

State Funding For Water Programs Legislative Primer

FIRST EDITION



PREPARED BY LEGISLATIVE BUDGET BOARD STAFF

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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:

- ◆ a high-level overview of the demand for water in Texas;
- ◆ a summary of water rights issues, including groundwater and surface water rights, and the privatization of water rights;
- ◆ 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;
- ◆ program descriptions and funding for the financial assistance programs for water infrastructure projects provided by the Texas Water Development Board (TWDB);
- ◆ a summary of potential additional dedicated funding sources for water programs, including revenue options to address an anticipated shortfall in General Revenue–Dedicated funds, Water Resource Management Account No. 153, which is the primary source of funding for the Texas Commission on Environmental Quality’s (TCEQ) water program expenditures; and
- ◆ 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 dedicated funding sources for water programs and actual receipts in fiscal year 2008.

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

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.

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.

STATE AGENCIES WITH WATER RESPONSIBILITIES AND PROGRAMS

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

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 groundwater data throughout the state and plays an integral role in the regional water planning process (see page 7). 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).

TEXAS STATE 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 silvicultural¹ 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

¹Refers to timber and/or forests.

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 drinking water, wastewater discharges, and Concentrated Animal Feeding Operation (CAFO) discharges. 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.

²Legislative 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 and General Revenue–Dedicated Funds. **Figure 2** shows the 2008–09 General Revenue Funds and General Revenue–Dedicated Funds 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). However, the available balance and estimated revenues in this account may not be sufficient to cover the agency’s current level of water program expenditures in 2010–11. In fact, based on current expenditure levels, revenues, and balances in the account, it is estimated that the shortfall in this account could reach \$32.5 million by August 31, 2011.

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 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.

FIGURE 2*
STATE FUNDING FOR WATER PROGRAMS, AS OF AUGUST 2009

AGENCY	ACCOUNT	2008	2009	2008–09 BIENNIUM
Texas Commission on Environmental Quality				
	General Revenue	\$7,459,517	\$7,707,446	\$15,166,963
	General Revenue–Dedicated Account No. 153	\$45,832,903	\$46,435,305	\$92,268,208
	General Revenue–Dedicated Account No. 158	\$1,214,227	\$1,303,205	\$2,517,432
Texas Water Development Board				
	General Revenue	\$21,967,230	\$26,930,717	\$48,897,947
Debt Service Payments for Non-Self-Supporting General Obligation Water Bonds				
	General Revenue	\$23,434,472	\$57,931,453	\$81,365,925
Texas State Soil and Water Conservation Board				
	General Revenue	\$8,140,688	\$7,521,775	\$15,662,463
	Total General Revenue	\$61,001,907	\$100,091,391	\$161,093,298
	Total General Revenue–Dedicated	\$47,047,130	\$47,738,510	\$94,785,640
	TOTAL	\$108,049,037	\$147,829,901	\$255,878,938

*In addition to program expenditures shown in Figure 2, the Texas Parks and Wildlife Department estimates it will spend approximately \$1.5 million out of General Revenue–Dedicated Funds (Game Fish and Water Safety Account No. 9) in the 2008–09 biennium on water planning activities related to Senate Bill 3, Eightieth Legislature, 2007.

NOTE: Amounts do not include employee benefit costs. Texas Commission on Environmental Quality amounts do not include all indirect administrative and support costs.

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

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. A surface water right permit is not needed for the construction of a reservoir with normal storage capacity of not more than 200 acre-feet of water per year or for domestic and livestock use which is constructed on a person’s own property.

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 permit 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 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 \$129,038 in WUP revenues in fiscal year 2008.

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, non-consumptive use, or hydropower 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 the entity paying the CWQ fee. Agricultural use and hydroelectric facilities with less than 2-megawatt capacity are exempt from this fee. During the 2008–09 biennium, about \$400,000 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 non-consumptive (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 \$0.22 per acre-foot up to 20,000 acre-feet and \$0.08 per acre-foot thereafter.

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. 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 (approximately \$2.4 million per fiscal year in the 2008–09 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 river basin 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 river basin, and Concho River 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, except for the area immediately adjacent to the Rio Grande basin. The Concho River Watermaster program, created in 2005, encompasses the Concho 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 “run of the river rights,” meaning that surface water is taken from specified diversion points as it flows in relation to other priority water rights holders. Water rights and water distribution in these areas are based on two factors: (1) the maximum water allocated by permit to each water rights holder; and (2) the permitted dates. Accordingly, all uses are considered equal, and no single use has a priority over another. The permitted date and water balance of each water right determine the order of allowable diversions. Drought conditions can further limit allowable diversions.

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 September 2008, there were 95 groundwater districts in Texas, including 4 awaiting confirmation, that cover approximately 64 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 Carrizo-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.

Currently, groundwater conservation districts in Groundwater Management Areas across the state are making decisions that affect future groundwater permitting. Districts are deciding what the desired future conditions are for their aquifers.³ These desired future conditions result in permitting caps/targets for groundwater, called managed available groundwater, which is likely to affect groundwater rights.

³A desired future condition is essentially a management goal for an aquifer.

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.

GROUNDWATER MONITORING

TWDB performs groundwater monitoring activities which produce 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 ambient (i.e., surrounding) 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 determining groundwater availability. 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 \$3.6 million per year on groundwater management activities, \$3.3 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 costs about \$300,000 per year. TCEQ’s remaining groundwater protection activities cost an estimated \$1.2 million per fiscal year in the 2008–09 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, 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

**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

SOURCE: 2007 State Water Plan, Texas Water Development Board.

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 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. 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.

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 two interbasin transfer authorizations that were subject to these provisions have been granted.

WATER INFRASTRUCTURE

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 state 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 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 new technology that has become a viable water management strategy. 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.

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 \$42.6 million on brush control, resulting in 745,585 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. Senate Bill 3, Eightieth Legislature, 2007, further requires a stakeholder group to determine what environmental flows are necessary in each river basin. Although the issue has been studied by TWDB, TCEQ, and TPWD, the results of those studies have not obtained widespread acceptance and are not presently 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. 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 and loan repayments, and the CWSRF is also funded with revenue bonds.

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, 2008. 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. Approximately \$25 million per year 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 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 nonprofit water supply corporations with eligible water, wastewater, flood, and municipal solid waste projects.

The DFund provides on average approximately \$73.0 million in financial assistance each year and is funded by GO bonds issued by TWDB. The DFund is presently

FIGURE 4
TEXAS WATER DEVELOPMENT BOARD -- FINANCIAL ASSISTANCE PROGRAMS
(AS OF AUGUST 31, 2008)

PROGRAM	POPULATION SERVED***	TOTAL GENERAL OBLIGATION (GO) BOND AUTHORITY	AUTHORIZED, BUT UNISSUED GO BOND AUTHORITY	BOND ISSUED OR PROJECTED TO BE ISSUED AS AUTHORIZED BY THE 80TH LEGISLATURE	CASH BALANCES	CAPACITY (\$)	TOTAL COMMITMENTS (INCEPTION TO DATE)	LOANS AND GRANTS CLOSED	OUTSTANDING COMMITMENTS
Texas Water Development Fund (DFund)	4,496,676	\$4,180,000,000	\$1,974,237,891	N/A	\$74,401,442	NA	\$1,862,084,529	\$1,419,080,804	\$333,296,500
Agricultural Water Conservation Loan Program		\$200,000,000	\$164,840,000	N/A	\$15,033,716	NA	\$67,745,876	\$66,765,630	\$0
Rural Water Assistance Fund (RWAF)	205,650	*	*	N/A	\$257,140	NA	\$127,305,000	\$83,451,000	\$21,356,000
State Participation (SP)	2,317,722	*	*	\$195,000,000	\$14,496,871	NA	\$165,050,000	\$150,565,000	\$14,485,000
Water Infrastructure Fund (WIF)**	6,773,365	\$50,000,000	*	\$449,253,188	\$51,425,667	NA	\$116,355,000	\$64,955,000	\$51,400,000
Economically Distressed Areas Program (EDAP)	270,139	\$500,000,000	\$262,013,072	\$74,452,188	\$48,702,660	NA	\$189,511,603	\$161,084,946	\$14,818,597
Colonia Self-Help Program	758		N/A	N/A	\$484,155	NA	\$624,461	\$205,230	\$200,055
Water Loan Assistance Fund	1,168,200		N/A	N/A	\$8,238,500	NA	\$64,204,576	\$54,427,191	\$7,393,091
Clean Water State Revolving Fund	9,236,923		N/A	N/A	N/A	\$524,000,000	\$5,202,312,740	\$4,554,494,971	\$443,271,053
Drinking Water State Revolving Fund	2,827,480		N/A	N/A	N/A	\$80,000,000	\$970,986,941	\$405,627,000	\$448,038,784

*These programs are included in the DFund constitutional authority.

**WIF is included in the DFund constitutional authority, which requires that at least \$50 million in GO bonds be designated for WIF projects.

***Population Served may include the same individuals more than once because they may have been affected by more than one of the listed programs.

SOURCE: Texas Water Development Board.

authorized to issue up to \$4.2 billion in bonds, and as of August 31, 2008, TWDB has committed \$1.9 billion and closed loans accounting for \$1.4 billion. There was \$0.3 billion in outstanding commitments. The DFund is self-supporting; therefore, the state currently pays none of the related debt service.

TEXAS AGRICULTURAL WATER CONSERVATION FUND

The Texas Agricultural Water Conservation Fund provides funding for grants to state agencies and political subdivisions for conservation programs and projects; loans to political subdivisions, individual farmers and ranchers for conservation programs or projects; and linked deposits to lending institutions for individuals to access TWDB's financial assistance through loans for nonpoint source conservation 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, local political subdivisions, and individual farmers and ranchers. As of August 31, 2008, TWDB had \$15.0 million in cash and \$164.8 million in 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.

In fiscal year 2003, TWDB issued \$16 million in GO bonds, \$15 million of which was transferred to TSSWCB for brush control projects, and \$1 million was transferred to the Department of Agriculture for a salt cedar eradication project along the Pecos River. Through fiscal year 2009, the debt service on these bonds has been paid with General Revenue appropriations. TWDB reports that beginning in fiscal year 2010, the fund will become self-supporting and will no longer require General Revenue appropriations.

As of August 31, 2008, TWDB had \$67.8 million in total commitments for the Agricultural Water Conservation Fund; this amount includes closed loans and grants of \$66.8 million.

RURAL WATER ASSISTANCE FUND

The Rural Water Assistance Fund (RWF) 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 RWF 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 RWF is funded with TWDB GO bonds using the state's Private Activity Bond Cap to access tax-exempt rates. As of August 31, 2008, TWDB had awarded \$127.3 million in total commitments from the RWF, with closed loans accounting for \$83.5 million of this amount. There are currently \$21.4 million in outstanding commitments. The RWF is self-supporting, (i.e., requires no General Revenue appropriation 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 Account, 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 Account, 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, 2008, TWDB had \$165.1 million in total commitments for the State Participation Program, with closed loans accounting for \$150.6 million of this amount. There was currently \$14.5 million in outstanding commitments.

The Eightieth Legislature, 2007, authorized TWDB to issue up to \$326.1 million for the State Participation Program, including \$276.1 million for projects identified in the 2007 State Water Plan. Of this amount, the agency anticipates issuing \$195 million for the State Participation Program, including \$170 million for State Water Plan projects in the 2008–09 biennium. For these and prior issuances, TWDB was appropriated \$29.7 million in General Revenue Funds and loan repayments to pay debt service requirements in the 2008–09 biennium.

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 begins, for planning and design, permitting, and state and federal regulatory activities. Additionally, grants or low-or-zero-interest loans are available for rural projects outside metropolitan areas and for projects in economically distressed areas. Statute also allows funding for economic development programs. 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, 2008, TWDB has awarded \$116.4 million in total commitments from the Water Infrastructure Fund, with closed loans accounting for \$65.0 million of this amount. There is currently \$51.4 million in outstanding commitments. The Eightieth Legislature, 2007, authorized TWDB to issue up to \$449.3 million for the Water Infrastructure Fund and the agency anticipates issuing the total amount authorized. For these

issuances, TWDB was appropriated \$32.3 million in General Revenue Funds to pay debt service requirements in the 2008–09 biennium.

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.

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. 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, 2008, TWDB has awarded \$189.5 million in total commitments through EDAP, with closed loans and grants accounting for \$161.1 million of this amount. At present, there remains \$14.8 million in outstanding commitments. TWDB was appropriated \$43.3 million for debt service on EDAP bonds for the 2008–09 biennium. Of this amount, \$39.2 million is General Revenue Funds.

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 nonprofit 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 2008–09 biennium, the Colonia Self-Help Program was funded by General Revenue Fund appropriations.

As of August 31, 2008, TWDB had awarded \$0.6 million in total commitments through the Colonia Self-Help Program, with closed grants accounting for \$0.2 million of this amount. There was \$0.2 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, 2008, TWDB had issued \$64.2 million in total commitments for the Water Loan Assistance Fund, with closed loans and grants accounting for \$54.4 million of this amount. There was \$7.4 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 for wastewater projects addressing compliance issues in disadvantaged communities; linked deposits to local lending institutions to make loans to individuals for nonpoint source projects; 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, state 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, 2008, TWDB had \$5,202.3 million in total commitments through the Clean Water State Revolving Fund, with closed loans accounting for \$4,554.5 million of this amount. There was \$443.3 million in outstanding commitments.

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. 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 2008–09 biennium, up to \$7.7 million in General Revenue Funds was appropriated to provide state matching requirements for the DWSRF disadvantaged loan program.

As of August 31, 2008, TWDB had awarded \$971 million in total commitments through the Drinking Water State Revolving Fund, with closed loans accounting for \$405.6 million of this amount. There was \$448 million in outstanding commitments.

POTENTIAL ADDITIONAL FUNDING SOURCES FOR WATER PROGRAMS

The Joint Committee on State Water Funding was established by Senate Bill 3, Eightieth Legislature, 2007. The Texas Water Development has provided the Joint Committee with information on possible additional funding sources for water programs. This section of the primer focuses on those sources

identified by TWDB, and, on revenue alternatives previously identified in “Options to Improve State Financing of Water Programs,” included in the Legislative Budget Board (LBB) publication, *Texas State Government Effectiveness and Efficiency Report*, Eightieth Legislature. The LBB staff report analyzes various methods for increasing the balance of Water Resource Management Account No. 153 (General Revenue–Dedicated Funds).

JOINT COMMITTEE ON STATE WATER FUNDING, EIGHTIETH LEGISLATURE, 2007

TWDB provided the Joint Committee on State Water Funding a list of potential dedicated 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 to the committee, TWDB, in consultation with TCEQ and the Comptroller of Public Accounts, also included revenue estimates for each of the possible funding sources.

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 2010 and 2011.

**FIGURE 5
POTENTIAL REVENUE SOURCES – WATER PROGRAMS
(IN MILLIONS)
FISCAL YEARS 2010–11**

	2010	2011
Sales Tax on Retail Sales of Utility Water and Sewer	\$235.0	\$242.0
Water Conservation and Development Fee	72.0	72.0
Tap Fee on Retail Public Utility Connections	96.0	97.0
Water Rights Fee	49.0	49.0
Sales Tax on Bottled Water	93.0	102.0
TOTAL	\$545.0	\$562.0

SOURCE: 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, nonprofit

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 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 sales tax would 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 nonprofit 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)
FISCAL YEARS 2010–11**

	2010	2011
State tax revenues	\$235.0	\$242.0
Local tax revenues	68.0	70.0
Administrative fee for utilities	(1.5)	(1.6)
TOTAL TAX REVENUES	\$301.5	\$310.4

NOTE: Numbers may not add 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 fee would 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 nonprofit 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 OF WATER CONSERVATION
AND DEVELOPMENT FEE (IN MILLIONS)
FISCAL YEARS 2010–11**

	2010	2011
Total fee revenues	\$72.0	\$72.0
Administrative fee for utilities	(0.36)	(0.36)
TOTAL FEE REVENUES TO THE STATE	\$72.0	\$72.0

NOTE: Numbers may not add 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.

**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: Numbers may not add due to rounding.
SOURCE: Texas Water Development Board.

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 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 2010–11**

	2010	2011
Total fee revenues	\$96	\$97

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.

**FIGURE 10
REVENUE ESTIMATE OF A SALES TAX ON BOTTLED WATER
(IN MILLIONS)
FISCAL YEARS 2010–11**

	2010	2011
State tax revenues	\$93	\$102
Local tax revenues	27	29
TOTAL TAX REVENUES	\$120	\$131

NOTE: Numbers may not add due to rounding.
SOURCE: Texas Water Development Board.

TEXAS STATE GOVERNMENT EFFECTIVENESS AND EFFICIENCY REPORT, EIGHTIETH LEGISLATURE, 2007

The Water Resource Management Account No. 153 (General Revenue–Dedicated Funds) is funded through the collection of 28 different fees, which generates approximately \$83 million per biennium. Costs that TCEQ assigns to the Water Resource Management Account No. 153 are expected to total approximately \$120 million, including benefits, for the 2010–11 biennium. Given an anticipated fund balance of about \$5 million as of September 1, 2009 (the start of the 2010–11 biennium), a shortfall of \$32.5 million in Water Resource Management Account No. 153 is expected as of August 31, 2011 (the end of the 2010–11 biennium). To address this shortfall, any of the 28 fees could be increased to raise revenue for the account, but since many of these fees focus on a narrow group of fee payers or generate small to negligible amounts of revenue, the report focused on the three largest fees: the Consolidated Water Quality Fee, the Water Utility Regulatory Fee, and the Public Health Service Fee.

The Consolidated Water Quality (CWQ) Fee is assessed annually for each permit authorizing the treatment and/or discharge of water issued under Chapter 26, Texas Water Code. TCEQ sets the CWQ Fee rates; however, the agency is restricted in the Texas Water Code, Section 26.0291(3), in assessing the annual fee to a limit of \$75,000 per permit. If TCEQ were to increase the rate on all fee payers paying less than the \$75,000 limit, additional revenue would be gained. This increase would mean that smaller water utilities and industrial users would be paying a greater portion of the costs than they are now paying. However, if the limit were removed and the current fee rate were applied to all fee-payers without a per-permit ceiling, TCEQ estimates that an additional \$16 million could be gained in annual revenue to Water Resource Management Account No. 153.

TCEQ sets the Public Health Service Fee rates and assesses it on all public drinking water systems based on the number of retail connections served by the system. Proceeds of the fee are used by TCEQ to assess the quality of water provided by water systems through the Public Drinking Water Program. According to TCEQ, revenues from the Public Health Service Fee brought in \$4.2 million in revenue in fiscal year 2008. The cost of administering the Safe Drinking Water Program is \$10.9 million per year plus an estimated \$1 million per year in employee benefit costs. Therefore, TCEQ could increase by rule the Public Health Service Fee by approximately 41 percent, or an amount sufficient to cover costs incurred in assessing the quality of water provided by water systems.

The Water Utility Regulatory Fee is collected by public utilities, water supply service corporations, and water districts. The fee is assessed against each retail customer at a rate of 0.5 percent of the charge for water or sewer service by investor-owned utilities and water supply and service corporations and at a rate of 1.0 percent of the charge for retail water or sewer service by water districts. The fee brought in \$6.1 million in fiscal year 2008, and is assessed on approximately 1.9 million connections. Municipal- and county-owned water and wastewater systems, which represent 78 percent of the 9 million connections in the state, are exempt from the fee.

The Legislature could modify the existing statute to apply the 1.0 percent rate to all current fee payers. This would generate an additional \$6 million per year, or about double the current revenue stream. Another option would be to apply the fee to systems currently exempt from the fee (mainly municipal systems). If the 0.5 percent rate were extended to include municipal systems, an additional \$17.2 million in annual revenues could be collected, while extending the 1.0 percent fee to municipal systems would generate \$34.4 million in annual revenues.

APPENDIX A

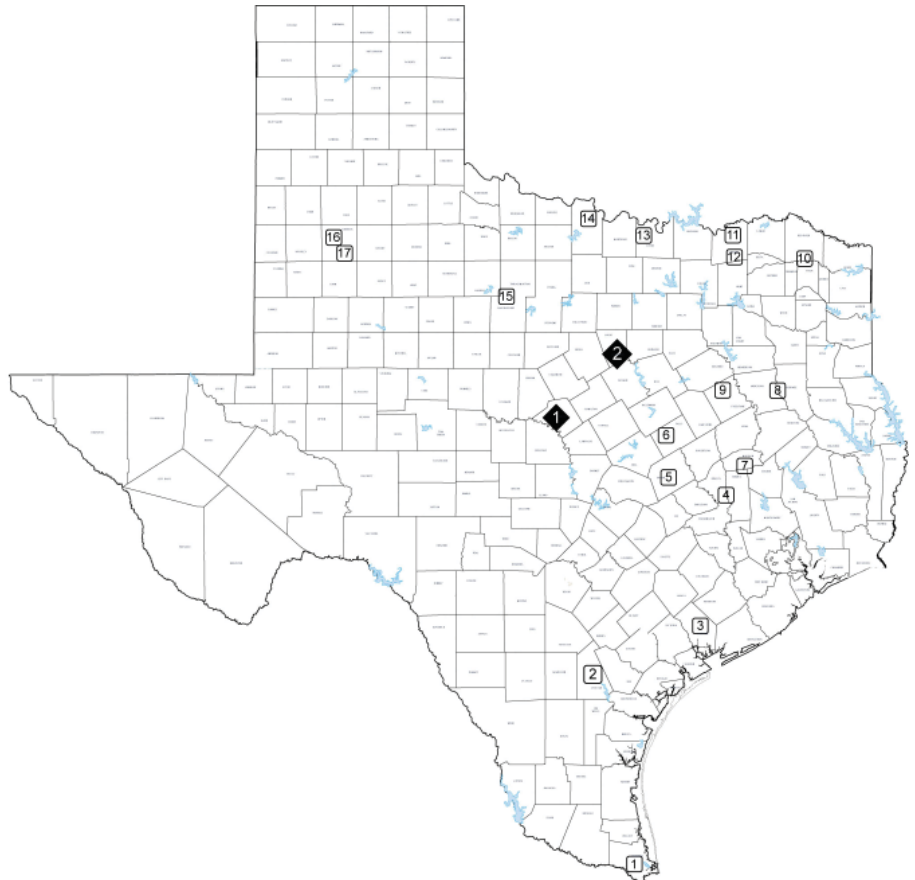
EIGHTIETH LEGISLATURE DESIGNATED UNIQUE RESERVOIR SITES

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: Three sites (Post, Allens Creek, and Lake Columbia) were designated prior to 2007.
SOURCE: Texas Water Development Board.

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, 2008, the Texas Water Development Board (TWDB) had issued over \$2.0 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, 2008, there was approximately \$2.3 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. Approximately \$25 million per year 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:** The higher of TWDB cost of funds or Delphis A Scale (4.53 percent as of September 12, 2008). *(Note: the Delphis A Scale is a composite index of municipal bond interest rate tables published by the Delphis Hanover Corporation.)*
- **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 AUGUST 31, 2008 (FISCAL YEAR 2008)

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
\$1,862,084,529	\$1,419,080,804	\$333,296,500

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 can 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 (3.25 percent as of September 12, 2008)
- **Constraints:** Limited to cash on hand and bond authority.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2008 (FISCAL YEAR 2008)		
TOTAL COMMITMENT	LOANS AND GRANTS CLOSED	COMMITMENTS OUTSTANDING
\$67,745,876	\$66,765,630	\$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 (5.15 percent as of September 12, 2008)
- **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, 2008 (FISCAL YEAR 2008)		
TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
\$127,305,000	\$83,451,000	\$21,356,000

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 the 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. The TWDB may acquire ownership interest in the water rights or a co-ownership interest of the property and treatment works. The loan 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 the 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 the 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 the 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 the TWDB for participation in the project. Although it is not required, the applicant usually acquires a loan from the 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. TWDB has historically funded projects producing more than 30 percent in capital savings.
- **Loan Terms:** Approximately 34 years
- **Interest Rate:** The higher of TWDB cost of funds or Delphis A Scale (5.54 percent as of September 12, 2008) (*Note: the Delphis A Scale is a composite index of municipal bond interest rate tables published by the Delphis Hanover Corporation.*)
- **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, 2008
(FISCAL YEAR 2008)**

TOTAL COMMITMENT	ASSISTANCE CLOSED	OUTSTANDING COMMITMENTS
\$165,050,000	\$150,565,000	\$14,485,000

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 grants and deferred payments and subsidized interest rates. Ultimately, the state recovers the total amount of bonds and appropriations from the local government except for grant portions.
- **Program Description:**
 - Loans for projects to political subdivisions, at or below market rates.
 - Grants or low-or-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 or below market rates, with deferral of principal and interest payments for up to 10 years, or until construction begins
- 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 or grants
- **Loan Terms:** 20-year maturities
- **Interest Rate:** 200 basis points below TWDB cost of funds (2.47 percent as of September 12, 2008)
- **Constraints:** Legislature must appropriate General Revenue (at least initially) to pay debt service for new bond issues.

TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2008 (FISCAL YEAR 2008)		
TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
\$116,355,000	\$64,955,000	\$51,400,000

ECONOMICALLY DISTRESSED AREAS PROGRAM

- **Source of Funds:** TWDB issued GO bonds. Funded by GO Bond authorization of \$250 million. As of August 31, 2008, \$12 million remained unissued from the original authorization. Enactment and voter approval of SJR 20, Eightieth Legislature, 2007, authorized an additional \$250 million in bond issuance.
- **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. 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.
- **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:** The higher of TWDB cost of funds or Delphis A Scale (5.11 percent as of September 12, 2008) (*Note: the Delphis A Scale is a composite index of municipal bond interest rate tables published by the Delphis Hanover Corporation.*)
- **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 abide by Model Subdivision Rules.

**TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2008
(FISCAL YEAR 2008)**

TOTAL COMMITMENT	LOANS AND GRANTS CLOSED	OUTSTANDING COMMITMENTS
\$189,511,603	\$161,084,946	\$14,818,597

COLONIA SELF-HELP PROGRAM

- **Source of Funds:** Currently funded from payments to Texas Water Resources Finance Authority (TWRFPA) when available. The Eightieth Legislature, 2007, appropriated General Revenue for this purpose in the 2008–09 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 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 non-profit organizations.

**TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2008
(FISCAL YEAR 2008)**

TOTAL COMMITMENT	GRANTS CLOSED	OUTSTANDING COMMITMENTS
\$624,461	\$205,230	\$200,055

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 of TWDB cost of funds or Delphis A Scale or as determined by appropriations (*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, 2008
(FISCAL YEAR 2008)**

TOTAL COMMITMENT	LOANS AND GRANTS CLOSED	OUTSTANDING COMMITMENTS
\$64,204,576	\$54,427,191	\$7,393,091

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. No repayment of federal grants is required.
- **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 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;
- 1 percent and 0 percent interest loans for wastewater projects addressing compliance issues in Disadvantaged Communities;
- linked deposits to local lending institutions (e.g., banks or farm credit associations) to make loans to individuals for non-point source projects; and
- loans for Estuary Management projects.
- **Borrower’s Advantage:** Subsidized interest rates
- **Loan Terms:** 20- to 30-year maturities
- **Interest Rate:** 95–195 basis points below market rate (3.30 percent to 4.15 percent for Tier II and 2.30 percent to 3.15 percent for Tier III as of September 12, 2008); 0 percent to 1 percent for disadvantaged communities
- **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, 2008
(FISCAL YEAR 2008)**

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
\$5,202,312,740	\$4,554,494,971	\$443,271,053

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 1.2 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 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:** 150 basis points below market (2.8 percent to 3.6 percent as of September 12, 2008); 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 up to 30 percent of the capitalization grant can be made available annually for disadvantaged communities. Upgrades or replacements of existing systems only. Funds cannot be used for growth or to purchase water rights.

**TOTAL FUNDS PROVIDED THROUGH AUGUST 31, 2008
(FISCAL YEAR 2008)**

TOTAL COMMITMENT	LOANS CLOSED	OUTSTANDING COMMITMENTS
\$970,986,941	\$405,627,000	\$448,038,784

APPENDIX C – WATER FEES

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY DEDICATED FUNDING SOURCES FOR WATER PROGRAMS ANNUAL FEE REVENUE (FISCAL YEAR 2008) AND STATUTORY FEE LEVELS

ACCT. #	DESCRIPTION	FEE DESCRIPTION	STATUTORY AUTHORITY	FEE RATE	STATUTORY MAXIMUM?	RULE OR STATUTE	ACTUAL RECEIPTS FISCAL YEAR 2008	NUMBER OF PAYEE INVOICES	BILLED OR SELF-ASSESSED
153	Water Resource Management Account 153	General Permit Stormwater	Water Code 26.040	\$100 construction; \$200 multi-sector Notice of Intent (NOI)	Yes	Rule 205.6	\$3,483,903	4,059 in fiscal year 2003	Billed Fee
153	Water Resource Management Account 153	General Permit Wastewater	Water Code 26.040	\$100–\$800, depending on type	Yes	Rule 205.6	\$784,695	140 in fiscal year 2003	Billed Fee
153	Water Resource Management Account 153	Consolidated Water Quality Fee	Water Code 26.0291 and 26.0135(h)	\$400–\$75k, depending on volume, pollutants, toxicity, etc.	Yes	21.1 and 21.3	\$18,354,302	3,414 in fiscal year 2003	Billed Fee
153	Water Resource Management Account 153	Water Use Assessment Fee	Water Code 26.0135(h)	For consumptive use, \$0.22 to \$0.08 per acre-foot, depending on use; for non-consumptive use, \$0.021 to \$0.0007 per acre-foot, depending on use.	Yes	Rule 21.3(c)	\$410,311	200	Billed Fee
153	Water Resource Management Account 153	Boat Sewage Disposal Device Certification	Water Code 26.044	\$15–\$35	Yes	Rule 321.7	\$20,285	1,318	Self-pay with application
153	Water Resource Management Account 153	Water Utility Regulatory Assessment Fee	Water Code 5.701(n)	0.5% to 1% of utility companies' retail water service charges	Yes	Rule 291.76	\$6,112,389	3,923	Self-assessed/self-pay
153	Water Resource Management Account 153	Water Utility Bond Issue Application Fee	Water Code 5.701(f)	\$500 plus cost of notice	Yes	Rule 293.43	\$112,600	497	Self-pay with application
153	Water Resource Management Account 153	Water Utility Bond Issue Proceeds Fee	Water Code 5.701(f)	0.25% of bond issue principal	Yes	Rule 293.45	\$2,446,516	Based on dollar amount of bonds	Self-pay with application

ACCT. #	DESCRIPTION	FEE DESCRIPTION	STATUTORY AUTHORITY	FEE RATE	STATUTORY MAXIMUM?	RULE OR STATUTE	ACTUAL RECEIPTS FISCAL YEAR 2008	NUMBER OF PAYEE INVOICES	BILLED OR SELF-ASSESSED
153	Water Resource Management Account 153	Public Health Service Fee	Health & Safety Code 341.041	\$75 minimum, then based on # of retail connections	Not specified in statute	Rule 290.51(a)(3)	\$4,174,226	6,668 in fiscal year 2003	Billed Fee
153	Water Resource Management Account 153	Edwards Aquifer Development Application Fee – San Antonio Region	Water Code 26.0461(d)	\$650–\$10,000 based on acreage, sewage system, linear feet of pipe, etc.	Yes	Rule 213.14	\$764,174	335	Self-assessed/self-pay
153	Water Resource Management Account 153	Edwards Aquifer Development Application Fee – Austin Region	Water Code 26.0461(d)	\$650–\$10,000 based on acreage, sewage system, linear feet of pipe, etc.	Yes	Rule 213.14	\$733,279	359	Self-pay with application
153	Water Resource Management Account 153	Edwards Aquifer Development Plans and Amendments	Water Code 26.0461	\$100–\$5,000 based on acreage, sewage system, linear feet of pipe, etc.	Yes	Rule 213.14	\$0	Not assessed at this time	NA
153	Water Resource Management Account 153	Application for Certificate of Public Convenience and Necessity	Water Code 13.4522(a)	\$100 / application	Yes	Rule 291.7	\$3,500	223	Self-pay with application
153	Water Resource Management Account 153	Sale, Transfer or Merger of Certification of Public Convenience and Necessity	Water Code 13.4522(b)	\$50–\$500 based on # of water or sewer connections	Yes	Rule 291.7	\$8,500	159	Self-pay with application
153	Water Resource Management Account 153	Rate Change Application Fee	Water Code 13.4521(a)	\$50–\$500 based on # of water or sewer connections	Yes	Rule 291.7	\$23,200	53	Self-pay with application
153	Water Resource Management Account 153	Water Use Permit Application Fee	Water Code 5.701(c)	\$100–\$2,000	Yes	Rule 295.132	\$129,038	Unknown	Self-pay with application

ACCT. #	DESCRIPTION	FEE DESCRIPTION	STATUTORY AUTHORITY	FEE RATE	STATUTORY MAXIMUM?	RULE OR STATUTE	ACTUAL RECEIPTS FISCAL YEAR 2008	NUMBER OF PAYEES OF INVOICES	BILLED OR SELF-ASSESSED
153	Water Resource Management Account 153	Water District Creation Application Fee	Water Code 5.701(e)	\$700 plus cost of notice	Yes	Rule 293.11	\$23,800	20	Self-pay with application
153	Water Resource Management Account 153	Temporary or Emergency Water Use Permits	Water Code 11.138(g)	\$100-\$250, based on # acre-feet, plus notice, \$500 maximum fee	Yes	Rule 295.132, 295.134	\$27,387	Assessed when applications are filed with TCEQ	Self-pay with application
153	Water Resource Management Account 153	Misc. Water District Application Fees	Water Code 5.701(b)	\$100 plus cost of notice	Yes	Rule 295.132	\$39,000	Assessed when applications are filed with TCEQ	Self-pay with application
153	Water Resource Management Account 153	Water Use Permit - Construction Delay	Water Code 11.145	Varies based on # acre-feet, plus cost of notice, \$1,000 maximum fee	Yes	Rule 295.132, 295.134	\$1,503	12	Self-pay with application
153	Water Resource Management Account 153	Water Quality Permit Application Fee	Water Code 5.701	\$100-\$2,000	Yes	Rule 305.53	\$840,830	999	Self-pay with application
153	Water Resource Management Account 153	Water Use Maximum Use Fee	Water Code 5.701	\$100-\$2,000	Yes	Rule 305.53	\$0	NA	Self-assessed/self-pay
153	Water Resource Management Account 153	Water rate appeals filing, application, petition, recording fees	Water Code 5.701(b) Water Code 11.041(b)	\$100 application + \$25 deposit	Yes	Statute	\$125	6-12 per year	Self-pay with application
153	General Revenue	Disposal waste, injection, or gas well fee	Water Code 27.014	Application fee, \$100 non-hazardous and \$2,000 hazardous	Yes	Rule 305.53	\$22,730	Assessed when applications are filed with TCEQ	Self-pay with application
153	Water Resource Management Account 153	General Permit Water Discharge Application	Water Code 5.701	\$100 construction; \$200 multi-sector Notice of Intent (NOI)	Yes	Rule 205.6	\$3,483,442	18,061	Self-pay with application

ACCT. #	DESCRIPTION	FEE DESCRIPTION	STATUTORY AUTHORITY	FEE RATE	STATUTORY MAXIMUM?	RULE OR STATUTE	ACTUAL RECEIPTS FISCAL YEAR 2008	NUMBER OF PAYEE INVOICES	BILLED OR SELF-ASSESSED
153	Water Resource Management Account 153	Municipal Waste Permit	Water Code 5.701	\$100 application + \$50 notice	Yes	330.59(h)(1) and 305.53	\$21,900		Self pay w/ application
153	Water Resource Management Account 153	Water Saving Performance Standards Fee (a.k.a.) Plumbing fixture inspection)	Health & Safety Code 372.002(d)	\$50 initial, \$25 annual	Not specified in statute	Rule 290.255	\$38,928	145 in fiscal year 2003	Billed Fee
153	Water Resource Management Account 153	Surface Casing Expedited Letters	Water Code 5.701(r)	\$75	Yes	Rule 339.3	\$1,320,225	17,603 in fiscal year 2008	Self pay w/ application
153	Water Resource Management Account 153	On-Site Sewage Disposal System Permit (Wastewater Treatment Inspection)	Health & Safety Code 366.058	\$200 for single family dwelling, \$400 for other	Not specified in statute	Rule 285.21	\$242,923	1,245 in fiscal year 2003	Self pay w/ application
153	Water Resource Management Account 153	On-site Wastewater Charge-back Permit	Health & Safety Code 366.059	not to exceed \$500	Yes	Rule 285.14	\$0	Assessed only when state takes back program from county; has never happened.	Billed Fee
158	South Texas Watermaster Assessment	South Texas Watermaster Assessment	Water Code 11.329	2009 Rates: \$0.14296 per acre ft. irrigation; \$0.1787 an acre ft. municipal	Yes	Rule 304.62(b)	\$510,752	1,150 in fiscal year 2003	Billed Fee
158	Rio Grande Watermaster Assessment	Rio Grande Watermaster Assessment	Water Code 11.329	2009 Rates: \$0.24696 per acre-foot irrigation; \$0.3087 an acre-foot municipal	Not specified in statute	Rule 303.72(b)	\$632,160	1,295 in fiscal year 2003	Billed Fee
158	Concho River Watermaster Assessment	Concho River Watermaster Assessment	Water Code 11.329	2009 Rates: \$0.43912 per acre-foot irrigation; \$0.5489 an acre-foot municipal	Not specified in statute	Rule 304.62(b)	\$157,259	259	Billed Fee

SOURCE: Texas Commission on Environmental Quality.