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TO THE ISSUES

WATER SUPPLY

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THE ISSUE

As time passes, Texas faces an ever more urgent challenge to provide sufficient water to meet rapidly growing demand. This is one of the most critical, long-term policy issues facing the Texas Legislature. Policy decisions made—or not made—in the present will impact the future of Texas' water supply.

Texas has one of the fastest growing populations and economies in the country. Although Texas has completed nationally acclaimed water plans designed to help meet future demands, legal and financial constraints stall actual implementation of planned projects. Texas has fallen well behind schedule in meeting the challenge to increase available water.

Not only will a much larger population need more water; the existing water supply of 17 million acre-feet also may significantly decline due to groundwater depletion and siltation in reservoirs.

As required by SB 1 in 1997, Texas has completed detailed water plans carefully measuring available water and future demand. Sixteen Regional Water Groups across the state have developed comprehensive plans then compiled by the Texas Water Development Board (TWDB) into the official State Water Plan (SWP). In 2002, the TWDB issued the first SWP developed through the bottom-up, rigorous regional requirements of SB 1. In 2007, TWDB issued a revised SWP. The Regional Water Plans carefully identified 4,500 strategies to augment annual supply by 9 million acre-feet of water by 2060. Strategies include municipal and irrigation water conservation, re-use, desalination, new reservoirs, increased use of groundwater, and diverse surface water management.

Although no comprehensive assessment of implementation status yet exists, a partial review by the TWDB revealed only 9 percent of strategies were operational and only 5 percent had begun construction. Most large-scale water supply projects minimally require 10 years for completion. Large reservoirs have required 20 or more years if necessary federal authorizations and financing could ever be secured. TWDB estimates the total capital cost for projects necessary to meet future demand in 2060 exceed $30 billion.

As stipulated in SB 1, more than half of the water supply strategies in the regional plans envision "voluntary redistribution" of existing water supply. Such redistribution assumes a well functioning water market which facilitates change of use, e.g., from irrigation to municipal, or change of location (i.e., water transfers). Except in a few areas, water marketing has been far more limited than anticipated. Regulatory constraints on interbasin transfers, indirect reuse and water rights amendments, legal questions about the property interest attaching to a surface water right, and landowners' groundwater rights preclude an efficient water market in Texas. Enacted in the last legislative session, major new law to protect environmental flows complicates many water supply projects.

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THE FACTS

- ★ Texas' current population of 23 million is projected to double to 46 million by 2060.
- ★ The 2007 State Water Plan (SWP) estimates Texas needs an additional 9 million acre-feet to meet demand in 2060 during drought conditions.
- ★ Future water demand widely varies among the 16 water planning regions. The Dallas-Fort Worth metroplex (Region C) has the greatest short-term water needs.
- ★ Implementation of the 4,500 water supply strategies in the 16 regional water plans has an estimated capital cost of $30 billion.
- ★ Water conservation strategies could generate 23 percent (2 million acre-feet) of increased supply needed by 2060.
- ★ Agricultural conservation accounts for 1.4 million acre-feet of conservation strategies. Capital cost for the irrigation conservation is estimated at $929 million.
- ★ A highly cost-efficient strategy, water re-use strategies are recommended in 14 of the 16 regional plans and could meet 14 percent (1.3 million acre-feet) of additional demand in 2060.
- ★ Surface water strategies in the 2007 SWP could produce 4.4 million acre-feet by 2060, accounting for almost 50 percent of new supply at an estimated capital cost of $18 billion.
- ★ Fourteen recommended new reservoirs account for 1.1 million acre-feet annually at an estimated cost of $5 billion.
- ★ Multiple management strategies for existing surface water could generate 3.3 million acre-feet.
- ★ Legal ambiguity in Texas water rights law, a cumbersome administrative process, and uncertain financing constrains efficient, timely implementation of planned water projects. A simple water right amendment application to add an industrial use to a municipal use surface water right has been pending for eight years and still lacks final approval.
- ★ Water markets depend upon clearly defined property interests and a predictable administrative process.

RECOMMENDATIONS

- ★ Examine a broad range of private and public-private financing mechanisms to fund water supply projects.
- ★ Remove legal barriers to private investment in water supply projects.
- ★ To facilitate water marketing, clarify the property interest in surface water rights and landowners' groundwater rights.
- ★ Strengthen the importance of voluntary redistribution of existing water as articulated in Chapter 16 of the Water Code.
- ★ Amend TWC 11.122.b to simplify the process for TCEQ approval of a water right amendment for a change or addition of beneficial use.
- ★ Simplify the requirements for bed and banks authorization needed for indirect re-use projects, the most cost efficient of water supply projects.
- ★ Legally integrate regional water planning process with now separate bay/basin environmental flows standard process.

RESOURCES

- *Water for Texas 2007*, Volumes I, II, III, Texas Water Development Board (Jan. 2007) http://www.twdb.state.tx.us.

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