



# CALIFORNIA HYDROLOGY UPDATE

CONDITIONS AS OF MAY 31, 2025



*The California Hydrology Update is a regular summary of current weather conditions in the State of California and serves as a supplement to the data on the [California Water Watch](https://www.waterwatch.ca.gov/) website. It is produced by the California Department of Water Resources Hydrology Section and Sustainable Groundwater Management Office teams. For tips and resources on how to make water conservation a way of life, please visit [saveourwater.com](https://www.saveourwater.com).*

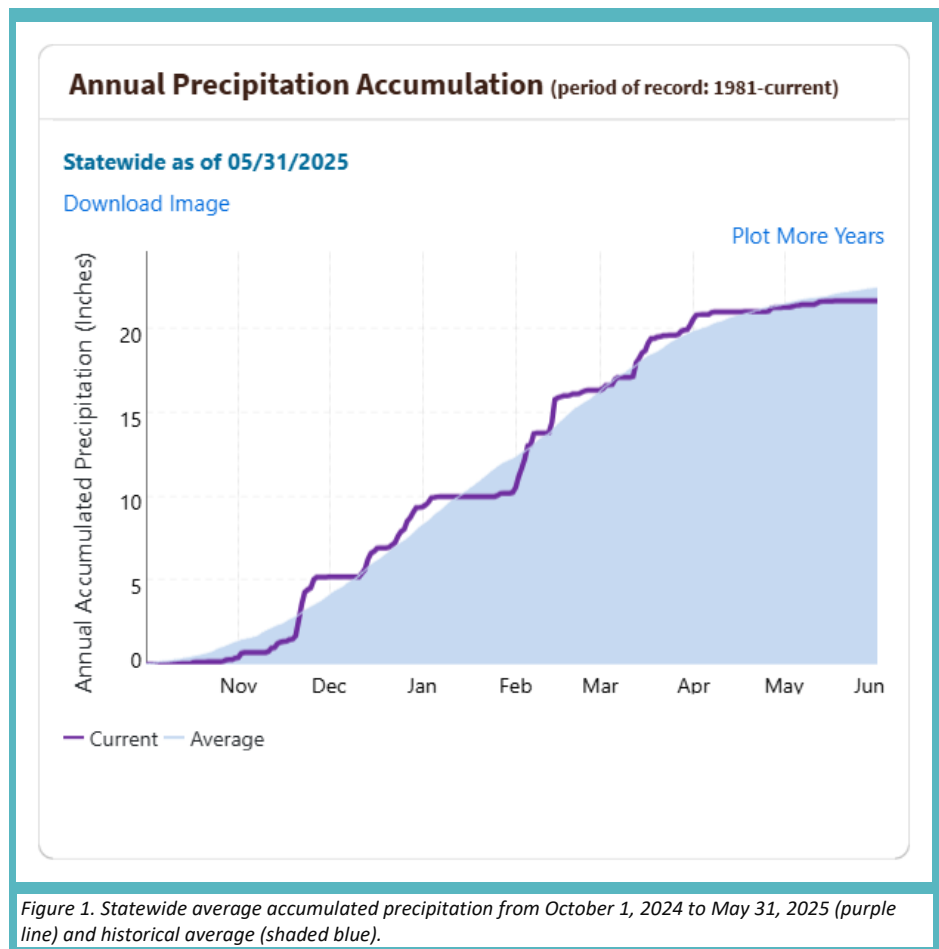
## PRECIPITATION

The statewide accumulated precipitation through the end of May 2025 was about 21.7 inches, which is 97% of average. The month of May was well below average for precipitation across California. The few storms that did travel across California during May resulted in precipitation generally during May 3-6, 11-14, and 17 (shown in Figure 1).

During May 3-6, a cold front and a series of upper lows traveled across California bringing scattered showers. About May 7, high pressure began to build off the coast of California, which resulted in higher temperatures and dry conditions from May 7-10. During May 11-14 a low-pressure system traveled across California, which resulted in precipitation (mainly in Northern California), a few isolated thunderstorms, and cooler temperatures. Precipitation totals for May 8-14 included up to 2 inches for North Coast and Northern Sierra and up to an inch for the rest of Northern California. On May 17, a system moved into the state, which resulted in minor precipitation (mainly over Eastern Sierra) and isolated thunderstorms. During May 18-31, California observed dry and above normal temperatures.

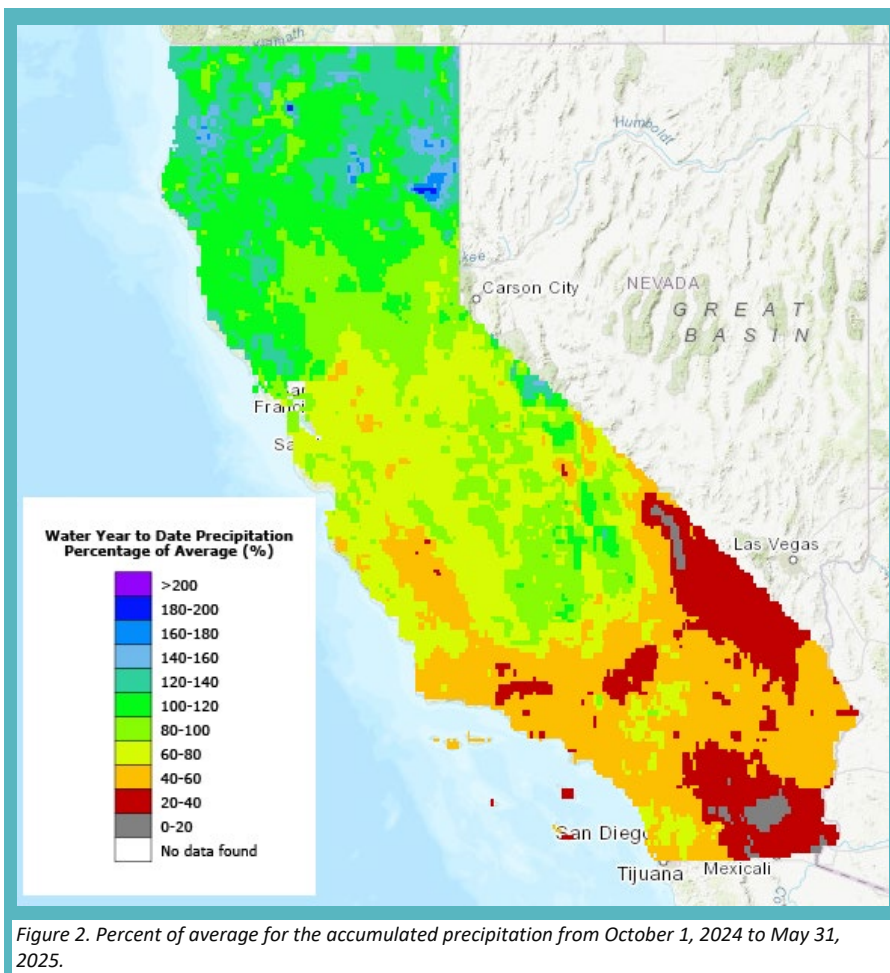


As shown in Figure 2, for the water year to date through the end of May 2025, Northern California received near to above average accumulated precipitation, Central California received below to near average accumulated precipitation, and Southern California received well below average accumulated precipitation. The North Coast has accumulated about 60.8 inches of precipitation for the water year through end of May, which is 119% of average. The Sacramento River region has accumulated about 37.9 inches of precipitation for the water year through end of May, which is 109% of average. The San Joaquin River region has accumulated about 20.7 inches of precipitation for the water year through the end of May, which is 79% of average. The Central Coast has accumulated about 12.9 inches of precipitation for the water year through the end of May, which is 65% of average. The Tulare Lake region has accumulated about 12.3 inches of precipitation for the water year through the end of May, which is 82% of average. The South Coast has accumulated about 8.7 inches of precipitation for the water year through the end of May, which is 52% of average.





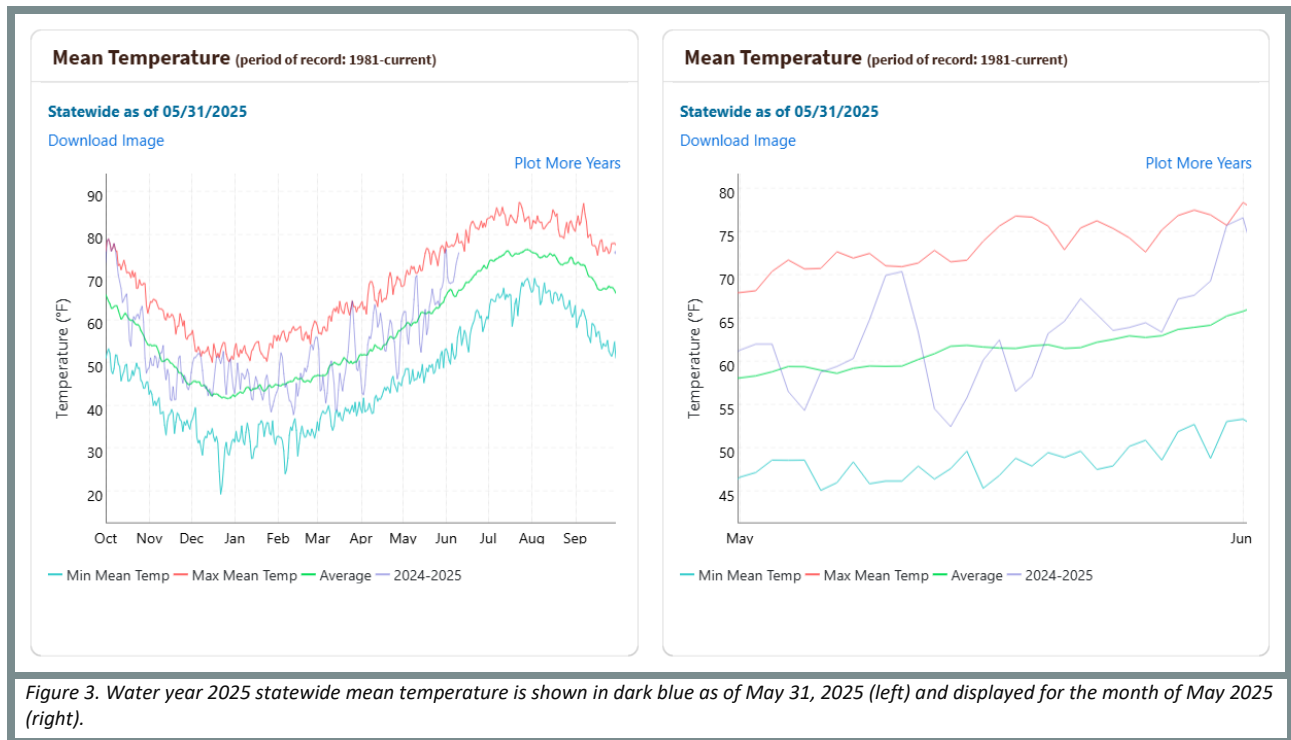
The Climate Prediction Center (CPC) monthly outlook issued on May 31, 2025, indicates 33-40% chance of above normal precipitation along the border with Arizona, and equal chances of below, near, or above normal precipitation for the rest of the state during the month of June 2025. The CPC seasonal outlook covering the period of June 2025 through end of August 2025 indicates 33-40% chance of below normal precipitation for along the border with Oregon, 33-40% chance of above normal precipitation for along the border with Arizona, and equal chances of below, near, or above normal precipitation for the rest of California.



Sources: [Statewide Hydroclimate and Water Supply Conditions, Forecast Information](#),  
[Center for Western Weather Water Extremes \(CW3E\) Event Summaries](#),  
[California Nevada River Forecast Center \(CNRFC\) Data Archive](#), [Western Regional Climate Center \(WRCC\) Monthly Updates](#)

## TEMPERATURE

The statewide average temperature for the end of May was about 75.8°F, which is about 10.5 degrees above the historical average for this time of year. The statewide average temperature was near or above average throughout May, excluding from about May 4-6 and 13-20 when it was below average. The two graphs in Figure 3 show the statewide mean temperatures for the water year through May 31 (on the left) and the month of May 2025 (on the right).

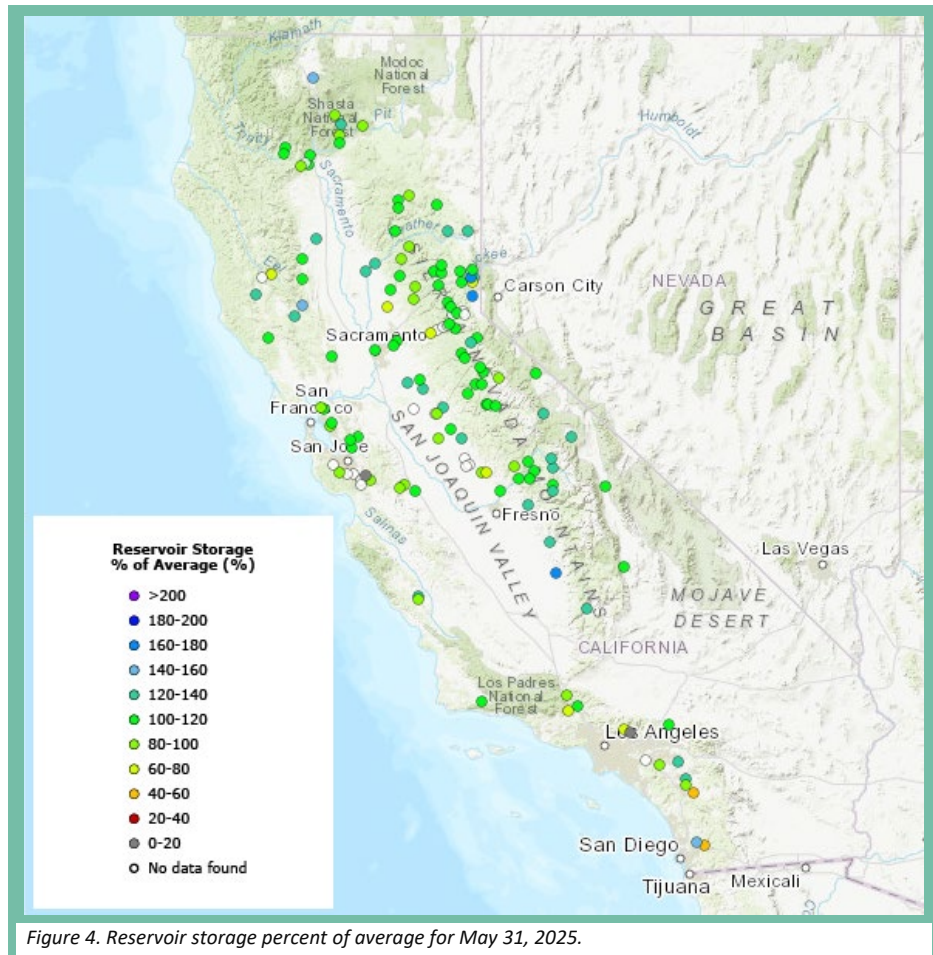


According to the CPC, El Niño Southern Oscillation (ENSO) neutral conditions is expected with 82% chance to continue during summer (June-August) and 48% chance to continue into winter. CPC also forecasts 41% chance of La Niña conditions sometime in November 2025 to January 2026. The CPC temperature outlook issued on May 31, 2025 indicates above normal temperatures with 40-60% chance for Northern California, 33-50% for Central California, and 40-50% for Southern California. The CPC seasonal outlook covering the period of June 2025 through end of August 2025 indicates above normal temperatures with 40-50% chance along Central and South Coast, and 50-60% chance for the rest of the state.

Sources: [Statewide Hydroclimate and Water Supply Conditions](#), [CPC 30-Day Forecasts](#)

## RESERVOIRS

Statewide reservoir storage at the end of May was 114% of average. As shown in Figure 4, most reservoirs have near average storage for this time of year due to retaining inflow from snowmelt runoff in the past month. Shortly after the peak snow accumulation in early April, snowmelt runoff was observed with greater flow contributions for major rivers along Sierra Nevada. Table 1 shows observed one day peak inflow and the date, where it was either on April 2 or between May 11-13.



Major water supply reservoirs continued to retain inflow and capture the snowmelt runoff from the last month, to be used during the upcoming dry months of summer and early fall when water demand increased across the state.

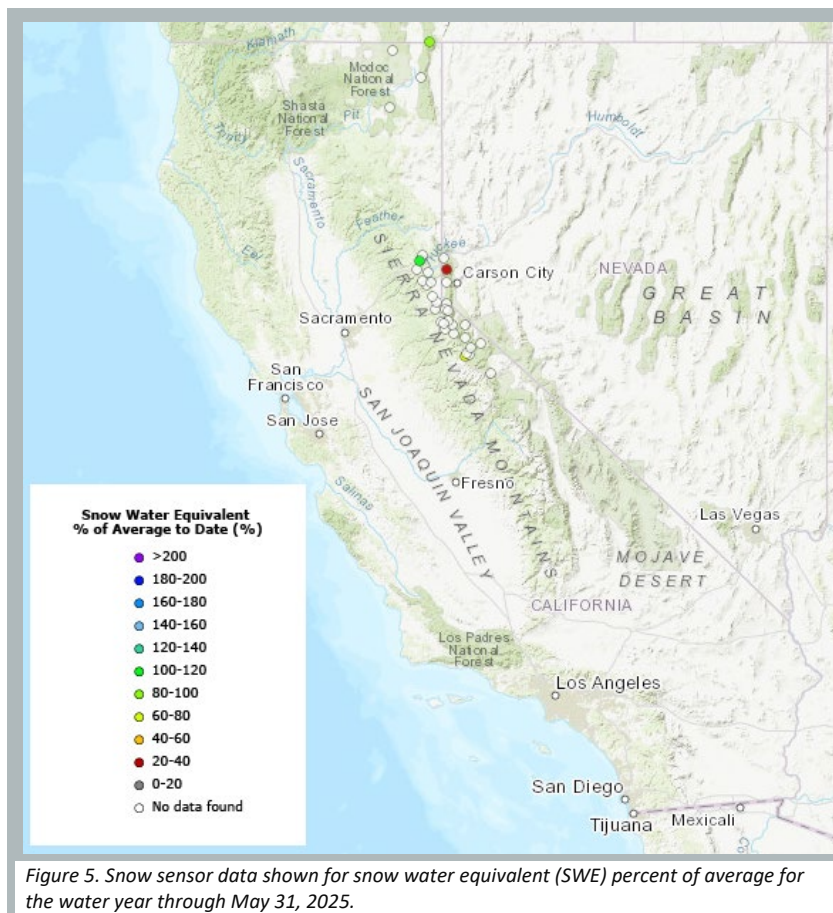
At the end of May, most water supply reservoirs are near their total capacity. At the end of May, two water supply reservoirs that were notably below their total storage capacity were Lake Sonoma (68% of capacity and 111% of historical average) and San Luis Reservoir (64% of capacity and 92% of historical average).

Sources: [California Water Watch](#), [California Data Exchange Center Reservoirs Flood Control](#), [CNRFC Observed Date of Peak Flow](#)



Table 1. One-day peak observed inflow from April 1 to May 31, 2025 in thousand acre-feet(kAF) and date of occurrence.

RESERVOIR	I-DAY PEAK OBSERVED INFLOW, THOUSAND ACRE-FEET (KAF)	DATE
Lake Shasta	43.9	April 2
Lake Oroville	38.9	April 2
New Bullards Bar Reservoir	10.1	April 2
Folsom Lake	24.6	April 2
Pardee Reservoir	7.0	May 12
New Melones Lake	10.3	May 13
Don Pedro Reservoir	19.8	May 12
Lake McClure	9.6	May 11
Millerton Lake	17.6	May 12
Pine Flat Reservoir	18.5	May 12
Lake Kaweah	4.2	May 11
Lake Success	1.3	April 2
Lake Isabella	5.1	May 13



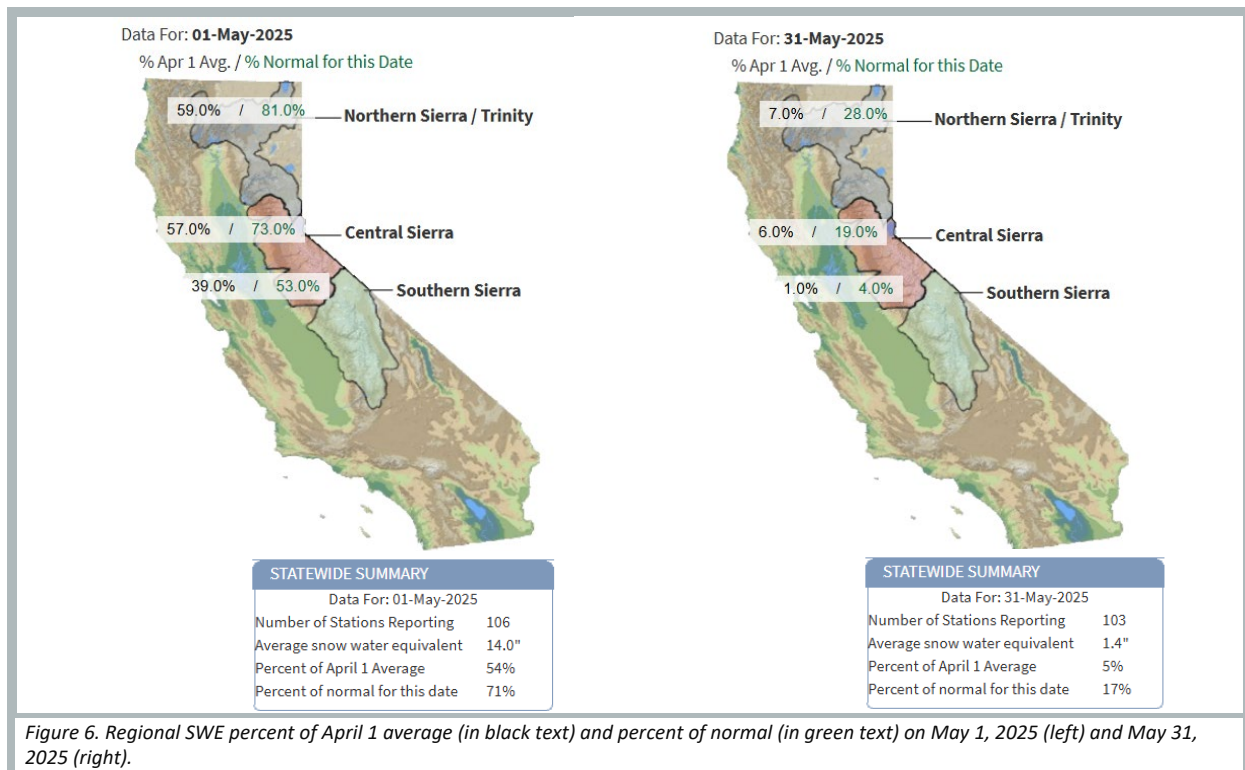
## SNOWPACK

The statewide average snow water equivalent (SWE) on May 31 was 1.4 inches (based on snow sensor readings), which is 17% of average for the date. The rapid decline of SWE is a result of snow melting from the warmer temperature periods, greater exposure to sunlight, and decrease in precipitation during the month of May. As shown in Figure 5, snow sensor readings for SWE percent of average for May 31 were below average for the Northern Sierra and Southern Cascades (28% of average), the Central Sierra (19% of average), and the Southern Sierra (4% of average). Figure 6 shows regional SWE conditions at the beginning of May 2025 (left)



and end of May 2025 (right) to further show the decrease of SWE during the past month.

In general, for the Sierra Nevada, snowpack accumulation peaks around April 1 each year, and thereafter begins to melt with longer days and longer exposure to solar radiation. Several factors involving the timing, pace, and scale of storms and their temperature characteristics through the end of March can influence the total amount of snowpack and when it will begin to melt. The snowmelt period typically is from April through July, where the runoff is collected by major reservoirs for water supply during the dry months of summer and beginning of fall.



Sources: [California Water Watch](#), [CDEC Snow Water Equivalent Plot](#)



## STREAMFLOW

Streamflow for about 71% of locations across California was at a normal flow rate at the end of May according to United States Geologic Survey (USGS) stream gage locations. About 11% of streamflow locations were flowing greater than average for this time of year, while about 18% of streamflow locations were flowing below normal for this time of the year. The periods of precipitation that occurred during May caused minor river rises. Snowmelt driven rivers observed minor to moderate rises during the sustained periods of warmer temperatures. The stages at these locations tend to have diurnal cycles, where there are periods of higher stages during daylight and slight decreases in stage overnight when the lack of exposure to solar radiation slows melt rates for a few hours. Generally during May 11-14, as the low-pressure system traveled across the state, runoff from most snow-driven basins had decreased from the cooler temperatures and greater cloud coverage. California-Nevada River Forecast Center (CNRFC) forecast locations remained below their flood stages during the month of May. Full natural flow (the river flow that would be observed if there were no alterations upstream from diversions, storage, or by export/import of water) was below average across California's major river basins for the month May.

*Sources: [USGS Water Watch](#), [California Nevada River Forecast Center \(CNRFC\)](#), [CDEC Daily Full Natural Flows](#)*

## GROUNDWATER

Although rainfall increased in 2023 and precipitation was average in 2024, California continues to face a cumulative precipitation deficit from 2000 to 2024. While recent wet years have helped stabilize groundwater levels, California's future will likely see continued fluctuations between wet and dry periods. Recently measured monitoring wells show groundwater levels in 35% of monitoring wells across California are below normal, 42% are normal, and 23% are above normal. These statistics are based on 256 wells where groundwater levels have been collected for at least 10 years, and the most recent measurements were collected within the last 60 days. There were three dry domestic wells reported in the last 30 days. Data reported is as of June 13, 2025. Visit DWR's [California's Groundwater Live](#) for the latest groundwater conditions across the state.

Source: [DWR California's Groundwater Live](#)

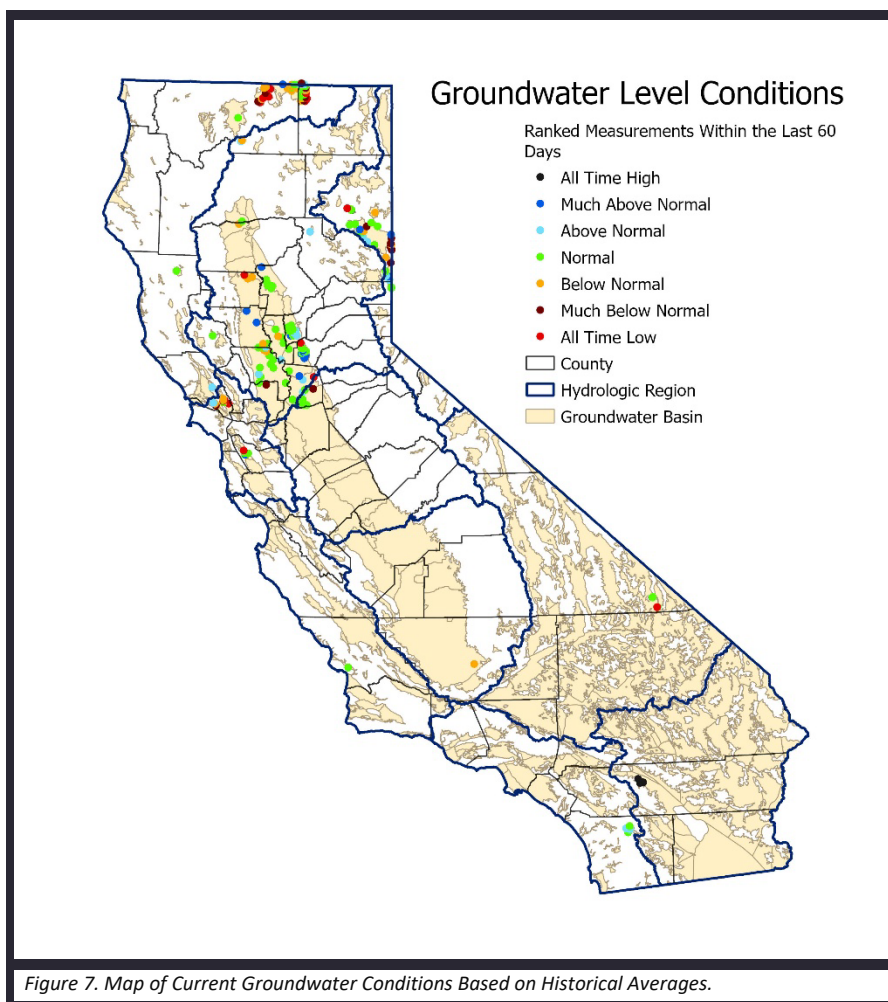


Figure 7. Map of Current Groundwater Conditions Based on Historical Averages.

Cover page photo: An aerial view shows high water conditions at Enterprise Bridge located at Lake Oroville in Butte County, California. Photo taken May 20, 2025. On this date, the water storage was 3,400,147 acre-feet (AF), 99 percent of the total capacity.