



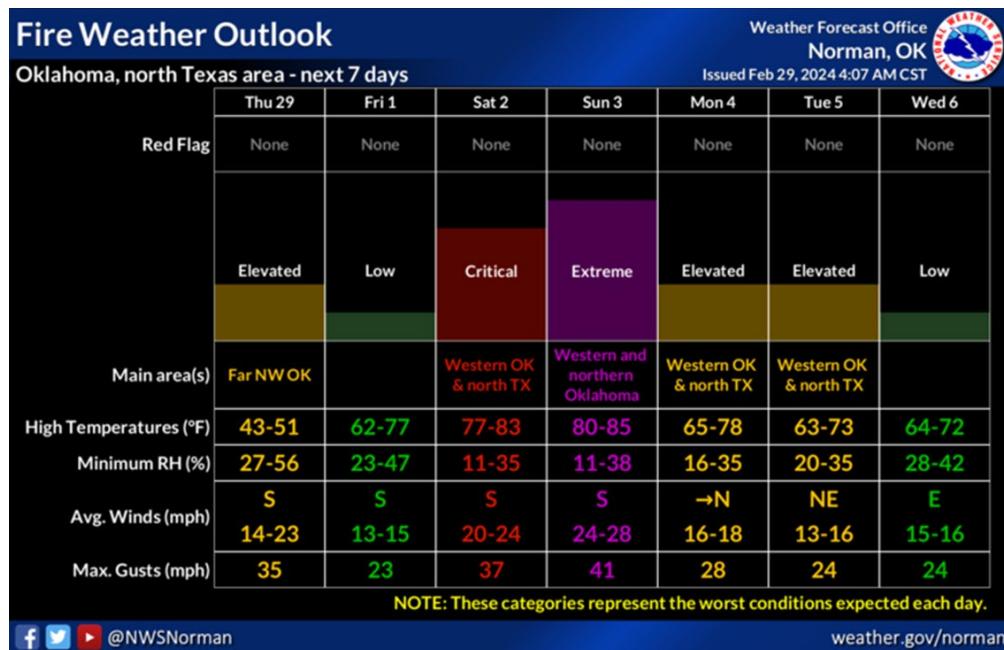
Water and Climate Update

February 29, 2024

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.

Snow	2	Drought	10
Precipitation	4	Other Climatic and Water Supply Indicators	14
Temperature.....	8	More Information.....	20

Historic wildfire burns in the Texas Panhandle



The largest fire in Texas history, named the Smokehouse Creek fire, has burned over 1 million acres as of February 29. The cause of the fire is still under investigation, but officials cite unseasonably warm temperatures, low humidity, dry grasslands, and high winds as primary factors for the spread of the blaze. The National Weather Service is expecting hot and dry conditions to resume by the weekend, causing concerns of further spread as the historic fire burns despite rain and snow falling in the area on February 29.

Related:

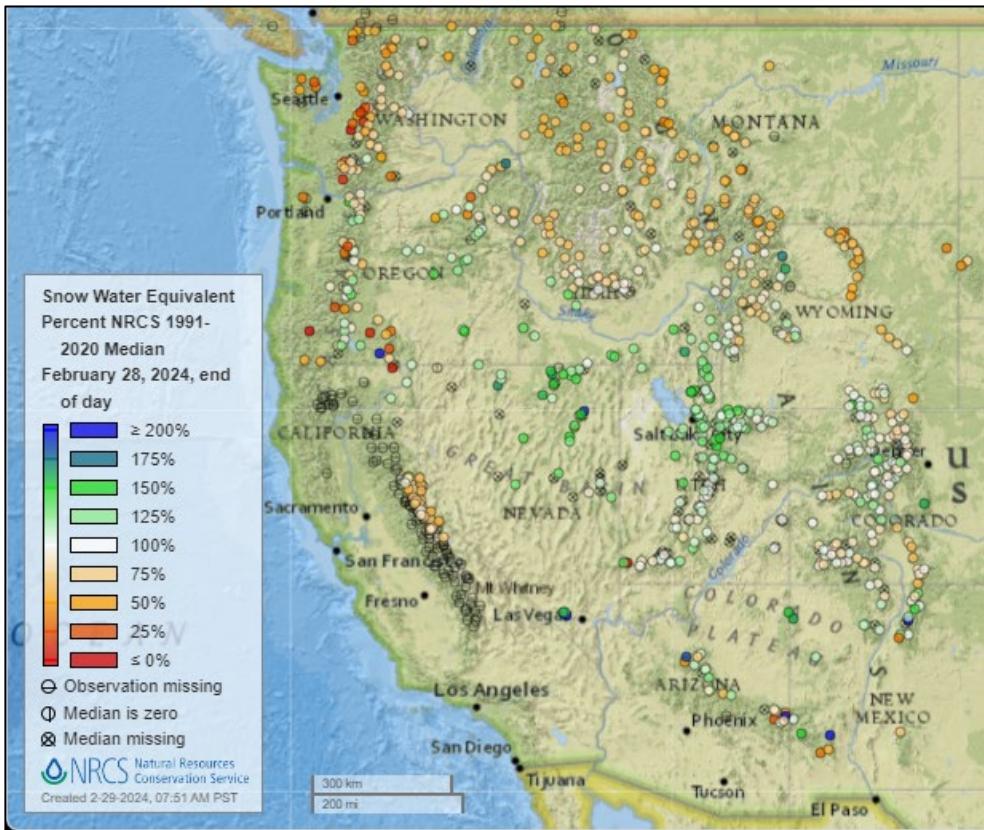
[The latest on the rapidly growing Smokehouse Creek Fire in Texas](#) – CNN

[Texas wildfires live updates: Massive blaze covers over 1 million acres, becoming largest in state history](#) – NBC News

[Fast-moving wildfire in Texas panhandle blows flames, smoke into Oklahoma - see photos](#) – The Oklahoman

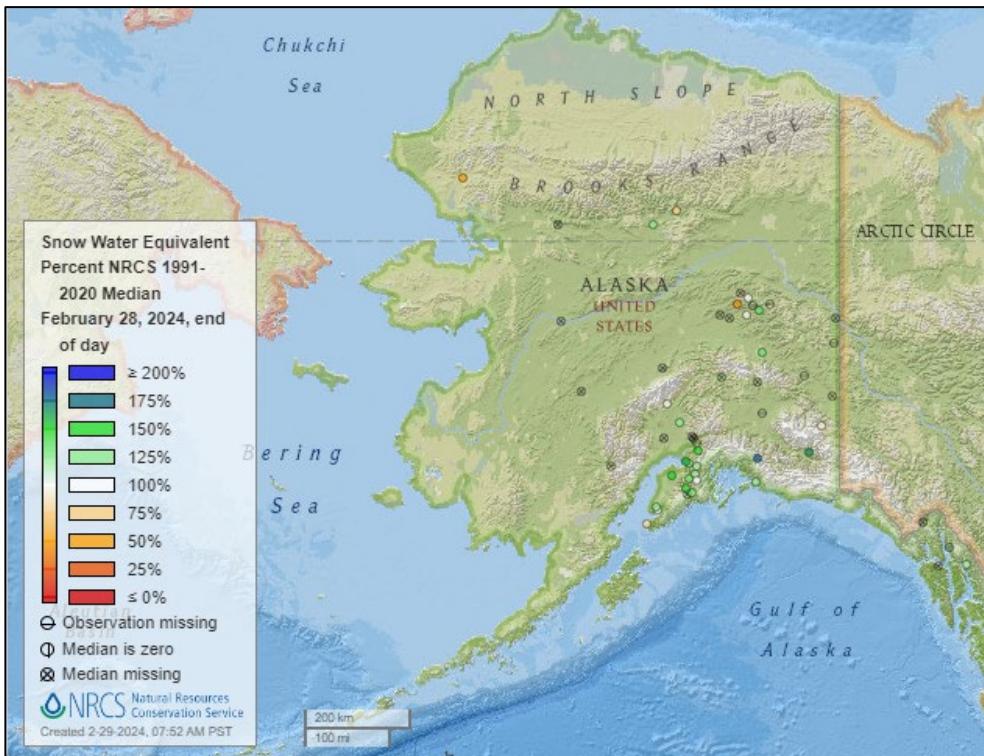
['Devastating' Texas wildfires spark disaster declaration, nuclear plant partial evacuation](#) – ABC News

Snow



[Snow water equivalent percent of median map](#)

See also:
[Snow water equivalent values \(inches\) map](#)

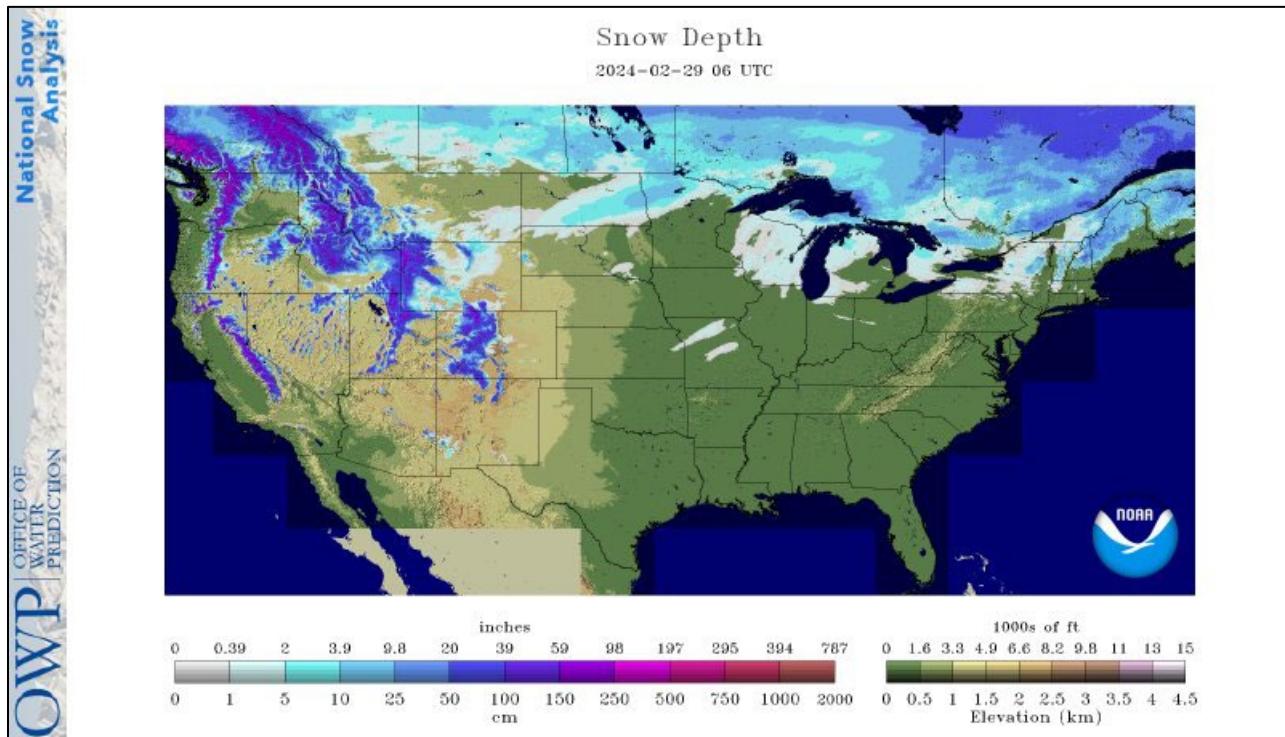


[Alaska snow water equivalent percent of median map](#)

See also:
[Alaska snow water equivalent values \(inches\) map](#)

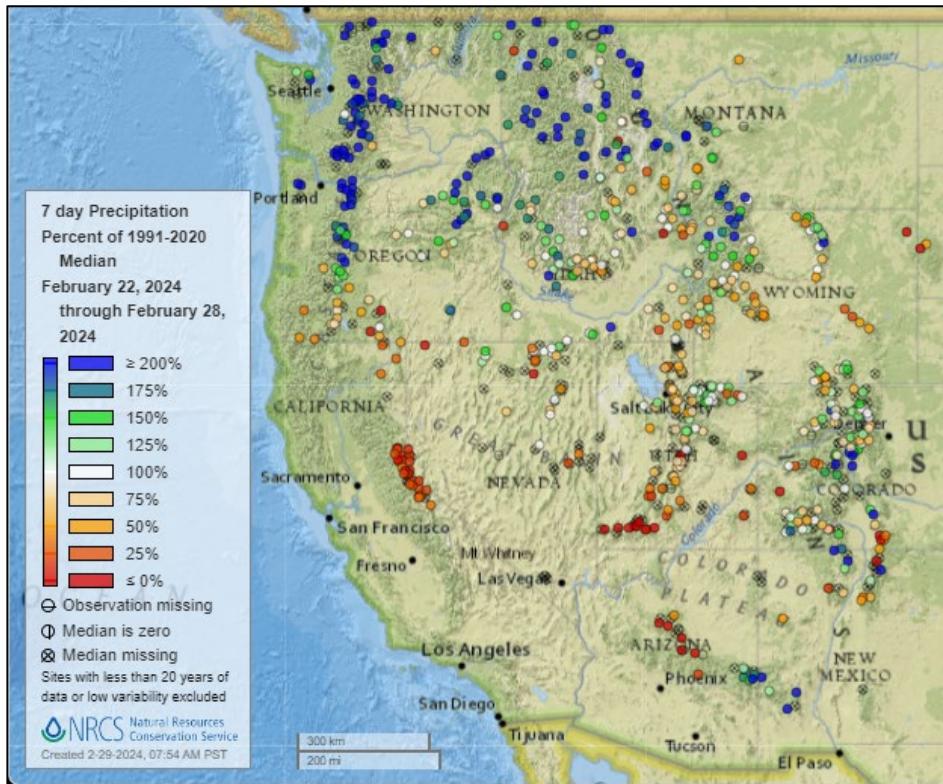
[Current Snow Depth, National Weather Service Snow Analysis](#)

Source: NOAA NWS National Operational Hydrologic Remote Sensing Center



Precipitation

Last 7 Days, NRCS SNOTEL Network



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

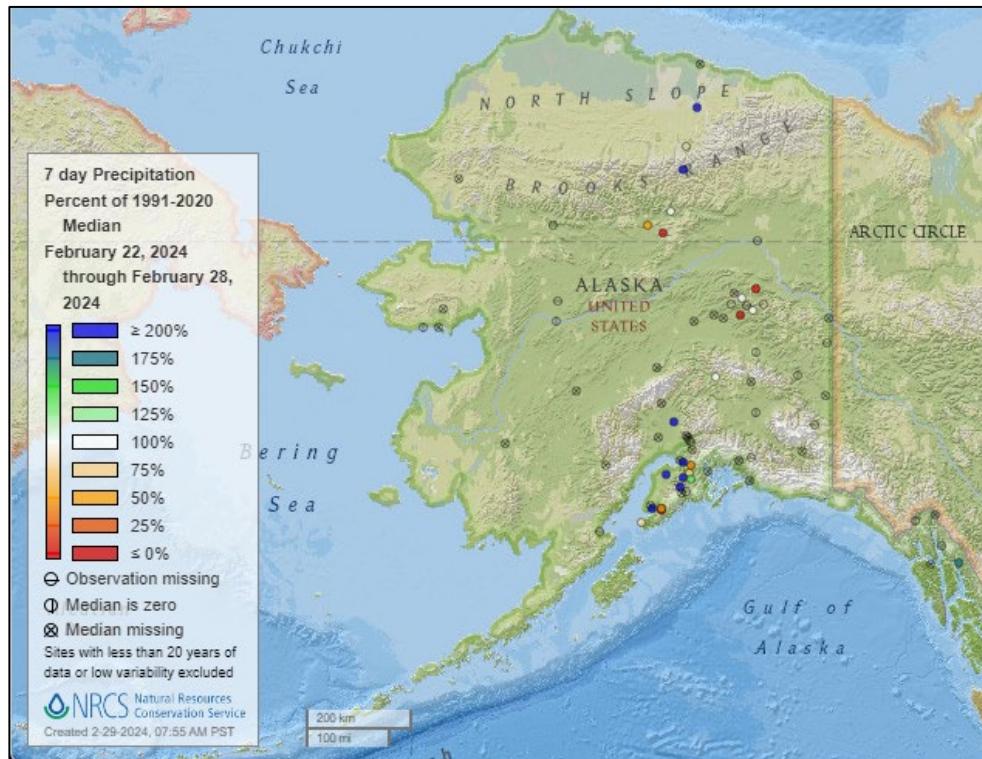
See also:

[7-day total precipitation values \(inches\) map](#)

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

See also:

[Alaska 7-day total precipitation values \(inches\) map](#)



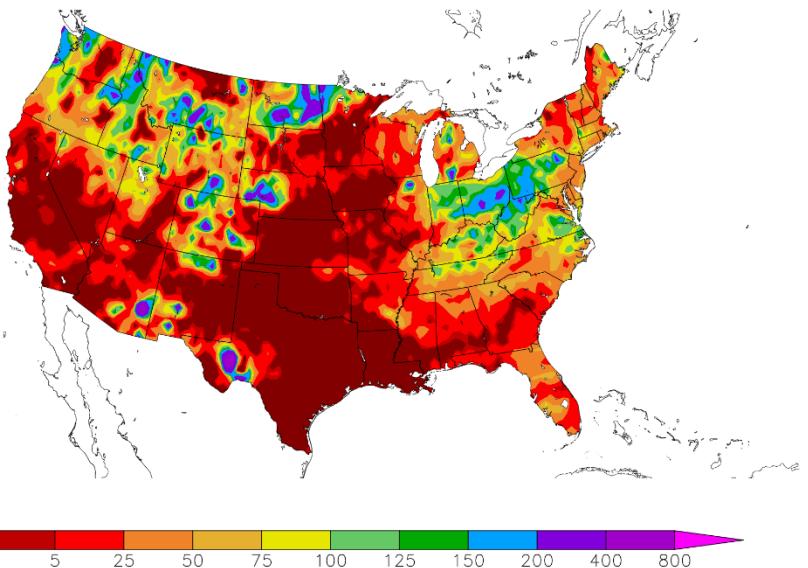
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day precipitation percent of normal map](#) for the continental U.S.

Percent of Normal Precipitation (%)
2/22/2024 – 2/28/2024

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



Generated 2/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

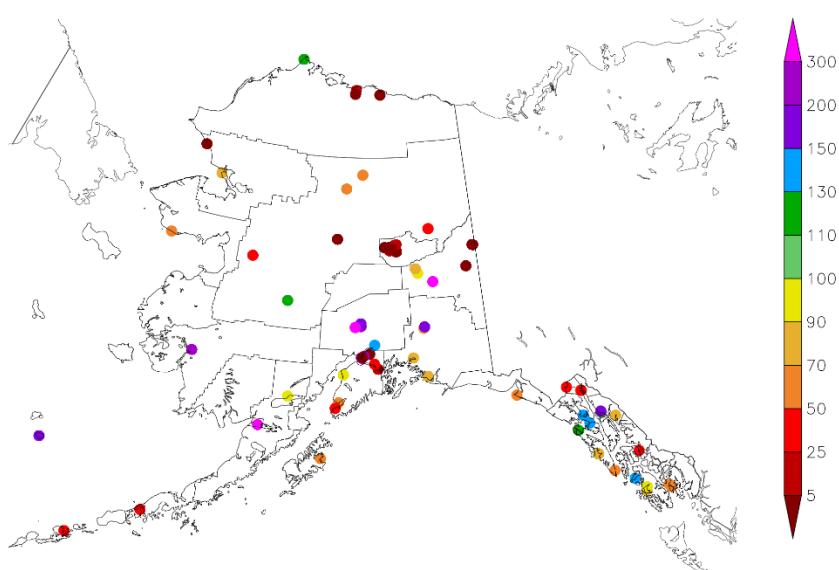
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

Percent of Normal Precipitation (%)
2/22/2024 – 2/28/2024

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



Generated 2/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

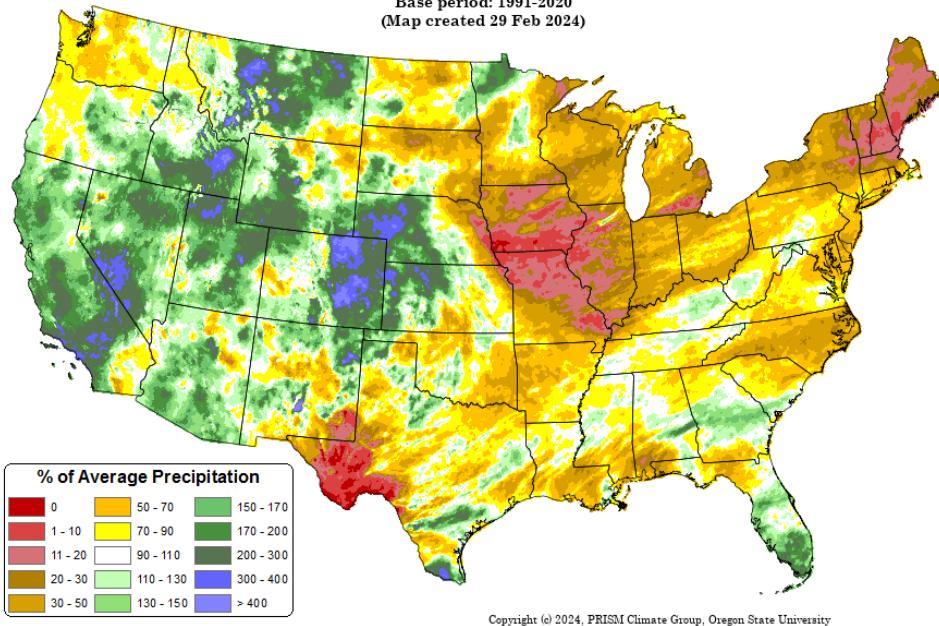
Month-to-Date, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

Total Precipitation Anomaly: 01 Feb 2024 - 28 Feb 2024

Period ending 7 AM EST 28 Feb 2024
Base period: 1991-2020
(Map created 29 Feb 2024)

[Month-to-date national total precipitation anomaly map](#)



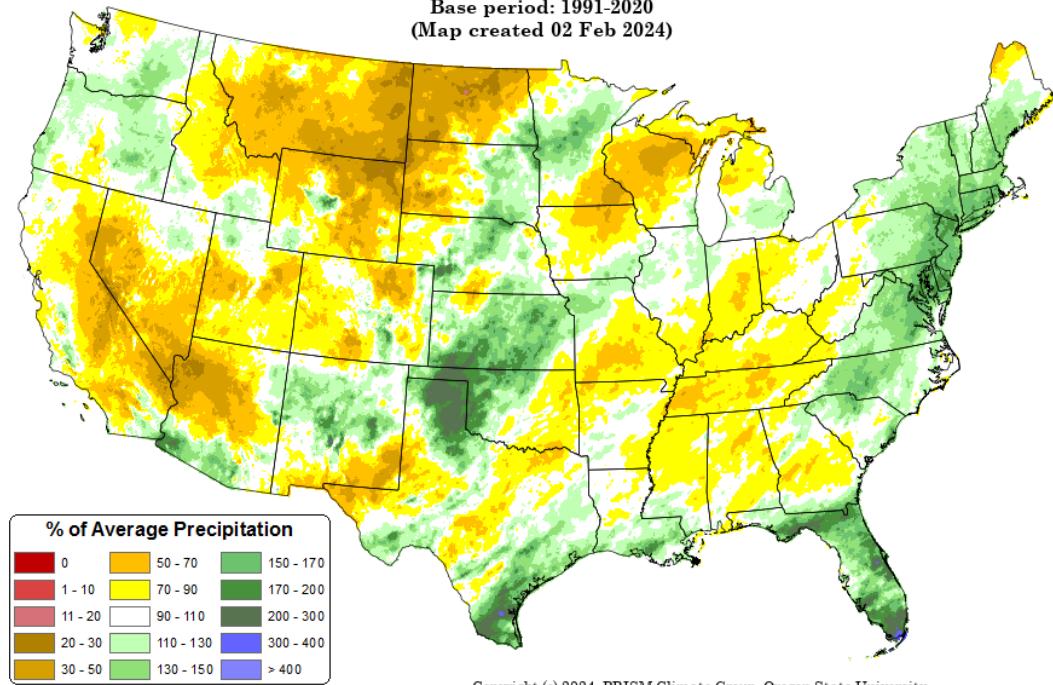
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

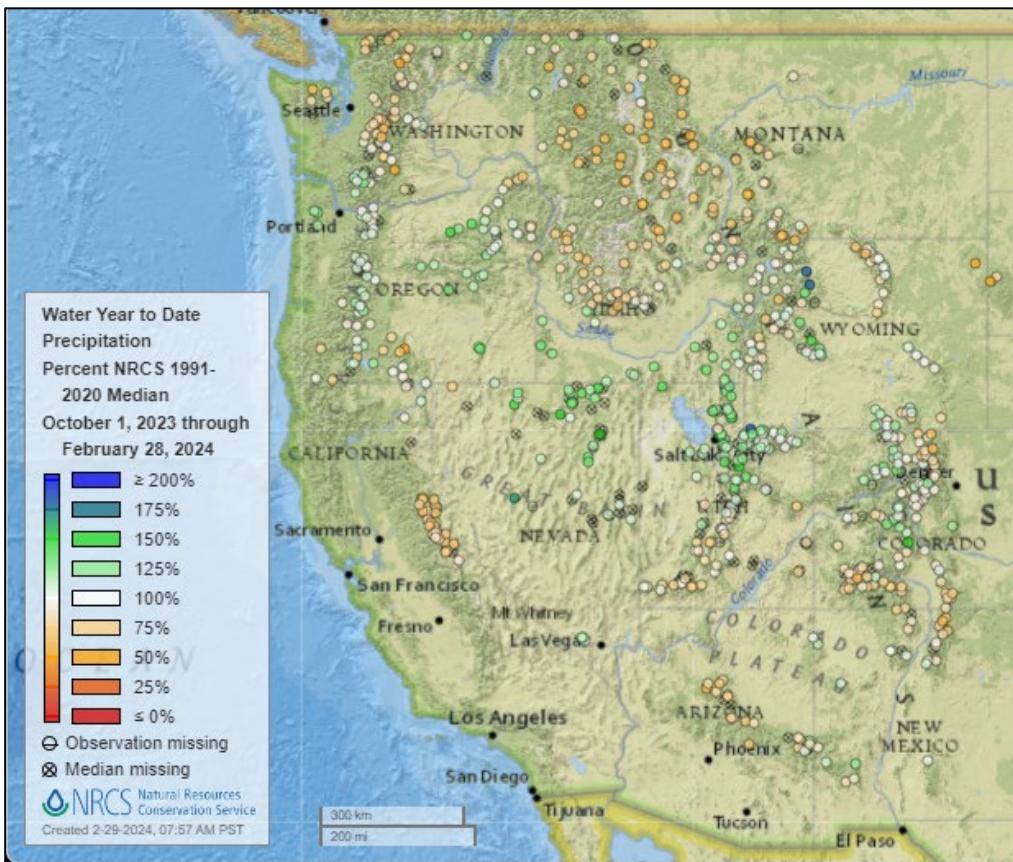
[November 2023 through January 2024 precipitation anomaly map](#)

Total Precipitation Anomaly: Nov 2023 - Jan 2024

Period ending 7 AM EST 31 Jan 2024
Base period: 1991-2020
(Map created 02 Feb 2024)



Water Year-to-Date, NRCS SNOTEL Network

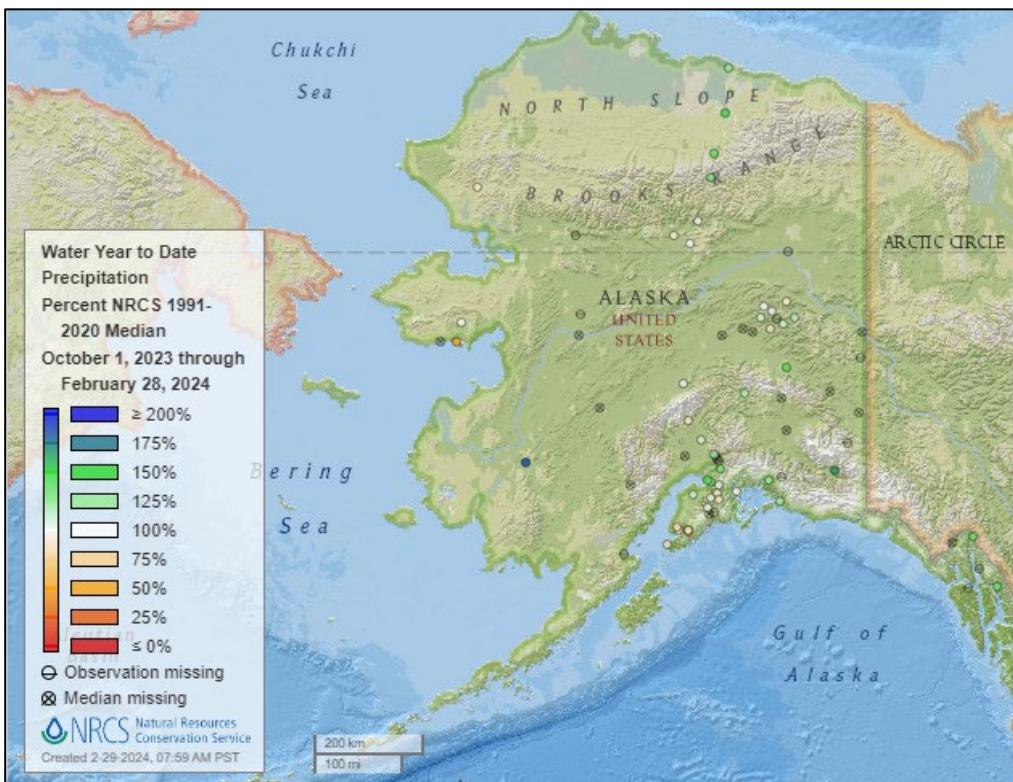


[2024 water year-to-date precipitation percent of median map](#)

See also:

[2024 water year-to-date precipitation percent of average map](#)

[2024 water year-to-date precipitation values \(inches\) map](#)



[Alaska 2024 water year-to-date precipitation percent of median map](#)

See also:

[Alaska 2024 water year-to-date precipitation percent of average map](#)

[Alaska 2024 water year-to-date precipitation values \(inches\) map](#)

Temperature

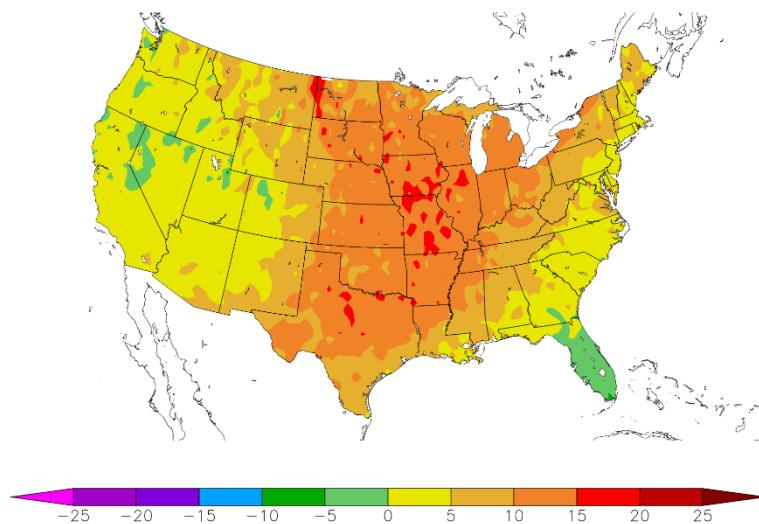
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

[7-day temperature anomaly map](#) for the contiguous U.S.

Departure from Normal Temperature (F)
2/22/2024 – 2/28/2024

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



Generated 2/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

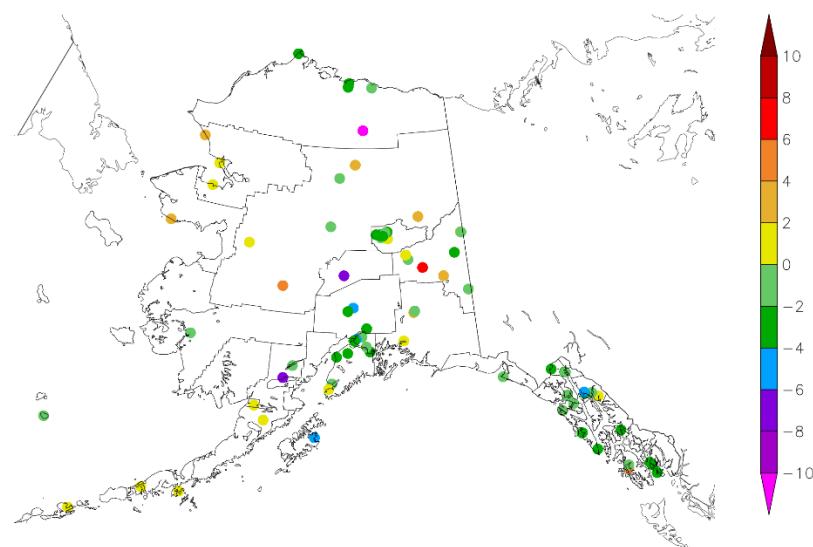
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

Departure from Normal Temperature (F)
2/22/2024 – 2/28/2024

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



Generated 2/29/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Water and Climate Update

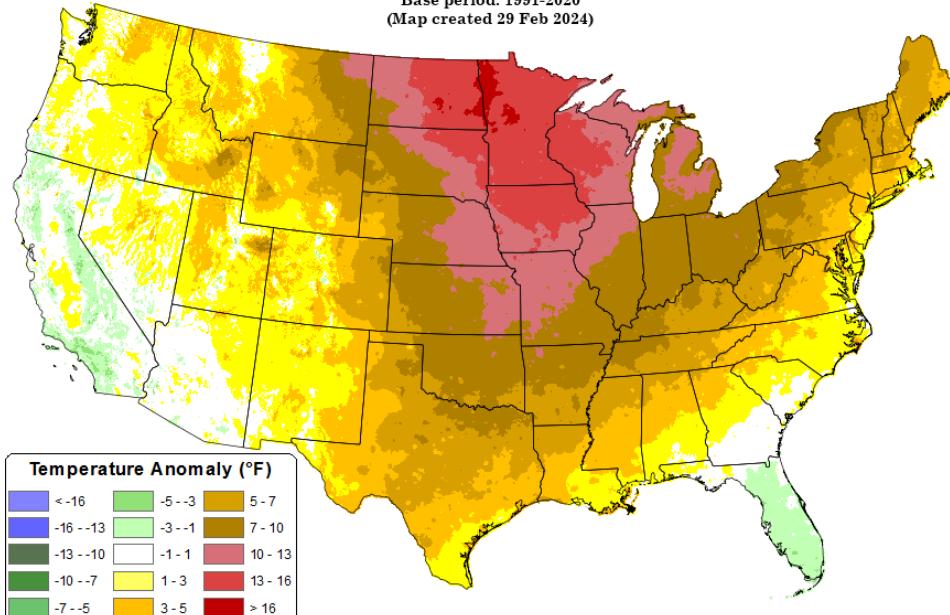
Month-to-Date, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

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

Daily Mean Temperature Anomaly: 01 Feb 2024 - 28 Feb 2024

Period ending 7 AM EST 28 Feb 2024
Base period: 1991-2020
(Map created 29 Feb 2024)



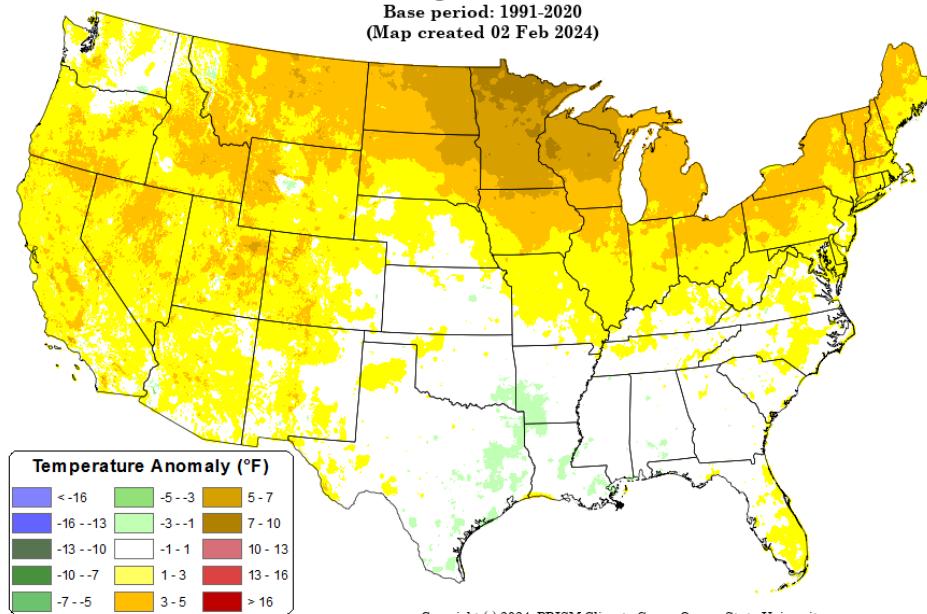
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

Daily Mean Temperature Anomaly: Nov 2023 - Jan 2024

Period ending 7 AM EST 31 Jan 2024
Base period: 1991-2020
(Map created 02 Feb 2024)

[November 2023
through January 2024
daily mean
temperature anomaly
map](#)



Drought

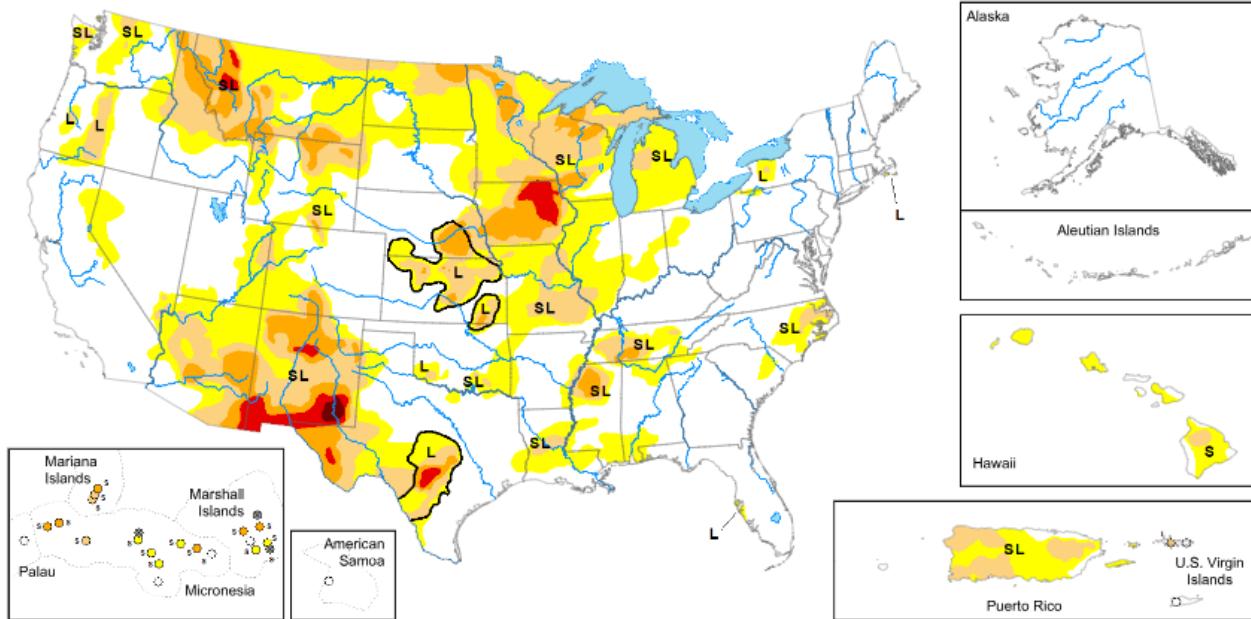
[U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

Map released: February 29, 2024

Data valid: February 27, 2024

View grayscale version of the map



United States and Puerto Rico Author(s):

[Richard Heim](#), NOAA/NCEI

More maps and statistics:

[U.S. States and Puerto Rico](#)

[Continental U.S.](#)

[Regions ▾](#)

Pacific Islands and Virgin Islands Author(s):

[Denise Gutzmer](#), National Drought Mitigation Center

The data cutoff for Drought Monitor maps is each Tuesday at 7 a.m. EST. 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](#), February 27, 2024

Source: National Drought Mitigation Center

"Several weather systems moved across the contiguous U.S. (CONUS) during this U.S. Drought Monitor (USDM) week (February 21-27). Their fronts and surface lows spread rain and snow across parts of the West at the beginning and end of the week, and over the Tennessee to Ohio Valleys and Appalachians at mid-week. These systems were associated with an upper-level circulation pattern that consisted of low-pressure troughs just off the west coast and east coast, with a high-pressure ridge over the central part of the country. The ridge brought above-normal temperatures to much of the CONUS, from the Rocky Mountains to Appalachian Mountains, with weekly temperatures averaging 15-20 degrees F above normal from Texas to the northern Plains and Upper Mississippi Valley. Temperatures averaged near to cooler than normal in parts of the interior West to Pacific Coast and along the Eastern Seaboard. The ridge also inhibited precipitation from the Rockies to Mississippi Valley. The precipitation in the West was mainly over mountain ranges but was not enough to improve drought conditions. The precipitation in the Midwest was enough to prevent further drought expansion or intensification where it was wetter than normal for the week. In other areas, drought or abnormal dryness expanded or intensified in parts of the Plains and Midwest, and a few parts of the Pacific Northwest, Gulf of Mexico coast, and Mid-Atlantic coast."

National Drought Summary – Looking Ahead

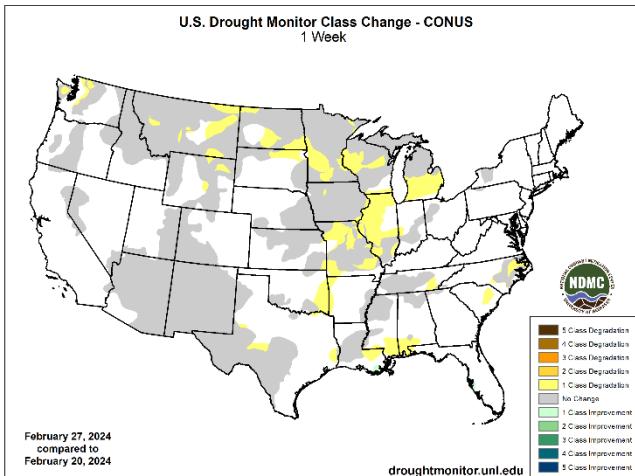
"In the two days since the Tuesday valid time of this USDM, Pacific moisture continued to move across the Coastal and Cascade ranges in the Pacific Northwest, with precipitation falling in areas east of the Mississippi River and in parts of the southern Plains. For February 29-March 5, a ridge over the eastern CONUS will bring warmer-than-normal temperatures to much of the country east of the Rockies while a trough contributes to cooler-than-normal temperatures in the West. Forecast models predict a wet period for much of the West, in the Upper Rio Grande Valley, and from the Lower Mississippi Valley to the East Coast, as low-pressure systems and fronts bring locally heavy precipitation. The Coastal, Cascade, and Sierra Nevada mountain ranges could see 5 to 10 inches of precipitation, or locally more, while the central to northern Rockies could receive 2 to 4 inches of precipitation. Parts of southern New Mexico and western Texas could receive up to an inch of rain. An inch or more of precipitation is predicted from southern Louisiana to southern New England. Outside of these wet areas, up to half an inch of moisture could fall in the lower elevations of the West, across the northern and southern Plains, and Midwest to Northeast. Areas that could miss out on the precipitation stretch from southern California to the central Plains, where little to no precipitation is expected, and the southern Plains and Mid-Mississippi Valley to eastern Great Lakes, where less than a fourth of an inch may fall.

For much of the next 2 weeks, the atmospheric circulation is expected to continue an upper-level trough over the western CONUS and a ridge over the eastern two-thirds of the country, with Pacific weather systems migrating through the trough/ridge pattern. The Climate Prediction Center's (CPC) 6-10 Day Outlook (valid March 4-8) and 8-14 Day Outlook (valid March 6-12) favor a fairly stable pattern of warmer-than-normal temperatures from the Plains to East Coast and cooler-than-normal temperatures over the West and Alaska. The outlook is for above-normal precipitation over eastern and southern Alaska and much of the CONUS, especially east of the Mississippi River, with odds favoring near to below-normal precipitation over the northern Rockies to northern Plains and over the west coast of Alaska."

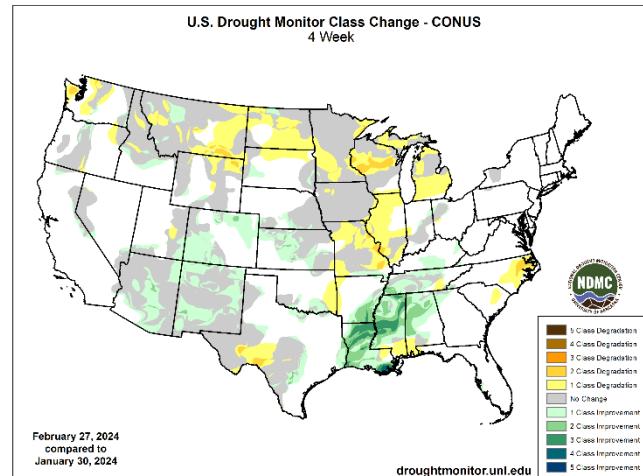
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

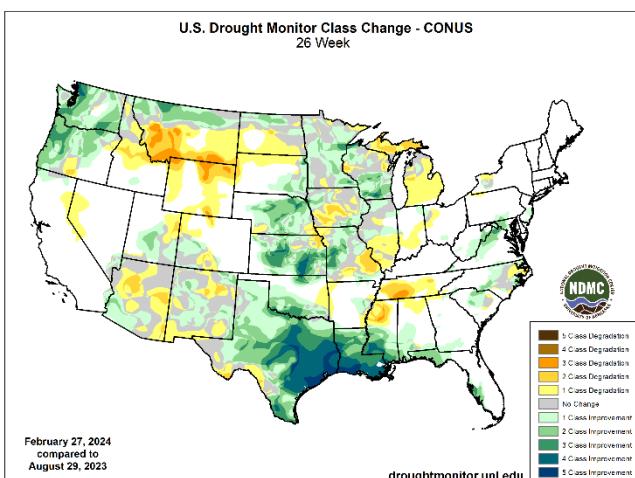
1 Week



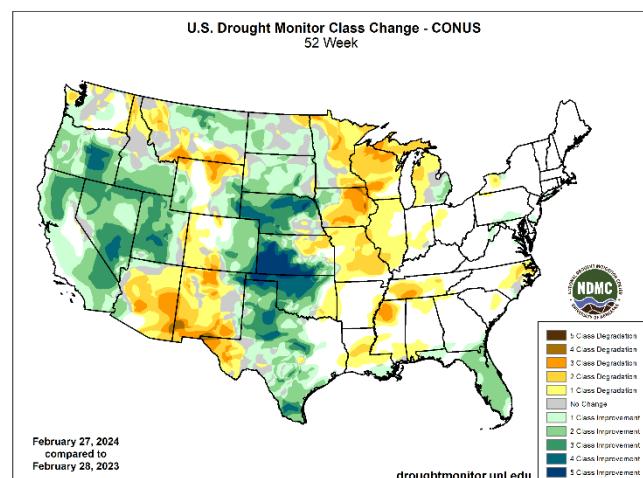
1 Month



6 Months



1 Year



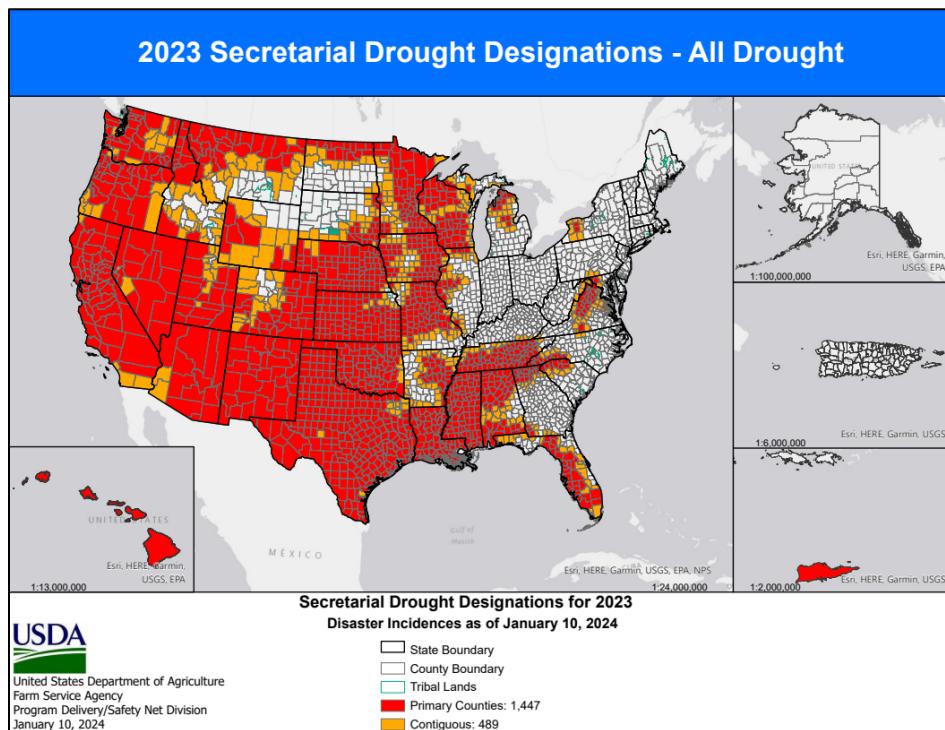
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

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: Fire Information for Resource Management System US/Canada

Source: NASA/USDA Forest Service



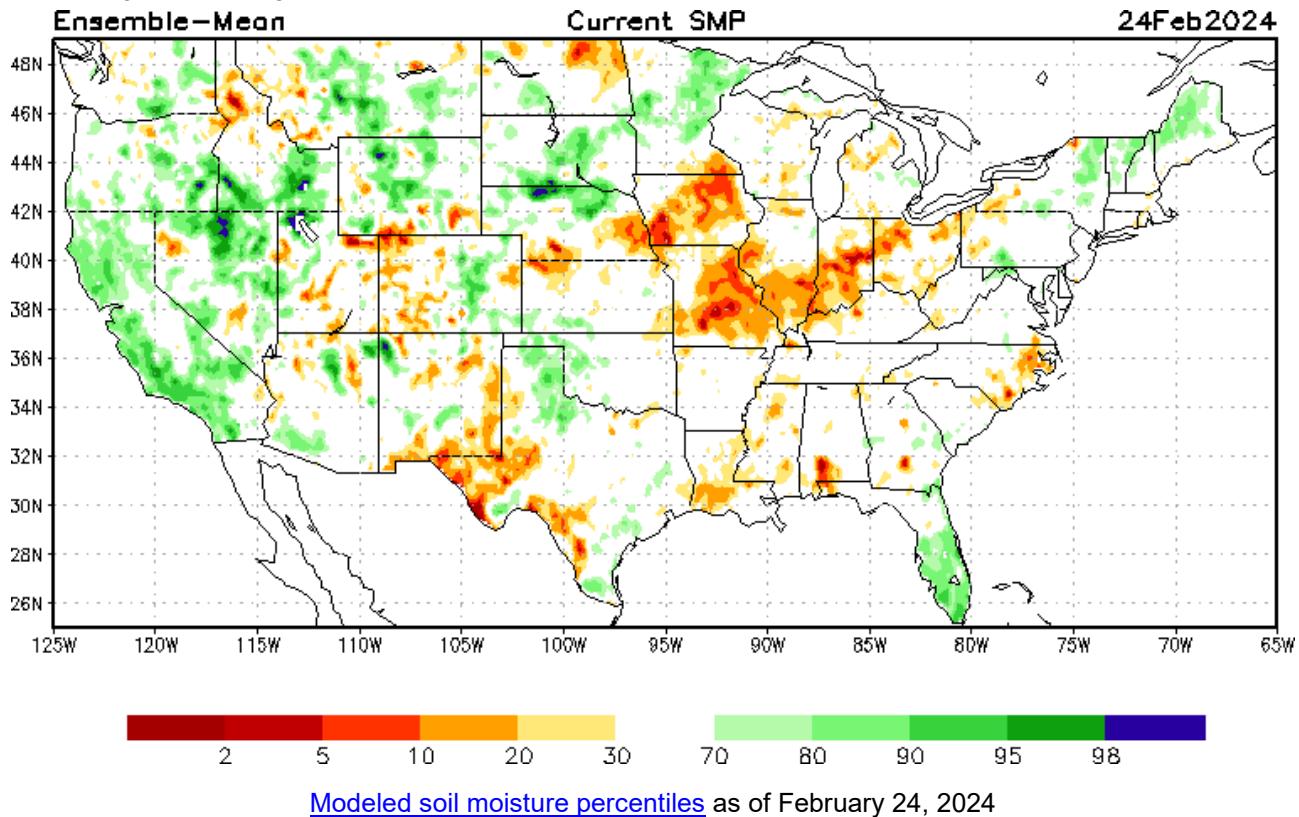
Highlighted Wildfire Resources

- [National Interagency Fire Center](#)
- [InciWeb Incident Information System](#)
- [Significant Wildland Fire Potential Outlook](#)

Other Climatic and Water Supply Indicators

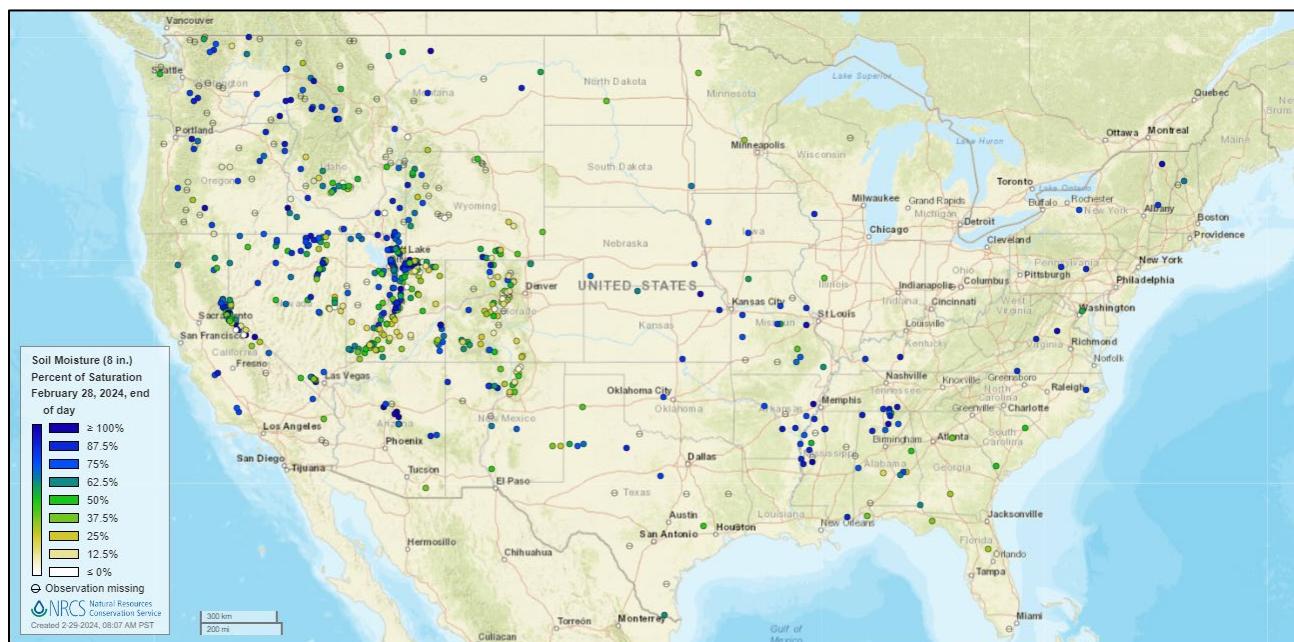
Soil Moisture

Source: NOAA National Centers for Environmental Prediction



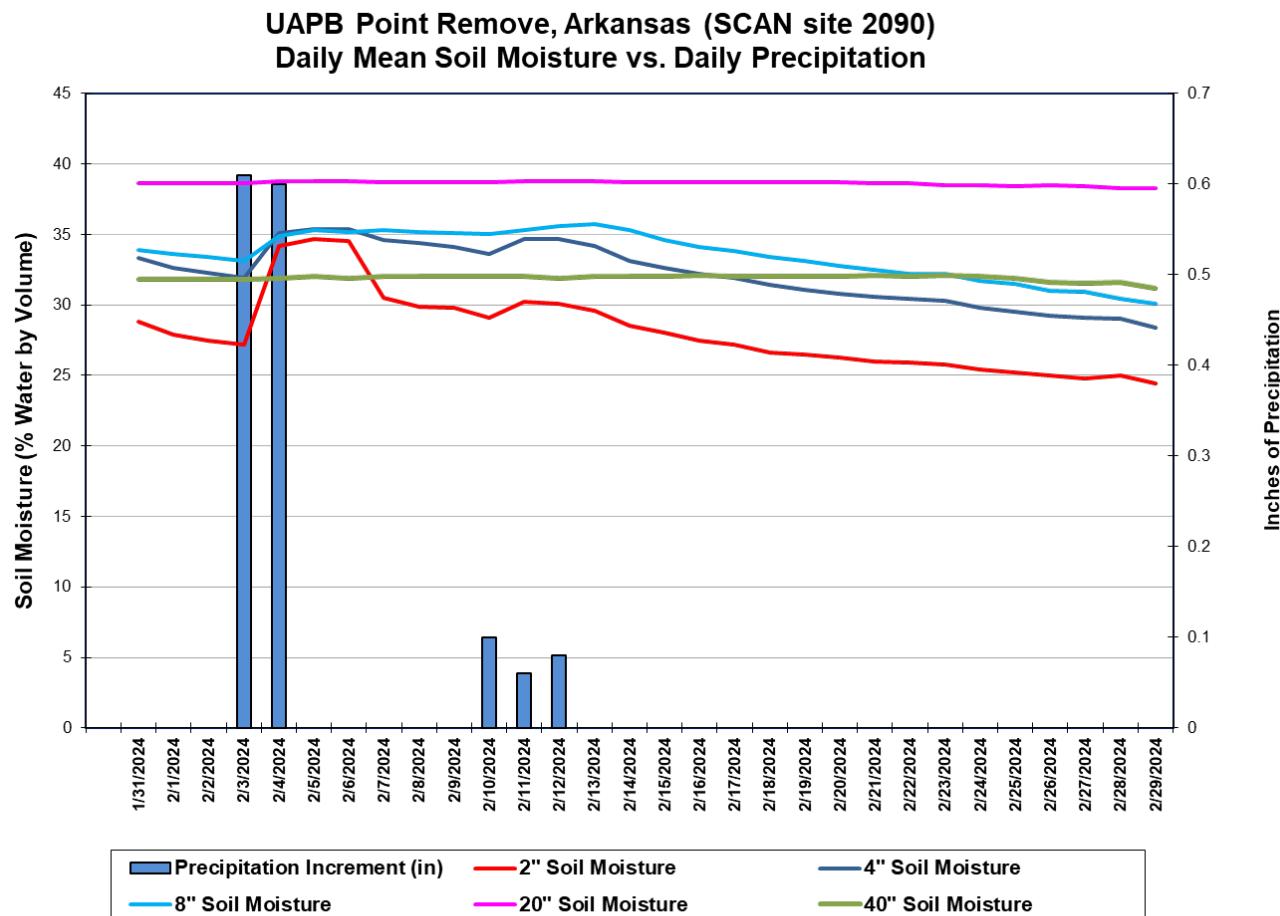
Soil Moisture Percent of Saturation

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 [UAPB Point Remove](#) SCAN site in Arkansas. After precipitation was received at the site during the first half of the period, soil moisture levels can be seen increasing at the -2, -4, and -8-inch soil sensor depths. Moisture levels remained relatively steady at the -20 and -40-inch sensor depths throughout the period, though sensors at the shallower depths indicate a decrease in soil moisture during the second half of the period. Total precipitation for the 30-day period was 1.45 inches.

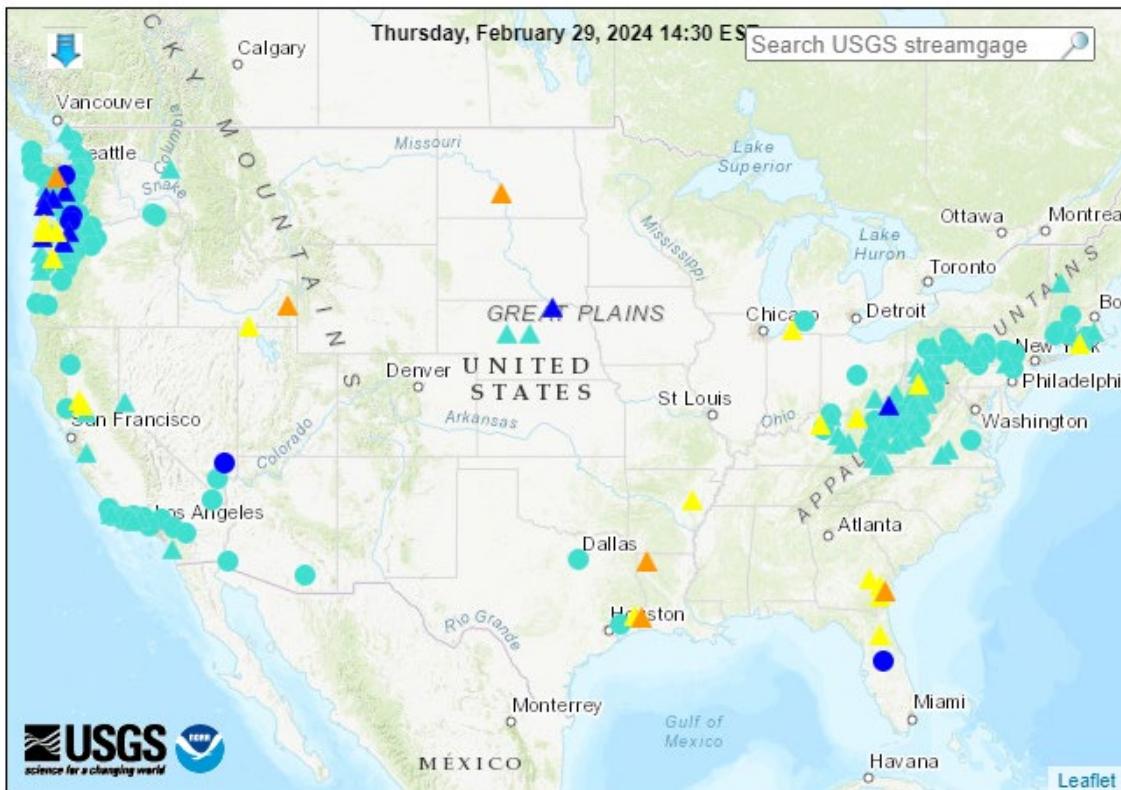
Soil Moisture Data Portals

- [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 (5 in floods [minor: 5], 17 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

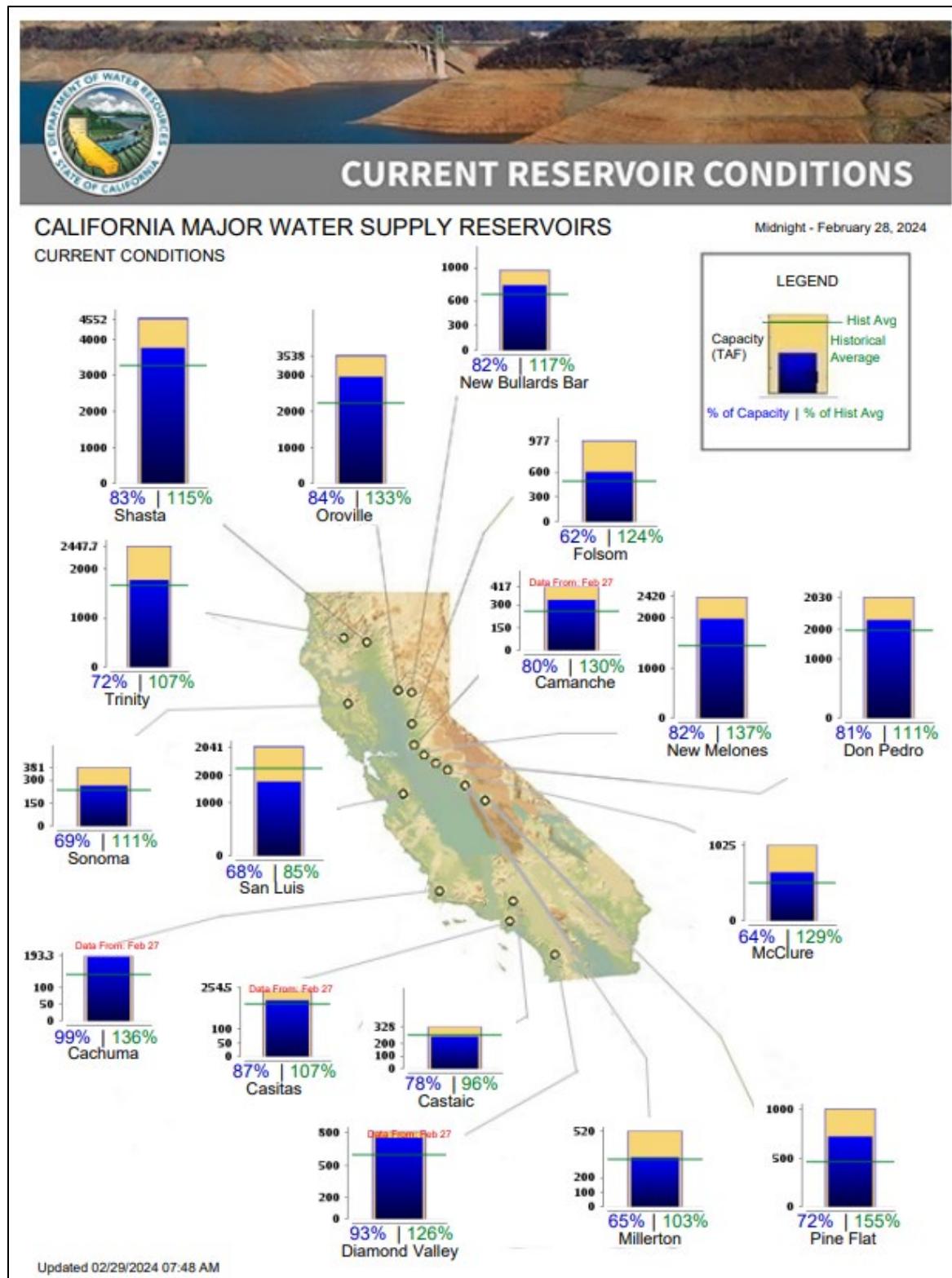
Hydromet Teacup Reservoir Depictions

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 February 29, 2024: "Precipitation—mostly rain—will spread into the

Southeast on Friday and affect portions of the Atlantic Coast States early in the weekend. Meanwhile, sprawling Pacific storminess will slowly translate eastward, with a low-pressure system crossing the northern Plains and upper Midwest late in the weekend. Cold air trailing that system could result in another round of temperatures below 0°F on Sunday and Monday in parts of Montana. Meanwhile, blizzard conditions across the northern and central Sierra Nevada should persist into Sunday, with a broader area of the western U.S. expecting high winds and significant mountain snow. Elsewhere, little or no precipitation will fall during the next 5 days across the nation's mid-section, including the central Plains and western Corn Belt, while temperatures will rebound to 80°F or higher by Sunday in the southcentral U.S. The NWS 6- to 10-day outlook for March 5 – 9 calls for above-normal temperatures across the eastern half of the U.S., while colder-than-normal conditions will cover the West. Meanwhile, wetter-than-normal weather occur nearly nationwide, with only northern sections of the Rockies and High Plains expecting near- or below-normal precipitation. California has the greatest likelihood of experiencing wet weather."

Weather Hazards Outlook: March 02 – 06, 2024

Source: NOAA Weather Prediction Center

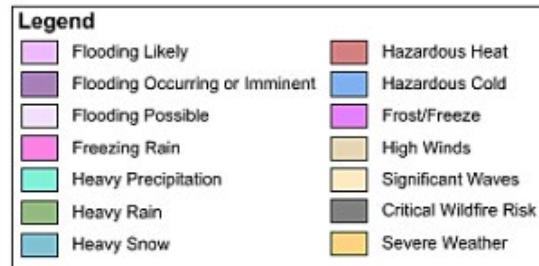
U.S. Day 3-7 Hazards Outlook

About the Hazards Outlook

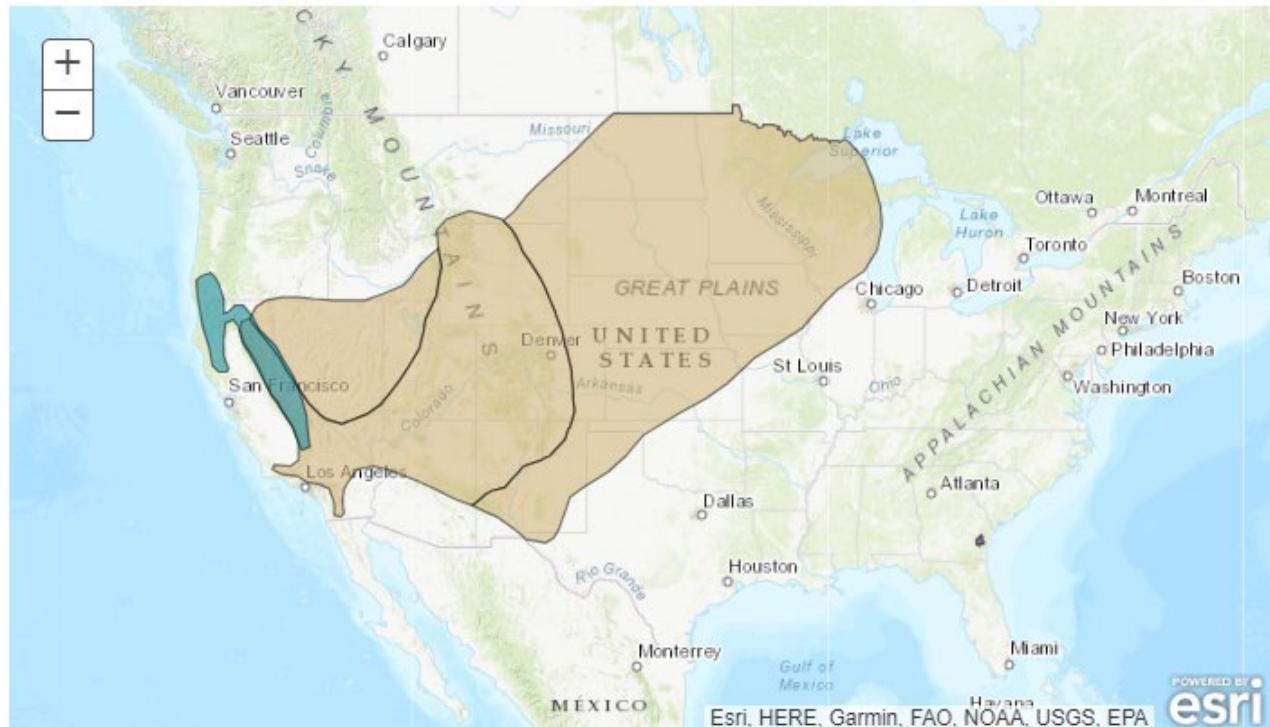
Created February 28, 2024

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"/>
Wildfires	<input checked="" type="checkbox"/>
Soils	<input type="checkbox"/>



Valid March 02, 2024 - March 06, 2024

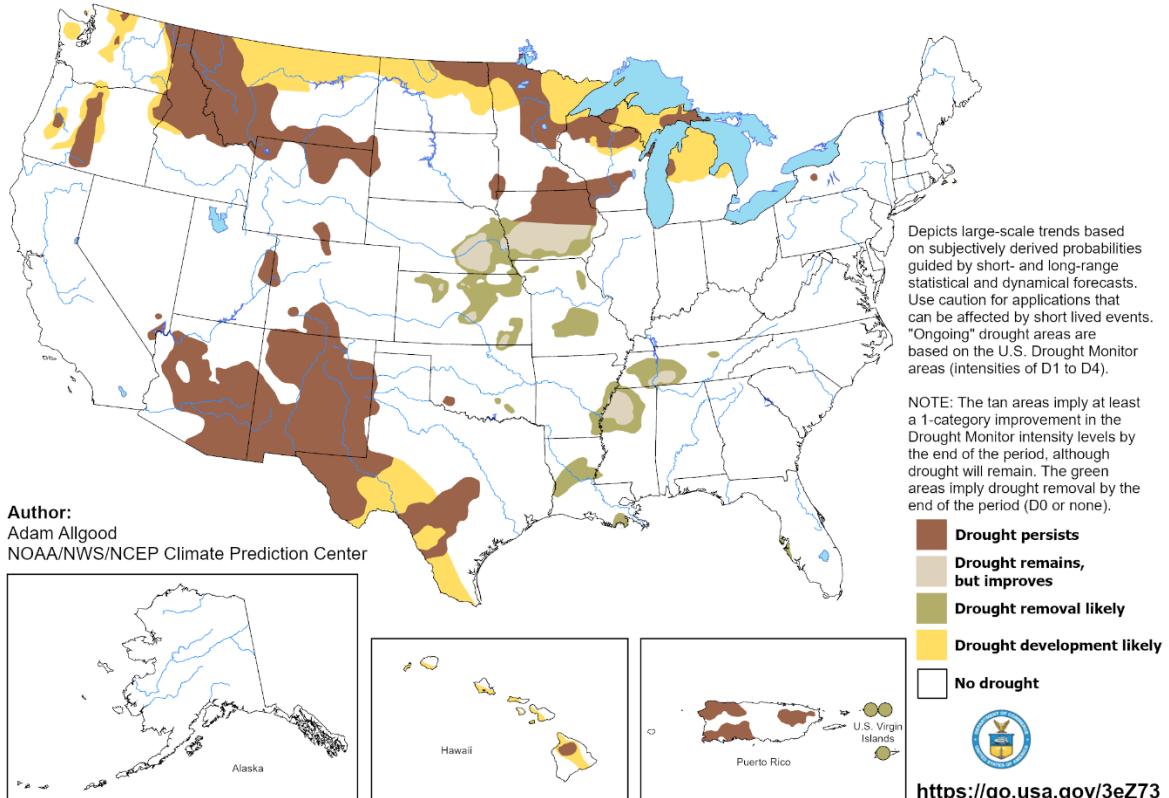


Seasonal Drought Outlook: [February 15 – May 31, 2024](#)

Source: National Weather Service

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

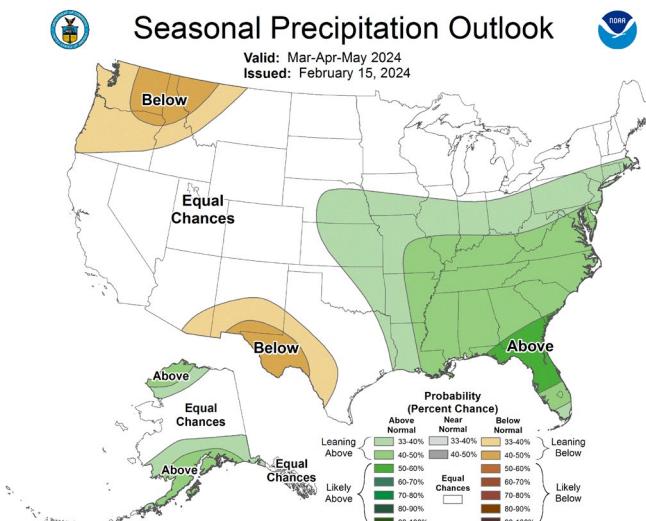
Valid for February 15 - May 31, 2024
Released February 15, 2024



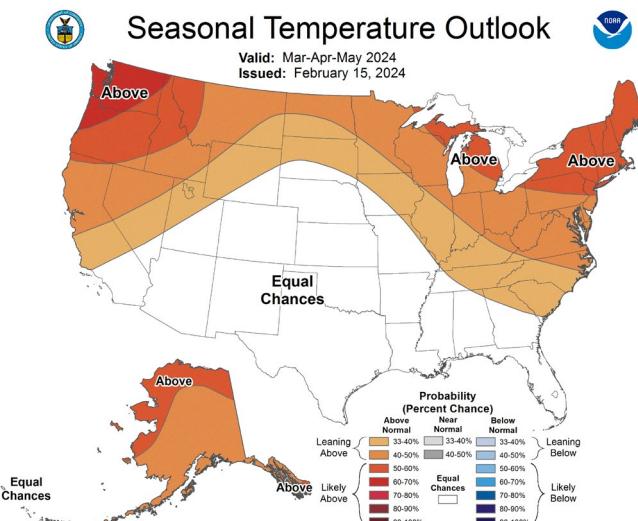
Climate Prediction Center Three-month Outlook

Source: National Weather Service

Precipitation



Temperature



[March-April-May 2024 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](#).