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At NRS, we see engineering as more than designing and building projects. Engineering better communities also means engineering innovation: new ways of approaching problems and solving them, using a toolkit that also encompasses financing alternatives, technological advances, and policy developments.

NRS **Texas Water News** is intended to help promote awareness of and dialogue on the important issues impacting water quantity and quality in the Lone Star State. Sharing information is the first step in working together to promote sustainable water resources for all Texans.

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NRS managing principals Bill Norris and Jesús Leal.

Financing Tops List of Recommendations for TWDB's Draft 2007 State Water Plan

For the Texas Water Development Board, the pivotal question for the future of water supplies in Texas is not "whether the state can afford to provide more financial assistance for water development" but rather "can it not afford to pay for additional financial assistance?"

Financing is shaping up as the number one policy issue for the 2007 State Water Plan. Others include expediting the amendment process, indirect reuse, environmental water needs, interbasin transfers, and reservoir site designation and acquisition. The Board has scheduled a series of meetings around the state to take comments on the proposed legislative recommendations and the plan as a whole (see page 2). Those meetings will culminate in a public hearing in Austin on Oct. 2, 2006.

The Board is scheduled to consider the plan for adoption at its Nov. 14, 2006, meeting. The hearing and the Board meeting will be held at the Stephen F. Austin Building in Austin, Room 170.

Financing Water Projects

In background papers prepared for Board members, TWDB staff cite several reasons for expanding state support for water supply infrastructure. Chief among them are increasing cost burdens on local water providers and governments, due in part to reductions in federal support, rising operating and maintenance costs, and growing demands for non-water related infrastructure. The briefing papers also point out that local governments may lack the political will necessary to take on immediate costs of planning and developing large-scale water supply projects when the benefits may not be realized for years in the future.

The State Participation Program and Water Infrastructure Fund administered by the Board cannot address the magnitude of water projects that require financing.

However, the Legislature could appropriate additional funds to the TWDB for debt service that would help local and regional water providers "fill the gap." According to the TWDB analysis, "an investment of \$90.1 million for the 2008-2009 biennium would provide \$929.6 million in projects, with a total investment of \$875 million

between 2008 and 2020 providing \$1,696 million in projects."

"As our state's population continues to grow, further delays in investment could feed a cycle of increasing costs and shrinking time frames for project implementation, and when severe drought next strikes, delays could spell social and economic disaster for Texas."

Expedited Amendments

Based on input from regional water planning groups, TWDB is proposing that the Legislature overhaul the process for making minor amendments to regional water plans. The goal would be to save both time and money by expediting the process for a minor amendment, defined as one that "will not result in overallocation of a source, is not related to a new reservoir, and does not have a significant impact on instream flows or fresh water inflows to bays and estuaries."

The expedited process would require the planning group to post in a place readily accessible to the public a two-week notice of the meeting at which the amendment would be considered and then take and consider public comment at that meeting.

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Policy Issues

The TWDB also is recommending that the Legislature consider and develop policies regarding indirect reuse, environmental water needs, and interbasin transfers.

Indirect Reuse. Fourteen of the 16 regional water planning groups included direct and/or indirect reuse as a recommended water management strategy in their 2006 plans, according to the TWDB briefing paper. The groups are projecting that reuse will supply 1.3 million acre-feet of water by 2060, the majority – 929,470 AF, or more than 70 percent – from indirect reuse. Eight of the groups included legislative recommendations related to reuse. Noting that there are several issues related to permitting indirect reuse, the TWDB is recommending that the Legislature develop policy in response to the several questions identified by the Reuse Committee of the Texas Water Conservation Association (see sidebar).

Environmental Water Needs. The debate continues in Texas “as to how much and by what means water should be provided to the environment for instream flows and freshwater inflows to bays and estuaries,” the TWDB briefing papers stress. Senate Bill 3 from the 79th Legislature would have created a consensus-

based approach for balancing water for human needs and for environmental flows. Now, the Environmental Flows Advisory Committee (see *Texas Water News*, March 2006) is revisiting provisions of SB 3. The Board is recommending that the Legislature provide statutory provisions similar to those in Article 1 of SB 3, as improved by recommendations from the Environmental Flows Advisory Committee.

Interbasin Transfers of Surface Water. In 1997, Senate Bill 1 “significantly expanded” the requirements for obtaining authorization to move water from one basin to another. About 193 permits for interbasin transfers have been issued – but only two since passage of SB 1. In the past, such transfers “have been an important, efficient, and effective means of meeting the diverse water supply needs of an ever increasing population in Texas,” the TWDB says. It cites the transfer of water from Lake Meredith in the Canadian River basin to 11 cities in the High Plains spread across three basins. “Without this project, local groundwater supplies from the Ogallala Aquifer, in many cases already severely depleted, would not have been able to meet the increasing municipal and manufacturing demands of

REUSE POLICY ISSUES

- Under current law, is the use of wastewater effluent after discharge to a stream a use of ‘state water’ subject to the laws of prior appropriation or is it subject to a different regulatory scheme?
- Does current law allow effluent derived from different sources of water to be treated differently for purposes of evaluating a request to reuse this effluent?
- Does current law provide for different treatment of effluent derived from ‘future’ and ‘existing’ return flows, regardless of the source?
- Who can obtain indirect reuse rights?
- To what extent should protection be afforded to the environment in reuse permitting decisions?

Source: TWDB briefing paper July 11, 2006, quoting Texas Water Conservation Association Reuse Committee

the region.” The Board recommends that the Legislature “thoroughly evaluate” relevant sections of the Texas Water Code “to determine if any of the statutory provisions are

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TWDB 2007 DRAFT STATE WATER PLAN MEETINGS

Date	City/Meeting Location
Sept. 12	Lubbock – Texas Tech University
Sept. 12	San Angelo – San Angelo Civic Center
Sept. 13	Wichita Falls – Midwestern State University
Sept. 13	Alpine – Sul Ross State University
Sept. 14	Amarillo – Texas A&M Ag Research & Extension Center
Sept. 14	Del Rio – Sul Ross State University – Rio Grande College
Sept. 19	San Antonio – University of Texas – San Antonio
Sept. 20	Arlington – Bob Duncan Center
Sept. 20	McAllen – Holiday Inn Express Hotel & Suites
Sept. 21	Gilmer – Gilmer Civic Center
Sept. 21	Corpus Christi – Texas A&M University – Corpus Christi
Sept. 26	Waco – Baylor Law School
Sept. 26	Conroe – San Jacinto River Authority
Sept. 27	Nacogdoches – Stephen F. Austin University

All meetings start at 6 pm

NRS Awarded Kenedy Desal Demonstration Project

NRS Consulting Engineers has been awarded a contract by the City of Kenedy in Karnes County and the San Antonio River Authority to provide engineering and design services for a demonstration brackish groundwater desalination project. NRS services also will include construction administration and project oversight and data collection and reporting.

The project will focus on retrofitting and modernizing the city's existing reverse osmosis facility in order to both enhance performance and provide a factual comparison of how new RO technologies perform in comparison to the older filtration methods currently used. The project is one of three funded in January by the Texas Water Development Board as part of a legislatively approved initiative to promote planning, permitting, designing, and developing brackish groundwater desalination demonstration projects that will serve as

roadmaps for small to medium sized communities (see *Texas Water News*, January 2006).

The award helps cement NRS' position at the forefront of innovative desalination projects in Texas. The firm is providing engineering services for the North Cameron Regional Water Supply Corp., which also received a TWDB demonstration grant to develop an engineering facility roadmap and on-site and web-based educational activities about its 3.2 MGD brackish groundwater desalination facility. That facility is scheduled to go on-line by mid-September.

In addition, NRS is the engineer of record for two seawater desalination pilot plants, also receiving TWDB funding. In April, TWDB awarded the Brownsville Public Utility Board \$1.34 million for a large-scale seawater

desalination pilot (see *Texas Water News*, April 2006); on July 18, it approved a \$231,000 grant to the Laguna Madre Water District for a small-scale pilot using an open-ocean intake. In announcing the award, the TWDB stressed that "information resulting from this unprecedented study will be useful to other coastal communities considering small-scale seawater desalination in the future."

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negatively affecting the voluntary transfer of water from one basin to another to meet the water supply needs of the state."

Reservoir Site Designation & Acquisition

Although the hey-day of reservoir building is over, 13 new major reservoirs are recommended in 2006 Regional Water Plans. The TWDB says "major reservoir projects must remain a strong and viable tool in our water-development toolbox if the state is to meet its future growth needs."

However, the Board acknowledges that several factors will determine whether any of the sites recommended actually will be developed, including "the manner in which the state addresses issues associated with preserving the viability of the reservoir site for future reservoir construction purposes."

The TWDB briefing paper suggests that the Legislature move to protect sites and thus preclude federal actions that otherwise could circumvent the state's primacy over water resources. Case in point: development of the proposed Waters Bluff Reservoir on the Sabine was prevented when a private conservation easement was established in 1986. Now, designation of the Neches River

National Wildlife Refuge may thwart development of the proposed Lake Fastrill, included as a recommended water management strategy in the 2006 Region C Water Plan (see *Texas Water News*, June 2006).


The briefing paper also notes that the Legislature is authorized to designate ecologically unique river and stream segments as well as unique sites for reservoir construction. "These designation processes could be linked to protect certain ecologically unique stream reaches as habitat mitigation areas associated with specific water supply projects, thus creating a balanced outcome," it suggests.

The Board recommends that the Legislature designate "all remaining viable reservoir sites of unique value for the construction of reservoirs" and "all river or stream segments of unique ecological value recommended in the 2006 Regional Water Plans and the 2007 State Water Plan for protection . . . as mitigation for future reservoirs." Furthermore, it says, "the Legislature should provide a mechanism to acquire feasible reservoir sites and possibly associated mitigation areas so that they are available for development of additional surface water supplies to

meet the future water supply needs of Texas identified in the 2006 Regional Water Plans and also water supply needs that will occur beyond the 50 year regional and state water planning horizon."

IN MEMORIAM

*Guillermo
"Memo" Perez*
General Manager
Laguna Madre
Water District
1957 – 2006




**Not your
average
engineer.**



engineering better communities

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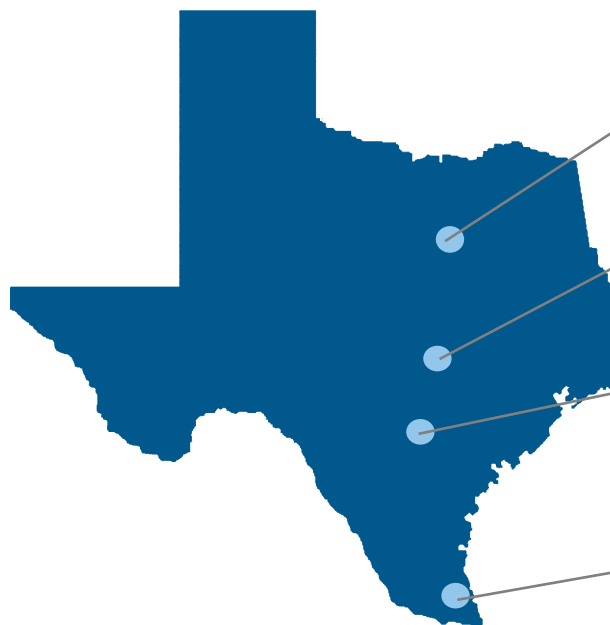


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NRS offices are strategically located along the IH-35 corridor in Texas, with associated offices in Oklahoma and Arkansas.



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