Orange County Water District
Rely on Us for High-Quality Groundwater

The Orange County Water District (OCWD; the District) is a special district formed in 1933 by an act of the California State Legislature. The District was originally created to protect Orange County’s rights to Santa Ana River (SAR) water and to manage the vast Orange County Groundwater Basin that underlies north and central Orange County. Its mission is to provide local water retailers with a reliable and high-quality water supply at the lowest reasonable cost in an environmentally responsible manner.

Managing Orange County’s Groundwater

- The Orange County Groundwater Basin is a large underground aquifer that through OCWD’s careful management supplies approximately 75 percent of the water supply for north and central Orange County.

- 19 municipal and special water districts pump water from the groundwater basin and deliver it to the 2.4 million residents in the District’s service area.

- With more than 80 years of sound planning and appropriate investment in the groundwater basin, OCWD has more than doubled its output of water.

- Investments include improving OCWD facilities to put more water into the basin, innovative water supply projects, contamination clean-up projects and a proactive water quality monitoring program.

- Orange County’s groundwater is cost-effective because of the low cost of recharging Santa Ana River water. Groundwater is about one-third the price of imported water per acre-foot (an acre-foot is 326,000 gallons or enough water for two small families for one year).

Ensuring a Reliable Supply of Groundwater

- To replace the groundwater that is pumped out of the basin every year, OCWD has a proactive program to refill the basin and ensure a reliable water supply.

- OCWD refills the basin with SAR water, recycled water (Groundwater Replenishment System), imported water, stormflows, and natural incidental recharge.

- To refill the basin, water is channeled off the Santa Ana River into more than two dozen nearby lakes called recharge basins located in the cities of Anaheim and Orange. The water is filtered through the bottom and sides of the basins and percolates into the deep aquifers, where it is ultimately withdrawn by water retailers for commercial and residential usage.
Ensuring Groundwater is Safe

- OCWD is committed to ensuring high-quality water and proactively monitors and tests its groundwater. OCWD’s state-certified monitoring and compliance lab, the Advanced Water Quality Assurance Laboratory (Lab), adheres to a rigorous monitoring program. It tests for more than 500 compounds, including contaminants of emerging concern, analyzes more than 20,000 samples per year and reports more than 400,000 results.

- OCWD’s Lab is one of only 10 labs in the nation to receive full EPA certification for unregulated contaminant monitoring.

Leading the Way in Water Reuse

- The Groundwater Replenishment System (GWRS) takes treated wastewater that otherwise would be sent to the Pacific Ocean and purifies it using a three-step advanced process. Consisting of microfiltration, reverse osmosis, and ultraviolet light with hydrogen peroxide, this purification process produces high-quality water that meets or exceeds all state and federal water standards.

- The GWRS is the result of a collaborative effort between OCWD and the Orange County Sanitation District (OCSD). Both sought solutions to issues they faced. In the mid-1990s, OCWD needed to expand Water Factory 21 (WF 21) and address continued problems with seawater intrusion. At the same time, OCSD faced the challenge of having to build a second ocean outfall. The GWRS resolved these issues.

- Operational since January 2008, the GWRS initially produced 70 million gallons (MGD) of high-purity water. In May 2015, production of the GWRS increased by 30 MGD per day to a total of 100 MGD. Approximately one-third of the GWRS water is injected into a seawater barrier. The remaining two-thirds are pumped to recharge basins where it becomes part of the region’s drinking water supply.

- Ultimate capacity for the GWRS is projected at 130 MGD after facilities are expanded further and more flows are rerouted from ocean discharge for reuse.

Protecting Nature While Maximizing Water Supplies

- OCWD owns 2,150 acres of land in Riverside County. Nearly 465 acres of the land behind Prado Dam are constructed wetlands. One-half of Santa Ana River flows are routed through the wetlands to naturally remove nitrates and other contaminants in the water. In addition to improving water quality, OCWD’s wetlands provide an opportunity for native habitat to thrive. OCWD has invested substantial resources to protect the endangered least Bell’s vireo, a California songbird that nests in the willows of Prado Basin.

- Through a series of agreements with the Army Corps of Engineers and the United States Fish and Wildlife Service, OCWD is allowed to hold a significant portion of stormwater flows behind the dam. This water can then be slowly released from the dam and captured downstream in OCWD’s recharge basins.