

OCWD Set to Build Advanced Water Quality Assurance Laboratory



A design rendering of OCWD's future Advanced Water Quality Assurance Laboratory. Ground breaking for the new green lab is scheduled for this summer.

OCWD is set to break ground on its new 39,000 square-foot Advanced Water Quality Assurance Laboratory. The highly sustainable (green) laboratory will house the equipment and personnel needed to test and ensure the quality of OCWD's groundwater used by approximately 20 city and retail water agencies serving more than 2.3 million residents. Current plans are to have the laboratory complete and ready for occupancy by fall 2008.

The new facility will replace a 32-year-old building and several add-on portable trailers that OCWD's lab has outgrown. Rehabilitating the old laboratory to meet seismic and other safety requirements, in addition to expanding the facility, would have been more costly than a new building constructed to meet current and future water quality testing requirements. OCWD conducts water quality testing for its retail water agencies, providing consistent, reliable water quality tests and water quality data that are required of the retailers by the state and other regulatory agencies.

The two-story steel framed laboratory will house approximately 30 chemists and lab technicians, 10 water quality monitoring personnel and all the equipment needed to conduct more than 350,000 analyses of approximately 18,000 water samples taken each year. Constantly striving to meet health and safety needs and improve water quality, the OCWD water quality laboratory is required to test for 122 constituents, but actually tests for more than 300 to stay ahead of emerging contaminants. The new advanced water quality assurance laboratory will also support the new water quality testing requirements for Orange County's Groundwater Replenishment System.



Michael Wehner Named Acting General Manager

OCWD's general manager for the past five years, Virginia Grebbien, resigned in early March. A national search for a new general manager is currently underway. In the interim, the OCWD board of directors named Assistant General Manager for Water Quality and Technology Mike Wehner as acting general manager.

Mr. Wehner has served OCWD the past 16 years, first as director of Water Quality and Technology and more recently as assistant general manager

for Water Quality and Technology. Prior to OCWD, he spent 20 years with the Orange County Environmental Health Department. During his time with OCWD, Wehner has implemented a proactive water quality program that includes comprehensive monitoring protocol, use of outside expert water quality studies and panels, and a water quality program for the county's new water purification project – the GWR System. Wehner earned his bachelor's degree in biological

sciences from the University of California, Irvine, and his master's in public works administration from California State University, Long Beach.

"I am honored to be named acting general manager," said Wehner. "I am committed to continuing to provide a cost-effective, high quality, reliable water supply for Orange County. I look forward to working together with the OCWD board of directors, staff, water retailers and community leaders."

Last of Water Factory 21 Demolished

With the Groundwater Replenishment System coming online in fall 2007, the last vestige of Water Factory 21, OCWD's world-renowned award-winning water treatment facility, was demolished in February to make way for OCWD's new water quality laboratory. The facility, which opened in 1975, could treat up to 15 million gallons of water per day (15 MGD), and was one of the first water purification facilities to use reverse osmosis on wastewater. The new GWR System will initially treat up to 70 MGD.

Created as a water source to inject purified water into OCWD's seawater intrusion barrier, Water Factory 21 purified sewer water to meet drinking water standards. Since its inception, two other coastal seawater barrier projects in Los Angeles followed suit and began to purify sewer water for their seawater barriers. A first-of-its-kind facility, Water Factory 21 is in many engineering textbooks on water purification, and was part of a prestigious American Society of Engineers California Historic Landmark award received by OCWD in 2006.

OCWD Employees Awarded for Service

OCWD proudly recognizes the dedication and commitment of its employees. Twenty-one employees were recognized recently for their length of service. The highest honor went to Plant Operator Heinz Roehler who received the Crystal Award for 30 years of service. Roehler was hired to operate Water Factory 21, which was built in 1975 to purify highly treated wastewater for OCWD's seawater intrusion barrier. Roehler looks forward to transitioning to the new state-of-the-art Groundwater Replenishment System. In addition to Roehler, the following employees also were recognized:

20 Years of Service:

James Caver, Senior Environmental Specialist
James Kalinowski, Process Control/System Manager
Ted O'Rourke, Maintenance Technician
Jana Safarik, Senior Scientist

15 Years of Service:

Jesse Aragon, Maintenance Technician, Grade II
Flora Chang, Senior Chemist
Craig Miller, Assistant General Manager
Vickie Nguyen, Senior Programmer/Analyst
Brian Okey, Senior Environmental Specialist
Michael Wehner, Assistant General Manager

10 Years of Service:

Bruce Dosier, Information Systems Director
Ruben Felix, Heavy Equipment Operator
Rita Hintlian, Senior Environmental Specialist
Michael Phillips, Hydrogeologist

5 Years of Service:

Chris Alvarez, Chemist
William Bradberry, Heavy Equipment Operator
Betty Freeman, Accountant
Jim Kutzle, Warehouse Technician
Bonnie Nash, Habitat Restoration Manager
Sumedha Weeratunga, Chemist

OCWD NEWS DROPS

Her peers elected Bonnie Nash as the 2006 Employee of the Year. Bonnie is a habitat restoration manager for the District and was chosen as December's Employee of the Month (EOM) which put her in the running with other previous 2006 EOM recipients for the top honor. Bonnie manages restoration programs for the endangered least Bell's vireo bird, Southwestern Willow flycatcher, threatened Santa Ana Sucker fish and other species. She also monitors and participates in the removal of Arundo donax, a non-native invasive plant species, and restores native habitat. Congratulations Bonnie!

Water consumption and cost on the rise. OCWD is committed to providing a cost-effective, high quality, reliable water supply for north-central Orange County. Due to factors beyond control of Southern California water agencies, the cost of water is increasing. There are several reasons your water bill may go up in the future. Some of the top reasons are:

- The cost of energy to move water hundreds of miles to Orange County continues to rise, as does the cost of energy and chemicals to purify it.

- As the population continues to rise we have to find new water, which generally is more costly.
- The infrastructure that brings water to Orange County from Northern California and the Colorado River is old and needs upgrading, as does local infrastructure.

Water Efficiency = Money Savings on your Water Bill

There are a number of things you can do to be more water efficient and save money:

- **Fix leaky faucets, plumbing joints and the sprinkler system.** Saves 20 gallons per day for every leak stopped.
- **Replace part of the lawn with native Southland-friendly plants.** Saves 1,000-1,800 gallons per month, depending on the climate.
- **Use a broom instead of a hose to clean driveways and sidewalks.** Saves 150 gallons or more each time.
- **Shorten showers.** Even a one or two-minute reduction can save up to 700 gallons per month.

For these and other water saving tips, go to any of these Web sites: bewaterwise.com, mwdoc.com and ocwd.com.



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HYDRospectives

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Water 101

Water 101: OCWD provides a free Orange County Water 101 class that is so informative it has been incorporated into the curriculum

of several area college courses. The classes take place quarterly. The next class is **July 25 from 6-8 p.m.** For information or to make reservations, please call Rose Wilke at (714) 378-3206.

What is Hydrospectives?

Hydrospectives is a quarterly publication of Orange County Water District (OCWD) to keep stakeholders informed about projects and events affecting the county's groundwater supply.

To learn more about water in Orange County, visit www.ocwd.com. If you received this newsletter by mistake and wish to be removed from the mailing list, or received duplicate copies, please contact Natalie Elizondo at (714) 378-3323 or nelizondo@ocwd.com. To sign up for this and other future electronic publications from OCWD, send your name and e-mail address to Natalie Elizondo at nelizondo@ocwd.com.

OCWD Employees of the Month

FEBRUARY 2007

Matt Buis
Basin Cleaning Vehicle Operator

MARCH 2007

Dan Cohen
Senior Programmer/Analyst

APRIL 2007

Menu Leddy
Molecular Biologist

orange county water district

HYDRospectives

VOL. V, ISSUE 1 OCWD GROUNDWATER NEWS

Huell Howser's "California's Water" Visits OCWD

Public television celebrity and producer of "California's Water," Huell Howser recently visited the Orange County Water District to film an episode on water recycling. No stranger to OCWD, Huell has filmed stories on OCWD's wetlands, the Children's Water Education Festival and the Groundwater Replenishment (GWR) System groundbreaking. This time around, with construction of the GWR System almost complete, OCWD was able to show off the project's water purification technology.

Huell reported on the three-step process used in the GWR System advanced water purification plant. The first step is microfiltration (MF), of which Huell's audience will get a glimpse of the 26 MF basins that hold 17,784 modules. Microfiltration is a low-pressure membrane process that removes small suspended particles, protozoa, bacteria and some viruses from the water. MF also is used to purify food products, such as fruit juices, wine and baby foods, and to sterilize medicines that cannot be heated.

The next, and most widely known process, is reverse osmosis (RO). Reverse osmosis is used by many bottled water companies to purify water. Water is directed under high pressure through thin membranes that eliminate salts, viruses, pesticides and most organic compounds, creating near-distilled quality water.

Following RO, the third step of the water purification process is ultraviolet light and hydrogen peroxide for disinfection and final purification. Ultraviolet light combined with hydrogen peroxide creates a powerful oxidation reaction that breaks down traces of organic compounds through an accelerated decomposition process. This advanced oxidation process essentially degrades compounds in the same way as Mother Nature, only much more quickly. The result of the multiple treatment barriers is ultra pure quality water similar to distilled water.

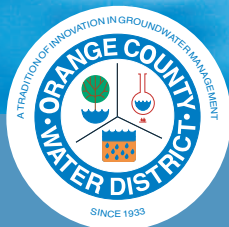


Huell Howser interviews Assistant General Manager Mike Markus on OCWD's new water purification plant.

About half of the resulting near-distilled high quality water is injected into an expanded seawater intrusion barrier. The rest of the water is pumped into deep aquifers where it naturally filters through the ground. The GWR System will produce 14 times more RO water than its predecessor Water Factory 21, and up to 12 percent of the future water supply for north and central Orange County. While not yet complete, the project has already received attention from state, national and international water industry professionals.

Government officials from Australia, Singapore and China have met multiple times with OCWD staff, trading best practices and future water recycling plans. Having just spent time in Australia, Huell noted that water is of top concern there – water is in short supply in many dry regions. The GWR System is part of OCWD's plans to ensure a reliable source of water for north-central Orange County.

Look for the "Water Recycling" episode of "California's Water" on your local KOCE-TV and KCET-TV stations. For more information on the GWR System, visit www.gwrssystem.com.



About OCWD

Orange County Water District (OCWD) manages the large groundwater basin that underlies north-central Orange County that provides most of the water for 2.3 million citizens. OCWD is focused on improving Orange County's groundwater quality and reliability in an environmentally friendly manner. With years of prudent planning and careful investment, OCWD has doubled the annual yield of the groundwater basin.

OCWD also has spent millions of dollars on studies by outside experts to ensure the quality of our groundwater. We want to be your trusted source for water quality. We will continue to plan and invest in ways to get more water into and out of the basin. OCWD is a special district, separate from the County of Orange, that supplies water to residents in the cities of Anaheim, Buena Park, Cypress, Costa Mesa, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, La Palma, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster and Yorba Linda.