



Building the Future

Orange County's pioneering Groundwater Replenishment System is under construction

In 1994, Southern California's Orange County Water District (OCWD) embarked on an innovative joint project with the Orange County Sanitation District (OCSD) to recharge a large groundwater basin with highly purified wastewater that is similar in quality to bottled water.

The purified water, which meets federal and state drinking water standards, will keep seawater out of the county's groundwater basin and replenish deep aquifers, eventually becoming part of the county's drinking water supply.

On budget and on time

The \$450-million Groundwater Replenishment (GWR) System—the largest water purification project of its kind in the United States—is scheduled to be on-line in 2007, and the first components are now under construction. "We're in a very exciting phase of the work," says OCWD General Manager Virginia Grebbien. "The design is completed, and now we're going out and starting to build."

The program, she adds, is on budget and on schedule. "Everything's been going extremely well," she says, "even though this is a logistically

challenging project involving two public agencies and several major consultants." Brown and Caldwell is part of the project design team, along with CDM and Tetra Tech.

The first elements of the system include an initial 6-mgd water purification facility (pictured). The plant will provide water to feed existing reverse osmosis water purification membranes and ultraviolet light disinfection facilities for the seawater intrusion barrier until an advanced 70-mgd water purification plant is completed for the system.

Parts of a 13-mile pipeline, along with a power substation, are also under construction.

Communication critical

Constant communication and public outreach, Grebbien says, has been essential to the program—both to minimize neighborhood disruption during construction and inform the public about the purity and safety of the water.

"We've been doing a tremendous amount of communicating throughout the process, making sure that everyone in the community understands the value of the project."

As a result, she adds, "the people we talk to feel good about what we're doing and appreciate that we're creating a secure water supply for the county's future."

Other municipalities in arid regions, she adds, should consider reuse projects like GWR. "Orange

County is on the leading edge, but there's no reason that other municipalities can't do it. Recovering water and using it over and over again in this way," she says, "is an increasingly cost-effective strategy. The keys are identifying the need, putting together the right solution and partnerships and then communicating."

