

### ***S1.4.1 Groundwater Replenishment System***

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The Orange County Water District (OCWD; the District), the State of California's oldest special district with groundwater management authority, is a renowned public entity in the reused water industry.

In 1997, the District started a very risky venture. It managed the large Orange County Groundwater Basin in Southern California, but, due to a growing population, cyclical droughts and the need for additional freshwater barriers to push back seawater intrusion from the Pacific Ocean, OCWD needed another reliable source of water. The solution could be treated wastewater.

In 2008, a 10-year collaborative venture between OCWD and the Orange County Sanitation District (OCSD) became reality and the Groundwater Replenishment System (GWRS), which initially produced 70 million gallons per day (MGD) of water, came online. The GWRS purifies OCSD treated-wastewater through microfiltration, reverse osmosis, and ultraviolet light with hydrogen peroxide. This state-of-the-art water purification project, the largest of its kind in the world, recently expanded and now has the capacity to produce 100 MGD of high-quality water. This is enough water to meet the needs of nearly 850,000. This presentation will cover OCWD's pivotal role in "making" water through the Groundwater Replenishment System and managing and protecting the region's major water sources.