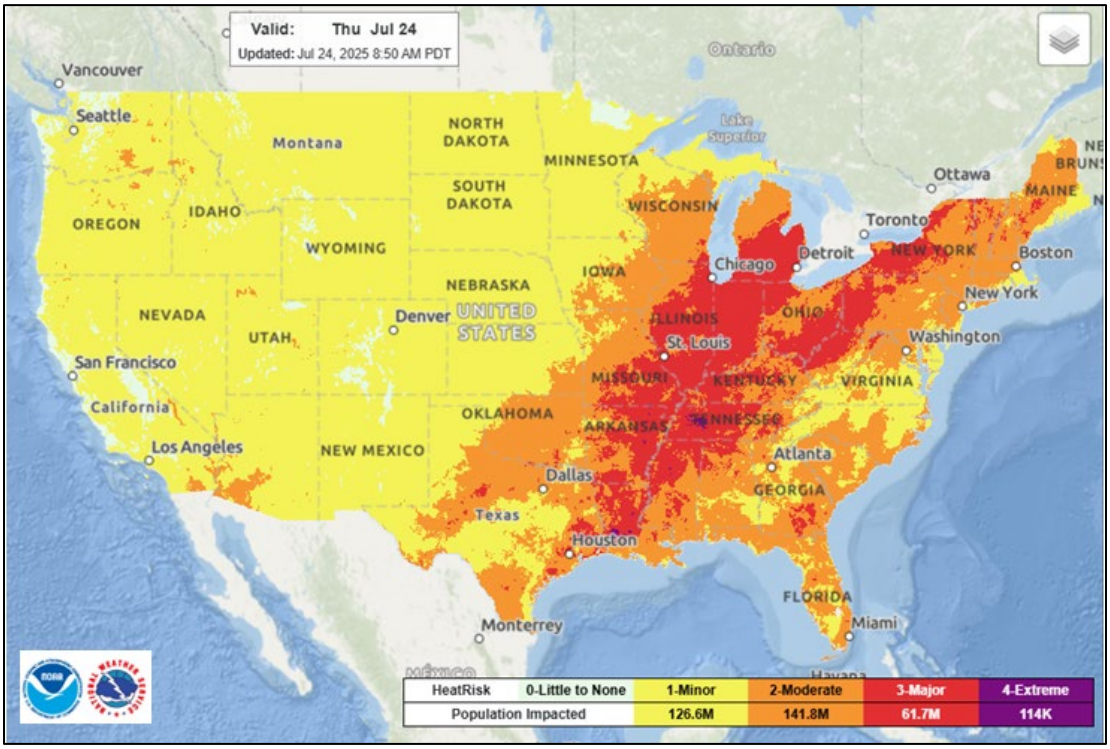
United States Department of Agriculture

Water and Climate Update

July 24, 2025

The Natural Resources Conservation Service (NRCS) 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.

Heat dome swelters millions across eastern half of the U.S.



Hazardous heat has impacted millions of residents in the Plains, Southeast, and Midwest regions this week after a heat dome formed from the Gulf Coast to the Plains on July 22. The sweltering conditions pushed into the Midwest between July 23-24, and are expected to impact the Northeast by July 25. High humidity from the weather pattern is raising overnight temperatures in the area, increasing the risk of heat-related illnesses for residents. The oppressive heat is expected to linger in the Plains and Southeast through next week.

Related:

Heat dome to push extreme temperatures across much of US this week – USA Today

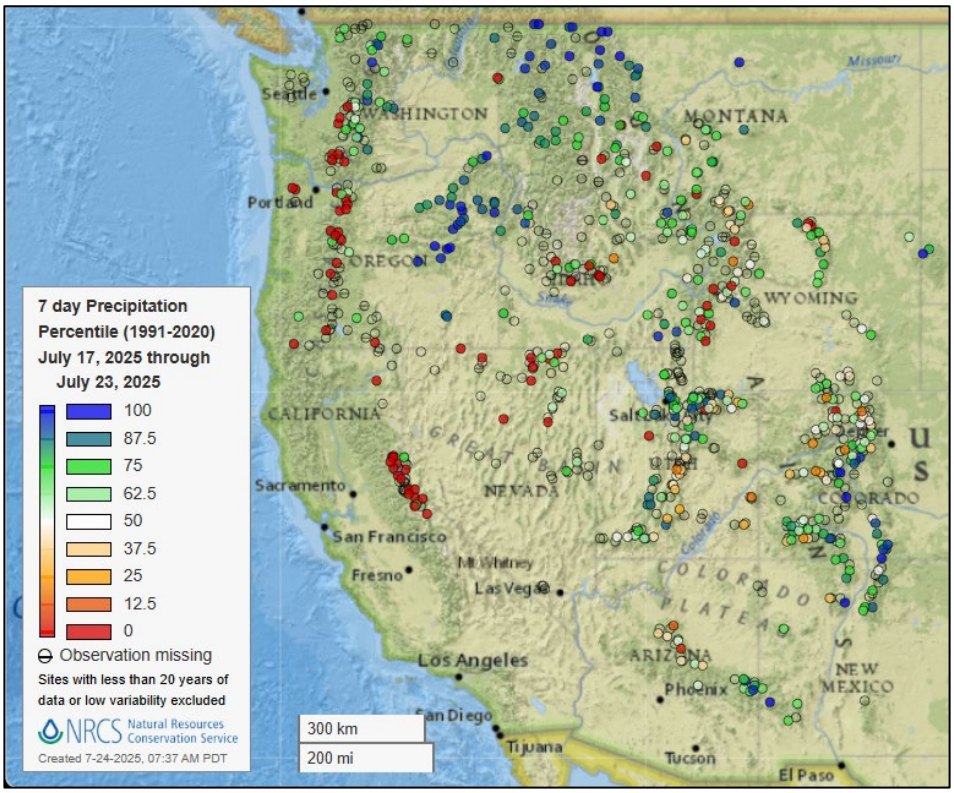
Extreme heat is back — here's where it will be the worst – CNN

Heat dome map shows dangerous temperatures across U.S. Corn Belt, parts of the South – CBS News

More than 60 million under heat alerts with sweltering triple-digit temperatures in the South and the Midwest – NBC News

Precipitation

Last 7 Days, NRCS SNOTEL Network



[7-day precipitation percentile map]

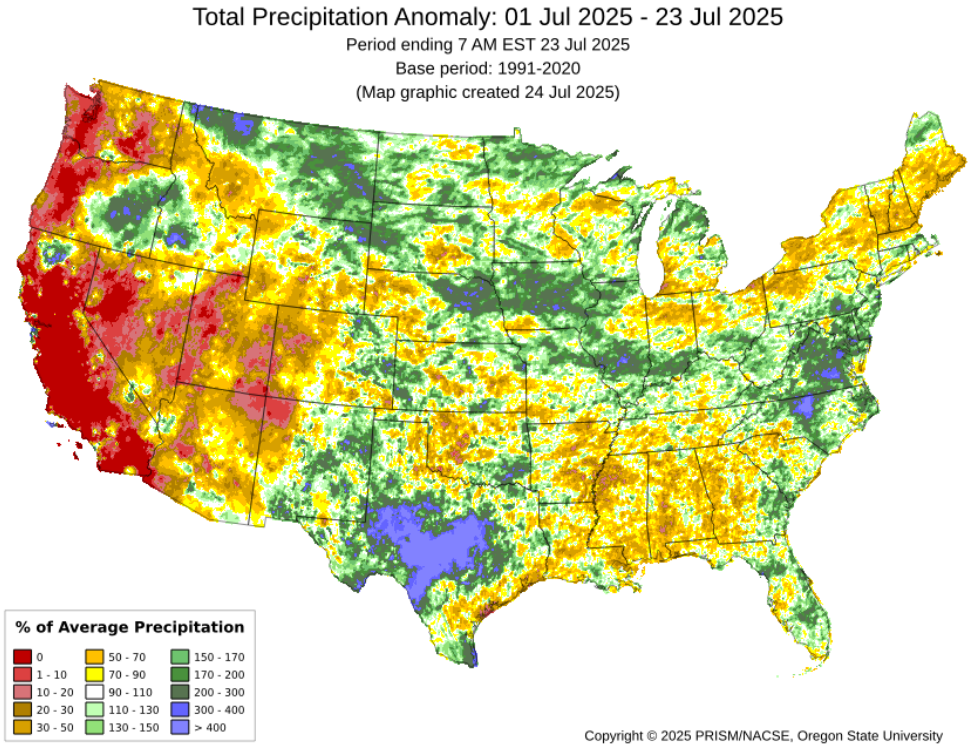
See also:
[7-day total precipitation values (inches) map]

[Alaska 7-day precipitation percentile map]

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

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

Source: PRISM

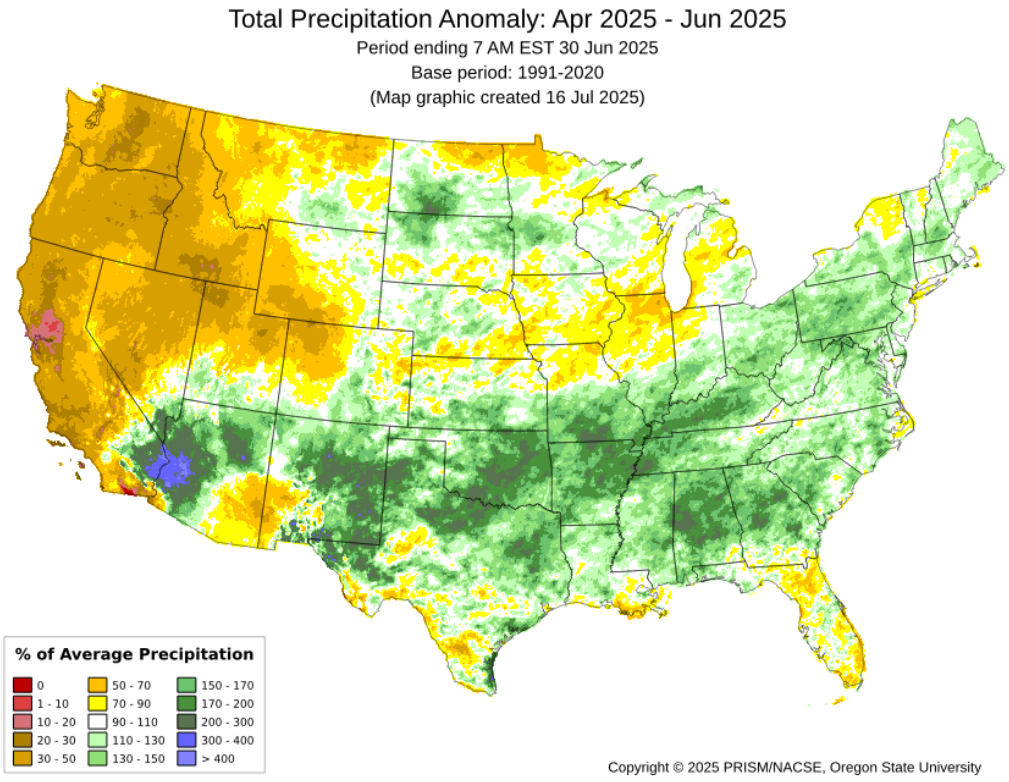


Month-to-date national total precipitation anomaly map

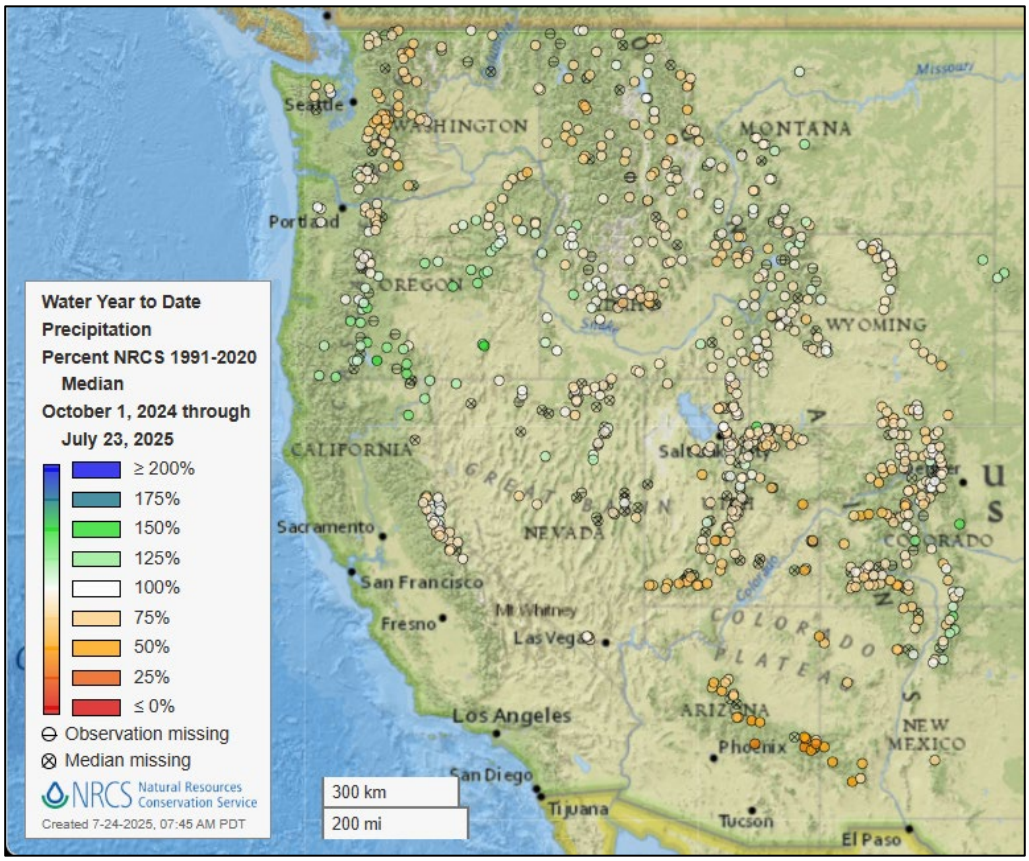
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

April through June 2025 precipitation anomaly map



Water Year-to-Date, NRCS SNOTEL Network

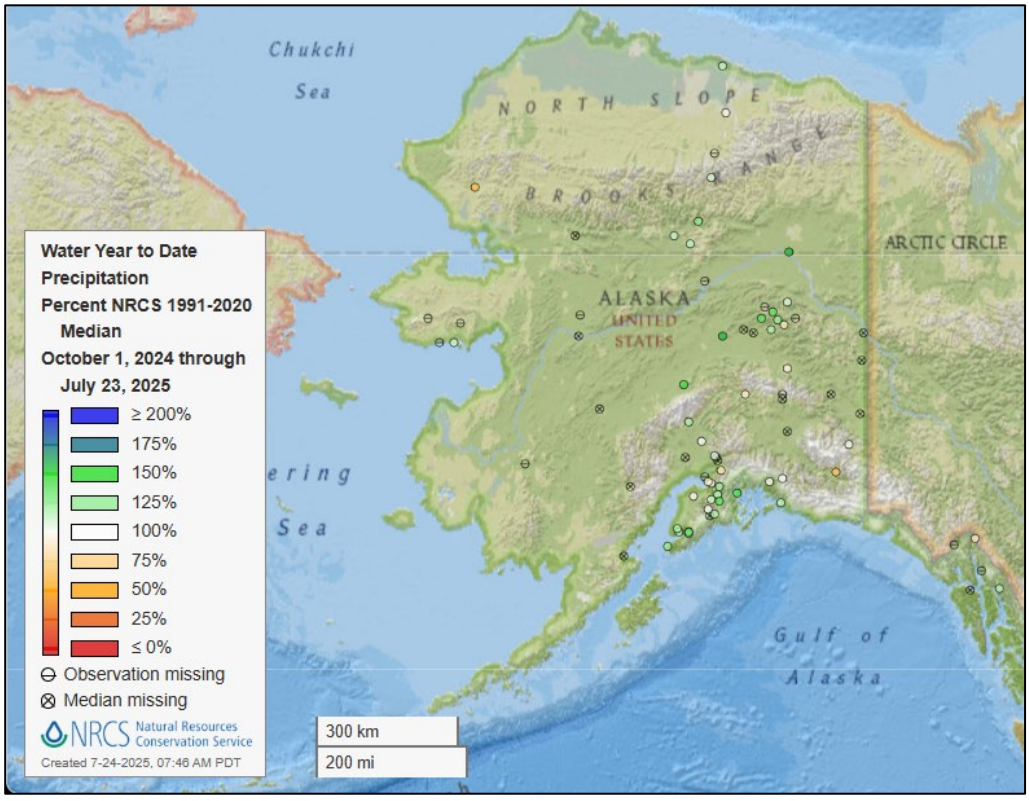


[2025 water year-to-date precipitation percent of median map]

See also:

[2025 water year-to-date precipitation percent of average map]

[2025 water year-to-date precipitation values (inches) map]



[Alaska 2025 water year-to-date precipitation percent of median map]

See also:

[Alaska 2025 water year-to-date precipitation percent of average map]

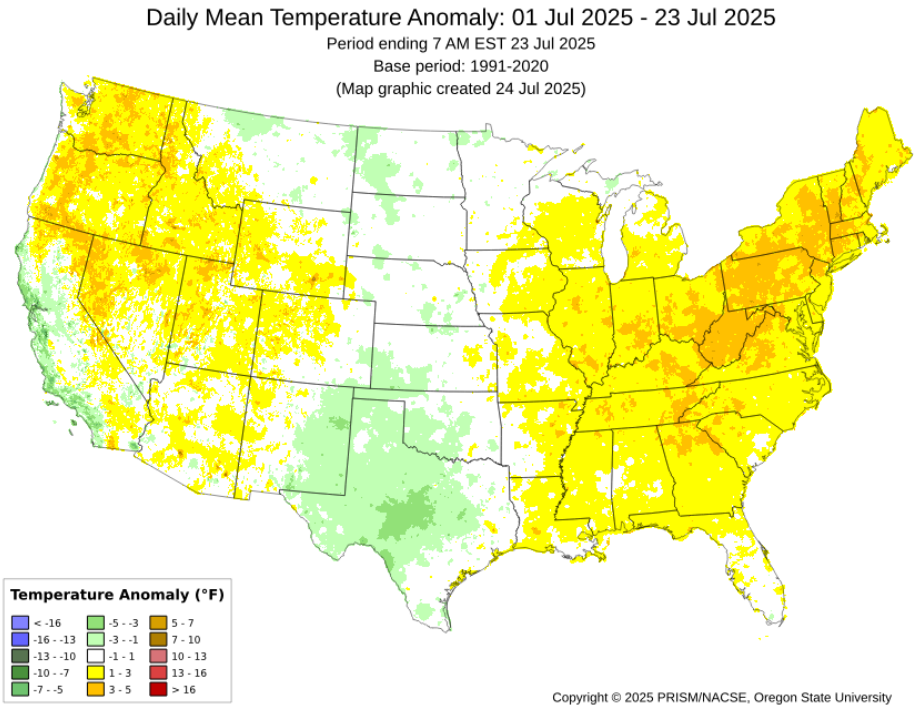
[Alaska 2025 water year-to-date precipitation values (inches) map]

Temperature

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

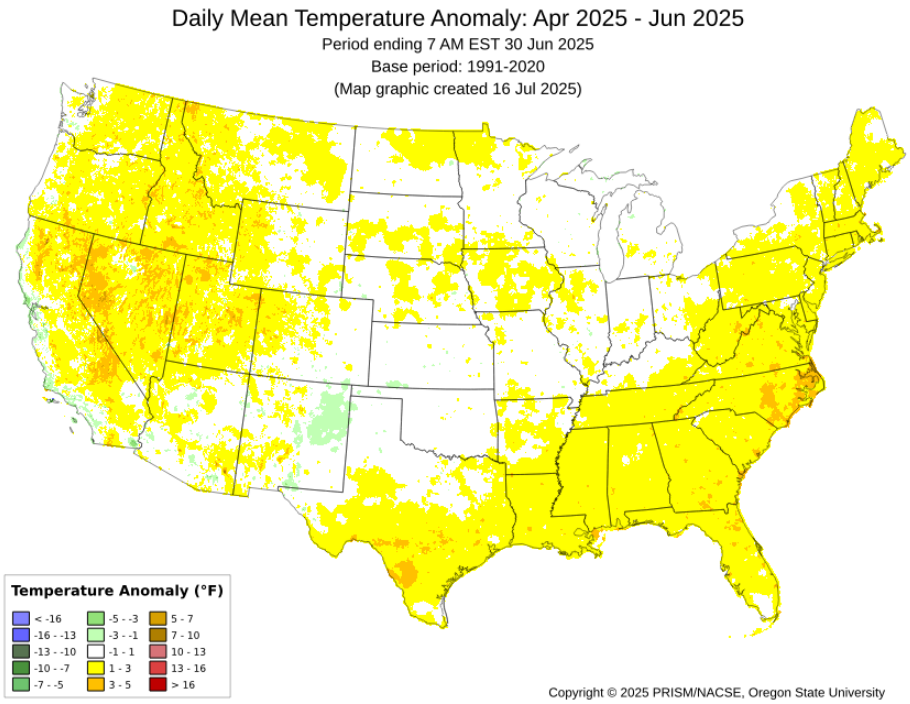
Source: PRISM

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



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

Source: PRISM



[April through June 2025 daily mean temperature anomaly map]

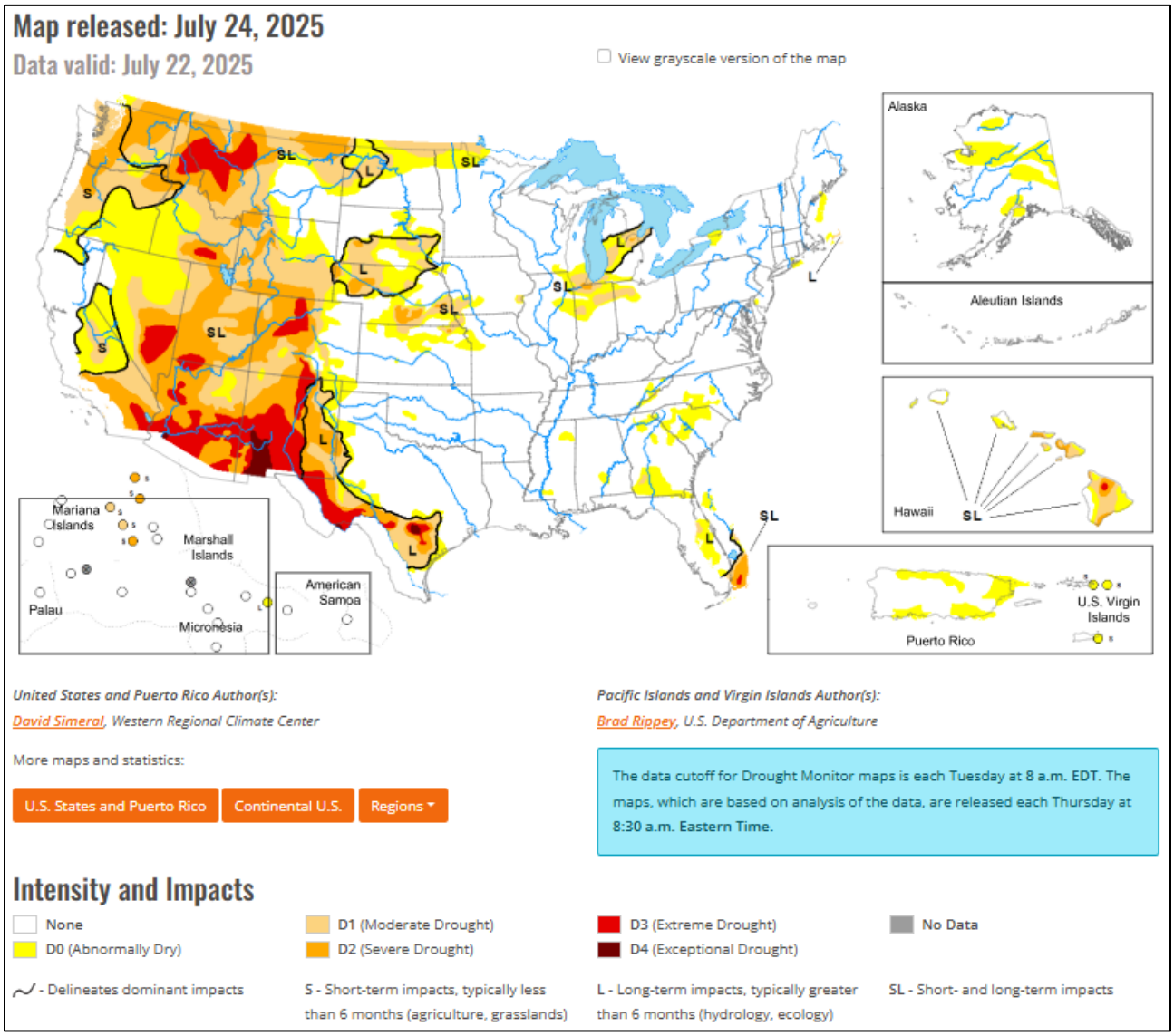
Drought

U.S. Drought Monitor

Source: National Drought Mitigation Center

U.S. Drought Portal

Source: NOAA



Current National Drought Summary, July 22, 2025

Source: National Drought Mitigation Center

“This U.S. Drought Monitor (USDM) week saw improvement in drought-related conditions across areas of the Southeast, South, Midwest, central and northern Plains, Intermountain West, and Desert Southwest, where short-term precipitation accumulations (past 30-day period) have helped to improve drought-related conditions. For the week, the most significant rainfall accumulations were observed across northern Kansas and areas of the Midwest including Missouri, Iowa, Illinois, and Indiana where accumulations ranged from 3 to 10+ inches, with the highest accumulations observed in northeastern Kansas. On the map, improving conditions over the past 30 to 60 days led to reduction in areas of drought in the Plains states, Kansas to North Dakota, as well as across drought-affected areas across the Midwest. Elsewhere, short-term dryness led to widespread expansion of areas of Abnormally Dry (D0) across the Southeast states including the Carolinas, Georgia, Alabama, and the Florida Panhandle. In the South, drought conditions continued to improve in Texas, including in the Trans-Pecos region in western Texas where short and mid-term composite drought indicators are showing improving conditions in terms of precipitation, soil moisture, and vegetation health. In the West, conditions were generally dry regionally, however, some isolated monsoon thunderstorms provided a much-needed boost in moisture (2 to 3 inch accumulations during the past week) to drought-affected areas of east-central and southeastern Arizona as well as lesser accumulations observed in central and northern Arizona. In terms of reservoir storage in the West, California’s reservoirs continue to be at or above historical averages for the date (July 22), with the state’s two largest reservoirs, Lake Shasta and Lake Oroville, at 105% and 117% of average, respectively. In the Southwest, the U.S. Bureau of Reclamation is reporting (July 21) Lake Powell at 31% full (47% of average for the date), Lake Mead at 31% full (52%), and the total Colorado system (July 20) at 39% of capacity (compared to 45% of capacity the same time last year).”

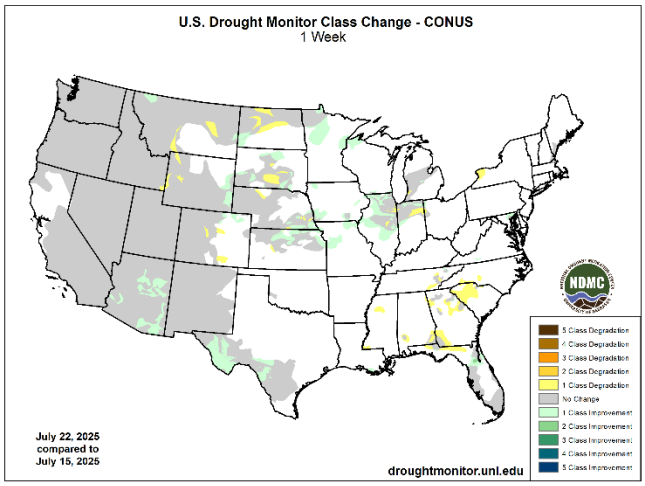
National Drought Summary – Looking Ahead

“The NWS Weather Prediction Center (WPC) 7-Day Quantitative Precipitation Forecast (QPF) calls for relatively dry conditions across the western U.S., areas of the South, and southern Plains. Elsewhere, light-to-moderate accumulations are expected across areas of the central and northern Plains, Northeast, and the Gulf Coast region of the South and Southeast. The Climate Prediction Center (CPC) 6-10-day outlooks call for a moderate-to-high probability of above-normal temperatures across most of the conterminous U.S. with the exception of portions of California and Maine where below-normal temperatures are forecasted. In terms of precipitation, there is a low-to-moderate probability of above-normal precipitation across the Pacific Northwest, northern portions of the Intermountain West, central and northern Plains, Gulf Coast region, and much of the Eastern Seaboard.”

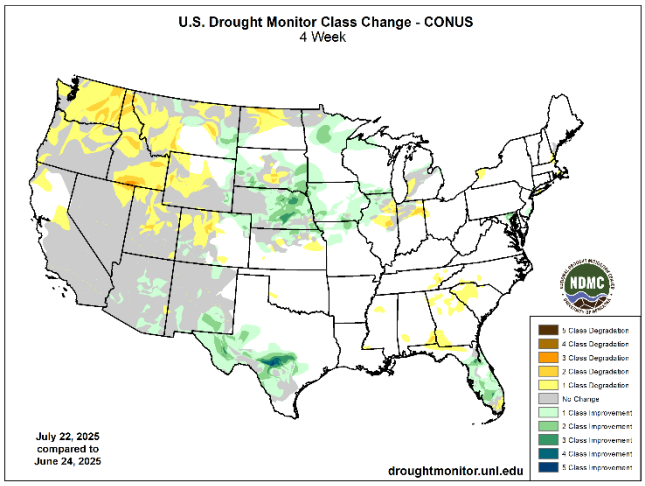
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

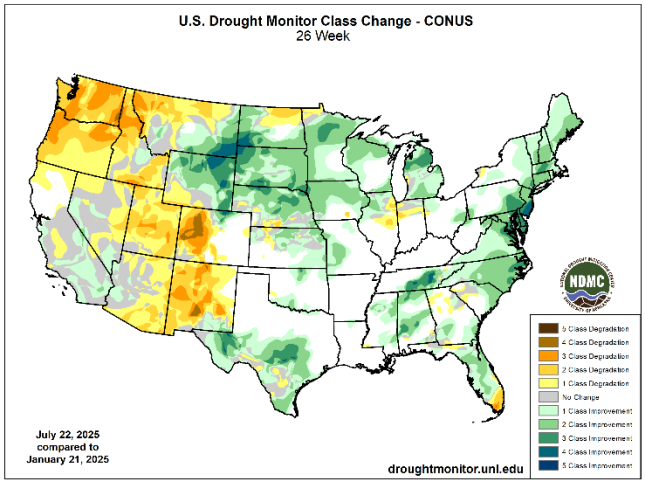
1 Week



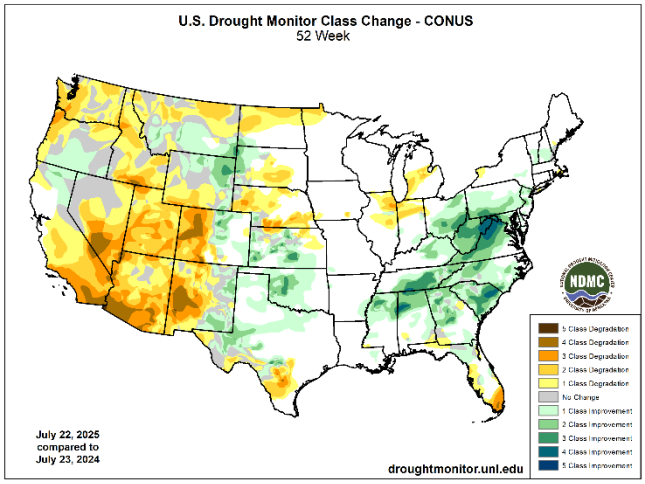
1 Month



6 Months



1 Year



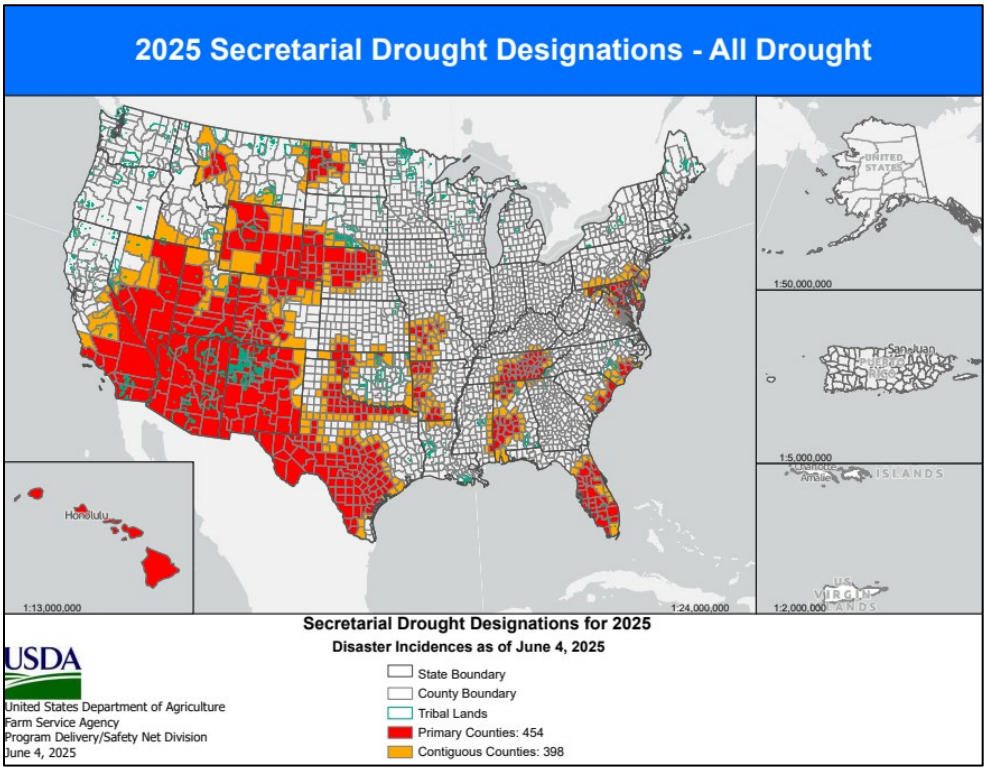
Changes in drought conditions over the last 12 months for the contiguous U.S.

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

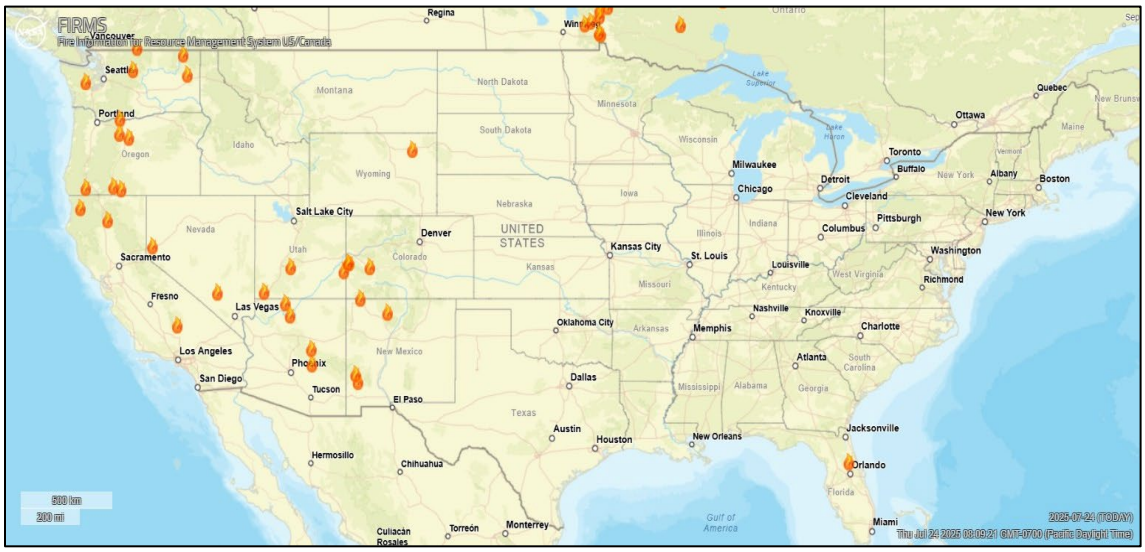
USDA Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: Fire Information for Resource Management System US/Canada

Source: NASA/USDA Forest Service



Current large wildland fires, as classified by the National Interagency Coordination Center

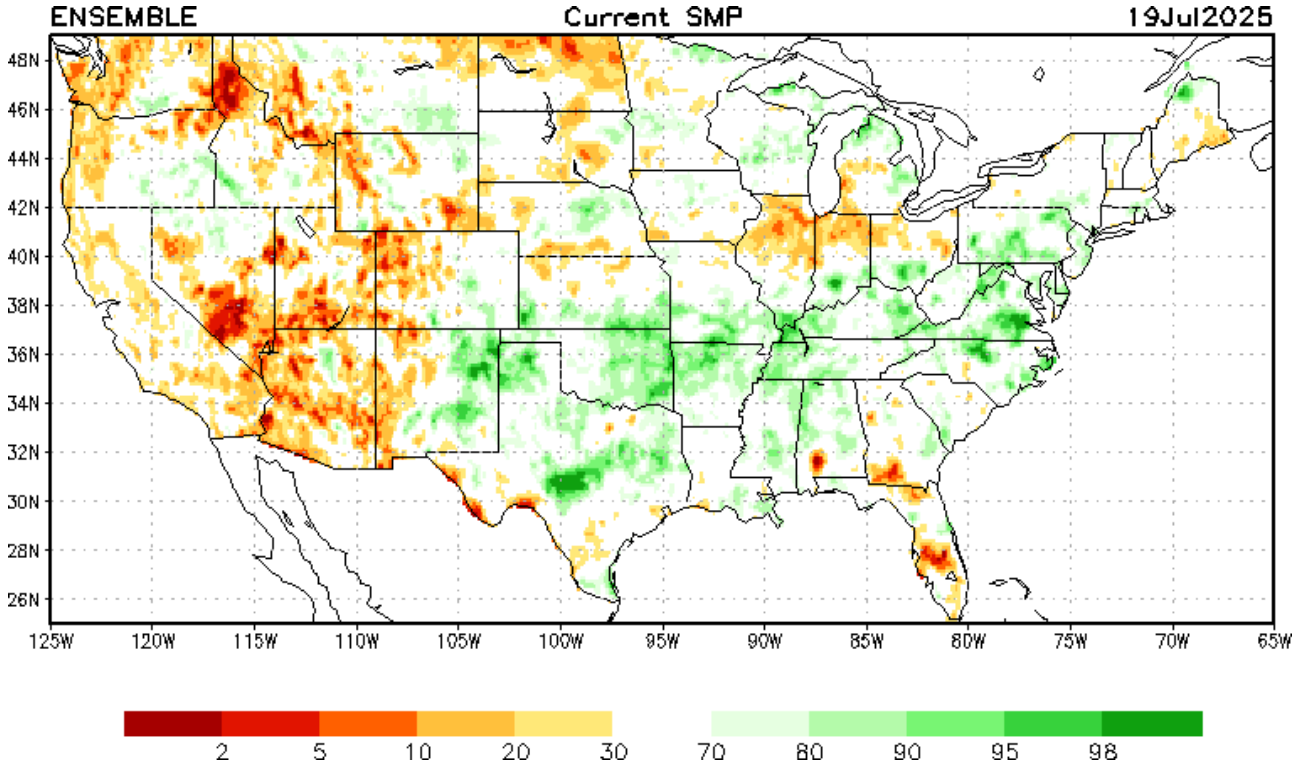
Highlighted Wildfire Resources

- 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

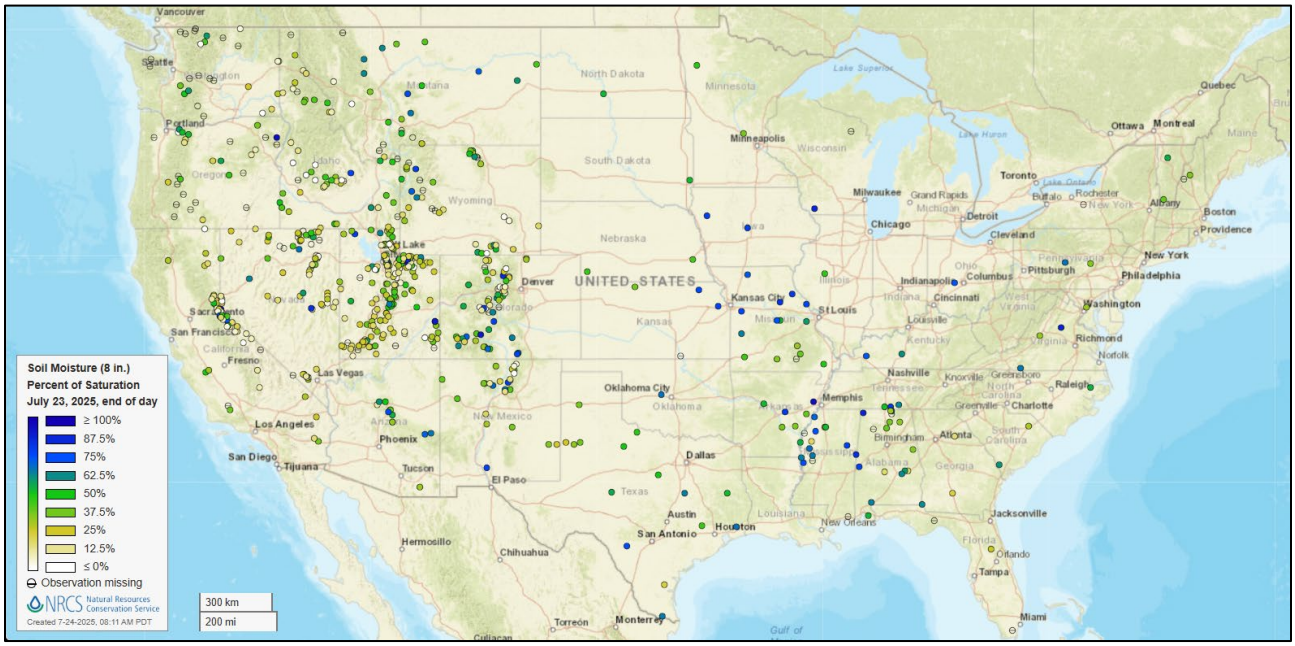


Modeled soil moisture percentiles as of July 19, 2025

Soil Moisture Percent of Saturation

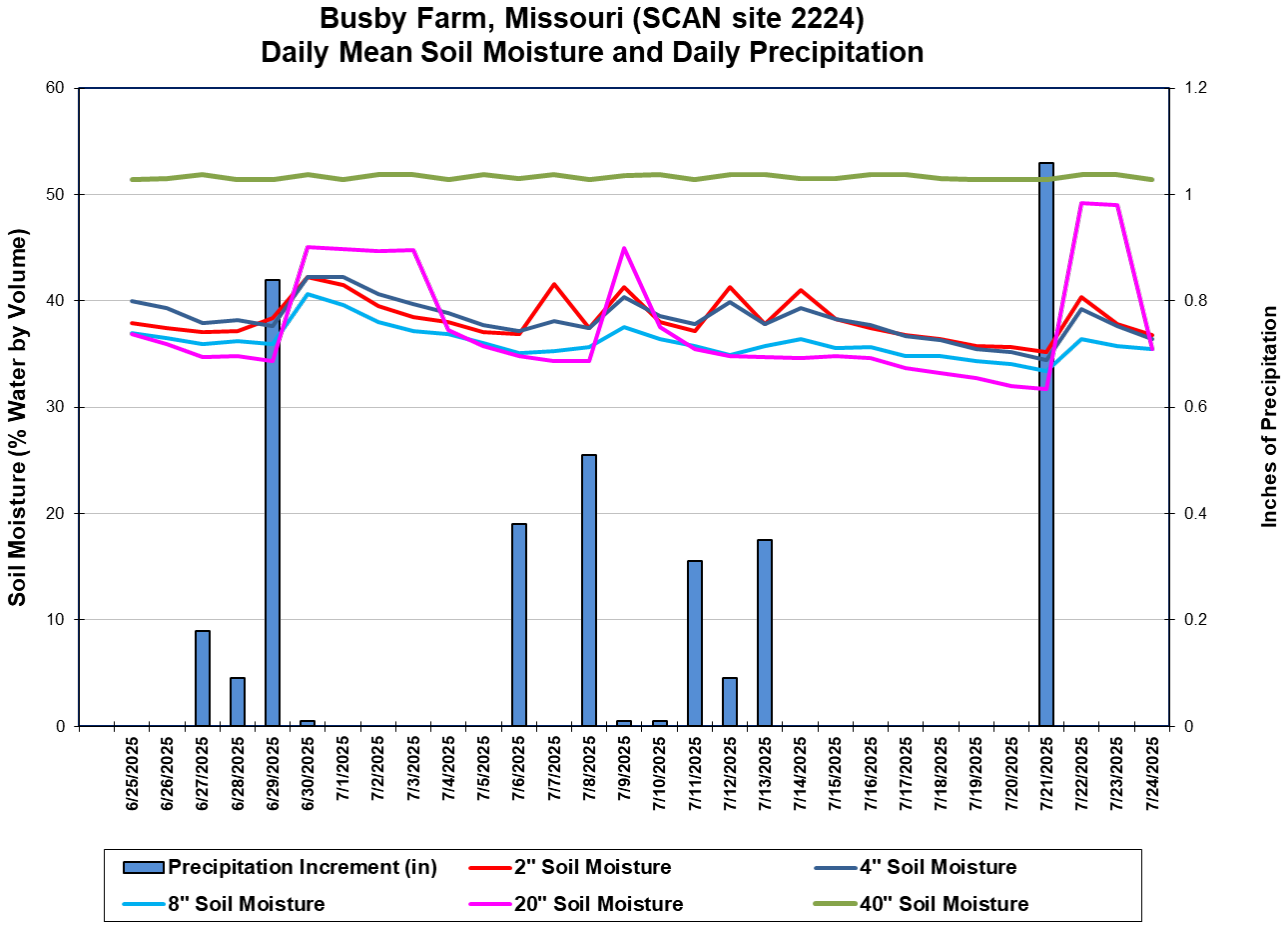
Source: NRCS SNOTEL and Soil Climate Analysis Network (SCAN)

U.S. soil moisture map at 8-inch depth:



Soil Moisture

Source: NRCS Soil Climate Analysis Network (SCAN)



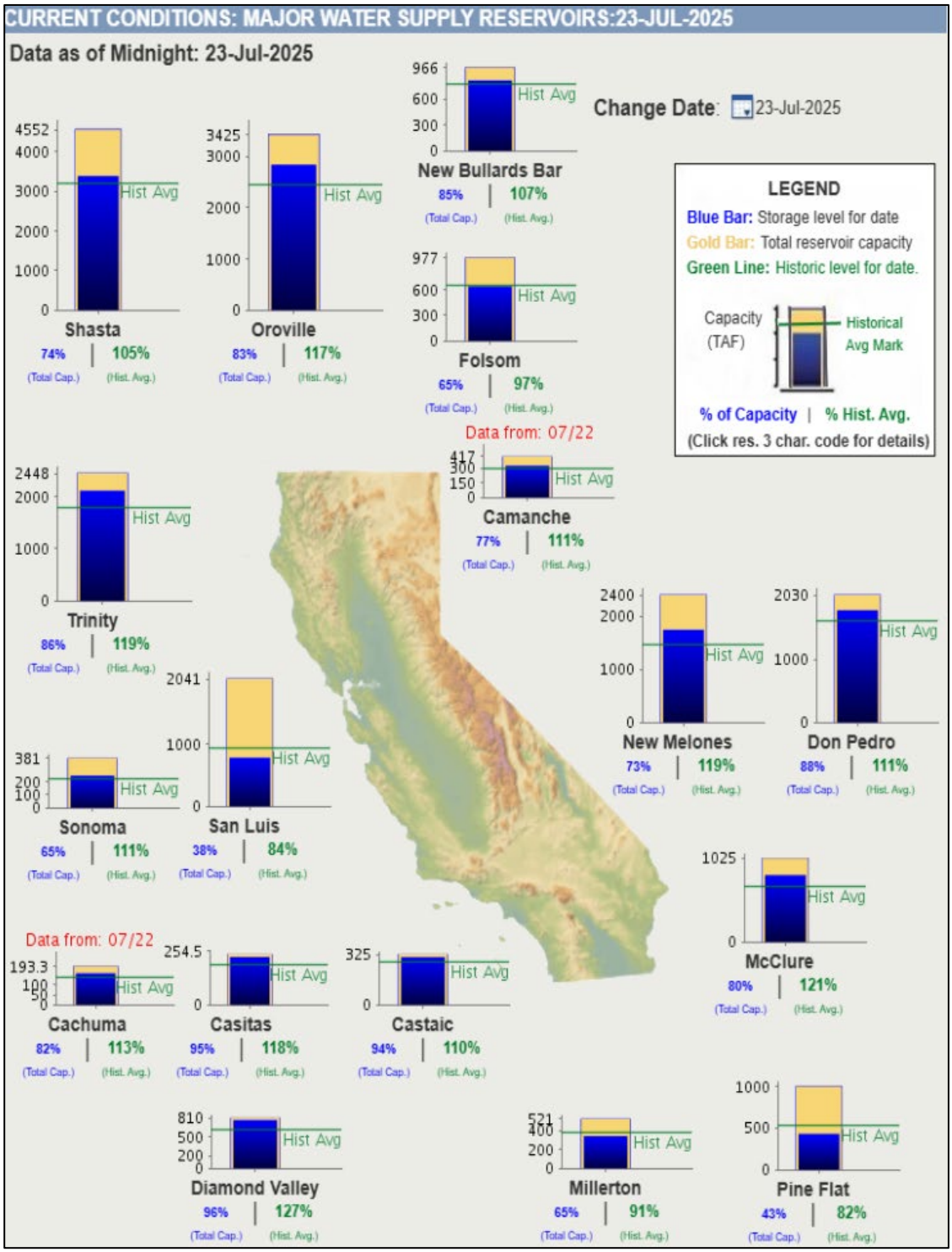
This chart shows the precipitation and soil moisture for the last 30 days at the Busby Farm SCAN site in Missouri. Soil sensors at all depths except the -40-inch sensor recorded increases in soil moisture after the site received over 0.5 inches of daily precipitation on June 29, July 8, and July 21. Soil moisture levels remained relatively steady at the 40-inch depth throughout the period. Total precipitation for the 30-day period was 3.75 inches.

Soil Moisture Data Portals

- USCRN Soil Moisture
- National Soil Moisture Network
- NOAA Climate Prediction Center Soil Moisture
- NASA Grace

Current California Reservoir Conditions

Source: California Department of Water Resources



Current California Reservoir Conditions

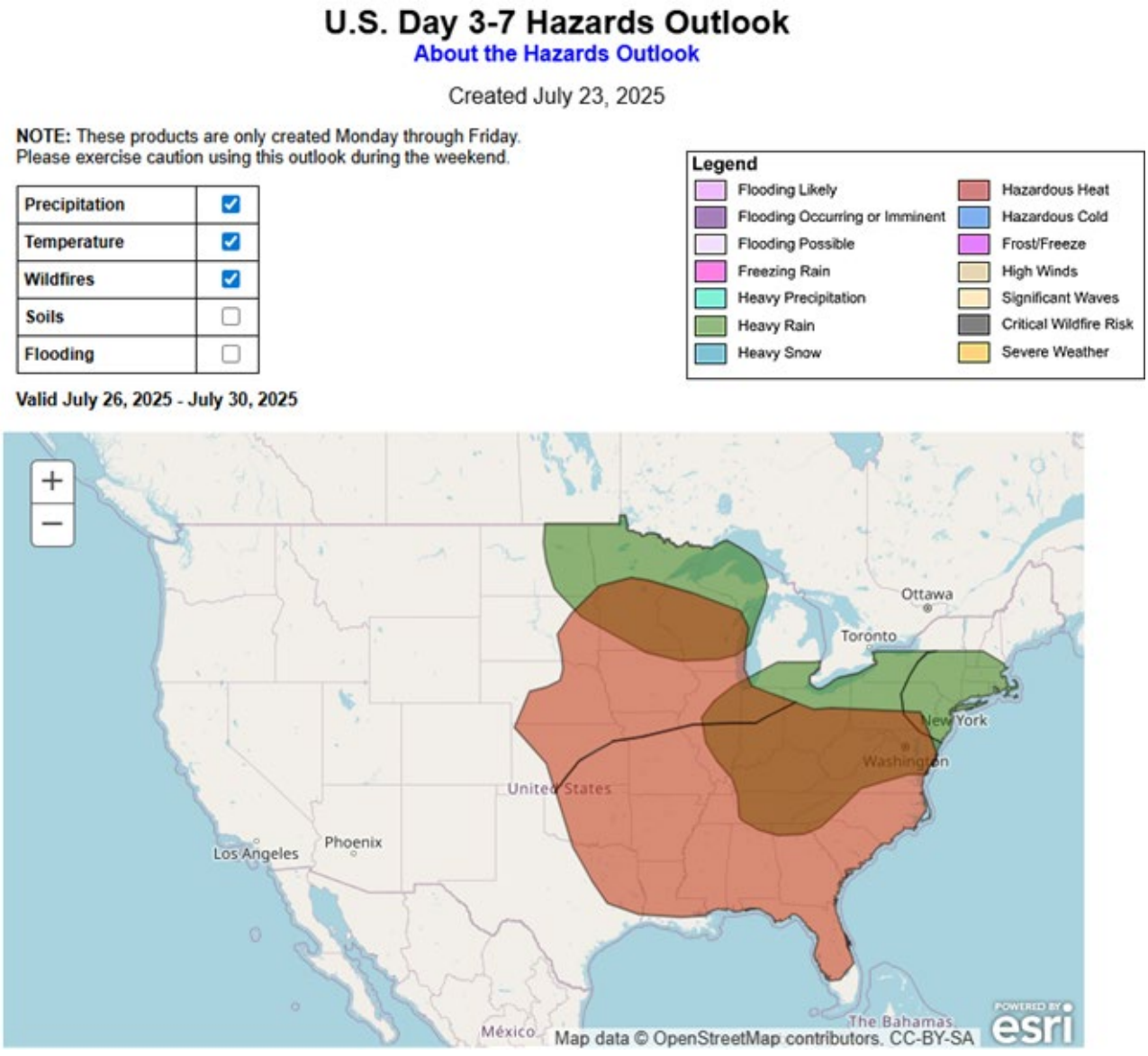
Agricultural Weather Highlights

Author: Maureen Sartini, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, Thursday July 24, 2025: "A slow-moving cold front will be the focus for locally heavy showers and thunderstorms as it drifts across the central Plains, Corn Belt, and Northeast before dissipating over the weekend. Meanwhile, a westward-moving disturbance will trigger locally heavy showers along the Gulf Coast, though development into a tropical storm is not expected at this time. Otherwise, a ridge of high pressure currently over the western Atlantic will build across the Southeast during the weekend before settling over the south-central U.S. by early next week; as a result, mostly dry, hot, and very humid weather will prevail over much of the nation east of the Rockies into next week. Out west, monsoon showers will expand into the central Rockies but dot the Four Corners region before subsiding over the weekend. Otherwise, mostly dry weather will persist west of the Rockies, though scattered showers are possible in northern California and environs. The NWS 6- to 10-day outlook for July 29 – August 2 calls for the likelihood of near- or above-normal temperatures and rainfall across most of the country. Cooler-than-normal conditions will be confined to parts of California, New England, and the northern Plains while drier-than-normal weather should be limited to portions of the northern Plains and New England."

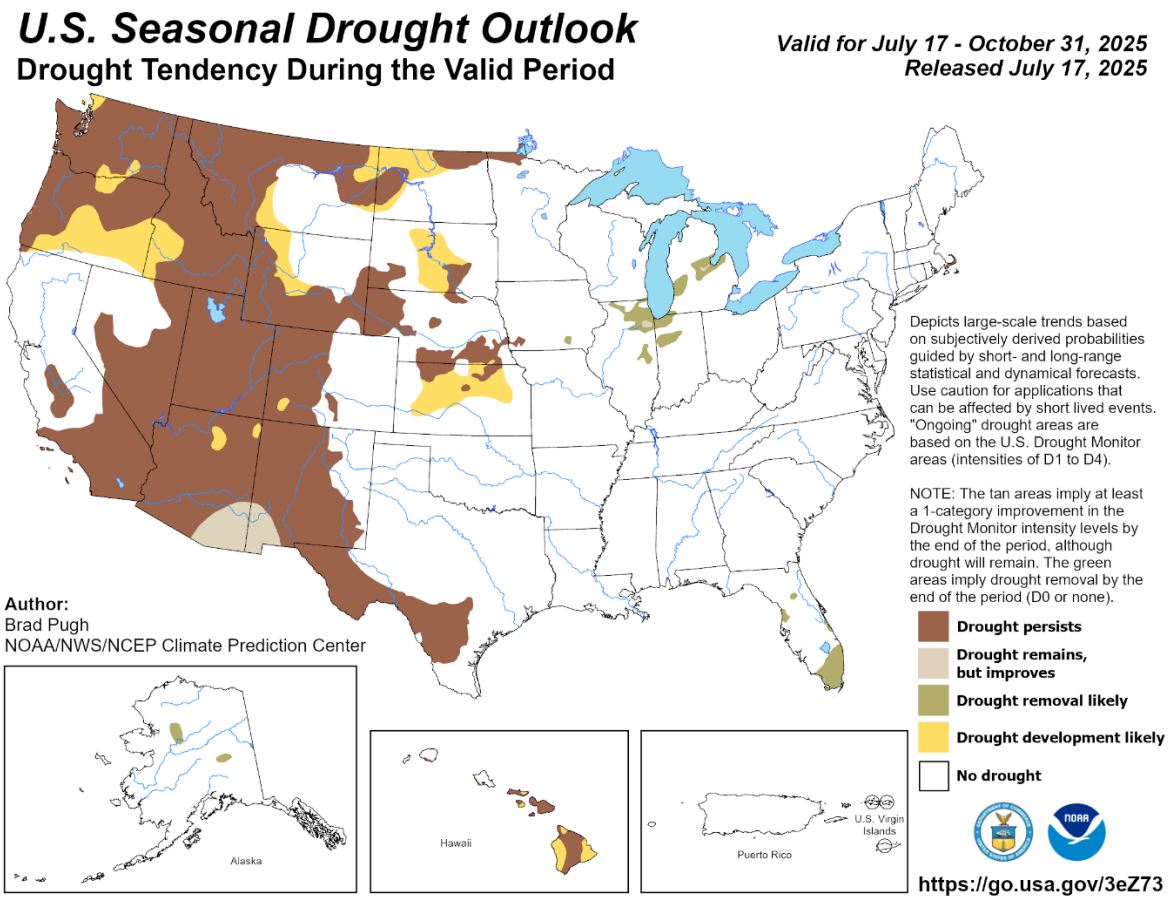
Weather Hazards Outlook: July 26 – 30, 2025

Source: NOAA Weather Prediction Center



Seasonal Drought Outlook: July 17 – October 31, 2025

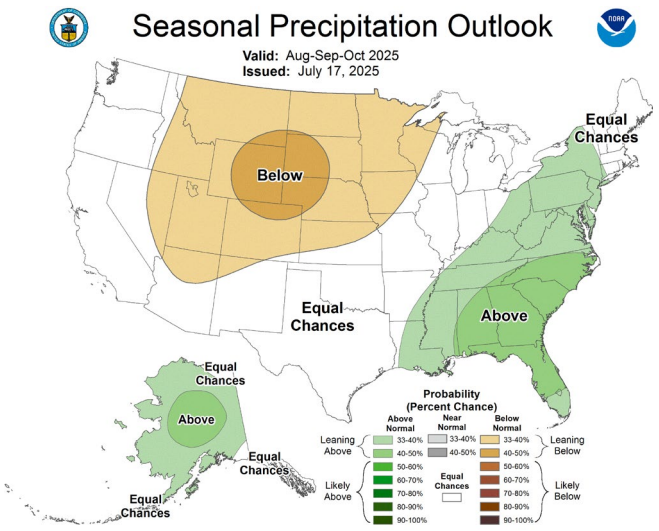
Source: National Weather Service



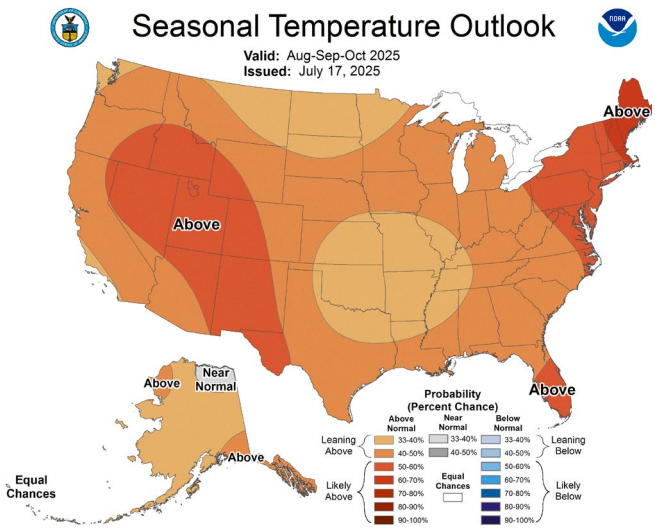
Climate Prediction Center Three-month Outlook

Source: National Weather Service

Precipitation



Temperature



August-September-October 2025 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.