



Baker Water Treatment Plant

A Collaborative Project

Purpose:

The Baker Water Treatment Plant is a joint regional project by five South Orange County water districts, supported by community and business organizations. The completed project, located in the City of Lake Forest, provides 28.1 million gallons per day (mgd) of drinking water.



Baker Water Treatment Plant Final Site Rendering

Benefits:

Increased Water Supply Reliability: The Baker Water Treatment Plant provides increased water supply reliability to South Orange County by increasing local treatment capability from multiple water supply sources, including imported untreated water from the Metropolitan Water District of Southern California (MWD) through the Santiago Lateral and local surface water from Irvine Lake.

Protection in Emergencies: The plant provides a reliable local drinking water supply during emergencies or extended facility shutdowns on the MWD delivery system. It also increases operational flexibility by creating redundancy within the water conveyance system.

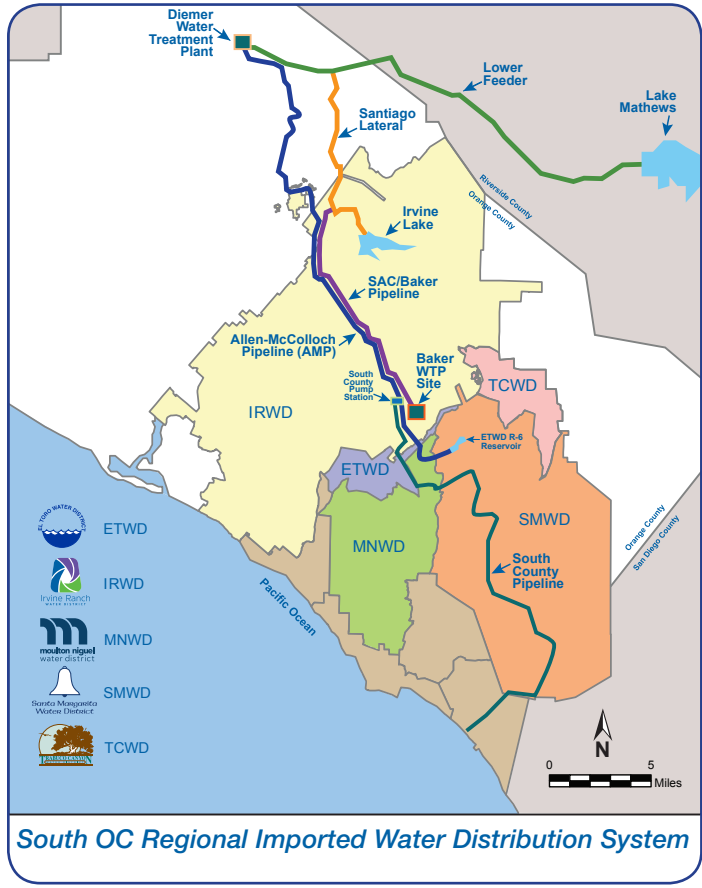
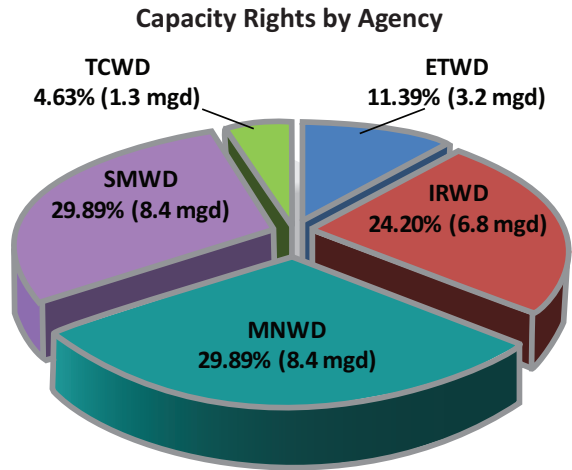
Improved Water Quality: The Baker Water Treatment Plant utilizes advanced microfiltration treatment and ultraviolet disinfection technologies to produce water that meets standards stricter than current regulatory requirements, resulting in a consistent, high quality source of drinking water for South Orange County.

Sustainable and Efficient: The plant is designed to minimize waste through on-site recycling and treatment of waste streams, resulting in a 99% recovery efficiency.

Complements the Community: Consistent multi-agency involvement and collaboration throughout the project's planning and design phases have resulted in an architecturally designed plant which blends into the surrounding neighborhood.

Project Ownership:

Irvine Ranch Water District (IRWD), El Toro Water District (ETWD), Moulton Niguel Water District (MNWD), Santa Margarita Water District (SMWD) and Trabuco Canyon Water District (TCWD) each own capacity rights in the Baker Water Treatment Plant's 28.1 mgd production capacity, as shown in the chart at right. At capacity, the Baker Water Treatment Plant produces enough water to serve 63,300 homes within South Orange County, providing an additional source of reliable, high quality drinking water to the region.



Reliability Improvement:

South Orange County receives the majority of its drinking water from the Municipal Water District of Orange County via MWD's Diemer Filtration Plant and the Allen-McColloch Pipeline. For a number of years, water agencies in South Orange County have investigated alternatives for improving both water supply and water system reliability.

In 2001, IRWD consolidated with the former Los Alisos Water District which served most of the City of Lake Forest. The original Baker Filtration Plant was one of the facilities IRWD took ownership of in the consolidation.

In 2006, the project partners studied the feasibility of constructing a new regional water treatment plant at the site of the former Baker Filtration Plant. After evaluating all critical issues including source water quality, treatment alternatives, permitting requirements, the site, and project economics, the project partners determined that the Baker Water Treatment Plant was an excellent option for improving South Orange County's water reliability and for developing alternative local water supplies for the region.

Timeline and Cost:

Plant construction began in early 2014 and was completed in late 2016 at an overall project cost of \$107 million.

For more information, please visit:
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IMPROVING WATER SUPPLY RELIABILITY IN SOUTH ORANGE COUNTY

