State Funding for Water Programs
Legislative Primer

SUBMITTED TO THE 82ND TEXAS LEGISLATURE **JANUARY 2011**

LEGISLATIVE BUDGET BOARD STAFF **SECOND EDITION**

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STATE FUNDING FOR WATER PROGRAMS LEGISLATIVE PRIMER

INTRODUCTION

The purpose of this primer is to provide information regarding the major water use issues in the State of Texas and state funding for water programs. The primer is divided into the following sections:

1. A high-level overview of the demand for water in Texas;
2. A summary of water rights issues, including groundwater and surface water rights, and the privatization of water rights;
3. A discussion of the regional planning approach that is used to develop the State Water Plan and of the water management strategies used to implement the State Water Plan;
4. Program descriptions and funding for the financial assistance programs for water infrastructure projects provided by the Texas Water Development Board (TWDB);
5. A summary of potential additional dedicated funding sources for water programs, including revenue options; and
6. Three appendices: Appendix A, which contains a map of the proposed reservoir sites included in the 2007 State Water Plan; Appendix B, which provides greater details regarding the TWDB's major financial assistance programs (funding sources, interest rates and loan terms, eligibility restrictions, etc.); and Appendix C, which lists TCEQ fees for water programs and actual receipts in fiscal year 2009.

HIGH-LEVEL OVERVIEW OF WATER DEMAND IN TEXAS

According to the 2007 State Water Plan, the population of Texas is increasing and is expected to continue to grow from 20.9 million residents in 2000 to an estimated 45.6 million residents in 2060. This growing population puts additional demands on a limited water supply. For example, in 2000, state consumption was approximately 17.0 million acre-feet of water per year; however, estimates reported in the 2007 State Water Plan show that 21.6 million acre-feet of water per year will be required to meet the state's demands by 2060. As reported in the 2007 State Water Plan, by 2060 the available water supply will be 14.6 million acre-feet of water per year, falling short of the state's demands by 8.8 million acre-feet of water per year.

The negative effects of not addressing this additional need would be considerable, with the TWDB estimating that in 2060 there would be losses of $98.4 billion in regional income; $5.4 billion in state and local taxes; 1.2 million jobs; and 1.8 million in population.

Figure 1 shows data from the 2007 State Water Plan, comparing the population estimates in 10-year increments from 2000 to 2060 and the estimated water demand, existing water supply, and projected needs.

In determining projected water needs, the Water Development Board includes the following types of primary water uses/consumption: municipal, manufacturing, mining, steam-electric, livestock, and irrigation. The 2007 State Water Plan reports that in 2010, demands by the two primary types of uses—municipal and irrigation—will be 26.1 percent and 56.5 percent of the total demand, respectively.

FIGURE 1
WATER DEMAND, SUPPLIES AND NEEDS (ACRE-FEET IN MILLIONS) 2000–2060

	2000	2010	2020	2030	2040	2050	2060
Population (in millions)	20.9	24.9	29.1	33.1	36.9	41.1	45.6
Water Demand	17.0	18.3	19.0	19.6	20.1	20.8	21.6
Existing Supply	-	17.9	16.9	16.1	15.4	15.0	14.6
Projected Needs	-	3.7	4.9	5.9	6.9	7.8	8.8

NOTE: Total needs are the summation of differences between local demand and supply, and not all local supplies can be used to meet the needs of other areas. As a result, projected needs (acre-feet of water) exceed the difference between demand and supply.
SOURCE: 2007 State Water Plan, Texas Water Development Board.

STATE AGENCIES WITH WATER RESPONSIBILITIES AND PROGRAMS

There are four agencies that have primary responsibility for water issues in Texas: TWDB; Texas Commission on Environmental Quality (TCEQ); Texas Parks and Wildlife Department (TPWD); and, the Texas State Soil and Water Conservation Board (TSSWCB).

TEXAS WATER DEVELOPMENT BOARD

TWDB is the agency that is involved most closely with water issues in Texas and focuses on data collection, planning, and financing of water programs. TWDB is instrumental in collecting and disseminating surface water and groundwater data throughout the state and plays an integral role in the regional water planning process. The programs operated by TWDB are focused on the development, delivery, and treatment of water and wastewater through their numerous financial assistance programs (see **Appendix B**).

SOIL AND WATER CONSERVATION BOARD

TSSWCB has programs that address both the quality and quantity of the water supply. The goal of the Water Supply Enhancement Program, also known as the Brush Control Program, is to increase the amount of surface water and groundwater by removing certain water-depleting species of brush from specific watersheds. TSSWCB also administers a portion of the statewide Nonpoint Source Management Program, the Water Quality Management Program, and the Total Maximum Daily Load (TMDL) Program, which focus on water quality. The Nonpoint Source Management Program prevents and abates nonpoint source pollution caused by runoff from agricultural and silvicultural[1] uses. TSSWCB operates the Water Quality Management Program by working with landowners to implement a site-specific plan to achieve the appropriate level of pollution prevention or abatement. Through the TMDL program, TSSWCB works with TCEQ to conduct assessments on various stream segments throughout the state to determine the level of pollutants that can exist within the stream without compromising human and wildlife health and safety.

TEXAS PARKS AND WILDLIFE DEPARTMENT

TPWD is the state agency responsible for protection of the state's fish and wildlife resources and exercises that responsibility through the review, assessment, and response to water resource management issues affecting aquatic ecosystems. These activities include, but are not limited to, the formulation of TPWD recommendations to minimize or avoid impacts on fish and wildlife resources resulting from water projects. Participation in water permitting and planning activities ensures that the needs of fish and wildlife resources are considered. TPWD works with regional and state water planning stakeholders and works with regulatory agencies in an advisory capacity to protect and enhance water quality and to ensure adequate instream flows for rivers and freshwater inflows for bays and estuaries. Finally, Senate Bill 3, Eightieth Legislature, 2007, requires TPWD to provide technical support to the environmental flows process and to participate in the Texas Water Conservation Advisory Council and the Edwards Aquifer Recovery Implementation Process.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

TCEQ focuses on water quality and quantity programs through various state and federal programs[2]. The agency issues permits for the treatment and discharge of industrial and domestic wastewater and storm water, including discharges from Concentrated Animal Feeding Operations (CAFO). In addition, the agency reviews completed plans and specifications for public water systems and ensures that safe drinking water is provided. TCEQ also conducts assessments of surface water and groundwater quality, which include ensuring that public drinking water systems meet certain standards. TCEQ also conducts TMDL assessments in conjunction with TSSWCB to determine the level of pollutants that can exist within the stream without compromising human and wildlife health and safety. TCEQ also regulates water and sewer utilities, reviewing rate increases by investor-owned water and sewer utilities as well as administering a portion of the Nonpoint Source Management Program which prevents and abates nonpoint source pollution caused by runoff from urban and commercial development uses.

In addition, TCEQ administers a surface water rights permitting program and a dam safety program; delineates and designates Priority Groundwater Management Areas (PGMAs); creates groundwater conservation districts (GCDs) in response to landowner petitions or through the PGMA process; and enforces requirements of GCD management planning.

[1]Refers to timber and/or forests.

[2]Legislative appropriations to TCEQ also include funding for Texas' participation in the five interstate compacts that apportion river and stream waters flowing through Texas and other states. These compacts are the Canadian River Compact, the Pecos River Compact, the Red River Compact, the Rio Grande Compact, and the Sabine River Compact. TCEQ also provides the Compact Commissioners with administrative support.

Much of the funding for the state's water programs currently is derived from General Revenue Funds, General Revenue–Dedicated Funds, and bond proceeds. **Figure 2** shows the 2010–11 General Revenue Funds, General Revenue–Dedicated Funds, and bond proceeds expended and budgeted amounts for each agency's water programs. A large portion of the state's water programs at TCEQ is funded by fees deposited to the Water Resource Management Account No. 153 (General Revenue–Dedicated Funds). TCEQ was facing a revenue shortage in the Water Resource Management Account No. 153 going into the 2010–11 biennium. TCEQ adopted a rule package in July of 2009 that allowed the agency to increase the Public Health Service Fee, Consolidated Water Quality Fee and Water Use Fee Rates. The adopted rates enabled TCEQ to generate approximately $30 million in additional revenue above 2009 amounts, which allowed the agency to prevent a potential revenue shortfall for the 2010–11 biennium of $28.9 million.

WATER RIGHTS IN TEXAS

Water rights in Texas are generally divided into three types: surface water, diffused surface water, and groundwater. Surface water contained in a defined watercourse is owned by the state and subject to state permitting requirements. Diffused surface water, or surface water not contained in or not derived from a defined water course, and groundwater are generally attached to land and subject to ownership by the landowner. The way in which surface water has been allocated and groundwater rights granted to land owners has evolved over the years as competing interests vie for a limited resource.

SURFACE WATER RIGHTS

According to TWDB, water rights regulation goes back to the 1600s, with Spain, and then Mexico, granting rights for water in what is now Texas. When Texas became a Republic, then a state, English common law was adopted. The English common law provided for riparian water rights, or the right for those owning land bordering streams to use that water. By the mid-1880s, the Texas Legislature began to appropriate

FIGURE 2
STATE FUNDING FOR WATER PROGRAMS

AGENCY / ACCOUNT	2010	2011	2010–11 BIENNIUM
Texas Commission on Environmental Quality			
General Revenue	$9,611,517	$9,930,136	$19,541,653
General Revenue–Dedicated Account No. 153	$53,269,452	$52,494,735	$105,764,187
General Revenue–Dedicated Account No. 158	$1,186,649	$1,545,250	$2,731,899
Texas Water Development Board			
General Revenue	$26,178,058	$28,557,448	$54,735,506
Debt Service Payments for Non-Self-Supporting General Obligation (GO) Water Bonds			
General Revenue	$56,104,409	$80,856,195	$136,960,604
Non-self Supporting GO Water Bonds			
Bond Proceeds	$339,508,859	$443,276,141	$782,785,000
Texas State Soil and Water Conservation Board			
General Revenue	$9,725,149	$9,724,971	$19,450,120
TOTAL			
General Revenue	$101,619,133	$129,068,750	$230,687,883
General Revenue–Dedicated Account No. 153	$53,269,452	$52,494,735	$105,764,187
General Revenue–Dedicated Account No. 158	$1,186,649	$1,545,250	$2,731,899
Bond Proceeds	$339,508,859	$443,276,141	$782,785,000
TOTAL	**$495,584,093**	**$626,384,876**	**$1,121,968,969**

SOURCES: Texas Commission on Environmental Quality; Texas Water Development Board; Texas State Soil and Water Conservation Board.

water. Thus, lands patented from the state after July 1, 1895 did not include riparian rights; instead the system of prior appropriations was established. This new system required those seeking rights to the state's surface waters to seek permission from the state to use the water. Those receiving permission the earliest held rights with greater priority than those gaining rights later—first in time, first in right. The state, however, continued to honor the riparian rights of those owning land prior to 1895.

By the 1950s, claimed water rights exceeded available water supply in the Rio Grande, and honoring both riparian and appropriated water rights became difficult. The State of Texas sued to review or adjudicate water rights in the Rio Grande, and the courts created the Rio Grande Watermaster. Subsequently, in 1967, the Texas Legislature enacted the Water Rights Adjudication Act, merging the riparian and appropriations systems together. All those holding riparian rights (other than for domestic use and livestock watering) were required to file a claim to the right with the Texas Water Rights Commission (a predecessor to TCEQ) by 1969. Both riparian and appropriated water rights claims were reviewed, and water rights were granted through certificates of adjudication. Thus, the state's water rights permitting system was established. Water Code, Section 11.134, provides that TCEQ may grant an application for a surface water rights permit if:

- there exists unappropriated water at the source of supply;
- the water will be beneficially used;
- the water will not impair another's water right or be detrimental to the public welfare; and
- the applicant proves he/she will avoid waste and achieve water conservation.

TCEQ also assesses the effects of the permit on freshwater inflows to bays and estuaries, existing stream uses, water quality, and fish and wildlife habitats. In order to be exempt, the reservoir must have a normal storage capacity of not more than 200 acre-feet of water, be located on a person's own property, and be used for domestic and livestock purposes.

Surface rights are granted under two types: *perpetual rights* and *limited-terms rights*. For perpetual rights, there generally exists an assigned priority date, which determines the permit holder's priority for available water. Regardless of the priority date, whenever there is less water than needed to satisfy all water rights in a basin, domestic and livestock users have priority over all other users. The Lower Rio Grande Basin is the only exception to the priority by date of first right. This area, which includes Falcon and Amistad Reservoirs, has a system which provides priority to domestic, municipal, and industrial users before irrigation rights are fulfilled. A water right permit in Texas generally provides a user with a specified volume of water that can be used, a place of use, and a diversion rate, if there is a diversion of water, and can include the ability to impound water. Limited-terms rights are generally for a short period of time and can restrict the time of year that water can be used and may impose other special conditions, such as the permit shall expire after a specified term of years, unless the owner applies for and is granted a new term permit. Term permits are generally issued when all of the water available for appropriation in an area has been permitted, but the permittees are not using the full amount of their permitted water. Term permits allow other users to beneficially use that amount of water until the permittee demonstrates full use of their permitted rights.

Surface water rights are considered a property right and, as such, can be bought, sold, or leased. Surface water rights may be cancelled by the TCEQ for non-use after 10 years under provisions specified in the Water Code, Chapter 11, Subchapter E.

DEDICATED FUNDING SOURCES – SURFACE WATER RIGHTS

Based on current law, surface water rights-holders pay the Water Use Permit (WUP) Application Fee, only when the right is first obtained or the water right is amended. The WUP includes filing and recording fees ranging from $100 to $2,000, depending on the amount of water rights being granted, as well as a per acre-foot fee depending on the use—$0.50 per acre-foot for irrigation or storage in a reservoir (except storage for recreational use) and $1 per acre-foot for other uses. When a water right is transferred to another owner, there is a one-time fee of $100. TCEQ reports collections of $87,600 collected in fiscal year 2010 in WUP revenue.

Certain water rights-holders also pay an annual Water Use Fee (WUF) based on the number of acre-feet of water rights permitted (not the actual amount used) in a given year for consumptive use, or non-consumptive use. Entities paying the Consolidated Water Quality (CWQ) fee, which is assessed annually on individual wastewater permit holders and supports TCEQ water activities, and

holding a municipal or industrial water right, are exempt from the WUF fee under Texas Water Code 26.0291, if the use under the water right is directly associated with an entity paying the CWQ fee. Agricultural use and hydroelectric facilities with less than 2-megawatt capacity are exempt from this fee. During the 2010–11 biennium, about $950,000 per fiscal year is expected to be collected from WUF fees. Spending for water quality purposes, which encompasses most of the water-related expenditures at TCEQ, is an eligible statutory use of WUF fees. The fee schedule for the WUF is based on whether the use of water is considered consumptive (e.g., for domestic and municipal, industrial, agricultural, or mining purposes), or nonconsumptive (e.g., hydroelectric power, navigation, non-consumptive recreation). WUF fees are based on the number of acre-feet of water rights held. For example, for a consumptive use, the fee is $0.385 per acre-foot.

Water rights holders in designated Watermaster divisions (Rio Grande, Concho River, and South Texas Watermaster programs) also pay an annual Watermaster fee based on the number of acre-feet of water rights permitted (not the actual amount used) in a given year (see below). This fee is to fund the watermaster program in these areas.

WUF and WUP revenues do not cover the costs TCEQ incurs in administering the water rights program (i.e., approximately $2.4 million per fiscal year in the 2010–11 biennium). The water use permit application fee and the water user permit fee are deposited to the General Revenue–Dedicated Funds, Water Resource Management Account No. 153, except for those fees collected in the Watermaster Areas (see Watermaster Areas below), which are deposited to the General Revenue–Dedicated Funds, Watermaster Administration Account No. 158.

WATERMASTER AREAS

There are three areas in Texas where surface water rights are tightly controlled and accounted for on a daily basis by a Watermaster: the Rio Grande river basin, South Texas South Texas Water Division, and Concho River segment of the Colorado basin. The first Watermaster in the state was established on the Rio Grande in 1971, subsequent to a court-ordered water management plan for the border region in response to a lawsuit from the late-1950s. The Rio Grande Watermaster was housed under the Texas Water Commission (predecessor to TCEQ), with a Watermaster office in the Lower Rio Grande Valley charged with allocating, monitoring, and controlling the use of surface water in the Rio Grande from Fort Quitman in Hudspeth County to the Gulf of Mexico.

The Rio Grande basin is unique in Texas in that its water rights are based on correlative rights, meaning that all rights are contained within the same two storage areas: the Amistad and Falcon Reservoirs. Because the total legal demand for water almost always exceeds the supply, only the highest priority users receive the full amount of their water rights. The following are the weighted priorities: (1) domestic municipal and industrial (DMI); (2) operational (conveyance of higher priority water); and (3) carry-over balances for irrigation water accounts. Thus, a water right in the Rio Grande Watermaster area is a set amount of water that will be allocated when available, but it is not a place in right. Irrigation rights are reduced proportionally if there is a shortage. Municipal, industrial, and domestic users have the highest priority and are protected from curtailment under nearly all conditions. Rights to the Rio Grande below the Amistad Reservoir are 100 percent adjudicated, and no additional water is available for appropriation.

The South Texas Watermaster program, created in 1988, encompasses most of the area south of the Colorado River Watershed. The Concho River Watermaster program, created in 2005, encompasses the Concho River segment of the Colorado River basin. Both programs are administered by the South Texas Watermaster in San Antonio; however, the Concho River Watermaster program does have staff in TCEQ's San Angelo regional office.

The South Texas and Concho River Watermaster areas fall under the prior appropriations doctrine, meaning that in times of water shortage those who obtained their water right earlier in time are entitled to their water first, regardless of permitted use. Water rights with early priority dates are called "senior" water rights. Water rights issued later are called "junior" water rights. As a practical matter, considering that senior water rights could be downstream from junior water rights, in a water shortage, or drought, the Watermaster may order junior water rights to stop diverting or storing water so that the senior permits can continue to divert, up to their maximum authorized amount.

DEDICATED FUNDING SOURCES – WATERMASTER AREAS

The Watermaster program generates sufficient revenue to cover the cost of administering all three Watermaster areas. Approximately $1.3 million per fiscal year in WUF fees is collected from those holding water rights. These fees are deposited to the credit of the General Revenue–Dedicated Funds, Watermaster Administration Account No. 158.

GROUNDWATER RIGHTS

To understand groundwater rights in Texas, one has to understand the Rule of Capture and groundwater conservation districts. The Rule of Capture, established in Texas in 1904 by the Texas Supreme Court, holds that landowners, absent malice or willful waste, have the right to take all of the water that they can capture beneath their land without liability to neighboring landowners even if they deprive their neighbors of the water's use. In this case, every landowner has the right to access the resource but is not guaranteed that the resource will be available if it has been "captured" by a neighbor. Since 1904, the courts have affirmed the Rule of Capture, most recently in 1999, with the exception of an amendment concerning land subsidence.

GROUNDWATER CONSERVATION DISTRICTS

In 1949, based on the Conservation Amendment to the Texas Constitution that voters approved in 1917, the Legislature allowed for the creation of groundwater conservation districts (GCDs). Groundwater conservation districts have the ability, unless restricted through enabling legislation, to regulate the non-exempt use of groundwater through spacing and use permits. Therefore, in a groundwater conservation district, the Rule of Capture may be further amended whereby a landowner cannot drill wherever they want (spacing requirements) and cannot pump as much as they want (permitting). This is done to prevent depletion of water tables, loss of artesian pressure, waste, and subsidence.

Regulations promulgated by groundwater districts can restrict pumping, require permits for wells, delineate well spacing, establish maximum rates of water use, and define out-of-district export requirements. According to TWDB, as of July 2010, there were 98 groundwater districts in Texas, including 2 awaiting confirmation, that cover approximately 65 percent of the land area in the state.

In 1997, the Seventy-fifth Legislature enacted Senate Bill 1, which instituted a bottom-up approach to state water planning and confirmed that GCDs "are the state's preferred method of groundwater management." However, Senate Bill 1 also prevented districts from prohibiting the export of groundwater, while placing additional restrictions on exporting surface water from one river basin to another. GCDs are charged to manage groundwater by providing for the conservation, preservation, protection, recharging, and prevention of waste of the groundwater resources within their jurisdictions. GCDs can be created four different ways:

(a) through legislation;

(b) through a landowner petition procedure filed by proposed district and submitted to TCEQ;

(c) by TCEQ in a designated Priority Groundwater Management Area (PGMA) through a procedure similar in principle to the landowner petition procedure; and

(d) by adding territory to an existing district, if the existing district is willing to accept the new territory.

The principal power that a GCD has to prevent waste of groundwater is to require all wells, with certain exceptions, to be registered and permitted. Wells with permits are subject to GCD rules governing spacing, drilling, equipping, and completion or alteration. Even exempt registered wells are subject to GCD rules governing well construction to prevent the unnecessary discharge of groundwater or pollution of the aquifer. Unless specifically exempted by a GCD, permits must be obtained for all wells except wells used solely for domestic use or for providing water for livestock or poultry purposes that are incapable of producing more than 25,000 gallons per day on a tract of land 10 acres or larger; water wells used solely to supply water for a rig actively engaged in drilling or exploration operations for an oil or gas well permitted by the Railroad Commission of Texas (RRC); and water wells authorized by the RRC for mining activities.

Other political subdivisions may have limited powers over groundwater use. For example, municipalities have restricted the drilling and use of wells inside their jurisdictions, and counties have required certain lot sizes and aquifer productivity before approving developments. In addition, GCDs recognize the need to coordinate activities of districts that rely on the same aquifer. In some cases, districts have teamed up to share staff and other resources. Some examples of regional alliances include the West Texas Regional Groundwater Alliance; the Carrizzo-Wilcox Aquifer Alliance; the Hill Country Groundwater Conservation District Alliance; the Far West Texas Alliance of Groundwater

Districts; and the South Texas Regional Groundwater Alliance.

Groundwater conservation districts in Groundwater Management Areas across the state have adopted desired future conditions for their aquifers. These desired future conditions will be used by the TWDB to calculate managed available groundwater values which will be used by regional water planning groups in regional water plans and by groundwater conservation districts in groundwater management plans and in groundwater permitting.

The courts have also been active with decisions that may affect groundwater permitting. In a recent opinion by the Fourth Court of Appeals in San Antonio, the court recognized a "vested right in groundwater beneath their property" on the part of landowners, and remanded "the constitutional taking claim" to the lower court for further proceedings. This case was appealed to and argued before the Texas Supreme court in February 2010. As of August 2010, the Texas Supreme Court has not made a decision.

GROUNDWATER MONITORING

The agency performs groundwater monitoring activities which yield data that serve as the basis for efforts in other groundwater programs at TWDB, at all levels of government throughout the state, and for use by many private companies. Texas is one of the few states in the country to operate programs solely dedicated to systematic collection of groundwater data. The agency's Groundwater Monitoring Section measures groundwater levels in wells representing static water level conditions and collects samples from wells and springs representing ambient groundwater quality from all major and minor aquifers in the state. The agency's Groundwater Availability Modeling (GAM) program aims to provide useful and timely information for understanding groundwater flow conditions and calculating managed available groundwater. In addition, the agency provides groundwater technical assistance, utilizing both the data that the Groundwater Monitoring group collects and the groundwater model simulations that the GAM group develops.

DEDICATED FUNDING SOURCES – GROUNDWATER MANAGEMENT ACTIVITIES

There is no dedicated funding source for TWDB groundwater management and monitoring activities. Altogether, TWDB spends about $4.8 million per year on groundwater management activities, $4.6 million of which is funded by General Revenue Funds.

EDWARDS AQUIFER AUTHORITY

An example of a unique groundwater district is the Edwards Aquifer Authority (EAA), which has jurisdiction over a broad area generally to the north and west of San Antonio, covering an area from the Kinney County/Uvalde County line to Kyle in Hays County, and serving approximately 1.7 million people. The EAA has powers unlike other districts in Texas in that it has established trigger levels limiting withdrawals from the aquifer. The EAA also is required to establish a permit system for regulating municipal, industrial, and irrigation diversion from the aquifer based on historical use. There is an additional protection that existing irrigation users receive a permit for not less than two acre-feet per year per acre of land that the user actually irrigates in any one calendar year. The EAA also may issue regular permits, term permits, and emergency permits. An EAA groundwater right holder cannot sell or lease more than 50 percent of his/her irrigation rights. The remaining irrigation users' water rights must be used in accordance with the original permit and must pass with the transfer of the irrigated land. This provision aims to address third-party impacts of groundwater transfers away from agricultural uses.

TCEQ also regulates activity in the EAA by requiring those developing land in the Edwards Aquifer area and contributing zone to submit for review and approval development plans, including pollution abatement plans that protect the quality of water in the aquifer.

DEDICATED FUNDING SOURCES – GROUNDWATER PROTECTION

Costs of the groundwater protection program at TCEQ have no dedicated source of fee revenue, except for the Edwards Aquifer Authority Development Fee, which covers that program alone and generates approximately $300,000 per year. TCEQ's remaining groundwater protection activities cost an estimated $1.2 million per fiscal year in the 2010–11 biennium.

THE REGIONAL WATER PLANNING PROCESS

The current water planning process established by Senate Bill 1, Seventy-fifth Legislature, 1997, and all related rules adopted by TWDB in 1998, utilizes a regional planning process. The following basic planning assumptions are used to develop the State Water Plan:

- The drought of record is the basis for all water supply assumptions;

- The Plan covers a 50-year time frame and is updated every 5 years (the 2007 State Water Plan is the current plan and the next plan will be completed in 2012);
- Individual water user groups are considered;
- The projected population begins with census data as its base; and
- The State Water Plan incorporates 16 separately prepared regional water plans.

The development of the State Water Plan takes a "bottom-up" approach. During the planning process, TWDB provides the regional planning groups with guidelines for developing the regional water plans, approves the regional water plans, and compiles the regional water plans and any additional information needed to develop the State Water Plan, which is eventually adopted by TWDB. However, prior to the approval of regional water plans and adoption of the State Water Plan, the TWDB must resolve any interregional conflicts within the plans. Finally, TWDB is responsible for providing financial support for both the planning and implementation of the State Water Plan. There is a planning group for each regional water planning area that represents the interests of its planning area and is responsible for developing a regional water plan. This planning group is led by a political subdivision, such as a river authority, a groundwater conservation district, or a council of governments that administers the planning process, and also includes other interested parties (i.e., the public, counties, municipalities, industries, small businesses, electric-generating utilities, river authorities, water districts, water utilities, and groups representing the interests of the environment and agriculture).

The regional water planning group conducts the following seven tasks in developing the regional water plan:

1. The planning group describes the regional water planning area including information about major water providers, current water use, sources of groundwater and surface water, the area's agricultural and natural resources, the regional economy, summaries of local water plans, and other information deemed relevant by the planning groups.
2. The planning group reviews population growth and water demand projections provided by TWDB and proposes revisions resulting from changed conditions or new information.
3. The planning group evaluates and quantifies current water supplies that would be physically and legally available from existing sources during a repeat of the drought of record.
4. The planning group compares existing water supplies with current and projected water demands to identify when and where additional water supplies are needed for each identified water user group and wholesale water provider.
5. If existing supplies do not meet future demand, the planning groups recommend specific water management strategies to meet water supply needs. Each planning group is also required to assess the financing needed to implement the water management strategies and projects in their water plans as well as the social and economic impact of not meeting needs, with assistance from TWDB.
6. The regional water planning group makes regulatory, administrative, and legislative recommendations within their regional water plans.
7. The final task required to complete a regional water plan is to adopt the plan, including the required level of public participation.

WATER MANAGEMENT STRATEGIES

A water management strategy is a specific plan to increase water supply or maximize existing supply to meet a specific need. Regional water plans incorporate many different kinds of water management strategies including: advanced conservation of existing water supplies; interbasin transfers; designation of new reservoir sites; construction of water infrastructure; direct and indirect reuse; and, the utilization of new technologies (e.g., desalination). **Figure 3** shows acre-feet of water estimated to be generated by each water management strategy from 2010 to 2060, as reported in the 2007 State Water Plan.

WATER CONSERVATION

Water conservation involves managing existing water supplies to reduce demand and increase efficiency of use. This is accomplished by water managers and citizens collectively joining forces to use less water in their homes, businesses, and farms rather than building new projects to supply more water. Water conservation strategies are a very important part of the 2007 State Water Plan, with approximately 23 percent

FIGURE 3
WATER MANAGEMENT STRATEGIES (ACRE-FEET IN THOUSANDS) 2010–2060

	2010	2020	2030	2040	2050	2060
Conservation	1,079,077	1,473,411	1,627,002	1,755,422	1,895,812	2,046,851
New Reservoirs	132,863	306,663	646,993	681,498	1,051,128	1,072,128
Desalination	84,295	101,522	130,164	159,922	200,866	312,887
Direct and Indirect Reuse	443,030	788,223	965,593	1,041,433	1,182,441	1,261,579
Other Strategies	1,852,009	2,581,220	2,845,990	3,143,211	3,832,970	4,340,766
Total – All Water Management Strategies	**3,591,274**	**5,251,039**	**6,215,742**	**6,781,486**	**8,163,217**	**9,034,211**

NOTE: Amounts represent the number of acre-feet in thousands that should be generated by that date.
SOURCE: 2007 State Water Plan, Texas Water Development Board.

of the identified water need addressed through water conservation projects.

Water conservation can take the form of active conservation or passive conservation. Active water conservation measures are usually initiated by water utilities, individual businesses, residential water consumers, and agricultural producers to reduce water consumption. Passive water conservation involves water savings that result from state and federal legislation requiring plumbing manufacturers to sell more water-efficient plumbing fixtures, such as showerheads, faucets, and toilets.

Water conservation can also be divided into municipal water conservation strategies and agricultural water conservation strategies. Municipal water conservation strategies focus on reducing residential, commercial, and institutional water use that typically involves water for drinking, cooking, cleaning, sanitation, air conditioning, and outdoor uses, such as landscape irrigation and swimming pools. These strategies can focus on social approaches, such as changing water pricing structures; creating a greater awareness of conservation through promotional and educational campaigns; and accelerating technological approaches, such as installing more efficient plumbing fixtures in homes and businesses and providing financial rebates or incentives for the installation of such fixtures. For example, the San Antonio Water System provides information on conservation; free water-efficient toilets; and rebates for improved residential irrigation design, efficient washing machines, hot-water-on-demand water heaters, and landscapes that do not require much water. Agricultural water conservation is promoted in areas of the state with large concentrations of irrigated crop production, and focus on water management strategies like irrigation water use management; land management systems; on-farm delivery systems; water district delivery systems; and miscellaneous other systems.

Senate Bill 3, Eightieth Legislature, 2007, requires TWDB to give priority for the funding of water supply projects in the State Water Plan to those projects that have already demonstrated significant water conservation savings or those that will achieve significant water conservation savings by implementing the proposed project. TWDB has addressed this requirement through the point system used to award projects through the Water Infrastructure Fund. This point system assigns 0-50 points based on the decade of need in the State Water Plan and 0-50 points for conservation previously achieved or that will be achieved by the project.

INTERBASIN TRANSFERS

Interbasin transfers of surface water have been an important water management strategy in the past and address the water needs of one river basin by transferring water from another river basin. Prior to the passage of Senate Bill 1, Seventy-fifth Legislature, 1997, interbasin transfers were more common, and it was easier to receive a permit for such a transfer. Since the passage of Senate Bill 1, there has been a significant drop in the number of interbasin transfer authorizations issued. According to TCEQ data, only three interbasin transfer authorizations that were subject to these provisions have been granted.

WATER INFRASTRUCTURE (RESERVOIRS)

An important water management strategy included in the State Water Plan involves the creation of additional reservoirs. The regional planning groups have the opportunity to recommend unique reservoir sites for designation by the state legislature. A unique reservoir site is a location where a reservoir could be built, and once designated by the Legislature, a state agency or political subdivision would not be allowed to purchase land or obtain an easement that would prevent the construction of a reservoir at the site. The 2007 State Water Plan recommended that the Legislature

designate 19 major and minor reservoir sites[3] as unique reservoir sites, which was done by the Eightieth Legislature, 2007. See **Appendix A** for a map of the reservoir sites included in the 2007 State Water Plan.

The construction of water infrastructure is an important water management strategy that helps Texas address all of its residents' water needs by installing new and supplemental wells; expanding treatment plants to make sure supplies meet water quality standards; supplying additional water; installing infrastructure that can transfer groundwater supplies from areas where projections indicate that surplus groundwater will exist to areas with water needs; and adding infrastructure construction projects that can help meet the water supply needs identified through the water planning process.

DESALINATION

Desalination is a water management strategy that provides new drought-proof water supplies for Texas communities. Desalination is the process of converting saline water to usable water through a process that removes salt from brackish groundwater or seawater. This process has proven to be both reliable and cost effective in areas where water is scarce and accounts for 3 percent of all new water supplies from recommended water management strategies identified in the 2007 State Water Plan. An example of brackish groundwater desalination is the Kay Bailey Hutchison Desalination Plant, which is the world's largest inland desalination plant. It is located in El Paso and is a joint venture between El Paso Water Utilities and Fort Bliss and uses brackish groundwater from the Hueco Bolson Aquifer. At full capacity, the plant can produce 27.5 million gallons of fresh water daily.

An example of seawater desalination is the Brownsville Public Utilities Board's seawater pilot plant. Brownsville was chosen by TWDB for a 12-month pilot study to develop the state's first large-scale seawater desalination plant. The pilot study concluded that seawater desalination was technically feasible, but expensive. The study served to collect source water data, test the performance of various desalination technologies and select the most appropriate treatment process to desalinate ocean water at this site. Currently, the Brownsville Public Utilities Board is proposing to implement the first phase of a 25 million-gallon-per-day facility by installing a 2.5 million-gallon-per-day production prototype on the south bank of the Brownsville Ship Channel.

[3]After a protracted legal battle, it was determined that one of the proposed reservoir sites, Lake Fastrill, will become a wildlife refuge instead of the reservoir considered in the State Water Plan.

WATER REUSE

Water reuse is becoming a more important water management strategy, with approximately 14 percent of new water supplies identified in the 2007 State Water Plan coming from this water management strategy. There are two types of water reuse: direct and indirect reuse. Direct reuse is the use of wastewater effluent that involves delivery of effluent via pipelines, storage tanks, and other necessary infrastructure directly from the wastewater treatment plant to others before discharging the effluent into a watercourse. El Paso has an extensive direct reuse project that involves using treated wastewater to water many local golf courses. Indirect reuse is the process of discharging treated wastewater that is not directly reused to a watercourse and subsequently diverting the use of this wastewater further downstream. An example of indirect reuse is a project recently completed by the Tarrant Regional Water District, which runs treated wastewater through an engineered wetland that has been created to naturally filter and purify treated wastewater, and then pumps the water that has been treated back into Richland Chambers Lake where it is reused as a water supply.

BRUSH CONTROL

A water management strategy that has received much attention is brush control, which involves reducing vegetation that consumes large volumes of water that would otherwise recharge aquifers and streams in many areas of the state. TSSWCB administers a brush control program, which focuses on removing water-depleting brush and trees, such as juniper, mesquite, and salt cedar. Since the program's inception in 2000, TSSWCB has spent nearly $30.5 million on brush control, resulting in 703,593 acres of brush being cleared.

ENVIRONMENTAL FLOWS

The role that environmental flows should play in future planning cycles is still being determined. The debate continues as to how much and by what means water should be provided to the environment for streams, rivers, bays, and estuaries. TCEQ is required to consider environmental flows in its consideration of a water rights application, and TWDB guidelines call for the evaluation of the effects of water supply strategies on environmental water needs. Senate Bill 3, Eightieth Legislature, 2007, further requires expert scientists to develop environmental flow recommendations and local stakeholders to comment on those recommendations to determine environmental flows necessary in each river basin. Although the issue has been studied by TWDB, TCEQ, and

TPWD, the results of past studies have not obtained widespread acceptance and are not directly incorporated into the water right permitting and regional water planning process.

FINANCIAL ASSISTANCE PROGRAMS

TWDB provides financial assistance to communities for water and wastewater-related projects with state and federal financing programs. The TWDB financial assistance programs are funded from revenue and General Obligation (GO) bonds, funds appropriated by the Legislature, and from federal sources, specifically, the U.S. Environmental Protection Agency (EPA). The Texas Water Development Fund and the Rural Water Assistance Fund are self-supporting programs funded by GO bond proceeds. The Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF) are capitalized with Federal Funds matched primarily by Development Fund general obligation bonds, and loan repayments, and the CWSRF is also funded with revenue bonds.

EVERGREEN BOND AUTHORITY

In various constitutional authorizations, TWDB has been authorized to issue $4.23 billion in GO bonds for the Texas Water Development Fund II and $500.0 million in GO bonds for the Economically Distressed Areas Program. This authority was provided to the agency in such a way that, once the bonds have been issued, the authority no longer exists. As of August 31, 2010, TWDB has $1.1 billion in remaining authorized, but unissued GO bond authority for the Texas Water Development Fund II and $236.9 million in remaining authorized, but unissued GO bond authority for the Economically Distressed Areas Program.

Senate Joint Resolution 50 and House Joint Resolution 128, Eighty-first Legislature, Regular Session sought to provide TWDB with Evergreen bond authority of $6 billion for the Texas Water Development Fund II. This Evergreen bond authority would have allowed TWDB to issue GO bonds on a continuing basis, so long as the outstanding principal on the bonds does not exceed $6 billion. Since the bond proceeds for the Texas Water Development Fund II are used for loans, as loan repayments are collected and the principal for previously issued bonds is paid down, the TWDB's authorized, but unissued bond authority would increase. The issuance of non-self supporting GO bonds would, however, still require legislative approval, since the Legislature appropriates General Revenue to fund debt service for all non-self supporting GO bonds.

NON-SELF SUPPORTING GENERAL OBLIGATION WATER BONDS AND THE CONSTITUTIONAL DEBT LIMIT

Article III, Section 49-j of the Texas Constitution places a limit on state debt payable from the General Revenue Fund. This limit is generally referred to as the Constitutional Debt Limit (CDL). This section requires that "the maximum annual debt service in any fiscal year on state debt payable from the General Revenue Fund may not exceed five percent of an amount equal to the average amount of general revenue fund revenues, excluding revenues constitutionally dedicated for purposes other than payment of state debt, for the preceding fiscal years." Additionally, this section stipulates that "for purposes of this section, 'state debt payable from the General Revenue Fund' means general obligation and revenue bonds, including authorized but unissued bonds. The term does not include bonds that, although backed by the full faith or credit of the state, are reasonably expected to be paid from other revenue sources and that are not expected to create a General Revenue draw."

TWDB has both self supporting and non-self supporting debt among its various programs. Self supporting programs are those that have loan repayments which cover the cost of debt service related to the bond proceeds used to fund that program. Conversely, non-self supporting programs do not have the level of loan repayments to cover the cost of debt service related to the bond proceeds used to fund that program, and thus require General Revenue funds to cover the cost of debt service.

Since the CDL relates to "debt payable from the General Revenue Fund," only non-self supporting programs have an effect on the CDL. Additionally, Section 49-j requires authorized but unissued bonds to be considered for non-self supporting programs to be included as well.

TWDB has two constitutional bond authorizations related to the Economically Distressed Areas Program and the Texas Water Development Fund II. The Economically Distressed Areas Program is a non-self supporting program and therefore, the entire bond authorization is calculated into the CDL. Conversely, the Texas Water Development Fund II, is made up of both self supporting and non-self supporting programs. Therefore, the bond authorization

for the Texas Water Development Fund II is not included in the CDL until the Legislature appropriates General Revenue for the repayment of debt service related to the non-self supporting programs of the Texas Water Development Fund II.

Figure 4 lists TWDB's primary state and federal financial assistance programs, and shows eligible recipients, population served, authorized funding, and program commitments as of August 31, 2010. See **Appendix B** for greater details regarding each of the listed financial assistance programs.

STATE FINANCIAL ASSISTANCE PROGRAMS

TEXAS WATER DEVELOPMENT FUND

The Texas Water Development Fund (DFund) is the funding source from which TWDB makes state loans for water supply, water quality enhancement, and flood control. The DFund was first created in 1957 to provide loans for these purposes, and in November 1997, the Texas Constitution was amended to create the Texas Water Development Fund II to modernize the flow of funds and maximize the use of the remaining DFund bond authority. Up to $75 million per biennium is used to provide state matching funds for the federal Clean and Drinking Water State Revolving Fund programs. The DFund provides financing for the acquisition, improvement, or construction of water-related projects such as water wells, retail distribution and wholesale transmission

FIGURE 4
FINANCIAL ASSISTANCE PROGRAMS OPERATED BY TWDB (AS OF AUGUST 31, 2010)

PROGRAM	POPULATION SERVED***	TOTAL G.O. BOND AUTHORITY	AUTHORIZED, BUT UNISSUED G.O. BOND AUTHORITY	BOND ISSUES AUTHORIZED BY THE 81ST LEGISLATURE	CASH BALANCES	CAPACITY	CUMULATIVE COMMITMENTS	LOANS AND GRANTS CLOSED	COMMITMENTS
Texas Water Development Fund (DFund)	4,496,676	$4,230,000,000	$1,111,501,674	N/A	$58,387,735	N/A	$2,925,787,282	$2,419,531,557	$203,490,000
Agricultural Water Conservation Loan Program		$200,000,000	$164,840,000	N/A	$10,379,892	N/A	$69,745,876	$68,765,630	$0
Rural Water Assistance Fund (RWAF)	205,650	*	*	N/A	$528,252	N/A	$162,885,000	$106,626,000	$24,314,000
State Participation (SP)	2,317,722	*	*	$225,050,000	$13,757,151	N/A	$338,895,000	$196,614,000	$142,281,000
Water Infrastructure Fund (WIF)**	6,773,365	$50,000,000	*	$473,365,000	$73,339,392	N/A	$746,729,000	$632,269,000	$87,470,000
Economically Distressed Areas Program (EDAP)	270,139	$500,000,000	$236,853,902	$84,370,000	$15,881,158	N/A	$242,370,153	$220,636,320	$36,072,026
Colonia Self-Help Program	758		N/A	N/A	N/A	N/A	$668,461	$405,285	$89,022
Water Loan Assistance Fund	1,168,200		N/A	N/A	N/A	N/A	$69,937,051	$64,280,028	$8,326,860
Clean Water State Revolving Fund	9,236,923		N/A	N/A	N/A	$323,000,000	$6,309,498,689	$5,315,493,775	$757,460,000
Drinking Water State Revolving Fund	2,827,480		N/A	N/A	N/A	$89,700,000	$1,251,706,996	$1,066,175,398	$470,656,468
Colonia Wastewater Treatment Assistance Program	248,688		N/A	N/A	$22,320,847	N/A	$418,429,145	$363,881,358	$0

*These programs are included in the DFund constitutional authority.
**WIF was included in the DFund constitutional authority, but at least $50 million was designated as WIF.
***The amounts under Population Served may include the same individuals more than once because they may have been affected by more than one program.
SOURCE: Texas Water Development Board.

lines, pumping facilities, storage reservoirs and tanks, and water treatment plants; for the purchase of water rights; for wastewater collection and treatment projects; and for flood control projects.

The loans from the DFund are available to all political subdivisions in the state and non-profit water supply corporations with eligible water, wastewater, flood, and municipal solid waste projects.

The DFund provides on average approximately $69.2 million in financial assistance each year and is funded by GO bonds issued by TWDB. The DFund is presently authorized to issue up to $4.2 billion in bonds, and as of August 31, 2010, TWDB has committed $2.9 billion and closed grants and loans accounting for $2.4 billion. There was $0.2 billion in outstanding commitments. The DFund consists of both self supporting and non-self supporting programs.

TEXAS AGRICULTURAL WATER CONSERVATION FUND

The Texas Agricultural Water Conservation Fund may provide funding for grants to state agencies and political subdivisions for conservation programs and projects; and loans to political subdivisions which may use the funds directly or to make loans to individual farmers and ranchers for conservation programs or projects. The fund was created through the consolidation of the Agricultural Water Trust Fund No. 562 (Other Funds) and the Agricultural Soil and Water Conservation Fund No. 563 (General Revenue–Dedicated Funds). (See Senate Bill 1054, Seventy-eighth Legislature, 2003.)

The grants and low-interest loans provided through the Agricultural Water Conservation Fund are eligible to state agencies and local political subdivisions, which can then assist individual farmers and ranchers. As of August 31, 2010, TWDB had $10.4 million in cash and $164.8 million in authorized, but unissued bond authority for this program. The bonds from this fund are repaid through a mix of loan repayments from political subdivisions and General Revenue appropriations for debt service, although there is no outstanding debt at this time.

As of August 31, 2010, TWDB had $69.7 million in total commitments for the Agricultural Water Conservation Fund; this amount includes closed loans and grants of $68.8 million.

RURAL WATER ASSISTANCE FUND

The Rural Water Assistance Fund (RWAF) provides tax-exempt, low-interest loans with short-term and long-term finance options to assist small and rural utilities to obtain low-cost financing for water and wastewater projects. The loans may be used to fund water construction projects (e.g., line extensions, overhead storage, the purchase of well fields), and to purchase or lease rights to produce groundwater; to fund water quality enhancement projects such as wastewater collection and treatment projects; and to acquire water or wastewater service supplied by a larger utility, or to finance the consolidation or regionalization of a neighboring utility.

Loans provided through the RWAF are eligible to rural political subdivisions, which include: nonprofit water supply corporations; water districts; municipalities serving a population of up to 10,000, or that otherwise qualify for federal financing; or counties in which no urban area has a population exceeding 50,000.

The RWAF is funded with TWDB GO bonds using the state's Private Activity Bond Cap to access tax-exempt rates. As of August 31, 2010, TWDB had awarded $162.9 million in total commitments from the RWAF, with closed loans accounting for $106.6 million of this amount. There are currently $24.3 million in outstanding commitments. The RWAF is self-supporting, (i.e., requires no General Revenue appropriations to cover debt service requirements).

STATE PARTICIPATION PROGRAM

The State Participation Program provides loans to political subdivisions for the construction of regional water or wastewater projects. Through this program the state assumes a temporary ownership interest in a regional project when the local sponsors are unable to assume debt for an optimally-sized facility. The goal of this program is to encourage "right-sizing" of projects in consideration of future growth by allowing local political subdivisions to build projects that are larger than their current capacity need in anticipation of future growth. The State Participation Program is structured so that local political subdivisions begin purchasing the state's interest on a deferred timetable to allow a sufficient rate base to develop in the project area to allow the borrower to repay the loan. Ultimately, the state recovers the total amount of the loan. TWDB can fund up to 80 percent of new water project costs, provided the applicant finances at least 20 percent of the total project costs from sources other than the State Participation Program, and at least 20 percent of the total capacity of the proposed project serves existing

water needs. TWDB can fund up to 50 percent of project costs on State Participation wastewater projects provided the applicant finances at least 50 percent of the total project cost from sources other than the State Participation Program, and at least 50 percent of the total capacity of the proposed project serves existing needs.

The State Participation Program is funded through GO bonds issued by TWDB. The state pays the debt service on this program through a mixture of General Revenue Funds and loan repayments after the deferment period. As of August 31, 2010, TWDB had $338.9 million in total commitments for the State Participation Program, with closed loans accounting for $196.6 million of this amount. There are currently $142.3 million in outstanding commitments.

The Eighty-first Legislature, 2009, authorized TWDB to issue up to $225.1 million for the State Participation Program, including $200.1 million for projects identified in the 2007 State Water Plan. For these and prior issuances, TWDB was appropriated $43.1 million in General Revenue Funds and loan repayments to pay debt service requirements in the 2010–11 biennium. Although State Participation bonds are considered non-self supporting, $139.6 million of State Participation principal has been reclassified to self supporting.

WATER INFRASTRUCTURE FUND

The Water Infrastructure Fund provides funding for low-interest loans for construction projects to political subdivisions and low-interest loans with deferral of principal and interest payments for up to 10 years, or until construction ends, for planning and design, permitting, and state and federal regulatory activities.

Additionally, low-or-zero-interest loans are available for rural projects outside metropolitan areas and for projects in economically distressed areas. All of the projects funded under the Water Infrastructure Fund must be included in the State Water Plan.

The Water Infrastructure Fund may be funded with GO bond proceeds, loan repayments, and appropriations, although to date, no appropriations have been made except for debt service. Local political subdivisions are eligible for funding from the Water Infrastructure Fund. As of August 31, 2010, TWDB has awarded $746.7 million in total commitments from the Water Infrastructure Fund, with closed loans accounting for $632.3 million of this amount. There is currently $87.5 million in outstanding commitments.

The Eighty-first Legislature, 2009, authorized TWDB to issue up to $473.4 million for the Water Infrastructure Fund. For these and previous issuances, TWDB was appropriated $108.9 million in General Revenue Funds and loan repayments to pay debt service requirements in the 2010–11 biennium. Although the Water Infrastructure Fund bonds are considered non-self supporting, $230.1 million of Water Infrastructure Fund principal has been reclassified to self supporting.

ECONOMICALLY DISTRESSED AREAS PROGRAM

The Economically Distressed Areas Program (EDAP) provides financial assistance for the supply of water and wastewater services to economically distressed areas, where water and wastewater facilities are currently nonexistent or inadequate to meet minimum state standards. Any costs related to construction, acquisition, improvements, or necessary engineering work associated with water and wastewater services are eligible for EDAP funding. EDAP will fund up to 100 percent of eligible project costs. To complement the state's EDAP program, the federal government provided $300 million through the federal Colonia Wastewater Treatment Assistance Program (CWTAP) for areas within 100 kilometers of the Mexico border. CWTAP was matched with EDAP bonds.

EDAP grants and loans are available to local political subdivisions to serve economically distressed areas, which are defined as an area with a median household income of less than 75 percent of the median state household income. EDAP is funded with GO bond proceeds, loan repayments, and General Revenue appropriations for debt service. TWDB was originally authorized to issue $250 million in GO bonds for EDAP in 1989 and 1991. Following the passage of Senate Joint Resolution 20, Eightieth Legislature, 2007, a constitutional amendment authorizing TWDB to issue an additional $250 million in GO bonds for EDAP was approved by Texas voters in November 2007.

As of August 31, 2010, TWDB has awarded $660.8 million in total commitments through EDAP and CWTAP, with closed loans and grants accounting for $584.5 million of this amount. At present, there remains $36.1 million in outstanding commitments. The Eighty-first Legislature, 2009, authorized TWDB to issue up to $84.4 million in Economically Distressed Areas Bonds. For these and previous issuances, TWDB was appropriated $47.6 million in General Revenue Funds and loan repayments to pay debt service requirements in the 2010–11 biennium.

COLONIA SELF-HELP PROGRAM

The Colonia Self-Help Program provides grant assistance for water and wastewater projects for which the local residents provide labor to construct the facilities and/or donate equipment, materials, and supplies to the project. The Colonia Self-Help Program is available to political subdivisions and non-profit organizations with tax-exempt status under Section 501(c)(3) of the IRS Code that have a demonstrated record of completing construction of self-help projects. The funding under this program is available to projects located within a county within 50 miles of the international border for expenses related to construction, planning, platting, surveying, engineering, equipment, and other necessary self-help project-related expenses.

For the 2010–11 biennium, the Colonia Self-Help Program was funded by General Revenue Fund appropriations.

As of August 31, 2010, TWDB had awarded $0.7 million in total commitments through the Colonia Self-Help Program, with closed grants accounting for $0.4 million of this amount. There was $0.1 million in outstanding commitments.

WATER LOAN ASSISTANCE FUND

The Water Loan Assistance Fund provides loans and limited grants for water and wastewater projects that focus on water conservation, water development, water quality enhancement, flood control, drainage, recharge, brush control, weather modification, regionalization, and desalination. Local political subdivisions are eligible for funding through this program.

The Water Loan Assistance Fund is a sub-fund within the Water Assistance Fund, which is funded through direct appropriations and loan repayments.

As of August 31, 2010, TWDB had issued $69.9 million in total commitments for the Water Loan Assistance Fund, with closed loans and grants accounting for $64.3 million of this amount. There was $8.3 million in outstanding commitments.

FEDERAL FINANCIAL ASSISTANCE PROGRAMS

CLEAN WATER STATE REVOLVING FUND

The Clean Water State Revolving Fund (CWSRF) provides reduced interest rate loans for wastewater projects addressing compliance issues consistent with the goals of the Clean Water Act; 1 percent and zero interest loans and loan forgiveness for wastewater projects addressing compliance issues in disadvantaged communities; and loans for estuary management projects. Local political subdivisions with the authority to own and operate a wastewater system are eligible for funding under this program. Although nonprofit water supply corporations are considered political subdivisions for various other TWDB programs, they are not eligible to receive assistance from this program. The loan program is funded through a mixture of federal grants, revenue bonds, and loan repayments deposited back into the revolving account. The state match required by the federal grant is provided by the Water Development Fund, which is replenished as the loans are repaid.

As of August 31, 2010, TWDB had $6,309.5 million in total commitments through the Clean Water State Revolving Fund, with closed loans accounting for $5,315.5 million of this amount. There was $757.5 million in outstanding commitments.

As part of the American Recovery and Reinvestment Act of 2009, TWDB received $179.1 million in additional one-time federal appropriations for the CWSRF program which is included in the amounts above.

DRINKING WATER STATE REVOLVING FUND

The Drinking Water State Revolving Fund (DWSRF) provides low-interest loans for the planning, design, and construction of projects to facilitate compliance with primary drinking water regulations, or that otherwise significantly further the health protection objectives of the federal Safe Drinking Water Act. One percent, zero interest and loan forgiveness have been provided to disadvantaged communities. Projects may include upgrading or replacing water supply infrastructure; correcting violations of the federal Safe Drinking Water Act health standards; consolidating water supplies, and purchasing capacity in water systems. Local political subdivisions, nonprofit water supply corporations, privately-owned water systems and state agencies are eligible for funding under the DWSRF.

The DWSRF Loan Program is funded through a mixture of federal grants and loan repayments deposited back into the revolving account. The state match required by the federal grant is provided by the Texas Water Development Fund (DFund), which is replenished as the loans are repaid, and by General Revenue appropriations. For the 2010–11 biennium, up to $5.2 million in General Revenue Funds was appropriated to provide state matching requirements for the DWSRF disadvantaged loan program, although this was impacted by budget reductions.

As of August 31, 2010, TWDB had awarded $1,251.7 million in total commitments through the Drinking Water State Revolving Fund, with closed loans accounting for $1,066.2 million of this amount. There was $470.6 million in outstanding commitments.

As part of the American Recovery and Reinvestment Act of 2009, TWDB received $160.7 million in additional one-time federal appropriations for the DWSRF program which is included in the amounts above.

POTENTIAL ADDITIONAL FUNDING SOURCES FOR WATER PROGRAMS

This section of the primer focuses on various possible funding sources which could be used to provide dedicated funding sources for water programs.

In May 2010, TWDB compiled a report providing an overview of five potential revenue sources for funding Texas water programs. The revenue sources include a tax on retail sales of water and/or sewer services provided by public water suppliers; a fee on retail water sales applied to the volume of water use (as opposed to a tax on utility revenues); a fee on water rights; a "tap fee" on all water utility connections; and a tax on retail sales of bottled water. In its report, TWDB, in consultation with TCEQ and the Comptroller of Public Accounts, also included revenue estimates for each of the possible funding sources. In addition to these five revenue sources, this primer includes impact fees, which were not considered by TWDB in their May 2010 report, nor by the Joint Committee on State Water Funding, Eightieth Legislature, 2007. An impact fee is a standardized fee on new developments to fund water and wastewater infrastructure expansion required to serve new growth.

Figure 5 provides a list of the potential revenue sources identified by TWDB, as well as the estimated revenue that would be generated for fiscal years 2012 and 2013.

FIGURE 5
POTENTIAL REVENUE SOURCES – WATER PROGRAMS (IN MILLIONS)
FISCAL YEARS 2012 AND 2013

	2012	2013	2012–13
Sales Tax on Retail Sales of Utility Water and Sewer	$244.9	$253.0	$497.9
Water Conservation and Development Fee	$70.9	$71.6	$142.5
Tap Fee on Retail Public Utility Connections	$104.3	$105.3	$209.6
Water Rights Fee	$49.3	$49.3	$98.6
Sales Tax on Bottled Water	$71.3	$72.0	$143.3
Impact Fee	$55.1	$83.4	$138.5
TOTAL	**$595.8**	**$634.6**	**$1,230.4**

NOTE: Figure totals may not sum due to rounding.
SOURCES: Legislative Budget Board; Texas Water Development Board.

SALES TAX ON RETAIL SALES OF UTILITY WATER AND SEWER

The proposed sales tax would apply to retail sales of water and/or sewer services provided by Retail Public Utilities which includes municipalities, water districts, non-profit water supply and sewer service corporations, and investor-owned utilities systems. Retail Public Utility systems are defined as systems that have the potential to serve at least 15 residential service connections on a year-round basis or that serve at least 25 residents on a year-round basis and include municipal water utilities, various types of districts established under state law, and investor-owned water utilities. The proposed sales tax assumes a total tax rate of 8.05 percent, of which the state portion would be 6.25 percent and the local portion would be an average of 1.80 percent, although this might vary from community to community. An administrative fee for utilities to administer and process tax collections would be allocated from total tax revenues at a rate of 0.5 percent. The estimate below includes an exemption for the first 5,000 gallons of residential water use; industrial customers; government and institutional customers; religious, educational, and charitable organizations; chambers of commerce; convention and tourist promotional agencies; and any non-profit organization, including hospitals providing charity care.

Figure 6 shows the estimated tax revenue generated from a sales tax on retail sales of utility water and sewer.

FIGURE 6
REVENUE ESTIMATE OF SALES TAX ON RETAIL SALES OF UTILITY WATER AND SEWER (IN MILLIONS)

	2012	2013
State tax revenues	$244.9	$253.0
Local Tax revenues	$70.5	$72.9
Administrative Fee for Utilities	($1.6)	($1.6)
TOTAL TAX REVENUES	**$313.9**	**$324.2**

NOTE: Figure totals may not sum due to rounding.
SOURCE: Texas Water Development Board.

WATER CONSERVATION AND DEVELOPMENT FEE

A water conservation and development fee, as originally proposed under Senate Bill 3, Seventy-ninth Legislature, Regular Session, 2005, is similar in structure to the sales tax on water; however, it is designed as a fee that would apply to the volume of water sold by public water systems as opposed to taxing sales revenue. As structured in Senate Bill 3, the fee would apply at a rate of $0.13 per 1,000 gallons of water sales and would not apply to sewer service. The estimates below include an exemption for the first 5,000 gallons of residential water use; industrial customers; government and institutional customers; religious, educational, and charitable organizations; chambers of commerce; convention and tourist promotional agencies; and any non-profit organization, including hospitals providing charity care.

An administrative fee equal to 0.5 percent of total receipts would be retained by the utilities to administer and process tax collections.

Figure 7 shows the estimated revenue generated from a water conservation and development fee.

FIGURE 7
REVENUE ESTIMATE FOR WATER CONSERVATION AND DEVELOPMENT FEE (IN MILLIONS)
FISCAL YEARS 2012 AND 2013

	2012	2013
Total Fee Revenues	$71.3	$72.0
Administrative Fee for Utilities	($0.4)	($0.4)
TOTAL FEE REVENUES TO THE STATE	**$70.9**	**$71.6**

NOTE: Figure totals may not sum due to rounding.
SOURCE: Texas Water Development Board.

WATER RIGHTS FEE

A water rights fee would place a charge on authorized water rights in the state. Although the fee could vary according to type of use, a $1.50 surcharge per acre-foot of authorized water for municipal, industrial, irrigation, and mining water rights holders is assumed for this revenue estimate. Water rights allocated to in-stream uses, such as recreation and hydroelectric uses, would be exempt, as well as water rights for storage.

Figure 8 shows the estimated revenue generated from a water rights fee.

TAP FEE ON RETAIL PUBLIC UTILITIES CONNECTIONS

A "tap fee" would place a charge on all Public Water Supply connections in the state. Although the fee could vary according to type of use, a monthly surcharge of $1.00 per connection regardless of the type of volume or use is assumed for this revenue estimate; however, the fee could be structured to exempt low volume water consumers or different types of water users.

FIGURE 8
REVENUE ESTIMATE OF WATER RIGHTS FEE (IN MILLIONS)

TYPE OF USE	PROJECTED ANNUAL FEE REVENUE
Municipal	$4.6
Multiuse	$21.9
Industrial	$16.4
Irrigation	$6.2
Mining	$0.2
TOTAL	**$49.3**

NOTE: Figure totals may not sum due to rounding.
SOURCE: Texas Water Development Board.

Figure 9 shows the estimated revenue generated from a tap fee on retail public utility connections and assumes that government and institutional users would be exempt.

FIGURE 9
REVENUE ESTIMATE OF A TAP FEE ON RETAIL PUBLIC UTILITY CONNECTIONS (IN MILLIONS)
FISCAL YEARS 2012 AND 2013

	2012	2013
TOTAL FEE REVENUES	**$104.3**	**$105.3**

SOURCE: Texas Water Development Board.

SALES TAX ON BOTTLED WATER

A sales tax on bottled water would extend state and local sales taxes to retail sales of bottled water and would likely include non-carbonated bottled water commonly sold in retail outlets in various size containers; distilled water sold in gallon or larger-size containers often used for cooking and drinking; carbonated or seltzer water; "cooler" or delivered water, typically sold in 5-gallon to 10-gallon containers, dispensed via drinking water coolers, and sold to offices, factories, schools, and individuals for home use. The sales tax would not be assessed to non-packaged bulk water delivered by tanker truck and dispensed into residential cisterns or wells, nor would it include water sold at community dispensers.

The proposed sales tax assumes a total tax rate of 8.05 percent, of which the state portion would be 6.25 percent and the local portion would be 1.80 percent, although this could vary from community to community.

Figure 10 shows the estimated revenue generated from a sales tax on bottled water.[4]

FIGURE 10
REVENUE ESTIMATE OF A SALES TAX ON BOTTLED WATER
FISCAL YEARS 2012 AND 2013

	2012	2013
State tax revenues	$71.3	$72.0
Local tax revenues	$20.5	$20.7
TOTAL TAX REVENUES	**$91.9**	**$92.8**

NOTES: Figure totals may not sum due to rounding.
SOURCE: Texas Water Development Board.

IMPACT FEE

An impact fee would place a standardized fee on new developments to fund water and wastewater infrastructure needed to serve new growth. Although this fee was not considered by TWDB in their review, this type of fee is common in many parts of the country. Statewide, at least eight communities charge impact fees on new developments. Generally, there is a set fee that is charged to all new construction, including fixed single-family detached housing, multi-family, retail, office and industrial. Due to the availability of projected new construction housing starts projects for fiscal years 2012 and 2013. The focus of this analysis is on revenue derived from impact fees placed on new single-family detached houses. This estimate assumes a water impact fee of $550 for each newly constructed single-family detached house. The amount of this fee is equal to the lowest fee charged by the eight Texas communities surveyed in a 2008 National Impact Fee Survey conducted by Duncan Associates.[5, 6]

Figure 11 shows the estimated revenue generated from a water and wastewater impact fee on newly constructed single-family detached houses in fiscal years 2012 and 2013.

FIGURE 11
REVENUE ESTIMATE OF AN IMPACT FEE
FISCAL YEARS 2012 AND 2013

	2012	2013
New single-family detached housing	100,116	151,573
State revenue from a water impact fee (in millions)	$55.1	$83.4

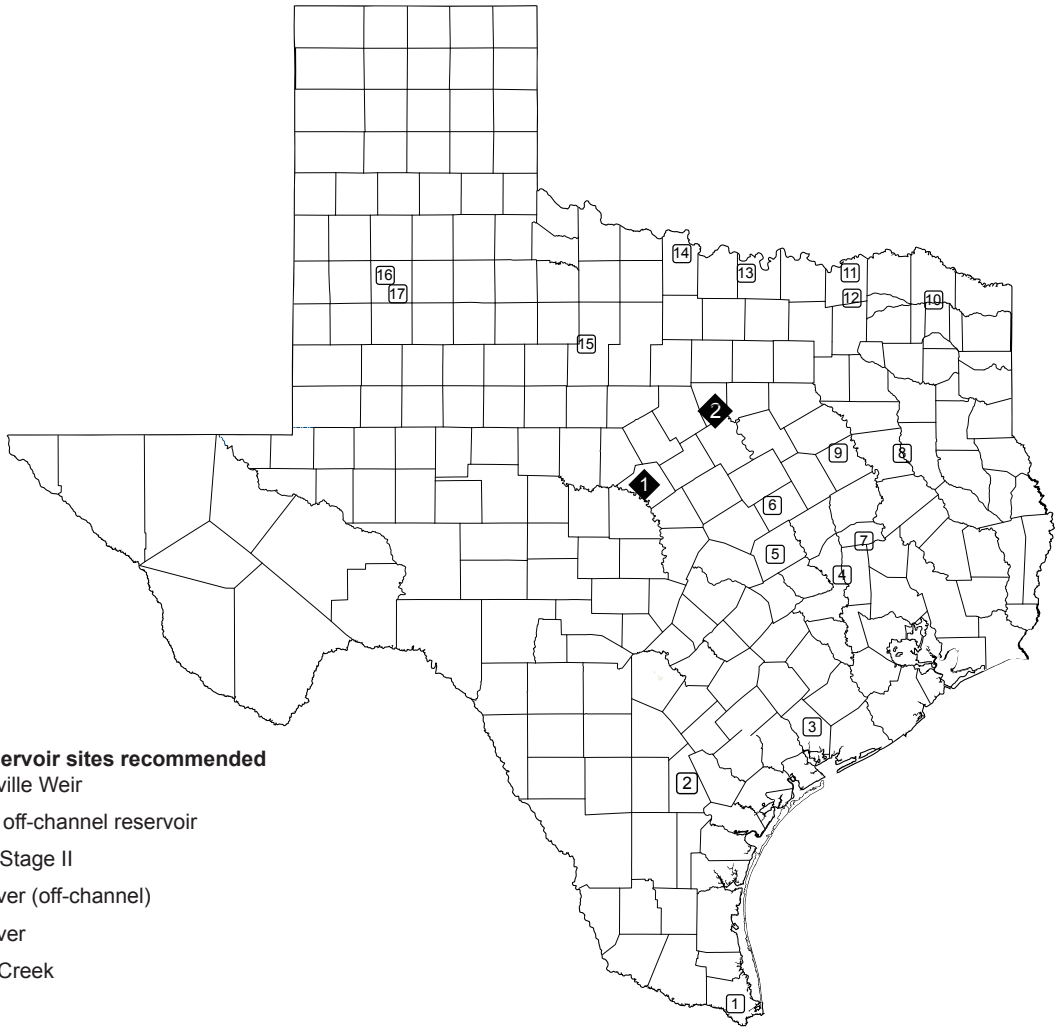
SOURCES: Legislative Budget Board; Moody's.

[4]The LBB estimates a repeal of the sales tax exemption for water sold in sealed containers would result in a revenue gain to the state of $59.2 million in fiscal year 2012, and a revenue gain to local governments of $17.5 million. These estimates assume an effective date of October 1, 2011.

[5]From the report: National Impact Fee Survey: 2008, conducted by Duncan Associates. Available at http://www.impactfees.com/publications%20pdf/2008_survey.pdf

[6]Enabling legislation could create a statewide impact fee to be collected by the Comptroller of Public Accounts (CPA) for all new single-family detached houses to be paid by all real estate developers along with their franchise tax submittal. A business, as part of their franchise tax report, is required to include the appropriate North American Industry Classification System (NAICS) code. The enabling legislation could direct the CPA to collect the impact fee for all single-family detached houses constructed by builders with the NAICS code 236115 – New Single-Family Housing Construction. This revenue stream could then be deposited to an account dedicated for water programs.

APPENDIX A—MAP OF DESIGNATED UNIQUE RESERVOIR SITES



Major reservoir sites recommended
1-Brownsville Weir
2-Nueces off-channel reservoir
3-Texana Stage II
4-Little River (off-channel)
5-Little River
6-Brushy Creek
7-Bedias
8-Lake Fastrill
9-Tehuacana Creek
10-Marvin Nichols
11-Lower Bois d'Arc
12-Lake Ralph Hall
13-Muenster
14-Ringgold
15-Cedar Ridge
16-Lake 07
17-Lake 08

Minor reservoir sites recommended
1-Goldthwaite
2-Wheeler Branch Reservoir

NOTE: After a protracted legal battle, it was determined that one of the proposed reservoir sites, Lake Fastrill, will become a wildlife refuge instead of the reservoir considered in the State Water Plan.

APPENDIX B—TEXAS WATER DEVELOPMENT BOARD FINANCIAL ASSISTANCE PROGRAMS

(SOURCE: Texas Water Development Board)

TEXAS WATER DEVELOPMENT FUND (DFUND)

Source of Funds: As of August 31, 2010, the Texas Water Development Board (TWDB) had issued over $3.1 billion out of the total $4.2 billion in Texas Water Development General Obligation (GO) bonds authorized by the Texas Constitution. (As of August 31, 2010, there was approximately $1.1 billion in authorized but unissued Texas Water Development GO bonds.)

Bond Repayment: Revenue from loan repayments from political subdivisions

Program Description: Since 1957, the Texas Water Development Fund I has been authorized to provide loans for water supply, water quality enhancement (sewer), flood control and state participation. In November 1997, the Texas Constitution was amended to create Texas Water Development Fund II to modernize the flow of funds and maximize the use of the remaining bond authorizations. Up to $75 million per biennium is used to provide state matching funds for the Clean and Drinking Water State Revolving Funds programs.

To apply for state financial assistance for water supply, water and wastewater treatment, and flood control projects, an applicant must be a political subdivision of the state or a nonprofit water supply corporation. Political subdivisions include cities, counties, districts, and river authorities.

The program provides financing for the acquisition, improvement or construction of water-related projects such as water wells, retail distribution and wholesale transmission lines, pumping facilities, storage reservoirs and tanks, water treatment plants, wastewater collection and treatment projects, and flood control projects. It also provides financing for the purchase of water rights.

Borrower's Advantage: Political subdivisions and water supply corporations that borrow from the fund receive a lower interest rate than they might otherwise receive due to the state's superior credit rating.

Loan Terms: Generally, 20- to 25-year maturities

Interest Rate: TWDB cost of funds (4.52 percent as of September 3, 2010).

Constraints: Applicants with projects typically funded through this program are: (1) unable to access the open market and need funding through state assistance programs, (2) on a fast-track or the need is urgent and the applicant is unable to wait for the Federal Program submittal cycles and deadlines, or (3) ineligible for the Clean and Drinking Water State Revolving Fund programs. Statutory or constitutional restrictions prevent the proceeds from being used to provide grants to political subdivisions, or any financial assistance to individuals or private entities.

TOTAL FUNDS PROVIDED THROUGH MAY 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$2,925,787,282	$2,419,531,557	$203,490,000

AGRICULTURAL WATER CONSERVATION LOAN PROGRAM

Source of Funds: The Agricultural Water Conservation Fund was consolidated with the Agricultural Water Trust Fund and the Agricultural Soil and Water Conservation Fund, resulting in total assets of approximately $20 million. The fund can be used in conjunction with TWDB's authority to issue state General Obligation (GO) bonds. Amounts funded from GO bond authorization are not to exceed $200.0 million; $35.2 million has been issued to date.

Bond Repayment: Revenue from loan repayments from political subdivisions; legislative appropriation for debt service for special projects.

Program Description: TWDB may provide agricultural water conservation funds for grants, loans and linked deposits, as described:

- grants to state agencies or political subdivisions (e.g., soil and water conservation districts, irrigation districts and groundwater conservation districts) for conservation programs (e.g., technical assistance, research, demonstration, technology transfer, or educational programs) or for conservation projects (e.g., improving irrigation systems efficiency, converting irrigated land to dry land, improving dry

land use of natural precipitation, installing water meters, and brush control activities);

- loans to political subdivisions for conservation programs or conservation projects or to make loans to individual farmers and ranchers; and
- linked deposits to local lending institutions (e.g., banks or farm credit associations) for individuals to access TWDB financial assistance through loans for conservation projects.

Borrower's Advantage: Grants and low-interest loans.

Loan Terms: Generally 7- to 10-year maturities

Interest Rate: Asking rate of 12-month maturity U.S. Treasury note (0.25 percent as of September 3, 2010)

Constraints: Limited to cash on hand and bond authority.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$69,745,876	$68,765,630	$0

RURAL WATER ASSISTANCE FUND

Source of Funds: Currently funded with TWDB issued GO bonds using the state's Private Activity Bond Cap to access tax-exempt rates.

Bond Repayment: Revenue from loan repayments from political subdivisions.

Program Description: The program is designed to assist small rural utilities to obtain low cost financing for water and wastewater projects. The TWDB offers tax exempt, attractive interest rate loans with short-term and long-term finance options. Eligible borrowers are defined as rural political subdivisions which include nonprofit water supply corporations, water districts, or municipalities serving a population of up to 10,000, or that otherwise qualify for federal financing, or counties in which no urban area has a population exceeding 50,000.

- Loans may be used to fund water-related capital construction projects including, but not limited to, line extensions, overhead storage, the purchase of well fields, and the purchase or lease of rights to produce groundwater. Water quality enhancement projects such as wastewater collection and treatment projects are also eligible projects in addition to interim financing of construction projects. Costs of planning, design, and construction are all eligible for funding.
- Loans may also be used to enable a rural utility to obtain water or wastewater service supplied by a larger utility or to finance the consolidation or regionalization of a neighboring utility.

Borrower's Advantage: Below market loans for terms of up to 40 years. Additionally, water supply corporations are exempt from paying sales taxes for any project financed through the program.

Loan Terms: Up to 40-year maturities

Interest Rate: TWDB cost of Alternative Minimum Tax Bonds (3.92 percent as of September 3, 2010)

Constraints: The program is restricted to rural communities with a service area of <10,000 population or that otherwise qualify for financing from a federal agency or to counties in which no urban area exceeds a population of 50,000.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$162,885,000	$106,626,000	$24,314,000

STATE PARTICIPATION

Source of Funds: TWDB issued GO bonds

Bond Repayment: General Revenue appropriations pay the related debt service until a sufficient rate base develops in the project area to allow local participants to purchase the State's interest. Ultimately, the state recovers the total amount of bonds and appropriations from the local government.

Program Description: The program enables TWDB to assume a temporary ownership interest in a regional project when the local sponsors are unable to assume debt for an optimally-sized facility. TWDB may acquire ownership interest in the water rights or a co-ownership interest of the property and treatment works. The repayments that would have been required, if the assistance had been from a loan, are deferred. Ultimately, the cost of the funding is repaid based upon purchase payments, which allows TWDB to recover its principal and interest costs and issuance expenses, but on a deferred timetable. The program is intended to allow for optimization of regional projects through limited state

participation where the benefits can be documented, and such development is unaffordable without state participation. The goal is to allow for the "Right Sizing" of projects in consideration of future growth. On new water supply projects TWDB can fund up to 80 percent of costs, provided the applicant will finance at least 20 percent of the total project cost from sources other than the State Participation Account, and at least 20 percent of the total capacity of the proposed project will serve existing needs. On other State Participation projects TWDB can fund up to 50 percent of costs, provided the applicant will finance at least 50 percent of the total project cost from sources other than the State Participation Account, and at least 50 percent of the total capacity of the proposed project will serve existing needs. Any political subdivision of the state and water supply corporations that may sponsor construction of a regional water or wastewater project is eligible to apply to TWDB for participation in the project. Although it is not required, the applicant usually acquires a loan from TWDB for the community's immediate needs.

Borrower's Advantage: Local governments obtain economies of scale for projects that are beyond their current financial capability. In addition to interest savings, the program reduces the necessity and added capital expense of building new structures or replacing undersized structures in the future.

Loan Terms: Approximately 34 years.

Interest Rate: TWDB cost of funds (4.52 percent as of September 3, 2010).

Constraints: Legislature must appropriate General Revenue Funds to pay debt service (at least initially) for new GO bond issues.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$338,895,000	$196,614,000	$142,281,000

WATER INFRASTRUCTURE FUND

Source of Funds: May be funded with GO bonds, legislative appropriations and fees or with revenues from gifts, grants and donations, and other available sources.

Bond Repayment: General Revenue appropriations pay the related debt service for deferred payments and subsidized interest rates. Ultimately, the state recovers the total amount of bonds and a portion of the interest from the local governments.

Program Description:

- Loans for projects to political subdivisions, at or below market rates.
- Zero-interest loans for projects outside metropolitan areas to ensure implementation of projects for rural or economically distressed areas.
- Loans for planning and design, permitting, and state and federal regulatory activities, at below market rates, with deferral of principal and interest payments for up to 10 years, or until construction ends.
- Economic Development Programs (statutory allowance but not in rules).

Borrower's Advantage: Up-front funding for preliminary project costs with payment deferral; low interest loans.

Loan Terms: 20-year maturities.

Interest Rate: 200 basis points below TWDB cost of funds (2.15 percent as of September 3, 2010).

Constraints: Legislature must appropriate General Revenue (at least initially) to pay debt service for new bond issues although $230.1 million has been certified as self supporting.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$746,729,000	$632,269,000	$87,470,000

ECONOMICALLY DISTRESSED AREAS PROGRAM

Source of Funds: TWDB issued GO bonds.

Bonds Repayment: Approximately 90 percent General Revenue appropriation; approximately 10 percent revenue from loan payments from political subdivisions.

Program Description: Grants and loans are provided for the construction, acquisition or improvements to water supply and wastewater collection and treatment works, including all necessary engineering work where services do not exist or existing services are inadequate to meet minimum state standards. House Bill 467, Seventy-ninth Legislature, 2003,

expanded the program statewide to any county in which an economically distressed area exists that was established as of June 2005. EDAP bonds have matched the $300 million federal Colonia Wastewater Treatment Assistance Program which funds projects within 100km of the Mexico border.

Borrower's Advantage: Assistance provided primarily as grants, with a loan amount determined by the capital contribution available to be paid by the customer base.

Loan Terms: 20-year maturities

Interest Rate: TWDB cost of funds (3.77 percent as of September 3, 2010)

Constraints: Limited to entities meeting the description of "economically distressed areas" within the state with median household income not greater than 75 percent of median state household income. Must have nuisance determination to qualify for more than 50 percent grant. Applicable entities must adopt and enforce by Model Subdivision Rules.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

	TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
EDAP	$242,370,153	$220,636,320	$36,072,026
CWTAP	$418,429,145	$363,881,358	-

COLONIA SELF-HELP PROGRAM

Source of Funds: The Eighty-first Legislature, 2009, appropriated General Revenue for this purpose in the 2010–11 biennium. Potential funding sources include legislative transfers, gifts, grants, and donations.

Bond Repayment: Not applicable.

Program Description: The program funds water and wastewater projects sponsored by political subdivisions or non-profit organizations that rely on community residents' in-kind contribution to help construct the project.

Borrower's Advantage: 100 percent grant funds.

Loan Terms: Not applicable.

Interest Rate: Not applicable.

Constraints: Limited to political subdivisions or non-profit organizations.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$668,401	$405,285	$89,022

WATER LOAN ASSISTANCE FUND

Source of Funds: General Revenue Funds and other appropriations.

Bond Repayment: Not applicable.

Program Description: The Water Assistance Fund consists of various sub-funds. The most relevant for financing of water and wastewater projects is the Water Loan Assistance Fund, which provides assistance in the form of loans and limited grants for water conservation, water development, water quality enhancement, flood control, drainage, recharge, brush control, weather modification, regionalization, and desalination.

Borrower's Advantage: Grants and lower interest loans may be available. Provides pre-construction funding.

Loan Terms: Varies.

Interest Rate: The higher Delphis A Scale or as determined by the Board based on legislative direction or to promote major water initiatives designed to provide significant regional benefit. (Note: the Delphis A Scale is a composite index of municipal bond interest rate tables published by the Delphis Hanover Corporation.)

Constraints: Limited by legislative appropriations or availability of TWRFA funding.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$69,937,051	$64,280,028	$8,326,860

CLEAN WATER STATE REVOLVING FUND

Source of Funds: Annual federal capitalization grants matched with TWDB issued GO bonds, revenue bonds and loan repayments deposited back into the fund. Funding is determined during the federal appropriations process.

Bond Repayment: No repayment of the federal grant required; revenue from loan re-payments from political subdivisions for the GO and revenue bonds.

Program Description: The fund provides loans at interest rates lower than the market to political subdivisions with the authority to own and operate a wastewater system. The program also includes Federal (Tier III) and Disadvantaged Communities funds that provide even lower interest rates or loan forgiveness for those meeting the respective criteria. Although nonprofit water supply corporations are considered political subdivisions for various other TWDB programs, they are not eligible to receive assistance from the program. These are the types of loans offered through this program:

- reduced interest loans for wastewater projects addressing compliance issues consistent with Clean Water Act goals;
- loan forgiveness or 1 percent and 0 percent interest loans for wastewater projects addressing compliance issues in Disadvantaged Communities; and
- loans for Estuary Management projects.

Borrower's Advantage: Subsidized interest rates or loan forgiveness.

Loan Terms: 20- to 30-year maturities.

Interest Rate: Basis point reduction from market rate (2.35 percent to 3.40 percent as of September 3, 2010); 130 basis points for Tier III projects as of September 1, 2010.

Constraints: Projects must be on an annual Intended Use Plan to receive funding. Federal goal-based priority distribution of funds.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$6,309,498,689	$5,315,493,775	$757,460,000

DRINKING WATER STATE REVOLVING FUND

Source of Funds: Annual federal capitalization grants matched with TWDB issued GO bonds and loan repayments deposited back into the fund. Revenue bonds also available for providing money to the fund, but have not yet been utilized. Funding is determined during the federal appropriations process.

Bond Repayment: Revenue from loan repayments from political subdivisions for the GO bonds. No repayment of federal grants is required.

Program Description: Loans are offered at interest rates lower than the market offers to finance projects for public drinking water systems that facilitate compliance with primary drinking water regulations or otherwise significantly further the health protection objectives of the federal Safe Drinking Water Act (SDWA). For most loans, the net long-term interest lending rate is 1.25 percent below the rate a borrower would receive on the open market at the time of loan closing with a maximum repayment period of 20 years from the completion of construction. There is, however, a limited amount of funding available each year at even greater subsidies including loan forgiveness including loan forgiveness to applicants that qualify as "disadvantaged communities." Disadvantaged communities may also receive a 30-year loan term.

Applicants may be political subdivisions of the state, nonprofit water supply corporations, privately-owned water systems and state agencies. Loans can be used for the planning, design, and construction of projects to upgrade or replace water supply infrastructure, to meet SDWA health standards, to consolidate water supplies and to purchase capacity in water systems. Loan proceeds can also be used to purchase land integral to the project.

Borrower's Advantage: Subsidized interest rates, loan forgiveness, or zero percent loans for disadvantaged communities.

Loan Terms: 20-year maturities; 30-year maturities for disadvantaged communities.

Interest Rate: 125 basis points below market (2.05 percent to 3.10 percent as of September 3, 2010); 0 percent to 1 percent for disadvantaged communities.

Constraints: Projects must be on annual Intended Use Plan to receive funding; federal goal-based priority distribution of funds; a minimum of 30 percent of the capitalization grant is specified for disadvantaged communities.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2010

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
$1,251,706,996	$1,066,175,398	$470,656,468

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
DEDICATED FEES FOR WATER PROGRAMS
ANNUAL FEE REVENUE (FISCAL YEAR 2010) AND STATUTORY FEE LEVELS

ACCOUNT	DESCRIPTION	FEE DESCRIPTION	STATUTORY AUTHORITY	FEE RATE	RULE OR STATUTE	ACTUAL FEE REVENUE (FY 2010)	NUMBER OF PAYEES/ INVOICES	BILLED OR SELF ASSESSED
0153	Water Resource Management Account 153	Application for Cert of Public Convenience & Necessity (CCN)	Water Code, Sec. 13.4522(a)	$100/application	Rule 291.7 (Subsection A)	$2,300	23	Self pay w/ application
0153	Water Resource Management Account 153	Sale, Transfer or Merger of Cert of Public Convenience & Necessity (STM)	Water Code, Sec. 13.4522(b)	$50 - $500 based on # of water or sewer connections	Rule 291.7 (Subsection A)	$5,700	54	Self pay w/ application
0153	Water Resource Management Account 153	Rate Change Application Fee	Water Code, Sec. 13.4521(a)	$50 - $500 based on # of water or sewer connections	Rule 291.7 (Subsection A)	$13,375	94	Self pay w/ application
0153	Water Resource Management Account 153	Water Use Permit Application Fee	Water Code, Sec. 5.701(c)	$100-$2,000 based on acre ft	Rule 295.132 (Subsection I)	$87,600	279	Self pay w/ application
0153	Water Resource Management Account 153	Water District Creation Application Fee	Water Code, Sec. 5.701(e)	$700 plus cost of notice	Rule 293.11 (Subsection B)	$4,200	13	Self pay w/ application
0153	Water Resource Management Account 153	Temporary or Emergency Water Use Permits	Water Code, Sec. 11.138(g)	$100 - $250, based on # acre-feet, plus notice, max $500 (statute)	Rule 295.132, .134 (Subsection B)	$36,555	372	Self pay w/ application
0153	Water Resource Management Account 153	Misc. Water District Application Fees	Water Code, Sec. 5.701(b)	$100 plus cost of notice	Rule 293.80 (Subsection G)	$28,324	294	Self pay w/ application
0153	Water Resource Management Account 153	Water Use Permit - Construction Delay	Water Code, Sec. 11.145	Varies based on # acre-feet, plus cost of notice, $1,000 max	Rule 295.132, .134 (Subsection B)	$205	2	Self pay w/ application
0153	Water Resource Management Account 153	Water Quality Permit Application Fee	Water Code, Sec. 5.701	$100 - $2,000	Rule 305.53 (Subsection C)	$678,298	898	Self pay w/ application
0153	Water Resource Management Account 153	Water Use Max Use Fee	Water Code, Sec. 5.701	$100 - $2,000	Rule 305.53 (Subsection C)		Not assessed at this time	Self assessed/ self pay
0153	Water Resource Management Account 153	Water rate appeals Filing, application, petition, recording fees	Water Code, Sec. 5.701(b) Water Code, Sec. 11.041(b)	$100 application + $25 deposit	Statute		1 in 2008	Self pay w/ application

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (CONTINUED)
DEDICATED FEES FOR WATER PROGRAMS
ANNUAL FEE REVENUE (FISCAL YEAR 2010) AND STATUTORY FEE LEVELS

ACCOUNT	DESCRIPTION	FEE DESCRIPTION	STATUTORY AUTHORITY	FEE RATE	RULE OR STATUTE	ACTUAL FEE REVENUE (FY 2010)	NUMBER OF PAYEES/ INVOICES	BILLED OR SELF ASSESSED
0153	Water Resource Management Account 153	Disposal waste, injection, or gas well fee	Water Code, Sec. 27.014	Application fee, $100 non-hazardous and $2,000 hazardous	Rule 305.53 (Subsection C)	$8,100	20	Self pay w/ application
0153	Water Resource Management Account 153	General Permit Wastewater (Concrete Production, Aqua Culture, Petroleum Bulk Station and Terminals, Hydrostatic Test Water, Petroleum Fuel or Substance, and CAFO)	Water Code, Sec. 26.040	$100- 300 Application $100- 800 annual fee depending on permit type	Rule 205.6 (Subsection A)	$1,566,595	7,568	Self pay w/ application
0153	Water Resource Management Account 153	General Permits Storm Water (Multi-sector, Ms4, and Construction)	Water Code, Sec. 26.040, 26.021, & 26.029	$100 Application$100-200 annual Water Quality Fee and $225-325 Construction fee	Rule 205.6 (Subsection a)	$1,567,110	7,159	Billed Fee
0153	Water Resource Management Account 153	General Permit Wastewater Live Stock Manure Compost Operation	Water Code, Sec. 26.040	$100 Application $100 Annual Water Quality Fee	Rule 205 (Subsection A)	$853,476	1,020	Billed Fee
0153	Water Resource Management Account 153	Water Utility Regulatory Assessment Fee	Water Code, Sec. 5.701(n)	0.5% to 1% of utility companies' retail water svc charges	Rule 291.76 (Subsection D)	$7,455,556	2,168	Self assessed/ self pay
0153	Water Resource Management Account 153	Municipal Waste Permit	Water Code, Sec. 5.701	$100 application + $50 notice	330.59(h)(1) (Subsection B)	$17,100	179	Self pay w/ application
0153	Water Resource Management Account 153	Consolidated Water Quality Fee	Water Code, Sec. 26.0291 & 26.0135(h)	$620 - $100k depending on volume, pollutants, toxicity, etc.	Rule 21.3	$21,684,651	2,419	Billed Fee
0153	Water Resource Management Account 153	Water Use Assessment Fee	Water Code, Sec. 26.0135(h)	For consumptive use, $0.385 per acre-foot; for non-consumptive use $0.021 per acre-foot	Rule 21.3(c)	$914,292	162	Billed Fee

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (CONTINUED)
DEDICATED FEES FOR WATER PROGRAMS
ANNUAL FEE REVENUE (FISCAL YEAR 2010) AND STATUTORY FEE LEVELS

ACCOUNT	DESCRIPTION	FEE DESCRIPTION	STATUTORY AUTHORITY	FEE RATE	RULE OR STATUTE	ACTUAL FEE REVENUE (FY 2010)	NUMBER OF PAYEES/ INVOICES	BILLED OR SELF ASSESSED
0153	Water Resource Management Account 153	Edwards Aquifer Development Application Fee - San Antonio Region	Water Code, Sec. 26.0461(d)	$650 - $10,000 based on acreage, sewage system, linear feet of pipe, etc	Rule 213.14 (Subsection A)	$614,721	213	Self assessed/ self pay
0153	Water Resource Management Account 153	Water Utility Bond Issue Application Fee	Water Code, Sec. 5.701(f)	$500 plus cost of notice	Rule 293.43 (Subsection E)	$79,200	178	Self pay w/ application
0153	Water Resource Management Account 153	Water Utility Bond Issue Proceeds Fee	Water Code, Sec. 5.701(f)	0.25% of bond issue principal	Rule 293.45 (Subsection E)	$1,675,109	164	Self pay w/ application
0153	Water Resource Management Account 153	Public Health Service Fee	Health & Safety Code, Sec. 341.041	$100 minimum, 25-161 connections $175, then $2.15 per # of retail connections	Rule 290.51(a) (Subsection E)	$20,140,289	7,928	Billed Fee
0153	Water Resource Management Account 153	Boat Sewage Disposal Device Cert.	Water Code, Sec. 26.044	$15 fee for marine sanitation device; $35 for initial certification of pump out facility with $25 dollar renewal fee	Rule 321.7 & 321.12 (Subsection A)	$17,820	1,167	Self pay w/ application
0153	Water Resource Management Account 153	Edwards Aquifer Development Application Fee - Austin Region	Water Code, Sec. 26.0461(d)	$650 - $10,000 based on acreage, sewage system, linear feet of pipe, etc	Rule 213.14 (Subsection A)	$579,282	238	Self pay w/ application
0153	Water Resource Management Account 153	Edwards Aquifer Development Plans and Amendments	Water Code, Sec. 26.0461	$100 - $6,500 based on acreage, sewage system, linear feet of pipe, etc	Rule 213.14 (Subsection A)		Not assessed at this time	n/a
0153	Water Resource Management Account 153	Water Saving Performance Stds. (a.k.a.Plumbing fixture inspection) Fee	Health & Safety Code, Sec. 372.002(d)	$50 initial, $25 annual	Rule 290.255 (Subsection G)		0	Billed Fee
0153	Water Resource Management Account 153	On-Site Sewage Disposal System Permit (Wastewater Treatment Inspection)	Health & Safety Code, Sec. 366.058	$200 for single family dwelling, $400 for other	Rule 285.21 (Subsection C)	$211,976	1,005	Self pay w/ application

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (CONTINUED)
DEDICATED FEES FOR WATER PROGRAMS
ANNUAL FEE REVENUE (FISCAL YEAR 2010) AND STATUTORY FEE LEVELS

ACCOUNT	DESCRIPTION	FEE DESCRIPTION	STATUTORY AUTHORITY	FEE RATE	RULE OR STATUTE	ACTUAL FEE REVENUE (FY 2010)	NUMBER OF PAYEES/ INVOICES	BILLED OR SELF ASSESSED
0153	Water Resource Management Account 153	On-Site Wastewater Charge-back Permit	Health & Safety Code, Sec. 366.059	not to exceed $500	Rule 285.14 (Subsection B)	—	Assessed only when state takes back program from county; has never happened	Billed Fee
0153	Water Resource Management Account 153	Surface Casing Expedited Letters	Water Code, Sec. 5.701(r)	75	Rule 339.3	$764,935	10,452	Self pay w/ application
0158	Concho River Watermaster Assessment	Concho River Watermaster Assessment	Water Code, Sec. 11.329	2009 Rates: 0.43912 per acre ft. irrigation, 0.5489 an acre ft. municipal	Rule 304.62(b) (Subsection G)	$158,615	241	Billed Fee
0158	Rio Grande Watermaster Assessment	Rio Grande Watermaster Assessment	Water Code, Sec. 11.329	2009 Rates: 0.24696 per acre ft. irrigation, 0.3087 an acre ft. municipal	Rule 303.72(b) (Subsection H)	$741,992	866	Billed Fee
0158	South Texas Watermaster Assessment	South Texas Watermaster Assessment	Water Code, Sec. 11.329	2009 Rates: 0.14296 per acre ft. irrigation, 0.1787 an acre ft. municipal	Rule 304.62(b) (Subsection G)	$549,289	859	Billed Fee