City of Austin

TESTIMONY
OF
CHRIS LIPPE, P.E.

DIRECTOR
CITY OF AUSTIN WATER UTILITY

ON
HR 2341

SUBCOMMITTEE ON WATER AND POWER
COMMITTEE ON RESOURCES
UNITED STATES HOUSE OF REPRESENTATIVES
OCTOBER 6, 2005

Chairman Radanovich, Ranking Member Napolitano and Members of the Subcommittee, thank you for the opportunity to appear before you today to testify in favor of HR 2341. I would also like to thank Representative Doggett, for introducing this bill and our entire Congressional delegation for all of their hard work on Austin's behalf.

My name is Chris Lippe, P.E., and I am the Director of the City of Austin's Water Utility. We provide water, reclaimed water, and wastewater service in Austin, the capital of Texas. With a population of approximately 770,000 Austin offers the best of big city and small town life. Achieving this balance has not always been easy. Austin's high quality of life attracts growth and we manage that growth to maintain the highest quality of life. Although we have had to overcome some difficult obstacles, today Austin is recognized as a leader in sustainable growth that enhances communities, enables economic development and supports the environment. Our Reclaimed Water Program is a component of that effort.

In my testimony, I will provide information on HR 2341, Austin and its water needs, our efforts to meet those needs, and the role that we envision for the Bureau of Reclamation's Title 16 Program in helping to meet those needs.

HR 2341

HR 2341 amends the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize the Secretary of the Interior to participate in the design,

planning, and construction of a project to reclaim and reuse wastewater within the service area of the Austin Water Utility.

About the City of Austin

Austin, Texas is a vibrant community of approximately 770,000 citizens located in Central Texas and serves as the State Capital. The City owns and operates the Austin Water Utility, which has more than 180,000 residential, multifamily, commercial, industrial, and wholesale connections and draws its water supply from the Colorado River.

The City faces two major challenges in meeting the needs of its customers. First, there is a projected water need. The City's current water rights and water contracts are expected to meet demand until approximately 2042. By 2050, however there will be an anticipated water shortage of 42,096 af/yr. That is enough water to serve 63,000 residences, or an equivalent population of 221,000 in contrast to our served population of 770,000. Water conservation measures are expected to provide half of the shortfall, leaving the other half to be provided by some alternative measure, such as reclaimed water.

The second need is financial in nature and relates to funding constraints under our capital improvement plan. The City, through its capital improvement plan, recently identified almost $1 billion in infrastructure needs in the next five years. Much of that is devoted to water treatment plant expansion, wastewater

treatment plant expansion, and rehabilitation of the wastewater collection system to meet the needs of a growing community. This of course does include some funding for a growing reclaimed water program.

The expansion of our water reclamation system will provide a number of benefits. It alleviates the potential for water shortages. It defers millions of dollars in annual payments under our raw water contract. Finally, it can help defer the need for the construction of additional water treatment plants.

The Reclaimed Water Program

Based on the quality of the reclaimed water, the major uses for it in Austin are for irrigation, cooling towers, and manufacturing. During peak summer demands, reclaimed water use is more than three million gallons per day, predominantly for landscape irrigation. An electric power plant is in the process of connecting to the system. Likewise, the Combined Transportation and Emergency Communication Center is in the process of connecting and will use reclaimed water for irrigation purposes. In the next few years, we anticipate numerous additional customers to connect at the redevelopment of the City's former airport. Other potential customers, such as the University of Texas, are interested in using reclaimed water if distribution lines can be extended to their property. Major Austin employers such as Freescale, Samsung and the University of Texas are eager to be connected to our reclaimed water system.

Reclamation and Reuse Project -- Central System

The central reclaimed system provides water from the Walnut Creek WWTP. In 2004, the most recent full year of data, customers used 34 million gallons per year of reclaimed water. Piping in the central reclaimed system consists of 4 miles of transmission main. Pumping equipment consists of two low-service pumps, a one million gallon ground storage tank, and three high-service pumps at the Walnut Creek Wastewater Treatment Plant (WWTP). The central reclaimed system has one project in the preliminary engineering design stage – a two million gallon elevated storage tank and an additional mile of transmission main.

Reclamation and Reuse Project -- South System

The south reclaimed system consists of a pump station, a booster pump station, a 0.5 million gallon elevated storage tank, and 15 miles of piping carrying treated wastewater effluent from the South Austin Regional WWTP. Customers include the award winning Hornsby Bend Biosolids Management Facility and three golf courses. In 2004 these customers used 467 million gallons of reclaimed water. Recently completed construction at the South Austin Regional WWTP has resulted in improved reclaimed water quality.

Reclamation and Reuse Project -- Satellite System Details

The Austin Water Utility operates three satellite systems that are located on the fringes of its service area. With a satellite system, large wastewater flows are

geographically matched with potential customers and a water reclamation plant is built in the immediate vicinity. In 2004, the Davenport WWTP provided 81 million gallons of reclaimed water for golf course irrigation. The Onion Creek WWTP produced 68 million gallons of reclaimed water for golf course irrigation. Finally, the Balcones and Pickfair WWTPs provided 78 million gallons of reclaimed water, again for golf course irrigation.

Reclamation and Reuse Project – System Growth

As mentioned above, the City has approximately 19 miles of existing transmission main in the southern and central part of its service area as well as pump stations and storage tanks at the Walnut Creek and South Austin Regional WWTPs. This existing infrastructure serves as the backbone for the growth of the reclaimed water system. Eventually, the central and south systems will connect. A schematic showing the existing and proposed reclaimed water system is attached.

With Federal assistance, the reclaimed water system can grow dramatically. The miles of transmission mains will expand to from 19 to 137, an increase of more than 700%. Storage tanks in the distribution system will grow from zero to seven with a combined storage capacity of 14.3 million gallons. Pump stations in the distribution system will increase from one to a total of five. The number of pressure zones will increase from two to five. Plant storage tanks will increase from two to three and their capacity will increase from 2.5 million gallons to 3.5

million gallons. The magnitude of system growth requires that improvements be built over a period of years. Construction is projected to ramp up in 2006 and concludes in 2034, with the system reaching full capacity in 2038.

Table 1 -- Existing and Anticipated Reclaimed Water Demand

System	Water Source	2004 Demand	2050 Demand
Central	Walnut WWTP	34.0 MG/yr	6,266.0 MG/yr
South	SAR WWTP	467.0 MG/yr	2,137.5 MG/yr
Balcones/Pickfair	Balcones/Pickfair WWTPs	78.0 MG/yr	78.0 MG/yr
Davenport	Davenport WWTP	81.0 MG/yr	0.0 MG/yr
Onion Creek	Onion Creek WWTP	68.0 MG/yr	68.0 MG/yr
	Total	728.0 MG/yr	8,549.5 MG/yr

Financial Constraints Facing Austin's Water Reclamation Program

A significant constraint to implementing our Reclaimed Water Program is funding. The Environmental Protection Agency, the American Water Works Association and the Association of Metropolitan Sewerage Agencies have all documented the enormous infrastructure needs of water and wastewater utilities. Austin's infrastructure needs reflect this national phenomena. Our recently approved 5-year Capital Improvement Plan contains nearly $1 billion worth of projects. This includes funding to alleviate sanitary sewer overflows, the construction of water treatment plants, the upgrading of wastewater treatment plants, and the rehabilitation of water and sewer mains. Construction of reclaimed water projects is part of this and promotes prudent financial management by offering the potential to defer some of the water treatment plant projects.

We acknowledge that under the Title 16 Program, federal funding is capped and that the City will have to cover the bulk of the costs under Title 16. The City is prepared and committed to doing so. However given the importance of addressing water needs and water quality, federal assistance with this project is appropriate and welcome.

Table 2 -- Major Reclaimed Water Component Costs (in millions)

Service Area	Project Completed or Funded	Future Projects	Total Project Cost	Funding Shortfall
Early System Improvements	$4.0		$4.0	
Central/South	$19.0	$161.2	$180.2	$161.2
Satellite	$4.3		$4.3	
Total	$27.3	$161.2	$188.5	$161.2

Bureau of Reclamation's Title 16 Program

The Bureau of Reclamation operates a well-respected water reclamation program, referred to as the Title 16 Program. It is designed to improve efficiency in the use of water resources in the western states. Section 1602 of Public Law 102-575 establishes broad goals for Reclamation in administering the Title 16 Program. These goals include:

- Identifying opportunities for reclamation and reuse of municipal wastewater,
- Investigating those opportunities and,

- Providing a cost-share opportunity for an appraisal and feasibility study and for the design and construction of permanent facilities to reclaim and reuse municipal wastewater.

The City of Austin's Reclaimed Water Program fits well within these broad goals. An Appraisal Report prepared jointly by the City and the Bureau of Reclamation that was completed in April 2004 confirmed this. The Appraisal Report concluded that there was a Federal interest in pursuing water reclamation and reuse investigations in Austin and recommended that a Feasibility Report be done.

The City continues to collaborate with the Bureau of Reclamation on investigating the potential for reclaimed water in Austin. Specifically, we signed a cooperative agreement with the Bureau of Reclamation in September 2003 to jointly prepare a Feasibility Report. The report was delayed for some time because of modeling difficulties, but is now nearing completion. While the Feasibility Report is not final, preliminary indications are that it will support Austin's entry into the Bureau of Reclamation's Title 16 Program.

In addition to conforming to the general goals of the Title 16 Program, the City of Austin's Reclamation project meets the following specifics for the Title 16 Program:

Applicability -- Austin is located in Texas, which is one of the seventeen western states under the Bureau of Reclamation's jurisdiction.

Eligibility -- Austin is a municipality and therefore capable of entering into a cost-sharing agreement with the Bureau of Reclamation.

Financial capability -- Austin has dedicated revenue sources through water and wastewater user fees and has demonstrated financial capabilities as evidenced by the investment grade rating of its outstanding bonds.

Ownership -- Austin will hold title to the facilities and be responsible for their operation and maintenance.

Regional perspective -- Austin's Reclamation Project is consistent with state authorized regional water supply plans for the Colorado River.

Postpones new or expanded water supplies -- Austin's Reclamation Project has the potential to postpone the expansion of water treatment plants through more efficient use of existing water resources.

Reduces diversions from existing watercourses -- Austin's Reclamation Project will reduce existing diversions from the Colorado River through more efficient use of existing water resources.

Improves surface water quality -- Austin's Reclamation Project will improve surface water quality in the Colorado River by reducing effluent discharges from our wastewater treatment plants.

Conclusion

In summary, the expansion of our water reclamation system provides a number of benefits. It alleviates the potential for water shortages. It reduces millions of dollars in annual payments under our raw water contract. It also can help postpone the need for the construction of additional water treatment plants.

HR 2341 will authorize federal participation in the City of Austin's Reclaimed Water project under the Bureau of Reclamation's Title 16 Program. I believe that the project fits within the goals and objectives of the Title 16 program and respectfully request that the Subcommittee approve HR 2341 and seek its final passage. We appreciate your time and support. Thank you again for this opportunity to testify.

EXISTING AND PROPOSED RECLAIMED WATER SYSTEM