



Water and Climate Update

August 11, 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.

Precipitation	2	Other Climatic and Water Supply Indicators	12
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Drought	8		

Record rainfall saturates Death Valley National Park



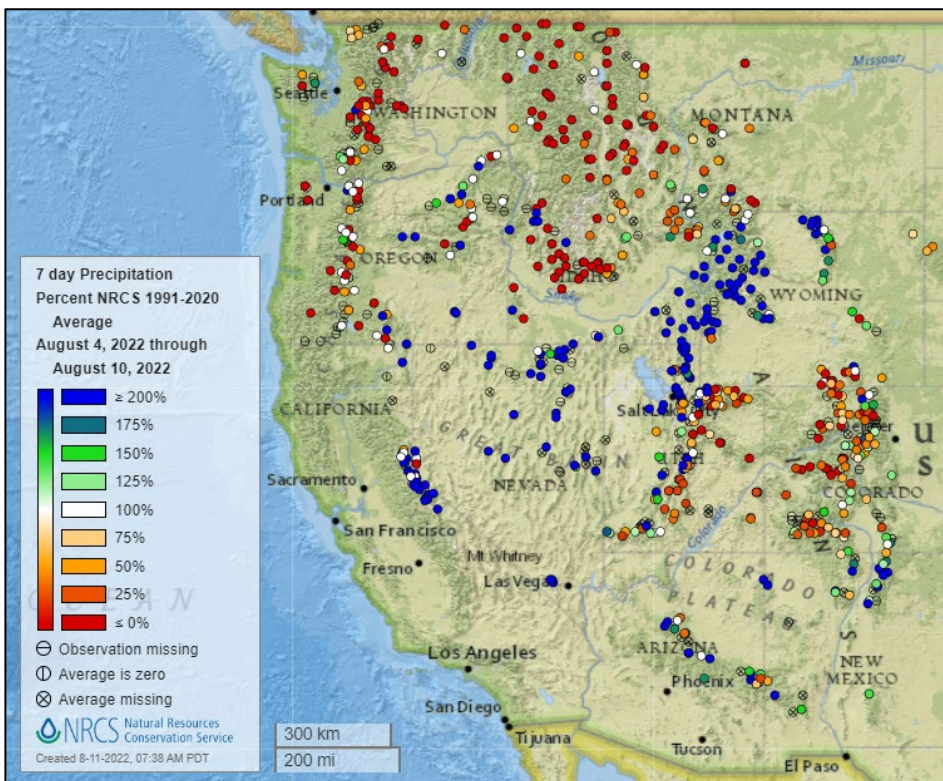
Death Valley National Park in California, the driest area in North America, experienced a record rainfall of 1.46 inches in just a few hours on August 5. The total comes within .01 inches of breaking the all-time one-day record for the area, with records going back as far as 1910. The monsoon event was a 1-in-1,000-year occurrence, dropping 75 percent of the median annual rainfall for the region. The resulting flash flood damaged roads and structures, buried cars, and stranded nearly 1,000 people in the park. Flooding has caused the park to close, with limited access to roads and facilities.

Related:

- [Flash floods strand 1,000 people in California's Death Valley National Park](#) – Reuters
- [Death Valley experiences a '1,000 year' rain event, National Weather Service says](#) – AZFamily
- [Death Valley National Park remains closed after record rainfall](#) – ABC
- [Officials: A year's worth of rain fell in Death Valley within three hours](#) – KSNV (NV)
- [Record-Breaking Rains Flood Death Valley National Park](#) – Smithsonian Magazine
- [Death Valley: Before and after flooding as seen from space — PHOTOS](#) – Las Vegas Review-Journal
- [Tourists escape flash flooding in Death Valley; roads to remain closed for days](#) – CBS News
- [Flash floods strand 1,000 people in California's Death Valley National Park](#) – Reuters
- [Death Valley route buried in floods closed for another week](#) – AP

Precipitation

Last 7 Days, NRCS SNOTEL Network

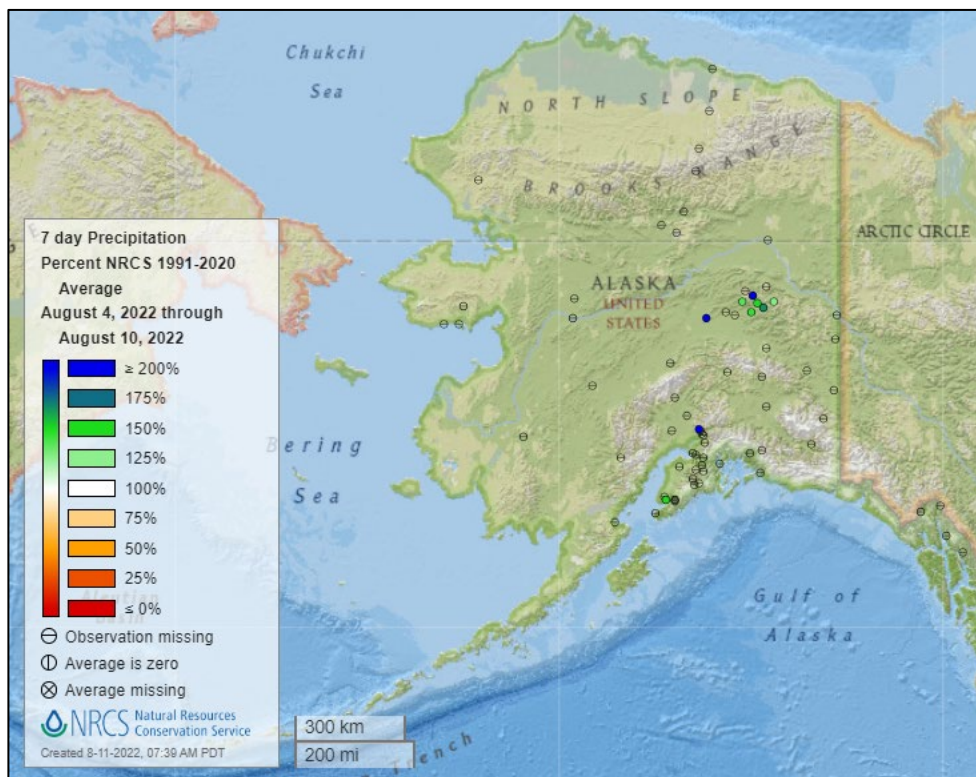


[7-day precipitation percent of average map](#)

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](#)



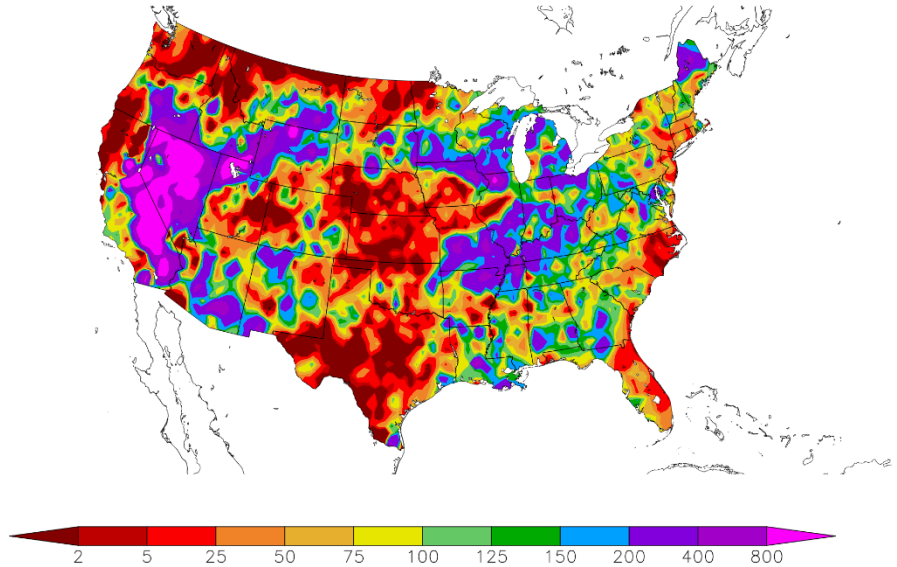
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
8/4/2022 – 8/10/2022



Generated 8/11/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

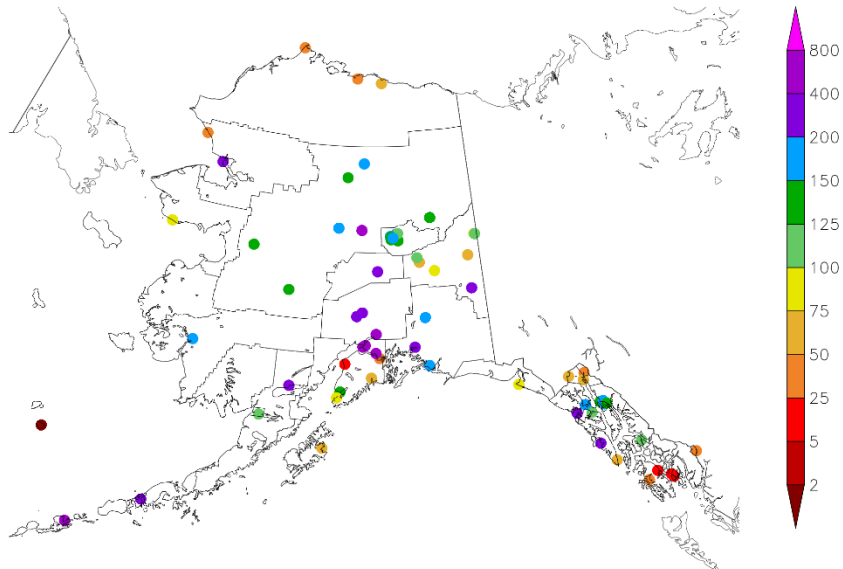
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)
8/4/2022 – 8/10/2022



Generated 8/11/2022 at HPRCC using provisional data.

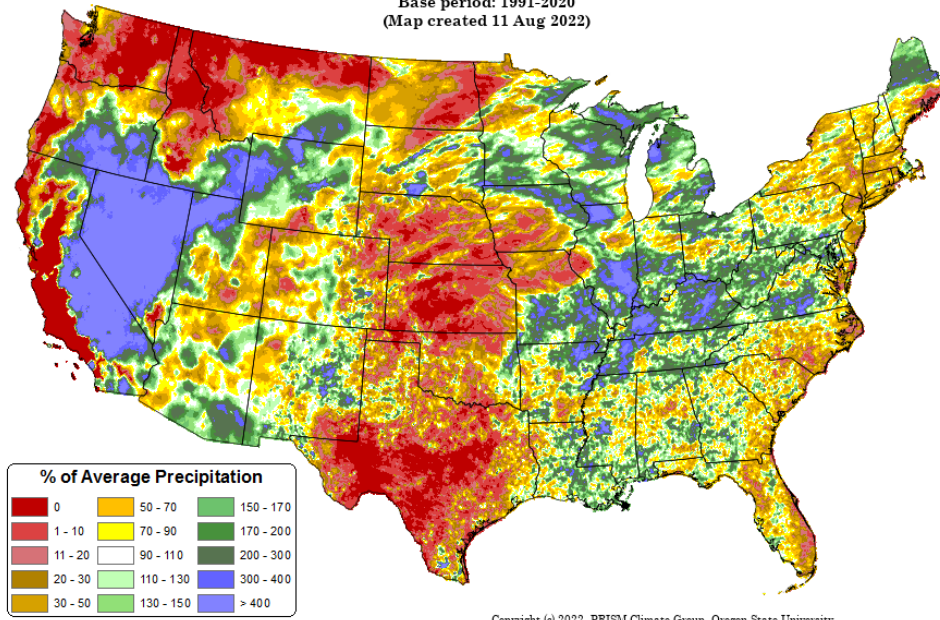
NOAA Regional Climate Centers

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

Source: PRISM

Total Precipitation Anomaly: 01 Aug 2022 - 10 Aug 2022
Period ending 7 AM EST 10 Aug 2022
Base period: 1991-2020
(Map created 11 Aug 2022)

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

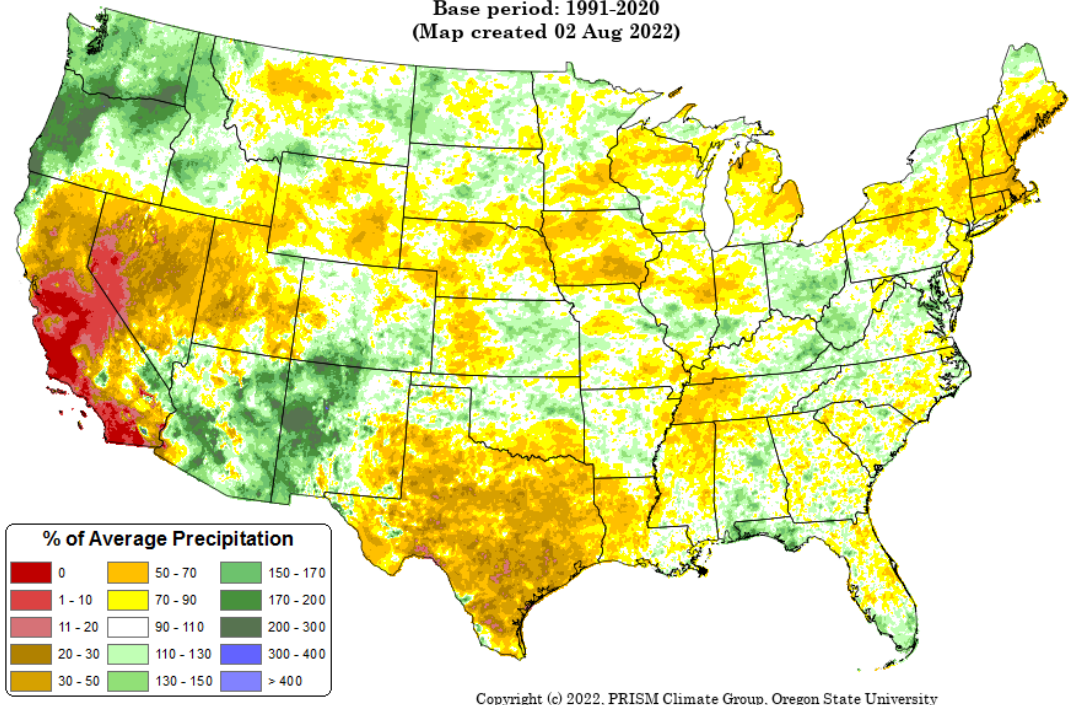


Last 3 Months, All Available Data Including SNOTEL and NWS Networks

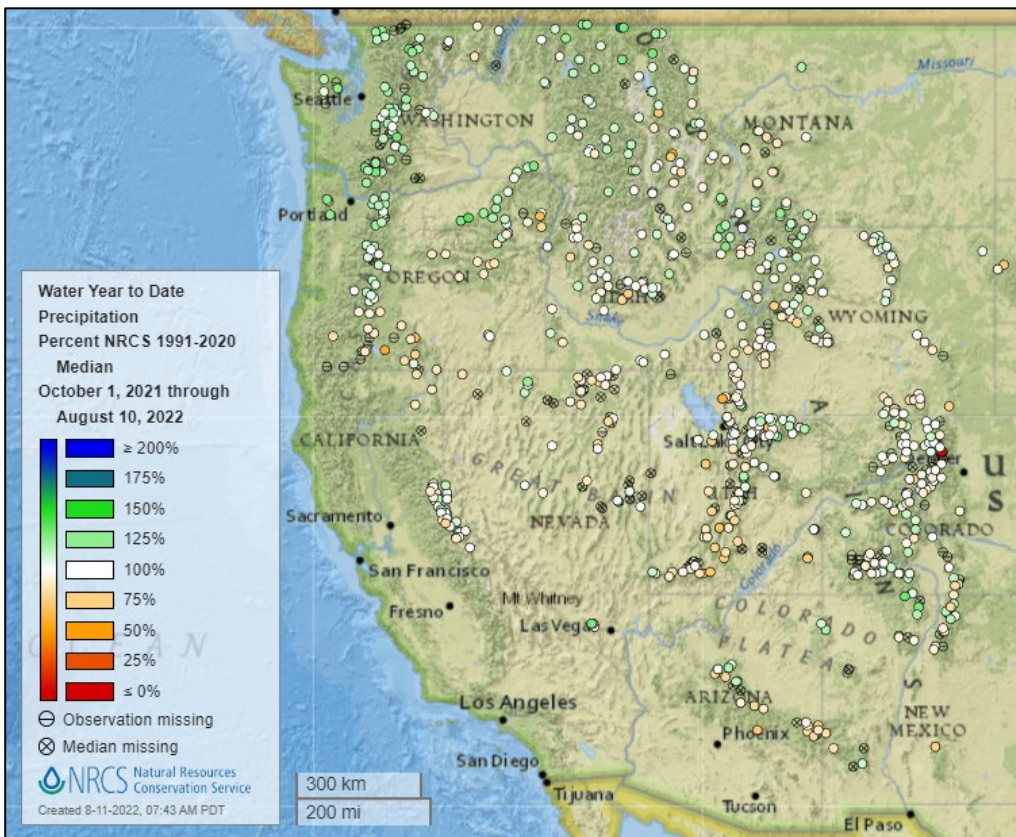
Source: PRISM

[May through July 2022 precipitation anomaly map](#)

Total Precipitation Anomaly: May 2022 - Jul 2022
Period ending 7 AM EST 31 Jul 2022
Base period: 1991-2020
(Map created 02 Aug 2022)



Water Year-to-Date, NRCS SNOTEL Network

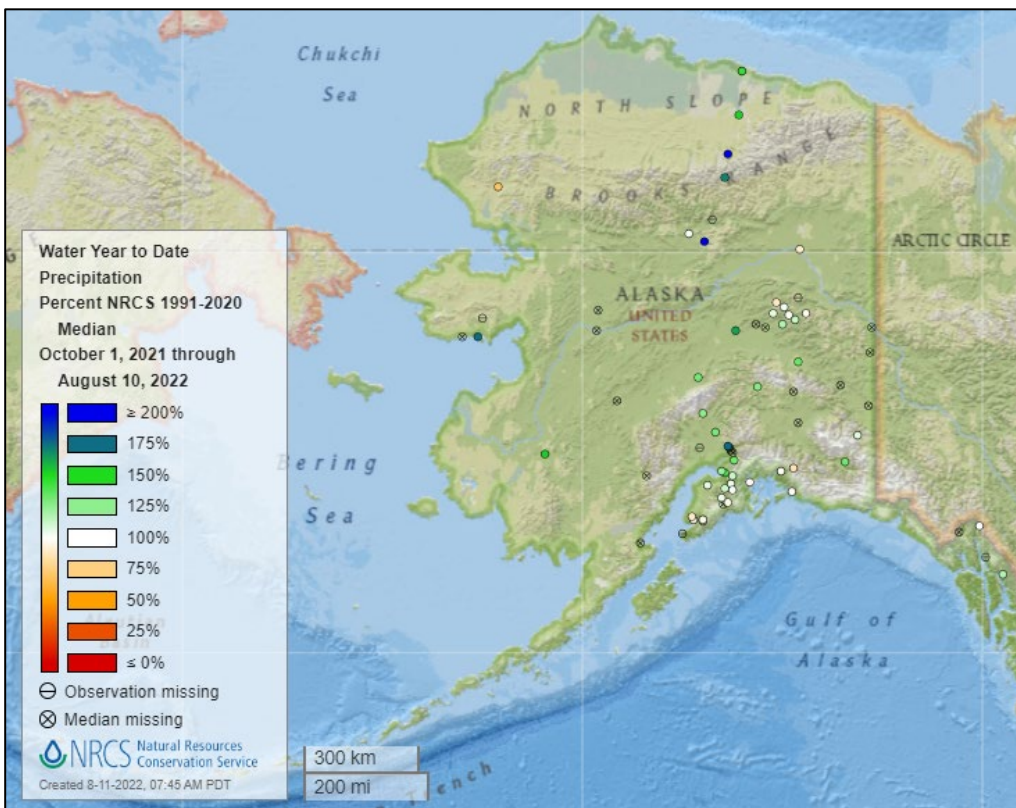


[2022 water year-to-date precipitation percent of median map](#)

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

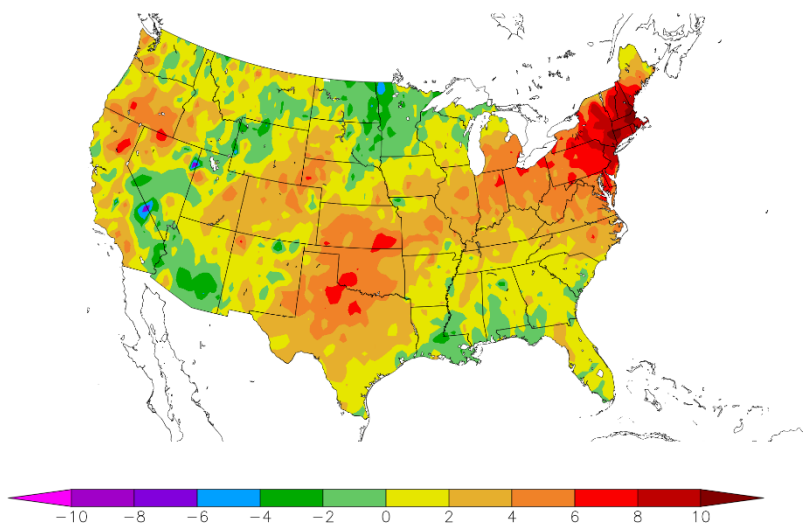
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map](#) for the contiguous U.S.

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

Departure from Normal Temperature (F)
8/4/2022 – 8/10/2022



Generated 8/11/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

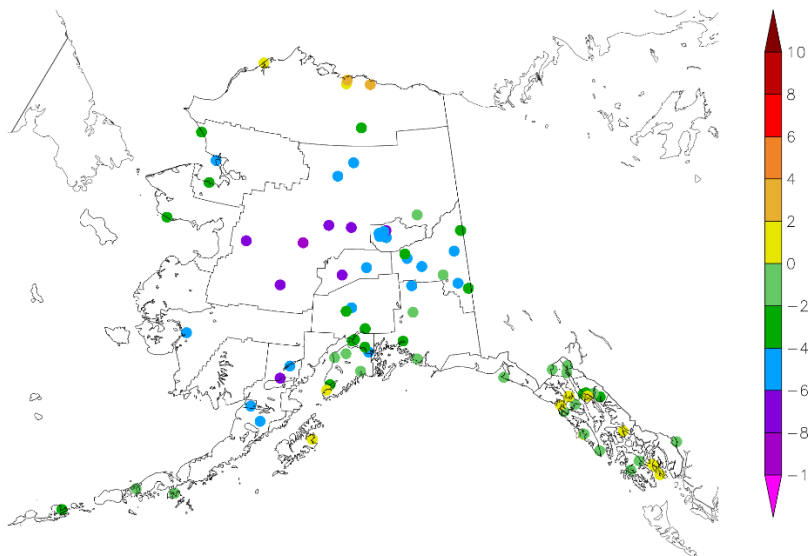
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
8/4/2022 – 8/10/2022



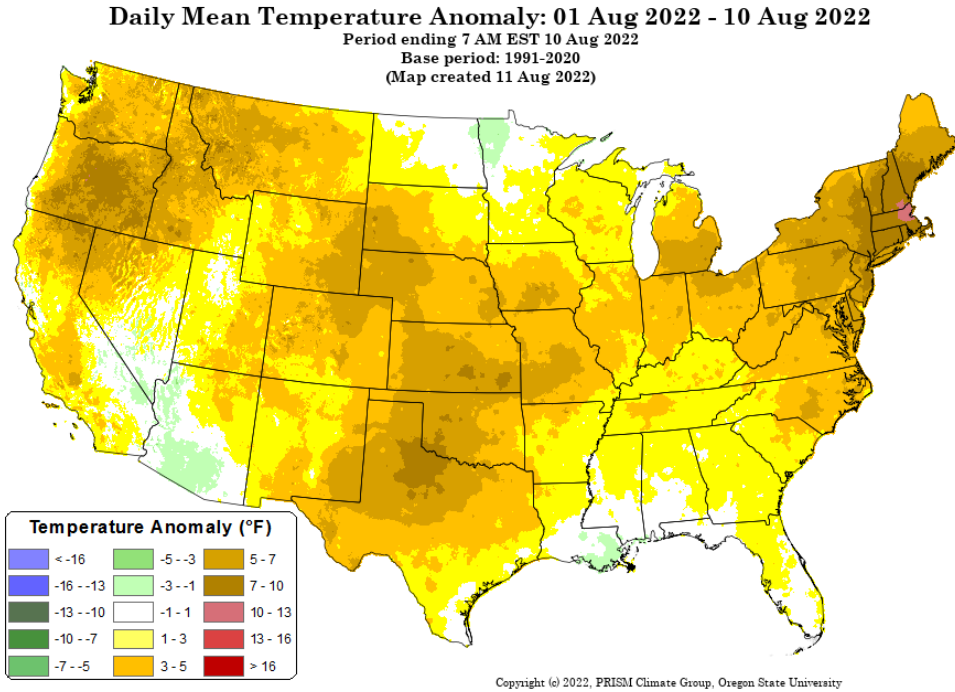
Generated 8/11/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

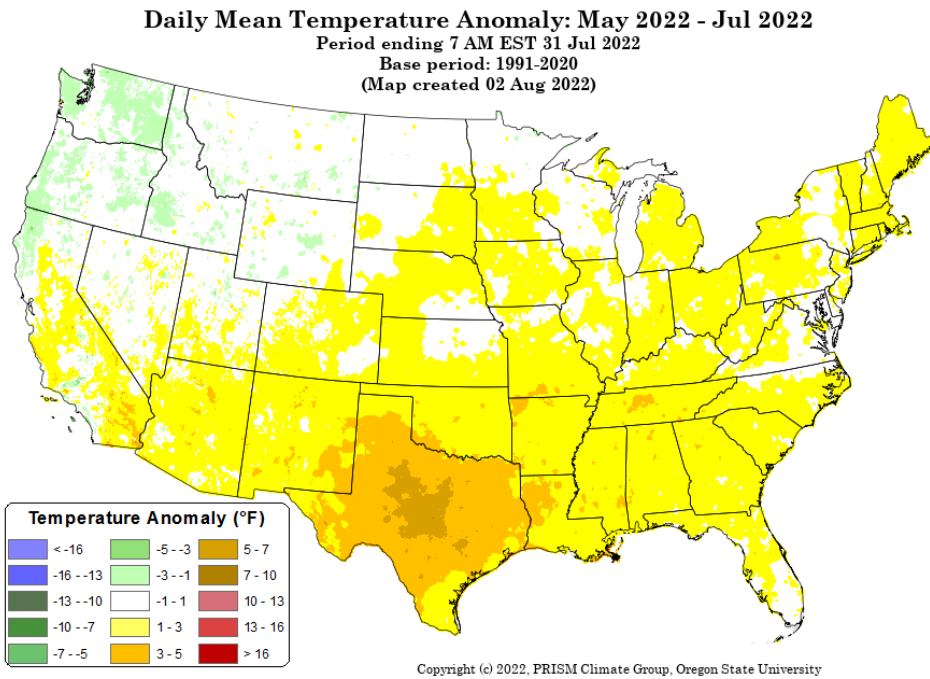
Source: PRISM

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



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

Source: PRISM



[May through July 2022 daily mean temperature anomaly map](#)

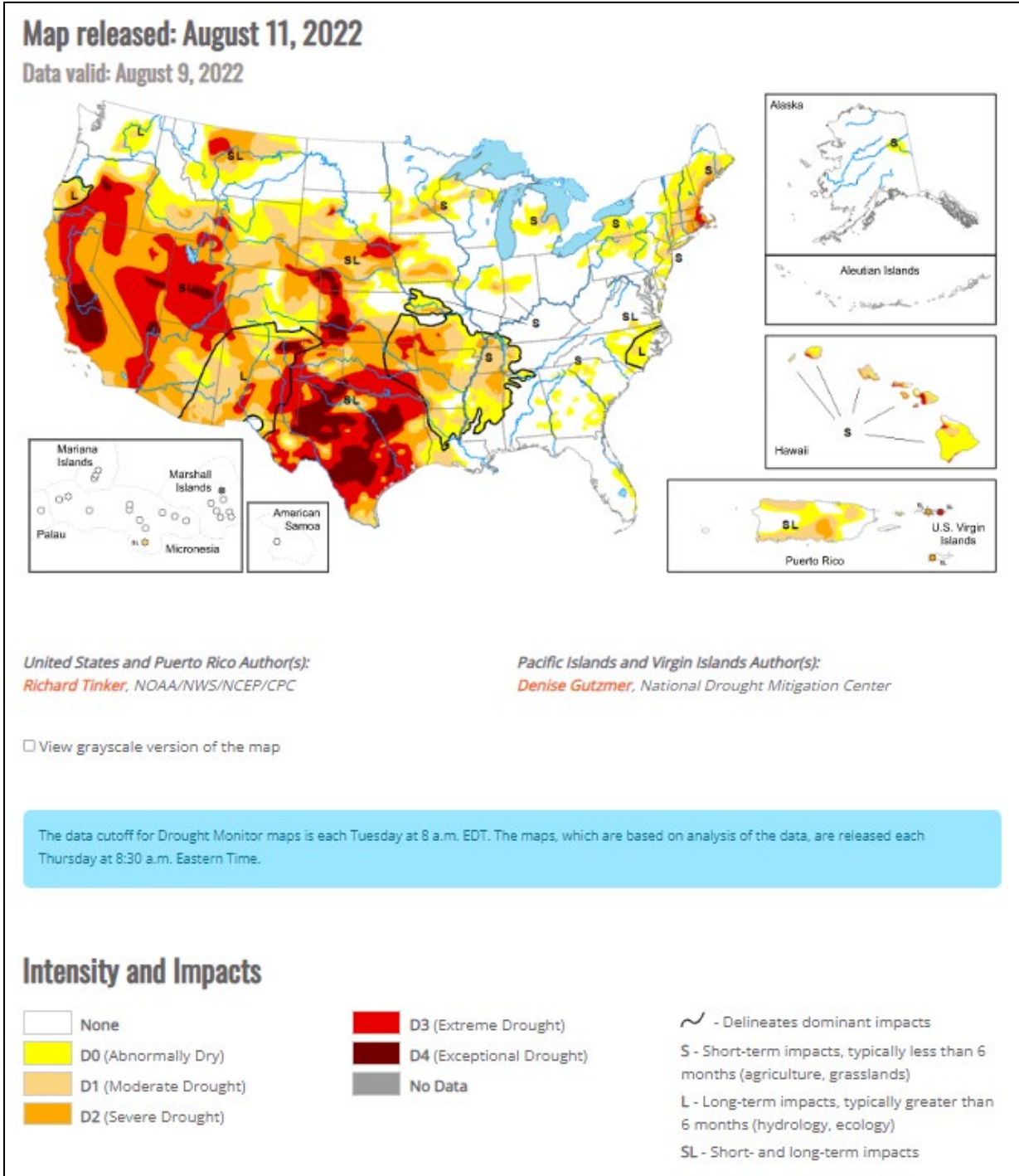
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), August 09, 2022

Source: National Drought Mitigation Center

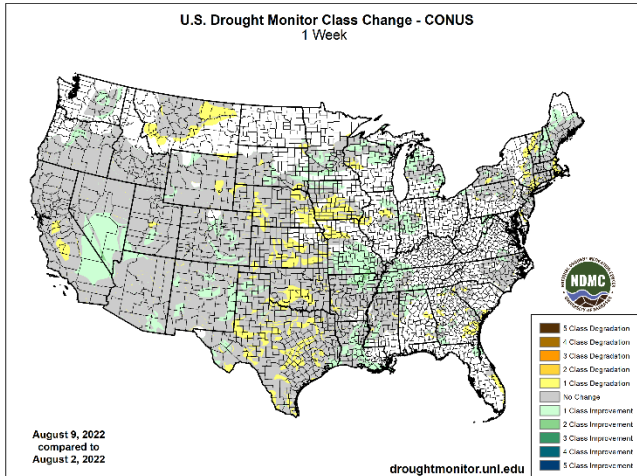
“Precipitation varied widely across the Lower 48 this week. Across the interior West, heavy monsoon rains set records in some locales, with tropical moisture streaming much farther north and west than normal (through southern Montana, the Great Basin, and parts of the Sonoran Desert). Death Valley, CA set an all-time record for 24-hour rainfall, being doused with 1.46 inches during August 5 and 6. The average annual rainfall in Death Valley is less than 2.5 inches, and the 24-hour total makes August 2022 the wettest month in Death Valley since February 2010, and more than half of all calendar years bring less rain than that 24-hour total.

Farther east, many areas from the Mississippi River eastward through the Piedmont and Middle Atlantic States recorded moderate to heavy precipitation. Most areas from southern Missouri and northeastern Arkansas through central Illinois recorded over 1.5 inches of rain, as did parts of the Tennessee and southern Ohio Valleys, the Upper Midwest and western Great Lakes Region, the Central Gulf Coast, and northern Maine. In other areas from the Mississippi Valley eastward, heavy rain was less widespread. Still, numerous patches of land across the Upper Midwest, the middle Mississippi Valley, the Ohio Valley, and the Gulf Coast east of Texas received over 3.5 inches of rain, with isolated totals of 6 to locally 11 inches reported in a swath from the middle Mississippi and lower Ohio Valleys northward through the Upper Midwest and western Great Lakes Region. In contrast, many areas across these regions recorded only a few tenths of an inch of rain or less, with tight gradients between heavy rain and lesser amounts common. This variable rainfall pattern had a similar effect on areas of dryness and drought, with deterioration noted very close to improvement in many cases, and only a few broad swaths with a consistent pattern. Looking at the western half of the Lower 48, outside the areas affected by the monsoon, much drier conditions prevailed, though there were a few small areas recording moderate to heavy rainfall. Little or no rain fell on the central and southern Great Plains, much of the central Rockies, and the Far West. Temperatures averaged over 3 deg. F above normal in a large area across the central Rockies, most of the Plains, and the northeastern quarter of the country, exacerbating dryness in areas that missed the heavier rains.”

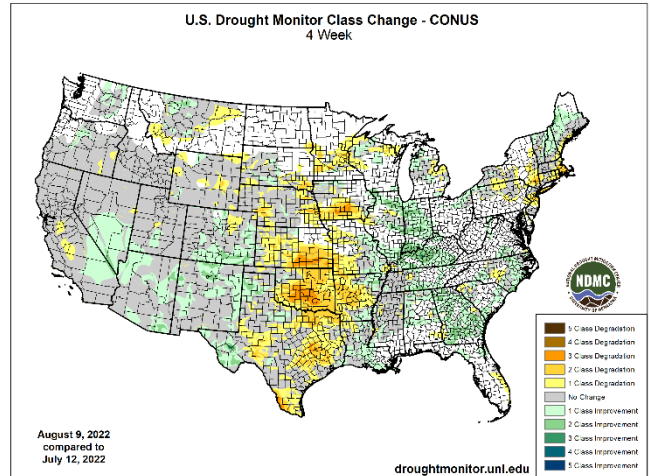
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

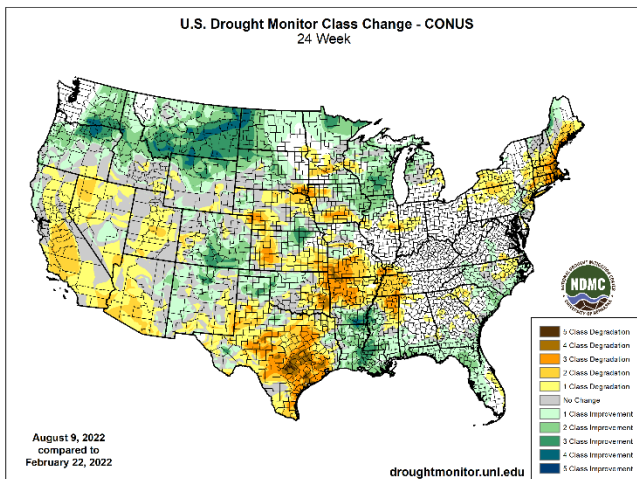
1 Week



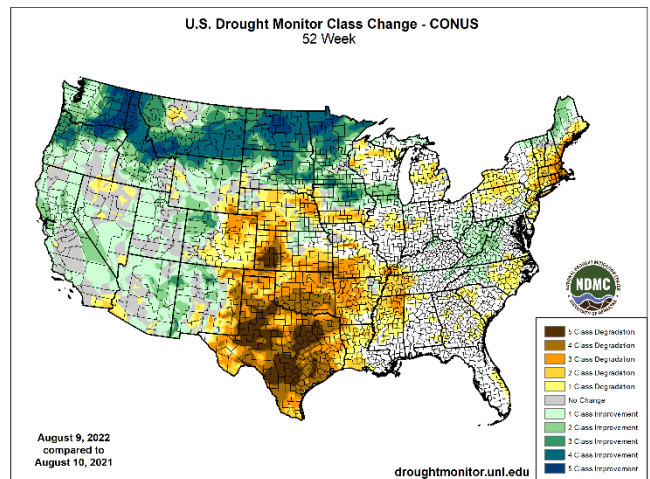
1 Month



6 Months



1 Year



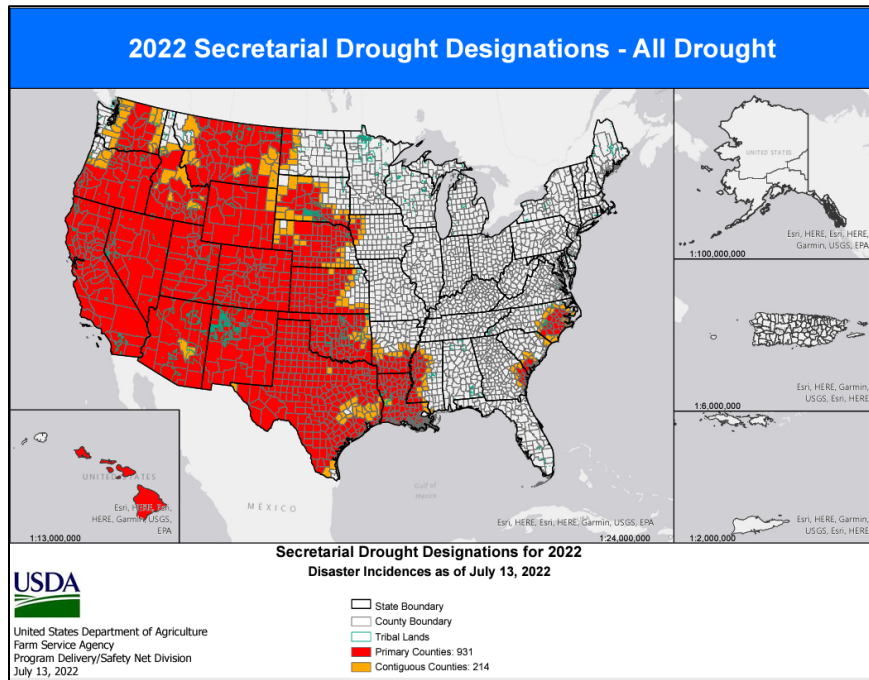
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

Highlighted Drought Resources

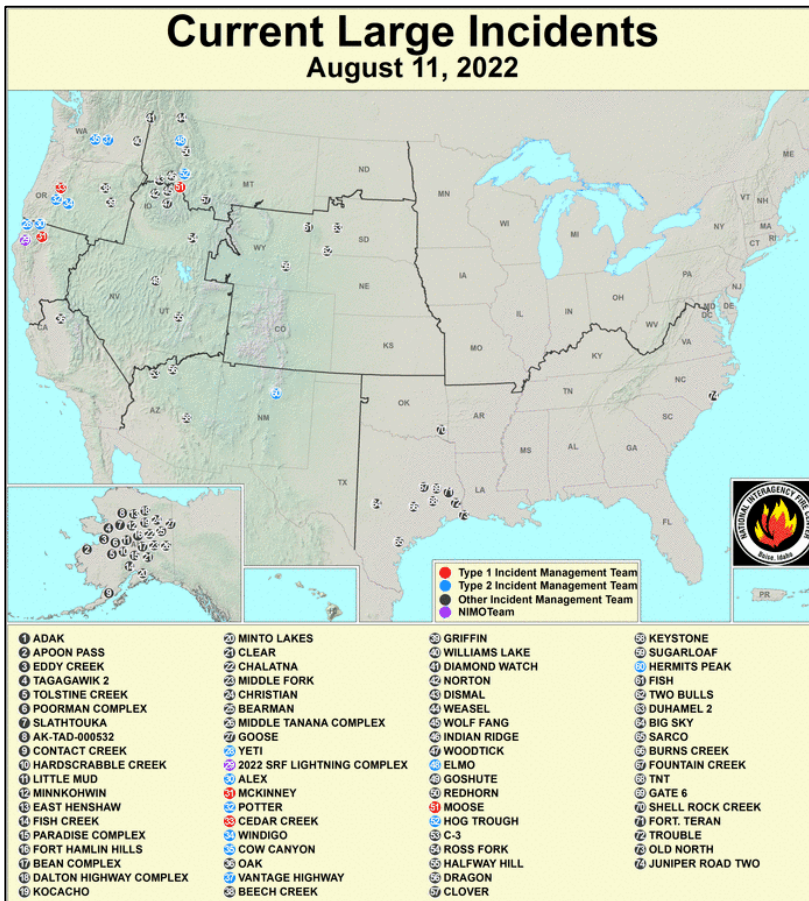
- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)
- [U.S. Population in Drought, Weekly Comparison](#)
- [USDA Disaster and Drought Information](#)

USDA Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: USDA Forest Service Active Fire Mapping



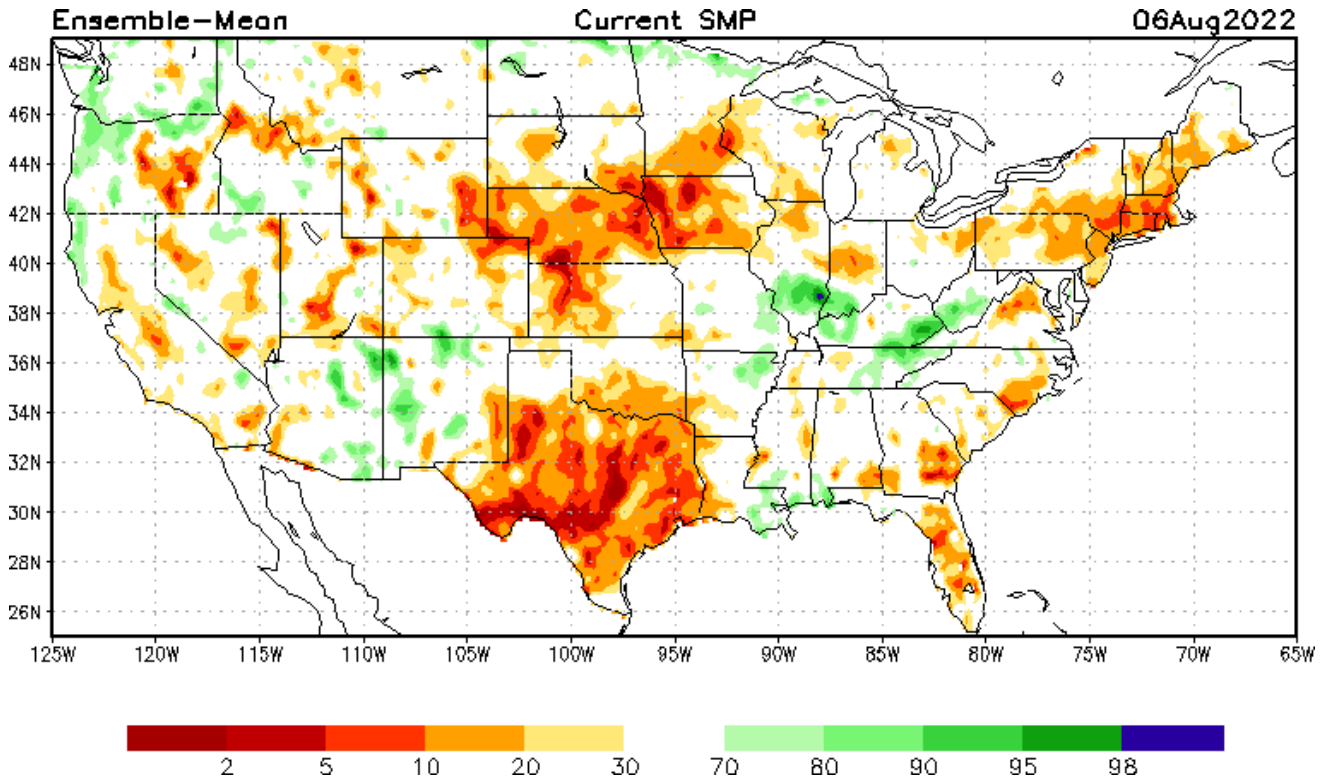
**Highlighted
Wildfire
Resources**

- [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

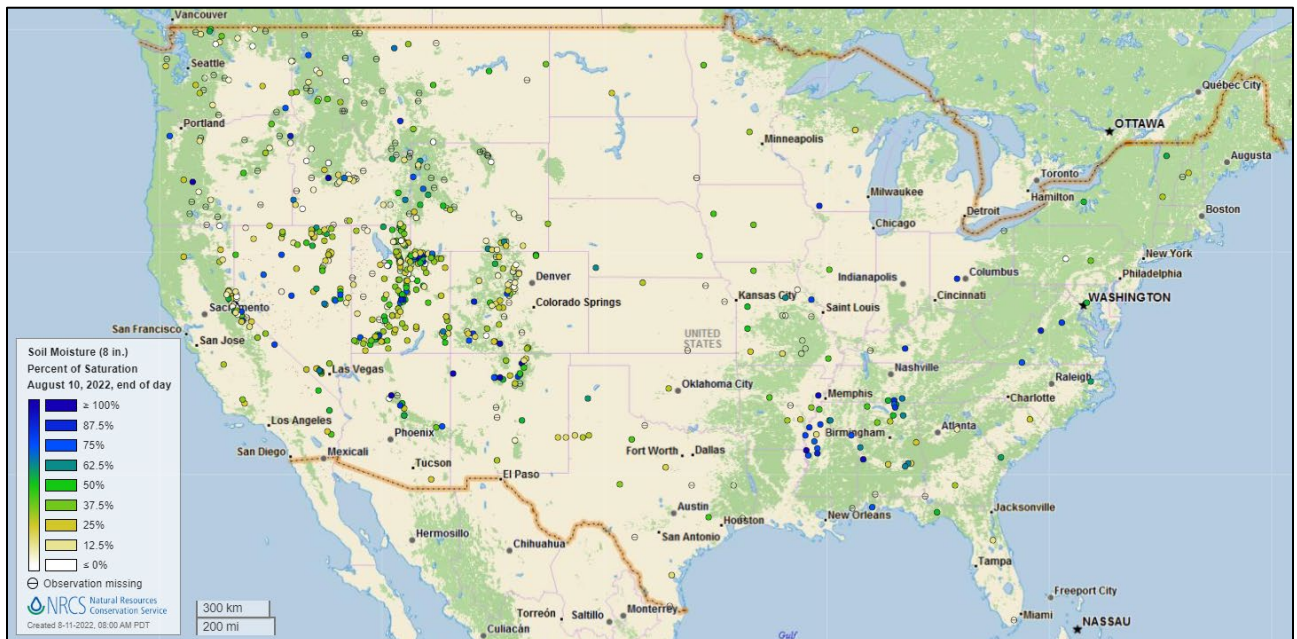


[Modeled soil moisture percentiles](#) as of August 06, 2022

Soil Moisture Percent of Saturation

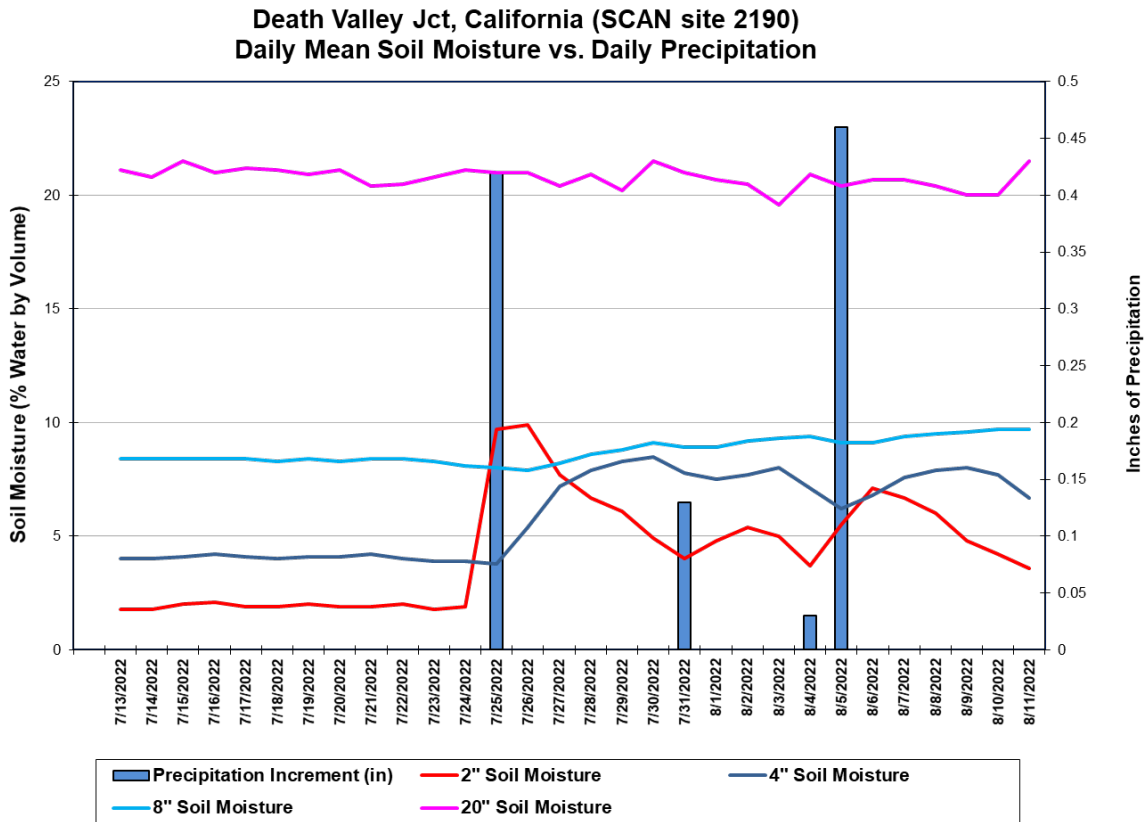
Source: NRCS SNOTEL and [Soil Climate Analysis Network](#) (SCAN)

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



Soil Moisture

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



This chart shows the precipitation and soil moisture for the last 30 days at the [Death Valley Jct](#) SCAN site in California. Precipitation events on July 25 and August 4-5 caused an increase in soil moisture levels at the -2, -4, and -8-inch soil sensor depths. The -20-inch sensor showed little change over the period. Total precipitation received during the period was 1.04 inches.

Soil Moisture Data Portals

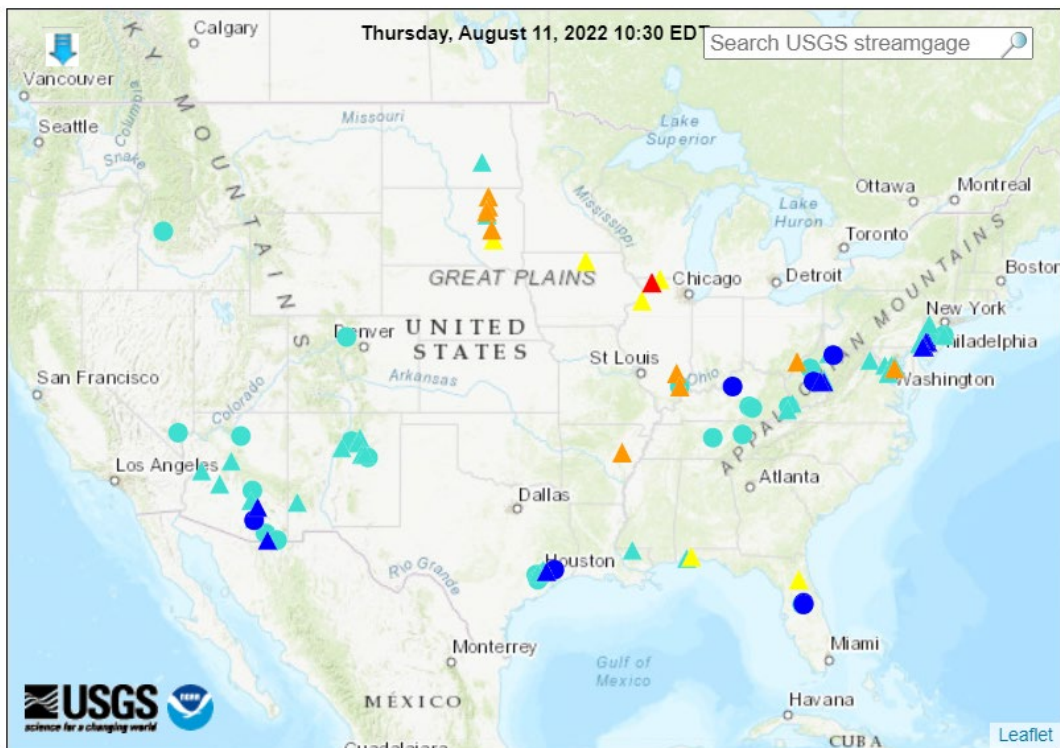
- [USCRN Soil Moisture](#)
- [National Soil Moisture Network](#)
- [NOAA Climate Prediction Center Soil Moisture](#)
- [NASA Grace](#)

Streamflow, Drought, Flood, and Runoff

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

Map of flood and high flow conditions

(10 in floods [moderate: 1, minor: 9], 7 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

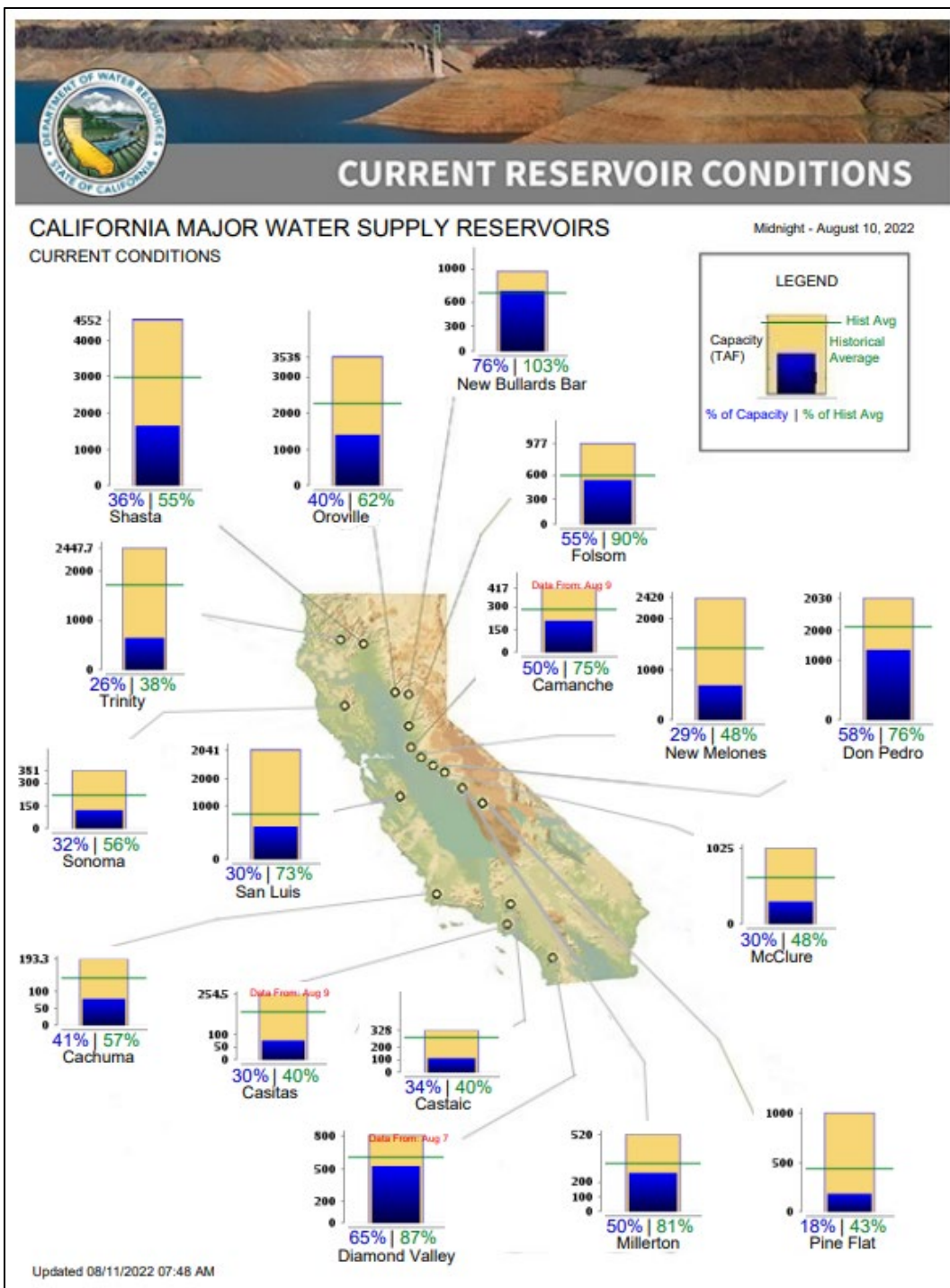
Hydromet Teacup Reservoir Depictions

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, August 11, 2022: “Above-normal temperatures will dominate the western and central U.S. during the next several days, although slightly cooler air will overspread the northern Plains by early next week. Frequent triple-digit (100-degree) temperatures will continue to affect the southern half of the Plains, as well as California’s Central Valley, the Desert Southwest, and the interior Northwest. Meanwhile, relatively cool conditions will cover the heart of the Midwest. Even hotter areas of the western Corn Belt will get some heat relief early next week. However, large sections of the Plains and Midwest will receive little or no rain during the next 5 days. Dry weather will also prevail in the Far West. In fact, meaningful precipitation should be limited to the Deep South and an area stretching from the Southwest to the Intermountain West. Early next week, heavy showers may develop along the middle and northern Atlantic Coast. The NWS 6- to 10-day outlook for August 16 – 20 calls for the likelihood of below-normal temperatures across a broad area, including the Four Corners region, central Plains, Midwest, and mid-Atlantic, while hotter-than-normal weather will prevail in the Deep South, Far West, Great Basin, and northern sections of the Rockies and Plains. Meanwhile, near- or above-normal rainfall across most of the country should contrast with drier-than-normal conditions in the Great Lakes region and along the Canadian border from Washington to western North Dakota.”

Weather Hazards Outlook: August 13 – 17, 2022

Source: NOAA Weather Prediction Center

















U.S. Day 3-7 Hazards Outlook

About the Hazards Outlook

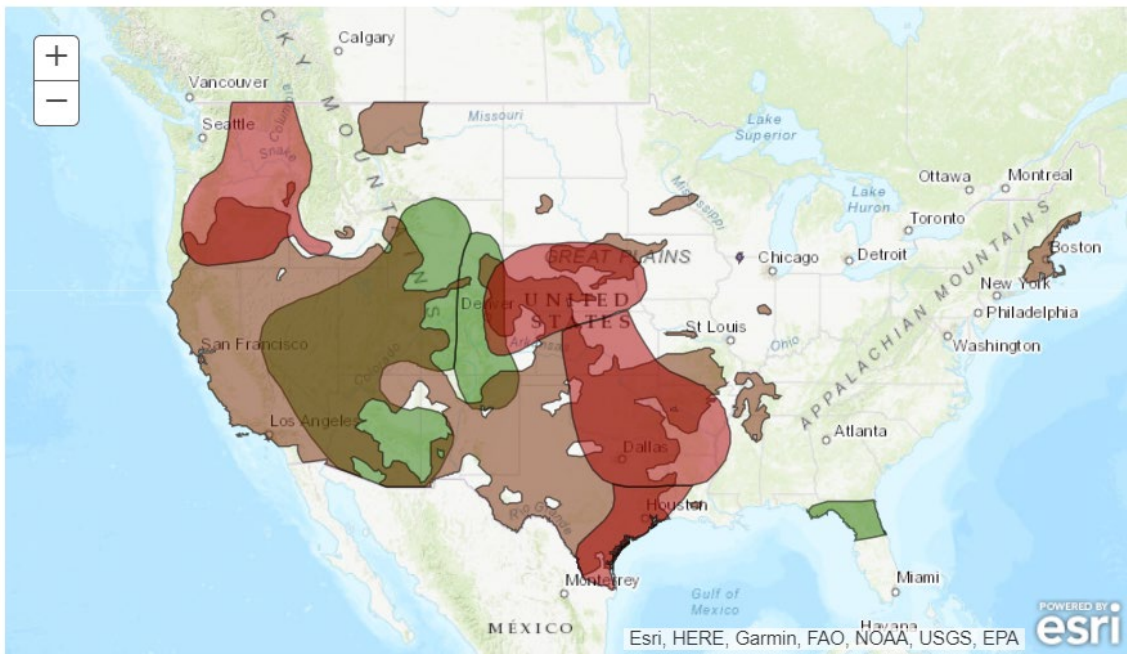
Created August 10, 2022

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"/>
Soils	<input checked="" type="checkbox"/>

Legend			
	Flooding Likely		Excessive Heat
	Flooding Occurring or Imminent		High Winds
	Flooding Possible		Much Above Normal Temperatures
	Freezing Rain		Much Below Normal Temperatures
	Heavy Ice		Significant Waves
	Heavy Precipitation		Enhanced Wildfire Risk
	Heavy Rain		Severe Drought
	Heavy Snow		
	Severe Weather		

Valid August 13, 2022 - August 17, 2022

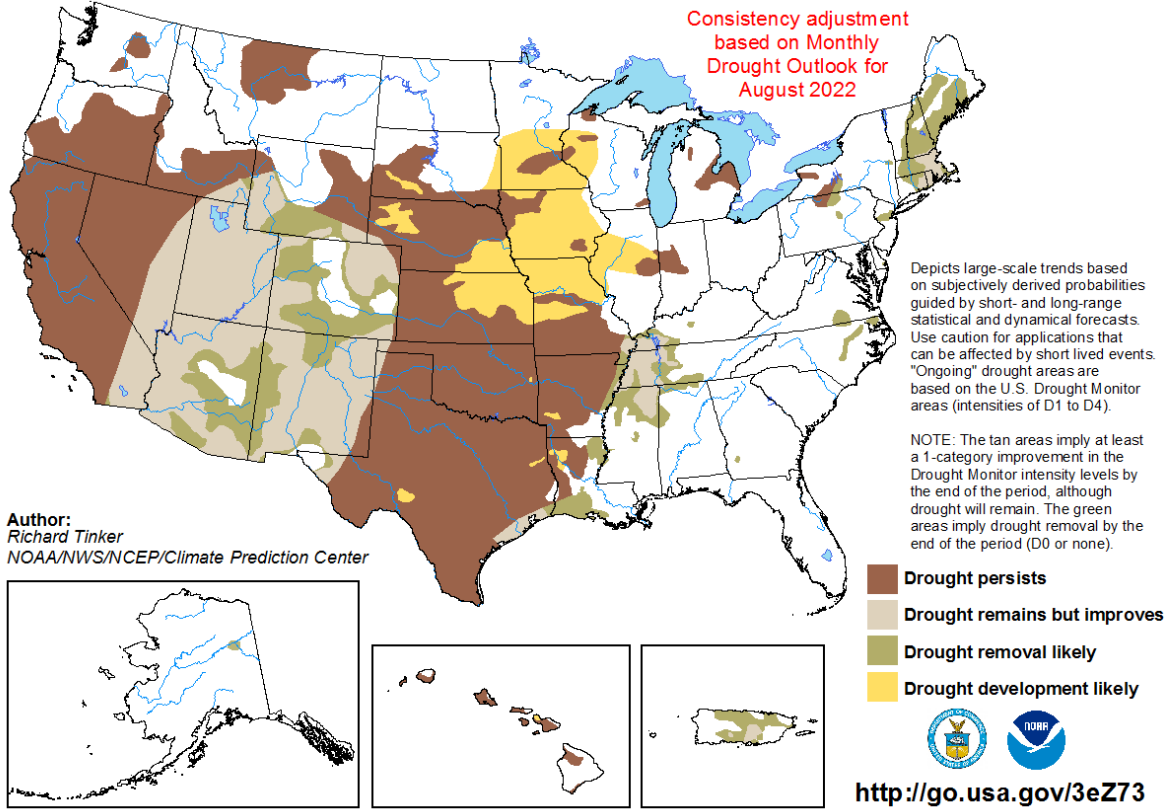


Seasonal Drought Outlook: [August 01 – October 31, 2022](#)

Source: National Weather Service

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

Valid for August 1 - October 31, 2022
Released July 31, 2022

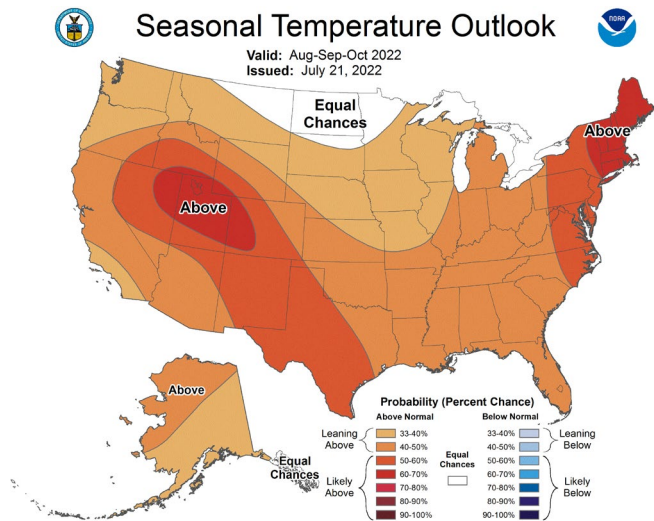
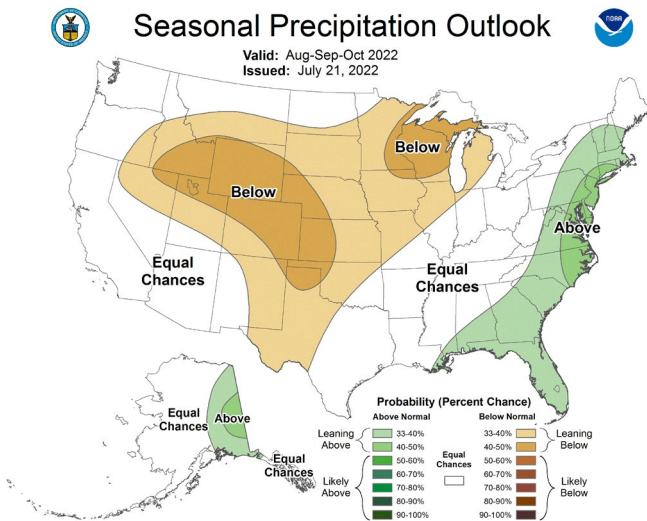


Climate Prediction Center 3-Month Outlook

Source: National Weather Service

[Precipitation](#)

[Temperature](#)



[August-September-October 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](#).