

California Drought 2021

These images were acquired by Landsat 8 and show Shasta Lake and Lake Oroville, California in July 2021 and June 2019 (more typical conditions). The tan fringes around the waters edge in the 2021 acquisitions are areas of the lakebed that are typically underwater when the reservoirs are closer to full capacity. This observation is commonly referred to as a “bathtub ring.”

Shasta Lake is the largest reservoir and third largest water body in California. It feeds into the Sacramento River watershed and is a key water source for the agricultural lands of the Californian Central Valley. As of June 16, 2021, Shasta Lake held 1.87 million acre feet (maf) of water, or about 41% of capacity and 49% of the historical average for July. Between June 2019 to July 2021 the lake level dropped 106 feet (32 meters) in elevation.

Lake Oroville is California’s second largest reservoir. From June 2019 to June 2021 the reservoir dropped 190 feet (58 meters), from 895 to 705 feet above sea level. The record low is 646 feet, set in September 1977.

These reservoir deficits have been exacerbated by a lack of snowmelt running down from the Sierra Nevada range. Mountain snowfall was already below average this winter, and much of it melted quickly amid high spring temperatures. Large volumes of meltwater were also absorbed by soils still parched from last year.

California state government has issued drought proclamations for 41 of California’s 58 counties, and people in many communities are being asked to conserve water. Federal and state authorities have also reduced annual water allocations to farmers and cities in several areas. The cutbacks will likely remain in effect until winter rain and snow falls.

This story originally appeared on the Earth Observatory. Visit [NASA Earth Observatory](#) to view the full, original record.

Source: NASA Earth Observatory images by Lauren Dauphin, using Landsat data. Story by Michael Carlowicz.

