



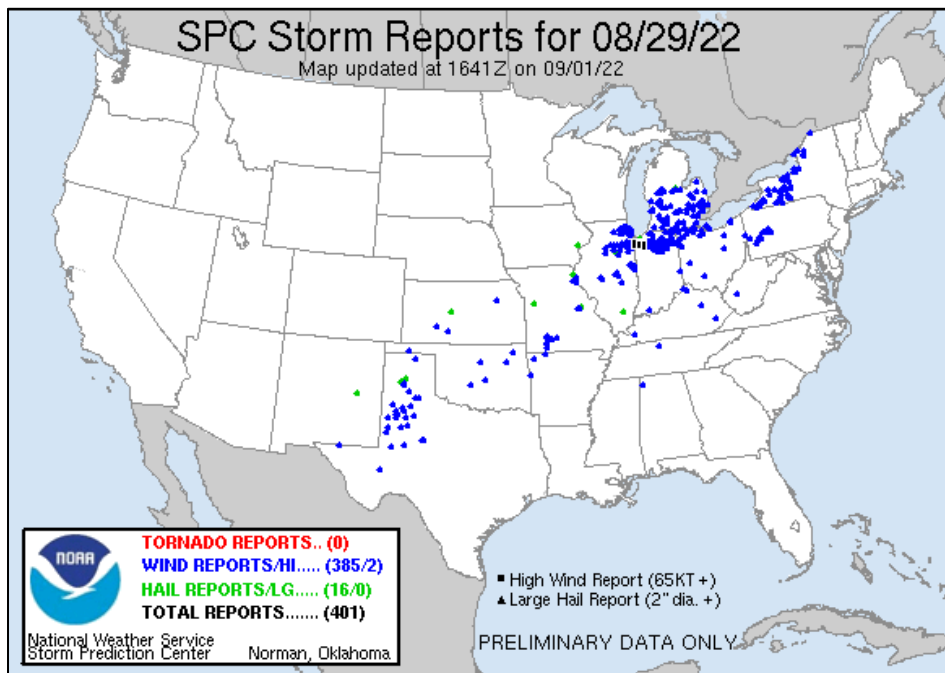
# Water and Climate Update

## September 1, 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
Temperature .....	6	More Information .....	18
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### Severe Storms Slam Upper Midwest



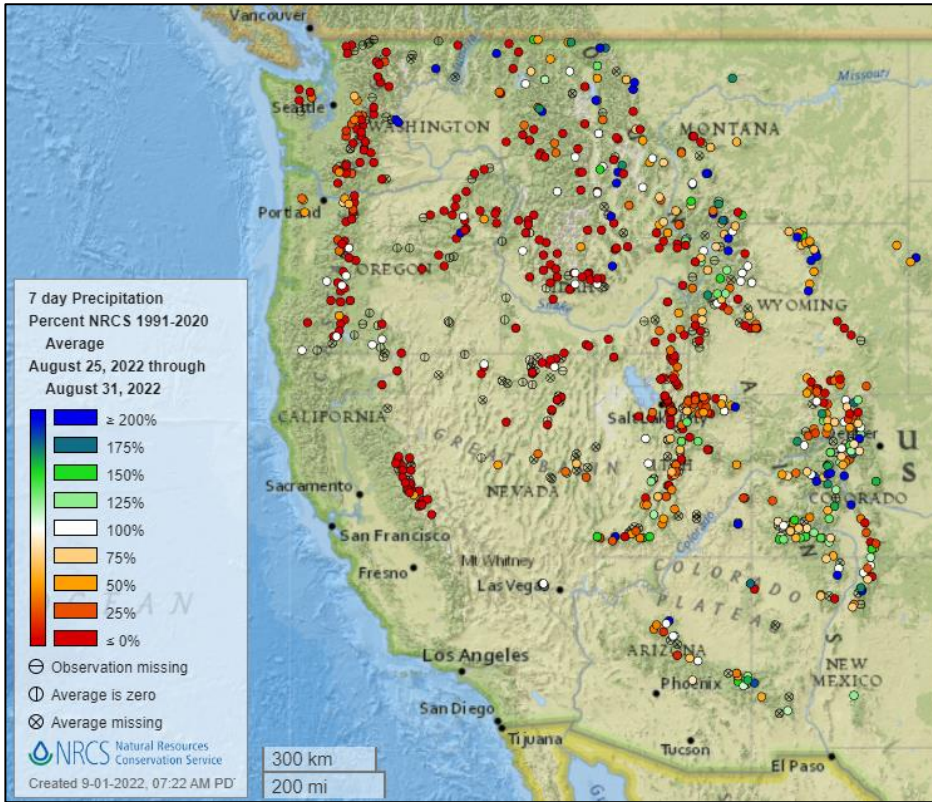
Severe thunderstorms with strong winds, heavy rain, and flash flooding swept across in the upper Midwest this week. Damages included downed trees and powerlines, and left over 650,000 customers without power, and several deaths. The line of storms was widespread and included Illinois, Michigan, Ohio, and Indiana. Wind gusts reached up to 80 mph in some areas. The brunt of the storm was felt in Southern Michigan where most of the damage occurred. The severe thunderstorms continued to move East impacting New York and Pennsylvania.

#### Related:

- [Storms bring severe threat to the Midwest and flood risk to the South](#) - CNN
- [3 killed, including 2 children, after severe storms hit the Midwest and South](#) – CBS News
- [Severe storms strike Midwest, flooding continues in South](#) – ABC News
- [Hundreds of thousands without power as severe storms push through Midwest](#) – Yahoo!News
- [At least 3 dead, hundreds of thousands still without power as storms slam Michigan, Indiana, Pennsylvania](#) – Milwaukee Journal Sentinel
- [Storms blamed for deaths in 3 states](#) – Arkansas Democrat Gazette (AR)
- [Tornado reported for second night as severe weather sweeps Minnesota](#) – StarTribune
- [DTE Energy reports more than 200,000 outages, strong winds knocked out 3,000 power lines](#) – CBS News

## Precipitation

### Last 7 Days, NRCS SNOTEL Network

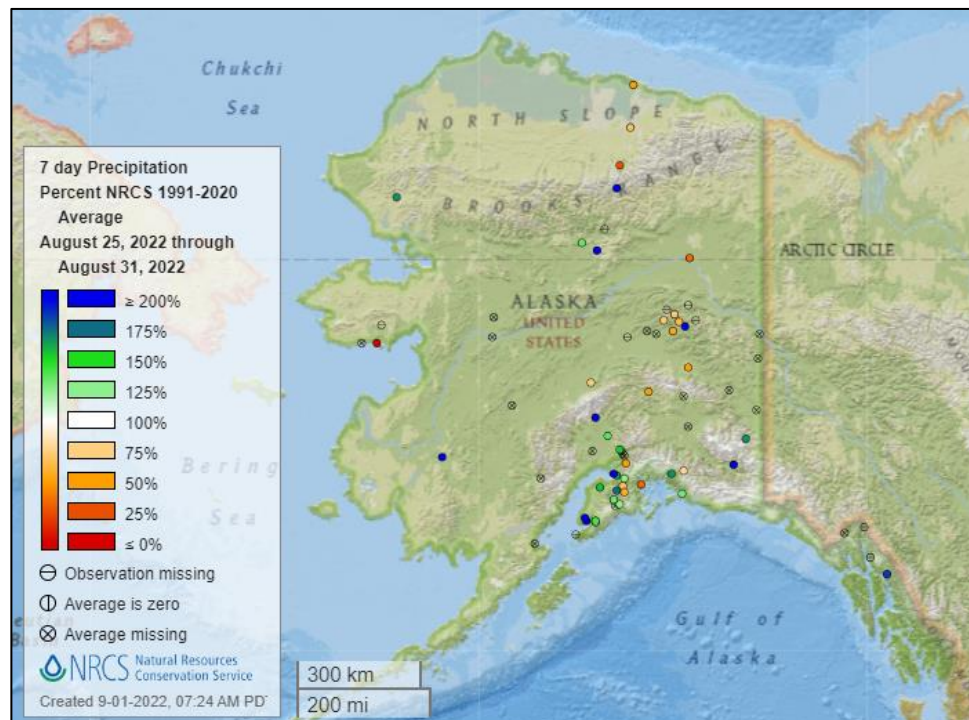


[7-day precipitation percent of average map](#)

**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](#)



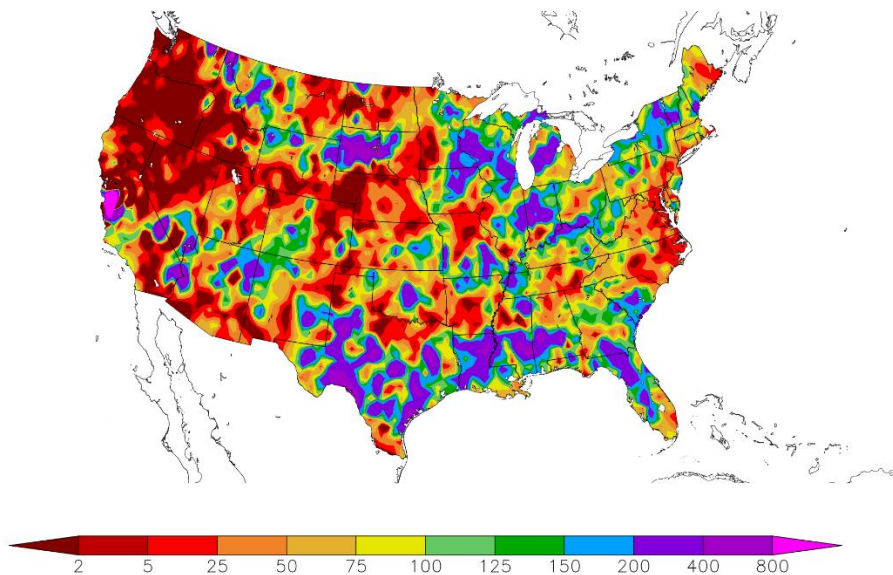
### Last 7 Days, National Weather Service (NWS) Networks

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 (%)  
8/25/2022 – 8/31/2022



Generated 9/1/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

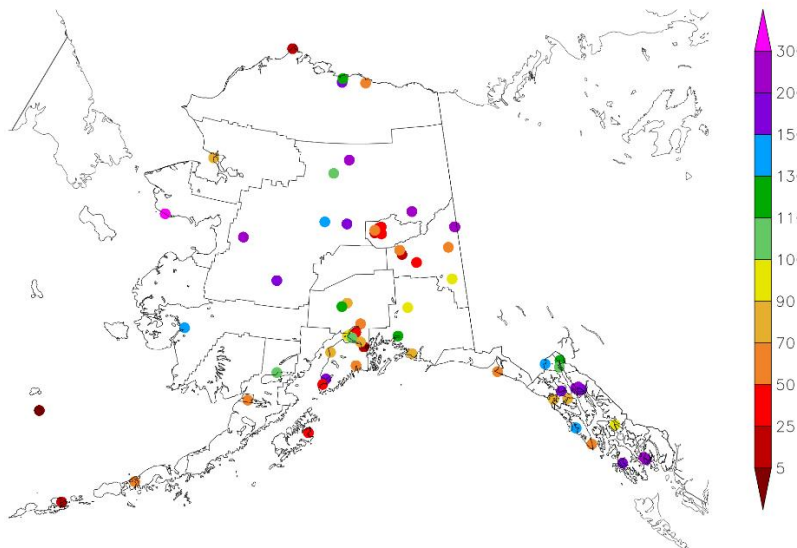
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Percent of Normal Precipitation (%)  
8/25/2022 – 8/31/2022



Generated 9/1/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Source: PRISM

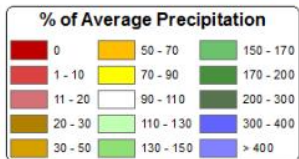
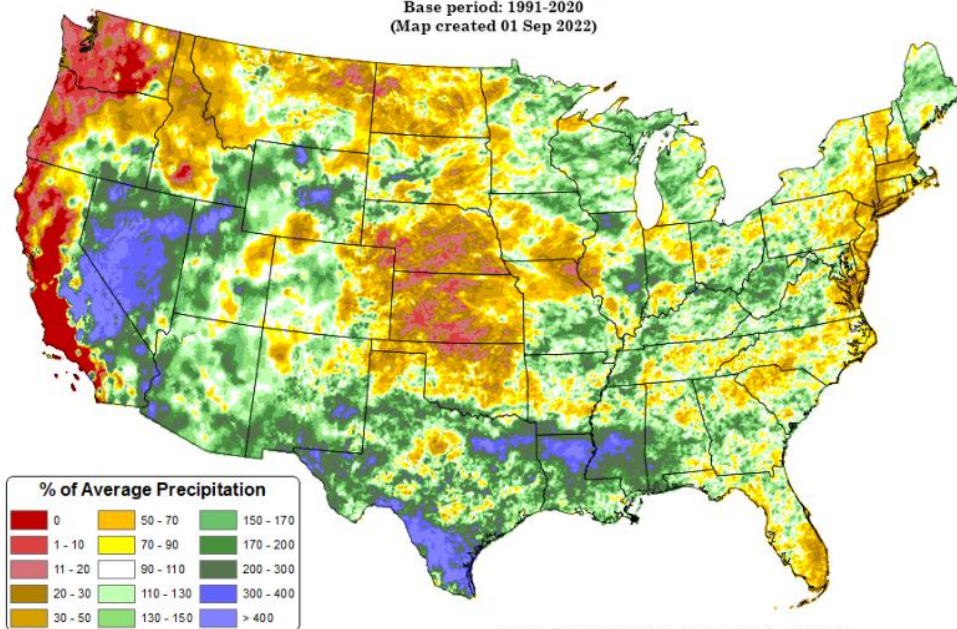
#### Total Precipitation Anomaly: 01 Aug 2022 - 31 Aug 2022

Period ending 7 AM EST 31 Aug 2022

Base period: 1991-2020

(Map created 01 Sep 2022)

[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

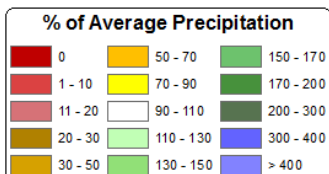
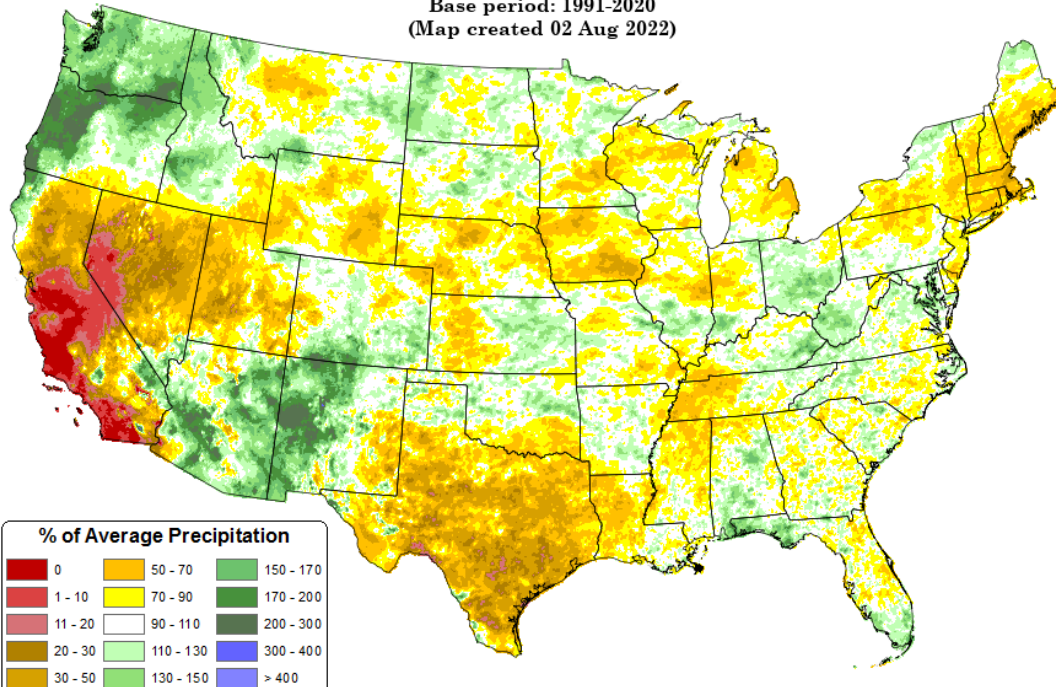
[May through July 2022 precipitation anomaly map](#)

#### Total Precipitation Anomaly: May 2022 - Jul 2022

Period ending 7 AM EST 31 Jul 2022

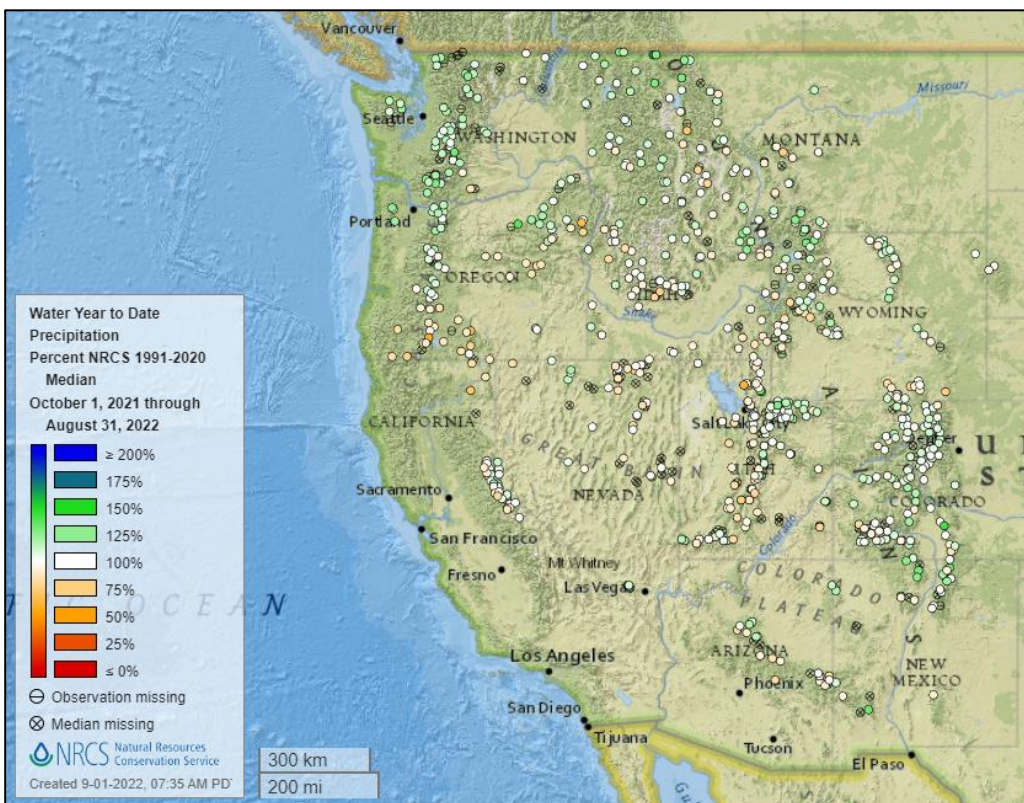
Base period: 1991-2020

(Map created 02 Aug 2022)



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### Water Year-to-Date, NRCS SNOTEL Network

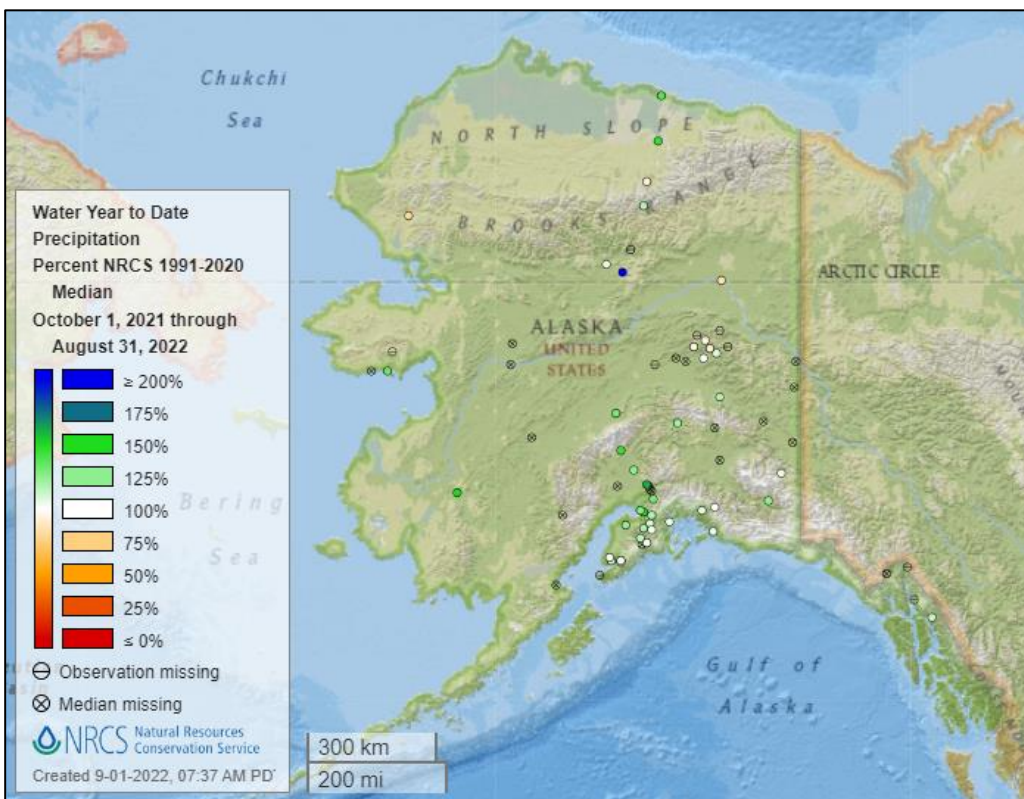


[2022 water year-to-date precipitation percent of median map](#)

**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

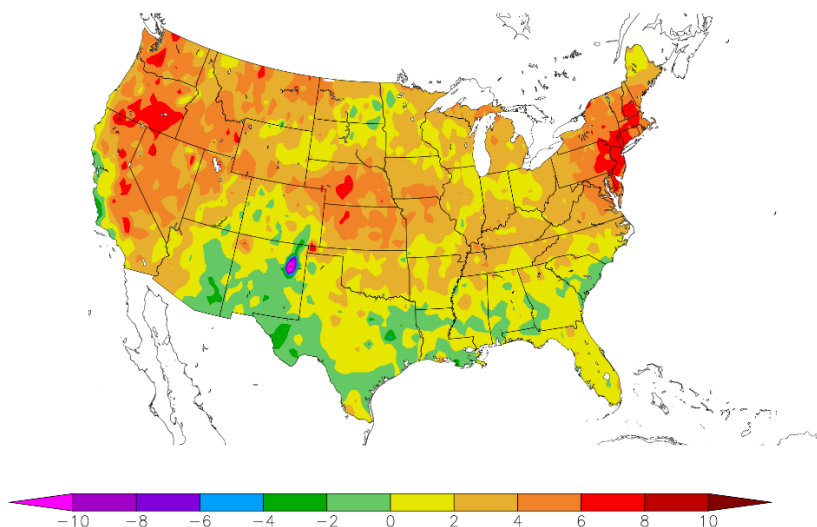
### Last 7 Days, National Weather Service (NWS) Networks

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)  
8/25/2022 – 8/31/2022



Generated 9/1/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

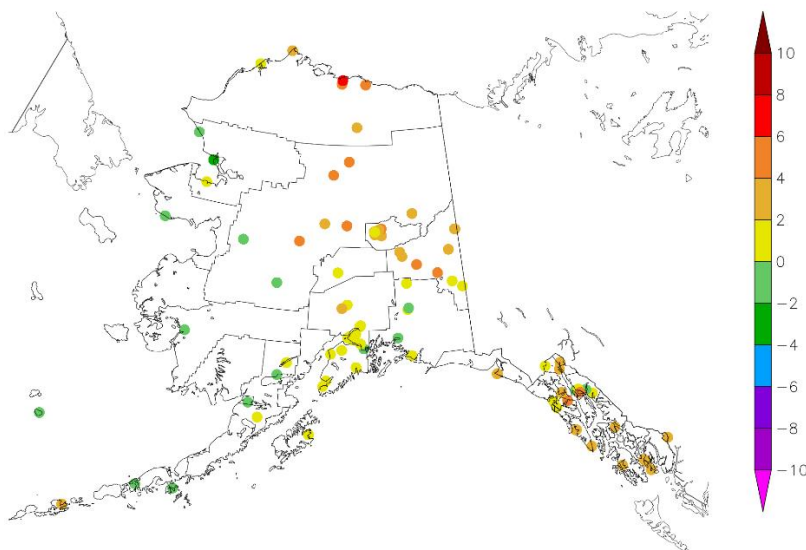
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)  
8/25/2022 – 8/31/2022



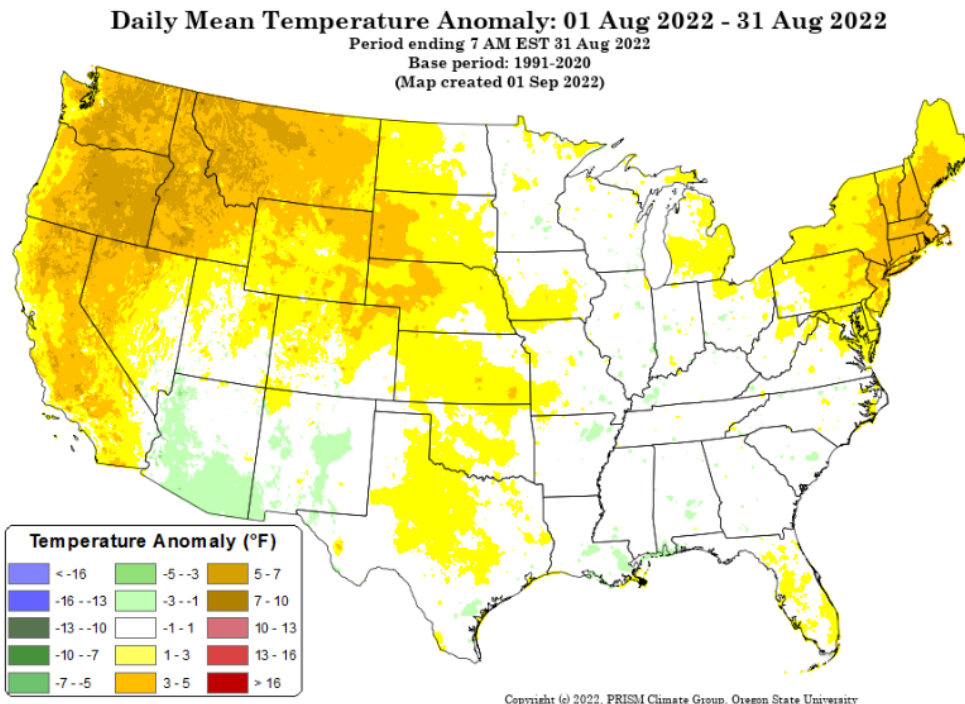
Generated 9/1/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

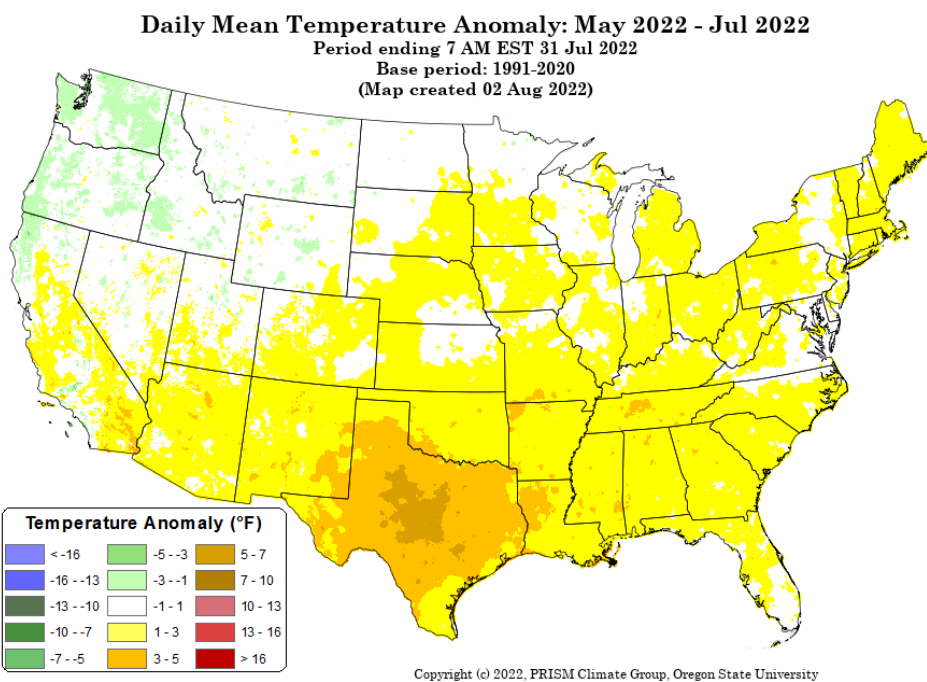
Source: PRISM

[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](#)

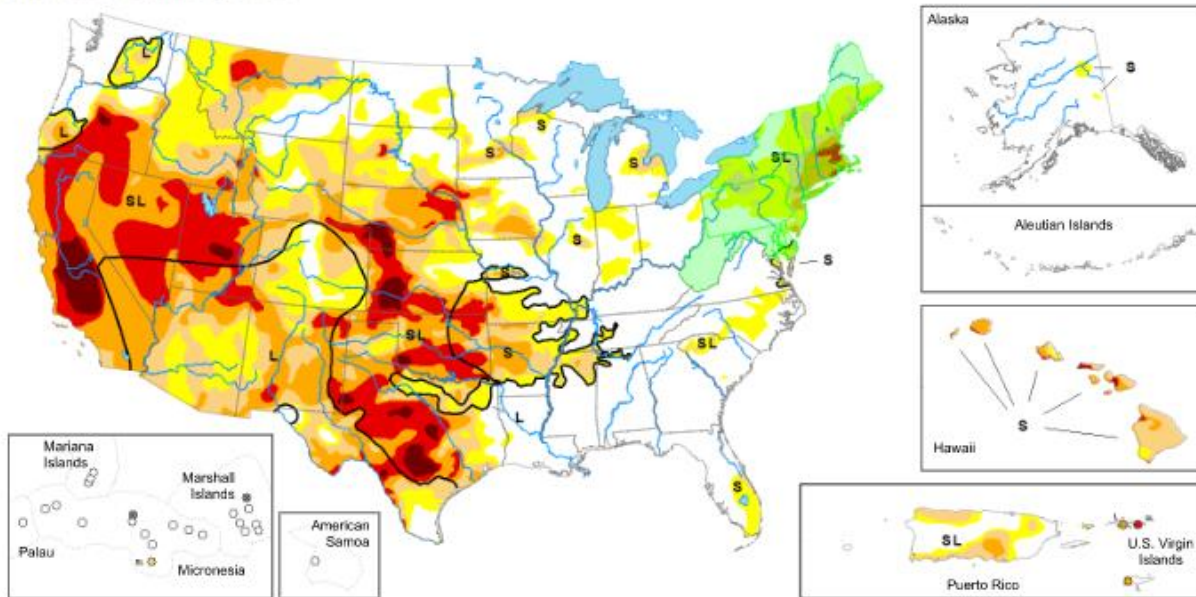
Source: National Drought Mitigation Center

### [U.S. Drought Portal](#)

Source: NOAA

**Map released: September 1, 2022**

**Data valid: August 30, 2022**



*United States and Puerto Rico Author(s):  
Deborah Bathke, National Drought Mitigation Center*

*Pacific Islands and Virgin Islands Author(s):  
Ahira Sanchez-Lugo, NOAA/NCEI*

View grayscale version of the map

The data cutoff for Drought Monitor maps is each Tuesday at 8 a.m. EDT. The maps, which are based on analysis of the data, are released each Thursday at 8:30 a.m. Eastern Time.

### Intensity and Impacts

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)

- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

- Delineates dominant impacts
- S - Short-term impacts, typically less than 6 months (agriculture, grasslands)
- L - Long-term impacts, typically greater than 6 months (hydrology, ecology)
- SL - Short- and long-term impacts



**Current [National Drought Summary](#), August 30, 2022**

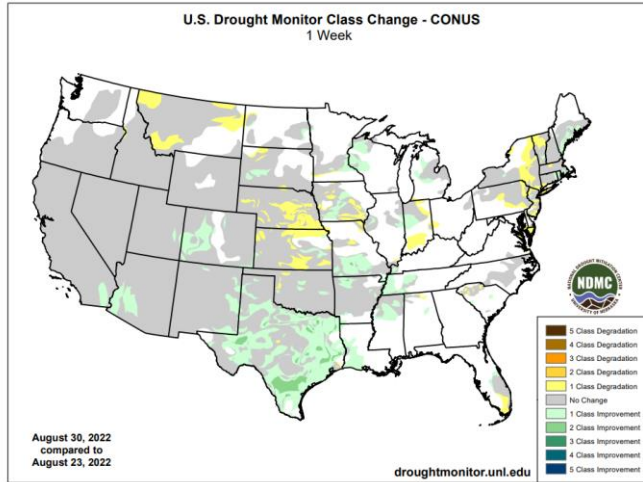
Source: National Drought Mitigation Center

“Broad drought improvements continued across parts of the South for the second week in a row as the ongoing effects of record-setting rainfall over the last two weeks became apparent. The North American Monsoon also continued to provide much-needed rainfall in the Southwest, leading to additional improvements across much of the region. Drought expanded in the Northwest as warm, dry conditions continued across the region, while the Midwest, Southeast, and Northeast saw a mix of improvements and degradations due to locally heavy rain.”

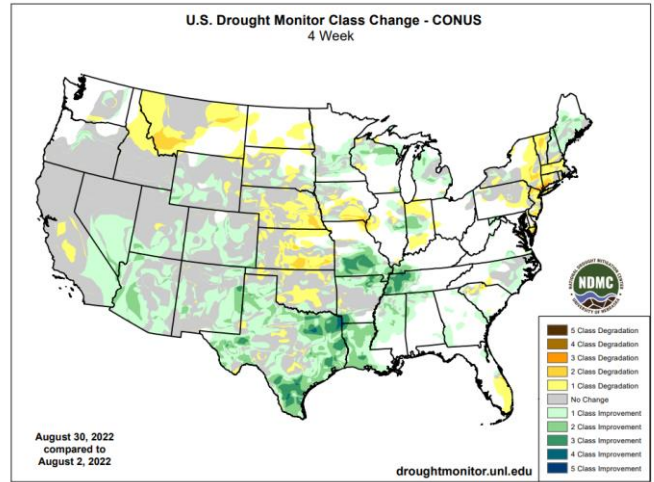
## Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

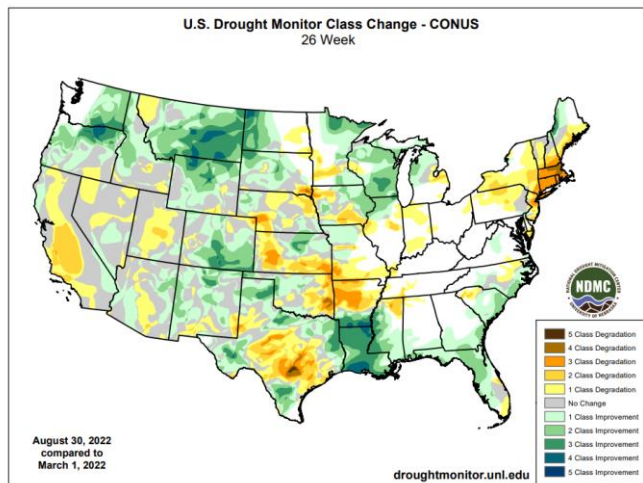
### 1 Week



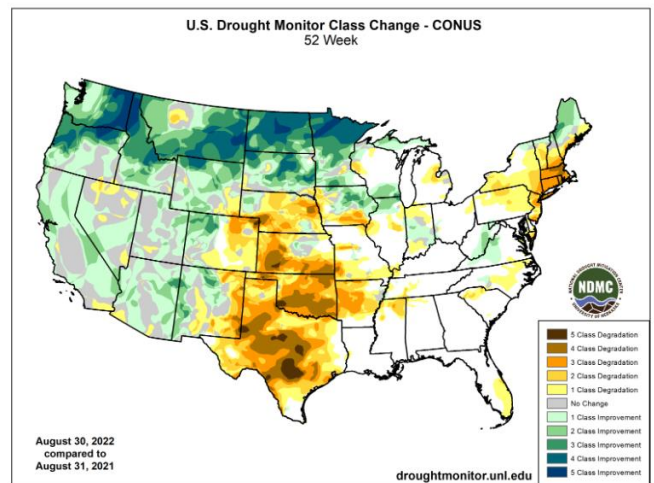
### 1 Month



### 6 Months



### 1 Year



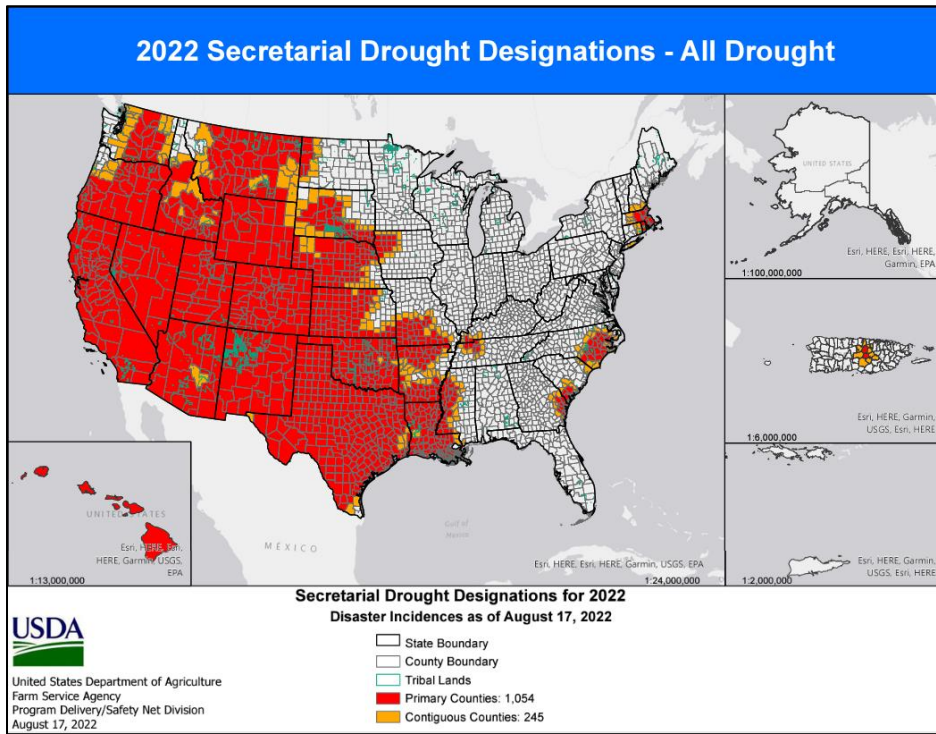
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

## Highlighted Drought Resources

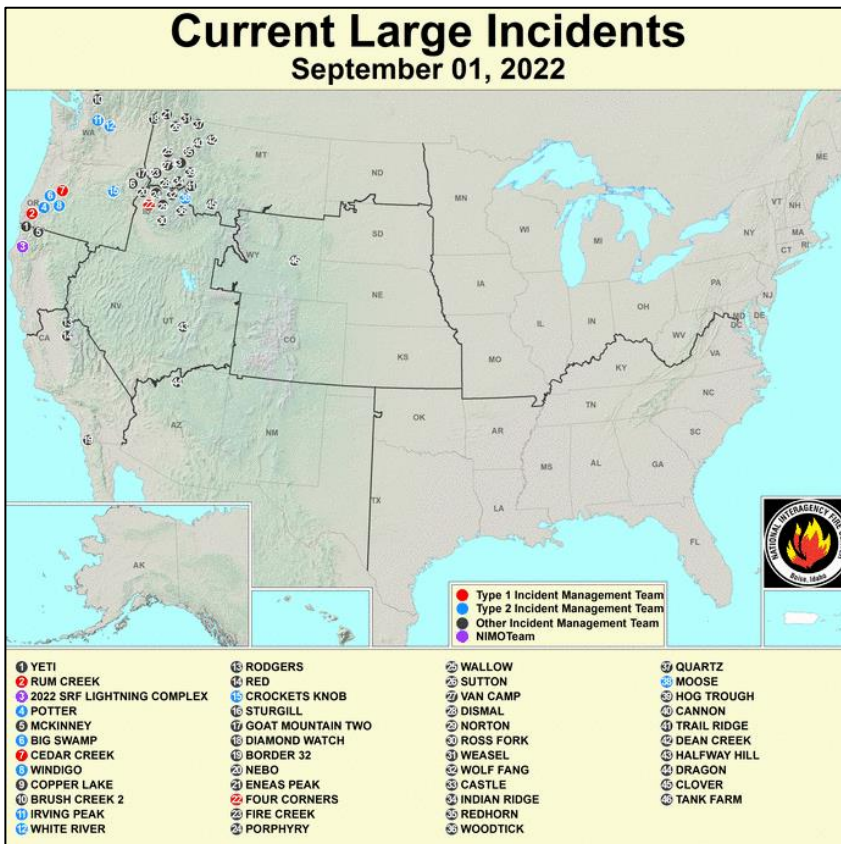
- [Drought Impact Reporter](#)
- [Quarterly Regional Climate Impacts and Outlook](#)
- [U.S. Drought Portal Indicators and Monitoring](#)
- [U.S. Population in Drought, Weekly Comparison](#)
- [USDA Disaster and Drought Information](#)

**USDA Secretarial Drought Designations**

Source: USDA Farm Service Agency



**Wildfires: USDA Forest Service Active Fire Mapping**



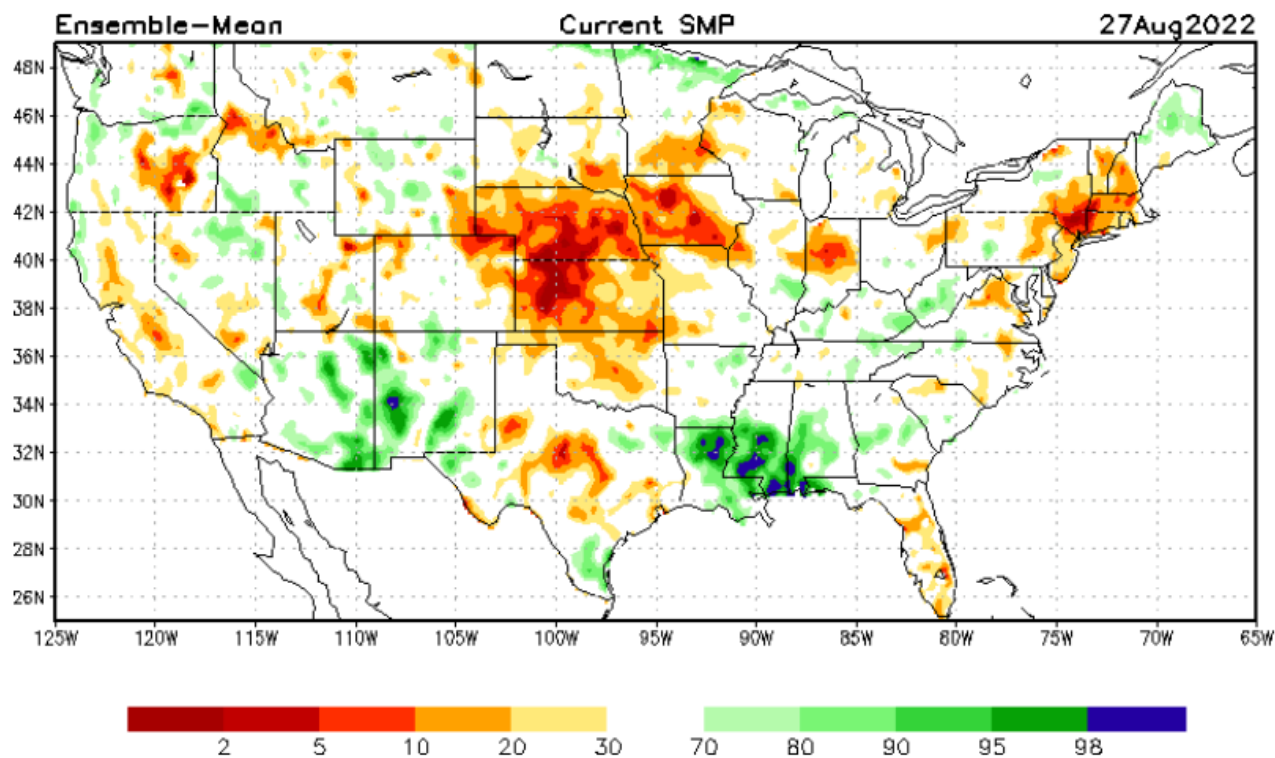
**Highlighted Wildfire Resources**

- [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

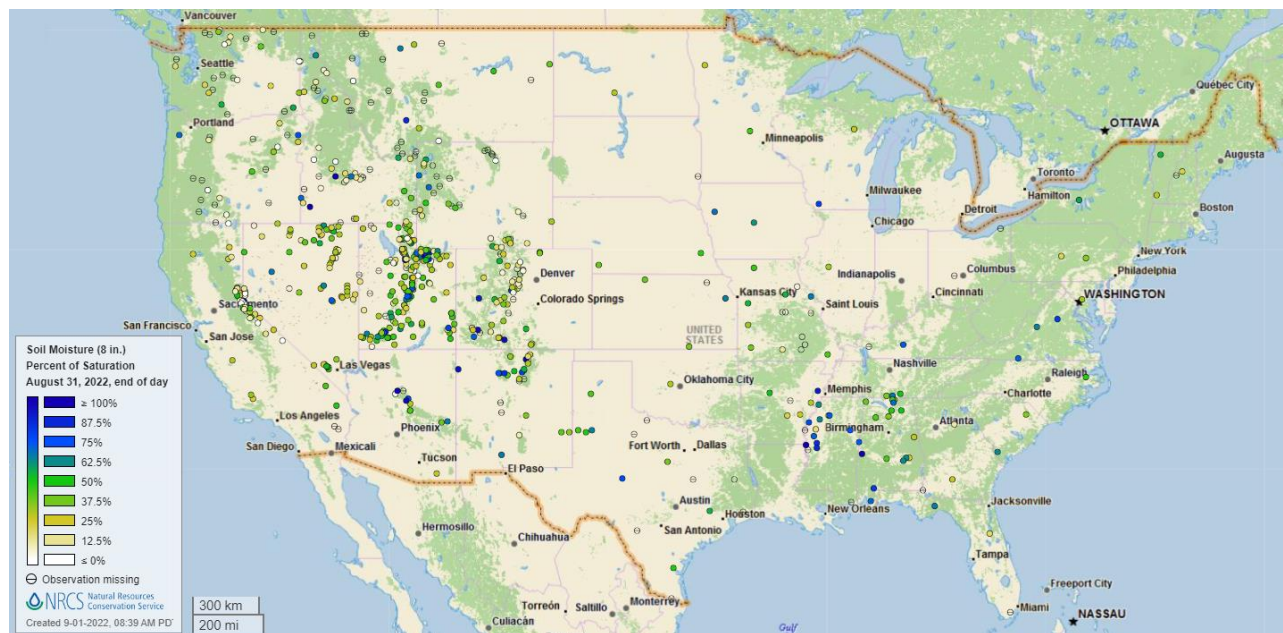


[Modeled soil moisture percentiles](#) as of August 27, 2022

### Soil Moisture Percent of Saturation

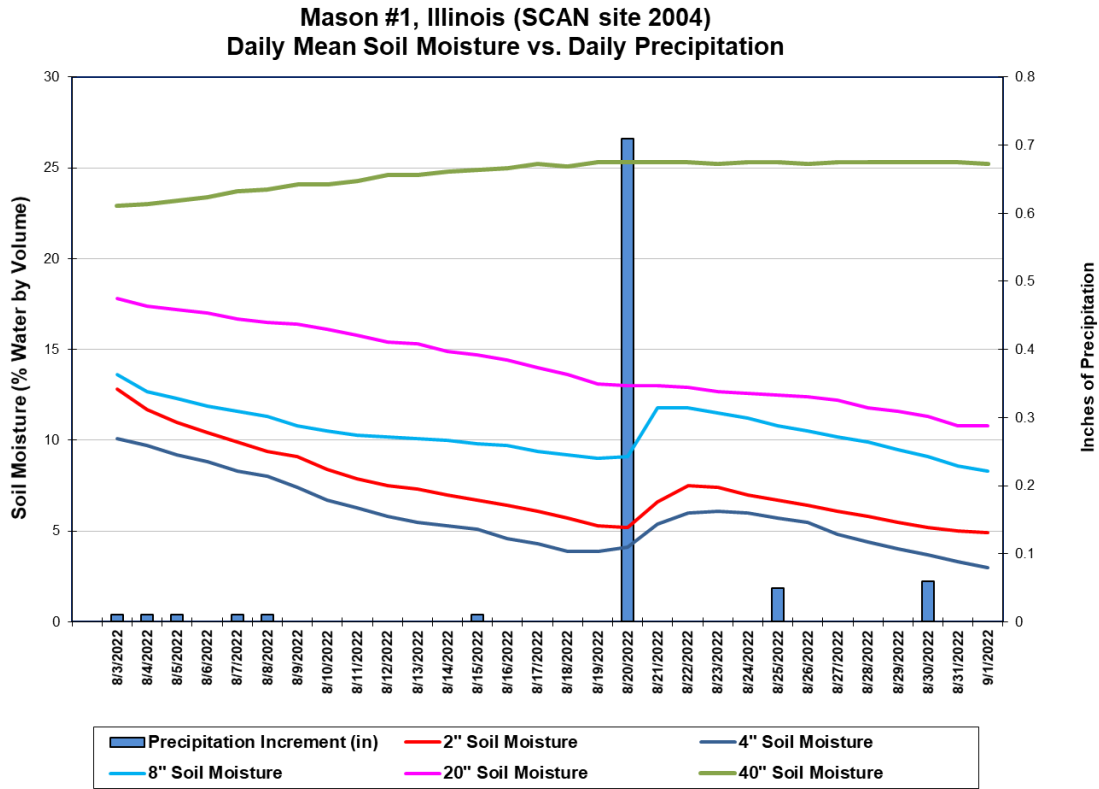
Source: NRCS SNOTEL and [Soil Climate Analysis Network](#) (SCAN)

[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 [Mason #1](#) SCAN site in Illinois. The precipitation event on August 20 caused an increase in soil moisture levels at the -2, -4, and -8-inch soil sensor depths. The deeper sensors showed a slight change over the period. Total precipitation received during the period was 0.88 inches.

**Soil Moisture Data Portals**

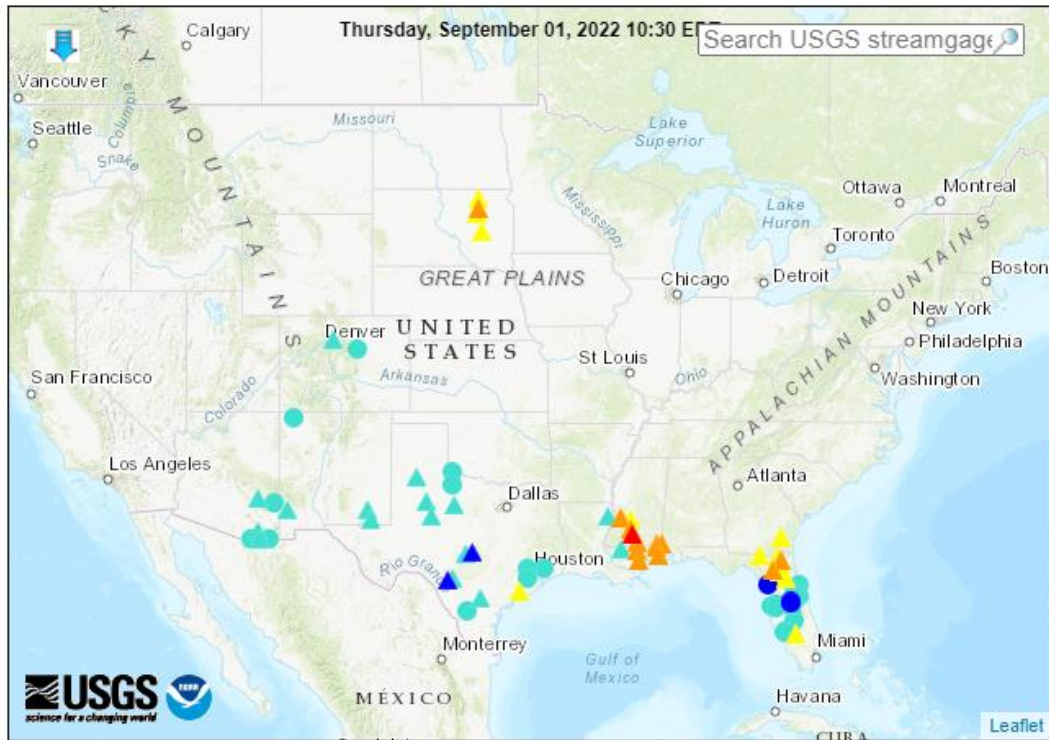
- [USCRN Soil Moisture](#)
- [National Soil Moisture Network](#)
- [NOAA Climate Prediction Center Soil Moisture](#)
- [NASA Grace](#)

### Streamflow, Drought, Flood, and Runoff

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

## Map of flood and high flow conditions

(13 in floods [moderate: 1, minor: 12], 14 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

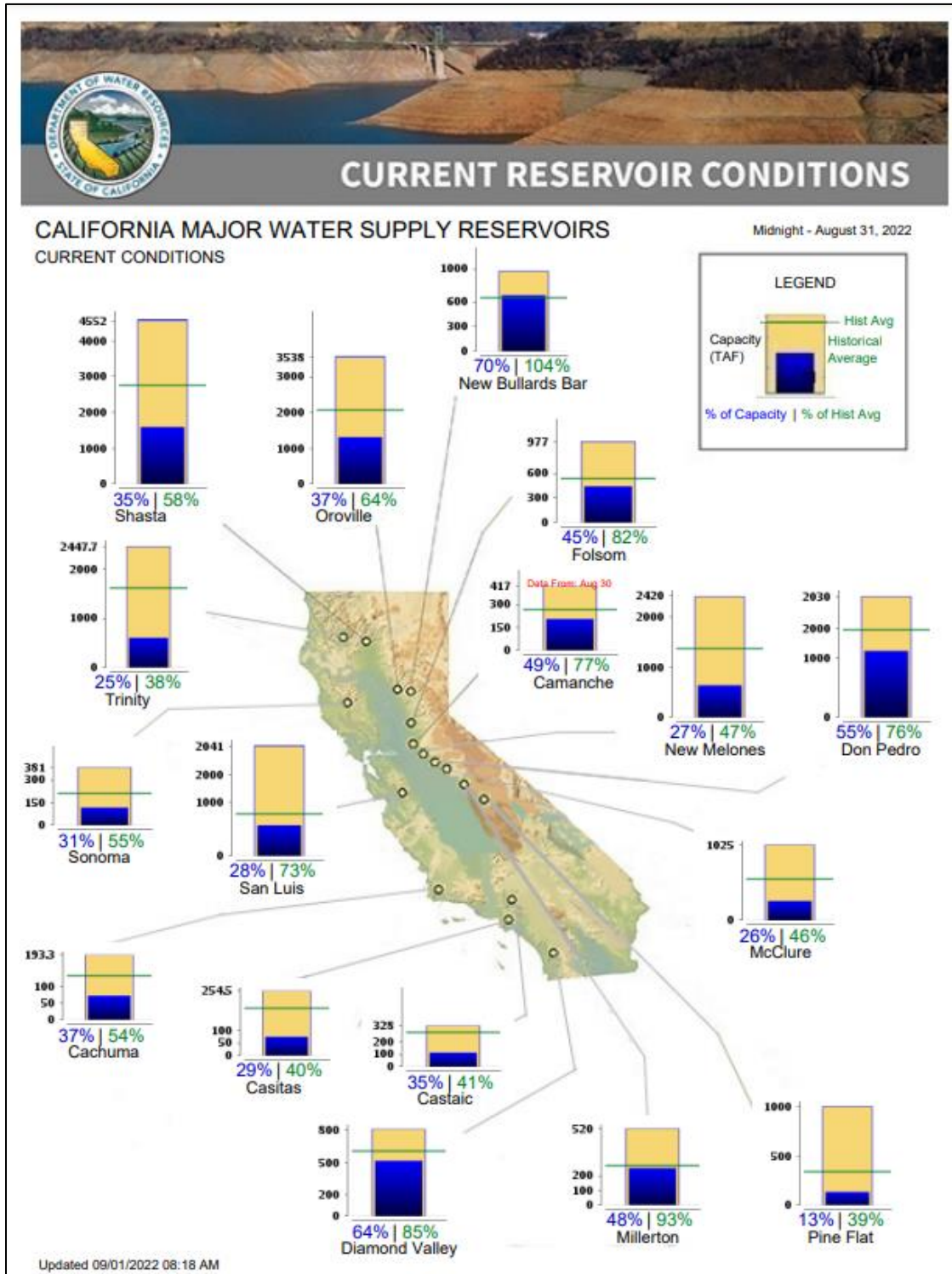
#### Hydromet Teacup Reservoir Depictions

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 1, 2022:** “Dry weather will cover much of the U.S. through Labor Day weekend, especially along and northwest of a line from the southern Rockies into the upper Great Lakes region. From the Pacific Coast to the northern High Plains, unusually hot weather will accompany the dryness. In contrast, locally heavy showers will affect parts of the South, mainly from southern and eastern Texas to the southern Atlantic Coast. Five-day rainfall totals could reach 2 to 6 inches or more in the lower Rio Grande Valley and the western Gulf Coast region. Late in the weekend and early next week, showers may begin to spread northeastward into the middle Atlantic States and Ohio Valley. The NWS 6- to 10-day outlook for September 6 – 10 calls for the likelihood of above-normal temperatures nationwide, except for cooler-than-normal conditions in the south-central U.S., including much of Texas. Meanwhile, below-normal rainfall throughout the northern half of the country should contrast with wetter-than-normal weather across much of the South.”

### Weather Hazards Outlook: [September 3 - 7, 2022](#)

Source: NOAA Weather Prediction Center

## U.S. Day 3-7 Hazards Outlook

[About the Hazards Outlook](#)

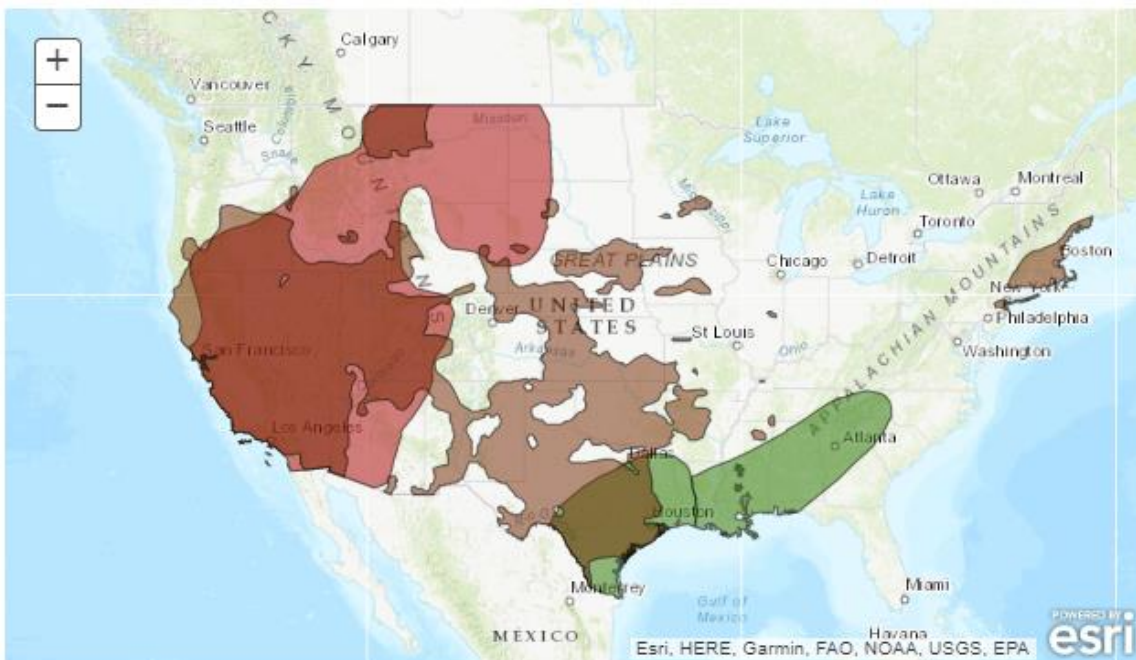
Created August 31, 2022

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 September 03, 2022 - September 07, 2022



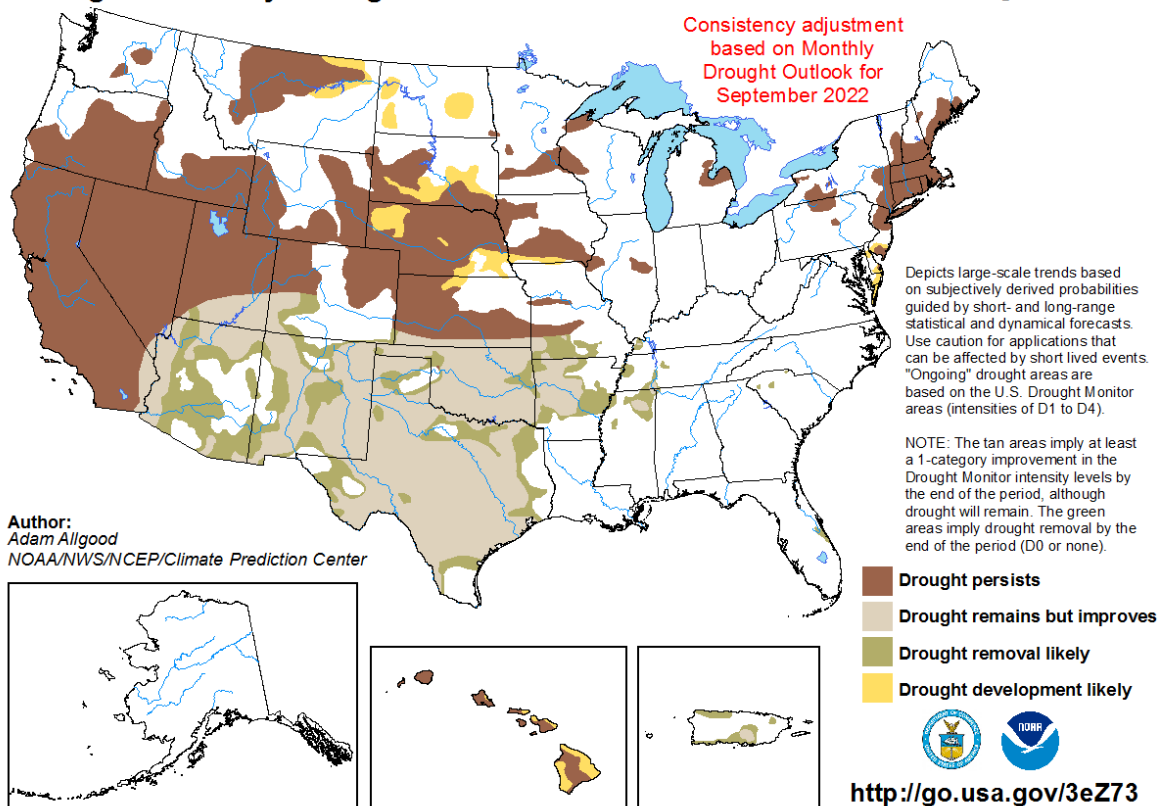


**Seasonal Drought Outlook: [September 1 – November 30, 2022](#)**

Source: National Weather Service

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

Valid for September 1 - November 30, 2022  
Released August 31, 2022

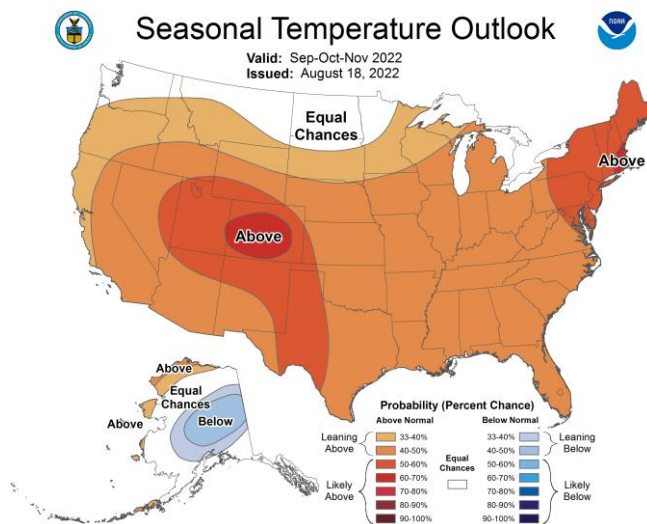
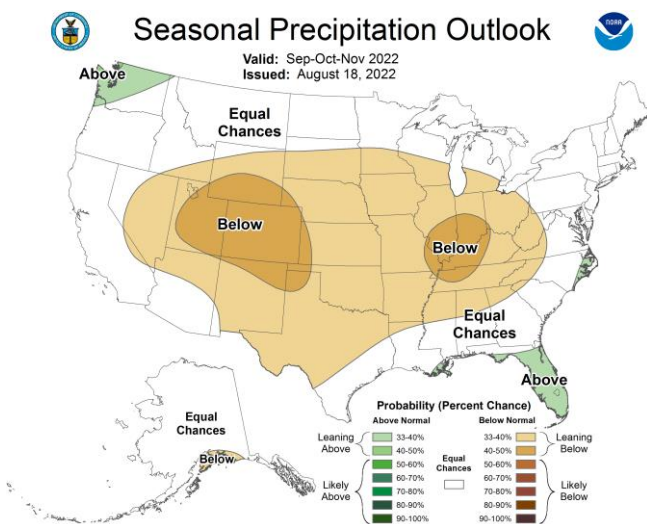


**Climate Prediction Center 3-Month Outlook**

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](#).