



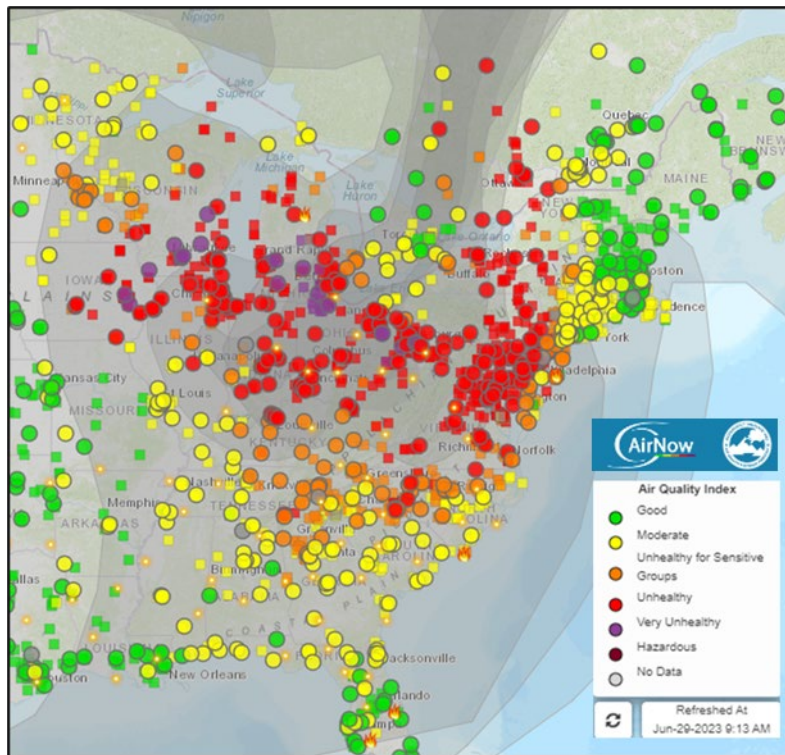
Water and Climate Update

June 29, 2023

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.

| | | | |
|---------------------|---|--|----|
| Precipitation | 2 | Other Climatic and Water Supply Indicators | 11 |
| Temperature | 6 | More Information | 17 |
| Drought | 8 | | |

Canadian wildfire smoke continues to impact the eastern U.S.



Canada is experiencing its worst wildfire season on record, with over 19 million acres scorched as of June 29. Smoke from the fires is pouring into the U.S., blanketing over one-third of the country with unhealthy air. The upper Midwest and Great Lakes regions currently have the worst air quality in the country, but states as far south as Alabama are being impacted. Residents are encouraged to spend as little time outside as possible, especially people with respiratory conditions. Short-term relief may occur as wind patterns shift, but the impacts are expected to continue until the fires are contained.

Related:

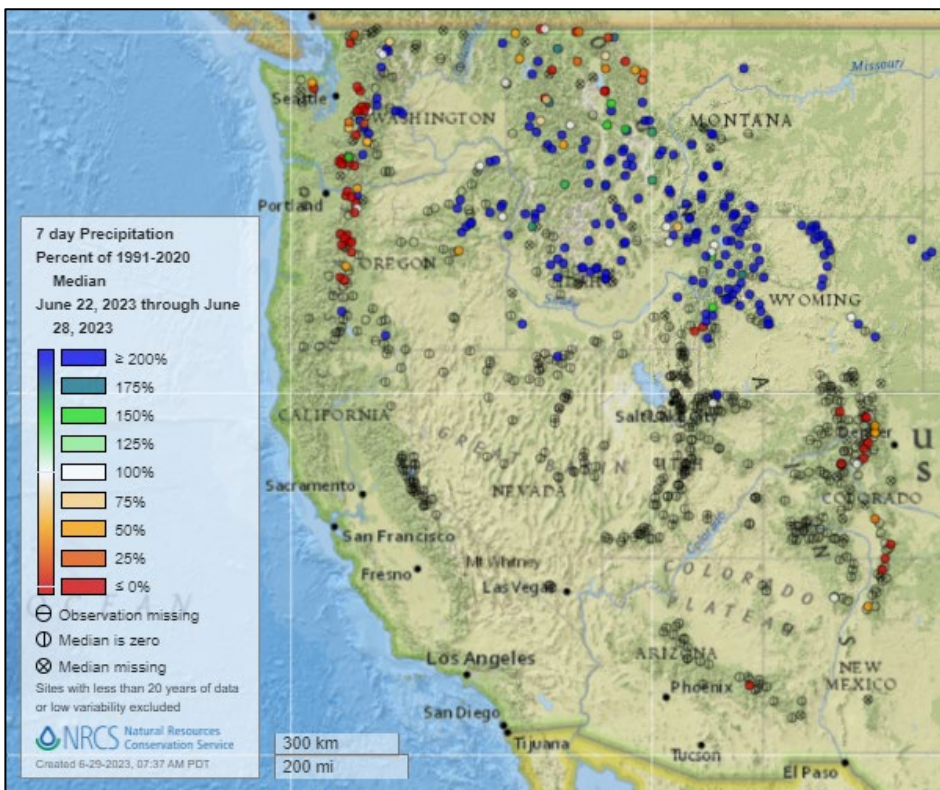
[More than a third of the US population, from the Midwest to the East Coast, under air quality alerts from Canadian wildfire smoke – CNN](#)

[Live updates: Chicago’s air quality index is the worst in the U.S. as Canadian wildfire smoke lingers – NBC News](#)

[Canadian wildfire smoke reaches Europe as Canada reports its worst fire season on record – CNN](#)

Precipitation

Last 7 Days, NRCS SNOTEL Network



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

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

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

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



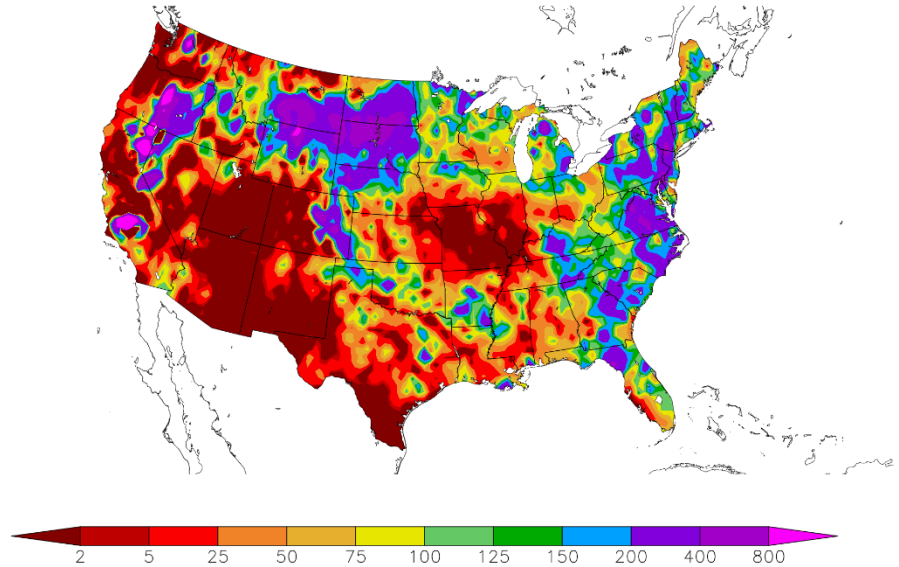
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
6/22/2023 – 6/28/2023



Generated 6/29/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

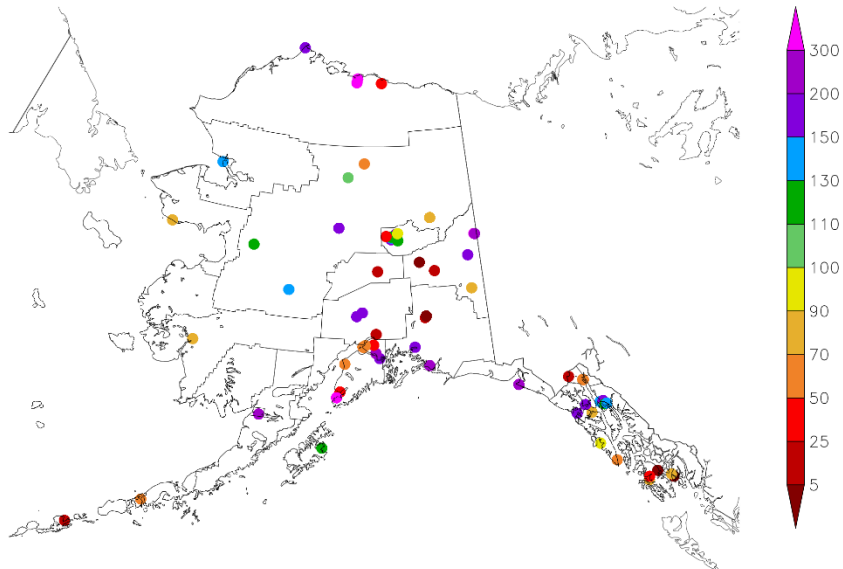
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day precipitation percent of normal map](#) for Alaska.

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

Percent of Normal Precipitation (%)
6/22/2023 – 6/28/2023



Generated 6/29/2023 at HPRCC using provisional data.

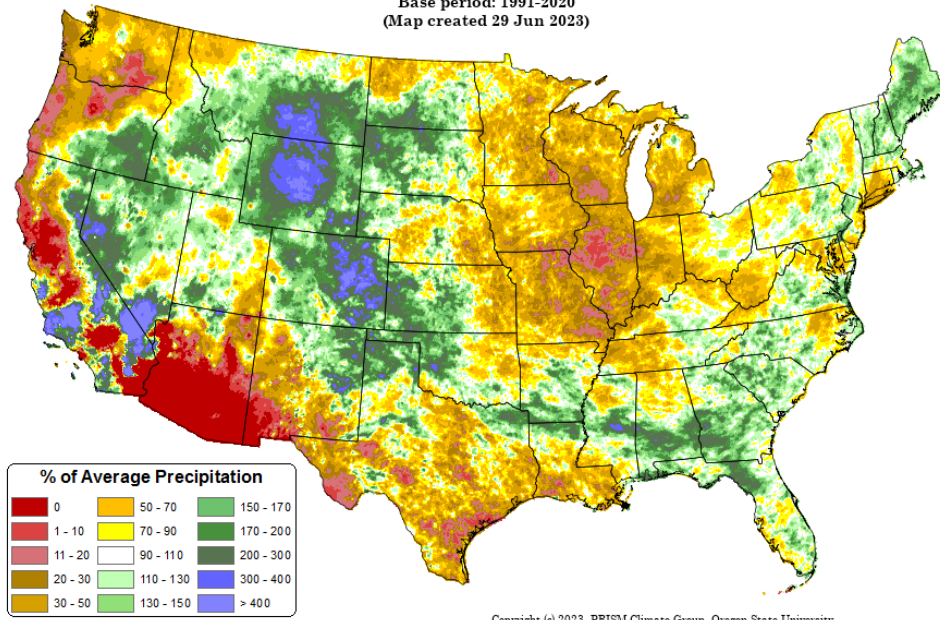
NOAA Regional Climate Centers

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

Source: PRISM

Total Precipitation Anomaly: 01 Jun 2023 - 28 Jun 2023
Period ending 7 AM EST 28 Jun 2023
Base period: 1991-2020
(Map created 29 Jun 2023)

[Month-to-date national total precipitation anomaly map](#)



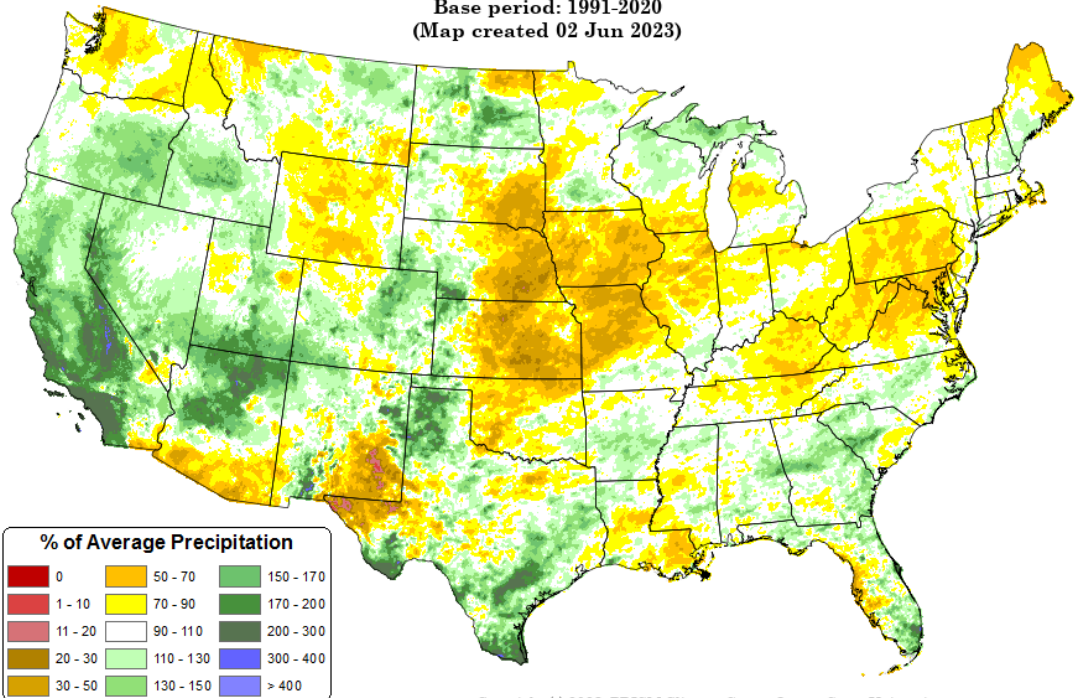
Copyright (c) 2023, PRISM Climate Group, Oregon State University

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

Source: PRISM

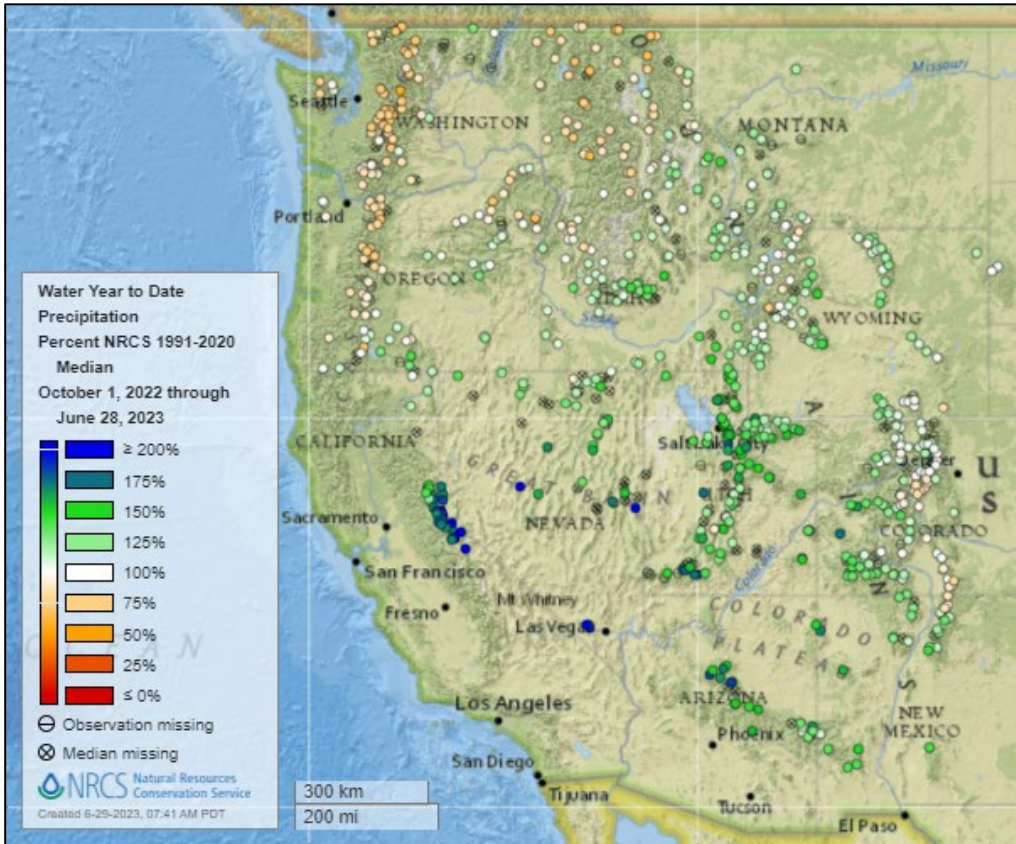
[March through May 2023 precipitation anomaly map](#)

Total Precipitation Anomaly: Mar 2023 - May 2023
Period ending 7 AM EST 31 May 2023
Base period: 1991-2020
(Map created 02 Jun 2023)



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Water Year-to-Date, NRCS SNOTEL Network

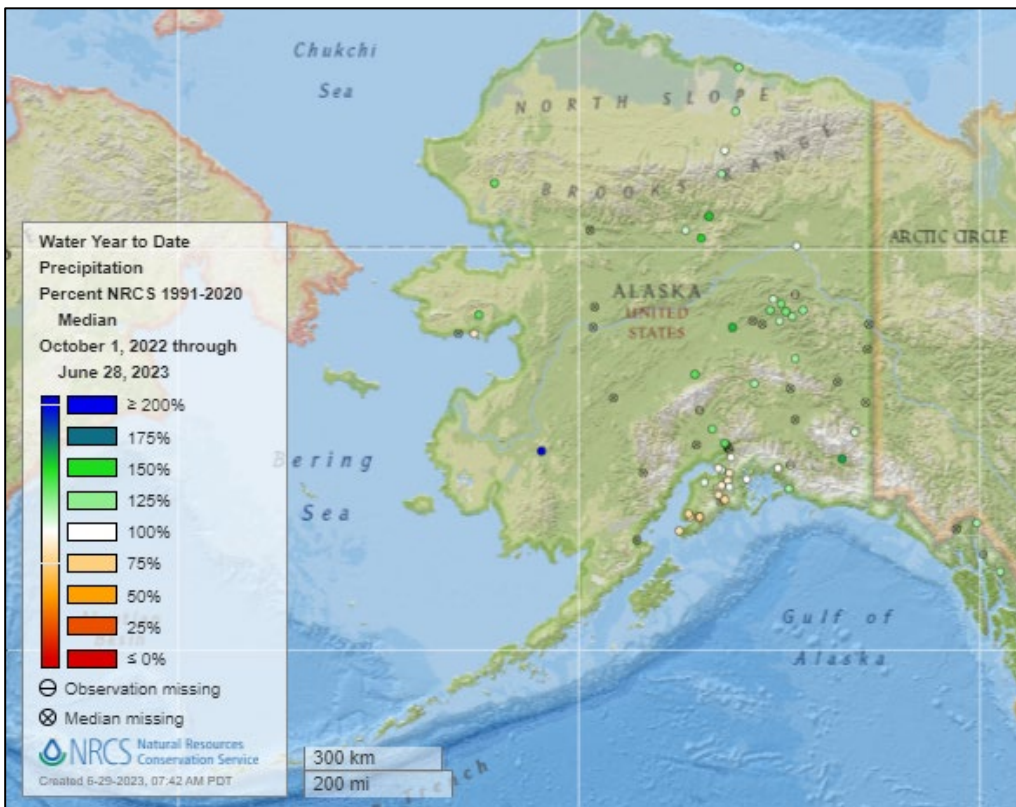


[2023 water year-to-date precipitation percent of median map](#)

See also:

[2023 water year-to-date precipitation percent of average map](#)

[2023 water year-to-date precipitation values \(inches\) map](#)



[Alaska 2023 water year-to-date precipitation percent of median map](#)

See also:

[Alaska 2023 water year-to-date precipitation percent of average map](#)

[Alaska 2023 water year-to-date precipitation values \(inches\) map](#)

Temperature

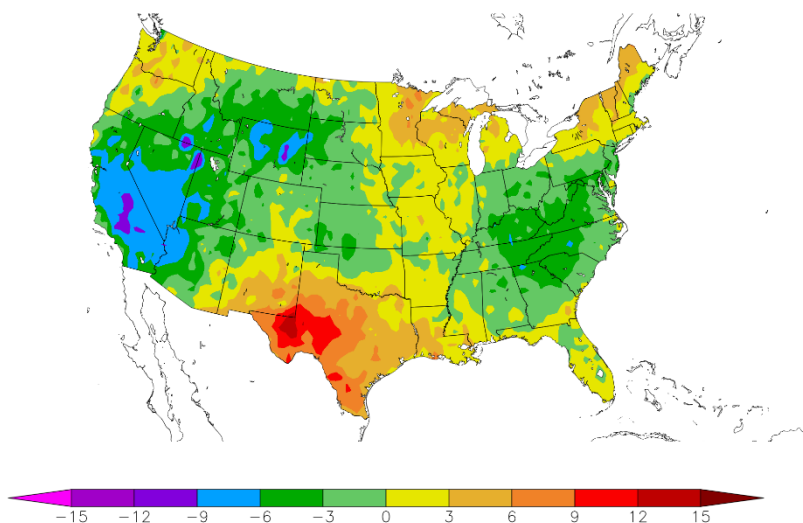
Last 7 Days, National Weather Service (NWS) Networks

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)
6/22/2023 – 6/28/2023



Generated 6/29/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

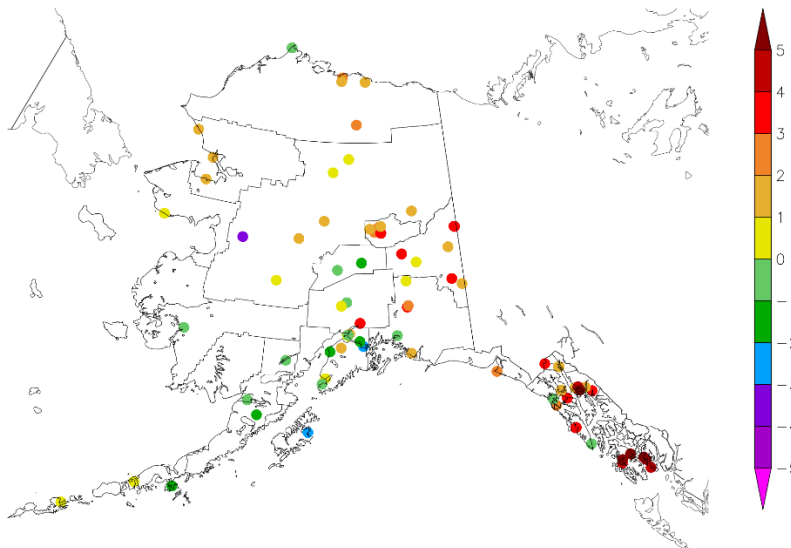
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
6/22/2023 – 6/28/2023



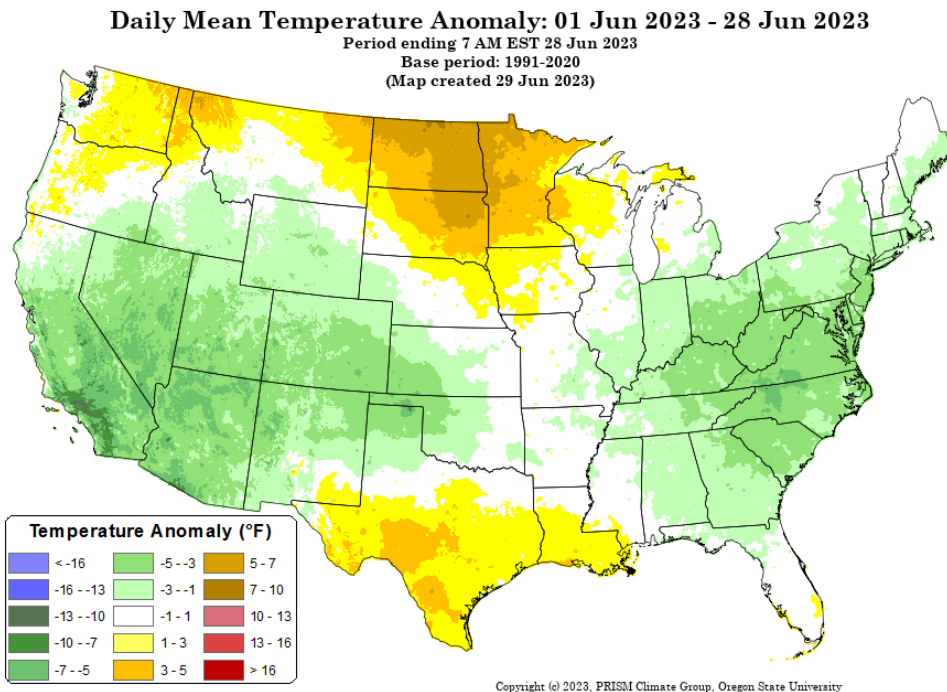
Generated 6/29/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Source: PRISM

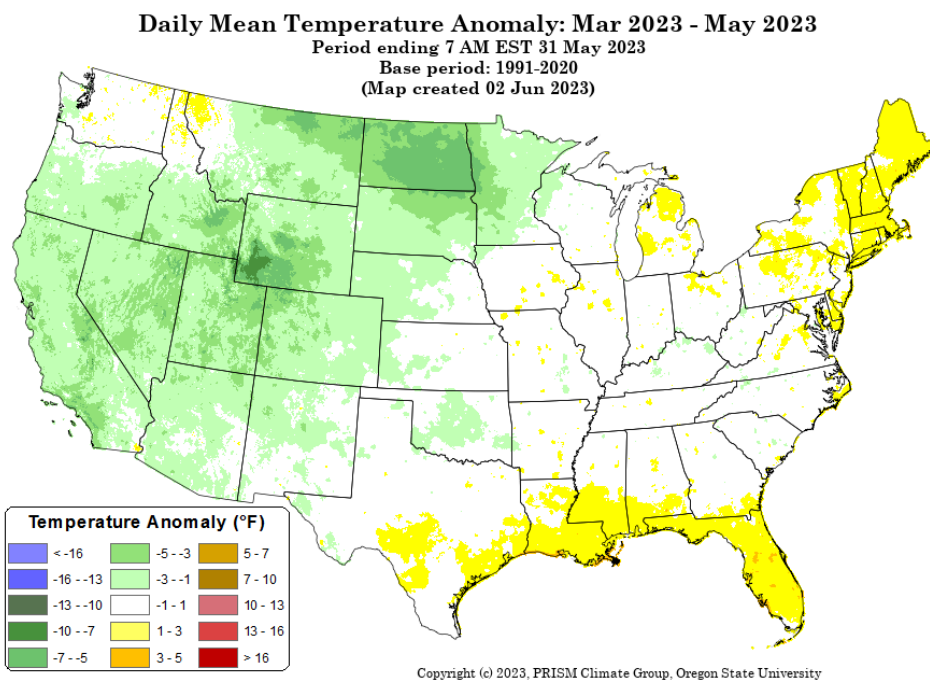
[Month-to-date national daily mean temperature anomaly map](#)



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

Source: PRISM

[March through May 2023 daily mean temperature anomaly map](#)



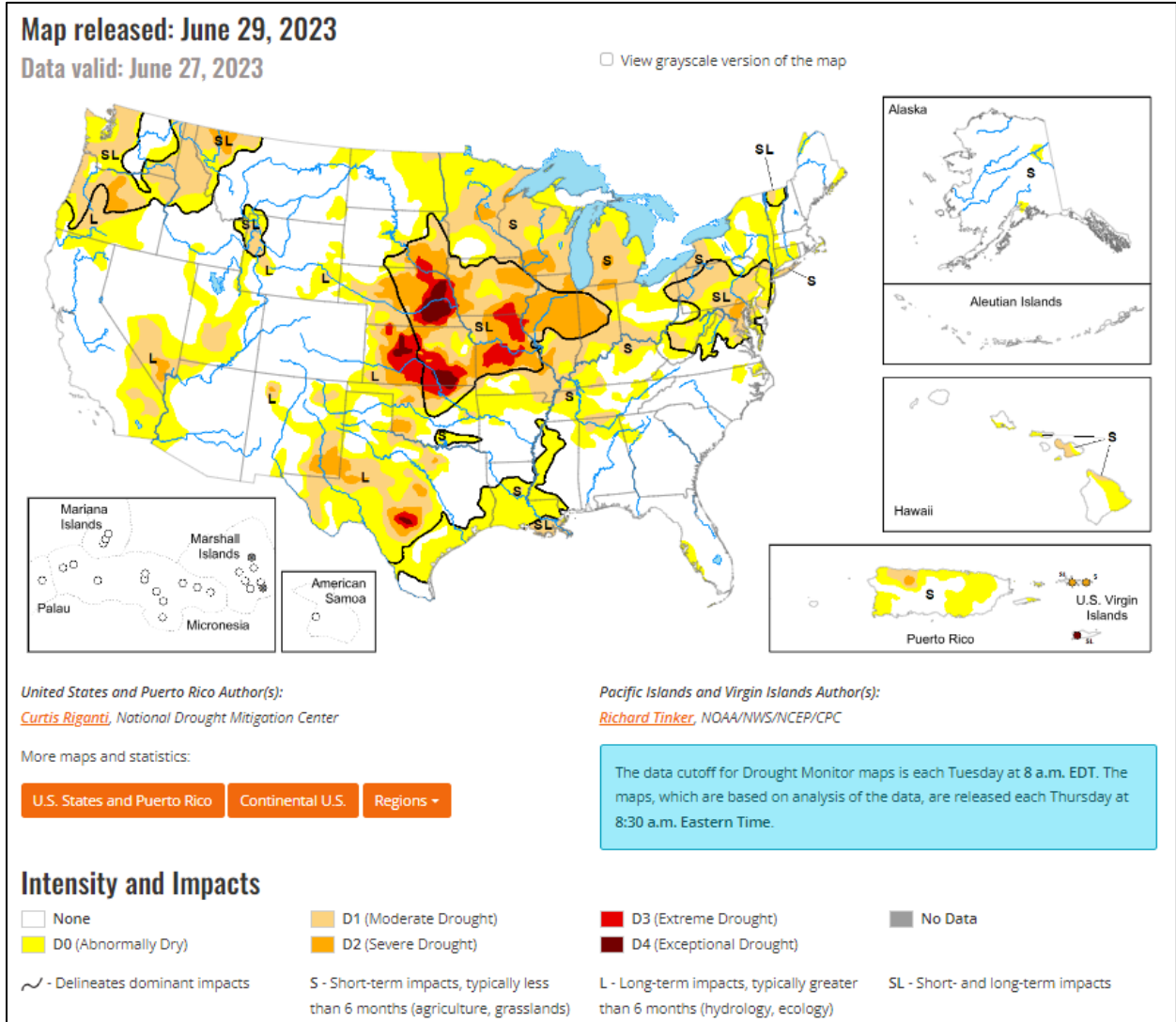
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), June 27, 2023

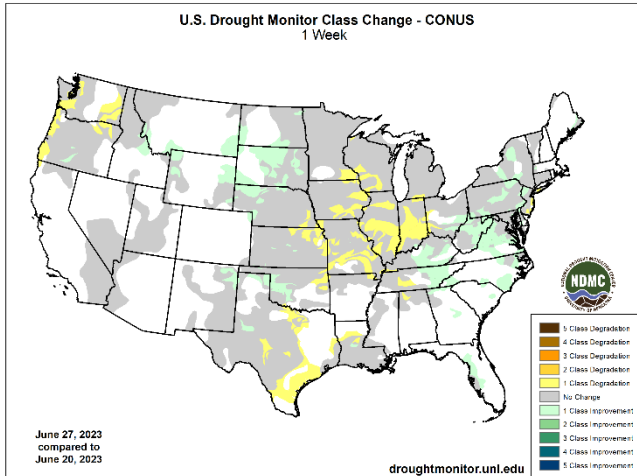
Source: National Drought Mitigation Center

“Widespread changes were made across the country, with many degradations and improvements occurring. In the eastern U.S., mostly widespread improvements occurred following widespread heavy rains, though parts of New Jersey and Long Island that missed out on these rains saw conditions worsen. The Midwest and east-central Great Plains saw mostly worsening conditions and widespread crop stress and low streamflows after another week of mostly dry weather. A mix of improvements and degradations occurred in Texas, where recent precipitation amounts have varied widely. The northern Great Plains received widespread heavy rainfall this week, leading to large-scale improvements to ongoing drought and abnormal dryness. In the Pacific Northwest, a few areas saw above-normal precipitation and improving conditions, but larger parts of the region saw increasing evaporative demand, continued dry weather and lowering streamflows, leading to worsening conditions.”

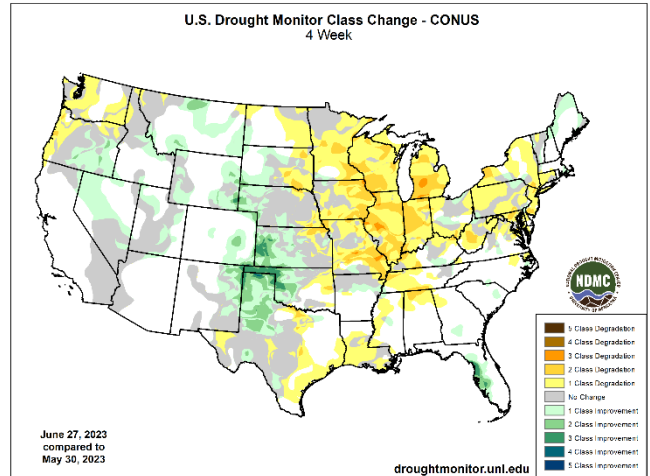
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

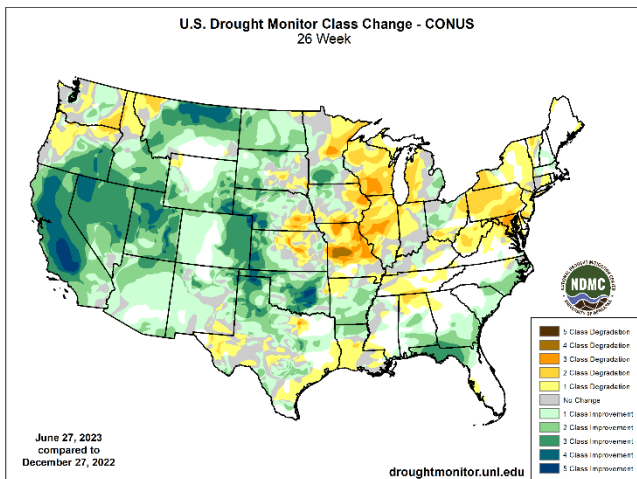
1 Week



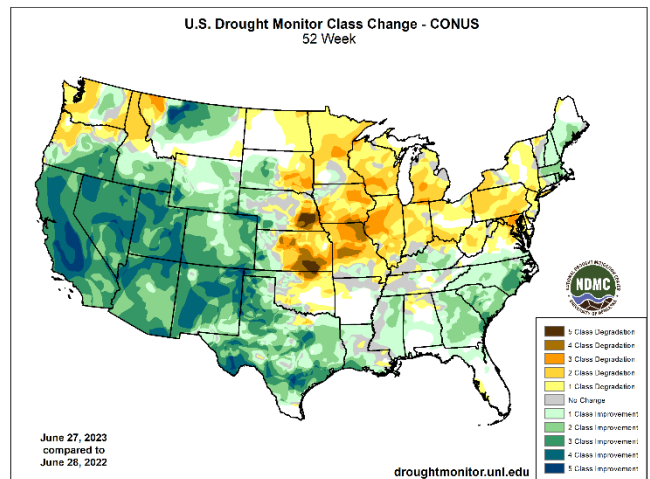
1 Month



6 Months



1 Year



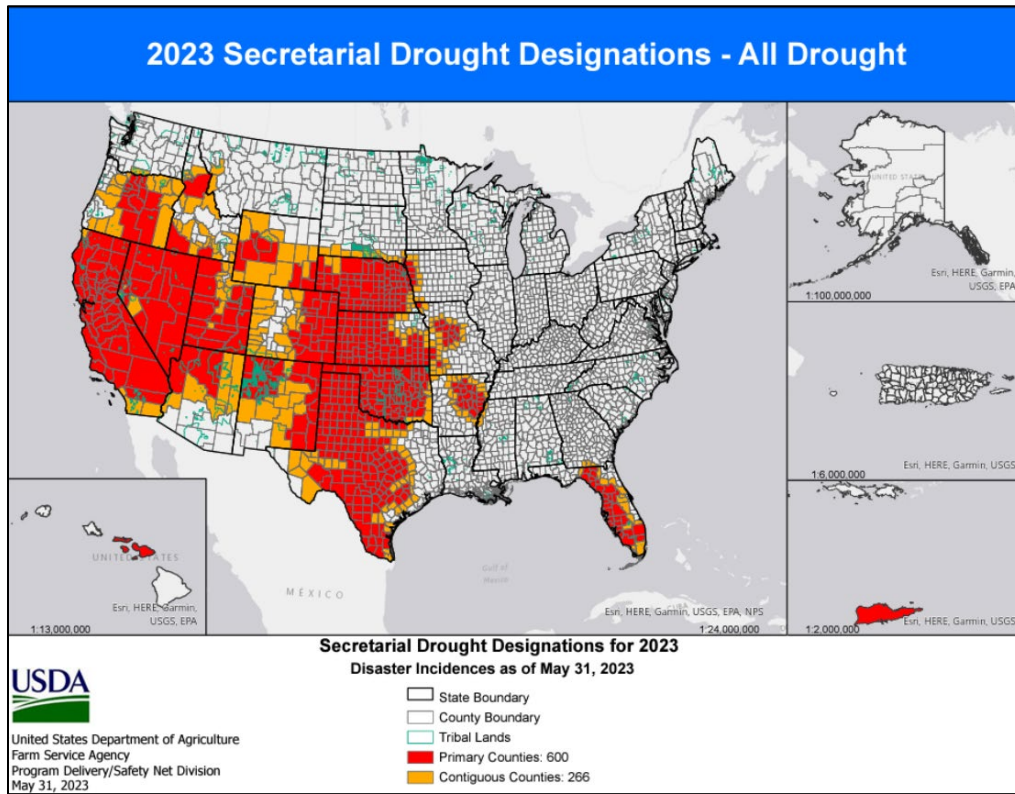
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

Highlighted Drought Resources

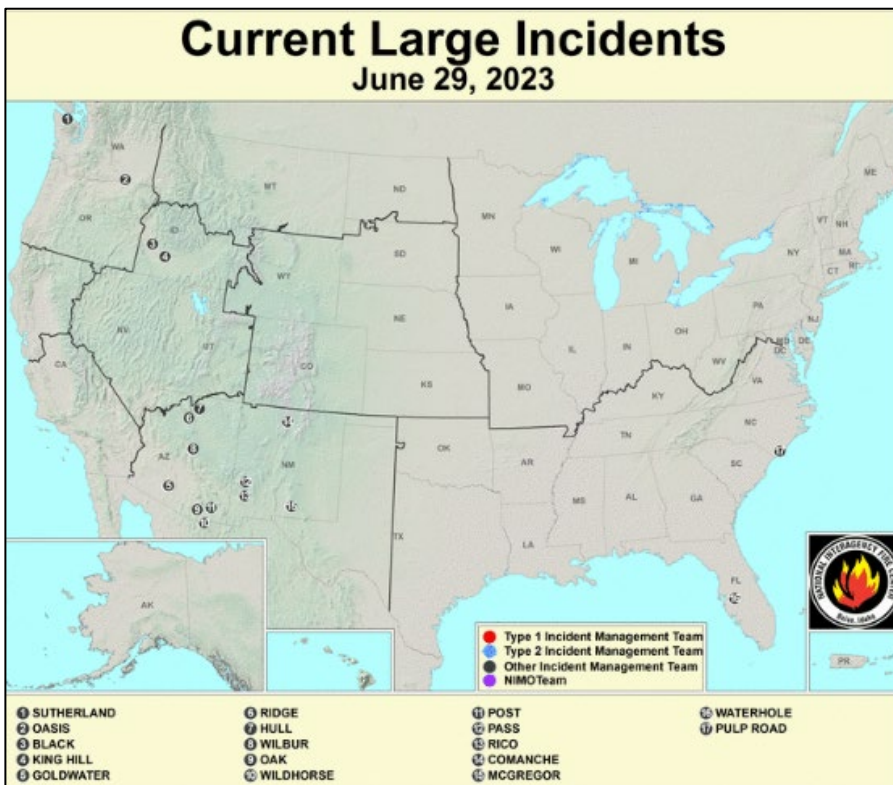
- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)
- [U.S. Population in Drought, Weekly Comparison](#)
- [USDA Disaster and Drought Information](#)

USDA Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: USDA Forest Service Active Fire Mapping



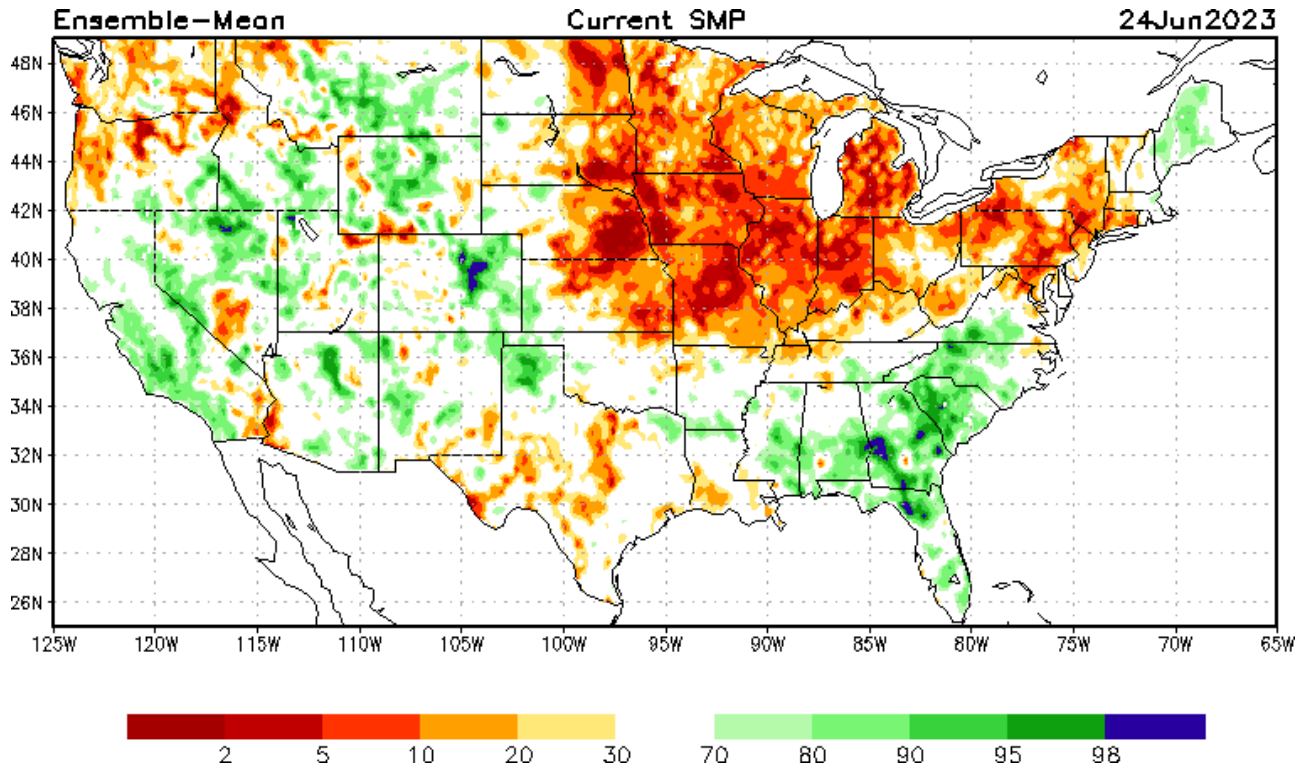
Highlighted Wildfire Resources

- [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

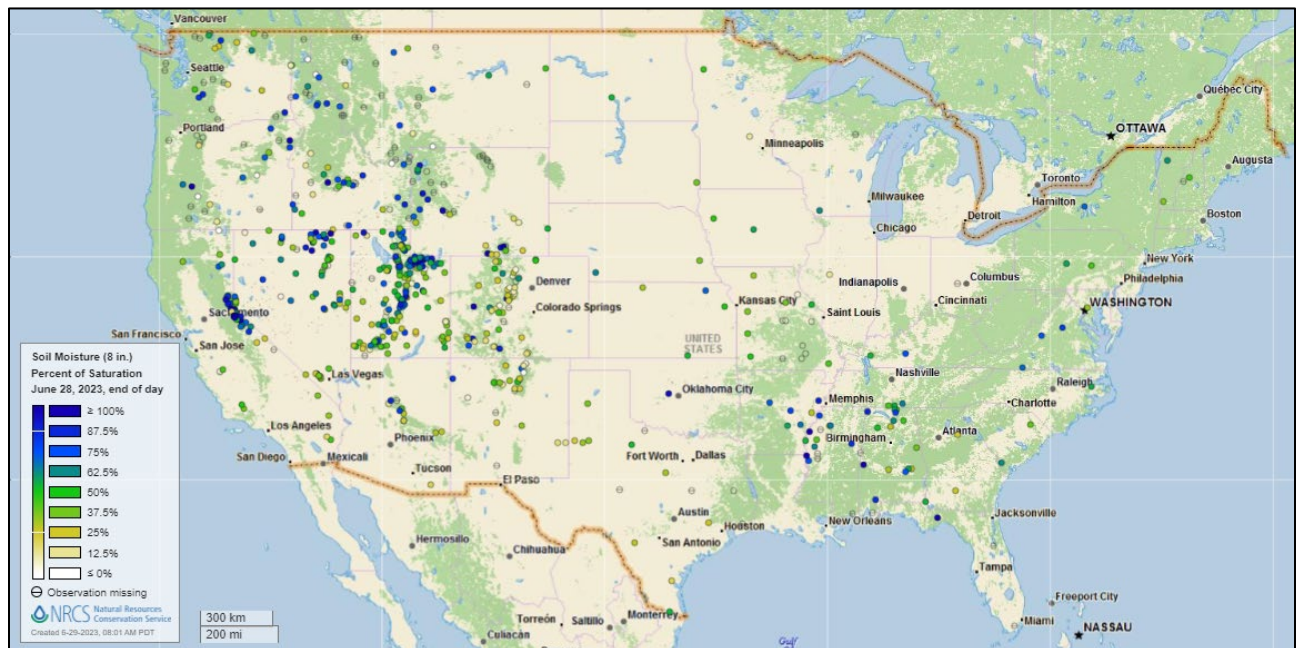


[Modeled soil moisture percentiles](#) as of June 24, 2023

Soil Moisture Percent of Saturation

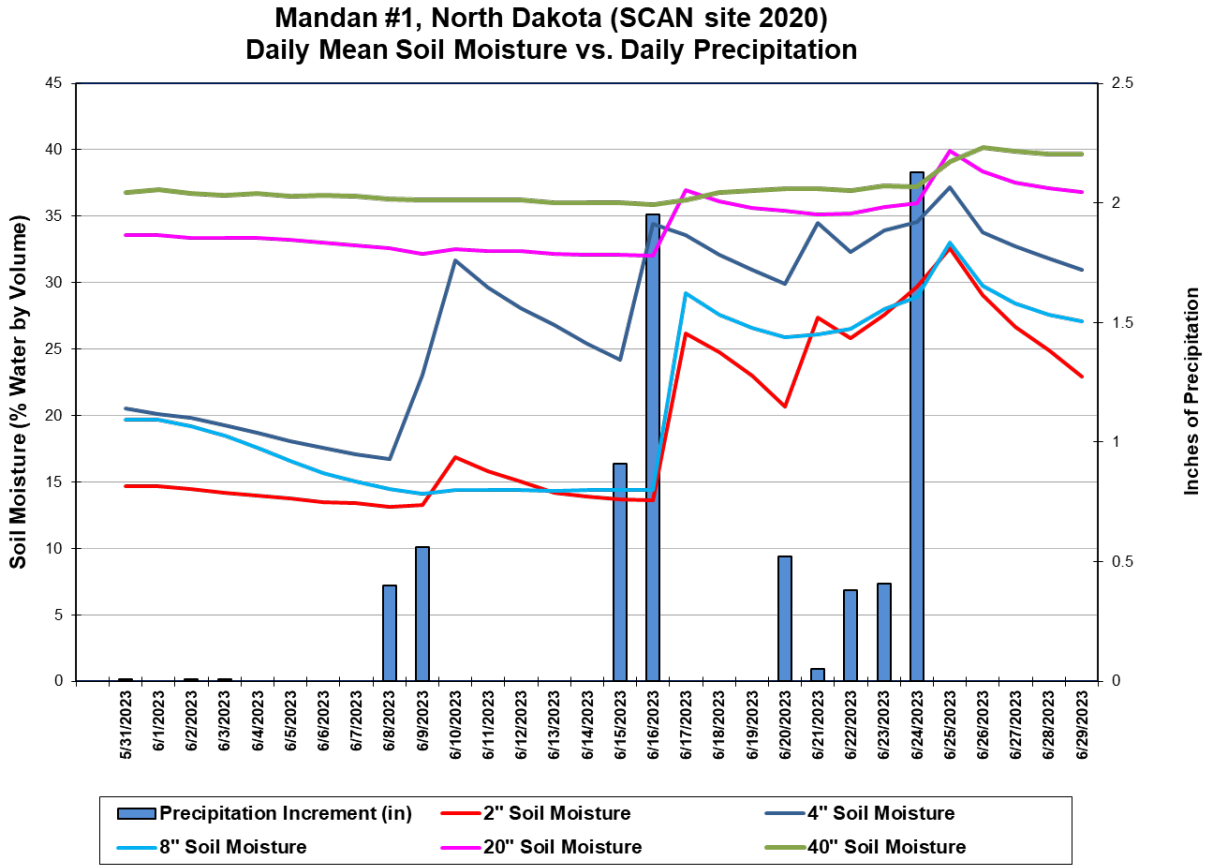
Source: NRCS SNOTEL and [Soil Climate Analysis Network](#) (SCAN)

[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 [Mandan #1](#) SCAN site in North Dakota. Fluctuating precipitation events occurred between June 8-24, with soil moisture levels at the site increasing at all sensor depths toward the end of the period. Total precipitation for the 30-day period was 7.34 inches.

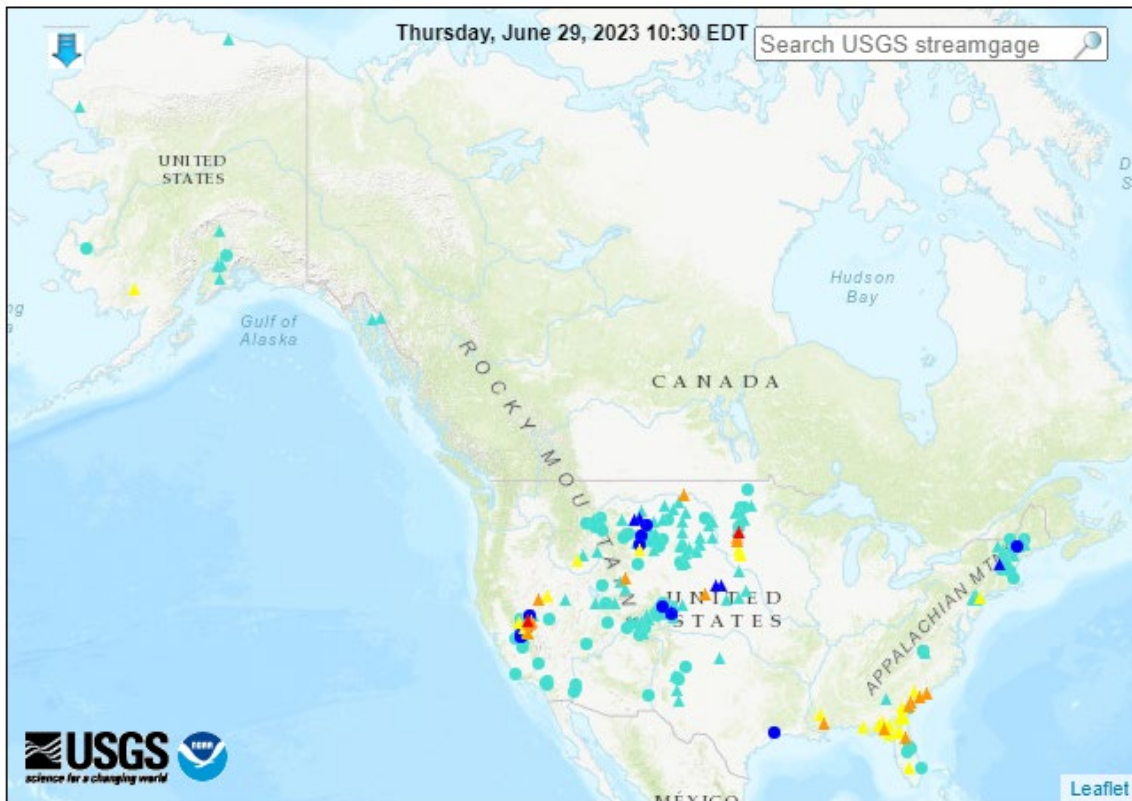
Soil Moisture Data Portals

- [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](#)

Map of flood and high flow conditions (22 in floods [moderate: 2, minor: 20], 27 in near-flood)



| 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

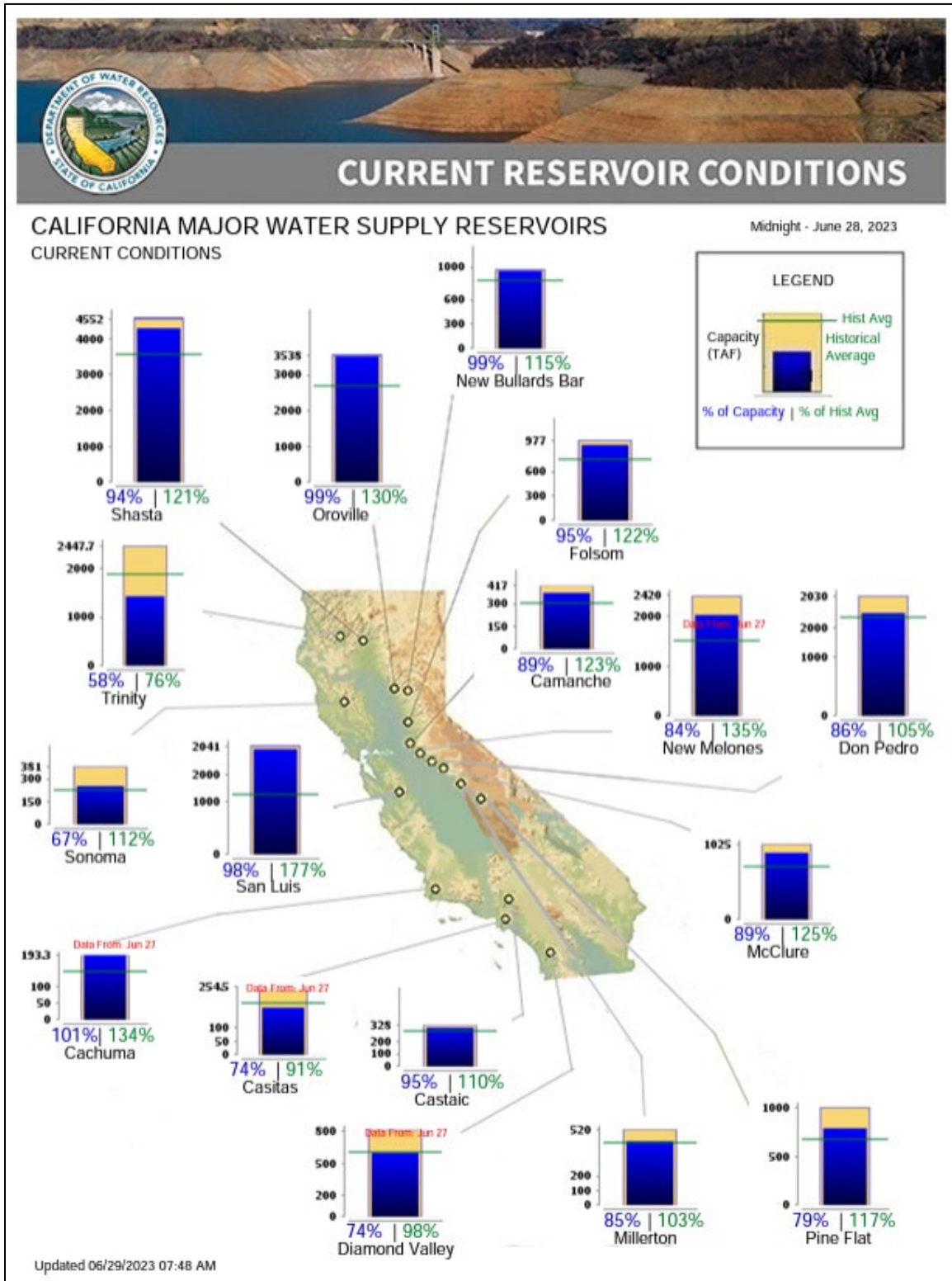
Hydromet Teacup Reservoir Depictions

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 June 29, 2023: “The long-running heat wave in the south-central U.S. will be temporarily broken, with hot, humid conditions shifting eastward. By the weekend and early next week, temperatures should remain below 100°F across much of Texas, but readings ranging from 95 to 100°F will be common near the Gulf Coast and in the southern Atlantic States. Meanwhile, a separate area of heat will affect the West, with weekend temperatures rising to 110°F or higher as far north as California’s San Joaquin Valley. Dry weather will accompany the Western heat, while only spotty showers will occur across the Deep South. Farther north, however, 5-day rainfall should reach 1 to 3 inches or more from the central Plains to the middle and northern Atlantic States. Parts of the Midwest, including Illinois and Indiana, may experience weekend drought relief. However, only light rain will fall across the northern Corn Belt, from the Dakotas to Michigan. The NWS 6- to 10-day outlook for July 4 – 8 calls for the likelihood of near- or above-normal temperatures and precipitation across most of the nation. Cooler-than-normal conditions will be confined to southern California, as well as the northern half of the High Plains and adjacent Rockies. Meanwhile, drier-than-normal weather should be limited to the Pacific Northwest and parts of the Southwest.”

Weather Hazards Outlook: [July 01 – 05, 2023](#)

Source: NOAA Weather Prediction Center















U.S. Day 3-7 Hazards Outlook

[About the Hazards Outlook](#)

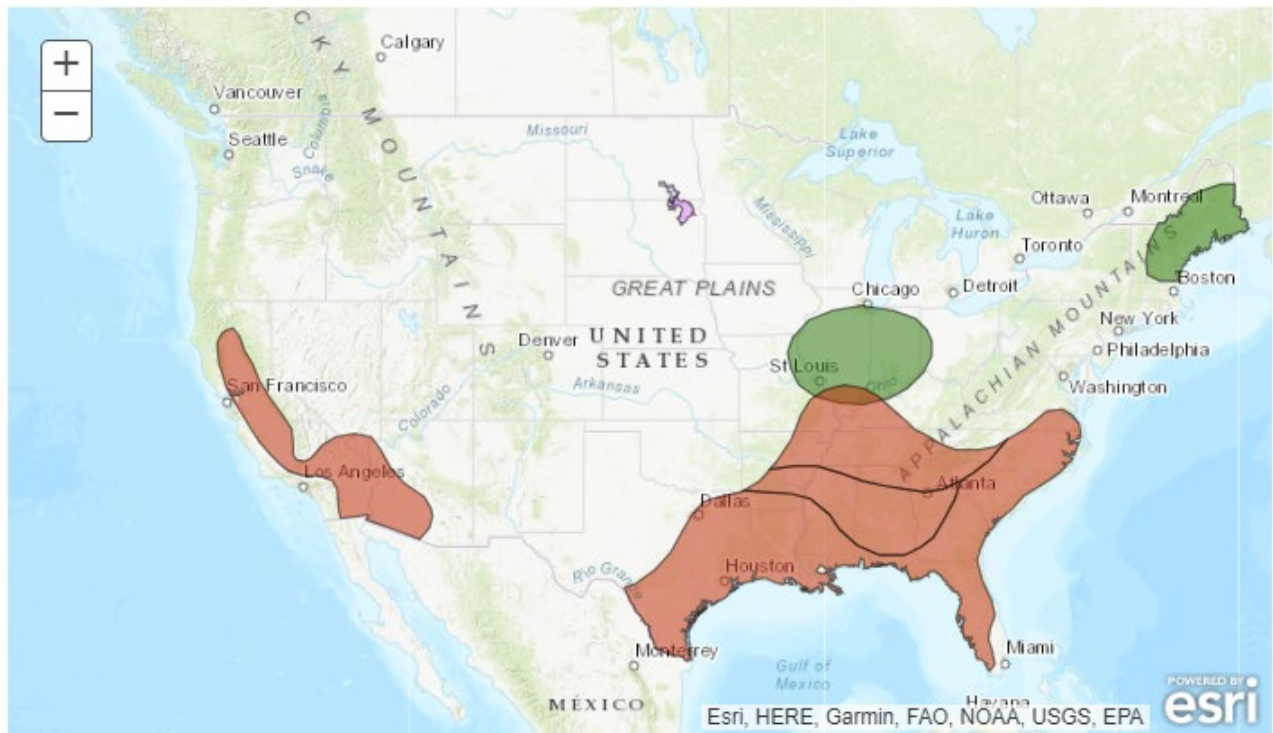
Created June 28, 2023

NOTE: These products are only created Monday through Friday. Please exercise caution using this outlook during the weekend.

| | |
|---------------|-------------------------------------|
| Precipitation | <input checked="" type="checkbox"/> |
| Temperature | <input checked="" type="checkbox"/> |
| Wildfires | <input checked="" type="checkbox"/> |
| Soils | <input type="checkbox"/> |

| Legend | | | |
|---|--------------------------------|---|------------------------|
|  | Flooding Likely |  | Hazardous Heat |
|  | Flooding Occurring or imminent |  | Hazardous Cold |
|  | Flooding Possible |  | Frost/Freeze |
|  | Freezing Rain |  | High Winds |
|  | Heavy Precipitation |  | Significant Waves |
|  | Heavy Rain |  | Critical Wildfire Risk |
|  | Heavy Snow |  | Severe Weather |

Valid July 01, 2023 - July 05, 2023

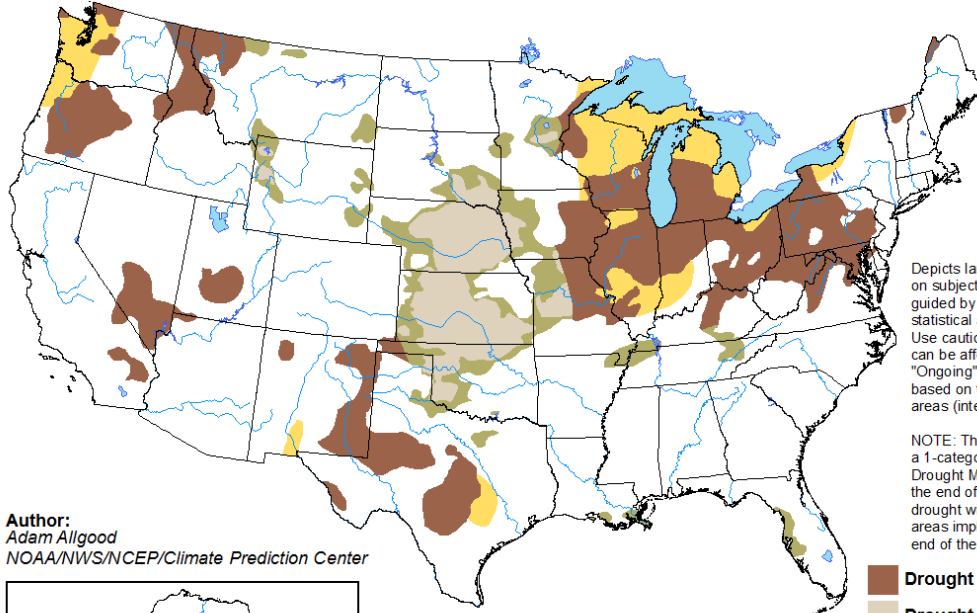


Seasonal Drought Outlook: [June 15 – September 30, 2023](#)

Source: National Weather Service

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

Valid for June 15 - September 30, 2023
Released June 15

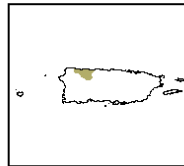
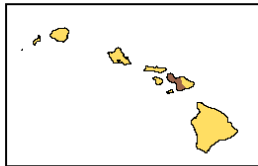
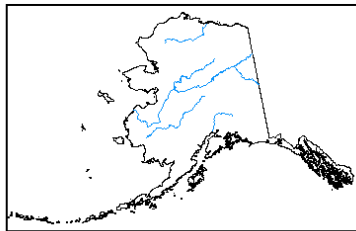


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



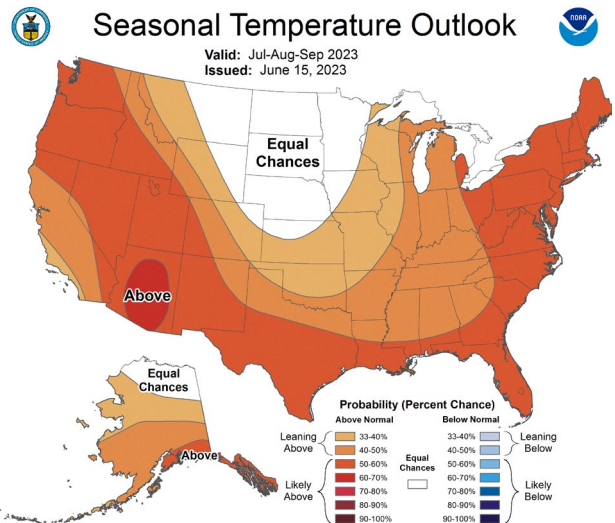
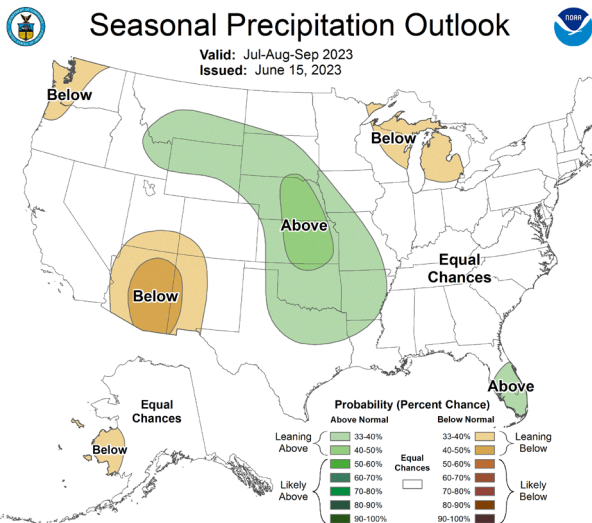
<http://go.usa.gov/3eZ73>

Climate Prediction Center Three-month Outlook

Source: National Weather Service

[Precipitation](#)

[Temperature](#)



[July-August-September 2023 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](#).