

# Key Points of Report

## A Management Control Audit of the Texas Water Development Board

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January 1998

### Overall Conclusion

The Texas Water Development Board (Board) has established appropriate controls over its mission-critical water planning and financing functions. Through its state water planning process, the Board has demonstrated leadership by identifying and planning to meet future state water needs and by helping to guide state water policy. Through its various financial programs, the Board has issued nearly \$2 billion in bonds since 1988 to assist local entities in financing water-related infrastructure. The Board has made progress toward meeting its responsibilities under Senate Bill 1 (75th Legislature).

### Key Facts and Findings

- Complex financial programs have been effectively administered. The Board has overseen an increase in the number and dollar volume of loan/grant programs administered. The risk of loan defaults will increase under the new Drinking Water State Revolving Fund.
- Over each of the past four years, the Board has accounted for between 9 and 12 percent of all combined revenue and general obligation debt issued by Texas state agencies. Over 80 percent of the debt issued by the Board is outstanding.
- Improvements are needed in the management and control of information resources.
- Since September 1996, the Board has experienced turnover in 2 of 3 deputy positions and 4 of 11 division director positions. In all, 24 of 56 persons noted on the organizational chart at that time are either no longer employed at the Board or are eligible for retirement within three years.
- Parameters for implementing regional water planning under Senate Bill 1 may need further clarification through rules or Board procedures.

### Contact

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## Office of the State Auditor

Lawrence F. Alwin, CPA

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*This management control audit was conducted in accordance with Texas Government Code, Chapter 321.*

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# Executive Summary

The Texas Water Development Board (Board) has established generally effective controls over its key financial and water planning functions. Through its state water planning process, the Board has demonstrated leadership by identifying and planning to meet future state water needs and by helping to guide state water policy. Through its numerous financial programs, the Board has issued approximately \$2 billion in bonds since 1988 to assist local entities in financing water-related infrastructure. (Detailed information on the Board's financial programs is provided in Appendices 3 and 4.)

Under the guidance of a leadership council comprised of executive and senior managers, the Board has analyzed and documented many of its core processes, such as debt issuance, investments, and loans. It has employed innovative organizational techniques to deliver an increasing array of services over recent years without large increases in staffing or budget.

Despite the strengths of its current control structure, the Board faces risks relating to:

- Continued increase in the number of financial programs administered, increase in the number and type of entities eligible for those programs, and the high dollar volume and complexity of transactions
- Uncertainties about and potential barriers to the successful implementation of Senate Bill 1 water planning requirements
- Employee turnover and a reliance on key employees, many of whom are highly marketable or eligible for retirement

Consistent with our audit scope and objectives (described at the end of this executive summary), the following paragraphs summarize our conclusions regarding the Board's current management of policy, information, performance, and resources.

## Policy Management

The Board has demonstrated leadership in matters of state water law and policy, and it has coordinated appropriately with the Texas Natural Resource Conservation Commission and the Texas Parks and Wildlife Department in state water planning.

Board policies and data will play a key role in ensuring the success of regional water planning under Senate Bill 1 (omnibus water legislation passed by the 75th Legislature). The Board has accelerated the drafting of rules to implement the bill in order to give local and regional entities additional time to plan. Parameters for regional water planning may need further clarification through rules or Board procedures, regarding, for example: criteria for accepting or rejecting a regional plan, timelines for mediating interregional disputes, resolution of conflicting demographic data, and consistency review.

The Board has documented and managed its debt issuance processes well in the absence of a formal debt management policy. We recommend development of such a policy.

The Board's governing board is active and informed, and is supported by a strong agency rulemaking function.

The Board has moved toward an advanced, team-based, regional organizational structure; however, the current structure is in flux. To promote consistency among

# Executive Summary

regional teams and ensure that the Board's financial and planning functions operate in a complementary way, we suggest that the Board consider aligning its financial and construction regions to match the planning regions it designates under Senate Bill 1.

The internal audit function meets the needs and interests of executive management and the governing board; however, it is not fully aligned with the State's internal auditing act. We recommend administrative steps to ensure continued compliance.

Several policies aimed at making the Board's financial programs more customer-friendly, including a first-come, first-served policy for state revolving fund loans, have generated demand in excess of sustainable fund capacity. The Board has recognized this and taken steps to align capacity and demand. A formal prioritization system may be necessary.

## Information Management

The Board's information assets are not managed and protected for overall agency efficiency and effectiveness. The Board has appropriately identified information as one of its key products, but the data has not been compiled into an integrated and controlled management information system. Consequently, some Board functions exhibit outstanding uses of information technology (such as financial projections, geographical information systems, and water modeling), while other functions (including budgeting and accounting) are under-served. We attribute this to the presence of multiple operating systems, incompatible data sets, inconsistent indexing conventions, and few standards and policies for system design, development, and security.

The recent creation of the Resource Information Office is a positive

development. We suggest that the Research Information Office develop and enforce agencywide standards for system design, development, documentation, maintenance, and security.

## Resource Management

The Board achieves excellent ratings on its bonds, and its debt issuance process is well documented. Bond sales are primarily negotiated rather than competitive. Issuance costs appear reasonable. The Board actively monitors the financial condition of loan recipients to limit bond default risk. Though it has never had a loan default, on occasion it has appropriately refinanced or refunded local bonds to prevent such an occurrence.

Minor improvements are needed in the accounting, human resource management, and budgeting functions. Several accounting transactions have created the appearance of significant lapses of funds; we will continue to work with Board staff to ensure that the transactions are entered correctly into the statewide accounting system. During the audit, the Board responded quickly and favorably to address control weaknesses involving cash management and access to the statewide accounting system. Based on internal audit recommendations, the Board has recently taken steps needed to improve controls over travel advance funds and research and planning grants.

Engineering review and monitoring of funded projects appear to be comprehensive with respect to ensuring the eligibility of loan applicants and the allowability of expenditures. However, the reviews are not sufficiently risk-based given the increased workload implied by existing and future financial programs.

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We recommend that the Board refine its risk-based engineering review and construction monitoring based on a staffing and workload analysis.

## Performance Management

Historically, the Board has consistently met or exceeded legislative performance targets.<sup>1</sup> In association with its recent reorganization, the Board also has developed internal measures to monitor operations. It periodically surveys customers to determine their needs and concerns, actively solicits public input on its water planning initiatives, reports quarterly to the governing board on investments, and requires a performance evaluation of each bond issuance.

## Audit Scope and Methodology

We conducted this audit of management controls to determine whether the Board had established appropriate controls over policies, information, performance, and resources. Specifically, we considered whether the Board is making progress toward goals and objectives, safeguards its assets and uses them efficiently, complies with applicable laws and regulations, and maintains and reports reliable data. This audit was conducted in accordance with government auditing standards.

We appreciate the courtesy, cooperation, and professionalism of the Board's staff throughout this project.

<sup>1</sup> The Board is scheduled for an audit of its reported performance measures in January 1998.

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# Management's Response



## TEXAS WATER DEVELOPMENT BOARD

William B. Madden, *Chairman*  
Charles W. Jenness, *Member*  
Lynwood Sanders, *Member*

Craig D. Pedersen  
*Executive Administrator*

Noé Fernández, *Vice-Chairman*  
Elaine M. Barrón, M.D., *Member*  
Charles L. Geren, *Member*

December 12, 1997

Mr. Larry Alwin  
State Auditor  
State Auditor's Office  
206 East 9th, Suite 1900  
Austin, Texas 78701

Dear Mr. Alwin:

Enclosed is the Texas Water Development Board management response report related to the Management Audit recently conducted by the State Auditor's Office.

We would like to recognize the successful relationship formed between your audit team and TWDB staff during the course of the audit. It was obvious that mutual cooperation allowed for an open flow of information and recommendations which will help us enhance our services. Your staff is to be commended for their professionalism and deep understanding of the business of the Texas Water Development Board.

Thank you for the opportunity to comment on the Management Audit.

Sincerely,

A handwritten signature in cursive script, appearing to read "Craig D. Pedersen".

Craig D. Pedersen  
Executive Administrator

### *Our Mission*

*Exercise leadership in the conservation and responsible development of water resources for the benefit of the citizens, economy, and environment of Texas.*

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# Issues and Recommendations

## Overall Assessment

The Texas Water Development Board (Board) has established appropriate controls over its mission-critical water planning and financing functions. Through its state water planning process, the Board has demonstrated leadership by identifying and planning to meet state water needs and by helping to guide state water policy. Since 1988, through its numerous financial programs, the Board has issued approximately \$2 billion in bonds to assist local entities in financing water-related infrastructure. (Detailed information on the Board's financial programs is provided in Appendices 3 and 4). The Board has made considerable progress toward meeting its new planning and financing responsibilities under Senate Bill 1 (75th Legislature).<sup>2</sup>

Despite the strengths of its current control structure, the Board faces risks and uncertainties:

- The number of financial programs it administers, and the number and types of entities eligible for the programs, continues to increase. The high dollar volume and the complexity of the typical Board transaction compound these risks. A particular challenge involves the creation of a new revolving fund for drinking water. The new fund expands the Board's applicant pool to include several thousand water systems that previously were not eligible for Board loans. Some of these systems may pose a higher loan default risk than the Board has faced in the past. In addition, federal legislation requires the program to have a loan forgiveness component for disadvantaged communities.
- The Board's responsibilities for successful implementation of Senate Bill 1 include a number of uncertainties. The Board's challenge is to assist in structuring a system under which fair, consensus-based water planning can occur at the local and regional levels.
- Many of the Board's key employees are highly marketable or eligible for retirement. Since September of 1996, the Board has experienced turnover in 2 of 3 deputy positions and 4 of 11 division director positions. In all, 24 of 56 persons noted on the organizational chart at that time are either no longer employed at the Board or are eligible for retirement within three years. We suggest that the Board conduct a wage/salary survey to assist in establishing appropriate compensation for employees.

This report is intended to assist the Board in strengthening its management of information resources, continuing to administer sound financial and planning programs, streamlining engineering reviews, monitoring the impacts of recent reorganization, and preparing for additional responsibilities and programs.

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<sup>2</sup> Senate Bill 1 provides a framework for the management of water resources, including drought response planning, water rights regulation, financial and technical assistance, and data collection.

Section 1:

## Improvements Needed in Management of Information Resources

The Board's information assets are not sufficiently managed or protected for overall agency efficiency and effectiveness. Although the Board has appropriately identified information as one of its key products, the data has not been compiled into an integrated and controlled management information system. In all:

- Some key information needs are not being met.
- Investment in information resources is not sufficiently protected.

Some Board departments exhibit outstanding uses of information technology (such as financial projections, geographical information systems, and water modeling), while other departments (including Budgeting and Accounting) are under-served. We attribute this to the presence of multiple operating systems; incompatible data sets; inconsistent indexing conventions; and few standards and policies for system design, development, and security.

### Management's Response:

*For the most part, the assessments in this section are correct. It is worth noting that these findings sound more negative than they are. This is a very complex field, and the Board is in the enviable position of needing to improve linkages in systems that generally work, as opposed to having to dismantle systems that don't work and start over. The SAO characterizes these, and all of the TWDB findings, as being of a secondary order. As recognized in the report, the formation of the Resource Information Office (RIO) is a positive development that resulted from TWDB management's recognition of the Information Resource needs listed.*

Section 1-A:

### **Some Key Information Needs Not Met**

The Board lacks a unified approach to internal information management. We reported in 1990 that the Board was not maintaining data in a standard format, causing information-sharing problems. We also reported that various divisions and sections had developed their own information systems without a Board-wide perspective (*A Management Audit of the Texas Water Development Board*, SAO Report No. 91-027, November 1990). Though some progress has been made, including the early stages of a management information system, the situation has not improved much. For example, the Board has software applications identified with the same name, applications and data sets that should but do not interface, and database applications with no data dictionary.

Opportunities for automation have been overlooked. Departments that do not have knowledgeable information resource personnel, such as Accounting, have missed ways to improve their processes through automation. Some accounting data must be entered three times into separate systems.

An Information Resources Council, composed of section chiefs, directors, and information services personnel, has drafted a framework for information systems to guide future system development. In addition, the Board has developed documents addressing applications development, life cycle planning, and a new application development team structure.

The Board has recognized deficiencies in its management of information resources and recently created a central Resource Information Office to address them. The Resource Information Office includes application development, geographic information systems, customer support, and network support. This is the first time that the Board has committed such resources to information management.

Recommendations:

The creation of the Resource Information Office is a positive development. In consultation with information resource personnel agencywide, the Resource Information Office should develop and enforce agencywide standards for system design, development, documentation, maintenance, and security.

Responsibilities for the new Resource Information Office should include overall information systems planning, prioritization of development projects, and establishment and enforcement of standards and procedures. Emphasis should be placed on major projects, such as the Financial Information System and the Project Tracking System. To integrate its diverse databases, the Board will need to develop an agencywide dictionary, naming conventions, and an entity attribute relationship model.<sup>3</sup>

Management Response:

*We concur with this recommendation with the single proviso that prioritization of workload is to be done in coordination with the agency's Leadership Council.*

Section 1-B:

**Investment in Information Resources Not Adequately Protected**

Historically, the Board has been lax in developing and implementing agencywide policies and procedures to protect its information resources. We reported in 1990 that the Board lacked policies and procedures for the selection, purchasing, development, or maintenance of systems. Many of the recommendations from that report are not yet in place to protect the Board's technology investments. For example:

- Development of the Financial Information System (FIS), which will eventually monitor billions of dollars worth of investments, grants, and loans, is four years behind budget and still not in production as of September 1997. Before the creation of the Resource Information Office, only two people were developing

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<sup>3</sup> To facilitate interagency data sharing, the Board should consult with the Texas Natural Resource Conservation Commission regarding the development of a comprehensive indexing system.

the system; if one or both were to have left the Board, the system would have been further delayed. The Board has not addressed supporting this system once it is in production.

- The Board has not always notified system administrators of terminated employees. Therefore, terminated employees may have access to sensitive data after leaving the Board.
- The Board has not developed policies or trained application administrators on how and when to grant access to individuals, including assigning accounts and granting types of access.
- Some programmers have had access to live data files. As a rule, programmers should not have such access.
- The Information Resource Council's framework does not address the use of quality assurance.
- The Board's Disaster Recovery Plan is not adequate. It has not been updated since 1995. Personnel contacts, essential hardware and software needs, and application priorities have changed since 1995. In addition, the Disaster Recovery Plan has never been tested to determine if recovery is possible.
- Policies and procedures have tended to be minimal. For example, the Board has no policies and procedures addressing external users' access to the Board's systems or the installation of dial-up software.

Recommendations:

The Board should establish additional controls over the reliability of, the security over, and the continued use of critical data. The controls should ensure the following:

- Data and systems are protected against unauthorized changes or destruction.
- Information systems are planned and monitored.
- The methodology for developing new applications includes a needs analysis, system analysis and design, development, program promotion, implementation, quality assurance, and post-implementation evaluation.
- Written documentation is developed at the system, program, and user levels.
- Quality assurance is implemented that involves users, management, a quality assurance group, and the internal auditor.
- The Disaster Recovery Plan is tested and kept up-to-date.

Finally, the Board needs to establish policies and procedures regarding security. An integrated security plan should address issues such as dial-up modems, viruses, and employee terminations. Network security should be evaluated on an ongoing basis to ensure that it reflects changing network conditions, including the addition of new users, dial-up modems, LAN configurations, and Internet access.

Management's Response:

*We concur, and have initiated appropriate actions*

## Section 2:

**Financial Programs Generally Sound**

Overall, the Board has:

- Managed debt well in the absence of a formal debt management policy
- Taken appropriate steps minimize the risk of loan default
- Addressed several control weaknesses noted during the audit

Certain transactions were incorrectly entered into the statewide accounting system, falsely creating the appearance of significant lapses of funds for appropriations years 1994 and 1995.

## Section 2-A:

**Debt Has Been Well Managed in Absence of a Formal Policy**

The Board has been effective in issuing bonds to assist local entities in financing water-related projects. Under the Board's main financial programs, proceeds from the bond sales are used to acquire the bonds (or other debt instruments) of local entities such as cities, counties, and special districts. The debt issuance process is well documented. However, the Board has not compiled and published a debt management policy for adoption by its Governing Board. Instead, elements of such a policy are embedded in transaction-specific documents.

The Board's decision to issue a new bond offering is driven by demand for its loans. Demand for loans, primarily through the Water Pollution Control State Revolving Fund, has increased in recent years. The amount of funds needed and the timing of applications determine the sizing and timing of a bond issuance. In general, the Board's debt is structured to match that of the underlying local debt, regarding call provisions and maturities for example.

Figure 1 shows general obligation bonds and revenue bonds issued by the Board and the Texas Water Resources Finance Authority<sup>4</sup> since 1988.

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<sup>4</sup> The Texas Water Resources Finance Authority was created in 1987 to increase the availability of financing. It has the same composition as the Board. Its only issuance occurred in 1989, when it issued revenue bonds to defease (purchase) the general obligation debt held by the Board.

Figure 1

General Obligation Bonds and Revenue Bonds Issued By the Board and the Texas Water Resources Finance Authority 1988-1997*			
Calendar Year	Obligation Bonds Issued	Revenue Bonds Issued	Total
1988	\$63,000,000	\$ 0	\$63,000,000
1989	\$27,190,000	\$511,755,000	\$538,945,000
1990	\$36,240,000	\$ 0	\$36,240,000
1992	\$37,760,000	\$291,000,000	\$328,760,000
1993	\$92,000,000	\$125,000,000	\$217,000,000
1994	\$79,000,000	\$ 0	\$79,000,000
1995	\$80,564,956	\$ 0	\$80,564,956
1996	\$90,000,000	\$385,000,000	\$475,000,000
1997 (as of 8/31)	\$120,000,000	\$50,000,000	\$170,000,000
Total	\$625,754,956	\$1,362,755,000	\$1,988,509,956

\*The Board issued no bonds in calendar year 1991.

Source:

Texas Water Development Board Portfolio Management System, Office of Public Finance and Construction Assistance

From 1988 through August 1997, the Board performed 23 bond sales. Of these:

- Six sales were through a competitive process, representing \$218 million.<sup>5</sup>
- Seventeen sales were through a negotiated process, representing \$1.78 billion.<sup>6</sup>
- Approximately 31 percent of these amounts were of general obligation bonds, and 69 percent were of revenue bonds.

The Board achieves excellent ratings on its bonds. Its issuance costs appear reasonable, and it contracts for a thorough evaluation of each issuance. Investment activity associated with bond and loan proceeds is monitored and reported quarterly to the Governing Board.

The Board contracts with two law offices to serve as bond counsel for a one-year period and with First Southwest Company, which serves as the Board's financial advisor for a two-year period. The contracts contain the appropriate control elements, such as required performance, calendar dates for deliverables, and allowability of expenses.

<sup>5</sup> The competitive bidding process requires that the State receive solicited sealed bids from bond underwriters and that the State select the underwriting firm whose bid provides for the lowest overall interest cost to the State on the date of sale.

<sup>6</sup> The Board prefers the negotiated sales process because it allows for more flexibility in a changing interest rate market. Under this method, interest rates are set on the day of the sale and maturities of the bonds may be adjusted, or termed, to better fit the market demands. The sale date can be moved forward, backward, or postponed to obtain favorable interest rates.

Recommendations:

The Board should develop a debt policy for adoption by the Governing Board. The policy should provide a framework for debt issuance by describing fiscal and management practices that match available resources with long-term project needs. We provided information to the Board on the potential elements of such a policy.

Management's Response:

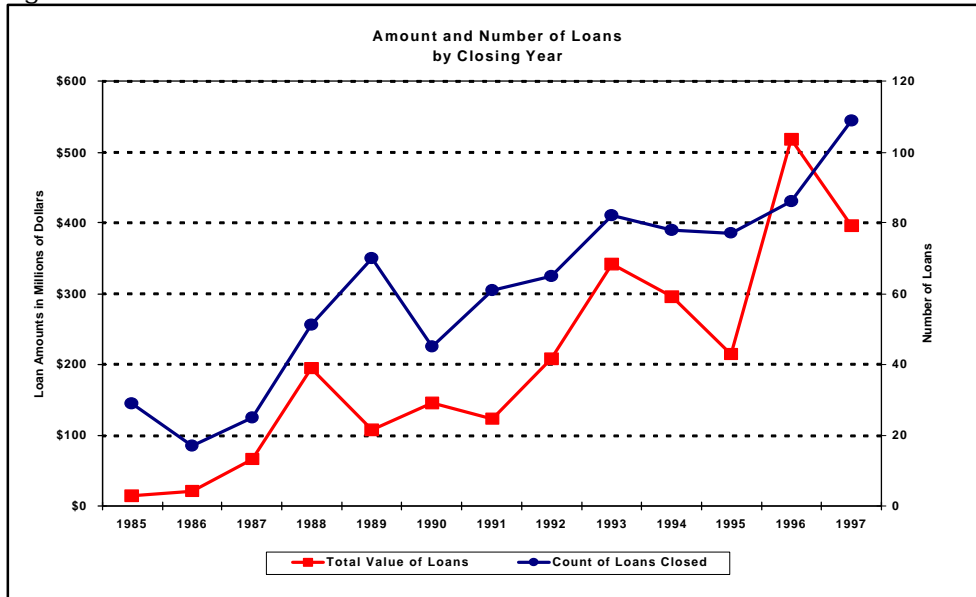
*Staff concurs with the assessment of the bond issuance process and accepts the compliment that it is well-managed. The recommendation to establish a formal Debt Management Policy or Plan is a good suggestion and that task is well underway. (It should be noted that we know of no other Texas State issuer nor other State Revolving Fund program with such a formal policy in place.)*

Section 2-B:

**Steps Taken to Minimize Bond Default Risk**

The Board has established sound analytical procedures for making and monitoring loans. Though it has never had a loan default, on two known occasions it has appropriately refinanced or refunded local bonds to prevent such an occurrence.<sup>7</sup> In these cases, the Board's external audit function determined that the water system's

Figure 2



Source:

Texas Water Development Board Portfolio Management System, Office of Public Finance and Construction Assistance

management was at fault, rather than a deficient financial analysis by the Board.

Preliminary financial analysis and loan monitoring are critical functions at the Board. The volume of Board loans has increased significantly in recent years. Figure 2 shows the increase in the number and dollar volumes of

<sup>7</sup> The refunding occurred when the loan recipient refunded a portion of its outstanding bonds ("called" the bonds before their maturity date) by issuing new bonds to the Board. The refinancing occurred when the Board authorized a new loan, allowing the recipient the cash flow needed to meet its bond payments.



Board loans since 1985. Nearly 30 percent of all Board loans have occurred within the last two years and nearly 60 percent within the last five years. Loan repayment periods are typically for between 20 and 30 years. Almost 85 percent of the dollar value of the Board's loans is yet to be repaid.

The number and dollar value of loans is expected to increase further as the Board begins making loans under the Drinking Water State Revolving Fund. The fund was created under the federal Safe Drinking Water Act; the state program was authorized under Senate Bill 1. Several thousand water systems that have not been eligible for Board loans in the past will be eligible for loans under the new fund. Some of these entities may have a higher risk of default than the Board's past applicant pool.

The two main controls for ensuring the repayment of Board loans are:

- Preliminary financial analysis, to ensure that the entity structures its taxes and/or rates in such a way that it can meet its loan payments
- Active monitoring of the entity's financial condition, again to ensure its ability to repay the debt

The Board has documented its application procedures, standard bond conditions, processes for reviewing loan applications, instructions for reading bond ordinances and resolutions, closing instructions, and loan monitoring processes and procedures.

Recommendations:

The Board should monitor the capacity development initiative at the Texas Natural Resources Conservation Commission. The initiative will provide information on the financial, technical, and managerial capacity of many water systems that only recently became eligible for Board water supply loans. In addition, Senate Bill 1 allows the Texas Natural Resource Conservation Commission to require business management plans from some utilities. This information also could be of value to the Board in determining the creditworthiness of its loan applicants.

Management Response:

*Concur with recommendation.*

Section 2-C:

**Some Accounting Transactions Incorrect**

Several transactions involving the Water Assistance Fund (state fund 480) have created the appearance of approximately \$15 million in lapses following appropriation years 1994 and 1995 and additional lapses into appropriation year 1997. The Board had unexpended balance authority for most of this amount. These funds should have been carried forward (a different accounting transaction) under the appropriate fund number rather than lapsed. The affected strategies were (1) regional planning and (2) economically distressed areas.

The incorrect transactions occurred as a result of the following interactive factors:

- The complexity of the Board's fund structure<sup>8</sup>
- Implementation of the new Uniform Statewide Accounting System (USAS) in fiscal year 1994
- Requirements for reconciliation of USAS with the State's budgeting system (ABEST) beginning in fiscal year 1995
- Difficulties in encumbering amounts for multi-year contracts for the economically distressed areas program

We have worked with the Board to ensure that entries for lapses, budget adjustments, and carryovers of unexpended balances are correctly entered into USAS. An agreement appears to have been reached between the office of the Comptroller of Public Accounts and the Legislative Budget Board regarding entry of the transactions. However, the ABEST reconciliation due in December 1997 will determine the adequacy of the solution.

Management Response:

*Concur with recommendation statement. We are confident that our current ABEST reconciliation will reflect this solution.*

Section 2-D:

**Control Weaknesses Responded to Quickly and Favorably**

When we began this project, the Board had seven accounting employees with full access to the Uniform Statewide Accounting System (USAS). When this was brought to the attention of management and accounting staff, the Board took steps to limit full access to three employees.

Cash receipts are being deposited to the State Treasury within three days, and accounting staff members verify it against the mail log. However, at the time of this audit, only one person was opening and logging the loan payments. The Board has since required that two people be present at the mail opening.

Recommendations:

The Board should:

- Continue to limit full USAS access to the three selected staff positions.
- Ensure that two people open, restrictively endorse, and log in the loan payments.

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<sup>8</sup> Primarily in that (1) state fund 480 serves as the master fund for several subfunds, under one of which some of the actual cash expenditures occurred and (2) difficulties in treating the Texas Water Resources Finance Authority, a non-state fund, as a state method of finance for appropriations purposes.

Management Response:

*The TWDB concurs with these findings and has implemented the recommended corrective action.*

## Section 3:

### **Board Rules, Policies, and Data Will Play Key Role in Implementing Regional Water Planning Under Senate Bill 1**

Well in advance of its statutory deadlines, the Board has made substantial progress in drafting rules and policies necessary to implement Senate Bill 1 planning requirements. We observed the Board's rule drafting process and its extensive efforts to gain public input by hearings held throughout the State. The rules addressing regional planning are still in draft form. Thus, the following comments and observations should be viewed as input into the Board's dynamic planning and rulemaking processes, rather than as audit findings. They are included here to highlight potential issues for the Board to monitor as Senate Bill 1 unfolds.

The Board plays a key role in promoting equity and ensuring consistency in the regional planning process. The Board's challenge under Senate Bill 1 is to balance its expanded role in state water planning with the Legislature's mandate for a locally driven, participative planning process. At the state level, the Board sets the framework for regional planning by designating regional boundaries, initial planning group members, and procedures. Board rules also establish controls over:

- The use of data, such as local and regional population totals
- The consistency review process, which occurs at the state and regional levels to ensure that local plans and strategies are consistent with regional plans

Both the Board and the Texas Natural Resource Conservation Commission share responsibility for rules regarding local conservation, drought, and groundwater management plans. Some of these local plans may still be in development after regional plans are due on September 1, 2000. The approved regional plans will form the building blocks of future state water plans. If an entity's water management strategy is not consistent with the plan for the region in which the entity is located, the entity becomes ineligible for Board's financial assistance or the Texas Natural Resource Conservation Commission's approval of water rights applications. This process of "consistency review" could affect demand for the Board's loan programs.

## Section 3-A:

#### **The Board Should Use its Authority to Promote Consistency and a Level Playing Field**

Within a given region, groups with more experience in water planning and access to greater resources might come to dominate the planning process. The Board's primary leverage points in promoting equity and consistency in the planning process lie in its authority to designate membership of initial regional coordinating bodies, provide procedures for adoption of regional plans by the regional planning groups, and establish

criteria for awarding planning grant funds for regional studies. In each case, there is an opportunity to provide guidance:

- Representation on initial regional coordinating bodies is a key factor for ensuring equity. The Board is to appoint members to the initial coordinating body for each region within 60 days of designating the regions. The initial representatives are to include one member from 11 different interest groups.<sup>9</sup> The coordinating body then designates additional representatives to ensure adequate representation of interests within the region. While each region will determine the final membership of its planning group, the Board can help to ensure fair representation through its appointment of the initial coordinating body members.
- Absence of uniform procedures for adoption of plans could create inequities and slow the planning process. While Senate Bill 1 requires the Board to adopt rules to provide for the procedures for adoption of regional water plans by regional water planning groups, the Board's initial draft rules primarily address matters of plan review and public access and participation. The rules do not address, for example, the number of votes needed to adopt a regional plan. Formulation of bylaws and detailed procedures for adoption of plans is specifically delegated to each regional planning group.

The absence of administrative rule guidance on procedures for adoption of plans could affect the equity, efficiency, and consistency of the regional planning process. Depending on the membership of the regional planning group and its adopted bylaws, a simple majority vote could override significant interests within a region. If each region formulates its own set of adoption procedures, substantive planning on water issues could be delayed by conflict over procedural details. Varying degrees of consensus across regions might affect the quality of regional plans and the state water plan. A lack of consistency in procedures for adopting plans could also be problematic for entities operating in more than one region. The Brazos River Authority, for example, is split into four separate regions and might have to operate under four separate sets of procedures.

- Small communities may need special consideration in awarding regional planning grants. Small Texas communities that lack financial resources and experience in water planning may need special consideration in applying for and receiving Board planning grants. The Board's draft rules require a 25 percent local match that may be cost prohibitive. Although in-kind services can be substituted for the local share, the applicability of this provision to small communities may be limited. The Board currently plans to target small communities for technical assistance; however, it may not be able to assist all communities needing help within the time frames set by Senate Bill 1.

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<sup>9</sup> Board draft rules require one representative from each of the following groups: the public, counties, municipalities, industries, agricultural interests, environmental interests, small businesses, electrical generating utilities, river authorities, water districts, and water utilities.

Recommendations:

As the initial coordinating bodies ultimately determine individual representation from each category of interest group, the Board should give particular consideration to appointment of small communities/rural interests, environmental interests, and entities with broad-based regional constituencies. The Board should consider providing a governance model which addresses procedural issues for adopting regional plans.

The Board also should:

- Consider waiving the 25 percent local match requirement for communities that can demonstrate financial need.
- Provide additional criteria to define allowable costs for in-kind contributions.
- Consider adopting criteria, either by administrative rule or agency policy, which require some portion of regional planning grant funds to address the needs of small communities and rural and environmental interests

Management Response:

*The TWDB concurs with recommendations regarding initial planning group membership and a governance model for regional planning process (if the model is not a requirement). Regional Water Planning groups will be required to adopt by-laws prior to receiving funds from TWDB according to proposed rules. Funding for small communities (25 percent local match) is also a concern of TWDB staff. The legislative appropriations to support Senate Bill 1 regional plan production assumes a 25% local match, as the Legislature appropriated funds only sufficient for an estimated 75% share of planning costs. Proposed rules require regional planning groups to develop plans for all municipal needs, except for those political subdivisions who choose to not participate in the planning.*

Section 3-B:

### **Uncertainties Over Data May Require Planning Milestones and a More Explicit Decision-Making Structure**

Potential uncertainty over the availability of water supply data and negotiations over population projections could delay or impede progress for the initial round of regional planning. Under Senate Bill 1, the Texas Natural Resource Conservation Commission will develop or obtain an updated water availability model for six river basins by December 31, 1999. Data on the remaining basins is due by December 31, 2001. While the regions are to use state population projections, they may also submit revised population forecasts subject to approval by the Board. As water supply and demand analysis lays the foundation for regional planning, more specific guidance and milestones over which data to use would help to keep the planning process on schedule.

- New water availability data may become available during the regional planning process. New water availability data on most river basins will not be available in time for the first round of regional planning. Should this data become available before the regional planning process is complete, it is not clear under

the initial draft rules whether the regions would be required to use it, or whether there is a point in the planning process at which regions should proceed with data previously supplied.

- Negotiations over population projections could delay regional planning process. The use of Board population control totals is an essential safeguard in ensuring statewide consistency and equity in the planning process. Competition for water supplies provides a potential incentive for regional interest groups to increase population forecasts and estimates of water demand. Although the Board must approve revisions to state estimates of population projections, the planning process could be delayed if resolution of differing estimates is not timely. Significant revisions to the Board's overall population control totals could result in unrealistic projection of water demand. In addition, Board control totals act as a check to protect interest groups that may lack the resources to conduct independent forecasting studies.

Recommendations:

The Board should consider:

- Establishing time lines to resolve differences over conflicting population projections and demand for water
- Setting criteria or limits on revisions to state population control totals
- Providing more specific guidance regarding availability of water supply data; criteria might include the impact that new data has on planning assumptions and the point at which the planning process may proceed with previously supplied data.

Management Response:

*The TWDB agrees with the SAO recommendations.*

Section 3-C:

**Criteria for Approval and Consistency Review of Local and Regional Plans May Require Clarification**

The Board's draft rules regarding consistency review may need further clarification, particularly where a regional plan contains "unmet needs." To be eligible for Board financial assistance and the Texas Natural Resource Conservation Commission's regulatory approvals, a local entity's water management strategies must be consistent with the plan for the region in which the entity is located.<sup>10</sup> Timing differences between local and regional plan development may contribute to gaps or conflicts between local plans.

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<sup>10</sup> If no regional plan is in place, the Board must determine the project's consistency with the state water plan, as in the past.

- The magnitude of unmet needs in approved regional plans is unclear. The Board's draft rules provide for situations for which no feasible water management strategies are available to meet identified needs. However, political subdivisions also might reject feasible strategies due to their political or economic cost. It is not readily apparent from the draft rules the extent to which regional plans may include unmet needs and still be approved by the Board. In such situations, it is not clear how the consistency review process would operate.
- Consistency review of local plans is problematic. The Board's draft rules do not specifically address consistency review at the regional level. Gaps or conflicts between local plans could undermine the effectiveness of regional planning efforts. Some local plans may be developed after the initial regional plans are developed or approved. While local planners are to ensure the alignment of their plans with an approved regional plan, an approved regional plan may not be in place when local plans are developed. This could result in multiple claims on the same water supply source to serve communities in time of drought or for long-term supplies. In addition, the interdependence between conservation, drought, and groundwater management plans could be critical. The potential timing differences in the development of local and regional plans increase the potential for gaps or conflicts between local plans.

Recommendations:

The Board should consider:

- Clarifying the extent to which regional plans may contain unmet needs and still be approved
- Specifying consistency review of local plans with the regional plan as an expectation for regional planning groups
- Consistency of local plans with appropriate regional plans in its regional plan approval criteria

Management Response:

*The TWDB generally agrees with the concepts embodied in these recommendations. The TWDB believes that Senate Bill 1 does not authorize the regional water planning groups to review the local plans specifically for consistency with adopted or approved regional water plans. Also, the statute does not authorize the Board to consider the level of consistency of local plans with regional plans when the Board considers approval of regional plans. Senate Bill 1 specifically mentions consistency between adopted regional plans as a factor when the Board considers regional plan approval, and makes no mention of consistency of local with regional plans as a criteria to be used.*

Section 4:

## Engineering Review and Construction Monitoring Should Target the Highest Design and Construction Risk

To some extent, the Board tailors its engineering and construction reviews to meet the needs and risks of the project. This effort should be refined and expanded.

The Board's engineers review and approve the plans and specifications for proposed water projects. They also review conservation plans and may conduct or approve environmental reviews. Engineering review and monitoring of funded projects appear to be comprehensive with respect to ensuring the eligibility of loan applicants and the allowability of expenditures; however, the reviews are not sufficiently risk-based given the expected workload associated with startup of the drinking water state revolving fund. On the recently created regional teams, engineers outnumber financial analysts three to one. The Board has not formally studied the value-added contribution of specific engineering tasks or evaluated relative staffing needs for the new regional teams.

The City of Houston, which has its own professional engineering staff, accounts for between 20 and 25 percent of the Board's loan portfolio. We identified significant engineering resources devoted to reviewing and approving Houston's plans. The Board recently instituted a risk-based "high confidence review" process for dealing with large borrowers with multiple contracts, such as Houston. Continuing to refine and extend this process would help to ensure that the Board directs its engineering expertise to the projects having the greatest risk.

At present, the Board does not formally track the reasons for construction change orders, though this information could be of value in targeting and controlling the projects.<sup>11</sup> For a number of low-dollar loans, we identified a high percentage of change orders, resulting in increased time and cost for the loan recipient.

### Recommendations:

We suggest that the Board refine and streamline its engineering reviews to target those projects having the highest risk.<sup>12</sup> In preparation for increased workload, particularly associated with the drinking water state revolving fund, we recommend that the Board:

- Establish a risk ranking system that takes into account the size and sophistication of the entity (including whether it has a professional engineering department) and the Board's experience with particular engineering firms and contractors. In addition, the Board should establish "reason codes" for change orders. The system should be used to evaluate project risks and adjust the level and type of engineering review accordingly.

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<sup>11</sup> The project's owner, rather than the Board, is directly responsible for monitoring project construction.

<sup>12</sup> Conditions attached to federal funding may limit the extent to which the Board can proceed with this recommendation.



- Identify and reduce non-value-added activities to the extent possible, given federal and state requirements.
- Based on analysis of value-added activities, evaluate relative staffing needs for the new regional teams to ensure that resources are directed to their highest use. The Human Resources Department and Internal Auditor might collaborate on such a project.

Management Response:

*Concur with recommendation.*

Section 5:

## **The Board Exhibits Operational Strengths Yet Has Room For Improvement**

The following paragraphs identify various strengths observed at the Board. Subsequent headings address monitoring of the recent Board reorganization, integration of Board planning and financing activities, human resources management, and internal agency budgeting.

- Policy Management - The Board has demonstrated leadership in matters of state water law and policy. Our previous management audit in 1990 found that the Board had foregone its charge to advise the Legislature on necessary and desirable water legislation. Subsequently, in its 1992 water plan, the Board raised a number of water policy issues and options. Ultimately, these issues and options, and those presented in 1996, assisted in providing a framework for the enactment of Senate Bill 1.
- Interagency Coordination - The Board coordinates appropriately with other state agencies. For example, the Texas Natural Resource Conservation Commission relies on the Board's engineering and financial reviews of water supply projects in its permitting processes. The Board has developed a consensus-based state water planning process that involves the Texas Natural Resource Conservation Commission and the Texas Parks and Wildlife Department, and it has coordinated with these agencies in developing rules and procedures under Senate Bill 1.
- Governance - The Board's Governing Board appears to be active and informed, and is supported by a strong agency rulemaking function.
- Performance Management - Historically, the Board has consistently met or exceeded legislative performance targets.<sup>13</sup> In association with its recent reorganization, the Board also has developed internal measures to monitor

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<sup>13</sup> The Board is scheduled for an audit of its reported performance measures in January 1998.

operations. It periodically surveys customers to determine their needs and concerns, and is participating in an activity-based costing pilot project.

- **Financial Projections** - Several policies aimed at making the Board's financial programs more customer-friendly (including a first-come, first-served policy for state revolving fund loans) have generated demand in excess of sustainable fund capacity. Through its financial projections, the Board appropriately identified this issue, informed the Governing Board, and proposed interim steps to address it. It appears likely that a formal prioritization system (the elements of which have already been addressed in the Board's rules) may be necessary.

Section 5-A:

### **Recent Reorganization Will Aid in Meeting Upcoming Challenges**

The Board has recently undergone extensive reorganization of its financial, engineering, planning, and information resources functions. Essentially, the reorganization:

- Combines engineers, financial analysts, and other specialists into regional teams
- Creates regional planning teams
- Centralizes information management and data services

Under the guidance of a leadership council comprised of executive and senior managers, the Board has analyzed and documented many of its core processes, particularly financial operations such as debt issuance, investments, and loans. In all, the Board has delivered an increasing array of customer-oriented services without large increases in staffing or budget.

#### Recommendations:

We recommend that the Board actively monitor and mitigate the risks associated with the reorganization. Risks include:

- A potential loss of expertise, professional orientation, and influence on the part of specialists, such as lawyers and environmental reviewers, who for the first time will report through regional teams rather than through functional lines
- Potential inconsistency in policies and procedures across regional teams

The Board has recognized these risks and planned to mitigate them through "centers for excellence." We recommend monitoring the effectiveness of these centers.

#### Management Response:

*Concur with recommendation.*

Section 5-B:

### **Integration of Planning and Financing Incomplete**

We recommended in 1990 that the Board strengthen the link between its planning and financing functions so that needs identified in planning could become priorities for state financing.<sup>14</sup> While the Board now documents planning review of loan applications according to statutory criteria, the intended integration has not been achieved. However, the process for ensuring that Board-funded projects are consistent with regional and statewide needs will change under Senate Bill 1. (See Section 3-C for information on consistency review.)

Additional procedures and organizational adjustments would help to ensure that those projects that are optimal from a planning perspective receive funding priority. Particularly under the Drinking Water State Revolving Fund, it will be critical that the projects financed by the Board be in the right place, rightly sized and timed, and environmentally sound. It will also be necessary to ensure the financial, technical, and managerial capacity of the loan recipient. (See Section 2-B for more information on the Board's management of default risk.)

Both the Office of Planning and the Office of Public Finance and Construction Assistance have recently adopted regional organization. However, the offices use different numbers of regions and different regional boundaries. The differences might impair future Board efforts to integrate its planning and financial operations.

#### Recommendations:

The Board might consider aligning regions across the Planning and Public Finance and Construction Assistance offices to match the planning regions designated under Senate Bill 1. In addition, it might explore additional ways to link its planning and financial programs.

#### Management Response:

*Generally, we concur with this recommendation, and for our two largest programs we believe procedures are currently in place to ensure that the Board funds projects which are optimal, considering the federal statutes under which they were created. The two largest funding programs, the Clean Water and Drinking Water SRF programs both incorporate priority rating processes, by rule, to ensure that funds will be available for the projects which will have the greatest impacts on water quality and addressing public health risks. In the case of the Clean Water SRF the priority rating system is used only when a shortage of funds exists, and has not been used in the past 5 years. However as capacity issues continue to exist, the priority system may see a broader usage. The priority rating systems for both programs were developed to comply with the federal mandates for the respective programs. However, the federal mandates are*

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<sup>14</sup> The report recommended development of a system for rating the technical, economic, and environmental merit of loan applications and greater involvement by planners in reviewing and approving individual loans.

*targeted more toward in-stream water quality improvements and addressing public health risks, which are not always consistent with long range water development goals.*

Section 5-C:

### **Minor Improvements Needed In Human Resource Management and Internal Agency Budgeting**

During this course of this audit, we provided Board management recommendations addressing:

- Posting open positions
- Tracking employee training
- Documenting and automating the budget process

*Management Response:*

*Management appreciates recommendations and has initiated appropriate changes.*

Section 6:

### **Internal Audit Function Not Fully Aligned With State's Internal Auditing Act**

The Board's Internal Auditor serves an important troubleshooting role. During the course of this audit, we observed the value of this role. However, several administrative steps are needed to ensure that the Internal Auditor meets the intent of the Texas Internal Auditing Act. Specific observations are as follows:

- The last formal risk assessment was in 1992.<sup>15</sup>
- The current audit plan does not define scope, objectives, measurement criteria, or targeted dates of accomplishment.<sup>16</sup>
- Two of six (33 percent) planned audits were completed for 1997; a relatively high percentage of the current audit plan is devoted to unscheduled activities.
- A peer review has not been conducted since September 1993.<sup>17</sup>

<sup>15</sup> Standards for the Professional Practice of Internal Auditing state that a risk assessment should be conducted annually.

<sup>16</sup> The Texas Internal Auditing Act, Section 2105.005, requires that the annual audit be prepared using risk assessment techniques and that identifies the individual audits to be conducted during the year.

<sup>17</sup> Governmental Auditing Standards, Section 3.33, states that organizations conducting audits in accordance with these standards should have an external quality control review at least once every three years by an organization not affiliated with the organization being reviewed.

- Reports do not include a statement of compliance with Government Auditing Standards.<sup>18</sup>

Despite these conditions, the Internal Auditor appears to meet the needs and expectations of the Governing Board and executive management. Of nine prior internal audit findings, the Board has implemented seven and is in the process of implementing another.

Recommendation:

To ensure that the Board's Internal Auditor is in a position to address significant agencywide risks, we recommend the following:

- Revise and update the risk assessment.
- Reconsider the amount of unscheduled time to be included in the audit plan and establish realistic estimates of completion.
- Arrange for timely peer review.
- Include a statement in internal audit reports as to whether the work was performed in accordance with generally accepted government auditing standards.

Finally, we encourage the Board's Governing Board and executive management to develop a philosophy of what the internal audit function will be, and to ensure that the role is consistent with the State's Internal Auditing Act.

Management Response:

*While the basic risk assessment was prepared in 1992, it is consulted each year to see if revisions are necessary. Fortunately, the Board has been an extremely stable organization. Until recently, the time and efforts required to prepare a new risk assessment would not have been value-added activities. When the current agency-wide reorganizations, including and the organizational effects of Senate Bill 1 are complete, a new risk assessment will be prepared.*

*Unscheduled audit activity has historically been comprised of both perceived and real areas for concern, the majority of which have an element of urgency about them. The Audit Committee felt so strongly about the Internal Audit role in investigating all incidents and allegations of conflicts of interest, misconduct, fraud, or other potential ethical violations, that in November 1993, they modified the Internal Audit Charter to include this as a specific responsibility. The nature, timing, scope of work required, and amount of time required to complete these activities are impossible to predict. In a one-person audit shop, realistic estimates of completion cannot be set when dynamic factors affect the audit plan.*

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<sup>18</sup> Section 7.24 of Government Auditing Standards states that auditors should report that the audit was made in accordance with generally accepted government auditing standards and that this statement should be qualified in situations in which the auditors did not follow an applicable standard.

*A peer review has been scheduled through the State Agency Internal Audit Forum for early spring depending on the availability of volunteers.*

*In the future, a statement will be included in all reports indicating conformance with GAAS.*

Appendix 1:

## Objectives, Scope, and Methodology

We conducted this audit of management controls to determine whether the Board had established appropriate controls over policies, information, performance, and resources. Specifically, we considered whether the Board is making progress toward goals and objectives, safeguards its assets and uses them efficiently, complies with applicable laws and regulations, and maintains and reports reliable data. This audit was conducted in accordance with government auditing standards.

Based on a risk assessment, we tailored these general objectives to develop a Board-specific scope. The scope included such issues as the following:

- Has the Board developed sufficient policies and procedures to guide the issuance of debt?
- How and how well does the Board manage the risk of default on its loans?
- Are Board information resources (1) managed to facilitate decision-making and (2) protected from loss or misuse?
- Are Board engineering reviews comprehensive and efficient?
- Is the Board on track to implement Senate Bill 1 regional planning requirements?
- Does the Board coordinate appropriately with other state agencies in administering its financial and planning programs?

To address these issues, we developed an audit approach and methodology that included:

- Direct observation of Governing Board and committee meetings, a bond sale, and management meetings
- Interviews with Governing Board members, managers, and staff
- Review of Board documentation, including Governing Board meeting minutes, Governing Board member financial filings, financial reports, interagency memoranda of understanding or agreement, organizational charts, various planning documents, process flow charts and descriptions, internal memoranda, external customer surveys, contracts, and grant and loan files
- Tests of processes and specific transactions, such as transfers and cash deposits
- Analyses of financial, staffing, and performance data from various statewide and Board systems

Fieldwork was conducted from July through October 1997.

The following individuals managed or performed the audit:

- Deborah Kerr, Ph.D.
- Charlie Hrcir, CPA
- John Swinton, CGFM (Project Manager)
- Nancy Raabe, CPA
- Bev Schulke, CPA
- John Young, M.P.Aff.
- Paul Butz



## Appendix 2:

**Background Information**

## Appendix 2.1:

**Financial Information**

This appendix provides summary information for the Texas Water Development Board. Figure 3 includes information from the General Appropriations Act, 75th Legislature, for the Texas Water Development Board (Board). It provides performance and method of finance information for the 1998 and 1999 biennium.

Figure 3

Appropriations for the 1998 and 1999 Biennium				
Goal/Strategy	Appropriations by Goal		Appropriations by Strategy	
	1998	1999	1998	1999
A. Goal: Water Resource Planning 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.	\$ 9,123,262	\$ 9,150,192		
A.1.1. Data Collection Operate a statewide data collection and water resources evaluation program that provides information to conduct planning assessments of current and future water resource needs.			\$ 3,018,508	\$ 3,049,088
A.1.2. Long-Range Planning Update Texas Water Plan information based on significantly changed demographic, economic, or other water-related conditions through the involvement of key water interests and the general public in the planning process.			\$ 2,179,263	\$ 2,175,762
A.1.3. Texas Natural Resource Info System Operate TNRS to facilitate state agency and public access to natural resource and census data.			\$ 379,399	\$ 379,399
A.2.1. Regional Planning Provide technical and financial assistance to Texas communities and other entities for the development of regional plans for areas of the state, which lack long-term water supplies, adequate wastewater treatment or flood protection.			\$ 2,689,737	\$ 2,689,737
A.2.2. Multi-Year & Region Plan Provide technical and financial assistance to Texas communities and other entities in developing and implementing detailed multi-year or multi-region water and wastewater service plans.			\$ 131,461	\$ 131,313

Figure 3 (concluded)

Appropriations for the 1998 and 1999 Biennium				
Goal/Strategy	Appropriations by Goal		Appropriations by Strategy	
	1998	1999	1998	1999
A.2.3. Conservation Assistance Provide water conservation and other technical and/or financial assistance to Texas communities and other entities to promote increased water use efficiency and improve water systems operations.			\$ 724,894	\$ 724,893
B. Goal: Financing Water-Related Projects Provide cost-effective financing for the development of water supply, for water quality protection, and for other water-related projects.	\$ 8,170,290	\$ 8,254,407		
B.1.1. Financial Assistance Provide financial assistance to Texas communities for water supply, wastewater treatment and flood protection.			\$ 4,936,923	\$ 4,953,220
B.1.2. Economically Distressed Areas Provide special financial assistance to aid economically distressed areas (e.g., colonias) in order to provide residents access to adequate water supplies and/or wastewater treatment systems.			\$ 3,233,367	\$ 3,301,187
C. Goal: Indirect Administration	\$ 1,994,165	\$ 1,994,165		
C.1.1. Central Administration			\$ 1,295,740	\$ 1,295,740
C.1.2. Information Resources			\$ 318,904	\$ 318,904
C.1.3. Other Support Services			\$ 379,521	\$ 379,521
Grand Total	\$ 19,287,717	\$ 19,398,764	\$ 19,287,717	\$ 19,398,764
<b>Method of Financing</b>				
General Revenue Fund	\$ 6,471,055	\$ 6,501,635		
Earned Federal Funds	\$ 1,135,000	\$ 1,087,000		
General Revenue Fund - Dedicated - Agricultural Soil and Water Conservation Account No. 563	\$ 106,000	\$ 106,000		
Federal Funds	\$ 4,558,474	\$ 4,075,790		
Other Funds:	\$ 7,017,188	\$ 7,628,339		
Water Assistance Fund No. 480			\$ 3,156,106	\$ 3,156,106
Agricultural Trust Fund No. 562			\$ 225,000	\$ 225,000
Appropriated Receipts			\$ 3,636,082	\$ 4,247,233
Total, Method of Financing	\$ 19,287,717	\$ 19,398,764		

The Board also received contingency appropriations to implement Senate Bill 1 in the following amounts:

Source	For the Years Ending	
	August 31, 1998	August 31, 1999
General Revenue Fund	19,818,055	7,760,487
Federal Funds	5,671,584	5,671,585
Appropriated Receipts	1,678,569	1,678,570

Appendix 2.2:

**Board Information**

The Texas Water Development Board (Board) is the state agency responsible for water planning and financing. Its mission is to exercise leadership in the conservation and responsible development of water resources for the benefit of the citizens, economy, and environment of Texas.

The Board was created in 1957. A six-member Governing Board, whose members are appointed by the Governor for staggered six-year terms.

The Board:

- Provides loans and grants to local governments for water supply projects; water quality projects including wastewater treatment, municipal solid waste management, and nonpoint source pollution control; agricultural water conservation projects; and flood control projects
- Prepares a state water plan that addresses Texas' surface and ground water resources for the orderly development, management, and conservation of the State's water resources
- Provides water-related research and planning
- Collects data and conducts studies concerning the fresh-water needs of the State's bays and estuaries
- Administers a centralized data bank of the State's natural resource information through the Texas Natural Resource Information System (TNRIS)
- Provides grants and loans for the water and sewer needs of the State's economically distressed areas
- Board financial assistance programs are funded through state-backed bonds or a combination of state bond proceeds and federal grant funds. Since 1957, the Legislature and voters have approved constitutional amendments authorizing the Board to issue up to \$2.68 billion in Texas Water Development Bonds.

Appendix 2.3:

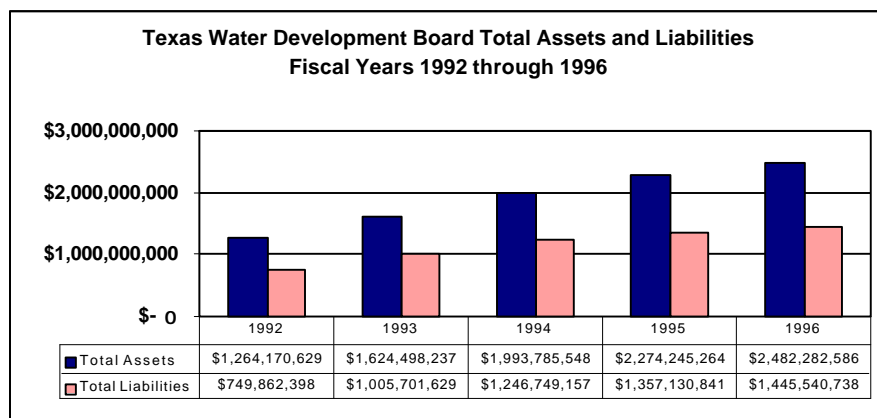
## Board Total Assets and Liabilities

Figure 4 provides summary information on the Texas Water Development Board's assets and liabilities. The data are from the 1992, 1993, 1994, 1995, and 1996 comprehensive annual financial reports (CAFRs) for the State of Texas.

As Figure 4 indicates:

- Assets and liabilities have almost doubled in size in the past four years.
- 1992's total assets are 50.93 percent of 1996's total assets.
- 1992's total liabilities are 51.87 percent of 1996's total liabilities.

Figure 4

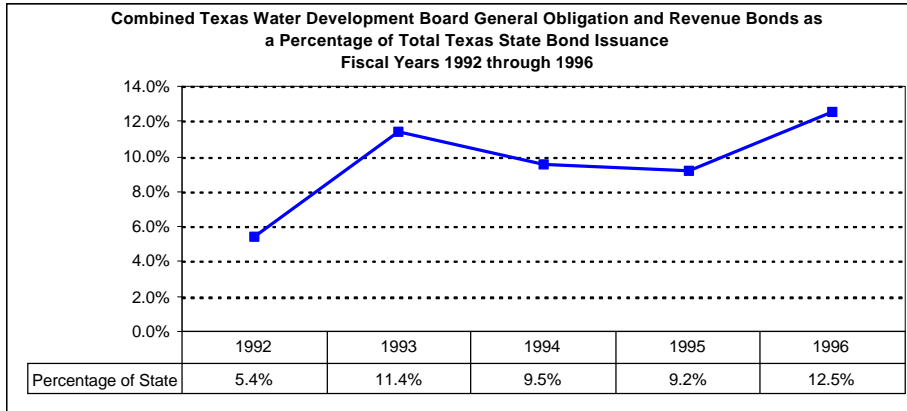


Appendix 3:

### Overview of Debt Issued by the Board

This appendix provides summary information on the general obligation and revenue bonds issued by the Texas Water Development Board. Figure 5 shows the Board's combined general obligation and revenue bonds as a financial percentage of the total

Figure 5



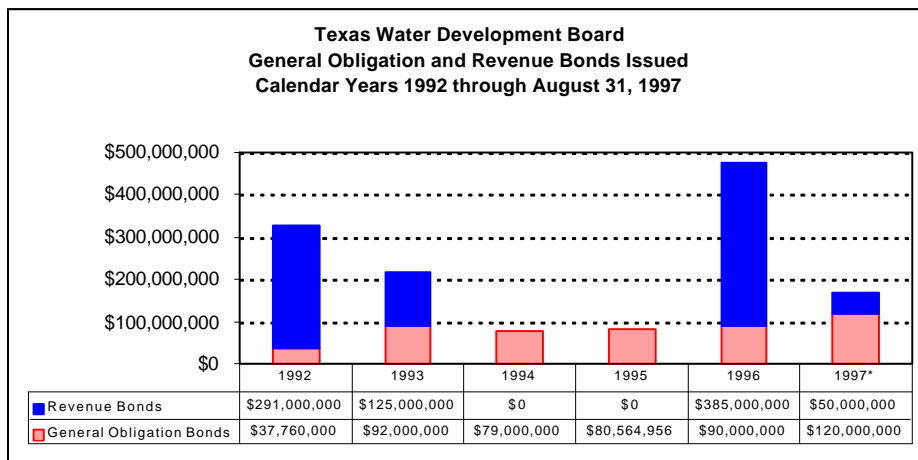
Texas state bond issuance. In fiscal year 1996, the Board ranked third among state agencies in the combined amount of general obligation and revenue bonds payable. The data are from the 1992, 1993, 1994, 1995, and 1996 comprehensive annual financial reports (CAFRs) for the State of Texas.

In Figures 5 and 6:

- Revenue bonds are bonds secured by the revenues derived from a particular service provided by the issuer.
- General obligation bonds are voter-approved bonds that are backed by the full faith, credit, and unlimited taxing power of the State of Texas

Figure 6 shows the total amount of bonds issued by the Board from 1992 through August 1997. The source of the data is the Portfolio Management System database of the Office of Project Finance and Construction Assistance at the Board updated through August 31, 1997.

Figure 6



## Appendix 4:

**Financial Programs and Activity**

## Appendix 4.1:

**Financial Programs Administered by the Board**

This appendix summarizes the Board's financial program activity. As noted in the report, the Board administers numerous programs having distinct purposes and requirements.

Figure 7 provides an overview of the programs. To some extent, it can serve as a map for program-specific data in later figures. The information it contains was compiled from various sources throughout the audit. It shows the following information:

The nine major programs administered by the Board

- Characteristics of the programs and their source and intended use of funds
- Amounts of general obligation bonds authorized and issued for the Board as of August 1997
- The three major revenue bond programs
- The two appropriated fund programs

Figure 7

Fund	Program	Authorized	Issued	Loan/ Grant	Acct. No.	Fund Type	M.O.F.	Bonds Issued	Comments
Water Development Fund	Water Supply	\$1,040,000,000	\$ 893,000,000	L	351	PR	GO	SS, T/TE	
	Water Quality	\$ 740,000,000	\$ 417,000,000	L	351	PR	GO	SS, T/TE	
	State Participation	\$ 400,000,000	\$ 23,000,000	L	351	PR	GO	SS, T/TE	
	Flood	\$ 300,000,000	\$ 59,305,000	L	351	PR	GO	SS, T/TE	
	Agricultural Water Conservation Bond Program	\$ 200,000,000	\$ 19,000,000	L	358	PR	GO	SS, T	
	EDAP - Water Supply	\$ 250,000,000	\$ 88,435,000	L/G	355	SPC REV	GO/FF	NSS, TE	
	EDAP - Water Quality								
Agricultural Trust Fund	Agricultural Grants	N/A	N/A	G	563	SPC REV	APP FND	N/A	
	Pilot Loans	N/A	N/A	L	562	SPC REV	APP FND	N/A	Activity in this program is repayment of loans only
Water Assistance Funds	Research and Planning	N/A	N/A	G	483	SPC REV	APP FND	N/A	
	Research and Planning - EDAP	N/A	N/A	G	4803	SPC REV	APP FND	N/A	
	Hydrographic	N/A	N/A	*	4805	SPC REV	APP FND	N/A	
	Border Regional	N/A	N/A	G/L	4809	SPC REV	APP FND	N/A	\$2-3 Million for Border Efforts
	Small Community Emergency	N/A	N/A	L	4804			N/A	
	Trans-Texas Water	N/A	N/A	L/G	4808			N/A	Existing projects being wrapped up and program is terminating

Figure 7 (concluded)

Fund	Program	Authorized	Issued	Loan/Grant	Acct. No.	Fund Type	M.O.F.	Bonds Issued	Comments
State Water Pollution Control Revolving Fund (SRF)	Water Quality Enhancement	N/A	N/A	L	651	PR	RB, SM, FF	SS, TE	G.O. Bonds generate the state matching portion for federal requirements. No mandated limits; program funds limited only by state's ability to subsidize interest rates
Drinking Water State Revolving Fund (DWSRF)	Water Supply	N/A	N/A	L and Sub	900 series	PR	RB, SM, FF	SS, TE	No mandated limits; program funds limited only by state's ability to subsidize interest rates on loans.
Texas Water Resource Finance Authority (TWRFA)	Water Supply	N/A	N/A	L	751	PR	RB	SS, TE	Bonds outstanding = \$517,624,013
	Water Quality	N/A	N/A	L	751	PR	RB	SS, TE	
	Flood	N/A	N/A	L	751	PR	RB	SS, TE	
Colonia Plumbing Loan Program	Plumbing	N/A	N/A	L/G	851	PR	FF	N/A	100% federally funded
Colonia Wastewater Treatment Assistance Program	Wastewater	N/A	N/A	G	355	SPC REV	FF	N/A	State match from GO bonds = \$17,626,467
Colonia Assisted Management Support	Management Support	N/A	N/A	G	355	SPC REV	FF	N/A	100% Federally Funded
<b>Loan/Grant</b>	<b>Fund Type</b>	<b>Program</b>		<b>M.O.F. (Method of Finance)</b>				<b>Bonds Issued</b>	
L Loan G Grant Sub Subsidies	PR Proprietary SPC REV Special Revenue	EDAP Economically Distressed Areas Program		GO GO/FF APP FND RB, SM, FF RB	General Obligation bonds General Obligation Bonds and Federal Funding Appropriated Funds Revenue Bonds, State match issued from Development Fund, and Federal Funds Revenue Bonds				SS Self Supporting T Taxable TE Tax Exempt NSS Non-Self-Supporting * Self-Supporting through a Cost Reimbursement Process

Appendix 4.2:

**Texas Water Development Board Applicant Pool**

The number of entities eligible for Board financial assistance has grown significantly. Under the original Water Development Fund, only cities and water districts were eligible. Nonprofit water supply and wastewater corporations became eligible in November 1985. Privately owned water systems (also called investor-owned utilities) became eligible in 1997. Many types of entities fall into the district category including municipal utility districts, river authorities, and groundwater districts.

The source of the data is the Facility Needs Database in the Resource Information Office of the Board and the Texas Natural Resource Conservation Commission's database in the Water Utilities Division. The four programs shown account for a large percentage of the Board's portfolio.

Figure 8

Potential Applicant Pool for the Board's Major Programs					
Major Programs	Applicants				Total Applicant Pool
	Cities (1,186)	Districts (1,295)	Nonprofit Corporations (965)	Privately Owned Water Systems (≈2,450)	
Water Development Fund (Supply, Quality, Flood, and Participation)	√	√			2,481
Water Development Fund (Supply, Quality, Flood, and Participation) including Not-for- profits as eligible entities	√	√	√		3,446
State Water Pollution Revolving Fund (SRF)	√	√			2,481
Drinking Water State Revolving Fund (DWSRF)	√	√	√	√	5,896

Some other entities eligible for Board financial assistance, not shown in Figure 8, are councils of government, state agencies, federal agencies, and counties.

Appendix 4.3:

**Board Grants and Loans**

Figure 9 shows Board grant and loan activity for the past 12 years. The source of the data is the Portfolio Management System Database of the Office of Project Finance and Construction Assistance Office at the Board. The data was provided on August 11, 1997, and was updated through August 31.



Figure 9

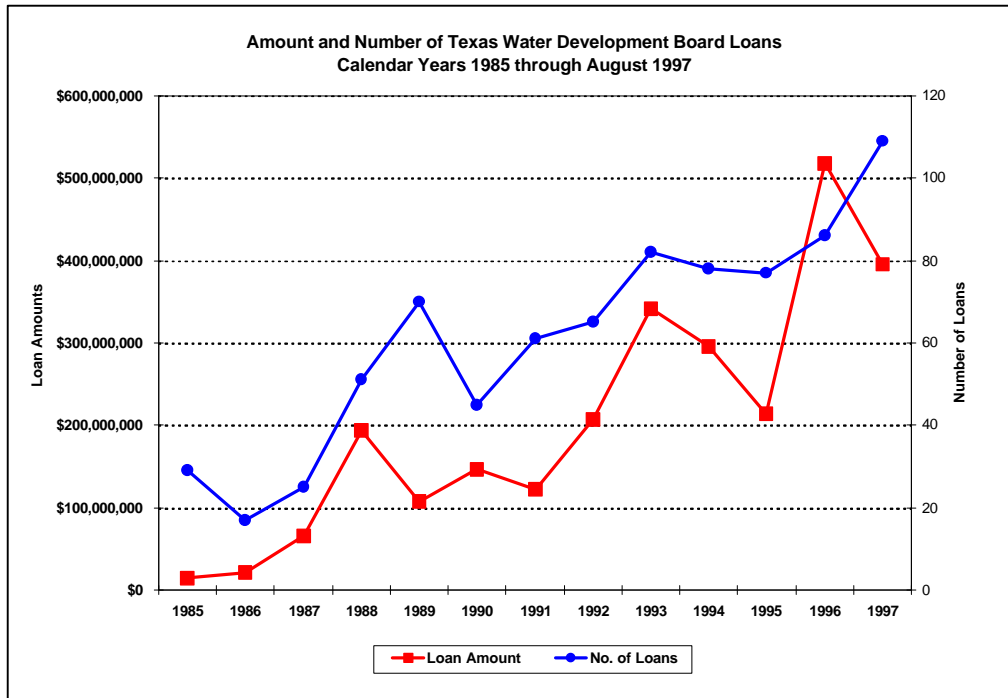
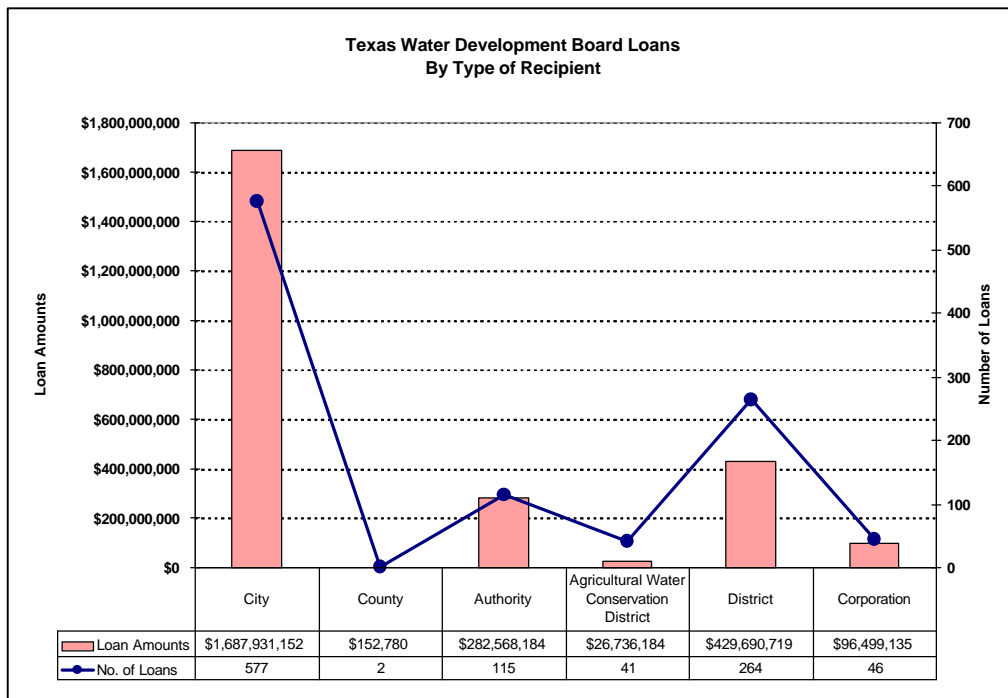


Figure 10



Appendix 4.4:

**Loans by Type of Recipient**

Figure 10 shows Board loans by type of recipient. In the figure, "Authority" refers to large regional water districts (shown as "Districts" in Figure 9) and "Corporation" refers to nonprofit water supply or sewer corporations. The source of the data is the Portfolio

Management System Database of the Office of Project Finance and Construction Assistance Office at the Board. The data was provided on August 11, 1997, and was updated through August 31.

Appendix 4.5:

### Board Loans by Type of Loan

Figure 11 shows Board loans according to the purpose of the loans. In the figure, state participation refers to state ownership of a share of a local facility. It indicates that most of the Board's loans have been to provide wastewater service. The source of the data for Figures 11 and 12 is the Texas Water Development Board Portfolio Management System, Office of Public Finance and Construction Assistance. The data are unaudited, in that we did not track individual records to source documents.

Figure 11

Loans by Cost Center		
Cost Center Description	Total	Percentage
Agricultural loans	\$28,286,184	1.05%
Flood Control loans	\$48,325,000	1.79%
Plumbing loans and grants	\$384,262	0.01%
State participation loans	\$32,660,000	1.21%
Water quality enhancement (wastewater/sewer systems) loans and grants	\$2,009,161,189	74.33%
Water supply loans and grants	\$584,274,266	21.62%
Total	\$2,703,090,901	100.00%

Most of the construction loans are financed through first lien bonds. One issuance of the Pollution Control State Revolving Fund (SRF) second lien bonds amounting to \$50,000. The terms "first lien" and "second lien" refer to the claim on the borrower's revenues. First lien bondholders have first claim to the tax and/or system revenues of the defaulting entity. Second lien bondholders receive a share of such revenues once first lien holders have been satisfied. The types of liens the bonds will support affect the bonds' ratings and the coverage requirements of the entity.

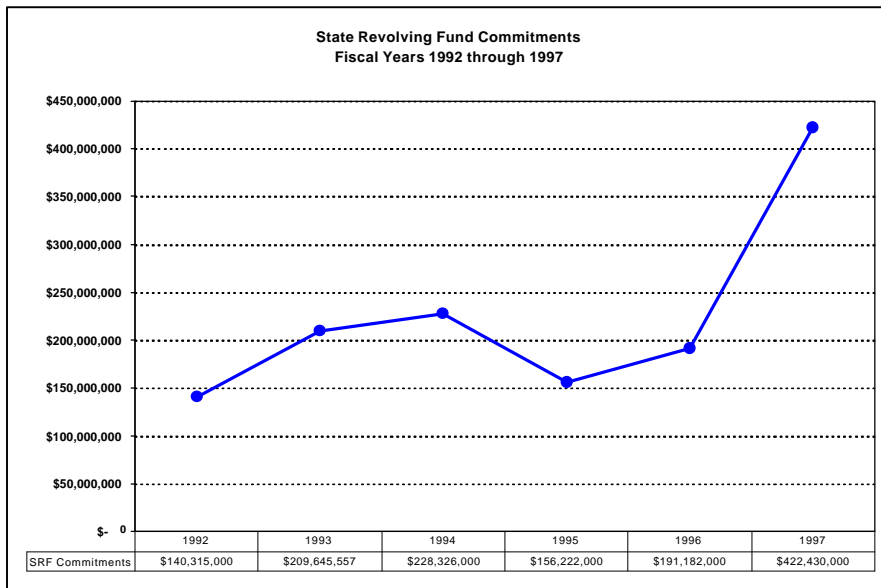
Included among the development fund bonds are match lien bonds in the amount of approximately \$159,832,747. The match lien bonds are used to provide the state-matching portion for the Pollution Control State Revolving Fund.

Appendix 4.6:

### State Revolving Fund Commitments

This appendix provides summary information on the Texas Water Development Board's State Pollution Control Revolving Fund (SRF) Program. The SRF replaced a previous federally funded Construction Grants program. SRF loans are used to finance costs associated with the construction, expansion, or improvement of sewage treatment and collection facilities and nonpoint source pollution control projects. Funded in part by federal grant money, the SRF provides loans at interest rates lower than market rates. Loans may be for up to 20 years, using either a traditional long-term, fixed-rate or a short-term, variable-rate construction period loan that converts to a long-term, fixed-rate loan on project completion. (See Figure 12 on the next page.)

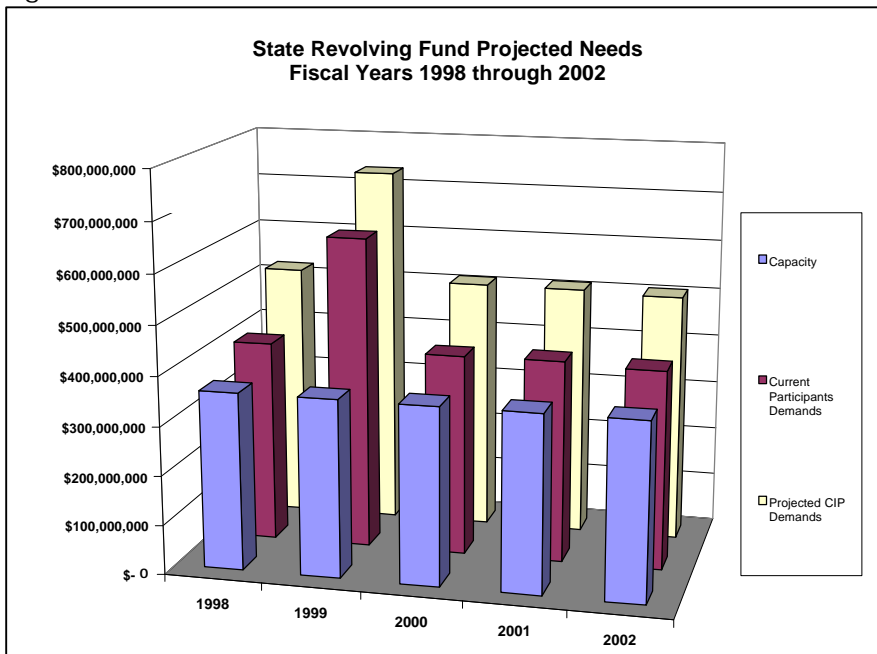
Figure 12



Source: Texas Water Development Board Portfolio Management System, Office of Public Finance and Construction Assistance. The data are unaudited, in that we did not track individual records to source documents.

Appendix 4.7:  
**State Revolving Fund, Projected Needs for Fiscal Years 1998 Through 2002**

Figure 13



Source: Texas Water Development Board, Office of Public Finance and Construction Assistance. The data are unaudited, in that we did not track individual records to source documents.

Demand for the State Revolving Fund (SRF) has increased beyond the SRF's sustainable capacity. The Board is now considering ways to balance demand with capacity, including use of a prioritization system. Figure 13 shows projected SRF capacity, projected demand by current program participants, and projected high-level new demand. The projections include assumptions that some entities with Capital Improvement Plans (CIPs) will be applying to the Board for SRF loans.

The projections in the Figure 13 were presented to

the Board's Governing Board in September 1997. If the Board continues to make loans at its present rate, the program's future capacity may be reduced to approximately \$60-\$70 million per year.

Appendix 4.8:

### Loans and Grants to Economically Distressed Areas

In 1989, the Legislature passed the Economically Distressed Areas Program (EDAP) to bring water and wastewater services to parts of the State where water facilities were not adequate to meet the minimal needs of residents. The EDAP is also referred to as the Colonias program. The Legislature and voters have authorized \$250 million in bonds for EDAP purposes. Of this authorization, the Board has issued \$88 million. However, the Board has made extensive EDAP grant/loan commitments beyond the issued amount. The Board also makes money available for EDAP facility planning grants and coordinates with other agencies and funding sources in administering the program.

According to the Economically Distressed Areas Program (EDAP) report dated November 20, 1997, from both federal and state funding sources, the Board has committed \$282,601,516 in funding and has provided \$8,503,429 in planning grants to economically distressed areas. These amounts apply to 45 discrete projects affecting 141,690 Texas residents.

Figure 14

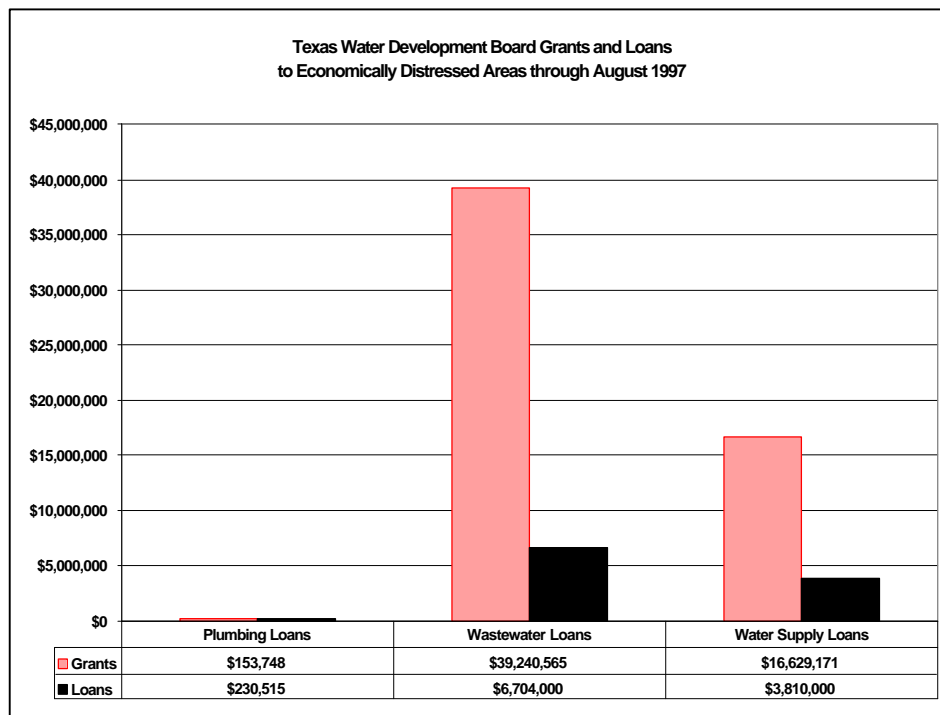


Figure 14 shows loans and grants to economically distressed areas. The source of the data is the Texas Water Development Board Portfolio Management System, Office of Public Finance and Construction Assistance. The data are unaudited, in that we did not track individual records to source documents.

Appendix 4.9:

### General Revenue Support for the Economically Distressed Areas Program

Of the various bond programs administered by the Board, only the EDAP bonds are not considered self-supporting. Thus, the program will require general revenue support.

Figure 15

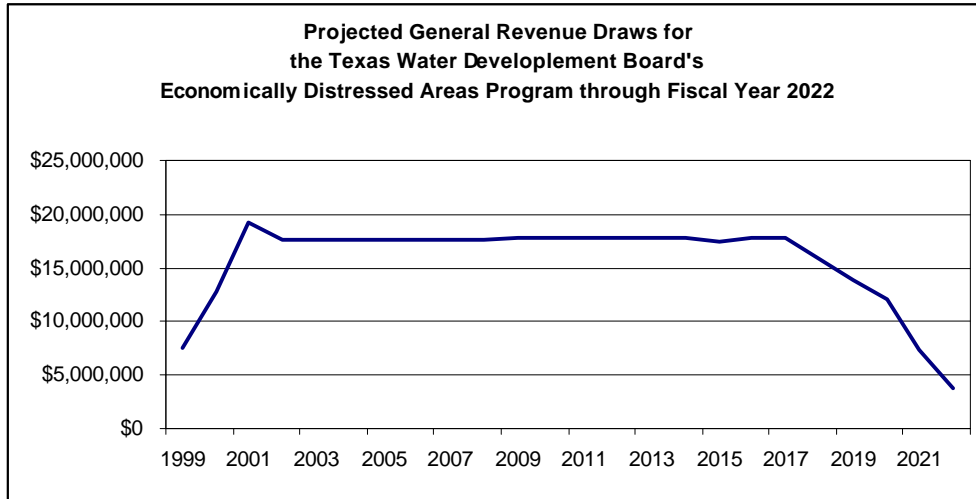


Figure 15 shows projected general revenue draws through the year 2022. The source of the data is the Board's Office of Public Finance and Construction Assistance. The data are unaudited, in that we did not track individual records to source

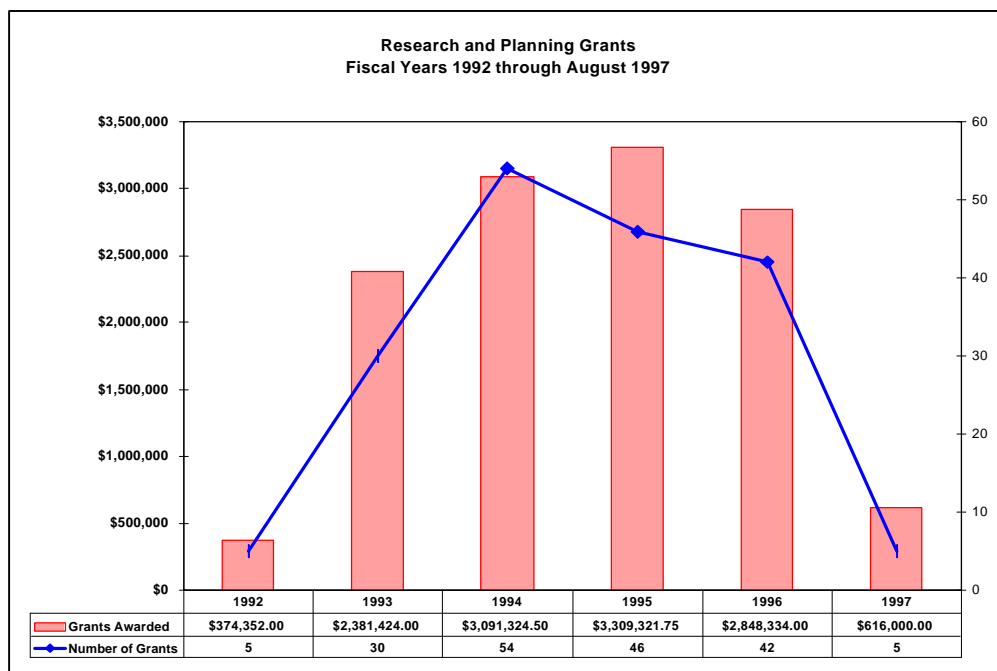
documents.

Appendix 4.10:

### Research and Planning Grants

Through its planning program, the Board administers grants from the Water Assistance Fund (state fund 480). Figure 16 shows Board research and planning grants for the past five years. The source of the data is the

Figure 16



research/planning database in the Board Office of Planning. The data are unaudited, in that we did not track the numbers to source documents.