



May 6, 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

As of May 3, 2022, precipitation is 74% of average statewide for the current water year (October 1, 2021- September 30, 2022). That is up slightly from the beginning of April when it was near 70% of average. April's storms were focused on the northern part of California, which contributed to the advancement in percent of average for the water year.

April finished near average conditions. This ultimately did little to offset the precipitation deficit caused by near record-breaking dry conditions to start 2022. For example, March 2022 was warmer and drier than both March 2021 and 2020 with 0.99 inches of precipitation and an average temperature of 52 degrees.

The precipitation deficit as of May 3 is 5.61 inches. Little precipitation is expected for the remainder of the water year.

Temperature

The statewide mean temperature is slightly below average for this time of year at 96% of average. April's storms were out of the Gulf of Alaska bringing in cooler air to help keep temperatures lower. May is starting warm with summer-like temperatures during the first week.

Historically, La Nina years, which is what we are experiencing this year, are cooler than average. Recent La Nina years, including 2008, 2009, 2018, and 2021 have been warmer-than-average. This may still happen as the warmest months are ahead. This is consistent with the warming trends we have seen the past decade due to California's changing climate.

Reservoirs

Statewide reservoir storage has increased at a slower pace than normal so far this year due to the limited storms and associated runoff. Snowmelt is expected to be below average, limiting opportunities for storage recovery. For early May, the statewide storage is at 71% of average storage for this time of year. Storage can vary significantly based on size of reservoir and purpose.

The statewide storage at this time of year is slightly better than it was in 2015 when it was 65% of average.

Snowpack

The peak of the statewide snowpack as measured by the automated sensors appears to have occurred on March 8 with about 57% of a seasonal snowpack, which equates to 16.1 inches of snow water equivalent or SWE.

The April 1 snowpack ended up being one of the 10 worst on record due to the amount of snow melting in March from lack of storms, clear skies and warmer-than-average temperatures.

As of May 4, the automated sensors were reporting 5.7 inches of SWE, which is 20% of average for this time of year. While April's storms added a small amount of water to the snowpack, the melting of the snowpack is still faster than average and well below average in volume.

Streamflow and Groundwater

Streamflow and groundwater are also both well below average across much of the state. Some areas are reporting streamflow in the bottom 10% of historical distribution. As May continues, the flows will drop off rapidly given the third year of drought and the heat of summer beginning.

Groundwater levels likely hit their spring peak and will begin to drop as water use picks up and surface supplies are unable to meet demands. Additional heat events and any further spring precipitation will determine how quickly the landscape dries out. The landscape will then continue to be dry until the first rains fall in October for the start of the 2023 Water Year.