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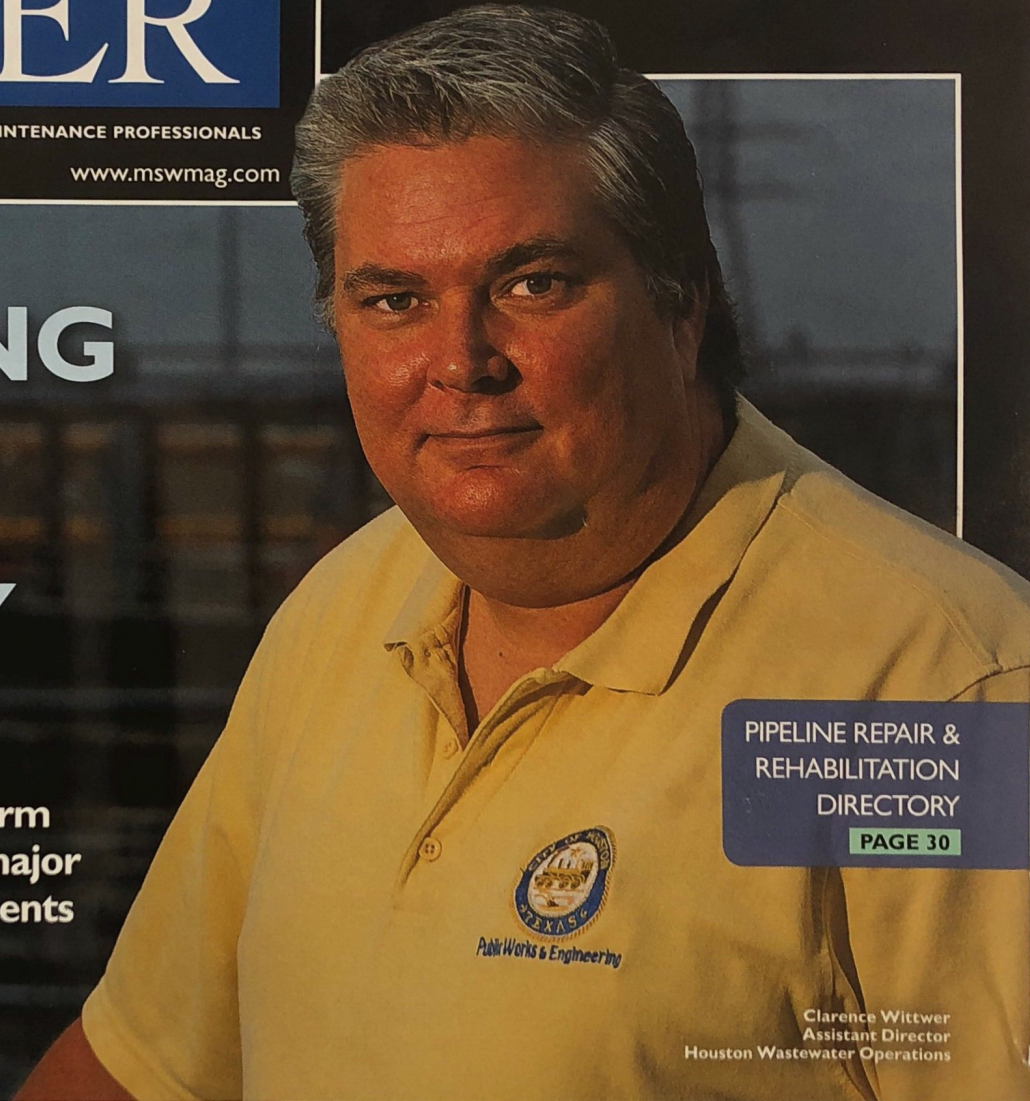
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Rowland Water District operator Alex Zaragoza takes a routine water sample from one of the district's reservoir tanks. (Photography by Collin Chappelle)

# QUENCHING A DISTRICT'S THIRST

Southern California water district makes the most of limited resources and builds resiliency for the future

By Giles Lambertson

**Y**ou can't make more water. But the Rowland Water District makes the most of what it has.

The Rowland district is comprised of 17.2 square miles in southeastern Los Angeles County and serves residents in three unincorporated areas and two cities — Industry and West Covina. Created 65 years ago to provide water for ranchers and farmers, it now serves commercial, light industrial and residential customers.

Tom Coleman is general manager of the district. He was born and raised in the region and has worked his way up in his profession over two decades, including stints in such places as the Alhambra Municipal Water Department and a water district serving Whittier. He became manager of the Rowland district four years ago and oversees an organization with a \$23 million budget.

Coleman acknowledges that there is an undercurrent of unease associated with  
*(continued)*

constantly needing to replenish a water supply from places other than the heavens. To alleviate some of this pressure, the district has undertaken a partnership with a neighboring water district to give themselves “a little bit more comfort.”

Specifically, the Rowland and Walnut Valley districts agreed in 2009 to budget \$20 million apiece to buy surplus water from the Metropolitan Water District of Southern California, which is the largest distributor of treated water in the country. For the money, the communities are acquiring 25,000 acre-feet of water and dumping it into an underground basin as a reserve source. Rowland’s 12,500-acre-foot share constitutes more than a year’s supply.

So, if the 240-mile-long aqueduct carrying water to Southern California from the Colorado River and the 440-mile-long California Aqueduct bringing water from the Sacramento region of Northern California both failed — think earthquake or terrorist sabotage — Rowland Water District customers would draw from their underground source and carry on as usual. “We probably would enact a drought conservation ordinance and start conserving 50 percent of our water right away,” Coleman says. “We would be ultraconservative. But it would have to be a very, very dire situation.”

In 2014, an emergency statewide declaration required Rowland, among other districts, to certify that it had enough water sourcing to meet customer demand for three years. The district was able to do so because the Metropolitan Water District assured its member communities that it could provide the needed water — plus Rowland had started its underground reserve.

Coleman is high on Metropolitan Water District, which supplies 90 percent of Rowland’s potable water. “Metropolitan Water District has done a great job of water forecasting, building needed structures, storing water and so on. I can’t think of another agency in the country that does a better job.”

### Teaching conservation

Coleman and other district leaders are not content to sit on their stored water supply and lean on Metropolitan Water District in an emergency. They have instituted a variety of alternate water strategies that, together, are giving water users opportunities to help themselves. Some of it falls under the banner of education, perhaps all of it. Some parts are purely teaching. Coleman refers to the educational initiatives as “The Brittne Factor.”

Brittne Van De Car coordinates the district’s education program, among other public affairs

responsibilities. As such, she visits pre-K and elementary classrooms around the district to lead classes in hands-on water activities, such as teaching children about nature’s water cycle (a bracelet is constructed that represents the various stages of the cycle).

Last August, a new education initiative targeted Boy Scouts and Girl Scouts. To earn a merit badge or patch, a scout must explain principles of water conservation and good stewardship activities, create a public service announcement, research the state’s native drought-resistant plants, and so on. When the program was launched in August, Coleman described it as a way “to teach the scouts their role in water conservation and show each of them how to make using water wisely a way of life for the future.”


The theme of conservation being a way of life is embroidered on all of Rowland’s initiatives, tying together such disparate recommendations as eschewing grassy lawns in favor of desert landscaping and buying water-efficient toilets. It is all an effort to win the hearts and minds of a population who otherwise might take their imported water for granted.

The approach is well-suited to the demographics of Rowland Heights, where the district is headquartered. The unincorporated community is 60 percent Asian — Chinese, principally — with an average household income just shy of \$100,000. One might assume such a relatively stable and affluent community would be responsive to communitywide appeals. Yet Coleman says such an assumption is misleading because the water district also serves officially designated disadvantaged communities.

“Our district is very diverse. Some areas of our community have been identified as having an annual income 40 to 60  
(continued)

**“I think that winning support for conservation is really about education.”**

Tom Coleman



Operations Supervisor Dusty Molesio makes a routine inspection of the Whittier Booster Pump Station. This pump station is dedicated to adding stored groundwater into the system.

### PROFILE:

Rowland (Calif.)  
Water District



### CUSTOMERS:

13,500 connections, 58,000 residents

### SERVICE AREA:

17.2 square miles

### WATER VOLUME:

18 mgd summer consumption,  
10 mgd in winter

### INFRASTRUCTURE:

150 miles of potable waterline,  
18.1 miles of pipeline for recycled water

### EMPLOYEES:

26

### WEBSITE:

[www.rowlandwater.com](http://www.rowlandwater.com)



The Rowland Water District service area encompasses a 17.2-square-mile area in southeastern Los Angeles County. The district currently provides potable and recycled water for approximately 58,000 people through 13,500 service connections in portions of Rowland Heights, Hacienda Heights, La Puente and the cities of Industry and West Covina.

**“We could do it today. It is getting people to trust the technology that is the challenge. It’s getting the regulator and elected officials to embrace and truly trust the technology.”**

**Tom Coleman**

percent below the state median income.” (In 2016, the state median was \$68,000.) “I think that winning support for conservation is really about education.”

Other district educational initiatives include poster contests, desert landscaping classes, customer appreciation weeks and a lottery in which a high-

end irrigation controller is the prize.

### Recycling

A more direct water conservation method is recycling. That is, reusing water over and over again. In an ideal world, wastewater routed to a treatment plant would leave the plant as potable water fully useable for any human application. “We are not there,” Coleman says of 100 percent conversion. He hesitates to speculate how soon the district might reach total water reuse.

One obstacle to such complete recycling is human distrust of the process. The science is

there, Coleman says. “We could do it today. It is getting people to trust the technology that is the challenge. It’s getting the regulator and elected officials to embrace and truly trust the technology. There probably are even some in the water community who wouldn’t trust it.”

So Rowland and other districts are settling for reusing treated water for nonpotable tasks such as irrigation, industrial cooling, concrete production and agriculture. Recycled water is distributed through a network of pipes painted purple to distinguish them from drinking-water pipes. The cost of operating a dual-pipeline system argues against wholesale expansion. The district

## EDUCATING THE NEXT GENERATION

How many people are required to operate a water system in naturally arid Southern California, a district with 13,500 connections serving 58,000 residents? Fifty employees? A hundred? How about 26. It is a small number by design.

“We do not hire or add appreciably to our staff, largely because we embrace technology — software and outsourcing and GIS. We are an agency that embraces technology,” says Tom Coleman, general manager. The latest example is the district’s adoption of advanced metering

infrastructure. The AMI meters are currently being retrofitted throughout the system. Not only will water usage and bills be calculated as before, the process of collecting the data will be simplified and automated and the water system as an asset will be better monitored and managed.

Technology notwithstanding, Coleman acknowledges that his staff members are the heart of the program. “We wear a lot of hats. Our staff members are very dedicated and we have a great culture, but we also utilize software. For us, it is all about looking at our rates and keeping those rates affordable for our customers.”

The district also uses interns to accomplish its work. It instituted an intern program after people showed interest in pursuing a career in

water work. Coleman says water agencies want to hire people who already are somewhat conversant with the work, so Rowland worked with local school and adult education programs to create the program. From school referrals, the district selects interns who are paid \$15 an hour and work full time for the district for six months.

“They are immersed in our culture, working on breaks in lines and at reservoirs and in reading meters. We give our interns the skills and real-life experience to go out and become employed in the industry,” Coleman says. The program would have to be deemed a success: Eight men and women have completed the internship and five of them have started their careers in the industry.