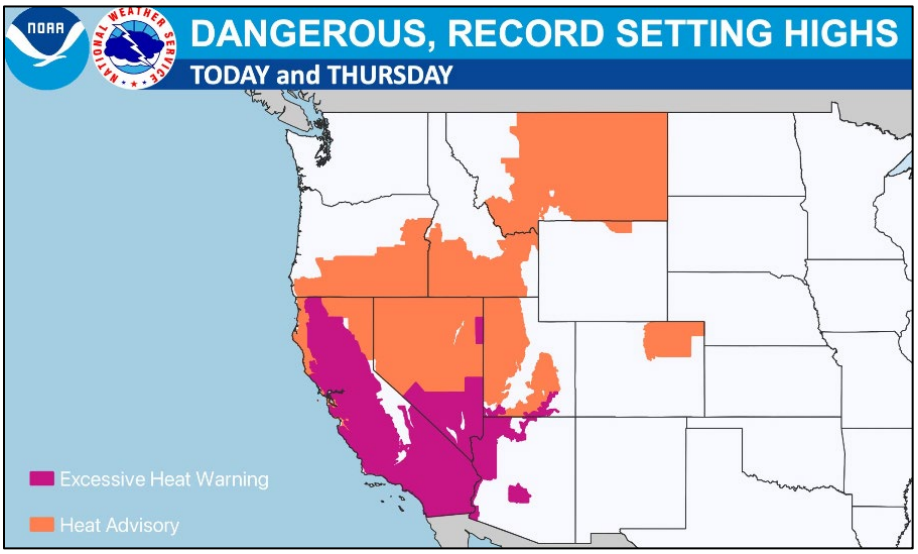
United States Department of Agriculture

Water and Climate Update

September 8, 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.

The West Swelters in Record Heat



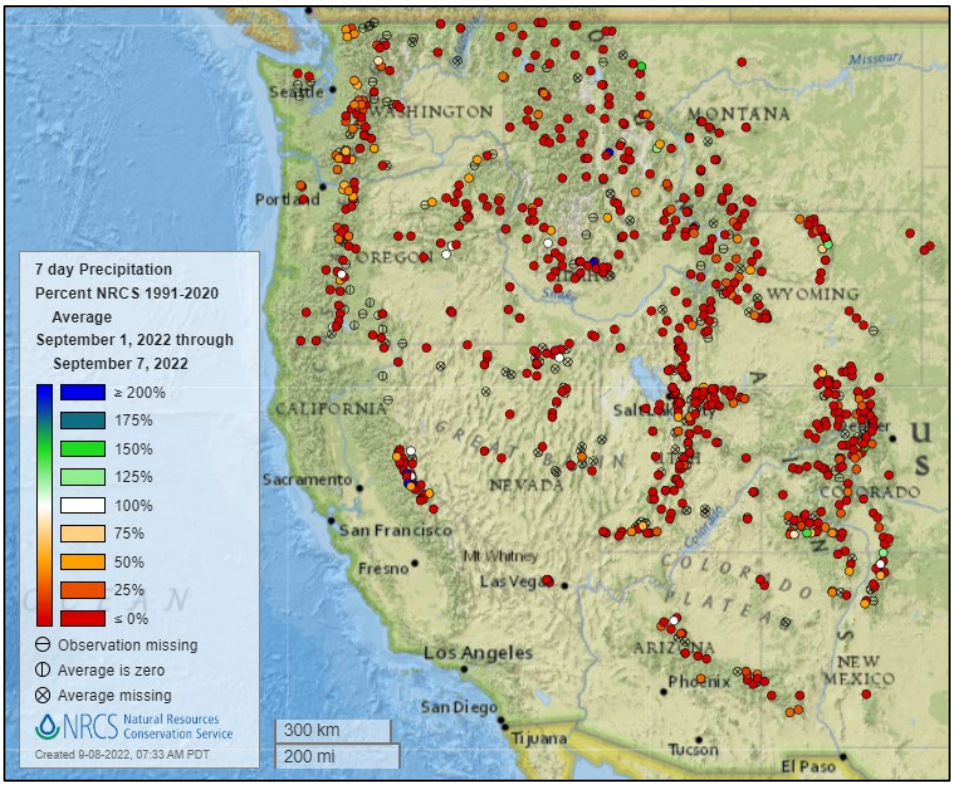
A historic early-September heatwave has been blanketing the Western U.S. Records were set for many areas this past week with nearly 54 million people under excessive heat warnings and advisories across the region. The heat has been both excessive and persistent, with triple digit temperatures impacting many areas throughout the West. California has experienced especially high temperatures for over a week, which may be the worst heatwave on record for the state. Sacramento, CA endured an all-time record high temperature of 116°F on September 6. California experienced multiple days over 110°F during the heatwave. High temperature records were reported in almost every state in the West during the period.

Related:

The heat wave scorching California may be the worst in its history and now an approaching hurricane threatens to fan already raging wildfires – CNN
Historic, unforgiving Western heat wave is peaking and crushing records – The Washington Post
"Dangerous" heat wave breaks at least a dozen records in California as state prepares for hottest day yet – CBS News
September swelter: Dangerous heat wave continues to roast West – UPI
Blazing record Labor Day heat grips the Bay Area; Fairfield hits 117° – CBS News (CA)
Utah's heat wave is getting worse and crushing records – Axios
Cities in Oregon break records for summer heat – KGW 8 (OR)
Blast of late summer heat hits Colorado, bringing near-record temperatures – 7News (CO)
Record-Breaking Heat Wave Continues To Bake SE Wyoming – KGAB (WY)
More than 50 million in West at risk for prolonged heat wave – Yahoo!News
High fire danger across Montana as heat sets in for weekend – AP

Precipitation

Last 7 Days, NRCS SNOTEL Network

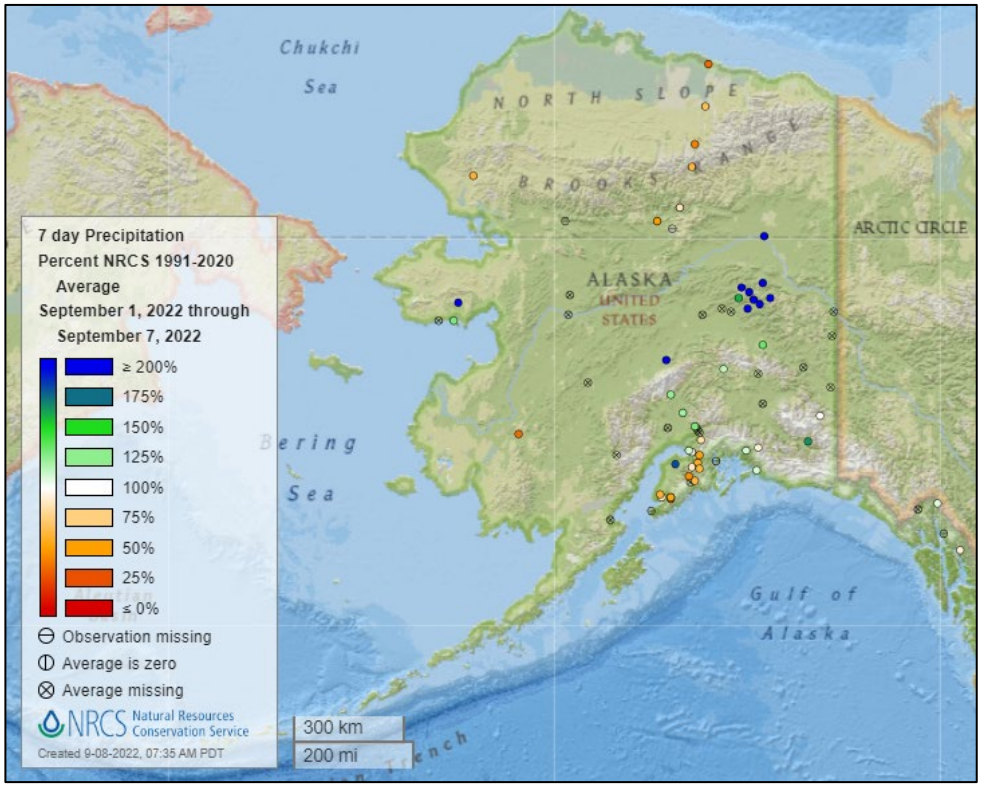


[7-day precipitation percent of average map]

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]

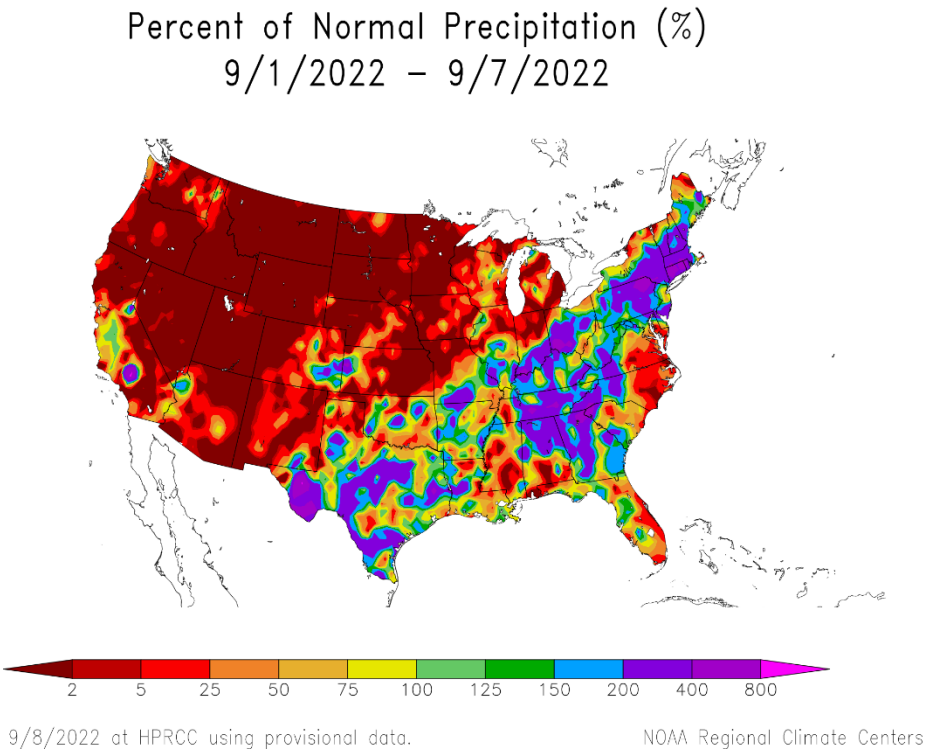


Last 7 Days, National Weather Service (NWS) Networks

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]

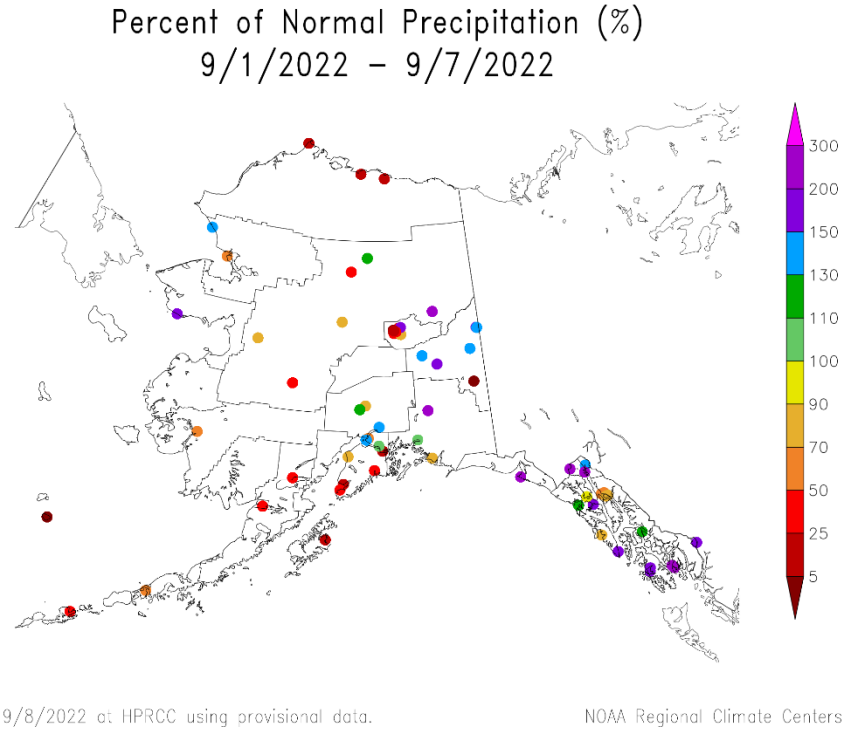


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

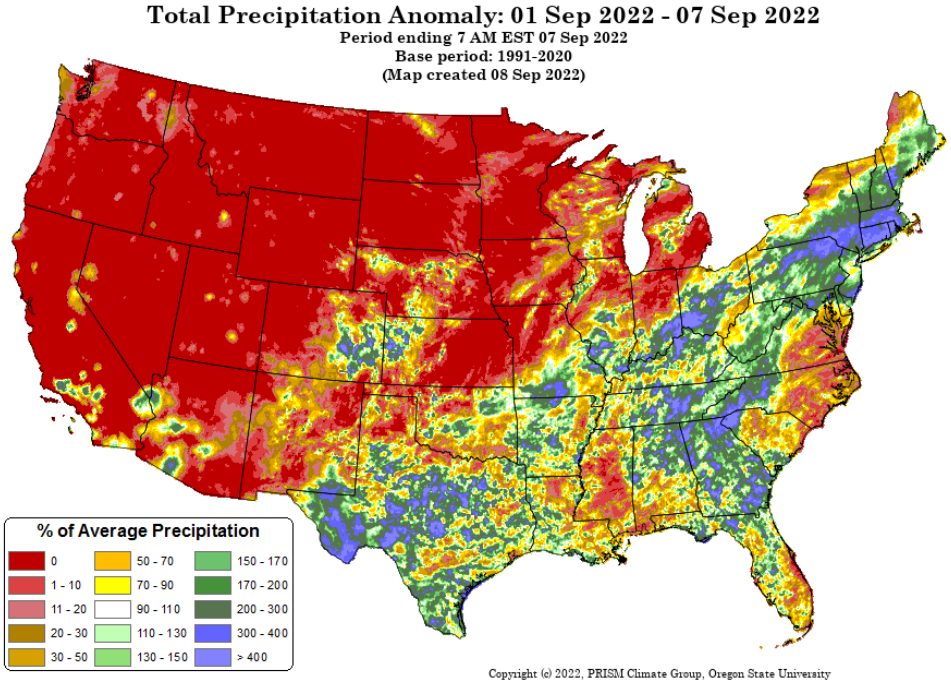
[7-day precipitation percent of normal map] for Alaska.

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



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

Source: PRISM

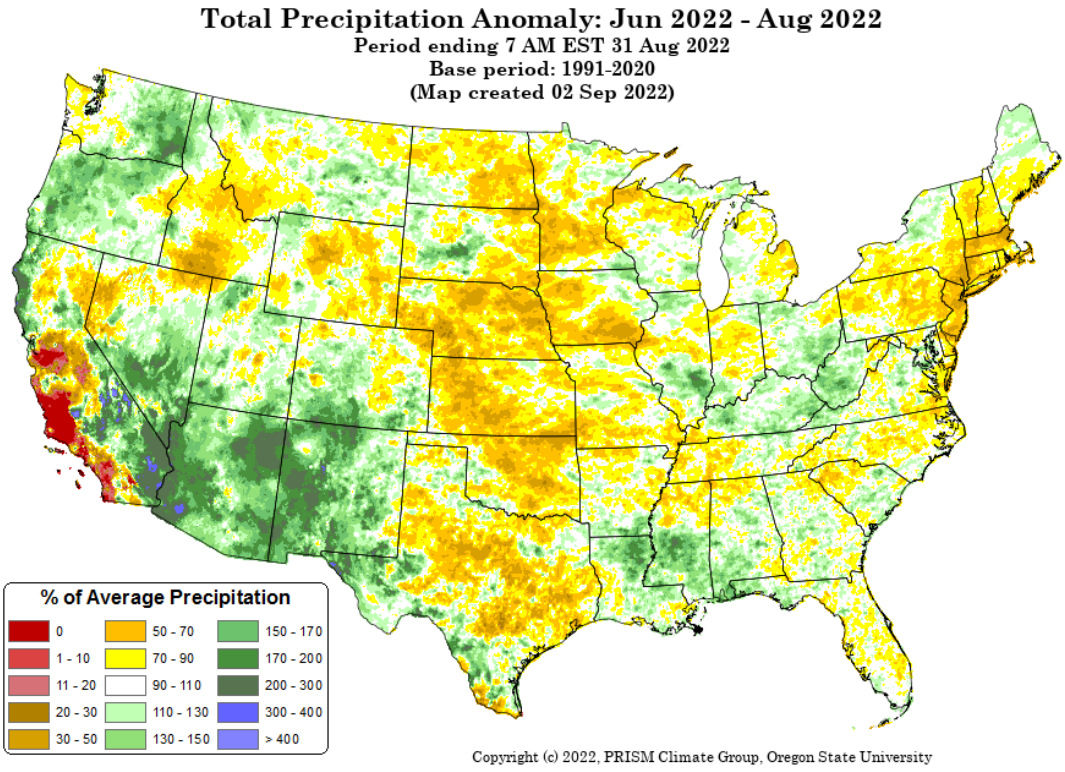


Month-to-date national total precipitation anomaly map

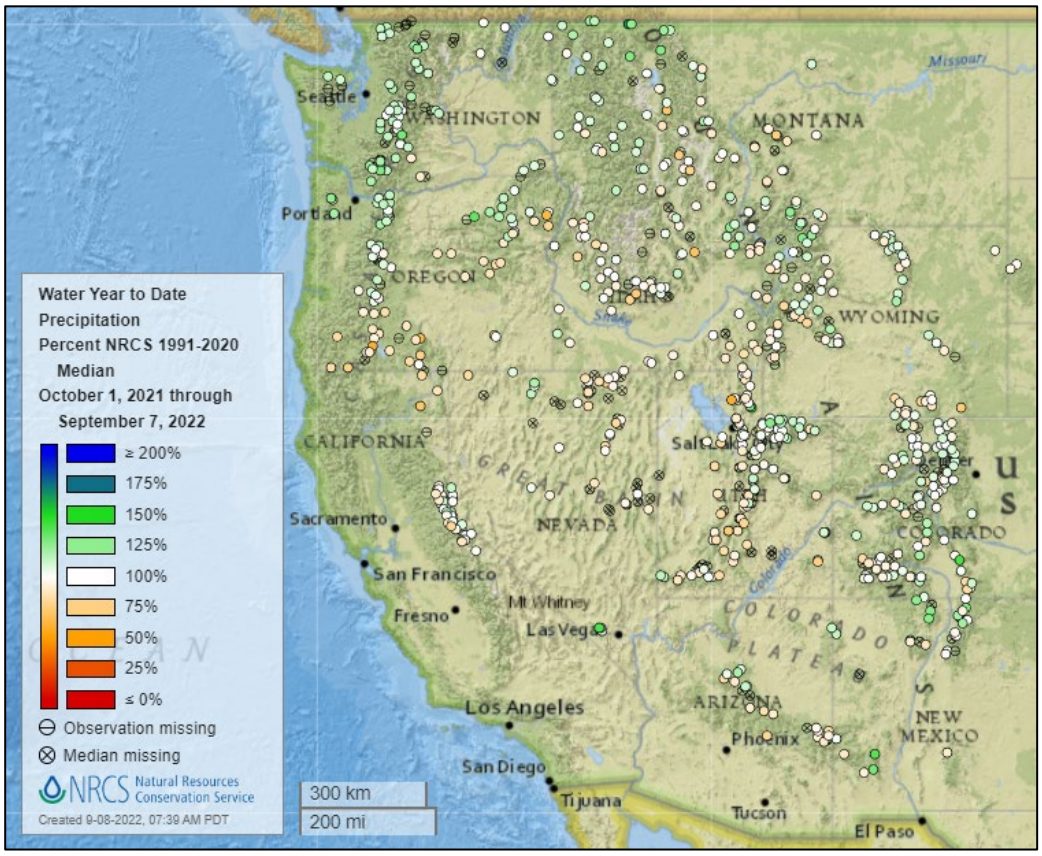
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

June through August 2022 precipitation anomaly map



Water Year-to-Date, NRCS SNOTEL Network

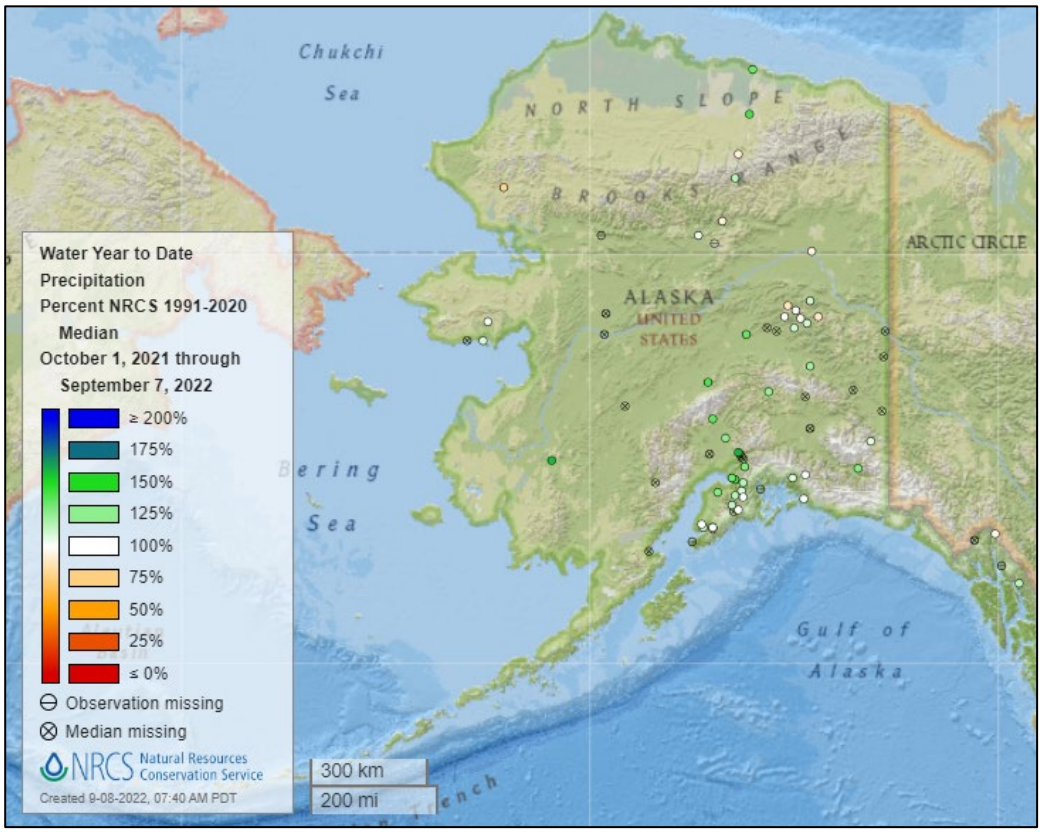


[2022 water year-to-date precipitation percent of median map]

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]

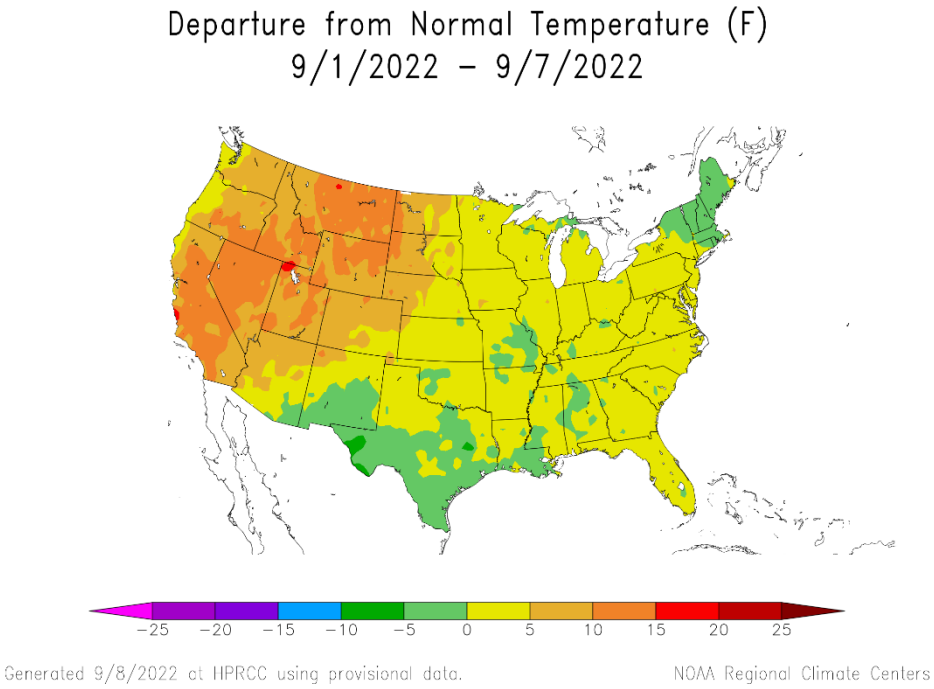
Temperature

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

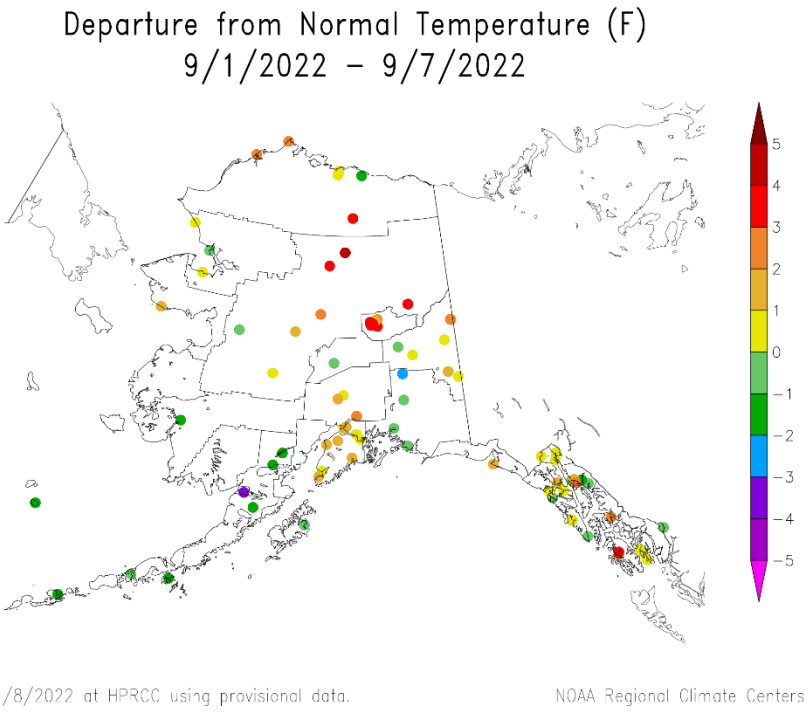


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

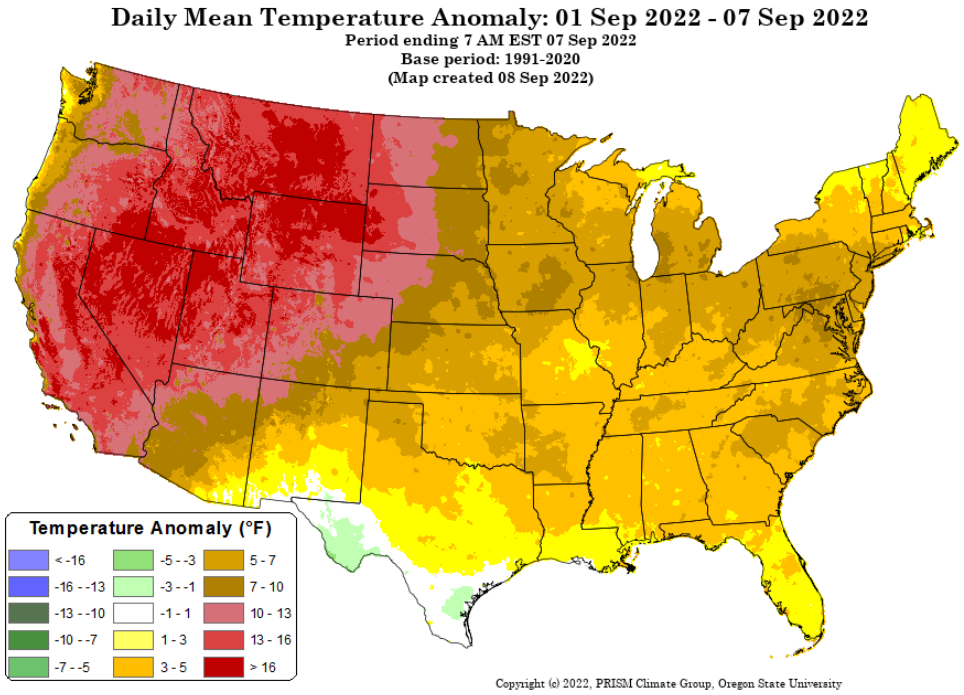
See also: 7-day temperature (° F) map



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

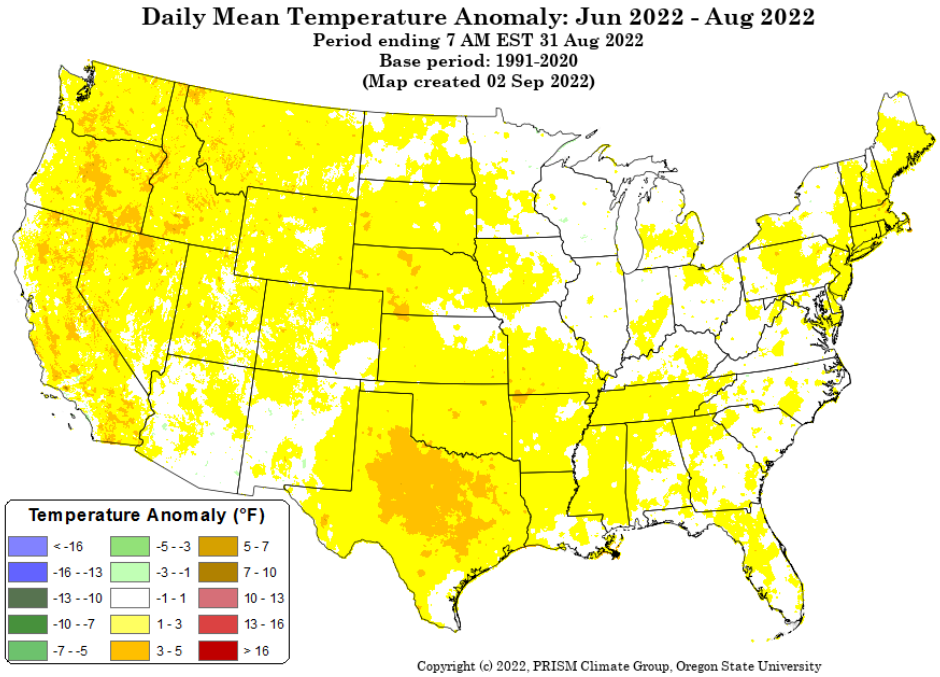
Source: PRISM

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



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

Source: PRISM

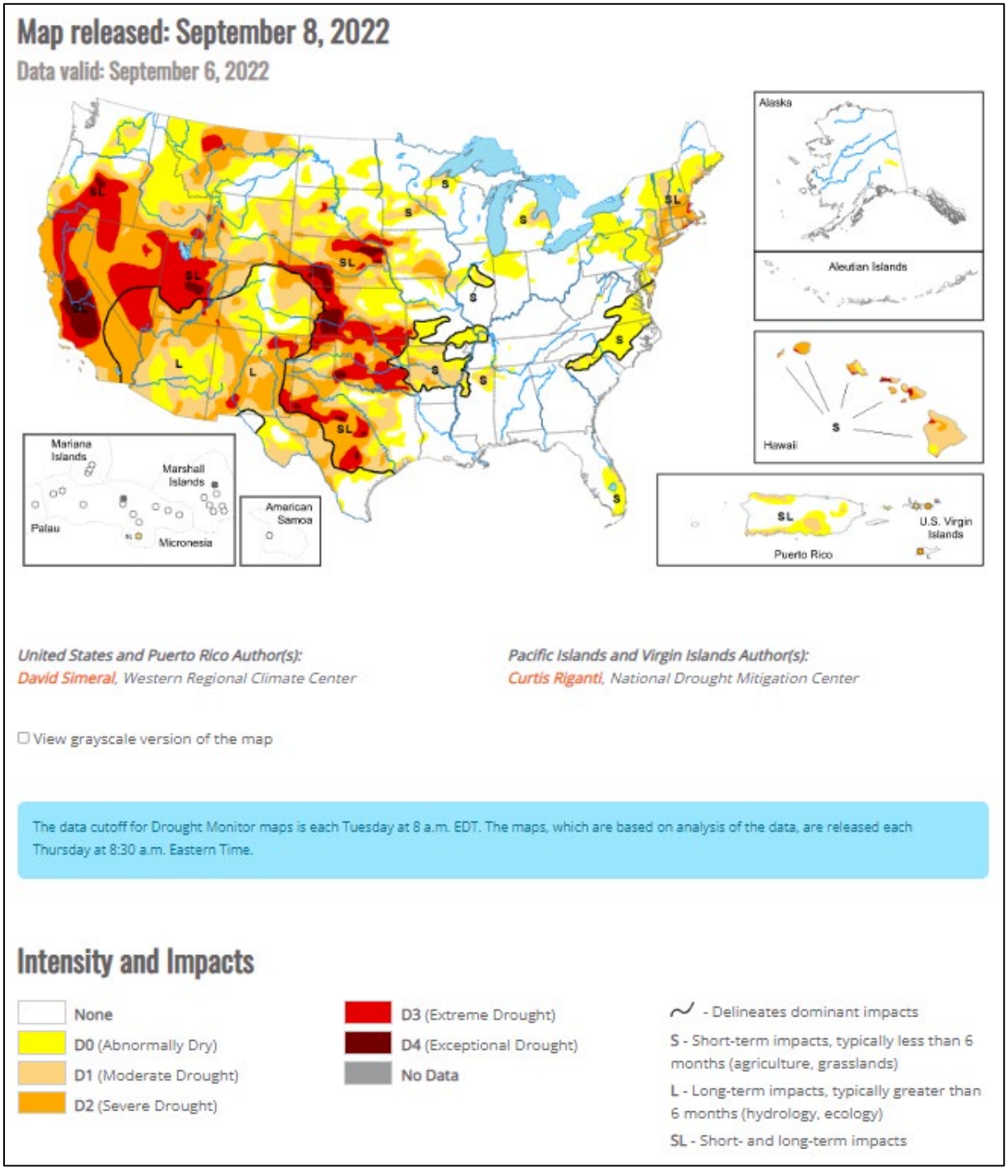


[June through August 2022 daily mean temperature anomaly map]

Drought

U.S. Drought Monitor
Source: National Drought Mitigation Center

U.S. Drought Portal
Source: NOAA



Current National Drought Summary, September 06, 2022

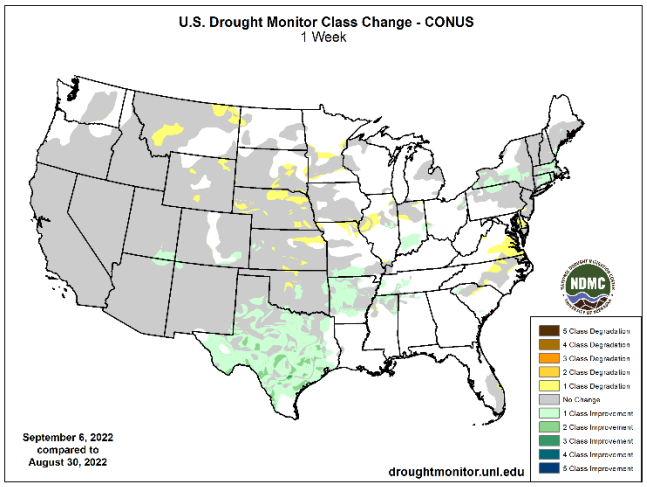
Source: National Drought Mitigation Center

“This U.S. Drought Monitor (USDM) week saw continued improvements on the map across areas of the South, including Texas, in response to another round of localized heavy rainfall during the past week. Overall, the recent rainfall in Texas throughout the past month has started to make a significant dent in the state’s drought conditions in some areas. In contrast, drought conditions intensified in areas of the central and northern Plains with additional degradations on this week’s map. In these areas, recent drought impact reports submitted to the National Drought Mitigation Center indicated drought-related impacts within the agricultural sector including reduced crop yields as well as deteriorating pasture and rangeland conditions. Out West, the big story of the past week has been the heat wave that has impacted the region with record-setting temperatures and critical fire-weather conditions. The hot temperatures and strong winds exacerbated conditions on the Mill Fire, which broke out in Northern California on Friday, forcing the evacuation of the town of Weed, California as well as neighboring communities. In Death Valley, California, high temperatures exceeded 125 deg F multiple times during the past week including on September 1st when the high temperature reached 127 deg F—potentially breaking the record for the hottest temperature ever recorded during September, according to preliminary reports. Elsewhere, shower activity in the Northeast led to isolated improvements in drought-affected areas of Massachusetts and Connecticut, while further to the south conditions deteriorated on the map in Delaware. In the Midwest, short-term precipitation deficits and declining soil moisture levels led to the expansion of areas of drought in northern Missouri and central Illinois.”

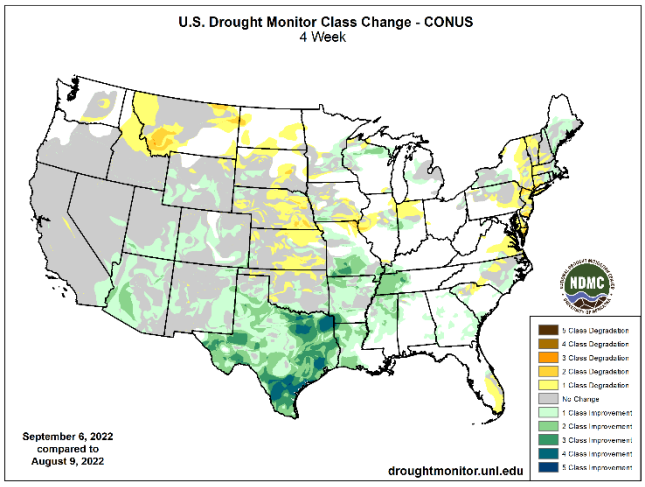
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

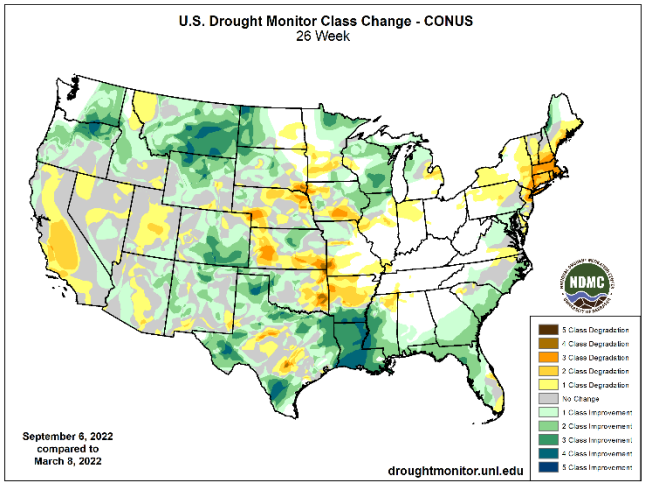
1 Week



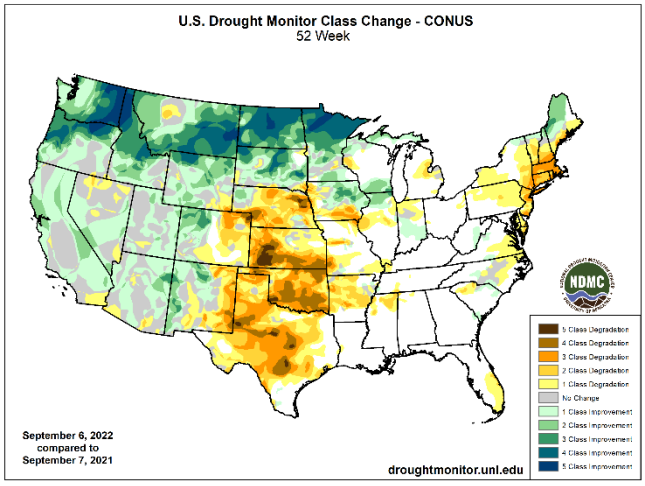
1 Month



6 Months



1 Year



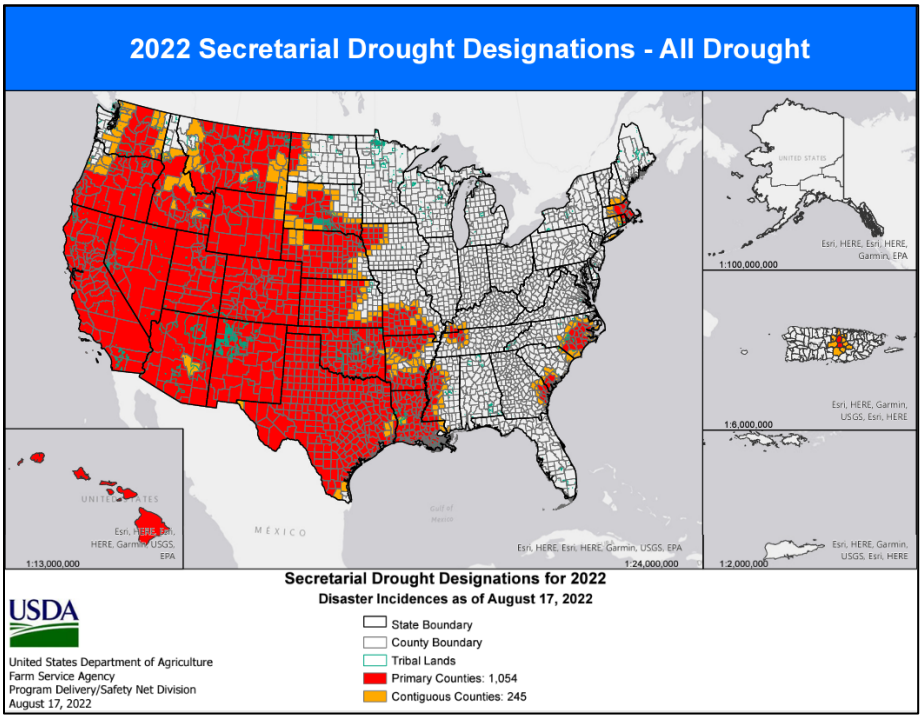
Changes in drought conditions over the last 12 months for the contiguous U.S.

Highlighted Drought Resources

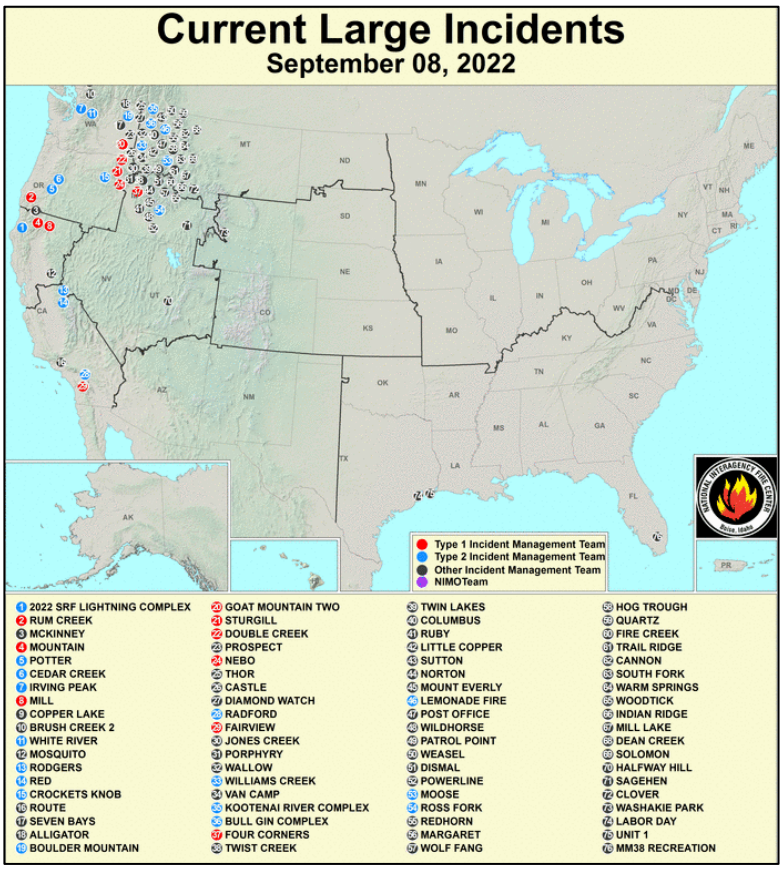
- Drought Impact Reporter
- Quarterly Regional Climate Impacts and Outlook
- U.S. Drought Portal Indicators and Monitoring
- U.S. Population in Drought, Weekly Comparison
- USDA Disaster and Drought Information

USDA Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: USDA Forest Service Active Fire Mapping



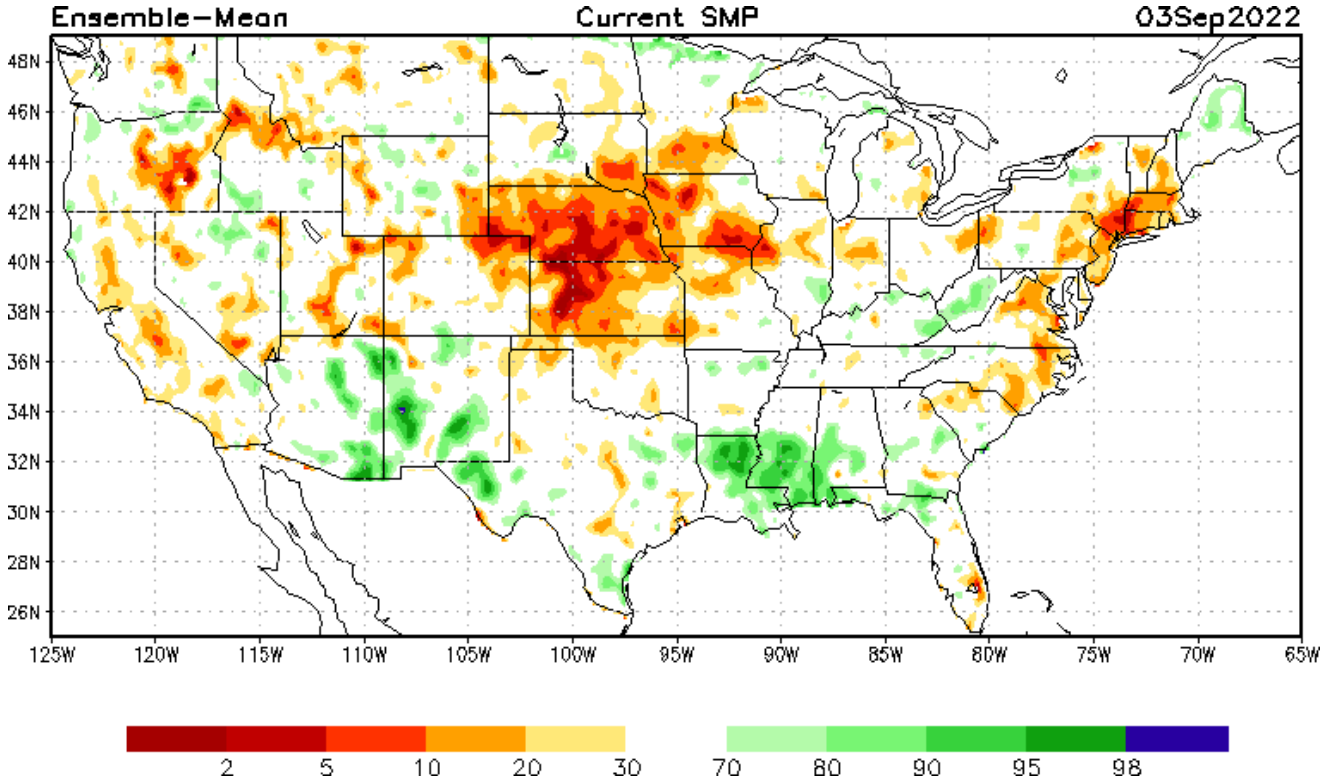
Highlighted Wildfire Resources

- 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

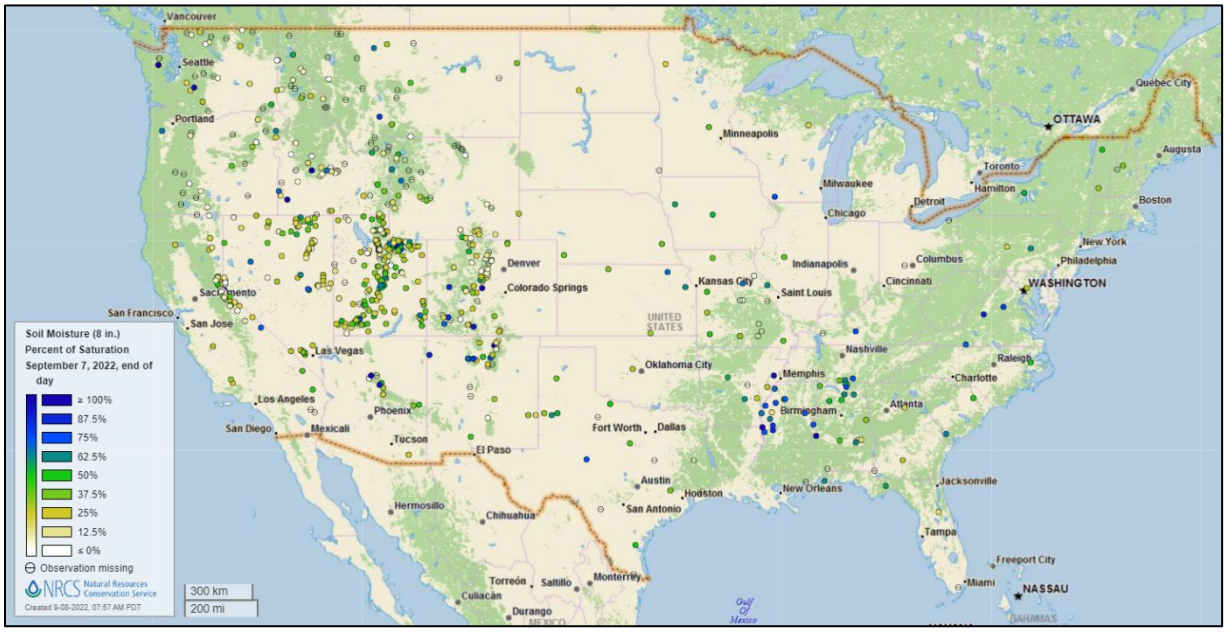


Modeled soil moisture percentiles as of September 03, 2022

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)

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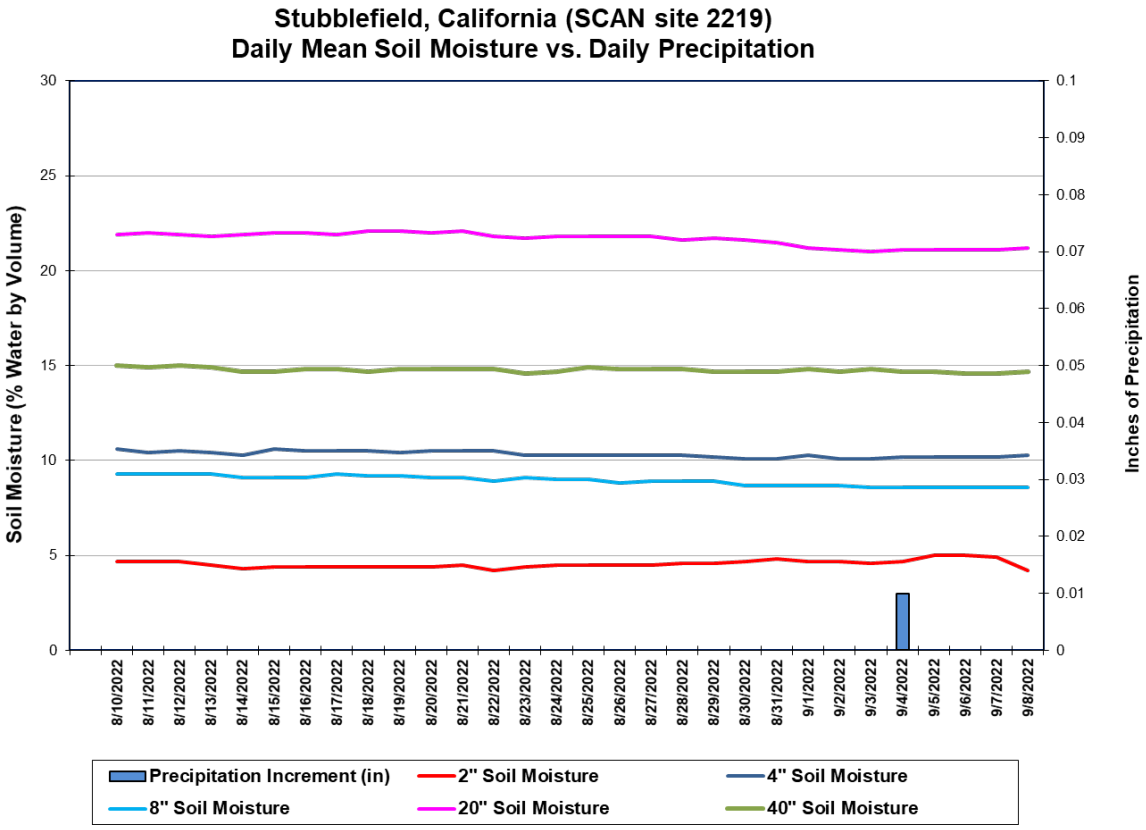


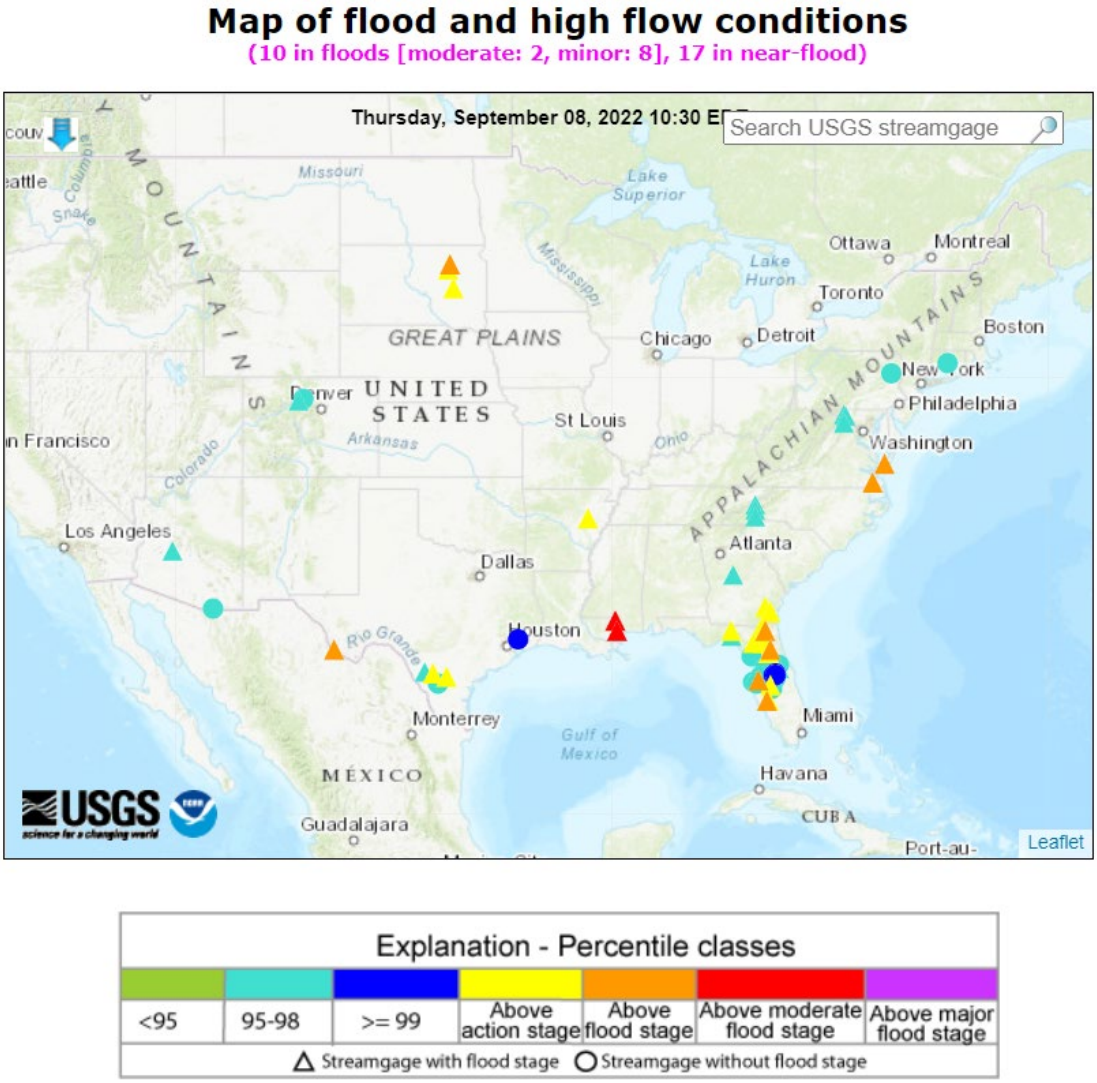
This chart shows the precipitation and soil moisture for the last 30 days at the Stubblefield SCAN site in California. There was little-to-no change in the soil moisture at any sensor depth over the period. The area experienced just one small precipitation event during the period of 0.01 inches on September 9.

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]



[WaterWatch: Streamflow, drought, flood, and runoff conditions]

Reservoir Storage

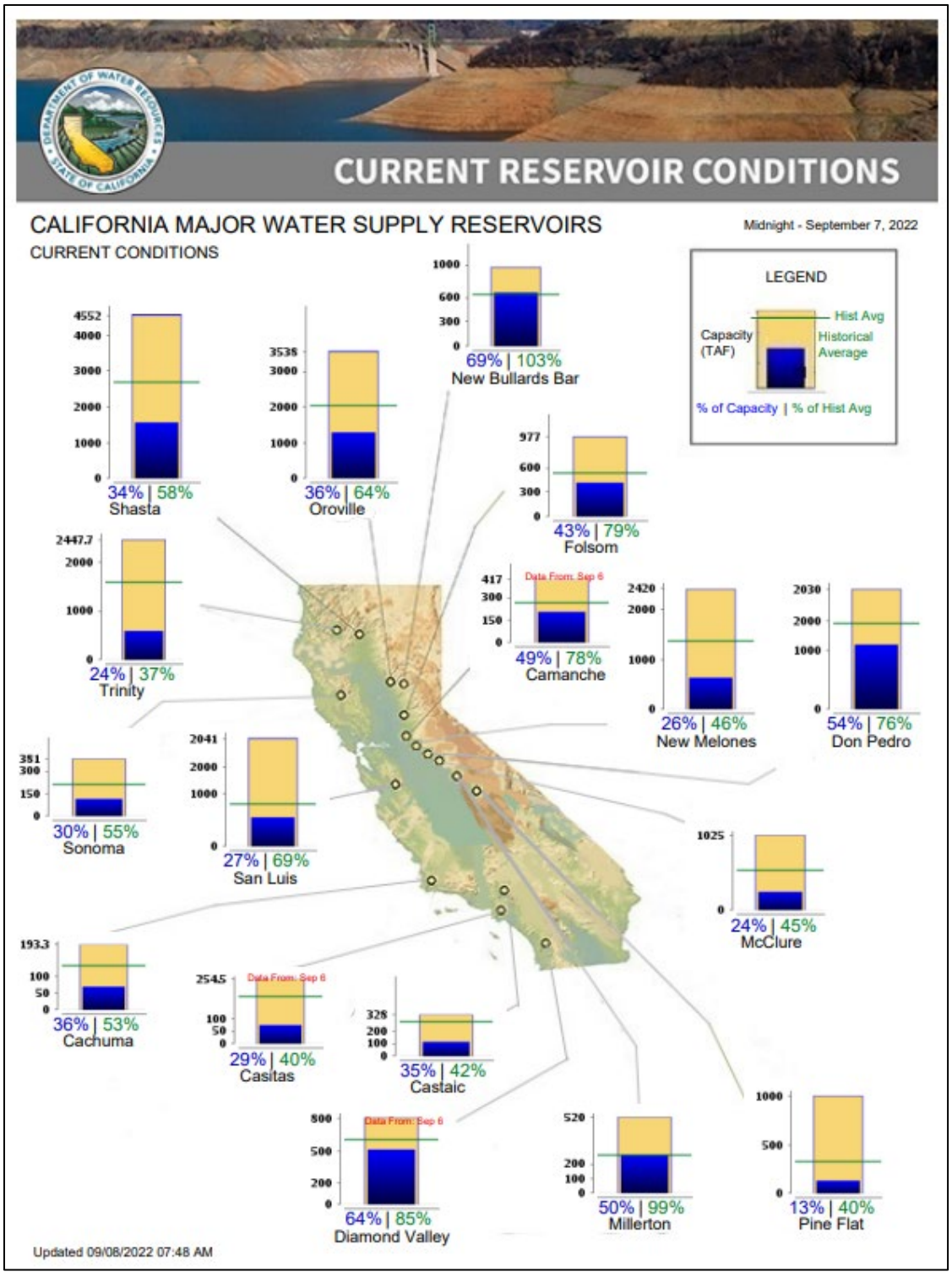
Hydromet Teacup Reservoir Depictions

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

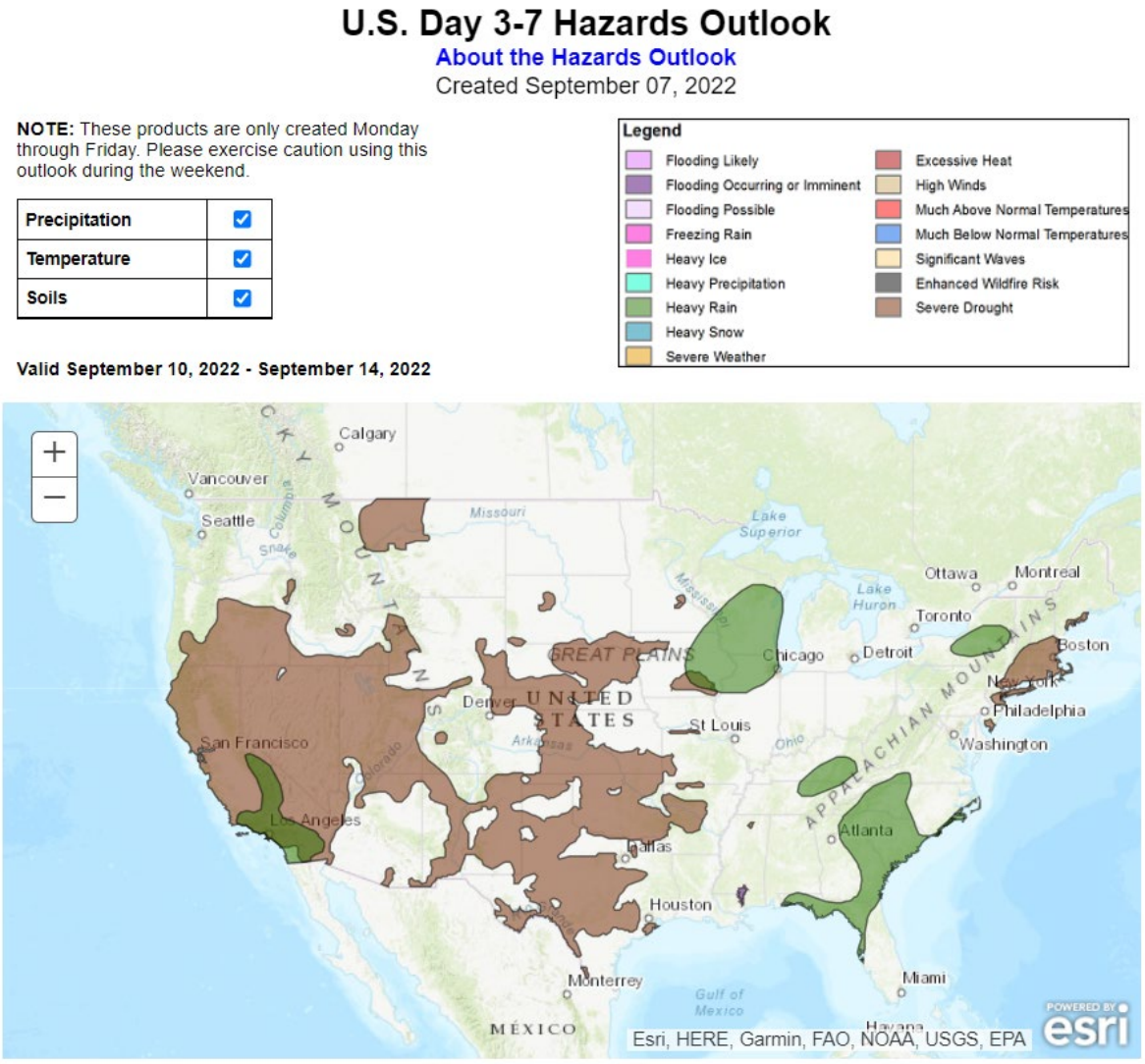
Agricultural Weather Highlights

Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, Thursday, September 8, 2022: "During the next couple of days, a strong surge of cool air will engulf much of the nation's mid-section, including the Plains and Midwest. On Friday, high temperatures will remain below 60°F in parts of Montana. During the weekend, temperatures may not reach 70°F in portions of the upper Midwest. Meanwhile, an impressive Western heat wave will gradually break, although temperatures near 110°F will linger through Friday as far north as California's Sacramento Valley. Farther south, Hurricane Kay will soon weaken and eventually dissipate, although remnant tropical moisture could result in heavy rain and flash flooding in southern California and the Desert Southwest, starting on Friday. Elsewhere, the cold front currently crossing the northern Plains will begin to interact with lingering moisture in the Southeast. As a result, 5-day rainfall totals could reach 2 to 4 inches or more from Florida to the Carolinas, while spotty but locally heavy showers will dot the Midwest and the remainder of the Southeast. Little or no rain will fall during the next 5 days in the Northwest, as well as the south-central U.S. The NWS 6- to 10-day outlook for September 13 – 17 calls for the likelihood of near- or above-normal temperatures nationwide, except for cooler-than-normal conditions along the Pacific Coast and in parts of the Southeast. Meanwhile, below-normal rainfall from the southern half of the Plains into the Southeast should contrast with wetter-than-normal weather in the Northeast, northern High Plains, and much of the West."

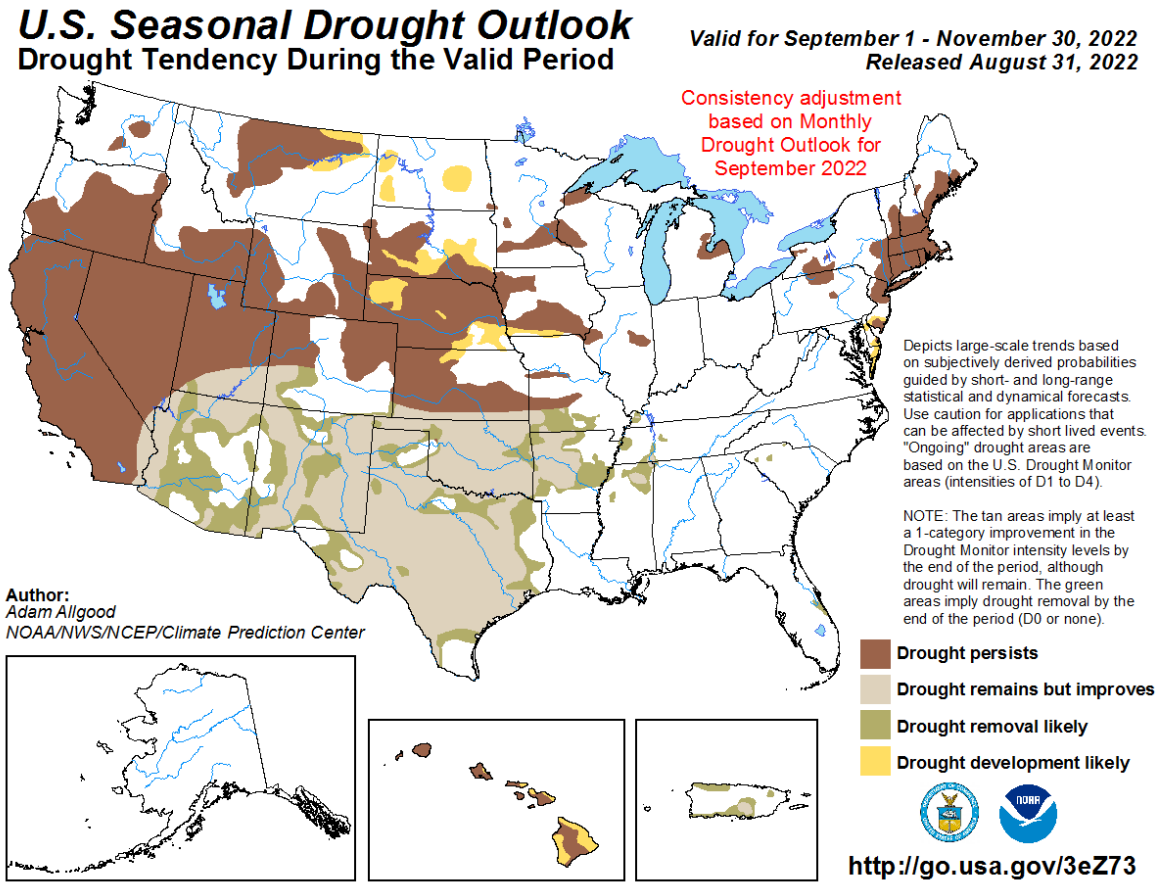
Weather Hazards Outlook: September 10 – 14, 2022

Source: NOAA Weather Prediction Center



Seasonal Drought Outlook: [September 1 – November 30, 2022]

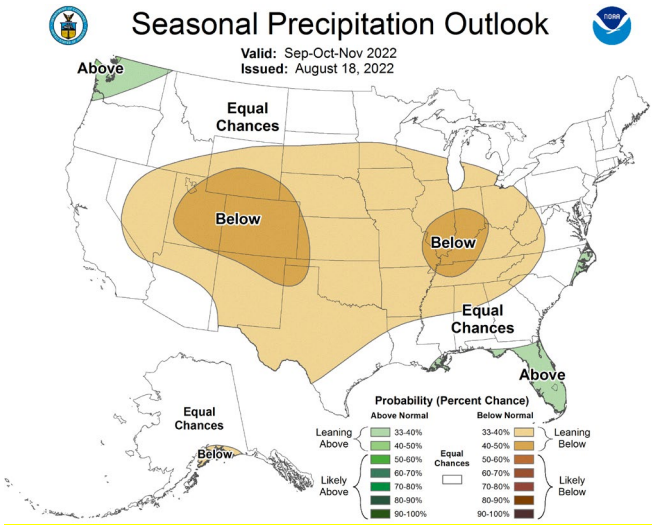
Source: National Weather Service



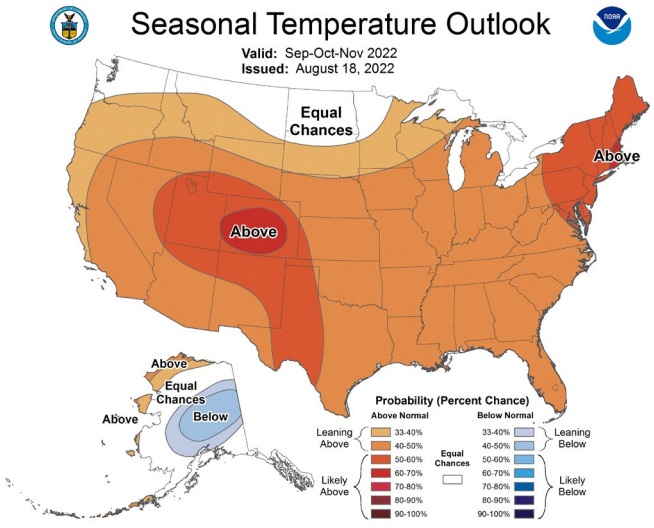
Climate Prediction Center 3-Month Outlook

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.