

# WELL MONITORING PROGRAMS

Protecting Orange County's Water Supply



The Orange County Water District (OCWD) is committed to providing exceptional water quality to the 19 cities and water districts it serves in north and central Orange County. Given its commitment to protect and enhance the quality of the Orange County Groundwater Basin, OCWD implements proactive, diverse and comprehensive groundwater and surface water monitoring programs to continually generate real-time data. The District owns and operates a series of monitoring and injection wells throughout the region to collect water samples, measure groundwater levels and help prevent seawater intrusion.

## Collecting water samples from monitoring wells

Throughout the Orange County Groundwater Basin, OCWD water quality staff collects groundwater samples from more than 400 monitoring wells using submersible pumps. Depending on the monitoring program, sampling takes place monthly, quarterly, semi-annually, or annually.

## How sampling works

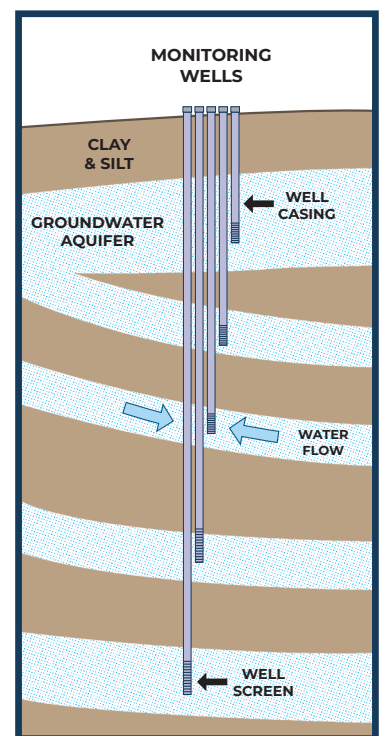
Between sampling events, the water in the casing of a monitoring well may not be representative of the underlying aquifer of the groundwater basin because of physical, chemical or biological changes that may occur over time. To ensure that samples from monitoring well are representative of the groundwater aquifer, stagnant casing water must be removed (purged) from the well and replaced with fresh groundwater before collecting samples. The volume of water purged from each well casing varies depending on well depth, depth to water level and casing diameter.

## Water purged during well sampling is not wasted

In many cases, purged water removed during the well sampling process is not wasted. The water may be discharged (1) to dirt or grass to percolate back into the

ground, (2) into storm drains, where it may flow to earthen flood control facilities to percolate into the ground, or (3) to the Santa Ana River to percolate into the riverbed or be diverted to the Orange County Sanitation District (OC San), where it undergoes treatment. The treated wastewater is then sent from OC San to OCWD's Groundwater Replenishment System (GWRS) for reuse. The GWRS takes treated wastewater and purifies the water to exceed drinking water standards, so it can be used to replenish

the groundwater basin. Only at coastal locations not tributary to the Santa Ana River or during times of extreme wet weather would the purged water eventually flow to the ocean.



## Extensive testing of water samples

OCWD tests water from approximately 1,500 locations throughout the basin, analyzes more than 20,000 samples each year, and reports more than 400,000 results. This extensive testing is conducted at OCWD's internationally recognized Philip L. Anthony Water Quality Laboratory. OCWD also provides regional testing of more than 200 drinking water wells for local drinking water providers to help ensure compliance with monitoring and reporting requirements mandated by the federal Safe Drinking Water Act.



## Water quality in the groundwater basin

Groundwater is typically high-quality within the OCWD basin. Recharge basins and the river improve groundwater quality through natural percolation. Purifying recycled water to near-distilled water quality in OCWD's celebrated Groundwater Replenishment System (GWRS) not only increases the water supply quantity, but enhances the quality of the water in the groundwater basin. The quality of groundwater is essential. OCWD has taken proactive measures to ensure high-quality and clean drinking water through extensive monitoring, and by participating in studies, forming work groups, and collaborating with agencies around the world to address and study water quality issues.

Your water is constantly monitored and tested to ensure that when it is delivered to you, it meets all state and federal drinking water standards.

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For more information about OCWD, please visit [www.OCWD.com](http://www.OCWD.com)  
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