

Treatment site trickles into service

South Bay water facility to run at 10% of capacity

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More than three years after it was dedicated as "an additional water source" for a thirsty city, San Diego's South Bay sewage treatment plant is about to sell its first batch of recycled water – to another wastewater treatment plant.

Much of that water will end up in the ocean after it is used to process sewage. It will not irrigate parks or highway medians in the fast-growing southern section of San Diego. That kind of success is two years away, barring hiccups in a costly piping project to service eastern Chula Vista.

For now, San Diego will run the \$143 million South Bay Water Reclamation Plant at about 10 percent of its recycling capacity. City water officials said they are trying to determine how long it will take for the plant to achieve its maximum production of 15 million gallons a day.

To some who have followed water reuse issues in San Diego, the pace is hardly surprising. Despite pouring more than \$450 million from federal and local sources into water reclamation during the last decade, San Diego recycles about one-third of the water per capita as the state average, California records show. Almost all of the city's treated sewage is flushed into the ocean.

"The city has fallen woefully behind other proactive districts around the state in its reuse of treated water," said Robert Simmons, a retired University of San Diego law professor and a leader of the Sierra Club's efforts to boost water reclamation in San Diego.

He blames the city's record on several factors: wastewater officials who didn't see the potential of reclaimed water, weak enforcement of water-reuse mandates and the high cost of installing and maintaining separate pipes for reclaimed water.

Water recycling requires a step beyond conventional sewage treatment. The process removes enough impurities from wastewater so it can be safely used for irrigation and industrial processes. A controversial effort to turn sewage into drinking water was

scuttled by the City Council in 1999, but it will be addressed again in a \$900,000 report on San Diego water reuse due by summer.

California leads the nation in water recycling, which is recognized as a key to surviving droughts and serving a population expected to reach 48 million by 2030.

About 545,000 acre-feet of California sewage was recycled in 2002, more than twice the volume in 1970. Nearly half of the state's recycled water is used on farms, 20 percent went to landscaping and the rest was spread among other uses.

State data show that San Diego County, with a population of nearly 3 million, recycled about 15,700 acre-feet of wastewater in 2002, the most recent year for which comprehensive statewide data are available. An acre-foot equals 326,000 gallons, or enough to service two typical households for a year.

Orange County, with a population similar to San Diego County's, recycled about 57,000 acre-feet. By itself, recycling by Orange County's Irvine Ranch Water District, which serves a population of 316,000, outpaces all of San Diego County.

But that district has a huge advantage: It was mostly developed in the 1960s by a development company that installed pipes for recycled water along the way. These pipes were painted purple to distinguish them from pipes that transport drinking water – a technique widely used today.

"There is just sort of a culture that we have in the district," Irvine Ranch spokeswoman Beth Beeman said. "Water is too valuable to be used just once."

San Diego's water reuse efforts have been complicated by hilly terrain and a lack of aquifers for storing reclaimed water, said Fawzi Karajeh, water recycling chief at the state Department of Water Resources. Others point to San Diego's absence of large-scale agriculture, which sops up huge volumes of treated water in other regions.

"I think they have tried," Karajeh said.

San Diego's critics fear the city isn't keeping up with population growth or offsetting increasingly uncertain water supplies. The city imports up to 90 percent of its water from the Colorado River and Northern California.

San Diego City Councilman Jim Madaffer likens the promise of water recycling to a pot of gold at the end of the rainbow – something that never quite materializes.

"The city is still behind the eight ball with respect to getting a return on its investment," he said. "I think it will happen over time, but people aren't beating the door down to buy reclaimed water."

At the Sierra Club, Simmons said city bureaucrats' changing attitudes and the municipal study of water reuse bode well for San Diego's future.

"What we expect is that this report will say . . . the city can reuse substantially more of its treated wastewater than it is," he said.

San Diego sells recycled water for \$350 an acre-foot, half of the price for drinking water. It is common for agencies to charge much more and the city is studying whether a rate increase is justified.

The North City Water Reclamation Plant, which opened in 1997, is showing more signs of success than its South Bay counterpart. North City sells about 6 million gallons of reclaimed water per day. Still, that is plenty shy of its recycling capacity of 30 million gallons a day.

Both San Diego treatment plants were mandated by federal legislation in 1994 that forced the city to build capacity for 45 million gallons a day of reclaimed water by 2010.

Each day, the South Bay facility takes in about 5 million gallons of sewage from southern San Diego. It treats the sewage to a level deemed safe for discharge into the ocean. The annual cost to operate the plant is \$6.9 million. With no customers, the city hasn't been paying for the additional clean-up required to produce recycled water.

City officials said they have spent the last three years getting environmental sign-offs for water recycling and building the half-mile pipeline to serve their first customer, the federal government's South Bay International Wastewater Treatment Plant.

Daily delivery of about 500,000 gallons of recycled water is expected to begin within several weeks, after the city fine-tunes some computer controls.

The water will be used to help process waste from the Tijuana River, where the federal government has been spending about \$45,000 a month to buy potable water to cool motors and for other industrial processes.

"We're hoping . . . to reduce our costs and conserve a little," said Dion McMicheaux, an official for the international plant.

The U.S. Environmental Protection Agency spent about \$27 million to help build San Diego's South Bay facility. At the agency's water division in San Francisco, associate director Nancy Woo said the EPA's grants did not include benchmarks for recycled water sales.

Woo was heartened by the imminent sale, saying, "This is a good, solid start."

Plant to sell water

San Diego's South Bay Water Reclamation Plant in the Tijuana River Valley is selling its first delivery of reclaimed wastewater to the nearby International Wastewater Treatment Plant.

1/4 mile

Tijuana River Valley Regional Park

Dairy Mart Rd.

TIJUANA RIVER VALLEY

Tijuana River

South Bay Water Reclamation Plant

South Bay International Wastewater Treatment Plant

Monument Rd.

CALIFORNIA
MEXICO

TIJUANA

UNION-TRIBUNE

