AWWA Director's Report

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American Water Works Association
Dedicated to Safe Drinking Water

Growing Demand for Reclaimed Water

WATER IS CLASSIFIED IN VARIOUS CATEGORIES SUCH AS RAW WATER, groundwater, potable water, wastewater effluent, and reclaimed water. In the arid West, community leaders are pondering how to best use these sources of water to meet the needs of burgeoning populations. The West is quickly running out of "natural" water sources, such as ground and surface waters, and some communities are looking at the largely untapped water resource of reclaimed water for more uses than just irrigation.

In the 1990s The City of San Diego began considering "water repurification" as a source of potable water for the region. However, as the city began discussions about the possibility of reclaiming wastewater to drinking water standards and mixing it with Colorado River water in reservoirs, opponents began referring to the water repurification proposal as the "toilet to tap" plan. As a result of negative public reaction, the City of San Diego discontinued consideration of this proposal. Today, however, the concept is being discussed again. According to an August 8, 2005 article in the *San Diego Union-Tribune*, an advisory panel is looking at six major scenarios for using the region's effluent to meet growing water demands: "San Diego's decision promises to be driven more by the perception of the city's 1.2 million water users than what national, state and local water experts say is the clear reality: the super-scrubbed wastewater is as good or better than water taken from the Colorado River."

As the population of the Sun Belt states continues to grow, communities will have to grapple with the challenge of meeting the potable water needs of their residents and businesses. Effluent is the only water source that grows along with population. Primary and secondary treatment of wastewater are man-made techniques fashioned after the way nature cleans water in lakes and rivers. Tertiary treatment applies man-made technologies to filter out contaminants left behind in primary and secondary treatment. However, if policy makers wish to reclaim wastewater to drinking water standards, they must first carefully educate the public about the treatment process. Because wastewater treatment is based on the natural cleansing that occurs in lakes and rivers, policy makers would be wise to stress that wastewater is "cleansed" in much the same way "mother nature" cleanses water naturally.

Today, in Pima County, Arizona (the county in which the City of Tucson is located), reclaimed water is used for irrigation of turf facilities such as golf courses, parks, ball fields, schoolyards etc. Pima County (which operates the region's publicly owned wastewater treatment works) places great value on the creation of riparian habitats through the discharge of effluent into the Santa Cruz River or through the delivery of reclaimed water to such facilities as the Ed Pastor Kino Environmental Restoration Project (EPKERP). EPKERP allows for irrigation of nearby turf facilities, captures storm water for beneficial use, prevents flooding, and creates a riparian habitat that residents use for such activities as bird watching and walking. The county's Sonoran Desert Conservation Plan, seeks to preserve the area's cultural past and restore natural environments and ecosystems that existed prior to the significant overdrafting of groundwater in the 20th century. Reclaimed water plays an important role in the overall Conservation Plan.

The City of Tucson which is the largest drinking water provider in Pima County, depends on both Colorado River water and limited supplies of ground water for its potable water needs. Like San Diego, it too is considering the use of highly purified reclaimed water to supplement its potable water supplies through recharge of the aquifer. In the City's 2000 – 2050 long-range water plan, the municipality's water utility, Tucson Water, acknowledges effluent as a viable water source. "Municipal wastewater effluent is a renewable water supply that steadily grows along with population. This recycled water supply can provide an alternative to groundwater for urban irrigation and industrial uses through Tucson Water's reclaimed system. In addition, this water source will be used to augment Tucson Water's ground-water supplies and help meet the area's increasing demand for potable water."

Each community must decide what is in the best interest of its residents – present and future – to determine how to best use its water resources. The reclamation of wastewater can be used in many beneficial ways. If policy makers wish to pursue the treatment of wastewater to drinking water standards to increase potable water supplies, they must expect to face controversy and significant concern among members of the public. It is critical, therefore, that a well thought-out public information plan be formed. Policy makers must be ready to answer questions about contamination and health impacts in precise and easily understood terms, and an education campaign should begin well in advance of implementing a proposed plan. If a community decides against treating reclaimed water to drinking water standards, it should seek to maximize the use of this largely untapped resource in other ways. Across the arid West, decisions made about the use and reuse of reclaimed water today will impact water use and supplies for generations to come.