



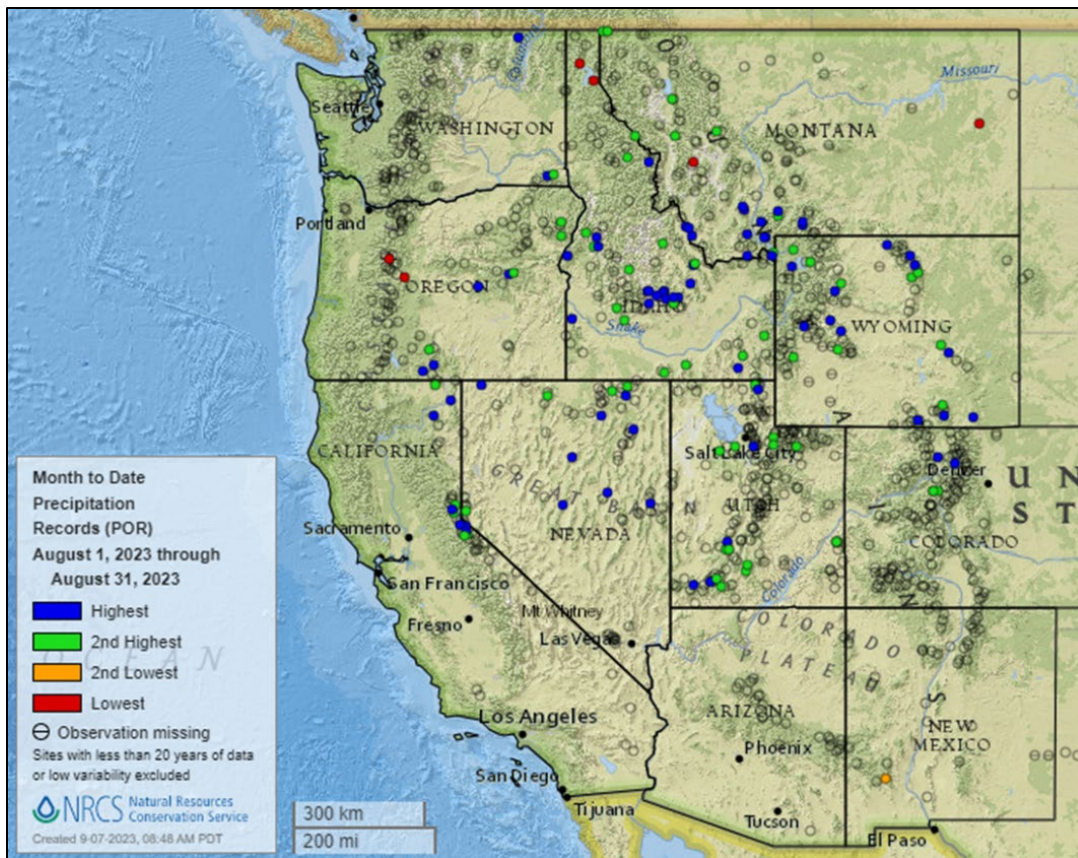
Water and Climate Update

September 07, 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	12
Temperature.....	6	More Information	18
Drought	8		

August precipitation records set at multiple SNOTEL sites



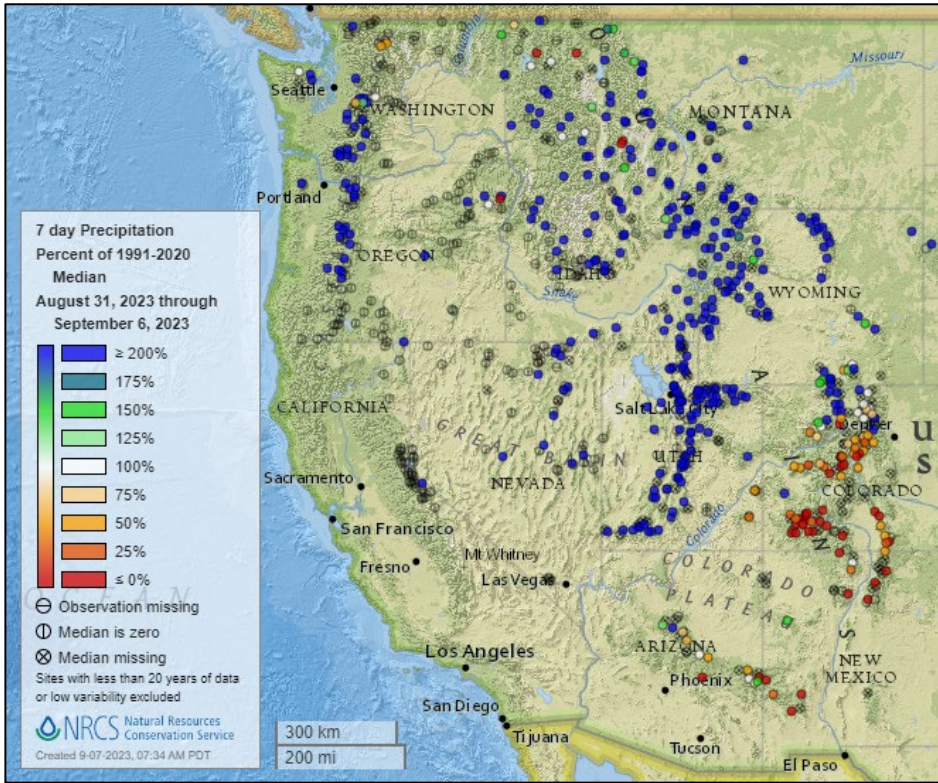
August proved to be a wet month for parts of the western U.S. Many of the Natural Resources Conservation Service SNOTEL stations with at least 15 years of record measured their highest-ever August precipitation. Tropical Storm Hilary was responsible for most of the monthly rainfall as it moved through California before tracking northeast. Seasonal monsoonal flow brought even more precipitation to the Southwest on September 1, causing these wet areas to become even more saturated. Impacts from the abundant rain include interstate closures near Las Vegas, NV and Burning Man Festival attendees being stranded for several days after the event due to flooding.

Related:

- [Flood engulfs California's I-15, temporarily closing artery from Vegas](#) – SFGATE (CA)
- [Wait times to exit Burning Man drop after flooding left tens of thousands stranded in Nevada desert](#) - AP News
- [Las Vegas Flooding Sweeps People Away as Strip Becomes River](#) – Newsweek

Precipitation

Last 7 Days, NRCS SNOTEL Network

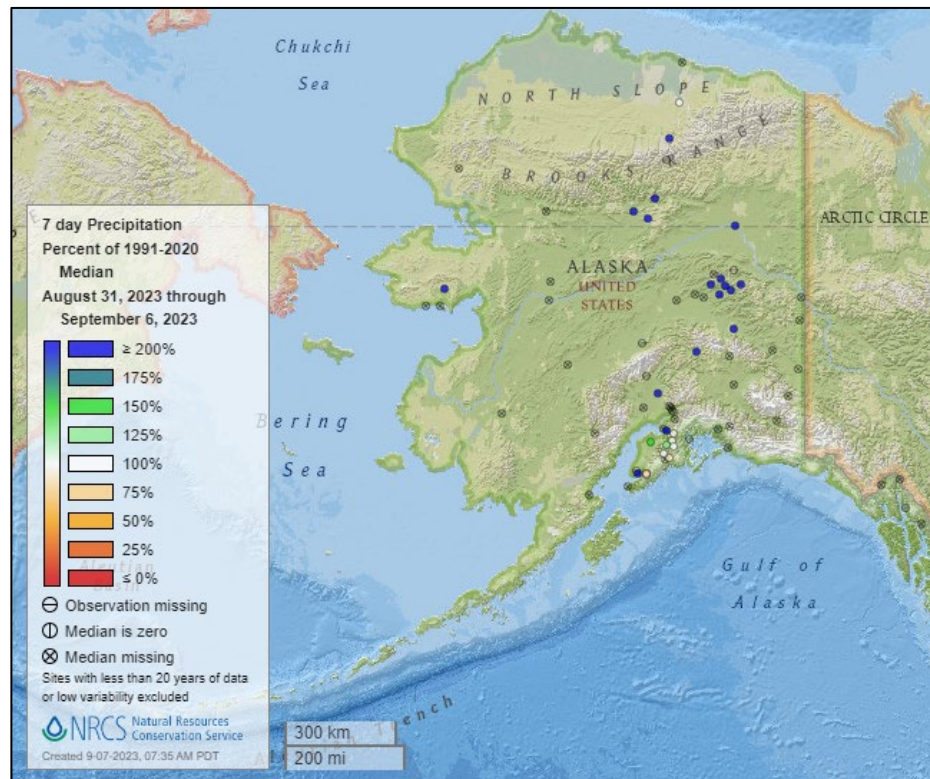


[7-day precipitation percent of median map](#)

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](#)



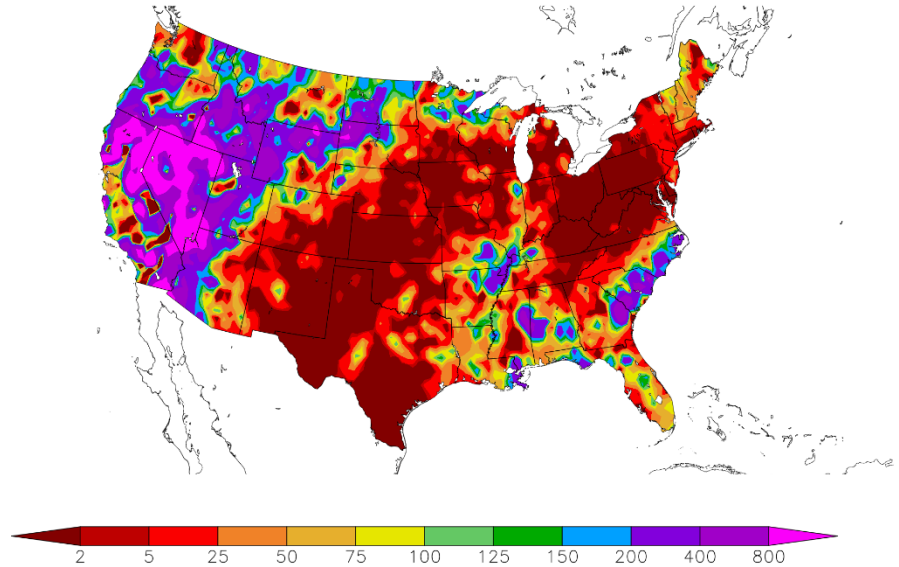
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
8/31/2023 – 9/6/2023



Generated 9/7/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

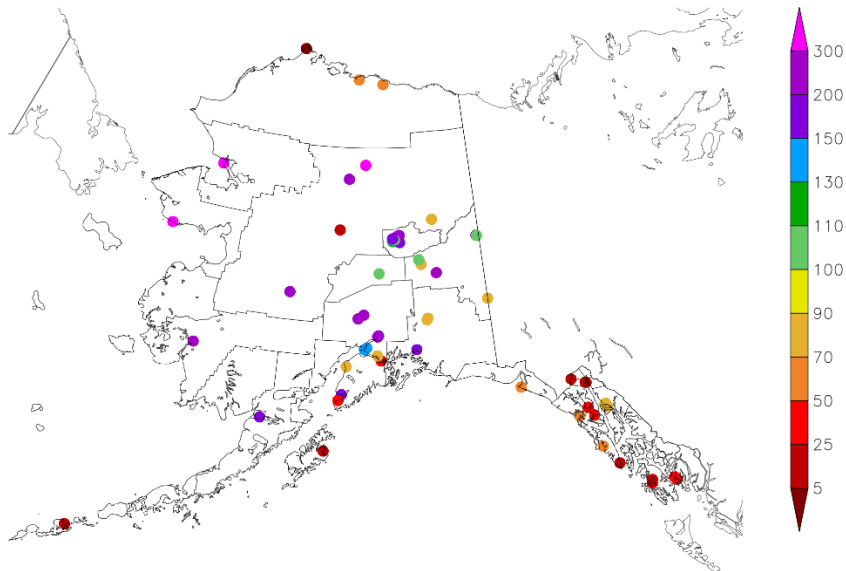
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
8/31/2023 – 9/6/2023



Generated 9/7/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Source: PRISM

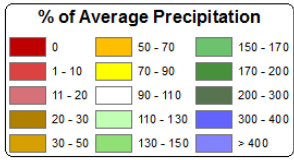
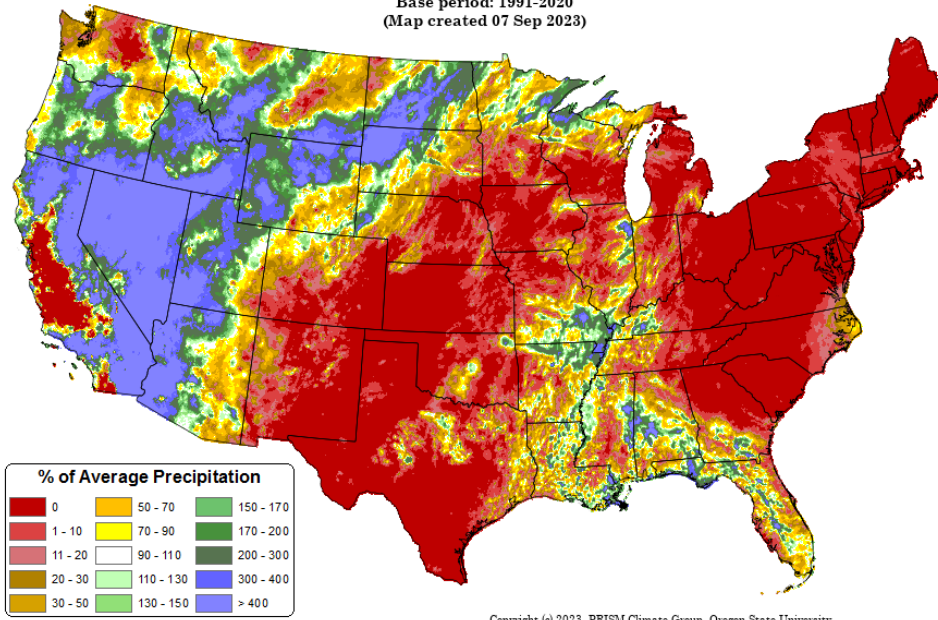
Total Precipitation Anomaly: 01 Sep 2023 - 06 Sep 2023

Period ending 7 AM EST 06 Sep 2023

Base period: 1991-2020

(Map created 07 Sep 2023)

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



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

Source: PRISM

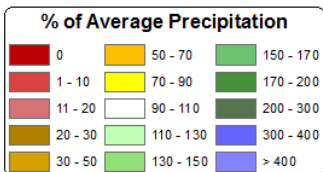
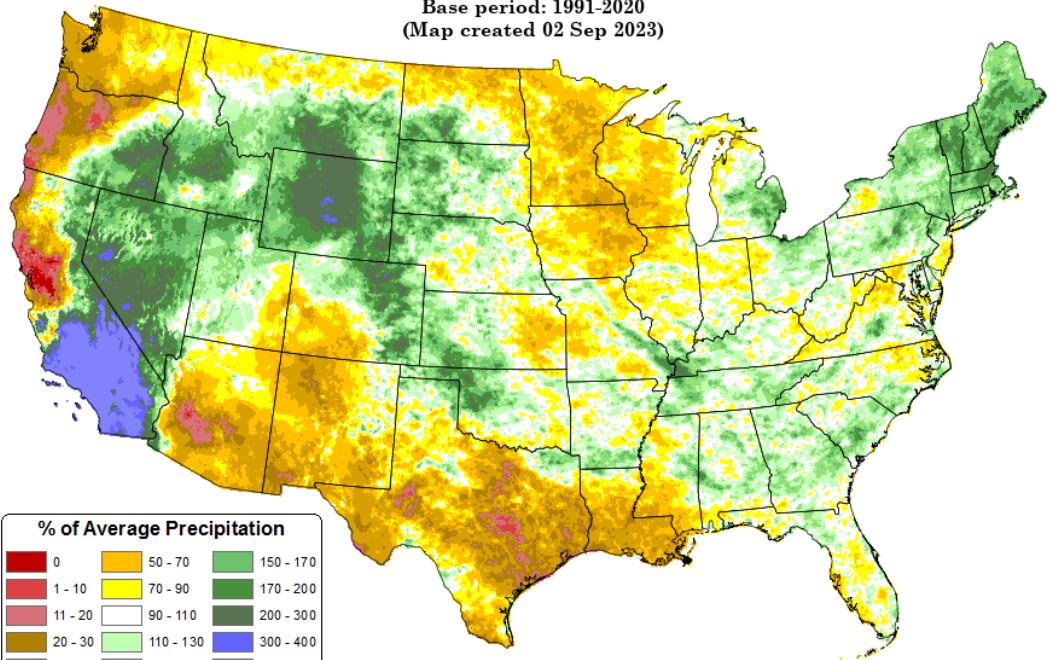
[June through August 2023 precipitation anomaly map](#)

Total Precipitation Anomaly: Jun 2023 - Aug 2023

Period ending 7 AM EST 31 Aug 2023

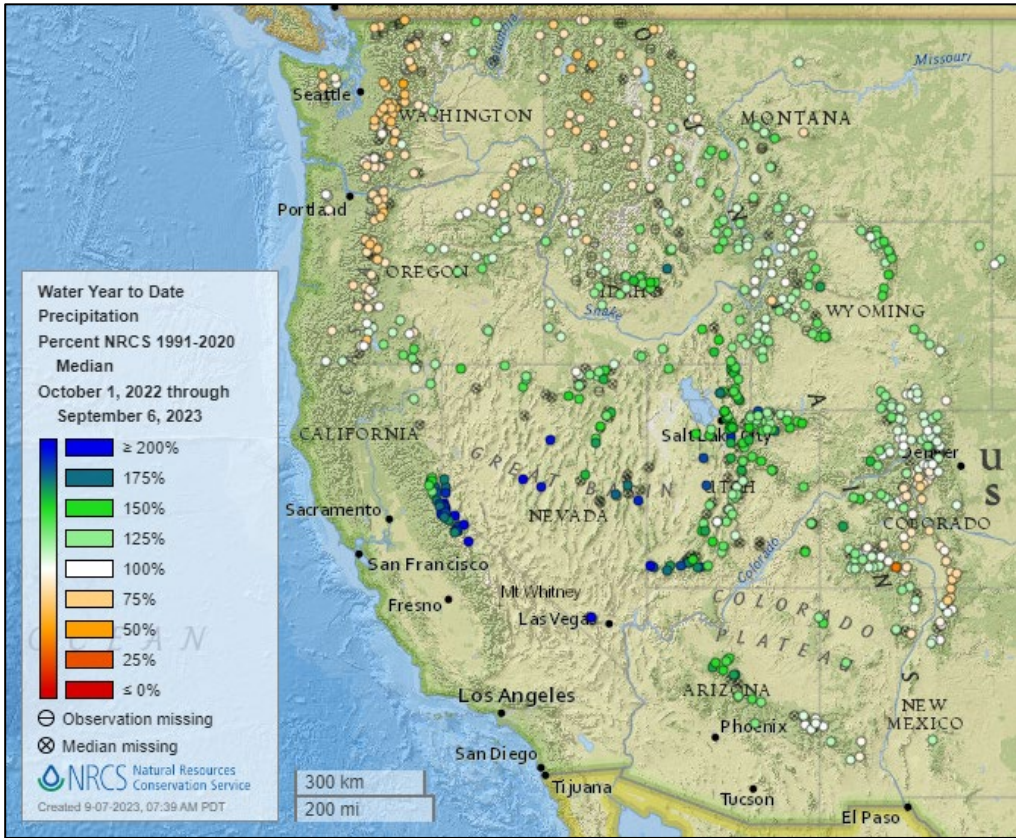
Base period: 1991-2020

(Map created 02 Sep 2023)



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

Water Year-to-Date, NRCS SNOTEL Network

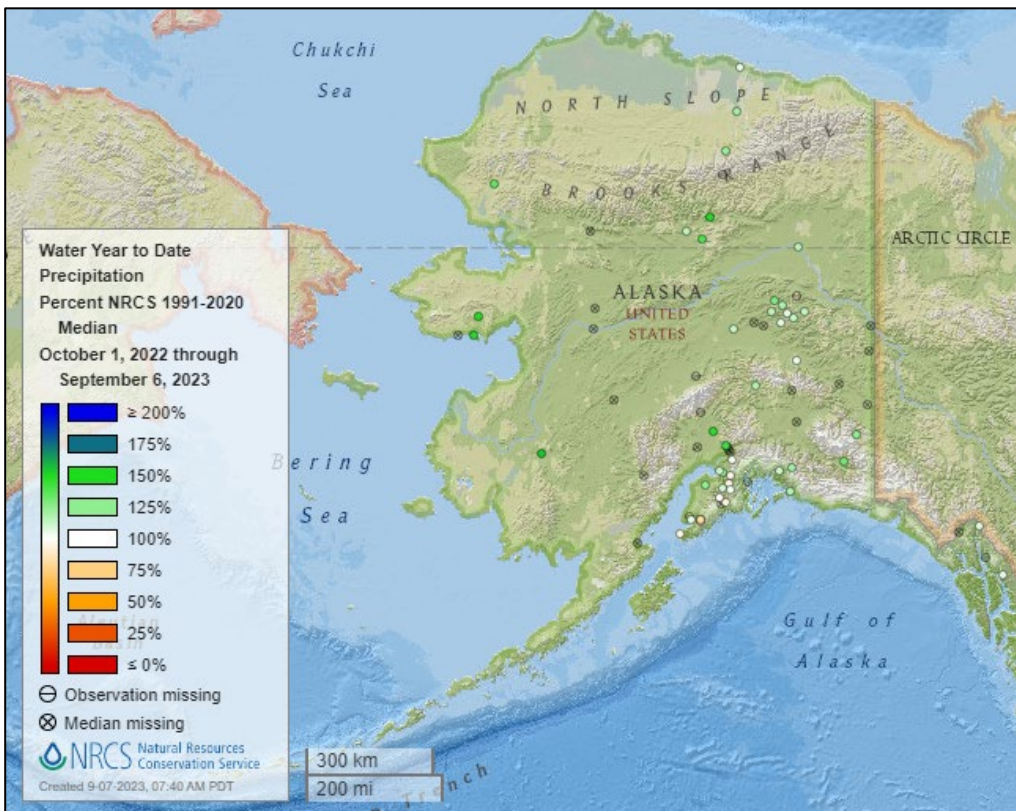


[2023 water year-to-date precipitation percent of median map](#)

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

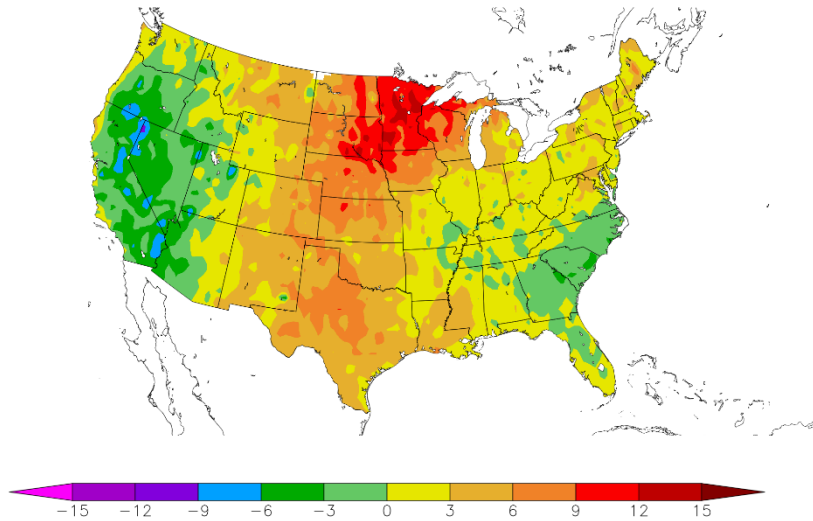
Last 7 Days, National Weather Service (NWS) Networks

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)
8/31/2023 – 9/6/2023



Generated 9/7/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

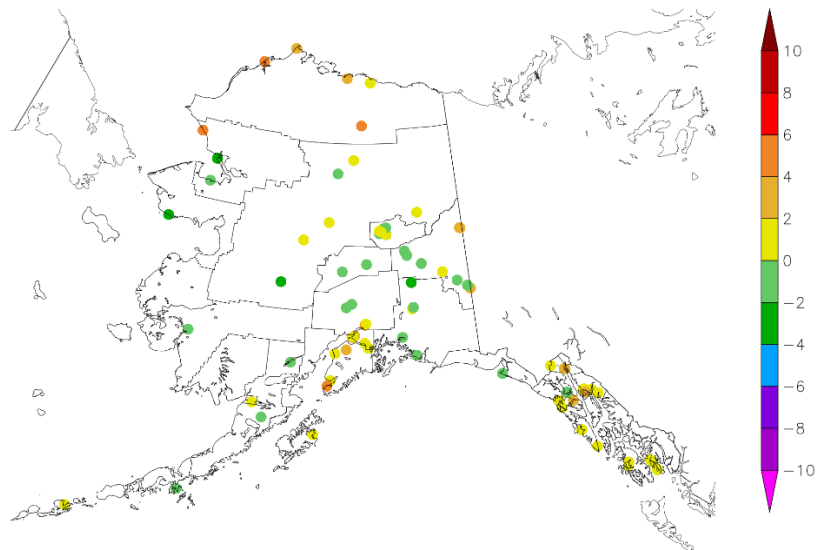
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
8/31/2023 – 9/6/2023



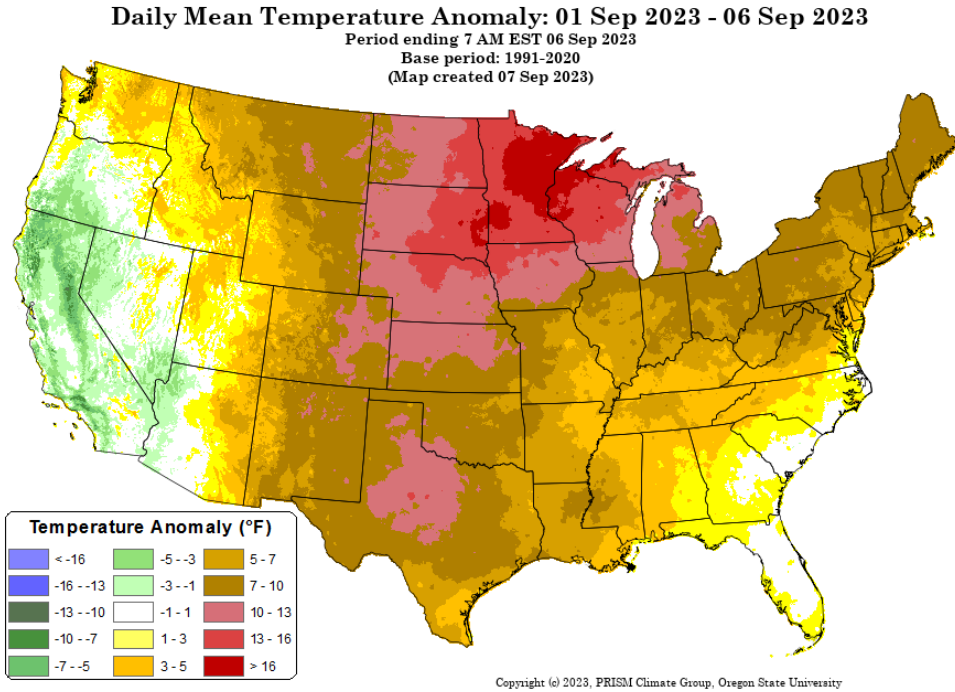
Generated 9/7/2023 at HPRCC using provisional data.

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

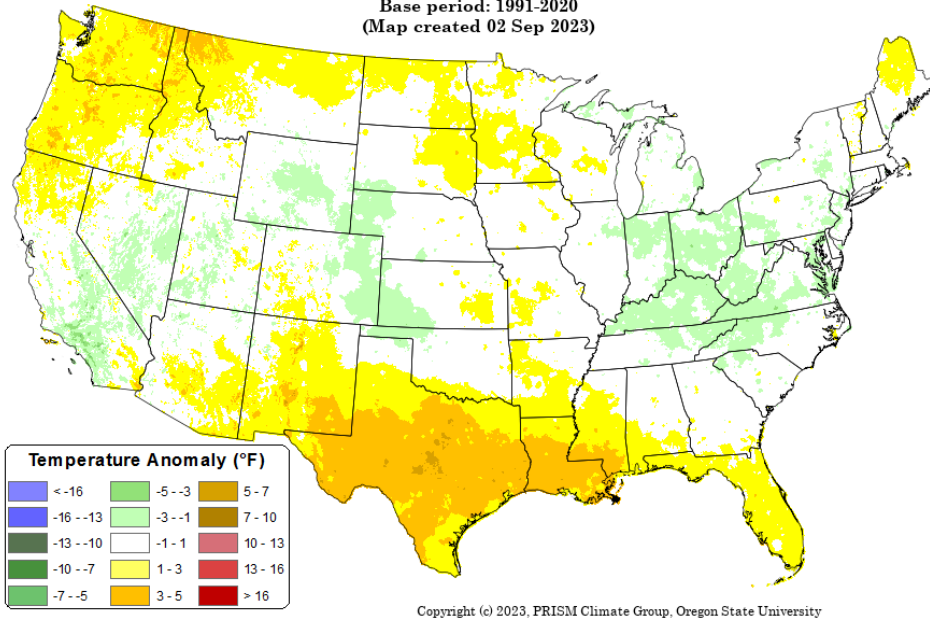
Daily Mean Temperature Anomaly: Jun 2023 - Aug 2023

Period ending 7 AM EST 31 Aug 2023

Base period: 1991-2020

(Map created 02 Sep 2023)

[June through August 2023 daily mean temperature anomaly map](#)



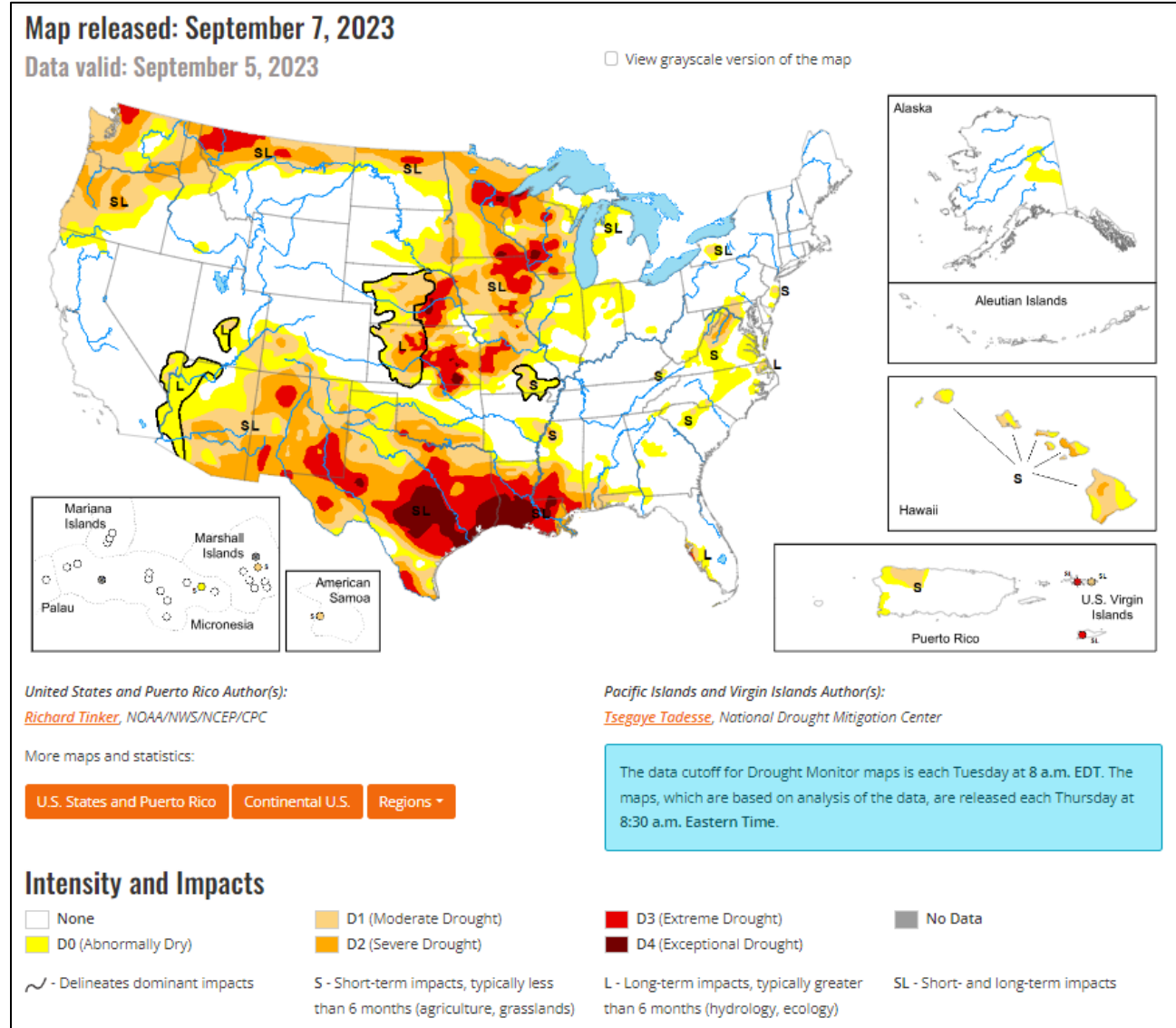
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), September 05, 2023

Source: National Drought Mitigation Center

“Heavy rainfall associated with Hurricane Idalia brought damaging winds and flooding centered along its path. Idalia moved from the Gulf of Mexico inland along the northeastern Gulf Coast of Florida and continued northeastward through south-central and east-central Georgia, slightly inland from the South Carolina Coast, then across southeastern North Carolina before moving into the open waters of the northwestern Atlantic Ocean. A solid swath of heavy rains were observed in a band from the eastern Florida Panhandle northward through middle Georgia, interior eastern South Carolina, and southeastern North Carolina as far north as the lower Outer Banks. Between 4.5 to 10.0 inches of rain fell solidly along this swath of land, but rainfall totals dropped off rapidly to the west and east of the main band.

Farther west, a surge of tropical moisture pushed northward into the southwestern U.S., continuing northward across the Great Basin, Intermountain West, and adjacent Rockies into adjacent Canada. Heavy rainfall fell in a broken pattern over this general area, with the highest amounts reported across interior southeastern California, over much of the middle Colorado River Basin, and across scattered areas farther north. The heaviest amounts outside the lower Colorado River Basin fell on higher elevations and over areas where precipitation was enhanced by orography, as is typical.

Most of the Nation, however, endured a hot and drier-than-normal week, including most areas of drought. Temperatures averaged 5 to 10 deg. F accompanied deficient precipitation over a large area from the Rockies to the Appalachians and central Gulf Coast Region, prompting drought intensification over large parts of the Upper Mississippi Valley, the Central States, and the southern tier of the country west of the Florida Panhandle. Improvement was limited to the band of heavy precipitation from Hurricane Idalia, and in scattered locales affected by the tropical moisture surge in the Desert Southwest, from southeastern Utah to central Arizona westward toward central California. According to the U.S. Department of Agriculture (USDA), the coverage of topsoils short or very short of moisture increased by 6 percent this past week, now covering 58 percent of the contiguous 48 states. This is the greatest coverage at this time of year in more than 9 years, the prior record in that short interim being just over 50 percent in 2020.”

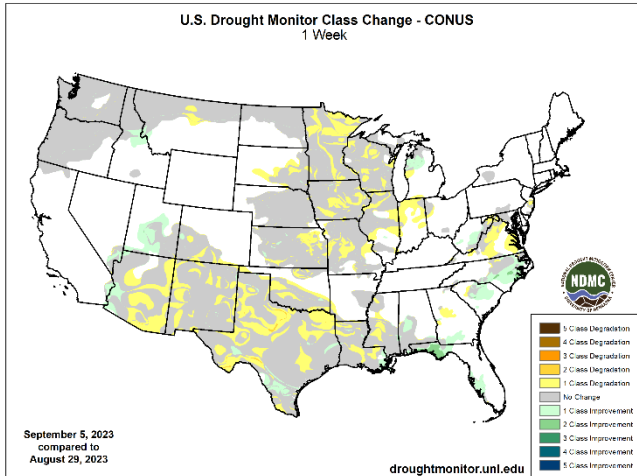
National Drought Summary – West

“Monsoon rains remained subpar across eastern Arizona, New Mexico, and southwestern Colorado, prompting a continued deterioration in dryness and drought there. With the monsoonal wet season winding down during September, the odds for heavy precipitation episodes declines, and thus the prospects for significant relief from the intensifying dryness and drought become progressively worse. Dryness and drought also cover large parts of Washington and Oregon as well as the northern tiers of Idaho and Montana. Some deterioration was noted in north-central Montana, but farther west, conditions were essentially unchanged in northern Idaho and the Pacific Northwest.”

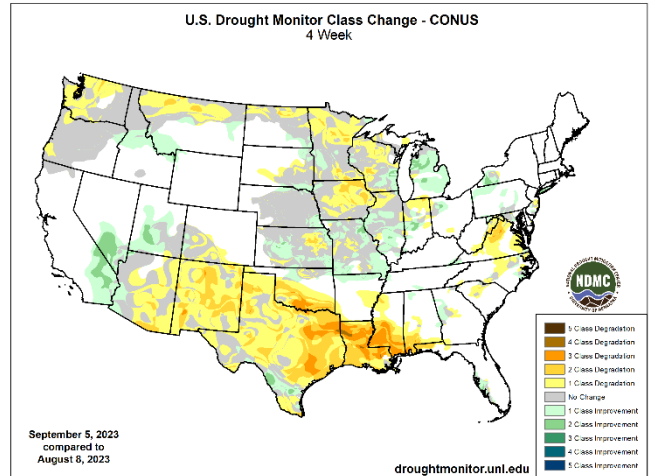
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

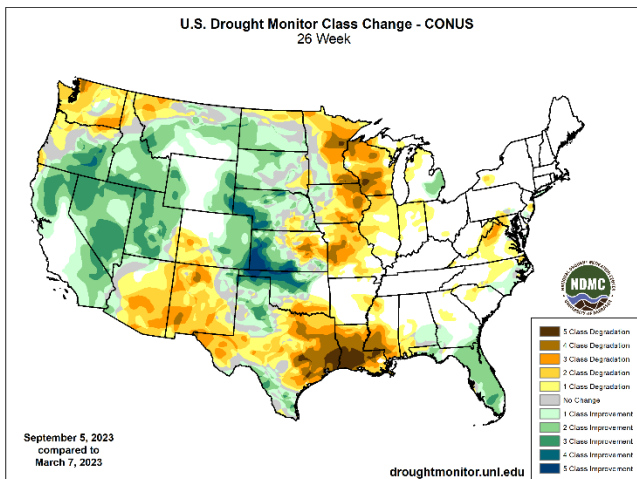
1 Week



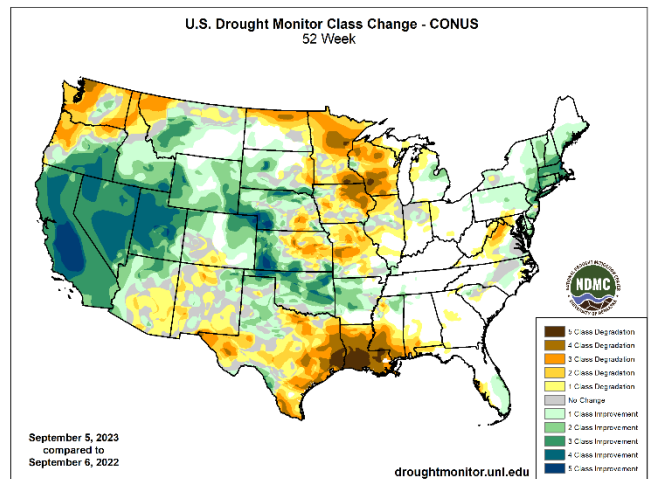
1 Month



6 Months



1 Year



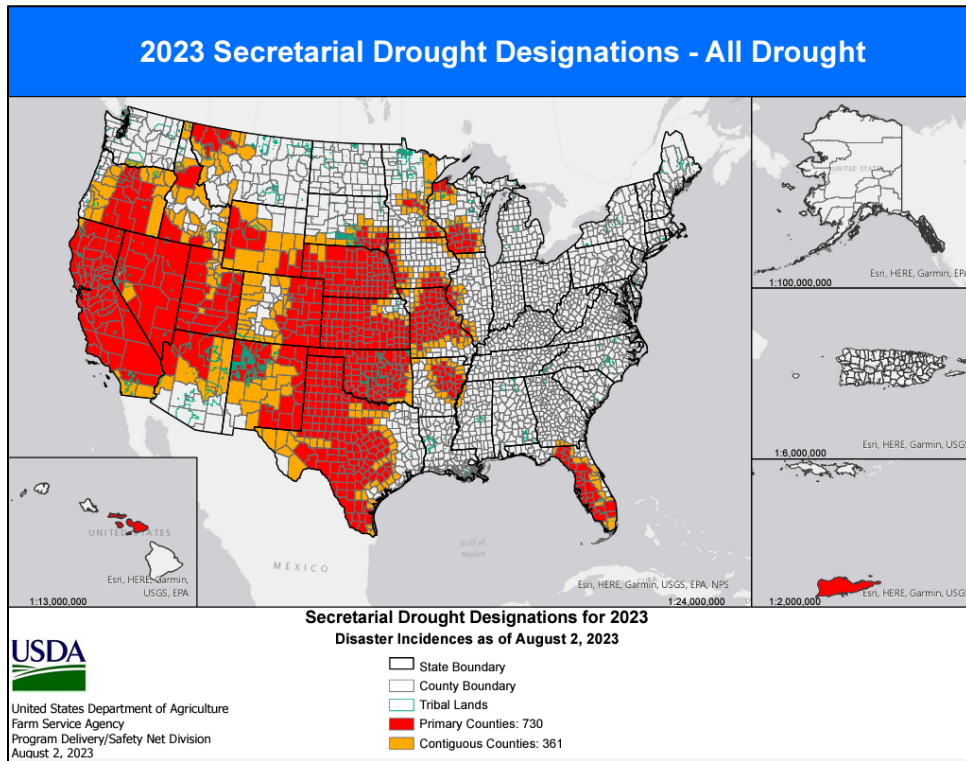
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

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](#)

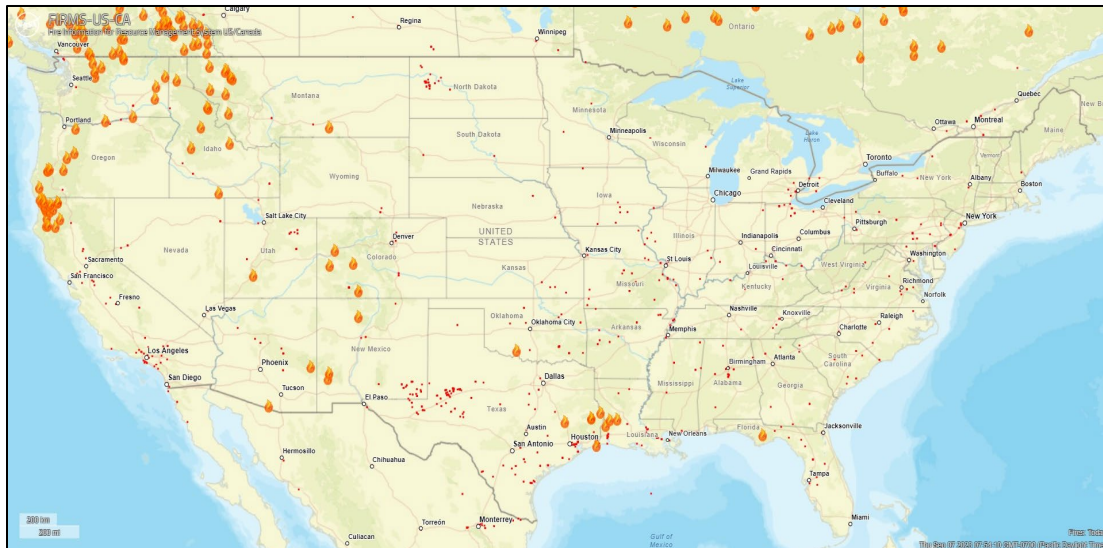
USDA Secretarial [Drought Designations](#)

Source: USDA Farm Service Agency



Wildfires: [Fire Information for Resource Management System US/Canada](#)

Source: NASA/USDA Forest Service



Current active wildfires larger than 1,000 acres in size

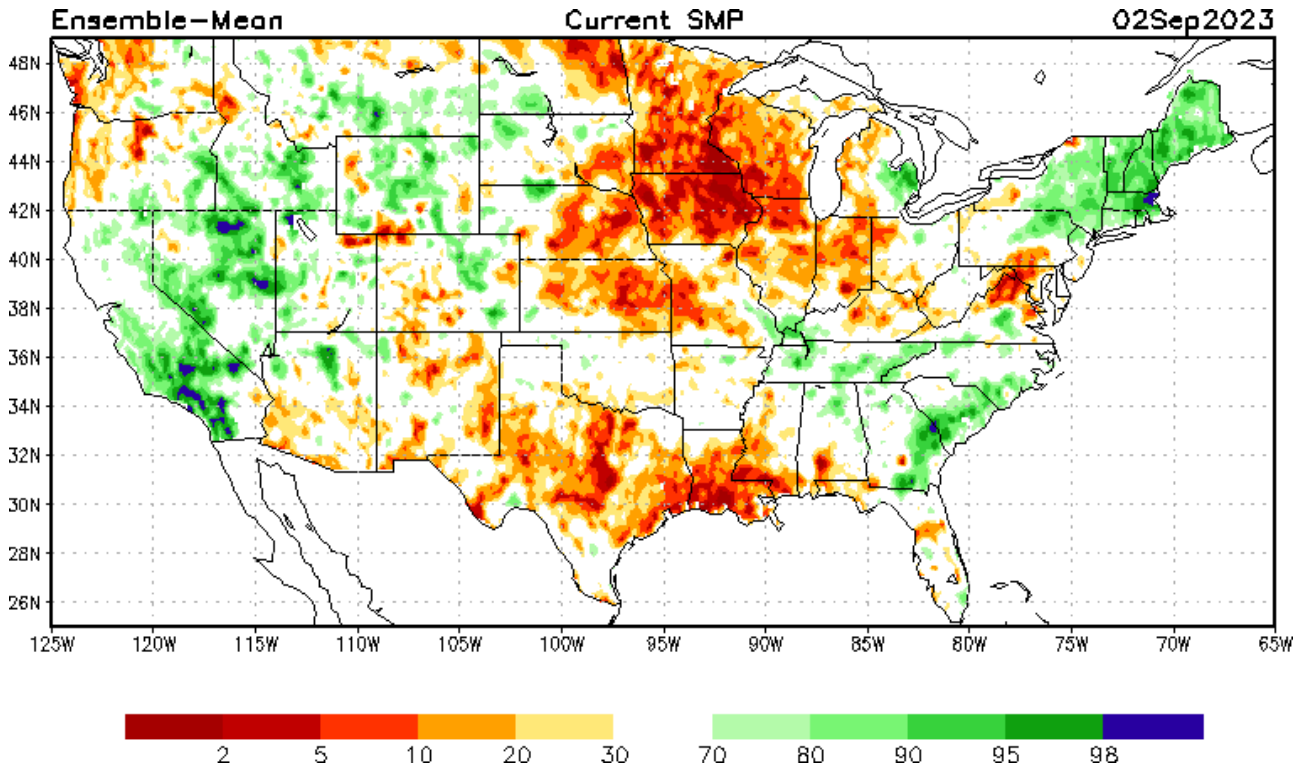
Highlighted Wildfire Resources

- [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

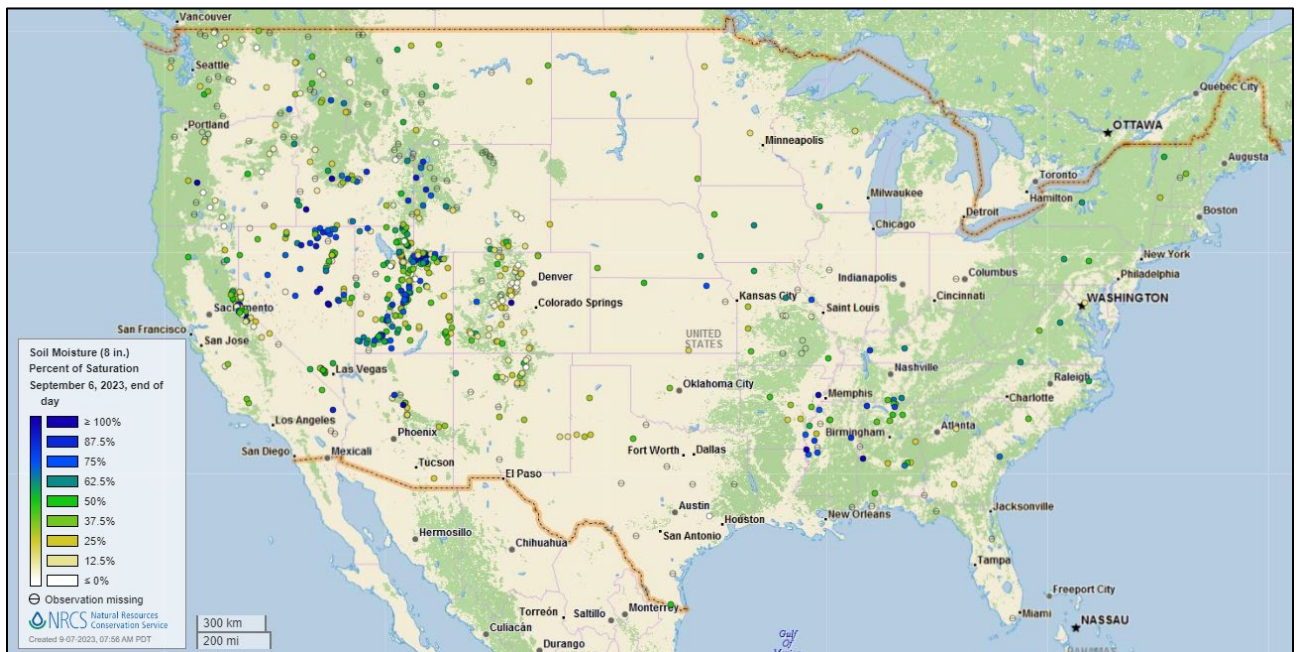


[Modeled soil moisture percentiles](#) as of September 02, 2023

Soil Moisture Percent of Saturation

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

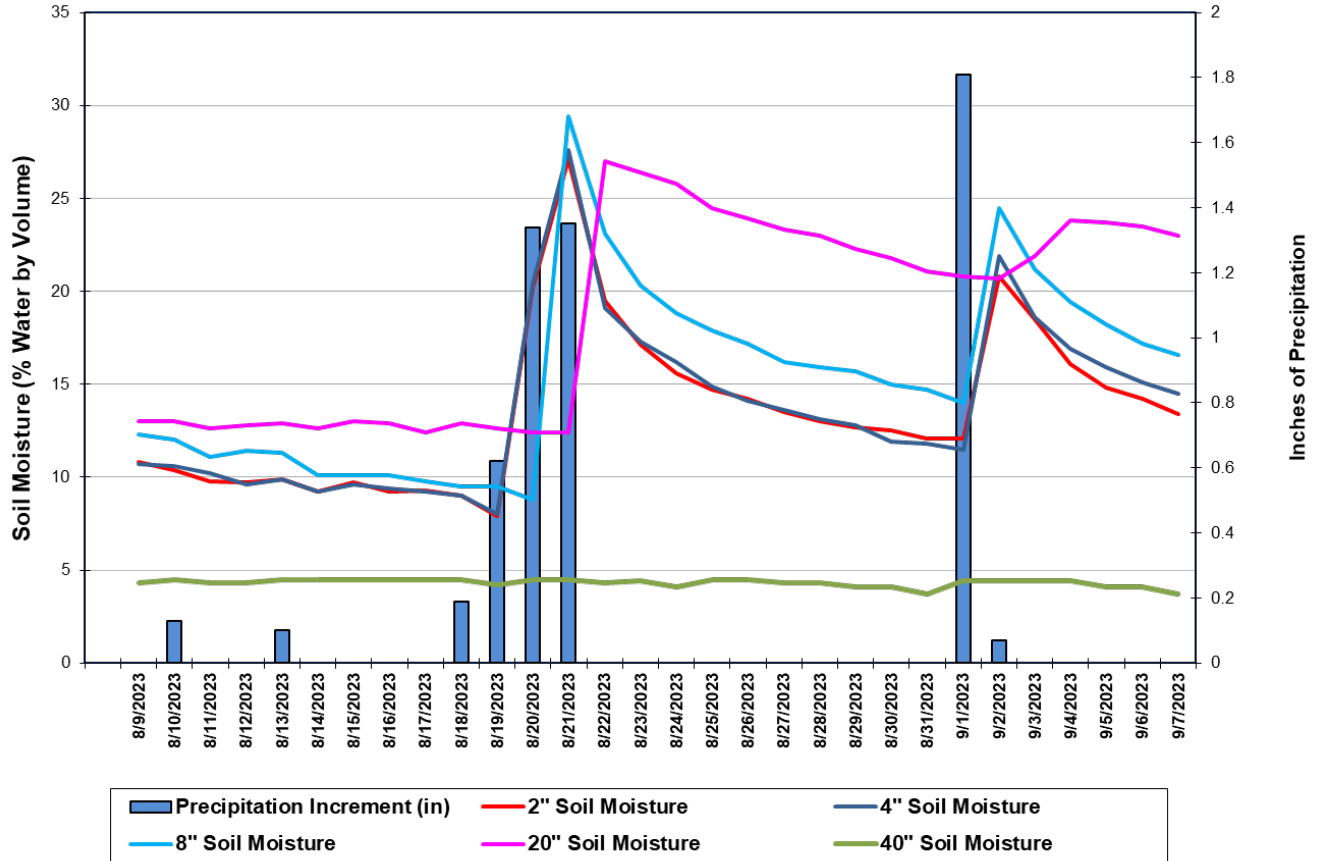
[U.S. soil moisture map at 8-inch depth:](#)



Soil Moisture

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

**Pine Nut, Nevada (SCAN site 2144)
Daily Mean Soil Moisture vs. Daily Precipitation**



This chart shows the precipitation and soil moisture for the last 30 days at the [Pine Nut](#) SCAN site in Nevada. Two powerful storm systems, Tropical Storm Hilary and the recent monsoonal flow, brought ample precipitation to the site during the period, with increases in soil moisture seen at all sensor depths except the -40-inch sensor after the events. Total precipitation for the 30-day period was 5.61 inches.

Soil Moisture Data Portals

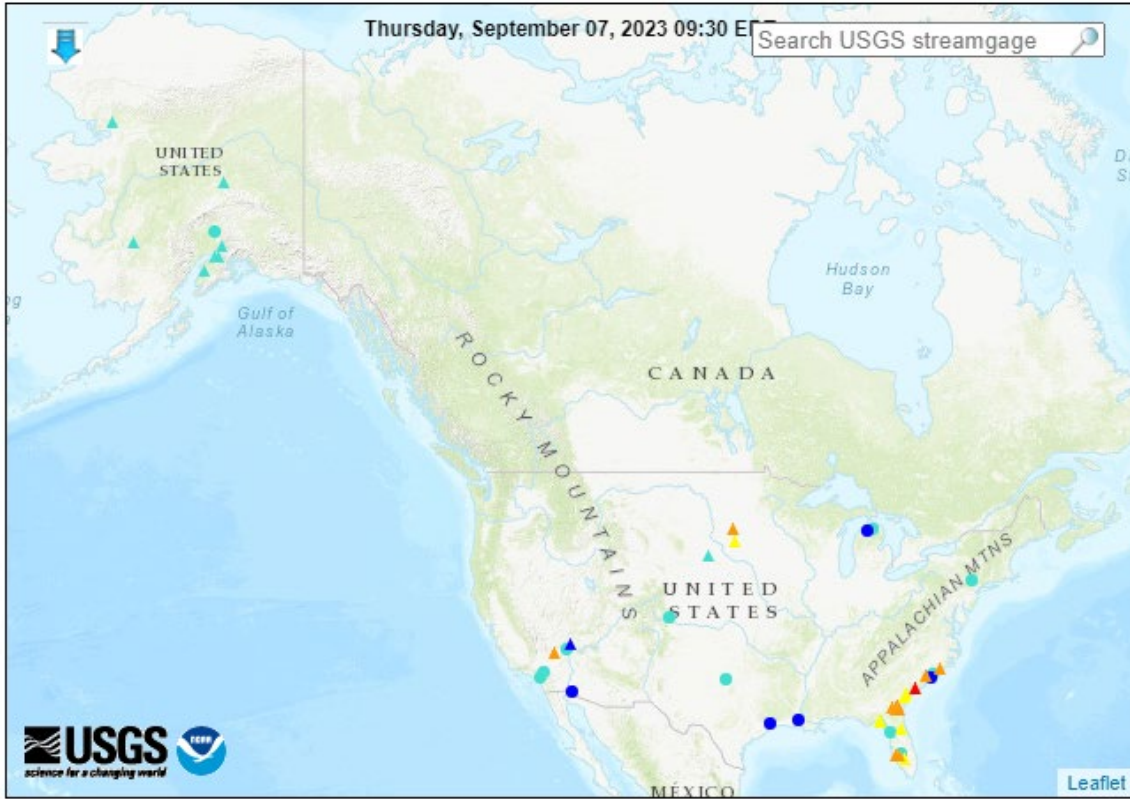
- [USCRN Soil Moisture](#)
- [National Soil Moisture Network](#)
- [NOAA Climate Prediction Center Soil Moisture](#)
- [NASA Grace](#)

Streamflow, Drought, Flood, and Runoff

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

Map of flood and high flow conditions

(12 in floods [moderate: 1, minor: 11], 8 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

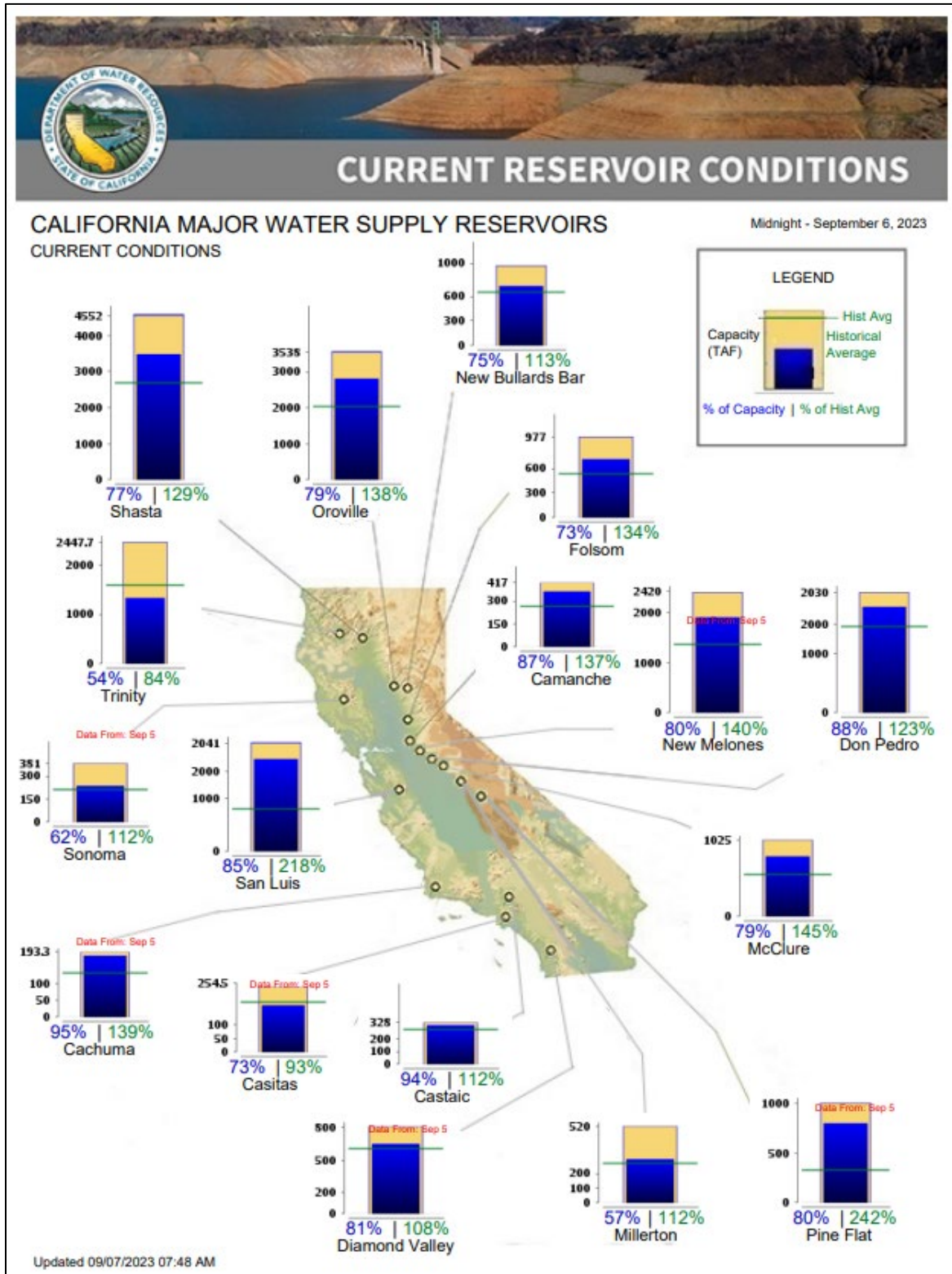
Hydromet Teacup Reservoir Depictions

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 September 07, 2023: “A cold front inching toward the East Coast will remain the focus for afternoon and evening thunderstorms, leading to 5-day rainfall totals of 1 to 3 inches or more in the middle and northern Atlantic States. Meanwhile, a new disturbance arriving across the nation’s mid-section will generate a few showers, starting on Friday or during the weekend. Although most areas will receive only light rain, totals could reach 1 to 2 inches or more on the central and southern Plains. Elsewhere, little or no rain will fall during the next 5 days west of the Rockies. Additionally, a weekend heat wave will push temperatures to 110°F or higher in parts of the Desert Southwest. Farther east, however, a protracted heat wave in the south-central U.S. will begin to break, with temperatures largely remaining below 100°F by early next week. The NWS 6- to 10-day outlook for September 12 – 16 calls for the likelihood of near- or below-normal temperatures from the central and southern Plains to the northern and middle Atlantic States, including the Midwest, while warmer-than-normal weather will dominate the West and the Deep South. Meanwhile, near- or above-normal precipitation across much of the country should contrast with drier-than-normal weather in southern Florida and from the Pacific Northwest to the upper Midwest.”

Weather Hazards Outlook: [September 09 – 13, 2023](#)

Source: NOAA Weather Prediction Center















U.S. Day 3-7 Hazards Outlook

[About the Hazards Outlook](#)

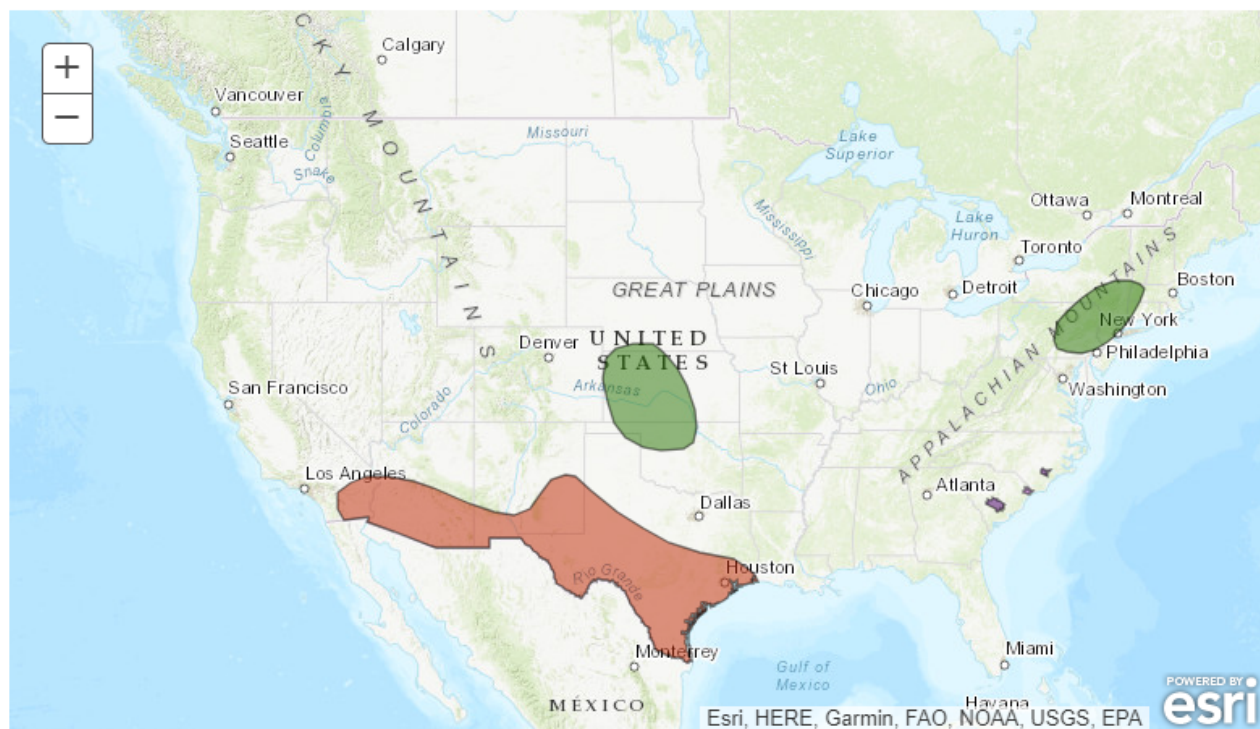
Created September 06, 2023

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 September 09, 2023 - September 13, 2023



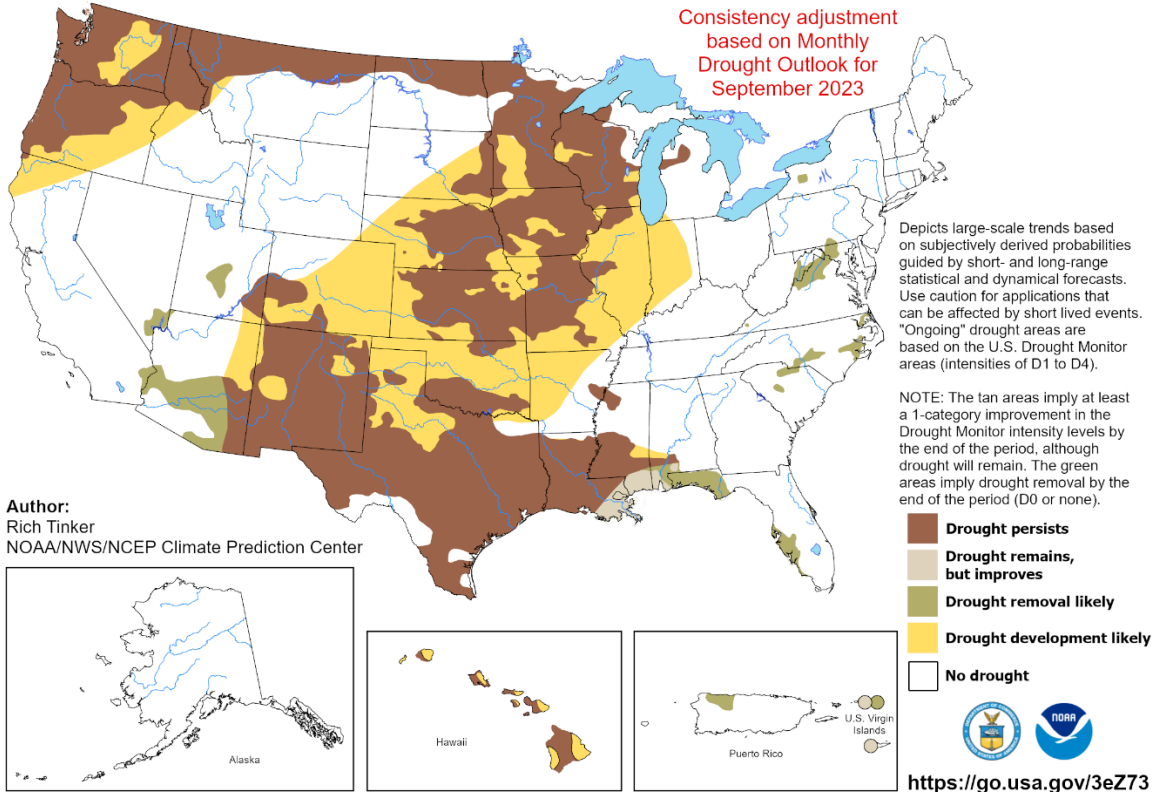
Seasonal Drought Outlook: [September 01 – November 30, 2023](#)

Source: National Weather Service

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

Valid for September 1 - November 30, 2023
Released August 31, 2023

Consistency adjustment
based on Monthly
Drought Outlook for
September 2023

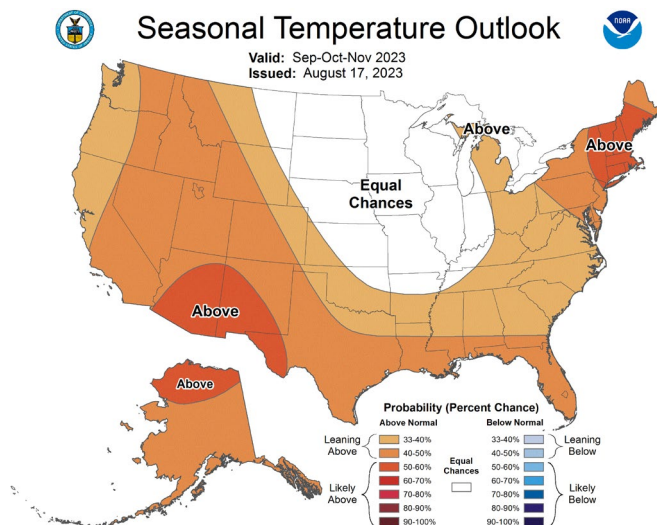
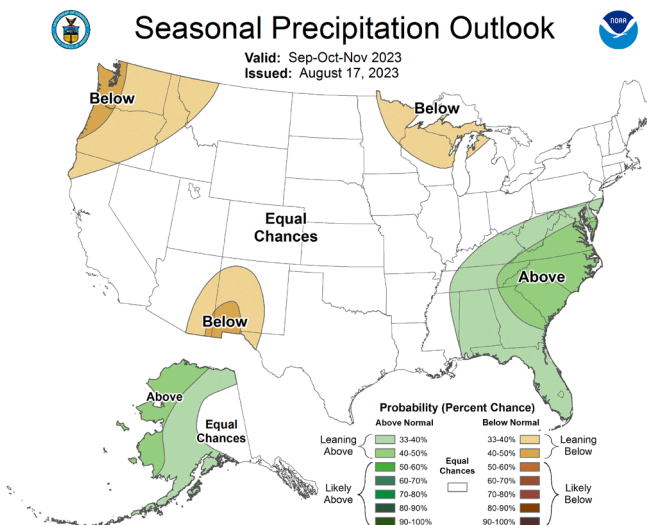


Climate Prediction Center Three-month Outlook

Source: National Weather Service

Precipitation

Temperature



[September-October-November 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](#).