CALIFORNIA HYDROLOGY UPDATE

CONDITIONS AS OF AUGUST 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 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.

PRECIPITATION

The statewide accumulated precipitation for the water year remains just below average at 95%, with 22.1 inches total through the end of August 2025. Aside from select isolated showers producing minor precipitation for select areas in Northern California and Sierra Nevada (around August 16 and August 23-27) the rest of the state was dry for the month of August (shown in Figure 1).

The beginning of August was dry across the state. During August 16, a cold front resulted in light rain along the border with Oregon. After, dry conditions resumed across California. During August 23, monsoonal moisture traveled into California which resulted in thunderstorms along Sierra Nevada, and greater precipitation spread through August 27. Precipitation totals for August 21-27 include up to 2 inches along Sierra Nevada, up to an inch in Northern California, and scattered amounts with up to 0.5 inch for Southern California.

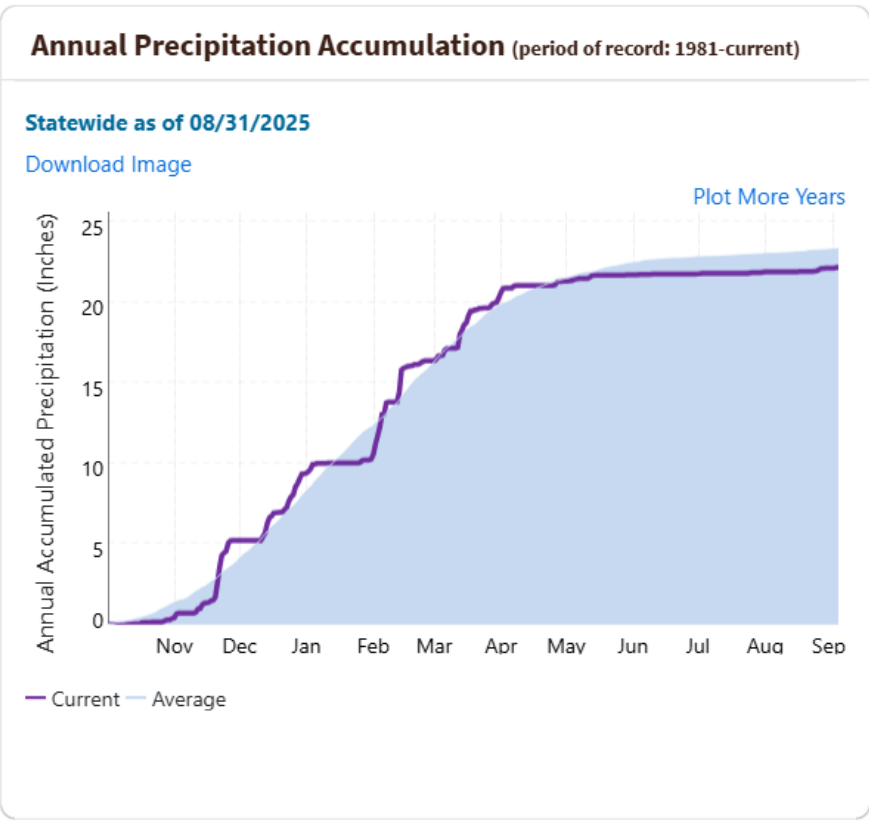

Figure 1. Statewide average accumulated precipitation from October 1, 2024 to August 31, 2025 (purple line) and historical average (shaded blue).

As shown in Figure 2, for the water year to date through the end of August 2025, Northern California received near to above average accumulated precipitation, Central California received below to near average accumulated precipitation, and Southern California received below average accumulated precipitation. The North Coast has accumulated about 61.4 inches of precipitation for the water year through end of August, which is 117% of average. The Sacramento River region has accumulated about 38.4 inches of precipitation for the water year through end of August, which is 107% of average. The San Joaquin River region has accumulated about 21.1 inches of precipitation for the water year through the end of August, which is 79% of average. The Central Coast has accumulated about 12.9 inches of precipitation for the water year through the end of August, which is 65% of average. The Tulare Lake region has accumulated about 12.5 inches of precipitation for the water year through the end of August, which is 81% of average. The South Coast has accumulated about 8.9 inches of precipitation for the water year through the end of August, which is 52% of average.

The Climate Prediction Center (CPC) monthly outlook issued on August 31, 2025, indicates equal chances of below, near, or above normal precipitation for across California during the month of September 2025. The CPC seasonal outlook covering the period of September 2025 through end of November 2025 indicates up to 40% below 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

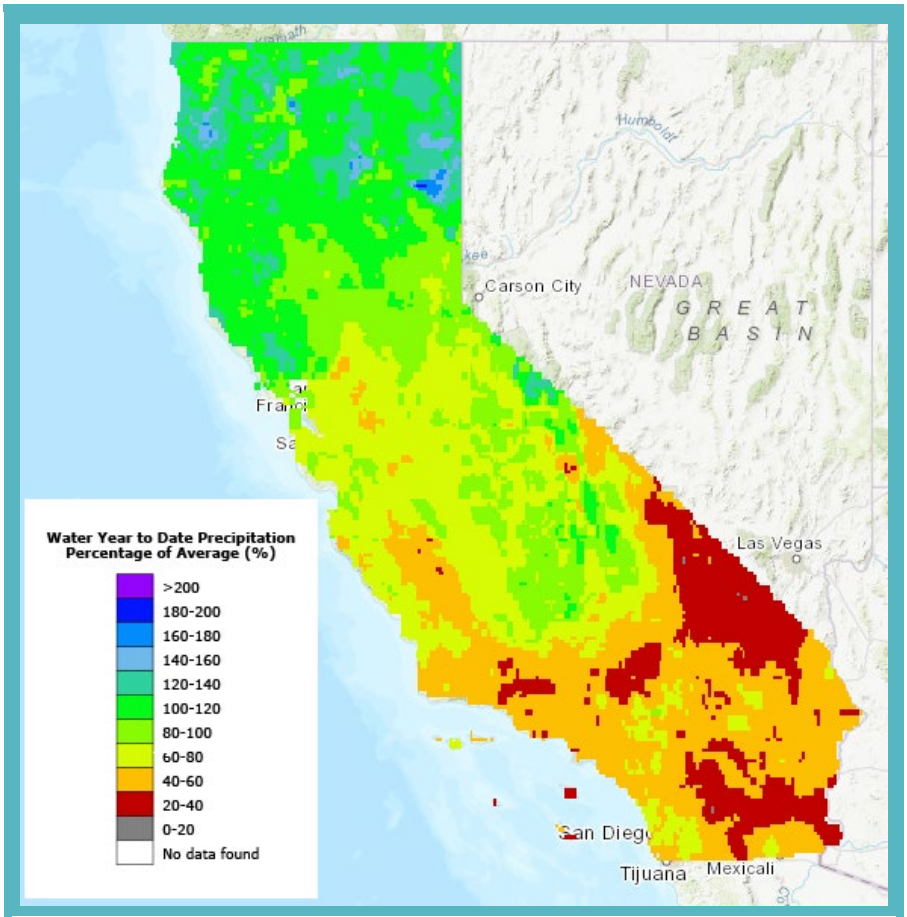

Figure 2. Percent of average for the accumulated precipitation from October 1, 2024 to August 31, 2025.

TEMPERATURE

The statewide average temperature for the end of August was about 76.8°F, which is about 3.3 degrees above the historical average for this time of year. The statewide average temperature was near or below average throughout August, excluding from about August 7-15, August 20-27, and August 30-31 when it was above average. The statewide average temperature reached the historical maximum mean temperature during August 22-24. The two graphs in Figure 3 show the statewide mean temperatures for the water year through August 31 (on the left) and the month of August 2025 (on the right).

According to the CPC, El Niño Southern Oscillation (ENSO) neutral conditions is forecasted to transition to La Niña conditions in the coming months with a 71% chance during October to December 2025 and 54% chance during December 2025 to February 2026. The CPC temperature outlook issued on August 31, 2025 indicates equal chances of below, near, or above normal temperature across California during the month of September. The CPC seasonal outlook covering the period of September 2025 through end of November 2025 indicates above normal temperatures with 33-50% chance along the border with Oregon, 33-50% chance along Central and South Coast, and 40-50% chance for the rest of California.

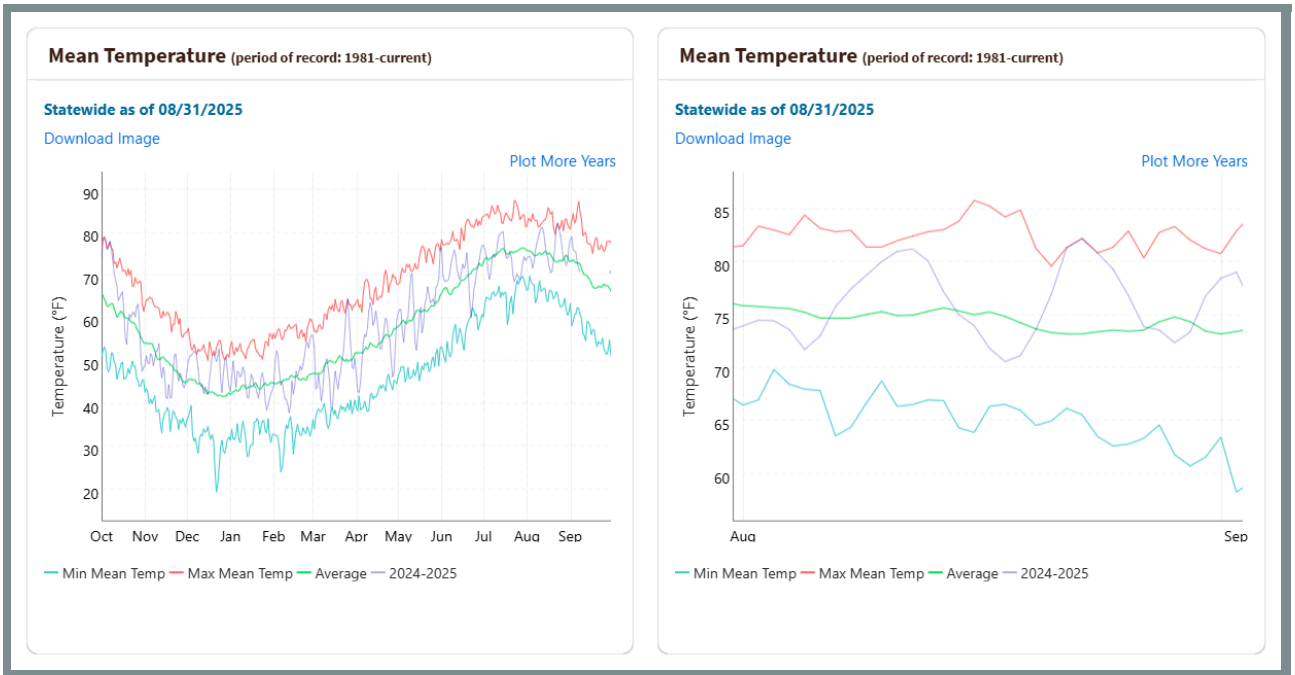

Figure 3. Water year 2025 statewide mean temperature is shown in dark blue as of August 31, 2025 (left) and displayed for the month of August 2025 (right).

Sources: Statewide Hydroclimate and Water Supply Conditions, CPC 30-Day Forecasts

RESERVOIRS

Statewide reservoir storage at the end of August was 107% of average. As shown in Figure 4, several reservoirs have near average storage for this time of year. In general, major water supply reservoirs have made steady releases necessary for water allocations during the dry summer months. Most major water supply reservoirs have about 65-95% total capacity and 100-123% of average for this time of year.

At the end of August, six water supply reservoirs that were notably below their total storage capacity were Lake Shasta (63% of capacity and 104% of historical average), Folsom Lake (49% of capacity and 88% of historical

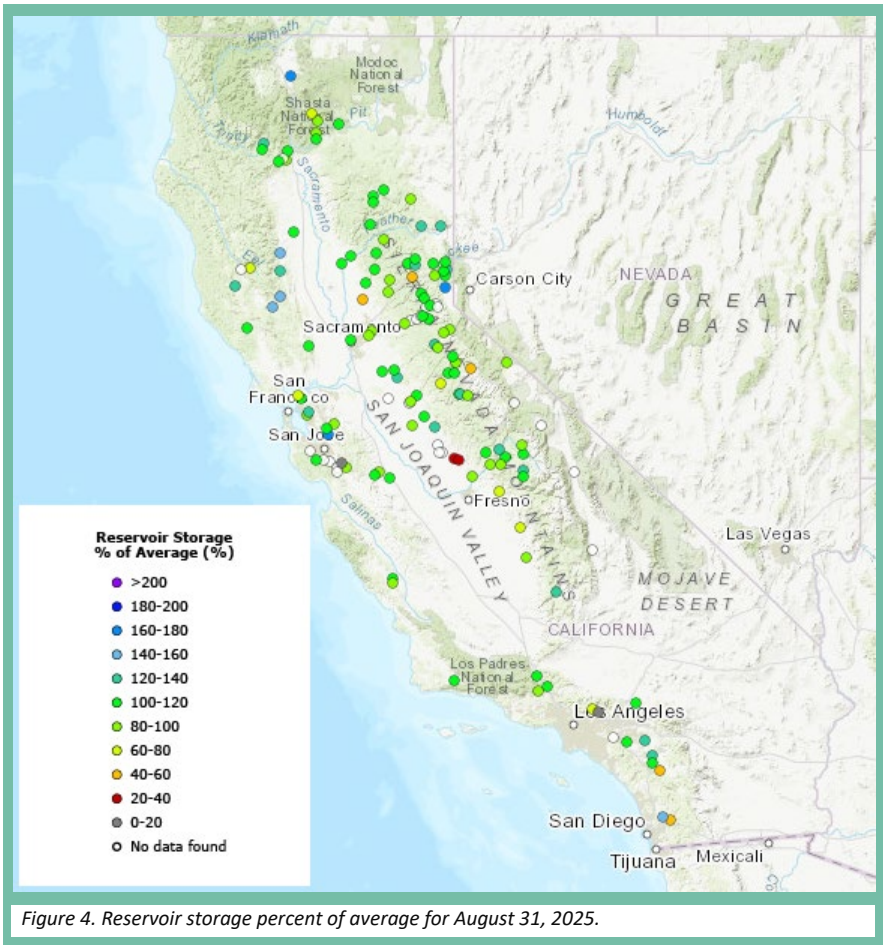

Figure 4. Reservoir storage percent of average for August 31, 2025.

average), Lake Sonoma (62% of capacity and 112% of historical average), San Luis Reservoir (42% of capacity and 109% of historical average), Millerton Lake (47% of capacity and 90% of historical average), and Pine Flat Lake (24% of capacity and 70% of historical average).

Sources: California Water Watch, California Data Exchange Center Reservoirs Flood Control, CNRFC Observed Date of Peak Flow

SNOWPACK

The snowpack season for water year 2025 has concluded. 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 66% of locations across California was at a normal flow rate at the end of August according to United States Geologic Survey (USGS) stream gage locations. About 16% 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.

Scattered showers (around August 16) caused minor rises on the north coast and thunderstorms (around August 23-27) caused minor rises in select rivers (mainly along Sierra Nevada) and smaller streams. Otherwise, flow for major rivers remained near baseflow levels (what is typically observed during summer in California).

Sources: USGS Water Watch, California Nevada River Forecast Center (CNRFC), CDEC Daily Full Natural Flows

GROUNDWATER

Precipitation in water year 2024 was average compared to the last 50 years. However, there are sharp contrasts in rainfall across the state, which highlight California's ongoing climate variability. Although groundwater levels have stabilized or risen in many wells over the past year due to recent wetter conditions, long-term trends continue to raise concern. Over a 20-year period, 49% of wells statewide showed declining trends. Recently-measured monitoring wells show groundwater levels in 25% of monitoring wells across California are below normal, 49% are normal, and 26% are above normal. These statistics are based on 370 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 six dry domestic wells reported in the last 30 days. Data reported is as of September 10, 2025. Visit DWR's California's Groundwater Live for the latest groundwater conditions across the state.

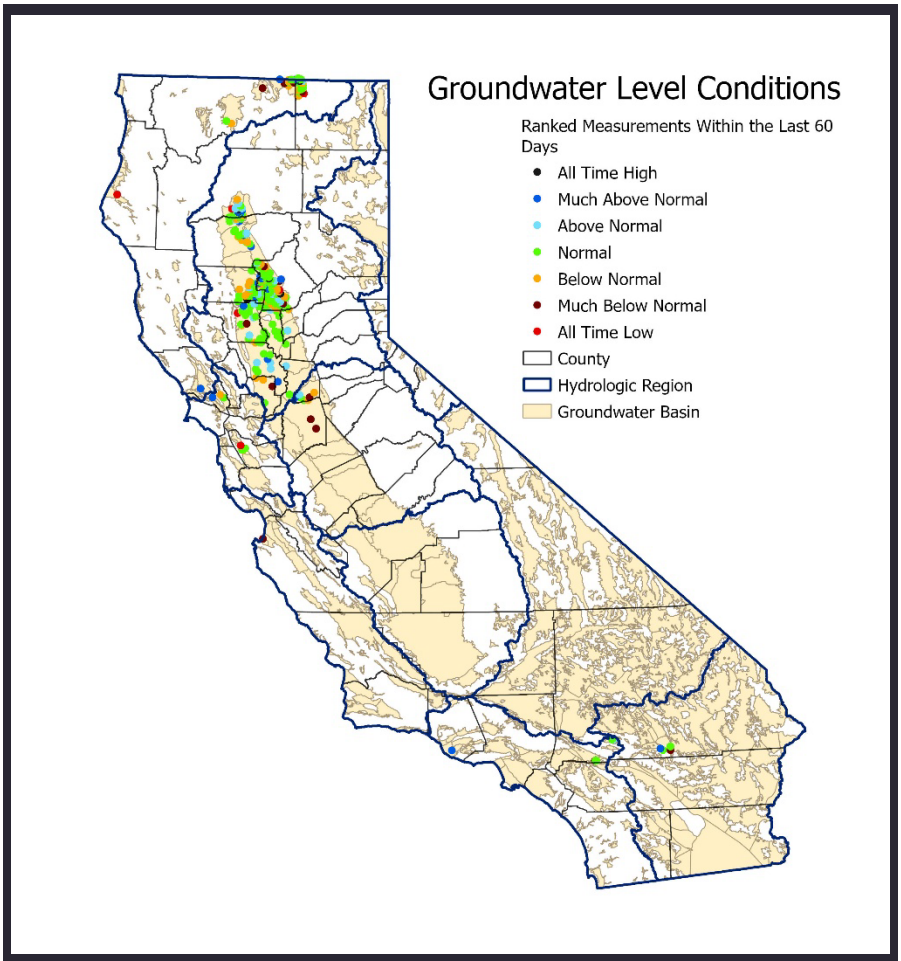

Figure 5. Map of Current Groundwater Conditions Based on Historical Averages.

Source: DWR California's Groundwater Live

Cover page photo: An aerial view of South Mokelumne River (Left to Right) in San Joaquin County, California. Brack Tract is left, and Terminous Tract is on the right, with Sycamore Slough between them. Photo taken August 28, 2025.