

Local solutions to our long-term water needs

By Joseph Parker, Joe Panetta and Marco Gonzalez
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It's a fact. Over 90 percent of the city of San Diego's water is imported from Northern California and the Colorado River. These water supplies are strained by a growing population and will be stretched even further in the future.

Local rainfall averages only about 10 inches a year, and we have just completed our sixth winter with below-average rainfall. If the city relied solely on rainfall for our water supply, we could support a population of only 50,000 people.

By 2030, San Diego will require 25 percent more water than it is using now. With our arid, Mediterranean climate and minimal groundwater resources, San Diego has few options to meet these future water demands, other than import more water.

At the same time, the National Weather Service reports that low runoff into the Colorado River predicted for this year means 2004 will likely be the fifth consecutive year of reduced river water supplies available to states utilizing the river's water.

The landmark agreement between the San Diego County Water Authority and the Imperial Irrigation District increases the region's water reliability, but we will still be relying on imported water sources. For the sake of our families' future in San Diego, our economy, and our quality of life, it's time for San Diegans and the city to work together to decide the best means to become more water independent.

Water recycling opens up important opportunities for water independence. Recycled water is municipal wastewater that has been treated to a high level so that it can be reused for a variety of purposes. Recycled water provides an uninterrupted local water resource that is available even during droughts. We have already started using it. But now is the time to increase our efforts. The potential is tremendous.

The city of San Diego treats municipal wastewater and produces recycled water at the North City Water Reclamation Plant. Following strict regulatory requirements, an annual average of 5 million gallons per day of high quality recycled water currently flow through a separate pipeline system to recycled water customers for landscaping and industrial uses. Water that is recycled and reused locally helps reduce our demand for imported water.

Some of the city's largest recycled water users are well known. Torrey Pines Golf Course, the University of California San Diego, Miramar Marine Corp Air Station, Miramar Nursery, the city of Poway and Caltrans are successfully using recycled water.

A second water recycling facility, the South Bay Reclamation Plant, began operations in June 2002 and is treating an annual average of 5 million to 6 million gallons of municipal wastewater each day to a secondary treatment level. Agreements to sell 6 million gallons of recycled water per day are in place. The facility expects to receive final certification from a state regulatory agency soon.

But there's a seasonal challenge – city customers use about twice as much recycled water in the summer than in the winter. We need year-round uses for recycled water – uses that extend beyond irrigation; and we need more customers. Both the North City facility and the South Bay plant are capable of receiving more wastewater and producing more high quality recycled water. Without large groundwater basins or surface lakes available for storing seasonally excess recycled water – a key challenge – treatment capacity is left unused.

In its search for a way to optimize the use of recycled water, the city is beginning a comprehensive, impartial, science-based study that evaluates existing and potential uses for recycled water. The one-year study will examine all opportunities to optimize the use of recycled water produced by the city to reduce our demand for imported water. These opportunities include expanding the existing distribution system for irrigation and industrial use, considering groundwater and surface reservoir storage, grey water use, live stream discharge and wetlands development.

Expanded uses of recycled water included in the study include recreational lakes, ornamental fountains, recharging groundwater basins, additional manufacturing and industrial processes, cooling towers, toilet and urinal flushing and construction uses such as dust control and soil compaction. With further advanced treatment, recycled water has been successfully used in other parts of the United States to supplement drinking water sources by adding it to groundwater storage basins and open reservoirs (a process called reservoir augmentation).

The city's recycled water study team will work with the public to develop increased uses for recycled water that are safe, economically viable, environmentally sustainable, and without adverse health impacts.

The study will focus heavily on the health and safety aspects of recycled water alternatives. An independent advisory panel formed from the fields of science, economics, medicine and education will analyze the results and make recommendations to the city's recycled water study team. Advanced treatment methods, health and safety issues, public acceptance and costs will be among the issues analyzed and evaluated in the study.

The public's participation in this study is critical. It is a top priority that the public become involved in the recycled water study, understand the recycling process and help determine the best use of this water resource. A wide range of meetings and communication opportunities will facilitate dialogue and information sharing with city residents and the study team over the next year.

Our understanding of recycled water must begin now in order to become fully engaged in the recycled water study and to help the study team analyze the alternative uses. Recycled water is a readily available local resource. It is up to us, not only as San Diego water consumers, but also as citizens, business owners, parents and educators, to determine the viability of increasing and expanding the use of recycled water in our community.

It's our water; let's make the most of it.

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