



February 3, 2022

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 State Climatologist, Mike Anderson, and the hydrology and forecasting team at the California Department of Water Resources. For the latest on drought conditions, visit [drought.ca.gov](#). For tips and resources for conserving water, please visit [saveourwater.com](#).

Precipitation

Statewide water year precipitation through January 31, 2023 is 18.17 inches, which is 147% of average for this time period. A significant weather pattern change arrived with the winter solstice with the blocking high pressure moving south and a stronger jet stream pushing a series of warm storms into California. A series of nine atmospheric rivers impacted California with heavy precipitation and strong winds. In a three-week span from December 25, 2022 to January 15, 2023, 11.18 inches of precipitation fell over California which is 46% of a total water year. While precipitation was statewide, the far north of California did not see as much precipitation as areas between San Francisco Bay and Santa Barbara.

Temperature

The statewide average temperature has fluctuated between warm and cold extremes during water year 2023. The cooler than average air has helped to build a strong snowpack in California's mountains. Expectations are for temperatures to be near average with a greater potential for cooler than average temperatures north of the Bay Area. Historically, La Niña years are some of the State's colder years. While not as warm as recent La Niña years, the current year is still running above average. This is consistent with the warming trends that we have seen over the past decade due to California's changing climate.

Reservoirs

Statewide reservoir storage at the end of January is 97% of average. Storage can vary significantly based on size of the reservoir and its purpose. Reservoir levels have come up significantly with the series of storms in January. During this time, the smaller reservoirs with flood control requirements shifted from drought recovery to flood mitigation operations. Shasta and Trinity reservoirs still have significant deficits to overcome as the focus of the January series of storms was further south.

Snowpack

At the end of January, the automated snow sensors are reporting approximately 206% of average snowpack for this time of year and 129% of a full seasonal snowpack expected on or around April 1. This is one of the strongest starts to a snowpack in the last 40 years. On average the snowpack grows until around April 1 when the snowmelt season typically begins. The timing, pace, and scale of storms and their temperature characteristics through the end of March will determine how big the snowpack gets and when it peaks.

Streamflow and Groundwater

Streamflow reached record levels during the series of storms to start January. However, in the dry two weeks that followed, streamflow has fallen and in some cases is now in the bottom 25% of observations for this time of year. Groundwater is slower to respond to wet extremes on the surface. At this time, 64% of monitoring wells remain below average. It takes more than one wet year to restore groundwater storage that was used heavily during the past 3 years of drought.