

Lake Mead



Lake Mead, August 7, 2000 and August 9, 2021, Credit: [NASA Earth Observatory](#)

[Link images to enlarge.](#)

Lake Mead is the largest reservoir in the United States and part of a system that supplies water to more than 40 million people across seven states and northern Mexico. It stands today at its lowest level since Franklin Delano Roosevelt was president. This means less water will be portioned out to some states in the 2022 water year.

As of August 22, 2021, [Lake Mead was filled](#) to just 35 percent of its capacity. This low water level comes at a time when 95 percent of the land in nine Western states is affected by [some level of drought](#). It continues a 22-year [megadrought](#) that may be the Western United States' worst dry spell in twelve centuries.

These natural-color images of Lake Mead were acquired in August 2000 and August 2021 by [Landsat 7](#) and [Landsat 8](#), respectively. The tan fringes along the shoreline in 2021 are areas of the lakebed that are typically underwater when the reservoir is filled closer to capacity. This phenomenon is often referred to as a "[bathtub ring](#)."

Lake Mead [last approached full capacity](#) in the summer of 1999, and its water level has been dropping since. In most years, about 10 percent of the lake's water comes from local precipitation and groundwater, with the rest coming from snowmelt from the Rocky Mountains that melts and flows down to rivers, traveling through Lake Powell, Glen Canyon, and the Grand Canyon on the way. The [Colorado River basin](#) manages to provide water to millions of people—most notably the cities of San Diego, Las Vegas, Phoenix, and Los Angeles—and 4-5 million acres of farmland in the Southwest.



Text courtesy of NASA Earth Observatory: [Lake Mead Drops to a Record Low.](#)

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DISCUSSION PROMPTS

-  Are you aware of the effects that drought may have on your community?
-  Are any neighborhoods in your community experiencing worse impacts from periods of drought than others? If so, why?
-  How is drought affecting life for humans in other regions of the world?
-  What ideas and concrete solutions would you offer to your community to prevent and prepare for severe drought?
-  Share your ideas and prospective solutions with us on social media.

OPTIONAL

-  Take images of the land cover and trees in your neighborhood. How are they affected by drought?
-  Share your images with us on social media.

DROUGHT RESOURCES

From NASA Earth Observatory:

[Lake Mead Drops to a Record Low](#)

[Topic Search: Drought](#)

[Severe Drought in the Northeast \(2020\)](#)

From National Drought Mitigation Center:

[Drought Monitor Maps for the Northeast](#)

[2020 Drought Monitor Map](#)

Additional Resources:

[NASA Global Climate Change: Vital Signs of the Planet](#)

[NASA Overview: Weather, Global Warming, and Climate](#)

[Action for the Climate Emergency](#)

[Perspectives of Earth: Main Website](#)

[Perspectives of Earth: UN Sustainable Development Goals: Six Essential Elements](#)

[Windows on Earth: See Earth Through the Astronauts' Lens](#)