



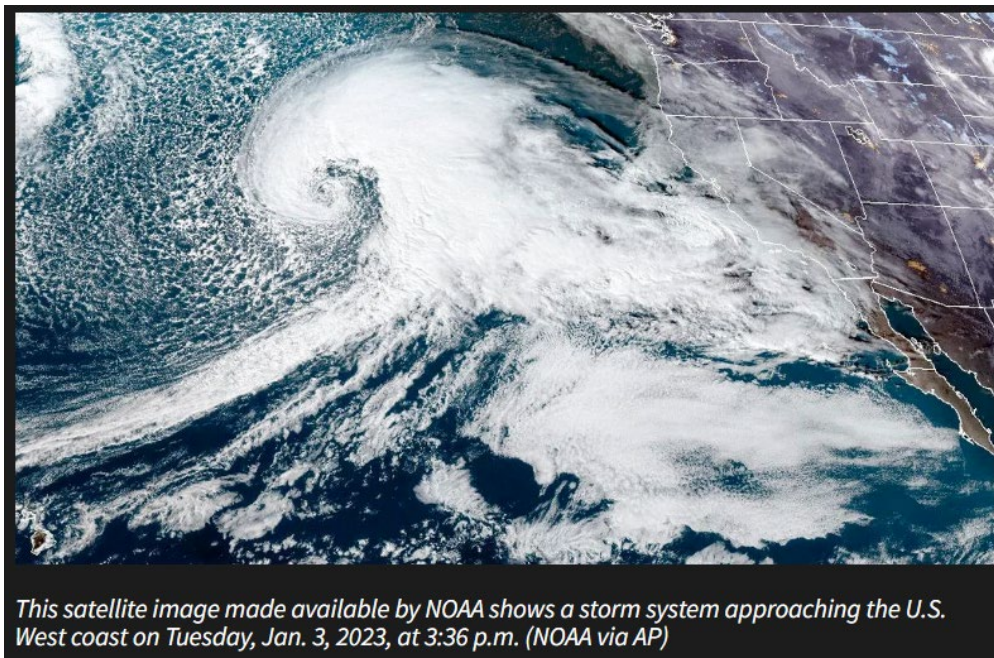
# Water and Climate Update

## January 05, 2023

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
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### U.S. West Coast endures another atmospheric river

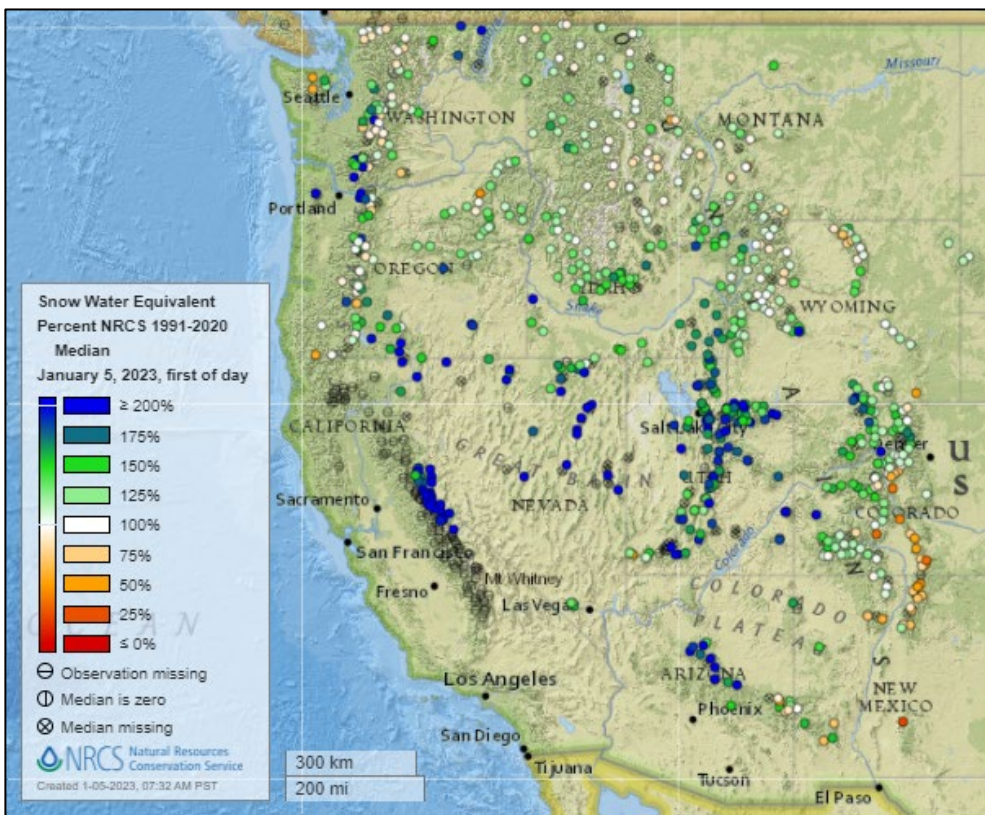


California is faced with another atmospheric river after a brief pause following the previous storm that included excessive lowland flooding and high winds. In anticipation of the impacts expected from the strong storm, Governor Gavin Newsom declared a state of emergency on January 4. Although short-term flooding may not fully result in recovery from long-term drought that has continued to impact California, the storm is expected to leave large amounts of mountain snow, which will increase mountain snowpack and potentially enhance summer water supplies for the region.

**Related:**

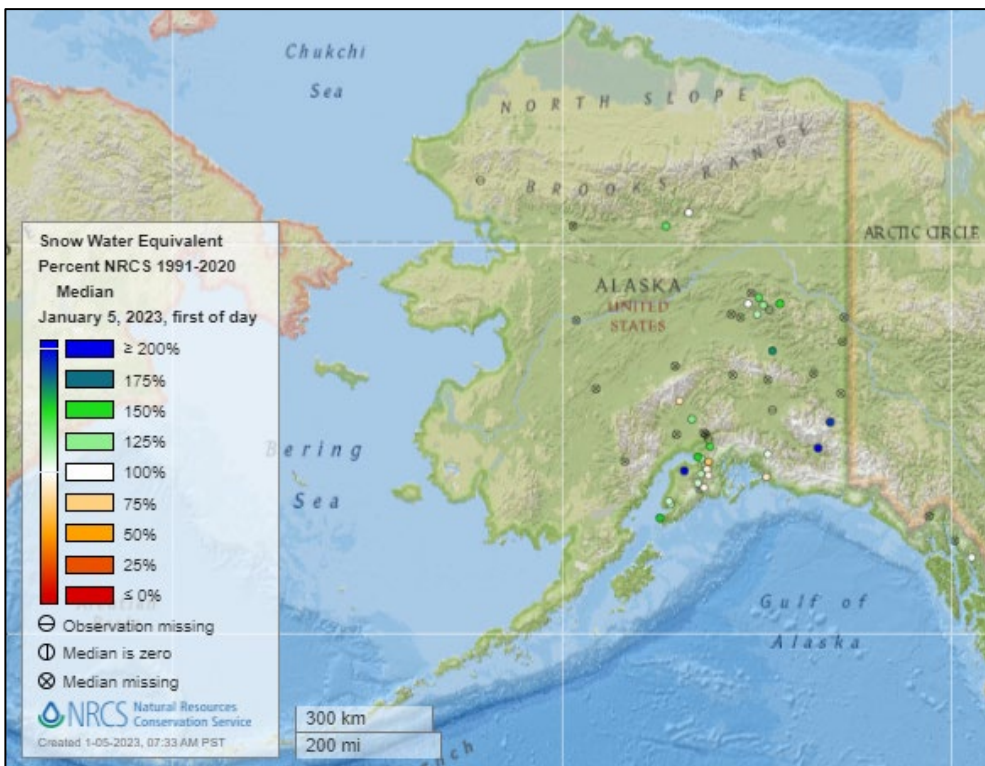
- [A powerful storm slams California, killing a child. Now, more flooding and ferocious winds are on tap for the weather-ravaged state](#) - CNN
- [With all this rain, is California still in a drought?](#) - ABC7 (CA)
- [Photos: 'Bomb cyclone' hits California](#) – KTLA (CA)
- [Epic flooding leads to water rescues and highway closures in California as the storm system threatens more states](#) - CNN
- [Major storm to bring flooding threat, damaging winds to West Coast](#) – ABC News

# Snow



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

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

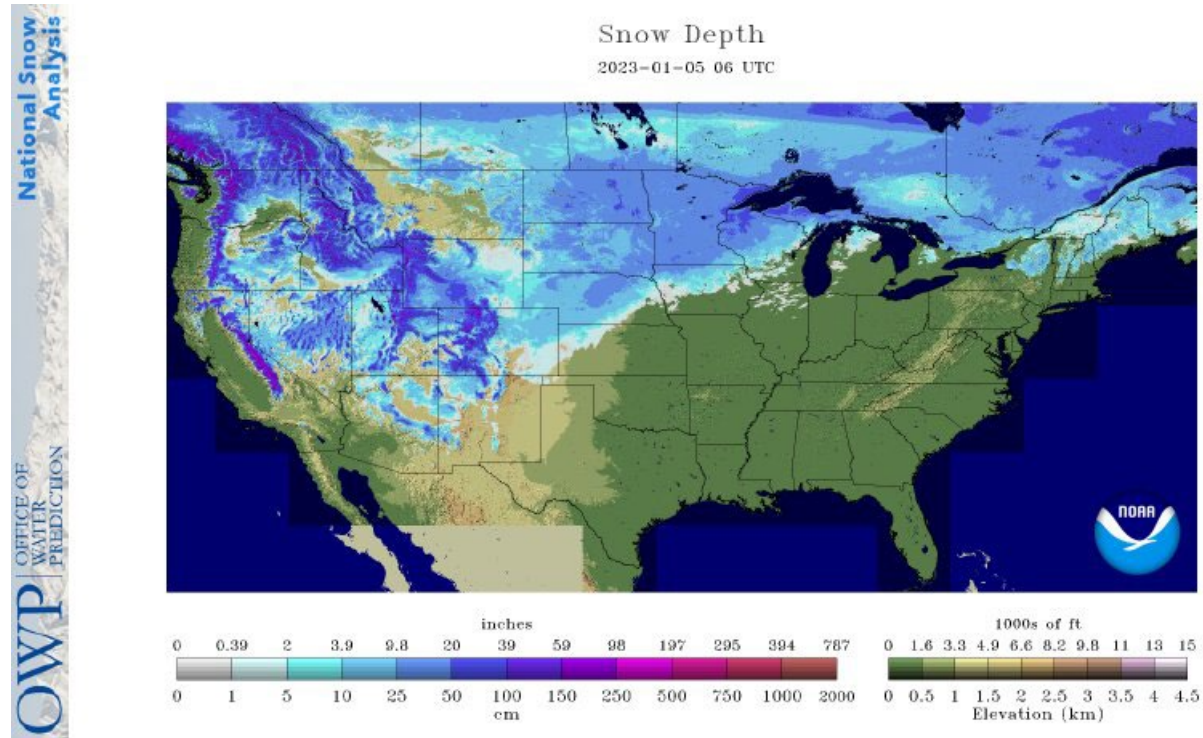


[Alaska snow water equivalent percent of median map](#)

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

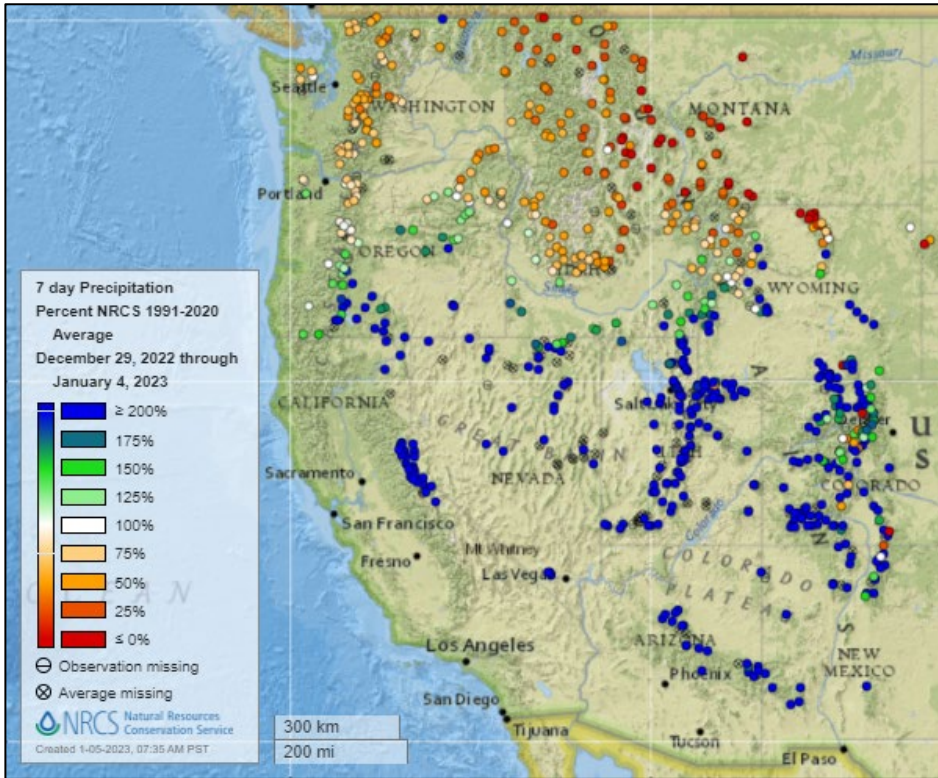
**Current Snow Depth, National Weather Service Snow Analysis**

Source: NOAA NWS National Operational Hydrologic Remote Sensing Center



# Precipitation

## Last 7 Days, NRCS SNOTEL Network

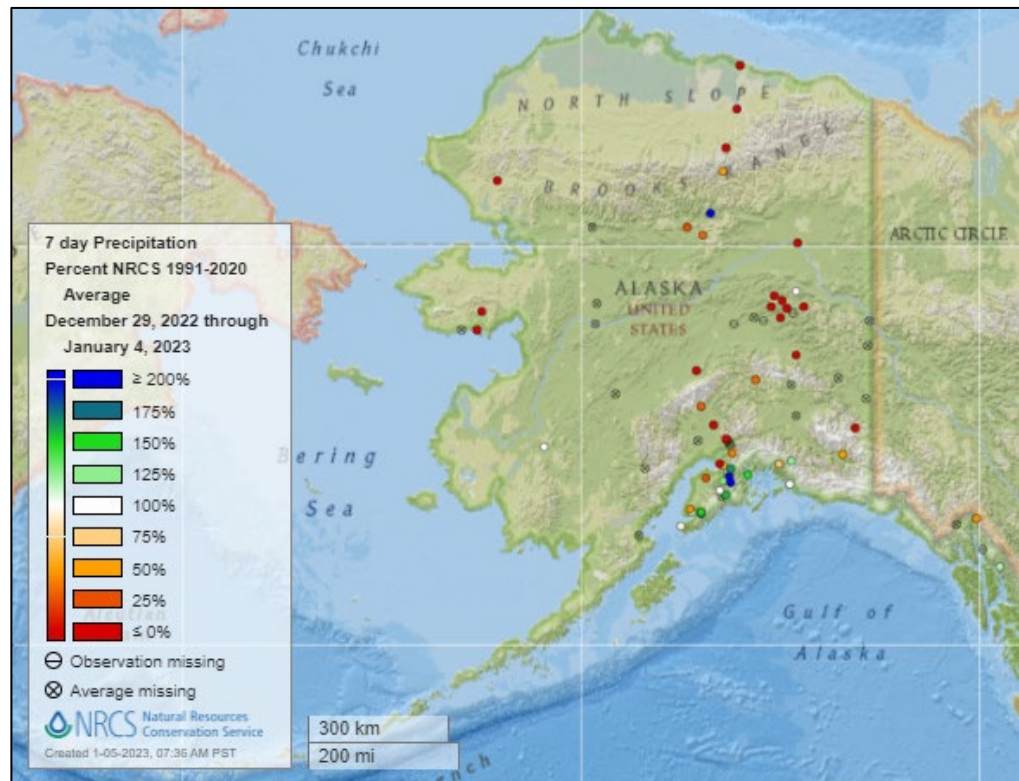


[7-day precipitation percent of average map](#)

**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](#)



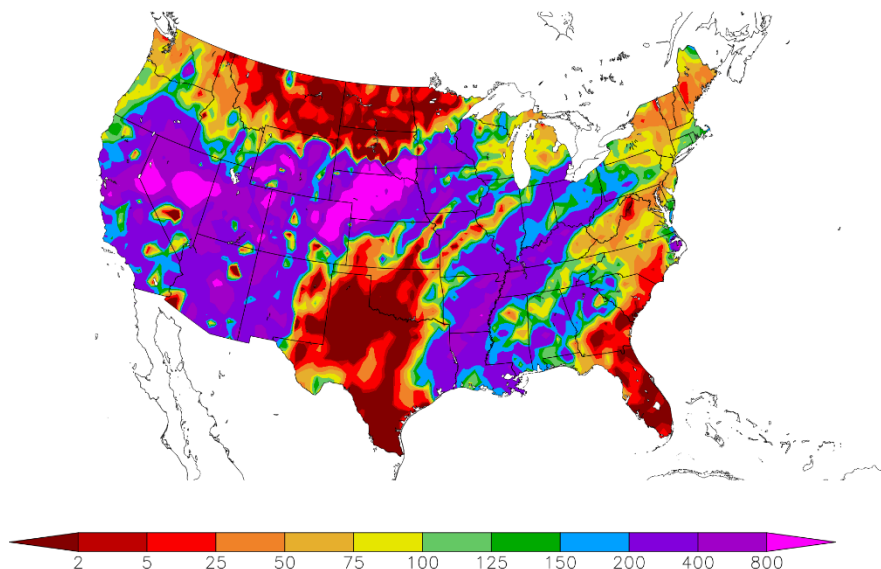
### Last 7 Days, National Weather Service (NWS) Networks

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 (%)  
12/29/2022 – 1/4/2023



Generated 1/5/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

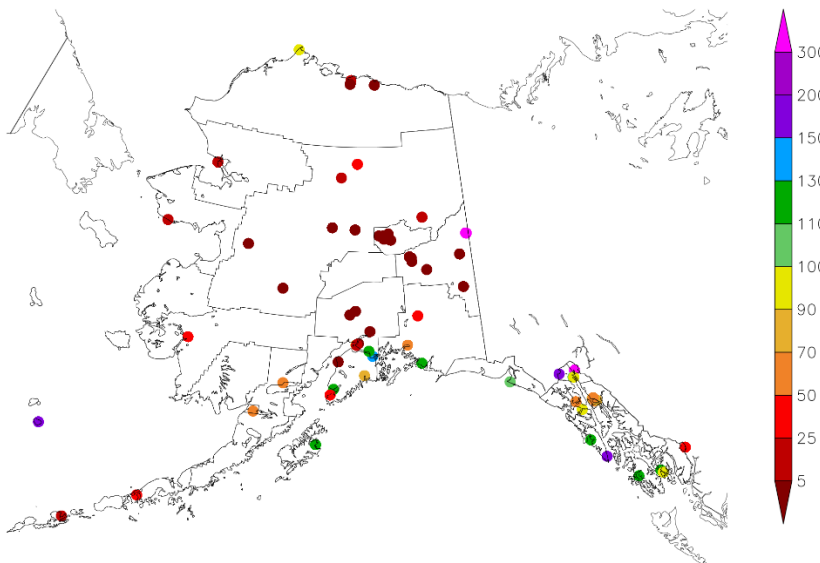
### Last 7 Days, National Weather Service (NWS) Networks

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 (%)  
12/29/2022 – 1/4/2023



Generated 1/5/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

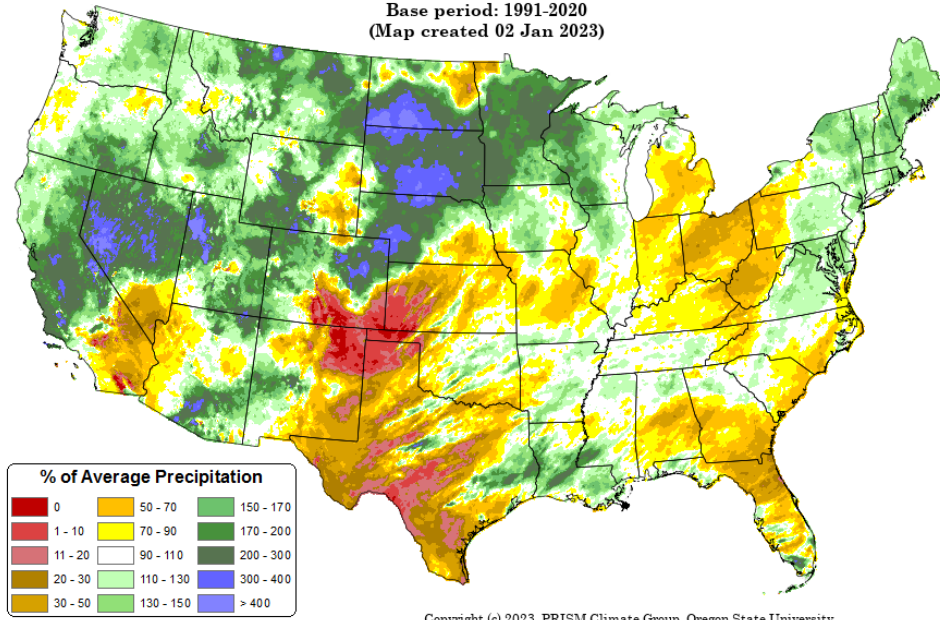
### Monthly, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

#### Total Precipitation Anomaly: Dec 2022

Period ending 31 Dec 2022  
Base period: 1991-2020  
(Map created 02 Jan 2023)

[Monthly national total precipitation anomaly map](#)



Copyright (c) 2023, PRISM Climate Group, Oregon State University

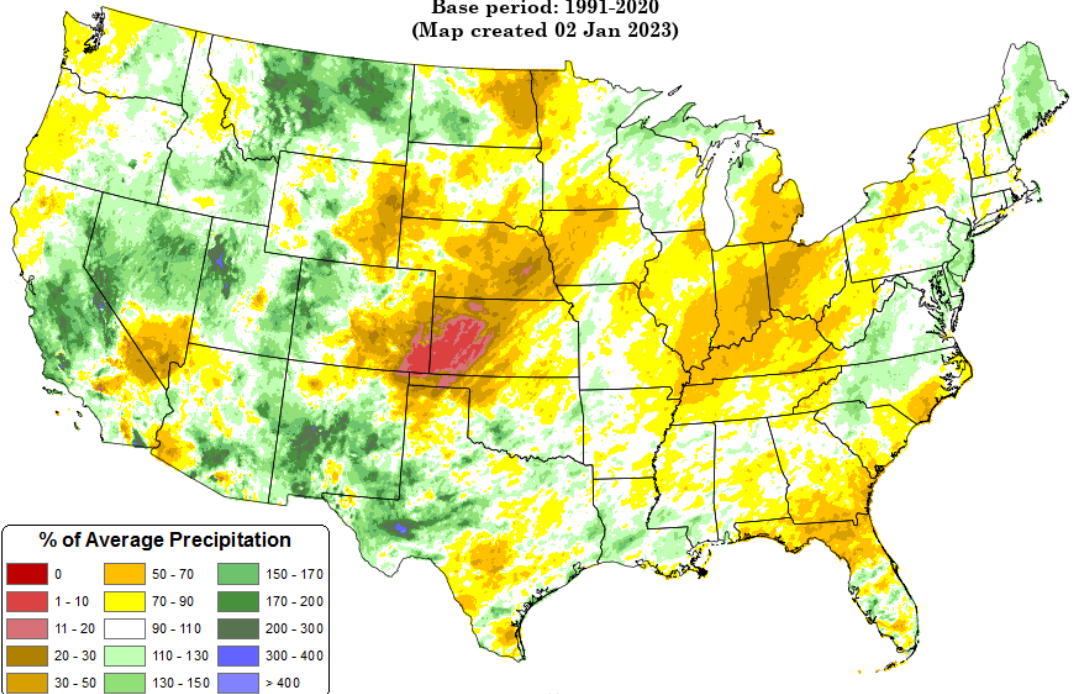
### Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[October through December 2022 precipitation anomaly map](#)

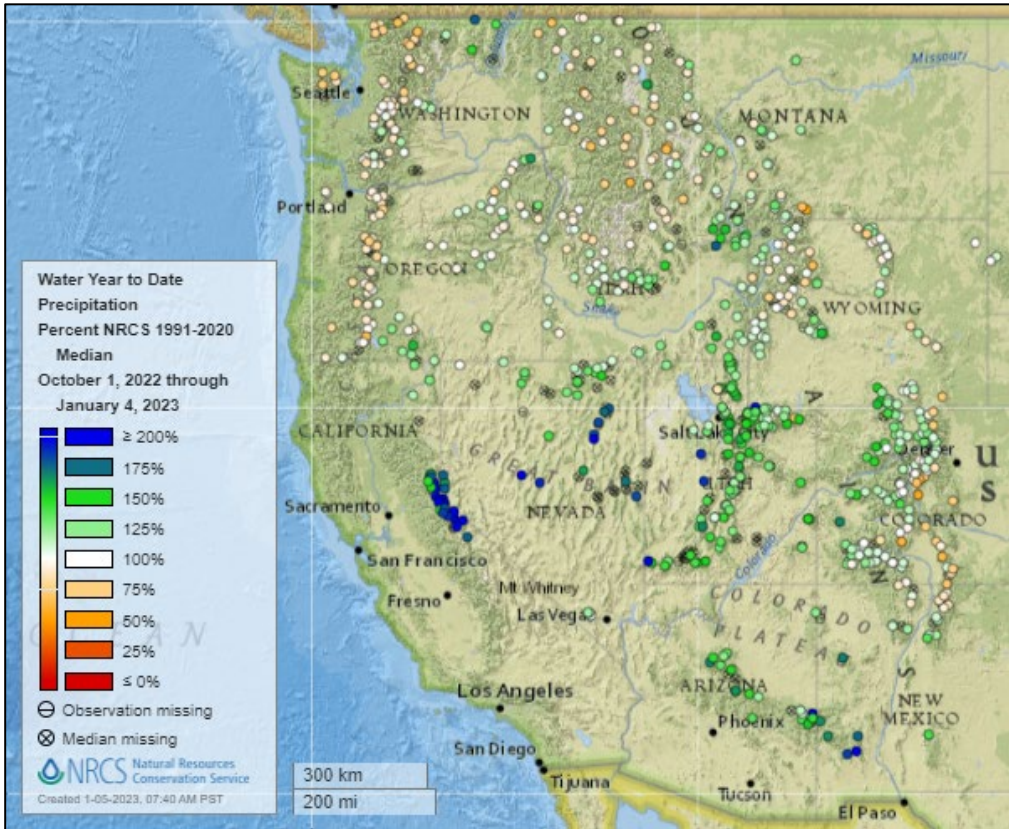
#### Total Precipitation Anomaly: Oct 2022 - Dec 2022

Period ending 7 AM EST 31 Dec 2022  
Base period: 1991-2020  
(Map created 02 Jan 2023)



Copyright (c) 2023, PRISM Climate Group, Oregon State University

Water Year-to-Date, NRCS SNOTEL Network

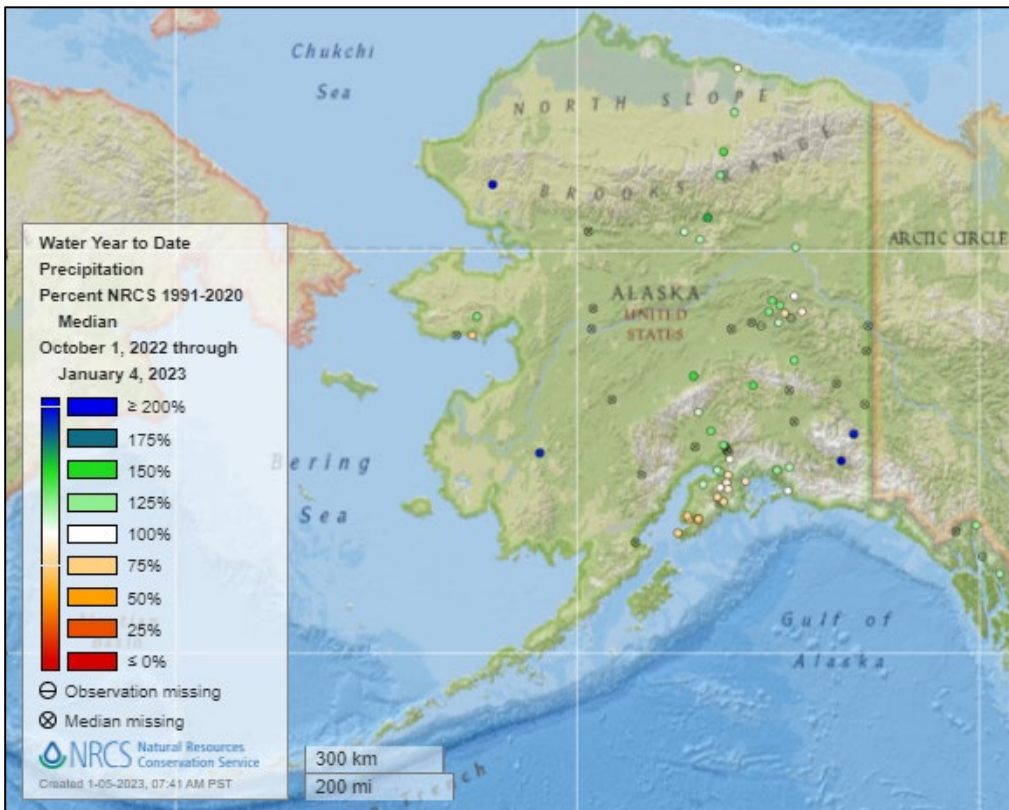


[2023 water year-to-date precipitation percent of median map](#)

**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

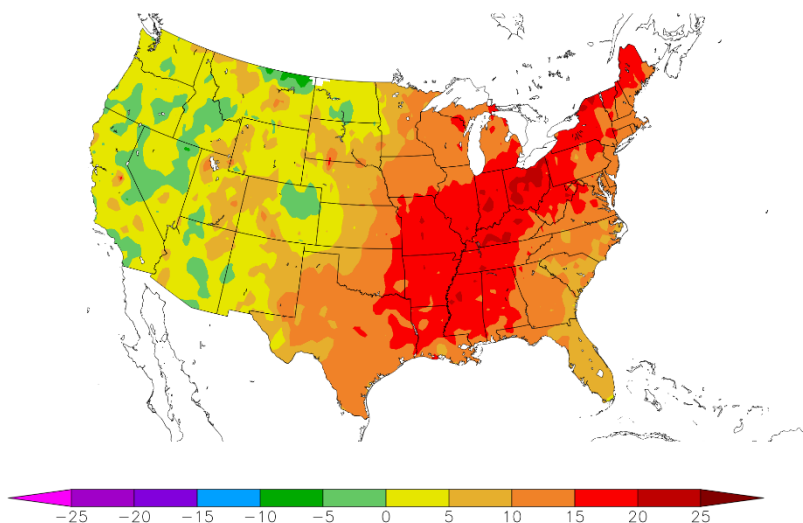
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)  
12/29/2022 – 1/4/2023



Generated 1/5/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

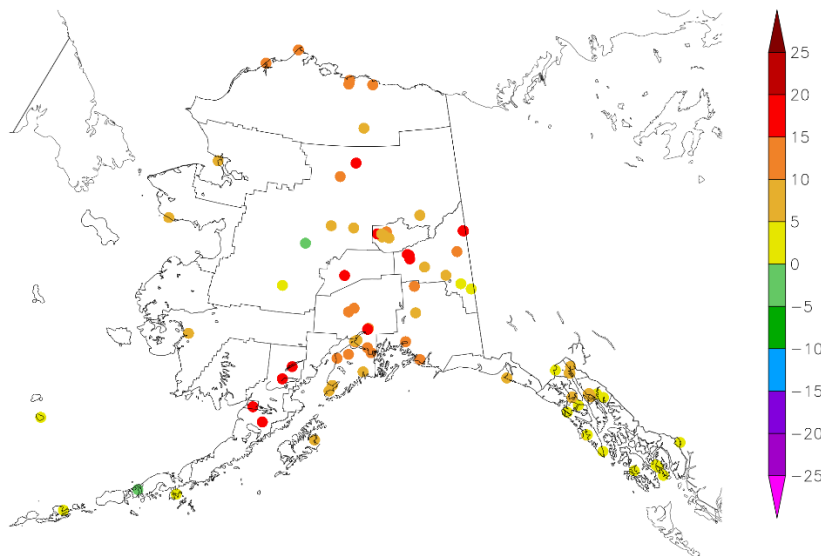
### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

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

Departure from Normal Temperature (F)  
12/29/2022 – 1/4/2023



Generated 1/5/2023 at HPRCC using provisional data.

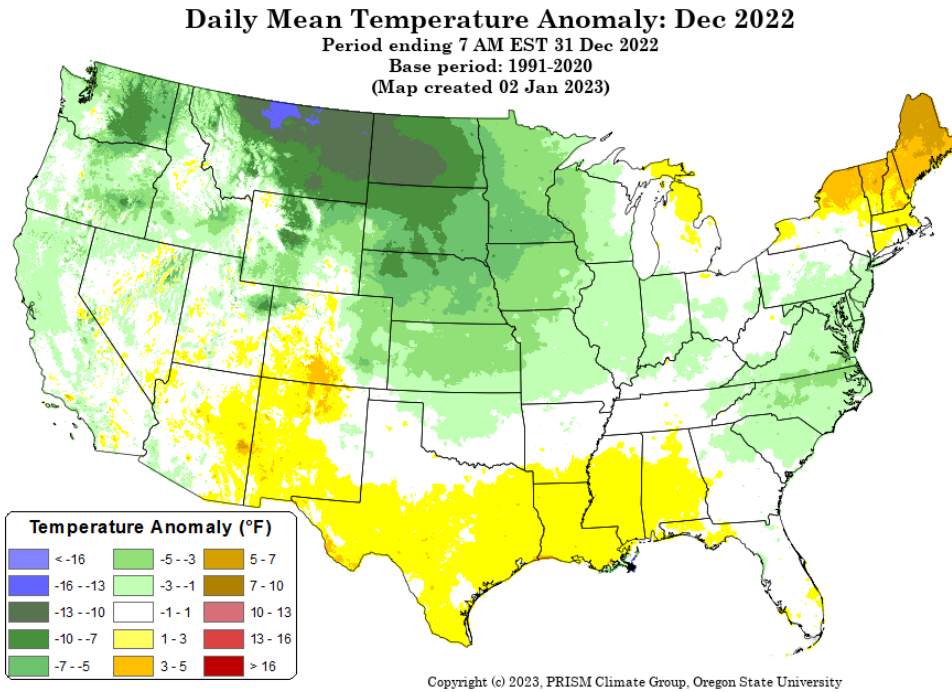
NOAA Regional Climate Centers



### Monthly, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

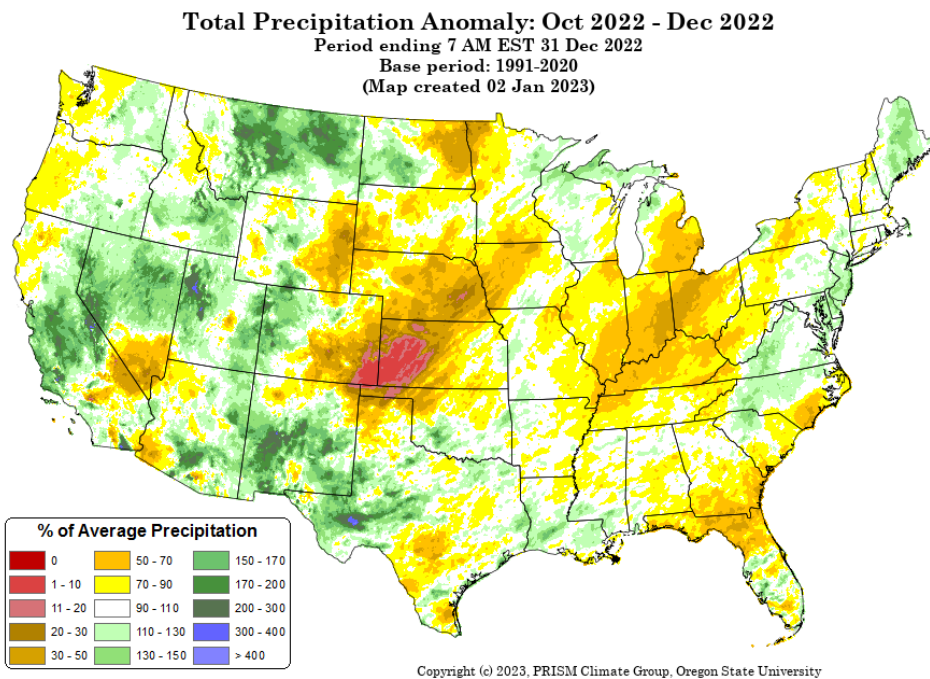
[Monthly national daily mean temperature anomaly map](#)



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

Source: PRISM

[October through December 2022 daily mean temperature anomaly map](#)



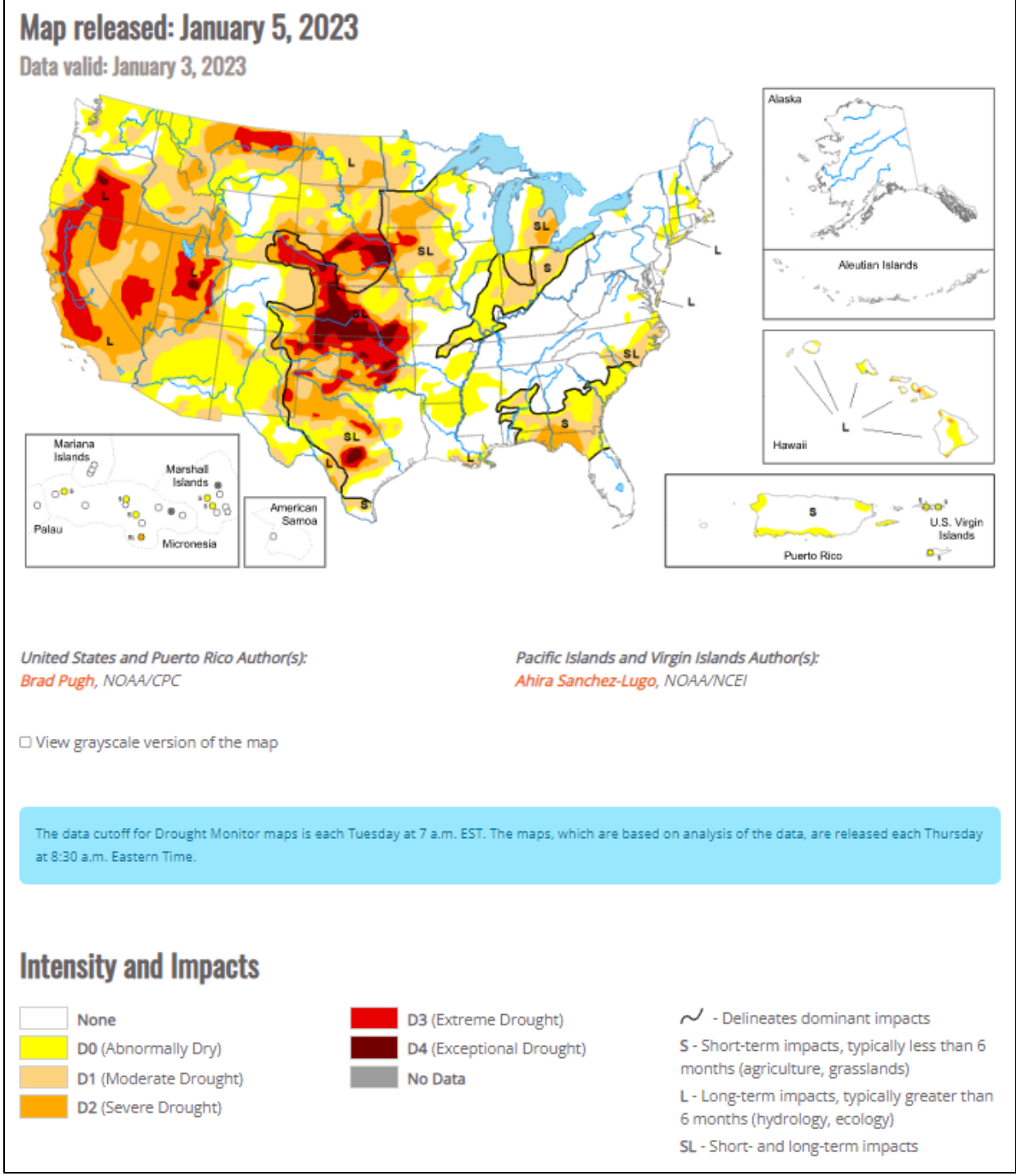
# Drought

## [U.S. Drought Monitor](#)

Source: National Drought Mitigation Center

## [U.S. Drought Portal](#)

Source: NOAA



### Current [National Drought Summary](#), January 03, 2023

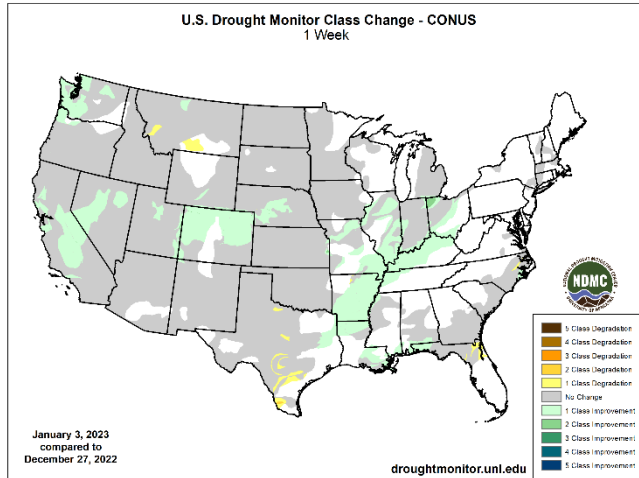
Source: National Drought Mitigation Center

“An atmospheric river (AR) led to heavy rain and high-elevation snow across the West with the largest amounts throughout California on December 30 and 31. Preceding this AR, enhanced onshore flow also resulted in widespread rain and high-elevation snow from the West Coast eastward to the Continental Divide. 7-day total amounts (liquid equivalent), from December 27, 2022 - January 2, 2023, ranged from 2 to 6 inches (locally more) across much of California, western Oregon and Washington, and parts of the Great Basin and central Rockies. A pair of low pressure systems brought widespread, heavy rainfall (1 to 3 inches, locally more) from the lower Mississippi Valley northward to the Ohio Valley. A winter storm affected southern South Dakota and western to central Nebraska where 6 to 18 inches of snowfall occurred on January 2. Mostly dry weather prevailed along most of the East Coast and southern Great Plains. Following the Arctic air outbreak during late December, a rapid warming trend began during the final days of 2022. 5-day temperatures (December 27, 2022 - January 2, 2023) averaged more than 10 degrees F above normal across the central and eastern U.S.”

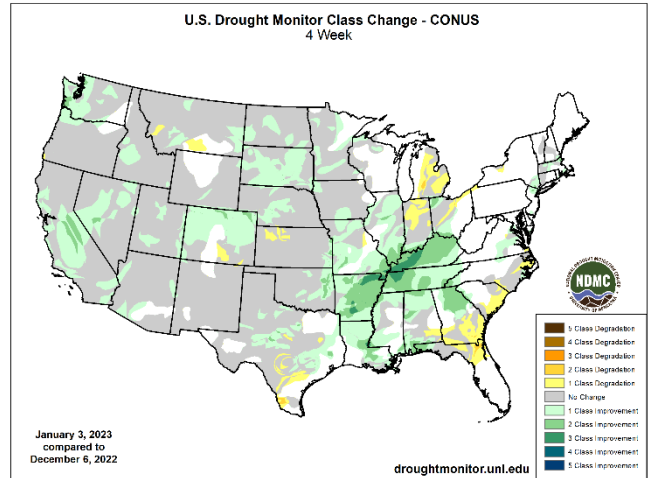
## Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center

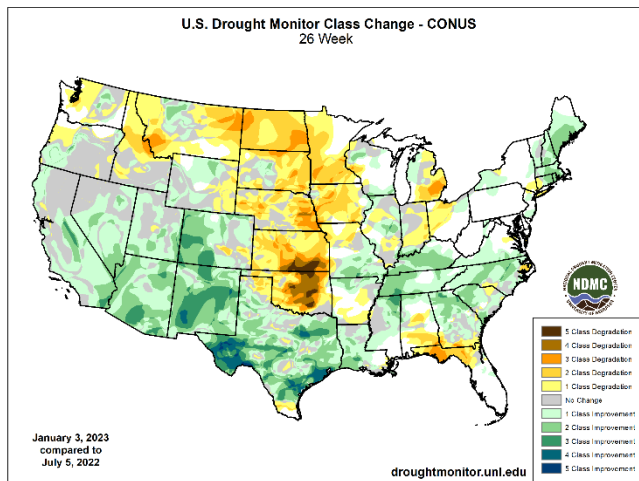
### 1 Week



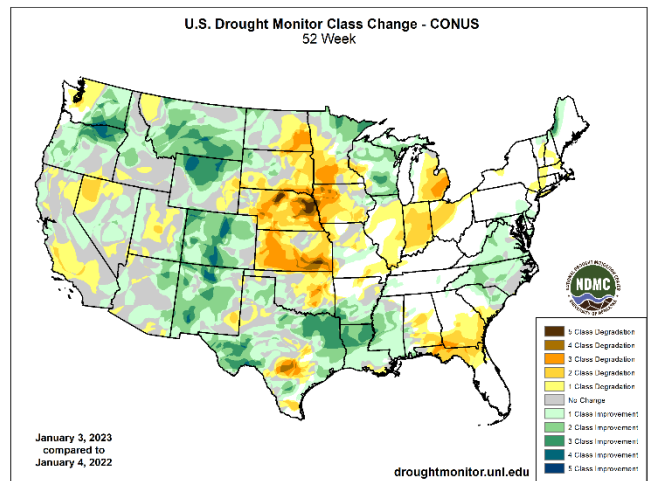
### 1 Month



### 6 Months



### 1 Year



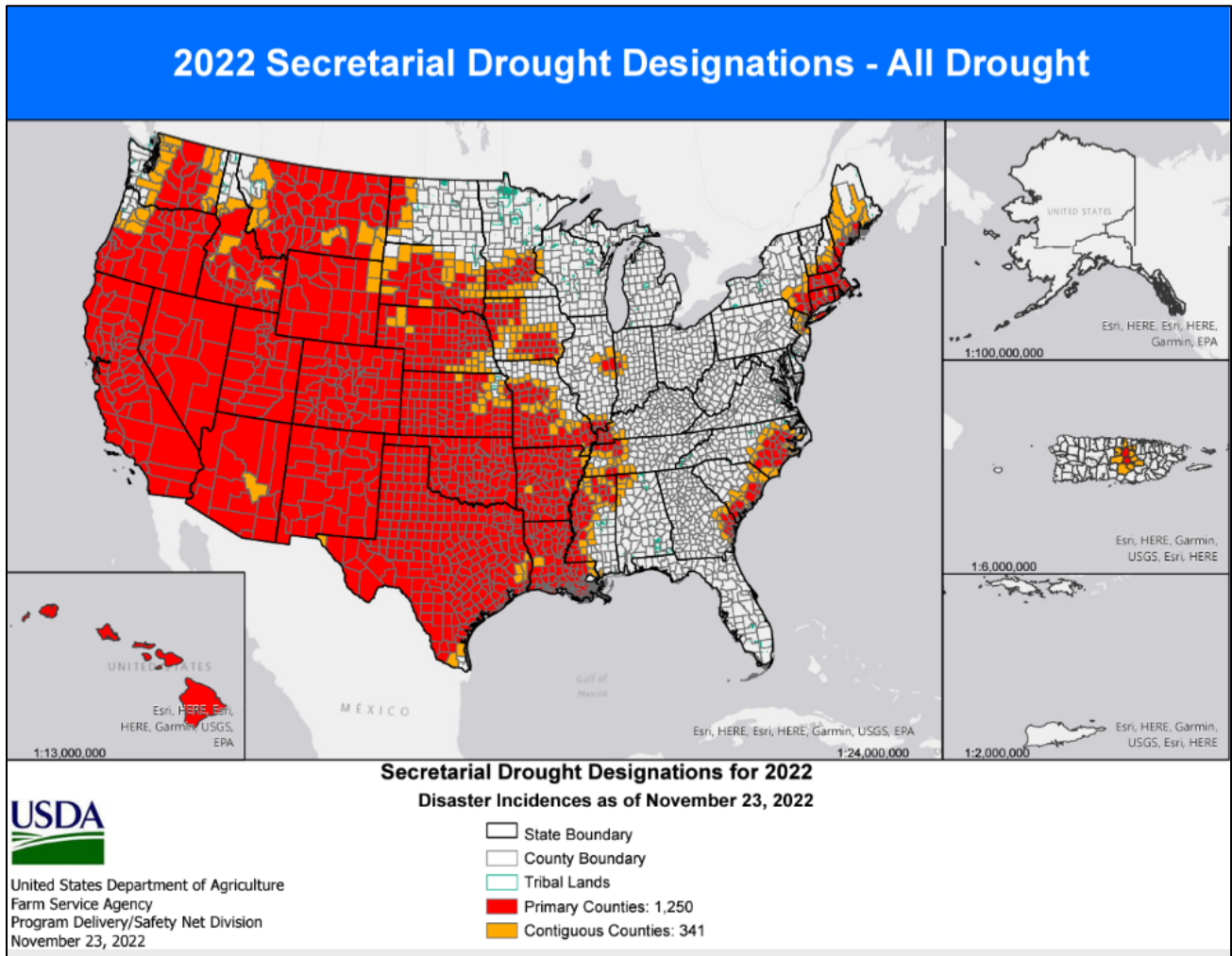
[Changes in drought conditions over the last 12 months for the contiguous U.S.](#)

## 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**

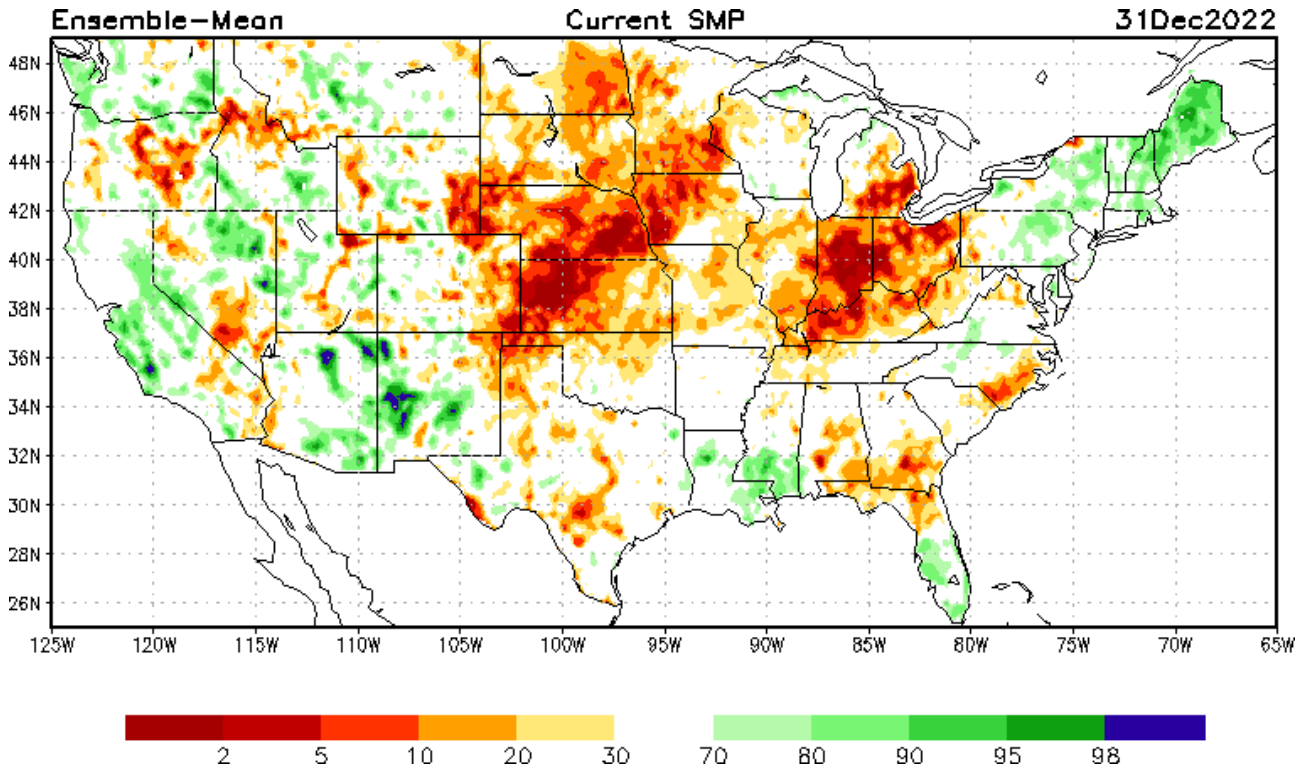
Source: USDA Farm Service Agency



## Other Climatic and Water Supply Indicators

### Soil Moisture

Source: NOAA National Centers for Environmental Prediction

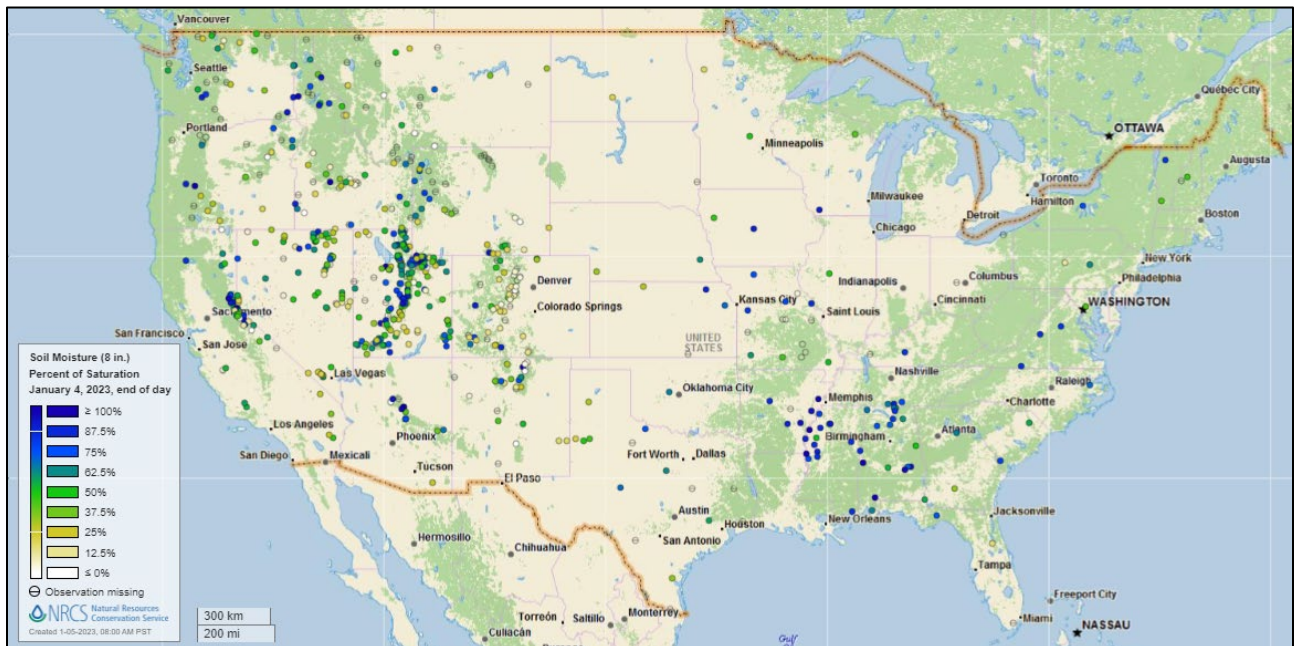


[Modeled soil moisture percentiles](#) as of December 31, 2022

### Soil Moisture Percent of Saturation

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

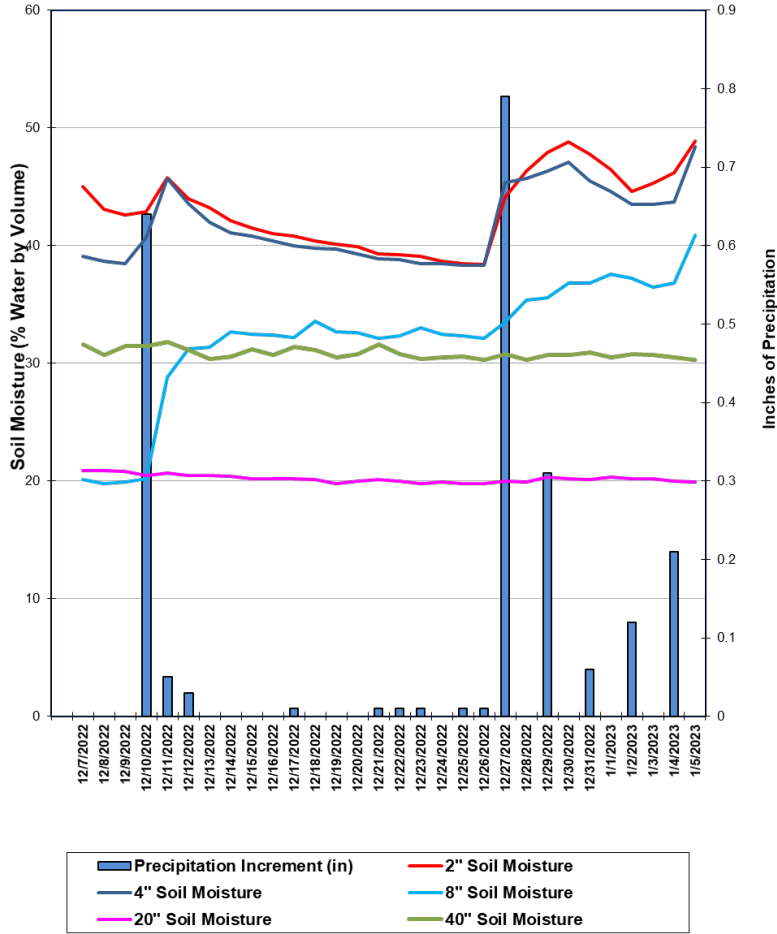
[U.S. soil moisture map at 8-inch depth:](#)



Soil Moisture

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

Monocline Ridge CA (SCAN site 2217)  
Daily Mean Soil Moisture vs. Daily Precipitation



This chart shows the precipitation and soil moisture for the last 30 days at the [Monocline Ridge](#) SCAN site in California. Storm activity on December 27 brought 0.79 inches of precipitation to the station with the -2, -4, and -8-inch soil sensors reporting an increase in soil moisture. Total precipitation for the 30-day period was 2.27 inches.

Soil Moisture Data Portals

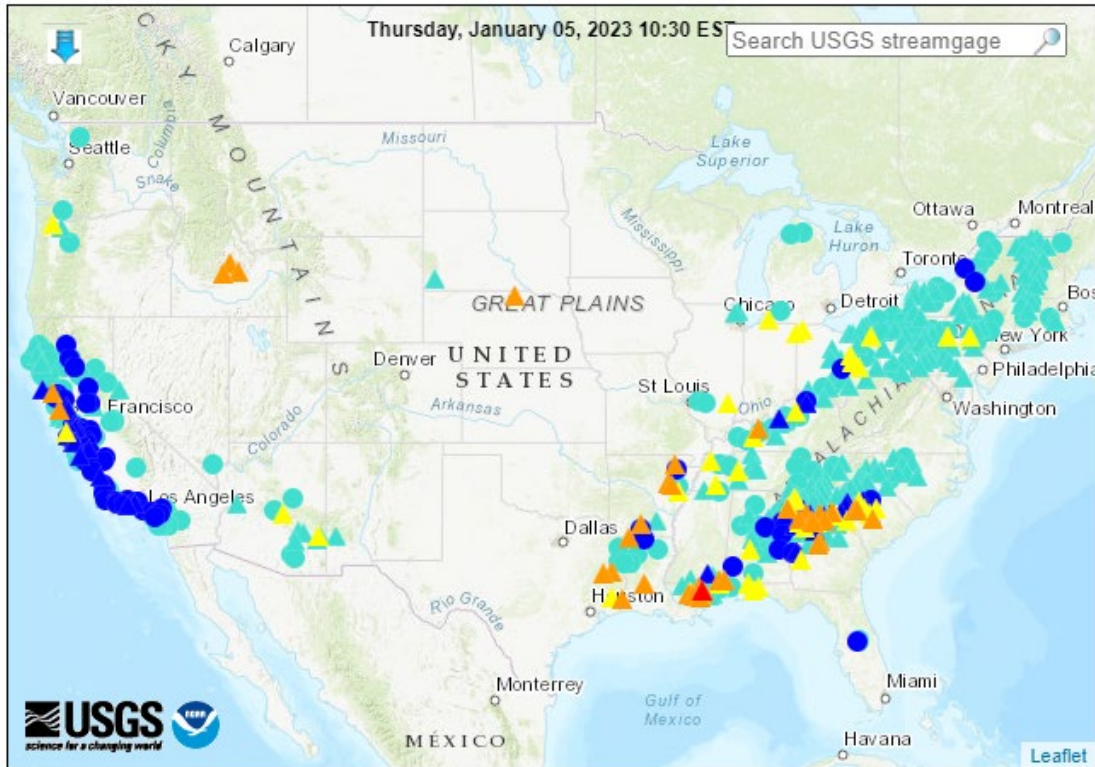
- [USCRN Soil Moisture](#)
- [National Soil Moisture Network](#)
- [NOAA Climate Prediction Center Soil Moisture](#)
- [NASA Grace](#)

### Streamflow, Drought, Flood, and Runoff

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

### Map of flood and high flow conditions

(40 in floods [moderate: 1, minor: 39], 41 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

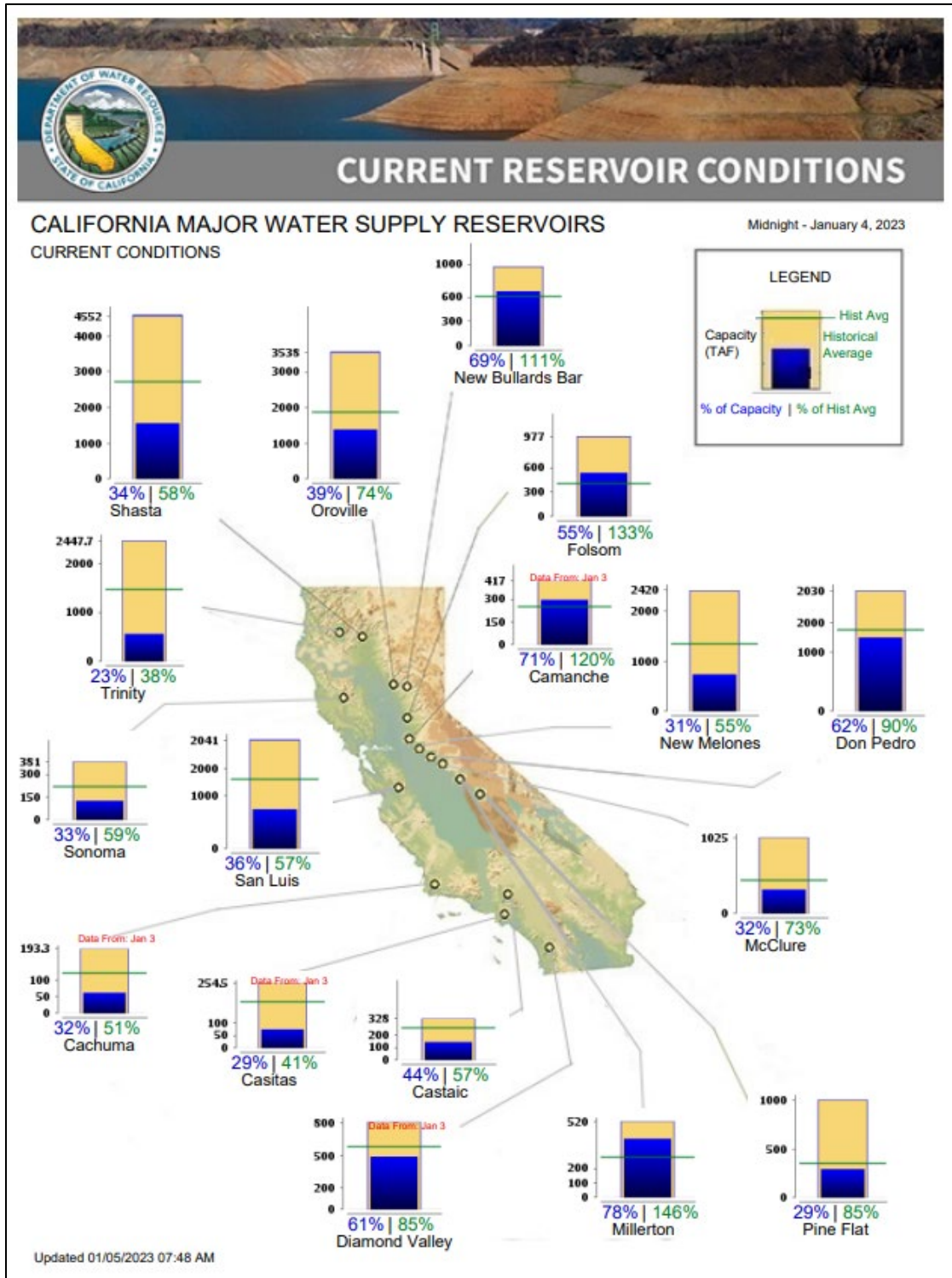
Source: U.S. Bureau of Reclamation

- [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 January 05, 2023:** “The cold front currently traversing California will move farther inland and weaken, but at least three additional fronts will arrive along the Pacific Coast during the next 5 days. Accordingly, 5-day precipitation totals could reach 5 to 10 inches or more in northern and central California, with lighter amounts expected in other areas of the western U.S. In contrast, dry weather will prevail into early next week across the Plains. During the weekend, rain will return across portions of the South and lower Midwest, with heavier showers (locally 1 to 2 inches or more) possible from the western Gulf Coast region to the Mississippi Delta. The NWS 6- to 10-day outlook for January 10 – 14 calls for above-normal temperatures nearly nationwide, with the greatest likelihood of warmth stretching from the southern Plains to the upper Great Lakes region. Meanwhile, near- or above-normal precipitation across most of the country should contrast with drier-than-normal weather in portions of the northern Plains, Great Lakes region, and south-central U.S.”

### Weather Hazards Outlook: [January 07 – 11, 2023](#)

Source: NOAA Weather Prediction Center

## U.S. Day 3-7 Hazards Outlook

[About the Hazards Outlook](#)

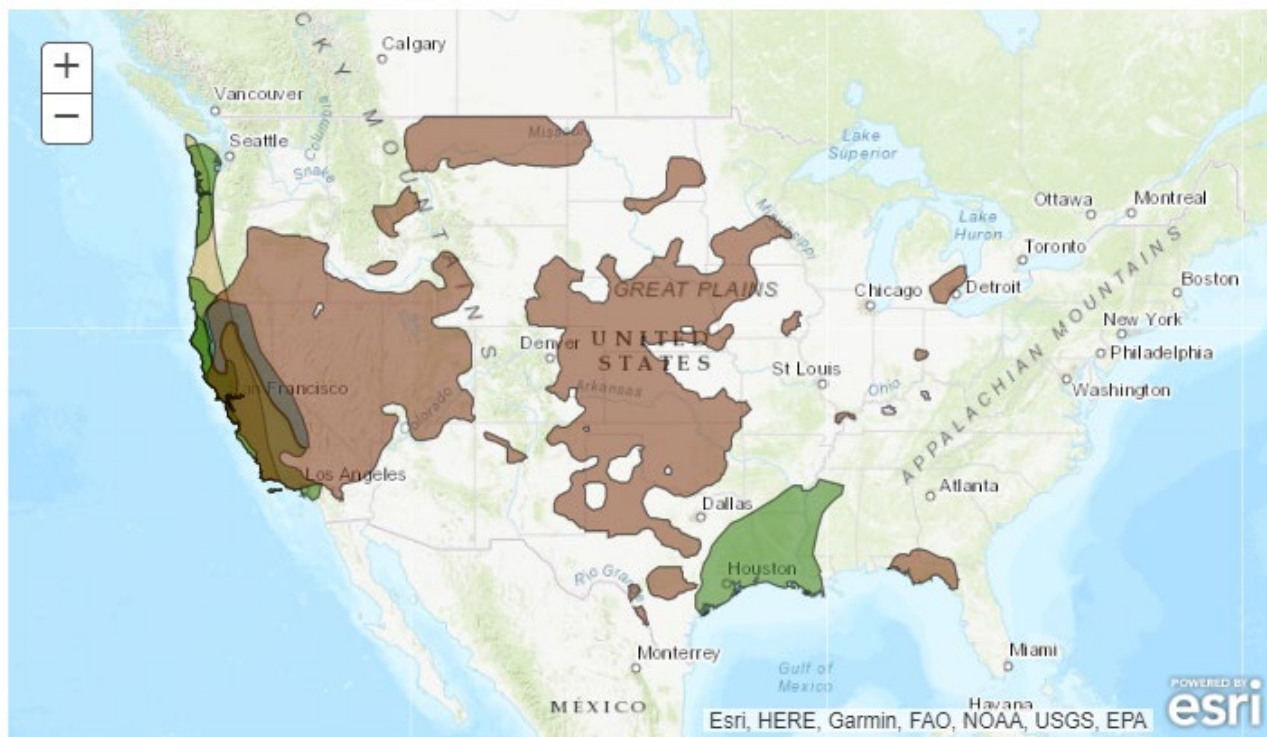
Created January 04, 2023

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 January 07, 2023 - January 11, 2023

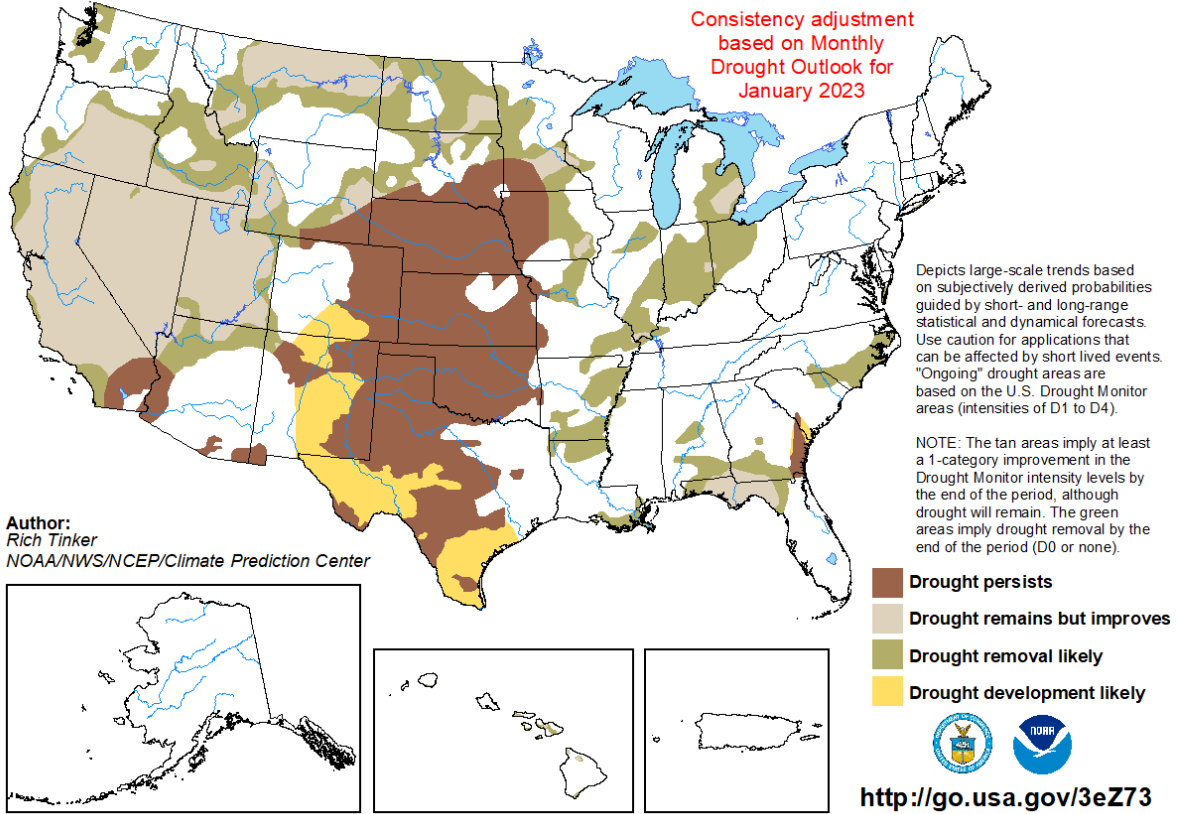


**Seasonal Drought Outlook: [January 01 – March 31, 2023](#)**

Source: National Weather Service

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

Valid for January 1 - March 31, 2023  
Released December 31, 2022

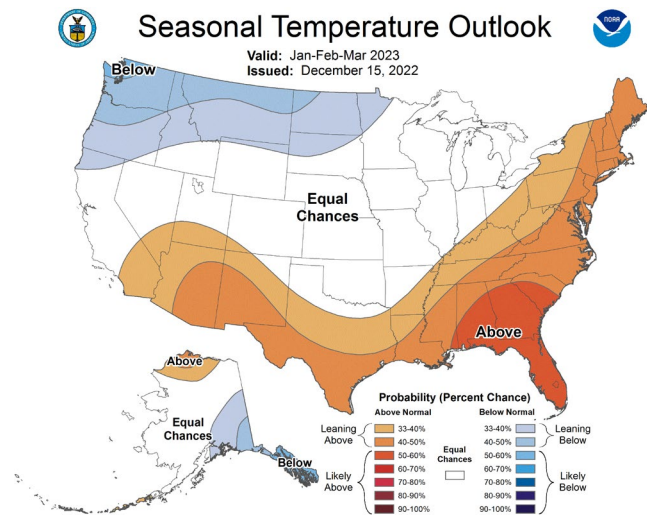
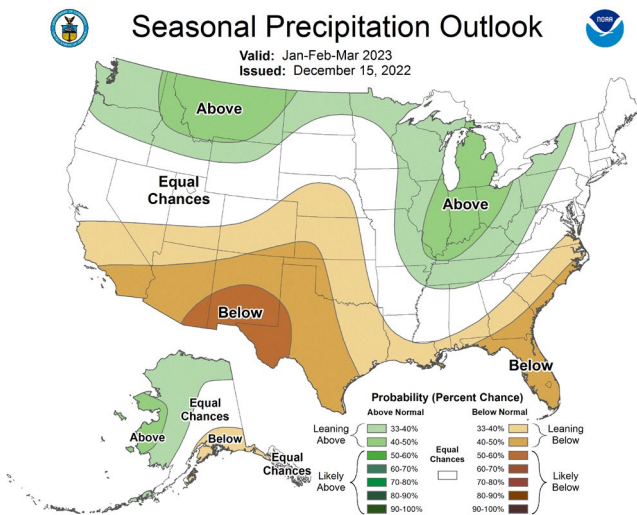


**Climate Prediction Center Three-month Outlook**

Source: National Weather Service

Precipitation

Temperature



[January-February-March 2023 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](#).