

VOICE OF SAN DIEGO

Fact Check: The Real Price of Purified Sewage

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Bob Kittle

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By Rob Davis



Statement: "That water (from purified sewage) is three to four times as expensive as anything else. Desalinated water has gotten cheaper because they've improved

the technology for taking the salt out of the water. ... We can create more water through desalination and through reclamation at a far cheaper cost than the toilet-to-tap project. It's economically unviable, in my view," Bob Kittle, KUSI's director of news planning and content, said Sept. 10 on Editor's Roundtable on KPBS.

Determination: False

Analysis: There's no ignoring that creating water by purifying sewage (what Kittle called toilet-to-tap) isn't as cheap as importing water from the Colorado River or Sacramento Delta, our two main sources. But it's not as expensive as Kittle claimed.

Kittle [made his comment](#) to argue in favor of expanding the city's purple pipe system, which treats sewage to be clean enough for irrigation but not drinking. That's also known as reclaimed water or reclamation. And right now, San Diego has more reclaimed water available than customers for it.

The city hasn't built enough purple pipes to distribute the water everywhere it could be used. And the city doesn't have a way to store the water in winter when sprinklers are turned off. That leaves a paradox: San Diego has extra water it can't use in a dry region scrounging for every drop it can get.

Kittle -- basing his comments on memory, he said in an interview -- claimed expanding the purple pipes would be cheaper than purifying sewage.

That claim is false.

[The city's own estimates](#) show that expanding the purple pipe system would cost more than purifying sewage to make it clean enough to drink. Why? Because building a second set of purple pipes throughout the city would be expensive.

A 2006 city study concluded that the purple pipe expansion Kittle referenced would cost \$1,960 per acre-foot including storage to enable year-round use -- or

\$1,530 without the storage. (An acre-foot is 326,000 gallons, enough for two households for a year.)

That same study concluded that purifying the sewage so the water would be clean enough for drinking would cost less: \$1,230 per acre-foot.

So how does purified sewage's cost compare to desalination?

Kittle was right that desalination's technology has improved. But those same improvements also benefit sewage purification. Both use the same technology -- an energy-intense process with tiny filters and membranes that remove contaminants.

The city's 2006 report said seawater desalination would cost \$1,400 per acre-foot -- less than purifying sewage. That number was based on information from Poseidon Resources, the company that plans a desalination plant in Carlsbad. Its stated costs have since increased to \$1,600 an acre-foot. That's also costlier than purifying sewage.

Independent analyses have reinforced that purifying sewage is cheaper than desalination. Why? Because it takes more energy to strip salt out of seawater than crud out of sewage. That's why officials in Orange County chose purified sewage when they needed a new supply. They found it cheaper than seawater desalination.

Lynn Reaser, a Point Loma Nazarene University economist [who studied the costs of new water sources](#) in San Diego, also concluded that purifying sewage (\$1,200-\$1,800 per acre-foot) would be cheaper than desalination (\$1,800-\$2,800). Her analysis called desalination the most expensive source available.