



## ESCONDIDO: City endorses plan to convert sewage into drinking water

By DAVID GARRICK dgarrick@nctimes.com | Posted: Saturday, December 10, 2011 9:00 pm

Escondido's City Council endorsed a plan last week that would transform the city's sewer water into clean drinking water.

Known by critics as "toilet to tap," such plans have faced a public [backlash](#) nearly everywhere they've been proposed.

Yet city officials said they've been impressed by the technology of the process, which uses oxidation and ultraviolet light, and that the financial and environmental benefits would be remarkable.

San Diego launched a "pilot" project in Miramar this year to test the technology, and Orange County opened a large plant that purifies sewer water in 2008. But toilet-to-tap programs haven't been embraced in the rest of the nation, where water is typically more plentiful.

"We live in a desert so we've got to look at things like this," said Councilwoman Marie Waldron.

The council voted unanimously Wednesday to seek a consultant to study how the city would purify its sewer water and how quickly city officials should move forward.

While it could take as long as 10 years for the city to begin purifying sewer water, the technology would save water and sewer customers money, bolster Escondido's agricultural industry and help the city stave off a sewer capacity [shortfall](#) that threatens to prevent future development.

City officials said that purifying all of Escondido's sewer water would allow the city to buy less imported water, which has sharply increased in price over the last decade. And the city has passed those price increases on to its 26,000 water customers, including a proposed 12 percent [increase](#) the council is scheduled to approve this Wednesday.

The plan could also help the city's cherished agricultural community, where a long drought and increasing water prices have forced many farms to scale back or cease operations.

The city already plans to help the farmers by [extending](#) its reclaimed water line from Centre City Parkway to the east by 2014. Reclaimed water has been purified enough for irrigation, but not for drinking.

And adding purified sewer water into the mix would allow the city to provide significantly more water to agriculture at much lower prices, said Christopher McKinney, the city's utilities director.

### **\$300 million vs. \$30 million**

But the strongest argument for the proposal is probably the city's dwindling sewer capacity, said McKinney. The city's sewer plant is nearing capacity and the sewer pipes connecting Escondido to the ocean will need to be widened if the city continues to grow.

By purifying its sewer water, the city could avoid the environmental hurdles and the roughly \$300 million cost to widen those pipes. McKinney said it was difficult to estimate the cost of establishing a purification plant, but he said somewhere between \$20 million and \$40 million was a good guess.

"It would easily be an order of magnitude less than expanding our (sewer) capacity, and there would be no environmental hurdles," he said.

McKinney said purifying sewer water would be cheaper than building a desalination plant, which would purify ocean water for drinking.

In addition, the plan would help the environment because Escondido would no longer be pumping sewage into the ocean and because the city would import less water, which gets pumped in from neighboring states and Northern California.

Councilwoman Olga Diaz said the science behind purifying sewer water is sound, but that it would take an aggressive public education campaign to convince people.

Councilwoman Waldron said she'll need to be convinced. Waldron said she'd be reluctant to drink purified sewer water based on concerns about dangerous hormones remaining in the water after purification.

### **Cleaner than reservoirs**

McKinney stressed that the technology kills viruses, bacteria, hormones and anything else people can imagine. The process relies on reverse osmosis, which removes all the pharmaceuticals and hormones found in water, and then ultraviolet light and some hydrogen peroxide, which kill any remaining bacteria.

"The technology is there to clean the water to a very high standard, higher than in our reservoirs," he said.

Supporters also note that only about 10 percent of sewer water was actually in a toilet, with the rest coming from showers, sinks and laundry machines.

The only significant worry, McKinney said, would be how to handle a malfunction of the system. One option, he said, would be storing the water after it's purified instead of pumping it directly into the water supply after purification.

That would require an underground basin, a storage facility or use of a city lake, which would increase the cost of the process, he said.

Mayor Sam Abed said he supports the plan because of the financial benefits for city residents and because it would boost agriculture.

Abed, who toured the Orange County purification facility two years ago and sampled some of its water, said he was also reluctantly willing to drink purified sewer water.

"If you don't think about it where it was, it tastes like normal water" he said.