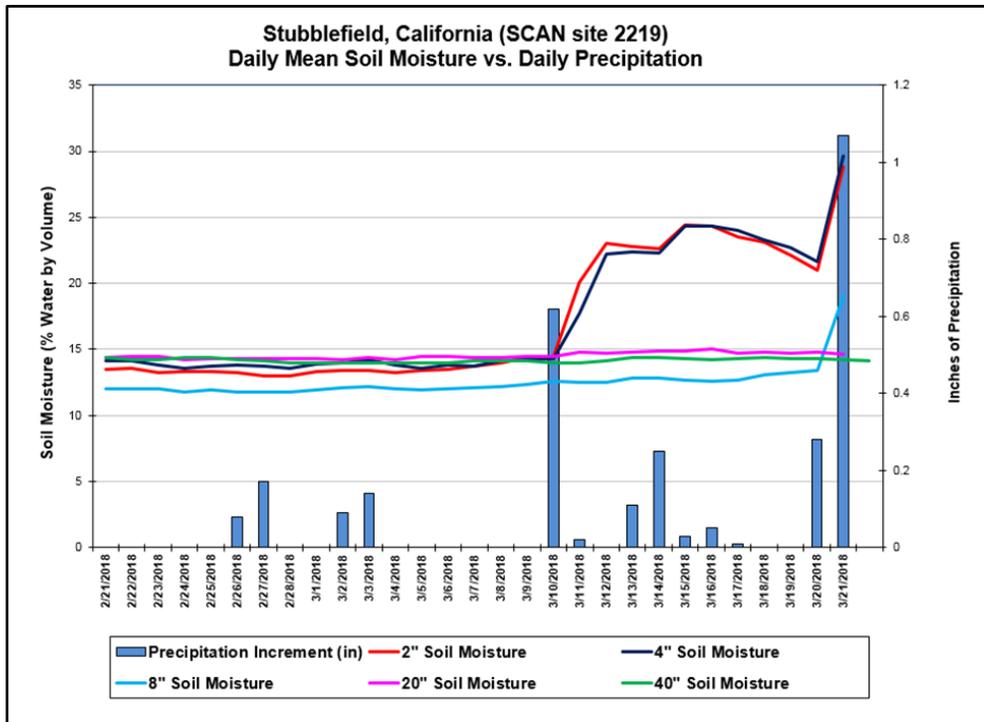
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of March 17, 2018.

Soil Moisture Data

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



The chart shows precipitation and soil moisture for the last 30 days at the [Stubblefield SCAN site 2219](#) in California. Precipitation near the end of the period increased the soil moisture at the 2- and 4-inch depth sensors. In the last few days the 8-inch depth sensor has shown an increase in soil moisture. The deeper sensors have not responded to the precipitation.

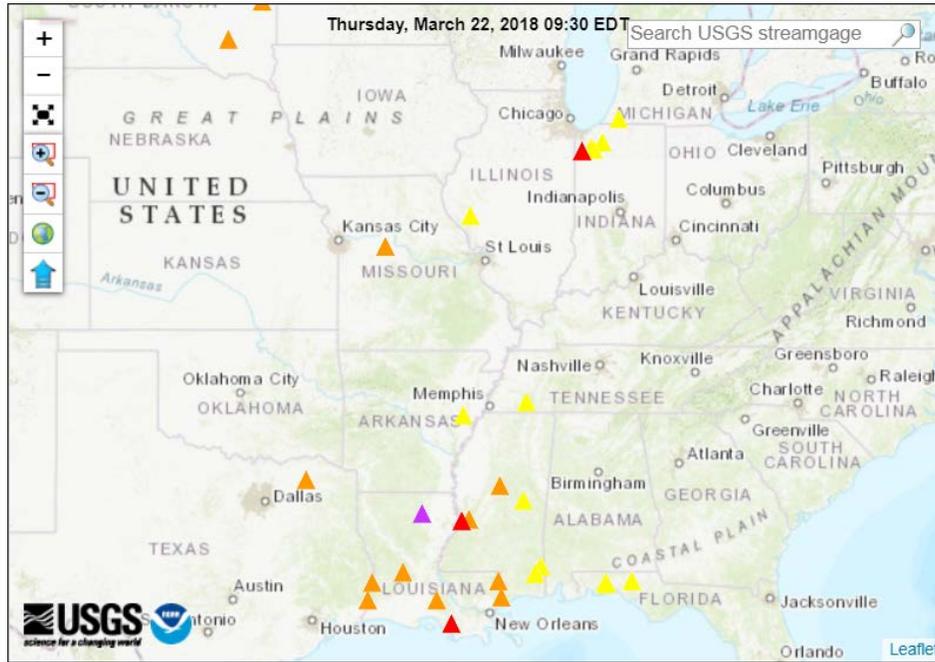
Soil Moisture Data Portals

- [CRN Soil Moisture](#)
- [Texas A&M University North American Soil Moisture Database](#)
- [University of Washington Experimental Modeled Soil Moisture](#)

Streamflow

Source: USGS

Map of flood and high flow conditions



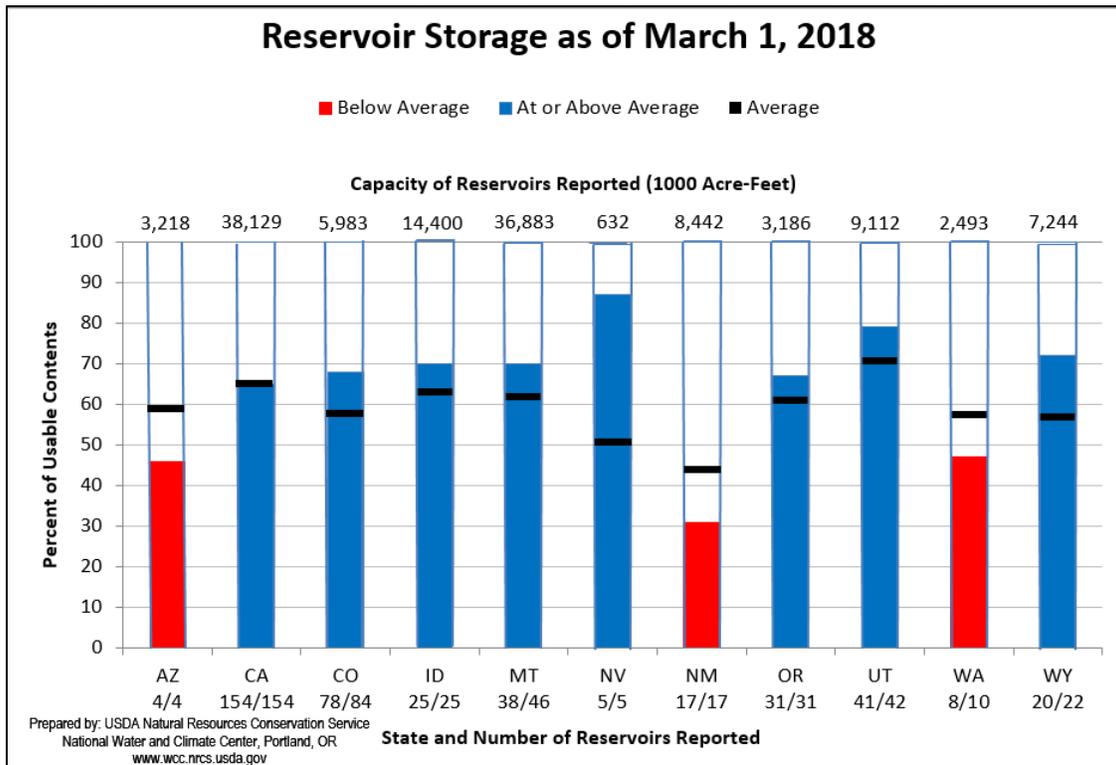
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
			△ Streamgauge with flood stage	○ Streamgauge without flood stage		

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

Reservoir Storage

Western States Reservoir Storage

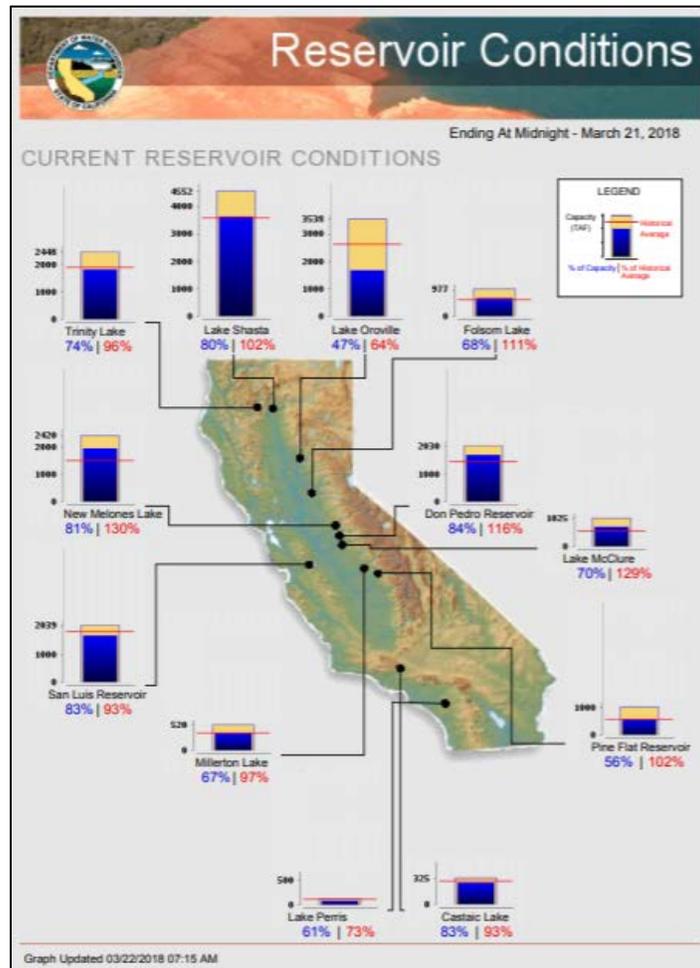
Source: NRCS National Water and Climate Center



March 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](#)

Short- and Long-Range Outlooks

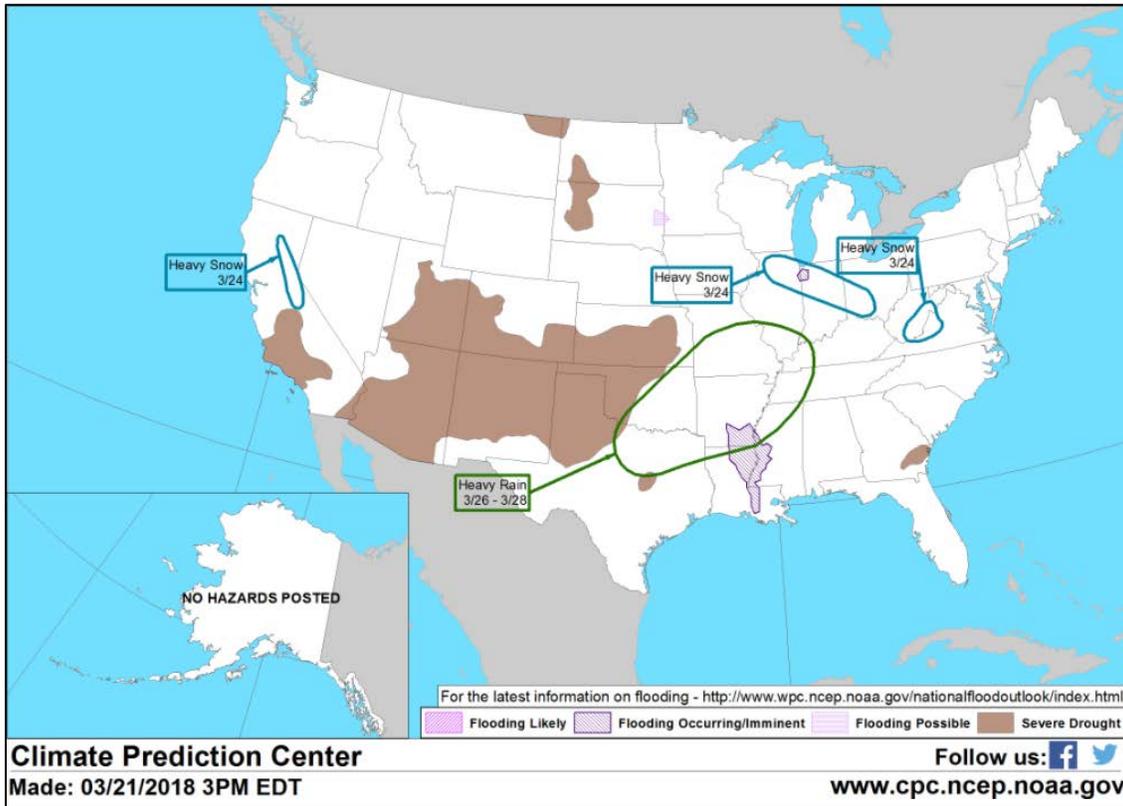
Agricultural Weather Highlights

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

[National Outlook, Thursday, March 22](#): “Heavy precipitation will end later today across California. Thereafter, rain and snow shower activity will generally shift northward and farther inland, although periods of snow will linger through the weekend as far south as the Sierra Nevada. Late in the week, a fast-moving storm will produce a stripe of snow from the northern Plains to the central Appalachians. Early next week, another storm system will deliver additional snow to parts of the north-central U.S., as well as locally heavy showers and thunderstorms from the western Corn Belt to the southeastern Plains. Hot weather will prevail across the south-central U.S. in advance of that storm, with several days of 90-degree heat possible. The NWS 6- to 10-day outlook for March 27 – 31 calls for the likelihood of near to above-normal temperatures across the eastern half of the U.S. and along the Pacific Coast, while colder-than normal conditions will cover the Plains, Rockies, and Southwest. Meanwhile, near- to above-normal precipitation across most of the country should contrast with drier-than-normal weather in peninsular Florida, central and northern California, and the Northwest.”

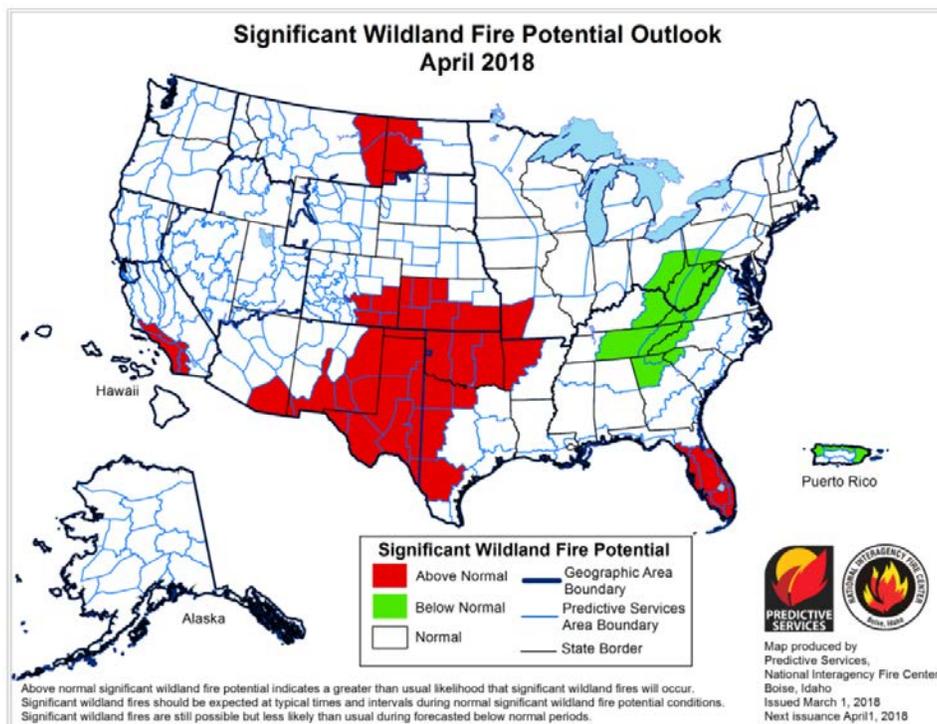
Weather Hazard Outlook [March 24 - 28, 2018](#)

Source: Climate Prediction Center



Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center

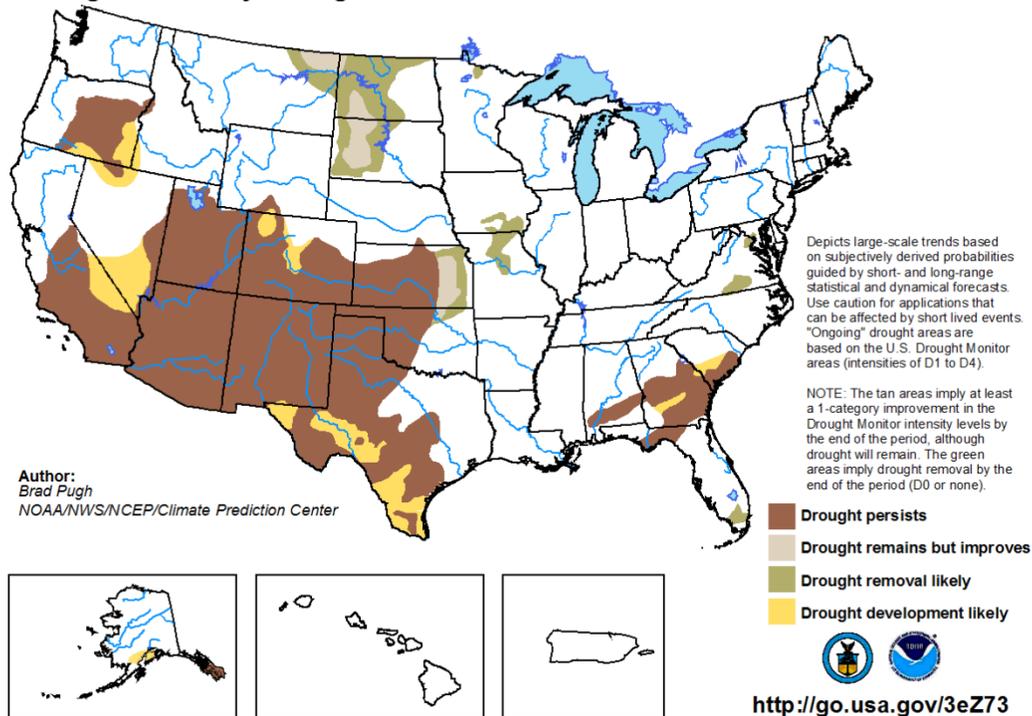


Seasonal Drought Outlook: [March 15 - June 30, 2018](#)

Source: National Weather Service

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

Valid for March 15 - June 30, 2018
Released March 15, 2018

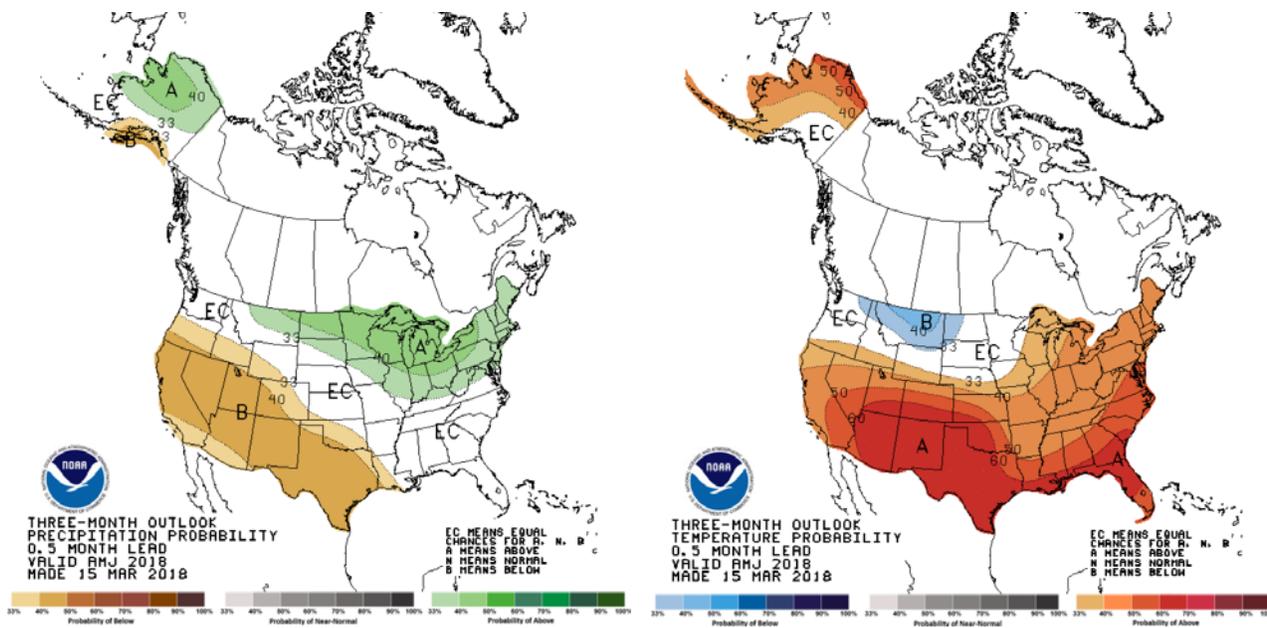


Climate Prediction Center 3-Month Outlook

Source: National Weather Service

[Precipitation](#)

[Temperature](#)



[Apr-May-June \(AMJ\) 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](#).