

# State Water Plan: Issues and Funding

In addition to the strategies identified by water planning regions, the 2007 Texas State Water Plan highlighted several policy issues to be addressed in implementing the plan. Some of the recommendations were enacted by the 80th Legislature in 2007, while others have not yet been addressed.

## Reservoir Site Designation and Acquisition

Development and construction of new reservoirs remains an ongoing policy issue. An important factor in preserving future reservoir sites for construction is proper designation by the Legislature. Actions by federal, state or local governments to protect ecosystems in or near reservoir sites can sometimes impede development.<sup>1</sup> For example, in 2006 the U.S. Fish and Wildlife Service designated a federal wildlife refuge on 25,000 acres in Anderson and Cherokee coun-

ties in East Texas, preventing the construction of Fastrill reservoir, a water supply project which had been sought by the city of Dallas.<sup>2</sup> This designation is being appealed.

Acquisition and protection of future sites is also an issue. To address this, the Texas Water Development Board (TWDB) controls the Storage Acquisition Fund for projects related to the acquisition and development of water storage.<sup>3</sup> In 2007, the 80th Legislature enacted Senate Bill 3. Among its provisions, the bill designated 19 sites identified in the State Water Plan as having unique value for the construction of a dam and reservoir, a designation that will expire in 2015 unless an affirmative vote for a project is made by the project sponsor, such as the governing body of a city. Although the bill did not initiate reservoir construction, it did lay the ground-



Cotton fields near Lubbock, Texas

work for it by designating these sites. To address concerns over the controversial Marvin Nichols reservoir planned along the Sulphur River in Red River and Titus Counties, a study commission will examine water needs in Region C (Dallas-Fort Worth) and recommend, no later than December 1, 2010, whether Marvin Nichols should remain designated as a reservoir site.<sup>4</sup>

Reservoir designation and construction are controversial issues. Development can conflict with the interests of local landowners whose property would be flooded, and environmental concerns such as habitat loss, diminished downstream flows and pollution have also led to opposition.

### Interbasin Transfers of Surface Water

Interbasin transfer of surface water is the practice of moving surface water from one river basin to another. This provides an important source of regional water supply for some, and has been used to meet water demand shortages in various regions. Current state laws, however, substantially restrict the free flow of interbasin transfers.

Prior to the passage of Senate Bill 1 in the 75th Legislative Session (1997), interbasin transfers were significantly more accessible. With Senate Bill 1, the state adopted the “junior water rights provision.” This regulation requires any water right that transfers surface water from one river basin to another to be reclassified as “junior.” This reclassification means that senior water rights allowing the transfer of surface water outside the basin become junior to other water rights within the basin. For this reason intrabasin water rights have priority over interbasin rights. In drought years when there is not enough surface water to satisfy all water rights, junior interbasin rights may not be satisfied.<sup>5</sup>

Since the passage of Senate Bill 1, only two interbasin transfers have been authorized. Opponents argue that the Legislature should repeal the 1997 provisions to restore the volume of interbasin transfers and facilitate free flows of water throughout the state.<sup>6</sup> Others point out that the process can harm agricultural or historic users in the originating river basin and that these users have a right to be protected.

### Groundwater Regulation in Texas

For more than a century, Texas’ groundwater has been governed under the “rule of capture,” a tenet based in English common law that considers groundwater to be a privately owned resource. Thus in Texas groundwater is treated differently from surface water, which is publicly owned and requires a permit for use.

Under the rule of capture, as adopted by the Texas Supreme Court in 1904, a Texas landowner may pump a virtually unlimited amount of groundwater from below his or her land.<sup>7</sup> The court has established only limited exceptions to this rule, requiring that the water be put to a beneficial use; that a landowner may not withdraw water to maliciously injure a neighbor; and that a landowner cannot cause subsidence to a neighbor’s land as a result of groundwater withdrawals.<sup>8</sup>

Since adopting the rule of capture, Texas courts have deferred to the Legislature regarding groundwater regulation. In 1997, Senate Bill 1 took a major step toward altering the state’s approach to groundwater regulation by strengthening the role of groundwater conservation districts, specifying that these districts are the preferred method for managing the state’s groundwater.<sup>9</sup>

Groundwater districts can be created by local voters or through legislation. At this writing, Texas has 95 groundwater districts.<sup>10</sup> These districts can regulate well spacing and may limit groundwater production.

In some areas, more than one groundwater district manages land over a single aquifer. In these cases, groundwater districts must work together under the framework of a “groundwater management area” that encompasses the aquifer. Districts in a groundwater management area collaborate to ensure that groundwater withdrawals are consistent with their plans for the aquifer.

Parts of the state that are without a groundwater district, however, remain governed by the rule of capture. Because groundwater is less highly regulated than surface water, water marketers

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have become increasingly interested in groundwater resources as an option for meeting growing demand.

In recent months, several important court rulings have highlighted the contentious nature of groundwater regulation in Texas. In *Guitar Holding Co. L.P. v. Hudspeth County Underground Water Conservation Dist. No. 1, et al.* (December 2007), the Texas Supreme Court found that when using historic usage to permit groundwater withdrawals, a district must consider not only the amount of water historically permitted to a landowner, but also the purpose for which the water had been used. According to the court, “because transferring water out of the district is a new use, it cannot be preserved or ‘grandfathered.’” The net effect of the court’s ruling was to level the playing field for landowners in the Hudspeth County Underground Water Conservation District, meaning that landowners who do not have a history of irrigating now have a right to export water that is equal to those who have historically drawn from the aquifer, and both must apply for a new permit on an equal basis.

Two recent rulings by the Fourth Court of Appeals in San Antonio clarified the status of a landowner’s ownership right to groundwater. In February 2008, the court ruled in *City of Del Rio v. Clayton Sam Colt Hamilton Trust* that groundwater is the property of a landowner whether or not it has yet been captured by the landowner. In August 2008, the Fourth Court of Appeals ruled in *Edwards Aquifer Authority v. Day* that a landowner has a vested ownership right in groundwater, potentially opening the door to compensation for landowners if a groundwater district restricts their ability to withdraw groundwater from their property.

These recent court rulings have affirmed the state’s long-held position on ownership of private property, as codified in 1995 by SB 14, the Private Real Property Rights Act, authored by Senator Teel Bivins and then-Representative Susan Combs. Groundwater is the property of the owner of the land overlying the aquifer, and efforts to interfere with this right could result in both uncertainty of ownership and enormous economic consequences for our state.

### Environmental Water Needs

Environmental concerns regarding water allocation are a crucial part of state water planning. Rivers need a base level of flow to preserve the fragile ecosystems that surround them. Coastal bays and estuaries need freshwater inflows to maintain the delicate balance between freshwater and seawater that sustains wildlife and supports shrimping, fishing, recreation, and other coastal industries. It is important for state officials to have accurate information on environmental flow requirements when they issue permits for municipal, industrial and agricultural uses. And water rights applicants and permit holders need reliable information from the state to plan adequately for environmental issues. Although state agencies have studied environmental inflow needs since 1977, until recently the results were not widely accepted or incorporated into the water right permitting and planning process.<sup>11</sup>

In 2007, Senate Bill 3 passed by the legislature included a process to determine the environmental needs of Texas rivers, bays and estuaries. This process incorporates a bottom-up planning approach, where basin stakeholder committees and expert science teams submit environmental recommendations to the Environmental Flows Advisory Group and the Texas Commission on Environmental Quality (TCEQ), which then develops environmental flow standards. These flow standards are developed to inform water rights applicants of water to be set aside for the environmental protection of rivers, bays and estuary ecosystems.<sup>12</sup>

Currently, two river basin/bay stakeholder committees are active: the Sabine and Neches Rivers/Sabine Lake Bay Stakeholder Committee and the Trinity and San Jacinto Rivers/Galveston Bay Stakeholders Committee. These committees have appointed experts to gather research on environmental flow needs specific to these river and bay systems. TCEQ is scheduled to adopt environmental flow standards for these regions by May 2011. As specified by Senate Bill 3, the remaining river basin and bay systems will begin their planning process in the coming months and all will be active by June 2010.<sup>13</sup> In addition, the Environmental

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Flows Advisory Group, which will ultimately recommend environmental flow set-aside levels to TCEQ, was appointed by the governor, in December 2007.<sup>14</sup> This group has met several times, as has the Environmental Flows Science Advisory Committee, which advises the Environmental Flows Advisory Group on technical and scientific questions.

### Water Conservation

Water conservation is an integral part of the Texas Water Plan. Conservation initiatives will help supply nearly 23 percent of the state's water requirements by 2060. The 78th Legislature established a Water Conservation Implementation Task Force that developed best practices for regional water planners to enhance conservation efforts statewide. The task force made 25 recommendations for conservation initiatives at the state level.

Examples of these recommendations included efforts to raise water conservation awareness, tying state water funding to water conservation requirements, grants to fund innovations in water conservation, and the establishment of a water management resource library. Of the 25 statewide recommendations made by the task force, three need continued funding for existing programs, eight require new or additional funding and 13 require legislation and, in most cases, additional funding.<sup>15</sup>

In addition to these measures, in 2007 the 80<sup>th</sup> Legislature established a statewide water conservation public awareness program and required public utilities serving at least 3,300 water utility connections to develop a water conservation plan. The Legislature also established the Water Conservation Advisory Council, to provide guidance on water conservation issues.<sup>16</sup>

### Expedited Amendment Process

To qualify for state funding assistance, Texas law requires that water supply projects are consistent with the state and regional plans, and receive surface water right permits from TCEQ. If a project does not conform to the state water plan and to the regional water plan, the project's applicant must seek either an amendment to

those plans or a waiver from TWDB and from the appropriate regional water planning group. The amendment process can be costly and difficult, requiring such actions as a 60-day notice and comment period; notices to municipalities and river authorities; notices published in local newspapers; and public hearings and comments.

To streamline this process, TWDB has recommended an expedited process for projects that would not result in over-allocation of water resources, was not a reservoir project and would not significantly impact environmental flows. This proposed process would require a two-week public notice of an entity's intent to amend the water plans, followed by a public meeting in which the planning group must consider any public comment before amending the plan.<sup>17</sup> The agency claims that this recommendation would significantly accelerate the amendment process and afford economically disadvantaged areas more opportunities.

### Indirect Reuse

Indirect reuse occurs when wastewater treatment plants discharge water into a stream and that water is diverted and reused by the same permit holder downstream creating, in effect, a closed loop system. Under current law, indirect reuse requires a "bed and banks" permit that authorizes a water rights holder to transmit water in a watercourse. This is contrasted with direct reuse, in which water is sent directly from a treatment plant to a location where it is used again without reentering the river or stream.

Conflicts have arisen over indirect reuse because downstream users argue that discharged water falls under the "first come, first served" doctrine of "prior appropriation." Prior appropriation allows the water rights holder with the most senior permit full use of his or her permitted amount before the next most senior permit holder can exercise his or her use. Under this doctrine, any entity interested in reusing water that had been discharged into a river would have to apply for another, more junior permit in order to use that water. Proponents of indirect reuse believe that they should be allowed to reuse discharged effluent downstream in order to meet growing demand for water.

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Ultimately, many water users believe that the Legislature should clarify water rights accordingly. Potential issues that could be addressed include: the uniform status of water that is derived from different sources; whether water from future or existing sources is treated uniformly; who can obtain indirect reuse rights; and environmental protection in reuse permitting.<sup>18</sup>

### Financing Water Management Strategies

The 2007 State Water Plan's total price tag is \$30.7 billion, which represents capital costs associated with supplying water to regional systems. Capital costs do not include funds for water distribution within a water supplier's service area, forcing suppliers to shoulder a variety of investment strategies to meet water needs.

Major challenges affecting each water region include decreased federal assistance, the competition for funding by non-water infrastructure needs and time necessary to complete water projects. Local water groups are receiving less federal support for infrastructure, and are feeling the pinch of higher real interest rates, water scarcity, and rising energy costs, which all erode spending power on water projects. Additionally, water projects must compete with other infrastructure needs brought about by population growth, such as roads and schools.

The length of time needed for large water project construction prevents many local groups from implementing projects without state help. Current legal and regulatory barriers require 10 years for planning, and local sponsors are reluctant to approve projects with little short-term benefit. Economically disadvantaged areas cannot raise necessary capital without sufficient income from residents, adding another barrier to water development without state assistance.

Of the \$30.7 billion cost of proposed projects in the 2007 state water plan, municipalities and other jurisdictions indicate that the state will need to provide \$2.1 billion by 2060. State funds would aid in initiating essential, large scale projects in communities across the state. TWDB

subsequently updated this number to \$2.4 billion. In the summer of 2008 TWDB completed a new infrastructure finance survey and the agency now estimates that the state will need to provide \$16.6 billion by 2060.<sup>19</sup>

### Current Water Project Financing

Water projects in Texas are funded by state and local sources. For the past four years, state funding has made up approximately 2 percent of total water project funding in Texas. In fiscal 2008, TWDB provided \$137.9 million, which was 3 percent of the total debt issued in Texas for water projects.<sup>20</sup>

Texas' primary funding mechanism has been the issuance of general obligation (GO) bonds backed by the state. TWDB has authority to issue \$4.9 billion in GO bonds. As of August 31, 2008, the agency had issued \$2.5 billion in GO bonds with a remaining \$2.4 billion in issuance authority.<sup>21</sup> Although TWDB has constitutional authority to issue the bonds, the agency depends upon the Legislature to make an appropriation for debt service (interest and principal payments) on any non-self supporting bonds issued. Therefore, debt service amounts appropriated by the Legislature affect the amount that TWDB can issue in GO bonds each biennium.

The 80<sup>th</sup> Legislature authorized TWDB to issue \$874.8 million in non-self-supporting GO bonds with debt service payments of \$39.8 million for fiscal 2008 and \$70.9 million for fiscal 2009.<sup>22</sup> The majority of these debt service amounts will be paid from general revenue. Of the bonds authorized for issuance during the 2008-09 biennium, \$762.8 million will be used for projects in the State Water Plan.<sup>23</sup>

TWDB provides grants and loans to local entities for funding the planning, design and construction of water and wastewater projects. Grants are provided primarily through the Economically Distressed Areas Program (EDAP), while loans are provided through the State Participation Program, the Water Infrastructure Fund (WIF), the Clean Water State Revolving Fund, and the Drinking Water State Revolving Fund. Typically, the proceeds from GO bond issuances are used to provide loans

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to local entities that in turn pledge to pay back the loans. Local entities apply for state financial assistance when they cannot assume enough debt for a project or if they can obtain more favorable terms from a state program. Loans are available to a variety of entities and political subdivisions including:

- cities;
- counties;
- river authorities;
- special law districts;
- water improvement districts;
- water control and improvement districts;
- irrigation districts;
- groundwater districts; and
- nonprofit water supply corporations.

Some of TWDB's loan programs offer local entities the option of deferred payments or a repayment rate below market rates. Deferring payments after the completion of a project lets local entities build the required customer base to generate enough revenue to repay the loan. TWDB also offers loans below the market rate to encourage local entities to begin crucial water projects for the region. In the case of deferred loans, from the State Participation Fund, the state recovers all of the principal and interest. Under the Water Infrastructure Fund, the difference between TWDB's cost for debt service and the amount paid back by the local entities represents a cost to the state.

TWDB administers both self-supporting and non-self-supporting GO bond programs. In self-supporting programs, such as the Water Development Fund, proceeds are used to make loans to communities and loan repayments are used to pay debt service on these bonds and make additional loans. Repayments by local entities are then deposited to the same fund for debt service payments and additional loans. In non-self-support-

ing programs, proceeds from the sale of bonds are used to make loans to communities. Repayments from the communities are then deposited to the particular program fund. These repayments are insufficient to pay all the debt service required and general revenue pays the remaining amount required to pay debt service.

### Non-Self-Supporting GO Bond Programs

Through the State Participation Program (SPP), TWDB provides loans to local governments for the construction of water facilities where local funding is inadequate and the entity cannot assume the necessary debt. To ensure that the project is built with enough capacity to serve future growth, TWDB will defer repayment of the loan until an adequate customer base has been established. In exchange, TWDB may acquire an ownership interest in the water rights or co-ownership in the facility or property.<sup>24</sup> TWDB continues to pay the debt service amounts on the original GO bond issuance while local entities repay the entire loan amount on a deferred timetable. TWDB is authorized to issue \$326.1 million in bond authority during the 2008-09 biennium with \$276.1 million to be used for projects in the State Water Plan.<sup>25</sup>

EDAP provides loans and grants in economically distressed areas where water or wastewater systems are inadequate and the financial resources to provide services are insufficient. Qualifying systems include *colonias* on the Texas-Mexico border and unincorporated areas across the state. Eligible projects are in areas where the median household income is less than 75 percent of the median state household income. In 1991, voters approved \$250 million in bonds for the EDAP program and in 2007 approved an additional \$250 million. By the end of fiscal 2007, \$238 million had been issued.<sup>26</sup> Out of the authorized issuance of \$99.5 million in the 2008-09 biennium, \$37.5 million is for projects identified in the State Water Plan. By using GO bond proceeds and federal funds in the Colonia Wastewater Treatment Assistance Program, TWDB has provided \$570.9 million to 103 projects in 24 counties, affecting 328,069 residents in 676 colonias.<sup>27</sup>

WIF was created in 2001 for making grants and low-interest loans to communities for water

projects, but it did not receive any appropriations until 2007. Currently, TWDB can issue \$449.3 million in GO bonds for funding projects in the State Water Plan.<sup>28</sup> Bond proceeds are used to make loans at a subsidized interest rate of 2 percent below the cost for TWDB and no less than zero percent. Since the state offers local entities loans at a lower rate than the state is paying for the debt service, general revenue is used to make up the difference. To advance projects that have significant planning and design stages, locals may defer repayment for up to 10 years or until end of construction for the project.<sup>29</sup>

TWDB has constitutional authority to issue up to \$200 million in GO bonds for the Agricultural Water Conservation Fund (AWCF). Through the AWCF, TWDB can provide grants to state agencies and political subdivisions for conservation activities and the purchase and installation of metering devices for irrigation use. Loans are available for projects such as converting irrigated land to dryland farming, more efficient use of precipitation and brush control activities. Local banks and credit systems also can apply to this program for funds. Through linked deposits, banks or farm credit associations are able to offer a lower rate for loans to individuals.<sup>30</sup> In exchange, the lender pays a less-than-market interest rate on state funds deposited with the lender. To date, TWDB has loaned \$35.2 million to political subdivisions, individuals, and local lending institutions through the AWCF.<sup>31</sup>

### Self-Supporting Bond Programs

The Water Development Fund I was established in 1957 when voters approved a constitutional amendment authorizing \$200 million in GO bonds for water projects. In 1997, a new Water Development Fund II was established to update the process used to loan and distribute funds.<sup>32</sup> This constitutionally dedicated fund provides most of TWDB's authority to issue GO bonds for such programs as the SPP, EDAP, WIF and RWAF. The Water Development Fund program offers TWDB flexibility as a wide array of water projects are eligible for funding. The self-supporting component of the Water Development Fund provides loans to entities that need state assistance, are unable to wait for federal funds, and are ineligible for either the Clean or the Drinking

Water state revolving funds. Through this initiative, TWDB can make one loan to a municipality for multiple water projects. TWDB funds the 20 percent federally required state match for the Clean and the Drinking Water state revolving funds primarily by using bond proceeds amounts from the Water Development Fund II.<sup>33</sup>

Rural political subdivisions that include municipalities and water districts with a population under 10,000 and counties where no urban area has a population more than 50,000 qualify for Rural Water Assistance Fund loans. The program issues Alternative Minimum Tax (AMT) bonds through the state's private activity bond program and under DFUND authority. The AMT bond allow TWDB to offer loans at rates below taxable market rates to non-profit water supply corporations. Another benefit to the program is that construction purchases by nonprofit water supply corporations may receive a sales tax exemption.<sup>34</sup> Since the program's inception in 2001, \$104.8 million has been committed to 34 rural communities through the program.<sup>35</sup>

### Federal Financial Assistance

TWDB operates two revolving loan funds that receive federal capitalization grants. The Clean Water State Revolving Fund (CWSRF) was established in 1988 in compliance with the Clean Water Act and the Drinking Water State Revolving Fund (DWSRF) established in 1997 in compliance with the Safe Water Drinking Act.<sup>36</sup> Each of these funds receives a federal grant and the state must provide a match of 20 percent of the federal amount. The state matching amount is provided by bonds issued through the Water Development Fund. CWSRF program funds are used as collateral to issue CWSRF revenue bonds to leverage the program. By leveraging the federal and state match amounts, TWDB is able to make more and larger loans than would be possible using only the amounts in the funds. Repayment of the loan is made by the local entity and these amounts are deposited in the respective fund and used to pay debt service and secure additional bond issuances. TWDB provides these loans at rates of 1 percent to 4 percent below market rates.<sup>37</sup>

The CWSRF provides loans to political subdivisions (except nonprofit water supply corpora-

tions) for wastewater treatment facilities and pollution projects that address compliance with the federal Clean Water Act. In addition to providing loans to political subdivisions, banks or farm credit associations may apply for linked deposits to make loans for nonpoint source pollution control projects.<sup>38</sup> TWDB has received \$3.0 billion in federal capitalization grants as of 2007 and has provided \$5.2 billion in loans to local entities.<sup>39</sup>

Loans provided through the DWSRF ensure public drinking water systems comply with the federal Safe Drinking Water Act regulations and the State Water Plan. In addition to political subdivisions, nonprofit water supply corporations, privately owned water systems, and state agencies are also eligible for funding. Loans can be used for water supply infrastructure upgrades, compliance with federal health standards and the purchase of land or easements in order to prevent contamination of a drinking system water source.<sup>40</sup> TWDB has received \$685.2 million in federal capitalization grants as of 2007 and has provided \$971 million in loans to local entities.<sup>41</sup>

### Proposed Revenue Sources

By adopting a statewide planning process to identify and pursue water development projects, the State of Texas has established water infrastructure as an important public priority. However, Texas also has many other important spending priorities. In coming years, as the Texas population expands, public demand for services provided by state government will grow. State expenditures on health care, public education, higher education, public safety and transportation infrastructure will continue to exert pressure on the state's budget. In addition, given the relatively high levels of property and sales taxation in Texas, it is questionable whether these sources will be available for additional funding. Thus, a dedicated funding source for those projects may need to be established to ensure steady progress toward adequate future water supplies.

Since 1997, the Legislature has considered establishing a dedicated funding mechanism for water programs. Currently, however, no such

mechanism exists. Debt service on non-self-supporting general obligation bonds is paid with general revenue from state taxes.

The Water Development Board has identified \$2.4 billion in state funding that will be needed to support \$30.7 billion in local projects identified in the State Water Plan. Texas needs a funding system for water projects that provides a link between these water development projects and end users. The Texas Legislature is actively exploring the options that are available for funding water projects and may act on the issue in the 2009 legislative session. Although no funding mechanism has been adopted so far, policymakers have considered several proposals. Most recently, the Joint Committee on State Water Funding has held hearings considering several options.

Funding proposals presented by TWDB and the Joint Committee on State Water Funding include:

- a state sales tax increase;
- a water conservation and development fee;
- a water rights fee;
- a water connection fee; and
- a sales tax on bottled water.

Research has shown that the following criteria represent ideal principles by which to evaluate water project funding proposals:

1. Adequacy: The financing mechanism should be sufficient to cover identified costs without excessively burdening those who pay the fees.
2. Balance: The burden for funding water projects should be spread among all water user groups in relative proportion to each group's demand for water, and no group should be favored.
3. Specificity: Funds that are raised should be used for water development projects and not diverted for other budgetary obligations.



4. **Equity:** The plan should be sensitive to water users' ability to pay, since a certain level of water consumption is nondiscretionary and essential for every individual's health. No plan should unduly burden individuals who might have difficulty paying for it.
5. **Efficiency:** The plan should be easy to administer, comply with and understand. Such a plan also should avoid distorting economic activity by favoring certain user groups or creating incentives favoring certain types of water projects.
6. **Conservation:** The financing system should be consistent with the goal of water conservation and discourage inefficient uses.

Policymakers should strive to find the appropriate balance among these criteria.

### State Sales Tax Proposal

Under this proposal, the state sales tax rate of 6.25 percent would apply to currently exempt retail sales of water or sewer services by public water supply systems. In addition to a state sales tax, local governments could apply a local tax on retail water sales. Typical exemptions include government entities, education, charitable and nonprofit organizations and chambers of commerce. Residential users would also receive a fixed monthly exemption to account for basic water needs.

Assuming an exemption for the first 5,000 gallons of household residential use per month, state revenues generated from a sales tax on both water and sewer services would be an estimated \$243.2 million in fiscal 2008, increasing to \$266.6 million in fiscal 2011. This estimate is based on taxable retail sales of water and sewer services of \$3.9 billion in fiscal 2008 and \$4.3 billion in fiscal 2011.<sup>42</sup> In 2003, average per person-per month water use ranged from approximately 3,750 gallons in Killeen to approximately 8,250 in Richardson.<sup>43</sup>

Taxing industrial users would have been exempt. Industrial users have argued that they should be exempt from this tax because they are taxed on their final product. They point out that manufacturers' inputs typically are exempt from sales tax. Others argue that industrial users should be taxed

in proportion to the water that they consume. Assuming an industrial exemption, revenue would decline to an estimated \$220.1 million in fiscal 2008 and \$242.8 million in fiscal 2011. This is based on estimated taxable retail sales of water and sewer services of \$3.5 billion in fiscal 2008 and \$3.9 billion in fiscal 2011. The sales tax on water services accounts for 60 percent of the total water/sewer sales tax revenue, with wastewater service accounting for the rest. By applying the 6.25 percent state sales tax to water sales, the average monthly water/sewer bill would increase by approximately \$1.66 per month for residential customers and approximately \$10.51 for commercial customers.<sup>44</sup>

Proponents of this approach argue that this option generates substantial revenue and would be easy to administer. These amounts could be used to replace general revenue funds for the payment of debt service. Annual amounts for debt service associated with the State Water Plan are expected to increase significantly, but annual revenues generated from this sales tax would exceed that amount. Sales tax revenue could also be used to supplant a portion of GO bond proceeds in the future, providing a savings to the state by avoiding debt service costs. In addition, a tax on water sales would discourage water waste, as taxes increased with increases in water use, which could further be discouraged if higher levels of water use were priced at marginally higher rates. The regressive aspect of this approach would be minimized by providing an allowance for a base level of residential use that would go untaxed.

Critics point out that although this tax is a small portion of a user's residential water bill, sales taxes are regressive, meaning that their burden falls more heavily on lower-income taxpayers than on higher-income taxpayers. Some critics think it would be unfair for industrial users to get an exemption while residents and other commercial users pay the tax. In addition, some argue that it would be problematic for the tax to be a function of both consumption and the price for water that is charged by a utility, rather than exclusively basing it on water use. Finally, unless the revenue stream was established as a dedicated fund, these amounts would be credited to the General Revenue Fund (as is most sales tax) and could be used to pay for other government programs.

### **Water Funding Mechanisms in Other States**

Because of high costs associated with building water infrastructure, many states issue GO or revenue bonds to pay for large water projects. States use additional funding mechanisms to support water quality, conservation and some infrastructure projects.<sup>46</sup>

#### **Arizona**

Arizona levies a 5 percent transaction privilege tax on the gross sales or income derived by an entity that furnishes water, including cities and municipalities. The delivery of water by federal or state government entities is exempt generally. The state exempts bottled water (other than water delivered by a retailer to an office or business) and governmental entities. Residential and commercial users pay a water quality fee of \$0.0065 per 1,000 gallons of water. The state uses this fee for water quality improvement projects. The state also collects a storm water fee of 50 cents on each utility account.

#### **Arkansas**

Arkansas applies a 6 percent state sales tax on residential, commercial and industrial water sales. Large users of water are assessed an annual water use fee in the amount of \$10 per registered-surface water diversion and \$10 per registered well. The state funds water conservation programs using these fees.<sup>47</sup>

#### **California**

In California, water rights holders pay an annual fee of 3 cents per acre-foot of "authorized" water.

#### **Kansas**

Kansas assesses a water protection fee of 3 cents per 1,000 gallons of water on the following: 1) water sold at retail by public water supply systems; 2) water appropriated for industrial use; and 3) water appropriated for stock watering. The state charges an inspection fee on each ton of fertilizer offered for sale and deposits \$1.40 per ton to the State Water Plan Fund. The state deposits \$100 of each pesticide registration fee to the State Water Plan Fund. Kansas also assesses a Clean Water Drinking fee of 3 cents per 1,000 gallons of retail water sold by a public water supply system. The state deposits 95 percent of this in the State Water Plan Fund, using 85 percent of this amount for the renovation and protection of lakes and 15 percent for technical assistance for public water supply systems.<sup>48</sup>

#### **Louisiana**

Louisiana applies a 3.8 percent sales tax on water sales to commercial and industrial users. While individual residential consumers are exempt, sales where one meter applies to several residential units, multi-family rentals for example, are subject to the tax.

#### **Michigan**

Michigan assesses an annual water use fee on community water supply systems ranging from \$372 to \$124,791, depending on the number of people served by the water system.<sup>49</sup> The state also charges non-community water suppliers a fee. Facilities with wells serving primarily transient populations, including campgrounds, rest stops, motels and restaurants, are assessed an annual fee of \$104. Larger, non-community water systems, such as schools and businesses, that serve the same 25 or more persons on a routine basis, are assessed \$442 per year. The state uses the fees to administer Michigan's Clean Drinking Water Act.

#### **Nebraska**

Nebraska levies a 5.5 percent sales tax on amounts paid for through sewer and water services. The state exempts water used for agricultural irrigation and manufacturing.

**Water Funding Mechanisms in Other States (continued)**

**Minnesota**

Minnesota taxes commercial and industrial water sales at a rate of 7 percent. The state exempts housing authorities, non profits, governmental entities and ice manufacturers. Water permit holders pay a \$140 minimum water use fee and a per million gallon fee based on the amount of water appropriated (or used). Maximum allowable fees range from \$750 for an agricultural irrigation permit to \$250,000 for cities with populations of more 100,000.<sup>50</sup>

**Oregon**

Oregon charges a fee for water right transfers, permit amendments and exchanges. Water rights users are assessed a minimum fee of \$200 or \$400 depending on the intended use. The state also charges a fee based on the flow of water measured in cubic feet per second. These fees range from \$80 to \$200 per cubic feet per second, depending on use.<sup>51</sup>

**Tennessee**

The state assesses a 7 percent sales tax on residential and commercial water utility accounts and a 1 percent rate on water sold to manufacturers.

**Water Conservation and Development Fee Proposal**

Legislation introduced, but not passed, in the 79th Legislature in 2005 would have established a water conservation and development fee of \$0.13 per 1,000 gallons used by consumers each month. The fee would have been collected by public water supply systems, remitted to the Comptroller and deposited to the Water Infrastructure Fund.

The first 5,000 gallons of water used by a residential customer each month would not be subject to the fee. Exemptions from the fee would have included governmental entities, educational, charitable and nonprofit organizations, and chambers of commerce, and could be expanded to include industrial users.<sup>45</sup>

Using this structure, estimated revenue would be \$127.3 million in fiscal 2008 increasing to \$130.0 million in fiscal year 2011. This is based on a taxable amount of 978.8 billion gallons in fiscal 2008 and 1 trillion gallons in 2011 of residential, commercial, industrial and irrigation usages.<sup>52</sup>

Assuming exemption for industrial uses (as under the previous sales tax exemption), revenue would decrease by 44 percent to \$70.7 million in fiscal 2008 and \$72.5 million in fiscal 2011. Taxable gallons for this estimate are 543.8 million

in fiscal 2008 and 557.5 million in fiscal 2011.<sup>53</sup> Residential users would see an estimated 48 cents per month average increase to their water bill while commercial customers would see a \$4.66 monthly increase.<sup>54</sup>

A change in the number of exempted residential gallons would increase revenue for both the sales tax proposal and the water conservation fee proposal. Reducing the number of gallons exempted by 1,000 would increase average annual revenue amounts by \$17.9 million for the sales tax and \$9 million for the water conservation fee revenue, based on fiscal 2008. This also would result in a corresponding increase in the monthly water/sewer bill of residential customers of an average of 20 cents for the sales tax and 10 cents for the water conservation fee.

Supporters claim that this option would generate sufficient revenue to replace general revenue funds for expected annual debt service payments associated with the State Water Plan for all but a few years. In the future, these revenues could also supplant some GO bond financing, depending on debt service demands. This fee is a small portion of the average monthly water bill and provides a residential exemption for basic water uses. The fee and exemption could also be changed based on estimated future needs. While costs may be

passed on to the consumer, this plan would allow for more accurate pricing of water resources, improving efficiency in the market for this scarce resource. Construction of water infrastructure will pose a significant cost. From the standpoint of economic efficiency it would be most appropriate if those costs were accounted for in the goods that require expanded water supplies.

On the other hand, critics point out that with industrial exemption, the fee would raise insufficient funds, while industrial users would bear a heavy burden without an exemption. Although designed as a conservation measure, increased usage costs residential customers very little. Business interests suggest that it would be unfair for low-use residential customers to avoid paying any fee while industrial users account for the largest share. There is the possibility that industrial users would pass on additional costs to the consumer, potentially reducing demand for some products.

### Water Rights Fee Proposal

Surface water in Texas is owned by the state of Texas and requires a permit for use. The Texas Commission for Environmental Quality (TCEQ) administers water rights based on the principle of “prior appropriation,” which, in effect, means “first come, first served.” A water rights holder could be anyone from an individual landowner to a manufacturing firm, to a municipal water utility that provides water service to thousands of households.<sup>55</sup>

Currently, TCEQ collects an annual fee from water rights holders based on acre-feet of water rights held. In the case of municipal, industrial, agricultural or mining users, the fee is 22 cents per acre-foot up to 20,000 acre-feet, and 8 cents per acre-foot above 20,000 acre-feet. However, many of these entities are exempt under statute if they are paying the Water Quality Fee. As a result, revenues for this fee are low (\$416,483 in fiscal 2006).<sup>56</sup> The intent of the fee is to defray TCEQ’s costs associated with the water rights permitting program.

Assessing a fee of \$1.50 per acre-foot of authorized water on water rights holders would generate an estimated \$49.3 million annually. The

fee would apply to 7,090 municipal, industrial, irrigation, and mining water rights holders with an estimated 32.9 million acre-feet of authorized water. Water rights for hydroelectric, recreation, storage and environmental needs would be exempt. Average annual costs to water rights holders would increase approximately \$10,906 for municipal permit holders and \$44,421 for industrial permit holders. Costs to irrigation and mining permit holders would be significantly less, at \$1,148 and \$1,413 respectively.<sup>57</sup> Increasing revenue from this fee would depend upon increased permitting or raising the fee amount.

Supporters say that this proposal could be used to supplant some general revenue for debt service payments. Although some of the costs to municipal and industrial holders would be passed to residential users, it would not be overly burdensome.

This option generates the least amount of revenue and it may not provide enough money to cover the needs that have been identified.

### Water Connection Fee Proposal

A water connection, or “tap fee,” would place a monthly charge on each water connection in the state. Applying a \$1 monthly fee on residential, commercial, irrigation and industrial users would generate an estimated \$94.6 million in fiscal 2008, and increase to \$97.3 million in fiscal 2011. This estimate is based on 7.9 million connections in fiscal 2008 and 8.1 million in fiscal 2011.<sup>58</sup> Residential connections could account for 93.5 percent of the total revenue.

This option would generate slightly more revenue than what is required for annual 2008-09 debt service payments. The residential bill charge is slightly less than the sales tax and is a small portion of the water/sewage bill, meaning that it would not be a burdensome levy.

Critics argue that this fee is not tied to water usage, includes no conservation component and is regressive. Residential customers would be the primary contributor of the fee since they make up over 90 percent of water connections in Texas, even though they account for only about 48 percent of water usage.

**Sales Tax on Bottled Water Proposal**

Removal of the state sales tax exemption for bottled water is estimated to generate \$78 million of state sales tax revenue in fiscal 2008 to \$101.8 million in fiscal 2011. This estimate is based on Texas bottled water sales of \$1.2 billion and \$1.6 billion, respectively. The 6.25 percent sales tax would apply to bottled water sold at retail (including gallons or larger), carbonated or seltzer water and cooler water delivered to homes and offices. Local sales and use taxes also would apply. Water delivered by tanker truck to residential wells or cisterns and water sold at community dispensers would be exempt from the sales tax.<sup>59</sup>

As proposed, the bottled water fee would not generate enough revenue supplant all general revenue for debt service payments. Proponents argue, however, that bottled water sales

increased significantly in the past few years, providing the possibility of steady revenue growth. Bottled water consumption is typically discretionary, as consumers could purchase other tax-exempt products or drink tap water. In rural areas where tap water is not available, tax exemptions could be structured to avoid taxation of drinking water.

Critics say this fee would not be related to water usage, and bottled water suppliers and consumers likely would object to being singled out. This tax would include no conservation component and would likely be regressive.

**Exhibit 42** shows the potential results of the funding mechanisms listed above. Fiscal impact numbers for the proposed funding mechanisms were generated by TWDB with help from TCEQ and the Comptroller’s office.

Exhibit 42

**Proposed Funding Mechanisms**

| Proposed Revenue Sources                                  | Fiscal 2008   | Fiscal 2011   |
|---|---------------|---------------|
| State Sales Tax   | \$243,270,000 | \$266,579,375 |
| State Sales Tax, industrial exemption                     | \$220,112,500 | \$242,837,500 |
| Water Conservation and Development Fee                    | \$127,250,019 | \$130,001,766 |
| Water Conservation and Development , industrial exemption | \$70,695,486  | \$72,479,123  |
| Water Rights Fee  | \$49,339,946  | \$49,339,946  |
| Water Connection Fee                                      | \$94,573,104  | \$97,280,928  |
| Sales Tax on Bottled Water                                | \$78,000,000  | \$101,750,000 |

*Source: Texas Water Development Board. and Texas Comptroller of Public Accounts*



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