

NEWS > CALIFORNIA NEWS

# The West's historic drought in 3 maps

By [CNN.COM WIRE SERVICE](#)

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**By John Keefe and Rachel Ramirez | CNN**

An unprecedented, multi-year drought continues to worsen in the West amid a period of record heat and dryness, which scientists say is a clear sign of how the climate crisis is affecting not only the weather, but water supply, food production and electricity generation.

Despite some good rainfall in Southwest, new drought numbers show worsening and expanding drought across the board in the West, according to the US Drought Monitor. More than 95 percent of the West is in some level of drought, with nearly two-thirds in extreme or exceptional drought — the two worst categories.

Six states are entirely in drought conditions.

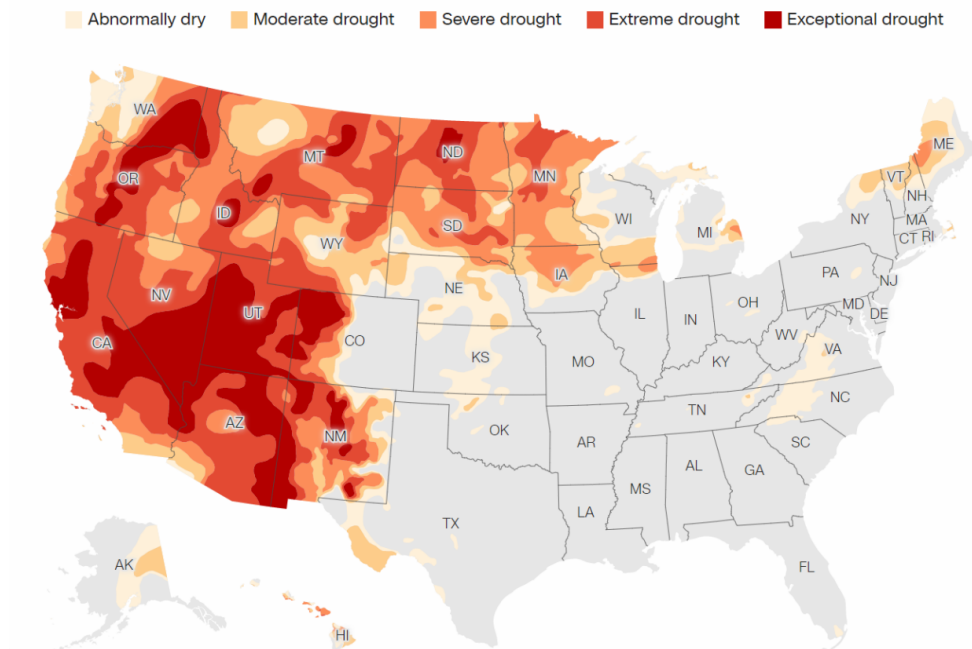
Across the US, the drought has nearly doubled in size from this time last year. Around 25% of the country was in drought conditions in July 2020; as of this week, nearly half is in drought.



In addition to mandatory water restrictions already in place, [even stricter cuts are looming](#) amid the drought in some states as water levels plummet along the Colorado River.

Climate change is playing a key role in these compounding crises: Drought and extreme heat are fueling wildfires; reduced snowpack and the lack of substantial precipitation are exacerbating water demands for millions of people, as well as agriculture, ecosystems and deteriorating infrastructure.

## Current drought



More than 25 percent of the West is in an exceptional drought, which is the most severe category used by the US Drought Monitor.(US Drought Monitor/CNN)

More than 95% of the West is in drought, the largest area on record. More than 65% of the region is in 'extreme' or 'exceptional' drought — the two most severe categories — expanding by 60,000 square miles, or about the size of the state of Georgia, during the month of July.

There are six states completely in drought conditions: California, Oregon, Nevada, Utah, Idaho and North Dakota.

While showers from the Southwest monsoon improved conditions in Arizona, New Mexico, and southwestern Colorado, it brought little relief. Elsewhere, drought intensified across the northern Rockies and especially the Pacific Northwest where the numbers are dire and the rainfall has been basically nonexistent.



As the [Bootleg Fire](#), the country's largest active wildfire, rages in Southern Oregon, about 17% of the state is now in exceptional drought — a number that nearly quadrupled in a month and the highest on record for the state. Washington state, which until last week had never seen any exceptional drought, has now seen it explode to covering more than a quarter of the state. It's also leading the country with poor ratings for rangeland pastures, spring wheat, and barley.

Many of the West's largest reservoirs and lakes continued to show shocking declines. Lake Mead, a Colorado River reservoir behind the Hoover Dam, fell 135 feet below its 2000 level, when it was last considered full.

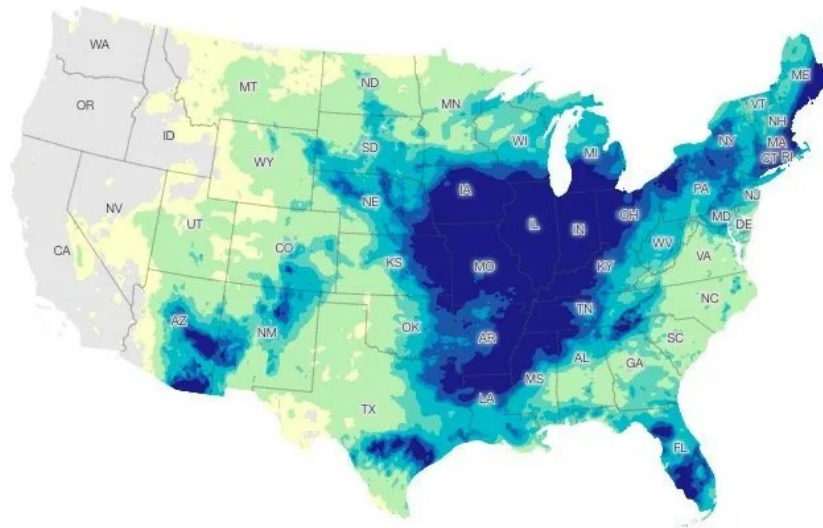
Meanwhile, the Flaming Gorge Reservoir in Wyoming and Utah is releasing water to boost Lake Powell's water levels to protect its hydropower generating capacity. Also in Utah, the surface elevation of the Great Salt Lake also declined, tying the previous record low set in 1963.

As the planet warms, drought and extreme heat will also fuel deadly wildfires. Multiple studies have linked rising carbon dioxide emissions and high temperatures to increased acreage of burning across the West, particularly in California.

## **Rainfall outlook**



7-day precipitation forecast, in inches



Data last updated on July 9, 2021.

Source: National Weather Service's Weather Prediction Center  
Graphic: John Keefe, CNN

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The West experienced extremely low rain and snowfall over the past year, compounded by drastically high temperatures. Less rain and increasing heat waves have led directly to drought conditions and water shortages.

The Southwest monsoon, which began in mid-July, is expected to lead to some relief in that region. Still, the Drought Monitor reports recent rain “provided limited drought relief.” In some cases, the agency reports, “moisture has seeped several feet into the soils.”

As climate change accelerates and winter temperatures increase, snowfall will decrease. High-elevation snowpack serves as a natural reservoir that eases drought, storing water through the winter months and slowly releasing it through the spring melting season.

## Stream and river flow



### 7-day average streamflows

● Much below normal   ● Below normal   ● At or above normal



Preliminary 7-day average streamflows as of July 8, 2021 compared to historical data for each site on the same day. Sites with no data or fewer than 30 years of comparison data omitted. "Normal" means current readings are in at least the 25th percentile compared to past values. "Much below normal" means the current reading is less than in the 10th percentile.

Source: US Geologic Survey  
Graphic: John Keefe, CNN

Preliminary 7-day average streamflows are shown as of July 8 compared to historical data for each site on the same day. Sites with no data or fewer than 30 years of comparison data omitted.(CNN)

Streamflow, a measure of how much water is carried by rivers and streams, is another significant indicator of drought and its impact.

As drought conditions have worsened in 2021, hundreds of stream and river locations are experiencing below-average flow. More than 50 percent of the western monitoring stations reported lighter-than-usual flows. Fishing restrictions have also been put in place on many rivers in Montana due to low flows and warm waters.

Changes in streamflow affect the water supply for our own municipal use, crop irrigation and power generation.

