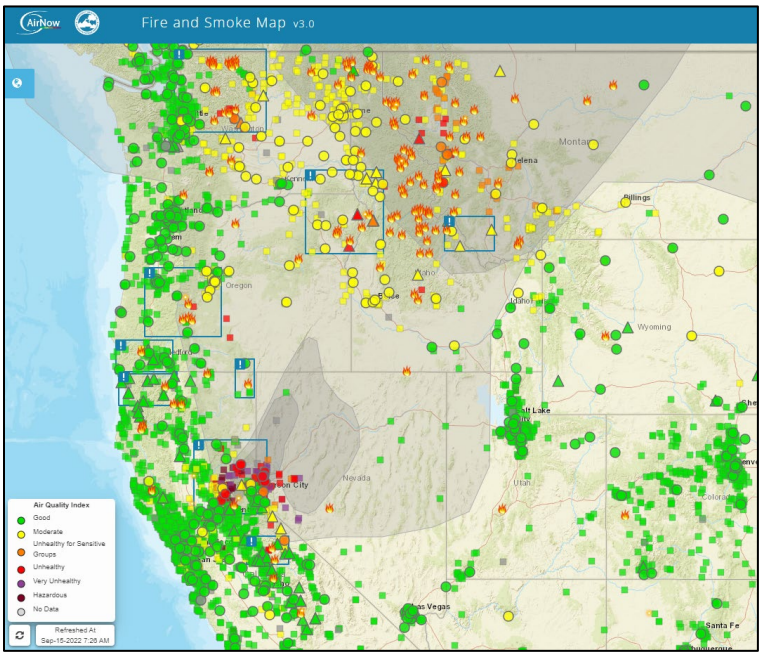
United States Department of Agriculture

Water and Climate Update

September 15, 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.

Western Wildfire Smoke Impacts Air Quality Across the U.S.



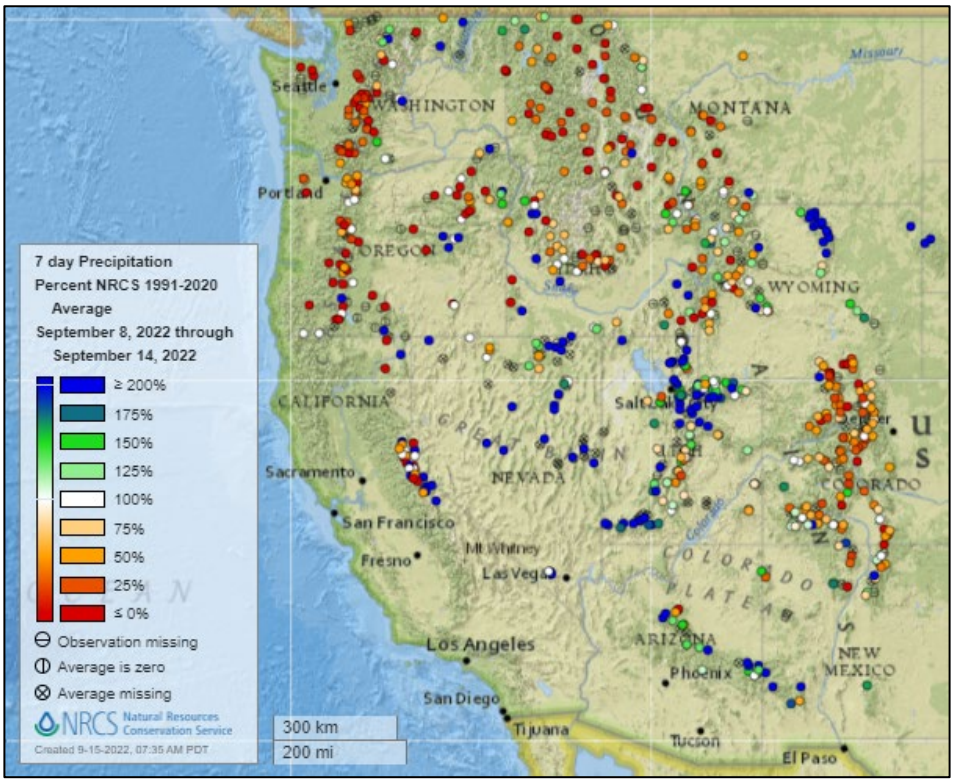
The western U.S. is currently experiencing 91 large wildfires burning over 854,000 acres, with more than 20,000 firefighters assigned to combat the blazes. The Double Creek Fire in eastern Oregon is currently the largest wildfire in the U.S., burning 156,195 acres as of September 15. Smoke plumes from these wildfires have prompted hazardous air quality advisories in parts of California, Nevada, Oregon, Washington, Idaho, Wyoming, and Montana. Schools closed in Reno, Nevada and the surrounding area after the National Weather Service issued a special weather statement for unhealthy-to-hazardous air quality in the region. Dilute amounts of the wildfire smoke have reached parts of the eastern U.S.

Related:

Firefighters battle 11 major California wildfires, including Mosquito and Fairview – CBS News
Wildfires in Oregon and Washington State Prompt Evacuation Orders – Wall Street Journal
Satellite images show ravages of Western wildfires - SPACE
34 wildfires in Idaho contributing to over 200,000 acres burned – KBOI Boise (ID)
Western wildfires leave 14,000 people under evacuation orders, but cooling weather starts to help – CBS News
Smoke from western fires fuels dangerous air quality - The Washington Post.
Smoke from the Mosquito Fire begins creating unhealthy to hazardous conditions in Northern California - CNN
Smoke From California Wildfires Closes Schools in Reno Area – US News and World Report
Northwest wildfire smoke sweeps east over Upper Midwest bringing poor air quality – Yahoo News.

Precipitation

Last 7 Days, NRCS SNOTEL Network

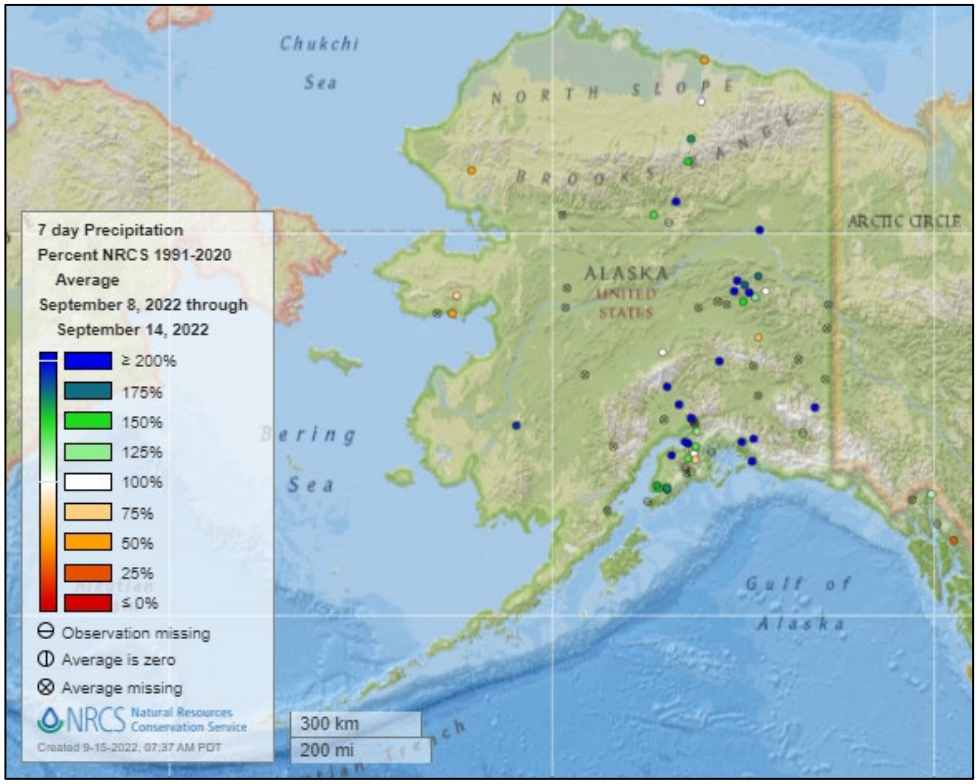


[7-day precipitation percent of average map]

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]

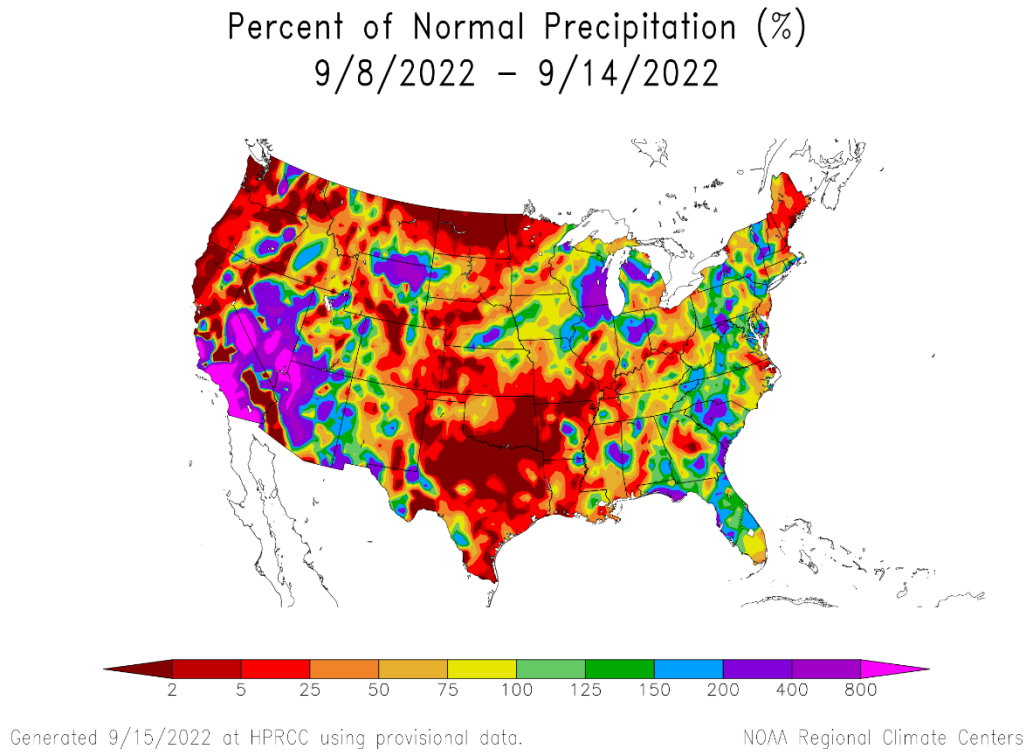


Last 7 Days, National Weather Service (NWS) Networks

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]

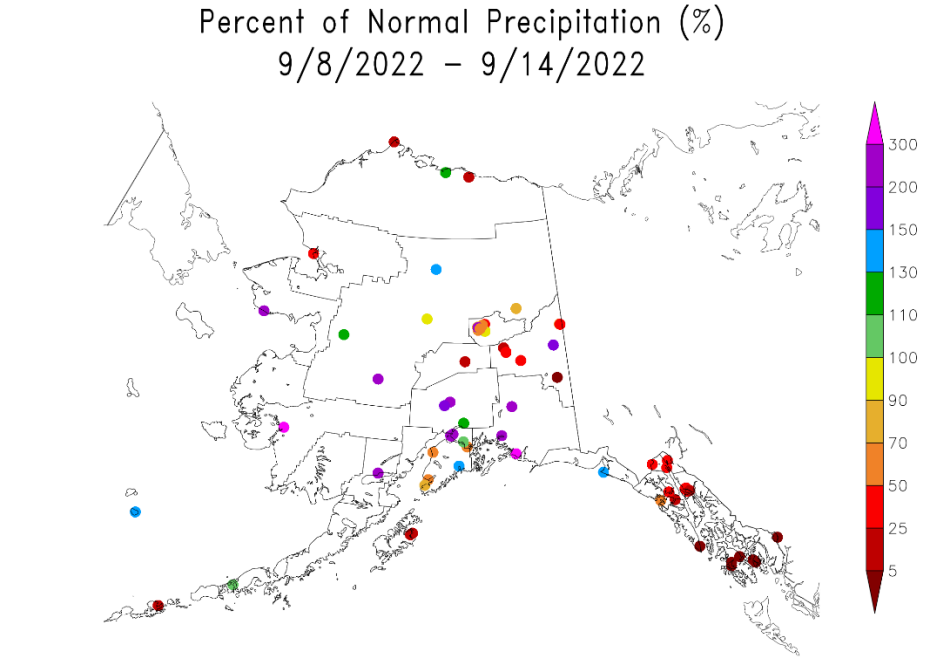


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

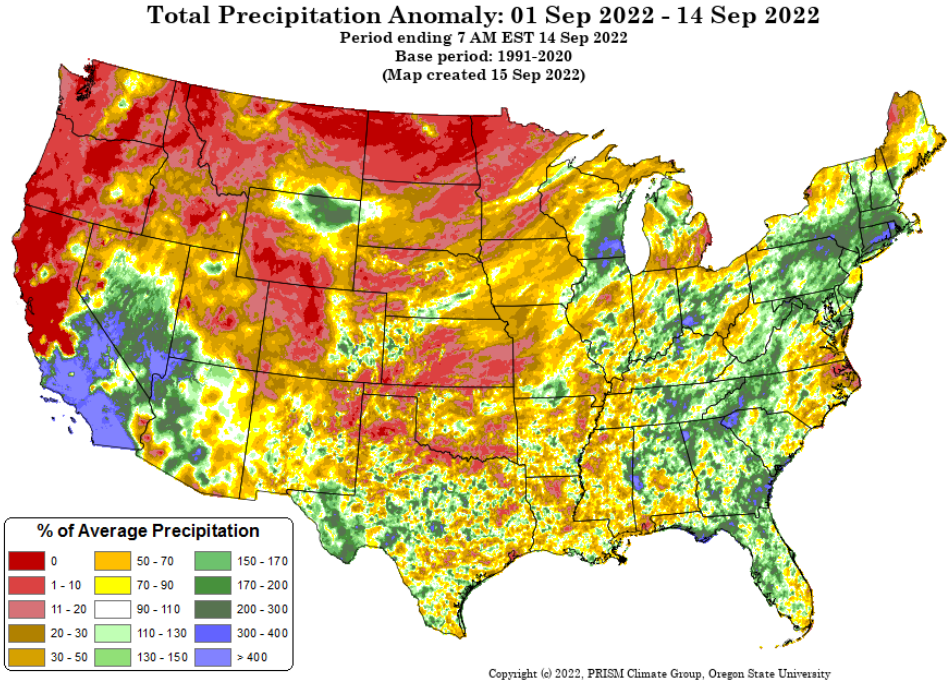
[7-day precipitation percent of normal map] for Alaska.

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



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

Source: PRISM

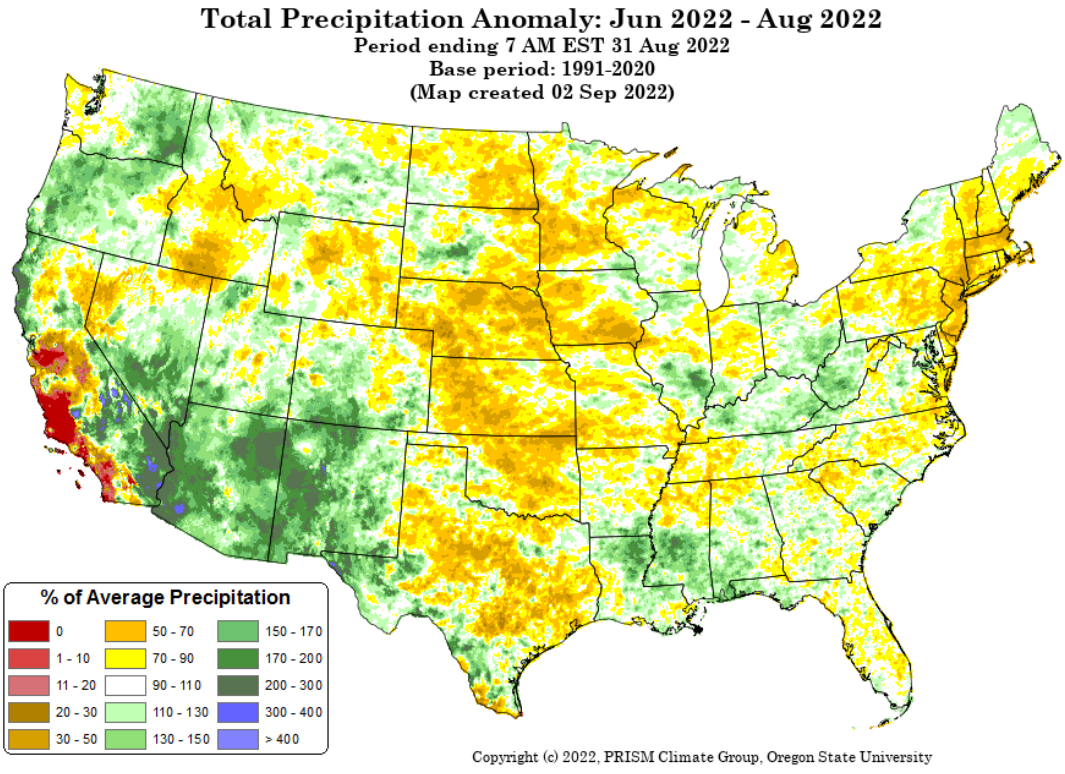


Month-to-date national total precipitation anomaly map

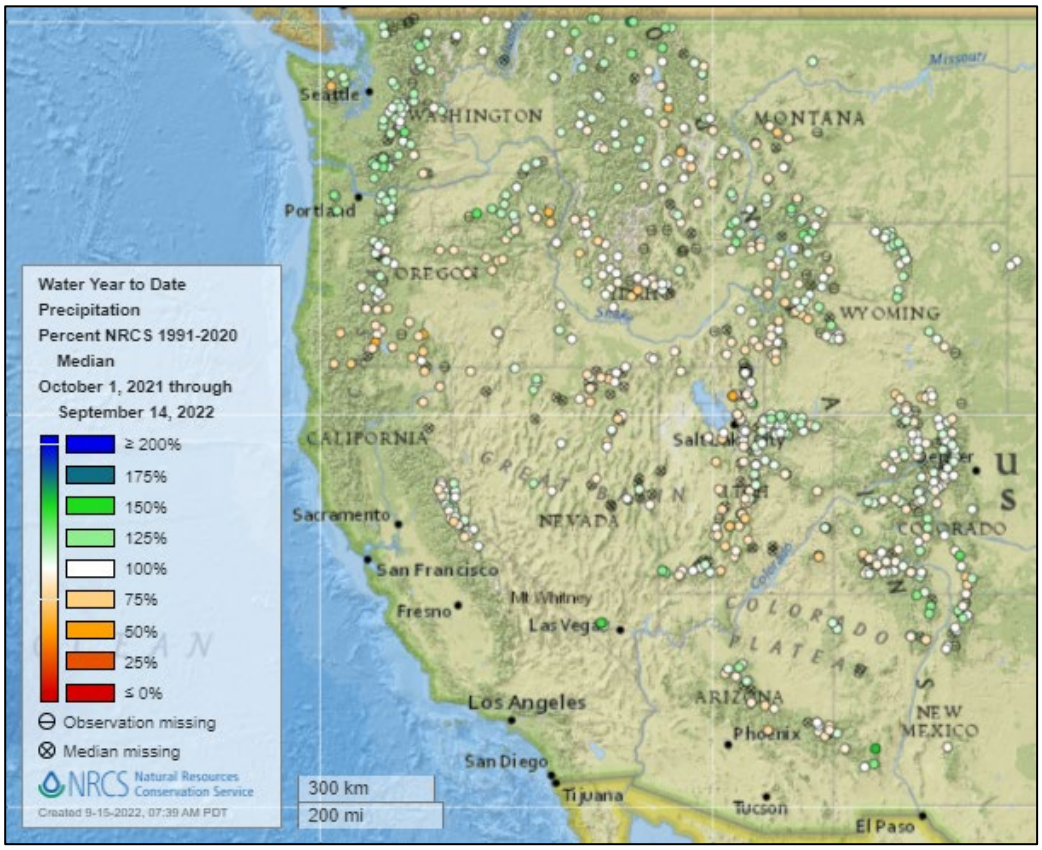
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

June through August 2022 precipitation anomaly map



Water Year-to-Date, NRCS SNOTEL Network

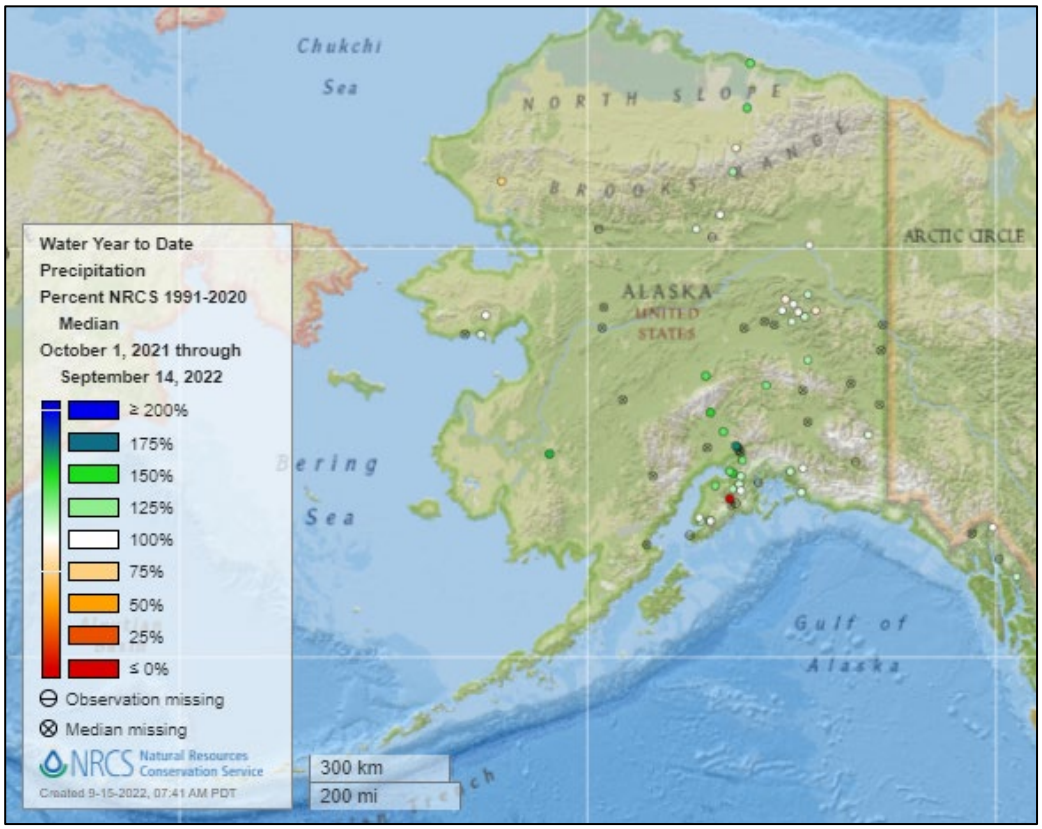


[2022 water year-to-date precipitation percent of median map]

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]

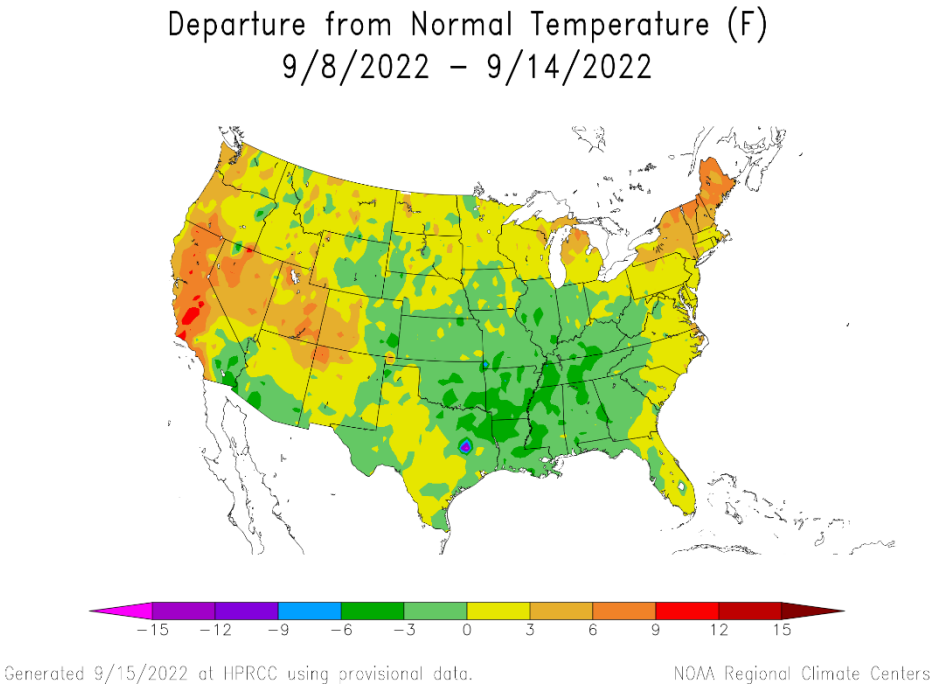
Temperature

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

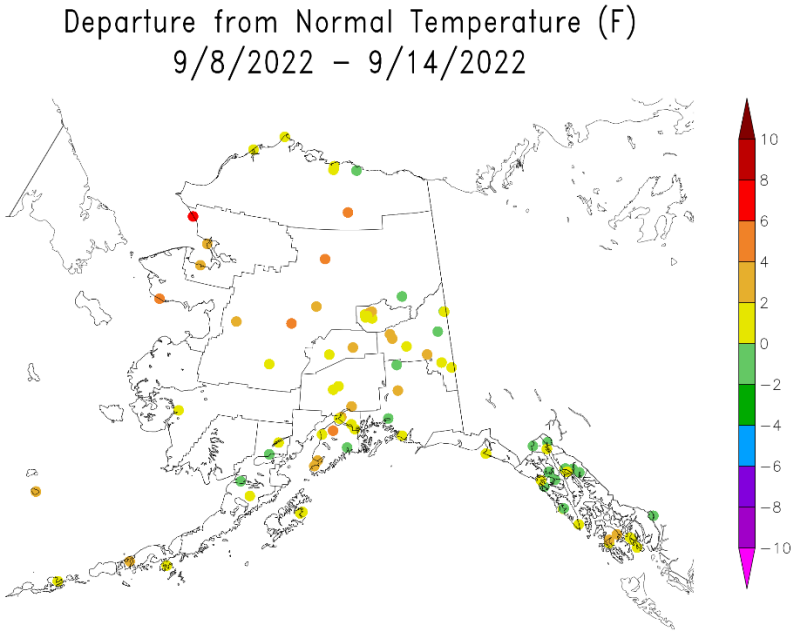


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

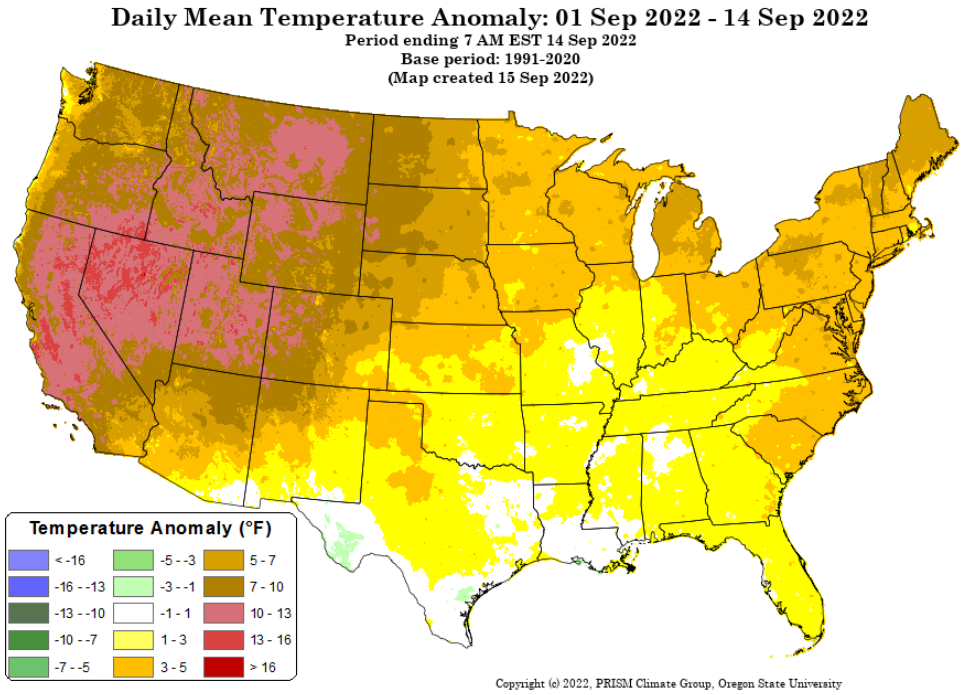
See also: 7-day temperature (° F) map



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

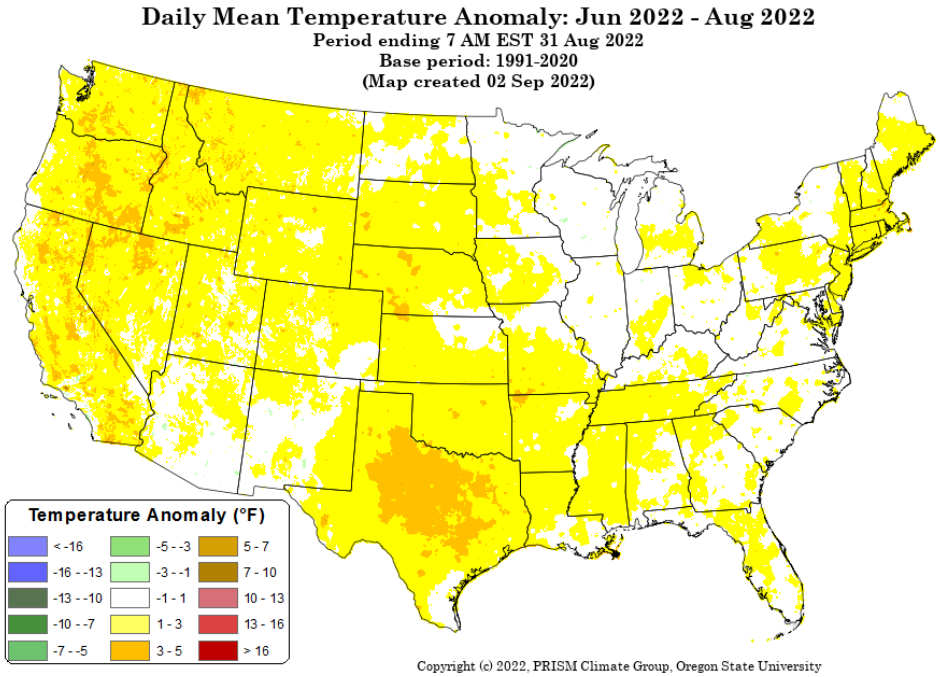
Source: PRISM

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



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

Source: PRISM

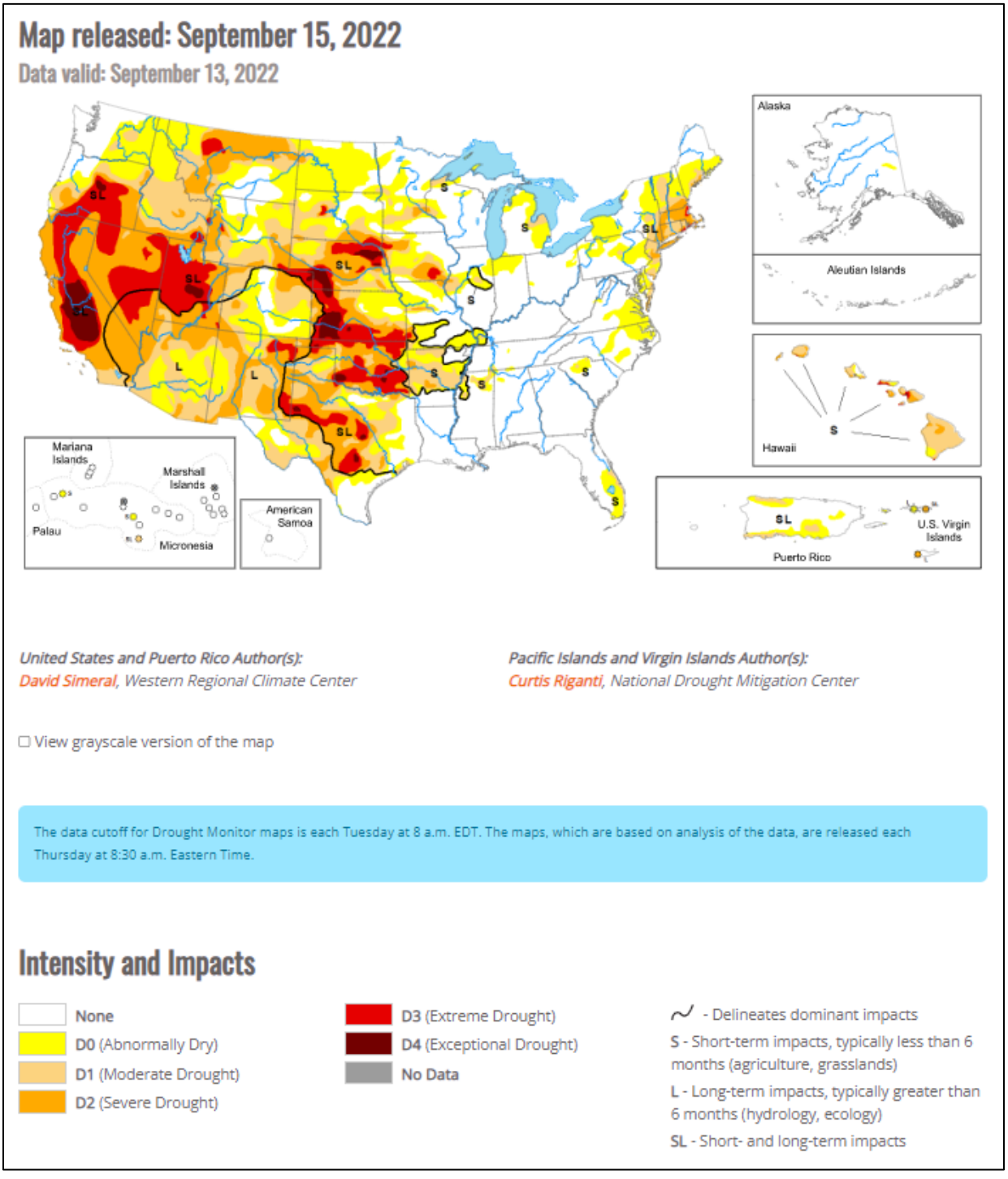


[June through August 2022 daily mean temperature anomaly map]

Drought

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

U.S. Drought Portal
Source: NOAA



Current National Drought Summary, September 13, 2022

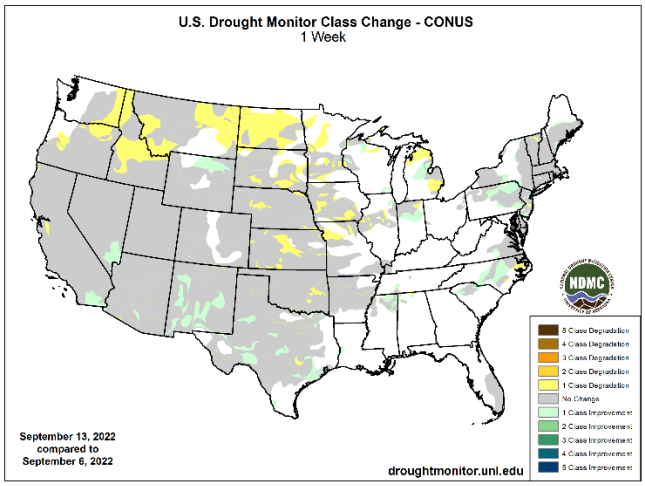
Source: National Drought Mitigation Center

“This U.S. Drought Monitor (USDM) week saw areas of isolated heavy rainfall in Southern California and the Desert Southwest in association with remnant moisture from Tropical Cyclone Kay late last week. Over the weekend and early this week, the residual moisture from the system moved further onshore impacting areas including Southern California, southern Sierra Nevada, Desert Southwest, and portions of the Great Basin. Overall, the heaviest accumulations were observed in very isolated higher-elevation areas of the Peninsular Ranges and Transverse Ranges of Southern California with accumulations ranging from 3 to 5-inches in addition to reports of wind gusts between 70-100 mph. Unfortunately, the overall impact of the precipitation on the long-term drought in California was negligible. In the High Plains, above-normal temperatures (2 to 6 deg F) and generally dry conditions during the past week continued to exacerbate drought conditions across areas of the central and northern Plains, with a growing number of drought impacts within the agricultural sector being reported to the National Drought Mitigation Center. In Texas, areas of isolated heavy rainfall accumulations (3 to 5+ inches) this week continued to ease drought-related conditions in the Rio Grande Valley and South Texas. In the Midwest, widespread heavy rainfall accumulations ranging from 2 to 6+ inches impacted northern Illinois and southern Wisconsin over the weekend—erasing some of the short-term precipitation deficits. Elsewhere in the region, a combination of short and longer-term precipitation deficits in Iowa led to degradation on the map, with rainfall deficits during the past 90-day period ranging from 4 to 8+ inches in southern Iowa. In the Northeast and Mid-Atlantic states, widespread shower activity this week helped to improve drought-related conditions in the southern portion of the Northeast region as well as alleviate short-term (past 30-60 days) precipitation deficits in areas of the Coastal Plain and Piedmont of North Carolina. In the Southeast, most of the region remained drought-free with exception of coastal areas of east-central and southern Florida, where rainfall deficits for the past 90-day period ranged from 4 to 12+ inches, causing some concerns regarding hydrologic drought (some low groundwater and surface water levels) with the end of the wet season approaching. Looking back at the 2022 summer months, the contiguous U.S. experienced its 3rd warmest June-August period on record since 1895 in terms of average temperatures (+2.52 deg F anomaly). Average minimum temperatures nationwide for August (+3.20 deg F) and the July-August (+3.12 deg F) periods were the warmest on record, according to NOAA National Centers for Environmental Information (NCEI). Precipitation in the contiguous U.S. during August and the July-August 2022 period ranked at 19th and 28th wettest, respectively, placing it in the top 1/3rd wettest.”

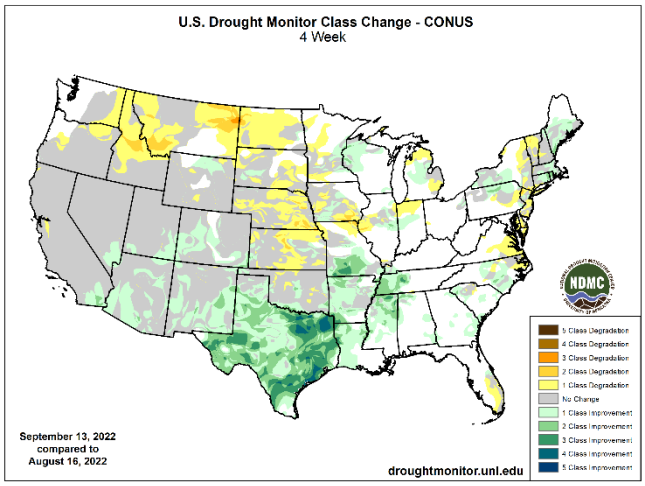
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

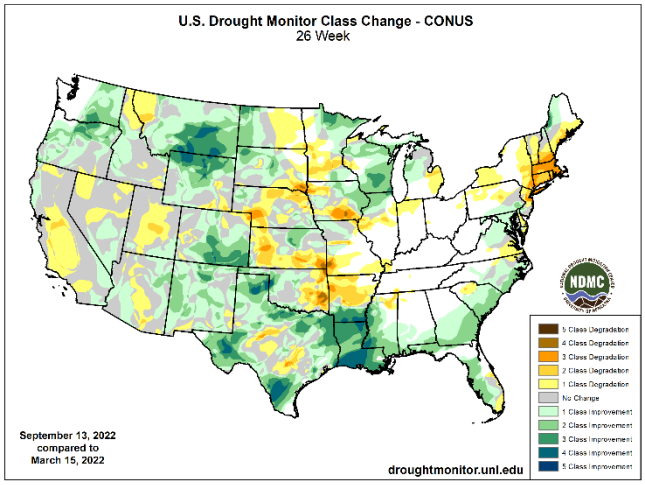
1 Week



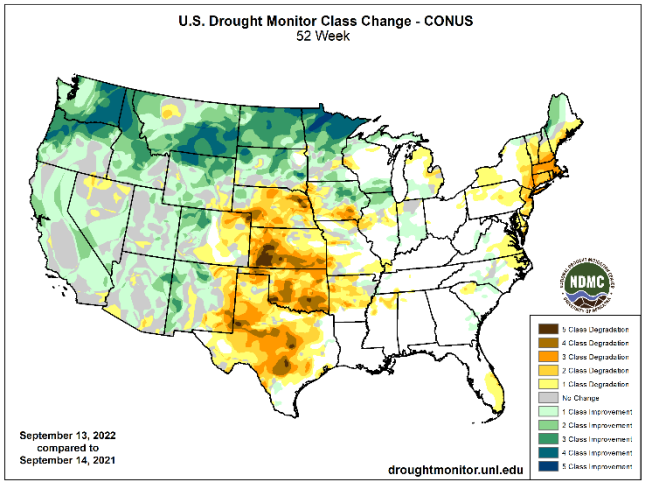
1 Month



6 Months



1 Year



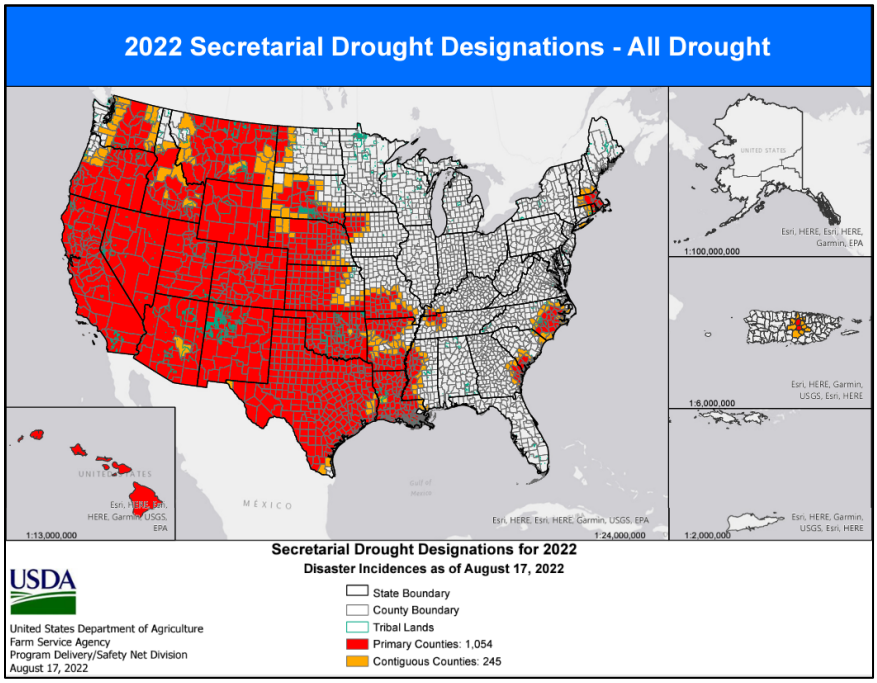
Changes in drought conditions over the last 12 months for the contiguous U.S.

Highlighted Drought Resources

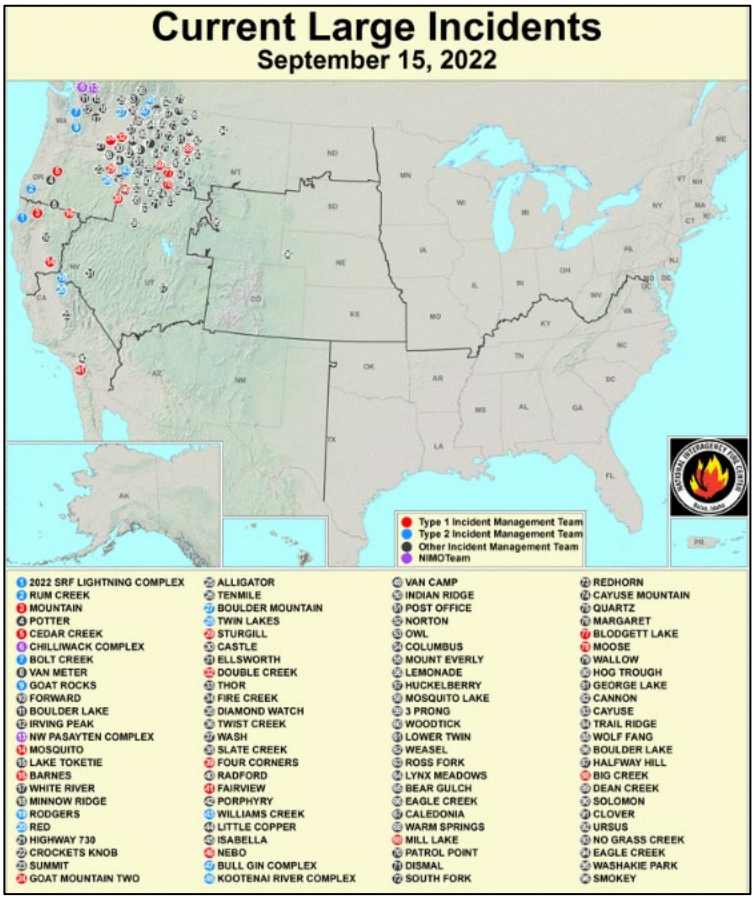
- Drought Impact Reporter
- Quarterly Regional Climate Impacts and Outlook
- U.S. Drought Portal Indicators and Monitoring
- U.S. Population in Drought, Weekly Comparison
- USDA Disaster and Drought Information

USDA Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: USDA Forest Service Active Fire Mapping



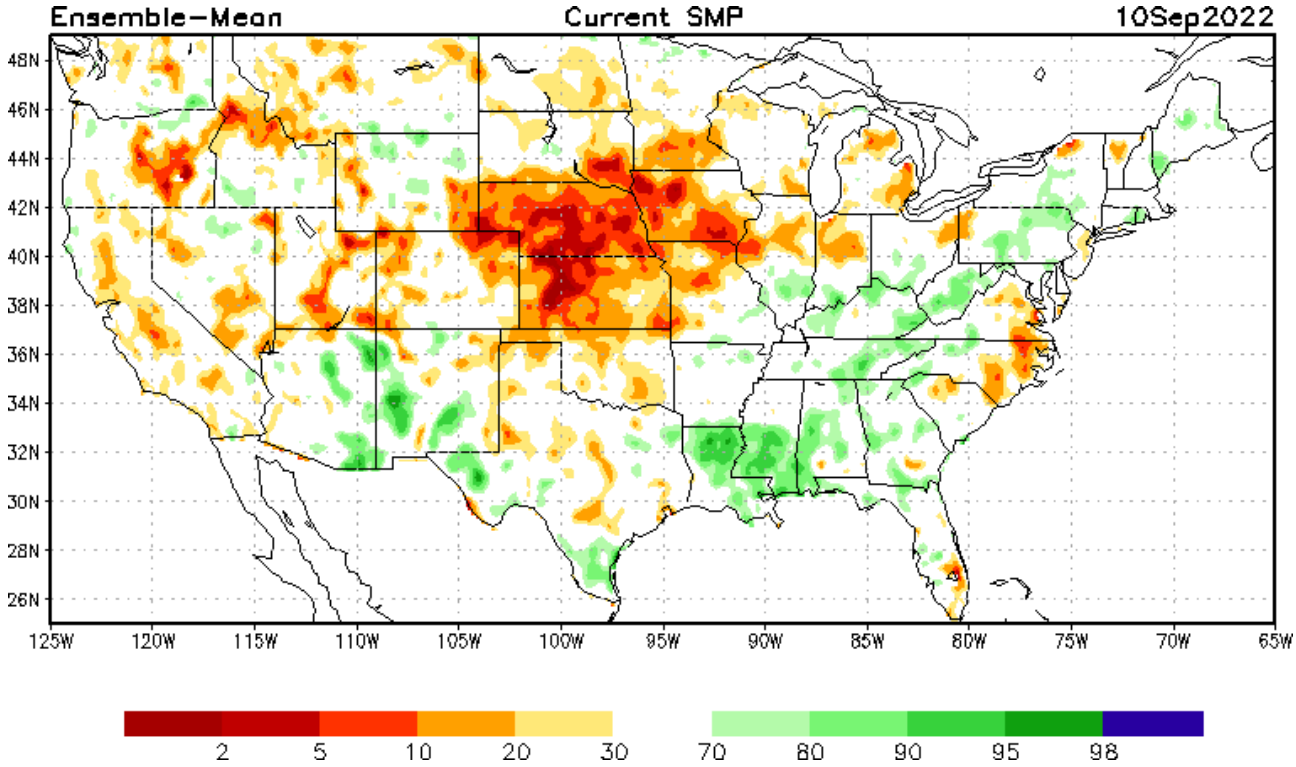
Highlighted Wildfire Resources

- 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

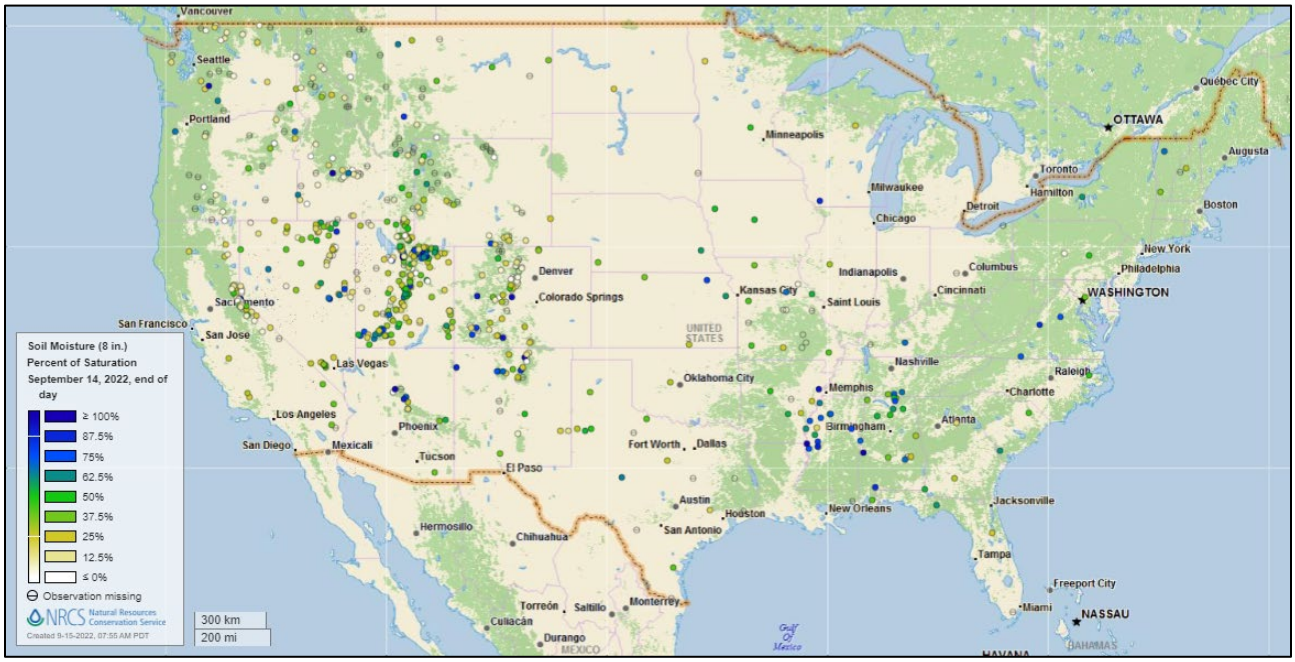


Modeled soil moisture percentiles as of September 10, 2022

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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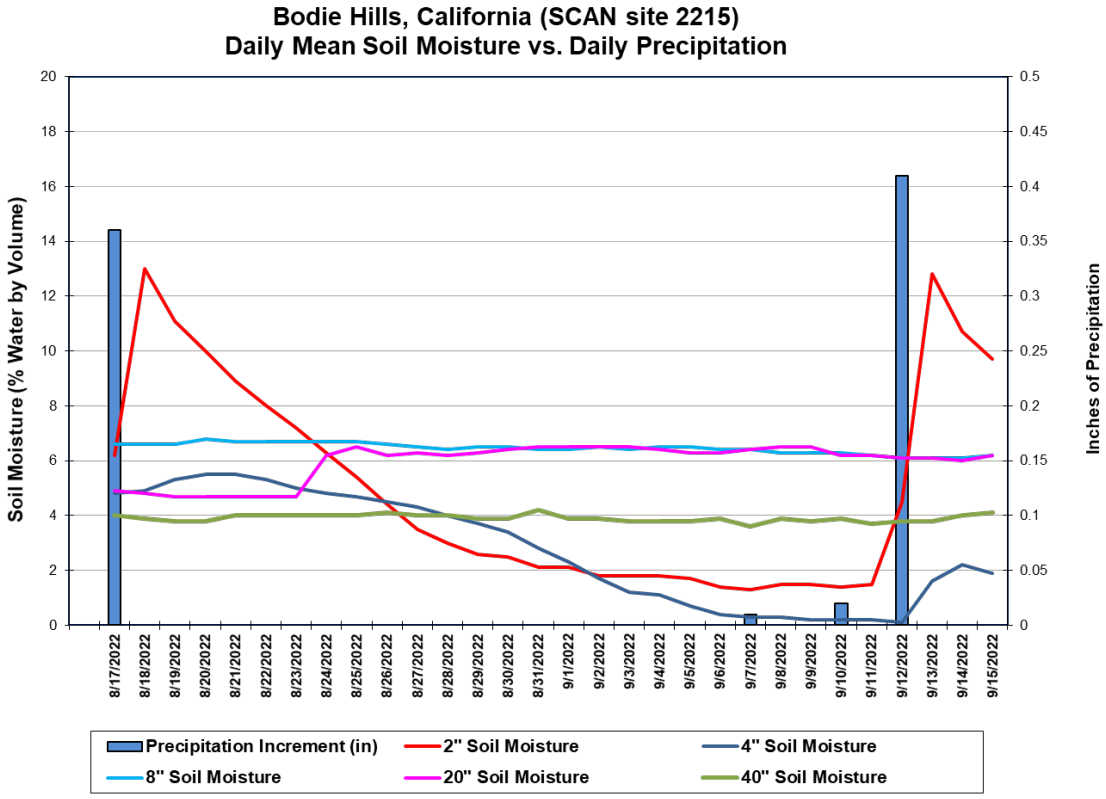


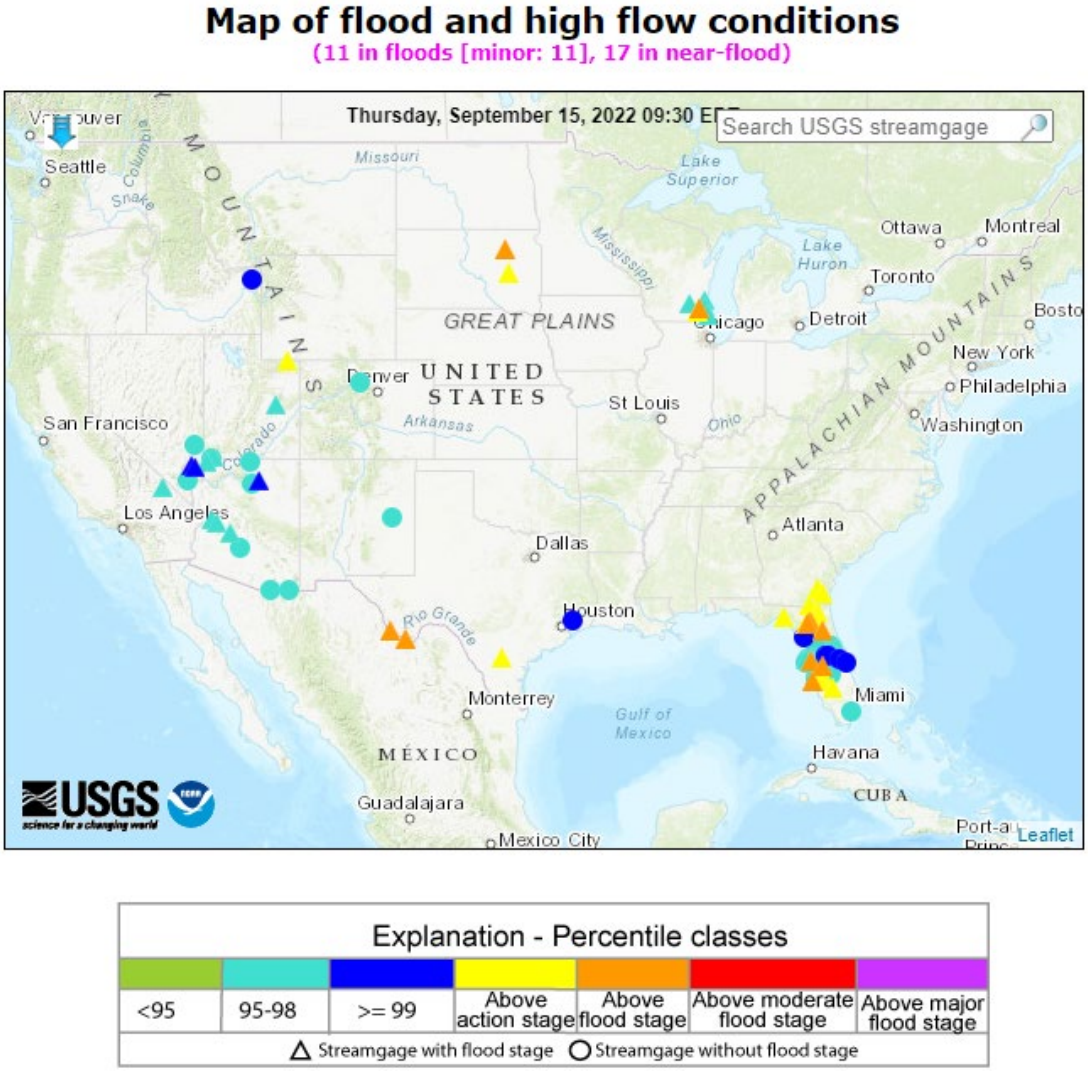
This chart shows the precipitation and soil moisture for the last 30 days at the Bodie Hills SCAN site in California. The larger precipitation events on August 17 and September 12 resulted in soil moisture levels increasing at the -2 and -4-inch sensor depths. Soil moisture at the site remains below 14 percent water by volume at all sensor depths. Total precipitation for the period was 0.8 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]



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

Reservoir Storage

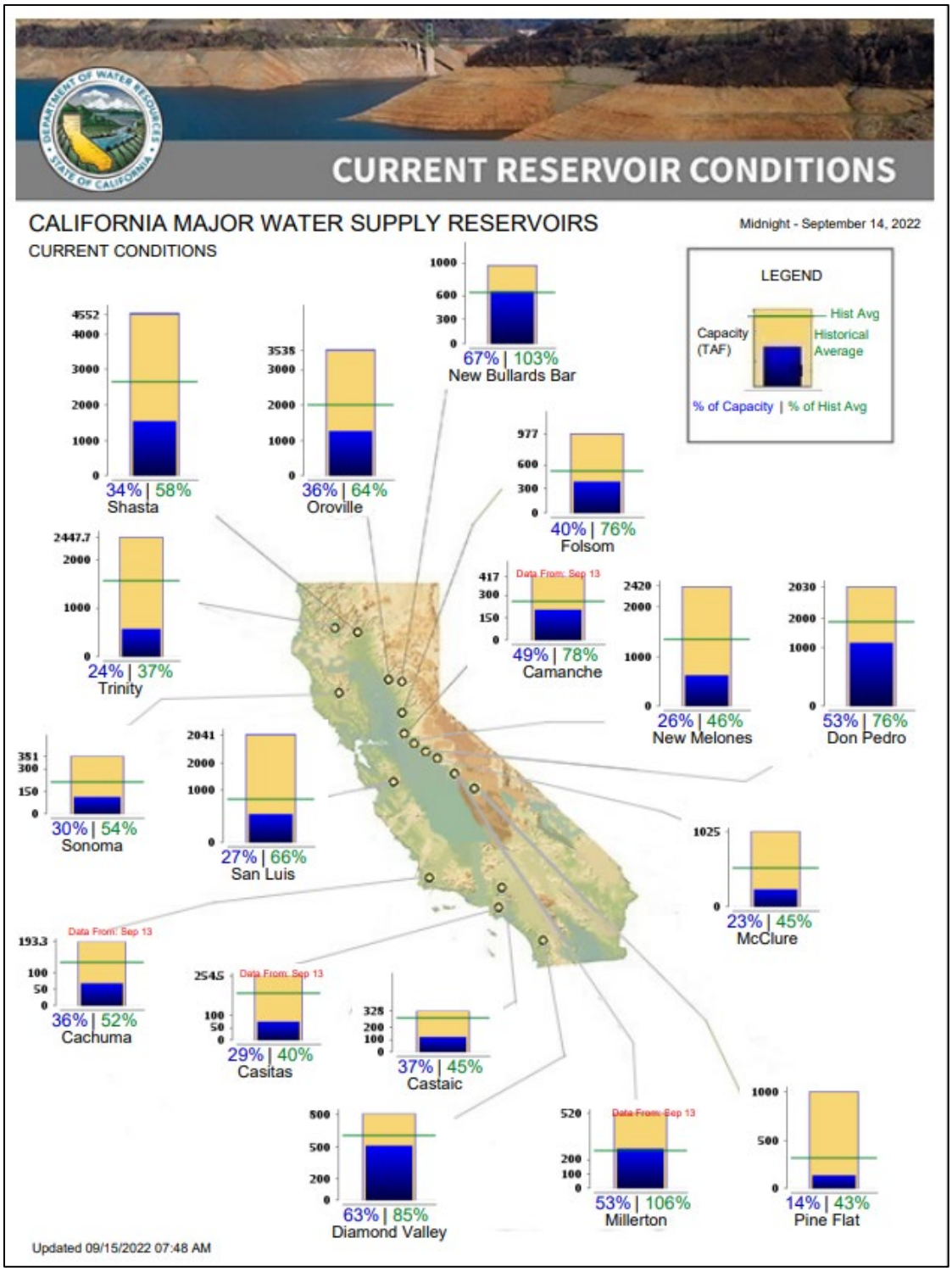
Hydromet Teacup Reservoir Depictions

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

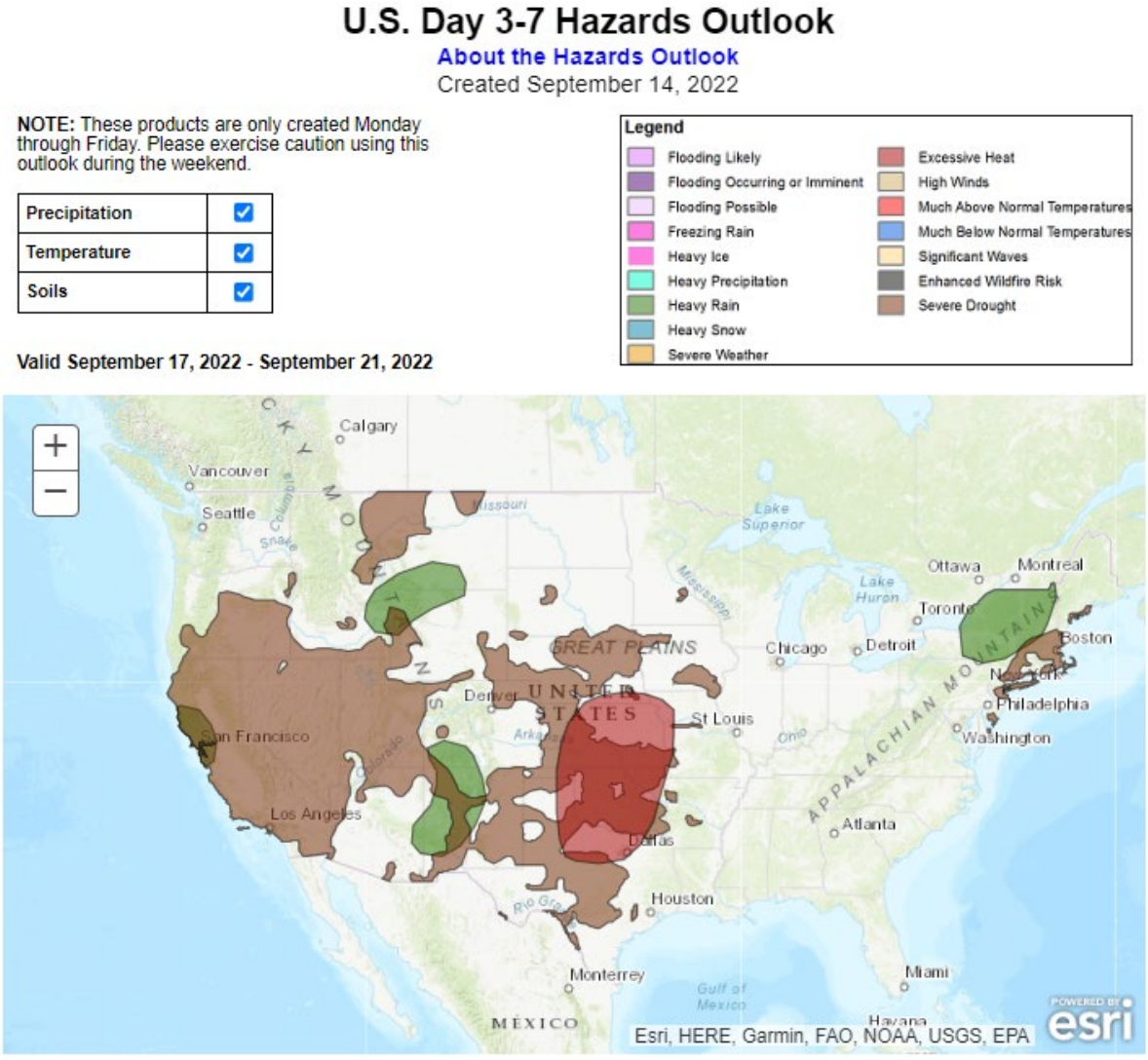
Agricultural Weather Highlights

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

National Outlook, Thursday, September 15, 2022: "Over the Atlantic Ocean, newly formed Tropical Storm Fiona lies east of the Leeward Islands. Although the westbound storm is not expected to appreciably strengthen, Fiona could result in mixed impacts—including drought relief and flash flooding—while passing near or over Puerto Rico and the U.S. Virgin Islands during the weekend. On the U.S. mainland, little or no rain will fall during the next 5 days in the southern half of the country, except along the Gulf Coast and across Florida's peninsula. Rainfall in Florida could total 2 to 4 inches or more. Farther north, periodic showers will occur from the Pacific Northwest to New England, with the heaviest rain (at least 1 to 3 inches) expected in the upper Great Lakes region. Early next week, accumulating snow may develop in the northern Rockies, while showers may spread as far south as northern California. Elsewhere, late-season heat will spread eastward from the central and southern Plains, while relatively cool air will cover much of the West. The NWS 6- to 10-day outlook for September 19 – 23 calls for near- or above-normal temperatures nationwide, with the greatest likelihood of late-season warmth stretching from the central and southern Plains into the Southeast. Meanwhile, near- or below-normal precipitation across most of the country should contrast with wetter-than-normal weather in northern New England, as well as portions of the Rockies, Great Basin, and Intermountain West."

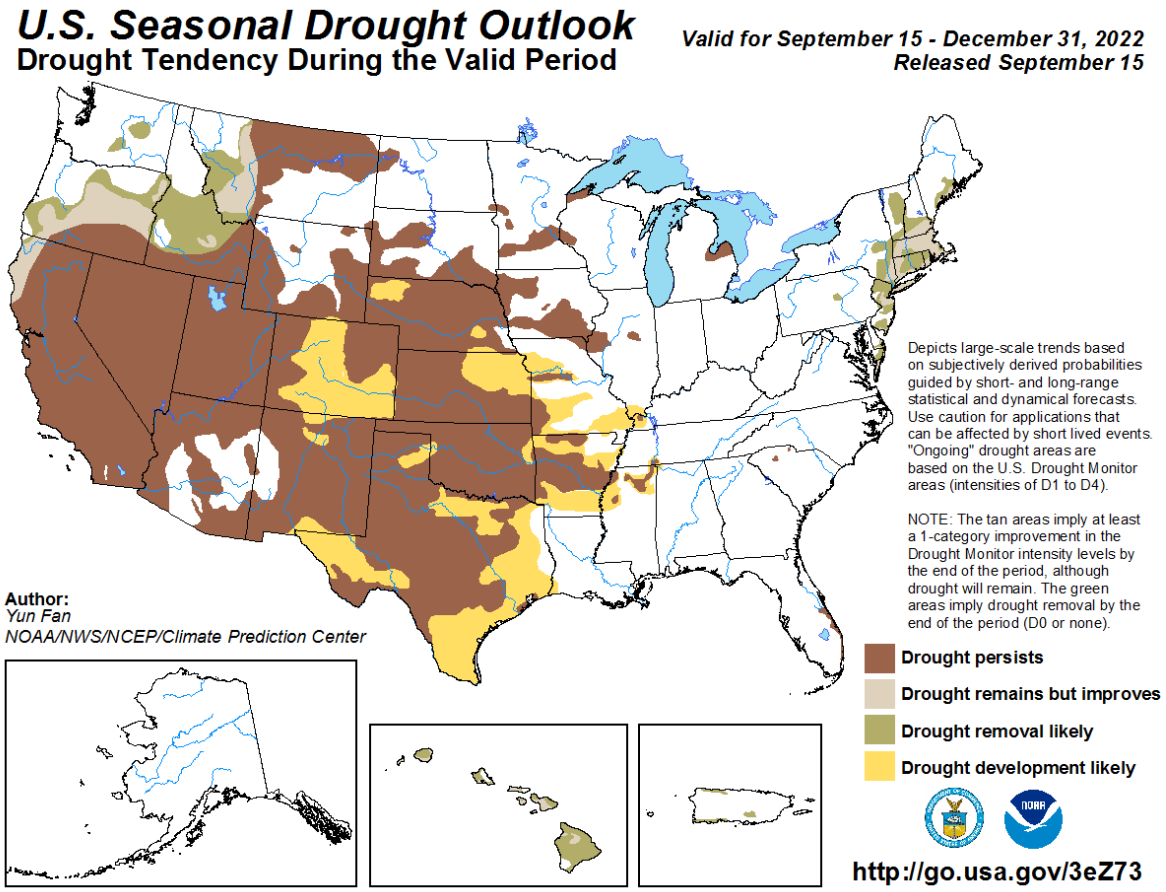
Weather Hazards Outlook: September 17 – 21, 2022

Source: NOAA Weather Prediction Center



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

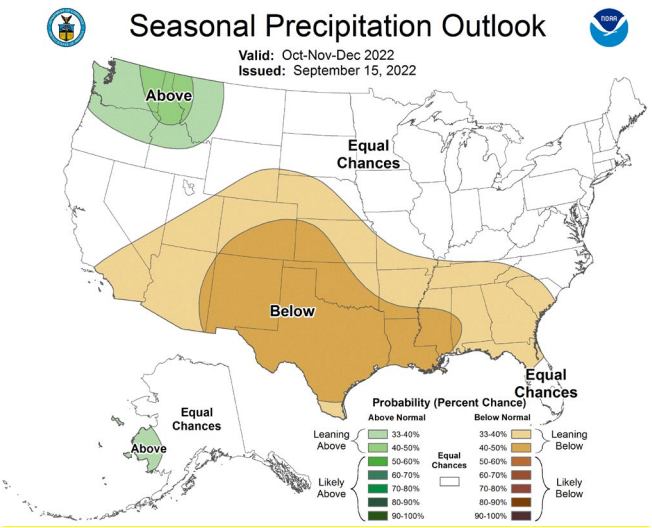
Source: National Weather Service



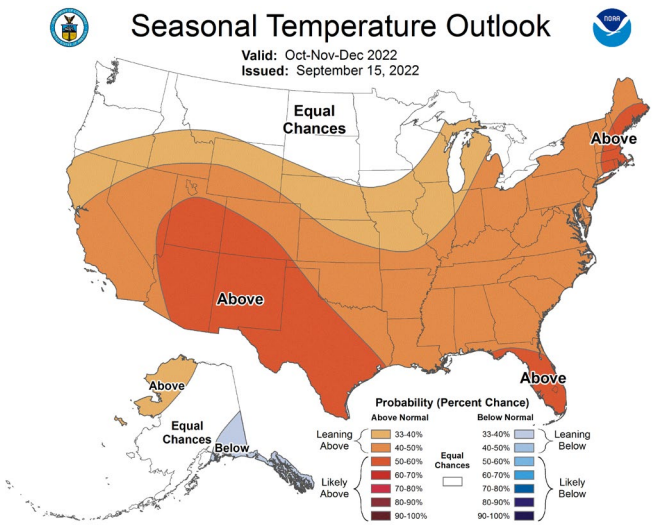
Climate Prediction Center 3-Month Outlook

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.