

# 2010 Recycled Water Quality Annual Report



## Recycled Water Supports Region's Economic Health

The San Ramon Valley Recycled Water Program (SRVRWP) provides a reliable, cost-effective supply of recycled water for irrigation and is an essential component of our area's diversified water supply portfolio. Communities that offer recycled water can minimize the impact of droughts on residents and employers and better protect public and private investments in parks, landscaping, and water-reliant industrial processes. Recycling treated wastewater, instead of pumping it 16 miles for discharge into the San Francisco Bay, also reduces energy use and carbon emissions.

The SRVRWP is a partnership between the Dublin San Ramon Services District (DSRSD) and the East Bay Municipal Utility District (EBMUD). Since the program began delivering recycled water in 2006, 3.4 billion gallons of safe, reliable recycled water have been delivered to irrigation customers in Dublin and San Ramon.

In 2010, we delivered 714 million gallons of recycled water to our communities. This saved enough potable water to meet the annual needs of 6,075 families (based on 322 gallons per day, an average amount for single-family homes in Dublin and San Ramon). By the end of 2010, the multi-phase program was serving 60 customers at 224 customer locations.

A pipeline along Bollinger Canyon Road was finished last year, completing a critical loop in the main transmission line that increases overall reliability and flexibility of the distribution system. The new pipeline enabled EBMUD to expand recycled water service to the Chevron campus in Bishop Ranch. In 2011, construction will begin on a bit more than one-and-a-half miles of pipeline that eventually will expand in scope and bring recycled water to parts of Danville and Blackhawk, and on more than two-and-a-half miles of pipeline that will serve portions of San Ramon.

Our locally produced recycled water continues to meet or surpass all regulatory requirements for water reuse. This annual report summarizes the water quality data submitted to the Department of Public Health and Regional Water Quality Control Board for 2010.

The report also profiles two customers: Chevron's corporate headquarters in San Ramon, and Ironhorse Trail apartments in Dublin, which was one of the first apartment complexes in the Tri-Valley to irrigate with recycled water. We appreciate the way our customers work with us to save drinking water and protect our environment.

## Water Recycling Plant Named to Honor Jeffrey G. Hansen

The water treatment plant that produces all of the recycled irrigation water used in the San Ramon Valley has been named the "Jeffrey G. Hansen Water Recycling Facility" in honor of the Dublin San Ramon Services District (DSRSD) director who led the drive to get it built. Hansen retired from the DSRSD Board of Directors in 2010 after serving for 25 years.

Hansen first advocated that DSRSD enter the recycled water business in 1989. He was instrumental in forming a partnership with the East Bay Municipal Utility District (EBMUD) and in negotiating with the City of Pleasanton for access to the effluent that is recycled into irrigation water. He was one of the District's first representatives to the joint powers authority that manages the San Ramon Valley Recycled Water Program (the recycled water partnership between DSRSD and EBMUD) and guided the planning, design and construction of the recycled water facility.

Hansen's leadership and passion for recycled water not only made DSRSD a local leader in the use of recycled water, it also led the District to the forefront of state and federal recycled water policy. He was a ceaseless advocate, always convincingly making the case that "recycled water is an idea whose time has come."

Bert Michalczyk  
General Manager  
Dublin San Ramon  
Services District

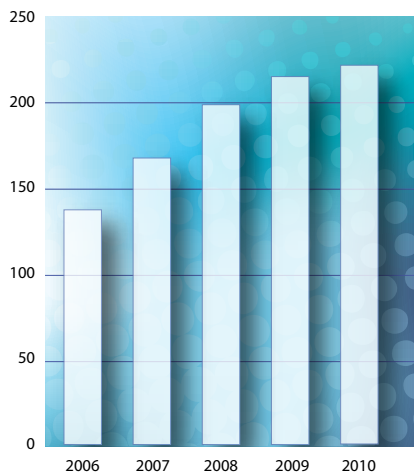


Alexander R. Coate  
General Manager  
East Bay Municipal  
Utility District



## Recycled Water Reaching More Sites Each Year

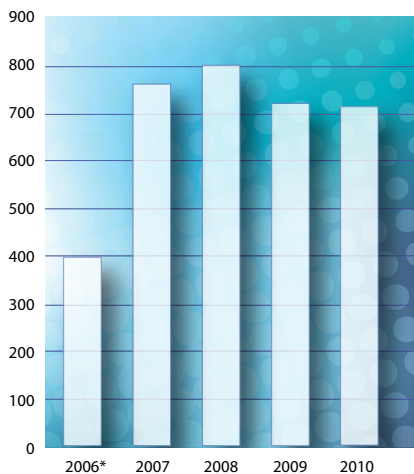
Number of Customer Sites at Year End



By the end of 2010, 60 customers were using recycled water for irrigation at 224 locations in Dublin and San Ramon.

## 714 Million Gallons Delivered in 2010

Million Gallons Delivered



During 2010, a cool summer tempered demand for irrigation even though 10 new customer sites were added to the system. Peak demand for a single day set a new record, however, hitting 5.53 million gallons on June 28.

\*Partial year, February-December 2006.



## EBMUD CUSTOMER PROFILE: CHEVRON

### Conversion Saves 36 Million Gallons of Potable Water a Year

Chevron, one of the largest energy companies in the world, maintains its global headquarters in San Ramon where nearly 4,800 people are employed, most of them at the 90-acre Chevron Park campus on Bollinger Canyon Road. Chevron Park is the newest East Bay Municipal Utility District (EBMUD) customer in the San Ramon Valley Recycled Water Program. The campus went “online” in August 2010 and approximately 50 acres of its landscape are now irrigated with recycled water.

Why did Chevron decide to switch from potable to recycled water? According to Operations and Maintenance Coordinator CJ Hunsinger, who manages the recycled water program for the campus, Chevron is very committed to its environmental goals and switching to recycled water was “the right thing to do.” Chevron officials realized that irrigating their large landscape (approximately 80% turf grass) with recycled water was an environmental win-win-win. It conserves limited drinking water for other purposes in the community and protects the San Francisco Bay by reducing treated wastewater discharges. Pumping less wastewater to the Bay also saves energy and generates a smaller carbon footprint.

In keeping with its commitments to conservation, Chevron is planning to transition to a more drought-tolerant landscape design in coming years, reducing the amount of turf grass

and replacing it with Bay-friendly materials, while maintaining the attractive landscape the global headquarters is known for. The use of recycled water guarantees that sufficient irrigation water will be available, even in drought years. Chevron employees enjoy lush green exterior landscapes, shady groves, playing fields, and grassy amphitheaters year-round in San Ramon’s sunny climate, all irrigated sustainably with recycled water.

Chevron and EBMUD planned for the conversion for more than two years before the physical plumbing connections were made. Even with two years of planning, some last minute plumbing and pressure changes were required. After about three days of connection work, the system was up and running. Chevron uses more than 200,000 gallons of recycled water daily in the summer. Over the course of a year, Hunsinger projects that approximately 36 million gallons of potable water will be saved—enough to meet the daily indoor and outdoor needs of more than 300 single-family homes in the San Ramon Valley.

Hunsinger also pointed out that EBMUD trained all the on-site landscape maintenance crew and contractors in the use of recycled water. The thousands of local employees were given opportunities to learn about the safe use of recycled water in the landscape.



## DSRSD CUSTOMER PROFILE: IRONHORSE TRAIL APTS. Recycled Water Supports Green Management

“Going green” is a strong marketing force in the apartment industry today. At Ironhorse Trail apartments in Dublin, many of the tenants know—and care—that recycled water irrigates their beautifully landscaped grounds.

“Our residents want to be involved in sustainability and recycling,” says Kathy Erickson, property manager. Prospective tenants often ask if Ironhorse Trail is a green property, she says. It’s on their list of what they want in a home.

SARES-REGIS Group of Irvine, CA, which manages the 177-unit complex, is one of the largest privately held developers of green apartments in California. Property managers follow detailed sustainability guidelines that affect both facility upgrades and operational practices, says Jill Parenti, regional vice president. Among landscape practices, for example, the guidelines specify that irrigation systems be checked weekly for leaks and proper spray direction, and controllers must have override devices and water level indicators.

Ironhorse Trail was one of the first apartment communities in the Tri-Valley to convert to recycled water for irrigation. Built in 2002, the complex was connected to the recycled water distribution system a year later. The San Ramon Valley Recycled Water Program’s backbone transmission pipeline was still largely under construction at that time. Expanding northward from central Dublin along Dougherty Road, the purple pipes ran right past the Ironhorse Trail complex.

As the designated on-site recycled water supervisor, Maintenance Supervisor Guillermo Alejandre has guided Ironhorse Trail apartments through four years of successful annual inspections conducted by Dublin San Ramon Services District staff. With Erickson, Alejandre attended the District’s required initial training for site managers. It was extremely helpful, he says, covering best practices and important safeguards to prevent cross connections with potable water pipes.

Ironhorse Trail apartments used 1.5 million gallons of recycled water in 2010 to irrigate approximately 1.26 acres of landscaping. This saved enough potable water to serve 13 single-family homes for a year.\* Because recycled water contains nutrients such as nitrogen, phosphorus, and potassium, the complex’s lawns also stay green with very little fertilizing, according to its landscape contractor, Medallion Landscape Management, Inc.

“As a company, we are committed to sustainable development and management,” Parenti says. “Using recycled water at Ironhorse Trail apartments saves water for the entire community and is just one of the measures we utilize for more sustainable living.”

\* Based on 322 gallons per day, an average amount of water use for single family homes in Dublin and San Ramon.

### Recycled Water Quality in 2010

INORGANIC CHEMICALS (units)	AVG	RANGE
Selenium (µg/L)	< 2.0	NA
Nitrate (as N) (mg/L)	1.2	< 1.0 - 2.1
Nitrite (as N) (mg/L)	1.0	< 1.0 - 1.2
<b>REGULATED CONTAMINANTS WITH SECONDARY MCLs*</b>		
Conductivity (µmhos/cm)	1265	1028 - 1537
Chloride (mg/L)	158	106 - 201
Sulfate (mg/L)	105	71 - 246
Total Dissolved Solids (mg/L)	658	568 - 748
<b>UNREGULATED CONTAMINANTS REQUIRING MONITORING*</b>		
Boron (mg/L)	0.473	0.427 - 0.515
<b>ADDITIONAL PARAMETERS</b>		
Alkalinity (as Ca CO <sub>3</sub> ) (mg/L)	293	250 - 350
Total Hardness (as CaCO <sub>3</sub> ) (mg/L)	256	190 - 384
Calcium (mg/L)	49	36 - 62
Magnesium (mg/L)	32	24 - 56
Potassium (mg/L)	25.0	17.8 - 36.1
Sodium (mg/L)	139	108 - 168
pH (standard units)	7.43	6.91 - 7.69
Silica (mg/L)	21.3	18.3 - 24.1
<b>DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS</b>		
Total Coliform Bacteria (MPN)	< 2**	< 2 - 240
<b>ORGANIC CHEMICALS</b>		
None Detected	-	-

\* Established by the State of California Department of Public Health

\*\* Median

**ABBREVIATIONS:** µg/L = micrograms per liter  
mg/L = milligrams per liter  
MCL = maximum contaminant level  
MPN = most probable number  
µmhos/cm = micromhos per centimeter





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# 2010

San Ramon Valley  
Recycled Water Program

Recycled  
Water Quality  
Annual Report



## **San Ramon Valley Recycled Water Program Pipeline Map**

March 2011

- SRVRWP Transmission Pipeline
- Dublin San Ramon Services District Recycled Water Pipeline
- Future Dublin San Ramon Services District Recycled Water Pipeline
- East Bay Municipal Utility District Recycled Water Pipeline
- Future East Bay Municipal Utility District Recycled Water Pipeline
- Dublin San Ramon Services District Water Service Area
- East Bay Municipal Utility District Water Service Area
- ★ Pumping Station
- ⊗ Future Pumping Station
- Reservoir
- ✱ Water Recycling Plant