

## II. Key Functions and Performance

Provide the following information about the overall operations of your agency. More detailed information about individual programs will be requested in a later section.

<b>A. Provide an overview of your agency's mission, objectives, and key functions.</b>
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The Texas Water Development Board (TWDB) was created by constitutional amendment in 1957 after many years of drought had devastated the Texas economy, leaving over 200 counties declared as disasters and many cities without water supplies. Interim committees met during the 1950s to report their findings to the Legislature, ultimately resulting in the 55<sup>th</sup> Legislature submitting an amendment that became Article III, Section 49-c of the Constitution, approved by voters in a special election held on November 5, 1957. The amendment created the Texas Water Development Board and the Texas Water Development Fund. The amendment also authorized the first \$200 million in Texas Water Development bonds for the state to provide loans to its political subdivisions to assist in “the conservation and development of the water resources of this State, including the control, storing and preservation of its storm and flood waters and the waters of its rivers and streams, for all useful and lawful purposes by the acquisition, improvement, extension, or construction of dams, reservoirs and other water storage projects, including any system necessary for the transportation of water from storage to points of treatment and/or distribution, including facilities for transporting water therefrom to wholesale purchasers, or from any one or more of such purposes or methods.”

In the first called special session of the 55<sup>th</sup> Legislature, 1957, the “Texas Water Planning Act” was also passed and signed into law on December 2, 1957, authorizing a Water Resources Planning Division within the State Board of Water Engineers. One of the duties of the new division was to acquire conservation storage in reservoirs. A second amendment to the Constitution, adopted by the voters on November 6, 1962, expanded the authority of the TWDB to acquire and develop storage facilities in reservoirs using the Texas Water Development Fund. This same amendment restricted projects to “not be used to finance any project which contemplates or results in the removal from the basin of origin of any surface water necessary to supply the reasonably foreseeable future water requirements for the next ensuing fifty-year period within the river basin of origin, except on a temporary, interim basis.” This amendment formed the foundation of the current water planning period for the state.

The heritage of the Texas Water Development Board is grounded in water resources planning, raising capital, and developing the water resources of the state through acquiring facilities and providing financial assistance. Since 1962, voters have continued to expand financing powers of the TWDB, increasing bonding authority, adding water quality enhancement and flood control to the list of authorized projects, and creating special funds in the state treasury for research and other water resource development projects. Retail distribution and economically distressed areas assistance through grants were added as well. Additionally, in response to recent droughts, the legislature has expanded funding programs for the TWDB to implement an aggressive subsidy program to assist water purveyors in financing projects that will withstand drought conditions.

With the Texas Legislature's passage of Senate Bills 1 (75<sup>th</sup> Legislature), 2 (76<sup>th</sup> Legislature), and 3 (80<sup>th</sup> Legislature), federal and state organizations, political subdivisions, and regional water planning groups have assumed increased responsibility for ensuring sufficient water supplies for the state. Notably, in recent

sessions, flood control funding from federal sources has been combined with related state assistance programs.

The TWDB is the state’s water planning and water project financing agency. The agency’s main responsibilities are threefold: collecting and disseminating water-related data; assisting with regional water planning and preparing the state water plan for developing the state’s water resources; and administering cost-effective financial assistance programs for the construction of water supply, wastewater treatment, flood control, and agricultural water conservation projects. In addition, the TWDB is the designated State Coordinating Agency for the National Flood Insurance Program, including community assistance and flood insurance rate mapping activities, and acts as the state’s clearinghouse for geographic information services.

The most recently adopted mission of the Texas Water Development Board is to provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas.

The current agency vision is sustainable, affordable, quality water for Texans, our economy, and our environment.

The original purpose and mission of the TWDB is still necessary. Political subdivisions of the state have not developed sufficient water resource related projects to withstand drought-of-record conditions. (The 1950s drought was the worst in the state’s recorded history—or the drought of record. As mandated by the legislature, TWDB water planning must determine that there are sufficient water supplies for the state when another drought of record occurs.) The TWDB has a leadership and support role through guiding, enabling, and supporting the responsible development of the state’s water resources to ensure that sufficient water will be available at a reasonable cost while protecting the agricultural and natural resources of the state.

**Enabling Statutes and Legislation**

Strategy	Statutory References
<p><b>Strategy description for 01-01-01 (Collection, Analysis, and Reporting of Environmental Impact Information):</b></p> <p>Collect, receive, analyze, process, and facilitate access to basic data and summary information concerning water necessary to support a sound ecological environment in the state's streams, rivers, bays and estuaries.</p>	<p>Water Code §§11.1491, 16.012, 16.058</p>
<p><b>Strategy description for 01-01-02 (Water Resources Data):</b></p> <p>Collect, receive, analyze, process, and facilitate access to basic data and summary information to support planning, conservation, and responsible development of surface water and groundwater for Texas and studies to determine the quantity and quality of water available and environmental flow needs.</p>	<p>Water Code Chapter 15 (Subchapter M), Chapter 16 (Subchapter B), §16.059</p> <p>Water Code §§11.153, 11.155, 15.4063</p>

**Enabling Statutes and Legislation – *Continued***

Strategy	Statutory References
<p><b>Strategy description for 01-01-03 (Automated Information Collection, Maintenance and Dissemination):</b></p> <p>Operate statewide program to provide training and to produce, maintain, and disseminate public domain geographic data in support of the state's water planning programs and related activities.</p>	<p>Water Code Chapter 16 (Subchapter B), Education Code §88.503</p>
<p><b>Strategy description for 01-02-01 (Technical Assistance and Modeling):</b></p> <p>Conduct studies on surface water and groundwater resources; provide technical information and assistance to citizens, groundwater conservation districts, river authorities, water utilities, and regional water planning groups; and develop, maintain, and adapt surface water and groundwater availability models to support planning, conservation, and responsible development of water in Texas.</p>	<p>Water Code Chapter 16 (Subchapters B and C), §§ 16.012, 16.015, 16.019, 16.051, 16.053; Water Code Chapter 35 §§ 35.004, 35.007, 35.012, 35.013, 35.018; Water Code Chapter 36 §§ 36.015, 36.108, 36.120, 36.1071 through 36.1073.</p> <p>Local Gov't Code §§ 212.0101, 232.0032.</p>
<p><b>Strategy description for 01-02-02 (Water Resources Planning):</b></p> <p>Assist in the developing and implementing regional and state water plans and measures resulting in protection from floodwaters. Efforts include managing contracts and providing technical assistance to regional water planning groups and political subdivisions for: 1) the preparation of regional water plans that are the foundation for the state water plan, 2) regional facility planning that initiates implementation of the state water plan, and 3) researching water resource problems and issues.</p>	<p>Water Code §§6.011, 6.012, 11.1271, 11.1272, 12.015, Chapter 15 (Subchapters A, B and F), Chapter 16 (Subchapters B, C, D and I)</p>
<p><b>Strategy description for 01-03-01 (Water Conservation, Education and Assistance):</b></p> <p>Provide water conservation information, data, and other technical assistance and services to promote increased water-use efficiency in Texas through statewide water conservation activities and as included in the regional and state water plans.</p>	<p>Water Code §§ 5.701, 11.1271, 13.146, 15.102, 15.103, 15.106, 15.208, 15.607, 15.701, 15.708, 15.735, 15.910, 15.975, 15.995, 16.012, 16.015, 16.0121, 16.022, 16.051, 16.053, 16.054, 16.055, Chapter 16, Subchapter K, 17.122, 17.125, 17.274, 17.277, 17.857, and 17.927, and Chapter 17, Subchapter J.</p>

**Enabling Statutes and Legislation - *Continued***

Strategy	Statutory References
<p><b>Strategy description for 01-04-01 Perform Community Assistance pursuant to the National Flood Insurance Program:</b></p> <p>Provide assistance through community assistance contacts and community assistance visits to ensure that communities that participate in the National Flood Insurance Program receive sufficient technical assistance and are compliant with federal floodplain management regulations. Community Assistance Contacts, through telephone or personal contact with a community, provide an opportunity to determine if any problems or issues exist and to offer assistance if necessary. Community Assistance Visits are on-site assessments of a participating community’s compliance with federal regulations, including a comprehensive assessment of the community's floodplain management program and its knowledge and understanding of the floodplain management requirements of the National Flood Insurance Program.</p>	<p>Water Code Chapter 16, Subchapter I, National Flood Insurance Reform Act of 1994, 42 United States Code, Chapter 50, Subchapter III, §§4001 through 4107, 44 CFR, Chapter I, Part 78, §§78.1 through 78.14</p>
<p><b>Strategy description for 02-01-02 (Economically Distressed Areas Program(EDAP)):</b></p> <p>Provide economically distressed areas access and connections to adequate water supply and wastewater treatment systems and indoor plumbing improvements.</p>	<p>Texas Constitution Article III, §§49-d-7, 49-d-8, 49-d-9, Water Code §§6.011, 6.012, 15.401, 15.407, Chapter 15 (Subchapters A, B, C, L, P and Q); Chapter 16 (Subchapter J); Chapter 17 (Subchapters K, M), applicable Federal Appropriations Acts.</p>
<p><b>Strategy description for 02-01-01 (Financial Assistance Programs):</b></p> <p>Provide financial assistance through state and federal programs to save money for Texas communities for water supply, water quality protection, and other water-related projects.</p>	<p>Water Code §§6.011, 6.012, 16.093, 17.0821, 17.961, 17.853; Chapter 15 (Subchapter J); 33 United States Code §§1251 et seq. (Federal Water Pollution Control Act); 42 United States Code §§ 300f-300j-26 (Safe Drinking Water Act); Texas Constitution Article III, §§49-c, 49-d, 49-d-1, 49-d-2, 49-d-3, 49-d-4, 49-d-5, 49-d-6, 49-d-7, 49-d-8, 49-d-9, 50-d; Water Code §§6.011, 6.012, Chapter 15, (Subchapters A-F, M, N, O, Q, and R); Chapter 16 (Subchapters E and F); Chapter 17 (except for Subchapter M); §§36.159-.161, 36.371-374</p>

**B. Do each of your key functions continue to serve a clear and ongoing objective? Explain why each of these functions is still needed. What harm would come from no longer performing these functions?**

Each of the key functions of the TWDB support the clear and ongoing objective of fulfilling the agency's vision to provide sustainable, affordable, quality water for Texans, our economy, and our environment. The TWDB takes each of its functions very seriously and respects the public trust that has been bestowed upon the agency. The discontinuation of the TWDB's functions would result in a loss of critical science, data, and planning, financial, and technical assistance necessary for ensuring the future water needs for the State of Texas. Although the TWDB relies on partnerships with other agencies for collaborative efforts in the TWDB's program areas, a loss of these functions would have a crippling effect on the state's water planning and water infrastructure needs, leaving the people of the state exposed to devastating economic losses and environmental hardship during droughts. Additionally, the agency's role as State Coordinating Agency for the National Flood Insurance Program is necessary for the state's communities and its citizens to be eligible for the Federal Emergency Management Agency's (FEMA) flood insurance and other financial assistance to respond to or mitigate flood damages.

**C. What evidence can your agency provide to show your overall effectiveness and efficiency in meeting your objectives?**

In addition to the TWDB's performance measures reported to the legislature, the increased funding and responsibility given to the TWDB in recent legislative sessions speaks to the agency's effectiveness and efficiency. Additionally, the demand for the TWDB's financial assistance programs is at an unprecedented level. The TWDB believes this directly correlates to our constituents' trust and shows our effectiveness in providing monies and contracting with communities and entities in need of water, wastewater and flood control projects.

The TWDB has had many major accomplishments in the past few years, receiving numerous awards and surpassing all expectations and forecasts set forth in previous strategic planning cycles. The agency has become nationally and internationally recognized for the work it does to ensure safe and adequate water supplies for Texas. Following is a high-level overview of significant recognitions the agency and our staff have received, noteworthy committees and organizations the TWDB is involved with, and innovations in which the TWDB has been a driving force.

**Debt Management for the State of Texas**

TWDB issues general obligation bonds (both self supporting and non-self supporting) and revenue bonds to provide financial assistance to political subdivisions for water and wastewater services. As noted by rating agencies, the TWDB actively manages the portfolio to maintain strong debt service coverage and strong cash and investment positions. The general obligation bonds receive the state's credit rating of AA. The revenue bonds issued in the Clean Water State Revolving Fund maintain a AAA rating. The rating reports by the three rating agencies are included as Attachment 21 of this report.

Since 1998, the TWDB has refunded 21 separate series of bonds for both general obligation and revenue bonds. The cumulative savings over that period has been over \$135 million dollars. In FY 2009 alone, refunding outstanding series saved over \$20 million dollars. This debt management strategy has saved over

\$10,814,000 cumulatively in General Revenue dollars through the refunding of non-self-supporting debt outstanding (Economically Distressed Areas and State Participation programs).

### **Coordination with State and Federal Partners**

In 2005, the TWDB, in conjunction with the Texas Water Conservation Association, co-founded and established Texas Water Day. Texas Water Day is held annually in Washington, D.C., to coincide with the release of the President's budget and the start of the congressional appropriations process. The event has proven to be a successful partnership between local, regional, state, and federal water resources agencies in reaching out to federal policymakers on key issues of importance to Texas water interests.

The primary purpose of Texas Water Day is to educate the Texas congressional delegation on policy and funding issues to help Texas meet its water needs. This highly successful venture is now in its fifth year; planning has begun for Texas Water Day 2010, which is tentatively scheduled for February 10, 2010.

### **State Revolving Fund Administration**

In 2007, the U.S. Environmental Protection Agency bestowed their prestigious PISCES Award (Performance and Innovation in the SRF [State Revolving Fund] Creating Environmental Success) on the TWDB to recognize the extraordinary success of our dedication to the Clean Water Revolving Fund (CWSRF) program. Projects financed under the CWSRF programs support the Clean Water Act by protecting environmental health and water quality. The PISCES Awards highlight successfully designed projects that further the goal of clean and safe water with exceptional planning, management, and financing. In recognition of this achievement, U.S. Representative Eddie Bernice Johnson (Dallas) filed House Resolution 832, which was co-sponsored by 13 members of the Texas congressional delegation, applauding the TWDB's achievements.

### **Groundwater**

In 2006, a staff member was awarded the Technology Award from the National Ground Water Association in recognition of the TWDB's Groundwater Availability Modeling Program.

### **Water Resources Planning**

As a result of continued refinement of the process, the TWDB has continued to receive recognition as one of the leading water planning organizations in the nation. The *Water for Texas* 2007 State Water Plan won praise from the American Planning Association, a professional organization focused on city planning and community development. In October 2007, the Texas chapter of the Association presented the TWDB with the 2007 Long Range Planning Award, "given to an outstanding plan that concentrates on a single long-range planning element." The 2007 State Water Plan also received one of the national Association's four Letters of Commendation from the Awards Jury for its nomination for the Planning Excellence Award for Best Practice.

### **Service**

Many in the TWDB family have been selected to serve on prestigious boards and entities in the water industry. Current Board member Thomas Weir Labatt III serves as vice chairman of the Western States Water Council, and it is anticipated that he will be elevated to the role of chair of the Council in 2010.

Executive Administrator J. Kevin Ward serves as vice president of the Council of Infrastructure Financing Authorities and is eligible to be nominated as the president of this organization in 2010. In 2005, Kevin Ward served on a three-member team of state administrators that conducted the U.S. Agency for International Development's Pooled Financing Workshop, titled the "Infrastructure Reform and Finance Project." The workshop was conducted in Bucharest, Romania, and assisted the countries of Romania,

Russia, Ukraine, Montenegro, Georgia, Bulgaria, and Armenia in evaluating how to develop capital markets and pool resources within their respective countries that facilitate the development of water resources necessary to support their economies effectively.

Many additional staff members at the TWDB serve on statewide and local committees and serve as informational resources to many of these entities.

The TWDB received an award for the 2008 State Employees Charitable Campaign for the highest per capita giving among all state agencies with 201–400 employees. We are proud to report that we won the same award for both the 2005 and the 2007 campaigns. Additionally, the 2005 awards included the Highest Percentage of Participants as well as the Rising Star Award.

### **Innovation**

Texas Natural Resources Information System (TNRIS), a division of the TWDB, is taking the initiative to prepare for emergency situations by making available through its Web site event-specific spatial data and resources to local, state, and federal entities. In May 2003, the Texas Senate passed Resolution 875 praising TNRIS and the TWDB's efforts in the recovery of the Space Shuttle Columbia. We are proud that our technology furthered the recovery efforts for the space shuttle. During the 2005 hurricane season, TNRIS was called upon to assist the Federal Emergency Management Agency (FEMA) with geographic information systems support at the FEMA Joint Field Office in Austin. Staff supported FEMA response efforts on a part-time basis over a three-to-four week period starting soon after Hurricane Rita came ashore. TNRIS continued to support FEMA during recovery operations. As part of the hurricane coordination effort, FEMA proposed that TNRIS create a repository for all of the geographic data collected during the Hurricane Rita response and recovery event. FEMA wanted the data to be permanently housed within TNRIS and available for analysis, planning, and mitigation activities. TNRIS worked with FEMA to define a proposal for this purpose and was encouraged to submit the proposal for funding to the Governor's Division of Emergency Management under the Hazard Mitigation Grant Program. Subsequently, TNRIS was awarded a grant for \$750,000 to create the Geospatial Emergency Management Support System.

The development of high-resolution elevation data is giving the state a much greater capacity to model potential hurricanes accurately. The data are being used to create detailed inundation maps that were used effectively in advance of Hurricane Ike to communicate risk to the public and to help decision makers anticipate and prepare for hurricanes.

One activity that has arisen from this is a public evacuation zone locator developed for the Governor's Division of Emergency Management. This allows citizens to input their address and see which evacuation zone they live in and links to other state preparedness resources.

The deployment of the Geospatial Emergency Management Support System has given emergency management decision makers a system for maintaining situational awareness during large emergency events. Based on the statewide Strategic Mapping Program data, the system allows for real time weather, traffic, and sensor data to be viewed and integrated.

In preparation of flood events, real time precipitation can be displayed with floodplains and watersheds, helping to target potential areas of flooding. This system is envisioned to support forecasting to allow the public and emergency managers to understand risks and act on current live data during an event.

## **Desalination**

In April 2002, Governor Rick Perry directed the TWDB to pursue the development of drought-proof water supplies from seawater desalination. Governor Perry's initiative called for implementing Texas' first large-scale demonstration seawater desalination project. Subsequently, the 78th Texas Legislature in 2003 passed legislation directing the TWDB to pursue the development of seawater desalination. Acting on these directives, the TWDB identified three sites with the highest potential for implementing large-scale seawater desalination: Brownsville, Corpus Christi, and Freeport. In 2004, based on the results of TWDB-funded feasibility studies for these sites, the TWDB requested a legislative appropriation to continue supporting the development of seawater desalination. In 2005, the 79th Texas Legislature appropriated \$2.5 million for seawater desalination pilot plant studies.

The TWDB has historically been engaged in developing desalination water supplies in Texas. Financial assistance for planning studies was instrumental in developing current model plants such as the Southmost Regional Water Authority and the El Paso-Ft. Bliss Brackish Desalination Plant. The TWDB currently has over seven demonstration projects active. In 2007, the TWDB awarded \$205,000 to the San Antonio Water System to perform a pilot test and assess the cost and technical feasibility of the Vibratory Shear Enhanced Process as a tool for reducing the volume of brackish groundwater desalination concentrate. The project includes developing a model for evaluating enhanced recovery processes to aid in selecting concentrate management solutions for brackish groundwater desalination. The total cost of the project is \$877,000.

In 2006, the TWDB was a finalist for the Water Agency of the Year Award from Global Water Intelligence. Global Water Intelligence noted that the TWDB had "set an example for other U.S. water agencies planning to tap nontraditional water resources."

## **National Flood Insurance Program Federal Funding**

Since assuming responsibilities for this program in September 2007 and in light of additional state appropriations to implement the program, the TWDB received additional federal funds in the following amounts: \$130,911 in FY 08 and \$177,962 in FY 09 for the Community Assistance Program; \$80,000 in FY 09 for flood insurance rate map management support; and \$26,560,000 in Severe Repetitive Loss grants.

## **Financial Assistance for Agricultural Water Conservation Demonstration Projects and Studies**

The TWDB has increased the amount of federal grant monies for agricultural conservation, which has allowed us to provide \$10 million in grant funding for two long-term (8 to 10 years) agricultural demonstration projects and \$2.5 million in other grants for 29 short-term (1 to 3 years) projects or studies during FYs 2004–2008. Additionally, the agency was selected by the U.S. Department of Agriculture–Natural Resources Conservation Service in FY 2009 to be an Agricultural Water Enhancement Program Partner, which allowed \$7 million of FY 2009 federal cost-share funding to be provided to participating agricultural producers in 49 counties in the Texas High Plains.

**D. Does your agency's enabling law continue to correctly reflect your mission, objectives, and approach to performing your functions? Have you recommended changes to the Legislature in the past to improve your agency's operations? If so, explain. Were the changes adopted?**

The agency's enabling law correctly reflects the agency's mission, key functions, powers, and duties. Each session the TWDB makes policy recommendations and funding requests to the legislature, and many of our recommendations were adopted by the 81<sup>st</sup> and 80<sup>th</sup> Legislatures as outlined below.

## **81<sup>st</sup> Legislature**

In the 81<sup>st</sup> Legislative Session, the TWDB recommended legislative changes that resulted in 10 bills being filed, five of which were passed and are being implemented. The requested legislation covered all facets of the agency from the Economically Distressed Areas Program (EDAP) to TWDB's ability to produce promotional items. Two of the bills that failed, the evergreen funding for replenishing the agency's state general obligation bond authorization, and the TWDB's ability to use other state and federal programs to match grants in the EDAP program, will be addressed in the first policy items in Section IX of this report.

Additionally, the 81<sup>st</sup> session secured funding for the state water plan and other non-self-supporting general revenue bond programs through the next biennium by appropriating \$46,447,917 in General Revenue for debt service on \$470 million in new bonding authority. Accompanying rider language to use baseline revenues to issue previously authorized bonds of \$312.7 million produced a total of \$782.7 million in bonds for water projects. Several riders were granted to the TWDB, including one that directs the agency to use appropriated dollars on recommended water management strategies in the state water plan. The rider also directs the TWDB to give priority to those projects with the earliest implementation date. Another allowed for reimbursement of expenses to the members of the Texas Environmental Flows Science Advisory Committee and the Basin and Bay Expert Science Teams as discussed in Section VII of this report.

### **80<sup>th</sup> Legislature**

The 80<sup>th</sup> Session of the Texas Legislature took historic actions on water conservation, environmental flows, and reservoir site designation and provided unprecedented funding to implement water management strategies in the 2007 State Water Plan. Existing TWDB state financial assistance programs were infused with new capital to open the doors to a new evolution of loans and grants for water and wastewater infrastructure in Texas.

House Bill 1, General Appropriation Act, included funding to implement seven of the TWDB's 14 original exceptional item requests and all five of the state water plan funding requests. The bill appropriated an additional \$30.6 million over and above the agency's \$78.0 million baseline request for agency programs and administration. It also appropriated almost \$56 million over and above the agency's \$54.7 million baseline request to pay the debt service on general obligation bonds to finance water and wastewater projects through existing agency programs—the Economically Distressed Areas Program, the State Participation Program, and the Water Infrastructure Fund. Proposition 16, approved by Texas voters on November 6, 2007, authorized the TWDB to issue up to \$250 million in additional general obligation bonds for the statewide Economically Distressed Areas Program. This authorization allowed the TWDB to use bond proceeds to issue approximately \$87 million during the next two years in grants and/or low-interest loans for water and/or wastewater projects in economically distressed communities across Texas.

Senate Bill 3 designated the unique reservoir sites listed in the 2007 State Water Plan and included provisions for protecting environmental flows, conserving water, expediting regional water planning amendments, promoting voluntary land stewardship, providing lease-back and mitigation protections for landowners impacted by potential reservoirs, designating river and stream segments of unique ecological value for protection, and creating a water supply study commission involving Regions C and D water planning areas. House Bill 1 included significant appropriation increases that are an investment in the future water supply and distribution and delivery systems serving Texas communities. As a result of the legislative investment in infrastructure financing, the TWDB had more than \$762 million available for loans and grants to implement water management strategies identified in the 2007 State Water Plan, approximately \$99 million available for loans and grants for water and wastewater infrastructure in economically distressed areas across the state, and \$600,000 in grant funding for self-help projects to address needs in colonia communities near the Texas-Mexico border.

<b>Outcomes of the 80<sup>th</sup> Legislative Session</b>
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<b>Policy Issues</b>	<b>Outcome</b>
Designate remaining viable reservoir sites of unique value for constructing reservoirs to meet future water demands	Article 4, Senate Bill 3
Authorize expedited amendments to regional water plans	Article 2, Sections 2.14 and 2.15 of Senate Bill 3
Extend the deadline for completing the instream flow priority studies from Dec. 31, 2010, to Dec. 31, 2016	Article 1, Section 1.23 of Senate Bill 3
Require subdivision developers to submit groundwater certification reports to TWDB and groundwater conservation districts	Senate Bill 662
Authorize collection of a fee to be dedicated to TNRIS	Filed as House Bill 3477. Fee provision removed. Amendment added Article 2, Sections 2.12 and 2.13, of Senate Bill 3.
Enhance and clarify Sec. 16.021, Texas Water Code, for TNRIS	Filed as House Bill 3477. Amendment added Article 2, Sections 2.12 and 2.13, of Senate Bill 3.
Authorize TWDB to acquire intellectual property rights, such as trademark, copyright, or patent.	Senate Bill 616
Finance water management strategies	Appropriations and riders for bond debt service in Article VI, Agency 58a in House Bill 1
Interbasin transfers of surface water	Filed as House Bill 991 but did not pass
Environmental water needs	Article 1, Senate Bill 3
Water conservation	Article 2 of Senate Bill 3 House Bill 4
Indirect reuse	Filed as House Bill 3233 but did not pass
Municipal water conservation program	\$596,020 appropriated in Article VI, Agency 580, in House Bill 1
Restore Drinking Water State Revolving Fund match	\$753,800 appropriated in Article VI, Agency 580, in House Bill 1
Disadvantaged Rural Community Water and Wastewater Financial Assistance Fund	Alternative funding through appropriations and riders for bond debt service and FTEs in EDAP and specific set-asides for rural disadvantaged areas
Groundwater management for Texas	\$622,489 appropriated and 6 FTEs added in Article VI, Agency 580, in House Bill 1
Environmental flows	Tasks from Exceptional Item not funded but new tasks from Article I, Senate Bill 3 funded in Article VI, Agency 580 in House Bill 1
Restoration of General Revenue for regional planning	\$2.5 million appropriated from Water Assistance Fund (WAF) balances and \$2.5 million appropriated from General Revenue
Restoration of General Revenue for StratMap	Not funded (\$1.09 million requested)
Water data for water planning	Not funded (\$2.1 million requested)

<b>Outcomes of the 80<sup>th</sup> Legislative Session - Continued</b>	
<b>Policy Issues</b>	<b>Outcome</b>
Economically Distressed Areas Program II	Senate Joint Resolution 20 (Proposition 16) authorized \$250 million in general obligation bond debt for EDAP. Appropriations and riders for bond debt service in Article VI, Agency 58a, in House Bill 1
Restoration of funding for desalination grants	Not funded (\$2.5 million requested)
Water Technology Demonstration Program	Not funded (\$2.1 million requested)
Borderlands Information Center	Not funded (\$693,518 requested)
Colonia Self-Help Program	\$774,891 appropriated for FTEs and grants in Article VI, Agency 580, in House Bill 1
Economically Distressed Areas Program bond debt	Appropriations and riders for bond debt service to issue final \$12 million in 1989 authorization included in Article VI, Agency 58a, in House Bill 1.
Debt service for State Participation Program	Appropriations and riders for bond debt service in Article VI, Agency 58a, in House Bill 1
Debt service for desalination	Not funded
Debt service for Water Infrastructure Fund for permitting and design and construction (municipal water supply)	Appropriations and riders for bond debt service in Article VI, Agency 58a, in House Bill 1
Debt service for Water Infrastructure Fund for other municipal projects (interest deferrals and low-interest loans)	Appropriations and riders for bond debt service in Article VI, Agency 58a, in House Bill 1
Debt service for Water Infrastructure Fund for water distribution and treatment grants in economically distressed areas.	Appropriations and riders for bond debt service in Article VI, Agency 58a, in House Bill 1
Debt service for Water Infrastructure Fund grants and subsidized loans (rural areas)	Appropriations and riders for bond debt service in Article VI, Agency 58a, in House Bill 1
Debt service for Water Infrastructure Fund for State Participation (project construction)	Appropriations and riders for bond debt service in Article VI, Agency 58a, in House Bill 1

**E. Do any of your agency's functions overlap or duplicate those of another state or federal agency? Explain if, and why, each of your key functions is most appropriately placed within your agency. How do you ensure against duplication with other related agencies?**

The key agency functions include regional and state water planning, water-related project financing (including water supply, water quality enhancement, flood control, nonsource pollution control, and scientific studies); groundwater and surface water data collection; promotion of water conservation; and dissemination of data related to geographic information systems using technologies that include satellite imagery, aerial photography, and Light Detection and Ranging (known as LiDAR). Although several state and federal agencies and universities may operate similar programs or maintain similar data sets, there is no material duplication of functions. In fact, the TWDB works with all of the other agencies doing similar work on joint projects, combining resources to maximize the effect of the respective programs in delivering optimum services to the public. For example, when the TWDB funds a water project that also receives financing from another state or federal agency, each respective agency funds separate components of the project that further their respective mission and give the maximum benefit to the recipient.

There have been legislative changes in the past for shared roles of engineering reviews of water and wastewater treatment system plans and specifications to ensure that the Texas Commission on Environmental Quality and TWDB do not perform dual review on projects. The TWDB and Texas Commission on Environmental Quality have a memorandum of agreement that describes the respective agency roles for this function.

State flood control planning and project financial assistance has been at the TWDB since inception, and recently, the legislature transferred the Federal Emergency Management Agency Flood Mitigation project funding program to the TWDB from the Texas Commission on Environmental Quality, consolidating management of the federal and state role for flood control planning and mitigation programs into a single agency.

**F. In general, how do other states carry out similar functions?**

**Financial Programs**

- Texas provides a great depth and breadth of financial assistance programs, ranging from grants to low-income disadvantaged communities, to sizable loans for water infrastructure. All 50 states have similar programs to our Drinking Water and Clean Water state revolving funds. Although the states have latitude in tailoring the revolving funds to their individual needs, all must follow the federal rules, guidelines, and laws. Other states similar in size to Texas (New York, Ohio, Pennsylvania, and California for example) also have a wide range of financial grant and loan programs for water infrastructure and related projects in addition to their state revolving funds. Some examples of other state's programs include Ohio's Dam Safety Loan Program and Emergency Relief Grant Program and Pennsylvania's Stormwater Management Planning and Implementation Program.
- Throughout the country, a wide range of financing options from fees and taxes to leveraging is employed to fund water and wastewater infrastructure projects.

**Conservation**

- Arizona, California, Colorado, New Mexico, and Nevada have been involved in water conservation for some time. Much of their efforts have been directed at developing, funding, and implementing water-use efficiency measures for both municipal and agricultural water use. More recently, severe drought conditions have states such as Oregon, Washington, Florida, and Georgia looking at incorporating conservation into their long-term water planning efforts. The efforts in Texas have been recognized nationally, and the TWDB has provided information on agency programs to assist in their efforts.

**Innovative Water Technologies**

- In Pennsylvania, the Department of Environmental Protection promotes the development and use of new water and wastewater and storm water technologies. The Department (1) provides financial assistance to support new and innovative water and wastewater treatment technology projects and a variety of technology demonstration projects, (2) researches and reports on new technologies, (3) monitors costs, and (4) conducts technology transfers via forums and symposiums.
- In California, the Department of Water Resources manages funding for desalination and water reuse projects.

**Groundwater**

- The California Department of Water Resources provides data collection services in some areas of the state (although not as comprehensive as Texas) and provides limited technical assistance in developing groundwater management plans. California has no organized program of groundwater modeling.
- The Arizona Department of Water Resources collects data in the active management areas that are managed by department staff. The Department also develops and manages groundwater models of the active management areas.
- The Kansas Water Office is involved in planning, including developing and revising their state water plan, and gathering water resource information. Other sister agencies provide technical support.

### **Surface Water**

- The U.S. Geological Survey and the National Weather Service operate in all states, so all states have at least a basic level of streamflow and meteorological information.
- Oklahoma collects basic meteorological data at nearly 120 sites across the state.
- California (as of 1994) and Florida (as of 1972) have established programs to determine the freshwater inflow needs of estuaries. Although other states in the United States have conducted investigations into the needs for freshwater inflows, dedicated programs are not as well established as in Texas, California, or Florida.
- Oklahoma has a hydrographic survey program.
- The National Oceanic and Atmospheric Administration, the U.S. Geological Survey, and the U.S. Army Corps of Engineers operate in other coastal states and provide tide gaging. These organizations also provide hydrodynamic modeling services in other states.

### **Water Planning**

- All 50 states do some type of water-related planning and all are different; many are crisis driven (drought or flood).
- Of the 50 states, 23 have current water supply plans; 9 more are developing plans.
- Western states do the most water supply planning and are the most comprehensive; 13 of 19 western states have plans (Arkansas, Arizona, California, Hawaii, Kansas, North Dakota, Nebraska, New Mexico, Oklahoma, Texas, Utah, Washington, and Wyoming).
- California probably has the most comprehensive water supply plan outside of Texas.
- Planning is done by state agencies, river/basin authorities, water supply districts, and other special purpose districts.
- Key reasons that states prepare water plans are to ensure future water supply sources, given population and economic growth; possible reductions in supplies; and the ability to better balance competition for water or reconcile conflicts over water.
- All states consider funding for both planning and implementation their greatest need; technical planning assistance is another need listed by many states.

### **GIS**

- Other states operate with a range of models. Some states use university programs to disseminate their information but do not provide funding from the state. Other states view geographic information systems (GIS) technology as a part of information technology and focus on technology coordination aspects. Still other states use a model similar to Texas, which provides a central clearinghouse and consolidated operational center to support agency specific GIS groups to accomplish their mission.

## G. What key obstacles impair your agency's ability to achieve its objectives?

### **Water Science and Conservation**

The legislature has mandated that the TWDB and other state agencies collect and analyze data for the state's inland and coastal surface water resources. An analysis by the U.S. Geological Survey and TWDB identified a "Core Network" of streamflow gages required to meet statewide data collection objectives. Because of restricted funding, less than 93 percent of these gages have been operational since 2003. Without a completely operational core network, TWDB is limited in its ability to adequately monitor surface water resources in Texas, a condition that could adversely impacts many agency objectives.

Through Senate Bill 2, 77<sup>th</sup> Legislative Session, the legislature mandated that the TWDB and other state agencies provide for the collection of instream flow data and analysis. The Texas Parks and Wildlife Department, Texas Commission on Environmental Quality, and TWDB were directed to determine the appropriate methodologies for determining flow conditions in the state's rivers and streams to support a sound ecological environment. Instream flow studies for six specified sites are to be completed no later than the statutorily established deadline of December 31, 2016. Although progress has been made over the last few years, reduced appropriations have negatively affected the Instream Flow Program by effectively eliminating the possibility of installing site specific real-time streamflow monitoring stations, reducing the ability of staff to conduct necessary fieldwork, and decreasing the amount of compensation available to hire and retain qualified technical staff. The legislature authorized but did not fund a full-time employee position for the Instream Flow Program, leaving the agency with limited resources to meet our legislative mandates. In response to legislative directives, the TWDB and the Texas Parks and Wildlife Department jointly established and currently maintain a data collection and analytical study program focused on determining the effects of and needs for freshwater inflows to the state's bays and estuaries. These studies and this data are useful in evaluating environmental flows in support of Senate Bill 3, 80<sup>th</sup> Legislative Session.

### **Water Resources Planning and Information**

Funding requests related to flood have continued to increase, with a four-fold increase in requests from 2006 to 2008. Priorities of the Flood Mitigation Planning Division include increasing funding available to analyze and mitigate flood hazards, increasing the participation in the National Flood Insurance Program to include all communities with identified flood hazards, and providing detailed Flood Insurance Rate Maps for 90 percent of the counties with identified flood hazards.

In addition to flood programs, Water Resource Planning and Information also houses the Texas Natural Resources Information System (TNRIS), the state's clearinghouse for natural resource information. University researchers have recently developed foundation technologies that are being evaluated for adoption within the TWDB, presenting a significant opportunity for building a unified approach to linking water sciences and planning for the public's benefit. If Texas can increase its investment in these technologies and systems, TNRIS could

- reduce the cost of data and data storage and services;
- increase access for the public to a wider range of information about agency programs and capabilities;
- provide a platform for organizing and coordinating real-time data exchange for planning, science, engineering, and policy proposals;
- serve as the national model for integrated hydrologic information systems; and
- provide a means to measure the state's capacity for accurately understanding historical, current, and future conditions and an ability to analyze social, economic, and environmental options.

Fiscal obstacles for achieving these capabilities include a lack of efficient purchasing mechanisms, lack of intra-government protocols for data exchange, undefined technology services from mandated providers, and a lack of awareness of successes by select technology centers.

### **Project Finance**

Funding requests of the TWDB's financial assistance programs continue to grow. This is partially due to current economic conditions and the downgrading of municipal insurers. Many entities that would normally access the municipal market are unable to do so and are turning to the TWDB for their infrastructure financing needs.

The full realization of several state financial assistance programs depends upon sufficient General Revenue funds and staff resources. Senate Bill 3, 80<sup>th</sup> Legislature, included provisions for a first-time investment in infrastructure financing specific to state water plan funding. More than \$762 million was made available for loans and grants to implement water management strategies identified in the 2007 State Water Plan. The \$762 million was estimated to meet Texas' water supply needs through 2020. Further funding will be needed to meet the additional water supply needs through the 2060 planning horizon. During the 81<sup>st</sup> session, the TWDB requested over \$1 billion to continue funding of the state water plan. However, total new funding secured was \$445 million for state water plan projects.

In the past, state loan programs have been affected by cuts to General Revenue, and any future funding cuts would result in reducing the level of services provided on state loan and grant programs. These service reductions include frequency of monthly field inspections during construction, levels of technical assistance to economically disadvantaged political subdivisions, and loan/grant management oversight activities. Several other state-funded programs administered by the TWDB also rely upon additional program funding each biennium for water and wastewater projects. Reductions to General Revenue in the financial assistance programs will result in project delays or in projects being scaled back to less than the most cost-effective size and scope. In addition, economically distressed areas will not receive basic water-related services, nor will the Drinking Water State Revolving Fund disadvantaged community program be able to continue providing grant assistance.

<p><b>H. Discuss any changes that could impact your agency's key functions in the future (e.g., changes in federal law or outstanding court cases).</b></p>
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Federal legislation, S.787, known as the Clean Water Restoration Act, proposes to amend the Federal Water Pollution Control Act by substituting the terms "waters of the United States" for "navigable waters of the United States." As such, the legislation would clarify and arguably extend the reach of permitting jurisdiction for, among other federal agencies the U.S. Corps of Engineers, beyond what is currently allowed under Supreme Court interpretations of "navigable" (most recently in *Rapanos v. United States* (2006)). This could impact the viability, cost, and duration of implementing water development projects that require Section 404 permits from the Corps.

Federal legislation, S.1005, proposes to amend the Federal Water Pollution Control Act and the Safe Drinking Water Act and could affect the TWDB's administration of the Clean Water and the Drinking Water state revolving funds. These programs administer grants received from the U.S. Environmental Protection Agency (EPA) to provide financing to Texas political subdivisions for constructing and improving treatment works and public water systems. This financing is provided through low-interest loans and, under the Drinking Water program, some level of grant in the case of disadvantaged communities.

The proposed legislation would authorize the appropriation of nearly \$35 billion over the 2010–2014 time frame for EPA capitalization grants to the states' revolving fund programs, reflecting an increase over previous appropriation levels. The legislation also proposes to expand the types of projects eligible for financial assistance, updating the formula used by EPA to allocate grant monies among the states and tribes based on the EPA needs surveys; authorize grant subsidies for disadvantaged communities under the clean water program; and allow the states to extend the repayment terms for loans. Provisions currently are not included in S.1005 but mentioned as possible amendments during markup include Davis-Bacon wage rates, "Buy American" requirements for construction contracts, and additional restructuring of the state allocation formula.

A lawsuit filed by the TWDB against the United States Fish and Wildlife Service (USFWS), *Texas Water Development Board v. United States Department of the Interior* (Fifth Circuit Court of Appeals, Cause No. 08-10890, petition for writ of certiorari pending) involves litigation that could impact the TWDB's stakeholders, including regional water planning groups, and financing strategies for long-term water supply. The lawsuit challenges actions by the USFWS that have effectively precluded the construction of Fastrill Reservoir, a long-term drinking water supply for the City of Dallas and other entities. The interest of the state is to require USFWS to consider the state water planning process as it would any other National Environmental Policy Act-like state process in considering the effects of establishing a wildlife refuge, ultimately resulting in the determination of necessary mitigation of the resulting loss of the potential future water supply.

Litigation currently pending before the Texas Supreme Court, *Edwards Aquifer Authority and the State of Texas v. Day and McDaniel* (Case No. 08-0964) and *City of Del Rio v. Clayton Sam Hamilton Trust* (Case No. 08-0755), could impact groundwater conservation districts and other TWDB stakeholders by declaring that groundwater underlying a landowner's property is a real property interest entitled to due process protection and possible compensation if that interest is affected by permitting decisions or regulatory determinations by the respective districts. The TWDB is directed by statute to review determinations by groundwater conservation districts of the desired future conditions of aquifers and, following approval, establish the managed available groundwater that is available for additional permitting by these districts. However, the outcome of these cases is unlikely to have a direct impact on these TWDB functions.

### **I. What are your agency's biggest opportunities for improvement in the future?**

The TWDB faces many challenges in today's economic and political climate, which we believe can be considered opportunities for the future. The biggest opportunities for improvement present themselves in the continued improvement of the use of new technologies and staff expertise and skill in delivering the many new and expanded services that the legislature has recently charged and entrusted to the TWDB. Reviews of the TWDB's implementation efforts for new legislation and appropriations by interim committees consistently provide feedback and direction. Additionally, stakeholder processes conducted by the TWDB, legislature, and trade organizations provide meaningful feedback to ensure that TWDB management becomes aware of any needed adjustments to our strategies in developing new or changing existing services.

In the areas of infrastructure finance, lessons learned from reviews (from TWDB management, audits, and federal agencies) of the Clean and Drinking Water state revolving funds, combined with the current experience of implementing the 2009 American Recovery and Reinvestment Act grant program, should be applied to future program years. These lessons include improved coordination with customers and stakeholders. Additionally, as mentioned earlier, there is likely to be a federal act that changes both

programs. The opportunity to combine the reviews of so many professionals will help ensure an effective and efficient conversion to the new federal initiatives.

The TWDB owns the Water IQ trademark, which with further development and funding could enable the state through the TWDB to be a leader in educating the public on conservation matters. Creating a stakeholder outreach and feedback process and encouraging its continued development is crucial to conservation strategies currently in place across the state. An outreach program also fosters the introduction of new strategies within water utilities and encourages more efficient government and individual water use habits. Increased development and distribution of conservation-related publications and materials will ensure a broad-based public awareness of the importance of individual, corporate, industry, and agricultural best practices for water conservation, which are collectively the least expensive source of new water supply for the state. The TWDB has an opportunity to develop reporting measures and projections that accurately depict the future water supplies available to the state by taking into consideration water savings generated through conservation. This information will help the agency understand the need for and implementation timing of other water management strategies for securing adequate water supplies for the state.

**J. In the following chart, provide information regarding your agency's key performance measures included in your appropriations bill pattern, including outcome, input, efficiency, and explanatory measures.**

<b>Texas Water Development Board Exhibit 2: Key Performance Measures - Fiscal Year 2008</b>				
<b>Key Performance Measures By Goal By Strategy</b>	<b>Key Performance Measures</b>	<b>FY 2008 Target</b>	<b>FY 2008 Actual Performance</b>	<b>FY 2008 % of Annual Target</b>
<b>Goal 1</b>	<b>Water Resources Planning</b>			
Outcome 01-01.01	Percent of information available to adequately monitor the state's water supplies	69.10 %	76.60 %	110.85 % *
Outcome 01-01.02	Percent of key regional and statewide water planning activities completed	84.60 %	96.80 %	114.42 % *
Outcome 01-01.03	Percent of eligible Texas communities and other entities receiving technical and/or financial assistance for water planning and conservation	9.50 %	6.90 %	72.63 % *
Output 01-01-01.01	Number of bay, estuary, and instream study elements completed	9.0	8.86	98.44%
Explanatory 01-01-03.01	Number of responses to requests for TNRIS-related information that are filled	350,000	769,500.00	219.86
Output 01-02-01.01	Number of responses to requests for water resource information that are filled	2,850.00	2,636.00	92.49%
Output 01-02-02-.01	Number of active grants for regional water, wastewater, flood, and research studies funded from the Research and Planning Fund	115.00	129.00	112.17%
Output 01-03-01.01	Number of responses to requests for water conservation information, data, technical assistance, and educational activities provided by the TWDB staff	575.00	613.00	106.61%

*Continued from previous page.*

<b>Key Performance Measures By Goal By Strategy</b>	<b>Key Performance Measures</b>	<b>FY 2008 Target</b>	<b>FY 2008 Actual Performance</b>	<b>FY 2008 % of Annual Target</b>
<b>Goal 2</b>	<b>Water Project Financing</b>			
Outcome 02-01.01	Total dollars committed as a percent of total financial assistance dollars available	73.00 %	130.01 %	178.10 % *
Output 02-01-01.01	Number of state participation projects receiving financial assistance	4.00	0	0%
Output 02-01-01.02	Total dollars committed to projects to implement the state water plan	\$234,910,000.00	\$511,440,000.00	217.72 % *
Output 02-01-01.03	Number of commitments to state water plan projects	37.00	15.00	40.54 %
Output 02-01-02.03	Number of completed colonia or economically distressed areas projects	81.00	70.00	86.42%
Output 02-01-03.01	Number of financial assistance commitments offered	102.00	87.00	85.29%*
Output 02-01-03.02	Number of commitments to small, rural, or disadvantaged community projects	26.00	66.00	253.85 % *
Output 02-01-03.03	Total dollars of financial assistance committed	\$679,700,000.00	\$827,679,205.00	121.77 % *
Output 02-01-03.06	Number of construction contracts managed	360.00	351.00	97.50 %
Efficiency 02-01-03.01	Administrative cost per active financial assistance agreement	\$3,231.00	\$1,408.00	43.58 % *

\*Varies by 5 percent or more from target.