



Economic Development

Problem Statement

The changing face of the Lower Rio Grande Valley poses significant issues in ensuring adequate supplies of water for all needs. Agriculture, while still a mainstay of the region's economy, is now competing with rapid urbanization and commercial expansion for both space and water. At the same time, heightened recognition of environmental issues has resulted in calls to set aside water for streamflows into rivers, the Laguna Madre, and the Gulf of Mexico.

The value of land increases sharply when converted from agricultural use to residential, commercial, or industrial development. Furthermore, developers can pay higher prices for water rights than most agricultural producers, thus compounding competing demands for a shrinking supply of water. Uncertainty about water supplies also affects the ability of the region to attract industries that are high-volume water users, particularly value-added activities (such as food processing) that complement agricultural production.

Despite growing urbanization, irrigation districts control the overwhelming majority of rights to Rio Grande water as well as the system used to distribute that water to both farms and municipal and industrial (M/I) users. Built for sporadic and large irrigation flows, the system is



inefficient for M/I deliveries, which require lower flows that are sustained over time. Control of water rights and the water distribution system can pit one state-sanctioned entity (e.g., a home rule city) against another (e.g., an irrigation district). Currently, there is no coordinated method for involving municipalities that may want to invest in or improve irrigation systems or for involving irrigation districts in planning for urban and economic growth.

Facts

The true supply of water available from the Rio Grande has been overstated. On one hand, the river is overappropriated; on the other hand, Mexico has not complied with its obligations to release minimum inflows, further reducing the amount available for use. These all impact the accuracy with which municipalities and districts can plan for future growth.

Although the supply of water for irrigation has slowed, agriculture is still very much an economic pillar of the region. "Despite a prolonged and severe drought, low market prices, escalating expenses and infringing urbanization, agriculture continues to contribute significantly to the state and local economies," according to the Texas A&M Agricultural Research and Extension Center in Weslaco. Agriculture contributed \$476 million to the Rio Grande Valley economy in 2001.¹ Declines in agricultural production due in large part to Mexico's failure to deliver minimum inflows to the Rio Grande have cost the local economy some \$1.48 billion over the last 11 years and more than 4,100 jobs related to agriculture each year.²

Urban development is rapidly encroaching on agricultural lands. The McAllen Chamber of Commerce found that most key indicators in McAllen, Edinburg, Mission and Pharr improved significantly in 2002. Retail sales were up 6%;

new construction, 11.9%; and new housing starts, 18.4%. In addition, the Brownsville-Harlingen-San Benito and McAllen-Edinburg-Mission Standard Metropolitan Statistical Areas place in the top 10 in the nation in job growth.³

Irrigation districts hold some 91% of Texas rights to water from the Rio Grande. As more acreage is converted from irrigated agriculture to urban use or to dryland farming, irrigation districts increasingly are finding that their water rights are a valuable asset. Often, these water rights are more valuable than the irrigated crops that are grown with this water.

The cost of water rights has increased exponentially over the past 10 years, from \$400 an acre-foot (AF) to \$2,000 per AF. Rising values may hinder the ability of municipalities to buy water rights outright or to enter into long-term leases for “wet water.” This impedes municipalities’ ability to meet statutory requirements to ensure that new subdivisions have adequate water supplies.

Many municipalities rely on a specific irrigation system to divert water from the Rio Grande and carry it to a treatment facility. Delivery problems may result if there is insufficient volume in the system to carry or push municipal water to treatment plants.

Developers must deal with a plethora of political subdivisions, municipal providers, and irrigation districts, each with its own board and own policies.

Potential Solutions

- New mechanisms to make water available for long-term M/I use at stable rates.
- Flexible rules for converting “wet water” from one use to another.
- Master plans for upgrading the water delivery system to benefit both agricultural and M/I uses.
- Pipelines connecting M/I users to reduce reliance on irrigation deliveries and the need for “push water.”
- Coordinated planning among municipalities and irrigation districts to identify “hot spots”

where intensive growth is likely to occur, and to develop long-term projects to meet future water needs.

- New impact fees to assist with regional planning. This could involve having municipalities assume responsibility for a certain amount of acreage in an irrigation district in order to ensure payment on long-term debt.
- A uniform process that irrigation districts can use to review and approve plats and grant right-of-way easements.

Barriers to Solutions

- Ignorance of the rules governing water rights and use along the Rio Grande.
- Limited flexibility to adjust to water needs under the current system that regulates how and when water rights are exercised. Water can only be used for the designated purpose associated with a right: agriculture or M/I. And while water rights can be converted from agricultural to M/I use, they cannot be converted back.
- Ill will between some irrigation districts and municipalities, especially in areas that are experiencing rapid growth and increased demand for water .
- Lack of funding to develop and implement a comprehensive, long-range plan that will prioritize water supply and delivery projects throughout the region.
- Reluctance among irrigation districts and municipalities alike to charge users the true cost of water.

¹ Real Estate Center at Texas A&M University, 6/27/2003

² These values assume the 350,000 ac-ft per year delivery requirement, incorporate a 41% water conveyance loss, and apply a \$652 and 0.02 jobs per acre foot loss impact. Source: John R.C. Robinson. *Alternative Approaches to Estimate the Impact of Irrigation Water Shortages on Rio Grande Valley Agriculture*. Texas Cooperative Extension, Weslaco, TX, 5/17/2002

³ Real Estate Center at Texas A&M University, 6/25/2003