



# Strategic Plan

Fiscal years 2013–2017

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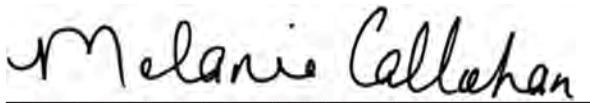
# Strategic Plan

*Fiscal Years 2013–2017*

TEXAS WATER DEVELOPMENT BOARD

<b>BOARD MEMBER</b>	<b>TERM</b>	<b>HOMETOWN</b>
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JULY 6, 2012



Melanie Callahan, Executive Administrator



Billy R. Bradford, Chairman

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# Introduction

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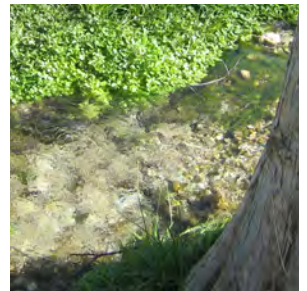
Statewide vision, mission, and philosophy

Relevant statewide goals and benchmarks

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# Introduction

## *Statewide Vision, Mission, and Philosophy*

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### **Statewide Vision**

Texas State Government must ensure that its role is limited and that its endeavors are done with maximum efficiency and fairness. The Governor's dedication to creating greater opportunity and prosperity for the citizens of Texas can be accomplished by focusing on the following critical priorities:

- Assuring open access to an educational system that not only guarantees the basic core knowledge necessary for citizenship, but also emphasizes excellence and accountability in all academic and intellectual undertakings;
- Creating and retaining job opportunities and building a stronger economy that will lead to more prosperity for our people, and a stable source of funding for core priorities;
- Protecting and preserving the health, safety and well-being of our citizens by ensuring health care is accessible and affordable, and our neighborhoods and communities are safe from those who intend us harm; and
- Providing disciplined principled government that invests public funds wisely and efficiently.

### **Statewide Mission**

Texas State Government must be limited, efficient, and completely accountable. It should foster opportunity and economic prosperity, focus on critical priorities, and support the creation of strong family environments for our children. The stewards of the public trust must be men and women who administer state government in a fair, just, and responsible manner. To honor the public trust, state officials must seek new and innovative ways to meet state government priorities in a fiscally responsible manner.

*Aim high... we are not here to achieve  
inconsequential things!*

### **Statewide Philosophy**

The task before all state public servants is to govern in a manner worthy of this great state. We are a great enterprise, and as an enterprise we will promote the following core principles:

- First and foremost, Texas matters most. This is the overarching, guiding principle by which we will make decisions. Our state, and its future, is more important than party, politics, or individual recognition.
- Government should be limited in size and mission, but it must be highly effective in performing the tasks it undertakes.
- Decisions affecting individual Texans, in most instances, are best made by those individuals, their families, and the local government closest to their communities.
- Competition is the greatest incentive for achievement and excellence. It inspires ingenuity and requires individuals to set their sights high. Just as competition inspires excellence, a sense of personal responsibility drives individual citizens to do more for their future and the future of those they love.
- Public administration must be open and honest, pursuing the high road rather than the expedient course. We must be accountable to taxpayers for our actions.
- State government has a responsibility to safeguard taxpayer dollars by eliminating waste and abuse, and providing efficient and honest government.
- Finally, state government should be humble, recognizing that all its power and authority is granted to it by the people of Texas, and those who make decisions wielding the power of the state should exercise their authority cautiously and fairly.

# Relevant Statewide Goals and Benchmarks

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Below are the statewide goals and benchmarks relevant to the Texas Water Development Board (TWDB). Direct linkages from this agency's activities to the Natural Resources, Agriculture, and General Government benchmarks are clear. The TWDB also contributes to the areas of Economic Development, Health and Human Services, and Regulatory Government.

## Natural Resources and Agriculture

### Priority Goal:

To conserve and protect our state's natural resources (air, water, land, wildlife, and mineral resources) by

- *Providing leadership and policy guidance for state, federal, and local initiatives; and*
- *Encouraging responsible, sustainable economic development.*

### Relevant Benchmarks:

- Acre-feet of desalinated brackish and ocean water produced for Texas
- Percent of water conservation through decreased water usage, increased water reuse, and brush control
- Percent of Texas water that meets or exceeds safe water quality standards
- Percent of regulatory permits processed while ensuring appropriate public input
- Percent of implemented new technologies that provide efficient, effective, and value-added solutions for a balanced Texas ecosystem
- Average time required in responding to natural disasters, such as wildfires and hurricanes
- Number of jobs created or retained in rural communities through state investment

## General Government

### Priority Goal:

To provide citizens with greater access to government services while reducing service delivery costs and protecting the fiscal resources for current and future

taxpayers by

- *Supporting effective, efficient, and accountable state government operations;*
- *Ensuring the state's bonds attain the highest possible bond rating; and*
- *Conservatively managing the state's debt.*

### Relevant Benchmarks:

- Total state taxes per capita
- Total state spending per capita
- Percent change in state spending adjusted for population and inflation
- State and local taxes per capita
- Ratio of federal dollars received to federal tax dollars paid
- Number of state employees per 10,000 population
- Number of state services accessible by Internet
- Total savings realized in state spending by making reports/documents/processes available on the Internet
- Funded ratio of statewide pension funds
- Texas general obligation bond ratings
- Issuance cost per \$1,000 in general obligation debt

## Economic Development

### Priority Goal:

To provide an attractive economic climate for current and emerging industries that fosters economic opportunity, job creation, capital investment, and infrastructure development by

- *Promoting a favorable and fair system to fund necessary state services; and*
- *Developing a well trained, educated and productive workforce.*

### Relevant Benchmarks:

- Per capita gross state product
- State taxes per capita as a percent of personal income
- Texas unemployment rate
- Median household income
- Net number of new non-government, non-farm jobs created
- Number of Texans receiving job training services

## Health and Human Services

### Priority Goal:

To promote the health, responsibility, and self-sufficiency of individuals and families by

- *Making public assistance available to those most in need through efficient and effective systems; and*
- *Continuing to create partnerships with local communities, advocacy groups, and the private and not-for-profit sectors.*

### Relevant Benchmarks:

- Infant mortality rate

## Regulatory

### Priority Goal:

To ensure Texans are effectively and efficiently served by high-quality professionals and businesses by

- *Implementing clear standards;*
- *Ensuring compliance;*
- *Establishing market-based solutions; and*
- *Reducing the regulatory burden on people and businesses.*

### Relevant Benchmarks:

- There are no relevant benchmarks listed for regulatory agencies that are pursuant to the goal of the TWDB, though the agency works to ensure compliance in projects funded by the TWDB. Now that all American Recovery and Reinvestment Act funds allocated to the TWDB's programs have been committed, TWDB staff is working to monitor fraud, waste and abuse. In administering the National Flood Insurance Program, the agency plays a regulatory role and adheres to the priority goal set forth for these agencies.

## Agency Vision and Mission

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### Agency Vision

Sustainable and affordable water for Texas.

### Agency Mission

To provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas.

## Agency Core Values

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To accomplish our mission, the TWDB will continue to focus on these core values:

### COMMUNICATION

Our standard is openness, accuracy, and accountability in our communications. We strive to enhance our communication and share information.

### CUSTOMER SERVICE

We value and respect all of our customers by considering their needs and interests in everything we do.

### EXCELLENCE

We want to achieve excellence in everything we do.

### GOVERNANCE

We are guided by sound governing principles. Accountability, transparency, and integrity are the cornerstones of the agency's governing framework, providing the foundation for how we do business.

### INNOVATION

We seek innovation and originality by encouraging fresh perspectives and divergent voices. We strive to be at the forefront of the water arena.

### INTEGRITY

We recognize our foremost responsibility is to the people of Texas and expect all employees to perform their duties with integrity and to the highest ethical standards.

### LEADERSHIP

The TWDB expects strong leaders who demonstrate qualities such as accountability, integrity, productivity, creativity, and decisiveness. To maintain success, we must continue to develop leaders. We will increase the capacity of our people to learn, to collaborate, and to lead. Through leadership, we will create a positive and productive work environment.

## **RESPECT**

We recruit the best employees and appreciate people who are passionate about our work. We respect each person at the TWDB.

## **STEWARDSHIP**

We recognize that our financing activities are closely linked to the state's economic well-being, and it is incumbent on us to practice fiscal prudence in managing our debt and loan portfolios in order to protect the TWDB, as well as the state.

## **Agency Philosophy of Customer Service**

The TWDB strives to achieve excellence in meeting and exceeding customer expectations and in providing information and services in a highly professional and timely manner. To achieve these goals, the TWDB is committed to encouraging customer feedback on products and services provided and to the continual evaluation of our programs to ensure they meet the needs of our customers.

## *Looking Forward*

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Drought and economic downturn over the past few years have put water issues on the front pages of newspapers across the state and in the forefront of the minds of most Texans. As the side effects of these problems persist, many turn to the Texas Water Development Board for information, cooperation, assistance and solutions.

While it is beneficial to reflect on the past and learn from what we've endured, it is important to look to the future. To ensure we are meeting the needs of Texas for years to come, the TWDB is focusing on the goals listed below as we continue to fulfill our statutory requirements and our agency's mission.

### ***State Water Plan Implementation***

Implementation of the 2012 State Water Plan is the first priority goal of the 2013-2017 Strategic Plan. The 2012 State Water Plan, the third plan developed through the regional water planning process, was adopted by the TWDB in December 2011. While

the responsibility to implement water management strategies falls on local and regional water providers, the TWDB supports project implementation through its financial and technical assistance programs. Since the beginning of the regional water planning process, there has been an increasing focus on implementation of the regional and state water plans by the Texas Legislature, regional water planning groups, water providers and their constituencies, and others.

As a first move toward implementation of the state water plan as a whole, TWDB staff is developing an action plan that outlines additional steps that the TWDB can take to facilitate the implementation of water management strategies in the state and regional water plans. The action plan will identify new activities that can be conducted by existing agency staff with currently available resources, such as outreach to water providers, facilitation of meetings between Board members and chambers of commerce, and other tasks. Staff will track and monitor their activities to gauge their effectiveness in facilitating project implementation.

### ***Plan to Address the Funding Gap***

The TWDB is funded by a variety of sources. While significant funding is provided by General Revenue, other sources that contribute major funding include the Water Assistance Fund, the Agricultural Water Conservation Fund, as well as appropriated receipts from the Texas Water Resources Finance Authority. Although these sources have funded research grants, regional planning, and some operations over a number of years, these funds are limited. It is likely that these funds could be depleted over the next decade. While the TWDB will manage these funds to achieve the maximum use, additional funding will be needed in the future in order to continue these functions.

### ***Establishment of a Geographic Information Office***

As a result of the agency's Sunset Advisory Commission review in 2010, the 82nd Texas Legislature established a new model for geographic coordination in Texas. The updates to the statute include a new role for the director of the Texas Natural Resources Information System as the state

geographic information officer (GIO), with the following responsibilities:

- Coordinate the acquisition and use of high priority imagery and data sets;
- Establish, support, and disseminate authoritative statewide geographic data sets;
- Support geographic data needs of emergency management responders during emergencies;
- Monitor trends in geographic information technology; and
- Support public access to state geographic data and resources.

The state GIO is executing an action plan to accomplish the five goals for geographic-related activities in Texas. The action plan includes identification of stakeholders, including representatives of federal, state, regional, and local government agencies; formation of advisory committees; outreach activities; identification of priorities; and reporting to leadership. The TWDB is required to submit a report with the resulting recommendations to the Governor, Lieutenant Governor, and Texas Legislature by December 1, 2016.

### ***Advancement of Innovative Technologies***

More and more water providers are looking toward innovative technologies, such as brackish groundwater and seawater desalination, water reuse, and aquifer storage and recovery, to meet future needs for water, especially during times of drought. Advancing innovative water technologies not only helps to implement the state water plan but also diversifies the state's water portfolio, increasing its resilience to scarcity.

The TWDB's action plan includes providing information and training to water suppliers that include innovative strategies in the state water plan or are otherwise considering these strategies and, with proper support, continuing the characterization of brackish groundwater resources, focused on those areas considering using brackish groundwater, and supporting work to implement the water plan and advance the implementation of projects.

### ***Increased Water Conservation***

The 2012 State Water Plan envisions that 24 percent of future water supplies by 2060 will come from water conservation, 7.2 percent from municipal conservation, and 16.7 percent from agricultural conservation. Water conservation is often the least expensive "source" of water. To support the implementation of water conservation in the state water plan, we will continue to support activities of the Water Conservation Advisory Committee, continue efforts to provide education on water conservation, push to further promote the Water IQ: Know Your Water program, and push to develop information and resources to assist water providers in conserving water.

### ***Drought Response***

The drought of 2011 was one for the record books. We and many of our sister agencies, particularly those on the Drought Preparedness Council, learned a lot about what works and what doesn't work responding to drought. The agencies have revised parts of the drought response plan and continue to update the rest of the plan and improve communication.

Along with the state's universities, we continue to work on a less subjective method of identifying counties that need to be on the governor's drought disaster proclamation. We are also revising our rules so that regional water planning groups must better consider drought response as part of their plans.

A key part of responding to drought is being ready for drought, and being ready for drought means implementing the state water plan. Much of our effort is directed toward implementing the state water plan.

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# Agency Overview

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Enabling statutes and legislation

TWDB history



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# Agency Overview

The Texas Water Development Board 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. The 55th Legislature adopted a resolution supporting a constitutional 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 TWDB 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 conservation and the development of state water resources.

In the First Called Special Session of the 55th 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 also provided that the Fund could “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 TWDB’s heritage 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. 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 (75th Legislature), 2 (77th Legislature), and 3 (80th 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.

In the 82nd legislative session, the Texas Natural Resources Information System (TNRIS), a division of the TWDB, was elevated in profile by Sunset legislation. The director of TNRIS is now designated as the Geographic Information Officer of the state. Additional responsibilities given to the TWDB during the last legislative session include working with the Texas Commission on Environmental Quality and the Water Conservation Advisory Council to develop a consistent methodology for calculating water use and conservation, and to include an evaluation of progress made in future state water plans.

Also during the last session, SJR 4 was passed by the legislature and approved by voters as a constitutional amendment (Proposition 2). Proposition 2 authorized \$6 billion in bonds as general obligation bonds on a continuous revolving basis. The TWDB now has the authority to issue bonds without repeated and costly constitutional amendments.

## Enabling Statutes and Legislation

Strategies	Descriptions	Statutory References
<b>Strategy 01-01-01</b> <b>Collection, Analysis, and Reporting of Environmental Impact Information</b>	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.	Water Code §§11.1491, 16.012, 16.058
<b>Strategy 01-01-02</b> <b>Water Resources Data</b>	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.	Water Code Chapter 15 (Subchapter M), Chapter 16 (Subchapter B), §16.059  Water Code §§11.153, 11.155, 15.4063
<b>Strategy 01-01-03</b> <b>Automated Information Collection, Maintenance, and Dissemination</b>	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.	Water Code Chapter 16 (Subchapter B), §§36.1071, 36.1072, 36.1073, 36.159, 36.160, 36.161, 36.169, Education Code §88.503
<b>Strategy 01-02-01</b> <b>Technical Assistance and Modeling</b>	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.	Water Code Chapter 16 (Subchapters B and C), §§16.012, 16.015, 16.019, 16.051, 16.053, 35.004, 35.007, 35.012, 35.013, 35.018, 36.015, 36.108, 36.120, 36.1071 through 36.1073  Local Government Code §§212.0101, 232.0032

<b>Strategy 01-02-02</b> <b>Water Resource Planning</b>	<p>Assist in the development and implementation of regional and state water plans and of 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, 12.0151, Chapter 15 (Subchapters A, B and F), Chapter 16 (Subchapters B, C, D and 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>
<b>Strategy 01-03-01</b> <b>Water Conservation, Education, and Assistance</b>	<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>
<b>Strategy 01-04-01</b> <b>Perform Community Assistance Pursuant to the National Flood Insurance Program</b>	<p>Perform community assistance pursuant to the NFIP.</p>	<p>Water Code §§ 16.314, 16.316, 16.317</p>
<b>Strategy 02-01-01</b> <b>State and Federal Financial Assistance Programs</b>	<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>Strategy 02-02-02</b> <b>Economically Distressed Areas Programs</b>	<p>Provide economically distressed areas access and connections to adequate water supply and/or wastewater treatment systems and/or 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>

# *TWDB History*

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## **1904**

A constitutional amendment was adopted authorizing the first public development of water resources.

## **1913**

The 33rd Texas Legislature created the Board of Water Engineers to regulate appropriations of water.

## **1957**

The TWDB was created by legislative act and constitutional amendment. The constitutional amendment, approved by Texas voters, authorized the TWDB to issue \$200 million in State of Texas General Obligation Water Development Bonds for the conservation and development of Texas' water resources through loans to political subdivisions. Additionally, Chapter II of the Laws of the First Called Session of the 57th Legislature, titled, "the Texas Water Planning Act of 1957" created a Water Resources Planning Division within the State Board of Water Engineers.

The statewide drought of record that lasted almost eight years ended, resulting in 244 out of 254 Texas counties being declared disaster areas.

## **1962**

The Board of Water Engineers was reorganized, renamed the Texas Water Commission, and given specific responsibilities for water planning by the 57th Texas Legislature. An additional constitutional amendment added powers to the TWDB regarding the acquisition and development of storage facilities in reservoirs using the Texas Water Development Fund.

## **1965**

The Texas Legislature restructured the state water agencies, transferred water resource planning functions to the TWDB, and renamed the Texas Water Commission as the Texas Water Resource Commission (TWRC).

## **1970**

President Richard Nixon established the U.S. Environmental Protection Agency (EPA).

## **1972**

The Texas Natural Resources Information System (TNRIS) was created, succeeding the Texas Water-Oriented Data Bank and incorporating a centralized repository and clearinghouse of maps, census information, and water-related information.

## **1977**

The three existing water agencies, the Texas Water Development Board, the Texas Water Rights Commission, and the Water Quality Board, were combined by the Texas Legislature, creating the Texas Department of Water Resources (TDWR). This new agency was responsible for developing Texas' water resources, maintaining the quality of water, and ensuring equitable distribution of water rights.

## **1985**

Sunset legislation reorganized the Texas Department of Water Resources, splitting the agency into two separate agencies: the Texas Water Commission and the Texas Water Development Board. The TWDB was charged with long-range planning and water project financing. Four constitutional amendments were passed that 1) added \$980 million in bond authorization for water, water quality enhancement, and flood control projects; 2) gave authority for the TWDB to create special funds in the treasury; 3) created a bond insurance program; and 4) authorized the TWDB to provide financial assistance to nonprofit water supply corporations.

## **1987**

Congress established the Clean Water State Revolving Fund through the Clean Water Act Amendments of 1987, creating a permanent, state-administered financial assistance program for water pollution abatement projects.

## **1989**

The 71st Texas Legislature and voters of the state passed comprehensive legislation and constitutional

amendments establishing the Economically Distressed Areas Program (EDAP), to be administered by the TWDB.

### **1996**

Congress established the Drinking Water State Revolving Fund through the Safe Drinking Water Act Amendments of 1996, creating a state-administered financial assistance program for drinking water infrastructure projects.

### **1997**

The 1997 State Water Plan was adopted as a consensus effort by the TWDB, the Texas Parks and Wildlife Department (TPWD), and the Texas Natural Resources Conservation Commission (now the Texas Commission on Environmental Quality or TCEQ).

The 75th Texas Legislature passed Senate Bill 1 (SB 1), changing the water planning process in Texas. SB 1 charged local entities with preparing regional water plans every five years and charged the TWDB with incorporating these plans into a comprehensive state water plan.

With enactment of SB 1, the Strategic Mapping Initiative was developed and the Texas Geographic Information Council (TGIC) was formed.

Sunset review resulted in passage of SB 312, which preserved existence of TWDB for 12 more years and mandated program changes. The TWDB revised all forms and procedures and adopted all necessary rules required to implement program changes mandated in SB 312.

### **2001**

The 2002 State Water Plan was published, the first state water plan to be adopted by the TWDB since the passage of SB 1 by the 1997 Texas Legislature.

The 77th Texas Legislature passed Senate Bill 2, which added additional requirements to the TWDB's technical data collection and groundwater modeling programs and created two new funding programs to be administered by the TWDB: the Water Infrastructure Fund and the Rural Water Assistance Fund. Senate Bill 2 also created the Texas Water Advisory Council, a 13-member organization of

which the TWDB is a member.

Voters approved \$2 billion in bond authorization under the Texas Constitution Amendment 19, Article III, Section 49-d-9.

### **2003**

The 78th Texas Legislature passed several bills focused on conservation: setting new requirements to address conservation issues when applying for financial assistance; requiring water audits by water utilities; consolidating financial assistance programs to provide financial assistance for agricultural water projects; and establishing the Water Conservation Implementation Task Force to review, evaluate, and recommend optimum levels of water use efficiency and conservation in the state.

### **2005**

The Economically Distressed Areas Program was changed from a border initiative to a statewide program, thus providing more money to the program and removing the moratorium on new projects.

In 2005, with Executive Order No. RP-50, Governor Rick Perry created the Environmental Flows Advisory Committee, whose charge is to develop recommendations to establish a process that will achieve a consensus-based, regional approach to integrate environmental flow protection into the water allocation process while ensuring that human water needs are satisfied. The committee, made up of the TWDB, TCEQ, and TPWD representatives, examines relevant issues and makes recommendations for action and legislation concerning flow allocation to meet human and environmental needs at all times, including during drought conditions.

The legislature passed House Bill 1763, which requires groundwater conservation districts within groundwater management areas to establish desired future conditions of their relevant aquifers.

### **2007**

Congress passed the Water Resources Development Act of 2007, which, as passed, included provisions to facilitate federal assistance in planning and developing water supply projects in Texas. Most

notably, the Act authorized \$40 million for the Texas Environmental Infrastructure Program to support implementation of water supply strategies prioritized by the TWDB.

Senate Bill 3 was passed, and historic actions on water conservation, environmental flows, and reservoir site designation were made. Unprecedented funding to implement water management strategies and state water plan requests were included in the state's House Bill 1 budget. In addition, the TWDB received \$30.6 million over and above the agency's baseline for agency programs and administration and authority and funding to issue Water Infrastructure Fund bonds.

The National Flood Insurance Program was transferred from the Texas Commission on Environmental Quality to the TWDB.

Proposition 16, passed by voters in November, gave the TWDB \$250 million in bond authorization, providing funding for the Economically Distressed Areas Program.

## **2009**

Congress passed the economic stimulus package titled the American Recovery and Reinvestment Act of 2009 (ARRA). EPA awarded over \$160 million in ARRA funds to the TWDB to help state and local governments finance improvements to water projects. EPA also awarded over \$179 million in ARRA funds to the TWDB to help state and local governments finance improvement to wastewater projects.

### **81st Legislative Session:**

House Bill 2275 created the Task Force on Uniform County Subdivision Regulation to ensure that statutory provisions are consistent and clearly achieve the goals of promoting uniform subdivision standards in unincorporated counties near the international border and in economically distressed counties.

House Bill 2374, passed by the 81st Legislature, allowed political subdivisions to provide financial assistance to residents in economically distressed areas for the cost of connecting to a public water supply, connecting yard water service, installing indoor plumbing fixtures, or connecting to a sanitary sewer system.

House Bill 3861 directed the TWDB to exercise the discretion available under Texas Water Code 16.135(1) to include revenues from a political subdivision not currently under contract with the Angelina and Neches River Authority to participate in paying the costs of the site acquisition stage of the Lake Columbia Reservoir project; or a political subdivision not currently under contract to purchase a portion of the water to be supplied by the project.

House Bill 4110 granted the TWDB the authority to purchase and sell promotional items to further the purposes and programs of the agency.

Senate Bill 1371 removed the requirement in current law that a colonia must consist of 11 or more dwellings if the TWDB determines the project will be beneficial and cost effective, thus removing a limitation on the number of small communities that may benefit from the program. The bill also allowed for a greater pool of sponsors, including political subdivisions, to be eligible for the program. Finally, Senate Bill 1371 allowed for advance financing, not to exceed 10 percent of the total grant, on a determination that participating utilities are sufficiently committed to actually providing service upon completion of the project.

Senate Bill 2312 clarified that entities eligible for other programs administered by the TWDB are also eligible to apply for financial assistance through the Water Infrastructure Fund, including nonprofit water supply corporations. It also removed a reference to an obsolete statutory reference and redefined "eligible political subdivision" to include nonprofit water supply corporations created and operating under Chapter 67 of the Texas Water Code and certain categories of districts, such as freshwater supply districts, special utility districts, and municipal utility districts, that had been excluded under the prior definition.

## **2011**

### **82nd Legislative Session:**

The Sunset Advisory Commission's review of the TWDB passed under Senate Bill 660. Provisions in the review included the elevation of the director of the Texas Natural Resources Information System to the position of Geographic Information Officer for

the state, the addition of Groundwater Management Area representatives to the regional water planning process, and the inclusion of an evaluation of progress made in meeting future water needs in the State Water Plan.

House Bill 3090 amended the Water Code to require retail public utilities that provide potable water and receive financial assistance from the TWDB to file an annual water audit. If the utility does not receive financial assistance from the TWDB, they must file an audit every five years.

SJR 4 was passed by the legislature and approved by voters as a constitutional amendment (Proposition 2). Proposition 2 authorized \$6 billion in bonds as general obligation bonds on a continuous revolving basis. The TWDB now has the authority to issue bonds without repeated and costly constitutional amendments.

## **2012**

The TWDB published its 2012 State Water Plan.

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# External/Internal Assessment

Overview of agency scope and functions

Organizational aspects

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Economic variables

Impact of federal statutes and regulations

Other legal issues

Self-evaluation and opportunities for improvement



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# External/Internal Assessment

## *Overview of Agency Scope and Functions*

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The Texas Water Development Board (TWDB):

- Supports the development of regional water plans and incorporates them into a statewide water plan for the orderly and responsible development, management, and conservation of the state's water resources.
- Provides loans to local governments for water supply projects; water quality projects including wastewater treatment, municipal solid waste management, and nonpoint source pollution control; flood control projects; agricultural water conservation projects; rural and small community water and wastewater projects; and groundwater conservation district creation expenses.
- Provides grants and loans for the water and wastewater needs of the state's economically distressed areas.
- Provides agricultural water conservation and water-related research and planning grants.
- Conducts studies of the occurrence, quantity, quality, and availability of the state's surface water and groundwater, including development of groundwater availability models for the state's major and minor aquifers.
- Collects data and conducts studies concerning the freshwater needs of the state's bays and estuaries. In conjunction with other natural resources agencies, maintains an instream flow data collection and evaluation program. This includes conducting studies and analyses to determine appropriate methodologies for determining flow conditions in the state rivers and streams necessary to support a sound ecological environment.
- Facilitates the state's efforts to determine the feasibility and to identify the requirements for implementation of large-scale seawater desalination projects, and supports their

implementation as appropriate. Supports ongoing desalination research and the sharing of technological information to enhance brackish groundwater and seawater desalination activities throughout the state.

- Maintains a centralized data repository of information on the state's natural resources called the Texas Natural Resources Information System (TNRIS) and manages the Strategic Mapping (StratMap) Initiative, a Texas-based, public and private sector cost-sharing program to develop consistent, large-scale digital base maps describing surface water, elevation, transportation, aerial photography, and other information. In addition, TNRIS houses the Geospatial Emergency Management Support System (GEMSS) and works in coordination with EPA, FEMA, and the Governor's Division of Emergency Management.
- Coordinates the National Flood Insurance Program (NFIP) within the state of Texas, acting as a liaison between the federal component of the program and the local communities.

## *Organizational Aspects*

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### **Size and Composition of Workforce**

#### **FULL-TIME EQUIVALENTS**

As of the first quarter of fiscal year 2012 (November 2011), the Texas Water Development Board had 293.3 full-time equivalent employees (FTE), including part-time workers and contractors. 370.4 FTEs were appropriated for FY 2012. The agency experienced a significant decrease in FTEs in the last fiscal year due to a reduction in force that occurred in August 2011. The reduction in force resulted in the elimination of 67 FTEs from the workforce. Another factor impacting the current number of FTEs is the conclusion of the American Recovery and Reinvestment Act (ARRA) program. As ARRA projects have been completed, the staff members working on these projects have been discharged and their positions eliminated.

## RACE/GENDER

Per the 2011 Equal Employment Opportunity Report for September 1, 2010, to August 31, 2011, the TWDB workforce was comprised of the following:

	Officials	Professionals	Para Professionals	Administrative Support	Technicians	Total
Total Employees	30	303	18	21	1	373
Caucasian Males	14	134	0	1	1	150
Caucasian Females	11	78	11	7	0	107
African Males	0	11	0	0	0	11
African Females	1	7	1	5	0	14
Hispanic Males	2	31	1	0	0	34
Hispanic Females	1	21	5	7	0	34
Other Males	1	16	0	0	0	17
Other Females	0	5	0	1	0	6
Total Males	17	192	1	1	1	212
Total Females	13	111	17	20	0	161

It is the intent of the TWDB to provide equal employment opportunity for all persons regardless of race, color, age, gender, religion, national origin, disability, or veteran's status. Physical disability or condition is not considered a factor in employment unless the specific job so warrants. Equal opportunity is provided for all persons in the areas of recruiting, hiring, transfers, promotions, training, compensation, benefits, layoffs, and terminations. Vacancies are filled in accordance with agency job descriptions, state classification system guidelines, and legislative appropriations.

The figures from the Civil Rights Division (CRD) of the Texas Workforce Commission do not single out a professional profile comparable to that of the TWDB. This makes it difficult to compare the two figures for professionals. CRD figures for professionals represent a wide variety of professions, of which females are represented in various proportions depending on the nature of the profession. The profile of professional positions in the TWDB explains part of the shortage of females in the professional category: the TWDB employs many natural scientists and engineers. Although increasing slightly, females continue to enter the natural sciences and engineering fields in lower proportions than males.

Each year, the TWDB evaluates the effectiveness of its affirmative action plan to determine if any modifications or policy changes are required. By careful analysis of hiring and retention practices, the TWDB can determine what specific activities were successful. The Director of Human Resources has been delegated overall responsibility for developing, coordinating, and implementing an Affirmative Action Program and Recruitment Plan.

### MANAGEMENT-TO-STAFF RATIO

The 78th Texas Legislature required that state agencies employing more than 100 full-time equivalent employees must attain a ratio of one full-time equivalent employee in a management position for every 11 full-time employees (1:11) no later than August 31, 2008 (Texas Government Code, Ann., §2053.004). The FY 2012 first quarter management-to-staff ratio was 1:9.3. The agency continues to re-evaluate its current structure in an effort to comply with the 1:11 ratio. Human Resources works with the agency's leadership to continually assess the current management-to-staff ratio to streamline management processes and identify efficiencies.

In theory, these minimum management-to-staff ratio requirements should result in increased operational efficiency. Organizations can allow

managers to focus solely on the business of managing without having to perform technical work. However, the TWDB has not been in a position to allow managers to focus solely on management; the TWDB relies on our managers to perform significant amounts of technical work in order to meet statutory and critical program requirements. This is further exacerbated by only a small number of staff available to handle multiple programs. The implementation of this statute has created a situation whereby “working managers” are called upon to oversee a greater number of programs and people. An additional unintended consequence with negative effects is that overloaded staff members have limited time to devote to quality training for succession planning.

#### **HUMAN RESOURCES STRENGTHS AND WEAKNESSES**

The Human Resources (HR) Division of the Texas Water Development Board is comprised of the Director, a Human Resources Generalist, a Staff Resources Officer and a Human Resources Assistant. In its effort to provide the best possible service to the agency and staff, the HR Division performs the following functions:

- ensures that employees of the TWDB receive the best possible combination of employee benefits, especially in the area of medical care;
- ensures the salaries paid to TWDB employees are competitive in a relative job market;
- provides TWDB employees opportunities for professional development through effective training programs available not only in-house but through the use of third-party providers and consultants;
- maintains accurate and complete personnel records;
- is responsive to questions and concerns of employees regarding all aspects of their employee/ employer relationship;
- strives to provide well-qualified applicant pools representing a broad cross-section of the community from which the TWDB may assemble a high quality and diverse workforce;
- ensures compliance with all internal and external human resource rules and regulations under which

- the TWDB is required to operate; and,
- uses available technology to make services more responsive and accessible to TWDB employees.

The current HR staff is trained and experienced with three staff members certified as Professionals in Human Resources.

The TWDB’s turnover rates have fluctuated in the past decade. Typically rates have lagged behind the statewide average. The TWDB’s turnover rate in 2009 was 7.0 percent compared to a statewide average of 14.4 percent. For 2010, the turnover rate was 8.0 percent compared to a statewide average of 14.6 percent. However, the TWDB rates for 2011 were significantly higher at 22.5 percent compared to the statewide percentage of 16.8 percent. This was due primarily to a reduction in force that occurred in August 2011. To date, the agency has had a 6.02 percent turnover rate in fiscal year 2012.

Notwithstanding the loss of staff due to the reduction in force, the TWDB’s rate continues to fall well below the statewide average. A continued lagging economy has contributed to a lower turnover rate for the TWDB and the state at large. However, several factors such as loss of institutional knowledge due to attrition and an aging workforce still put the agency at risk for maintaining a qualified future workforce. Most difficult to recover is the loss of tacit knowledge, known to few workers and not available in procedures and training manuals.

Since the last strategic plan submission, the TWDB has experienced a number of losses to critical management and executive positions, including the retirement of the Executive Administrator. As a result, the TWDB looked from within to fill many of these critical positions. It was through this succession planning that the TWDB has been able to continue to meet the needs of its stakeholders, as well as continue with critical business functions with little or no disruption in services.

Still, an aging workforce continues to be a great challenge to the TWDB. With expected retirements in the next three to five years, the TWDB has to ensure that remaining staff are quickly developed so that the agency will be able to continue running its operations. It is extremely important for the

TWDB to realize that the tenure and age of staff have changed dramatically over the past several years. As the workforce ages, it is important for the agency to develop a proactive approach with regard to staff development to ensure that critical skills are adequately replaced. To accomplish this, the TWDB HR Division will continue to enhance its comprehensive recruitment program that includes career fair attendance/sponsorship, successful advertisement program, and brand development. It will also continue to offer a series of management training, designed to address deficiencies in hiring, performance appraisal, and disciplinary actions as well as develop additional training on new hire recruiting, on-boarding, and staff development training for managers.

## Organizational Structure

### TEXAS WATER DEVELOPMENT BOARD MEMBERS

The Texas Water Development Board is governed by a six-member citizen Board appointed to six-year staggered terms by the Governor. This Board meets monthly in Austin to consider loan applications from eligible applicants, award grants for water-related research and planning, and conduct other TWDB business, such as approving the state water plan.

The Board is also divided into two self-functioning committees: the Finance and Audit committees. Each committee consists of a chair and two additional Board members. Meetings occur quarterly for the Audit Committee and monthly for the Finance Committee and are usually held in conjunction with regularly scheduled Board meetings. The TWDB Board members also oversee the TWDB Internal Audit office.

<b>Member Name</b>	<b>Term/Appointment Date</b>	<b>Qualifications</b>
<b>Billy R. Bradford Jr.</b>	3/9/11 – 12/31/15	Member and Chairman
<b>Joe M. Crutcher</b>	2/12/08 – 12/31/13	Member and Vice Chairman
<b>Monte Cluck</b>	3/9/11 – 12/31/15	Member
<b>Lewis H. McMahan</b>	3/13/08 – 12/31/17	Member
<b>F. A. “Rick” Rylander</b>	6/11/12 – 12/31/17	Member
<b>Edward G. Vaughan</b>	3/13/08 – 12/31/13	Member

## **AGENCY STRUCTURE**

The agency is structured into executive administration, and six separate program areas, each led by a Deputy Executive Administrator. The program areas and their respective divisions are as follows:

Internal Audit – Reports directly to the Board

Executive Administration

- Office of the Executive Administrator
- General Counsel and Legal Services
- Governmental Relations
- Project Oversight
- ARRA Implementation

Operations and Administration

- Administrative Services
- Communications and Web Administration
- Human Resources
- Information Technology
- Support Services and Contract Administration

Finance

- Accounting
- Budget
- Debt and Portfolio Management
- Project Development

Construction Assistance

- Inspection and Field Support
- Project Engineering and Review

Water Resources Planning and Information

- Flood Mitigation Planning
- Texas Natural Resources Information System
- Water Resources Planning

Water Science and Conservation

- Conservation
- Groundwater Resources
- Innovative Water Technologies
- Surface Water Resources

Program and Policy Development

- Program Development

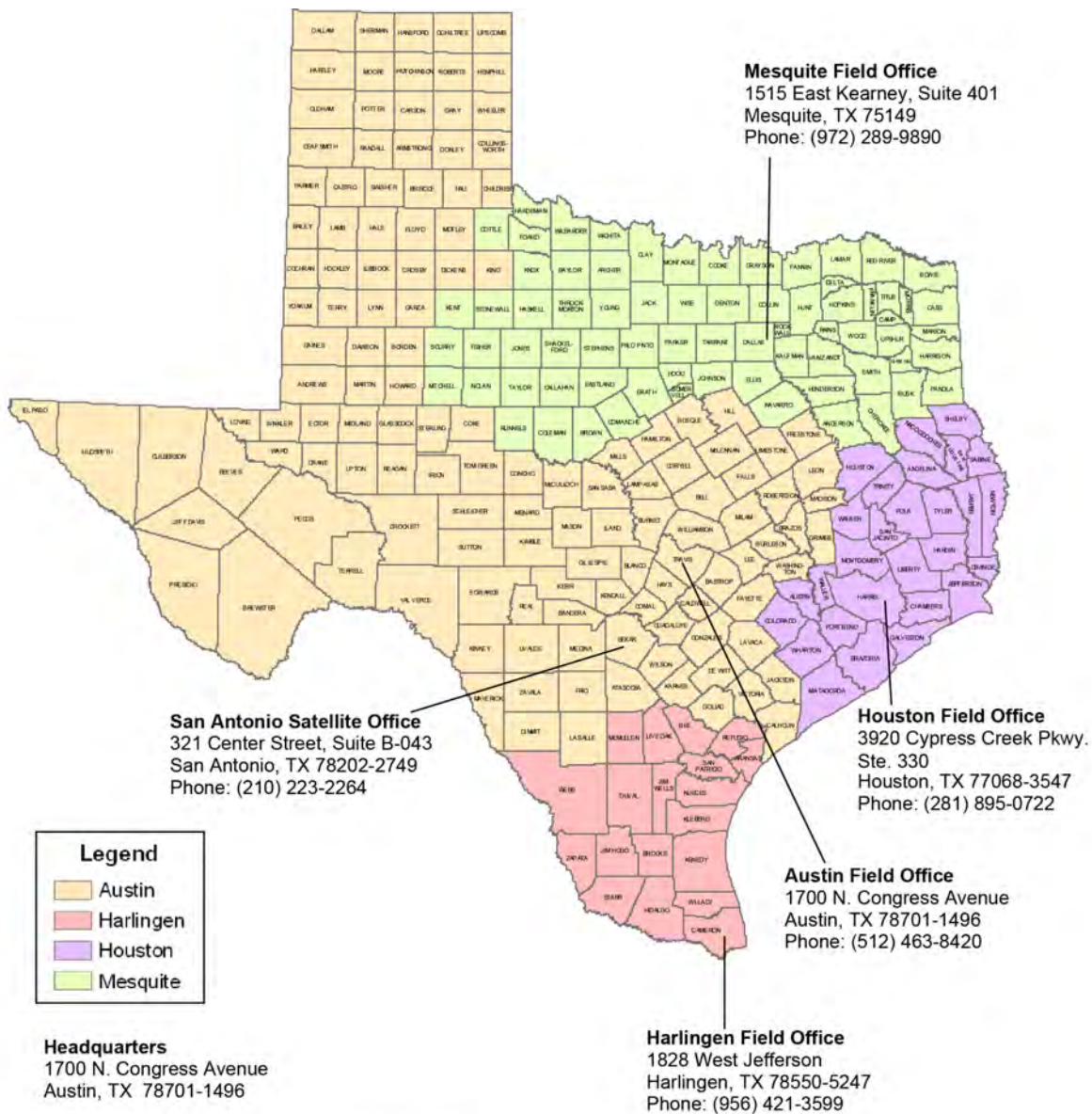
## **Geographic Location**

The main office of the Texas Water Development Board is located at 1700 N. Congress Ave., in the basement and on the fifth and sixth floors of the Stephen F. Austin Building. The majority of the TWDB's employees work at this location.

In addition, the TWDB houses field offices located across the state. Staff members in the field offices provide technical assistance and outreach for the construction site inspection program. There are approximately 15 employees in agency field offices, which are located in these cities:

- Harlingen
- Houston
- Mesquite
- San Antonio

Austin staff members serve as community contacts for the National Flood Insurance Program. Austin staff is also involved directly with regional water planning groups, groundwater management areas, groundwater conservation districts, and other local and regional entities. Each area has dedicated staff divided by region. These staff members regularly attend meetings in each of the various locations throughout the state and are in constant communication with the stakeholders and customers in their region.



*Locations of TWDB field offices.*



## Capital Assets

Capitalized assets are defined as assets with an initial, individual cost of \$5,000 or more and have an estimated useful life in excess of one year. These assets are capitalized at cost or, if not purchased, at appraised fair value as of the date of acquisition. The Texas Water Development Board's property manager is ultimately responsible for all agency assets. However, the agency assigns fixed assets directly to agency staff. The property manager conducts an annual inventory in order to account for each asset. Employees are required to certify the possession of these assets during the annual inventory. All agency assets are continuously tracked, updated, and reported through the State Property Accounting System. As of February 29, 2012, the Board had \$33,110,577 in capitalized assets, which have been depreciated by \$14,931,749. Examples of capitalized assets at the TWDB are vehicles, boats, water meters, and gauges.

## Historically Underutilized Businesses

A Historically Underutilized Business (HUB) is generally defined as a for-profit business enterprise (sole proprietorship, partnership, joint venture, corporation, limited partnership, or company) with its principal place of business located in the state of Texas. Such businesses must have at least 51 percent of the assets and interests of all classes of stock and equitable securities owned by one or more persons who are members of the following groups that have been identified as economically disadvantaged: Asian Pacific Americans, Black Americans, Hispanic Americans, Native Americans, and American women. HUB owners must be active participants in the day-to-day operations of the business and must also be citizens of the United States and residents of the state of Texas.

The state of Texas HUB Program is designed to facilitate the participation of minority and women-owned businesses in state agency procurement opportunities. All state agencies are required to make a good-faith effort to include HUBs in their procurement opportunities. The program is composed of various initiatives designed to produce full and equal participation by minority and women-

owned businesses in the state's procurement process.

## HUB INITIATIVES

The Texas Water Development Board fully understands the goals of the statewide HUB program and is committed to providing increased opportunities for HUB participation in all TWDB expenditures. The TWDB has been successful in exceeding and/or improving HUB participation in three of the four applicable procurement categories where expenditures have occurred. The TWDB's executives, managers, and staff will continue current efforts that have proven successful in meeting the statewide goals, and will explore new opportunities to improve and increase HUB participation wherever possible.

Examples of the TWDB's initiatives include:

- Continued assessment of internal policies and procedures to improve the TWDB's HUB program;
- Participation and attendance at Economic Opportunity Forums, where economically feasible;
- Collaboration and communication among the TWDB's staff involved with procurements and contract awards;
- Improvements to the TWDB's website to provide notification of current procurement opportunities and updated links to HUB search resources;
- Increasing the utilization of the HUB and Centralized Master Bidder's List in TWDB procurement activities;
- Emphasizing and increasing outreach and marketing efforts to educate current HUB vendors on specific TWDB procurement opportunities; and
- Assisting interested HUB vendors with the state's HUB certification process and with the processes of other recognized certification programs.

The TWDB regularly assesses its HUB program initiatives and strategies as they relate to actual performance, and actively seeks opportunities to enhance and improve the program.

## HUB Goals

Goal	Historically Underutilized Businesses
	<i>To establish procurement and contracting policies and procedures that support the identification, promotion, and utilization of qualified HUBs in all applicable procurements, contracts, and subcontracts awarded by the TWDB.</i>
<b>First Objective</b>	To make a good faith effort to meet or exceed the statewide HUB goals in all applicable procurement categories.
<b>Strategy</b>	Implement good faith efforts to identify, solicit, and utilize qualified HUBs in all applicable TWDB procurement and contracting opportunities.
<i>Output Measure</i>	1. Percent (%) of total combined dollar value of procurements, contracts, and subcontracts awarded to HUBs reflected in the semiannual and annual HUB reports.
<b>Strategy</b>	Participate in economic opportunity forums and other outreach/educational efforts to inform the public about contracting opportunities with the TWDB.
<i>Output Measure</i>	1. Number of forums attended and number of direct contacts made with HUBs.
<b>Strategy</b>	Identify subcontracting opportunities in all TWDB procurements that meet the established criteria for requiring HUB subcontracting plans.
<i>Output Measure</i>	1. Percent (%) of TWDB contracts that equal or exceed \$100,000 that have documented compliance with the state's HUB subcontracting plan requirements.

## HUB Activity

Fiscal Year	Total Board Expenditures	Total Expenditures with HUBs	HUB Expenditure Percentage	Number of Certified HUB Bids Received	Number of Certified HUB Awards	Percent of HUB Utilization Bids vs. Awards
FY 2009	\$5,401,678	\$1,345,629	24.9%	541	497	91.9%
FY 2010	\$6,242,921	\$1,134,018	18.1%	556	508	91.4%
FY 2011	\$6,360,106	\$1,301,849	20.5%	487	365	74.9%
Total	\$18,004,705	\$3,781,496	21.0%	1584	1370	86.5%

## Key Organizational Changes

Since the 2011-2015 Strategic Plan, the agency has undergone significant organizational changes due to several factors that impacted both staff and programs.

Perhaps the most significant change in the past two years was the reduction in force that occurred in August 2011. The Texas Water Development Board eliminated 67 full-time equivalents (FTEs) through a combination of retirement incentives, canceling vacant positions, and layoffs. The impact of reduced staff affected every program area but some areas suffered more in terms of the actual number of positions eliminated. The Groundwater Resources Division of the Water Science and Conservation program area had the most positions eliminated in a single division with 19 FTEs. Other program areas such as Water Resources and Planning eliminated the entire field staff for the National Flood Insurance Program. Their duties are performed on a reduced basis by staff in the main office in Austin. The administrative programs (Executive Office, Operations and Administration, and Finance) eliminated 12 FTEs, equating to a 13 percent reduction in staff.

The American Recovery and Reinvestment Act (ARRA) implementation had increased the number of FTEs, as well as TWDB's budget, in 2009. During the past 2.5 years, the TWDB managed a successful implementation of the ARRA Program and is now overseeing the completion of the last of the projects receiving funding. As a result, many of the temporary employees hired under the ARRA program have been discharged and their positions eliminated. It is anticipated that the program will be completed by early 2013 and all remaining ARRA staff will have been discharged by then.

Other key organizational events are as follows:

In December 2010, a new Chairman and Vice Chairman were appointed to the TWDB along with a new Audit Committee Chairman. Following soon after were the appointments of two new Board Members in March 2011.

In February 2011, the Executive Administrator retired after serving almost nine years in the position. As a result, the Board appointed an Interim Executive Administrator who served in that role until December

2011, when the appointment was made permanent.

In June 2011, the Project Finance program area was reorganized into two new programs: Project Oversight and Program and Policy Development. The goal was to enhance the coordination and communication for State Revolving Fund (SRF) programs and federal policy development in coordination with state policy and programs, and to provide a more strategic and comprehensive approach for SRF program management. This was accomplished by creating a project oversight team responsible for tracking the status of each project through construction completion and final accounting, helping to get stalled projects back on track and to report on the status of projects.

Also impacted by this reorganization was the realignment of the Project Development division (formerly a division within Project Finance) to place it under the Finance program area. This was done to improve the coordination and communication on the financial application process; loan and grant closings; impact of the Board's financial commitments on the agency's financing capacity; and financial monitoring requirements.

In September 2011, the Board appointed a new Director of Internal Audit, replacing the prior director who had served in the position since 1998. Like so many other programs impacted by the reduction in force, Internal Audit eliminated two auditor positions leaving only the director and a staff auditor to perform all agency audit functions.

In December 2011, Water Science and Conservation hired a new director for the Groundwater Resources Division. As previously noted, this division experienced the greatest loss in terms of total positions eliminated during the reduction in force. This will continue to create challenges for the new leadership in future management of groundwater monitoring, modeling and providing technical assistance to stakeholders.

In May 2012, the governor appointed Board member Billy R. Bradford Jr. as the chairman of the TWDB. Governor Perry also appointed Fredrick "Rick" Rylander to the Board in June, 2012.

Despite the challenges of a reduced workforce coupled with continued demand for its services, the

TWDB continually assesses and identifies efficiencies within its organizational structure to ensure maximum effectiveness of its program delivery.

### Use of Consultants

The Texas Water Development Board uses consulting services intermittently. These services are only used when there is a significant need and when agency staff or another agency is unable to perform the service. The TWDB has relied upon the use of consultants in the areas of human resources, legal consultation, water resources analysis, information technology systems development, and engineering design review.

As required by the state of Texas Purchase Policy, consultants are selected based on demonstrated competence, knowledge, and qualifications, as well as the reasonableness of the proposed fee for the service. The TWDB uses the services of qualified Historically Underutilized Businesses whenever the opportunity arises. The agency notifies the Legislative Budget Board and the Governor’s Budget, Planning, and Policy Division prior to contracting any consultant services exceeding \$14,000.

The TWDB anticipates continued use of consulting services throughout 2013-2017 to help achieve our mission to provide leadership, planning, financial assistance, information dissemination, and education for the conservation and responsible development of water for Texas.

### *Fiscal Aspects*

The 82nd Texas Legislature, responding to reduced state revenues caused by the economic downturn, made significant reductions to state agency budgets. The Texas Water Development Board was no exception, experiencing a \$16.8 million reduction to agency operations in General Revenue for the 2012-2013 biennium. The majority of the reductions were in Goal 1, Water Resources Planning, for \$14.6 million. This included reductions to Environmental Flows, including support for the Science Advisory Committees and Basin and Bay Expert Science Teams; data purchases for the Strategic Mapping program; grants for desalination

and regional planning; technical assistance for the National Flood Insurance Program and municipal conservation. There were also reductions in grants and administrative support for financial assistance programs including the Economically Distressed Areas Program (EDAP) included in Goal 2. The reductions to General Revenue, and to a lesser extent the anticipated reductions to several federal programs, necessitated the elimination of 67 positions prior to the beginning of fiscal year 2012. Because the TWDB anticipated the necessary reductions in staffing, only 39 of the 67 positions were filled.

Although there was a significant reduction in General Revenue for operations, the TWDB actually recognized growth in total appropriations due to increased federal fund appropriations, primarily in the form of pass through grants related to Federal Emergency Management Agency programs for Flood Mitigation and Severe Repetitive Loss.

	Total Appropriations	
	FY 2008-2013	
FY 2008-2009	\$108,787,808	
FY 2010-2011	\$97,730,716	
FY 2012-2013	\$125,141,502	
	General Revenue Appropriations	
	FY 2008-2013	
FY 2008-2009	\$55,484,226	
FY 2010-2011	\$58,042,524	
FY 2012-2013	\$38,221,334	

In addition to operational funding, the TWDB received approximately \$100 million in General Revenue appropriations for debt service to fund existing debt and to allow for the issuance of an estimated \$150 million in new non-self supporting general obligation bonds for the Economically Distressed Areas Program (\$50 million) and the Water Infrastructure Fund (\$100 million). The legislature passed a joint resolution authorizing a constitutional amendment, approved by voters on November 8, 2011, to allow the TWDB to issue additional general obligation bonds in an amount not to exceed \$6 billion outstanding at any time.

# Service Population Demographics

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## Historical and Current Characteristics

### AFFECTED POPULATIONS

In fulfilling its mission to provide leadership, planning, financial assistance, information, and education for the responsible development and conservation of the state's water resources, the TWDB serves all citizens of Texas in addition to an array of customers throughout Texas including but not limited to:

- counties
- municipalities
- industries
- agriculture
- environmental interests
- small business
- higher education
- energy sector
- river authorities
- regional water planning groups
- water districts
- groundwater management areas
- water utilities

Today, Texas remains one of the fastest growing states in the nation. Rapid growth, combined with the state's susceptibility to severe drought, makes managing current water supplies and planning for future water supplies a crucial endeavor. Without abundant and reliable water supplies, Texas could face serious social, economic, and environmental consequences - not only in our large metropolitan cities, but also in rural areas. As the state continues to grow, water providers and water resource managers are finding it increasingly difficult to meet growing water demands. As a result, over the past several years, water has emerged as a key issue in nearly every legislative session. With 2011 representing the most serious one-year drought in the state's history, it is virtually certain that water will be one of the major issues of the 83rd Texas Legislative Session.

Recent legislation related to water has expanded

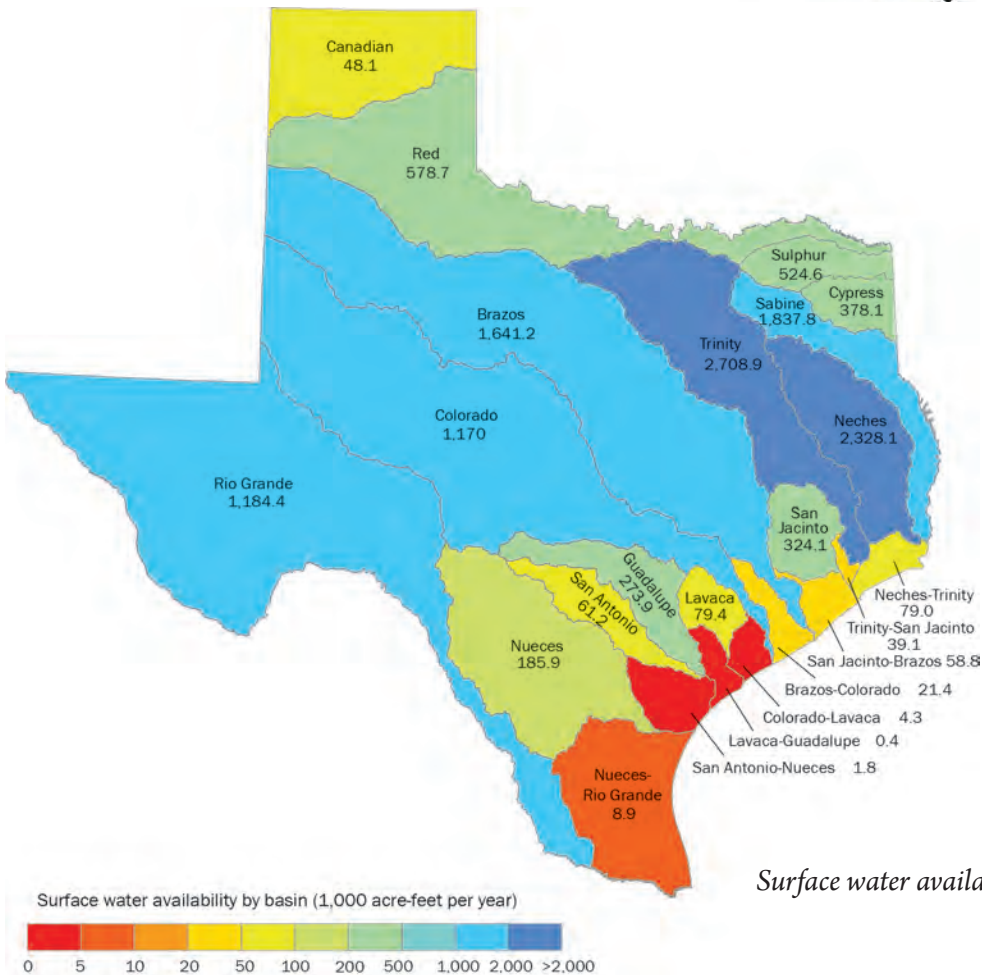
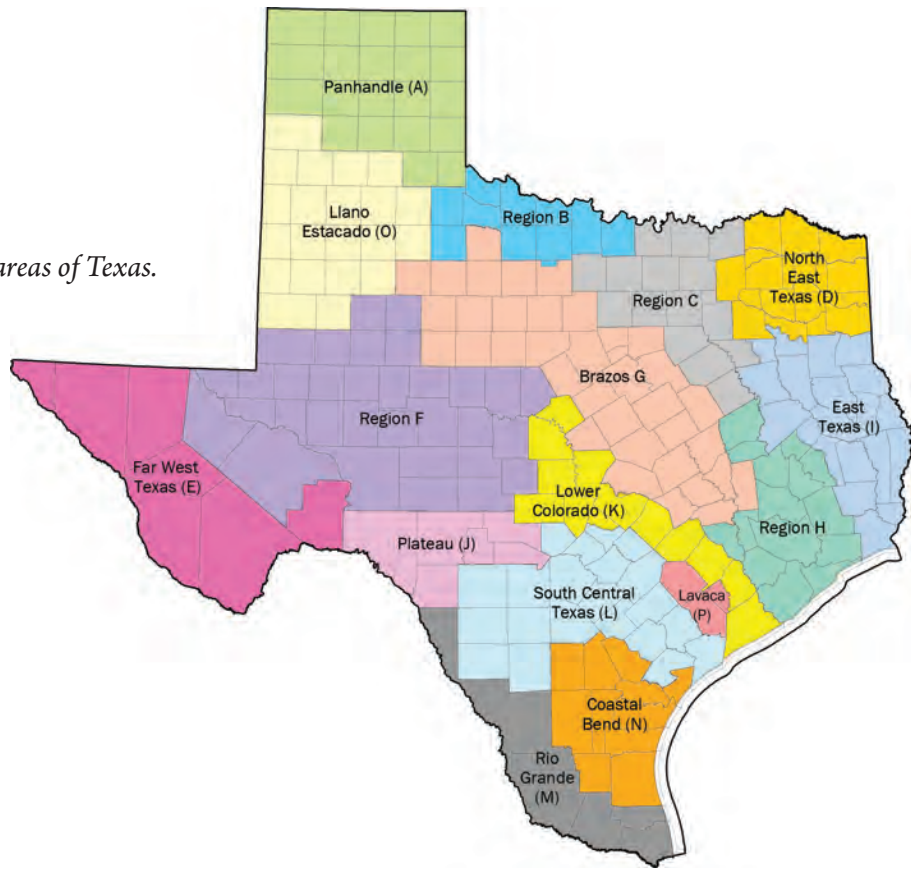
the breadth and size of the TWDB's service populations. Keeping up with legislative mandates intended to ensure that Texas has the water it needs to remain as one of the nation's largest and most robust economies, and one of the most geographically and culturally diverse states in the nation has posed challenges for the agency. Despite budgetary limitations, the agency must continue to provide financial assistance, data, science, planning, administration, and management to our expanding customer base.

### *Financial Assistance*

The TWDB provides financial assistance to customers via grants and loans for water projects. In recent years, legislative changes have expanded the scope of customers that may be eligible for the TWDB's Economically Distressed Areas Program (EDAP). Historically, the EDAP focused on colonias along the Texas-Mexico border. However, the passage of House Bill 1875 (78th Texas Legislature) expanded the TWDB's ability to provide assistance to other disadvantaged, small, and rural communities throughout the entire state.

On the 50th anniversary of the agency's creation, and upon completing the second round of regional and state water planning as mandated by Senate Bill 1 of the 75th Texas Legislature, the Texas Legislature convened for its 80th session. In addition to historic actions on water conservation, environmental flows and reservoir site designation, the legislature approved unprecedented funding to help implement water management strategies in the 2007 State Water Plan. House Bill 1, the General Appropriations Act, included substantial appropriations for investments in water supply, and distribution and delivery systems serving Texas communities including funding requests identified in the 2007 State Water Plan. The 80th and 81st Legislatures made appropriations to pay debt service on General Obligation bonds to finance state water plan projects through existing agency programs including the State Participation Program and the Water Infrastructure Fund. To date, about \$925 million has been provided from bond proceeds to help communities implement recommended water management strategies. The

Regional water planning areas of Texas.



Surface water availability by basin.

82nd Legislature authorized a smaller amount for debt service, which will result in less attractive terms for investment in state water plan projects in the current biennium; however, continued progress will be made. In any case, the majority of the \$53 billion capital cost of meeting water supply needs identified in the 2012 State Water Plan remains unmet and signifies a continuing demand for the agency's financial programs.

### ***State and Regional Water Planning***

The Water Resources Planning Division provides planning, project management, contract management and technical assistance to the 16 regional water planning groups who formulate water management strategies to ensure that Texas will have adequate water supplies in the future. In addition to providing technical and administrative assistance, the planning division has taken on a much greater role in data management and dissemination to its customers. To effectively manage and plan for the state's current and future water supplies, water providers and water resource managers need reliable, comprehensive, and current data regarding all aspects of historical and projected water use in the state and historical and projected water availability. The 82nd Texas Legislature passed a law requiring more detailed reporting of water use by individual cities and utilities, which will result in more specific data that will benefit planning and water conservation programs. The TWDB is the state's lead agency for providing this type of information and continues to significantly improve the collection and dissemination of water data utilizing Internet information technology applications that will greatly facilitate the availability and exchange of water resources data in Texas.

### ***Groundwater Resources***

The Groundwater Resources Division serves customers through three core services: monitoring of groundwater levels and water quality, groundwater technical services for groundwater conservation districts and management areas, and groundwater availability modeling of regional aquifers to support availability studies. These customers

include managers and technicians of groundwater conservation districts, hydrologic consultants to regional water planning groups, districts and municipalities, groundwater resource developers, and private well owners. Customers of the Groundwater Resources Division will increase as water planners continue to evaluate groundwater resources to supplement future supplies and as more groundwater districts are created in the eastern, northeastern, and southern areas of the state. While recent legislative and judicial actions will result in increased interest in groundwater science, the budget cuts from the 82nd Legislature resulted in a reduced workforce for the Groundwater Division and a significant challenge to meet the increasing demands for the program.

### ***Surface Water Resources***

The Surface Water Resources Division collects, analyzes, and provides the surface water-related data necessary to aid water resources planning and management efforts and to maintain the ecological health and productivity of Texas reservoirs, streams, rivers, bays, and estuaries. Data, models, and results are produced for state water planners, regulatory agencies, lake and reservoir owners, and other decision-makers to use as required. Environmental publications are made available to the state library system. Virtually all of surface water data, including lake hydrographic survey data, are published. As much of the data as possible are made available to TWDB's customers, partners, and other interested parties via the agency website. The 80th Texas Legislature placed considerable emphasis on water needs for the environment. One of its major accomplishments in this area was the establishment of a basin-by-basin stakeholder driven process to address in-stream flow requirements in rivers and streams. Scientists and managers who specialize in surface water resources at the TWDB are heavily involved in the process.

### ***Water Conservation***

The 78th Texas Legislature passed measures requiring a greater emphasis on conservation strategies in regional water plans and legislation requiring water utilities to conduct water loss surveys.

During the 80th Legislative session, state legislators took several steps to expand water conservation, including educating Texans about the importance of this issue and creating an advisory council to deal with statewide issues around water conservation. In addition, the 80th Texas Legislature passed a law requiring water utilities with more than 3,300 customers to submit water conservation plans to the TWDB, and authorized that TWDB's water assistance fund can be used for grants for water conservation initiatives. The agricultural water conservation program has also been expanded to allow increased funding for grants and loans. These legislative changes, combined with an increasing awareness of water conservation on the part of the public, business, and industry, means that the Conservation Division may experience an increase in the number of municipal water suppliers and other public subdivisions requesting technical and financial assistance, and a greater demand from the general public (e.g., homeowners, farmers, teachers) for technical information on water conservation measures and programs.

### ***General Data Collection, Analysis, and Dissemination***

As mentioned previously, data collection, analysis, and dissemination is an integral component of the agency's mission. Increased use of geographic information systems and the demand for current data continues to drive the need for more sophisticated capabilities to collect and share key information on water resources, transportation, and other critical infrastructure. Partnerships with local governments are particularly critical for continuously improving these datasets given that local entities are the most knowledgeable about changes in their jurisdictions. More outreach and communication with local entities would maintain the currency of these critical datasets and make effective and efficient use of the state's limited mapping dollars.

During the 82nd legislative session, the Texas Natural Resources Information System (TNRIS), a division of the TWDB, was elevated in profile by Sunset legislation. The director of TNRIS is now designated as the Geographic Information Officer

of the state. Additionally during the last legislative session, the TWDB was directed to work with the Texas Commission on Environmental Quality and the Water Conservation Advisory Council to develop a consistent methodology for calculating water use and conservation, and to include an evaluation of progress made in future state water plans.

## ***Technological Developments***

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The Texas Water Development Board relies on information technology to enhance customer service; disseminate comprehensive water planning, financial, and natural resource data; and streamline internal program operations. The agency emphasizes Internet technology usage, internal network and infrastructure upgrades, and enhanced business applications. The ability of the TWDB to collect, manage, and disseminate the most relevant water resource data has a direct impact on the ability of agency stakeholders to make effective decisions regarding economic development, infrastructure investment, water and natural resource management, and public health and safety.

The focus of technology operations within the agency has been to provide additional information over the Internet in easily accessible formats, increase the amount of information collected in electronic form, expand geospatial technologies, provide increased opportunities for customer feedback, and ensure that data collected are effectively managed and secured.

The TWDB has a major investment and stake in successfully developing and implementing GIS technology. Geospatial tools are integrated into the agency's water information portal, making it easier for customers to access and understand the extensive information maintained at the TWDB. Agency staff has continued to develop GIS functionality to support the TWDB, state agencies, local and regional governments, and the public.

### **Impact of Anticipated Technological Developments**

Technology trends for greater broadband access and



enhanced electronic services will be the principal drivers for technology in the near future, including

- greater adoption of broadband access and expansion of wireless network capacity;
- expanded implementation of service-oriented architectures emphasizing Web access and presentation;
- deployment of advanced data collection technologies driving the cost effectiveness of higher resolution information and the demand for real-time data;
- continued trend for lower costs associated with network storage systems; and
- more support for online collaboration and communication tools.

The need for greater Web-centric applications will drive more advanced Web architecture and system design. Greater productivity tools to meet audit and reporting requirements will be essential to support agency decision making, and stronger integration of technical databases with business applications will streamline agency operations.

Integration of real-time data services will foster better modeling and monitoring capabilities. Lower costs for developing mapping and imaging data, combined with greater resolutions and precision, will drive the adoption of greater volumes of data, requiring advanced technologies to make these data available to an expanded user base. Agency employees' expectations for access, as well as customer service needs, will require more integration of agency operations with external data providers.

## **Degree of Agency Automation**

Information continues to be added to the agency website regarding agency initiatives, operations and events, educational opportunities and curriculum, agency publications, and current water trends. Data continue to be consolidated, "de-duplicated," and cleansed using MS SQL Server database. Data are starting to be shared across agency departments on a broader scale. Broadcasting of agency Board meetings over the Internet provides the public near real-time access to agency business throughout the state.

Information Technology (IT) continues to

develop .NET C# web-based applications to support agency business processes. A development framework has been established so that programmers begin with the basic framework already in place and applications have a similar look and feel for users. The new Water Use Survey application now allows the survey to be completed online. The Water Loss Audit online application has been enhanced with additional functionality and security. Additional drought information is now available via the TWDB website as is the desalination plant database. Conservation literature requests are tracked via a new application for internal staff. The Texas Water Information System Expansion (TxWISE) application is being utilized by agency staff to enter and access detailed information regarding the TWDB financial assistance programs and application process. In addition, the timekeeping system used by agency staff is now a hosted solution.

It is also important to note that the agency has formally implemented a process for project portfolio management. Information Technology now initiates and executes projects in ranked order that is set by agency leadership. The IT Program Management Office (PMO) meets quarterly with agency leadership to review project status, ranked order, and new projects that have been submitted to the PMO.

## **Anticipated Need for Automation**

Changes and improvements in the TWDB's ability to respond to customer demands and maintain a high quality of service depend, to a great extent, upon continued technological advances and the agency's ability to adopt innovations. Likewise, as the currency and relevance of information available through the Internet and wireless electronic devices increase, so do the expectations and demands that customers place on government to respond. The TWDB will continue to adopt relevant technological advances and improve services. The agency anticipates these changes over the next planning period:

- Migration of the web application environment to the cloud will be a primary initiative for the TWDB. The development, test, and production environments for web development will be migrated to the cloud.

- The rewrite of several large applications will be a key initiative for IT and for the associated business areas.
- Migrating e-mail to the cloud, away from Novell Groupwise to Microsoft Outlook, is an additional key initiative.
- Agency program operations will continue to be supported through better integration of agency databases and business applications. Enterprise-wide assessments of data sources and outputs will drive enhancements, migration of legacy applications, and implementation of standardized web-based tools.
- Business processes and rules will be captured and documented for use in a more robust component-based architectural model.
- Dissemination of critical geographic data held by the TWDB and TNRS will be improved through the deployment of web-based map services. Online applications for viewing, downloading, and modeling these data will be deployed to enhance support for state agencies, as well as local governments and the public.
- Centralized services will be created and published to streamline web-based application development by other entities and reduce the need for state agencies to duplicate data and applications built by TNRS.
- Continued investment in security protocols and network administration tools will be a high priority to ensure the integrity and protection of agency data while supporting open access to public information.
- Improvements in disaster recovery, data redundancy, and fail-safe applications will be implemented to increase support for emergency response operations.
- Implementation of a wireless solution throughout the agency will provide staff with flexible computing opportunities and provide customers the ability to collaborate better with agency program areas. Improved network connectivity during emergency situations will allow for a broader computing environment, allowing agency staff and constituents immediate access to real-time information.

## *Economic Variables*

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### **Demographic and Economic Growth**

Demographic and economic growth is a fundamental driver of the agency's various programs. With growth comes greater demands for the state's natural resources, including water, and unlike some commodities, creating new water supplies is a capital-intensive effort that takes many years of planning and development.

Texas is one of the nation's fastest growing states. From 1950 to 2010, population in the state grew from just under 8 million to more than 25 million. According to Texas Water Development Board projections, the number of people living in Texas will reach 33 million by 2030 and 46 million by 2060. Most growth is expected to occur in the Rio Grande region and in large urban areas surrounding Dallas-Fort Worth, Houston, San Antonio, and Austin. Not only is the population rapidly growing, but Texas also has one of the world's most robust and largest economies. With an annual gross state product valued at roughly \$1.2 trillion, the state's economy is comparable in size to Mexico, Australia, and Spain. Over the next 30 years, Texas' economy is forecast to more than double.

Many important industries in the state rely heavily on water. For example, agriculture, which consumes about 60 percent of available water, remains a major consumer, as are many manufacturers such as petrochemical refineries and food processors. New industries have also flourished in Texas in recent decades, particularly computer manufacturers and biotechnology, both of which require large quantities of high-quality water. Another critical component of the state's economy is the energy sector. Energy and water are connected in many ways. Power generation requires substantial amounts of water to disperse excess created during the thermoelectric generation processes that account for over 90 percent of Texas' electricity. As Texas grows, electricity use will rise, and, thus, demands for cooling water will grow as well. Finding ways to balance the water needs of the energy sector with those of agriculture, industry, cities, rural areas, and the environment will become increasingly challenging, and TWDB data, research,

and planning will be instrumental in this effort.

Rapid growth combined with Texas' susceptibility to drought makes water supply a crucial and ever-growing issue. One of the most pressing concerns of policy makers is whether existing water supplies will sustain economic and demographic growth and provide ample water during times of drought. Inadequate water supplies would likely curtail economic activity in business and industries heavily reliant on water. Unreliable water supplies would not only have an immediate and real impact on business and industry, but they might also bias corporate decision makers against plant expansion or plant location in Texas. Thus, ensuring that Texas communities have abundant and dependable water supplies is crucial for the state's economic security. In this regard, regional and state water planning becomes even more critical.

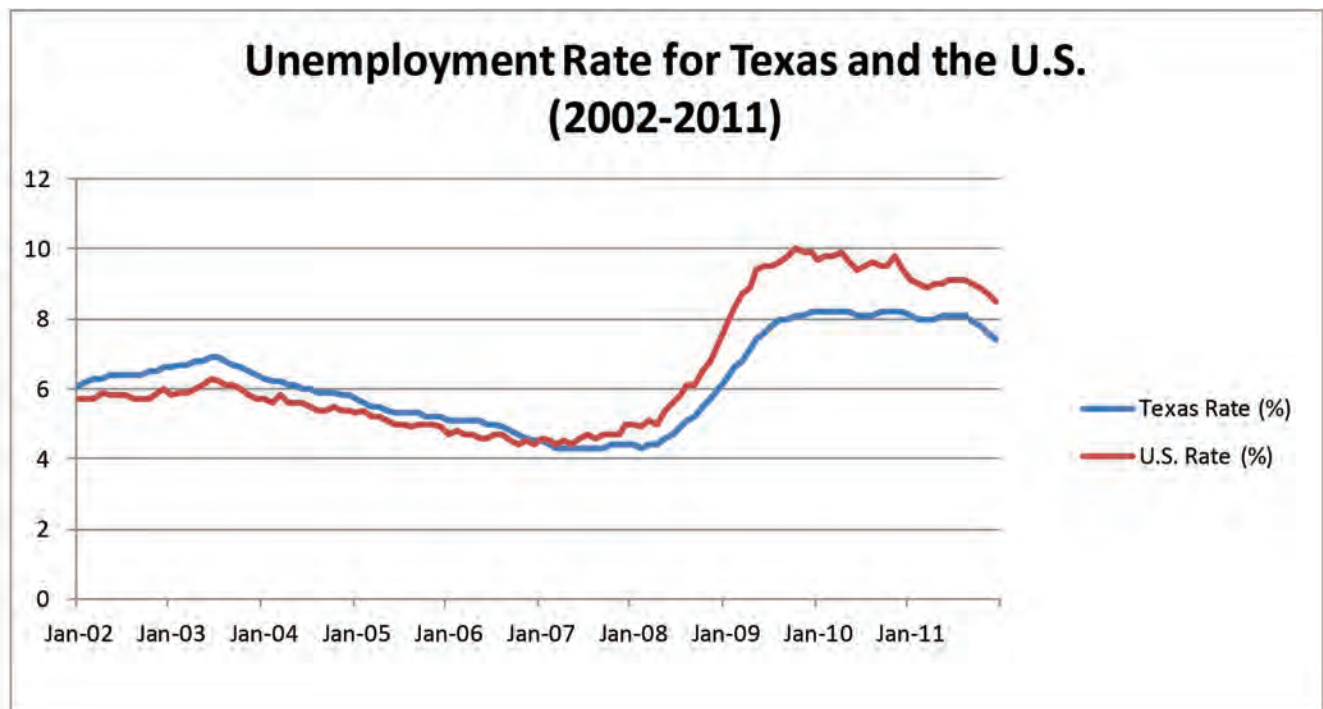
### Impact of Global and National Economic Conditions on Agency Programs

Beginning in 2007, a sustained period of widespread financial instability hit the national and global economy and led to a major recession. For the country as a whole, it has been considered the

most severe period of economic hardship since the Great Depression of the 1930s. During the ensuing years, the US economy experienced four consecutive quarters of contraction, rising levels of unemployment, a pronounced downturn in the stock market, and localized severe collapses in housing markets.

At the outset of the recession, Texas was not hit as hard as other parts of the country. The state was insulated by record high oil and gas prices and by strong growth in its export markets due to a weakened dollar. Eventually, however, the widespread global downturn depressed the demand for Texas oil and gas and other export products, and the state began to feel the effects. In 2010, unemployment in Texas rose to its highest level in 22 years, when it peaked at 8.2 percent. Growth also slowed considerably in the state, though not as severely as the national average. Since 2011, the state and national economies have slowly rebounded, and it appears as though a feared "double-dip" recession has been avoided. Both in Texas and nationally, unemployment is steadily declining (Figure) and growth is moving in a positive direction.

Economic conditions in Texas are still better than



many other states, and Texas' low taxes, regulatory structure, and economic development incentives continue to attract people and businesses to the state. Also, the national home mortgage crisis has not hit Texas as hard as it has elsewhere. While home values ballooned in other states earlier in the past decade, homes remained affordable in Texas, and have generally retained their value as prices collapsed in other high growth states like Florida, California, and Nevada.

Despite the volatile economic situation during the past few years, demands on agency services are only increasing. As of 2011, Texas is still the fastest growing state in the country, and it remains a top destination for people seeking better economic opportunities. According to the U.S. Census Bureau, the state's population increased by an estimated 529,120 people between April 2010 and July 2011. Approximately 239,000 of these new Texas residents were migrants from other states or abroad. The Texas economy remains vibrant relative to many other states, and this, combined with a relatively low cost of living, makes it an attractive place to relocate.

As Texas' population continues to grow, demand for the state's water supplies will only increase. Local and regional water providers are scrambling to accommodate the state's rapid growth, and the need to renovate existing infrastructure and fund new water and wastewater projects continues to increase. This is happening at a time when debt markets, including municipal bond markets, have tightened significantly. With the credit crunch making it more difficult for water suppliers to raise needed capital on the open market, TWDB funding programs will continue to serve a vital purpose of providing low interest loans and grants to Texas water suppliers. The TWDB's participation in the American Recovery and Reinvestment Act (ARRA), passed by the U.S. Congress in 2009 as a federal stimulus initiative, serves as an example of the agency's important role in overseeing large capital-intensive projects across the state. The ARRA effort created jobs and stimulated growth through various programs including \$367 million worth of capitalization grants to the TWDB's Clean Water and Drinking Water State Revolving Funds, all while providing needed improvements to

the state's water and wastewater infrastructure.

It is crucial that such funding efforts continue through the agency's various federal and state financial assistance programs and that new water supply projects are identified through the regional and state water planning process. The costs of such capital-intensive projects only become more burdensome the longer they are delayed.

## *Impact of Federal Statutes and Regulations*

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### **Current and Historical Role**

The TWDB continues to maintain a strong presence at the federal level, with a focus on proactive communication and coordination with federal agency partners and the Executive and Legislative branches of the federal government in regard to a broad range of water-related policy issues. The TWDB's interaction at the federal level is structured, proactive, and targeted in order to derive greater benefits for water resources management, planning, and development in Texas.

In addition, to compensate for limited resources and leverage the influence of others, the TWDB has sought partners to collaborate and coordinate on specific federal issues. In the past two years, the TWDB has shifted its focus and resources to place more attention on working with federal agencies.

Historically, the TWDB's primary interaction at the federal level was in regard to the state revolving funds. The Clean Water State Revolving Fund (CWSRF) was created in 1987 to establish a state-administered financial assistance program for water pollution abatement projects. The CWSRF is capitalized through annual grants from the U.S. Environmental Protection Agency (EPA) and supplemented by state funds to provide low-interest loans to improve wastewater infrastructure systems throughout Texas. The TWDB was instrumental in developing a sustainable and effective program by collaborating with EPA on program structure, rules, and policies.

Similarly, the Drinking Water State Revolving

Fund (DWSRF) was created in 1996 to establish a state-administered financial assistance program for drinking water projects. The DWSRF is capitalized through annual grants from EPA, and also supplemented by state funds. The DWSRF provides low-interest loans and grants to ensure that drinking water systems comply with federal Safe Drinking Water Act requirements.

Federal financial assistance has helped to increase funding available under the SRFs, but during this period the volume and complexity of federal laws, rules, and administrative requirements for developing water and wastewater projects also increased, in some instances disproportionately to the benefits of larger programs. Regulatory and permitting requirements increased the burden placed on state and local entities' ability to plan, design, and construct water-related projects.

## **Current Federal Activities**

The TWDB continues to not only monitor federal activity, but also to more actively participate in the deliberation of water policy issues at the federal level. The TWDB has dedicated staff to work directly in partnership with federal agencies and to establish routine contact with congressional staff and committees on current and future legislation and policies.

Currently, the TWDB has coordinated efforts on a broad range of issues with the following federal partners:

- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- Federal Emergency Management Agency
- U.S. Department of Agriculture (USDA)/Natural Resources Conservation Service
- U.S. Department of Interior (DOI)/Bureau of Reclamation
- Interior/United States Geological Survey
- U.S. Army/Assistant Secretary of the Army for Civil Works
- USDA/Rural Development
- National Oceanographic and Atmospheric Agency
- North American Development Bank

The TWDB also works very closely with offices

of the Texas congressional delegation, as well as key congressional committees, to ensure that Texas' interests in water resources policy are thoroughly considered. Texas congressional offices often consult with the TWDB on water policy issues.

In addition, the TWDB co-sponsors Texas Water Day in collaboration with the Texas Water Conservation Association. Texas Water Day was created for Texas water professionals to brief the Texas congressional delegation on priority water policy issues. Held annually since 2005, Texas Water Day has grown considerably, and attracts over 150 Texas water professionals, federal agency leaders, and members of Congress and their staffs.

The TWDB participates in membership meetings, conferences, and symposia of a variety of water organizations whose focus includes federal issues, including the Western States Water Council, Council of Infrastructure Financing Authorities, National Waterways Conference and the Alliance for Water Efficiency, to name a few. The TWDB joins with these groups on advocacy efforts at the federal level, and also helps to plan and conduct national and regional conferences and workshops on key issues such as groundwater management, water resources planning, flood mitigation, streamgaging, digital mapping, and infrastructure financing.

More recently, the TWDB has reached out to other states to advocate on issues of mutual interest. The TWDB partnered with the Association of California Water Agencies to submit comments to President Obama on the Administration's revision to federal water resources planning principles and guidelines. The TWDB also has collaborated with the Oklahoma Water Resources Board to protect the interests of the states in administering the State Revolving Fund programs.

Currently, the TWDB is partnering with the Kansas Water Office and the Oklahoma Water Resources Board to seek administrative, regulatory and statutory improvements in interacting with the U.S. Army Corps of Engineers civil works functions. The three state agencies have developed a package of legislative proposals for the next Water Resources Development Act and meet periodically with the U.S. Army and Corps of Engineers leadership to discuss

water supply issues. The three states have also briefed Texas, Oklahoma and Kansas congressional delegations, as well as committee staff on proposed legislative provisions.

The TWDB continues to monitor and communicate with federal partners and Congress on a variety of other issues, including but not limited to the following:

- Improving processes and coordination on permitting for State Water Plan projects;
- Making private activity bonds more accessible for financing of water and wastewater projects;
- Protecting state primacy over water; and
- Obtaining financial and technical assistance on drought response and investigation of innovative water technologies and techniques.

Finally, the TWDB is focusing attention on the administration of the State Revolving Funds (SRFs) as Congress seeks to reduce the federal deficit by cutting federal expenditures. One target of Congressional cuts is the SRF funds that have not yet been expended, known as Unliquidated Obligations (ULOs). Most of the ULO amounts are funds that are obligated to local Texas entities for specific projects that have yet to be initiated. Despite the commitment of these funds, the ULO issue has caused a significant increase in EPA oversight of SRF management at a time when federal requirements for the programs have increased. Administration of the SRFs is much more complex and complicated, and some of the new requirements have shown to be counterproductive to the mission of the program.

The TWDB is concerned that the SRFs are becoming difficult to manage efficiently and is making its concerns known at EPA and in Congress. As a result, the TWDB is considering various options for improving the administration of the program and delivery of services.

## **Impact to Agency and Service Populations**

The continuing trend at the federal level points to more federal directives and greater federal control over various aspects of water resources planning,

management and development. Anticipated federal actions could have very significant impacts on the TWDB, its stakeholders, and the state of Texas. The TWDB is fully engaged at the federal level to ensure that Texas and the states have a strong voice on policy and legislative issues.

The Executive and Legislative branches of the federal government have produced legislation, rules, and directives to shift control of water resources issues away from the states and toward federal agencies. The following higher profile initiatives provide a sense of this shift in control:

- Clean Water Act (CWA) guidance and impending rulemaking has been drafted by the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE) and has been submitted to the White House Office of Management and Budget for review. Generally, the guidance clarifies the universe of regulated waters and imposes federal jurisdiction over most waters of the United States. Texas and other states have objected to the scope and extent of the guidance, as well as the process undertaken by EPA and USACE (EPA received over 230,000 comments on the draft guidance). The intent of the draft guidance is to provide clearer, more predictable guidelines for determining which water bodies are subject to CWA jurisdiction pursuant to Supreme Court decisions on *Solid Waste Agency of Northern Cook County vs. the U.S. Army Corps of Engineers (SWANCC)* and *Rapanos vs. the United States (Rapanos)*. The draft guidance, however, goes further than the decisions and expands the reach of CWA jurisdiction.
- The Water Resources Development Act of 2007 requires the Secretary of the Army to revise the principles and guidelines used to formulate, evaluate, and implement water resources projects carried out by the U.S. Army Corps of Engineers. After an initial draft revision by the Secretary in 2008, the task of revising the principles and guidelines was taken over by the Council on Environmental Quality. The Council on Environmental Quality issued a draft revision for comment on December 3, 2009, in which the principles and guidelines provide greater control

over water resources projects to federal agencies, with a greater relative focus on environmental considerations (including non-monetary factors) over economic benefits and a preference for non-structural solutions. The revised principles and guidelines document expands the factors to be considered in planning (including climate change) and expands the number of federal agencies that must comply with the guidance.

- The Sacramento-San Joaquin Valley Water Reliability Act (H.R. 1837) would set aside Section 8 of the Reclamation Act of 1902 and preempt California state water law setting requirements for protection of the San Joaquin River. The bill sets a dangerous precedent in regard to state primacy over water resources. This weakening of the deference to state water law is a direct threat to water rights and water rights administration in all of the western states.

In addition to these initiatives, the TWDB is heavily involved in several other evolving issues that have or would have great impact on the agency's programs. Currently, the TWDB has taken the lead in highlighting major concerns related to EPA's interpretation of the application of Davis-Bacon wage rates on the SRFs, pursuant to a provision in the fiscal year 2010 appropriations bill for EPA. Despite pleas by the states to reconsider its position, EPA continues to rule that the Davis-Bacon requirements (i.e., to pay prevailing wage rates on water and wastewater projects) apply not only to FY 2010 appropriations but also retroactively to financial assistance awarded prior to the provision in the FY 2010 bill. The TWDB will continue to highlight the adverse impacts of this issue.

Other significant issues include the potential for a Water Resources Development Act, which authorizes projects for assistance from the U.S. Army Corps of Engineers (USACE). Reauthorization of the CWSRF and DWSRF may be debated in Congress over the next few years. While seemingly providing an opportunity to strengthen these programs to assist the states in water resources planning and development, the reauthorizations also open the door to legislate greater federal control and requirements.

The TWDB will monitor progress closely, working with all partners at the federal level to ensure that state input is recognized appropriately. On a more proactive note, the TWDB is advocating for issues and programs that will improve the delivery of its services to communities and other stakeholders, such as an exemption for water and wastewater projects from the private activity volume cap to allow water supply corporations to issue tax-exempt debt to finance projects.

The TWDB is also working positively with the USACE and other regulators to streamline permitting processes, and to improve understanding of mitigation requirements and methodologies. The discussions with the USACE and others will introduce greater certainty into the process of project development and will increase efficiencies in terms of data needs and coordination.

## *Legal Issues*

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### **Impact of Statutory Changes**

The 82nd Texas Legislature passed SJR 4 and voters approved the constitutional amendment (Proposition 2) authorizing an additional \$6 billion in bonds as general obligation bonds on a continuous or revolving basis, rather than on a one-time basis. This is significant because for the first time the TWDB now has the authority to issue additional bonds through an ongoing, "evergreen" bond authority, allowing the TWDB uninterrupted bond authority for its constitutional/statutory purposes without repeated and costly constitutional amendments.

The TWDB was one of 29 agencies reviewed by the Sunset Advisory Commission prior to the 82nd legislative session. The TWDB's Sunset review began with its self-evaluation report in September 2009 and ended with final passage of Senate Bill (SB) 660 in May 2011. SB 660 provisions included the following:

- The agency's requested judicial remedies language and requested language codifying the treatment of the agency's bonds.
- The profile of the TWDB's Texas Natural Resources Information System (TNRIS) was elevated by the Sunset legislation. The director of

TNRIS is designated the Geographic Information Officer for the state of Texas.

- Groundwater Management Area (GMA) representatives were added to the regional water planning processes.
- The state's water plan must include an evaluation of progress made in meeting future water needs and in implementing projects identified in the previous plan.
- The TWDB and the Texas Commission on Environmental Quality, in consultation with the Water Conservation Advisory Council (WCAC), must develop a uniform, consistent methodology for calculating water use and conservation.

SB 660 did not modify the Desired Future Conditions (DFC) appeals process as recommended by the TWDB in its priorities report to the 82nd Legislature. The current DFC appeals process was continued in the absence of consensus on statutory changes.

Other bills affecting the TWDB as passed by the 82nd Legislature include the following:

## **Bonds**

House Bill (HB) 1732 enacts the same statutory language enacted in Section 4 of SB 660 that exempts water financial assistance bonds that have been authorized but not issued from the Constitutional Debt Limit (CDL) until the legislature makes an appropriation from the General Revenue Fund to pay the debt service on the bonds; requires the executive administrator of the TWDB to certify to the Bond Review Board the source of debt service on a proposed issuance of bonds by the TWDB and codifies the historic practice by which the Bond Review Board removes previous non self-supporting bond issuances of the TWDB from the CDL. In addition, HB 1732 prohibits the TWDB from approving applications for financial assistance from the Water Infrastructure Fund (WIF), the State Participation Account, or the Disadvantaged Rural Community Water and Wastewater Financial Assistance Fund if the applicant has failed to satisfactorily complete a request by the executive administrator or a regional planning group for

information relevant to the project, including a water infrastructure financing survey. (SB 370 enacts the same statutory language for refusing approval of financial assistance applications.)

## **Budget**

The 82nd Texas Legislature, responding to the economic downturn and its impact on general revenue, made significant reductions in appropriations for TWDB programs. Agency operations funded by general revenue were reduced by a total of \$16.8 million for the biennium, with the largest general revenue reductions occurring in groundwater resources (\$3.8 million), strategic mapping (\$4.4 million), regional planning (\$1.2 million), desalination demonstration (\$1 million) and environmental flows programs, including support for the SAC/BBEST (\$1.7 million) established by Senate Bill 3, 80th Texas Legislature. However, the legislature appropriated an additional \$150 million for debt service on new non self-supporting bonds for the WIF and the Economically Distressed Areas Program.

## **Conservation**

HB 3090 amends the Water Code to require a retail public utility that provides potable water and receives financial assistance from the TWDB to file an annual water audit computing the utility system's water loss during the preceding year. If the utility does not receive TWDB financial assistance, a water audit is required once every five years.

SB 181 contains a number of requirements relating to water usage for state water planning and other purposes, including:

- requires every Regional Water Planning Group to include in its regional water plan information on expected water use and conservation in the planning area and implementation of water plan projects, including conservation strategies;
- establishes legislative findings that tracking water use is in the public interest and is necessary to estimate and meet future water demand and that measuring gallons per capita per day is not an accurate measure because a uniform, consistent methodology for calculating it has not been



- established;
- requires that, no later than January 1, 2013, the TWDB and the TCEQ work with the WCAC to develop a uniform, consistent methodology and guidance for calculating water use and conservation to be used by municipalities and water utilities in developing conservation plans and preparing required reports;
- requires the TWDB, in consultation with the TCEQ and the WCAC, to develop a data collection and reporting system to evaluate water usage by municipalities with more than 3,300 connections;
- beginning in 2015, requires the TWDB to submit a report to the legislature that includes data on water usage among various sectors of water users and municipalities with more than 3,300 connections; and
- requires the TWDB and the TCEQ to use these methodologies for certain water conservation planning and financial assistance applications.

## Rainwater Harvesting

HB 3391 affects both the TCEQ and the TWDB. The TWDB is required to make training on rainwater harvesting available to municipalities and counties at least quarterly.

## Financial Assistance

SB 360 amends Chapter 15, Subchapter R, Water Code, relating to the Rural Water Assistance Fund, by expanding the assistance available to rural political subdivisions at the TWDB and codifying certain practices relating to bond counsel and financial advisors that are in TWDB rules.

## Groundwater

SB 727 clarifies language in Chapter 36, Water Code, such as removing “comprehensive” when discussing the management plan and changing “Texas Water Development Board” to “development board.” The changes are made to clarify and provide consistency in the Water Code.

SB 737 amends Chapter 36, Water Code, definition of “managed available groundwater” to “modeled available groundwater” and defines

“modeled available groundwater” to mean the amount of water determined by the executive administrator that may be produced on an average annual basis to achieve a desired future condition. SB 737 requires that a groundwater conservation district (GCD) shall, to the extent possible, issue permits up to the point where the total volume of exempt and permitted groundwater production will achieve an applicable desired future condition. It further requires that in issuing permits, the GCD must manage the total groundwater production on a long-term basis to achieve an applicable desired future condition and consider the modeled available groundwater amount, the executive administrator’s estimate of the current and projected amount of groundwater produced under exempt uses, the amount of groundwater production authorized by the GCD’s issued permits, an estimate of the amount of groundwater actually produced under the permits issued by the GCD, and yearly precipitation and production patterns. SB 737 requires the executive administrator of the TWDB to solicit information from each applicable GCD to determine estimates of exempt use.

## Water Rights

SB 1132 relates to a water rights permit issued to the TWDB, the Brazos River Authority, and the City of Houston and extends the deadline for commencement of construction of the Allen’s Creek Reservoir from September 1, 2018, to September 1, 2025, to be completed no later than the fifth anniversary of the date the construction of the reservoir commences.

The following is a list of additional bills that have less specific impacts to the TWDB:

### **HB 628**

Relating to contracts by governmental entities for construction projects and related professional services and to public works and performance and payment bonds (alternative project delivery processes).

**HB 2226**

Relating to authorized investments for governmental entities.

**SB 18**

Relating to the use of eminent domain authority.

**SB 313**

Relating to priority groundwater management areas.

**SB 656**

Relating to the abolition of the Coastal Coordination Council and the transfer of its functions to the General Land Office.

**SB 693**

Relating to permit application and amendment hearings conducted by groundwater conservation districts and the State Office of Administrative Hearings.

**SB 701**

Relating to high-value data sets of state agencies posted on the Internet.

**SB 1048**

Relating to public and private partnerships for design and construction of facilities and infrastructure.

**HB 726**

Relating to the electronic distribution of information to legislators by state agencies.

**HB 1781**

Relating to obsolete or redundant reporting requirements applicable to state agencies.

**HB 3333**

Relating to the authority of the governor to order the disconnect of state computer networks from the Internet.

**HB 3395**

Relating to state purchasing preferences for recycled products and to the efficient operation of certain telecommunications entities.

**SB 327**

Relating to including certain veterans service organizations as small businesses for the purpose of state contracting.

**SB 602**

Relating to allowing a government body to redact certain personal information under the public information law without the necessity of requesting a decision from the attorney general and the calculating of certain deadlines.

**SB 791**

Relating to the delivery of proposed state agency rules to the lieutenant governor, a member of the legislature, or a legislative agency.

**SB 1179**

Relating to the elimination of certain required reports prepared by state agencies and institutions of higher education.

**SB 1618**

Relating to electronic reporting by certain state entities and to the review of continual report requirements.

**SB 1638**

Relating to the exception of certain personal information from required disclosure under the public information law.

**Interim Charges with Potential Impact to the TWDB**

Several legislative committees have interim committee charges studying issues that could result in recommendations for the 83rd legislative session in 2013 and either statutory or appropriation changes that could pose implications for the TWDB. Below is a list of these committees and several of the relevant interim charges.

**SENATE NATURAL RESOURCES COMMITTEE**

Review water resources and conservation measures included in the state water plan to ensure that the

appropriate entities are implementing the plans and that state and local authorities are enforcing requirements of the plans. In addition, the committee should evaluate methods to effectively enhance existing water resources and promote water conservation measures across the state at all times, not just in case of severe drought conditions.

Study the impediments to implementation of the state water plan, and make recommendations to ensure that Texas has access to sufficient water for future generations. Specifically, consider the following:

- Review opportunities to fully fund the implementation of the state water plan by encouraging local project selection and financing.
- Review the loan application process administered by the TWDB and prioritize the projects to ensure that the new bonding authority is targeted to the most pressing problems and those projects of highest value identified in the State Water Plan.
- Consider the impact and complexity of the water/energy/electricity connection.
- Review the progress made toward the designation of unique reservoir sites.
- Review current and proposed federal initiatives related to water resources.
- Review conservation measures across all sectors of the economy, including education about the benefits of conserved water and the enforcement of those measures.
- Review all state and federal statutory barriers, including the ability to move water around the state and pipeline prohibitions.
- Consider groundwater regulation and determine whether there is a need for modification of our current regulatory structure.
- Evaluate the progress of the state's goal of promoting desalination projects across the state (brackish and seawater), including their future expansion to assist in meeting the state's water needs.

Evaluate alternatives to using surface or groundwater in the generation of electricity and extraction of fuels, including hydraulic fracturing, dry-cooling, and the potential for desalinization and

other technologies for the reuse of brackish water. Examine the cost of alternatives in comparison to the continued use of ground and surface water including energy costs as well as the cost of water transport and treatment.

Examine the risks of continued future drought to the integrity of Texas' electricity generation and fossil fuel extraction. Study and make recommendations on the management of groundwater resources. Specifically, consider the following:

- Consolidation of groundwater conservation districts along major aquifer lines in an effort to increase efficiency and enhance responsible groundwater management;
- Effectiveness of single county and non-contiguous groundwater conservation districts;
- Efficiency and effectiveness of varying groundwater regulations and permitting processes throughout the state, including the adequate planning for withdrawals and the development of desired future conditions (DFCs), as compared to the regulation provided to surface water resources; and
- The relationship of local groundwater regulations to the state water plan and the regional planning process.

#### **STATE ECONOMIC DEVELOPMENT COMMITTEE**

Assess the economic impact of the long-term drought on all sectors of the Texas economy. Include additional analysis of economic consequences of wildfires. Develop a compendium of federal, state, and local funding and other assistance alternatives for reducing the long-term economic consequences of the drought.

#### **SENATE BUSINESS AND COMMERCE COMMITTEE**

Assess the impact of current and anticipated drought conditions on electric generation capacity. Identify those regions of Texas that will be most affected by a lack of capacity. Analyze response plans and make recommendations to improve and expedite those plans.

#### **HOUSE COMMITTEE ON APPROPRIATIONS**

Examine the growth of constitutionally and statutorily dedicated accounts and their utilization in the budget. Recommend methods to reduce the reliance on dedicated accounts for budget certification purposes, and examine ways to maximize the use of such accounts. (Joint charge with House Committee on Ways & Means).

Analyze increases in Texas' overall debt burden and the role debt plays in the state's fiscal management. Recommend strategies to reduce the state's debt, as well as the calculation of the constitutional debt limit.

Examine the investment and management of funds held outside the treasury, including whether the funds are being utilized for their statutory or constitutional purposes, and whether opportunities exist to utilize these funds in the state budget to reduce the demand on General Revenue.

#### **HOUSE COMMITTEE ON GOVERNMENT EFFICIENCY AND REFORM**

Examine the utilization of alternative project delivery methods, such as design-build and construction-manager-at-risk, by municipalities, water districts, and authorities, and other local governmental entities since the passage of HB 1886 during the 80th legislative session.

#### **HOUSE COMMITTEE ON COUNTY AFFAIRS**

Study county-related issues arising from population growth in unincorporated areas with regard to existing and new developments and the provision of services, including garbage disposal, fire protection, road maintenance, electricity, and water and wastewater service. Make necessary legislative recommendations for improving problems in these areas of the state.

#### **HOUSE COMMITTEE ON CULTURE, RECREATION, AND TOURISM**

Evaluate strategies to control known existing invasive aquatic species, including species commonly referred to as giant salvinia (*Salvinia molesta*), water hyacinths (family Pontederiaceae), and zebra mussels (family Dreissenidae).

#### **HOUSE NATURAL RESOURCES COMMITTEE**

Monitor the ongoing statewide drought and the performance of state, regional, and local entities in addressing it. Examine the impact of the drought on the state water plan, including an evaluation of how well the state's existing water resources can meet demand, the need for additional funding sources to implement the plan, and the effectiveness of current drought planning and drought management policies. Identify short-term and long-term strategies to help the state better cope with drought and assess any obstacles, including state and federal regulations, to implementation of these strategies.

Examine the interplay of water and energy resources and needs in the state. Study the economic, environmental, and social impacts of water use in energy production and exploration, including the impacts of this use on regional and state water planning. Determine the current and likely future water needs of power generation and energy production, and evaluate options to develop new or alternative supplies. Include an evaluation of current issues involving water use for oil and gas production and related water quality issues.

Evaluate the status of desalination projects in Texas. Include an evaluation of the regulation of brackish groundwater and whether opportunities exist to facilitate better utilization of this groundwater to meet future needs.

Study ways to enhance incentives for water conservation in agricultural irrigation.

#### **HOUSE COMMITTEE ON ENERGY RESOURCES**

In addition to monitoring the implementation of HB 3328 (82R), continue to study the implications of hydraulic fracturing for the state's energy needs, environmental policy, economic development, and other related priorities. Examine ways to ensure appropriate state and local regulation of hydraulic fracturing that matches the needs and conditions of Texas. Coordinate with the House Committee on Natural Resources' charge regarding water quantity and quality issues in oil and gas production, and with other committees, as necessary.

## **OTHER**

In addition, there are several committees charged with reviewing funding, overlapping jurisdiction, technology in state government, Public Information Act, Open Meetings Act, Administrative Procedure Act, state contracting, and other interim charges pertaining to all state agencies. These deliberations could impact the statutory authority and appropriations levels of the TWDB.

## **Significant Court Cases**

### **EDWARDS AQUIFER AUTHORITY AND THE STATE OF TEXAS V. DAY AND MCDANIEL, \_\_\_\_\_ S.W.3RD \_\_\_\_\_ (TEX. FEBRUARY 24, 2012)**

#### *Summary*

Plaintiffs Burrell Day and Joel McDaniel filed an application in 1996 with the Edwards Aquifer Authority (EAA) for an initial regular permit (IRP) to withdraw 700 acre-feet of groundwater from the Edwards Aquifer for irrigation. The EAA ultimately denied the IRP, determining that there was “inadequate use of irrigation during the historical period.” Following a contested case hearing, the State Office of Administrative Hearings Administrative Law Judge (ALJ) found that Day and McDaniel adequately demonstrated beneficial use of groundwater through irrigation by flooding on seven acres during the historical period and recommended issuance of an IRP authorizing the withdrawal of 14 acre-feet of water per year. The EAA issued an order adopting the ALJ’s Proposal for Decision, including the granting of the IRP for 14 acre-feet. Day and McDaniel appealed to federal and state court the EAA’s final IRP decision to reduce their proposed groundwater withdrawal amount. The federal court refused to take jurisdiction, dismissed the lawsuit, and referred the appeal to state court.

Day and McDaniel asked the trial court to reverse the Authority’s Final Order, find they had irrigated 300 acres of land during the historical period, and remand the matter to the EAA for reconsideration. Alternatively, Day and McDaniel asked the court to find in their favor on their constitutional claims,

chiefly that the decision constituted a taking of groundwater which they owned without historic production, simply as a matter of ownership of their land. Day and McDaniel and the EAA each filed motions for summary judgment. The trial court entered summary judgment, dismissing all of the constitutional claims, including Day and McDaniel’s constitutional takings claims. The district court judge also entered final judgment reversing the EAA’s decision in adopting the ALJ’s conclusion that the watercourses and the water within those watercourses on Day and McDaniel’s property is state water and any irrigation was irrigation using state water. The court ruled the water taken was groundwater.

Both parties appealed to the San Antonio Court of Appeals, which issued its opinion on August 29, 2008, authored by Justice Stephen Hilbig. The EAA raised a single issue on appeal: that the trial court erred in granting Day and McDaniel’s summary judgment motion concluding that water pumped from the property for irrigation was groundwater rather than state water. Day and McDaniel raised three issues, arguing the trial court erred in granting the EAA’s summary judgment motion on constitutional claims and in upholding the denial of Day and McDaniel’s well construction permit. The court of appeals (1) affirmed the trial court’s dismissal of constitutional claims raised by Day and McDaniel other than the takings claim; (2) reversed the trial court’s dismissal of Day and McDaniel’s takings claim and remanded the takings claim back to the Authority for further proceedings; and (3) reversed the trial court decision to invalidate the permit (regarding the quantification of historically irrigated acres) and rendered judgment affirming the EAA’s final order on the permit application.

Motions for rehearing were denied by the court of appeals and all parties appealed to the Texas Supreme Court on October 14, 2008. The case went to oral argument on February 17, 2010, and a decision was issued February 24, 2012.

On February 24, 2012, a unanimous Texas Supreme Court released its opinion in the case of Edwards Aquifer Authority and State of Texas v. Burrell Day and Joel McDaniel. The case involved two Bexar County ranch owners (collectively,

“Day”) who sued the Edwards Aquifer Authority (“Authority”) when the Authority issued a permit that limited the quantity of water they could produce from the Edwards Aquifer for crop production to 14 acre-feet per year, rather than the 700 acre-feet that they had requested. Day argued that the Authority unconstitutionally took their property - groundwater underlying their 350-acre ranch - without providing just compensation. The trial court granted summary judgment in favor of the Authority. The court of appeals reversed and the Authority appealed. (Day also appealed on rulings by both lower courts on other points Day had raised.) The Texas Supreme Court decided that inherent to the ownership of land is the ownership of the groundwater underlying that land, and that the ownership of this groundwater cannot be taken, even if it is taken for a public benefit, without adequate compensation that is guaranteed by the Texas Constitution. (As noted below, whether there actually is a taking requires an analysis of evidence by the court.)

In Day’s particular case, the Court decided (1) that the Authority’s decision to limit Day to a permit authorizing only 14 acre-feet of production annually was not erroneous under the law (the Edwards Aquifer Authority Act “EAAA”) and the Authority’s rules; (2) that Day does have a constitutionally protected interest in the groundwater beneath his property; and (3) that whether the Authority’s decision to limit the amount of water Day could produce - although legally correct - constituted a compensable taking could not be determined on the evidence in the record and, accordingly, the trial court would need to take additional evidence (“remanded ...for further proceedings”).

In examining the issue of whether Day had stated a viable takings claim, the Court applied traditional jurisprudence derived from United States Supreme Court decisions under the Fifth Amendment that apply “three analytical categories”: (1) is there a permanent physical invasion of property (the Court held that the Authority’s regulatory scheme is not such an invasion of property); (2) is the owner completely deprived of all economically beneficial uses of the property (the Court noted that “[b]y making it much more expensive, if not impossible,

to raise crops and graze cattle, the denial of Day’s application certainly appears to have had a significant, negative economic impact on him, though it may be doubted whether it has denied him all economically beneficial use of his property”); and (3) whether any number of “factors” relevant to regulation (as distinct from physical confiscation of property) impose a burden on the exercise of a property right that is so severe that it constitutes a compensable taking.

The Court focused on the third analytical category by reviewing factors known as the Penn Central factors from *Penn Central Transp. Co. v. New York City*, 438 U.S. 104 (1978). These include the economic impact of the regulation, especially “the extent to which the regulation has interfered with distinctive investment-backed expectations”; and the “character” of the regulation which can range from a physical invasion to a mere adjustment of economic burdens and benefits to “promote the common good.” The Court noted that full evaluation of these factors, while giving “rise to vexing subsidiary questions,” would be necessary to determine whether a compensable taking has occurred and, if so, the amount of compensation that must be paid.

The Court began with the premise that “[u]nquestionably, the State is empowered to regulate groundwater” and that “[i]n many areas of the state, and certainly in the Edwards Aquifer, demand exceeds supply. Regulation is essential . . .”

In remanding the case for further proceedings, the Court did note that a “full development of the record may demonstrate that the [Edwards Aquifer Authority Act] regulation is too restrictive of Day’s groundwater rights and without justification in the overall regulatory scheme.” (Emphasis added.) However, the Court held unequivocally that “a landowner cannot be deprived of all beneficial use of the groundwater below his property merely because he did not use it during an historical period and supply is limited.”

Several matters of note:

The Court noted that “[w]hether groundwater can be owned in place is an issue we have never decided.” Writing for the Court, Justice Hecht took care to establish that the Court’s prior decision in *Houston & T.C. Railway v. East* “denying East a cause

of action was to give the Railroad ownership of the water pumped from its well at the surface. No issue of ownership of groundwater in place was presented in East, and our decision [in that case] implies no view of that issue.”

The Court put to rest the debate over whether the common law for oil and gas interests differs from that for groundwater. Noting that “there certainly are” “important differences between groundwater and hydrocarbons,” the Court noted that prior decisions respecting ownership of oil and gas in place “correctly state the common law regarding the ownership of groundwater in place.”

The Court noted that the Texas Legislature “appears to share this view of the common law,” calling attention to the fact that the Legislature amended Section 36.002, Water Code, during the 82nd Session to clarify that “a landowner owns the groundwater below the surface of the landowner’s land as real property” to mean “ownership in place.”

The Court disagreed with arguments that the ownership rights to groundwater in place are “‘too inchoate’ to be protected by the Takings Clause of the Texas Constitution” and that there can be no entitlement “to any specific amount of water because its availability in a rechargeable aquifer is difficult to determine and constantly changing due to climate conditions” and that “the uncertainties involved in determining ownership to any amount of water preclude constitutional compensation for a taking.” The Court stated flatly that “[g]roundwater rights are property rights subject to constitutional protection, whatever difficulties may lie in determining adequate compensation for a taking.”

The Court seemed to draw a distinction between general regulation by groundwater conservation districts under Chapter 36, Water Code, and the particular regulatory scheme enforced by the Authority under the Edwards Aquifer Authority Act. In noting that “chapter 36 requires groundwater conservation districts to consider several factors in permitting groundwater production, among them proposed use of water, the effect on the supply and other permittees, a district’s approved management plan. By contrast, the [Act] requires that permit amounts be determined based solely on the amounts

of beneficial use during the historical period and the available water supply.”

### ***Impact to the TWDB***

The Day and McDaniel decision should have no impact to the TWDB. The question of a regulatory taking of ownership rights to groundwater does not enter into the TWDB’s consideration under Section 36.108, Water Code, of whether a desired future condition is reasonable.

### **WARD TIMBER, LTD., ET AL. V. TEXAS WATER DEVELOPMENT BOARD, CAUSE NO. \_\_\_\_\_ (11TH DIST. CT. APPEALS IN EASTLAND), PENDING**

### ***Summary***

Plaintiffs brought action against the TWDB, Ward Timber Ltd., et al. v. Texas Water Development Board, Cause No. D-1-GN-11-000121 in the 126th District Court of Travis County challenging the Board’s approval of the Region C regional water plan on December 16, 2010, alleging that there are conflicts between the Region C plan (Dallas-Fort Worth area) and the regional water plan adopted by the Region D (Northeast Texas) regional water planning group and that the Board was required to resolve these conflicts under Section 16.053(7)(A) before that approval. The alleged conflicts concern the Marvin Nichols Reservoir project proposed for future water supply for the Dallas-Fort Worth area and to be constructed in the Northeast Texas area. On December 5, 2011, the District Court denied TWDB’s plea to the jurisdiction and entered declaratory judgment for the plaintiffs, ruling that TWDB erred in approving the plans for Regions C and D without first resolving the conflicts. On December 13, 2011, TWDB filed its notice of appeal. On December 15, 2011, the TWDB Board approved the 2012 State Water Plan with the Region C and Region D plans included. The TWDB’s appeal has been transferred from the Third Court of Appeals in Austin to the Eleventh Court of Appeals in Eastland.

### ***Impact on the TWDB***

There are two implications for the TWDB. First, the

plaintiffs have sued the agency under Section 6.241, Water Code. TWDB argued that this provision does not waive the state agency's sovereign immunity from suit. The District Court ruled that TWDB may be sued under this provision, thus calling into question the TWDB's historic immunity. Second, the District Court has declared that the "conflicts" asserted by plaintiffs are, in fact, conflicts for purposes of Section 16.053 in contradiction of the agency's consistent determination to the contrary. This could make the TWDB's approval of regional water plans more difficult in the future.

## *Self-Evaluation and Opportunities for Improvement*

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### **Internal Audit**

The Internal Audit office reports directly to the agency's six-member Board. The key functions of Internal Audit are outlined below.

#### Internal Audit

- Assists members of management and the Board in the effective discharge of their responsibilities by furnishing them with analyses, recommendations, counsel, and information concerning the activities reviewed
- Reports directly to the Audit Committee of the Board
- Performs audits of the TWDB
- Performs follow-up reviews to determine what corrective action was taken and whether or not it is achieving the desired results
- Performs assurance services to parties outside of the TWDB, such as contractors or other state agencies
- Acts as a liaison with external auditors reviewing TWDB activities or programs
- Has primary responsibility for the investigation of all suspected fraudulent acts and for coordinating investigative activities

## **Executive Administration**

### **INTRODUCTION**

The Executive Administrator is the agency's chief executive officer, reporting directly to the Board. The Executive Office delegates authority for specific program areas to the Deputy Executive Administrators and the General Counsel as well as the Directors of Project Oversight, Governmental Relations and American Recovery and Reinvestment Act (ARRA) Implementation.

The Executive Office consists of five main areas:

- Office of the Executive Administrator
- General Counsel and Legal Services
- Governmental Relations
- Project Oversight
- ARRA Implementation and Strategic Initiatives

The key functions of the areas within the Executive Offices are outlined below:

#### Office of the Executive Administrator

- Reports directly to the Board
- Implements Board policies and directives
- Accountable for the functions and operations of the agency
- Manages agency priorities and budgets
- Directs and oversees agency initiatives
- Responsible for prudent management of Board assets

#### General Counsel and Legal Services

- Provides legal advice and representation to TWDB Board members, Executive Administrator, and staff in the areas of financial assistance, water planning, water policy, natural resources, environmental and regulatory compliance, legislation, tort claims, human resources, contracting and purchasing, real estate, ethics, open records, open meetings, and rulemaking
- Prepares and reviews documents
- Works with local governments on matters involving the adoption and enforcement of model subdivision rules
- Researches and prepares formal and informal legal opinions



- Represents the agency on interagency work groups
- Drafts and reviews regulations and policies
- Works with the Office of the Attorney General regarding agency litigation

#### Governmental Relations

- Reports directly to the Executive Administrator
- Coordinates agency interaction with the state legislature and interest groups
- Leads development of action plan for legislative session
- Advises the Executive Administrator and Board on legislative and policy initiatives
- Briefs the Board and Executive Administrator on status of legislative activity
- Promptly responds to inquiries from state legislators, legislative oversight agencies, and other state agencies

#### Project Oversight

- Conducts Pre-Application meetings to ensure our applicants are fully informed on all application and program requirements
- Provides internal project oversight to help ensure applicants reviews are on track
- Oversees projects to ensure they are progressing in a timely manner
- Ensures program requirements are being followed
- Reports on the status of projects as required
- Monitors the outlay process to ensure reports are submitted as required
- Monitors project draw rates

### **EFFECTIVENESS AND EFFICIENCY**

The Executive Office is a vital function. It coordinates activities with the legislature and ensures prompt and adequate response to inquiries from the legislature, customers, and stakeholders. The Executive Office also coordinates the monthly mailout of agenda items for Board meetings, coordinates correspondence for prompt response, and ensures that all Board member communications are in place.

The Executive Office is responsible, through the efforts of the Executive Administrator, for ensuring all areas of the TWDB operate as effectively, efficiently and strategically as possible.

Although the day-to-day activities of the Legal Services Division include a number of matters that are not easily counted, the following are a few statistics that reflect the work of the Legal Services Division.

- In fiscal year 2010, provided legal review of 31 Clean Water State Revolving Fund (CWSRF) program applications.
  - Provided legal review and advice for 17 commitments for loans in the amount of \$554,165,062, which includes 13 commitments from FY 2009.
  - Provided legal assistance and advice regarding a total of 49 loan and grant closings in FY 2010, for a total of \$458,838,803. The ARRA CWSRF grant and loan closings were a subset of 20 for \$190,957,086.
  - In FY 2010, provided legal review of 13 Drinking Water State Revolving Fund (DWSRF) program applications. Provided legal review and advice for eight commitments for loans totaling \$52,304,540.
  - Assisted with the application review and loan process for state programs, resulting in 68 applications reviewed and 55 closings, totaling \$468,249,708.
  - Developed and proposed/adopted 209 new rules or rule amendments and 32 miscellaneous documents in FY 2010 and 121 new rules or rule amendments and 21 miscellaneous documents in FY 2011.
  - Worked with the Office of the Attorney General in defending four pending lawsuits against the TWDB in FY 2010 and FY 2011. Assisted the Office of the Attorney General in pursuing lawsuits.
  - Responded to two complaints filed with the Equal Employment Opportunity Commission (EEOC) in FY 2008 and one complaint filed with the Texas Workforce Commission Civil Rights Division in FY 2009.
  - Responded to approximately 215 open records requests in FY 2010 and 187 open records requests in FY 2011.
  - Prepared bill analyses for over 160 bills during the 82nd Texas Legislature.
- The Project Oversight Division assists in ensuring

that its financial assistance programs and all applications for financial assistance are administered in compliance with federal and state statutes and regulations, including, but not limited to, the Clean Water Act, the Safe Drinking Water Act, and the Texas Water Code.

The Project Oversight Division, in coordination with other areas of the TWDB, administers affordable

financing for water and wastewater infrastructure to hundreds of utilities across Texas. In FY 2011, the TWDB made commitments of grants and loans valued at approximately \$500 million. The table below shows the number of pre-application meetings held with potential applicants for financial assistance in FY 2011 and year-to-date in FY 2012.

Program	FY 2012 YTD (9/1/11 - 4/30/12)	FY 2011 (9/1/10 - 8/31/11)
Economically Distressed Areas Program (EDAP)	8	3
State Programs	13	17
CWSRF	23	35
DWSRF	20	6
Total	64	61

Beginning with FY 2012, Project Oversight staff now monitors project activity as an indicator of effective and efficient project management. For FY 2012, project activity counts are listed below.

Greater emphasis has been placed on monitoring project schedules to ensure they are progressing in

a timely manner. The added emphasis on project schedules, increased communication with our customers, and improved procedures in the outlay process have helped to reduce potential unliquidated obligations (ULOs).

**PROJECT ACTIVITY COUNTS**

Fiscal Year 2011  
9/1/10 - 4/30/11

Commitments Made	46
Loan and Grant Closings	64
Construction Starts	53
Construction Completions	47
Total FY 2011	210

**PROJECT ACTIVITY COUNTS**

Fiscal Year 2012  
9/1/11 - 4/30/12

Commitments Made	46
Loan and Grant Closings	61
Construction Starts	33
Construction Completions	40
Total FY 2012	180

## **AGENCY CHARACTERISTICS REQUIRING IMPROVEMENT**

A Survey of Employee Engagement was conducted in February 2012. The TWDB is pleased to report that the agency had a high response to this survey, about 88 percent of all staff. Based on the results of that survey, the areas of most concern for the agency are compensation, internal communications and diversity. The Deputy Executive Administrators will be addressing those areas of concern. The agency is committed to increasing satisfaction among staff and to obtaining and responding to agency stakeholder feedback.

Staff needs to continue to enhance outreach to small and disadvantaged communities by providing technical assistance in addition to financial assistance. An increased effort should be made to establish new relationships with potential customers that may not have considered the benefits of TWDB financing.

Continued improvement needs to be made to processes to maximize efficiency and account for advancements and availability of information technology.

## **KEY OBSTACLES**

The state's recent budgetary shortfalls have adversely impacted the TWDB. It is a challenge to continue to meet our core functions in an atmosphere of increasing budgetary constraints and reduced staffing.

One of the agency's most urgent challenges is to keep pace with the growing water demands of a population that is expected to grow by 82 percent by the year 2060. Texas takes great pride in being a leader in regional water planning, emphasizing an open and collaborative process to account for a wide range of needs and interests. However, the challenge facing Texas now is how to move the state water plan from a plan to actual projects. The drought in 2011 served to demonstrate how unprepared Texas is for a recurrence of the drought of record.

Increased federal requirements and control over water planning and development will greatly complicate and lengthen the process of securing federal permits for many water-related projects sought by local interests, rendering some vital projects unviable. In addition, increased

requirements being placed on recipients of financial assistance programs are making those programs more cumbersome and costly and less attractive at a time when they are needed most.

Legal Services should better educate the TWDB staff about privileged communications, and the role of the attorneys within the agency by providing additional training opportunities.

For Legal Services to provide excellent representation to agency staff, the Board and the Executive Administrator, it is necessary to have the funding to hire and retain talented lawyers. Potential fiscal shortfalls may impact the agency's ability to replace retiring attorneys or provide salary increases to retain critical staff, an issue faced throughout the agency.

## **OPPORTUNITIES**

Continual dialog with policy makers on the state and federal level allows us to both promote the agency's mission and become aware of policy and funding issues. We have had an increase in funding for our state revolving funds both through the ARRA as well as through recent increases to ongoing annual appropriations. However, the federal capitalization grant funding has also been accompanied by increased federal regulations and requirements, although the Clean Water State Revolving Fund is fully revolving regardless of federal funding.

The slow economy has resulted in cost reductions in materials and supplies on construction bids. TWDB customers benefit when bids are less than the loan or grant commitment for the project. Customers are able to either increase the scope of their project or return unneeded funds to the TWDB to be committed to other worthwhile water and wastewater infrastructure projects.

The TWDB began using web-based meetings to reach out to customers and reduce their travel expenses for pre-application meetings, trainings, etc. The TWDB should expand use of web-based meetings to market its programs and services to customers across the state and provide support to applicants as they work through the funding process.

## **COORDINATION**

Staff in the Executive Office are often called on to provide specific input on draft legislation and appropriations related to water resources policy and funding.

The Executive Office works closely with a broad range of governments, from local to federal levels. The Executive Office interacts directly with municipalities, water districts, river authorities, state and federal agencies, and the executive and legislative branches of Texas and the federal government.

Legal Services works with entities seeking loans and grants from the TWDB, including but not limited to cities; counties; local and special districts created under Section 52, Article III or Section 59, Article XVI, Texas Constitution; groundwater districts; other political subdivisions of Texas; any interstate compact commission to which the state is a party; and any nonprofit water supply corporation created and operating under Chapter 67.

Legal Services also supports agency staff in Water Science and Conservation and water planning issues, as well as groundwater matters involving hearings on desired future conditions for the state's aquifers. This might include interacting with groups involved in these issues, such as local governments, special and local districts, regional water planning groups that have been designated by the TWDB, and groundwater management areas designated by the TWDB.

Finally, Legal Services supports the work of other TWDB divisions in their routine work with other state and federal agencies.

## **KEY RESOURCES**

The high caliber of our agency staff and the staff's consistent dedication to excellence is our greatest resource. The Executive office continues to place the highest level of confidence in staff's ability to meet challenges and to provide innovative solutions to challenging situations. Technology is valued and employed where appropriate. However, there is no substitute for solid knowledge, consistently high professional standards and commitment to the agency's mission.

Legal Services staff can take advantage of

resources in other state agencies, including inter-agency meetings such as State Agency Coordinating Committee, Legal Subcommittee; Public Information Act Council meetings, coordinated by the Comptroller; and other ad hoc task force entities like the Records Management Information Coordinating Committee. These groups can provide easy access to the latest legal requirements and discussions about implementation practices.

Additionally, Legal Services employees should develop relationships with attorneys in-house at state agencies whose work is related to TWDB programs. Similarly, TWDB lawyers should identify persons with specialized knowledge at other entities who can provide assistance on issues of first impression. Continuing legal education attendance is a good way to meet people from state agencies and other relevant entities, like river authorities and groundwater districts. Legal Services employees should take the extra step in building relationships by regularly communicating with other entities' lawyers.

Externally, Project Oversight works closely with the Texas Commission on Environmental Quality, Environmental Protection Agency Region 6, Texas Department of State Health Services, United States Department of Agriculture, Border Environment Cooperation Commission, and the North American Development Bank.

## **Finance**

### **INTRODUCTION**

The Finance office consists of the following areas:

- Debt and Portfolio Management
- Project Development
- Budget
- Accounting

Applicants for financial assistance are reviewed for financial soundness prior to Board recommendations. Assistance agreement documents are reviewed, compiled, registered, and closed and funds delivered through the Finance Division. Finance issues bonds; completes diligence on potential recipients; and monitors recipients of financial assistance through the TWDB within the Finance office. All internal

programs of the agency are supported by the accounting and budget functions.

#### **EFFECTIVENESS AND EFFICIENCY**

The staff in the Finance office has maintained an effective organization in meeting legal and audit requirements. Finance is integral in the TWDB providing affordable financing to hundreds of water and wastewater providers across the state.

#### **AGENCY CHARACTERISTICS REQUIRING IMPROVEMENT**

Staff continues to seek ways to improve its processes, security of information, and timeliness by adopting or improving automated processes. With the development of best practice procedures, appropriate documentation, and quality control reviews, staff strives to ensure effective and efficient management of our financial resources including the debt and loan portfolios. These improvements are advanced through training, communication, and ongoing review of processes and procedures. Staff continues to enhance the efficiency and ensure the accuracy of security documents. Cross-divisional coordination continues to be a target for improvement as well as establishing and maintaining good relationships with existing internal and external customers.

#### **KEY OBSTACLES**

The dynamic market will continue to present challenges, and will require constant review and diligence of the TWDB's loan and debt portfolio. Staff must be flexible and responsive in the issuance of debt, management of debt and oversight of existing and potential borrowers who are also dealing with difficult market and economic conditions. With limited resources, it is important to identify and prioritize potential issues in order to address them in a timely manner.

#### **OPPORTUNITIES**

Along with the challenges presented by market and economic conditions, staff is monitoring prepayments to be able to take advantage of market opportunities related to repayment and refunding debt. Additionally, initial debt structures are being

reviewed to provide the greatest benefit to the state, the TWDB, and financial assistance recipients. While the increased scrutiny of potential borrowers is warranted and encouraged, staff has to also be cognizant of the mission of the agency and the need of the citizens to obtain sustainable, affordable, quality water. Continued increased oversight and scrutiny by outside forces may cause conflicts with existing and ongoing operations and processes which will need to be addressed.

#### **COORDINATION**

Appropriate fiscal prudence requires ongoing coordination with oversight agencies, state and federal funding agencies, federal grantors, borrowers and grantees, and internal staff to ensure the timely issuance of debt, the timely commitment and disbursement of loan and grant funds, and the monitoring of the use of public funds. The office has built and sustained relationships with the Comptroller, Legislative Budget Board, State Auditor's Office, and the Bond Review Board.

#### **KEY RESOURCES**

Staff expertise is an invaluable asset, especially in the current economic conditions.

### **Program and Policy Development**

#### **INTRODUCTION**

Program and Policy Development (PPD) provides development and management of the Board's financial assistance programs, primarily the Drinking Water State Revolving Fund (DWSRF) and Clean Water State Revolving Fund (CWSRF). PPD is also responsible for coordinating policy and funding issues with Congress and federal agencies.

#### **EFFECTIVENESS AND EFFICIENCY**

The main task of PPD is to manage financial assistance programs to help Texas communities plan for, build, and rehabilitate water-related infrastructure. These programs, primarily the DWSRF and CWSRF, provide for subsidized financial assistance through loans and grants, but the associated federal requirements are increasingly

complex for entities to implement.

PPD has deftly juggled the impacts of the economy and increasing requirements imposed on the state revolving funds (SRFs) along with the need for a more streamlined and time-sensitive process. PPD is focused on improving the efficiency and effectiveness of financial assistance delivery to ensure that projects are completed in a timely manner to serve the public and to create adequate cash flow to keep the program healthy and robust.

PPD has made several program changes to gain efficiencies in the SRF programs by:

- reducing commitment time frames;
- closing loans for DWSRF fully into escrow rather than closing funds on an installment basis;
- increasing oversight of projects to adhere to project schedules and to encourage expeditious use of funds;
- encouraging effective management techniques; and,
- working with small systems through interagency coordination.

In addition, PPD created the Texas Water Infrastructure Coordination Committee to increase coordination and communication across relevant funding agencies at the federal, state, and local level. PPD also serves in a leadership role on the Council of Infrastructure Financing Authorities and the EPA/State State Revolving Fund Workgroup.

In regard to communication and coordination with Congress and federal agencies, PPD continues to work directly with applicable congressional members and staff on key issues. Due to the current stalemate in Congress and the moratorium on appropriations earmarks, PPD has discontinued submitting congressional appropriations requests. In contrast to funding issues, PPD's interaction with congressional committee staff and the Texas congressional delegation has increased as TWDB protects state primacy over water issues.

#### **AGENCY CHARACTERISTICS REQUIRING IMPROVEMENT**

Traditionally, the TWDB's financial assistance programs were administered to accommodate a much

more deliberate process and to offer greater flexibility for project schedules. Increasing needs for completed projects and for a more expeditious use of funds, however, requires the TWDB to focus on increasing the pace of project implementation and to improve cash flow in the programs.

PPD has been and continues to seek improvements to the DWSRF and CWSRF programs, with some notable examples described above. In addition to reaching out to potential candidates for financial assistance on program improvements, PPD is also communicating on a regular basis with EPA on various options for future administration of the programs.

#### **KEY OBSTACLES**

The primary obstacle to the efficient and effective delivery of SRF financial assistance for water-related projects is the increasing set of federal requirements imposed on the programs. Congress and EPA are shifting the management philosophy of the SRFs from state-run programs to programs that are subject to more and more federal priorities and mandates.

Perhaps of greatest concern to TWDB is the federal government's inclination to impose federal requirements on all SRF funds, including those funds provided by the state and those funds that have since revolved in the program and are now part of the SRF corpus. The TWDB will discuss this issue with EPA and Congress, arguing that the corpus is state funds and no longer encumbered by federal requirements.

This issue permeates virtually all aspects of the TWDB's interaction with federal programs. A large majority of PPD's time interacting with Congress and federal agencies is related to the imposition of federal jurisdiction and federal requirements over the development, management and use of water. As the federal government continues to increase oversight and requirements over water resources planning and implementation, critical decision making is shifting from the state and local level to the federal level. As described previously, the increase in federal requirements has been a hindrance to the delivery and efficiency of financial assistance. The increased federal presence also adversely affects the regulatory aspects of project development. Increasing federal

jurisdiction and requirements over water planning and development through regulatory processes and actions greatly complicates and lengthens federal permitting activities for many water projects.

A secondary obstacle to the management of the SRF programs is the less than robust economy. Many communities with planned water infrastructure projects are reluctant to take on new debt to finance the projects. In addition, the potential for water rate increases to pay for improvements would come at a time when many households are struggling. While surveys conducted by PPD demonstrate that water and wastewater infrastructure needs are great, the associated demand to finance needed projects is not commensurate with those needs.

Furthermore, current economic conditions provide for historically low interest rates. These low rates create two challenges: 1) the subsidy offered by the SRF becomes less attractive to prospective borrowers, particularly under onerous requirements not imposed on other financing options; and 2) current borrowers are enticed to pre-pay outstanding SRF loans, which creates a cash flow problem based on federal SRF rules.

Finally, a third obstacle in front of PPD is the frequent and increasing reporting demands placed on the SRFs. Since the stimulus funding provided under the American Recovery and Reinvestment Act of 2009 (ARRA), EPA has stepped up oversight and reporting requirements on a host of issues in the base programs. In addition, PPD is inundated with numerous site visits and ad hoc inquiries from EPA Region 6, EPA's Office of Inspector General, the Texas State Auditor's Office and others. The reporting and oversight, while necessary at a reasonable level, is becoming more of a distraction and a burden.

PPD is faced with a difficult challenge. On the one hand, Congress and EPA are scrutinizing unliquidated obligations (ULOs, which are federal funds that have not been spent) and pressing for more expeditious use of SRF funding. On the other hand, Congress and EPA continue to impose more and more federal requirements and mandates on the programs, which is counterproductive and slows the pace of spending. As mentioned above, adding to

the challenge is the fact that the burdensome federal requirements are not imposed on other financial assistance programs, thus making the SRFs less attractive despite the interest rate subsidies and loan forgiveness available.

PPD has made some programmatic changes that will prove to make the SRF financial assistance process more efficient and less burdensome for both the TWDB and borrowers/grantees. PPD has recently established a phased process encouraging applicants to obtain financial assistance only for what can be spent in the next two to three years. The new funding process divides projects into a planning, acquisition and design phase, followed by a construction phase; these phases are funded separately and sequentially. This phased approach eliminates the spending lag that occurs when the entire project is fully funded at the start for planning through construction.

#### **OPPORTUNITIES**

PPD has made other programmatic and policy changes over the past few years and continues to seek improvements to the program. PPD continues to work with EPA Region 6 to find suitable solutions and to develop SRF programs that both serve the public good and utilize SRF funds in the most expeditious and effective manner.

Similarly, PPD continues to network and stay tuned to congressional and federal activities to identify opportunities and challenges in water resources management.

#### **COORDINATION**

PPD coordinates with a host of partners and organizations, including but not limited to:

- EPA
- U.S. Army Corps of Engineers
- U.S. Bureau of Reclamation
- National Resource Conservation Service
- U.S. Department of Agriculture/Rural Development
- Texas Commission on Environmental Quality
- Council of Infrastructure Financing Authorities
- Western States Water Council

- National Waterways Conference
- EPA/State SRF Workgroup
- Texas Water Infrastructure Coordination Committee
- Local and regional water managers

PPD also coordinates closely with federal and state legislative bodies and executive branches.

### **KEY RESOURCES**

PPD continues to work closely with TWDB executive leadership to identify and allocate resource needs as appropriate.

## **Construction Assistance**

### **INTRODUCTION**

Construction Assistance (CA) provides environmental and engineering reviews and approvals required for projects financed with funds administered by the TWDB. In addition, CA staff provides technical and construction management assistance to project owners during all phases of project construction. Staff members include professional engineers, environmental reviewers, and technical field representatives who provide these services through two primary divisions:

- Project Engineering and Review
- Inspection and Field Support Services

The Project Engineering and Review Division is responsible for processing and assessing the engineering and environmental effects of an application for financial assistance from the TWDB, which includes the following tasks:

- Meeting with cities, water supply corporations, districts, and authorities regarding funding options from the conceptual stage, through funding commitment and closing, planning, design, and construction
- Reviewing and approving the engineering feasibility reports for the proposed project
- Reviewing environmental documents and issuing an environmental determination

- Reviewing and approving plans and specifications for every contract in each project
- Reviewing contract bid tabulations and authorizations to award
- Reviewing and approving of executed construction contract documents
- Reviewing and approving contract change orders
- Reviewing and approving payment requests and fund releases

The Inspection and Field Support Division is responsible for overseeing project construction and providing technical assistance to project owners from the pre-construction phase throughout the construction phase, and through contract and project closeout, which includes the following tasks:

- Performing biddability and constructability reviews of plans and specifications
- Participating in and reporting on pre-construction conferences
- Conducting monthly construction inspections and writing progress reports
- Conducting contract and project final inspections and writing final reports
- Gathering contract close-out documents and issuing a Certificate of Approval for each contract
- Conducting post-construction performance and warranty assistance as required
- Maintaining project database with current and historical project information

The administrative area of CA is composed of a deputy executive administrator; a team of administrative assistants that provides support for all areas; a systems analyst who develops, operates, and maintains the divisions' databases; and a program specialist who handles performance measures, strategic planning, and coordinates project management conferences. Project management conferences are conducted for projects receiving TWDB funding and are for the benefit of project owners. They provide guidance, promote goodwill, and ensure timely program compliance by raising the awareness of their commitment with the TWDB.



## **EFFECTIVENESS AND EFFICIENCY**

The programs that CA administers are governed by state and federal laws and regulations. CA currently has review and oversight procedures in place that have been very effective in helping CA meet its legal requirements. Federal programs requiring Crosscutter compliance are reviewed and monitored from the application phase through the end of construction to ensure all requirements are satisfied. State programs are reviewed and monitored to ensure compliance with design criteria and statute. These reviews typically involve milestones that are monitored and approved in sequential order to ensure compliance before proceeding to the next step. CA works jointly with other agency offices including the TWDB's legal department to insure compliance with legal requirements.

The programs that CA administers benefit a broad spectrum of citizens and needs in Texas. For example, the Economically Distressed Areas Program addresses infrastructure needs in areas of the state that are deemed economically distressed. These are usually smaller communities that do not have a large amount of experience in the financing and construction of water and wastewater facilities. As a result, CA provides a considerable amount of technical assistance to aid in the development and implementation of their project.

The Drinking Water State Revolving Fund (DWSRF) and the Clean Water State Revolving Fund (CWSRF) programs may also provide assistance to areas that are deemed to be disadvantaged. These areas are typically smaller communities that require technical assistance. The DWSRF and the CWSRF programs also meet the needs of non-disadvantaged areas in small, middle, and large communities across the state. These programs may also augment the construction in progress processes of larger communities. This requires CA staff to understand the needs and processes of larger communities and to interface with them to meet those needs.

The State Participation and the Water Infrastructure Fund (WIF) programs are targeted at providing funding for projects identified in the state water plan. These typically involve large water storage and transmission facilities, including

reservoirs. These programs provide funding to allow larger areas of the state to meet future water needs as the state grows. These programs impact virtually every citizen of the state and they require a significant level of expertise on the part of CA staff.

The Rural Water Assistance Fund is targeted at small rural communities, particularly water supply corporations. The program has unique characteristics that allow CA staff to aid in meeting the unique needs of rural areas. Finally, the Texas Water Development Fund is a program which all communities in the state have access to water and wastewater infrastructure financing. As such, it potentially touches all population groups across Texas.

CA's administration of these programs has yielded nationwide recognition through the Pisces Award given by the EPA and in the sheer volume and demand for funding. The agency and CA continue to receive positive feedback from the TWDB customer satisfaction surveys.

CA has worked with the consulting group Northbridge Environmental to assess the TWDB's SRF programs. Through Northbridge, experience with the ARRA program, and through internal needs identification, significant changes in operational methods have been considered and implemented. These include:

- Including green and Davis-Bacon requirements in the CWSRF and DWSRF programs;
- Opening up the SRF programs to encourage more non-traditional types of funding such as nonpoint source and source water protection projects;
- Loosening the SRF programs to allow the TWDB to target special needs such as arsenic, which may involve less reliance on rules and more reliance upon the intended use plan each year to govern SRF activities;
- Obtaining invoices on all CWSRF projects to provide a more efficient collection and submittal of payment requests to EPA;
- Implementing an integrative database called TxWISE to track and manage TWDB programs, which will aid CA in the tracking and management of projects to ensure that project schedules are maintained and assist in the reduction of un-

- liquidated obligations (ULOs);
- In the SRF programs, potentially using separate commitments for the various stages of project development from planning, acquisition, design, and construction in lieu of the pre-design funding option to aid in addressing ULOs;
- Implementing project close-out procedures to ensure that project funds remaining at the end of a project are either used or returned to the TWDB to aid other communities of the state;
- Establishing an Economically Distressed Areas Program priority system;
- Obtaining better information such as draw estimates to better aid bond sale timing;
- Establishing better file organization; and
- Implementing mail duties in CA to facilitate a more efficient management of information into and out of CA.

#### **AGENCY CHARACTERISTICS REQUIRING IMPROVEMENT**

Many improvements have been made to improve CA performance. The development of TxWISE, an agency-wide, computer-based database that includes project information, applications to run reports, produce memos, and to better track project schedules and milestones has been key. Organizational stability is important to maintain, and has been occurring in CA for the past two and a half years. A variety of efforts have been implemented and need to continue, such as management meetings and better communication efforts and updates. It is important to continue to emphasize cross-office communication as the entire agency works interactively on virtually every program.

#### **KEY OBSTACLES**

A key challenge is the continued demand for funding in a national environment of growing federal bureaucracy. Each new administrative requirement represents one more thing for our customers to have to comply with, and another thing that TWDB staff has to monitor to ensure compliance. This has been burdensome to the citizens of Texas and could ultimately slow down demand for TWDB funding.

Recent reductions in CA staff have impacted the

ability of staff to address the cultural, social, and political issues that result from these projects, but CA will continue to work to address them as needed.

#### **OPPORTUNITIES**

Opportunities exist to aid the entire state through our programs. The TWDB has always been a great place to work because of it. Although our resources are thin, efforts have been made to streamline processes and continue networking with our stakeholders to achieve successful projects.

#### **COORDINATION**

We will continue to meet interactively with customers, and state and local officials. We do this through project-related activities such as pre-application meetings, project management conferences, marketing trips, participation in professional organizations, direct mailings, statewide trainings through WebEx and other media, the use of the Internet, and the use of statewide focus groups/ stakeholder meetings. A more proactive approach has been implemented for tracking project schedules and better communications have been established. Our intent is to be a positive force toward the common goal.

#### **KEY RESOURCES**

The implementation of TxWISE is key internally. Resources have been devoted to this implementation through the hiring of Northbridge Environmental and various staff to dedicate to its success. This availability of financial backing and staffing resources need to continue to be a priority as we move through the various phases of implementation.

Technical assistance is key for customers.

Resources in terms of money, staffing, and time need to be devoted to this effort as we continue to work with smaller and disadvantaged/distressed areas. In addition, there is a growing need for assistance as more federal strings are attached to funding programs.

Proactively conducting project management conferences to provide customers with information they need without them having to ask has helped in making projects progress in a timely manner.

## Water Science and Conservation

### INTRODUCTION

Water Science and Conservation (WSC) supports the development and implementation of the state water plan and provides technical assistance and information to various internal and external customers.

Water Science and Conservation is organized into the following divisions:

- Surface Water Resources
- Groundwater Resources
- Conservation
- Innovative Water Technologies

#### Surface Water Resources

- Monitors the state's surface water resources
- Researches and evaluates instream flows and flow requirements for the state's bays and estuaries
- Supports the environmental flows process
- Runs water availability models to support water planning
- Measures sedimentation rates in reservoirs

#### Groundwater Resources

- Monitors the state's groundwater resources
- Develops and runs groundwater availability models
- Provides technical assistance to citizens, cities, groundwater conservation districts, and regional water planning groups
- Researches groundwater resources
- Supports the joint planning process in groundwater management areas

#### Conservation

- Develops and distributes literature on water conservation
- Estimates agricultural water use
- Administers agricultural water conservation demonstration projects
- Reviews water conservation plans and water loss audits
- Provides technical assistance on water conservation

#### Innovative Water Technologies

- Researches and promotes new methods for enhancing the state's water resources including seawater and groundwater desalination, rainwater harvesting, water reuse, and aquifer storage and recovery

### EFFECTIVENESS AND EFFICIENCY

Water Science and Conservation (WSC) has been effective and efficient in meeting its required duties. WSC is focused on meeting its legislative requirements on data collection, technical assistance, model development, and program implementation. Staff efforts have been recognized by national and international entities. For example, the National Ground Water Association has recognized WSC's numerical groundwater modeling program with a technology award and Global Water Intelligence has recognized their efforts on desalination.

As part of the office's internal strategic planning, each division in WSC holds a retreat and conducts an analysis of strengths, weaknesses, opportunities, and threats. Based on this analysis, staff identify which initiatives to improve processes and products can be undertaken in the ensuing year. In addition to this analysis, staff stay abreast of scientific literature, technology and what other state and federal agencies are doing to ensure we are doing the best we can. This benchmarking is built into this strategic analysis.

To promote efficiency, WSC staff use work process documents, meeting reports, analysis papers, teams, stakeholder processes, websites, and agency publications. Work process documents detail standard procedures for tasks to ensure consistency among staff members for frequently repeated tasks or to document infrequently completed tasks to retain institutional knowledge.

A key ingredient for efficiency is effective communication. A tool WSC uses to promote internal communication are meeting reports that document what occurred and any action items at internal and external meetings. We use our websites and agency newsletters to push information and data out to our customers. We reach out to stakeholders and customers for input on how and what we are doing to build into our services and products.

## **AGENCY CHARACTERISTICS REQUIRING IMPROVEMENT**

Based on our Survey of Employee Engagement, the agency could do more on pay, diversity, and internal communication issues.

## **KEY OBSTACLES**

Funding and the fallout from budget cuts from the 2011 legislative session are our main obstacles. Two of our groundwater sections were deeply cut, resulting in a much lower ability to provide technical assistance to groundwater conservation districts, particularly for the next round of developing desired future conditions. Because of these cuts, the risk of conflict between the agency and the districts on desired future conditions and the associated managed available groundwater is greatly increased. Furthermore, considerable staff resources are being employed to respond to petitions challenging the reasonableness of desired future conditions when districts have the final say.

The environmental flows process put into place by Senate Bill 3 in 2007 requires continued funding to ensure progress by the Science Advisory Committee and the various bay and basin area stakeholder committees and bay and basin expert science teams. Funding for this process was cut during the 2011 session, and funds are not available for the Science Advisory Committee and the stakeholder committees to finish their work.

WSC is statutorily charged with advancing the development of seawater desalination supplies in Texas. An obstacle in taking a demonstration project to a water supply project is the cost of desalting water compared to other sources of water. A state or federal contribution will probably be required to build the state's first production seawater desalination plant. Furthermore, our funding to support research and planning studies to further advance seawater desalination in Texas ended in 2005. Our funding for advancing brackish groundwater desalination was terminated in 2011.

The cost of storing and serving up information on the agency's website is becoming an obstacle. Much of our data and information is in large files or scanned reports and needs to be online for customers

to access. Because of costs, we have to weigh whether or not we can afford to post or continue to post information for the public.

Budget reductions and pay freezes have decreased morale causing us to lose good people to other organizations.

## **OPPORTUNITIES**

One opportunity WSC has is to leverage state resources to the maximum extent possible. To leverage resources with federal resources, we monitor a variety of activities at the federal level and work closely with the Texas congressional delegation and federal agencies on all water-related issues and policy. Our involvement in federal issues has given us a greater presence on Capitol Hill and strengthened partnerships with federal agencies. Unfortunately, as we increase our ability to secure federal funding and legislative provisions, the federal government is experiencing funding shortfalls equivalent to those at the state level. As a result of the shortfalls, Congress is reducing budgets, as well as shifting certain tasks to state and local governments.

## **COORDINATION**

In addition to coordinating activities internally, WSC works closely with its customers, sister agencies, universities, and federal agencies to coordinate its activities. For surface water, staff coordinates with the Texas Commission on Environment Quality (TCEQ), Texas Parks and Wildlife Department, U.S. Geological Survey (USGS), Environmental Flows Science Advisory Committee, river authorities, and the Corps of Engineers, among others, to coordinate research studies and data collection. For groundwater, staff works with the TCEQ, USGS, Natural Resources Conservation Service, groundwater conservation districts, regional water planning groups, Texas Groundwater Protection Committee, stakeholder advisory forums, and the Corps of Engineers, among others.

For water conservation activities, WSC coordinates with the Water Conservation Advisory Council, Natural Resources Conservation Service, various water suppliers, and the TCEQ, among others.

For innovative water technologies, staff members coordinate activities with the TCEQ, Bureau of Reclamation, South Central Membrane Association, and Water Reuse Foundation, among others.

For drought, WSC staff participate and coordinate with the Drought Preparedness Council and various local, state, and federal agencies.

## KEY RESOURCES

People and technology are key resources. WSC has been fortunate that the legislature has supported its programs, especially in groundwater with the implementation of joint planning in groundwater management areas but also with continued support for conservation, environmental flows, and brackish groundwater desalination.

## Water Resources Planning and Information

### INTRODUCTION

Water Resources Planning and Information (WRPI) consists of three divisions:

- Water Resources Planning
- Flood Mitigation Planning
- The Texas Natural Resources Information System

All three divisions continue to meet their statutory responsibilities by collecting, analyzing, and disseminating water-related data and providing other services necessary to aid in planning and managing the state's water resources. WRPI also provides statewide geographic data services and flood mitigation planning, including administration of federal assistance programs.

The Water Resources Planning (WRP) Division has continued to receive recognition as one of the leading water planning organizations in the nation. Since the inception of the regional planning process in Texas in 1997, the first priority of the division has been to:

- Support the development of the 16 regional water plans;
- Develop projections of population and water demand for each of the state's water user groups,

including municipal, industrial, and agricultural water uses;

- Work with state, federal, and local partners to implement water management strategies recommended in the planning process;
- Compile annual municipal, industrial, mining, and electric power generation water use data and information regarding water sales and purchases among users and suppliers;
- Develop estimates of agricultural water use; and
- Prepare the state water plan, a comprehensive guide to the state's water resources, every five years.

The Flood Mitigation Planning (FMP) Division serves as the liaison between the federal component of the National Flood Insurance Program (NFIP) and local communities, providing community assistance and training. It also manages the state flood protection planning grant program and the federal Flood Mitigation Assistance and Severe Repetitive Loss grant programs.

Historically, floods are one of the most frequently occurring, destructive, and costly natural hazards facing Texas. Funding assistance provided through the division has enabled communities to study and analyze flooding hazards within their jurisdiction and to develop technically feasible and cost-effective flood mitigation measures to address those hazards.

Texas Natural Resources Information System (TNRIS) serves as the state clearinghouse for geographic information, including socio-economic and emergency management related data. TNRIS maintains authoritative sources of geographic data that serve as the universal base map for managing the state's resources and provides a source for public access to historical and current maps, photography, and data.

The director of TNRIS serves as the state's Geographic Information Officer, with the responsibility to:

- Coordinate the acquisition and use of high priority imagery and data sets;
- Establish, support, and disseminate authoritative statewide geographic data sets;
- Support geographic data needs of emergency

- management responders during emergencies;
- Monitor trends in geographic information technology; and
- Support public access to state geographic data and resources.

### **EFFECTIVENESS AND EFFICIENCY**

All areas of WRPI consistently meet their legal requirements. In 2010, WRP staff completed timely review and comment of the 16 regional water plans, which were approved by the Board during the fall of 2010. WRPI subsequently developed the 2012 State Water Plan, which was adopted by the Board December 2011 and submitted to the Governor, Lieutenant Governor, and the Texas Legislature on the statutory deadline of January 5, 2012.

Despite a reduction in staff, Flood Mitigation Planning's (FMP) Community Assistance Program continues to provide a respectable number of Community Assistance Contacts and Community Assistance Visits and conducts at least eight training workshops throughout the state each year. The program ensures that the communities are compliant with the National Flood Insurance Program through General Technical Assistance and Ordinance Review. All FMP staff members are Nationally Certified Floodplain Managers.

The TNRIS Strategic Mapping Program, which develops and maintains geographic base data for the state of Texas, has been enhanced by assignment of a High Priority Imagery and Data Sets contract by the Council on Competitive Government. This contract has established a pool of qualified commercial data providers who compete for mapping and data development projects. The contract has allowed the state to enhance its responsiveness by serving local and state agencies with procurements that use TNRIS staff support to award projects in very short timeframes. The ongoing pool of competitive providers has realized regular savings to the state and established a clear market for these data.

TNRIS has been successful in its effectiveness due to its ability to adopt current and innovative technologies to support statewide geographic information resources. The practice of providing data via the Internet at no charge to the public has

garnered wide adoption and use of these data. The assignment of responsibility for administering the High Priority Imagery and Data Sets contract from the Council on Competitive Government has tightly aligned the statewide data acquisition and management mission with a streamlined procurement process, resulting in an innovative procurement solution.

The 82nd Texas Legislature named the director of TNRIS the Geographic Information Officer for the state, further streamlining the development of geographic data resources. This change is expected to provide greater effectiveness through centralized coordination, as well as involvement of federal and local stakeholders in the state geographic data advisory and coordination processes. Efficiencies through adoption of new cloud platform resources through the Department of Information Resources will allow for piloting a geographic information cloud platform that could provide widely shared data resources, reducing duplication and reinforcing the authoritative status of commonly used statewide geographic data. Additional efficiencies are expected to accrue through development of common templates for applications development and support for open interoperability of software, data services, applications and computing resources.

These efficiencies will lower life cycle costs and promote open, shared solutions across agencies. The shared platform is envisioned to provide a centralized catalog of geographic data for state agencies and the public, and coordinating web-based search indexes is anticipated to deliver rich search results that can be further categorized by themes, such as water, or by agency, such as Texas Parks and Wildlife.

WRP administers the regional water planning process, which is guided by 16 planning groups that represent key water supply stakeholders in the state—agriculture, industry, public, environment, river authorities, municipalities, counties, business, water districts, water utilities, power generation, and groundwater management areas. The division supports the work of these groups with technical and administrative assistance, and also responds to requests from the public, the legislature, and others for historical and projected water use information and

other planning-related data.

FMP's Community Assistance Program supports the NFIP so that Texas citizens can be eligible for federal flood insurance. The program is responsible for assisting over 1,200 communities throughout Texas, and since 2007 (when the TWDB assumed administration of the program), FMP staff have performed thousands of Community Assistance Contacts and Community Assistance Visits, conducted over 100 training workshops, and reviewed over 600 community flood ordinances pursuant to the NFIP. Additionally, the grants department has distributed more than \$150 million in federal and state grants since 1987 through its three grant programs.

TNRIS data are accessible to anyone and are easily accessed through the Internet and through customer service representatives.

WRP continues to receive recognition as one of the leading water planning organizations in the nation. The 2007 State Water Plan, Water for Texas, 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.

Texas continues to be a respected leader in the flood mitigation arena. In 2010, FEMA and the Association of State Floodplain Managers asked the division to participate in a pilot program that would ultimately be utilized across the United States. The grant area of FMP was also recognized for its efforts in funding the FloodFUND Research Project, which developed estimates of the capital costs for current and planned flood control projects for the 2012 State Water Plan. Conducted by the engineering consulting firm of Halff Associates, Inc. and funded by the TWDB Research and Planning Fund, the project received the American Council of Engineering Companies 2012 Texas Engineering

Excellence Awards Gold Medal in the category for "Studies, Research and Consulting Engineering Services."

In 2012, TNRIS received the National Hurricane Conference Outstanding Achievement Award for enhancing the use of Hazards software by integrating results into an Excel spreadsheet for scenario planning. TNRIS also received the Founders Award for the contributions that have significantly enhanced the importance of geospatial sciences and made significant contributions toward advancing the use of Geographic Information Systems (GIS). The award was presented by the South Central Arc User Group, a four-state GIS technology group comprised of Texas, Oklahoma, Louisiana, and Mississippi.

WRPI management also receives regular invitations to speak at local, state and national conferences, meetings, and events.

WRP has implemented programmatic changes as a result of lessons learned from the 2011 drought, including insights from other state agencies that responded to the drought, and from interactions with the U.S. Army Corps of Engineers regulatory staff and leadership. These insights informed improvements to the regional and state water planning administrative rules and programmatic guidance for the regional water planning groups.

Updates to the TNRIS statute arose out of the review performed by the Sunset Advisory Commission of Texas in 2012. The review recommended a new framework for geographic information coordination for the state and aligned this with the technical and clearinghouse resources at TNRIS. This change positively affected the state's profile for the National States Geographic Information Council Geospatial Maturity Index, a national standard to compare how well states support use of the technology. Seven out of nine criteria are now fulfilled in the Texas comparison.

#### **AGENCY CHARACTERISTICS REQUIRING IMPROVEMENT**

The agency is exploring adoption of social media strategies to better communicate and relate to stakeholders and the public and will continue to explore the deployment of innovative technology

where appropriate.

### **KEY OBSTACLES**

WRP seeks to continuously improve the effective planning and management of the state's current and future water supplies by providing reliable, comprehensive, and current data regarding all aspects of historical and projected water use and availability in Texas. The division recently completed a major initiative to significantly improve the collection and dissemination of water data by developing Internet applications that greatly facilitate the availability and exchange of water resources data in Texas. To achieve this goal, WRP acquired and maintained employees with technical expertise to focus on developing, implementing, improving, and maintaining the TWDB's water resources planning data interfaces.

The FMP division continues to face the issue of only temporary Congressional reauthorization of the NFIP. (On December 23, 2011, President Obama signed the fiscal year 2012 omnibus appropriations bill that includes a provision extending the NFIP through May 31, 2012.) The Community Assistance Program has also seen a reduction in federal funds from FEMA, with increased requirements for additional activities, and must make budget adjustments because of frequently untimely distribution of federal funds.

Geographic considerations are also an obstacle for FMP. There are over 1,200 communities in the state that participate in the NFIP, and are consequently eligible for disaster assistance through grants when needed. With the loss of five field staff in 2011, it will be a challenge to ensure that communities receive the assistance needed in an emergency.

TNRIS faces several obstacles, including:

- Limitations in technology options to develop modern enterprise geospatial technology resources, including data storage options;
- Acquiring and maintaining geographic information technology professionals due to external competition and available skills;
- Loss of capital funding to support data acquisition and leverage federal funding for shared statewide geospatial data infrastructure;

- Slow pace of adoption and access to resources to develop a statewide cloud computing solution specifically designed to support geospatial data and services; and
- Implementation of a statewide geospatial cloud computing platform would allow local and regional governments to lower costs and plan for shared resources.

### **OPPORTUNITIES**

WRPI has the opportunity to advance state water plan policy issues during the 83rd Texas legislative session by continuing the plan's policy recommendations in the agency's Legislative Priorities Report. The agency will also carry out the 2012 State Water Plan Implementation Action Plan which outlines additional steps that TWDB can take to facilitate the implementation of water management strategies in the state and regional water plans.

The worst one-year drought on record experienced by the state during 2011 brought greatly increased media attention to water planning. Staff will continue to use opportunities afforded by the media and other public engagements to highlight the importance of planning and the implementation of water management strategies recommended in the 2012 State Water Plan.

Technology will have the biggest impact on assisting the staff in doing their jobs. The constant evolution of computer equipment and software, as well the combination of other tools (cameras, GPS, etc.), will aid in doing the job quicker and more efficiently.

Implementation of statutory changes centralizing coordination of geographic information technology and resources represents a key opportunity for TNRIS. Other opportunities include the implementation of a geospatial cloud computing strategy aligned with federal models to integrate data, services and access for the state. This strategy is anticipated to positively affect effectiveness of government functions, efficiency through shared resources and services, and enhanced access by the public and government.



## **COORDINATION**

WRPI works extensively with other state agencies and local government representatives in coordinating its programs. The deputy executive administrator of WRPI serves on a three-state water resource management team composed of the TWDB, Oklahoma Water Resources Board, Kansas Water Office, and the U.S. Army Corps of Engineers Southwestern and Northwestern divisions. The team meets annually and coordinates regularly to cooperate on federal regulatory and policy issues and legislation, and to explore streamlining regulatory processes.

WRP has worked with stakeholders and state and federal agencies during revisions to regional and state water planning rules and will continue to work with them on the implementation of the rules, once adopted. WRP will also work with the Texas State Data Center in coordination with the Texas Commission on Environmental Quality, Texas Parks and Wildlife Department, Texas Department of Agriculture, and the regional water planning groups to develop population and water demand projections for inclusion in the 2016 regional water plans and the 2017 State Water Plan.

Staff will carry out the 2012 State Water Plan Implementation Action Plan by continuing to serve as a resource to the Texas Legislature and by assisting local and regional water providers with technical and administrative assistance related to water supply project implementation.

FMP works very closely with FEMA in administering the NFIP and the Flood Mitigation Assistance and Severe Repetitive Loss programs. FEMA administers these programs at the national level, and the TWDB serves as the state coordinator, providing services, awarding funds, and managing contracts with communities in Texas. As staff interacts with communities, new methods are often introduced and therefore benchmarked for future use. The division also coordinates with the Texas Floodplain Management Association, the Governor's Division of Emergency Management, the State Hazard Mitigation Team, and the Association of State Floodplain Managers. The Community Assistance Program-State Support Services Element program

has semi-annual meetings at FEMA along with other states in Region VI to learn and share about best practices and new ideas as well as covering new regulations.

TNRIS engages at the community-level through stakeholder processes, works with other agencies through agreements to develop shared resources, and collaborates with others using the High Priority Imagery and Data Sets Contract and with special initiatives on state priority issues, such as drought technology and emergency management. TNRIS also strives to align with federal level geospatial initiatives such as platform deployment and integration.

## **KEY RESOURCES**

If cloud platform services were available to all state and local government to host data and mapping services, then significant volume pricing discounts could be pursued. Statewide Interagency Cooperation Agreements could establish common understanding about use and classification of geographic data and technology resources. If it is determined that a common cloud computing environment would benefit state government, then a high level agreement negotiated across multiple agencies would expedite the administration and use of these services. Adoption of international Open Geospatial Standards for data interoperability will ensure Texas data are accessible to the widest potential audience.

The Geospatial Emergency Management Support System (GEMSS), originally developed by TNRIS as a geospatial data repository for use in emergency management, is being explored as a tool for the display of various data, including Public Utility Commission of Texas electric transmission line systems. GEMSS also represents an opportunity for the interactive display of state water plan and other state and federal geographic data.

# Operations and Administration

## INTRODUCTION

The Operations and Administration office encompasses the following areas:

- Administrative Services
- Human Resources
- Communications
- Information Technology
- Support Services and Contract Administration

### Administrative Services

- Provides policies, procedures, support and training to all divisions of the agency to ensure the efficient and economical management and preservation of records and information
- Ensures compliance with all applicable state and federal records laws and provides centralized records disposition
- Operates a file room and maintains water project files for the agency
- Completes the agency's Strategic Plan
- Supports Operations and Administration divisions as needed

### Human Resources

- Advises supervisors and managers in personnel matters
- Maintains a position classification system to evaluate jobs
- Provides recruitment programs
- Establishes training programs
- Administers employee benefits
- Processes employee grievances
- Announces job vacancies and screens applicants

### Communications and Web Administration

- Responsible for the agency's communications services
- Responsible for Web development
- Administers publications and graphic support

### Information Technology

- Provides program management organization
- Provides application services
- Provides IT systems and project coordination

- Responsible for IT security and infrastructure
- Maintains service desk assistance and support to the agency staff and customers

### Support Services and Contract Administration

- Provides facility management (building maintenance and associated repairs, space management, lease management)
- Provides staff support (telecommunications, fleet management, mail services, supplies)
- Ensures fraud prevention coordination
- Conducts annual inventory, safety management and cost-savings initiatives
- Develops and administers contracts
- Procures goods and services
- Coordinates contract payment
- Coordinates outlay processing

## EFFECTIVENESS AND EFFICIENCY

Divisions of the Operations and Administration office work effectively and efficiently to benefit the agency as a whole.

The Human Resources Division has been recognized statewide for its wellness programs and charitable campaigns. Three HR staff members have attained certification as a Professional in Human Resources through a nationally recognized and accredited professional human resources certification program.

The Communications and Web Administration Division produces most of the agency's legislatively required reports and always delivers them on time. Communications is also responsible for upgrading the agency's Website to meet federal and state accessibility requirements. In 2011, staff began a Web revitalization process to produce a much more usable site that meets rigorous accessibility guidelines.

To ensure the division's effectiveness, Communications and Web Administration uses a variety of tracking and prioritization systems. In the past year, the group also began a project management program for Web projects.

The TWDB's Information Technology (IT) Division has taken on many projects in the last two years to ensure effectiveness and efficiency throughout the agency, including the establishment

of an Accessibility Coordination Group, increased security initiatives, and better tracking of key metrics.

The Accessibility Coordination Group is spearheaded by the Information Technology division and has made great progress in the agency's accessibility initiatives. An "Accessibility Center" Web page has been established on the agency's Intranet that includes information on creating accessible Microsoft Word, PowerPoint, and Excel documents as well as .pdf documents. A training video has also been added as a tool for staff. There is a section on accessibility law and there are many links to helpful accessibility sites. In addition, a process has been established to request a Voluntary Product Accessibility Template (VPAT) when procuring products that must be accessible.

Several IT security initiatives have been completed. IT rolled out "Sophos" to agency desktops. Sophos replaces two previous desktop security products: Cisco Security Agent and Symantec. In addition, a new password policy was established that requires staff to change their logon password every 90 days. This replaces the previous 180-day change policy. An appropriateness security check on roles for three key agency applications will now occur bi-annually. Staff roles for Texas Water Information System Expansion (TxWISE), Contract Administration System (CAS), and Inspection and Field Support System (IFSS) are now reviewed bi-annually for appropriateness. This is in addition to the bi-annual system access review.

The IT Help Desk application, iSupport, has been implemented with most of the core functionality being utilized. The iSupport product has been configured so that agency staff can send an e-mail to the Help Desk e-mail address and a ticket is automatically generated in the iSupport application. Metrics of tickets opened and closed can now be tracked more closely.

The IT Program Management Office has met with agency leadership to establish an IT project priority list that is ranked by leadership and aligns with agency strategic initiatives. This list is reviewed quarterly with leadership. New projects require a new project request form; new projects are ranked by leadership among existing projects. In addition, a project management methodology has been

deployed. Standard IT project templates have been established that are required for every project.

Key statistics demonstrating effectiveness and efficiency from the Support Services and Contract Administration Division for fiscal year 2011 include:

- Operating agency fleet at \$0.38 per mile while the state reimbursement rate is \$0.55
- Providing cost savings to agency by renegotiating copier leases, cellular device services, etc.
- Number of new payable contracts executed: 152
- Total dollar amount of executed payable contracts: \$51,012,399.46
- Number of new receivable contracts executed: 66
- Total dollar amount of executed receivable contracts: \$186,850,934.00
- Number of purchase orders processed: 1,456
- Total dollar amount of purchase orders: \$5,907,763.48
- Number of outlays processed: 1,616
- Total dollar amount of processed outlays: \$292,326,180.92
- Number of escrow releases processed: 325
- Total dollar amount of processed escrow releases: \$594,654,371.11
- Number of contract payments processed: 856
- Total dollar amount of contract payments: \$48,623,288.79

Support Services and Contract Administration is currently staffed by 14 full time equivalents (FTEs). Two FTE positions for payment processing were eliminated within the past 12 months due to an agency-wide reduction in force initiative and other efficiencies. This reduction provided the agency a cost savings to correspond with a loss of revenue in legislative appropriations. Despite these losses, the division has been able to maintain service levels for internal and external customers. Staff continues to be praised for providing excellent customer service and response, which is a reflection of the division's effectiveness and the mission of Operations and Administration.

In October 2010, the Contract Administration process was reviewed by TWDB Internal Audit. The conclusion of the audit revealed that contracts are adequately planned, prepared and monitored.

Conclusions of the audit indicated that the Contract Administration team also provides high levels of customer service with an emphasis on excellent communication. The review recommended some minor improvements including the implementation of a contract manager training program and performance review requirements for contract managers, both of which have been implemented and documented through policies and procedures.

Contract Administration has been able to monitor contracting efficiencies through a variety of mechanisms. A particularly effective tool is the contract tracking database (work log) that records business process efficiencies for the team. The data from the work log are used for agency reports and for tracking contract status. As appropriate, contract data are reported to Board members and TWDB management staff. Work log data and statistics from the Contract Administration System (CAS) have become cornerstone factors to effective program and contract management.

In total, Support Services and Contract Administration staff members processed more than 5,000 individual work assignments/transactions during fiscal year 2011.

### **AGENCY CHARACTERISTICS REQUIRING IMPROVEMENT**

The agency is working toward a more strategic approach to its media and communications efforts. The TWDB should develop its key messages and implement strategies for deploying them. Another area needing improvement is accessibility. The agency needs to ensure that all staff members are trained on producing accessible materials.

The TxWISE application is currently based on a client server architecture. Agency staff may experience performance issues depending on the workstation configuration. In addition, application code resides on each TxWISE users' workstation. The application should be rewritten as a web application where the code resides on the server. There is currently an active project, TxWISE Phase 3, to rewrite TxWISE as a web application.

The Financial Information System (FIS) was written in Powerbuilder. Powerbuilder has been

in use since 1991; however, its market share has diminished. TWDB IT does not have skillset in Powerbuilder and therefore, maintenance on FIS cannot be accommodated. The functionality of the current FIS (and more) is included in the scope of the TxWISE Phase 3 project.

Support Services and Contract Administration is consistently seeking to review and improve its processes to better serve customers. Examples of recent improvements include:

- Policies and Procedures. New policies and procedures for contracting and purchasing have been a catalyst for self-evaluation within the group. Policies are reviewed regularly and revised as appropriate.
- Coordination of executable documents. Contract Administration is playing a central role in a new coordinated effort to route all contracts, grant agreements and loan/loan forgiveness agreements through a singular process. The new changes that have been implemented during the spring of 2012 are dynamic and evolving. Changes have already resulted in tracking and efficiency improvements.
- Electronic File storage in the Contract Administration System (CAS). With the implementation of the new CAS in November 2010, Contract Administration was provided with new tools allowing electronic documents to be uploaded to the system. Previously, documentation had been maintained on shared network storage space. All contracting and payment documentation has been converted to .pdf format and uploaded to CAS. Nevertheless, Contract Administration is seeking ways to convert other program documentation and reporting for inclusion into CAS. These efforts by Contract Administration on behalf of TWDB contract managers will be iterative and focused on assisting the contract managers with their documentation requirements.

### **KEY OBSTACLES**

In the next five years, the TWDB will need to overcome significant challenges (key obstacles) in order to manage its workforce and address the many factors that contribute to a constantly changing

environment. These factors can be categorized into three groups: Managing the Workforce, Budgetary Limitations and External Factors.

The workplace has always consisted of many generations working at one time. However, today's age-diverse workforce is working past retirement age, which has led to a generation gap of more than 40 years between the oldest and youngest workers. As a result, a one-size-fits-all approach is not appropriate in an age-diverse workforce that may have four generations of workers at one time. The TWDB must be prepared to work with the communication styles of each generation and find out what motivates each generation in order to bridge the generation gap. This is key in developing both succession planning and knowledge transfer for future generations.

Furthermore, as society in general becomes more diverse, the TWDB workforce must mirror this diversity, thereby meeting both the needs and expectations of the population it serves. The TWDB must continue to work with colleges, universities, and professional organizations to ensure that we have a varied and diverse perspective workforce.

In addition to the diversity and composition of the future TWDB workforce, fair pay will continue to impact recruitment and retention. The TWDB and state agencies in general currently cannot compete with other organizations in terms of compensating their employees. Many existing staff continue to serve the agency because they value its mission or enjoy the work-life balance that may be lacking in a for-profit company or firm. The TWDB must continue to foster an environment that offers not only fair compensation but other incentives that attract and retain staff.

For the first time in over three decades, Texas is beginning to experience a boom in the oil and natural gas industries. This has significant impact on the TWDB with regard to its inability to compete with major corporations for specialized positions such as engineers, geoscientists and hydrologists. The competitive labor market will only tighten as a result of this and further globalization of the economy. As a result, increased coordination and cooperation with federal, state and local entities will be necessary to develop efficiencies in service delivery that

could offset both funding and staff resource issues. Furthermore, the TWDB must strengthen its partnerships along with pursuing new ones in an effort to continue its leadership role in serving as the state's water resources agency.

As a state agency, the TWDB must manage its resources within the confines of continually decreasing appropriations, unfunded mandates and restrictive caps that curtail business activity. Funding for staff training and development gets reduced every appropriation cycle due partly to its low priority in regard to salary and other operating expenses. Additionally, the TWDB must adhere to an out-of-state travel cap as well as a management-to-staff ratio requirement that limits its ability to assign management roles based on business needs. In this climate of "do more with less," the TWDB must continue to provide education and outreach to legislative and other governmental entities, the private sector and the public. Understanding the importance of the state's most precious resource is the first step in ensuring that TWDB continues its role in serving the water needs of Texas.

The two significant obstacles for the Communications Division are limited staff resources and budget constraints. The reduced staff resources make it difficult for the team to engage in new communications technologies, such as social media, because those technologies are very labor intensive.

Because of budget constraints, some of the Communications' equipment is aging and out of warranty. Also, the agency cannot fund a content management system for the web, which would allow individual content areas to easily manage their Web pages.

Additionally, elimination of the agency's capital budgets will continue to stress the current motor pool fleet. There will be no opportunities to purchase new, replacement vehicles over the next biennium. The agency will need to ensure the current fleet is better maintained and more dependable since some of these vehicles are getting high on mileage.

Manual file routing continues to be critical to the business of Contract Administration. The current process for routing files adequately addresses the needs of contracting, purchasing and payment

processing, but presents some risks and obstacles. Manually routed files can be misplaced and are generally considered to be an inefficient method for obtaining signatures/approvals. Given the current technology that is available, implementation of systems to electronically route documentation could improve program efficiency and reduce the risk of lost documentation or delayed routing of assignments.

The Data Center Services contract has been a key obstacle in supporting and maintaining IT infrastructure. New vendors, Capgemini and ACS, will replace IBM as the DCS vendor. While TWDB IT is optimistic about the new vendors, relief regarding aging hardware is still one year away or more.

## **OPPORTUNITIES**

The agency has experienced a heightened interest from the media and general public because of drought and other current issues. This interest provides a new platform for more effective public outreach. Social media could help the division with that outreach and is generally low-cost or free.

An increasing number of low-cost training classes are making it possible for Communications to continue expanding its expertise in rapidly changing communications and Web technologies.

There are many opportunities for IT over the next months and years. These are included below.

TxWISE Phase 3 – includes the rewrite of the TxWISE client server application into a web application. FIS functionality (and more) is included in this project. Northbridge consulting has been contracted with to design and develop the application. This project is largely funded by the U. S. Environmental Protection Agency (EPA).

Water Information Integration and Dissemination (WIID) Rewrite – includes the rewrite of the current WIID application using the .NET C# framework. In addition, the GIS component will be rewritten to utilize ArcGIS from ESRI.

Regional Water Planning (2017) – includes the rewrite of the Regional Water Planning application using the .NET C# framework. Additional functionality and administrative features are included

in the project.

Wireless Network – includes deploying a wireless “guest” network on the 5th and 6th floors of the TWDB offices. The wireless network will not be connected to the Agency network.

Cloud Deployment – includes working with DIR to utilize cloud services to deploy two initial projects: 1) TNRIS production environment, and 2) the TxWISE development, test, and production environment.

Email in the Cloud – includes the analysis of Office 365 as a potential option for deploying agency email in the cloud.

The continuing implementation of the TxWise System and the full web enablement of the Contract Administration System (CAS) would provide the Contract Administration team with its strongest opportunity going forward. Contract Administration also envisions opportunities for more staff to be trained through the Comptroller’s revamped contract manager training program. Recent reductions to the course fees may increase participation, contingent on the availability of funding.

## **COORDINATION**

Human Resources staff actively coordinate with other state agencies both within the Capitol Complex and the state at large on matters pertaining to salary and benchmarking information, policy and rule making, and other HR-related topics and issues. Additionally, HR staff are members of several state and national professional organizations, such as the Texas State Human Resources Association, Society for Human Resources Management, the Austin Humane Resources Management Association, and the HR Certification Institute.

Communications staff collaborates with various partners to achieve their goals. The team works on an almost daily basis with reporters throughout the state to disseminate accurate and timely information. The Communications Division is a member of the Drought Joint Information Council, which confers regularly on critical drought issues. For print needs, the team works with the state’s Council on Competitive Government to ensure that agency materials are printed cost effectively and according

to state purchasing guidelines. They also work with the Texas State Library and the Department of Information Resources.

The TxWISE Phase 3 project is largely funded with federal funds from the U.S. Environmental Protection Agency (EPA). In addition to the federal funding, the TWDB uses an EPA national consultant from Northbridge Consulting for developing and deploying this new web application.

For those agencies under the Data Center Services contract, the IT Directors and their staff coordinate with each other and with the new vendors. In addition, agencies under the contract are divided into governance groups. TWDB is in Group 4 and there is even more coordination with agencies in Group 4.

Support Services and Contract Administration works very closely with external stakeholders to ensure the agency meets program expectations. State and Federal regulations and rules are key drivers that compel the division to remain connected with agencies such as the Legislative Budget Board, Comptroller of Public Accounts, Federal Emergency Management Agency and Environmental Protection Agency, amongst others. The division's business requirements call for tailored communications with external customers.

## **KEY RESOURCES**

The division's key resources are its skilled staff, followed closely by the technologies that staff require to perform their jobs.

IT consists of 20.5 FTEs and 4 consultants.

The Project Management Section has 3 project managers and 2.5 systems analysts; the Applications Services Section has 5 developers and 2 database administrators; and the Security, Infrastructure, and Service Desk Section has 5 resources.

Key resources on which Support Services and Contract Administration depend to carry out its mission include, but are not limited to:

- The Contract Administration System (CAS)
- CAS Adhoc Reporting Database
- TWDB Purchasing Database
- TWDB Outlay Database
- TWDB Escrow Database
- TWDB Contract Work Log

- Texas Water Information System Expansion (TxWise)
- Document scanning technology and adequate network/server allocation to store electronic documents
- Texas Fleet System (TxFS) – Comptroller of Public Accounts
- Inventory Database – Comptroller of Public Accounts
- Driver's License Database – Department of Public Safety
- COMDATA system – fleet and fuel reporting

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# Agency Goals

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Objectives and outcome measures

Strategies and output, efficiency, and explanatory measures



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# Agency Goals and Strategies

Agency Goal 1	Water Resources Planning
<p><i>Plan and guide the conservation, orderly and cost-effective development, and best management of the state's water resources for the benefit of all Texans.</i></p>	
<b>First Objective</b>	<p>Operate statewide, water-related data collection, integration, dissemination, and evaluation programs that provide public access to adequate information to conduct planning of water resources projects.</p>
<p><i>Outcome Measures</i></p>	<p>1. Percent of information available to adequately monitor the state's water supplies.</p>
<b>Strategy</b>	<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><i>Output Measures</i></p>	<p>1. Number of bay, estuary, and instream study elements completed.</p>
<b>Strategy</b>	<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><i>Output Measures</i></p>	<p>1. Number of data units collected/processed by TWDB staff.</p>
<b>Strategy</b>	<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><i>Output Measures</i></p>	<p>1. Number of person-hours in training classes and conferences sponsored by TNRIS. 2. Number of strategic mapping pool.</p>
<p><i>Explanatory Measures</i></p>	<p>1. Number of responses to requests for TNRIS-related information that are filled.</p>
<b>Second Objective</b>	<p>Conduct water planning and financial assistance activities to ensure adequate long-term water supplies, wastewater treatment, and flood protection.</p>
<p><i>Outcome Measures</i></p>	<p>1. Percent of key regional and statewide water planning activities completed.</p>
<b>Strategy</b>	<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><i>Output Measures</i></p>	<p>1. Number of responses to requests for water resources information that are filled.</p>

<b>Strategy</b>	Assist in the development and implementation of regional and state water plans and of 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.
<i>Output Measures</i>	1. Number of active grants for regional water, wastewater, flood, and research studies funded from the Research and Planning Fund.

<b>Third Objective</b>	Provide eligible political subdivisions in Texas with technical and/or financial assistance for water conservation to support planning, conservation, and responsible development of water supplies to meet the future demands for water as identified in the regional and state water plans.
<i>Outcome Measures</i>	<ol style="list-style-type: none"> <li>1. Percent of communities receiving technical and/or financial assistance.</li> <li>2. Percent of water saved with financial assistance.</li> </ol>

<b>Strategy</b>	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.
<i>Output Measures</i>	1. Number of responses to requests for water conservation information, literature, data, technical assistance, and educational activities provided by TWDB staff.

<b>Fourth Objective</b>	Administer the National Flood Insurance Program (NFIP).
<b>Strategy</b>	Perform community assistance pursuant to NFIP.
<i>Output Measures</i>	1. Number of communities assisted through Community Assistance Contacts and Community Assistance Visits.

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<b>Agency Goal 2</b>	<b>Water Project Financing</b>
<i>Provide cost-effective financing for the development of water supply for water quality protection and for other water-related projects.</i>	

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<b>First Objective</b>	Provide savings to Texas communities by making cost-effective financial assistance available for water supply, water quality protection, and other water-related infrastructure needs.
<i>Outcome Measures</i>	<ol style="list-style-type: none"> <li>1. Dollars committed as a percent of total financial assistance dollars.</li> <li>2. Dollars saved from TWDB assistance.</li> </ol>

<b>Strategy</b>	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.
<i>Output Measures</i>	<ol style="list-style-type: none"> <li>1. Number of state participation projects receiving financial assistance.</li> <li>2. Dollars committed to projects to implement the state water plan.</li> <li>3. Number of commitments to state water plan projects.</li> <li>4. Number of financial assistance commitments made.</li> <li>5. Number of commitments to small, rural, or disadvantaged community projects.</li> <li>6. Total dollars of financial assistance committed.</li> <li>7. Total dollars committed to small, rural, or disadvantaged community projects through agency programs targeting such communities.</li> <li>8. Number of communities with active financial assistance agreements.</li> <li>9. Number of construction contracts managed.</li> <li>10. Number of non-EDAP financial assistance agreements closed/executed.</li> <li>11. Number of new or updated water or wastewater facility needs.</li> </ol>
<i>Explanatory Measures</i>	<ol style="list-style-type: none"> <li>1. Number receiving water or wastewater services from regional systems.</li> <li>2. Dollars saved on water and wastewater services from regional systems.</li> <li>3. Dollars of financial assistance made available.</li> </ol>
<i>Efficiency Measures</i>	<ol style="list-style-type: none"> <li>1. Administrative cost per active financial assistance agreement.</li> <li>2. Financial assistance dollars managed per full-time equivalent.</li> </ol>
<b>Strategy</b>	Provide economically distressed areas access and connections to adequate water supply and/or wastewater treatment systems and/or indoor plumbing improvements.
<i>Output Measures</i>	<ol style="list-style-type: none"> <li>1. Number of economically distressed areas project loans and grants closed.</li> <li>2. Number of economically distressed areas projects that have completed all construction.</li> <li>3. Construction in progress for economically distressed areas projects.</li> </ol>
<i>Explanatory Measures</i>	<ol style="list-style-type: none"> <li>1. Economically distressed area residents provided adequate water supplies or wastewater systems.</li> </ol>
<i>Output Measure</i>	<ol style="list-style-type: none"> <li>1. Number of economically distressed areas projects that have complete non-construction activities in planning, acquisition or design.</li> </ol>

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**Agency Goal 3****Indirect Administration**

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**Strategy**

Central Administration

**Strategy**

Information Resources

**Strategy**

Other Support Services

# Technology Resources Planning

Technology assessment summary

Technology initiative alignment



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# Technology Resources Planning

## *Technology Initiative Assessment and Alignment*

<b>1. Initiative Name:</b>	
Replace legacy applications.	
<b>2. Initiative Description:</b> Brief description of the technology initiative.	
TWDB is replacing three current legacy applications.	
<b>3. Associated Project(s):</b> Name and status of current or planned project(s), if any, that support the technology initiative and that will be included in agency's Information Technology Detail.	
<b>Name</b>	<b>Status</b>
Texas Water Information System Expansion (TxWISE) Phase 3	Execution
Water Information Integration and Dissemination (WIID)	Execution
Regional Water Planning	Execution
<b>4. Agency Objective(s):</b> Identify the agency objective(s) that the technology initiative supports.	
<p>TxWISE Phase 3 – Agency Objective 2.1: Provide savings to Texas communities by making cost-effective financial assistance available for water supply, water quality protection, and other water related infrastructure needs.</p> <p>WIID – Agency Objective 1.1: Operate statewide, water-related data collection, integration, dissemination, and evaluation programs that provide public access to adequate information to conduct planning of water resources projects.</p> <p>Regional Water Planning – Agency Objective 1.2: Conduct water planning and financial assistance activities to ensure adequate long-term water supplies, wastewater treatment, and flood protection.</p>	
<b>5. Statewide Technology Priority(ies):</b> Identify the statewide technology priority or priorities the technology initiative aligns with, if any.	
<ul style="list-style-type: none"> <li>• P1 – Cloud</li> <li>• P2 – Data Management</li> <li>• P3 – Data Sharing</li> <li>• P4 – Infrastructure</li> <li>• P5 – Legacy Applications</li> </ul>	<ul style="list-style-type: none"> <li>• P6 – Mobility</li> <li>• P7 – Network</li> <li>• P8 – Open Data</li> <li>• P9 – Security and Privacy</li> <li>• P10 – Social Media</li> </ul>
<p>Replacing legacy applications aligns with the following statewide technology priorities:</p> <ul style="list-style-type: none"> <li>• P1 – Cloud</li> <li>• P2 – Data Management</li> <li>• P3 – Data Sharing</li> <li>• P5 – Legacy Applications</li> </ul>	

**6. Guiding Principles:** As applicable, describe how the technology initiative will address the following statewide technology guiding principles:

- Connect – expanding citizen access to services
- Innovate – leveraging technology services and solutions across agencies
- Trust – providing a clear and transparent accounting of government services and data
- Deliver – promoting a connected and agile workforce

**Connect**

Users will have 24x7 access to websites to obtain information.

**Innovate**

The TWDB will collaborate with Agencies such as TCEQ and TDLR for the projects in this technology initiative.

**Trust**

This technology initiative will provide a clear and transparent accounting of government services and data.

**Deliver**

Projects in this technology initiative will promote a connected and agile workforce.

**7. Anticipated Benefit(s):** Identify the benefits that are expected to be gained through the technology initiative.

Types of benefits include:

- Operational efficiencies (time, cost, productivity)
- Citizen/customer satisfaction (service delivery quality, cycle time)
- Security improvements
- Foundation for future operational improvements
- Compliance (required by State/Federal laws or regulations)

This technology initiative addresses legacy applications. All of the above benefits are expected to be gained through this technology initiative.

**8. Capabilities or Barriers:** Describe current agency capabilities or barriers that may advance or impede the agency's ability to successfully implement the technology initiative.

The agency resources assigned to the projects under this technology initiative are skilled and capable to work on the projects.

The availability of federal funding is a barrier that may impede the agency's ability to successfully implement this technology initiative.

Another barrier is the availability of the project resources. If the resources assigned to the projects under this technology initiative are pulled to address other agency initiatives, the project timelines may be delayed.

<b>1. Initiative Name:</b> Name of the technology initiative.	
Infrastructure.	
<b>2. Initiative Description:</b> Brief description of the technology initiative.	
The Texas Water Development Board became part of the Data Center Services (DCS) contract under HB 1516.	
<b>3. Associated Project(s):</b> Name and status of current or planned project(s), if any, that support the technology initiative and that will be included in agency's Information Technology Detail.	
<b>Name</b>	<b>Status</b>
DCS	Execution
<b>4. Agency Objective(s):</b> Identify the agency objective(s) that the technology initiative supports.	
All objectives.	
<b>5. Statewide Technology Priority(ies):</b> Identify the statewide technology priority or priorities the technology initiative aligns with, if any.	
<ul style="list-style-type: none"> <li>• P1 – Cloud</li> <li>• P2 – Data Management</li> <li>• P3 – Data Sharing</li> <li>• P4 – Infrastructure</li> <li>• P5 – Legacy Applications</li> </ul>	<ul style="list-style-type: none"> <li>• P6 – Mobility</li> <li>• P7 – Network</li> <li>• P8 – Open Data</li> <li>• P9 – Security and Privacy</li> <li>• P10 – Social Media</li> </ul>
<p>The DCS Technology initiative aligns with the following statewide technology priorities:</p> <ul style="list-style-type: none"> <li>• P1 – Cloud (DCS funding is used for the Pilot Texas Cloud Offering, PTCO)</li> <li>• P4 - Infrastructure</li> <li>• P5 – Legacy Applications</li> <li>• P9 – Security and Privacy</li> </ul>	
<b>6. Guiding Principles:</b> As applicable, describe how the technology initiative will address the following statewide technology guiding principles:	
<ul style="list-style-type: none"> <li>• Connect – expanding citizen access to services</li> <li>• Innovate – leveraging technology services and solutions across agencies</li> <li>• Trust – providing a clear and transparent accounting of government services and data</li> <li>• Deliver – promoting a connected and agile workforce</li> </ul>	
<b>Innovate</b>	
The DCS technology initiative will leverage technology and solutions across agencies.	
<b>Deliver</b>	
Promote a connected and agile workforce within the State of Texas and within the DCS vendors.	

**7. Anticipated Benefit(s):** Identify the benefits that are expected to be gained through the technology initiative.

Types of benefits include:

- Operational efficiencies (time, cost, productivity)
- Citizen/customer satisfaction (service delivery quality, cycle time)
- Security improvements
- Foundation for future operational improvements
- Compliance (required by State/Federal laws or regulations)

This technology initiative addresses DCS transformation. All of the above benefits are expected to be gained through this technology initiative.

**8. Capabilities or Barriers:** Describe current agency capabilities or barriers that may advance or impede the agency’s ability to successfully implement the technology initiative.

A capability of this technology initiative is that the Pilot Texas Cloud Offering (PTCO) is successful and Agency web applications are migrated to this cloud solution. Initially, the TxWISE Phase 3 project will utilize the PTCO for development, test, and production environments.

Additional costs not yet identified could be a barrier that impedes the agency’s ability to successfully implement this technology initiative.

Another barrier that may impede implementing this technology initiative is that current DCS funding will be insufficient to cover costs.

Current agency staff is spread thin due to current workload and additional work efforts requested by the new DCS vendors is a barrier.

**1. Initiative Name:** Name of the technology initiative.

Data sharing.

**2. Initiative Description:**

Implement a centralized statewide geospatial processing and mapping platform for government data and maps. This includes:

- data Services (i.e. Imagery, geoprocessing and analysis)
- indexed data catalog
- application development
- web mapping resources
- cloud hosting

<p>Platform includes commercial and open source resources and aligns with federal spatial data infrastructure technology initiatives to promote interoperability. This activity is in support of Geographic Information Officer (GIO) Implementation - §16.021 Tex. Water Code (2011). The legislature has assigned new responsibilities for the TWDB to serve as a centralized clearinghouse and to coordinate acquisition and use of high-priority imagery and data sets; establish support and disseminate authoritative statewide data sets; support geographic needs of emergency responders and support public access to state geographic data and resources.</p>	
<p><b>3. Associated Project(s):</b> Name and status of current or planned project(s), if any, that support the technology initiative and that will be included in agency's Information Technology Detail.</p>	
<b>Name</b>	<b>Status</b>
Texas Geospatial Data Visualization and Access Systems	Under Development
<p><b>4. Agency Objective(s):</b> Identify the agency objective(s) that the technology initiative supports.</p>	
<p>Objective 1.1: Operate statewide, water-related data collection, integration, dissemination, and evaluation programs that provide public access to adequate information to conduct planning of water resources.</p>	
<p><b>5. Statewide Technology Priority(ies):</b> Identify the statewide technology priority or priorities the technology initiative aligns with, if any.</p>	
<ul style="list-style-type: none"> <li>• P1 – Cloud</li> <li>• P2 – Data Management</li> <li>• P3 – Data Sharing</li> <li>• P4 – Infrastructure</li> <li>• P5 – Legacy Applications</li> </ul>	<ul style="list-style-type: none"> <li>• P6 – Mobility</li> <li>• P7 – Network</li> <li>• P8 – Open Data</li> <li>• P9 – Security and Privacy</li> <li>• P10 – Social Media</li> </ul>
<p>This technology initiative aligns with the following statewide technology priorities:</p> <ul style="list-style-type: none"> <li>• P1 – Cloud</li> <li>• P2 – Data Management</li> <li>• P3 – Data Sharing</li> <li>• P4 – Infrastructure</li> <li>• P6 – Mobility</li> <li>• P7 – Network</li> <li>• P8 – Open Data</li> <li>• P9 – Security and Privacy</li> <li>• P10 – Social Media</li> </ul>	
<p><b>6. Guiding Principles:</b> As applicable, describe how the technology initiative will address the following statewide technology guiding principles:</p> <ul style="list-style-type: none"> <li>• Connect – expanding citizen access to services</li> <li>• Innovate – leveraging technology services and solutions across agencies</li> <li>• Trust – providing a clear and transparent accounting of government services and data</li> <li>• Deliver – promoting a connected and agile workforce</li> </ul>	

**Connect**

Users will have access services and information 24x7 through the geospatial platform and associated websites to obtain information through a variety of accessible channels and collaborate and communicate with desktop and mobile devices

**Innovate**

Foster partnerships that deliver value through sustainable collaboration opportunities, TNRIS will gain meaningful results that:

- leverage technology services and solutions across agencies
- improve governance structures and processes
- implement leading-edge technology solutions that work for government
- open platforms and data services will promote citizen centric applications and promote transparency

**Trust**

Open access to public data and technology resources will build trusted resources that promote:

- clear and transparent accounting of government services and data
- reduced infrastructure and cyber security vulnerabilities
- security of personal information

**Deliver**

Technology solutions will deliver cost-effective and efficient results. Maximizing the state’s investment in geospatial technology will:

- reduce costs of service and consolidate shared services
- support alternate computing models for flexibility supported by interoperability standards
- promote a connected and responsive workforce

**7. Anticipated Benefit(s):** Identify the benefits that are expected to be gained through the technology initiative.

Types of benefits include:

- Operational efficiencies (time, cost, productivity)
- Citizen/customer satisfaction (service delivery quality, cycle time)
- Security improvements
- Foundation horizon for future operational improvements
- Compliance (required by State/Federal laws or regulations)

This technology initiative would result in citizen/customer satisfaction due to a more streamlined process for accessing data. It also addresses operational efficiencies in that a mobile solution will be deployed.

**8. Capabilities or Barriers:** Describe current agency capabilities or barriers that may advance or impede the agency’s ability to successfully implement the technology initiative.

Capability: Strong stakeholder engagement process organized to develop costs and requirements for implementation of this initiative

Capability: existing archives and systems in place are being designed for future platform deployment

Capability: Coordination responsibilities for outreach and engagement for multiple agencies (Federal, State and Local) are capabilities for successfully implementing this technology initiative.

**1. Initiative Name:** Name of the technology initiative.

Strategic Mapping Program

**2. Initiative Description:**

Strategic Mapping of Statewide Geospatial Base Data - acquire, develop, maintain and disseminate statewide geospatial data through collaboration with local, state, federal, and private sector entities. This includes agency responsibilities for preservation of historical photography archive, development of floodplain mapping data and alignment with state standards defined in the High Priority Imagery and Data Sets contract. This initiative is based on responsibilities found in Tex. Water Code §16.017 (b) ; §16.021; 16.316 (c)(4)(5)(6).

**3. Associated Project(s):** Name and status of current or planned project(s), if any, that support the technology initiative and that will be included in agency’s Information Technology Detail.

Name	Status
Strategic Mapping Program (StratMap)	Ongoing

**4. Agency Objective(s):** Identify the agency objective(s) that the technology initiative supports.

Objective 1.1: Operate statewide, water-related data collection, integration, dissemination, and evaluation programs that provide public access to adequate information to conduct planning of water resources.

Objective 1.2: Conduct water planning and financial assistance activities to ensure adequate long-term water supplies, wastewater treatment, and flood protection.

**5. Statewide Technology Priority(ies):** Identify the statewide technology priority or priorities the technology initiative aligns with, if any.

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• P1 – Cloud</li> <li>• P2 – Data Management</li> <li>• P3 – Data Sharing</li> <li>• P4 – Infrastructure</li> <li>• P5 – Legacy Applications</li> </ul> | <ul style="list-style-type: none"> <li>• P6 – Mobility</li> <li>• P7 – Network</li> <li>• P8 – Open Data</li> <li>• P9 – Security and Privacy</li> <li>• P10 – Social Media</li> </ul> |
|--|--|

- P1 - Cloud
- P2 – Data Management
- P3 – Data Sharing
- P6 – Mobility
- P8 – Open Data

**6. Guiding Principles:** As applicable, describe how the technology initiative will address the following statewide technology guiding principles:

- Connect – expanding citizen access to services
- Innovate – leveraging technology services and solutions across agencies
- Trust – providing a clear and transparent accounting of government services and data
- Deliver – promoting a connected and agile workforce

**Connect**

Users will have access services and information 24x7 through the geospatial platform and associated websites to obtain information through a variety of accessible channels and collaborate and communicate with desktop and mobile devices. Data standards will ensure freedom to share data across government enterprises

**Innovate**

Foster partnerships that deliver value through sustainable collaboration opportunities, TNRRIS will gain meaningful results that:

- leverage technology services and solutions across agencies
- improve governance structures and processes
- implement leading-edge technology solutions that work for government
- open platforms and data services will promote citizen centric applications and promote transparency

**Trust**

Open access to public data and technology resources will build trusted resources that promote:

- clear and transparent accounting of government services and data
- reduced infrastructure and cyber security vulnerabilities
- security of personal information

**Deliver**

Technology solutions will deliver cost-effective and efficient results. Maximizing the state’s investment in geospatial technology will:

- reduce costs of service and consolidate shared services
- support open data standards and open access to data

**7. Anticipated Benefit(s):** Identify the benefits that are expected to be gained through the technology initiative.

Types of benefits include:

- Operational efficiencies (time, cost, productivity)
- Citizen/customer satisfaction (service delivery quality, cycle time)
- Security improvements
- Foundation for future operational improvements
- Compliance (required by State/Federal laws or regulations)

This technology initiative will result in user satisfaction as a result of the availability of data and related services. Operational improvements are also gained in that more regular updates will be provided. An additional benefit is compliance by State and Federal laws and regulations.

**8. Capabilities or Barriers:** Describe current agency capabilities or barriers that may advance or impede the agency’s ability to successfully implement the technology initiative.

Capability: Coordination responsibilities for outreach and engagement for multiple agencies (Federal, State and Local) are capabilities for successfully implementing this technology initiative.



# Appendix

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Description of agency's planning process  
Current organizational chart  
Five-year projections for outcomes  
Performance measure definitions  
Workforce Plan  
Survey of Employee Engagement



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# Appendix A

## *Description of Agency's Planning Process*

The agency's 2013-2017 strategic planning process began with leadership meetings in the fall of 2011. The leadership team, consisting of the executive administrator, deputy executive administrators, General Counsel, and the directors of Internal Audit, Governmental Relations, Project Oversight and the American Recovery and Reinvestment Act Implementation, met regularly to discuss and lay out where they wanted to agency to go over the next five years.

Leadership conducted a strengths, weaknesses, opportunities and threats (SWOT) analysis to determine what the agency is good at, and where more energy needs to be focused. As a group, they also made revisions to the agency's vision statement and core values.

The agency conducted its bi-annual customer service survey to garner feedback from TWDB stakeholders. Responses were forwarded to appropriate agency staff to handle, and the overall results were used to formulate each office's self-evaluation portion of the plan. Answers were well aligned with what the TWDB is currently focused on, for both the present and future planning.

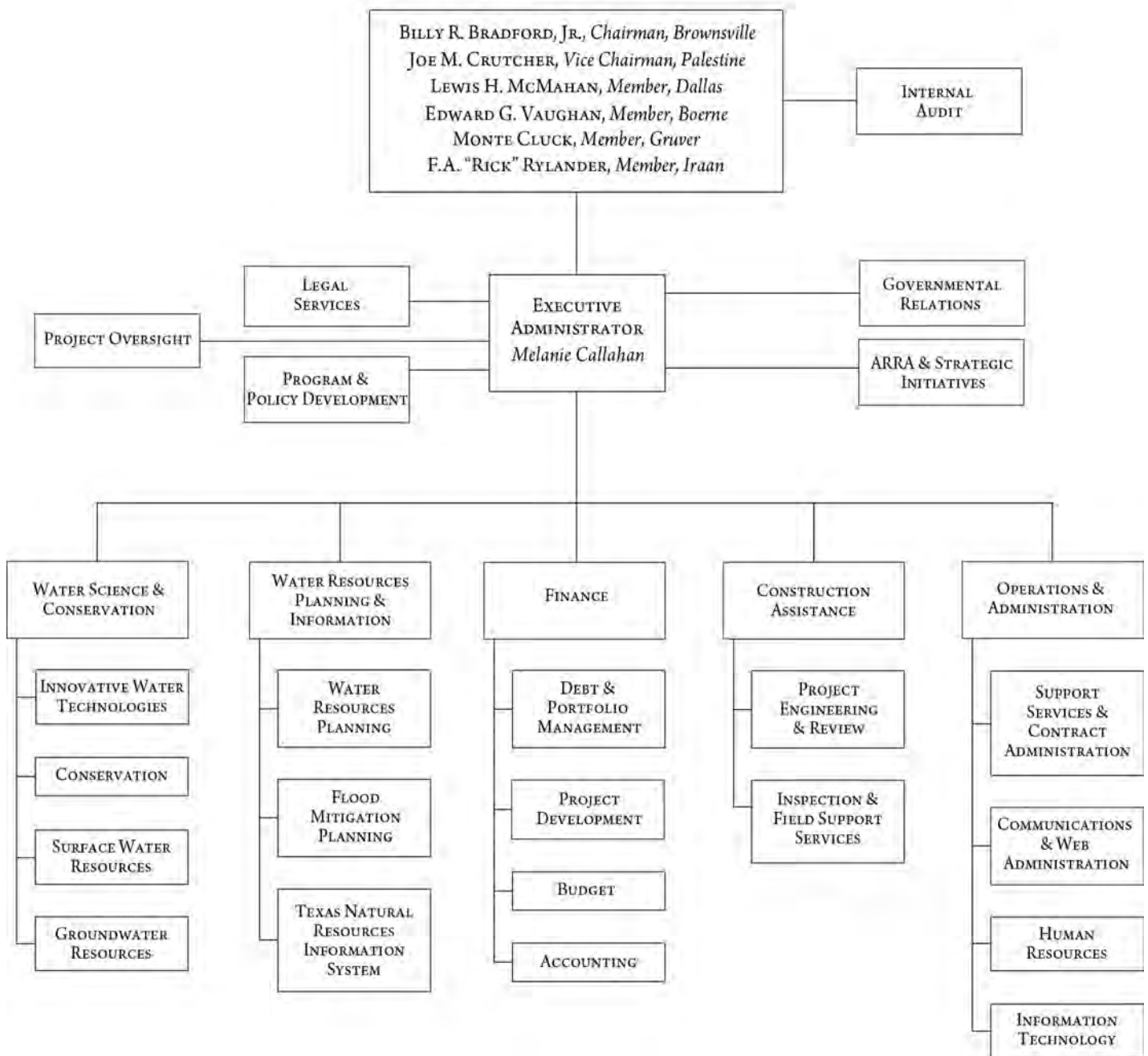
Throughout the strategic planning process, the Board was briefed on TWDB strategic planning activities and progress.

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# Appendix B

## Current Organizational Chart

### TEXAS WATER DEVELOPMENT BOARD Organization Chart



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# Appendix C

## *Five Year Projections for Outcome Measures*

<b>Outcome</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Percent of information available to adequately monitor the state's water supplies	66.9%	65.2%	64.2%	63.5%	63.0%
Percent of key regional and statewide water planning activities completed	90%	90%	90%	90%	90%
Percent of communities receiving technical and/or financial assistance	8.5%	8.5%	8.5%	8.5%	8.5%
Percent of water saved with financial assistance	7%	7%	7%	7%	7%
Dollars committed as a percent of total financial assistance dollars	80%	80%	80%	80%	80%
Dollars saved from TWDB assistance	\$165,985,860	\$165,985,860	\$165,985,860	\$165,985,860	\$165,985,860

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# Appendix D

## Performance Measure Definitions

AGENCY GOAL 1	WATER RESOURCES PLANNING
<b>FIRST OBJECTIVE</b>	<b>Operate statewide, water-related data collection, integration, dissemination, and evaluation programs that provide public access to adequate information to conduct planning of water resources projects.</b>
<b>Outcome Measure:</b>	<b>Percent of information available to adequately monitor the state's water supplies</b>
<i>Short Definition:</i>	Percent of information available to adequately monitor the state's water supplies.
<i>Purpose/Importance:</i>	This outcome reflects the percent of information available relative to the amount of information needed to adequately monitor the state's water supplies. The measure provides information concerning the adequacy of the state's water supply monitoring network aspects that are the TWDB's responsibility.
<i>Source/Collection:</i>	Information comes directly from TWDB monitoring programs for collection and analysis of groundwater, surface water, and environmental flow (bay, estuary, and instream) data, including data from cooperators, both paid, such as the USGS, and non-paid, such as groundwater conservation districts. Information is available when it has been collected by TWDB or other sources and processed by TWDB.
<i>Method of Calculation:</i>	Percent performance is calculated by dividing the amount of information available associated with adequately monitoring the state's water supplies from each TWDB monitoring program by the amount of information needed for each TWDB monitoring program to adequately monitor the state's groundwater and surface water supplies and multiplying by 100. These percentages are summed and their average is the reported measure. The amount of information needed for each TWDB monitoring program to monitor the state's water supplies adequately is contained in the Water Science and Conservation's Performance Measure Procedures document. The amount of information available associated with adequately monitoring the state's water supplies from each TWDB monitoring program is maintained by designated staff in spreadsheet form.
<i>Data Limitations:</i>	The TWDB does not have total control over either the amount or the time during which the information is received because this number reflects contributions from outside cooperators.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Actual performance higher than targeted reflects a greater amount of information available and is desirable.

STRATEGY	ENVIRONMENTAL IMPACT INFORMATION
<b>Output Measure:</b>	<b>Number of bay, estuary, and instream study elements completed</b>
<i>Short Definition:</i>	Number of bay, estuary, and instream study elements completed.
<i>Purpose/Importance:</i>	This measure shows the number of bay and estuary inflow and instream flow study elements completed annually as required by Texas Water Code Sections 16.058, 16.059, 11.1491, and 11.147. The measure also provides data on the progress of environmental flow needs studies necessary for planning, management, and availability modeling of the state's surface water as defined in Texas Water Code Section 11.021.
<i>Source/Collection:</i>	A study element is considered complete when designated staff has approved a study element. The number of study elements completed are maintained by designated staff in a spreadsheet according to the Water Science and Conservation's Performance Measure Procedures document.
<i>Method of Calculation:</i>	The number of study elements completed annually is calculated by adding the number of estuarine hydrographic surveys, hydrodynamic and salinity models, sediment analyses, nutrient analyses, fisheries analyses, freshwater inflow optimization analyses, water quality data collection and analysis, biological data collection and analysis, and verifications of needs for bays and estuaries to the number of instream flow study elements completed. The instream flow study elements are: study design, hydrologic and hydraulic evaluation, biological evaluation, physical processes evaluation, water quality evaluation, integration and interpretation, study report, and instream flow program support.
<i>Data Limitations:</i>	The number of study elements completed is dependent on the definition of study elements, which may be revised as necessary to fit the specific environment being studied. Verification of computed environmental flow needs information completed by cooperating agencies can be affected by other priorities in the joint interagency study program with the Texas Parks and Wildlife Department and the Texas Commission on Environmental Quality.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Actual performance higher than targeted would be desirable because it would provide needed information earlier in the process of regional and statewide water planning.

STRATEGY	WATER RESOURCES DATA
<b>Output Measure:</b>	<b>Number of data units collected/processed by TWDB staff</b>
<i>Short Definition:</i>	Short Definition: Number of data units collected and/or processed by TWDB staff in support of monitoring, investigating, and defining the state’s surface water and groundwater resources.
<i>Purpose/Importance:</i>	Purpose/Importance: This information provides an indication of the availability of data (collected by the TWDB and made available to the public, the TWDB, private companies, and governmental entities) necessary to perform water supply planning.
<i>Source/Collection:</i>	Information comes directly from TWDB staff collecting data and from cooperators, both paid, such as the USGS, and non-paid, such as groundwater conservation districts. Data units consist of: number of semi-monthly reservoir level measurements; number of semi-monthly periods that streamflow measurements are taken from daily streamflow sites funded by the TWDB; number of semi-monthly periods that meteorological reports are provided to TWDB by cooperators from TWDB-maintained stations; number of one-hundred-surface-acre areas surveyed by the TWDB during reservoir surveys; number of groundwater level measurements collected from non-recorder wells; number of groundwater levels (six per month) collected from automatic recorder sites; and number of groundwater quality analyses collected from wells and springs.
<i>Method of Calculation:</i>	The number of data units is calculated quarterly and is maintained by designated staff in spreadsheets and databases according to the Water Science and Conservation’s Performance Measures Procedures document.
<i>Data Limitations:</i>	The TWDB does not have total control over the amount nor the time during which the information is received because this number reflects contributions from outside cooperators.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Actual performance higher than targeted reflects a greater amount of information contributed by cooperators and is desirable.

<b>STRATEGY</b>	<b>AUTOMATED INFORMATION COLLECTION, MAINTENANCE AND DISSEMINATION</b>
<b>Output Measure:</b>	<b>Number of person-hours in training classes and conferences sponsored by TNRIS</b>
<i>Short Definition:</i>	This measure reports the number of person-hours in classes and conferences sponsored by TNRIS.
<i>Purpose/Importance:</i>	It quantifies the impact of TNRIS in providing technical training related to natural resource information and technology.
<i>Source/Collection:</i>	TNRIS training classes include workshops and short courses presented or sponsored by TNRIS. Outside experts may be hired by TNRIS on a consulting basis to provide instruction in the use of TNRIS-related facilities or technologies, or natural resource information. To be included, conferences must be sponsored or co-sponsored by TNRIS and relate to natural resource information and technologies. This measure is collected through registration records for each event to provide a total number of participants and the hours per event.
<i>Method of Calculation:</i>	The number of participants is then multiplied by the number of hours spent in each workshop, short course, training session, and conference to provide a total number of person-hours per event.
<i>Data Limitations:</i>	Measurement results are not subject to staff interpretation.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Desired performance would be reflected by higher than targeted results.
<b>Output Measure:</b>	<b>Number of strategic mapping pool</b>
<i>Short Definition:</i>	This measure records progress in maintaining the currency of the digital basemap for Texas, as defined by Texas Geographic Information Council (TGIC) in the Digital Texas 2004 report and initiated through the Texas Strategic Mapping (StratMap) Program created by the 75th Legislature in 1998. The digital base map consists of seven main layers or themes, augmented by fourteen additional layers. These layers can be classified in two categories: basemap vector layers and basemap raster themes (elevation, imagery). The modernization of the StratMap and basemap themes is accomplished by creating, updating, enhancing, or maintaining digital data layers. The measure is defined by counting the number of mapping units produced each quarter as a result of updates, maintenance, enhancement, and production of critical base map layers.

<i>Purpose/Importance:</i>	The measure is determined by the total number of current mapping units collected. Current mapping units are defined as updated, enhanced or new data at a scale of 1:24,000, or better, for one layer covering the area of one 7.5-minute USGS quadrangle. The Texas Geographic Information Council (TGIC) has identified these layers as requiring ongoing updates or maintenance to ensure that they will remain current. These themes are: transportation, political boundaries, elevation models and contours, watersheds, geographic names, parcel index, surface geology, street addresses, land use-land cover, and digital imagery. This measure is intended to ensure that the state receives, inventories, and integrates changes in these data themes as recorded by local, regional, state, and federal entities within Texas. Imagery and elevation models to update the digital data themes must also be received in a timely manner to ensure that the data remain useful for state and public planning purposes.
<i>Source/Collection:</i>	The measure information will be collected by the Texas Natural Resources Information System (TNRIS) division of the Texas Water Development Board (TWDB). Measure data will be stored and maintained within a database at TWDB.
<i>Method of Calculation:</i>	The measure is calculated as a total number of mapping units received, inventoried, and integrated into the existing basemap digital databases (both raster and vector) maintained by TNRIS. There are 4,376 quadrangle maps covering Texas. Total output for transportation and boundary update/maintenance is based on completing 4,376 mapping units per year. Output for digital imagery requires completion of 550 mapping units, covering 4,376 units over eight years. Annual output for all three data layers totals 9,302.
<i>Data Limitations:</i>	TWDB will be collecting updated transportation and boundary information from other entities of varied scale, quality, and format. Thus, data collected may not be standardized until processed by TWDB. Data updates may be submitted to TWDB at irregular intervals. TWDB will also be collecting data from a diverse group of data providers. Cooperation between these groups and TWDB is essential to ensure timely data updates and maintenance.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Desired performance would be to meet or exceed the targeted results.
<b>Explanatory Measure:</b>	<b>Number of responses to requests for TNRIS-related information that are filled</b>
<i>Short Definition:</i>	Report the number of requests from public or private entities for TNRIS-related information that are filled.

<i>Purpose/Importance:</i>	This measure reports the number of responses to requests from public or private entities for TNRIS-related information. This measure quantifies the role that TNRIS plays as the central repository and access for geo-spatial data utilized by governmental and private sector agencies in Texas.
<i>Source/Collection:</i>	<ul style="list-style-type: none"> <li>• • Quick Responses: Talled on a notepad and transferred to the Excel application to print monthly reports.</li> <li>• • Self-Service: Consultants trained to use TNRIS archives have an access database that resides on the TWDB network. The consultants sign in and then provide a monthly paper summary of their data request. These are tallied by request, not by volume.</li> <li>• • Data Delivery: A) Internet: The WebTrends Web tracking software counts data accesses on Web pages with downloadable data. TNRIS does not track “hits,” rather specific accesses to Web pages or sub-files. B) Sales: TNRIS accountant tracks the number of “orders” that have been placed into the accounting database for that month. This number only reflects actual transaction totals and does not reflect the total volume.</li> <li>• • Professional Services: Included within the Data Delivery report but category is used periodically to identify products that can be packaged into a data delivery to minimize the use of Professional Services.</li> </ul>
<i>Method of Calculation:</i>	<p>This measure is calculated by summing data gathered in the following categories:</p> <ul style="list-style-type: none"> <li>• • Self-Service requests: Data acquisitions by customers physically in the TNRIS office.</li> <li>• • Quick Response requests: Requests that are answered quickly (approximately five minutes or less), refer the person to the correct location to obtain information, and do not require a product delivery. QRs may be provided verbally (in person or phone), through e-mails or faxes.</li> <li>• • Data Delivery requests: Pre-packaged products delivered to a customer in the form of maps, digital data, handouts, and publications. DDs occur through the Internet, e-mails, over-the-counter, and faxes. Internet DDs are captured by a specialized counter that records the actual download of a computerized mapping or database file.</li> <li>• • Professional Services requests: Compilations, searches, or analyses performed of available water resource data that is not pre-packaged.</li> </ul>
<i>Data Limitations:</i>	A duplicate paper system may be utilized for self-service delivery or in the event the automated system is not available. Measurement results are not subject to staff interpretation.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Desired performance would be reflected by higher than targeted results.

<b>SECOND OBJECTIVE</b>	<b>Conduct water planning and financial assistance activities to ensure adequate long-term water supplies, wastewater treatment, and flood protection.</b>
<b>Outcome Measure:</b>	<b>Percent of key regional and statewide water planning activities completed</b>
<i>Short Definition:</i>	Percent of key regional and statewide water planning activities completed within the five-year planning cycle.
<i>Purpose/Importance:</i>	This outcome shows the percent of scheduled activities completed annually that are determined to be critical to the development of Regional and State Water Plans to meet future water supply needs in Texas.
<i>Source/Collection:</i>	<p>Measure annually assesses three activities that are consistently required each year throughout the cycle:</p> <ol style="list-style-type: none"> <li>1. Contract Management: Annual assessment is based on the number of total payment requests from the Planning Group Political Subdivisions (Contractors), which are paid within the contract specifications.</li> <li>2. Project Management: Assessment is based on number of all scheduled Planning Group meetings that are supported by the presence and participation of a TWDB representative.</li> <li>3. Database Management and Technical Assistance: Assessment based on the number of total requests for database information or assistance with database use that are fulfilled within the agreed period.</li> </ol>
<i>Method of Calculation:</i>	<p>Annually, numbers of payment requests, database requests, and Planning Group meetings are collected. These numerical data are converted to a percentage for the activities as described above. The individual activities completed are aggregated and divided by number of activities to provide the annual assessment of completed activities.</p> <p>Example Inputs:  FY 2003  Contract management (58/64)  Project management ((32/44)  Database management (60/75)</p> $= (58+32+60)/(64+44+75)$ $= 150/183$ $= 82.0\%$
<i>Data Limitations:</i>	No known data limitations.
<i>Calculation Type:</i>	Non-cumulative.

<i>New Measure:</i>	No.
<i>Target Attainment:</i>	To improve understanding and assessment of TWDB efforts throughout the regional and state water planning process. Higher than targeted performance indicates better progress and is desirable.
<b>STRATEGY</b>	<b>TECHNICAL ASSISTANCE AND MODELING</b>
<b>Output Measure:</b>	<b>Number of responses to requests for water resources information that are filled</b>
<i>Short Definition:</i>	This measure reports the number of requests for groundwater information.
<i>Purpose/Importance:</i>	This measure quantifies the role that the Groundwater Resources Division plays in the dissemination of valuable groundwater resource data to governmental and private concerns.
<i>Source/Collection:</i>	This measure is calculated by summing data requests in the following categories: <ul style="list-style-type: none"> <li>• • Quick Response requests: Requests for information that are answered quickly (approximately five minutes or less), refer the person to the correct location to obtain information, and do not require a product delivery. QRs may be provided verbally (in person or phone), through emails or faxes.</li> <li>• • Data Delivery requests: Pre-packaged products delivered to a customer in the form of maps, digital data, handouts, and publications. DDs occur through the mail, email, over-the-counter, and fax.</li> <li>• • Professional Services requests: Compilations, searches, or analyses performed of available water resource data that is not prepackaged.</li> </ul>
<i>Method of Calculation:</i>	Requests, entered by staff, are collected and maintained in an electronic format.
<i>Data Limitations:</i>	Back-ups are run nightly on the Novell Network. The maximum data loss from a system failure or crash would be one day's worth of data. A duplicate paper system may be utilized for self-service delivery or in the event the automated system is not available. Measurement results are not subject to staff interpretation.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Desired performance would be reflected by higher than targeted results.



<b>STRATEGY</b>	<b>WATER RESOURCES PLANNING</b>
<b>Output Measure:</b>	<b>Number of active grants for regional water, wastewater, flood, and research studies funded from the Research and Planning Fund</b>
<i>Short Definition:</i>	Number of active grants for regional water, wastewater, flood, and research studies funded from the Research and Planning Fund.
<i>Purpose/Importance:</i>	The number of active grants for studies is considered the number of studies funded from the Research and Planning Fund that require any management activity by TWDB staff and provides information on the workload associated with the grant program. A grant is active at the time of board action making a grant commitment until the contract retainer has been processed by designated staff in the Contract Administration Division.
<i>Source/Collection:</i>	Information for this measure is maintained by designated staff in a database according to the Office of Planning's Performance Measure Procedures document.
<i>Method of Calculation:</i>	This measure is calculated by adding the number of grant commitments made for studies during a particular fiscal year to the number of studies from previous fiscal years in progress at the beginning of each quarter.
<i>Data Limitations:</i>	No known data limitations. Measurement data is generated by TWDB staff through tracking of performance of grant studies as defined in the Office of Planning Performance Measures Procedures document.
<i>Calculation Type:</i>	Non-Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	A higher number is desired because this means that more grant money is being handed out.

<b>THIRD OBJECTIVE</b>	<b>Provide eligible political subdivisions in Texas with technical and/or financial assistance for water conservation to support planning, conservation, and responsible development of water supplies to meet the future demands for water as identified in the regional and state water plans.</b>
<b>Outcome Measure:</b>	<b>Percent of communities receiving technical and/or financial assistance</b>
<i>Short Definition:</i>	Percent of communities receiving technical and/or financial assistance for water planning and conservation.
<i>Purpose/Importance:</i>	This outcome measures the number of communities that receive technical and/or financial assistance from the TWDB for water conservation and financial assistance for water, wastewater, or flood protection planning relative to the total estimated number of Texas communities eligible for assistance. This outcome provides information on the percent of Texas communities that the TWDB is able to assist with the referenced programs.
<i>Source/Collection:</i>	The total number of Texas communities eligible for assistance is contained in Water Science and Conservation's Performance Measure Procedures document. Records of the communities assisted during each fiscal year for each of the above program areas is maintained in a database by designated staff. Each community receiving assistance is assigned a common but unique identifier in each of the program databases. These databases are then analyzed annually to ensure that individual communities are not double-counted. A particular community is counted only once during each fiscal year regardless of the number of times that community receives technical or financial assistance from TWDB.
<i>Method of Calculation:</i>	The measure is calculated by dividing the combined number of communities and other entities that are provided with technical and/or financial assistance from TWDB related to water conservation and water, wastewater, and flood protection planning by the total number of Texas communities eligible for assistance and multiplying by 100.
<i>Data Limitations:</i>	Technical assistance may be provided to individuals or firms that do not indicate they are associated with an eligible community; and thus, that particular community is not identified and counted.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	A higher percentage of communities being assisted is desirable.

<b>Outcome Measure:</b>	<b>Percent of water saved with financial assistance</b>
<i>Short Definition:</i>	Percent of annual water use saved by recipients of TWDB financial assistance.
<i>Purpose/Importance:</i>	This outcome demonstrates the amount of water saved by recipients of TWDB financial assistance due to conservation efforts relative to the amount of water used by the recipients and provides information on the amount of water savings due to conservation efforts by those recipients.
<i>Source/Collection:</i>	The amount of water saved is the annual water savings in acre-feet resulting from: (1) improvements made with systems or equipment purchased with TWDB agricultural water conservation grants or loans or (2) implementation of water conservation programs required as a condition of receiving TWDB loans for water supply or water quality enhancement projects. Recipients of TWDB financial assistance are required by rule to submit an annual report that includes estimates of water savings. Reported water savings are entered into a database by designated staff. The percentage may be adjusted based on the professional judgment of staff to remove or account for abnormal weather conditions or information that may become available in the future for those percentages used after the entity no longer submits reports to the TWDB. Water savings will be calculated for as long as a financial repayment obligation exists to the TWDB.
<i>Method of Calculation:</i>	The measure is calculated by dividing the amounts of water reported as saved for recipients of financial assistance by the total amount of water used by the entities receiving the financial assistance and multiplying by 100. Savings will be entered into a database and the average of all entities will be calculated according to the Water Science and Conservation's Performance Measure Procedures document.
<i>Data Limitations:</i>	The entities' reporting of water savings may be inaccurate or incomplete. TWDB estimates for years after entities have stopped reporting may not include specific data for that entity in a particular year.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	A higher percentage of savings is desirable.

<b>STRATEGY</b>	<b>WATER CONSERVATION EDUCATION AND ASSISTANCE</b>
<b>Output Measure:</b>	<b>Number of responses to requests for water conservation information, literature, data, technical assistance, and educational activities provided by TWDB staff</b>
<i>Short Definition:</i>	This measure reports the number of requests from public and private entities and individuals for water conservation information, literature, data, technical assistance, and educational activities provided by TWDB staff.
<i>Purpose/Importance:</i>	This measure is calculated by summing the number of responses to requests for information and assistance such as conservation information, literature, data, technical assistance, professional services, training, or equipment loans that is provided by TWDB Conservation staff.
<i>Source/Collection:</i>	<ul style="list-style-type: none"> <li>This measure is calculated by summing the number of responses to requests for information and assistance such as conservation information, literature, data, technical assistance, professional services, training or equipment loans that is provided by TWDB Conservation staff.</li> </ul>
<i>Method of Calculation:</i>	Requests, entered by staff, are collected and maintained in an electronic format.
<i>Data Limitations:</i>	Back-ups are run nightly on the Novell Network. The maximum data loss from a system failure or crash would be one day's worth of data. A duplicate paper system may be utilized for self-service delivery or in the event the automated system is not available. Measurement results are not subject to staff interpretation.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Desired performance would be reflected by higher than targeted results.

<b>FOURTH OBJECTIVE</b>	<b>Administer the National Flood Insurance Program (NFIP)</b>
<b>STRATEGY</b>	<b>COMMUNITY ASSISTANCE PURSUANT TO NFIP</b>
<b>Output Measure:</b>	<b>Number of communities assisted through community assistance contacts and community assistance visits</b>
<i>Short Definition:</i>	This measure reports the number of community assistance contacts made and the number of community assistance visits conducted. Community Assistance Contacts provide an opportunity to establish or re-establish contact with an NFIP participating community for the purpose of determining if any problems or issues exist and to offer assistance if necessary. Community Assistance Contacts may include telephone or personal contact with a community. 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 NFIP.
<i>Purpose/Importance:</i>	The measure reflects the combined workload of agency staff associated with ensuring that communities that participate in the National Flood Insurance Program receive sufficient technical assistance and are compliant with federal floodplain management regulations. Failure to be compliant would result in the community being suspended from the program and its citizens losing the ability to obtain federal flood insurance.
<i>Source/Collection:</i>	The numbers of communities assisted through Community Assistance Contacts and Community Assistance Visits are entered by NFIP staff into the Federal Emergency Management Agency's Community Information System database after completion of a contact or visit.
<i>Method of Calculation:</i>	The number of communities assessed is tracked by NFIP staff.
<i>Data Limitations:</i>	No known data limitations.
<i>Calculation Type:</i>	Cumulative
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Desired performance would be reflected by meeting or exceeding targeted results.

**AGENCY GOAL 2**

**WATER PROJECT FINANCING**

<b>FIRST OBJECTIVE</b>	<b>Provide savings to Texas communities by making cost-effective financial assistance available for water supply, water quality protection, and other water-related infrastructure needs.</b>
<b>Outcome Measure:</b>	<b>Dollars committed as a percent of total financial assistance dollars</b>
<i>Short Definition:</i>	Total dollars committed as a percent of total financial assistance dollars available.
<i>Purpose/Importance:</i>	This measure is intended to: demonstrate the TWDB’s effort to make funds available for financing; measure our effectiveness in marketing and providing technical assistance; and measure our effectiveness at committing funds to cost-effective water related projects.
<i>Source/Collection:</i>	The source of the numerator (“Total dollars committed”) will come from the Board’s Financial Information System (FIS) or subsequent database system. The agency will look at historical periods for establishing the benchmark and at the actual commitment dollars for the budget reporting period, for the reporting period of record. Commitments are Board-approved dedications of funds for specific projects.
<i>Method of Calculation:</i>	The reporting period “total dollars committed” will be divided by the “total financial assistance dollars available” and expressed as a percentage.
<i>Data Limitations:</i>	The denominator is set at the time of the benchmark and should not change. However, if federal grants or state appropriations change during the year, then this could have effects on the target
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Outcome Measure:</b>	<b>Dollars saved from TWDB assistance</b>
<i>Short Definition:</i>	This measure indicates the projected interest savings to local governments resulting from TWDB financial assistance.
<i>Purpose/Importance:</i>	This measure is important as it demonstrates the cost effectiveness of financial assistance provided to Texas communities.
<i>Source/Collection:</i>	A spreadsheet is used to calculate this measure. Current Year “Commitment Amounts” from the FIS or subsequent Board database system is the source of the numerator for the calculation.

<i>Method of Calculation:</i>	For loans, using an estimated interest rate differential, calculate the difference in the interest cost for TWDB loans versus estimated market rates, commercial loan rates, or bond interest rates. Depending on the loan program, various differentials are assumed in order to reflect the level of savings estimated for the program. For grants, the savings are calculated by using the total estimated market or commercial loan principal and interest costs. All TWDB loans and grant programs are included, except for General Research and Planning grants, Regional Water Planning grants, and Agricultural grants. The commitment dollar value used in this measure is not adjusted for commitment cancellations that occur when a loan is closed for less than the commitment amount, when a commitment expires without a closing, or when the TWDB formally cancels a commitment. Savings will be calculated as: $\text{Sum (Loans/type * Gross Int-saved Factor/type)} + \text{Sum (Grants/type)} + \text{Sum (Grants/type * GIFT)}$
<i>Data Limitations:</i>	The gross dollar savings resulting from TWDB financial assistance can be limited by highly competitive interest rates.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>STRATEGY</b>	<b>STATE AND FEDERAL FINANCIAL ASSISTANCE PROGRAMS</b>
<b>Output Measure:</b>	<b>Number of state participation projects receiving financial assistance</b>
<i>Short Definition:</i>	Measure indicates TWDB workload activity associated with state participation loans. State participation is when the state may purchase interest in a reservoir, water supply, or regional wastewater treatment project. The state's ownership interest will be purchased by the political subdivision over a specified period of time.
<i>Purpose/Importance:</i>	This measure reflects the number of commitments provided to state participation projects and is important because it ensures the optimum development for areas of high growth where the existing customer base is not able to afford proper funding at that current time.
<i>Source/Collection:</i>	This information will come from FIS or a subsequent Board database system.
<i>Method of Calculation:</i>	The measure is calculated each quarter by totaling the number of state participation commitments.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target

<b>Output Measure:</b>	<b>Total dollars committed to projects to implement the State Water Plan</b>
<i>Short Definition:</i>	Sum of committed financial assistance (dollars) to projects identified in the State Water Plan (SWP) during the reporting period. Commitments are Board-approved dedications of funds for projects and are counted at the time of the Board action.
<i>Purpose/Importance:</i>	This measure reflects the Board's commitment to the implementation of water management strategies in the SWP. This is important because it indicates progress on the implementation of the SWP, although only those funded through the Board, to prepare the state to meet future water needs and for drought. The breakout of the individual water management strategies in the Comment section of this measure will provide staff with an overview of which SWP strategies are being implemented.
<i>Source/Collection:</i>	Board financial assistance commitments to SWP projects will come from an internal PFCA or subsequent Board database system, which records project information provided by Water Resources Planning & Information (WRPI). Dollars of commitments will come from the FIS or subsequent Board database.
<i>Method of Calculation:</i>	The measure is calculated by summing the amount of financial assistance committed for the recording period and year to date.
<i>Data Limitations:</i>	Recipients may withdraw from the financial assistance commitments without taking any funds. The dollar amount committed is not adjusted for such withdrawals.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Number of commitments to State Water Plan projects</b>
<i>Short Definition:</i>	Count of Board commitments of financial assistance to projects identified in the State Water Plan (SWP) during the reporting period. Commitments are Board-approved dedications of funds for projects and are counted at the time of the Board action. Board actions to increase the amount of grant and loan will also be counted as a commitment.
<i>Purpose/Importance:</i>	This measure reflects the Board's commitment to the implementation of water management strategies in the SWP. This is important because it indicates progress on the implementation of the SWP to prepare the state to meet future water needs and for drought. The breakout of the individual water management strategies in the Comment section of this measure will provide staff with an overview of which SWP strategies are being implemented.



<i>Source/Collection:</i>	The number of the Board's financial assistance commitments to SWP projects will come from an internal PFCA or subsequent Board database, which records project information provided by Water Resources Planning & Information (WRPI).
<i>Method of Calculation:</i>	Count the number of commitments made each month from the data supplied by the internal PFCA or subsequent Board database system.
<i>Data Limitations:</i>	Recipients may withdraw from the financial assistance commitments without taking any funds. The count is not adjusted for such withdrawals.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Number of financial assistance commitments made</b>
<i>Short Definition:</i>	Provide financial assistance through SRF Programs and other Federal and State programs to save money for Texas communities for water supply, water quality protection, and other water-related projects.
<i>Purpose/Importance:</i>	This data is important because it represents the number of cost-effective financial assistance commitments provided to communities by TWDB.
<i>Source/Collection:</i>	This information is provided in the FIS or subsequent Board database system.
<i>Method of Calculation:</i>	The measure is calculated each quarter by totaling the number of financial assistance commitments provided to communities.
<i>Data Limitations:</i>	Recipients may withdraw from the financial assistance commitments without taking any funds. The count is not adjusted for such withdrawals.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Number of commitments to small, rural, or disadvantaged community projects</b>
<i>Short Definition:</i>	This is a count of the number of loan and grant financial assistance commitments the TWDB makes to small, rural, or disadvantaged community projects through one of the TWDB programs directed at small, rural, or disadvantaged communities.
<i>Purpose/Importance:</i>	This measure is important because it represents the number of small, rural, and disadvantaged communities that receive cost-effective financial assistance commitments from the TWDB.

<i>Source/Collection:</i>	The performance data will be based on Board commitments recorded in the database or subsequent Board database system.
<i>Method of Calculation:</i>	Query the FIS or subsequent Board database system to identify the commitments made during the reporting period. A commitment consists of a Board action on one project for funding from one program. Board actions to increase the amount of grant and loan will also be counted as a commitment. Rural is defined as a communities of less than 5,000 in population and in a county not included in a MSA. Small communities are those with populations of less than 5,000. This information is captured in population data from Water Resources Planning and Information (WRPI) and the IUPs. Disadvantaged is defined as those communities receiving funding from any of the programs identified in this measure.
<i>Data Limitations:</i>	Recipients may withdraw from the financial assistance commitments without taking any funds. The count is not adjusted for such withdrawals.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Total dollars of financial assistance committed</b>
<i>Short Definition:</i>	This measure accounts for the total dollars in financial assistance provided to communities per reporting period.
<i>Purpose/Importance:</i>	This measure represents a significant workload effort and is an important measure that assesses the TWDB's performance in providing financial assistance to communities.
<i>Source/Collection:</i>	This information is provided in the FIS or subsequent Board database system.
<i>Method of Calculation:</i>	The measure is calculated each quarter by totaling the dollar amount in financial assistance commitments provided to communities.
<i>Data Limitations:</i>	Recipients may withdraw from the financial assistance commitments without taking any funds. The count is not adjusted for such withdrawals.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.

<b>Output Measure:</b>	<b>Total dollars committed to small, rural, or disadvantaged community projects through agency programs targeting such communities</b>
<i>Short Definition:</i>	Sum of the dollar value of loan and grant financial assistance commitments the TWDB makes to small, rural, or disadvantaged community projects through one of the TWDB programs directed at small, rural, or disadvantaged communities.
<i>Purpose/Importance:</i>	The performance data will be based on Board commitments recorded in the FIS or subsequent Board database system.
<i>Source/Collection:</i>	Query the FIS database or subsequent Board database system to identify and sum the dollar value of commitments made during the reporting period from TWDB programs.
<i>Method of Calculation:</i>	Query the FIS database to identify and sum the dollar value of commitments made during the reporting period from the programs listed in the source/ collection of data. A commitment consists of a Board action on one project for funding from one program. Dollars associated with Board actions to increase the amount of grant and loan will also be counted in the total.
<i>Data Limitations:</i>	Recipients may withdraw from the financial assistance commitments without taking any funds. The dollars are not adjusted for such withdrawals.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Number of communities with active financial assistance agreements</b>
<i>Short Definition:</i>	This measure accounts for the number of entities having commitments and/or active loan or grant agreements requiring financial compliance, monitoring, and day-to-day portfolio and contract administration.
<i>Purpose/Importance:</i>	This measure will provide the TWDB and the legislature a gauge of how many communities the TWDB is interacting with each year.
<i>Source/Collection:</i>	This information is provided in the FIS or subsequent Board database system.
<i>Method of Calculation:</i>	The measure is calculated each quarter by totaling the number of communities that had active financial assistance agreements during the reporting period.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.

<b>Output Measure:</b>	<b>Number of construction contracts managed</b>
<i>Short Definition:</i>	Construction contracts in progress are construction contracts that result from non-EDAP financial assistance commitments approved by the TWDB that are in various stages of construction, from approval of plans and specifications through construction to completion, verified by final inspection.
<i>Purpose/Importance:</i>	This measure demonstrates the staff effort required after a financial assistance commitment is made to ensure completion of projects. Once entities are granted commitments, there are a number of construction contracts that must be executed to complete a project. This measure is important because it enables the TWDB to track the progress of the construction contracts, which directly reflects the completeness of a project.
<i>Source/Collection:</i>	This information is provided in the Board TxWISE/IFSS database system. The CA Inspection Field Support Division Offices monitor the progress of construction contracts for all of the entities that have a commitment with the TWDB.
<i>Method of Calculation:</i>	This measure is calculated each quarter by totaling the number of construction contracts in progress.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Number of non-EDAP financial assistance agreements closed/executed</b>
<i>Short Definition:</i>	This measure accounts for the number of non-EDAP financial assistance agreements closings processed per reporting period.
<i>Purpose/Importance:</i>	This measure quantifies the amount of information input to the Facility Needs (FN) Section database system or subsequent Board database system. The database facilitates and aids FN participation in two federally mandated water-related infrastructure needs surveys: 1) the Clean Water (Act) Needs Survey, and 2) the (Safe) Drinking Water (Act) Needs Survey. Needs identified for Texas determine the state's allotment of federal funding for the Clean Water and Drinking Water State Revolving Fund Programs.

<i>Source/Collection:</i>	Communities and other entities includes cities, water districts, municipal utility districts, water supply corporations, and other political subdivisions that manage or plan for water resources for which TWDB staff obtains current needs information regarding water, wastewater, and other water-related infrastructure. Update information is collected by: 1) direct contact with communities (e.g., site visits) by TWDB staff, 2) various secondary sources including Texas Commission on Environmental Quality (TCEQ) files and databases, 3) capital improvement planning documents obtained from public utilities, 4) TWDB-funded facility planning studies, and 5) direct mail surveys. A network database is maintained that includes facility needs data for Texas communities. A need is “identified” when a community/entity record is either established or updated in the database.
<i>Method of Calculation:</i>	This measure is calculated each quarter by totaling the number of construction contracts in progress.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Number of new or updated water or wastewater facility needs</b>
<i>Short Definition:</i>	This measure reports the number of updates to information on water-related facility needs for Texas communities and other entities.
<i>Purpose/Importance:</i>	This measure quantifies the amount of information input to the Facility Needs (FN) Section database system or subsequent Board database system. The database facilitates and aids FN participation in two federally mandated water-related infrastructure needs surveys: 1) the Clean Water (Act) Needs Survey, and 2) the (Safe) Drinking Water (Act) Needs Survey. Needs identified for Texas determine the state’s allotment of federal funding for the Clean Water and Drinking Water State Revolving Fund Programs.

<i>Source/Collection:</i>	Communities and other entities includes cities, water districts, municipal utility districts, water supply corporations, and other political subdivisions that manage or plan for water resources for which TWDB staff obtains current needs information regarding water, wastewater and other water-related infrastructure. Update information is collected by: 1) direct contact with communities (e.g., site visits) by TWDB staff, 2) various secondary sources including Texas Commission on Environmental Quality (TCEQ) files and databases, 3) capital improvement planning documents obtained from public utilities, 4) TWDB-funded facility planning studies, and 5) direct mail surveys. A network database is maintained that includes facility needs data for Texas communities. A need is “identified” when a community/entity record is either established or updated in the database.
<i>Method of Calculation:</i>	The calculation methodology is a simple sum of the number of facility database records that have been updated.
<i>Data Limitations:</i>	Back-ups are run nightly on the agency’s Unix database server. The maximum data loss from a system failure would be one day’s input. Measurement results are not subject to staff interpretation.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Desired performance would be reflected by higher than targeted results.
<b>Explanatory Measure:</b>	<b>Number receiving water or wastewater service from regional systems</b>
<i>Short Definition:</i>	This measure indicates TWDB workload activity associated with providing communities with water or wastewater service through regional systems with state ownership investment.
<i>Purpose/Importance:</i>	This measure identifies the number of communities benefiting from TWDB-funded state participation projects.
<i>Source/Collection:</i>	The information that is used to generate the quarterly performance for this measure is maintained in an internal PFCA database or subsequent Board database system.
<i>Method of Calculation:</i>	The measure is calculated each quarter by totaling the number of communities that received state participation funds.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Explanatory Measure:</b>	<b>Dollars saved on water and wastewater service from regional systems</b>

<i>Short Definition:</i>	This measure indicates dollars saved by regional project sponsors that received a TWDB financial assistance commitment for a state participation project.
<i>Purpose/Importance:</i>	This measure demonstrates the dollars saved by entities receiving a state participation financial assistance commitment. This measure is important, as it provides a basis for comparing TWDB interest rates with commercial market interest rates.
<i>Source/Collection:</i>	The total dollar savings for regional systems with state ownership is determined based on historical trends. The total projected savings provided by the division director for the fiscal year are then entered into a spreadsheet and totaled.
<i>Method of Calculation:</i>	Savings are based on a rate differential and calculated when a commitment is made. Savings are calculated according to the market rate differential between the total projected repurchase cost and the projected market cost, using the commitment report.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Explanatory Measure:</b>	<b>Dollars of financial assistance made available</b>
<i>Short Definition:</i>	The sum of the dollars that are made available for each financial assistance program over the course of a fiscal year. Through Intended Use Plans, sustainable capacity models, and appropriations the agency will establish an amount of funds designated as available for funding.
<i>Purpose/Importance:</i>	This measure is important because it establishes a base line of available resources from which the Board staff can develop projects and establish targets and goals for financial assistance commitments. While it may seem that the resources are not limited, except by bond authorization authority, there are, in fact, limits based upon certain program capacities, the amount of federal grants available, and the limitations or enhancements set by Appropriations Bill Riders. Therefore, this is an important benchmark to adequately measure the success achieved in committing funds while respecting the limitations of resources actually available while running sound and prudent programs of assurance to Texas communities.

<i>Source/Collection:</i>	The source of this will be “total financial assistance dollars available” for the specific period for financial assistance commitments. This total will be derived from the sum of money identified as available in the Intended Use Plan for the Drinking Water State Revolving Fund Program, the sustainable capacity models for the Clean Water State Revolving Fund Program and State Loan Program (Development Fund II), program fund balances, pending bond issues, and Legislative Appropriations and/or debt issuance authorization for the other financial assistance programs.
<i>Method of Calculation:</i>	The total will be derived from the sum of money identified as from the various sources listed.
<i>Data Limitations:</i>	This amount available is set as the benchmark for evaluating our performance and should not change after the amounts available for each program are established. Revisions to capacity models made late in the fiscal year will change the benchmark.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Efficiency Measure:</b>	<b>Administrative cost per active financial assistance agreement</b>
<i>Short Definition:</i>	This measure indicates the total dollars spent per active financial assistance agreement.
<i>Purpose/Importance:</i>	This measure demonstrates the average cost for each financial assistance agreement.
<i>Source/Collection:</i>	The financial assistance information is provided in the FIS or subsequent Board database system. The administration cost information is maintained in the agency’s MIP system or subsequent Board database system.
<i>Method of Calculation:</i>	Per reporting period, the total number of active financial assistance agreements is divided by the total administrative cost of the financial assistance programs.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Lower than target.
<b>Efficiency Measure:</b>	<b>Financial assistance dollars managed per FTE</b>
<i>Short Definition:</i>	This measure indicates the total dollars managed and administered by staff in the financial assistance programs.
<i>Purpose/Importance:</i>	This measure demonstrates the average amount of funds that are managed by program staff.



<i>Source/Collection:</i>	Data on the loan dollars managed is provided in the FIS or subsequent Board database system. The FTE information is maintained in the agency's USAS system.
<i>Method of Calculation:</i>	Data on the loan dollars managed is provided in a database system that was created by TWDB staff called the Financial Information System (FIS). Data on the amount of grant dollars managed are maintained in the agency's EVARE system. The FTE information is maintained in the agency's USAS system.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>STRATEGY</b>	<b>ECONOMICALLY DISTRESSED AREAS PROGRAM</b>
<b>Output Measure:</b>	<b>Number of economically distressed areas project loans and grants closed</b>
<i>Short Definition:</i>	This measure indicates TWDB workload activity associated with economically distressed areas. The number of loans closed and grants executed, which are funded from the Economically Distressed Areas Program Account.
<i>Purpose/Importance:</i>	This is a measure of major TWDB activity for the Economically Distressed Areas Program.
<i>Source/Collection:</i>	The information for loans and grants closed or subsequent Board database system.
<i>Method of Calculation:</i>	The measure is calculated each quarter by totaling the number of economically distressed areas loans closed and grants executed.
<i>Data Limitations:</i>	No limitations.
<i>Calculation Type:</i>	Cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Number of economically distressed areas projects that have completed all construction</b>
<i>Short Definition:</i>	This measure indicates the number of projects for which the TWDB has determined construction is complete.
<i>Purpose/Importance:</i>	This measure demonstrates the progress of the EDAP by counting the number of completed projects.

<i>Source/Collection:</i>	This information is provided in the Board TxWISE/IFSS database system. The CA Inspection Field Support Division Offices monitor the progress of construction contracts for all of the entities that have a commitment with the TWDB.
<i>Method of Calculation:</i>	The measure is calculated by totaling the number of completed economically distressed areas construction projects contracts.
<i>Data Limitations:</i>	No limitations.
<i>Calculation Type:</i>	Although the measure is cumulative over time, it includes performance data carried over from previous fiscal years.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Construction in progress for economically distressed areas projects</b>
<i>Short Definition:</i>	Construction contracts in progress are regarded as loan/grant commitments approved by the TWDB that are in various stages of construction, from approval of plans and specifications through construction to completion is verified by final inspection.
<i>Purpose/Importance:</i>	This measure demonstrates the staff effort required after a financial assistance commitment is made to ensure completion of projects.
<i>Source/Collection:</i>	The information used to generate the quarterly performance for this measure is maintained in the Board TxWISE/IFSS database system. The CA Inspection Field Support Division Offices monitor the progress of construction contracts for all of the entities that have a commitment with the TWDB.
<i>Method of Calculation:</i>	This measure is calculated by beginning with a baseline number of all contracts with approved plans and specifications, built without a final inspection at the beginning of each fiscal year. The measure for the first quarter is calculated by taking the beginning baseline number and adding all plans and specifications approved during the quarter. For the second, third and fourth quarters, the measure is calculated by taking the number at the end of the previous quarter and adding the number of plans and specifications approved during the quarter and subtracting the number of final inspections conducted during the pervious quarter. The fiscal year end number is calculated by taking the fourth quarter, which will then also become the baseline number for the first quarter of the following fiscal year.
<i>Data Limitations:</i>	No limitations.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.

<b>Explanatory Measure:</b>	<b>Economically distressed area residents provided adequate water supplies or wastewater systems</b>
<i>Short Definition:</i>	This measure indicates the number of people who will be able to receive adequate water or wastewater service.
<i>Purpose/Importance:</i>	This measure demonstrates the number of residents who may benefit from the EDAP and will have safe drinking water.
<i>Source/Collection:</i>	The number of residents that can be served by a completed construction project is reported in the EDAP monthly status report. When a project has been determined to be complete by running the query identified in Output Measure 02-01-02.03, the information is provided to the administrative technician that maintains the EDAP monthly report. Each month, projects are reported by phase of development at the end of the month. The advancement of a project from construction to completion also reflects the number of economically distressed areas and residents that can be served by the completed project. A running total is calculated in the Financial Summary, which is located at V:\share\status\Fundbrk2.xls - \$_Sum.
<i>Method of Calculation:</i>	The total number of economically distressed areas residents is calculated by adding the number of residents identified in the EDAP Monthly Status Report.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	Non-cumulative.
<i>New Measure:</i>	No.
<i>Target Attainment:</i>	Higher than target.
<b>Output Measure:</b>	<b>Number of economically distressed areas projects that have completed non-construction activities in planning, acquisition or design.</b>
<i>Short Definition:</i>	This measure indicates the number of projects for which the TWDB has determined is complete for Planning or Acquisition or Design, or a combination thereof, as determined by the grant agreement.
<i>Purpose/Importance:</i>	This measure demonstrates the progress of the EDAP by counting the number of completed projects.
<i>Source/Collection:</i>	The information that is used to generate the quarterly performance for this measure is maintained in the monthly EDAP status report.
<i>Method of Calculation:</i>	The measure is calculated by totaling the number of completed economically distressed areas, non-construction related projects.
<i>Data Limitations:</i>	No data limitations.
<i>Calculation Type:</i>	The measure is cumulative over time.
<i>New Measure:</i>	Yes.
<i>Target Attainment:</i>	Higher than target.



# Appendix E

## *Workforce Plan*

### **Overview of Operations**

#### **AGENCY VISION AND MISSION**

The Texas Water Development Board (TWDB) is the state's water planning and water project financing agency. The TWDB's main responsibilities are threefold: collecting and disseminating water-related data; assisting with regional water planning and preparing the state water plan for the development of the state's water resources; and administering cost-effective financial programs for the construction of water supply, wastewater treatment, flood control, and agricultural water conservation projects.

Since 1957, the TWDB has been charged with addressing the state's water needs. With the passage of Senate Bill 1 by the 75th Texas Legislature, federal and state organizations, political subdivisions, and regional water planning groups have assumed increased responsibility for ensuring sufficient water supplies for the state. 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.

#### ***Agency Vision***

Sustainable and affordable water for Texas.

#### ***Agency Mission***

To provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas.

#### **BUSINESS FUNCTIONS AND AREA MISSIONS**

The following is an account of the core business functions and missions of each area in the agency.

#### ***Executive Administration***

Executive Administration houses the executive

administrator of the TWDB, Legal Services, Governmental Relations, Project Oversight, and American Recovery and Reinvestment Act (ARRA) Implementation.

Legal Services is composed of the agency's general counsel, a deputy general counsel, four staff attorneys, a program specialist, and one executive assistant. The general counsel represents the agency in all hearings and negotiations. Legal Services is responsible for providing legal advice and representation to the agency Board members and staff in the areas of financial assistance, water planning, water policy, natural resources, environmental compliance, legislation, tort claims, human resources, contracting and purchasing, real estate, ethics, open records, open meetings, and rulemaking. This includes, but is not limited to, preparing and reviewing documents, researching and preparing formal and informal legal opinions, representing the agency on interagency working groups, drafting and reviewing regulations and policies, and working with the Office of the Attorney General regarding agency litigation and contested matters.

The TWDB Governmental Relations team works with state governmental entities and representatives to help carry out the mission of the agency. Before each legislative session, the office compiles a biennial report to the legislature that details where the agency is in regard to carrying out its mission and what tools we need to ensure our ability to move forward. At the conclusion of the session, Governmental Relations prepares a legislative wrap-up report that details specific legislation relative to the TWDB.

In 2011, the executive administrator created the Project Oversight Division to ensure that policy decisions and implementation account for an agency-wide perspective. The primary responsibility of Project Oversight is to ensure progress on projects is achieved from the pre-application phase through commitment, closing, construction, and final accounting.

On February 17, 2009, President Obama signed the American Recovery and Reinvestment Act of 2009 (ARRA or Act). The ARRA was passed as a nationwide effort to create jobs, jumpstart growth, and transform our economy to compete in the 21st

century. The compromise package of \$789 billion was intended to create or save 3.5 million jobs over two years.

The TWDB has provided \$326 million in ARRA funds for 26 drinking water and 20 wastewater projects across the state. These water and wastewater infrastructure projects will improve wastewater, water availability, usage, and quality in many communities across the state, as well as create jobs and benefit economies for many years. The funds were committed in the form of grants and loans to cities, water districts, and water supply companies.

The TWDB has successfully met all of the federally established ARRA funding goals and requirements. The Act required that 20 percent of the projects include “Green Project Reserve,” demonstrating identifiable and substantial benefits in water efficiency, energy efficiency, or environmental innovation. The Act also required that at least 50 percent of the funding be provided to disadvantaged communities in need of assistance. The TWDB exceeded the established goals for both of these requirements in both the Drinking Water State Revolving Fund (DWSRF) program and the Clean Water State Revolving Fund (CWSRF) program.

### ***Internal Audit***

The division of Internal Audit is a function required by the Texas Internal Auditing Act (Chapter 2102) of Texas Government Code. Internal auditors are governed by Government Auditing Standards and Standards for Professional Practice of Internal Auditing of the Institute of Internal Auditors. In the TWDB organizational structure, this function reports directly to the Board, and the audit committee is a non-partial, non-biased entity. The objective of this division is to assist members of management of the TWDB and Board members in the effective discharge of responsibilities. The mission of the Internal Audit Division is to present to the management and the Audit Committee determinations of adequacy/effectiveness of internal controls, objective reports, recommendations to management, and consultations. The Internal Audit Division consists of the director and one staff auditor.

### ***Operations and Administration***

Operations and Administration strives to provide professional, constructive, and formidable support to all areas in the agency in order to ensure delivery of an effective and efficient system of services for the employees and stakeholders of the TWDB.

Operations and Administration has four separate divisions: Communications and Web Administration; Support Services and Contract Administration; Human Resources; and Information Technology. The administrative arm of Operations and Administration reports to the Deputy Executive Administrator (DEA) of Operations and Administration and provides daily support to the divisions, and is also responsible for completing the agency’s Strategic Plan. Records Management staff also report directly to the DEA.

Communications is the agency’s direct contact with the media and public. The Director of Communications is the point of contact for inquiries for the agency, provides media training for staff, and serves as agency contact for general inquiries. The Web Administration section administers the TWDB’s Internet and Intranet websites, ensuring the public effective and quick access to the latest TWDB information. Communications staff provide editorial, design, and production assistance on printed resource materials for the agency.

The Support Services Division of Operations and Administration provides mail services, fleet management, staff support, and facility support, such as office space management, lease management, building safety, telecommunications, and other support functions of the agency as needed. The division also provides Board meeting coordination and Board member transportation during special events and at regular Board meetings. Within this division, Contract Administration provides contract development, contract compliance, contract monitoring, and related payment authorization. Contracting also provides procurement functions to acquire materials, equipment, and services in accordance with state and federal rules and regulations.

The Human Resources Division is an essential and indispensable force in facilitating the accomplishment

of the TWDB's mission by providing services and administering benefits that promote the security and well-being of the TWDB's most important resource: its employees. This division is committed to providing administrative services to the employees of the TWDB in the areas of employee benefits, salary administration, human resources development, personnel records, employment, and employee relations.

Information Technology (IT) serves as the information resources liaison to Executive Management, Department of Information Resources, the Legislative Budget Board, and the State Auditor's Office. IT oversees the implementation of new technology for the TWDB, manages the agency's Data Center Services contract, trains new employees on agency PC procedures, ensures technology standards are published and followed, and resolves user requests and reported computer problems. Within IT, various sections help to support all functions of the agency. IT staff maintain agency systems, databases, and applications, manage the Water Information, Integration, and Dissemination web portal, serve as the project manager for the systems integration process with the Environmental Protection Agency (EPA) known as TxWISE (Texas Water Information System Expansion), maintain the Online Regional Water Planning Data Submission System (DB12), and create specialized maps requested frequently by the Texas Legislature and other various political entities and the public.

### ***Finance***

The mission of the Finance program area is to provide customers with centralized, timely, meaningful, and high-quality financial services and to ensure fiscal integrity by investing and protecting the Board's assets. The primary responsibilities of Finance are to oversee day-to-day financial activities, provide support to the agency through the timely and accurate processing of payroll and financial transactions, formulate and monitor the agency budget, report financial and budget information, coordinate all activities related to issuance of bonds, invest funds in compliance with the Public Funds Investment Act, prepare cash flow and loan analyses

and interest rate calculations, and provide financial stability reviews of borrowers. Finance comprises five areas: Accounting, Budget, Debt and Portfolio Management, Financial Monitoring, and Financial Systems.

Accounting maintains the general ledger; prepares timely and accurate financial reports for internal and external recipients; processes all payments to vendors, loan recipients, grantees, and employees; processes all receipts and loan repayments; and processes employee payroll.

Budget manages the development, preparation, and maintenance of the TWDB's operating budget and position control; prepares budget-related financial data and reports for the Board, staff, and oversight agencies; prepares the Legislative Appropriations Request; and prepares fiscal notes, briefing documents, and responses to budget-related issues during the legislative session.

Debt and Portfolio Management provides comprehensive financial analysis for the management of the Board's portfolio; issues bonds to obtain money at the most economical cost to the Board to fund loan and grant programs; prepares cash flow analyses, loan analyses, and interest rate calculations; and invests funds in compliance with the Public Funds Investment Act. This division also monitors the loan portfolio, ensuring the prevention of loan defaults through financial stability reviews of its borrowers, and monitors financial assistance program requirements to ensure finance-related and contractual compliance by borrowers and grantees.

This division assesses the financial viability of projects by reviewing and analyzing financial data provided by potential applicants requesting financial assistance. Division staff members oversee projects to ensure they are progressing in a timely manner. Staff members also lead the efforts of multidisciplinary project work groups to ensure progress on projects is achieved from the pre-application phase through commitment, closing, and final completion. The division coordinates loan closing activities associated with the financial applications. Staff works with other program areas to ensure program requirements are being followed and that they are aware of the program implications of potential and existing projects. The

division is responsible for coordinating, compiling, reviewing, and finalizing monthly Board presentation material regarding proposed projects and presenting financial applications to the Board for consideration.

### ***Program and Policy Development***

This program area is responsible for marketing, developing, and implementing the TWDB financial assistance programs. The division also develops policies to facilitate the management of the financial assistance programs. Division staff monitor and ensure agency compliance with state and federal laws, policies, and standards as they relate to administering the TWDB financial assistance programs. The division conducts water and wastewater needs assessments and projections for two federally funded programs (CWSRF and DWSRF), in addition to handling all annual and interim reports. Staff actively pursues opportunities to market and provide outreach regarding TWDB programs.

### ***Construction Assistance***

The Construction Assistance program area provides environmental and engineering reviews and approvals required for projects financed with funds administered by the TWDB. In addition, Construction Assistance staff provides technical and construction management assistance to project owners during all phases of project construction.

Administration supports the mission and functions by providing leadership, strategic planning, and administrative support, and developing policies and procedures to assist staff with their duties.

The Project Engineering & Review Division is responsible for processing the engineering and environmental aspects of the financial assistance applications and projects. This includes review and approvals of engineering feasibility reports, environmental documents, water conservation plans, construction drawings and specifications, construction bids and contract documents, contract change orders, and other related documents.

The Inspection and Field Support Division includes the TWDB's four field offices (Austin, Harlingen, Mesquite, and Houston) and one satellite office (San Antonio). The division provides on-

site assistance and guidance to the project owners during the pre-construction, construction, and post-construction phases. Staff provides information on construction status to the Project Engineering and Review Division and to the loan recipients.

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

Water Resources Planning and Information supports the TWDB's mission by collecting, analyzing, and disseminating water-related data and by providing other services necessary to aid in planning and managing the state's water resources. It also provides statewide geographic data services and flood mitigation planning, including administration of federal assistance programs. The Water Resources Planning and Information office is composed of three divisions: Water Resources Planning, Flood Mitigation Planning, and Texas Natural Resources Information System (TNRIS).

Water Resources Planning provides ongoing technical assistance and administrative support to 16 Regional Water Planning Groups to assist in updating regional water plans, manages grants to Regional Water Planning Groups, manages grants to political subdivisions to conduct regional water and wastewater facility planning feasibility studies, and assists with preparation of the State Water Plan. This area also provides economic and demographic technical support to regional and state water planning processes and develops water demand projections for municipal, manufacturing, mining, steam-electric power generation, irrigation, and livestock water users.

The Flood Mitigation Planning Division manages state grants to political subdivisions to conduct flood protection planning studies and administers federal Flood Mitigation Assistance and Severe Repetitive Loss grant programs. This area is also responsible for the National Flood Insurance Program (NFIP) and conducts State Coordinating Agency functions for the NFIP; assists communities in enrolling in NFIP, conducts training related to floodplain management; and provides technical assistance and compliance reviews for participating communities with ordinance, floodplain management, and other NFIP issues.



The Texas Natural Resources Information System (TNRIS) was established to serve Texas agencies and citizens as a centralized clearinghouse and referral center for natural resource data, census data, data related to emergency management, and other socioeconomic data. TNRIS continues data maintenance and upgrades for the National Hydrography Dataset (NHD), transportation, political boundaries, and Digital Orthoimagery (digital ortho quadrangles, or DOQs); increases participation of local and federal partners in the National Map of Texas; and coordinates data production efforts among governmental entities. TNRIS also administers StratMap and the Texas/Mexico Borderlands Information System.

### ***Water Science and Conservation***

Water Science and Conservation is composed of the Water Conservation Division, Surface Water Resources Division, Groundwater Resources Division, and Innovative Water Technologies Division.

The TWDB's Water Conservation staff assists cities, utilities, and districts in establishing effective water-wise conservation programs. They lend out and provide training for leak detection and meter testing equipment, assist with water audits, and provide water conservation brochures and educational materials for schools for free or minimal cost to utilities and government entities. This area also provides grants to political subdivisions to implement conservation programs, and utilizes either local districts or local lending institutions to provide loans for individual farmers to install more efficient irrigation equipment. The Water Conservation Division provides irrigation water use estimates by county or regional planning groups, and provides agricultural water conservation educational activities to agricultural trade shows and other related events.

The Surface Water Resources Division administers the Instream Flows program and works in cooperation with the Texas Commission on Environmental Quality and the Texas Parks and Wildlife Department as mandated by the legislature. This division also administers the Bays and Estuaries program, the Lake Hydrographic Survey, and all state

Surface Water Monitoring.

The mission of the TWDB's Groundwater Resources Division is to collect, interpret, and provide accurate, objective information on the groundwater resources of Texas. The Groundwater Resources Division is responsible for all aspects of groundwater studies in the state. The division monitors water levels and quality in the state's aquifers, conducts regional-scale aquifer modeling, and houses and maintains water well records. This division also approves groundwater districts' management plans and provides groundwater information to citizens and lawmakers of the state.

The Innovative Water Technologies Division works to extend the state's water resources through desalination, rainwater harvesting, and water reuse. The mission of this division is to explore potential sources of water supply outside of the traditional areas of surface water and groundwater that could be made available for use within the state.

## **Current Workforce Profile-Supply Analysis**

### **FULL-TIME EQUIVALENTS**

As of fiscal year 2012 second quarter (February 2012), the agency had 291.1 full-time equivalent employees (FTE), including part-time workers and contractors. For FY 2012, 370.4 FTEs were appropriated.

### **MANAGEMENT-TO-STAFF RATIO**

The management-to-staff ratio at the agency (as of the FY 2012 second quarter [February 2012] Management to Staff Ratio Report) was 1:9. The agency continues to evaluate its current structure to ensure maximum efficiency regarding staff and management alignment.

	Officials	Professionals	Para Professionals	Administrative Support	Technicians	Total
Total Employees	30	303	18	21	1	373
Caucasian Males	14	134	0	1	1	150
Caucasian Females	11	78	11	7	0	107
African Males	0	11	0	0	0	11
African Females	1	7	1	5	0	14
Hispanic Males	2	31	1	0	0	34
Hispanic Females	1	21	5	7	0	34
Other Males	1	16	0	0	0	17
Other Females	0	5	0	1	0	6
Total Males	17	192	1	1	1	212
Total Females	13	111	17	20	0	161

**RACE/GENDER**

Per the 2011 Equal Employment Opportunity (EEO) Report for September 1, 2010, to August 31, 2011, the state agency workforce was composed of the groups shown in the table above.

In determining statistically under-represented EEO groups, the TWDB uses the Equal Employment Opportunity Commission’s (EEOC) Rule of 80. Using this rule, an under-represented group is considered statistically significant when the percentage of representation within the agency’s workforce is below 80 percent of that in the civilian workforce. Using statistical data of the TWDB’s workforce as of August 31, 2011, it has been determined that the following EEO categories were under-represented when compared to the civilian workforce. The percentages listed represent the percentage increase that must be accomplished to bring the targeted groups within EEOC’s Rule of 80.

Overall in the agency:

- African Americans were underutilized by 10.4 percent (FY 2010-10.9 percent)
- Hispanic Americans were underutilized by 2.3 percent (FY 2010-1%)
- Females were underutilized by 13.3 percent (FY 2010-12.3 percent)
- Other Americans were underutilized by 2.6 percent (FY 2010-1.6 percent)

Only the African American category showed improvement for FY 2011. The TWDB continues to experience an agency-wide underutilization of Hispanic Americans, Females, and Other Americans compared to the available population in Texas. Since there is an underutilization in two out of three minority groups as well as the female category, a continued effort will be maintained in minority and female recruitment so that the agency reflects the population it serves.

In order for the TWDB to decrease the underutilization, the agency continues to monitor and modify its recruitment plan to target specific population groups at university and other minority recruitment fairs. With some success already demonstrated, the TWDB will continue to focus future recruitment plans toward these target areas to increase the recruitment and selection of African-Americans, Hispanic Americans, Other Americans and Females.

**TURNOVER RATE**

According to the State Auditor’s Office, the statewide turnover rate for full- and part-time classified employees at state agencies in FY 2011 was 16.8 percent, based on a total of voluntary and involuntary separations, excluding interagency transfers. The 16.8 percent turnover rate is an increase from that of FY 2010 (14.6 percent). Excluding involuntary

separations and retirements, the statewide turnover rate decreases to nine percent. This rate is often considered a true turnover rate because it reflects preventable turnover. Employee turnover can be both negative and positive. Negatives include the associated costs of turnover, such as training and orientation of new employees, recruitment and selection of new employees, leave payout to departing employees, and lower productivity in the workplace during the time that a position is vacant and during the time that a new employee is learning the job.

Some turnover will always occur and is normal for any organization. Turnover can create positive outcomes for employers, because they can replace low-performing employees with high-performing employees. There is often a financial benefit gained as a result of the difference in the salary paid to an experienced employee who separates from an agency versus the salary paid to a new employee who takes the departing employee's position. However, when organizations start losing their high-performing, highly skilled, and experienced employees, turnover may begin to negatively affect the organization's business operations. This holds true for many of the professional positions held in the agency. In the Workforce Plan, the agency will go into further detail regarding how the salary schedule for professionals working for the state is causing us to be a training ground for employees to learn the necessary skills to succeed in the private sector.

## **Executive Administration**

Staff and workforce skills critical to the mission and goals of Executive Administration include, but are not limited to, the following:

- An Executive Administrator with extensive institutional knowledge of complex state and federal financial programs, knowledge of planning activities, managerial skills, and the ability to work with the Texas Legislature and bring its requests and visions to fruition;
- A General Counsel that possesses recognized legal expertise in water resources, including water rights, water resources planning, and the TWDB's financial programs;
- Staff attorneys with core skills through continuing

education, institutional knowledge in planning and program activities, human resources, contracts, and open records matters;

- A Director of Internal Audit who is a Certified Public Accountant or Certified Internal Auditor with expertise in auditing standards and performance criteria, federal audit requirements, electronic data processing skills, and skills in other areas that require extensive experience in governmental auditing;
- Governmental Relations staff with the ability to maintain effective relationships with all levels of individuals who possess excellent project management skills and the ability to analyze, interpret, and react to information in an efficient and effective manner; and
- Project Oversight director and staff qualified and experienced to monitor the financial assistance programs from inception to completion.

The active involvement and professional familiarity with the complexity of the TWDB's public financing programs provide the members of the governing Board with the judgment necessary to assess the specialized professional skills necessary and appropriate for the Executive Administrator position and the salary necessary to attract and retain qualified individuals. The Board needs to be provided the ability to set the Executive Administrator's annual salary as appropriate.

## **Operations and Administration**

Staff and workforce skills critical to the mission and goals of Operations and Administration include, but are not limited to, the following:

- Human resources personnel familiar with the state of Texas' rules, regulations, and benefits including recruitment, retention, compensation, classification, and one or more certified as Professionals in Human Resources;
- Certified state of Texas purchasers;
- Qualified contract administrator to effectively maintain all reporting requirements for state and federal programs;
- Staff with performance measurement, strategic planning experience, and management system

- analysis skills to review and implement policies and procedures to increase efficiency and effectiveness of workload flow;
- Project managers with experience in IT resource and software application development methodologies;
- Business and systems analysts with strong facilitation and documentation skills;
- Software engineers and database administrators with experience in standard software development techniques, Web development tools, and deployment of Web services;
- Network administration and security professionals with knowledge of local and wide area network administration, security protocols and threat protection, identity management, standard computer hardware, software support and troubleshooting;
- Programmers with multiple-level Web architect skills that can initiate the development, implementation, and maintenance of the internal and external Web resources, including updating Web content, monitoring Web resources and services, analysis of hardware and software, and evaluation of potential enhancements; and
- Records management specialists with knowledge of the State Records Retention Schedule, Texas State Libraries and Archives Commission (TSLAC) rules and regulations, and working knowledge of electronic document management systems.

Operations and Administration staff must maintain knowledge and expertise in a fast-paced environment while also demonstrating the essential relationship development skills needed to communicate with customers, understand the critical business drivers for the agency, and determine business case justifications and return on investment, and fostering solid partnerships among governmental entities at all levels.

## Finance

Staff critical to the mission and goals of Finance include, but are not limited to, the following:

- Accountants familiar with governmental

- accounting, as well as bond debt accounting;
- Budget analysts familiar with complex funding structures and state governmental budgeting practices; and
- Investment and portfolio analysts familiar with the state requirements for investments and with spreadsheet and database functions for preparing cash flow modeling.

These skill sets have remained constant; however, maintaining staff with these skill sets is a challenge. Retaining experienced and skilled staff is imperative to supporting the needs of the agency. Critical functions of the Finance office include the ability to provide sound accounting advice and opinions to Board members and staff, accurate and timely financial reporting, and maintenance of sound accounting records, municipal bond knowledge, negotiation skills, portfolio management knowledge, advanced spreadsheet and database skills, and agency program knowledge. The development and maintenance of staff in the financial areas are imperative.

## Program and Policy Development

The large amount of state water plan funding through the various financial programs is supported by Program and Policy Development staff. Existing programs pose challenges, such as decreases in federal appropriations for the State Revolving Fund programs, balancing EPA requests for information/reporting requirements with other workload requirements, unliquidated obligations, potential project delays due to approval backlogs at the U.S. Army Corps of Engineers, and the challenges associated with the continued growth of the financial assets owned and managed by the TWDB. Program and Policy Development staff is often called on to provide input on draft legislation and appropriations related to water resources policy and funding. The office also coordinates federal outreach with regional and national water organizations, including the Texas Water Conservation Association, Western States Water Council, Interstate Council on Water Policy, Council for Infrastructure Financing Authorities, and the Alliance for Water Efficiency.

Staff and workforce skills critical to the mission and goals of Program and Policy Development include, but are not limited to, the following:

- Financial analysts with significant experience in TWDB financial assistance programs;
- Administrative assistants with experience in TWDB financial assistance programs and Board mail-out procedures and proficiency in Microsoft Office;
- Division directors with significant experience in TWDB financial assistance programs and policy development;
- Project leads with significant experience in TWDB financial assistance programs;
- Team leads with significant experience in TWDB financial assistance programs and policy development; and
- Staff with performance measurement, planning, and management system analysis skills to review and implement policies and procedures to increase efficiency and effectiveness of workload flow.

The increasing complexity and number of the TWDB's financing programs have been aggravated by the loss of several senior staff that retired. Retiring staff are being replaced; however, retention and training continue to be an important need and challenge.

The workforce skill needs should not change significantly in the future. However, the key to the successful management of the large number of complex financial assistance programs Program and Policy Development implements is maintaining a large enough pool of agency experience and institutional knowledge in each discipline. This situation requires that we have enough latitude in salary adjustments to be able to retain skilled, experienced staff. The impacts of attrition can be managed, provided that Program and Policy Development continues to hire and retain new employees until they achieve a high level of proficiency and are ready to be promoted into managerial positions.

## **Construction Assistance**

Staff and workforce skills critical to the mission and

goals of Construction Assistance (CA) include, but are not limited to, the following:

- Professional engineers with significant TWDB institutional and program experience;
- Environmental resource specialists with extensive experience in environmental laws and TWDB financial assistance programs;
- Administrative assistants with experience in TWDB financial assistance programs and Board mail-out procedures and proficiency in Microsoft Office;
- Division directors with significant experience in TWDB financial assistance programs, project management, and policy development;
- Team leads with significant experience in project management and TWDB financial assistance programs and policy development;
- Field inspectors with water- and wastewater-related experience in conducting construction inspections on projects funded through the programs; and
- Administration including staff skilled in leadership, performance measurement, planning, and management system analysis to review and implement policies and procedures to increase efficiency and effectiveness of workload flow.

## **Water Resources Planning and Information**

Staff and workforce skills critical to the mission and goals of Water Resources Planning and Information (WRPI) include, but are not limited to, the following:

- Geospatial technologists with knowledge of GIS, geographic data models, remote sensing, Internet map services, and cartographic product development;
- Certified Flood Managers (CFMs) to work with the NFIP in conjunction with the EPA, FEMA, and the TWDB;
- Division directors with significant experience in TWDB water planning programs and policy development;
- Customer service specialists to support public assistance and access and dissemination of public data holdings;
- Economists with significant experience in TWDB water planning programs, statistics, population

- projections, and policy development;
- Administrative assistants with experience in TWDB regional water planning programs and Board mail-out procedures and proficiency in Microsoft Office; and
- Grant and contract management professionals to support joint partnership funding of agency technology initiatives, interagency contracts, and oversight of contract and consulting services.

## Water Science and Conservation

Staff and workforce skills critical to the mission and goals of Water Science and Conservation (WSC) include, but are not limited to, the following:

- Hydrogeologists, hydrologists, and geologists knowledgeable about Texas water and geologic resources;
- Other environmental scientists and/or professionals knowledgeable about Texas environmental regulations, research issues, and programs covering a wide spectrum of activities, such as conservation, and biology;
- Licensed professional engineers with significant TWDB financial and technical assistance program experience;
- Individuals with solid contract management skills and the ability to maintain effective working relationships with their customers;
- Individuals who possess strong written and verbal communication skills;
- Administrative assistants with experience in TWDB programs and Board mail-out procedures; and
- Division directors with significant TWDB program and policy development expertise.

Retaining senior and highly skilled staff is of paramount importance in order for the office to provide program continuity while assimilating new technological advances in water modeling, planning, and research. This situation requires that the office be given enough latitude in salary adjustments to be able to retain skilled, experienced workers and provide sufficient training to all staff.

## Future Workforce Profile

The TWDB will need to retain staff having the same or similar work skills that are currently present, and be able to provide training to set new employees up for success.

Because of the evolving nature of the Texas Legislature, the agency must ensure that staff continues to have strong interpersonal skills, project management skills, legislative process knowledge, and policy development skills. As state water resource issues become more political and complex, it is important that staff continue to be able to interact with individuals who represent the political and socioeconomic diversity of the state of Texas.

Water Resources Planning and Information is constantly affected by the population growth of the state of Texas. In regional water planning and the NFIP, population growth leads to greater demand on the few knowledgeable regional water planners in the state. Additional training and expertise will be needed in the coming years. In regard to the TNRIS, the need for staff with diverse GIS and IT backgrounds and improved knowledge of business processes and relationships will become more important, along with external customer service.

The anticipated workload brought on by legislative changes and state water plan projects will require Water Science and Conservation to maintain and enhance its current level of skills and provide training of both new and existing staff to stay ahead of competition for scientists and engineers from the private sector. Staff will need to continue to expand their expertise in specific technical knowledge, project management skills, writing abilities, new technology knowledge, and verbal communication skills.

The rapidly changing technology industry affects Operations and Administration's efforts to facilitate data dissemination. While current staffing levels are projected to essentially remain unchanged, the office workforce profile will continue to evolve, especially in light of the Data Center Consolidation effort being undergone by all agencies as part of the Governor's initiative. The need for staff with diverse IT backgrounds, including strong Web-based programming, database management, Internet-based

GIS programming, network management, project/program management expertise, and strong contract management skills will increase with this evolution.

Contract Administration and Records Management will be greatly affected by the implementation of new technology and an electronic document management system, and these areas will face an extreme workload, in addition to the ever-increasing burden that is inevitable as the agency continues to grow. Future needs in these areas are highly trained staff in records management with institutional knowledge of the state records retention schedule and procedures, and contracting and state-certified procurement specialists that are trained in the state of Texas' rules and regulations.

Future workforce needs in the Operations and Administration office include building strong overall knowledge in Human Resources, including compensation skills, and becoming a more effective change agent for the agency.

The appropriations of state water plan funding through three financial assistance programs will continue to impact the agency's current workforce. The additional program funding will not create demands for new skills but may require a level of effort that exceeds the current capacity. Automation will help in this effort through the TxWISE program.

## Gap Analysis

If the economy continues to recover and becomes more competitive, the agency will face greater challenges, given the salary levels it can afford to pay staff. The potential retirement of employees in all areas of the TWDB in the immediate future can have the effect of creating a shortage of expertise.

In the Office of Operations and Administration, there is currently need for additional staff in the areas of Contracting and IT. In addition, the office is at risk of the potential simultaneous retirement of multiple persons with vast institutional knowledge, thus creating a shortage of expertise in support services and facilities planning areas, network services, and records management.

If the economy continues its recovery, the Finance office may face difficulties in finding qualified staff to work in certain professions. High-level accountants

are currently at a premium.

Construction Assistance faces a significant risk if all current managerial and line staff retire upon their eligibility within the next three to five years. This program area has a large number of senior staff that will be eligible for retirement. Succession planning is under way and will need to be expedited in order to fill all the gaps that may be pending. New staff will need to be hired as soon as possible and developed rapidly.

An issue unique to both of these offices is the availability of General Revenue funding. If a shortfall continues to exist in this source of revenue, the office will be faced with a shortage of workers who perform work related to projects dependent on General Revenue funding. There may be a shortage of staff in some areas over the next five years owing to the increased workload associated with increased financial assistance opportunities, asset volume, and complexity. As in other program areas, if the economy picks up, this area may face difficulties in finding qualified staff to work in certain professions. Each of these offices must continue to maintain its current level of skills and provide training to both new and existing staff to limit the negative impacts of staff turnover.

The pool of GIS professionals interested in state employment will continue to dwindle. At the same time that the state is experiencing new growth in the IT sector, the State Auditor's Office reports that state government employees are still significantly behind in salary scale compared with the private sector. Specialty areas such as GIS are even more difficult environments in which to hire and retain staff, creating a much longer recruitment and hiring process. The quality and quantity of job applications for TWDB vacancies in these areas have dwindled remarkably, even when the agency has done extensive recruitment and advertising.

Although Water Science and Conservation (WSC) has done its best to maintain staffing levels, there are shortages for individuals with overall expertise in state of Texas water resources, hydrogeologists, groundwater modelers, surface water engineers, and surface water hydrologists. WSC is faced with hiring staff at entry- to mid-level positions and

providing these individuals with extensive training and development (internally and externally), only to see these scientists and engineers routinely recruited away by private enterprise who can afford to pay them 30 to 50 percent more than the state salary schedule allows. In effect, WSC serves as a training ground. The TWDB is often unable to fill key positions at competitive salaries for two primary reasons: first is simply a matter of inadequate resources and pay scales that are competitive with private enterprise; second, because of the tremendous increase in the demand for water resources needed to sustain the Texas economy, the demand for water resource expertise in science and engineering is simply not being met by higher education.

## **Strategic Development**

### **STRATEGIC DEVELOPMENT**

The workplace has always consisted of many generations working at one time. However, today's age-diverse workforce is working past retirement age, which has led to a generation gap of more than 40 years between the oldest and youngest workers. As a result, a one-size-fits-all approach is not appropriate in an age-diverse workforce that may have four generations of workers at one time. The TWDB must be prepared to work with the communication styles of each generation and determine what motivates each generation in order to bridge the generation gap. This approach is key in developing both succession planning and knowledge transfer for future generations. Furthermore, as society in general becomes more diverse, the TWDB workforce must mirror this diversity, thereby meeting both the needs and the expectations of the population it serves.

The TWDB must continue to work with universities and professional organizations to ensure that we have a varied and diverse workforce. In addition to the diversity and composition of the future TWDB workforce, fair pay will continue to impact recruitment and retention. The TWDB and state agencies, in general, currently cannot compete with other organizations in terms of compensating its employees. Many existing staff members continue to serve the agency because they value its mission

or enjoy the work-life balance that may be lacking in a for-profit company or firm. The TWDB must continue to foster an environment that offers not only fair compensation but also other incentives that attract and retain staff. Understanding the importance of the state's most precious resource is the first step in ensuring that TWDB continues its role in serving the water needs of Texas.

### **LEADERSHIP DEVELOPMENT**

The TWDB Human Resources Division continues to conduct training modules throughout the year focused specifically on management, as well as staff in general. Training programs such as Effective Performance Management - Supervisor/Employee Partnership, Managing for Success (A Guide to Progressive Discipline, New Hire Training for Managers, FMLA and Other Leave Guidelines) are part of a continued process for staff development. These interactive learning modules focus on defining clear job responsibilities, performance plans and appraisals; discussing performance issues on an ongoing basis; the need for regular documentation; and the role of the supervisor in the development of staff. In addition to "in-house" training, TWDB Human Resources staff works with outside vendors and consultants to provide customized training on topics such as public speaking, dealing with the press/media and providing effective presentations. Alliance Work Partners, the Employee Assistance Program provider for the TWDB, will offer a series of classes from May through August 2012 focusing on communications and management development.



# Appendix F

## *Survey of Employee Engagement Results and Utilization Plan*

### Survey

The Institute for Organizational Excellence at the University of Texas at Austin administered the Texas

Water Development Board’s internal assessment, the Survey of Organizational Excellence, in January and February 2012. The survey assessed workplace dimensions capturing the total work environment. Each dimension consists of survey constructs designed to profile organizational areas of strength and concern so that interventions are target appropriately.

### **SURVEY DIMENSIONS AND CONSTRUCTS:**

<b>Dimension I</b> Work Group	<b>Dimension II</b> Accommodations	<b>Dimension III</b> Organization	<b>Dimension IV</b> Information	<b>Dimension V</b> Personal
Supervision	Pay	Strategic	Information Systems	Employee Engagement
Team	Benefits	Diversity	Internal Communication	Employee Development
Quality	Physical Environment		External Communication	Job Satisfaction

### Results

Out of the 290 employees who were invited to take the survey, 254 responded. As a general rule, rates higher than 50 percent suggest soundness, whereas rates lower than 30 percent may indicate problems. At 88 percent, our response is considered high.

Scores above 350 suggest that employees perceive the issue more positively than negatively, and scores of 375 or higher indicate areas of substantial strength. Conversely, scores below 350 indicate issues are viewed less positively by employees, and scores below 325 should be a significant source of concern for the organization and should receive immediate attention.

The following constructs are considered the relative strengths of the TWDB:

#### **STRATEGIC**

Score: 392

The Strategic construct reflects employees’ thinking about how the organization responds to external

influences that should play a role in defining the organization’s mission, vision, services, and products. Implied in this construct is the ability of the organization to seek out and work with relevant external entities.

#### **PHYSICAL ENVIRONMENT**

Score: 391

The Physical Environment construct captures employees’ perceptions of the total work atmosphere and the degree to which employees believe that it is a “safe” working environment. This construct addresses the “feel” of the workplace as perceived by the employee.

#### **SUPERVISION**

Score: 387

The Supervision construct provides insight into the nature of supervisory relationships within the organization, including aspects of leadership, the

communication of expectations, and the sense of fairness that employees perceive between supervisors and themselves.

The following constructs are considered to be areas of concern for the agency:

#### **PAY**

Score: 227

The Pay construct addresses perceptions of the overall compensation package offered by the organization. It describes how well the compensation package “holds up” when employees compare it to similar jobs in other organizations.

#### **INTERNAL COMMUNICATION**

Score: 338

The Internal Communication construct captures the organization’s communications flow from the top-down, bottom-up, and across divisions/departments. It addresses the extent to which communication exchanges are open, candid, and move the

organization toward its goals.

#### **DIVERSITY**

Score: 352

The Diversity construct addresses the extent to which employees feel personal differences, such as ethnicity, social class or lifestyle, may result in alienation from the larger organization and missed opportunities for learning or advancement. It examines how the organization understands and uses creativity coming from individual differences to improve organizational effectiveness.

#### **Action Plan**

TWDB leadership has met and will continue to meet to discuss the agency’s lowest scoring constructs. A “Question of the Week” type of program is in the works to give employees the opportunity to anonymously offer feedback and suggestions. Staff is also working to organize morale-boosting activities, including picnics and cross-office field trips.

