

Graywater

But all water must be used responsibly

By Marco Gonzalez

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A system of full wastewater recapture and indirect potable reuse, coupled with an aggressive conservation program and responsible development practices, will go a long way toward enhancing regional water independence.

As the San Diego region attempts to enhance its water supply by diversifying sources, is reliability by diversifying its imported and local water sources, its reclamation plants are putting more than half of their capacity back into the sewer system.

The use of highly treated wastewater in place of imported potable water just makes sense. “Recycled” or “reclaimed” water is safe, drought proof and not subject to the political or environmental whims of imported supplies (San Diego imports about 90 percent of its water). In concept, especially in light of statewide drought conditions and San Diego's Mediterranean/Desert climate, maximum use of recycled water is a no-brainer.

San Diego's Metropolitan Waste Water Department produces reclaimed water at two facilities, the North City Water Reclamation Plant and the South Bay Water Reclamation Plant. At a cost of roughly \$300 million, the North City plant has the capacity to treat approximately 30 million gallons per day of wastewater to tertiary standards, while the South Bay plant handles about 15 million gallons per day.

So what's the problem? Cost of distribution. San Diego's reclaimed water is distributed to around 450 customers through a \$68 million, 66-mile backbone of “purple pipes” owned and maintained by the city's Water Department. The distinctly colored pipes are to ensure construction crews do not inadvertently connect to drinking water systems. Such errors rarely occur, and the dual plumbing system has for the most part protected water users.

However, creating an entirely separate distribution system, which requires ripping up streets and new pump stations makes reclaimed water so expensive to deliver, it cannot be priced effectively. As a result, despite the existence of 45 million gallons per day of service capacity, the city will fail to meet a mandate of at least 50-percent beneficial reuse by 2010.

Also, because reclaimed water is typically used for landscape irrigation, there is diminished demand during wetter winter and spring months, and little ability to store the water for when it's most needed in the summer and fall. As a result, the reclamation plants put more than half of their capacity back into the sewer system, from which it discharges through the Point Loma outfall into the Pacific Ocean. There may be no bigger or persistent waste of taxpayer funds than this failure of the city to utilize the full capacity of these expensive treatment plants.

Often ignored is the fact that highly subsidized reclaimed water does nothing to encourage responsible watering practices or landscape palette choices by customers. Instead, cheap recycled water is wasted on golf courses and spread on playing fields that probably shouldn't be so green to begin with.

Despite Mayor Jerry Sanders' continued support for the costly and unsuccessful purple pipe system, the City Council, grand jury and environmentalists have successfully directed the city's focus toward indirect potable reuse, aka "toilet to tap."

Putting highly treated recycled water into our reservoirs solves many of the problems associated with the purple pipe paradigm. In addition to providing a safe, reliable, drought-proof supply that is cleaner than water we currently import, because we need potable water all year, reclaimed water could be used in quantities as large as we could possibly produce from all wastewater flows.

A system of full wastewater recapture and indirect potable reuse, coupled with an aggressive conservation program and responsible development practices, will go a long way toward enhancing regional water independence. It's time the city stop wasting its efforts trying to expand the purple pipe system.

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