

## Chapter 9

# Infrastructure Financing Report

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The purpose of the infrastructure financing report (IFR) is to identify funding needed to implement the WMSs recommended in the 2011 Plan. The primary objectives of the report are:

- To determine the number of political subdivisions with identified needs for additional water supplies that will be unable to pay for their water infrastructure needs without some form of outside financial assistance;
- To determine how much of the infrastructure costs in the regional water plans cannot be paid for solely using local utility revenue sources;
- To determine the financing options proposed by political subdivisions to meet future water infrastructure needs (including the identification of any State funding sources considered); and,
- To determine what role(s) the RWPGs propose for the State in financing the recommended water supply projects.

A survey of WUGs with identified infrastructure needs was conducted by the ETRWPG and the TWDB. The survey form was designed by the TWDB and distributed after the IPP was approved by the ETRWPG.

### 9.1 Summary of Survey Results

Surveys were sent to seventeen municipal WUGs and seven WWP with projected water shortages. Surveys were completed and returned for eight of the municipal WUGs and six of the WWPs. There were 31 WUGs with needs identified in the 2011 Plan which were not surveyed. These WUGs were in the manufacturing, power

generation, irrigation, livestock, and mining categories. The results of the survey are included in Appendix 9-A.

In the IFR study, \$1,348,737,330 of water supply and infrastructure needs were identified. Of that, \$1,236,774,491 was the estimated cost of new surface water supply projects and major transmission systems. The remaining \$111,962,839 was in development of new wells, local infrastructure, and public/private partnership projects. A summary of the projected financing required to meet the needs in the East Texas Region and a listing of the projects considered are provided in Appendix 9-A.

**9.1.1 Municipal Water User Groups.** A separate accounting was made for cost of project, by decade, to meet water needs for municipal WUGs, and is summarized in Table 9-1. Not included in this group are the costs of projects being undertaken by WWP to meet the needs of municipal users. Projects for WWPs are discussed separately.

**Table 9-1: Infrastructure Improvement Cost by Decade for Municipal Use**

	2010	2020	2030	2040	2050	2060
<b>Cost</b>	\$43,337,189	\$17,569,450	0	0	0	0

Maintenance and replacement of existing treatment and transmission systems are not addressed in the 2011 Plan cost estimates. However, these are significant and on-going costs, and will impact communities' ability to fund additional infrastructure. These maintenance costs are expected to increase as a percentage of water system budgets as facilities constructed in the mid-20<sup>th</sup> century reach the end of their design life.

In the 14 survey responses received, four respondents (40%) anticipated fully funding the infrastructure costs through utility revenues supplemented in part with bank loans. The ten remaining respondents anticipated utilizing State or Federal programs to cover some or all of the estimated infrastructure costs.

**9.1.2 Non-Municipal Water User Groups.** Non-municipal WUGs were not surveyed. Water demands were aggregated at the county level. It is expected that within the non-municipal water use categories, any local infrastructure will be funded using a combination of the methods outlined below.

**Manufacturing.** It is anticipated that companies with projected shortages will coordinate directly with surface water providers identified for any infrastructure needed to bring water to their sites. The funding of this construction may occur in a number of ways. The typical method is for the water provider to construct the distribution system supplying the customers, and pass through the cost in the water rate. State assistance may be requested through the State Loan Program for some projects. A second funding option is for the manufacturer to directly construct the required infrastructure, which would be a site-specific consideration. In areas not currently served by a surface water provider, a private developer may choose to establish a distribution utility, or a public-private partnership may be formed between the water supplier and end user to develop a new system.

**Steam Electric Power.** It is expected that power plant owners, as a part of facility construction, will include any required water supply intakes and pipelines or contract directly with existing major water providers to obtain the needed additional water.

**Mining.** Mining is projected to experience water shortages in four counties. It is anticipated that those companies with projected shortages will either provide new supplies for themselves by drilling new wells or coordinate directly with surface water providers in their area for any infrastructure needed to bring water to their sites. It is expected that private companies will pay the cost of required infrastructure.

**Irrigation.** Anticipated infrastructure costs for irrigation are related to increased water needs due to business expansion. The needs are expected to be met by irrigators drilling wells or by contractual arrangement for increased supplies with surface water providers local to the point of need.

**Livestock.** Shortages in meeting livestock water demands are expected in seven counties. It is anticipated that those individuals and private companies with projected shortages will either provide new supplies for themselves by drilling new wells or coordinate directly with surface water providers in their area for any infrastructure needed to bring water to their sites. It is expected that payment of the cost for infrastructure will be made by the individuals or private companies needing the water.

**9.1.3 Wholesale Water Providers.** All six WWP respondents indicated they would be implementing the recommended strategy in the 2011 Plan. Five of the respondents indicated that all or most of the funding source would be through TWDB programs. One respondent indicated funding would be from cash reserves as the strategy involved agreement with downstream water right holders. The estimated cost, by decade and TWDB Funding program is shown in Table 9-2.

**Table 9-2: Infrastructure Improvement Cost for Wholesale Water Provider**

Decade of Improvement	TWDB Funding Source Amount	
	State Participation	Drinking Water SRF
		\$336,428,550
2020	\$85,790,050	\$266,992,250
2030		\$79,389,250
2040		\$79,783,000
2050		\$475,648,000
2060		\$12,387,000
<b>Total</b>	<b>\$85,790,050</b>	<b>\$1,164,838,000</b>

## **9.2 Infrastructure Finance Policy Statements**

The Legislature has directed each regional water planning group to propose ways for the State to finance a portion of the water supply projects recommended by the State Water Plan. The ETRWPG has reviewed the needs of the region, and offers the following recommendations. Recommendations are grouped by the following categories: Policy Recommendations, Financial Assistance Programs, and New Funding Sources.

**9.2.1 Policy Recommendations.** Several general policy recommendations are provided, as follows:

- Water users should pay for the required infrastructure.
  - From local funds including those borrowed locally
  - From state revolving fund loan programs
  - From federal loan programs
  - From existing state and/or federal grant programs
- The State of Texas should participate in constructing new water supplies to make development of large water supplies feasible. State money to be recouped at the earliest possible date through sale of state portion of the project to water user.
- If water users are unable to pay for the required infrastructure, merging with another local entity to improve financial capacity must be considered.
- If merger is not an option, the State must provide some safety net type funds to provide safe water supply for small water users (less than 200 connections) that cannot afford the required infrastructure as determined by EPA affordability calculation.

**9.2.2 Financial Assistance Programs.** Recommendations regarding financial assistance programs include the following:

- The State Participation Program will be one of the most important financing programs for water supply projects sized to meet projected long-term demands. Increase the funding of this program as needed to allow development of these water supply projects (Lake Columbia).
- The State Revolving Fund Programs will remain important to assist some systems in meeting minimum water quality standards. As infrastructure ages and water quality standards increase, the demand for this assistance will grow. Increase the funding of this program in future decades, and

expand the program to include coverage for system capacity increases to meet projected growth for communities.

- The State Loan Program for political subdivisions and water supply corporations offers loans at a cost advantage over many commercial and many public funding options. Increase funding of this program to allow financing of near-term infrastructure cost projections.
- The USDA Rural Utilities Service offers Water and Waste Disposal Loans and Grants to rural areas and towns of up to 10,000 people. Disadvantaged communities within Texas are specifically targeted for these loans. Support continued and increased funding of this program at the Federal level, and fund the state Rural Water Assistance Fund.
- The Regional Water Supply and Wastewater Facilities Planning Program assists political subdivisions with planning grants, allowing small communities to pursue cost-efficient regional solutions. Increase funding of this program in anticipation of upcoming development throughout the state, and expand the program to include the costs for preliminary engineering design and development of detailed engineering cost estimates of recommended facilities.
- The USACE constructs civil works projects for flood control, hydropower, and navigation and ecosystem restoration. USACE participation in water supply projects is limited by current regulations. The ETRWPG supports legislative or regulatory changes that will:
  - Increase USACE’s flexibility regarding increasing water supply storage in the reservoirs that they manage, and investigate other alternatives for increased involvement of USACE in funding water supply projects.
  - Allow the USACE to construct reservoirs with water supply as a primary purpose.

**9.2.3 New Funding Sources.** The ETRPWG believes that revenue generated by imposing a tax on bottled beverages, including bottled water, could be an important new source of income for financing water projects in Texas in the future. The legislative budget board has estimated that a 5 cent tax on bottled water only could raise in excess of \$65.2 million dollars (2006 estimate).

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