

Another Dry Year

Written by: Robert McDonald, General Manager

Throughout the past few weeks, California has moved into a drought crisis with the governor declaring drought emergencies in 41 of the state's 58 counties. As of May 18, 16 percent of the state is in exceptional drought, 57 percent is in extreme drought, 21 percent is in severe drought, and 6 percent is in moderate drought. In Santa Barbara County we are categorized as being in severe drought, but we could easily shift into an extreme status as early as next month. While projections are not great, it is important to know that the Carpinteria Valley Water District is closely monitoring water supply and groundwater basin conditions and is working in partnership with others to create a locally-controlled, drought-resistant drinking water supply for the future.

First, the projections. So far this calendar year, Carpinteria has received less than 5 inches of rain. In addition, the statewide snowpack survey performed by the Department of Water Resources in April painted a bleak water forecast for the state of California. The Sierra Nevada snowpack, which typically provides about a third of California's water supply each year, was 59 percent of the average in 2021, and 2020's survey was a mere 53 percent of the average. This decreased snowpack and rainfall in northern California has a direct impact on Carpinteria Valley Water District and our customers because we rely on water from the State Water Project in drier years, when there is less rain to replenish our groundwater basin and fill Lake Cachuma. The State Water Project brings water from the northern regions of the state to southern California water agencies to help us diversify our water supplies. This year, State Water Project deliveries are set at only 5 percent of requested supplies and next year they are expected to be lower.

Infrequent, unpredictable wet years are increasing the complexity of balancing our water supplies to meet water demand in the Carpinteria Valley. In 2017, we were fortunate to receive over 17 inches of precipitation in Carpinteria to help replenish water in the Carpinteria Groundwater Basin. The winter of 2017 also provided the Santa Ynez River watershed with enough rain to increase Lake Cachuma from 7.3 percent capacity in October of 2016 to 44.5 percent capacity in February of 2017. In 2019 the watershed received above-normal precipitation to bring the reservoir's capacity to 78 percent. Although we gladly welcomed and celebrated these years of rain after the 2011-2017 drought, this is unfortunately not enough water to save us from this streak of overwhelmingly dry years and we've already watched Lake Cachuma decline back to 59 percent capacity. If we do not have two wet years back to back, we will face water shortages in the near future.

The multiple years of dry weather have depleted a lot of water storage from the Carpinteria Groundwater Basin. To ensure that the groundwater basin remains healthy, the District continues to monitor groundwater levels and quality. We have seen water levels decline since 2012 and we are monitoring water quality and aquifer levels along the coast to determine whether seawater intrusion is occurring. We have seen some evidence of seawater intrusion at the coast in the deepest aquifer, which sits around 1,100 feet below sea level. We will continue to monitor groundwater quality and keep our eye on chloride and electrical conductivity levels, both indicators of seawater, along the coast to protect our groundwater resources.

In addition to the actions we are taking today, we are also preparing for our water future. The current drought conditions that we are experiencing emphasize the need for a locally controlled, drought-proof water supply to continue to meet water demand in the Carpinteria Valley. The Carpinteria Advanced Purification Project (CAPP) is anticipated to provide 25 percent of the District's water demand when completed. CAPP involves taking water that has already been cleaned at the Carpinteria Sanitary District Wastewater Treatment Plant, purifying it in a newly-constructed Advanced Water Purification Facility, then delivering it through a pipeline to injection wells for storage in the groundwater basin. We are continuing to advance design of the project and secure funding to reduce cost impacts with projected project completion in 2025. Although we are not in a water shortage at this point in time, if the next two winters do not provide sufficient precipitation, you can expect water restrictions and the need for additional water conservation efforts. It is important to invest now in water supplies that are not dependent on rainfall, especially in drought-ridden California.

For District updates, please visit our website cvwd.net, follow us on Twitter @CarpWater, or Carpinteria Valley Water District on Facebook and Nextdoor. For more information on CAPP visit cvwd.net/capp/ and to stay up to date on the Carpinteria Groundwater Sustainability Agency and Groundwater Sustainability Plan development visit carpgsa.org; both websites allow for you to sign up for e-mail updates to monitor project progress. We hope that you will continue to use water wisely. The District continues to offer rebates to residential and commercial customers for water conservation fixtures and appliances. Visit our website at cvwd.net and look at the resources under our Water Conservation section to learn more.