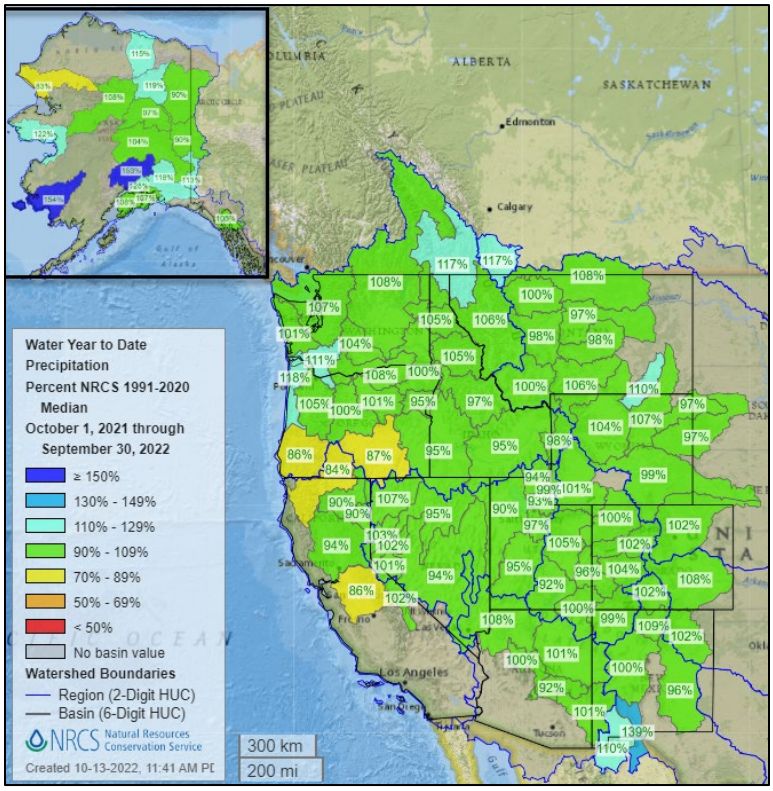
United States Department of Agriculture

Water and Climate Update

October 13, 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.

2022 Western U.S. Water Year Total Precipitation Near Median



Water year 2022 wrapped up with near-median percentages of total precipitation for much of the West.

The year had a dramatic start between October and December, with abundant precipitation received in the Great Basin, California and much of the Columbia River Basin, while the Southwest and parts of the Missouri River Basin saw less than 70 percent of median.

The winter months saw below-median precipitation across the West, with the region getting less than half of normal precipitation during what is usually the wettest part of the year.

Spring brought much-above-median precipitation to the Columbia River Basin, parts of the Missouri River Basin, and the Southwest, while the Great Basin, California, and Lower Colorado River remained especially dry.

The water year ended with above-median conditions in the Colorado River, Great Basin, Southwest, and parts of the Missouri River, while the Columbia River was drier than normal. Alaska had a median to above-median water year across the state with only one area in Northwest Alaska having below-normal precipitation for the water year.

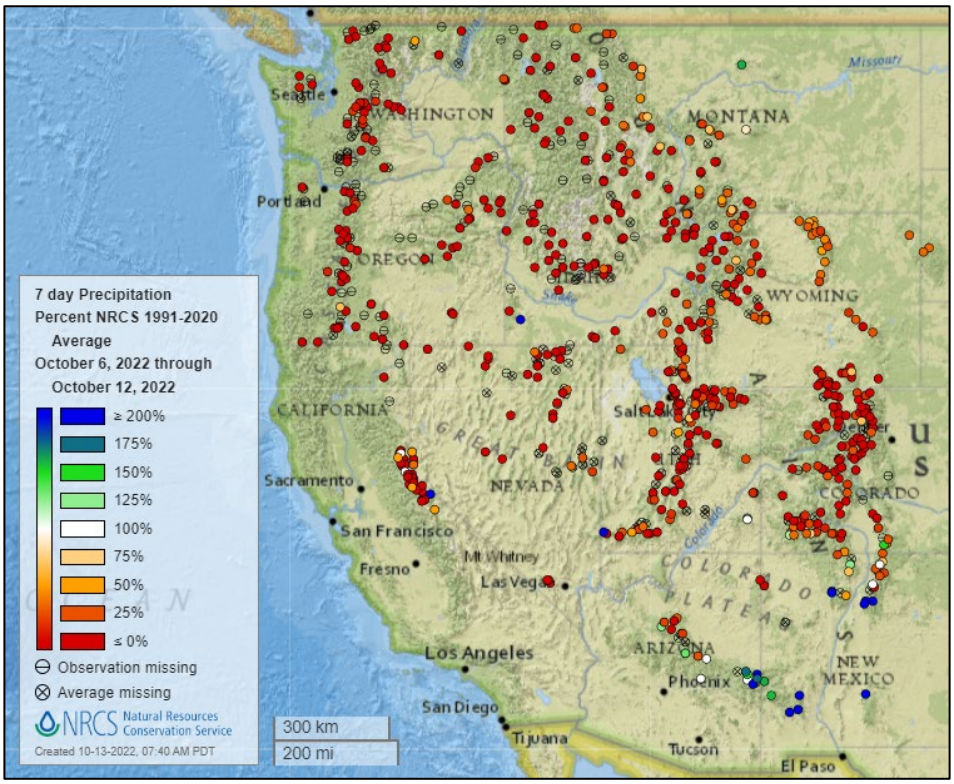
The precipitation reported during the water year ultimately ended with near-normal totals for the region, though the rainfall may have come at times that were not optimal for water management and use.

Related:

As the 2022 water year comes to a close, how did Utah fare? – KSL (UT)
Strong start in 2021 boosts Utah's water year totals – ABC4 (UT)
California suffering through driest three years ever recorded, with no relief in sight – Los Angeles Times (CA)
'We need water, water, water'; Central Valley farm wells drying up in drought – CBS News
With 2022 irrigation season over, what's the outlook for next year? – KBOI Boise (ID)
Western Slope water advocates reflect on 2022 water year – Summit County (CO)

Precipitation

Last 7 Days, NRCS SNOTEL Network

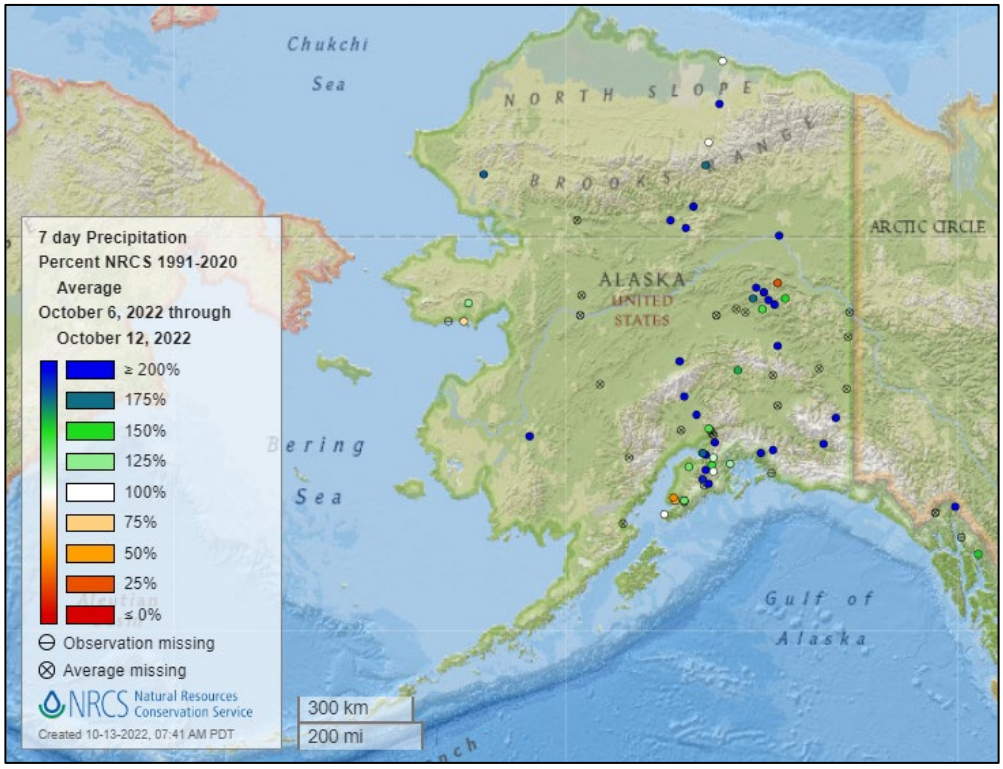


[7-day precipitation percent of average map]

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]

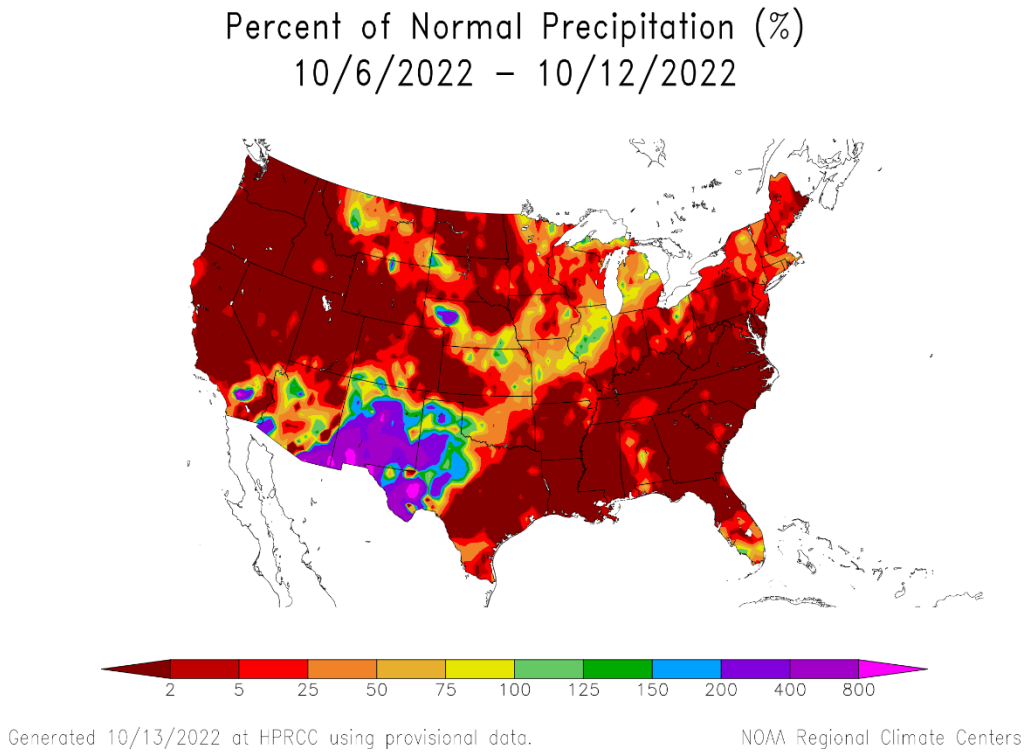


Last 7 Days, National Weather Service (NWS) Networks

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]

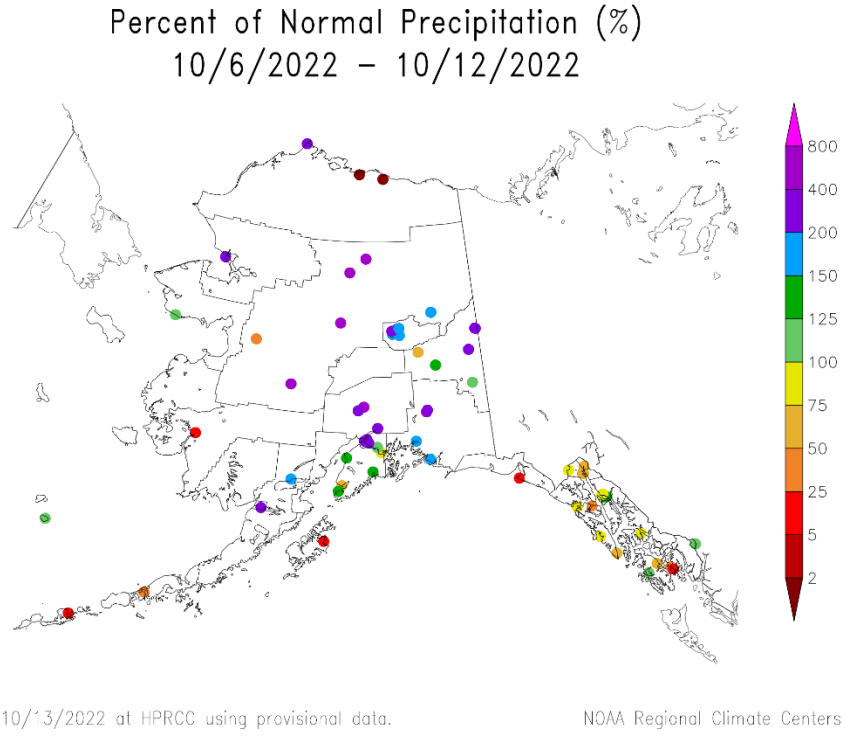


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

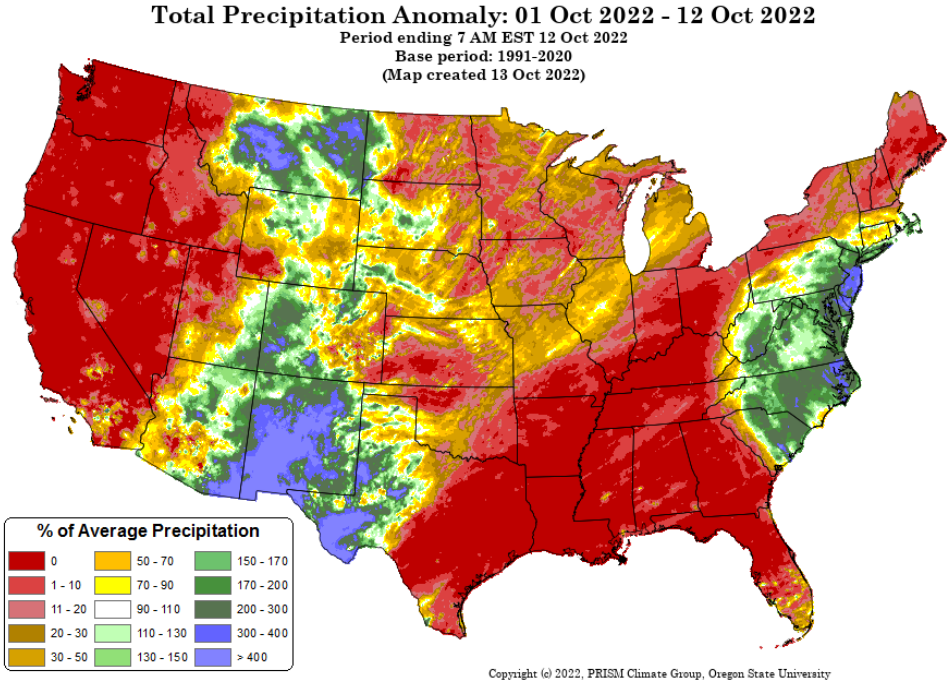
[7-day precipitation percent of normal map] for Alaska.

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



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

Source: PRISM

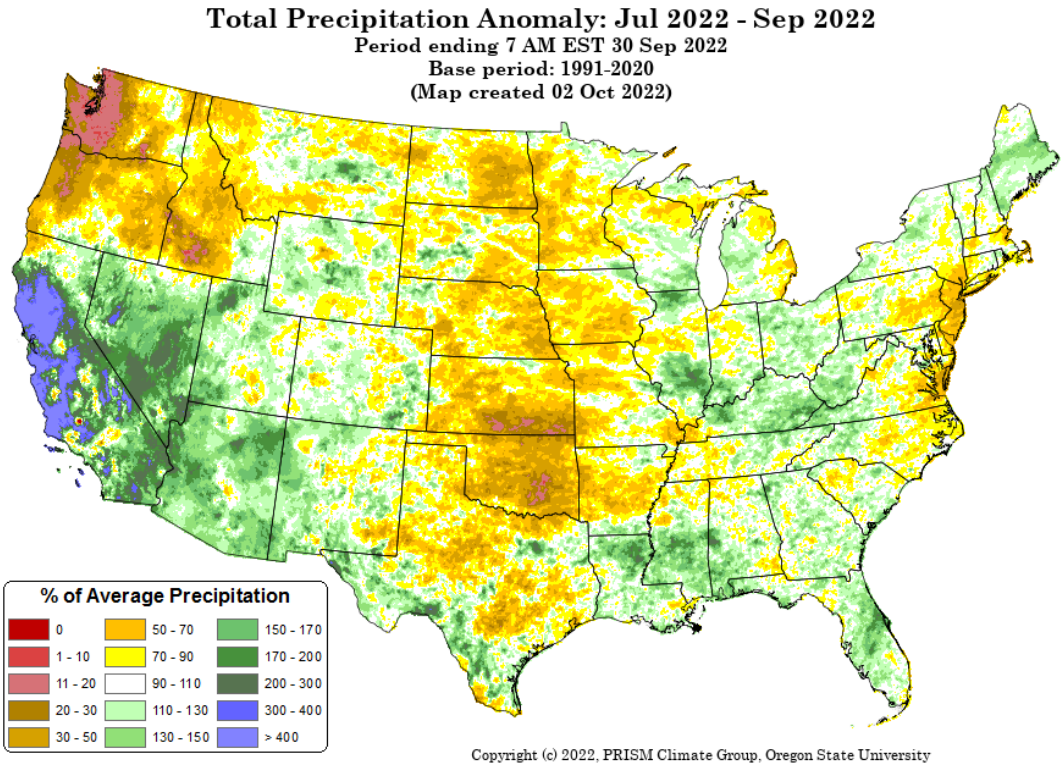


Month-to-date national total precipitation anomaly map

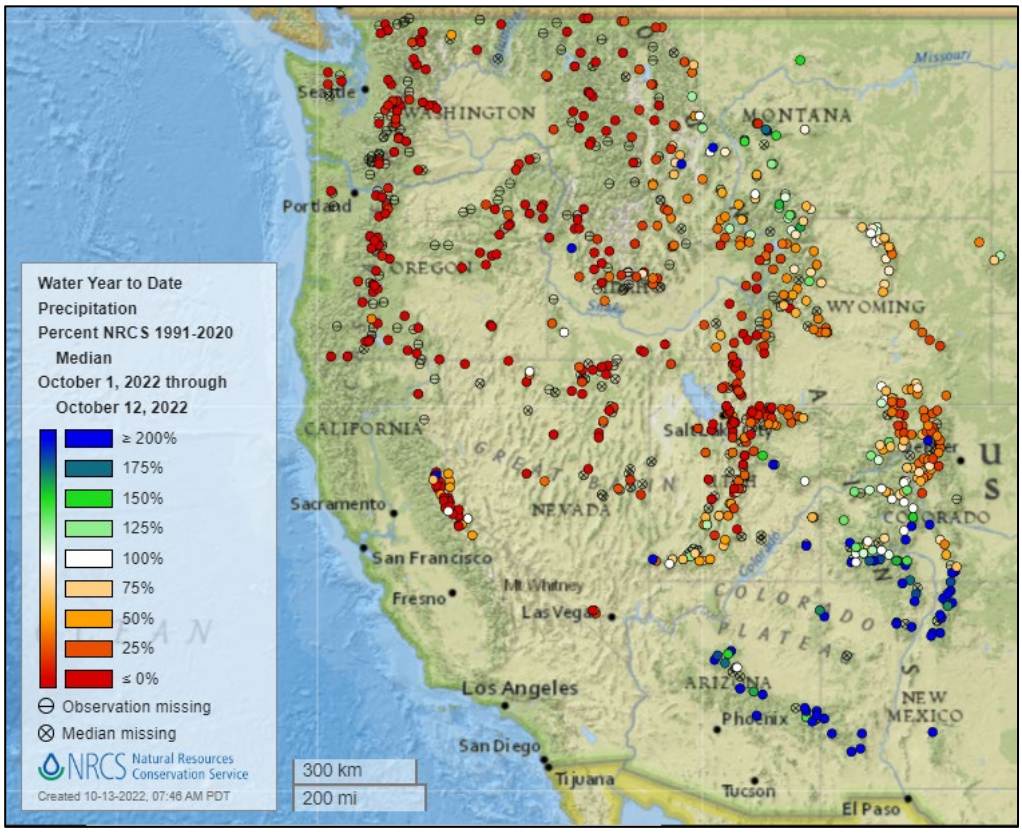
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

July through September 2022 precipitation anomaly map



Water Year-to-Date, NRCS SNOTEL Network

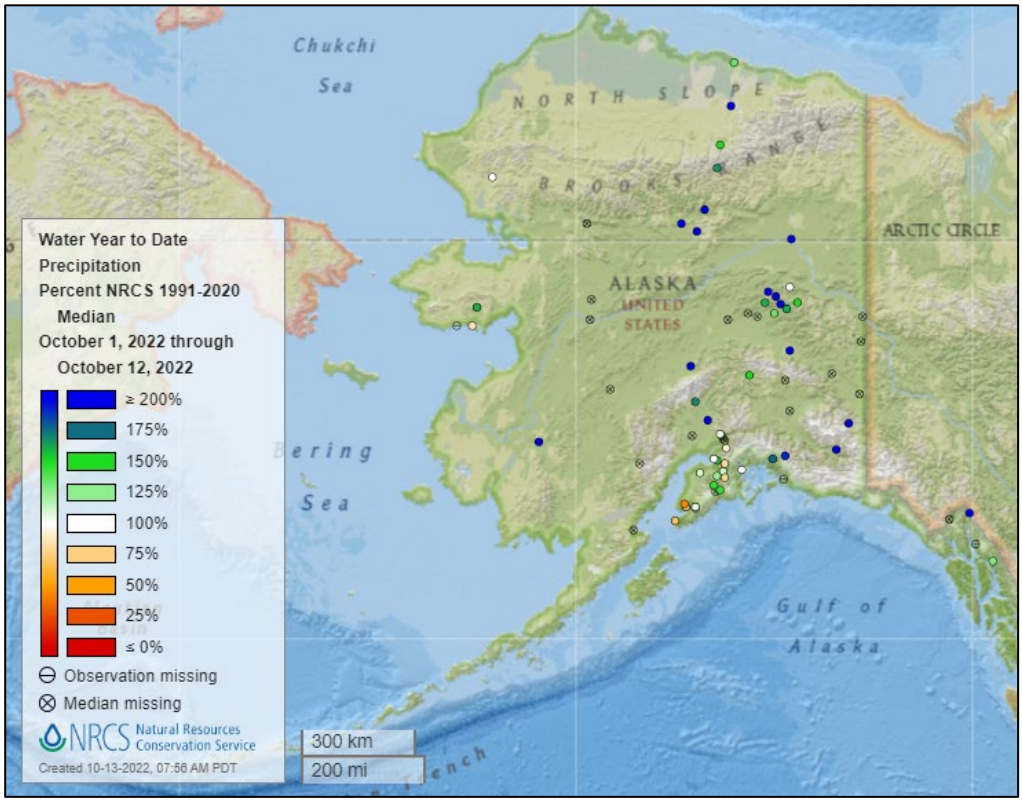


[2023 water year-to-date precipitation percent of median map]

See also:

[2023 water year-to-date precipitation percent of average map]

[2023 water year-to-date precipitation values (inches) map]



[Alaska 2023 water year-to-date precipitation percent of median map]

See also:

[Alaska 2023 water year-to-date precipitation percent of average map]

[Alaska 2023 water year-to-date precipitation values (inches) map]

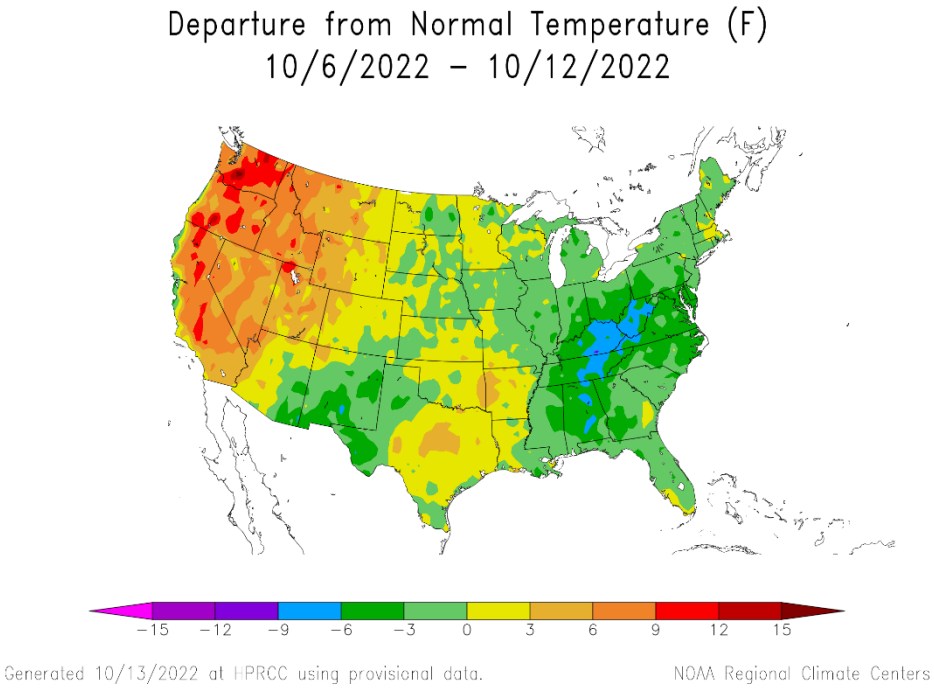
Temperature

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

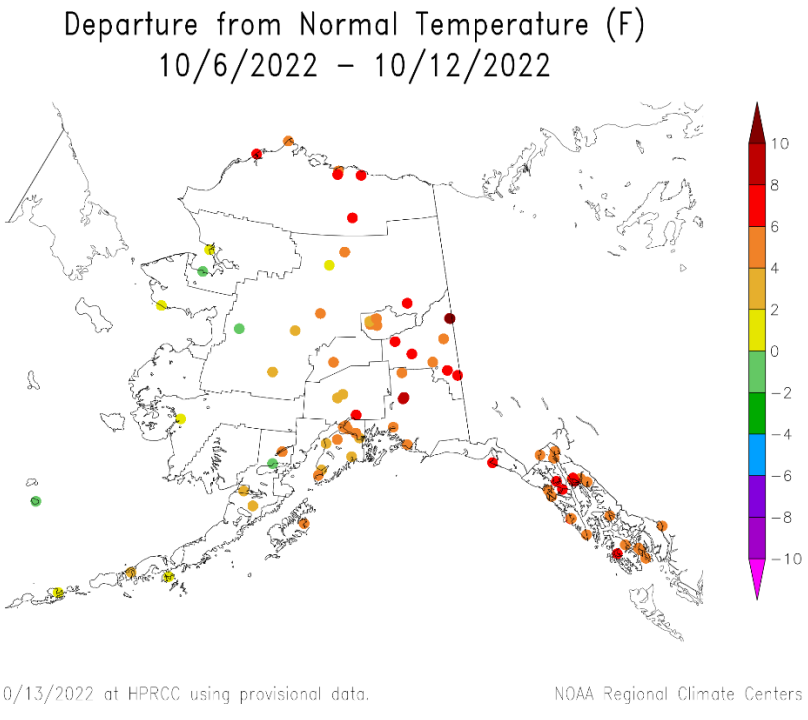


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

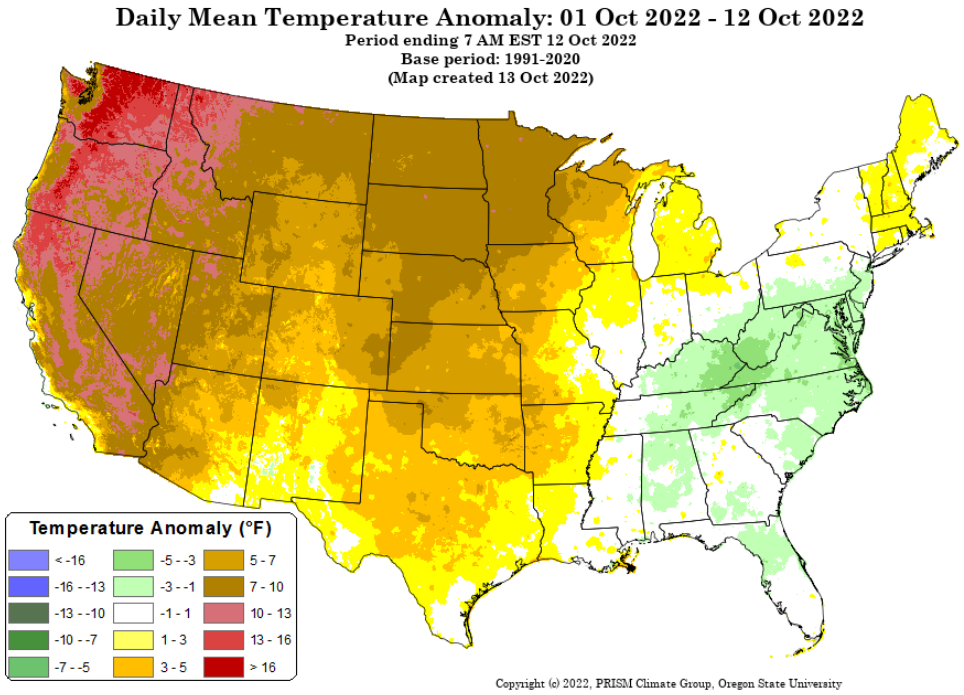
See also: 7-day temperature (° F) map



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

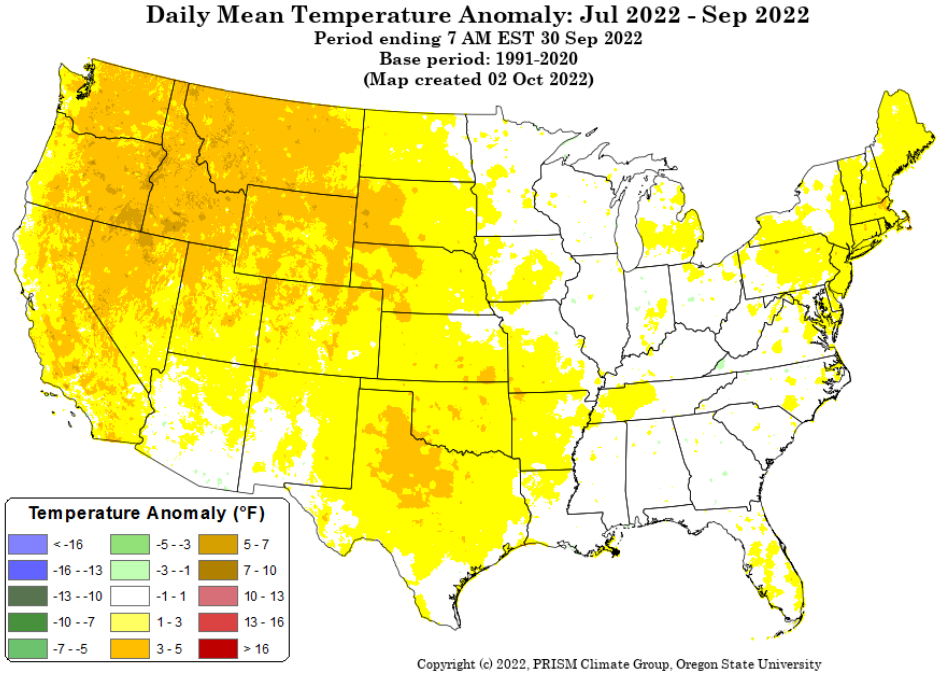
Source: PRISM

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



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

Source: PRISM

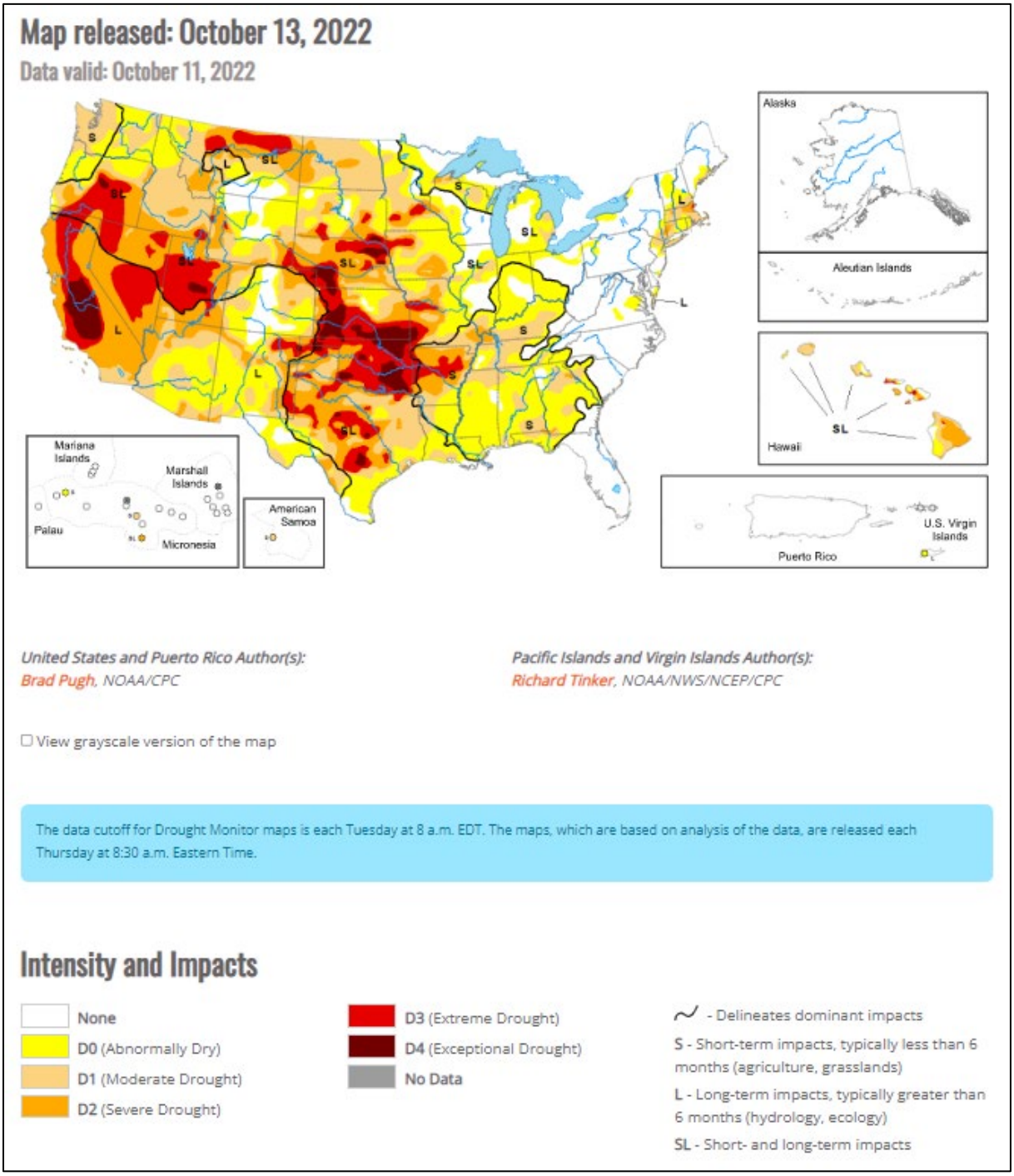


[July through September 2022 daily mean temperature anomaly map]

Drought

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

U.S. Drought Portal
Source: NOAA



Current National Drought Summary, October 11, 2022

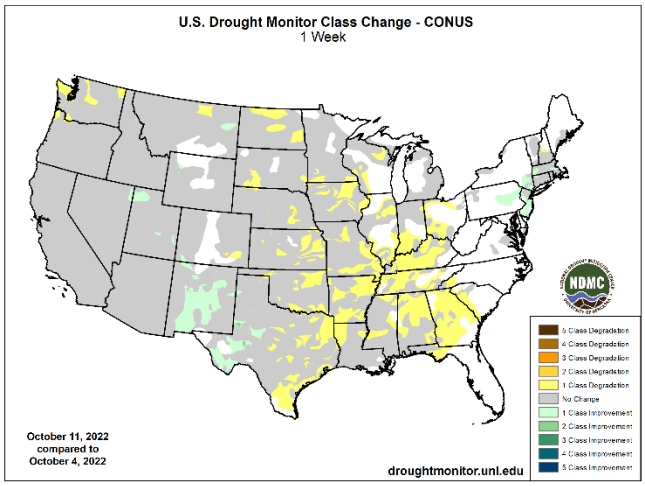
Source: National Drought Mitigation Center

“Following a drier-than-normal September for a majority of the contiguous U.S., this dry pattern continued into early October for many areas. Therefore, drought coverage increased and intensified throughout the Pacific Northwest, Great Plains, Ohio River Valley, and Southeast. From October 4-10, heavy rainfall (1 to 3 inches) was limited to the northern Mid-Atlantic, southern New England, and parts of the Southwest. New Mexico was especially wet this past week and this much above-normal precipitation extended eastward into west Texas. 7-day temperatures, ending on October 10, averaged above-normal across the West. Cooler-than-normal temperatures were observed from the Mississippi Valley to the East Coast with the first freeze of the season affecting parts of the Midwest.”

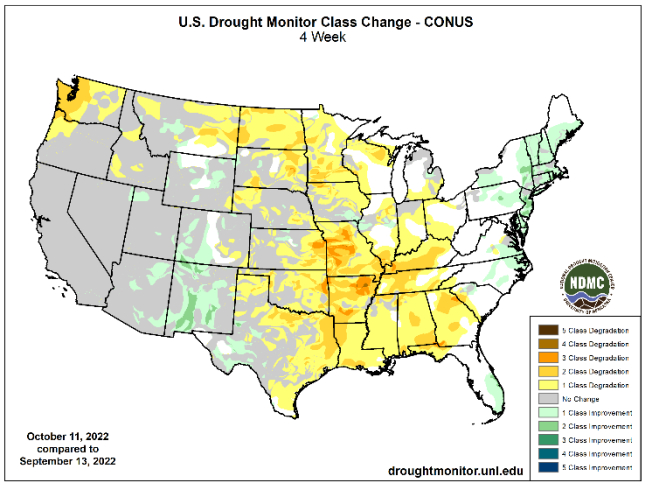
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

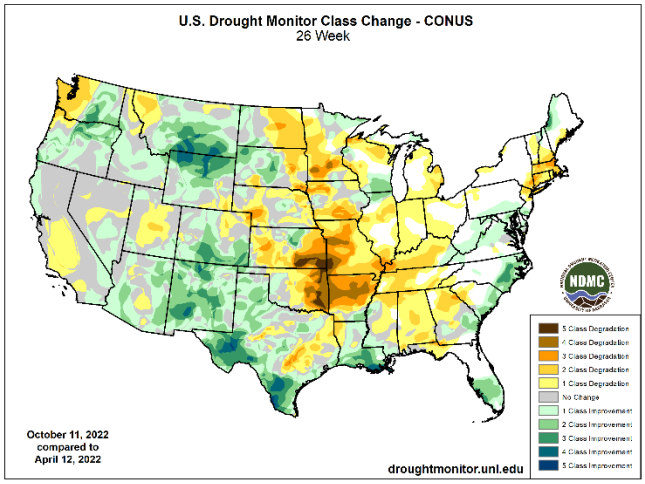
1 Week



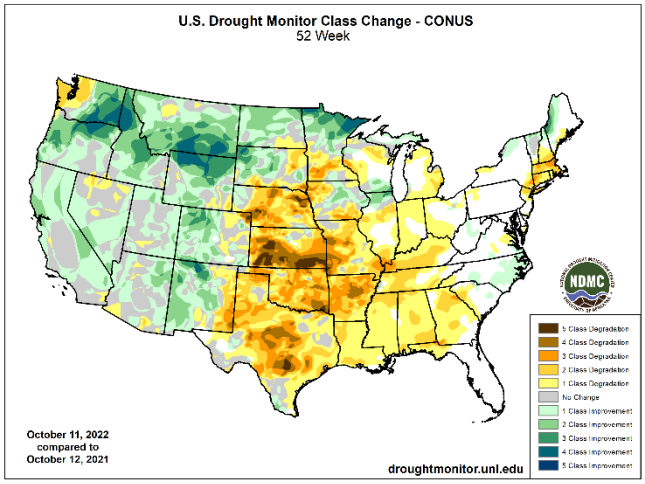
1 Month



6 Months



1 Year



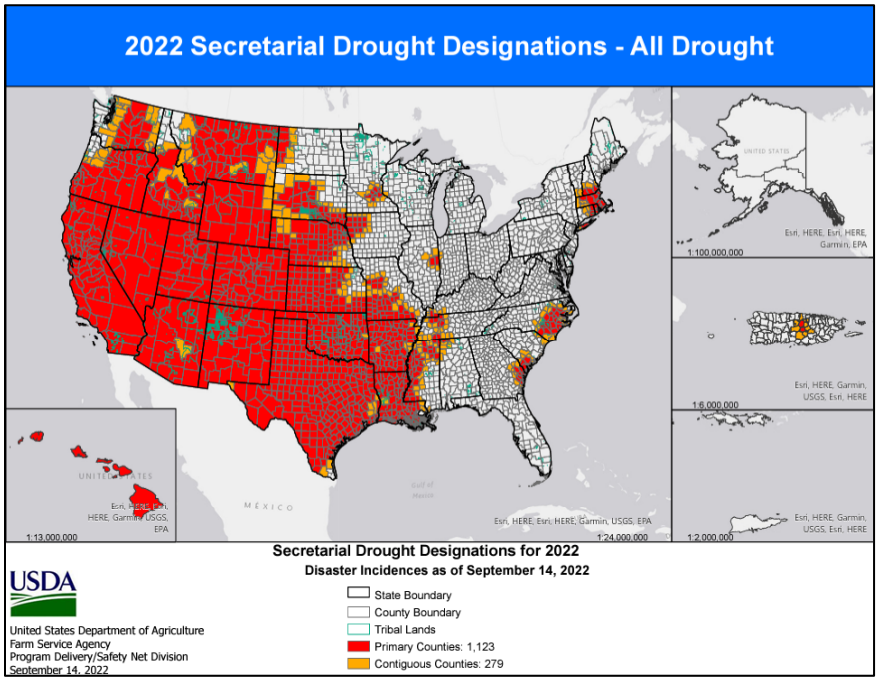
Changes in drought conditions over the last 12 months for the contiguous U.S.

Highlighted Drought Resources

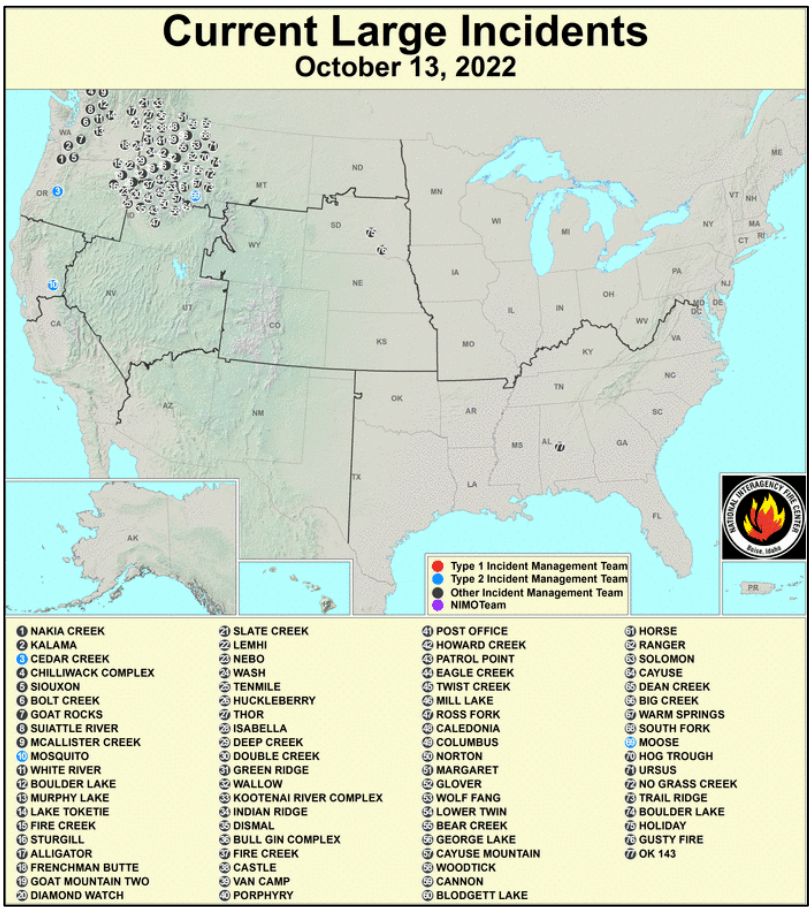
- Drought Impact Reporter
- Quarterly Regional Climate Impacts and Outlook
- U.S. Drought Portal Indicators and Monitoring
- U.S. Population in Drought, Weekly Comparison
- USDA Disaster and Drought Information

USDA Secretarial Drought Designations

Source: USDA Farm Service Agency



Wildfires: USDA Forest Service Active Fire Mapping



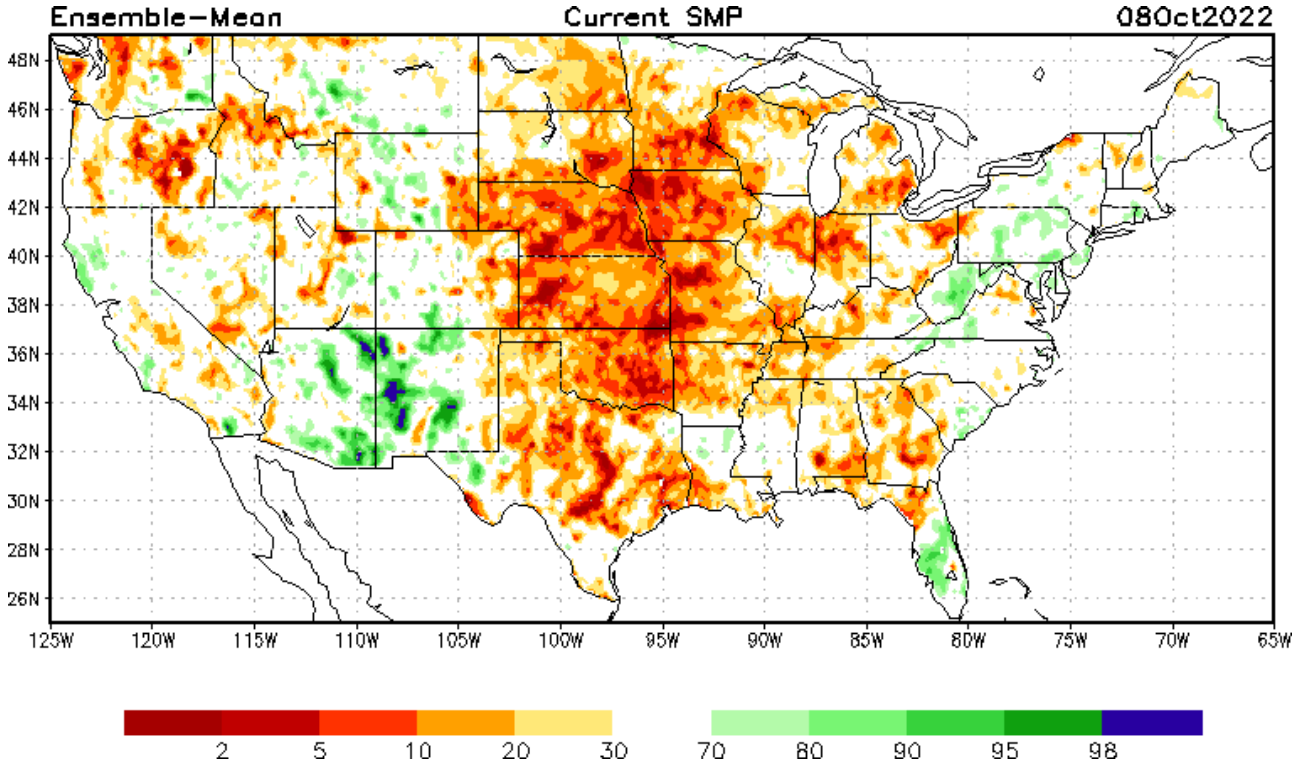
Highlighted Wildfire Resources

- 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

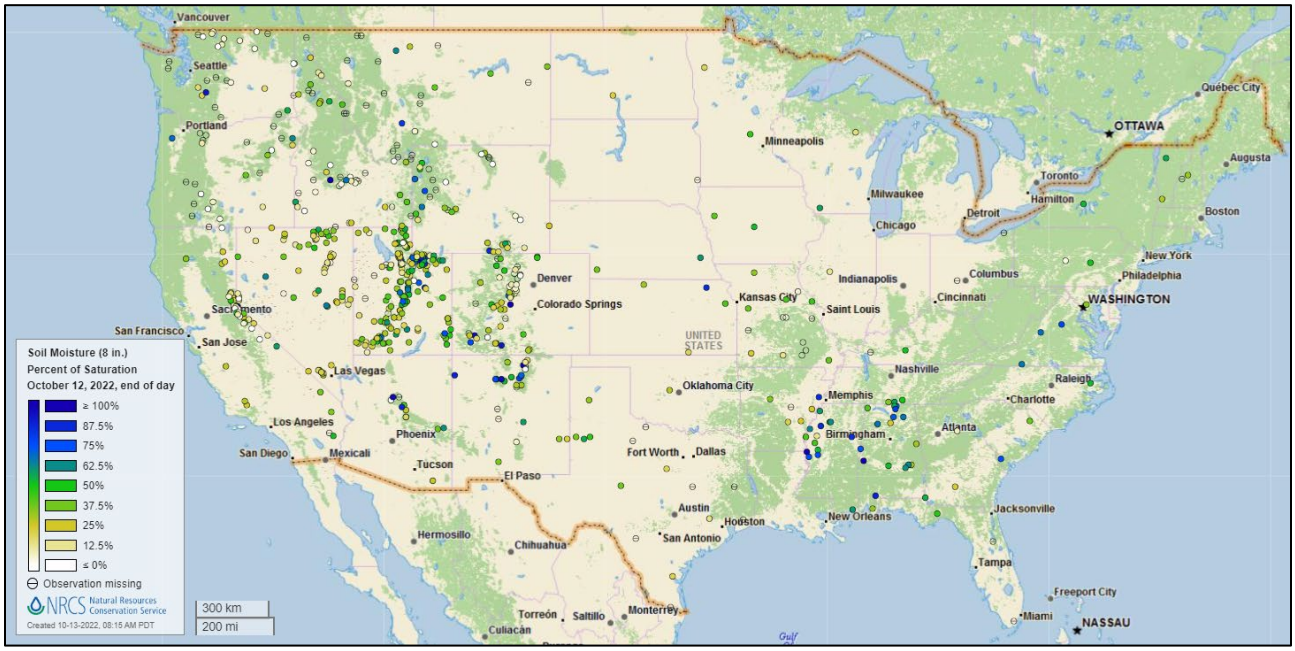


Modeled soil moisture percentiles as of October 08, 2022

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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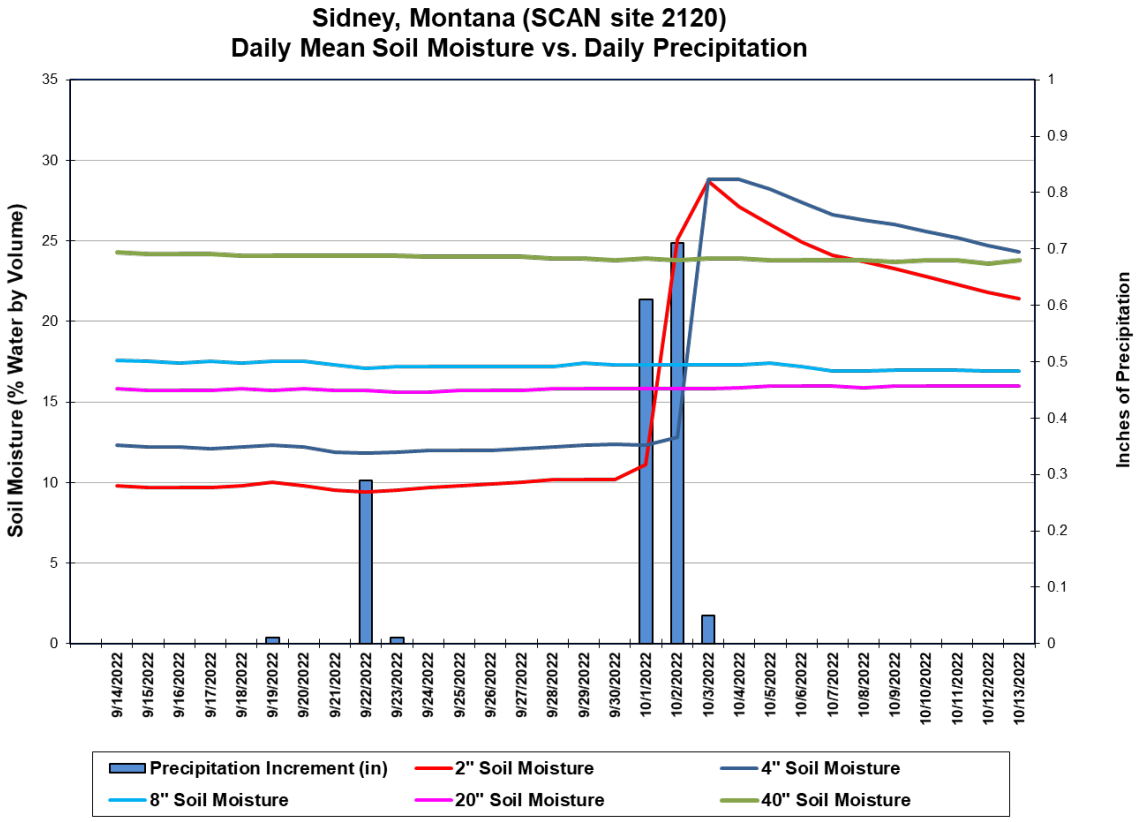


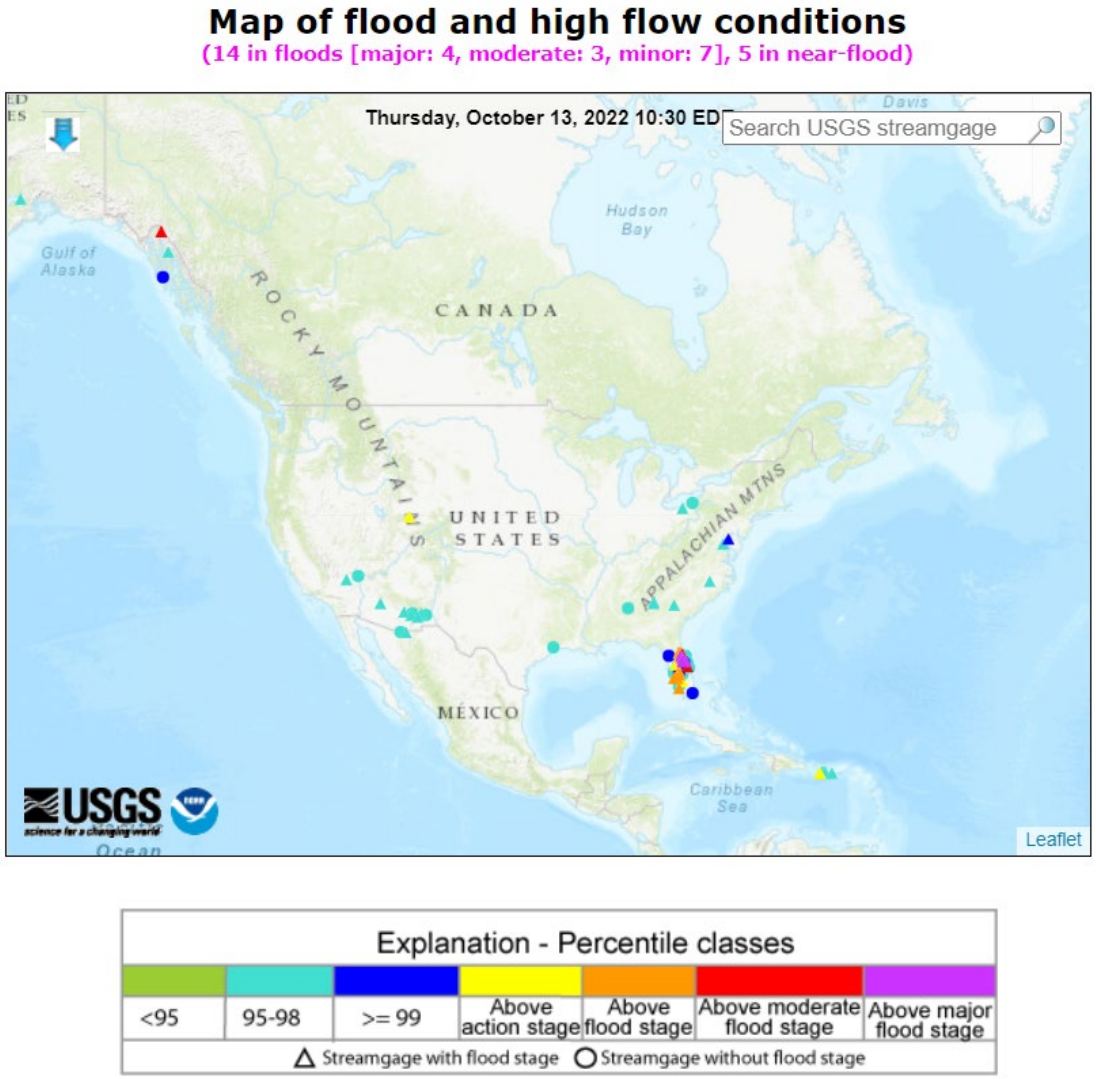
This chart shows the precipitation and soil moisture for the last 30 days at the Sidney SCAN site in Montana. Soil moisture levels increased at the -2 and -4-inch sensor depths after the site received a two-day total rainfall of 1.32 inches of precipitation from October 1-2. Total precipitation received during the period was 1.68 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

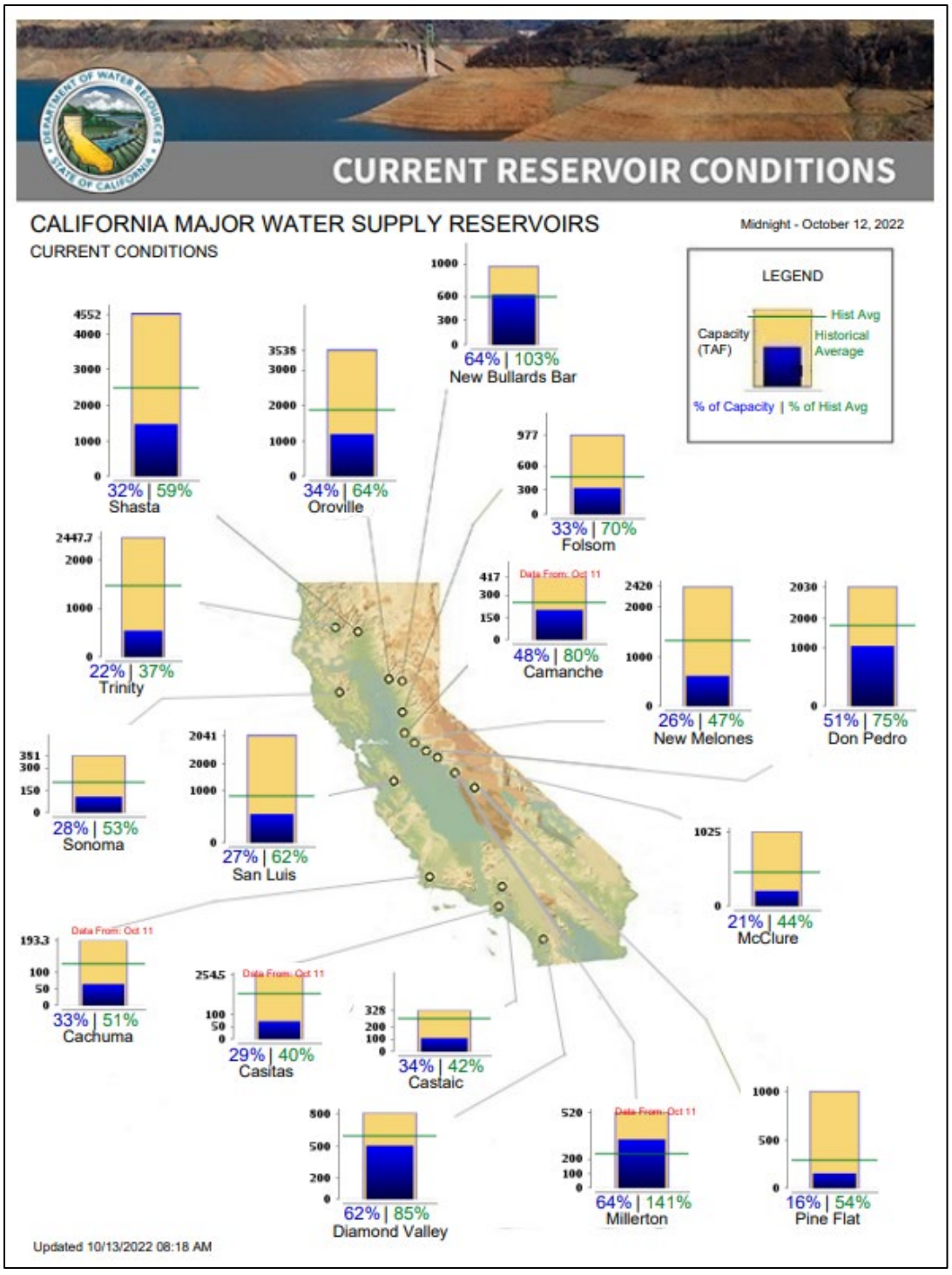
Hydromet Teacup Reservoir Depictions

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

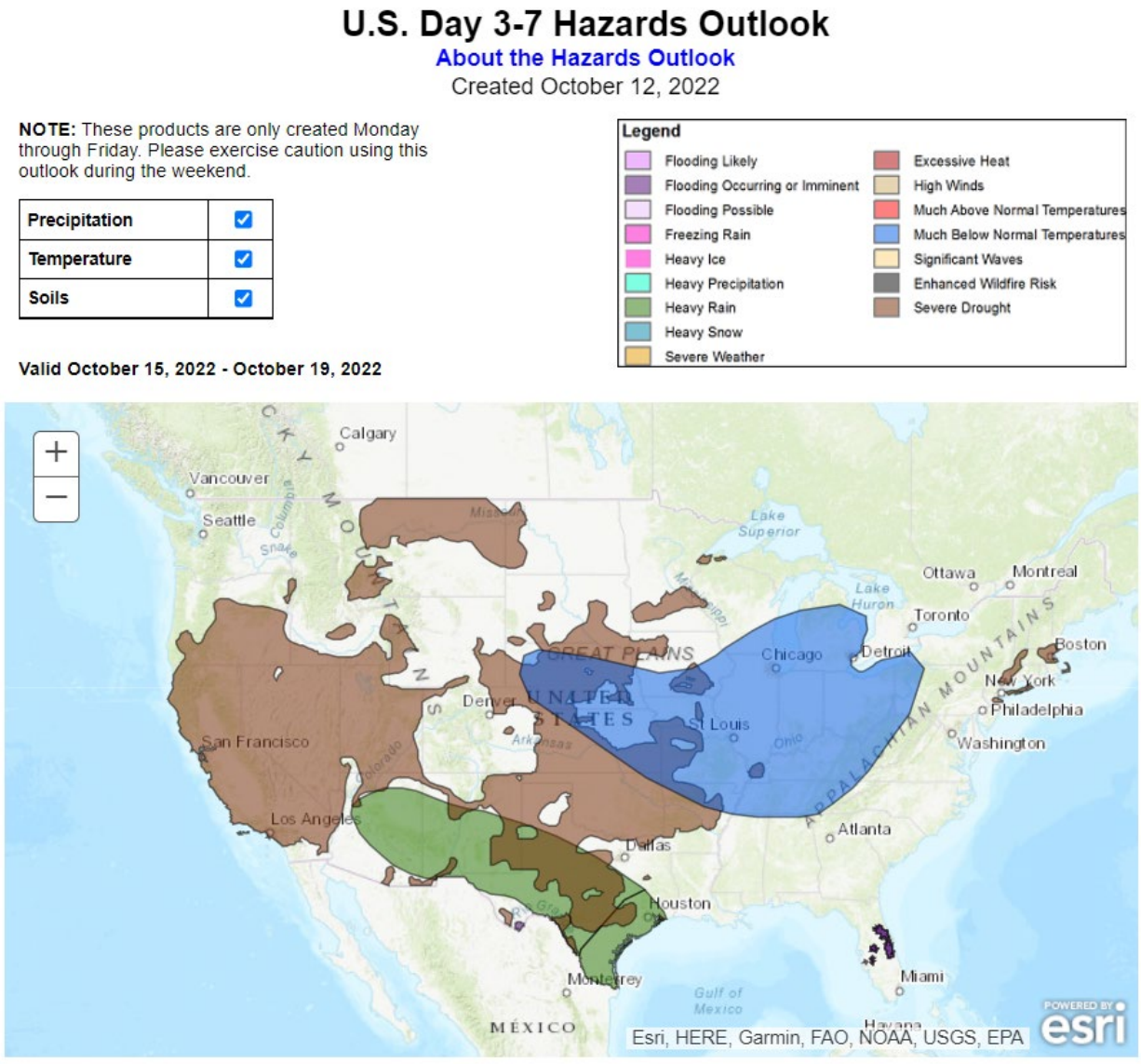
Agricultural Weather Highlights

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

National Outlook, Thursday, October 13, 2022: "Tropical Storm Karl, centered over the Gulf of Mexico, has begun to drift southward and poses no threat to the United States. Meanwhile, a cold front sweeping across the eastern U.S. will produce showers and locally severe thunderstorms, with rain lingering into Friday across the Northeast. Subsequently, dry weather will prevail nearly nationwide, although rain will return during the weekend and early next week across the southwestern and south-central U.S. Five-day rainfall could total 1 to 2 inches or more in parts of New Mexico and Texas. In contrast, dry weather will prevail from the Pacific Coast to the central and southern Plains and much of the Midwest. By early next week, widespread freezes will return across the northern half of the Plains and much of the Midwest. Late-season warmth will continue, however, west of the Rockies. The NWS 6- to 10-day outlook for October 18 – 22 calls for the likelihood of above-normal temperatures in most areas from the Pacific Coast to the High Plains, while cooler-than-normal conditions will cover the eastern half of the U.S. Meanwhile, near- or below-normal precipitation across most of the country should contrast with wetter-than-normal weather in the Southwest."

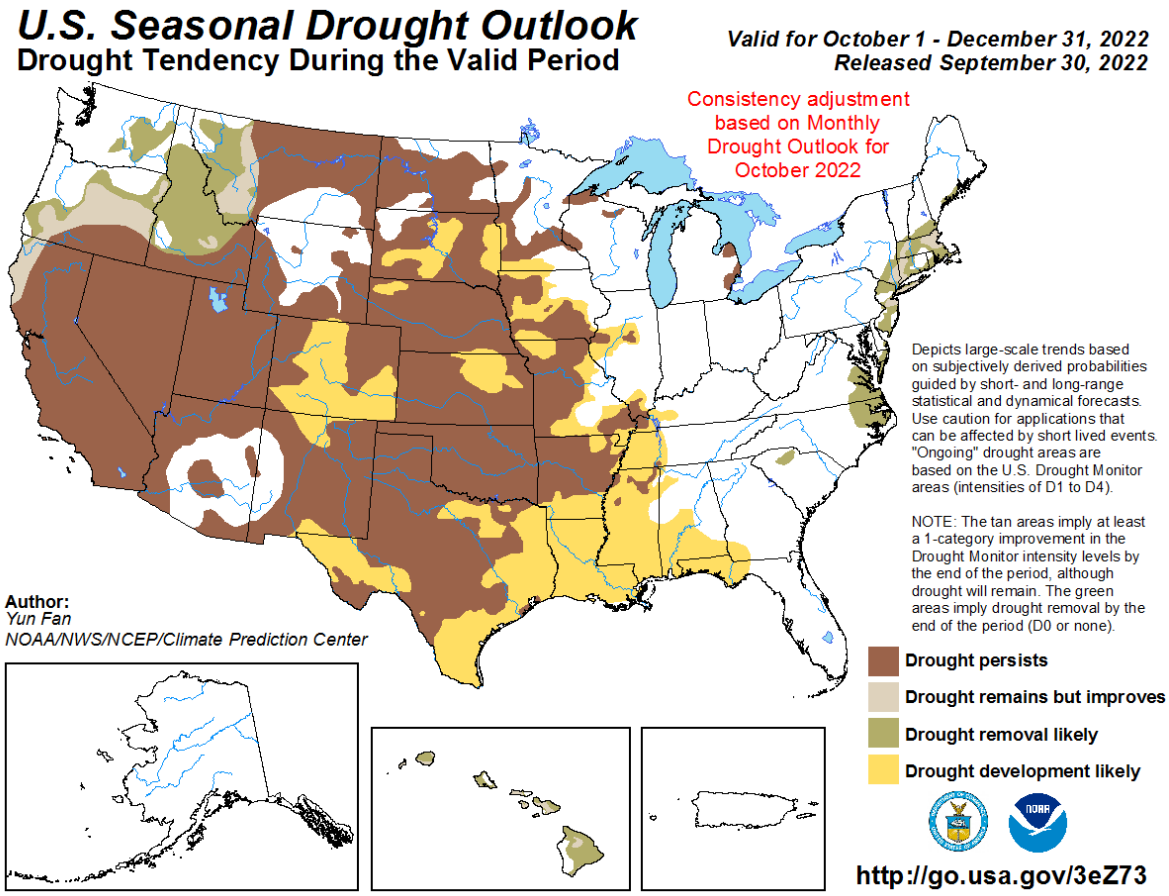
Weather Hazards Outlook: October 15 – 19, 2022

Source: NOAA Weather Prediction Center



Seasonal Drought Outlook: October 01 – December 31, 2022

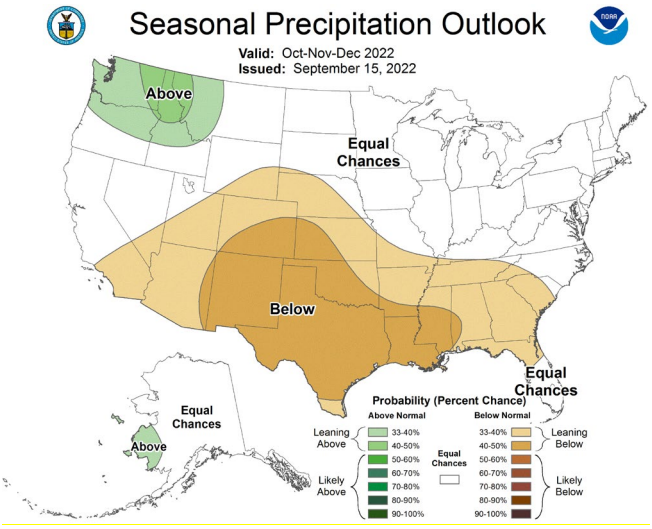
Source: National Weather Service



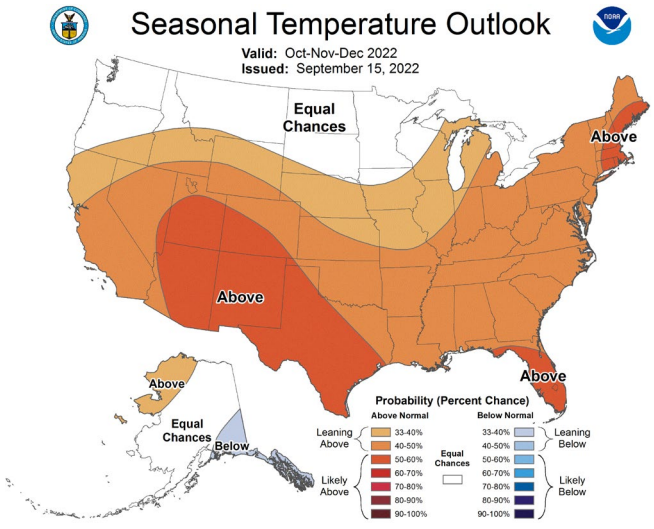
Climate Prediction Center 3-Month Outlook

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.