



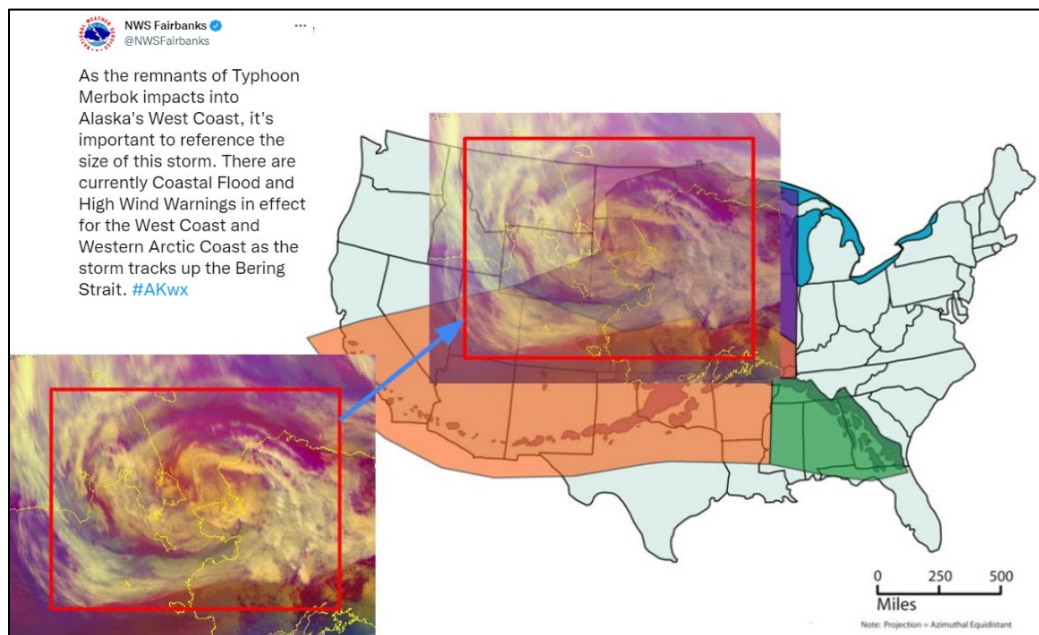
Water and Climate Update

September 22, 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
Drought	8		

Remnants of Typhoon Merbok Flood Western Alaska



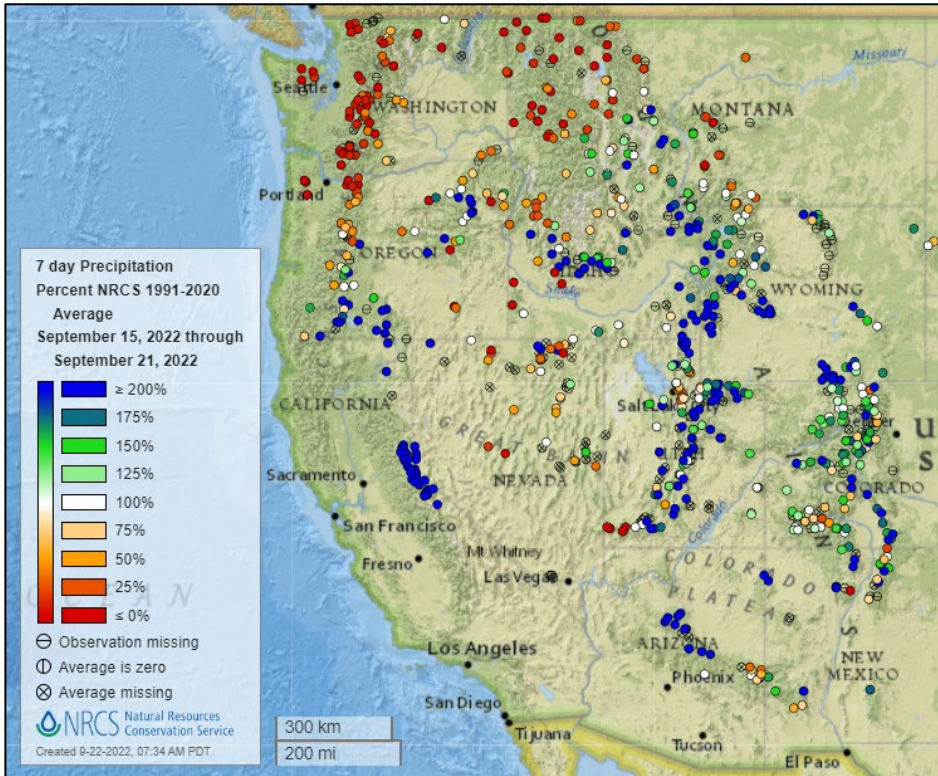
The remnants of former Typhoon Merbok impacted a significant area across western Alaska from September 16-20. For reference, the size of the storm is compared to the contiguous U.S. in the graphic above. The historic storm was the worst seen in nearly 50 years, with tidal flooding, storm surge, heavy rain, and wind gusts up to 90 mph causing damage to remote communities. Communities along a 1,000-mile stretch of coastline were impacted by sea level rise, with the highest reports of 18 feet above normal tide. The National Weather Service reported that the storm’s impact surpassed the 2011 and 1974 storms in some areas. Widespread damage was caused to homes and businesses as well as infrastructure in the region, including flooded roads and airport runways, and impacts to water and power services.

Related:

- [Remnants of typhoon bring floods to Alaska's western coast](#) – Reuters
- [Homes knocked off foundations, roads damaged after powerful western Alaska storm](#) – USA Today
- [Alaska Community Foundation, Red Cross accepting donations for storm-ravaged Western Alaska](#) – Alaska Dispatch News (AK)
- [Villagers taking stock after typhoon hits western Alaska](#) – Indian Country Today
- [Remnants of Typhoon Merbok remain on Northwest coast of Alaska](#) – Fairbanks KTVF (AK)
- [Alaska National Guard begins to mobilize in wake of Western Alaska storm](#) – Alaska Public Media
- [Alaska recovers after typhoon hits more than 1,000 miles of coast](#) – Seattle Times (WA)
- [Western Alaska confronts damage after historic storm](#) – Washington Post
- [Flood waters receding after storm batters western Alaska](#) – AP News

Precipitation

Last 7 Days, NRCS SNOTEL Network

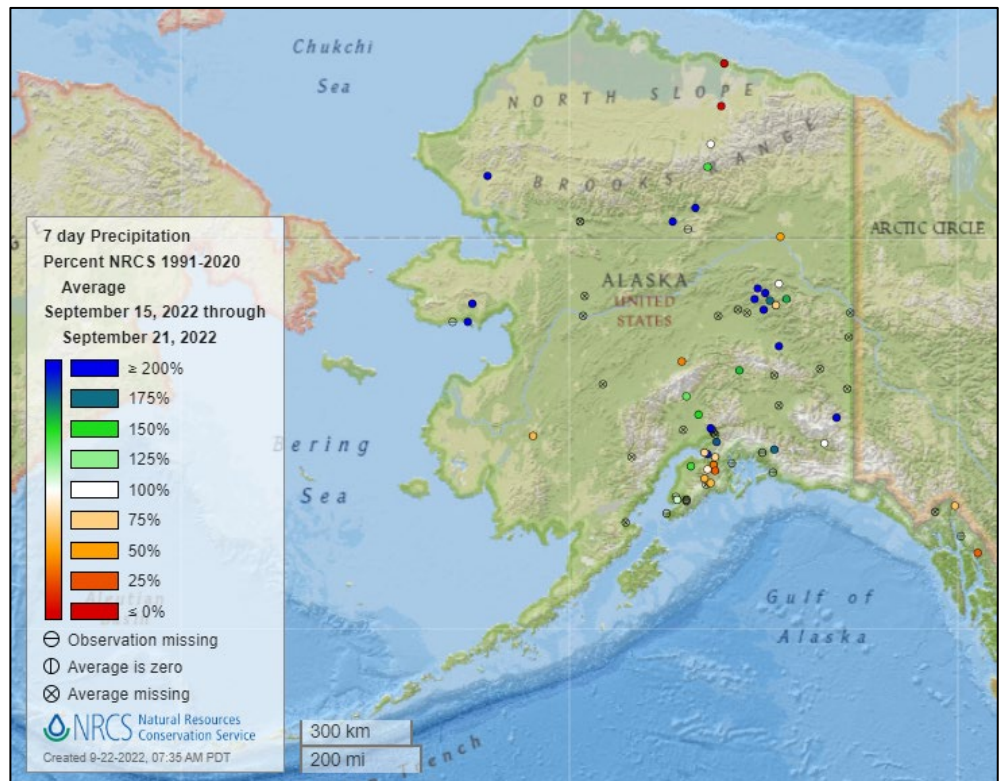


[7-day precipitation percent of average map](#)

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](#)



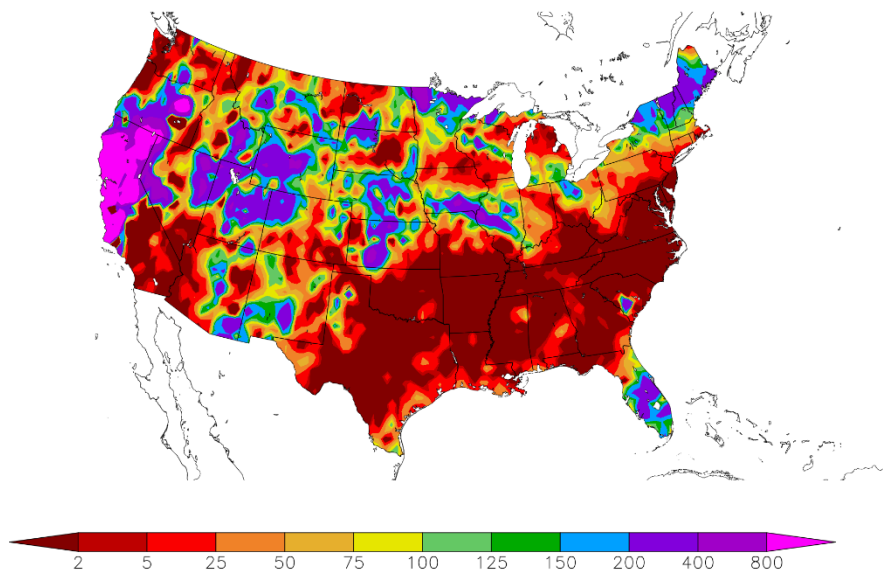
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
9/15/2022 – 9/21/2022



Generated 9/22/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

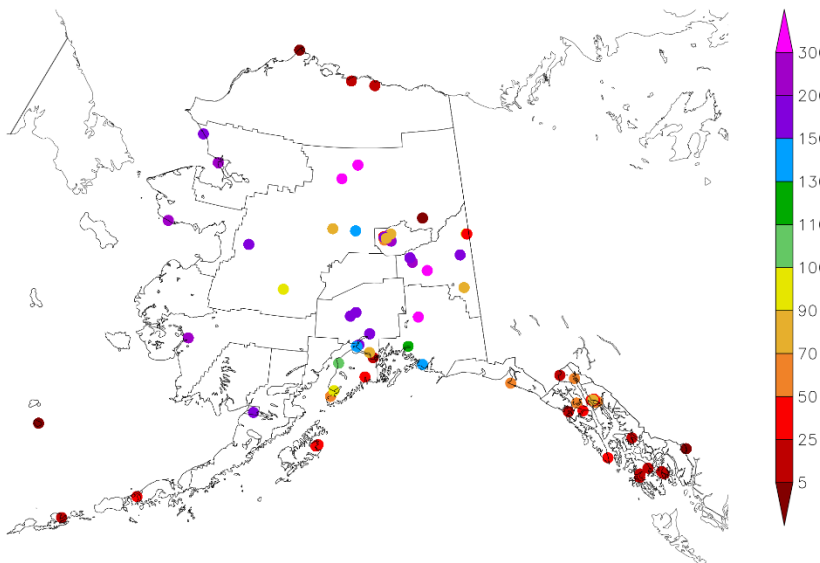
Last 7 Days, National Weather Service (NWS) Networks

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 (%)
9/15/2022 – 9/21/2022



Generated 9/22/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

Source: PRISM

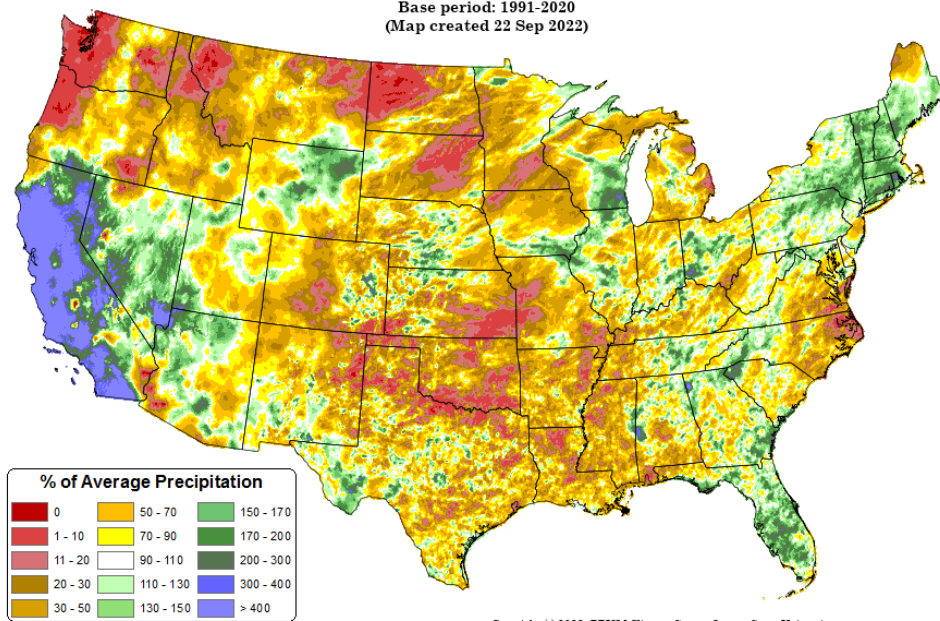
Total Precipitation Anomaly: 01 Sep 2022 - 21 Sep 2022

Period ending 7 AM EST 21 Sep 2022

Base period: 1991-2020

(Map created 22 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

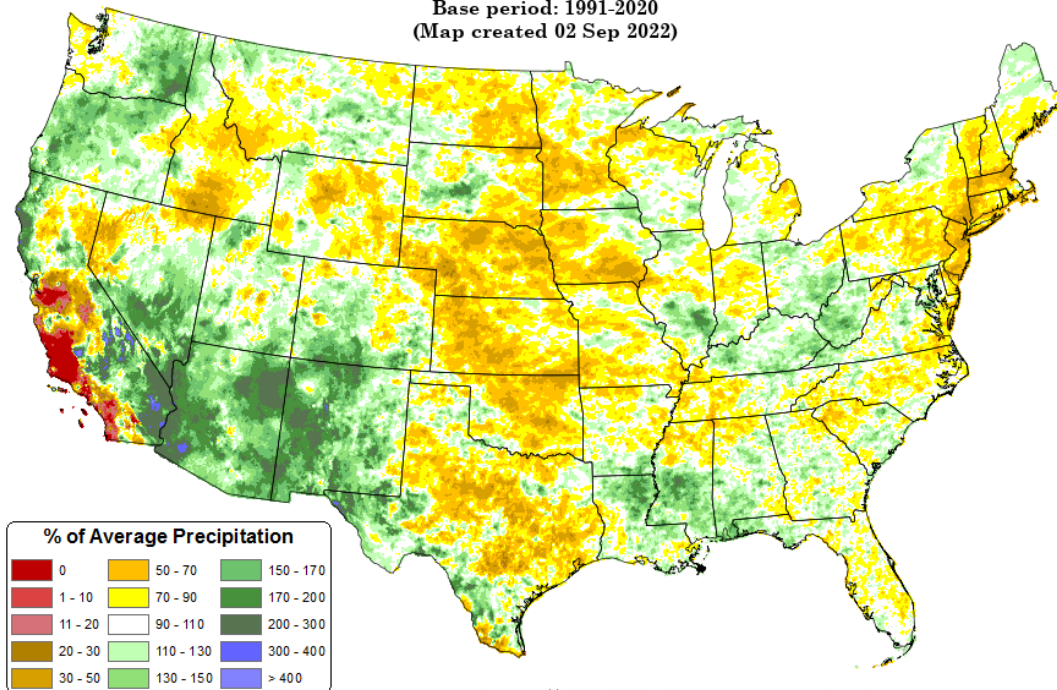
[June through August 2022 precipitation anomaly map](#)

Total Precipitation Anomaly: Jun 2022 - Aug 2022

Period ending 7 AM EST 31 Aug 2022

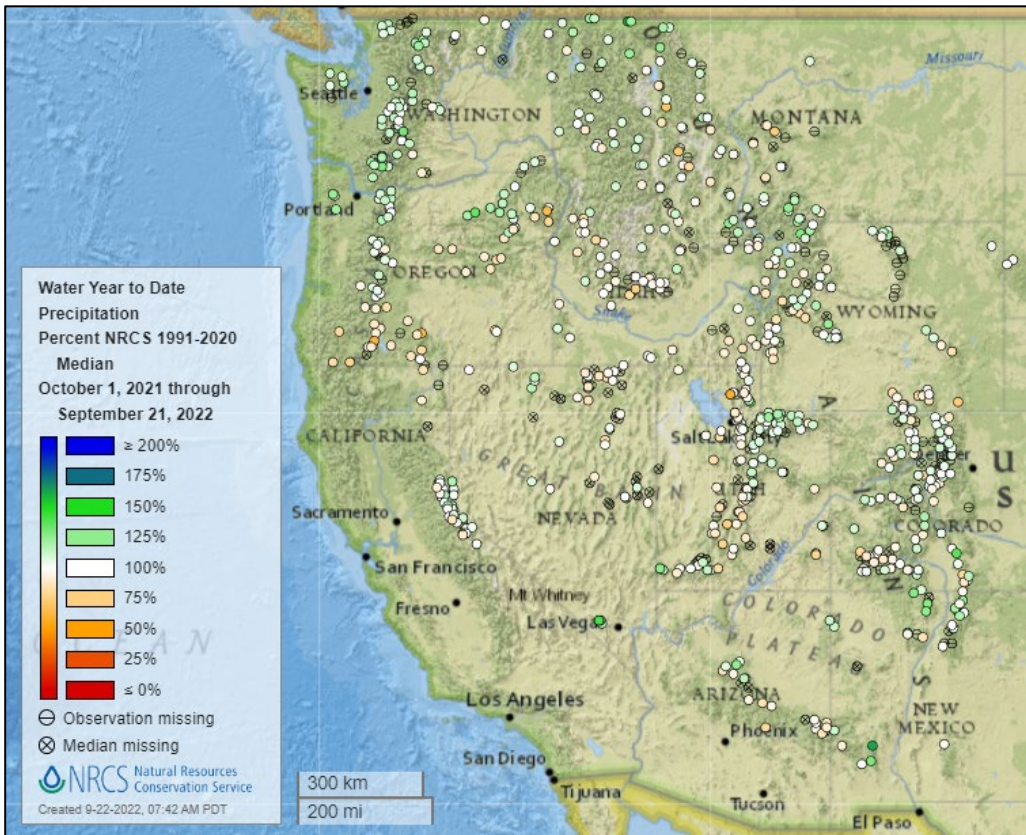
Base period: 1991-2020

(Map created 02 Sep 2022)



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Water Year-to-Date, NRCS SNOTEL Network

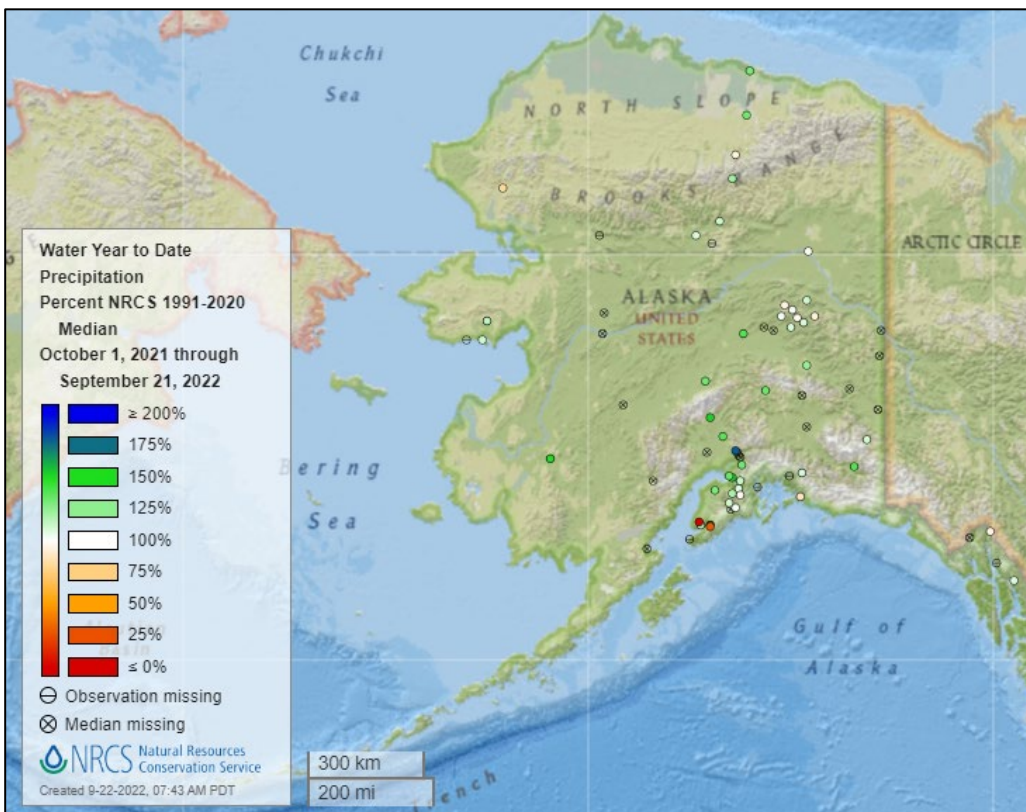


[2022 water year-to-date precipitation percent of median map](#)

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

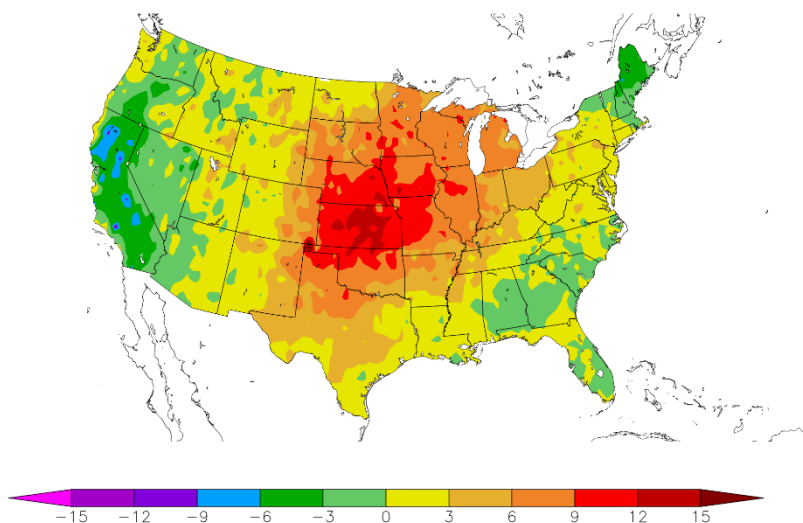
Last 7 Days, National Weather Service (NWS) Networks

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)
9/15/2022 – 9/21/2022



Generated 9/22/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

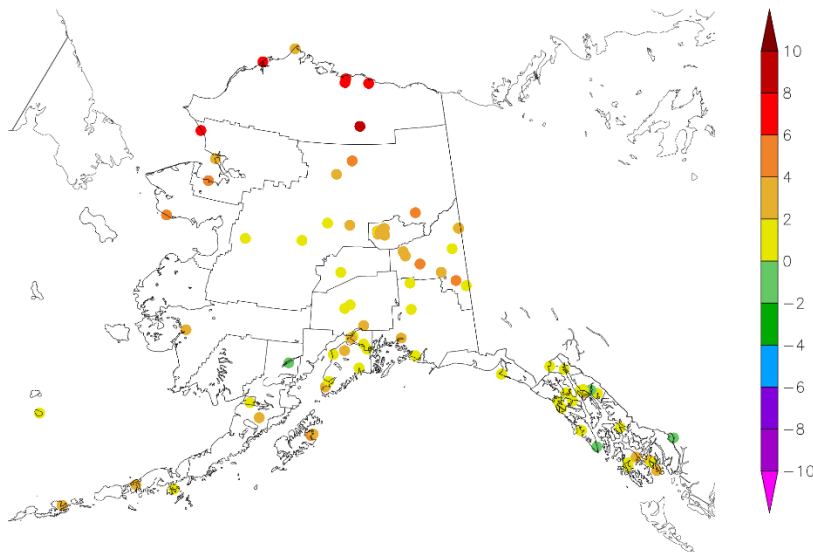
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)
9/15/2022 – 9/21/2022



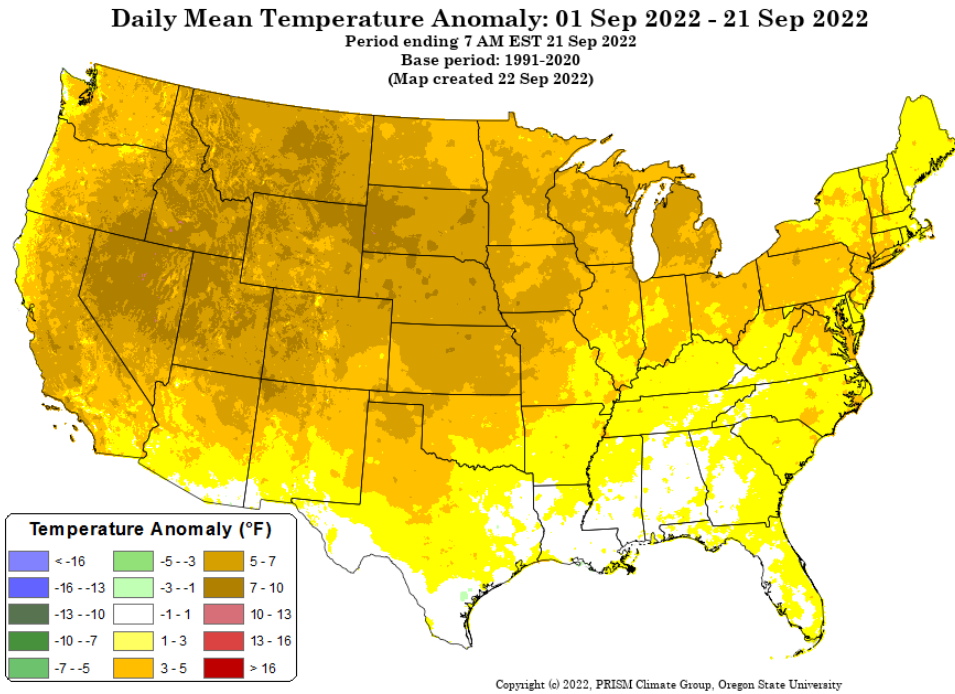
Generated 9/22/2022 at HPRCC using provisional data.

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

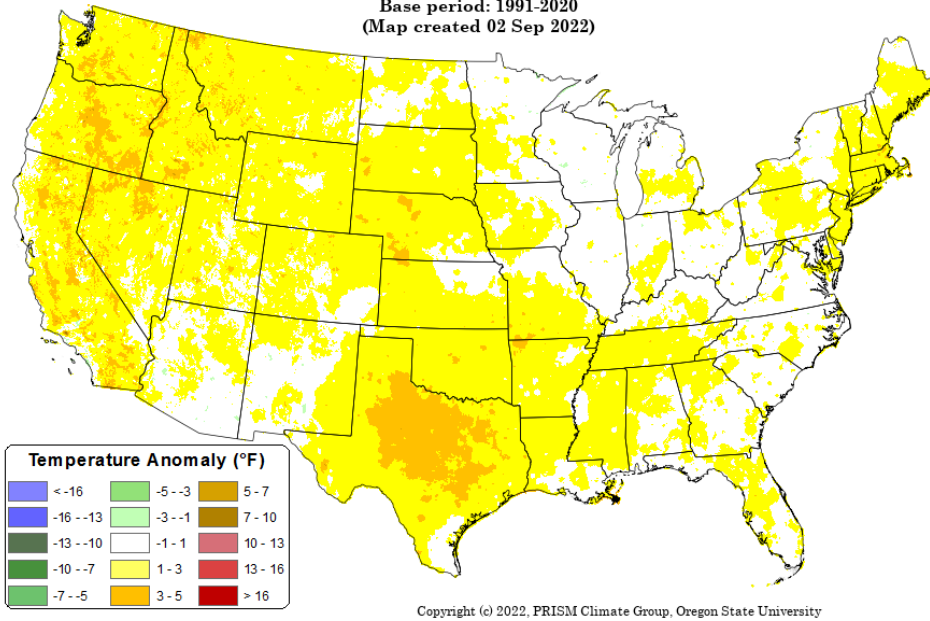
Daily Mean Temperature Anomaly: Jun 2022 - Aug 2022

Period ending 7 AM EST 31 Aug 2022

Base period: 1991-2020

(Map created 02 Sep 2022)

[June through August 2022 daily mean temperature anomaly map](#)



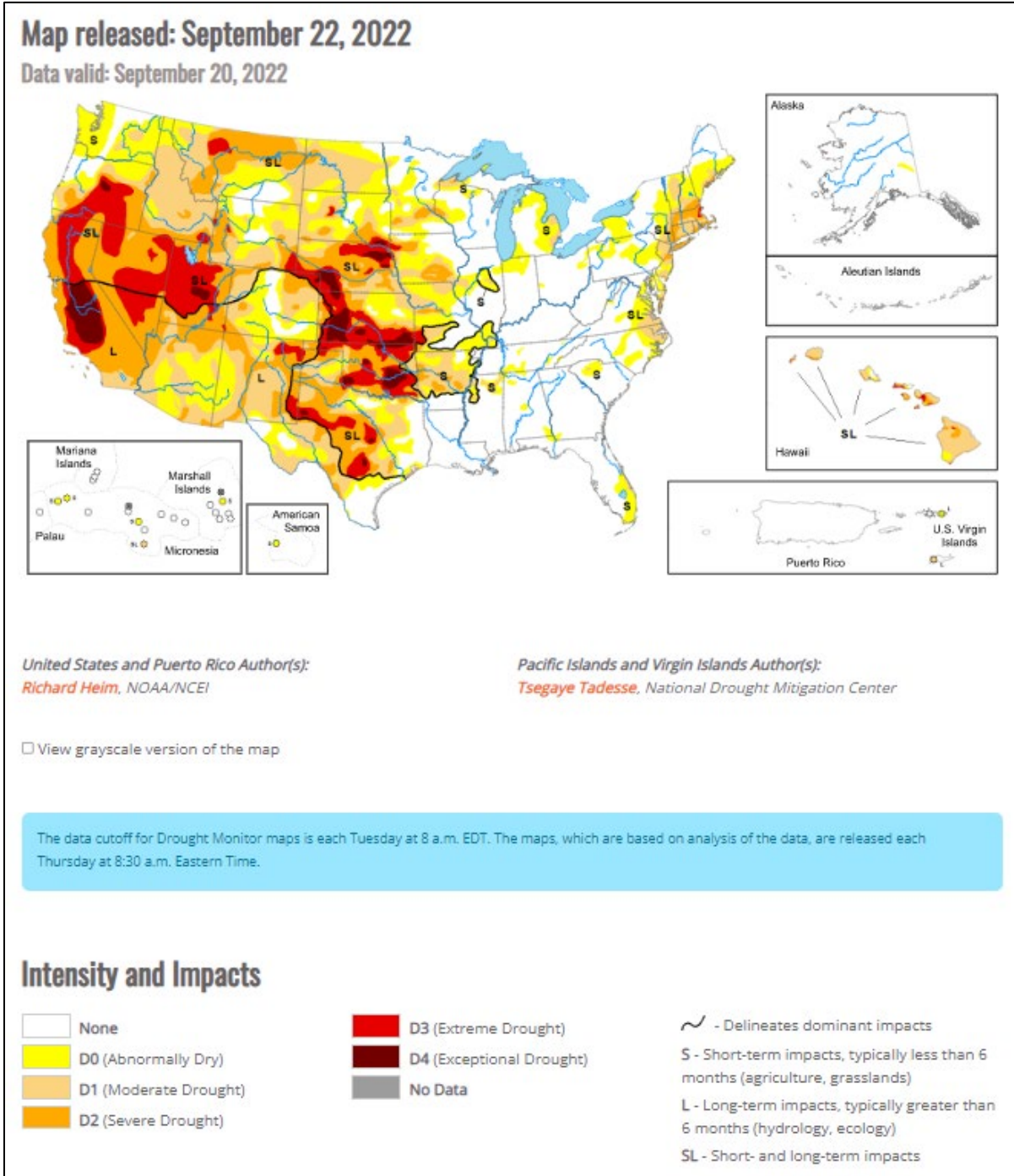
Drought

[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

[U.S. Drought Portal](#)

Source: NOAA



Current [National Drought Summary](#), September 20, 2022

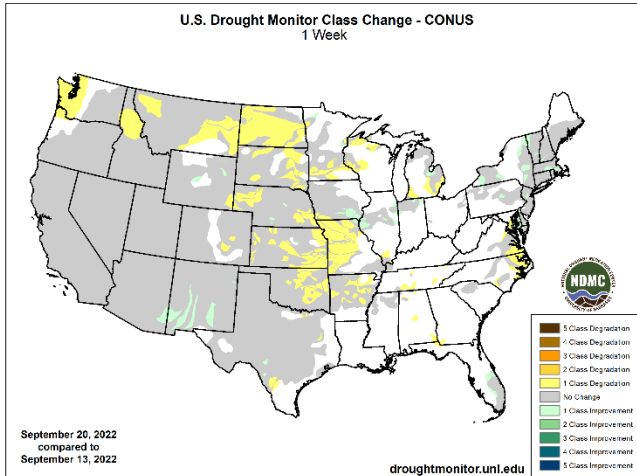
Source: National Drought Mitigation Center

“An upper-level ridge dominated the central contiguous U.S. (CONUS) during this U.S. Drought Monitor (USDM) week (September 14-20). It was bracketed by an upper-level trough which moved out of the Northeast early in the week, and a Pacific upper-level trough that moved into the West as the week progressed. Pacific weather systems moved across the northern states between the troughs. This pattern resulted in above-normal precipitation across much of the West and parts of the Northeast. Fronts associated with the Pacific systems triggered showers and thunderstorms across parts of the central and northern Plains to Mid and Upper Mississippi Valley. For the rest of the CONUS, a large dry air mass covered much of the southern Plains and East throughout the week. Rain occurred along a stationary front draped across Florida that was associated with the southern edge of the air mass, but for much of the South, Southeast, Mid-Atlantic, and Midwest regions it was a dry week. Temperatures averaged warmer than normal across the Plains to Great Lakes, and cooler than normal across much of the West, Southeast, and northern New England. A tropical system brought heavy rain to Puerto Rico and the Virgin Islands. Drought or abnormal dryness expanded or intensified across northern parts of the West, from the central and northern Plains to the Mid- and Upper Mississippi Valley, and over parts of the Mid-Atlantic coast. Drought or abnormal dryness contracted where it rained, especially in parts of Florida, New Mexico, and the Northeast, in a swath from Iowa to Illinois, and across Puerto Rico.”

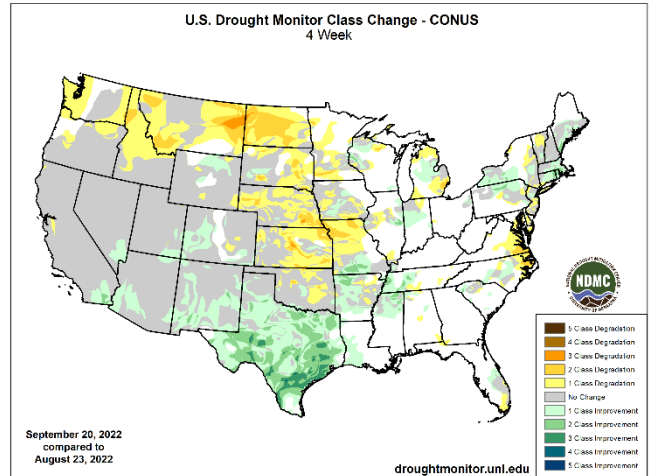
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

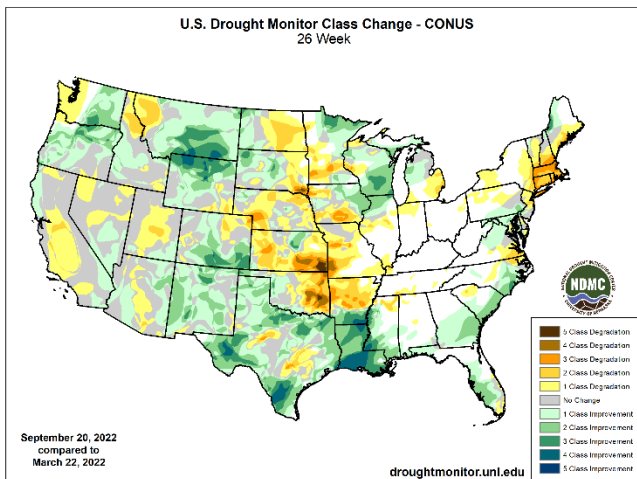
1 Week



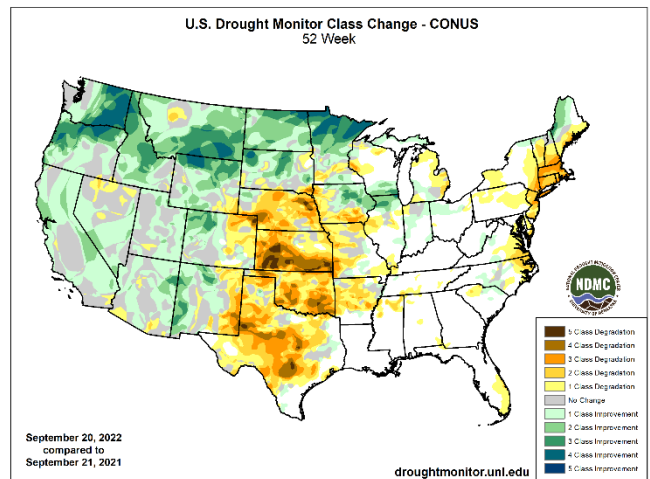
1 Month



6 Months



1 Year



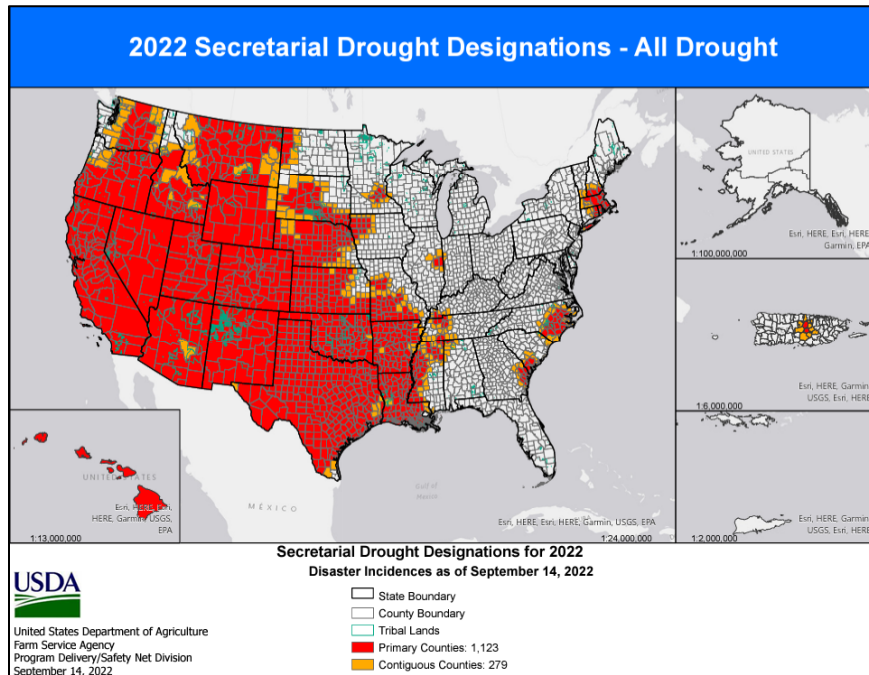
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

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



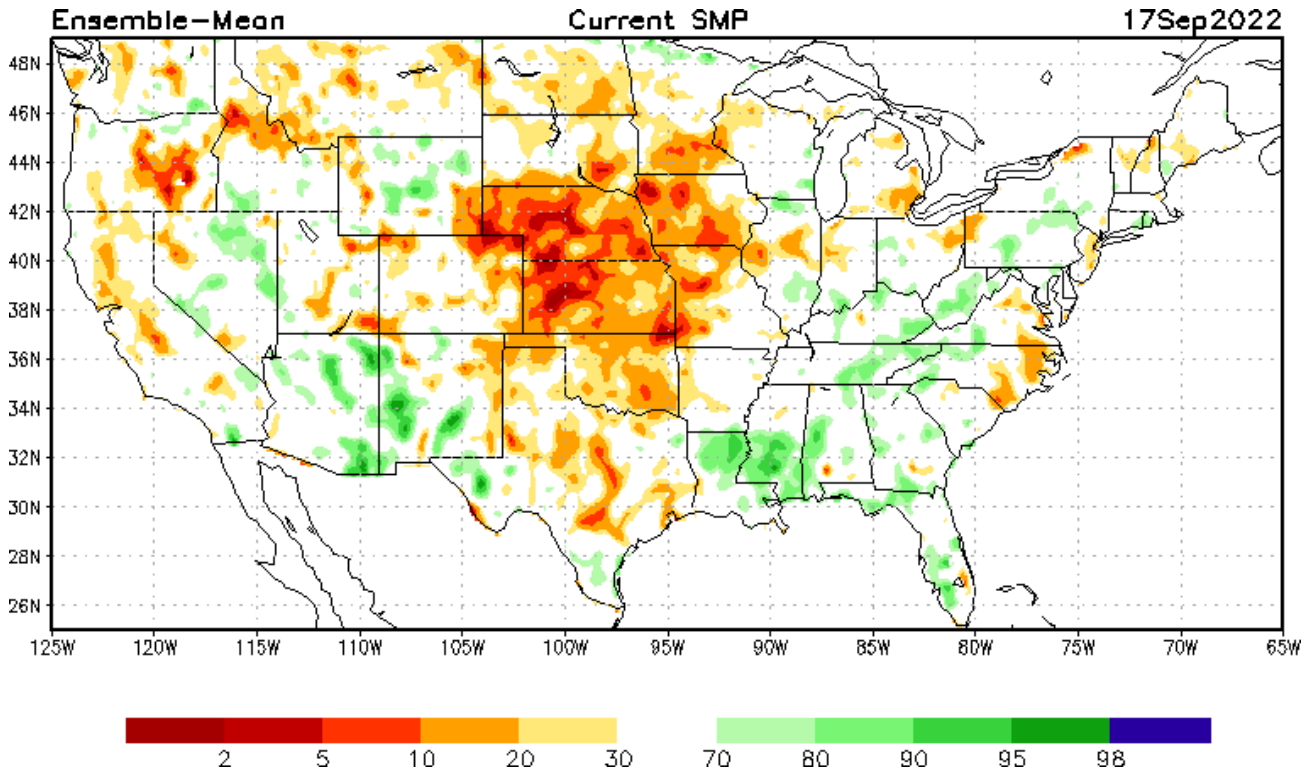
**Highlighted
Wildfire
Resources**

- [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

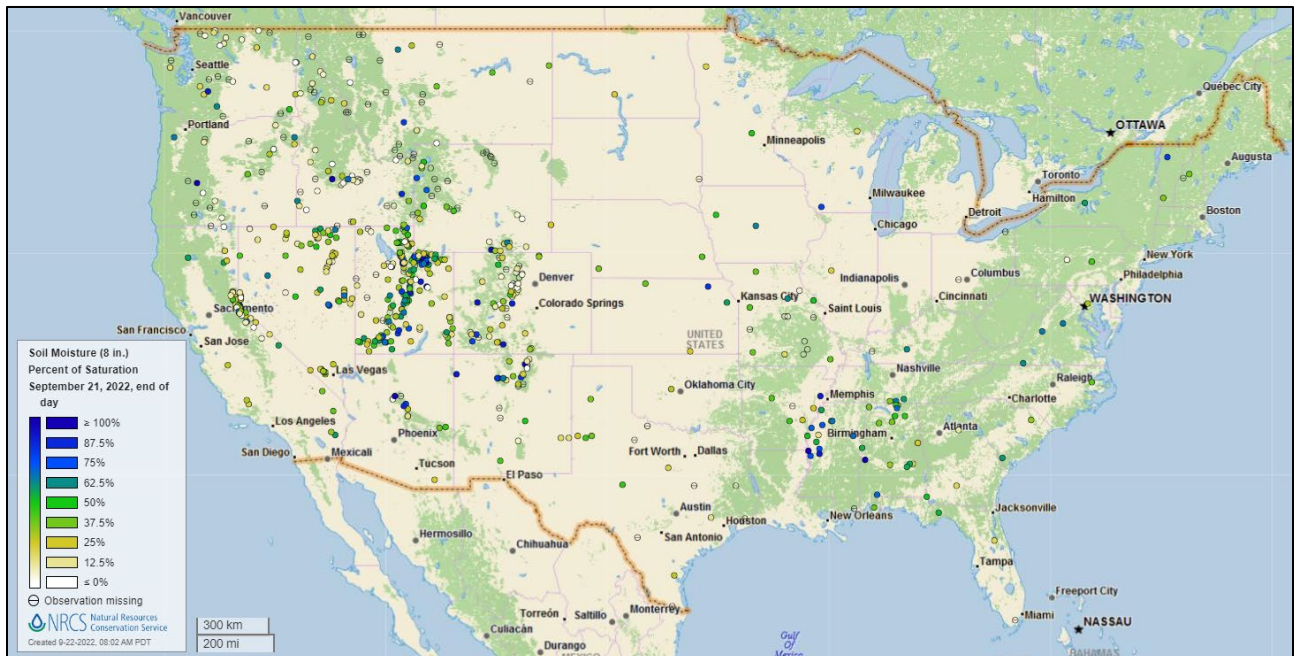


[Modeled soil moisture percentiles](#) as of September 17, 2022

Soil Moisture Percent of Saturation

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

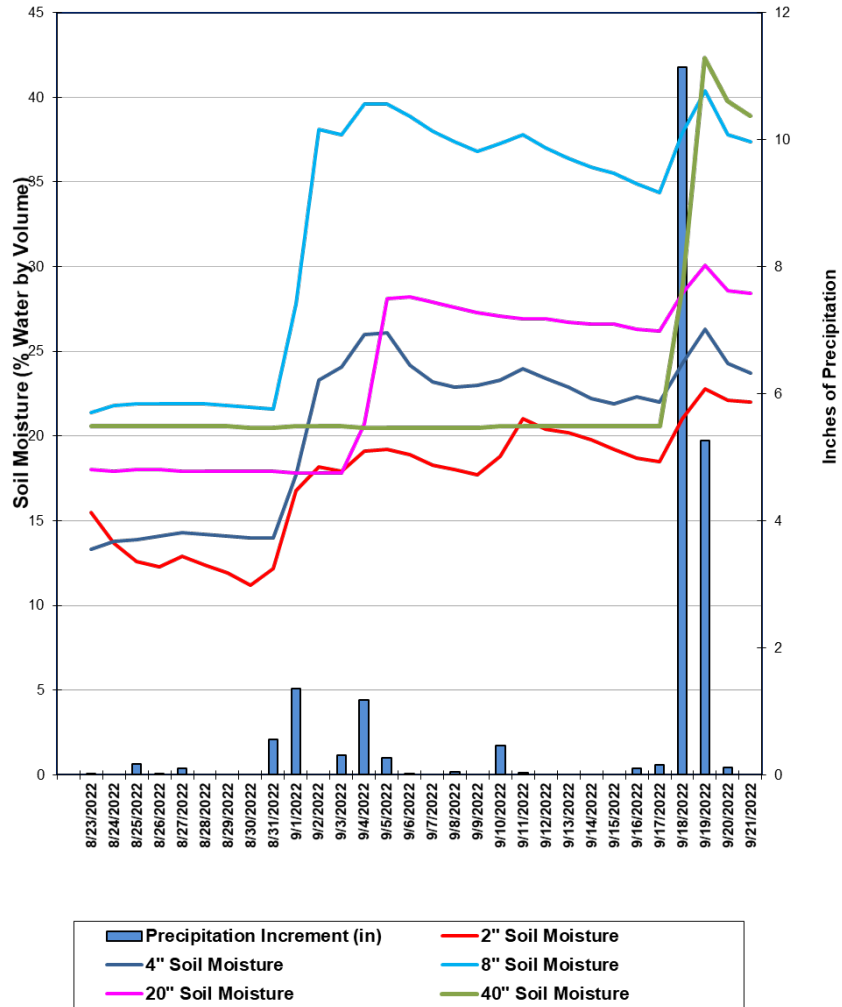
[U.S. soil moisture map at 8-inch depth:](#)



Soil Moisture

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

Fortuna, Puerto Rico (SCAN site 2122)
Daily Mean Soil Moisture vs. Daily Precipitation



This chart shows the precipitation and soil moisture for the last 30 days at the [Fortuna](#) SCAN site in Puerto Rico. Soil moisture levels increased at all sensor depths after the site received a staggering 11.14 inches of precipitation from Hurricane Fiona on September 18. Total precipitation for the period was 21.25 inches.

Soil Moisture Data Portals

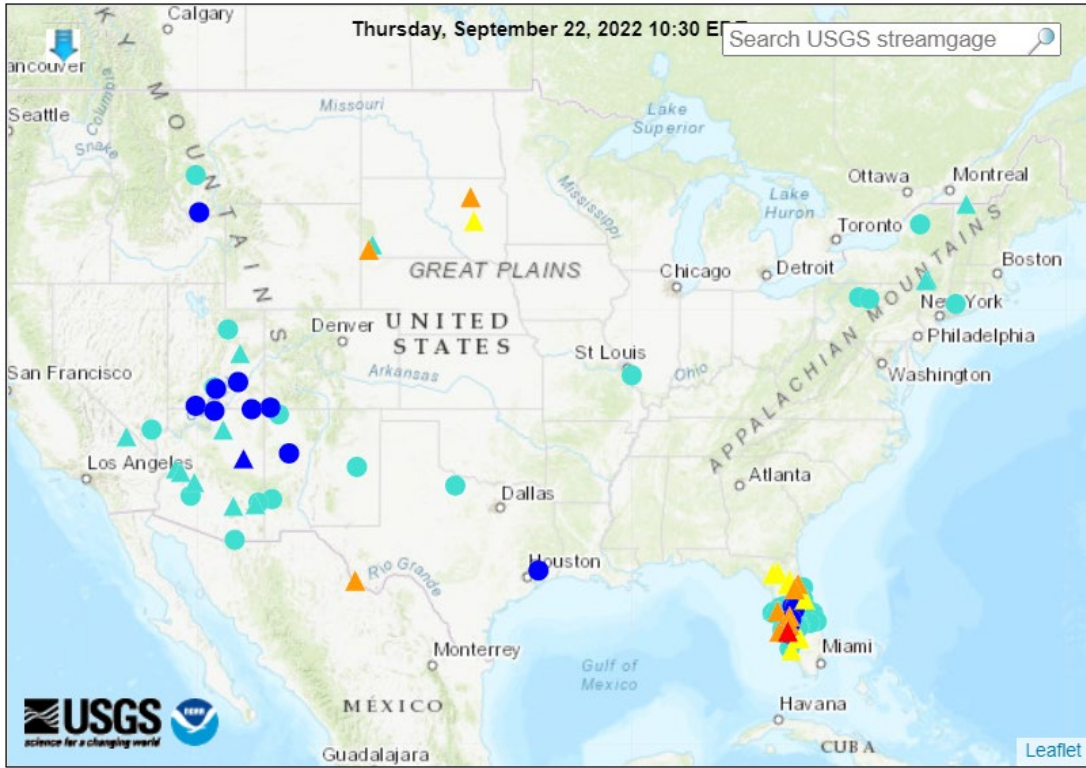
- [USCRN Soil Moisture](#)
- [National Soil Moisture Network](#)
- [NOAA Climate Prediction Center Soil Moisture](#)
- [NASA Grace](#)

Streamflow, Drought, Flood, and Runoff

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

Map of flood and high flow conditions

(11 in floods [moderate: 1, minor: 10], 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 without flood stage			△ Streamgage with flood stage			

[WaterWatch: Streamflow, drought, flood, and runoff conditions](#)

Reservoir Storage

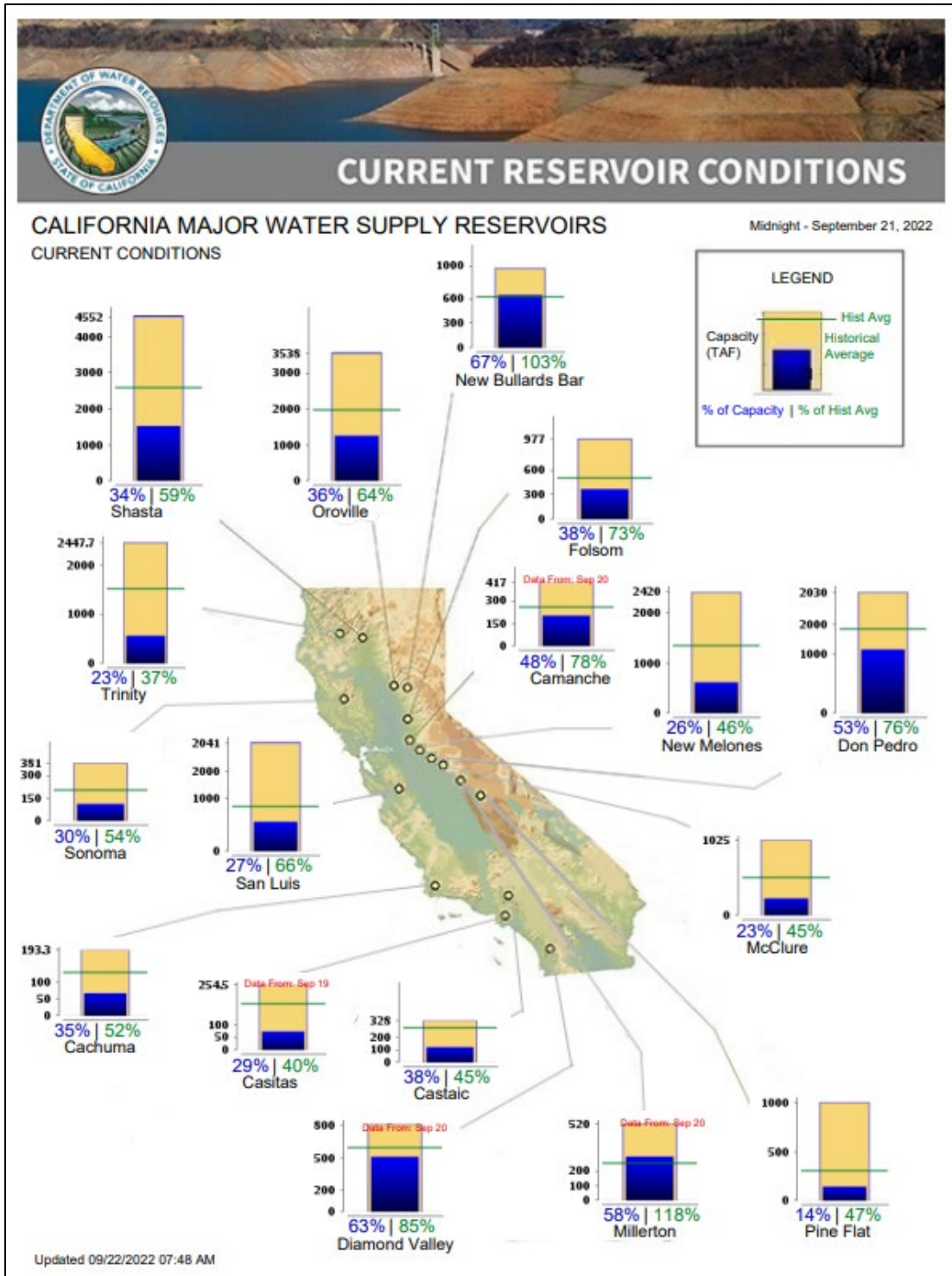
Hydromet Teacup Reservoir Depictions

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 22, 2022: “En route to a weekend strike on Atlantic Canada, Hurricane Fiona will pass well east of the U.S. East Coast. Meanwhile, a tropical wave over the southeastern Caribbean Sea will need to be monitored as it moves west-northwestward, likely becoming a named storm by early next week while approaching the Gulf of Mexico. Across the U.S. mainland, an active pattern across the North will feature scattered showers associated with a pair of fast-moving cold fronts. By early next week, however, any residual showers will be confined to the Great Lakes and Northeastern States. In the wake of both cold frontal passages, scattered frost may occur across the North. In contrast, hot, mostly dry weather will continue across the Deep South, especially in the western Gulf Coast region. By early next week, warm, dry weather will dominate the country, except for lingering cool conditions in the Midwest and Northeast. The NWS 6- to 10-day outlook for September 27 – October 1 calls for the likelihood of above-normal temperatures across Florida’s peninsula and from the Pacific Coast to the Mississippi River, while cooler-than-normal conditions will be confined to areas from the lower Great Lakes region, Ohio Valley, and middle Atlantic States into the Northeast. Meanwhile, near- or below-normal rainfall across most of the country should contrast with wetter-than-normal weather in the Four Corners region, as well as the southern Atlantic States.”

Weather Hazards Outlook: [September 24 – 28, 2022](#)

Source: NOAA Weather Prediction Center

















U.S. Day 3-7 Hazards Outlook

[About the Hazards Outlook](#)

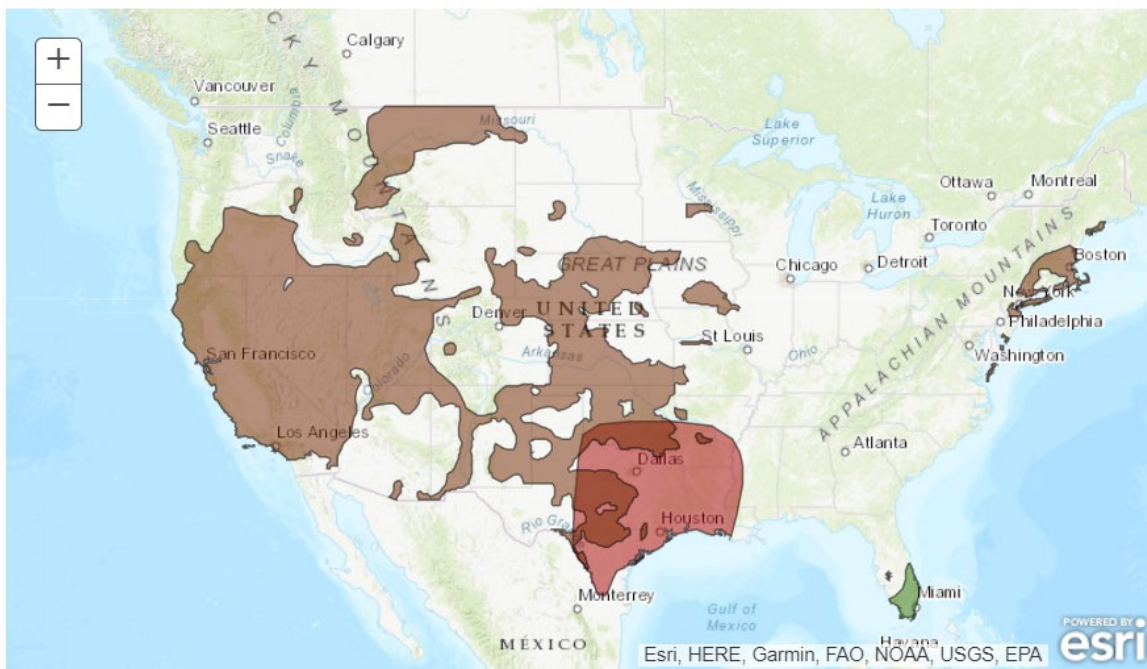
Created September 21, 2022

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 24, 2022 - September 28, 2022

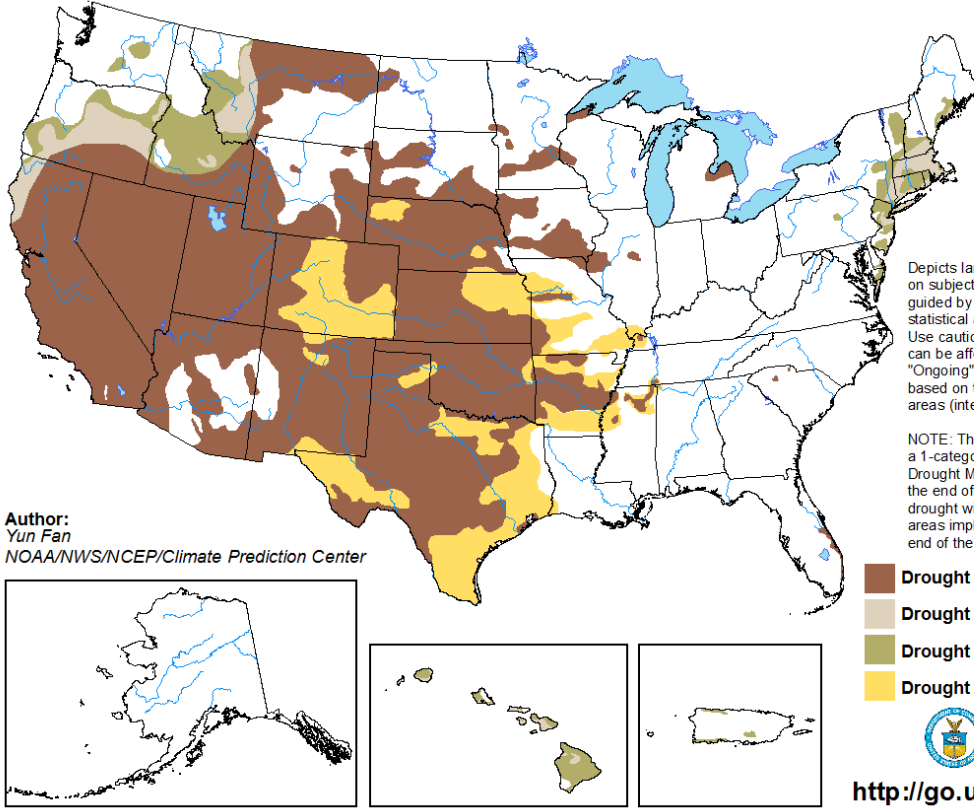


Seasonal Drought Outlook: [September 15 – December 31, 2022](#)

Source: National Weather Service

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

Valid for September 15 - December 31, 2022
Released September 15

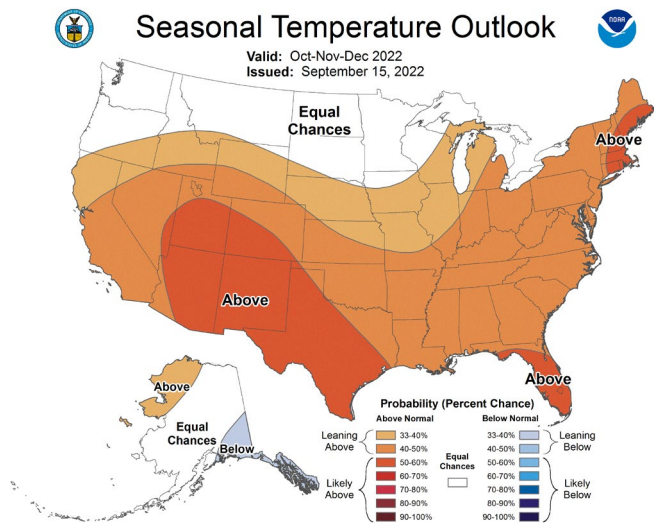
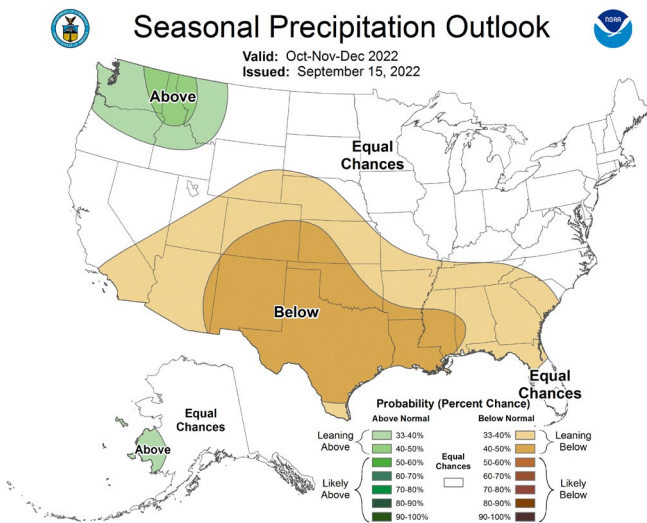


Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation

Temperature



[October-November-December 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](#).