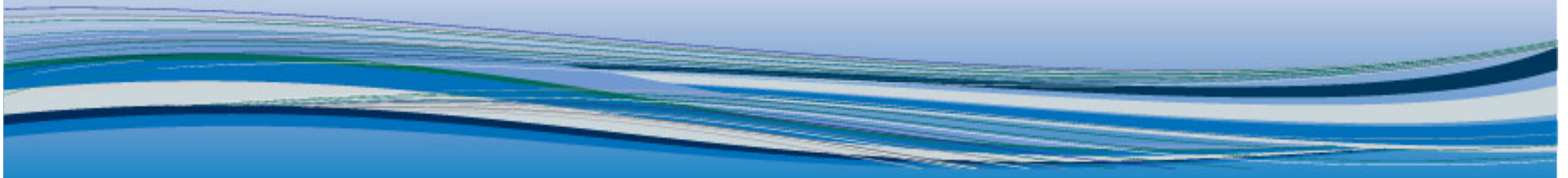




A joint effort of the
Orange County Water District and Orange County Sanitation District

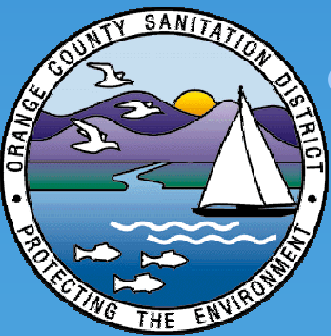


The Two Agencies



Orange County Water District

Provides local water retailers with a reliable, adequate, high-quality groundwater supply at the lowest reasonable cost in an environmentally responsible manner



Orange County Sanitation District

Protects public health and the environment by providing effective wastewater collection, treatment, and recycling

Long History Of Partnership

- **Orange County Water District (OCWD) & Orange County Sanitation District (OCSD)**
 - Both serve the same 2.4 million residents plus businesses and industries in northern and central Orange County
 - Came together on Water Factory 21 in 1975
 - OCSD contributed half the capital cost to the Groundwater Replenishment System (GWRS) to avoid building an additional ocean outfall
 - Finished as a dedicated team on the GWRS

What Is The GWRS?

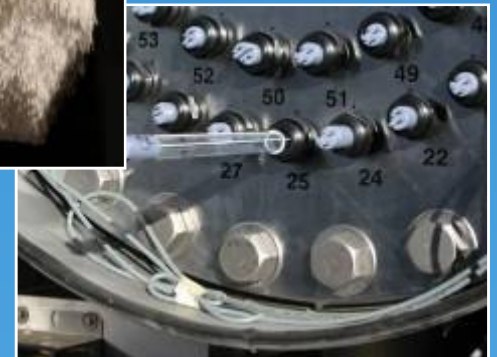
- New 70 million gallon per day advanced water purification facility
- Takes sewer water that otherwise would be wasted to the ocean, purifies it to near distilled quality and then recharges it into the groundwater basin
- Provides a new 72,000 acre-feet per year source of water, which is enough water for over 500,000 people
- Operational since January 2008



How Does The GWRS Work?

100% of water is treated through microfiltration, reverse osmosis and ultraviolet light with hydrogen peroxide

- Microfiltration: Tiny, straw-like plastic membranes filter out bacteria, particles and protozoa
- Reverse Osmosis: Water is forced through the molecular structure of the RO membranes where dissolved chemicals, pharmaceuticals and viruses are removed
- Ultraviolet Light with Hydrogen Peroxide: As a safety barrier, water is exposed to UV with H₂O₂ that disinfects and destroys potential harmful trace organics



Benefits Of GWRS



- **Creates a new water supply**
- **Reuses a wasted resource**
- **Expands the seawater barrier**
- **Increases water supply reliability**
- **Offsets imported water cutbacks**
- **Costs comparable to imported water**
- **Saves half the energy over imported water or desalinated seawater**
- **Improves quality of water in the basin**

GWRS Aerial View

