

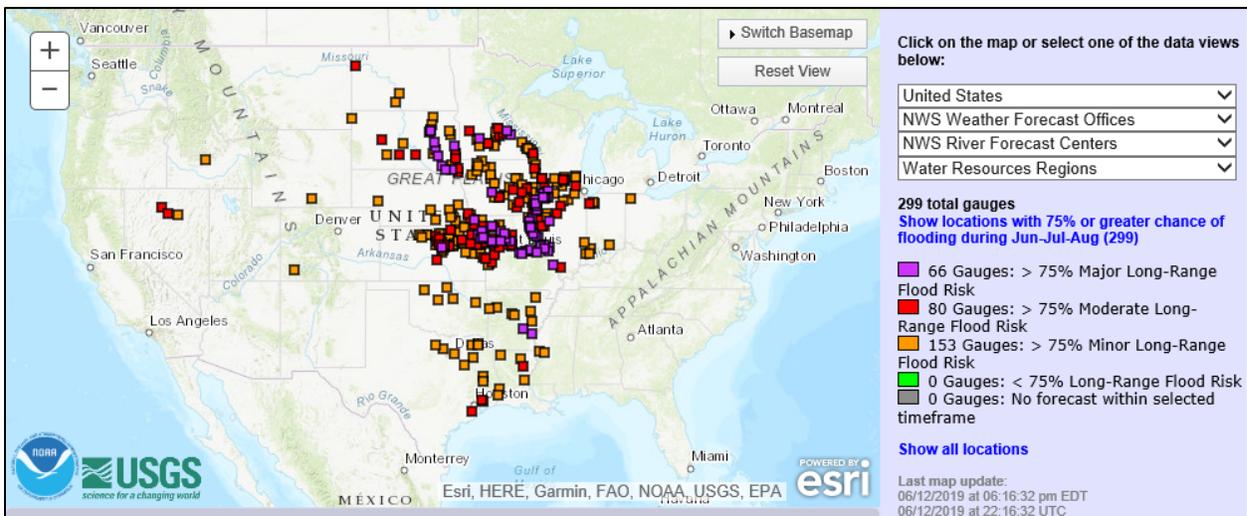
Water and Climate Update

June 13, 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.

Snow	2	Other Climatic and Water Supply Indicators	13
Precipitation	4	Short- and Long-Range Outlooks.....	18
Temperature.....	8	More Information	20
Drought	10		

Record flooding ongoing in water weary Midwest



299 locations where there is a 75% or greater chance of flooding through August

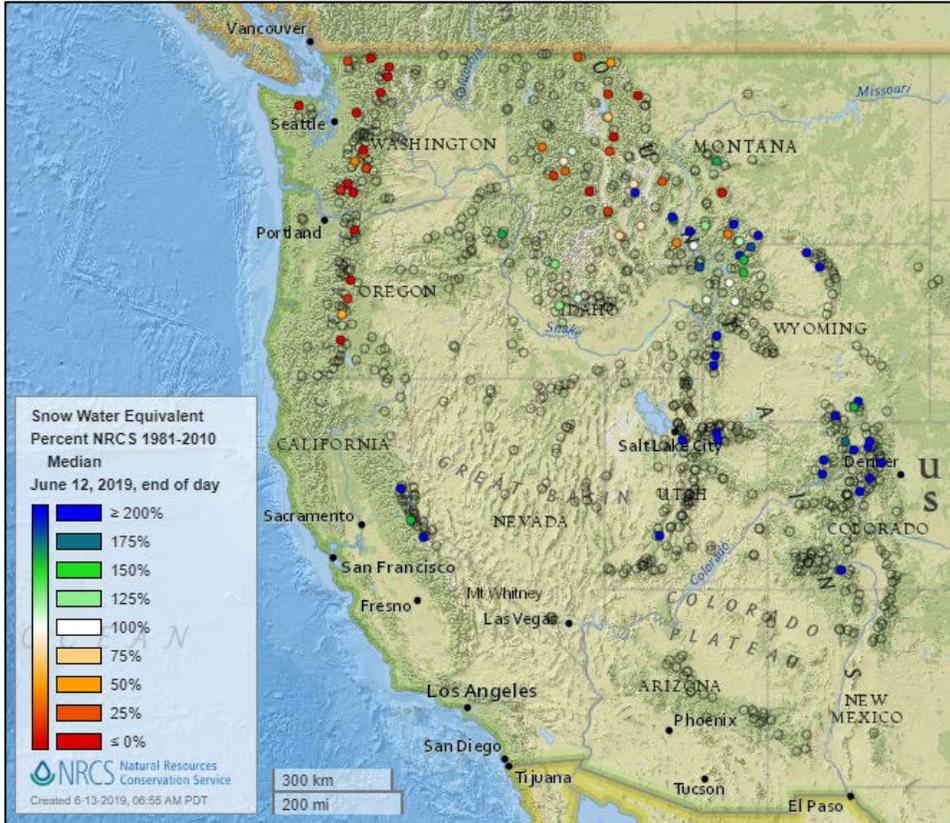
The Arkansas, Missouri, and Mississippi Rivers remain at major flood levels, inundating farmland and cities from continuing rainstorms and snowmelt. Some areas of the Midwest are reporting improvement, whereas others continue to evacuate ahead of new flooding. The Army Corps of Engineers remains concerned about weakening levees and the monitoring of dams and levees to mitigate flooding remains at emergency levels in many areas. Rain totals this year in the Missouri River Basin are the second highest in 120 years. Many fields that are still flooded will be unplatable this year and continued flooding will hamper recovery and repairs to farms, cities, and infrastructure.

Related:

- [Q&A: Missouri River Flood Risk to Continue for Months](#) – U.S. News & World Report
- [Paralysis on America’s Rivers: There’s Too Much Water ...](#) – NY Times
- [Mississippi River Flooding: High Water Levels Stop Barge Traffic Above St Louis and Illinois, Arkansas Rivers](#) - Newsweek
- [Mississippi River crests over weekend, metro-east agencies continue flood fighting efforts](#) – Belleville News Democrat (IL)
- [Nearly 400 Missouri roads closed by flooding](#) - KUSI (MO)
- [Record flooding causes levee breach in western Arkansas](#) – The Times of Northwest Indiana (IN)
- [2 cities still in major flood stage](#) – Arkansas Democrat-Gazette (AR)
- [Farmers worry about levee breaches, flooding even as water drops](#) – KMBC (KS)
- [HEARTLAND FLOOD: FEMA assessing damage as farmers ponder land's future](#) – WOWT (NE)

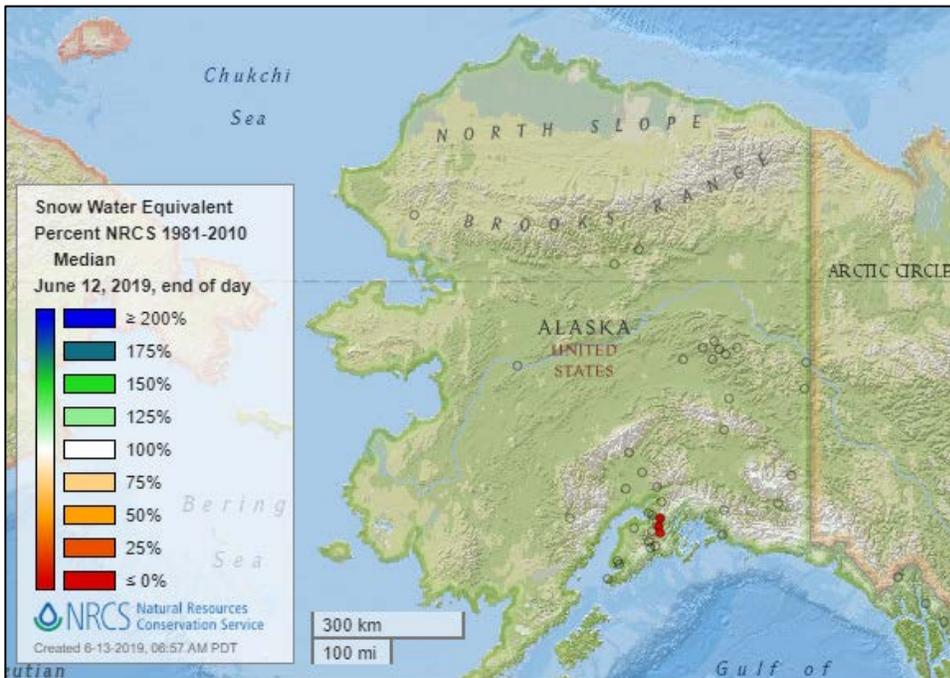
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



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

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

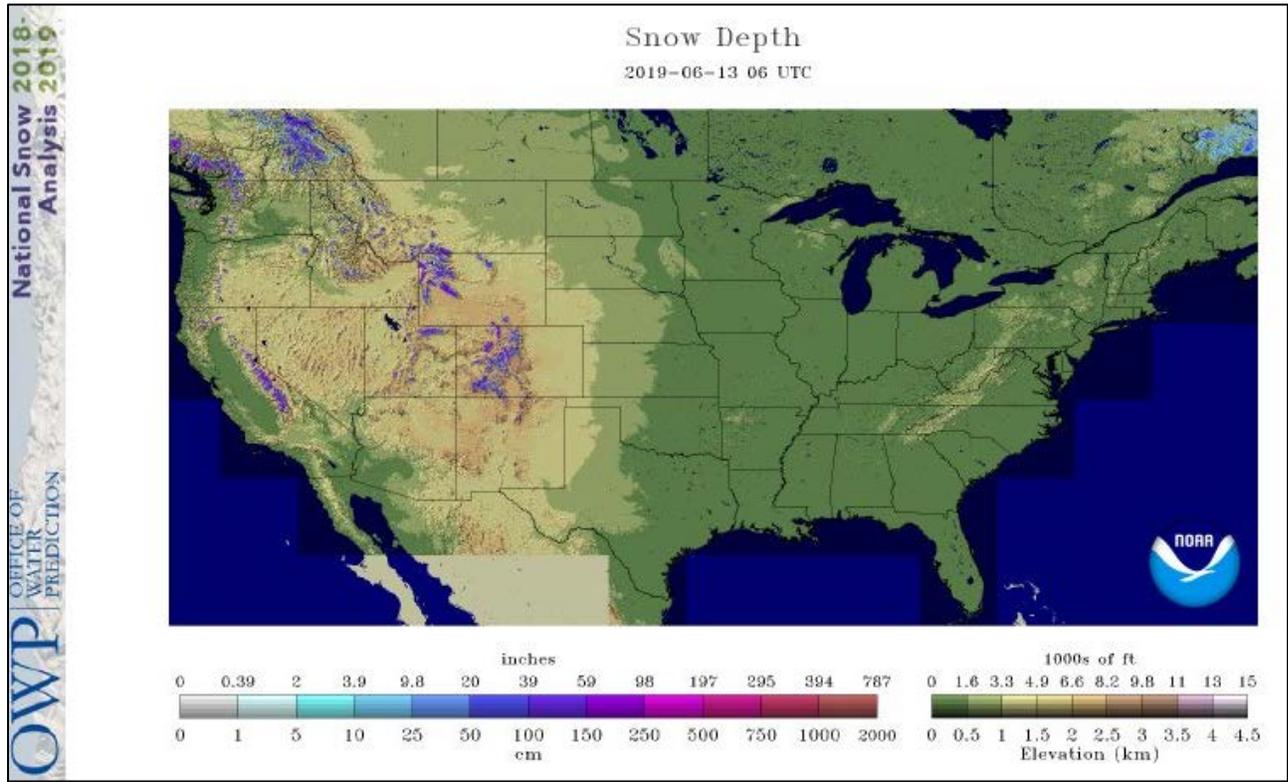


[Alaska snow water equivalent percent of median map](#)

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

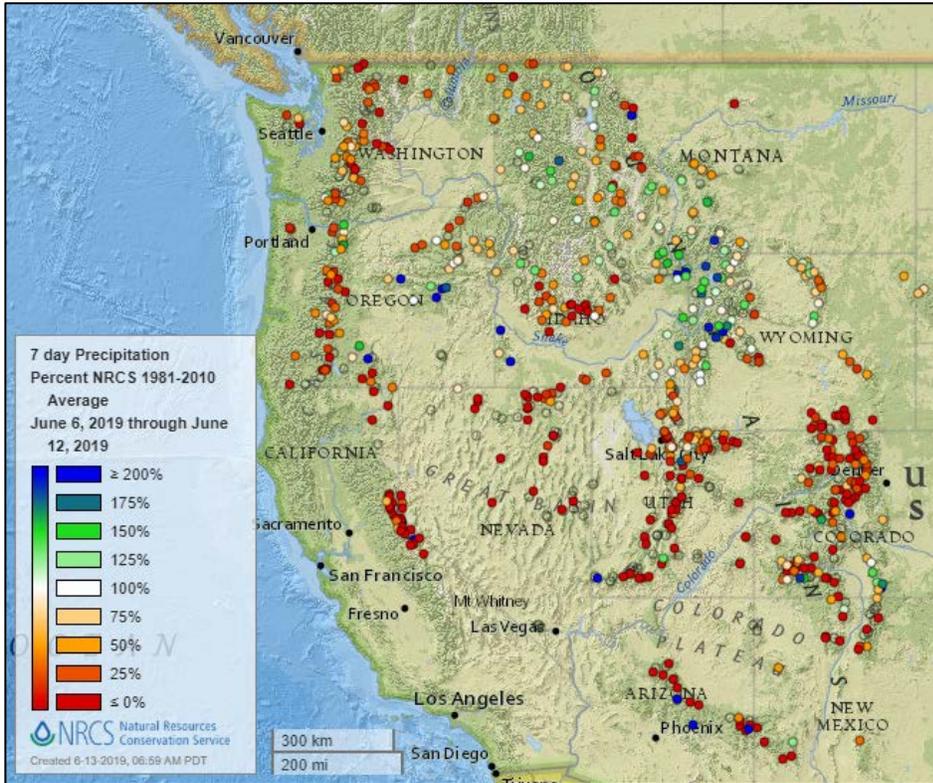
Current Snow Depth

Source: National Weather Service Snow Analysis



Precipitation

Last 7 Days, NRCS SNOTEL Network

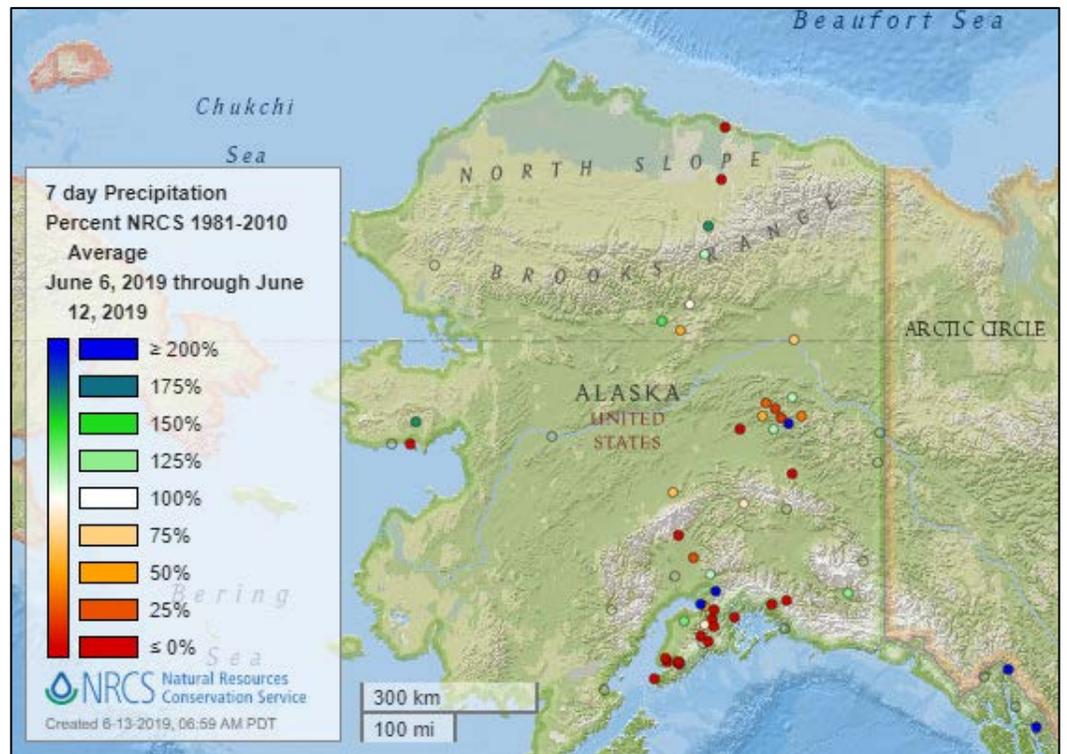


[7-day precipitation percent of average map](#)

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](#)



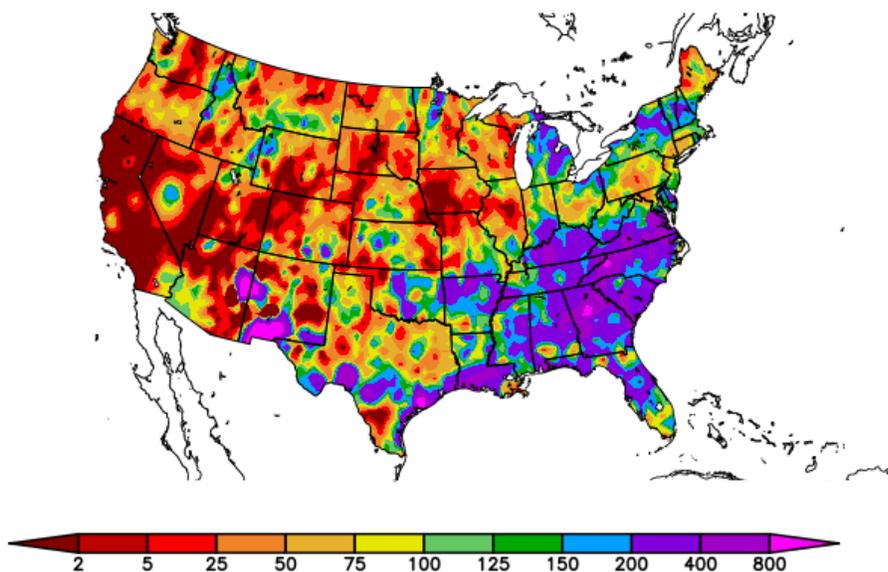
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
6/5/2019 – 6/11/2019



Generated 6/12/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

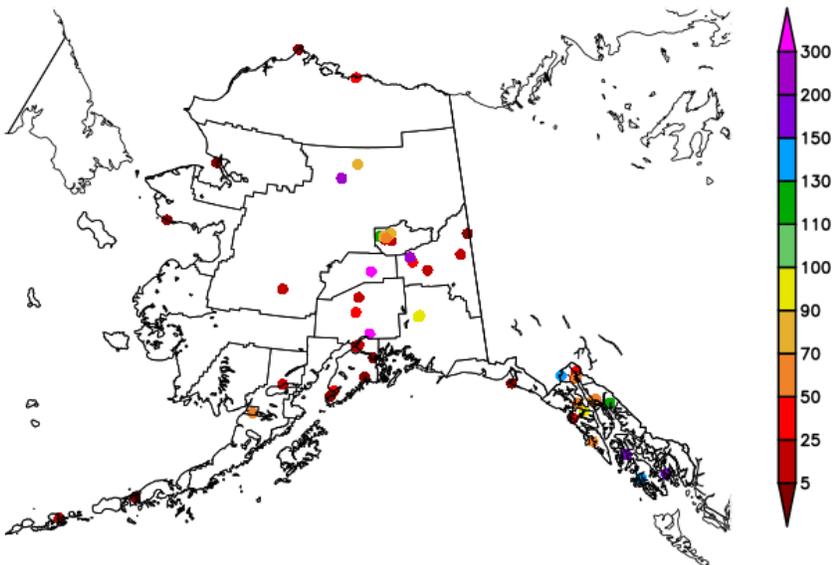
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)
6/5/2019 – 6/11/2019

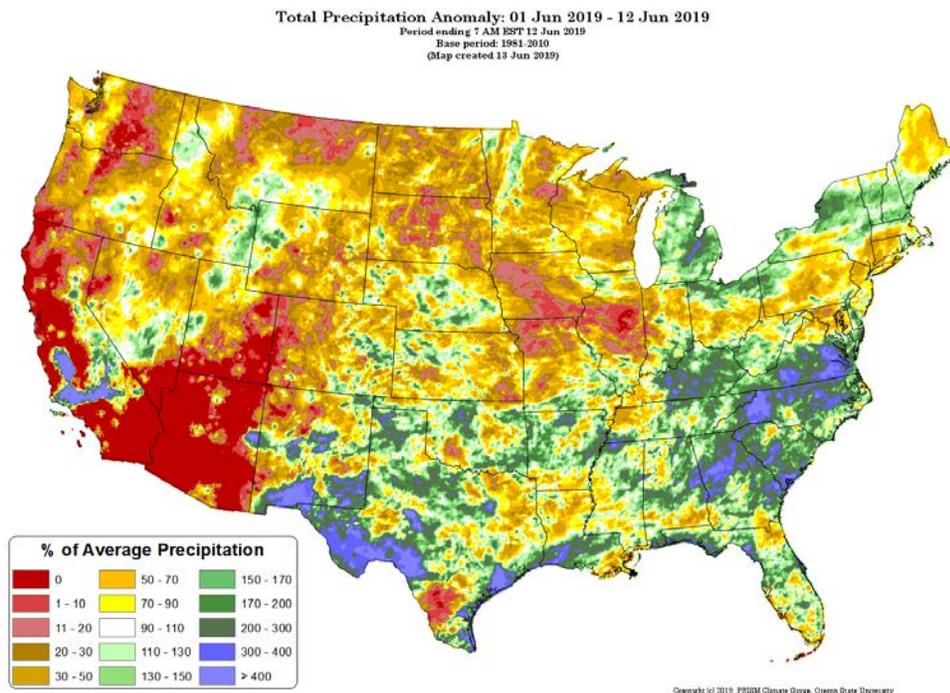


Generated 6/12/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Source: PRISM

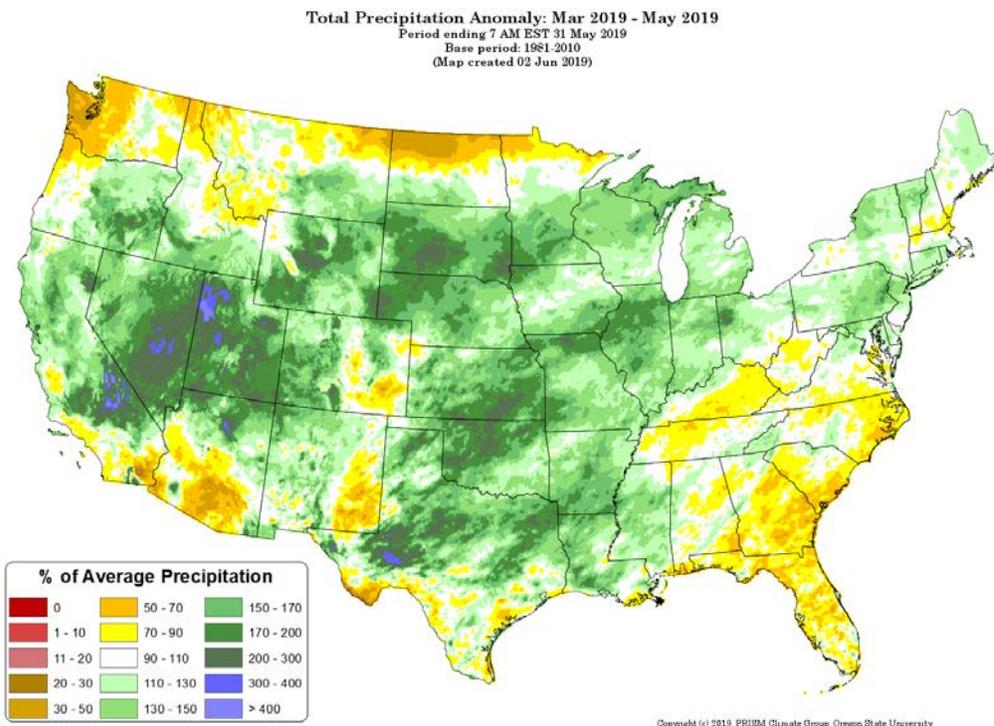


[Month-to-date national total precipitation percent of average map](#)

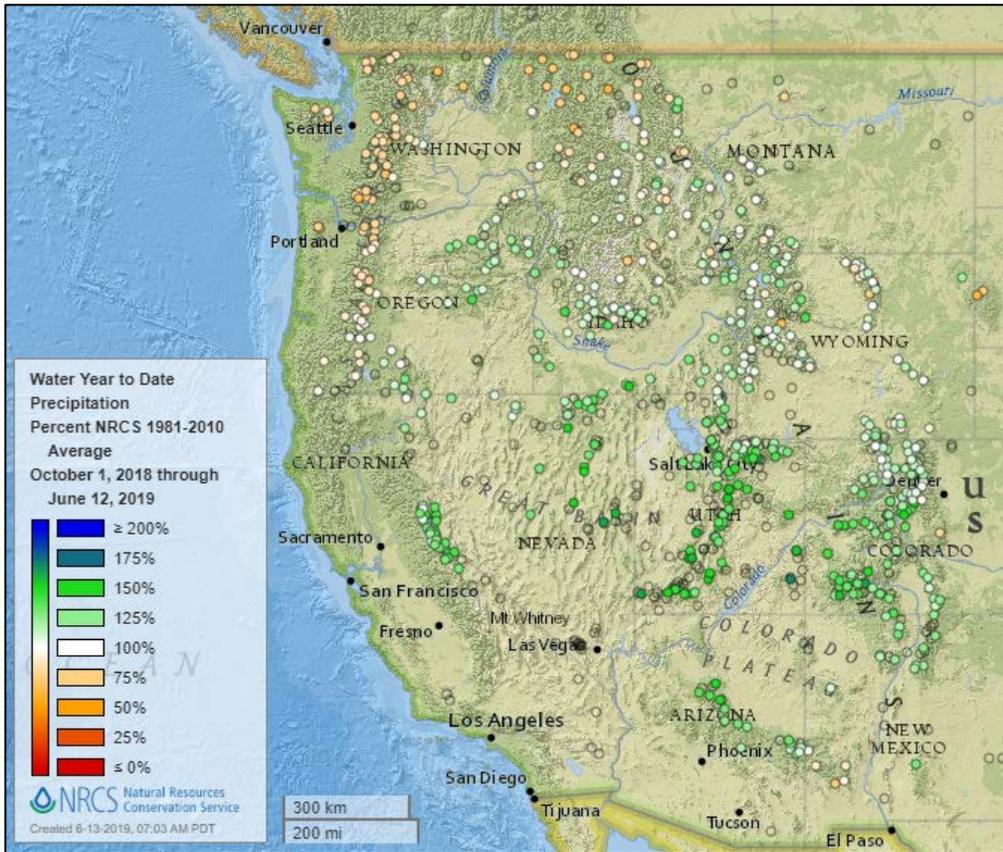
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

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

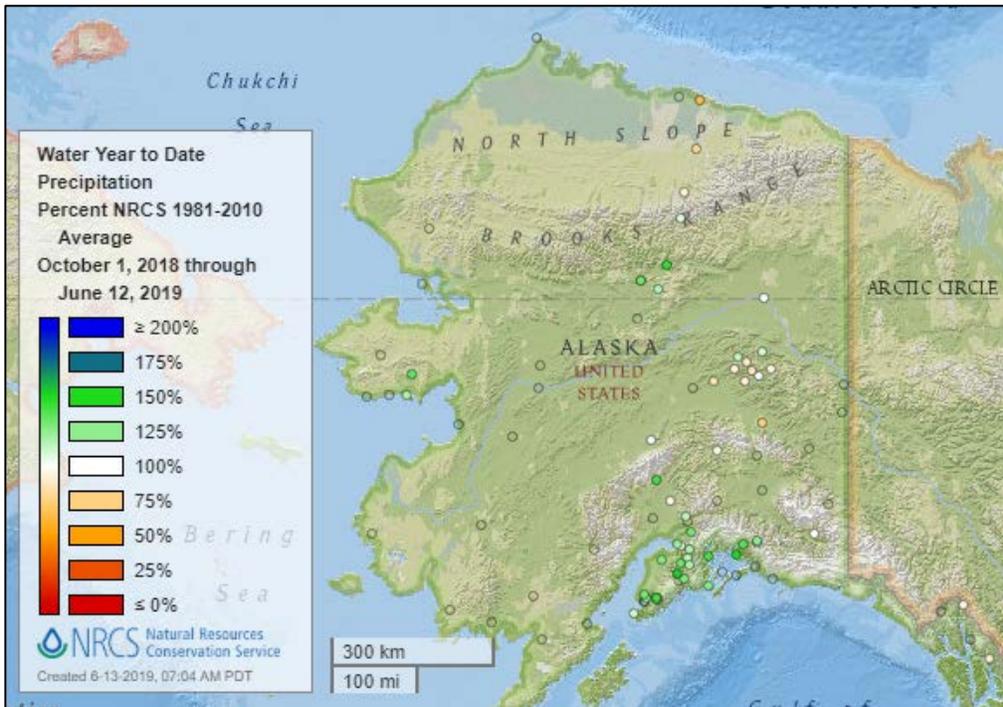


Water Year-to-Date, NRCS SNOTEL Network



[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

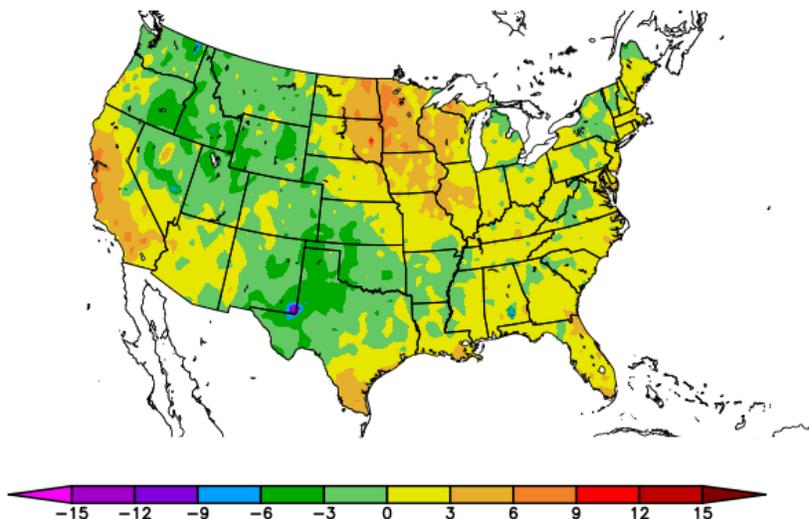
Last 7 Days, National Weather Service (NWS) Networks

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)
6/5/2019 – 6/11/2019



Generated 6/12/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

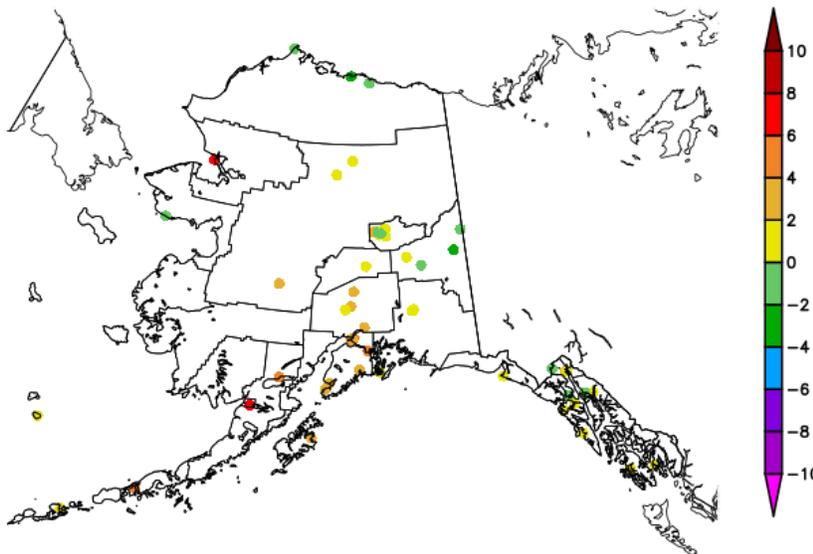
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
6/5/2019 – 6/11/2019



Generated 6/12/2019 at HPRCC using provisional data.

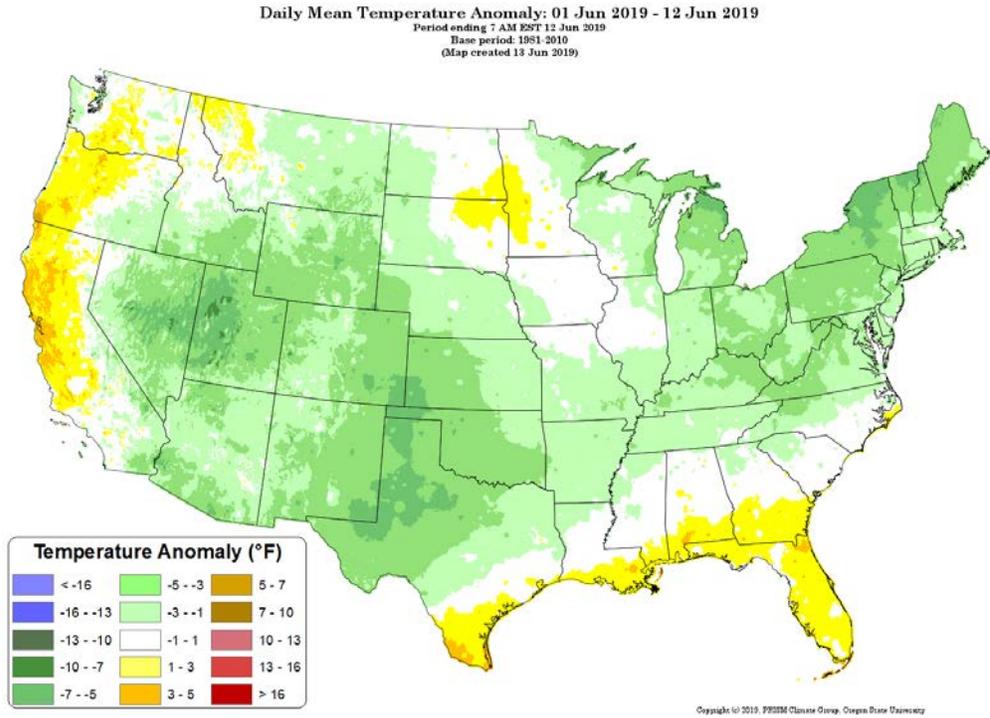
NOAA Regional Climate Centers

Water and Climate Update

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

Source: PRISM

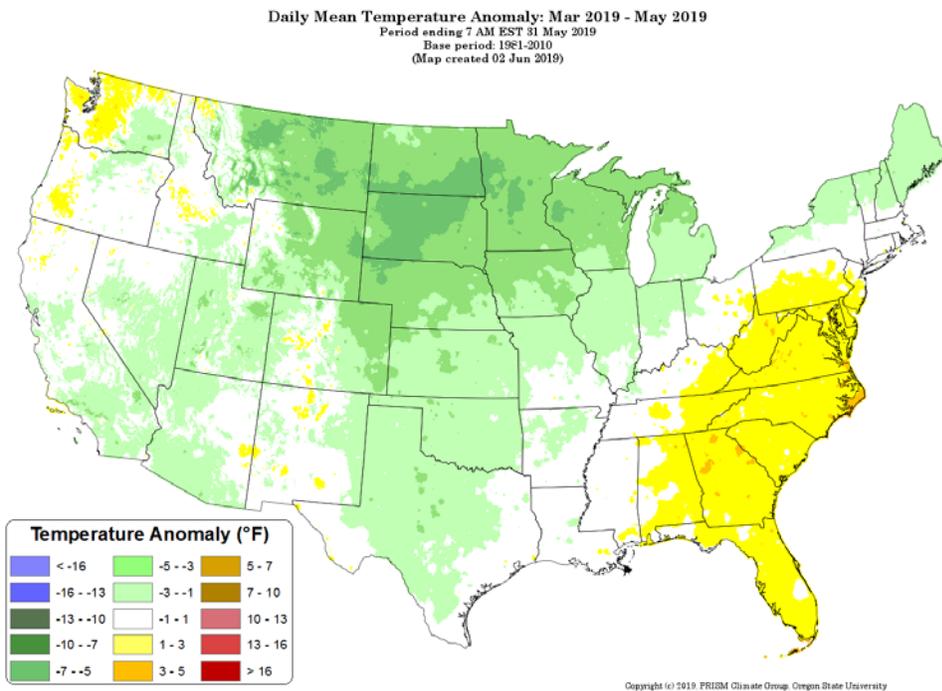
[Month-to-date national daily mean temperature anomaly map](#)



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

Source: PRISM

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



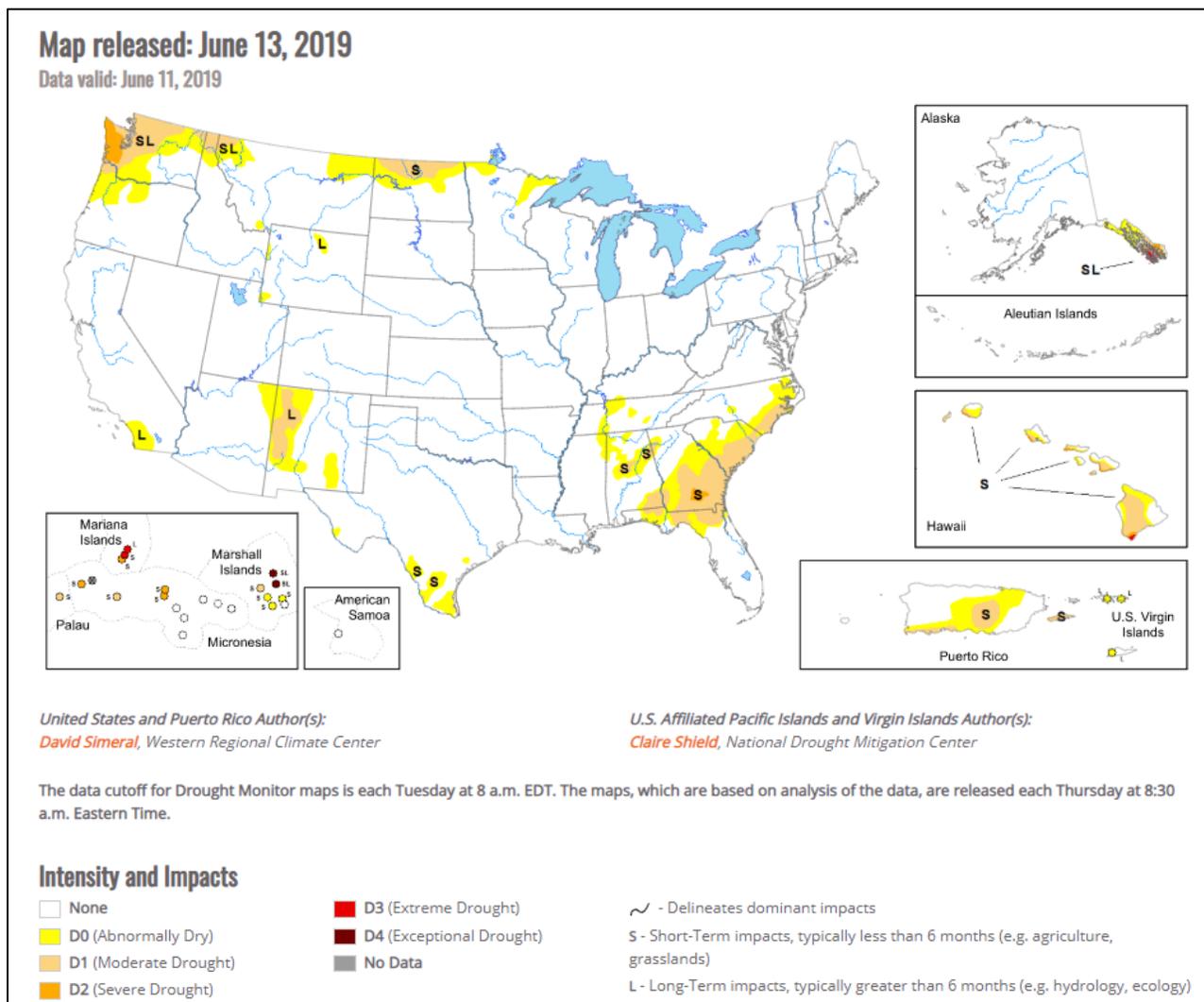
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), June 13, 2019

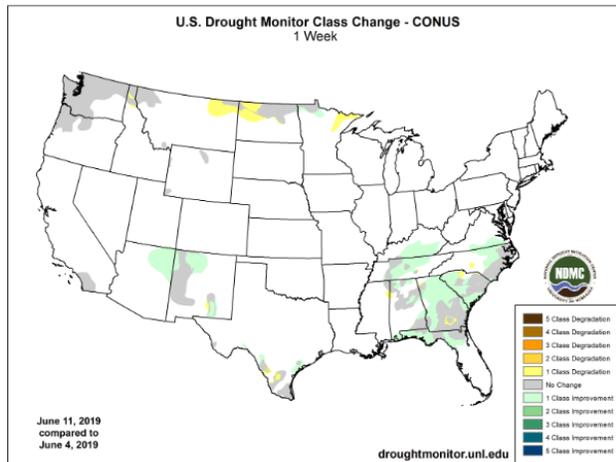
Source: National Drought Mitigation Center

“This U.S. Drought Monitor week saw highly beneficial rainfall activity across drought-stricken areas of the Southeast. Across this region, locally heavy rainfall accumulations (ranging from 2 to 8+ inches) and localized flash flooding were observed. These soaking rains helped to significantly improve soil moisture as well as boost streamflow levels in some of the areas hardest hit by the recent heatwave. In parts of the Midwest, continued rains, flooding, and very moist soils delayed the planting of crops—including corn and soybeans. According to the USDA June 11th Weekly Weather and Crop Bulletin, “only 67% of the nation’s corn and 39% of the soybeans had been planted, breaking 1995 records of 77 and 40%, respectively.” In northern North Dakota, areas of drought expanded in relation to short-term precipitation deficits and reported impacts in the agricultural sector. Out West, drought intensified in the Idaho Panhandle where poor snowpack conditions during the 2018–19 season have led to below-normal snowmelt runoff conditions. Nationwide, May of 2019 was the 2nd wettest May on record for the contiguous U.S., according to NOAA’s National Center for Environmental Information (NCEI).”

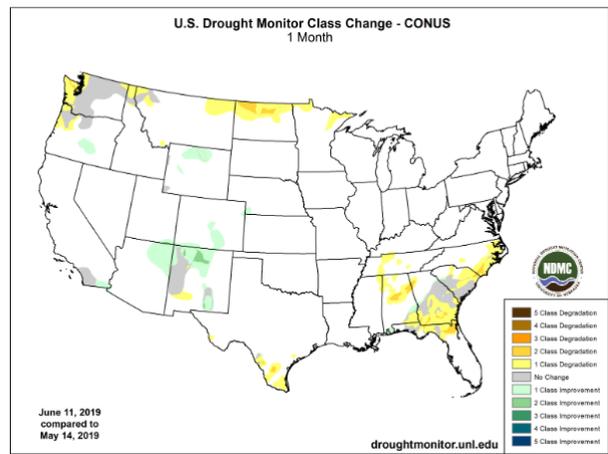
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

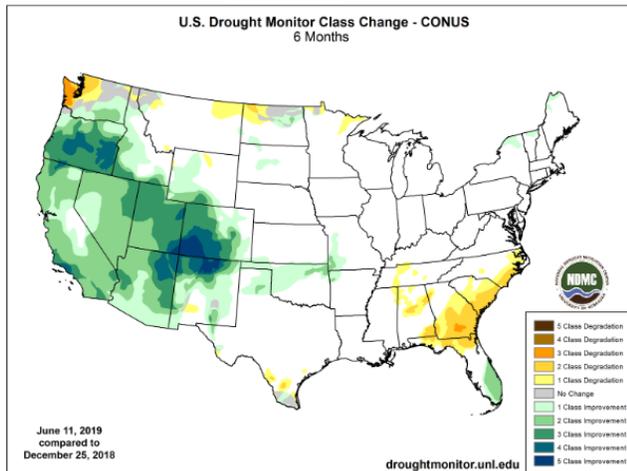
1 Week



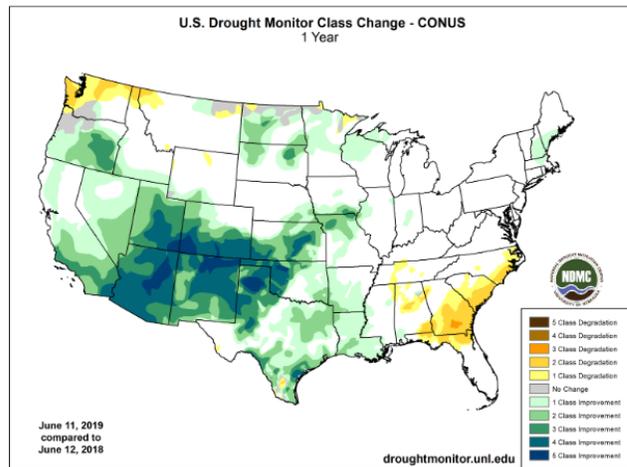
1 Month



6 Months



1 Year



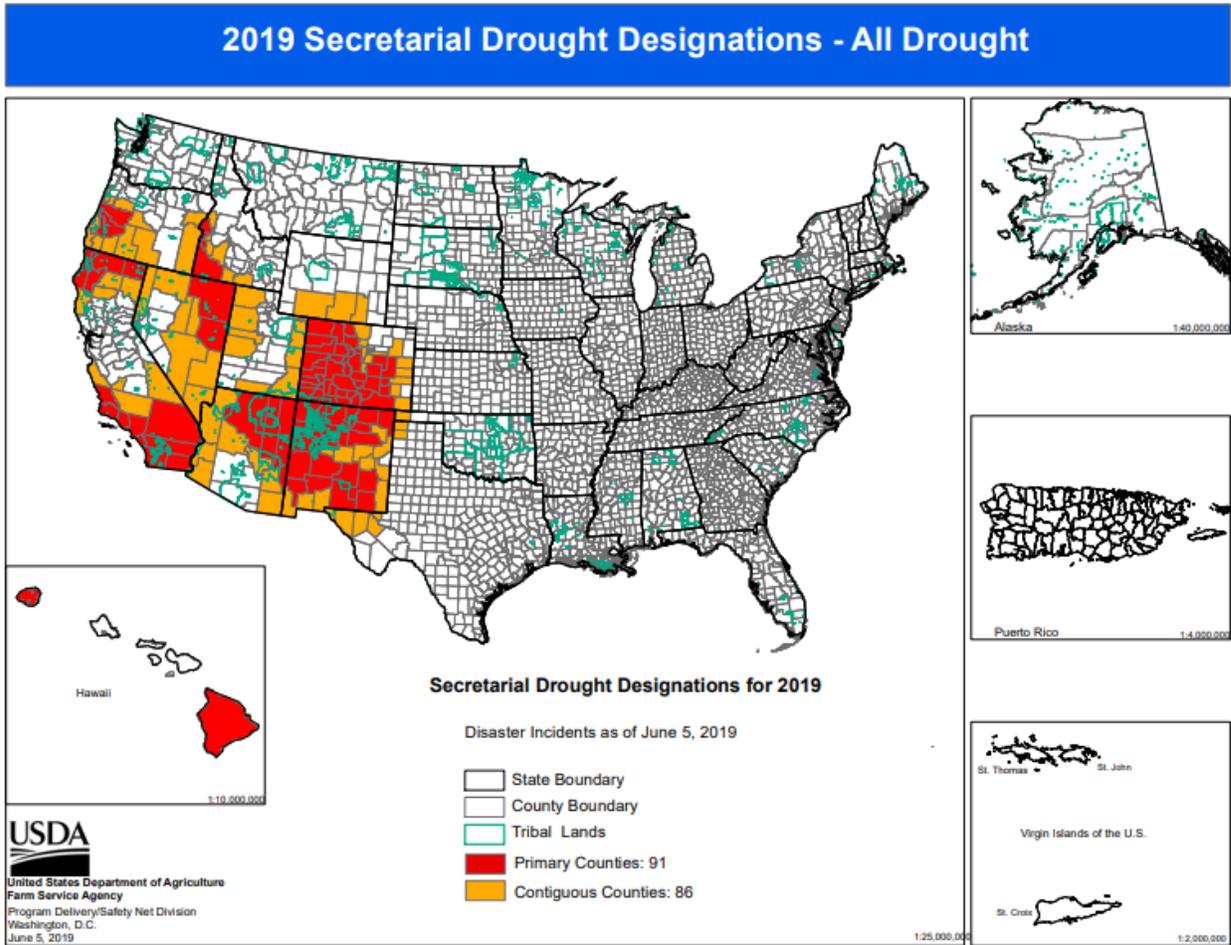
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

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

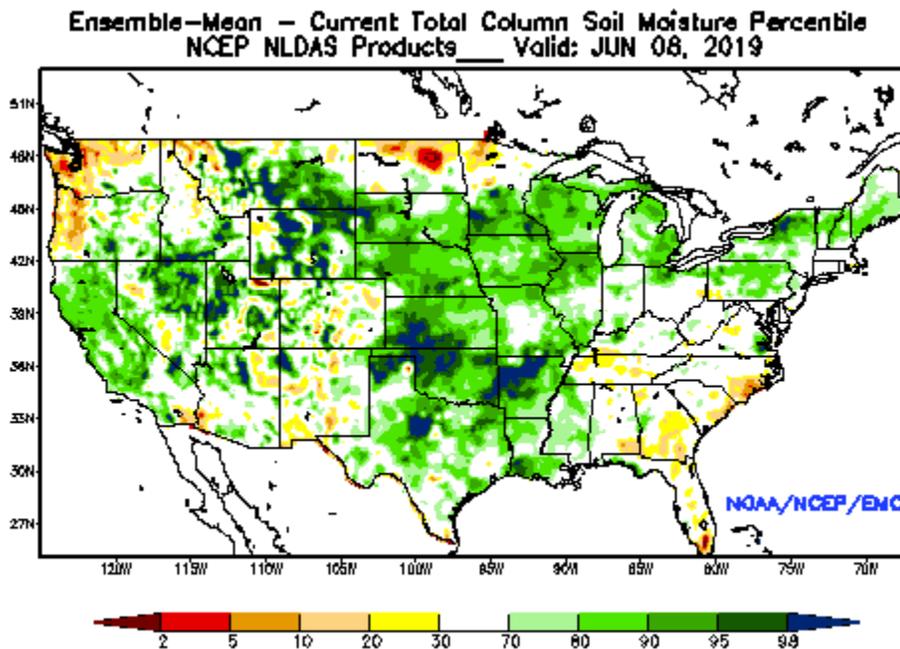
Source: USDA Farm Service Agency



Other Climatic and Water Supply Indicators

Soil Moisture

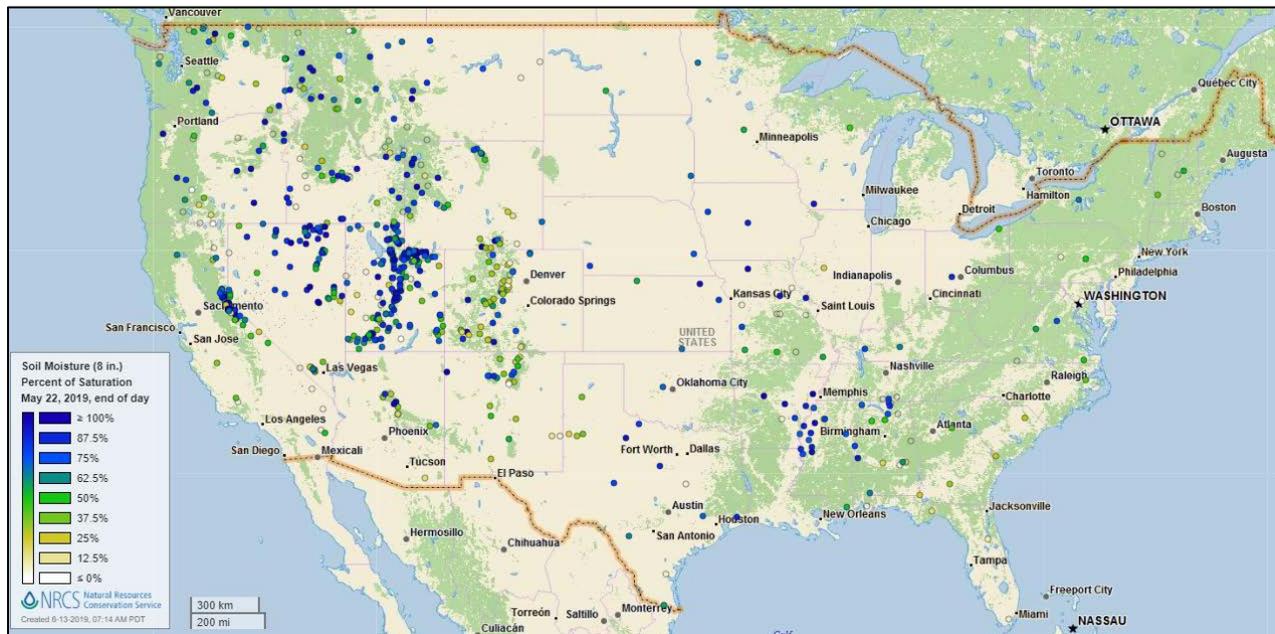
Source: NOAA National Centers for Environmental Prediction



[Modeled soil moisture percentiles](#) as of June 8, 2019

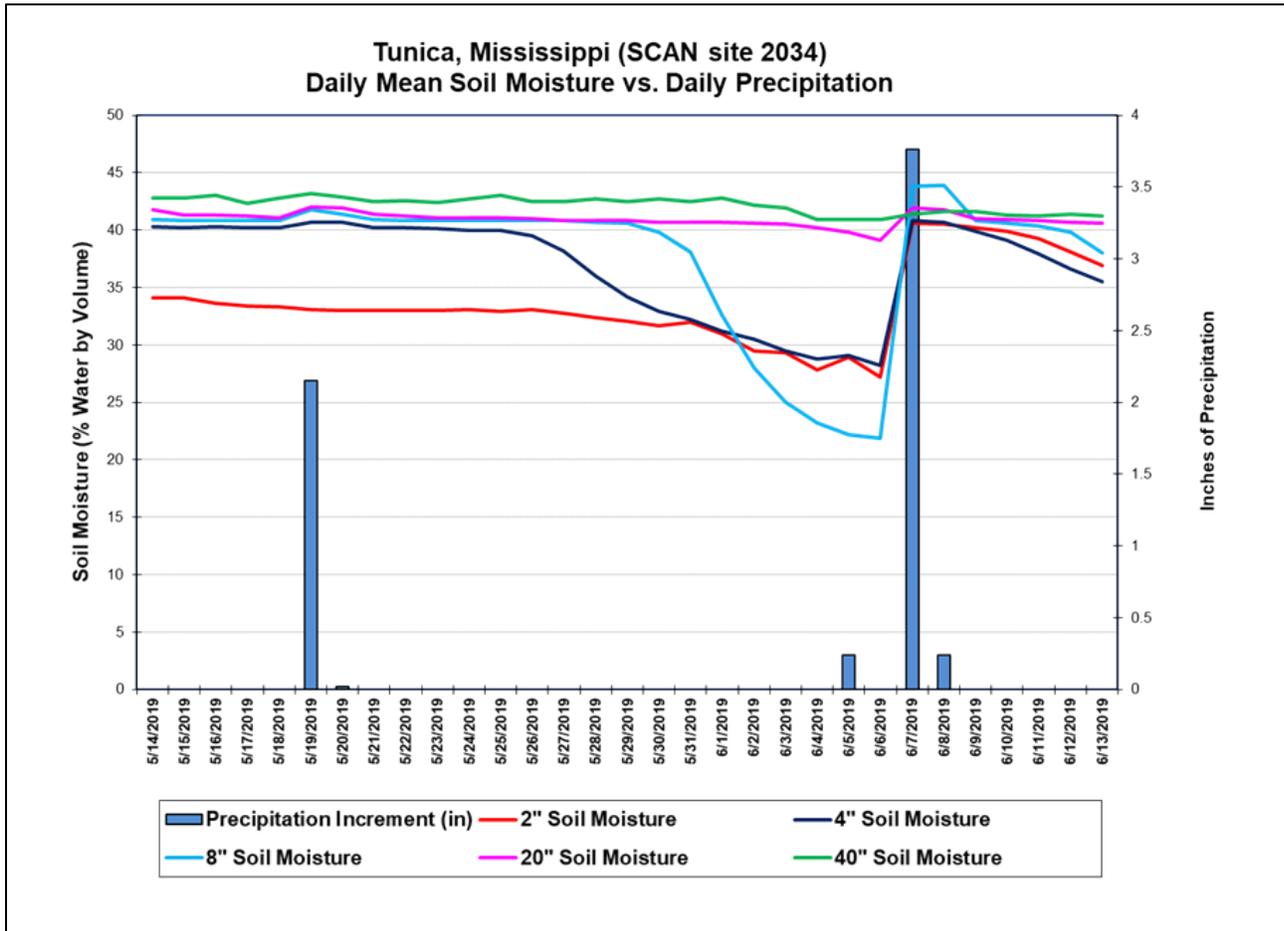
Soil Moisture Percent of Saturation

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



Soil Moisture Data

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



This chart shows the soil moisture and precipitation for the last 30 days at the [Tunica SCAN site 2034](#) in Mississippi. This site is located in an area that has recently experienced heavy rainfall. Between 6/7/19 - 6/8/19, accumulated precipitation totaled 4.0 inches and soil moisture increased at all but the -40” sensor, which is saturated at this level.

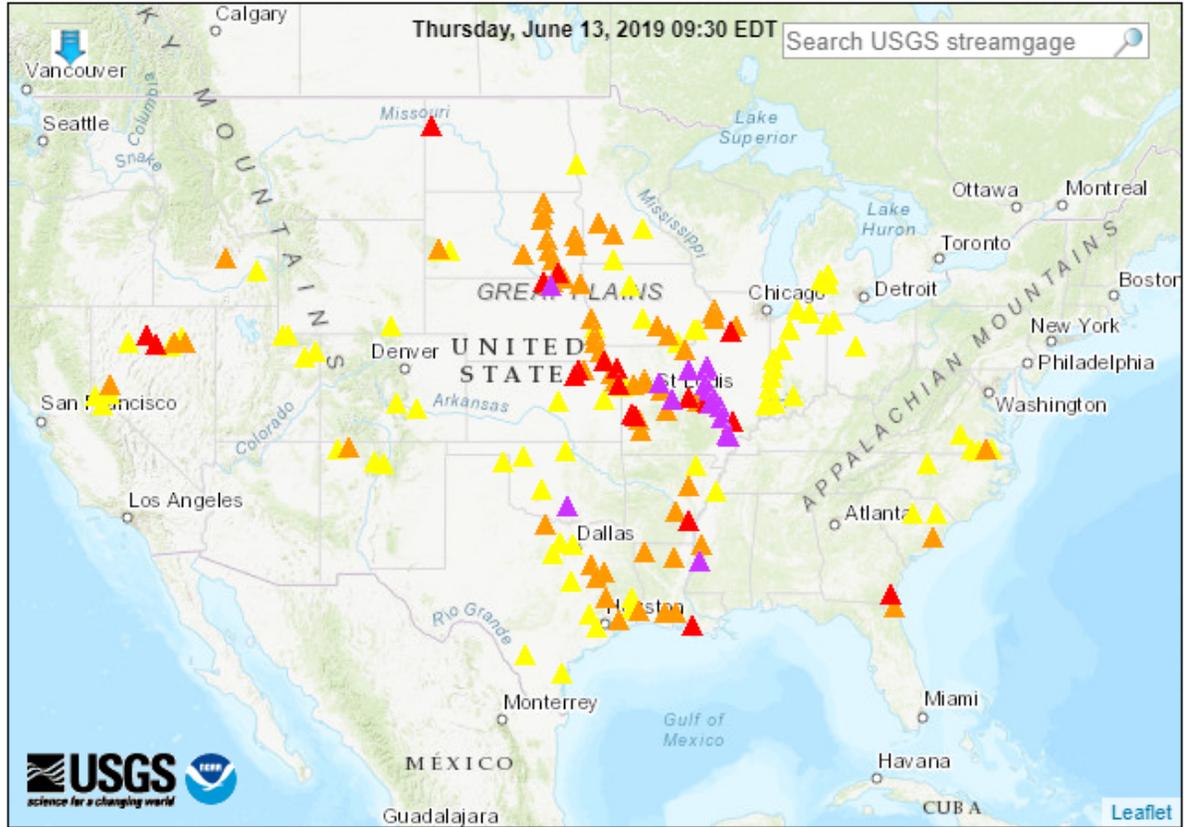
Soil Moisture Data Portals

- [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
 (16 in major flood, 21 in moderate flood, 60 in minor flood, 72 in near flood)



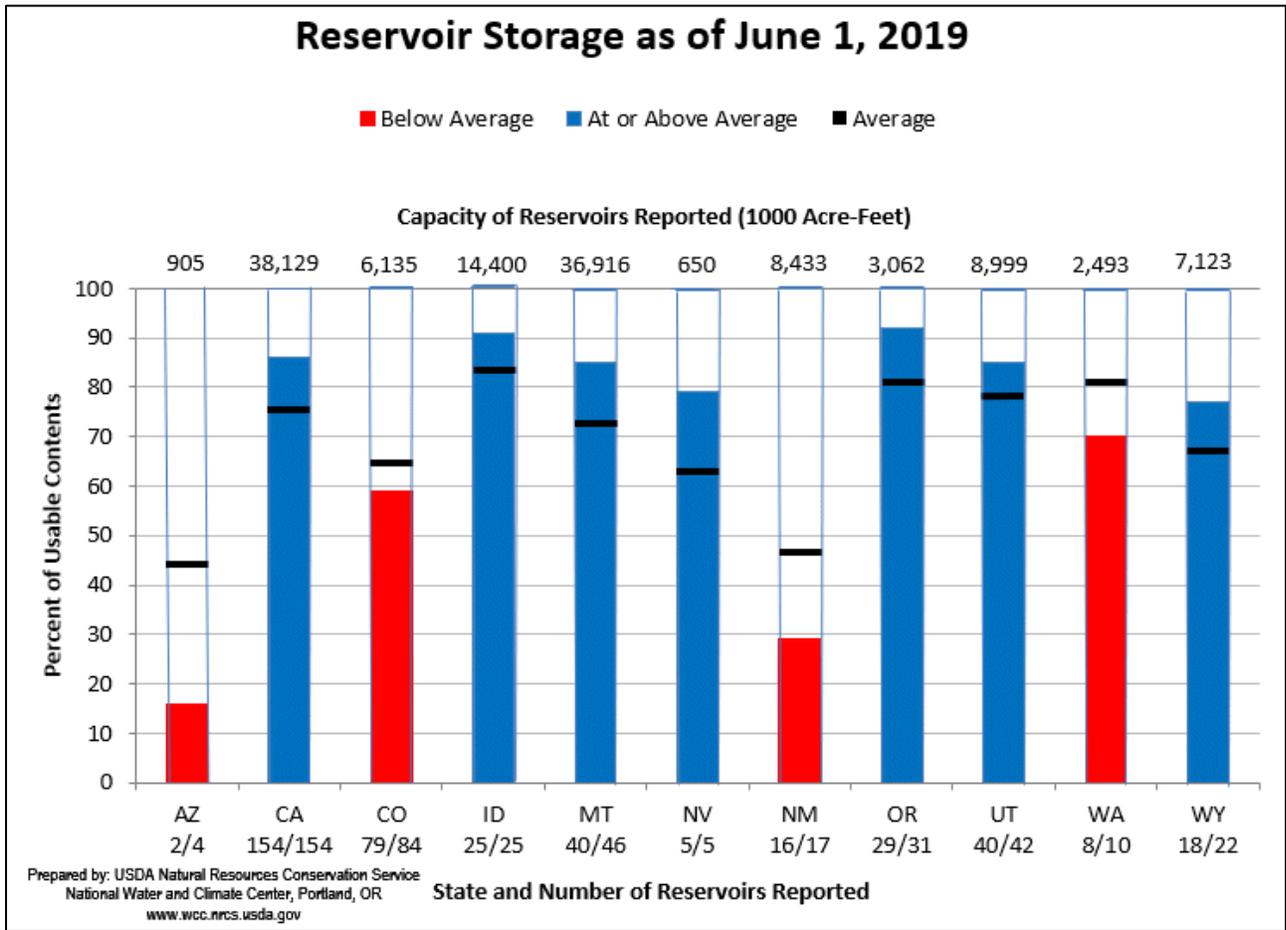
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
Streamgage with flood stage			Streamgage without flood stage			

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

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center



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

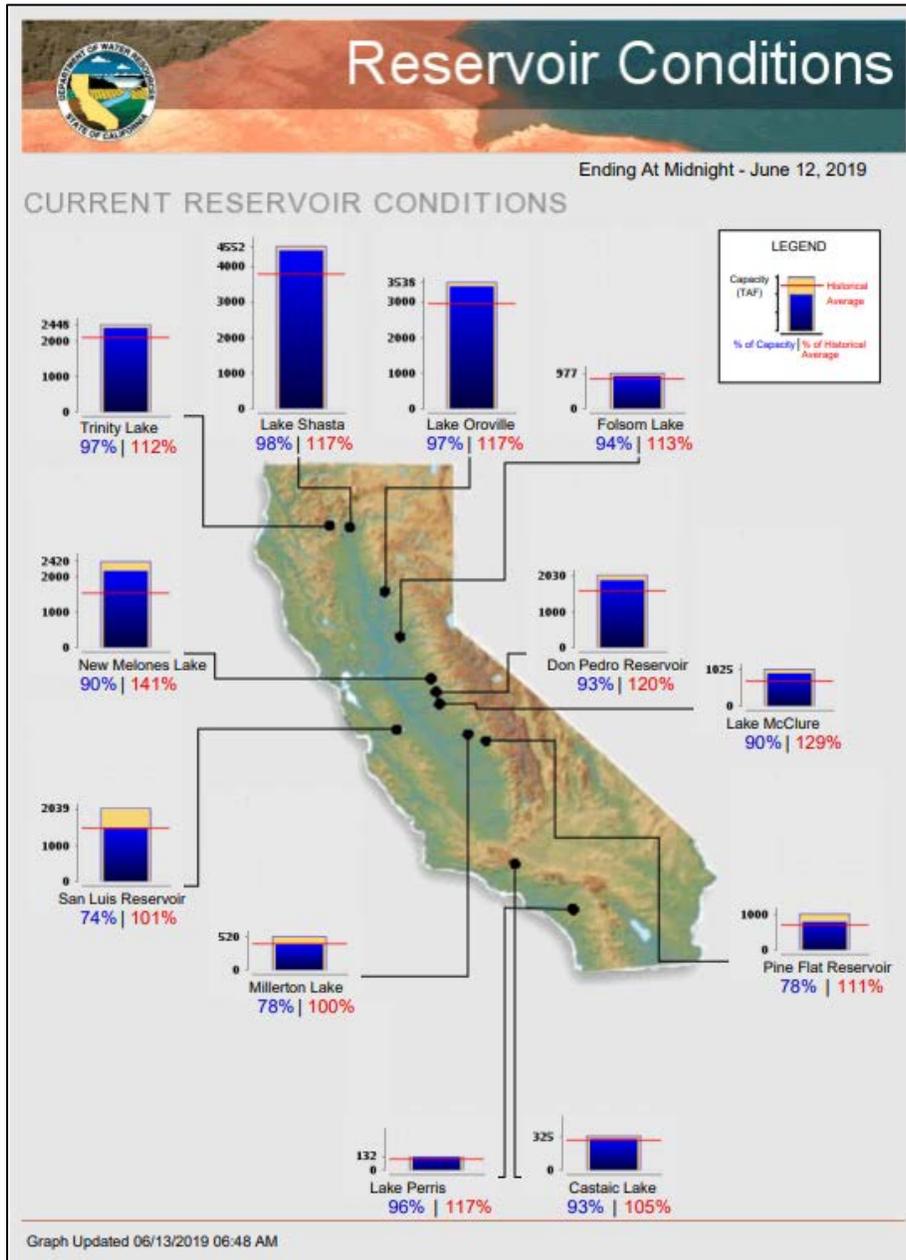
Hydromet Tea Cup Reservoir Depictions

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

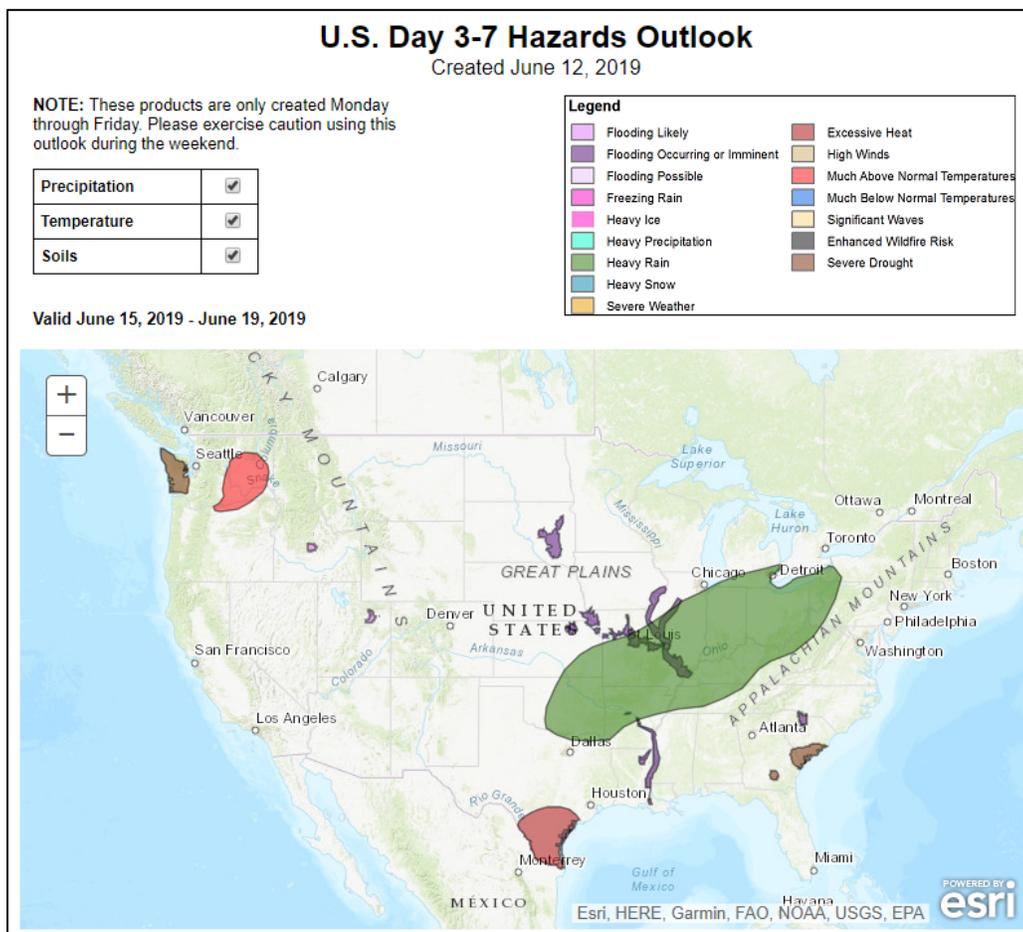
Agricultural Weather Highlights

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

National Outlook, Thursday, June 13, 2019: “For the remainder of today, rain will gradually shift from the lower Great Lakes region into the Northeast. Meanwhile, a new cold front will arrive across the Plains and upper Midwest, generating scattered showers. During the weekend and early next week, rain could become heavy from the central and southern Plains into the Northeast, with 1- to 3-inch totals common. Heavy showers may also linger across Florida’s peninsula. Elsewhere, below-normal temperatures will persist across large sections of the Plains, Midwest, and Northeast, while cooler air will spread inland across the Pacific Coast States. The NWS 6- to 10-day outlook for June 18 – 22 calls for below-normal temperatures from the Intermountain West to the Great Lakes region, including the northern and central Plains. Hotter-than-normal weather will prevail, however, in California, the Atlantic Coast States, and from the southern Plains eastward. Meanwhile, near- or above rainfall across most of the country will contrast with drier-than-normal conditions in Oregon, the southern Rockies, and the Rio Grande Valley.”

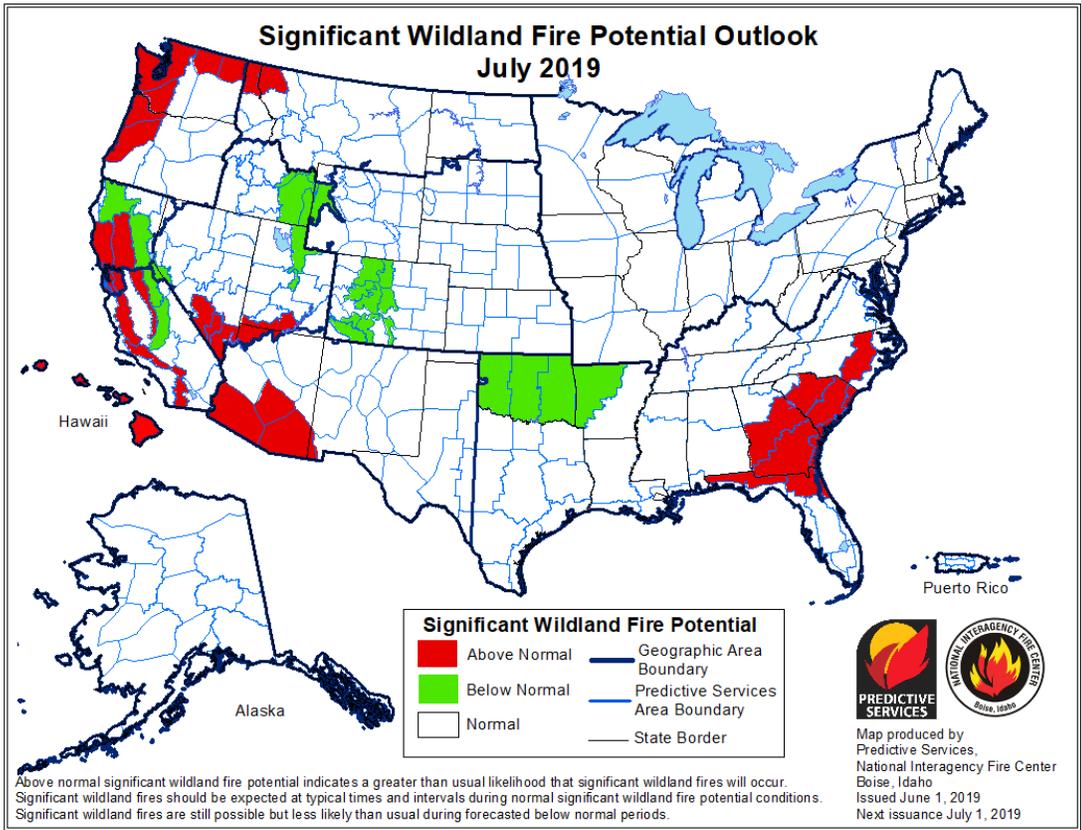
Weather Hazards Outlook: June 15 – June 19, 2019

Source: NOAA Climate Prediction Center



Significant Wildland [Fire Potential Outlook](#)

Source: National Interagency Fire Center

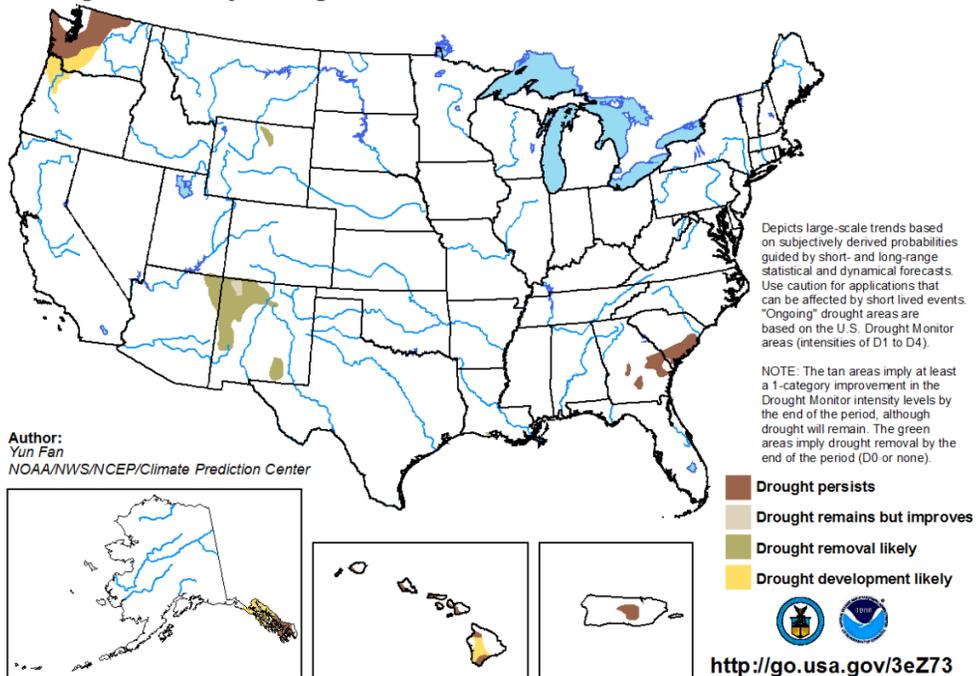


Seasonal Drought Outlook: [May 16 – August 31, 2019](#)

Source: National Weather Service

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

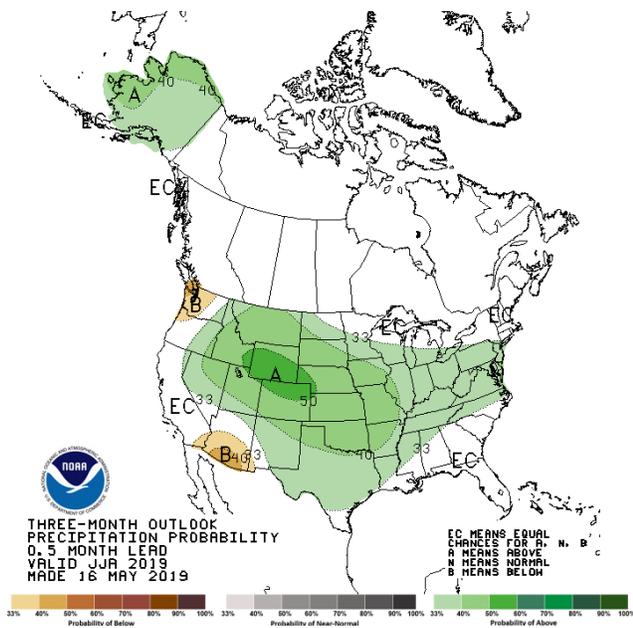
Valid for May 16 - August 31, 2019
Released May 16



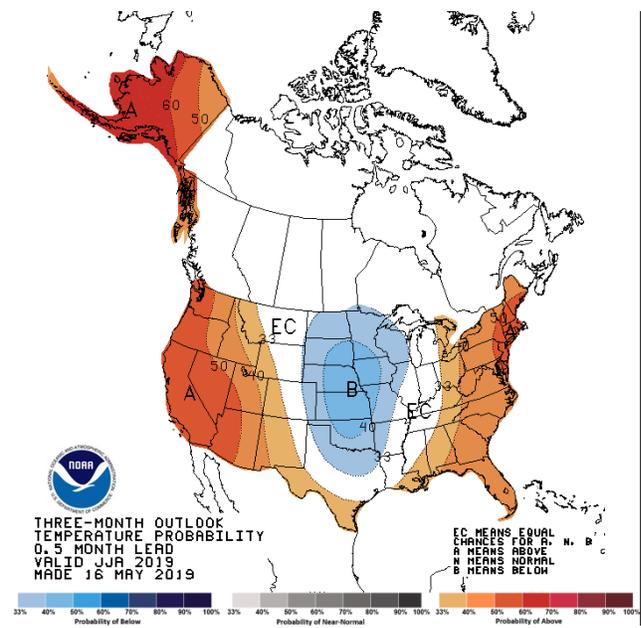
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



[June-July-August \(JJA\) 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](#).