



Chapter 11

Plan Implementation Funding





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\$30.7 billion will need to be spent by regional and local water supply entities and the private sector between 2007 and 2060 to implement fully the 2007 State Water Plan.

Water user groups were surveyed for the 2006 Regional Water Plans to determine what financial assistance will be needed in addition to conventional financing mechanisms and responded that approximately \$1.7 billion will need to come from state assistance programs by 2020. \$2.1 billion was identified as being needed by 2060.

The 77th Legislature, as a part of Senate Bill 2 in 2001, created the Water Infrastructure Fund to finance state water plan projects. To date, there have been no appropriations to this fund.

State financial assistance programs that are structured to assist in financing water management strategies and other water and wastewater-related infrastructure either require appropriations or additional appropriations.

\$30.7 billion will need to be spent by regional and local water supply entities and the private sector between 2007 and 2060 to implement fully the 2007 State Water Plan. The majority of that amount, \$29.3 billion, represents strategies for municipal water user groups (Table 11.1). For the most part, these costs are anticipated to be funded through conventional financing mechanisms readily available in the public and private markets. Water user groups were surveyed for the 2006 Regional Water Plans to determine what financial assistance will be needed in addition to conventional financing mechanisms and responded that approximately \$1.7 billion will need to come from state assistance programs by 2020. \$2.1 billion was identified as being needed by 2060. The survey results show that the majority of state assistance is needed to move the accumulating backlog of water management strategies forward from planning to implementation.

As in the first round of regional water planning in 2001, there were a tremendous number of water management strategies that either should have already been implemented or that were behind schedule for being in place to respond to the next



extended drought. The 2001 Regional Water Plans submitted on January 5, 2001, were available to the 77th Legislature, and as a part of Senate Bill 2 in 2001, the Water Infrastructure Fund was created to fund state water plan projects. Later that same year, House Joint Resolution 81, 77th Legislature, was passed and approved by the citizens of Texas. This resolution amended the Constitution, authorizing TWDB to issue an additional \$2 billion in general obligation bonds and specifically designated at least \$50 million to the Water Infrastructure Fund. The amendment also eliminated the prior constitutional limitation of 50 percent participation in any one project for TWDB's State Participation Program. However, both programs require appropriation to provide the legislatively directed incentives to be effective.

As illustrated throughout much of this state water plan, it is vital to ensure that water supplies and water-related infrastructure are both dependable and adequate during times of prolonged drought to sustain and promote future populations in Texas. To meet this challenge, Texas must continue to move from the planning stage toward project implementation.

11.1 How Water Supply Needs Fit Within the Universe of Water Development in Texas

The amount of money required to implement the 2007 State Water Plan is substantial, but it is only one component of the water supply picture. Many regional and state water plan water management strategies focus on “bringing water into the pipe” and to community water treatment plants, factories, farms, and other water users. Strategies focus on creating the water itself—but for the most part, they do not address other infrastructure and water management requirements, such as

- water transmission and distribution infrastructure within communities, including water mains, pump stations, and storage facilities within a city's system;
- wastewater treatment plants and collection infrastructure, including sewer mains and pipes that carry wastewater from our homes and businesses to wastewater treatment facilities; and
- flood control projects.

Table 11.1. Total capital costs for municipal water supply management strategies identified in the 2007 State Water Plan and financing needs by planning region (monetary figures reported in millions of dollars)

Region	Capital costs of municipal water supply strategies	Amount that planning groups reported as unable to finance	Percentage of total capital costs
A	378.42	5.41	1
B	143.08	1.18	1
C	13,086.64	708.81	5
D	32.58	5.06	16
E	688.86	0.35	<1
F	513.08	73.07	14
G	1,037.04	358.65	35
H	5,407.83	20.64	<1
I	523.15	389.73	74
J	14.37	5.66	39
K	249.38	5.63	2
L	5,216.66	484.65	9
M	734.82	1.54	<1
N	788.51	74.08	9
O	465.12	6.38	1
P	0.00	0.00	0
Texas	29,279.52	2,140.85	7

In order to give context to the investment required to implement the 2007 State Water Plan, it is necessary to present an estimate for all the water infrastructure-related costs for Texas. Current TWDB estimates indicate that Texas will need to invest approximately \$173.0 billion by 2060 to meet needs for water supply, water and wastewater infrastructure, and flood control. The nature of the costs that are not associated with the regional and state water plans' water management strategies and descriptions of the traditional funding mechanisms that are currently meeting those needs are discussed later in this chapter. Because these types of projects generally represent immediate regulatory compliance-related needs, there are existing state and federal financial assistance programs that are in place and funded to address them.

The 2007 State Water Plan recommends water management strategies that represent approximately

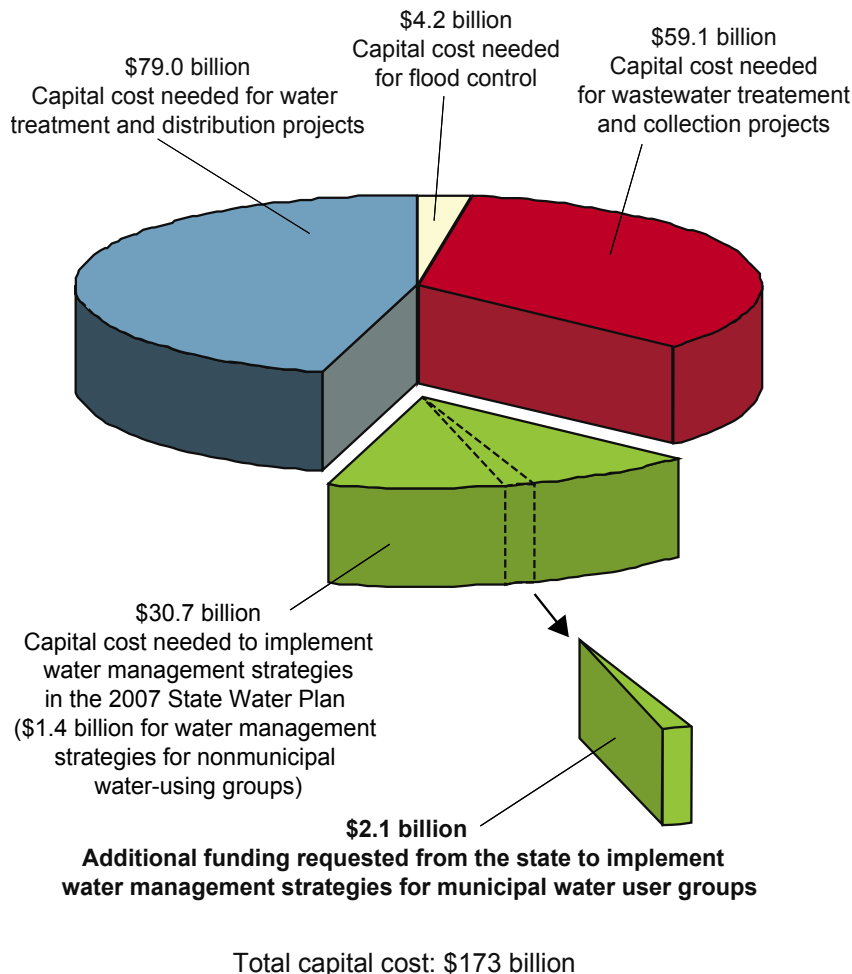


Figure 11.1. Total capital costs for water supplies, water treatment and distribution, wastewater treatment and collection, and flood control.

\$30.7 billion, or 18 percent, of this total need. The total amount identified by the planning groups as being needed in the form of additional state assistance is \$2.1 billion by 2060, or approximately 1.2 percent of the overall total (Figure 11.1). Knowing that these water management strategies represent such a small amount of the total funding needed for water-related infrastructure raises the questions of where these needs are and why they are not being addressed.

11.2 Costs of Water Supply Needs in the 2007 State Water Plan

As discussed in Chapter 10, cost estimates of water management strategies in the 2006 Regional Water Plans and this state water plan include both the direct costs of constructing facilities,

such as materials, labor, and equipment, and the indirect expenses associated with construction activities, such as costs for engineering studies, legal counsel, land acquisition, contingencies, environmental mitigation, interest during construction, and permitting fees. Capital costs do not include funds for internal distribution systems but only costs associated with getting a water supply to a system, which can include costs of treatment plants. Region C, Region H, and Region L have the highest capital costs to implement their 2006 Regional Water Plans, totaling \$23.9 billion. The costs associated with these planning areas account for about 78 percent of the total capital costs in the 2007 State Water Plan, and their populations reflect over 62 percent of the total projected population growth for the state by 2060.

The total capital costs of the 2007 State Water Plan, \$30.7 billion, are substantially higher than the \$17.9 billion in the 2002 State Water Plan.

There are several reasons for the large increase, including higher current and estimated future population growth, greater water demand projections associated with increased population growth, lower volumes of existing water supply than in the 2002 State Water Plan, and increased costs of construction materials and fuel.

11.3 Constraints Related to State Water Plan Implementation

The funding gaps for implementing recommended water management strategies need to be filled if Texas is to implement water-related infrastructure projects to address short-term needs by 2020. These needs represent costs based on existing economic and demographic factors as opposed to long-range estimates that are more subject to change. Factors contributing to the gap and the



need for additional state financial assistance include the following:

(1) *Increasing cost burdens on local water providers and governments*—Municipalities and other entities that provide water and wastewater services in Texas are now facing a more difficult financial future than they have in the past several decades. Over the years, reduced federal support for new capacity and rehabilitation of existing infrastructure is increasing the financial burden on local communities. This increase in responsibility is coming at a time when real interest rates are rising and sources of new water supplies are becoming increasingly scarce and expensive. Moreover, operating and maintenance costs have escalated in recent years due to rising energy costs that place an additional strain on the budgets of local utilities. Population growth also increases the financial burden on local governments for nonwater-related infrastructure, including new roads, schools, law enforcement, and other public service facilities. These services provide more apparent and highly publicized benefits and jobs for communities when compared to water and wastewater infrastructure projects. Delays in implementing water and wastewater infrastructure projects can result in increased costs and shorter time frames for project implementation. The delays also increase the risk that water supply projects will not provide for sufficient supplies when severe drought strikes again.

(2) *Timing issues of implementing large-scale water supply projects*—Without state assistance, many communities may not actively plan and build needed improvements. Under current legal and regulatory requirements, large-scale water supply projects often require up to 10 years for planning, permitting, designing, and constructing before water flows through the pipes. Often, local

project sponsors are reluctant to approve large capital expenditures for projects that will take many years to benefit the community.

(3) *Financial constraints in rural and/or economically disadvantaged communities*—Small, rural, and economically disadvantaged areas in Texas are particularly hard pressed to raise the necessary capital for water projects for a simple reason: the number of ratepayers in these communities is too small, and they lack sufficient income to pay the rate increases required to obtain traditional financing to improve or maintain existing water infrastructure to meet minimum regulatory requirements. These types of communities are far less likely to be able to implement water management strategies that will ensure their water supplies are dependable enough to withstand drought.

11.4 Potential Solutions to Provide Additional State Assistance for Implementation of the 2007 State Water Plan Water Management Strategies

Two TWDB financial assistance programs, the State Participation Program and the Water Infrastructure Fund, could be used to assist with funding the \$1.7 billion identified by the planning groups as needed to implement their water management strategies through 2020. The following sections describe the amount of additional appropriations needed and the amounts and types of financial assistance that could be provided.





11.4.1 Funding for Optimum Regional Water Supply Projects Using TWDB's State Participation Program

When TWDB was created in 1957 in response to the drought of the 1950s, a constitutional amendment was passed authorizing the issuance of general obligation bonds for water development purposes. This constitutional amendment was passed by both the legislature and the voters of Texas and gave TWDB the authority to use the State Participation Fund for projects, including the de-

sign, acquisition, lease, construction, reconstruction, development, or enlargement in whole or part of any existing or proposed project. In the 1960s and 1970s, many reservoirs were constructed with partial funding assistance from this authorization, including Toledo Bend Reservoir and Lake Conroe. In 1985, legislative amendments to the State Participation Program, further clarified that projects eligible for funding specifically include: reservoirs and storm water retention basins for water supply; flood protection; groundwater recharge; transmission and water treatment facilities; and treatment works.

In an effort to begin funding state water plan water management strategies, in 1997 and 1999, the legislature appropriated funds for debt service payments to support \$50 million each biennium in State Participation Bonds. In 2001, the legislature reduced the amount by \$15 million to \$35 million. However, TWDB only issued \$20 million of the 2001 authorization before the remaining amount was cancelled by the legislature in 2003. The funds TWDB issued have been invested in regional projects, mostly water supply projects.

The State Participation Program enables the state, through TWDB, to assume temporary ownership of regional projects when local sponsors are unable to assume debt for an optimally sized facility that provides financial savings and ensures the project is available to meet existing and future



needs. Building projects that will ultimately meet future needs takes advantage of economies of scale and costs savings by eliminating redundant expenses and ensures that the project is available when the need for the project occurs. TWDB rules limit the use of the State Participation Program to the portion of a project that exceeds the existing needs of a population and is repaid as the excess capacity is needed.

A unique attribute of the State Participation Program is that appropriations are in the form of an investment in facilities. Ultimately, every dollar invested will return to the State Participation Fund and be available to assist future projects.

11.4.2 Funding for Regional Water Supply Projects Using TWDB's Water Infrastructure Fund Program

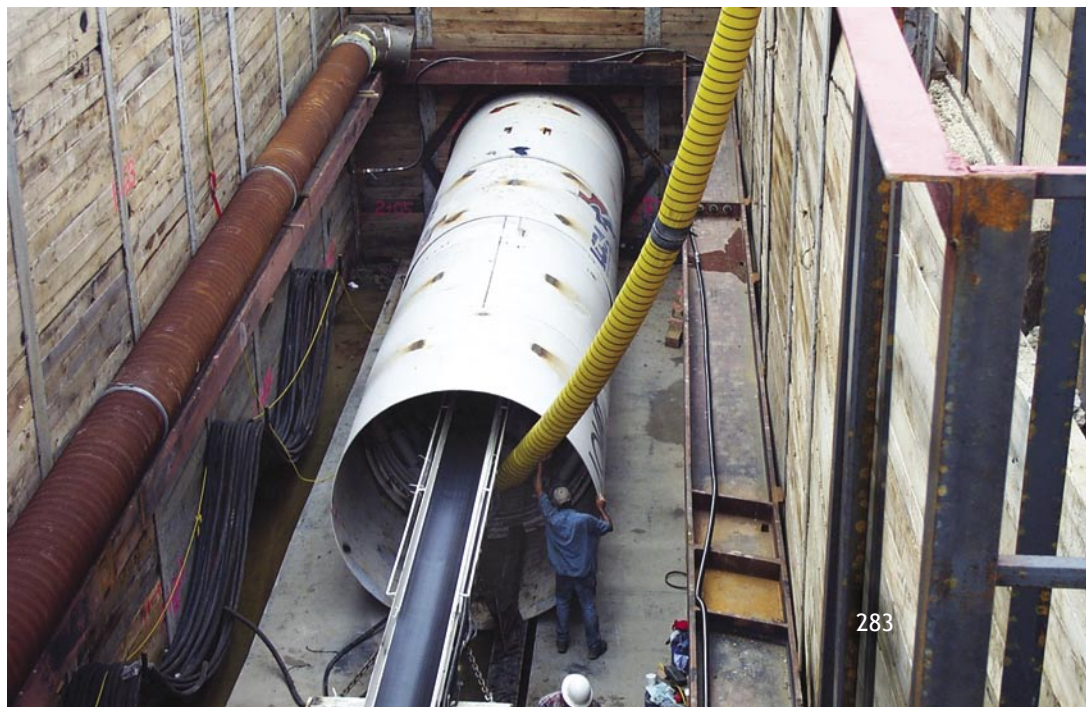
As previously stated, in 2001 the legislature created the Water Infrastructure Fund and set aside \$50 million in bond authorization in anticipation of providing financial assistance for implementing the 2002 State Water Plan. However, appropriations have not been made to the Water Infrastructure Fund. As a result, the program can not assist in successfully implementing the regional and state water plans' water management strategies.

The Water Infrastructure Fund can provide funding for the current and future capacity of water management strategies through low interest rate loans, zero interest loans, and grants. Funding can be used for preconstruction activities with deferred payments on low interest loans, as well as for low interest loans and grants to rural and disadvantaged communities. In addition, the fund can provide financial assistance to a single regional sponsor on behalf of multiple users of the facilities, accommodating the users' different levels of need and timing of need for the facility, which can span multiple decades. For instance, a water conveyance designed to serve a major city that needs water by 2020 could be sized so that a percentage of its capacity would be available



to several rural and disadvantaged communities along its route that do not need water until 2040. A key advantage of the Water Infrastructure Fund is that financial assistance can be provided for up-front development costs of projects (permitting and design costs), and repayment doesn't begin until the project is constructed and operating. However, repayment must begin within 10 years from the date of the financial assistance.

The Water Infrastructure Fund requires appropriations to subsidize or defer loan repayments and to provide grants. This investment in dollars by the state is ultimately recovered by the additional economic activity generated by starting construction on currently delayed projects. It is also recovered through the savings obtained by constructing regional projects that benefit multiple local entities through economies of scale in construction and operations.



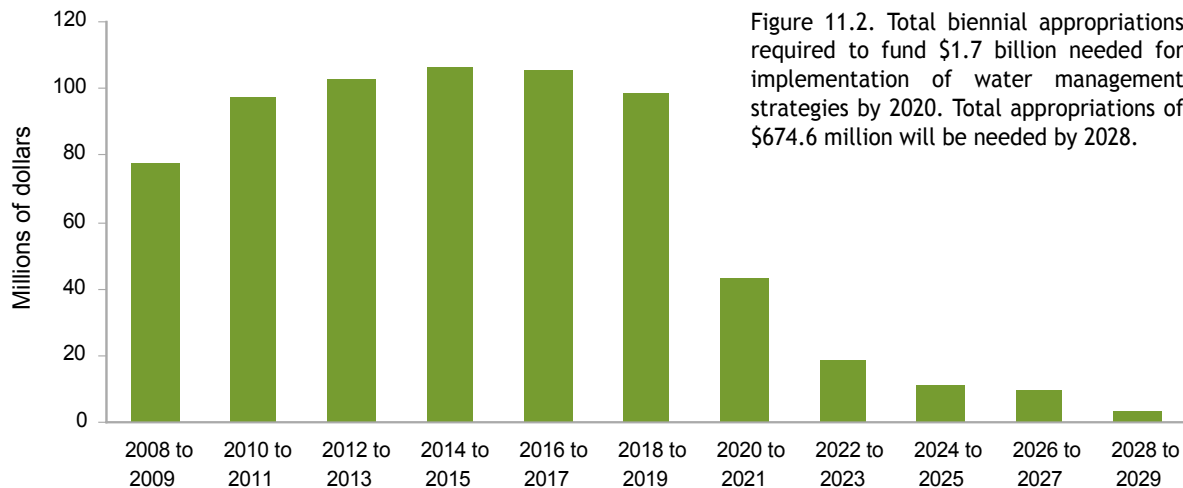


Figure 11.2. Total biennial appropriations required to fund \$1.7 billion needed for implementation of water management strategies by 2020. Total appropriations of \$674.6 million will be needed by 2028.

11.4.3 Using TWDB Programs to Provide the State Assistance Needed to Implement the 2007 State Water Plan

TWDB has calculated the amount of appropriations needed to provide \$1.7 billion in state financial assistance through the State Participation Program and the Water Infrastructure Fund (Tables 11.2 and 11.3). The calculation assumes that the majority of appropriations would be required through 2020 and could be used to augment debt service payments on state bonds issued to fund the two programs (Figure 11.2). The bond proceeds could be invested, loaned, or granted to entities to implement water management strategies. Appropriating \$211.8 million to the State Participation Fund would allow TWDB to invest in \$726.7 million in state water plan water management strategies (Figures 11.3 and 11.4). Appropriating \$462.8 million to the Water Infrastructure Fund would support grants and loans, including loans with deferrals totaling \$969.3 million. Additional appropriations would be needed through 2021 to support full repayment of State Participation Program debt service and through 2028 to support full repayment of debt service associated with Water Infrastructure Fund assistance. (Figure 11.5). Appropriations needed to finance the \$1.7 billion in capital costs for water management strategies needed by 2020 total 674.6 million between 2008 and 2028.

The following paragraphs describe the amount of assistance and associated appropriations for two special categories of water supply need: economically disadvantaged communities and rural communities. The amounts discussed below are a

subset of the total \$1.7 billion needed for water management strategies between 2008 and 2020.

The legislature has recognized that there are areas of the state with economic circumstances preventing them from generating sufficient revenues to support or improve existing water infrastructure. TWDB analyzed regional water planning data for municipal water user groups and determined which groups currently meet the statutory criteria for receiving assistance for disadvantaged areas. During the 2008-2009 biennium, \$27.9 million is estimated to be needed to implement water management strategies in economically disadvantaged communities. This would require an appropriation of \$3.4 million for the 2008-2009 biennium, with a total appropriation need of \$30.9 million from 2008 through 2020.

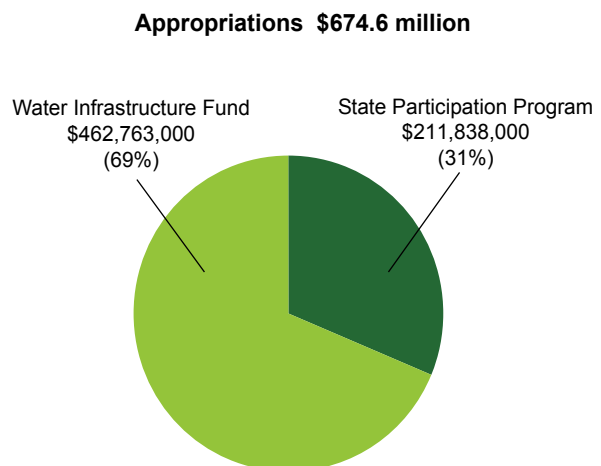


Figure 11.3. Total appropriations needed for the Water Infrastructure Fund and State Participation Program.

Table 11.2. Total recommended funding for municipal water supply projects identified in the 2007 State Water Plan (monetary figures reported in millions of dollars)

Fiscal year	2008	2009	Biennium totals	2010-2020	Total (2008-2020)
Funding for project implementation					
Loans and payment deferrals for construction for excess project capacity (State Participation Program)	158.0	158.0	316.0	410.7	726.7
Loans and payment deferrals for construction of nonexcess capacity and support for design and permitting costs and loans for projects that do not meet criteria of the State Participation Program (Water Infrastructure Fund)	352.9	214.0	566.9	355.7	922.6
Grants for economically distressed areas (Water Infrastructure Fund)	9.8	18.1	27.9	0	27.9
Grants and loans for projects in rural areas (Water Infrastructure Fund)	6.6	12.2	18.8	0	18.8
Total	527.3	402.3	929.6	766.4	1,696.0

Table 11.3. Total recommended appropriations for municipal water supply projects identified in the 2007 State Water Plan (monetary figures reported in millions of dollars)

Fiscal year	2008	2009	Biennium totals	2010-2020	Total (2008-2020)	2021-2028	Grand Total
Projected appropriations							
Loans and payment deferrals for construction for excess project capacity (State Participation Program)	8.1	16.2	24.3	183.1	207.4	4.5	211.9
Loans and payment deferrals for construction of nonexcess capacity and support for design and permitting costs and loans for projects that do not meet criteria of the State Participation Program (Water Infrastructure Fund)	23.2	24.9	48.1	315.6	363.7	27.0	390.7
Grants for economically distressed areas (Water Infrastructure Fund)	0.9	2.5	3.4	27.5	30.9	19.1	50.0
Grants and loans for projects in rural areas (Water Infrastructure Fund)	0.6	1.4	2.0	11.9	13.9	8.1	22.0
Total	32.8	45.0	77.8	538.1	615.9	58.7	674.6



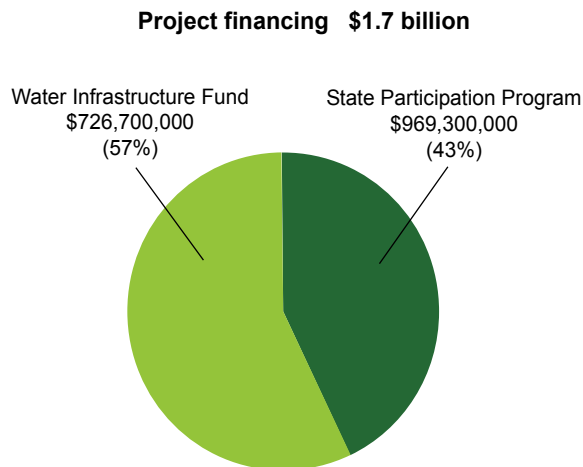


Figure 11.4. Total project financing needed from the Water Infrastructure Fund and State Participation Program.

In calculating funding needs for rural communities, they were defined as having populations less than 10,000 and located in counties not part of a metropolitan statistical area. TWDB identified which recommended water management strategies would meet the needs of rural communities. Based on certain assumptions, TWDB then estimated financial assistance needed from the state to be 25 percent of the costs of these water man-

agement strategies. The estimated costs associated with rural communities equal \$18.8 million in the 2008-2009 biennium. To provide this assistance, \$1.9 million in legislative appropriations is needed during the 2008-2009 biennium and \$13.8 million in appropriations is required to finance debt service on bonds issued for these grants and loans between fiscal years 2008 and 2020.

11.4.4 Water-Related Infrastructure Funding Through Private Activity Bonds

In addition to the Water Infrastructure Fund and the State Participation Program, other financing mechanisms will be required to implement the 2006 Regional Water Plan and this state water plan. The 78th Legislature recognized the need to access private resources when it passed Senate Bill 1664 in 2003, authorizing TWDB to reserve up to \$100 million of the available state ceiling for the issuance of private activity bonds to fund water development projects. It is likely that private investment will occur to develop and preserve water supply sources as a part of implementing water supply management strategies. Greater access to private capital may be another key funding source to fill the gaps that exist in the traditional financing mechanisms that have delayed implementation of water supply strategies in the past.

11.5 Water-Related Infrastructure Funding Needs and Traditional Financing Mechanisms

Water and wastewater providers in the state finance water projects primarily through municipal debt via the open bond market or through state bond programs, such as those administered by TWDB. Some water and wastewater providers, such as privately owned water systems or water supply corporations, may use cash or private equity sources such as banks. While there is no easy way of tracking how many projects are funded with cash or private equity, the percentage is very low given the large capital requirements for many water projects. Most projects are financed through municipal debt by water utilities and regional water providers that are political subdivisions of the state and can access tax-exempt debt. In Texas, funding through municipal bonds for water projects on the open market totaled \$19.7



Total appropriations for the State Participation Program and Water Infrastructure Fund

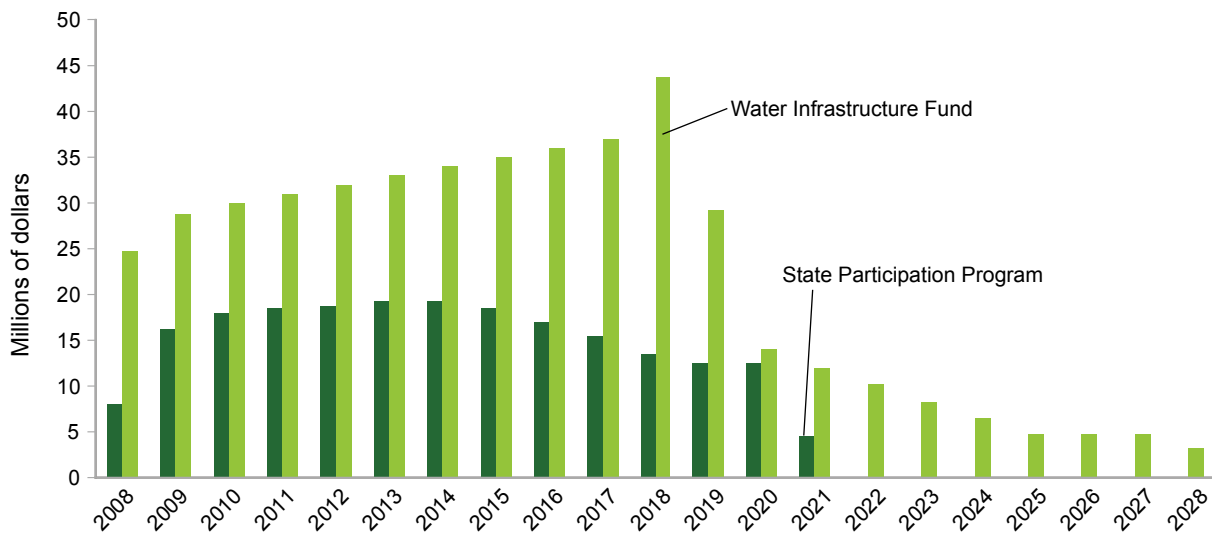


Figure 11.5. Annual appropriations for the Water Infrastructure Fund and State Participation Program. Total appropriations of \$674.6 million will be needed by 2028.

billion from 1997 to 2006—about \$2.1 billion per year (Figure 11.6). Over approximately the next 20 years, total municipal bond financing for water and wastewater in Texas will continue to parallel historical data and run about \$2.2 billion per year, based on the needs identified in the Clean Water and Drinking Water Needs Surveys.

Many political subdivisions in the state obtain financing through one of TWDB’s financing programs. Since 1959, TWDB has funded over \$9.3 billion of water and wastewater projects, and \$3.6 billion of that amount has been from 1997 through 2006. Traditional funding programs will continue to assist with financing implementation of water management strategies and other projects. Each year in Texas, about \$2.6 billion is invested in water-related infrastructure, ranging from projects to serve immediate needs to long-term water supply projects included in the state water plans. TWDB makes over \$550 million per year in state assistance available as loans and grants through several programs designed primarily to address water and sewer projects to meet basic needs and regulatory requirements. The largest programs benefit from federal grant funds that must be used for projects addressing regulatory mandates. Of the \$2.6 billion total, about \$2.1 billion per year is invested by project sponsors through the issuance of municipal debt using public financial markets. This debt is repaid by the users of the systems for which the infrastructure is built. Other federal agencies administer less than

\$100 million per year in financial assistance for agricultural, rural, and disadvantaged community projects through grant and low interest loans.

While many of the existing local, state, and federal financing programs are able to fund connection to a future water supply or the resulting wastewater treatment facility need, most cannot fund all of the costs of infrastructure and permitting associated with implementing the state water plan’s water management strategies. The existing programs have demands that currently exceed their annual funding levels. In recent years, budget cuts at both the state and federal levels have especially reduced funding for disadvantaged communities. The following subsections describe traditional financing mechanism and their associated needs.



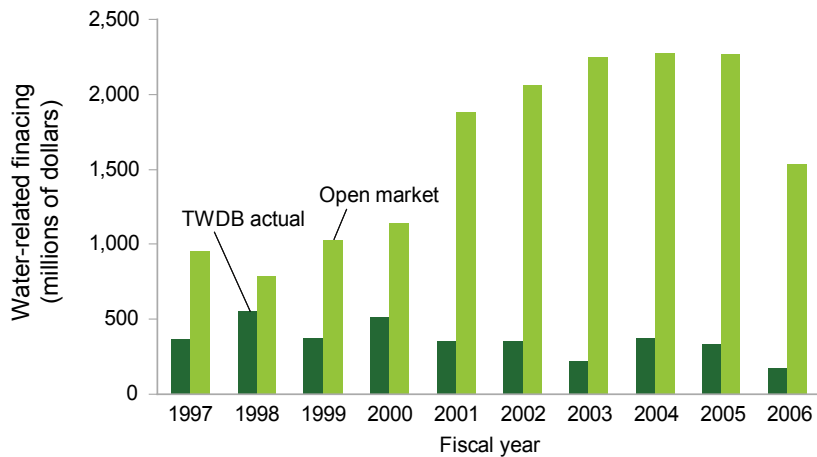


Figure 11.6. Water-related financing provided by TWDB and the open municipal bond market from 1997-2006 (source: Texas Bond Review Board, Municipal Advisory Council, and the TWDB).

11.5.1 Costs of Water and Wastewater Treatment, Distribution, and Collection

Upgrading and rehabilitating water and wastewater distribution and treatment systems represents a major capital investment. Using estimates from the most recent U.S. Environmental Protection Agency Drinking Water Needs Survey and Clean Water Needs Survey, Texas will need to invest over \$25.1 billion on water and wastewater infrastructure between 2010 and 2020 to comply with requirements of the Clean Water Act, Safe Drinking Water Act, and other state and federal regulations. These costs are in addition to capital cost estimates to implement water management strategies in the 2007 State Water Plan and include expenses associated with infrastructure for transmission and distribution within cities and communities, wastewater collection or treatment, and flood control. Over time, the integrity of water distribution

lines can be compromised due to natural settling of the land surface, pressure surges, disturbance from construction, subsidence, or natural causes such as frost penetration, tree roots, or seismic activity. In addition, escalating demands on systems resulting from population growth can stress distribution infrastructure. Communities often have to upgrade and rehabilitate water treatment plants as populations grow and regulatory requirements change. An example of regulatory change is the U.S. Environmental Protection Agency's more stringent drinking water standards adopted in 2002 to reduce health risks. In response to these standards, water providers in many communities must increase water treatment levels.

The same holds true for wastewater systems. As wastewater infrastructure ages, rehabilitating wastewater collection systems is becoming increasingly critical. Cracks, settling, tree root intrusion, and other disturbances through time deteriorate pipelines and other wastewater convey-



ance structures. Leaking, overflowing, and faulty wastewater collection infrastructure can release untreated wastewater into aquifers, streams, and rivers. Outdated and undersized pump stations carrying sewage from newly developed subdivisions or commercial areas can also create a potential overflow hazard, adversely affecting human health and degrading the water quality of receiving waters.

11.5.2 Costs of Flood Control

Flood control infrastructure is another area that will place additional financial burdens on many communities in Texas. Like other water-related infrastructure, flood control is a capital-intensive endeavor requiring extensive planning, permitting, and construction activities. Based on data provided by the U.S. Army Corps of Engineers Southwestern Division, \$4.2 billion in potential expenditures are required through 2060 for projects with current U.S. Army Corps of Engineers' authorization. This estimate does not include projects that local flood control and drainage districts may sponsor, nor does it include projects in watersheds where U.S. Army Corps of Engineers feasibility studies have not been conducted. Of the watersheds in Texas that have been studied by the U.S. Army Corps of Engineers, it is estimated that expenditures for flood control projects will total about \$1.0 billion between 2007 and 2020.

11.5.3 Financing Water and Wastewater Treatment and Internal Distribution Needs in Disadvantaged Areas

Currently, many communities in Texas lack adequate water treatment and distribution infrastructure as well as wastewater treatment and collection infrastructure, regardless of weather conditions or available water supply. Economically disadvantaged communities lack the financial and institutional resources to fund water and wastewater projects. As noted earlier in this chapter, the bond market, including TWDB bond issues, is largely adequate for addressing financing needs for water and wastewater infrastructure in most communities throughout the state. However, appropriations for funding economically disadvantaged communities are needed to meet their immediate needs beyond the water management strategies in the 2006 Regional Water Plans and this state water plan.



11.5.4 Overview of Water-Related Project Financing for Disadvantaged Communities

In 1989, the Texas Legislature directed TWDB to create and implement the Economically Distressed Areas Program. The program was created to provide financial assistance to economically distressed areas within affected counties that did not have adequate water and/or wastewater service. Affected counties were those located adjacent to an international border or those meeting economic criteria based on per capita income and unemployment levels. While 14 border counties remained eligible each year, the county economic criteria was required to be evaluated annually. As a result, counties fall in and out of eligibility from

year to year. The impact of the annual assessment of eligible counties is illustrated by the fluctuation in the number of nonborder counties, ranging from a high of 37 to a low of 17 counties in addition to the constant 14 border counties.

Economically Distressed Areas Program financial assistance is provided in the form of grants, loans, or combinations of grants and loans. Total funding authorized for the program to date is \$579 million, consisting of \$279 million in state funds and \$300 million in federal funds. The majority of the state funding was provided by bond authority for \$250 million in State of Texas bonds. As of May 31, 2006, the Economically Distressed Areas Program funded 84 projects in 22 counties and totaled more than \$500 million in financial assistance. Approximately 265,000 residents previously without adequate service either have or will have water and/or wastewater service directly because of these projects. An additional \$4.1 million in planning grants was also provided through the program, resulting in an additional 30,000 residents receiving service upon design and construction of the projects identified in facility planning.

In 2005, the 79th Texas Legislature passed legislation that changed the economic eligibility criteria from the county level to a project level. As of September 1, 2005, the definition of an affected county was changed to any county that has an economically distressed area with a median household income not greater than 75 percent of the median state household income. While this change expanded the program to include areas previously ineligible, the legislature did not appropriate funds to expand the Economically Distressed Areas Program.

11.5.5 Statewide Economically Distressed Areas Funding Needs

TWDB has conducted a series of studies to identify water and wastewater needs of disadvantaged communities in counties eligible for the Economically Distressed Areas Program. The latest study, *Assessment of Water and Wastewater Facility Needs for EDAP Counties*, published in 2003, specifically covered the 42 counties that were eligible for Economically Distressed Areas Program funding in fiscal year 2002 and identified approximately \$885 million in water and wastewater needs. A 2001 study, *Water and Wastewater Needs of Non-EDAP Eligible Disadvantaged Areas*, surveyed officials in counties not eligible for the Economically Distressed Areas Program at that time on information about disadvantaged communities in their counties. The study identified \$4.5 billion in water and wastewater infrastructure needs for these communities.

Cost estimates in both studies represent immediate infrastructure needs, ranging from first time facilities to upgrades of inadequate systems. Based on these studies, total statewide needs in disadvantaged areas is estimated to be \$5.4 billion, of which \$2.6 billion is for water treatment and distribution and \$2.8 billion is for wastewater infrastructure.

Remaining funds in the Economically Distressed Areas Program are targeted for pending projects and cost increases for existing projects. The original \$250 million bond authorization has been expended and requires authority to issue \$55.4 million in additional bonds for the recently expanded Economically Disadvantaged Areas Program.

