

Expanded use of recycled water on tap for Santa Clara County

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Chances are about to improve that when you flush your toilet a few years from now, more of what goes down will come back again — filtered, cleaned and disinfected — to irrigate golf courses, cool power plants, and perhaps one day become part of Silicon Valley's drinking water supply.

The Santa Clara Valley Water District will vote on a plan today to build a new \$52 million recycled water facility at the San Jose-Santa Clara Water Pollution Control Plant in Alviso that will convert sewage water to high-quality water, producing up to 8 million gallons a day.

Since 1997, the city of San Jose already has been converting about 10 million gallons a day, or 10 percent of the effluent at the wastewater plant, to recycled water.

It is sent down 100 miles of purple pipes and reused for irrigation and industrial needs around the county: The 49ers use it to irrigate their training fields. Calpine uses it to cool power plants. And The Villages Golf and Country Club uses it to irrigate its fairways and greens.

If the water district board approves the latest project, as expected, the amount of recycled water could nearly double. Crews would break ground in September, and the plant would open in 2012.

"This will help us meet future water demand," said Keith Whitman, water supply manager for the Santa Clara Valley Water District. "Recycled water is local, it is nearly independent of climate change and drought, and it doesn't have some of the uncertainties of taking water from the delta."

The city of San Jose is contributing \$11 million to the project. An additional \$8.25 million comes from federal stimulus funds, and \$3 million from the state.

John Stufflebean, environmental services director for San Jose, said it doesn't make sense to use precious drinking water for flushing toilets or irrigating grass.

He noted that among Mayor Chuck Reed's environmental goals is to have San Jose recycle 40 million gallons a day of the 110 million gallons that flow into the sewage plant by 2022.

Already numerous new buildings, including San Jose City Hall, have dual plumbing systems, that send recycled water to toilets and drinking water to faucets.

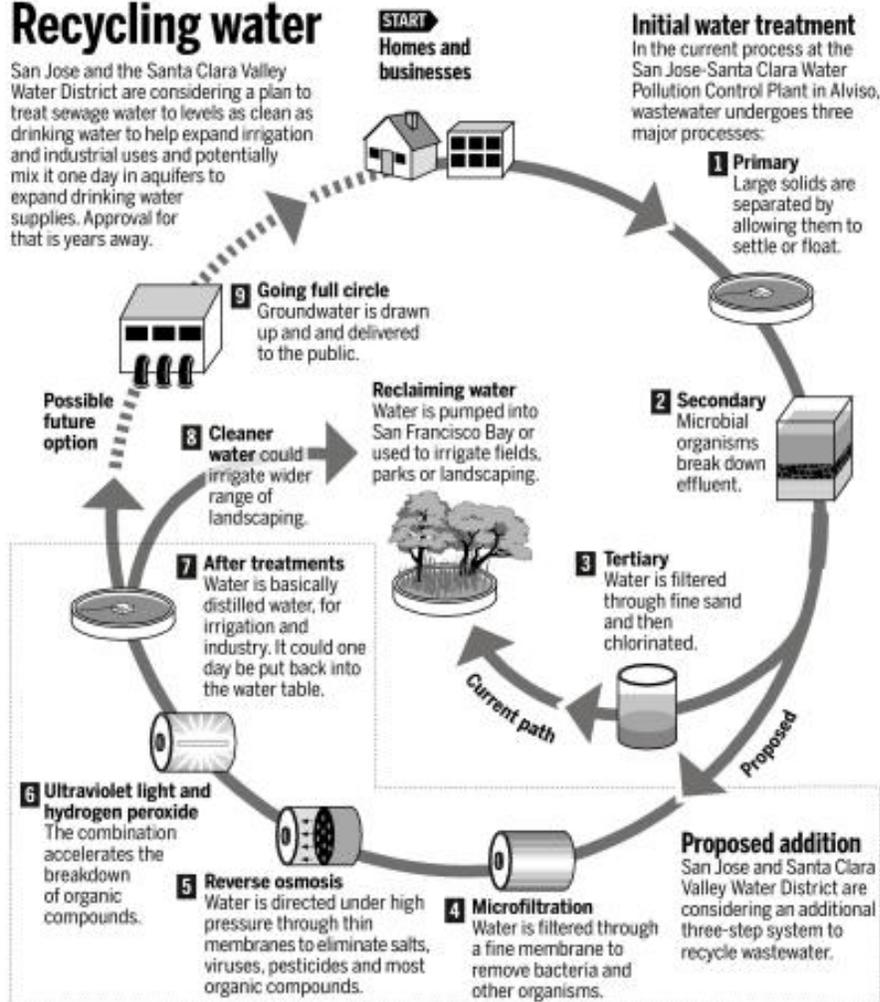
The city also is considering an ordinance to require dual plumbing for new office buildings.

Currently, sewage water at the San Jose plant is treated to the highest levels in the U.S. — tertiary treatment — in which sewage is settled, broken down with bacteria, then filtered and disinfected with chlorine. Most of the water then is released into San Francisco Bay.

The new plant would go further, taking the treated effluent and cleaning it with ultraviolet light, microfiltration and reverse osmosis, to kill any bacteria and remove microscopic contaminants. At that point, it is essentially cleaner than most drinking water in taps or bottles.

Recycling water

San Jose and the Santa Clara Valley Water District are considering a plan to treat sewage water to levels as clean as drinking water to help expand irrigation and industrial uses and potentially mix it one day in aquifers to expand drinking water supplies. Approval for that is years away.



Source: Orange County Water District, City of San Jose

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The cleaner water will be blended with existing recycled water, making it more suitable for a wider variety of industrial and irrigation uses, such as watering golf course greens, or redwood trees.

The new water also would be pure enough, under state health laws, to be put into underground aquifers and mix with existing drinking water supplies. But that use is not being considered at today's meeting.

"We're not in a hurry to do it. We want to make sure it's what the community wants. We'd need five to 10 years of study," said Whitman. "And we'll certainly learn from what Orange County did."

Two years ago, the Orange County Water District opened a \$485 million recycled water facility using the same treatment method that San Jose is now pursuing. The largest such plant in the world, it turns sewage water into 70 million gallons a day of recycled water that is blended with Orange County's aquifers.

To address public squeamishness, the Orange County agency conducted nine years of public meetings and outreach, and got a long list of medical leaders to endorse the project. Other places, however, like San Diego, have seen such projects stall over public opposition.

Today, Orange County water officials note that their water is treated more than any other drinking water in the state and that ironically, much of the water other cities are drinking is already coming from recycled

wastewater. Sacramento, for example, filters sewage, puts the treated effluent in the Sacramento River, and it flows to the delta, from where San Jose, Los Angeles and other cities pump water, treat it and serve it to the public.

"If you hear about our project in one sentence, you can jump to the toilet-to-tap conclusion, but when you hear about the high level of treatment, it's very easy to overcome the yuck factor," said Shivaji Deshmukh, groundwater replenishment system program manager for the Orange County Water District.

One environmental group said Monday it supports recycled water but wants to make sure if it is mixed with underground aquifers, that it is closely monitored and filtered for contaminants such as caffeine and pharmaceuticals that can be found in trace amounts in wastewater.

"The more it's treated, the better we like it," said Jennifer Clary with Clean Water Action in San Francisco. "It's always up to the public. You can say it's safe, but it is ultimately the public who will decide whether it is going to be used."