United States Department of Agriculture

Water and Climate Update

August 18, 2022

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.

Colorado River Endures Worst Drought in Recorded History

The Colorado River is experiencing the worst multi-year drought in recorded history. The river and its system of reservoirs supply water to seven states and over 40 million people in the Southwest and northern Mexico.

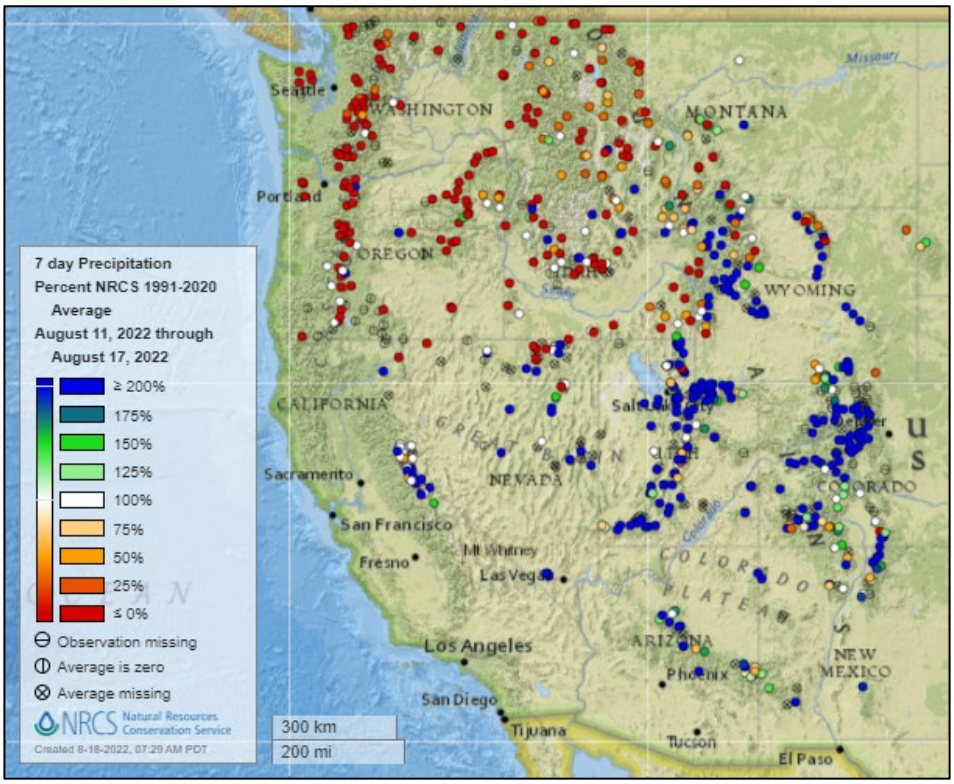
Lake Mead, the largest reservoir in the Colorado River system, as well as the United States, fell to just 27 percent capacity in July. Pictured to the left, Lake Powell, the second largest reservoir in the system, is currently at 25 percent capacity.

The historic drought threatens water supplies, irrigation, fish and wildlife, and hydropower across the region, as the Southwest relies heavily upon the Colorado River system.

Related:
Interior Department Announces Actions to Protect Colorado River System, Sets 2023 Operating Conditions for Lake Powell and Lake Mead – U.S. Bureau of Reclamation
Drought-stricken Arizona and Nevada to get less water from Colorado River, U.S. officials announce – CBS News
EXPLAINER: Winners, losers in water cuts for Western states – AP
Colorado River Basin reservoir levels drop to record lows amid drought – ABC News
Arizona loses one-fifth of its Colorado River allocation under new federal drought plan – USA Today
States still at odds over measures to deal with drought-starved Colo. River – Agri-Pulse
Four things to know about Colorado River water in California – Los Angeles Dispatch
Feds call for water cutbacks 'to avoid a catastrophic collapse' of Colorado River – CNBC

Precipitation

Last 7 Days, NRCS SNOTEL Network

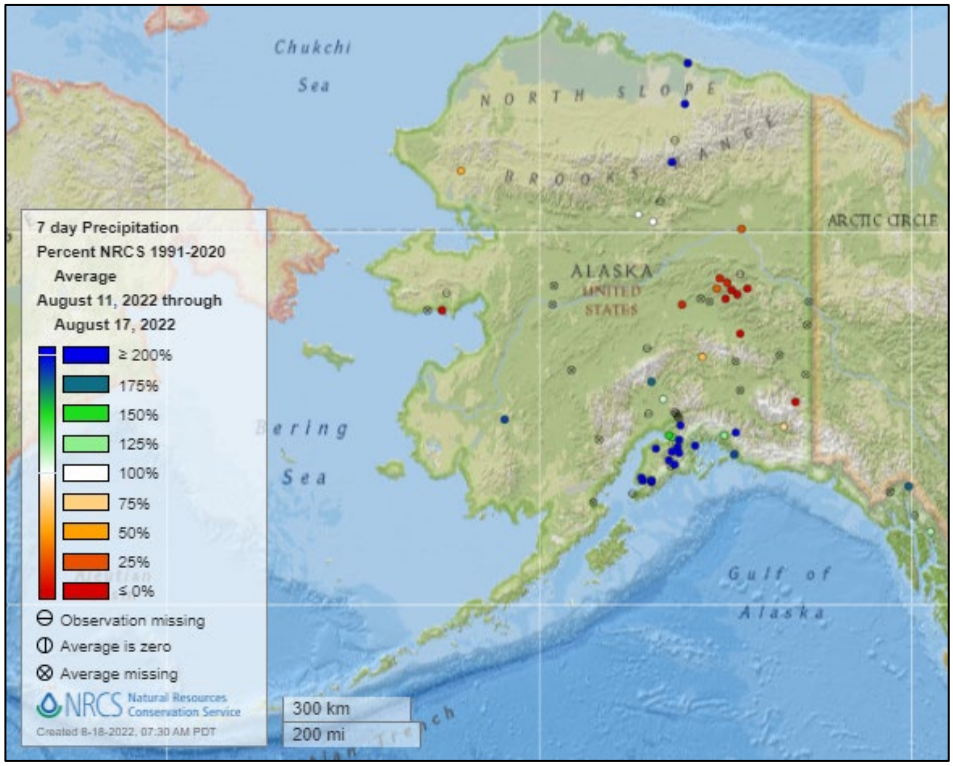


[7-day precipitation percent of average map]

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]

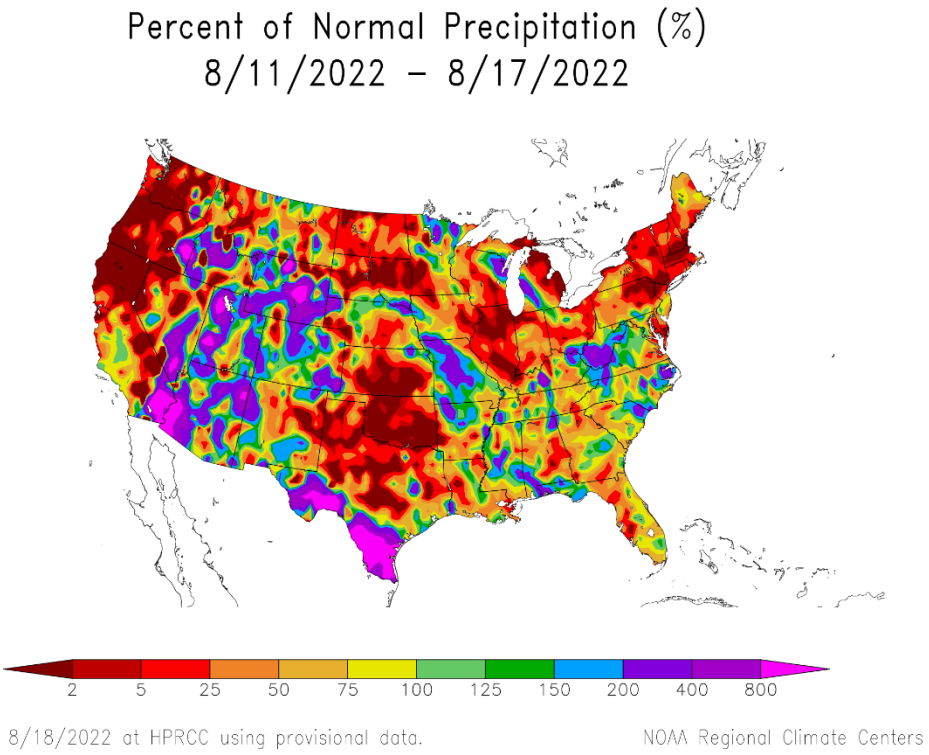


Last 7 Days, National Weather Service (NWS) Networks

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]

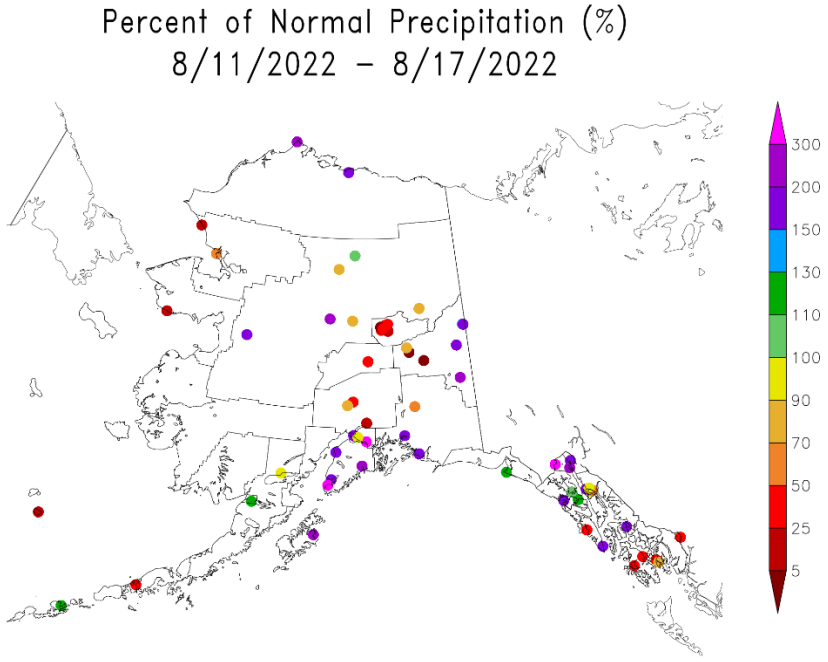


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

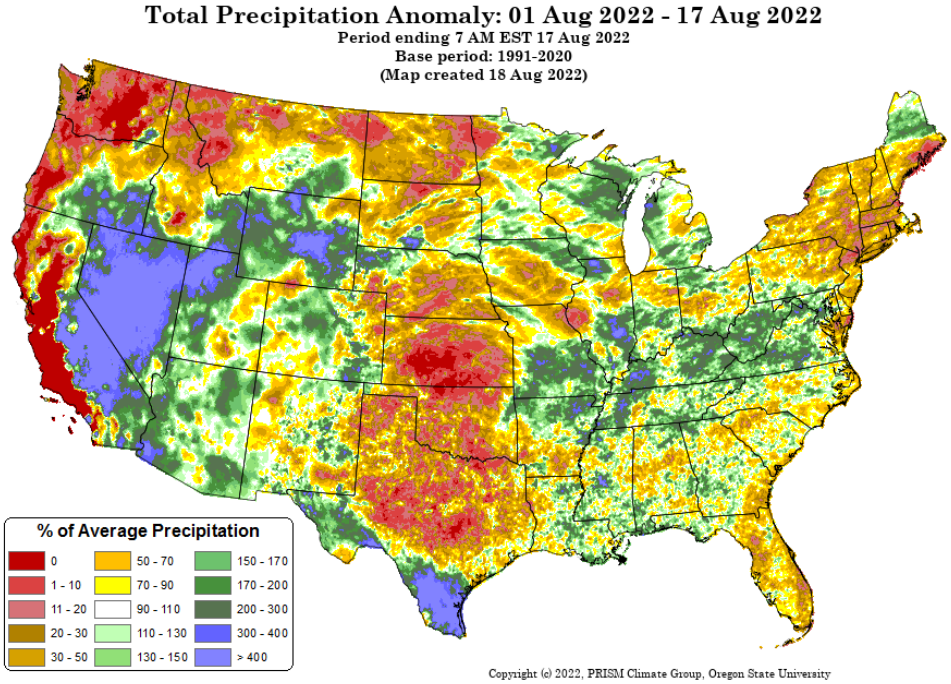
[7-day precipitation anomaly map] for Alaska.

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



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

Source: PRISM

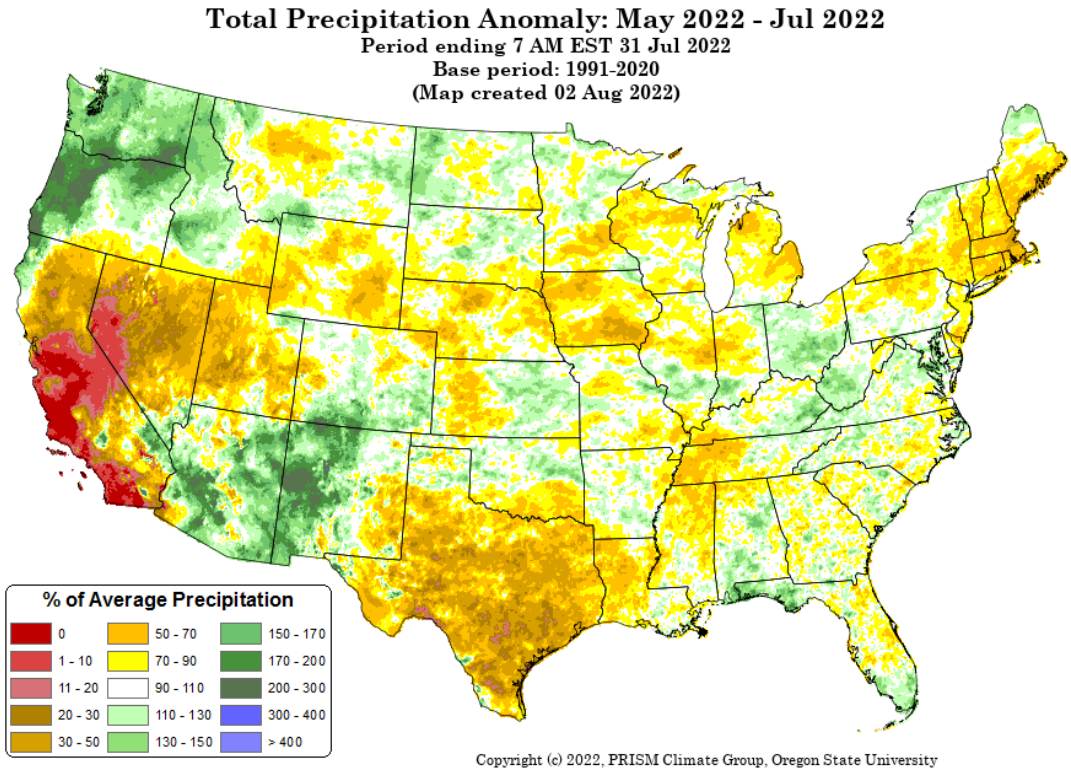


Month-to-date national total precipitation anomaly map

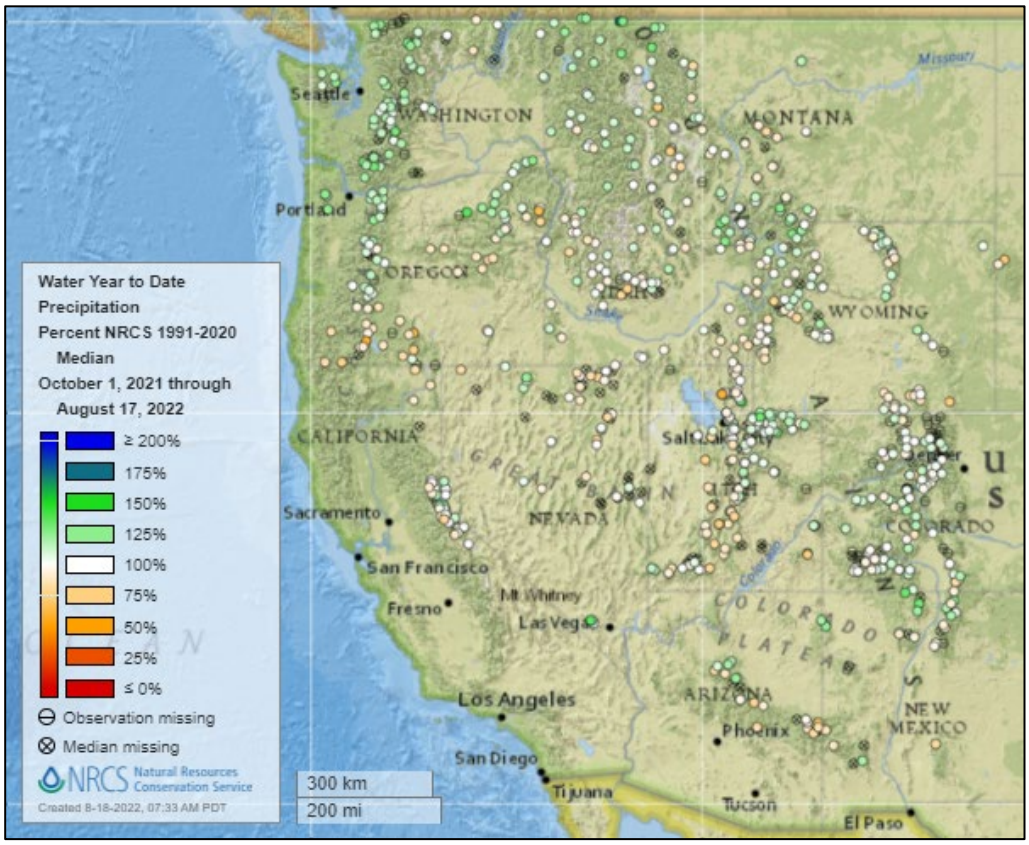
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

May through July 2022 precipitation anomaly map



Water Year-to-Date, NRCS SNOTEL Network

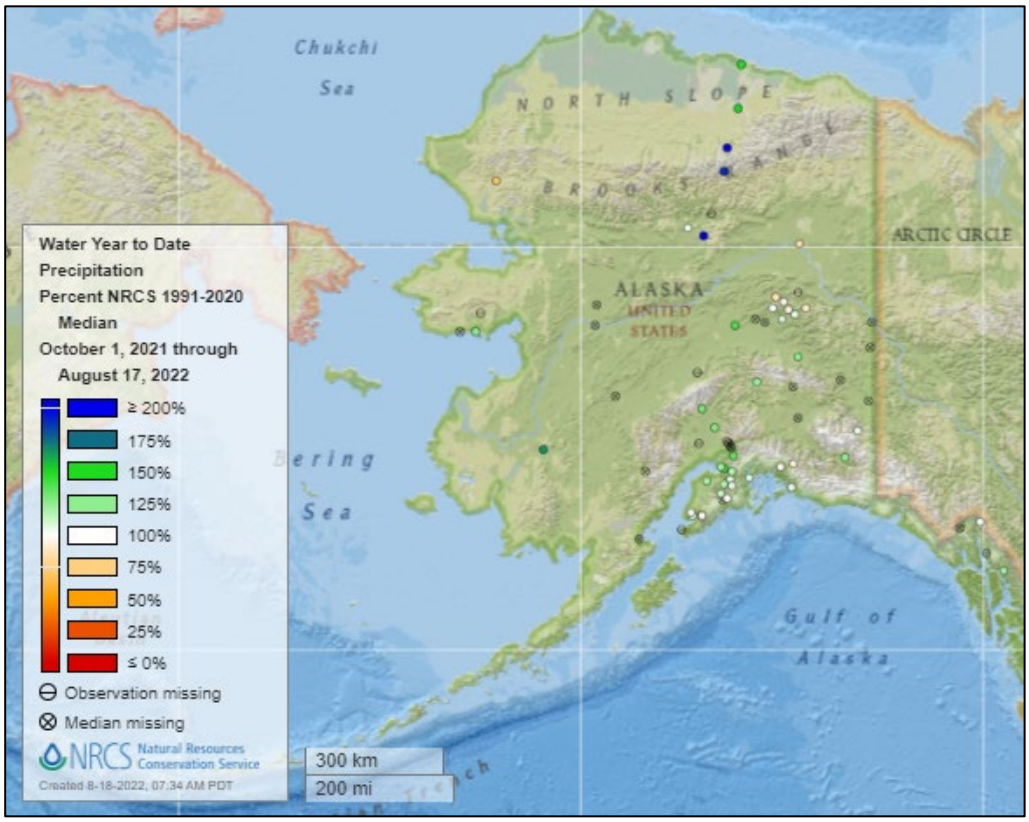


[2022 water year-to-date precipitation percent of median map]

See also:

[2022 water year-to-date precipitation percent of average map]

[2022 water year-to-date precipitation values (inches) map]



[Alaska 2022 water year-to-date precipitation percent of median map]

See also:

[Alaska 2022 water year-to-date precipitation percent of average map]

[Alaska 2022 water year-to-date precipitation values (inches) map]

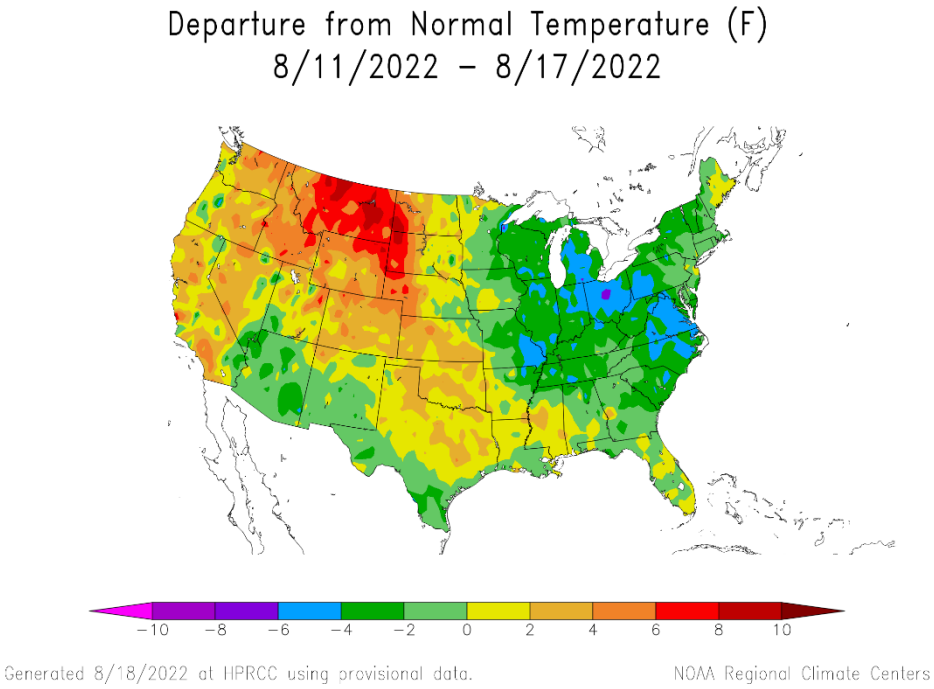
Temperature

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

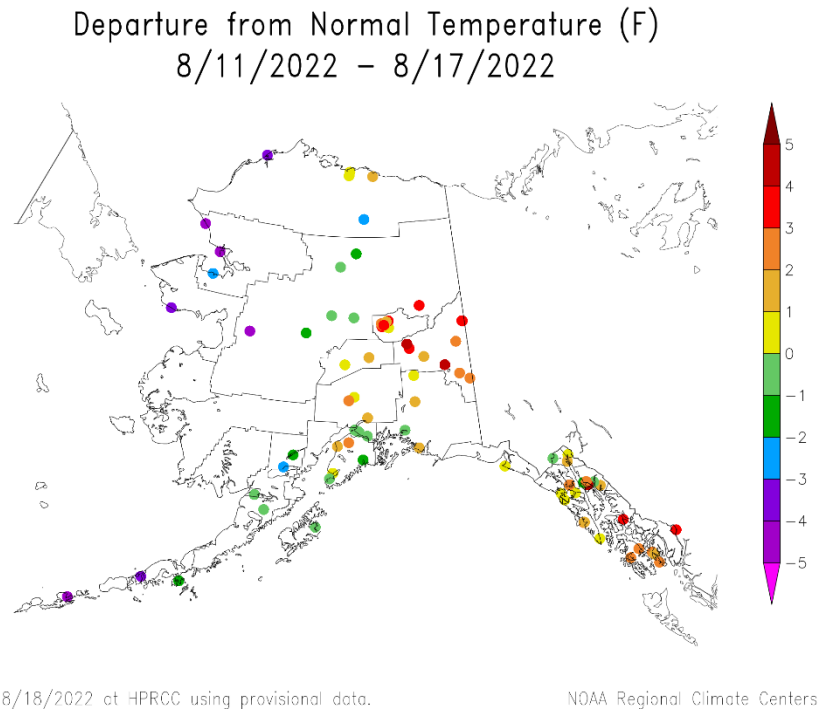


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

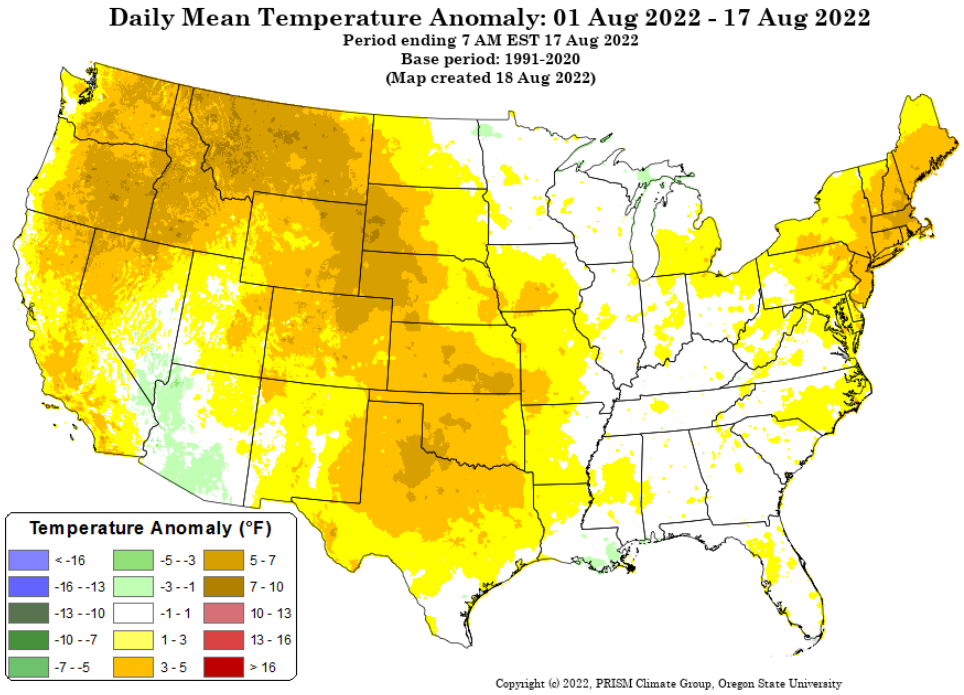
See also: 7-day temperature (° F) map



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

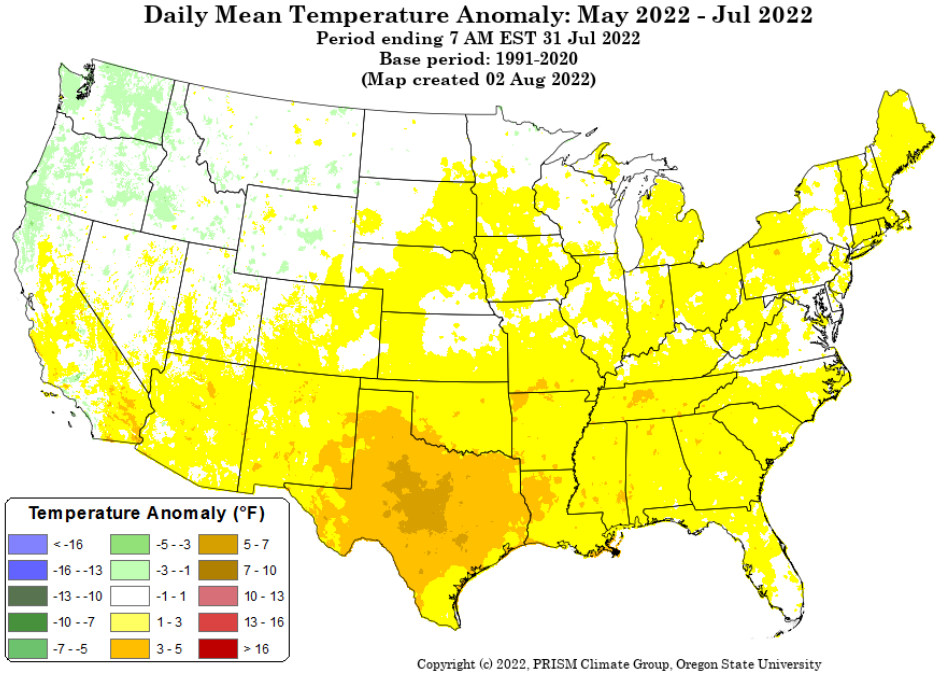
Source: PRISM

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



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

Source: PRISM

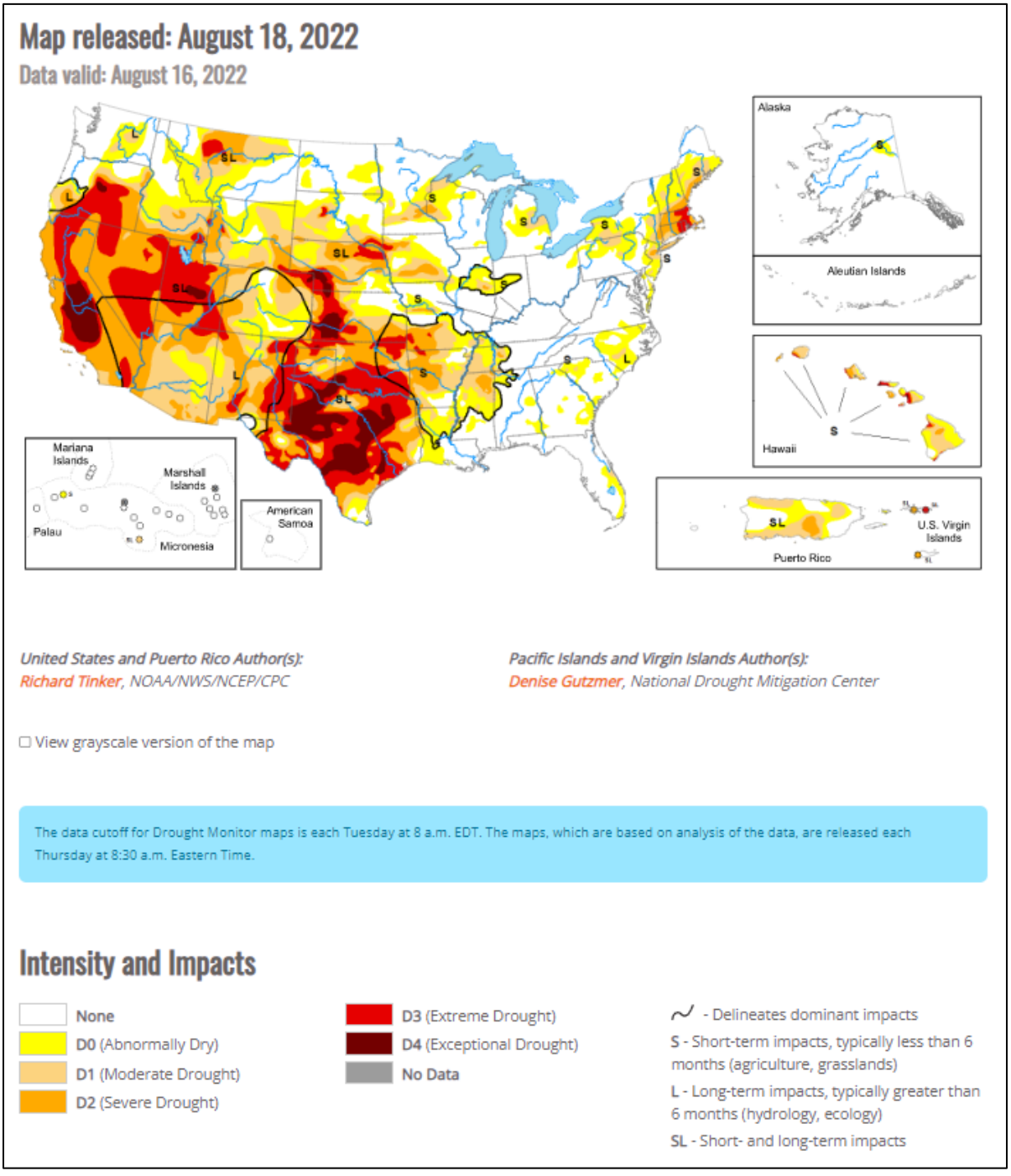


[May through July 2022 daily mean temperature anomaly map]

Drought

U.S. Drought Monitor
Source: National Drought Mitigation Center

U.S. Drought Portal
Source: NOAA



Current National Drought Summary, August 16, 2022

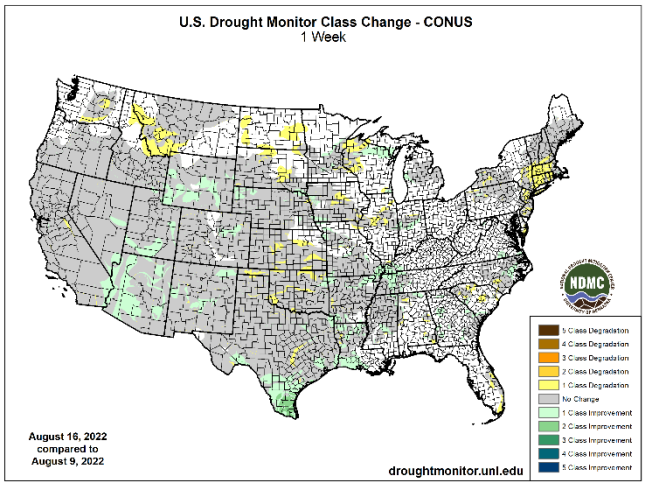
Source: National Drought Mitigation Center

“Precipitation again varied widely across the Lower 48 this week, which is not unusual during the summer. Across the interior West, monsoon rains were not as intense as last week, but remained heavier than normal. Several times the normal amount soaked most areas in the western half of the Four Corners Region, much of Nevada, southeastern California, reaching as far north as southeastern Oregon and Wyoming. Other areas receiving widespread heavy rains (and thus some improvement from recent dryness) included Deep South Texas and northwestern Nebraska. Parts of Deep South Texas recorded over 10 inches of rain, and 2 to 3 inches were common across northwestern Nebraska. Elsewhere, relatively narrow swaths of moderate to heavy rain dampened parts of the middle Mississippi Valley, Upper Midwest, and Great Lakes Region. Meanwhile, a broken pattern of moderate to heavy rain covered roughly the southeastern quarter of the contiguous 48 states. The higher amounts were in the 2 to 3 inch range though some small, highly-isolated areas recorded a bit more. In contrast, light precipitation at best fell on the Northeast, which teamed with abnormally high temperatures to induce significant and widespread intensification. Other areas observing light rain at best included part of the Upper Midwest, the north-central and south-central Plains. Conditions were seasonably dry along the West Coast.”

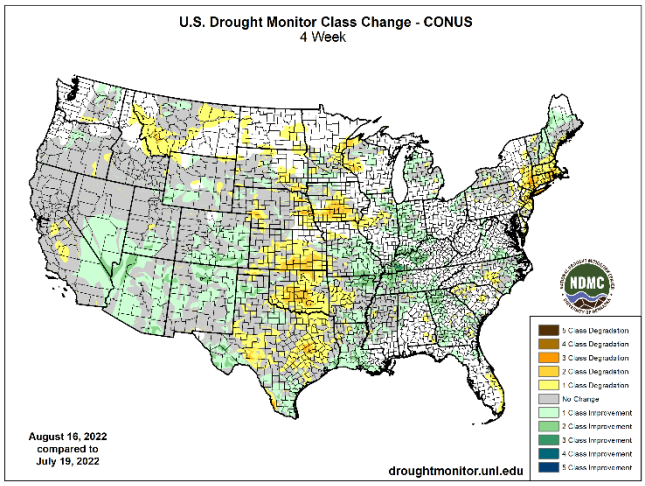
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

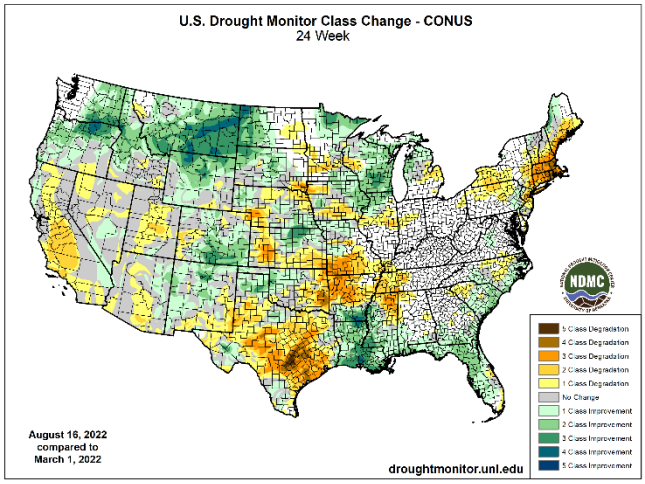
1 Week



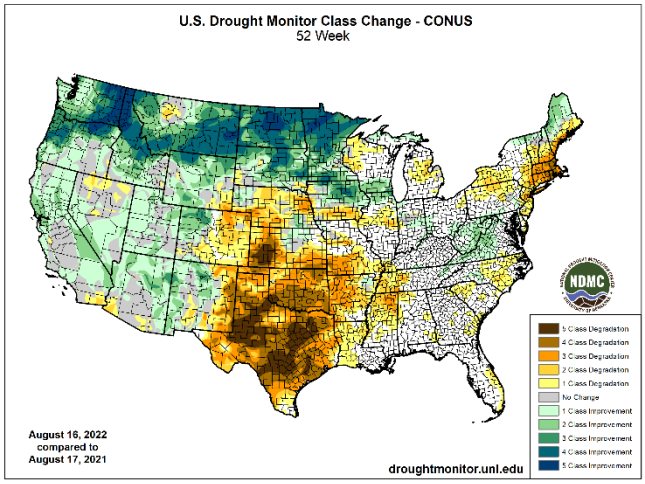
1 Month



6 Months



1 Year



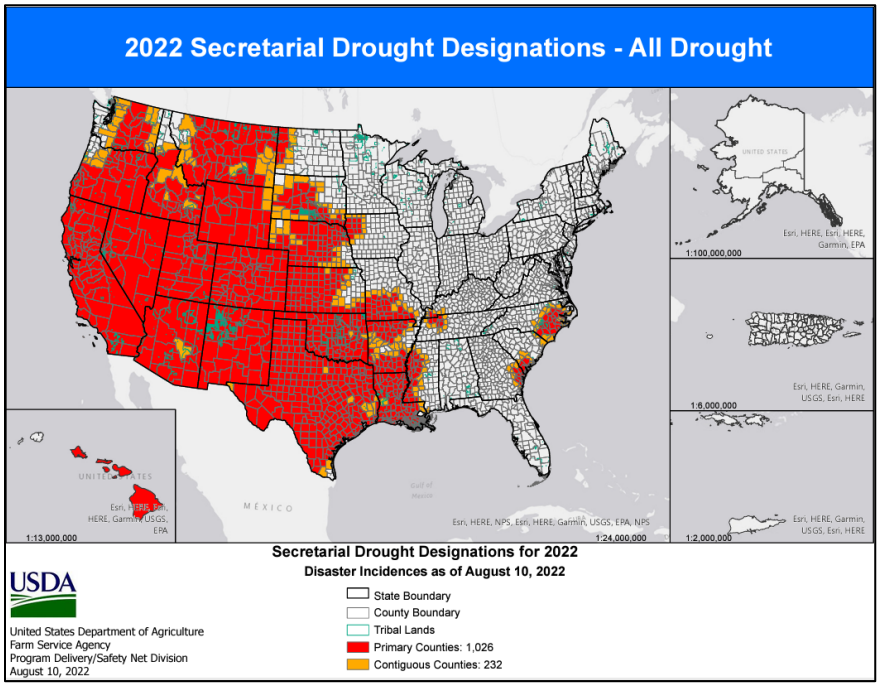
Changes in drought conditions over the last 12 months for the contiguous U.S.

Highlighted Drought Resources

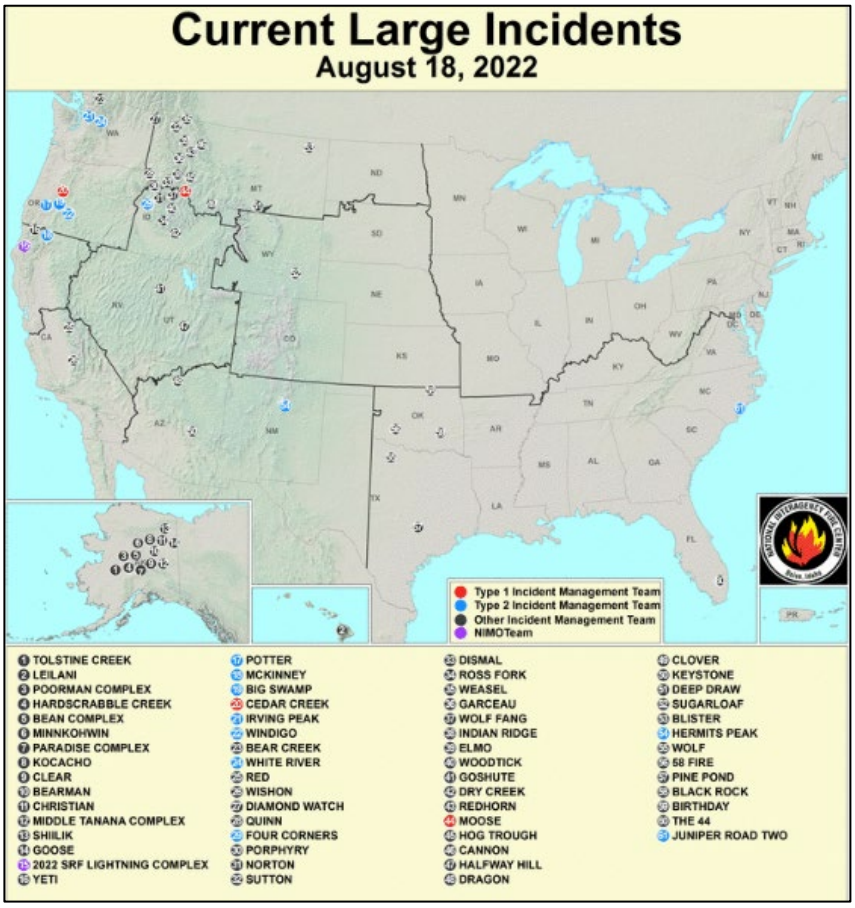
- Drought Impact Reporter
- Quarterly Regional Climate Impacts and Outlook
- U.S. Drought Portal Indicators and Monitoring
- U.S. Population in Drought, Weekly Comparison
- USDA Disaster and Drought Information

USDA Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: USDA Forest Service Active Fire Mapping



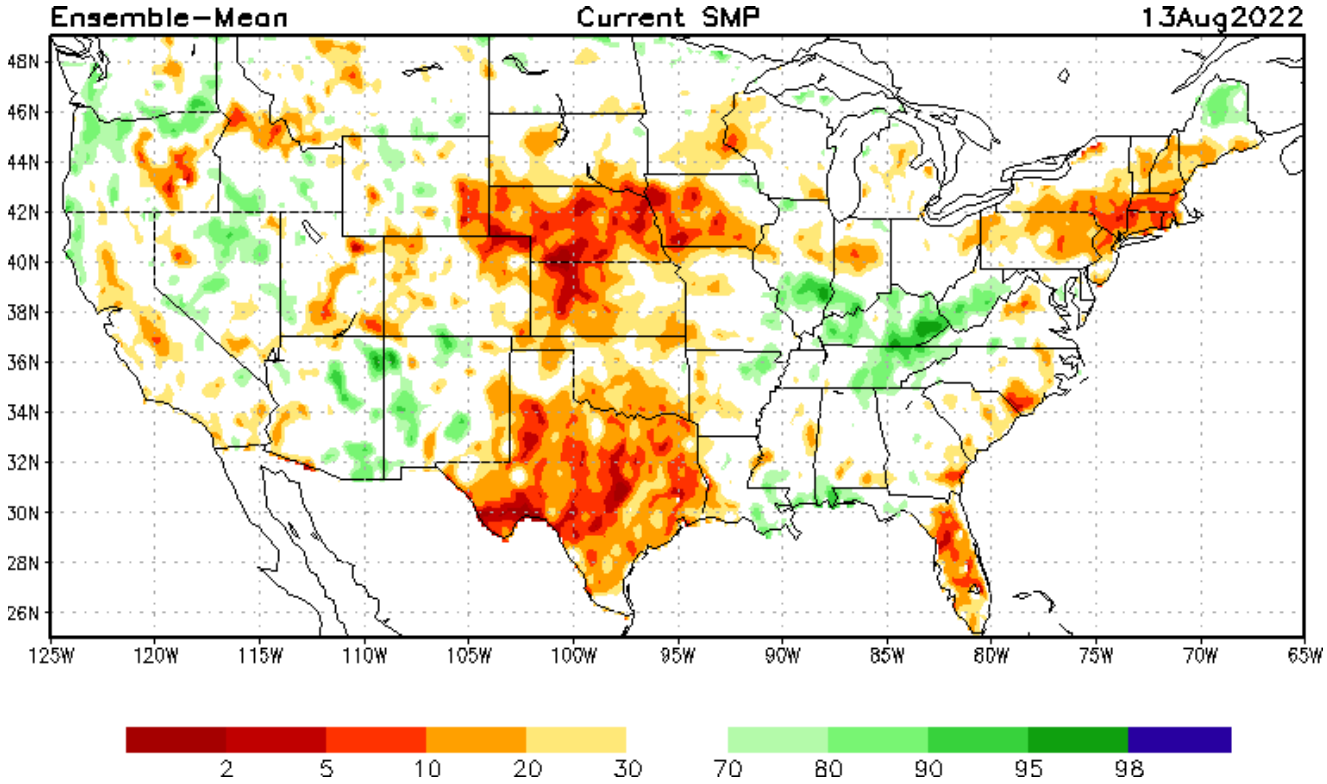
Highlighted Wildfire Resources

- 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

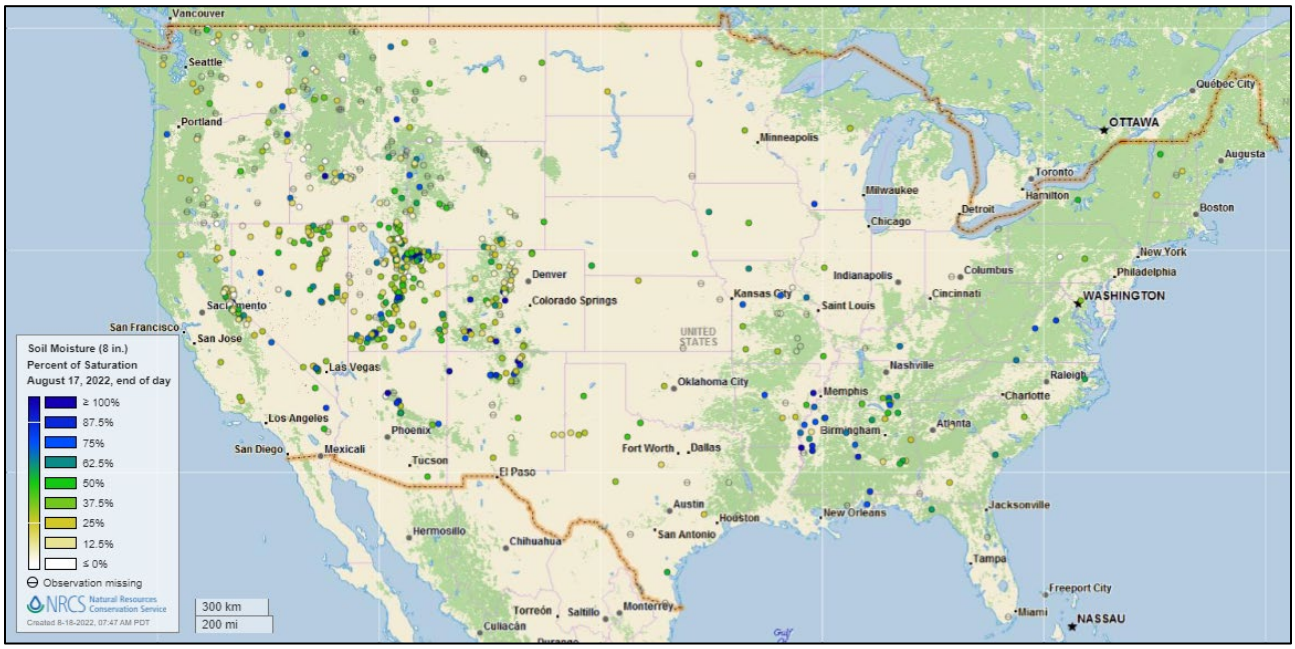


Modeled soil moisture percentiles as of August 13, 2022

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)

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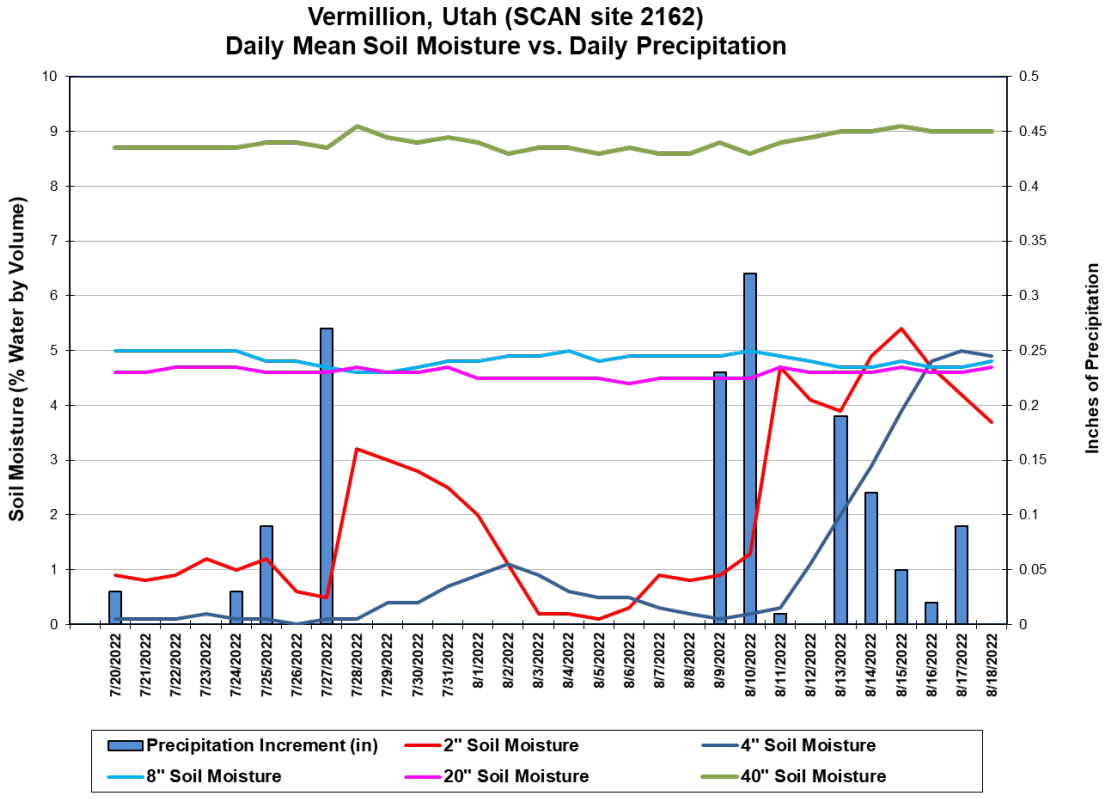


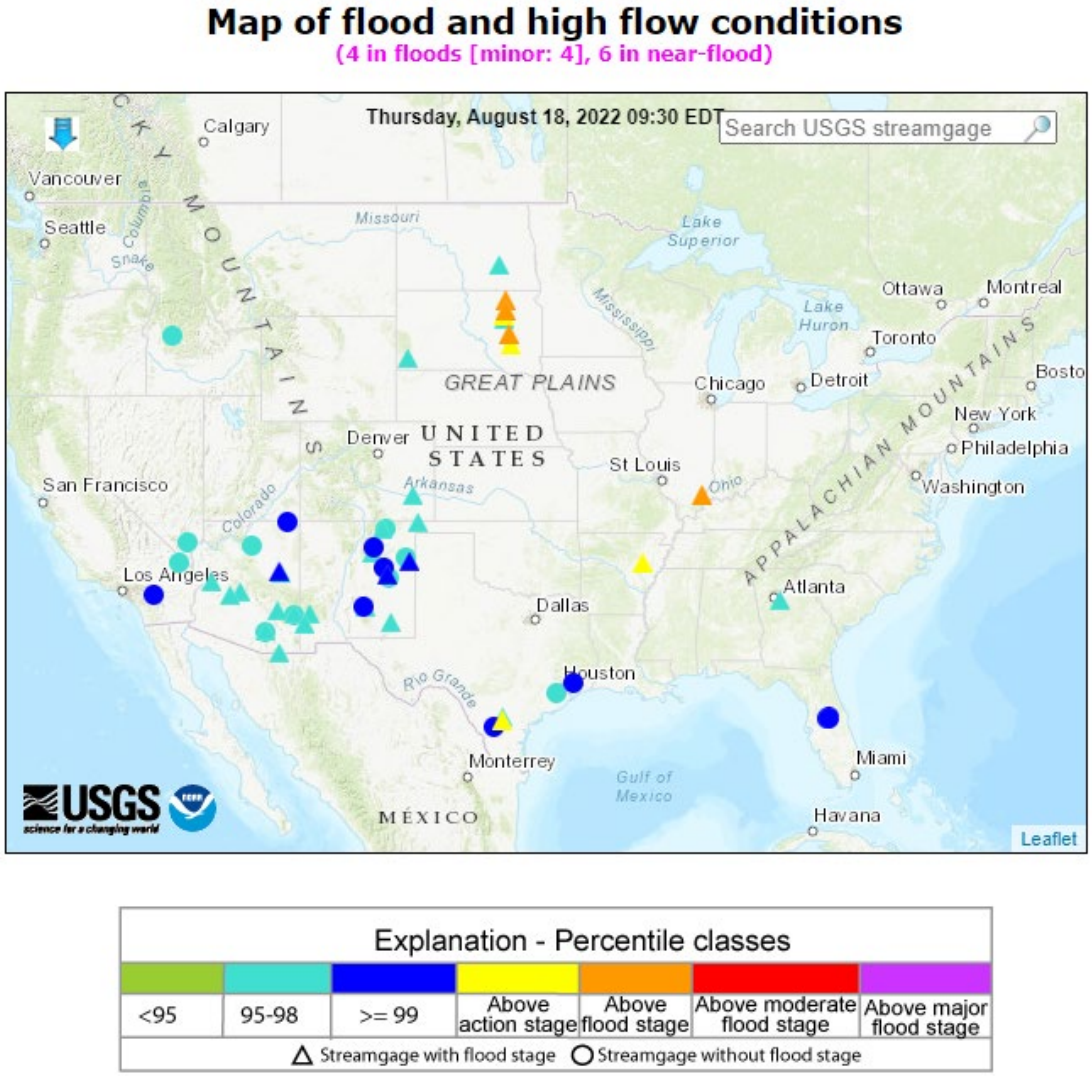
This chart shows the precipitation and soil moisture for the last 30 days at the Vermillion SCAN site in Utah. Precipitation events caused an increase in soil moisture levels at the -2 and -4-inch soil sensor depths. The deeper sensors showed little change over the period. All sensors reported less than 10 percent water by volume throughout the period. Total precipitation received during the period was 1.45 inches.

Soil Moisture Data Portals

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

Streamflow, Drought, Flood, and Runoff

Source: U.S. Geological Survey [WaterWatch Streamflow Map]



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

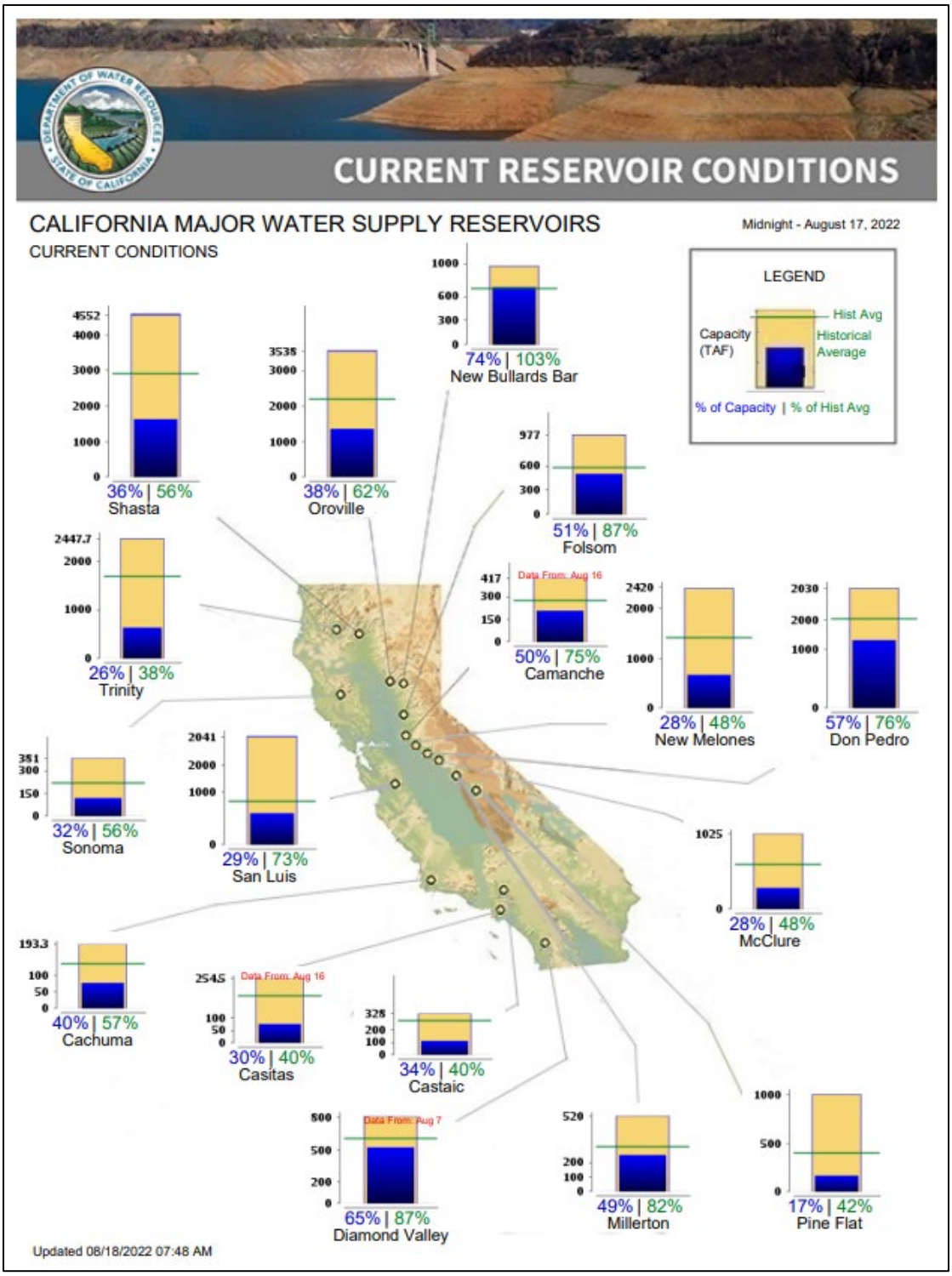
Hydromet Teacup Reservoir Depictions

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

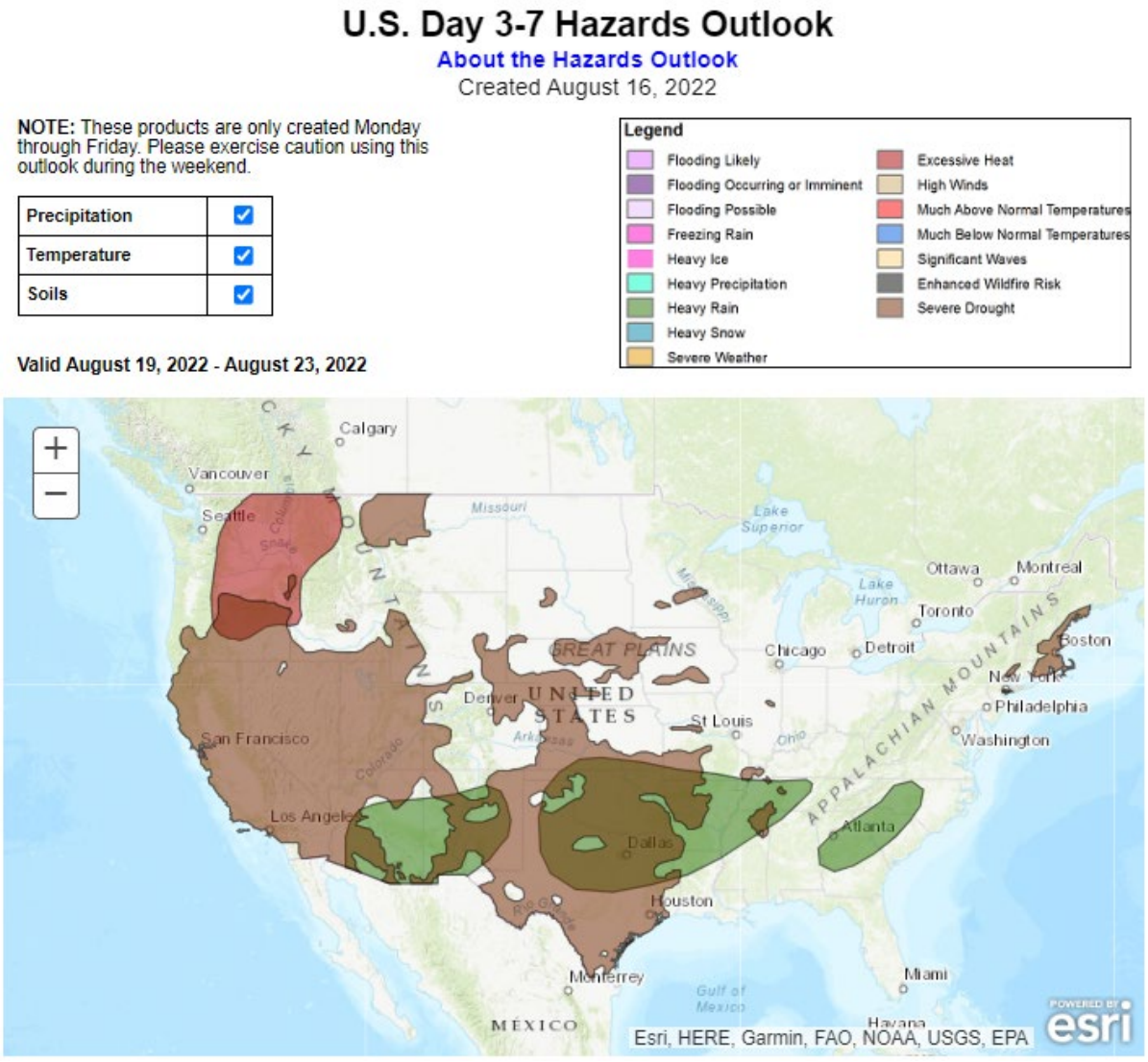
Agricultural Weather Highlights

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

National Outlook, Thursday, August 18, 2022: **"**Showers and thunderstorms will remain active during the next several days across the nation's southern tier, where a cold front will interact with the Southwestern monsoon circulation. During the weekend, rain may become heavy across the southern Plains, leading to 5-day totals ranging from 2 to 6 inches in northern Texas and southern Oklahoma. In parts of Arizona and New Mexico, similar totals will continue to spark flash flooding and debris flows, especially on recently burned hillsides. Meanwhile, mostly dry weather will prevail during the next 5 days across the Pacific Coast States and the northern High Plains. Farther east, however, late-week and weekend showers in the Midwest should benefit immature summer crops, although most areas will receive less than 2 inches of rain. The NWS 6- to 10-day outlook for August 23 – 27 calls for the likelihood of above-normal temperatures across much of the western, northern, and eastern U.S., while cooler-than-normal conditions will stretch from the central and southern Rockies to the southern Appalachians. Meanwhile, near- or above-normal rainfall across most of the country should contrast with drier-than-normal weather in the Pacific Northwest and parts of the upper Midwest."

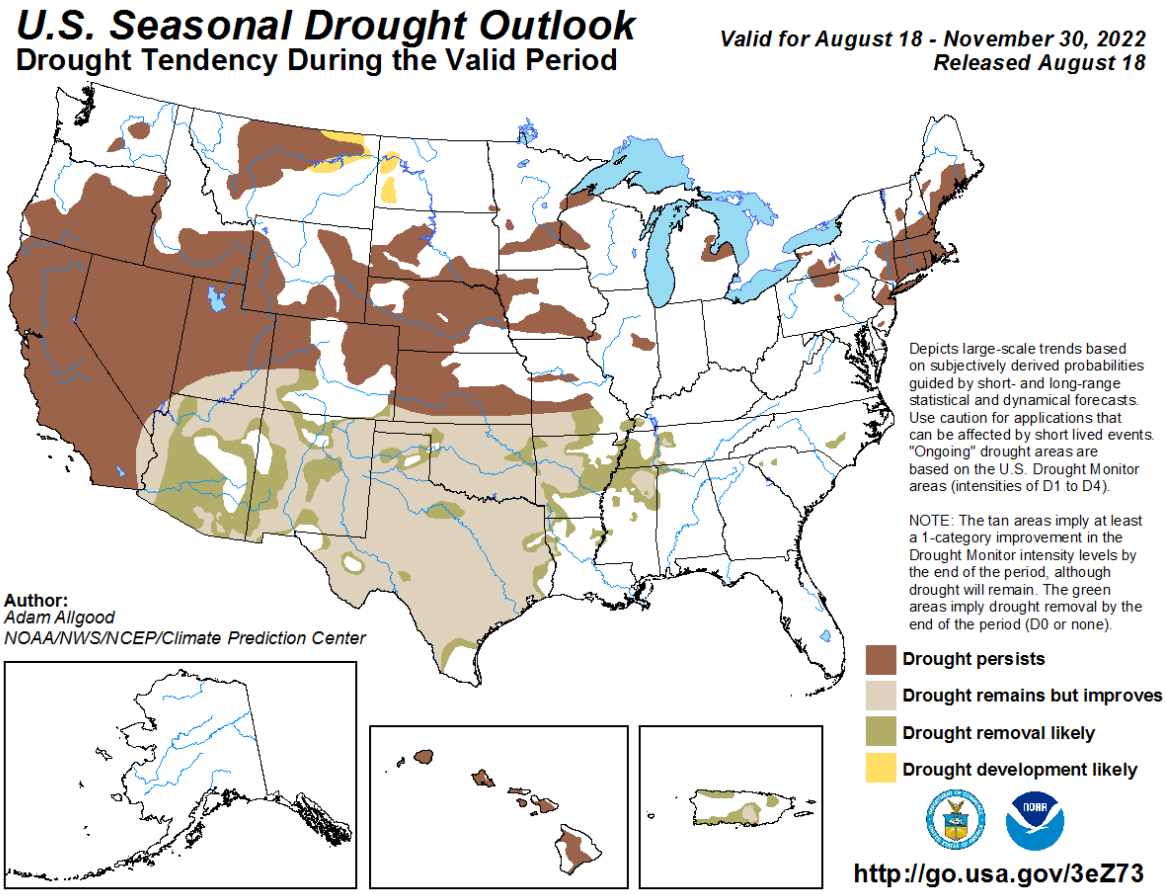
Weather Hazards Outlook: August 19 – 23, 2022

Source: NOAA Weather Prediction Center



Seasonal Drought Outlook: August 18 – November 30, 2022

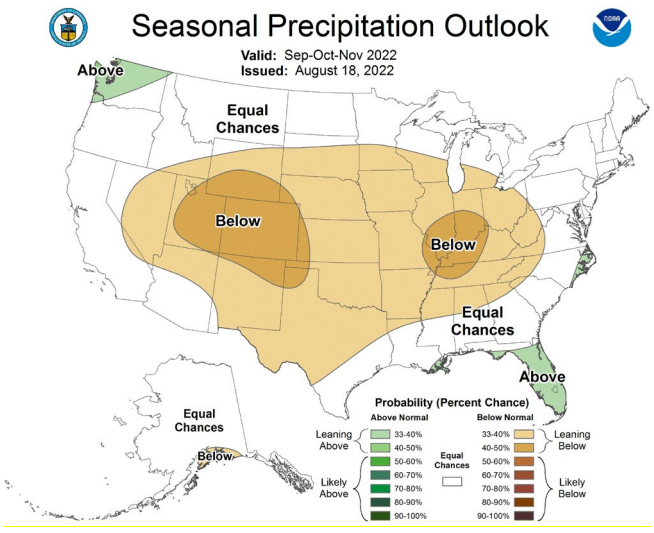
Source: National Weather Service



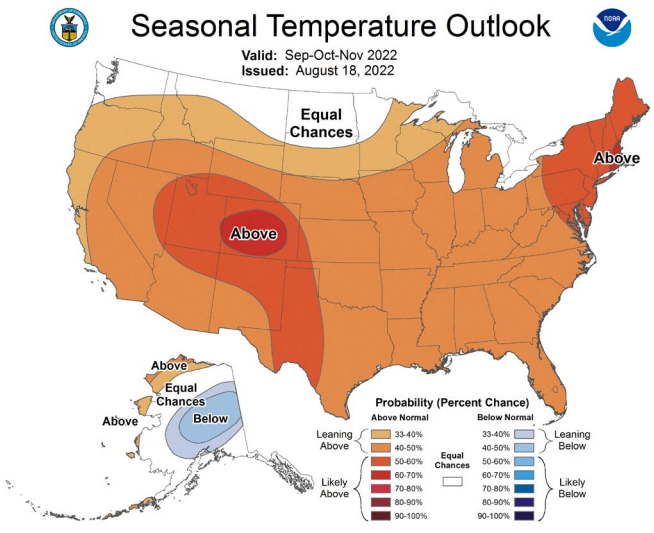
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



September-October-November 2022 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.