CALIFORNIA HYDROLOGY UPDATE

CONDITIONS AS OF FEBRUARY 28, 2026

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

Water year 2026 continues to have above average accumulated precipitation when considering the state's average at the end of February. The statewide accumulated precipitation through the end of February 2026 was about 18.7 inches, which is 116% of average. The month of February precipitation was near to above normal for most of the state, excluding Southern California being below to near normal. During the past month in February 2026, the main periods of precipitation were generally during February 8, 10-11, 15-20, and 23-25 (shown in Figure 1).

During February 1-6, dry conditions were observed for California as high pressure dominated over the region. On February 8, a frontal system resulted in minor precipitation in Northern California. During February 10-11, low pressure off the coast resulted in precipitation for most of the state.

Starting February 15, a series of low-pressure systems resulted in widespread precipitation and gradual decline in freezing level. During February 16-17, a second area of low pressure traveled across the state resulting in rain and snow. The third low pressure system approached and traveled across the state during February 18-19. Precipitation totals were about 4.0 to 8.0 inches across Sierra Nevada, higher elevations in North and Central Coast, and Transverse Ranges. Snow accumulation was mainly during the second and third storm systems. National Weather Service received reports of flood and landslides over Southern California (mainly during the first storm) and in Northern and Central California (mainly during the second and third storms). A deadly avalanche near Donner Summit caused nine fatalities.

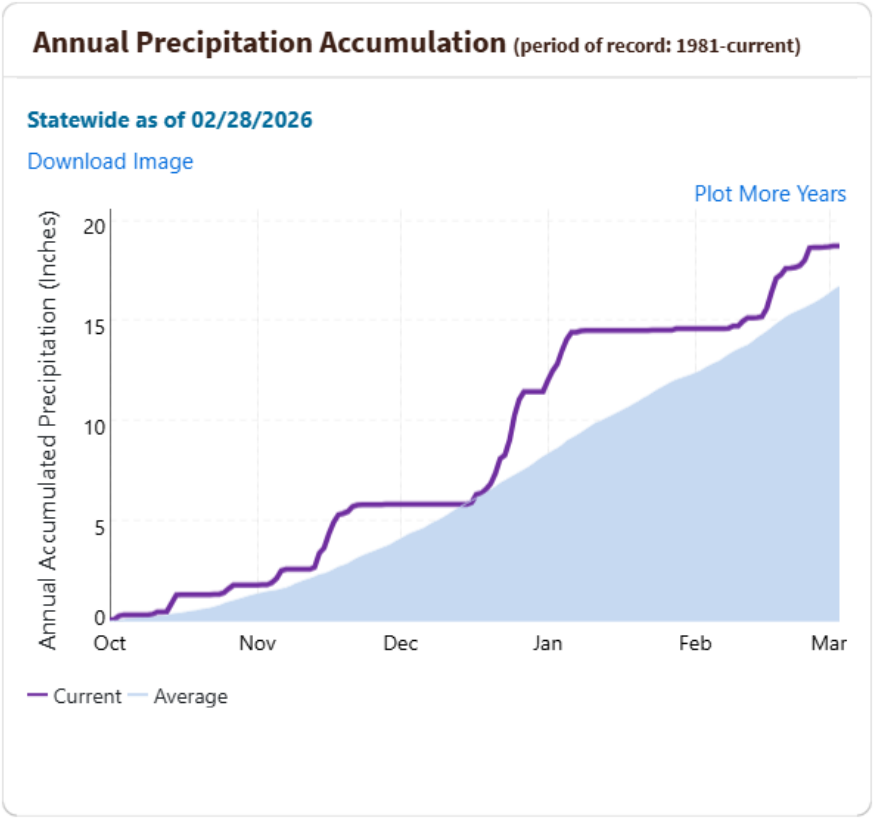

Figure 1. Statewide average accumulated precipitation from October 1, 2025 to February 28, 2026 (purple line) and historical average (shaded blue).

Light precipitation was observed during February 20 as the trough traveled east of California's borders. During February 23-25, an atmospheric river made landfall and resulted in additional precipitation for Northern California and Sierra Nevada. This system was fueled with tropical moisture, warmer temperatures, and higher freezing levels. This led to predominantly rain and melting snow at lower elevations. During February 26-28, high pressure set back into the region which resulted in dry conditions across the state (excluding trace precipitation amounts from a weak system along the border with Oregon on February 28).

As shown in Figure 2, for water year 2026, Northern California received near to above average accumulated precipitation, Central and Southern California received near to well above average accumulated precipitation. The North Coast has accumulated about 37.4 inches of precipitation for the water year through end of February, which is 100% of average. The Sacramento River region has accumulated about 28.8 inches of precipitation for the water year through end of February, which is 116% of average. The San Joaquin River region has accumulated about 19.6 inches of precipitation for the water year through end of February, which is 107% of average. The Central Coast has accumulated about 20.8 inches of precipitation for the water year through end of February, which is 143% of average.

The Tulare Lake region has accumulated about 15 inches of precipitation for the water year through end of February, which is 142% of average. The South Coast has accumulated about 16.7 inches of precipitation for the water year through end of February, which is 136% of average.

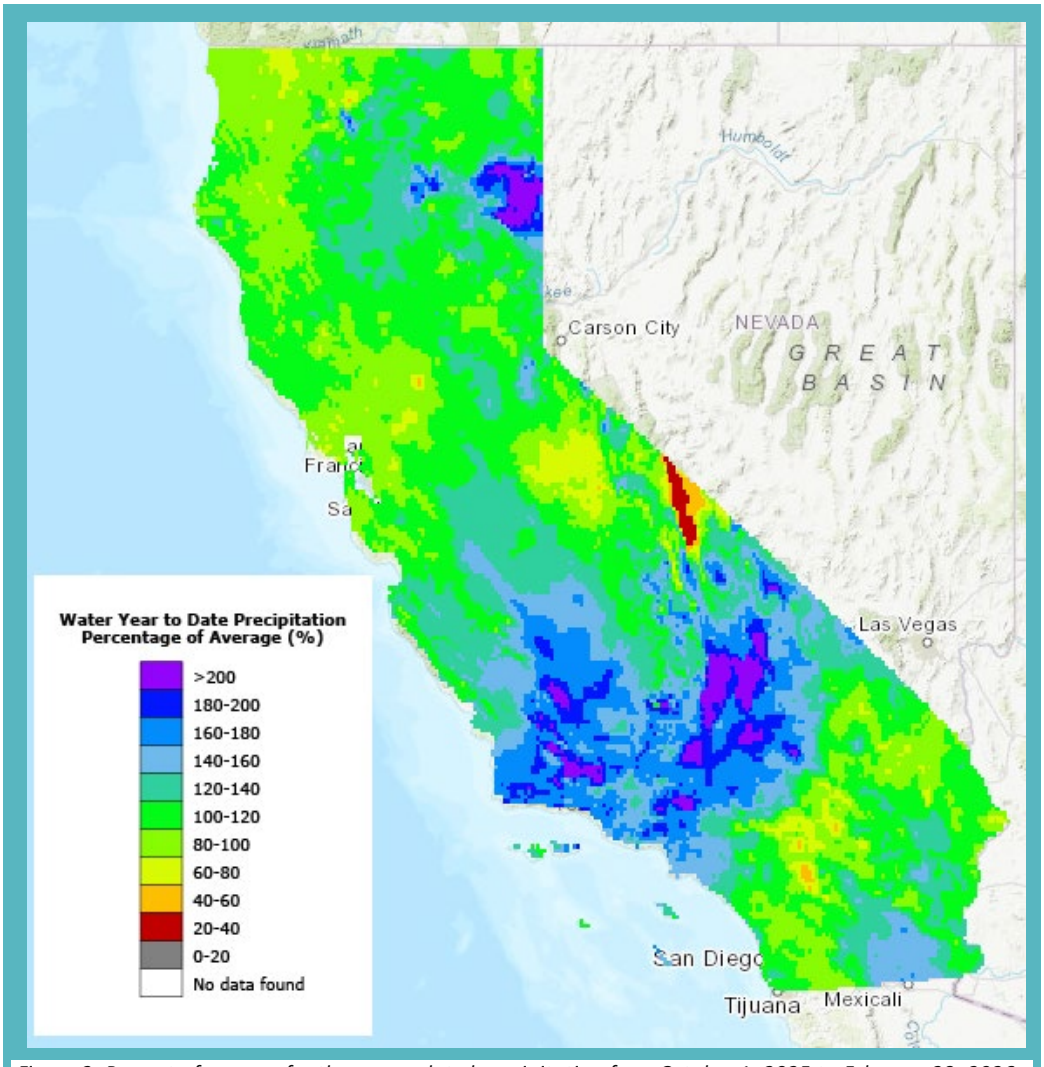

Figure 2. Percent of average for the accumulated precipitation from October 1, 2025 to February 28, 2026.

The Climate Prediction Center (CPC) monthly outlook issued on February 28, 2026 indicates below normal precipitation with 33-40% chance along the border with Oregon and Arizona and 40-50% chance for the rest of the state for the month of March 2026. The CPC seasonal outlook covering the period of March 2026 through the end of May 2026 indicates below normal precipitation with 33-40% chance across the state.

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 February was 61.6°F, which is about 14.3 degrees above the historical average for this time of year. The statewide average temperature was above average for most of February, excluding from about February 17-22 when it was below average. The statewide average temperature reached the historical maximum mean temperature on February 28. The two graphs in Figure 3 show the statewide mean temperatures for the water year through February 28 (on the left) and month of February 2026 (on the right).

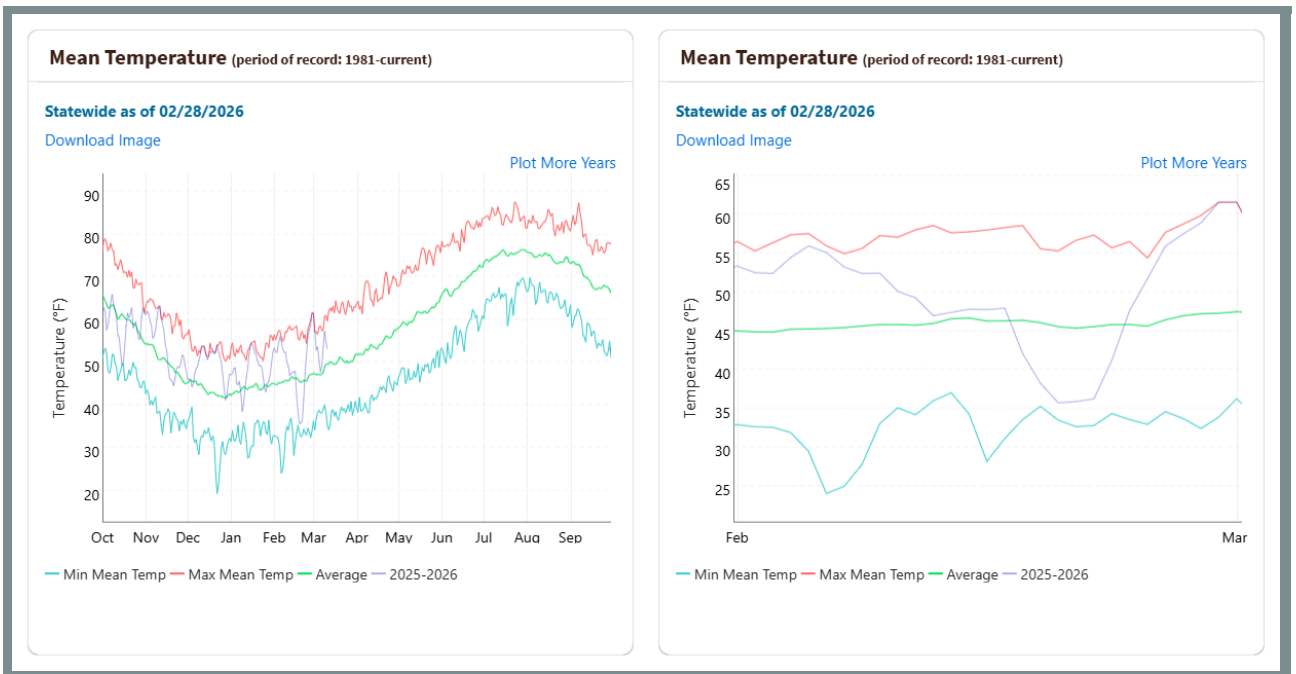

Figure 3. Water year 2026 statewide mean temperature is shown in dark blue as of February 28, 2026 (left) and displayed for the month of February 2026 (right).

La Niña conditions continued during February due to below-average sea surface temperatures (SSTs) across the equatorial east-central Pacific Ocean. According to the Climate Prediction Center (CPC), El Niño Southern Oscillation (ENSO) will transition to neutral conditions sometime in the next month and 55% chance of remaining through May-July 2026. CPC forecasts El Niño conditions to occur with 62% chance during June-August 2026. The CPC temperature outlook issued on February 28, 2026 indicates above normal temperatures with 33-60% chance for Northern California and 50-60% for Southern California during the month of March 2026. The CPC seasonal outlook covering the period of March 2026 through end of May 2026 indicates also above normal temperatures with 33-40% chance along the coast and border with Oregon and 40-50% chance for the rest of the state.

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

SOIL MOISTURE

The storm systems and precipitation during February help to increase soil moisture for California. Figure 4 shows a comparison of soil moisture (estimated from satellite images) on January 31, 2026 (left) and February 23, 2026 (right). By February 23, Northern California appears to have closer to average soil moisture (shown with grey color) and Central California increasing in soil moisture as well (with the darker shades of blue).

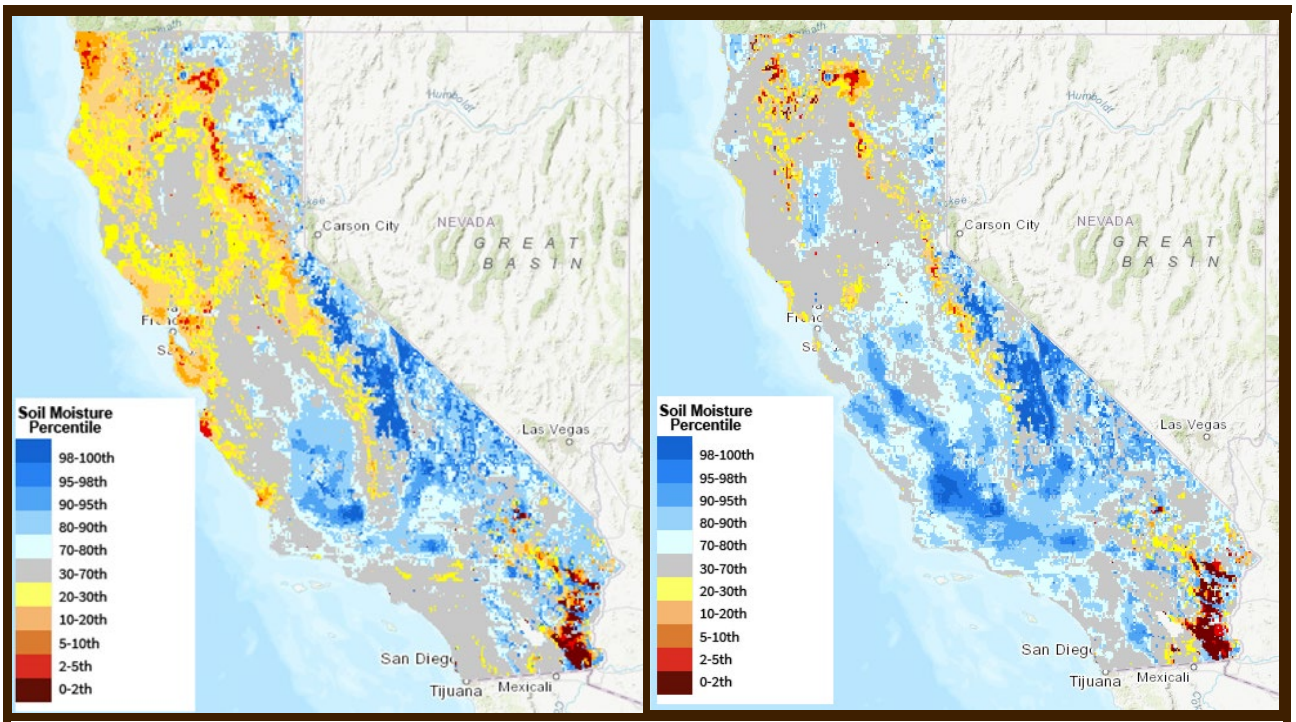

Figure 4. Soil moisture estimated from National Aeronautics and Space Administration (NASA) satellite-based measurements as percentile of historical measurements (with 1981-2013 soil moisture climatology) for the top 100 centimeters on January 31, 2026 (left) and February 23, 2026 (right).

Sources: Statewide Hydroclimate and Water Supply Conditions, NASA Short-term Prediction and Transition Center

RESERVOIRS

Statewide reservoir storage at the end of February was 121% of average. As shown in Figure 5, most reservoirs have near to above average storage for this time of year.

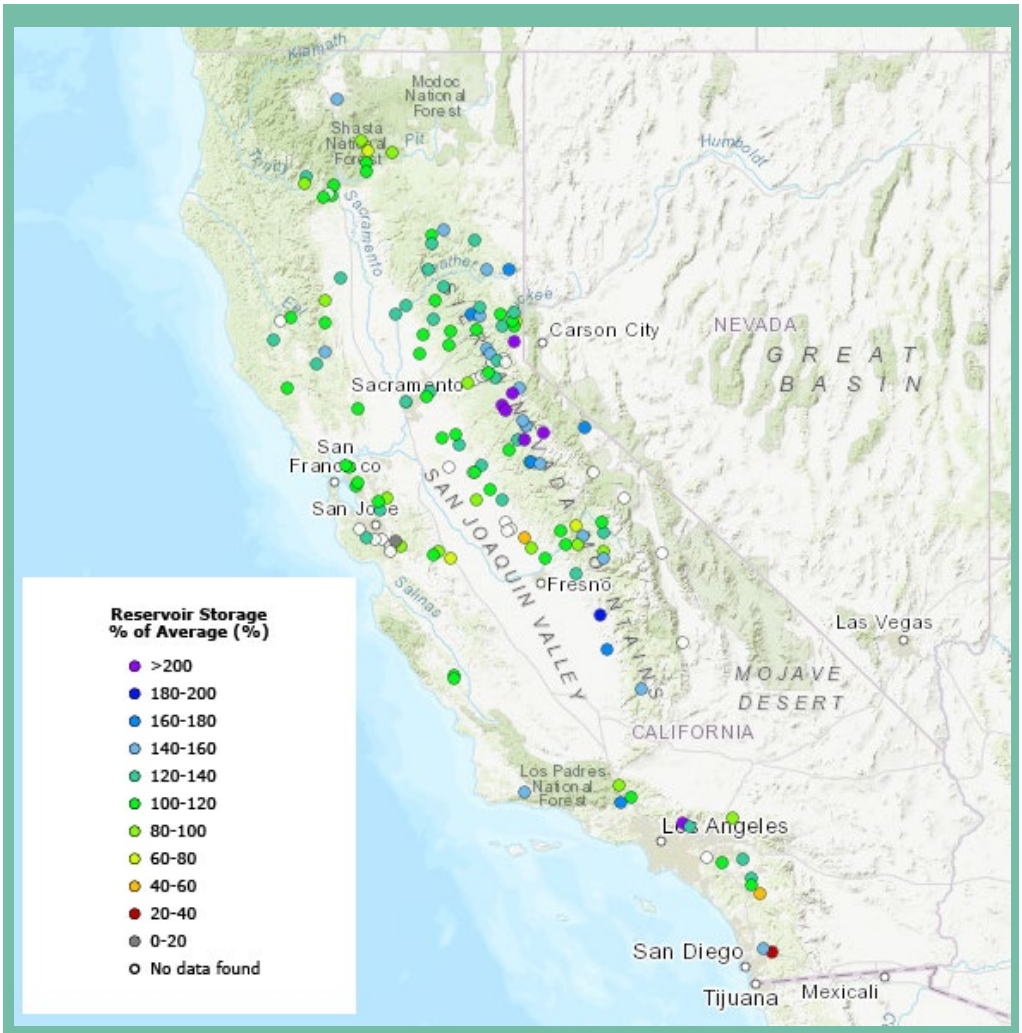

Figure 5. Reservoir storage percent of average for February 28, 2026.

All major water supply reservoirs are above their historical average for storage at the end of February. At the end of February, most flood control reservoirs were near their respective top of conservation levels, with several slightly encroached. The twelve major reservoirs slightly encroached at the end of February were Black Butte Lake (by about 33 thousand acre-feet [TAF]), Lake Mendocino (by about 23 TAF), Lake Sonoma (by about 30 TAF), Lake Oroville (by about 147 TAF), New Bullards Bar Reservoir (by about 18 TAF), Folsom Lake (by about 77 TAF), Camanche Reservoir (by about 57 TAF), New Hogan Lake (by about 21 TAF), New Don Pedro Reservoir (by about 33 TAF), Lake McClure (by about 29 TAF), Lake Kaweah (by about 39 TAF), and Success Lake (by about 17 TAF).

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

SNOWPACK

The statewide average snow water equivalent (SWE) was 15.2 inches for February 28, which is 65% percent of normal and 57% of April 1 average. The series of low-pressure systems (mainly the second and third systems during February 17-19) in mid-February resulted in snow accumulation across Sierra Nevada. Unfortunately, the following atmospheric river around February 23-25 was warmer, which resulted in mostly rain and melted snow at lower elevations. The snow sensor readings for SWE percent of average at the end of February for each region include 45% of normal (39% of April 1 average) for Northern Sierra and Trinity, 67% of normal (58% of the April 1 average) for Central Sierra, and 88% of normal (78% of April 1 average) for Southern Sierra. Figure 7 shows regional SWE conditions at the end of January 2026 (left) and end of February 2026 (right).

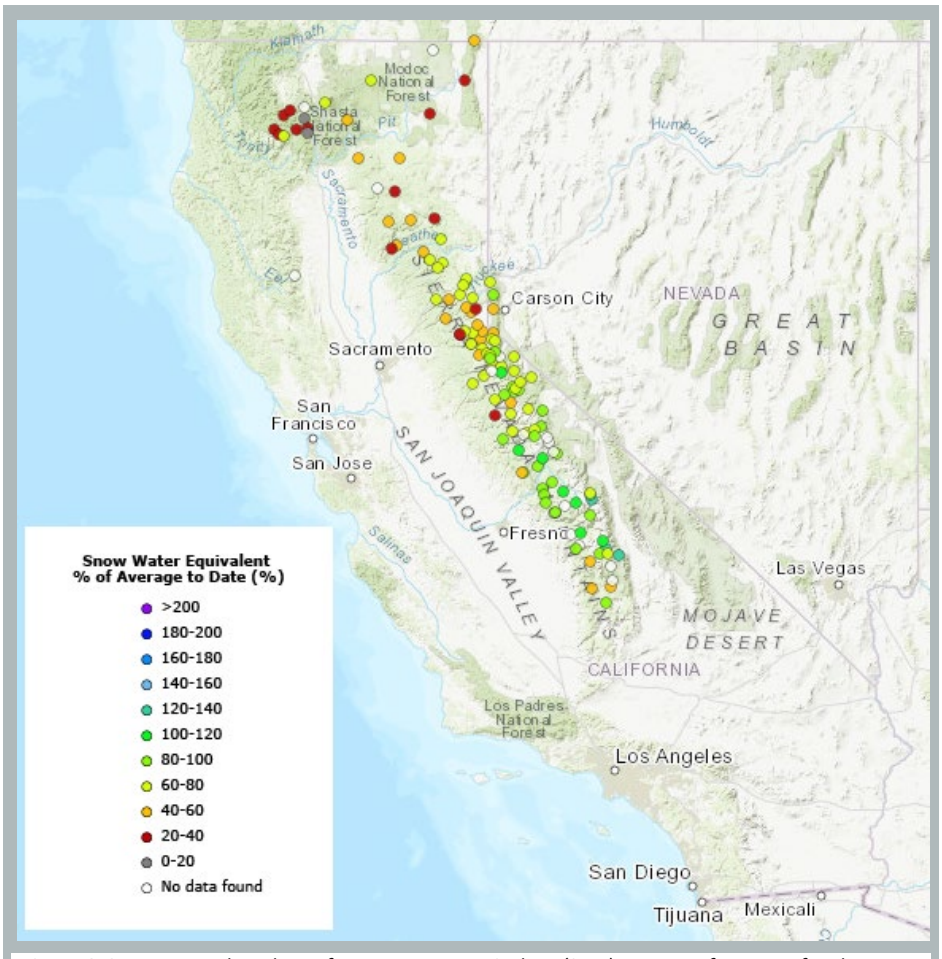

Figure 6. Snow sensor data shown for snow water equivalent (SWE) percent of average for the water year through February 28, 2026.

In general, for the Sierra Nevada, snowpack accumulation begins closer to early December, grows until a peak volume around April 1, 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.

Sources: California Water Watch, CDEC Snow Water Equivalent Plot

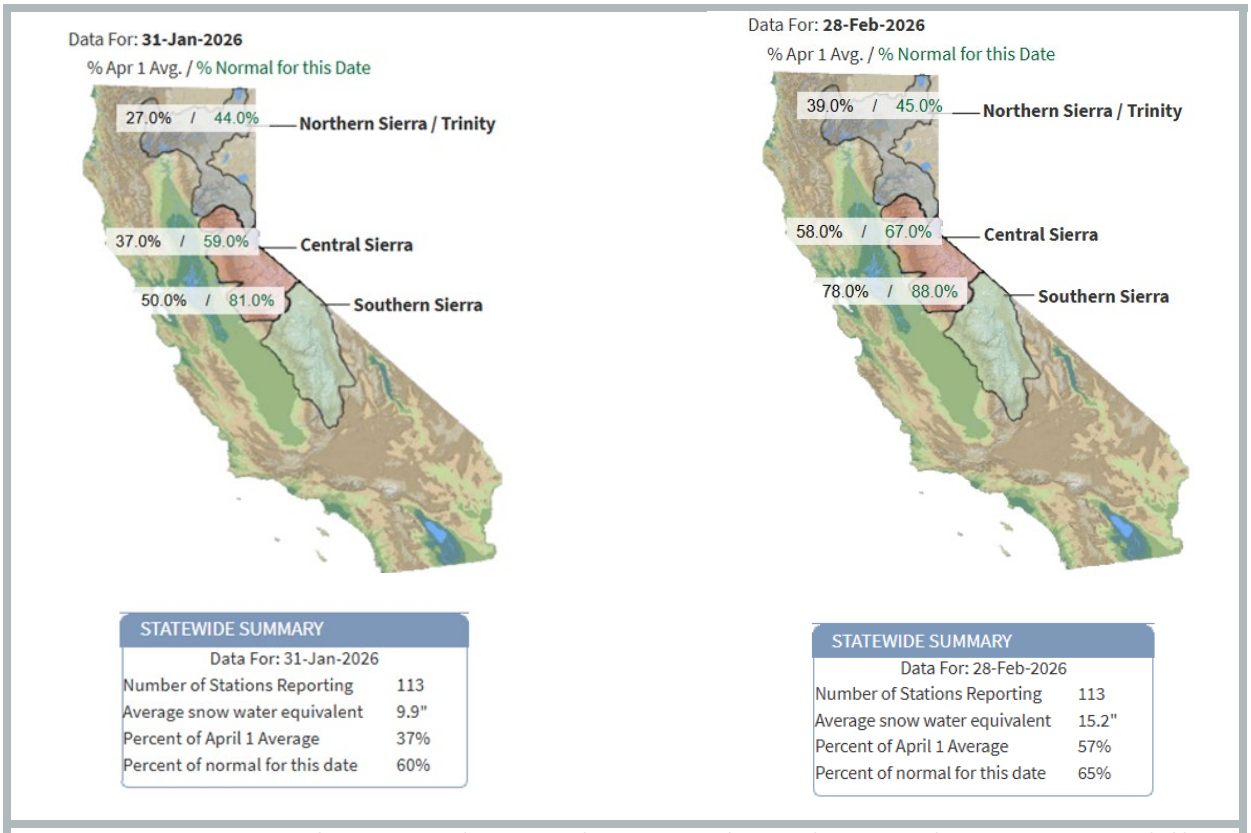

Figure 7. Regional SWE percent of April 1 average (in black text) and percent of normal (in green text) on January 31, 2026 (left) and February 28, 2026 (right).

STREAMFLOW

Streamflow for about 19% of locations across California was near normal flow rate for the water year to March 13, 2026 according to California Nevada River Forecast Center (CNRFC) locations (Figure 8). About 55% of streamflow locations were flowing greater than normal, while about 29% of streamflow locations were flowing below normal for the water year to March 13, 2026. The precipitation from the storm systems and some early snowmelt (due to warmer temperatures) have resulted in near to above average flow for most of California basins. The CNRFC forecast locations that exceeded their respective flood stages (with general dates on when it occurred) included: Russian River at Hopland (February 24-25 for minor flood stage), Eel River at Fernbridge (February 24-25 for moderate flood stage), Sacramento River at Tehama Bridge (February 24-25 for minor flood stage), and Sacramento River at Vina Woodson Bridge (February 25-26 for minor flood). The increase in routed river flow also resulted in weir flow along Sacramento River during February, which included at Moulton Weir (February 26-27), Colusa Weir (February 25-March 1), Tisdale Weir (February 17-22, February 26-March 1), and Fremont Weir (February 27-March 4). Moulton Weir and Colusa Weir allow overflow to go into the Butte Basin. Tisdale Weir (through the Tisdale Bypass) allows overflow to go into the Sutter Bypass. Fremont Weir allows overflow into the Yolo Bypass.

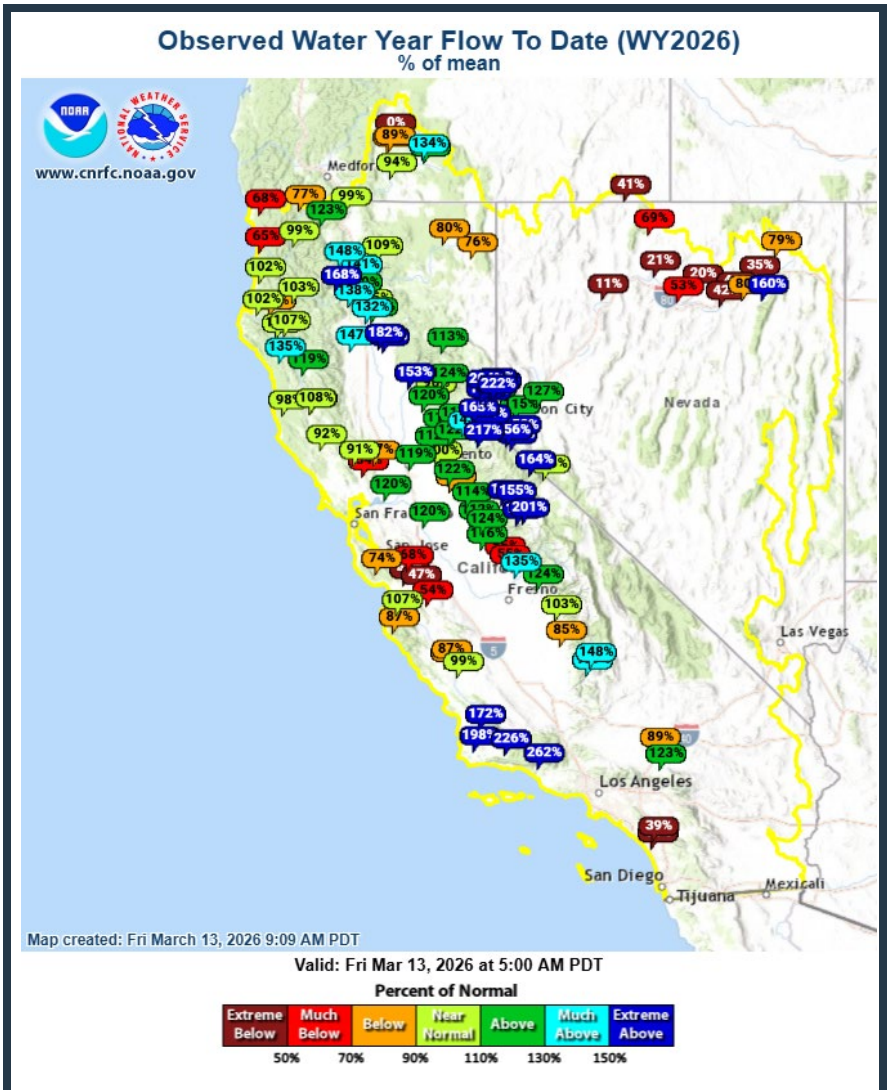

Figure 8. Observed water year flow percent of normal to March 13, 2026. Near normal (90-110%) shown in light green.

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

GROUNDWATER

Despite below-average precipitation in Water Year 2025, statewide groundwater levels remained relatively stable compared to recent years and show improvements compared to the severe drought conditions of a decade ago. While wetter years like 2019 and 2023 provided short-term relief, groundwater systems have not fully recovered, and multiple consecutive wet years combined with reduced pumping will be needed to achieve long-term aquifer sustainability.

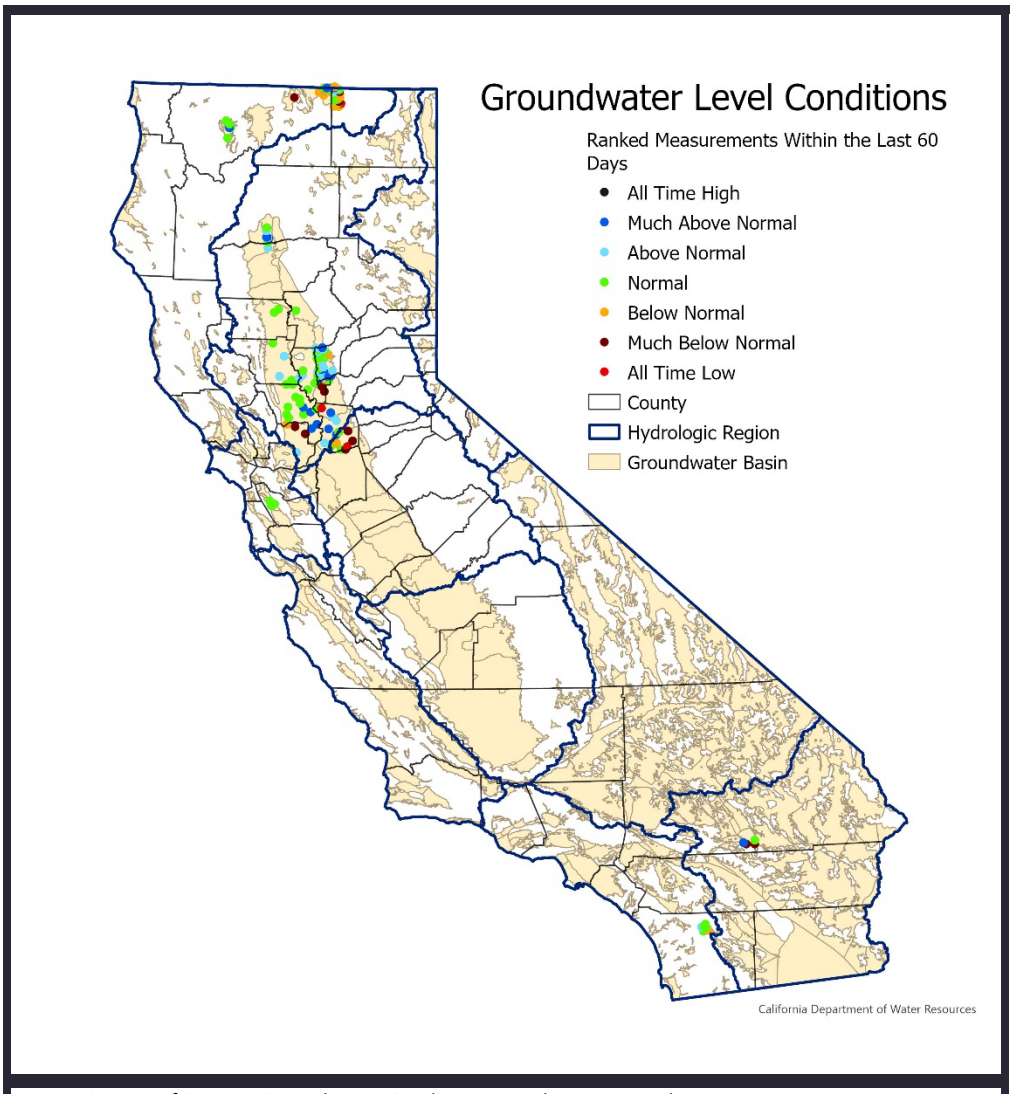

Figure 9. Map of Current Groundwater Conditions Based on Historical Averages.

Recently-measured monitoring wells show groundwater levels in 23% of monitoring wells across California are below normal, 44% are normal, and 33% are above normal. These statistics are based on 216 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 zero dry domestic wells reported in the last 30 days. Data reported is as of March 11, 2026. Visit DWR's California's Groundwater Live for the latest groundwater conditions across the state.

Source: DWR California's Groundwater Live

Cover page photo: A drone image shows the California Department of Water Resources' Twitchell Island Wetland Enhancement and Restoration Project as plant installation is wrapping up at the Sacramento County site. Photo taken February 2, 2026.

Launched last summer, the work is creating more than 50 acres of wetland habitat enhancement and about 80 acres of riparian forest and scrub-shrub habitat on one of the largest islands in the Sacramento-San Joaquin River Delta. Tule plants have begun to sprout, and by 2028 it's expected that a fully functional wetlands will be in place.