

WATER REUSE IN TEXAS

Water reuse is an important water management strategy to help meet the growing demands being placed on available water supplies in Texas and across the nation. There is becoming a greater use and acceptance of applying Recycled Water to a wide variety of applications, including landscape and agricultural irrigation, toilet and urinal flushing, industrial processing, power plant cooling, wetland habitat creation, restoration and maintenance, and groundwater recharge. Additionally, augmentation of potable water supplies through indirect applications (i.e., blend Recycled Water with raw water in a reservoir or other waterbody) of Recycled Water is beginning to play an important role in meeting water supply demands in Texas.

Recycled Water is identified in the state of Texas Year 2002 Water Plan as providing on the order of seven percent of the water required to meet the 2050 Texas water needs. The 2002 Plan identified 35 projects that would cost on the order of \$1.1 billion dollars. Since the adoption of the 2002 Plan, Recycled Water has been identified to play an even greater role in meeting the water needs across Texas. In Texas, during the last five years there have been about 30 Recycled Water applications submitted to the Texas Commission on Environmental Quality (TCEQ) to secure the permits for the right to use Recycled Water. The quantity of reclaimed water associated with these permit applications is on the order of 700,000 acre-feet. There are major Recycled Water projects in the North Central Texas area that are in either the planning or implementation stages and that will augment existing water supplies with about 400,000 acre-feet of Recycled Water. These projects will provide enough water to serve about 1.6 million people with their annual demand for water. About 30 percent of the future water needs in this part of Texas will be met with the use of Recycled Water and other water conservation practices. Another example of a major application in Texas involves utilizing Recycled Water as a water supply for industries located along the Houston Ship Channel. Initial investigations performed indicate that the use of Recycled Water would be cost-effective and would replace the use of about 45,000 to 56,000 acre-feet of raw water that could be used for potable water supply. Additionally, one of the largest Recycled Water projects in the United States, which provides water for non-potable purposes, is located in the San Antonio area. Recycled Water is also being extensively used in the west Texas area.

Water professionals are very actively involved in the promotion and development of the use of Recycled Water in Texas through professional organizations, including the Texas Water Conservation Association, Texas Section of American Water Works Association, the Water Environment Association of Texas, and the recently formed Texas Section of WaterReuse Association. Major considerations that must be addressed to successfully maximize the use of Recycled Water include performing research needed to develop sound science and technology, providing funding support for implementation of the projects, and gaining public support. In order to address these considerations, federal funding is needed to support the further development of Recycled Water as a key water management strategy. Possible avenues for providing the federal funding include the Title 16 Program and EPA Research Grant Program. Addressing these considerations would not only benefit Texas but would provide a benefit for implementing Recycled Water across the United States.

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