2014 Texas City Attorneys Association

Summer Conference – South Padre Island
June 20, 2014

State Water Planning:
Its History and Its Challenges

Emily W. Rogers, Partner
Bickerstaff Heath Delgado Acosta LLP

and

Lyn Clancy, Managing Associate General Counsel and
Senior Water Policy Advisor
Lower Colorado River Authority

TABLE OF CONTENTS

State Water Planning:
Its History and Its Challenges

Prepared by:
Emily W. Rogers, Partner, Bickerstaff Heath Delgado Acosta LLP
and
Lyn Clancy, Associate General Counsel for the Lower Colorado River Authority

I. Introduction

In 1997, the Texas Legislature adopted Senate Bill 1 ("SB 1"), a comprehensive water resource planning, management, and development bill. *See* Act of June 1, 1007, 75th Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610 eff. Sept. 1, 1997. It was "the most exhaustive rewrite of Texas water law" in over thirty (30) years and was the product of extensive work by Lieutenant Governor Bob Bullock, Senator Buster Brown, Representative Ron Lewis, and many others. *See* 30 TEX. TECH. L. REV. 53, 54 (1999). Seventeen years and three State Water Plans later, Texas, and its lawmakers, regulators, water purveyors, farmers, and environmental groups continue to evaluate the State's water planning process and its challenges in implementation.

This paper provides some historical background regarding water planning in Texas, and discusses the SB 1 planning process and the three state plans that have been adopted since 1997. The paper also examines the state water planning challenges that have been addressed over the years by legislation and regulation, and looks forward by examining the lingering challenges in the planning process. Finally, this paper will discuss the implementation of the State Water Implementation Fund of Texas ("SWIFT") created by the Texas Legislature and approved by voters in 2013.

II. Background about the State Water Planning and Senate Bill 1

A. State Water Planning before Senate Bill 1

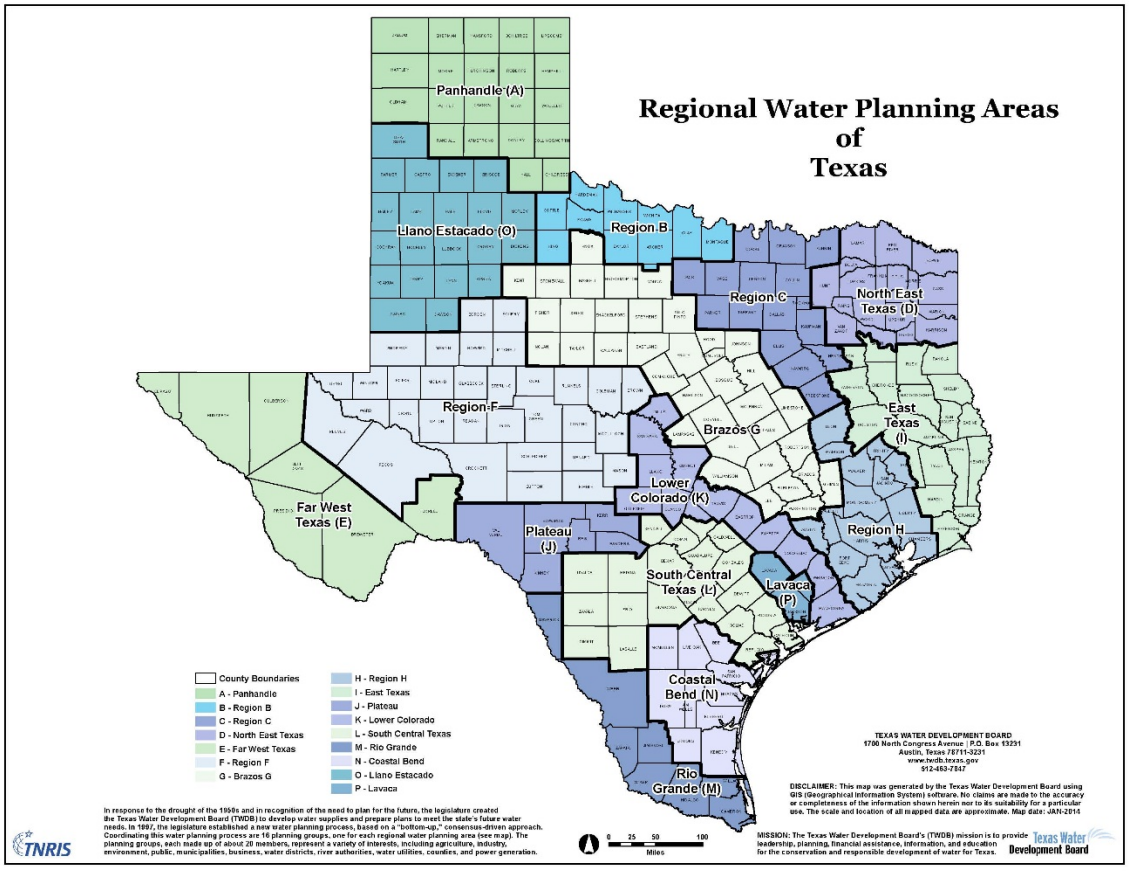
Although the Texas Legislature had been actively addressing water resource management and development since the early 1900's,[1] it wasn't until the 1950s that formal water planning began at the state level in Texas in the wake of the worst drought that Texas had experienced. *See* TEX. WATER DEV. BD., WATER FOR TEXAS: 2012 STATE WATER PLAN at 15 (2012) (hereafter "2012 State Water Plan"). In 1957, during a special session called by Governor Price Daniel, the Texas Legislature passed the Texas Water Resource Planning Act of 1957, which created the

[1] In 1904, Texas passed a constitutional amendment authorizing the first public development of resources. *See* Water for Texas 2012 State Water Plan at 15 (2012). The Texas Legislature authorized the creation of drainage districts in 1905. *Id.* In 1913, Texas passed the Irrigation Act of 1913, which created the Texas Board of Water Engineers. *See* Act of April 9, 1913, 33d Leg., R.S., ch. 171, 1913 Tex. Gen. Laws 358. In 1917, the Irrigation Act of 1917 and the Conservation Amendment to the Texas Constitution were adopted. *See* Act of March 19, 1917, 35th Leg., R.S., ch. 88, 1917 Tex. Gen. Laws 211; Tex. Const. art. XVI, § 59. Additional legislation was adopted in 1918 and 1925. *See* Act approved March 21, 1918, 35th Leg., 4th C.S., ch. 88, 1918 Tex. Gen. Laws 40; Act Approved March 28, 1925, 39th Leg., R.S., ch. 136, 1925 Tex. Gen. Laws 341, 344.

Texas Water Resource Planning Division of the Board of Water Engineers. *Id*. at 16. In 1961, the first plan was published – A Plan for Meeting the 1980 Water Requirements for Texas. Later plans were developed and adopted by the State in 1968, 1984, 1990, 1992, and 1997. *Id*. 17. While these plans were important tools for Texas, considering present and future needs, addressing the development of additional resources, and emphasizing the importance of conservation and natural resource protection, these plans were "top-down" plans with little emphasis on regional needs or preferences.

B. Senate Bill 1 Planning Requirements

In 1997, with SB 1, an entirely new form of planning was ushered in, and "the local and regional stakeholders were tasked with developing consensus-based regional plans for how to meet water needs during times of drought." *Id.* at 19. SB 1 required the Texas Water Development Board ("TWDB" or "Board") to define regional planning areas, designate representatives for each area that represent various interests, and develop guidelines for the development of the regional plans. *See* TEX. WATER CODE ANN. § 16.053. The TWDB designated sixteen (16) regional planning areas, considering factors such as river basins, aquifer delineations, political subdivision boundaries, and other socioeconomic characteristics. *Id*. at § 16.053(b). This map identifies the boundaries of each regional planning group.



The Board then appointed the initial members of the regional planning group, and each of these groups adopted bylaws to govern its methods of conducting business and designated a political subdivision to administer the planning process, and manage contracts. *See* TEX. WATER DEV. BD., WATER FOR TEXAS: 2002 STATE WATER PLAN at 23 (2002) (hereafter "2002 State Water Plan").

Working towards completing a regional water plan, each of the initially appointed regional planning groups began their planning work by describing their regional planning areas. Each group was to then quantify current and projected populations and water demands, evaluate and quantify current water supplies, identify surpluses and needs, evaluate water management strategies, prepare plans to meet the projected needs, and recommend regulatory, administrative, and legislative changes. *Id*. SB 1 required the regional planning groups to identify the water needs of all water users. If a user did not have a sufficient supply to meet current or future demands, the planning group was to recommend a specific water management strategy to address the water needs in the near-term and in the long-term. *Id.*

Prior to adoption of the regional water plan by a regional planning group, the group was to hold at least one public meeting to gather suggestions and recommendations from the public. *See* TEX. WATER CODE ANN. § 16.053(h). After this public meeting, as required by SB 1, each regional planning group was to submit an "Initially Prepared Plan" by October 2000. The purpose of submitting these plans in advance is to allow the TWDB to address interregional conflicts that may require coordination between the regional planning groups. *Id.* If no conflicts exist, or the TWDB otherwise resolves the conflicts, the groups would adopt the plans and submit them to the TWDB.

All the final regional water plans were to be submitted to the TWDB by January 5, 2001. The TWDB then began the process of consolidating the information and preparing the state water plan. The TWDB adopted the first state water plan under the SB 1 process on December 12, 2001. *See* 2002 State Water Plan.

While some changes have been made to better the planning process, the same basic "bottom-up" approach has been used for the adoption of the subsequent regional water and state water plans for 2007 and 2012.

C. Overview of the 2002, 2007, and 2012 Adopted State Water Plans

Using population projections, water usage data, and water supply information, along with other information, each regional group for each of the planning periods since the adoption of SB 1 has estimated the water supply needs for the region (and in turn the state) over a 50-year planning horizon. With the needs established, the regional planning groups have evaluated and proposed various water management strategies to meet those needs, and estimated the cost associated with meeting those needs. Below are charts that compare the data from each of the adopted state water plans:

Population Projections for Texas

Year	2002 Water Plan	2007 Water Plan	2012 Water Plan
2010	24,537,141	24,915,388	25,288,403
2030	32,774,870	33,052,506	33,712,020
2050	39,617, 389	41,071,409	41,924,167
2060	N/A	45,558,282	46,323,725

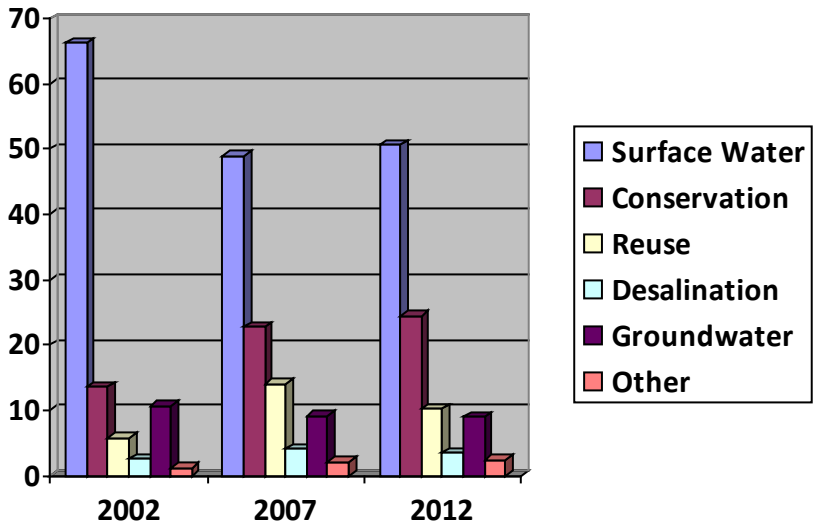
Estimated Water Supply Demands for Texas

Year	2002 Water Plan	2007 Water Plan	2012 Water Plan
2010	3,338,451	3,677,113	3,623,217
2030	5,780,221	5,923,764	5,827,627
2050	7,512,167	7,758,627	7,500,589
2060	N/A	8,832,586	8,325,201

Estimated Water Supply Needs for Texas

Year	2002 Water Plan	2007 Water Plan	2012 Water Plan
2010	17,661,815	18,311,823	18,010,599
2030	18,732,275	19,567,048	19,821,152
2050	20,022,209	20,758,602	21,190,527
2060	N/A	21,617,274	21,952,198

Water Management Strategies – Percentage of Supply



Cost to Implement Strategies Over the 50-Year Planning Horizon

	2002 State Water Plan	2007 State Water Plan	2012 State Water Plan
Costs for Water Supply Strategies Only	$17.8 Billion	$30.7 Billion	$53.1 Billion
All Costs – Strategies, Infrastructure, Wastewater and Flood	$108.7 Billion	$173 Billion	$231 Billion

Since the first SB 1 state water plan in 2002, the number of recommended strategies has grown. However, at the top of the list is water conservation for both municipal uses and irrigation uses. The 2012 State Water Plan notes that since the initial 2002 State Water Plan, conservation has been recommended in greater quantities over time. The current State Water Plan estimates that water conservation will account for 2.2 million acre-feet of the water needed to meet demands in 2060. *See* 2012 State Water Plan at 189-190.

Surface water management strategies, which, together as a category, account for the largest percentage of strategies, include expanding existing supplies, constructing new reservoirs, transferring water between basins, and reallocating existing supplies. "The volume of water produced by surface water strategies recommended in 2060 is five times greater than that produced by recommended groundwater strategies." *Id*. at 190. The 2012 State Water Plan proposes 26 new major reservoirs (having storage of more than 5,000 acre-feet), with most of those being proposed in areas east of Interstate Highway 35. *Id.*

Continuing to tap groundwater resources and developing water reuse projects also remain priorities. The proposed strategies include drilling new wells, increasing production of existing wells, building water treatment facilities to treat groundwater that do not otherwise meet drinking water standards, and transferring groundwater to other areas. *Id.* at 194. Water reuse includes both direct and indirect reuse of wastewater. *Id.* The reuse projects are estimated to account for about 915,000 acre-feet of the water supplied in 2060.

Other strategies include: (1) conjunctive use of various sources of water, which serve to optimize the beneficial characteristics of each source; (2) weather modification; (3) drought management, which unlike conservation is a temporary mandatory reduction in water use; (4) aquifer storage and recovery facilities, which allow non-native water (like surface water or treated brackish groundwater) to be stored in an aquifer; (5) brush control and land stewardship, which includes removing ash junipers and other water consuming plants; (6) desalination of both seawater and brackish groundwater; and (7) rainwater harvesting. *Id.*

III. A Look Back – SB 1 Challenges Addressed by Legislation and Regulation

In addition to determining water supply needs, and evaluating and proposing water management strategies, each regional planning group, as part of their plans, have submitted to the TWDB policy issues that the regional planning groups believe need to be addressed legislatively or through the regulatory process. Funding, including providing funds to the

regional planning groups to prepare the plans and providing funds to implement the water management strategies, has remained a priority for the regional planning groups, and with the passage of House Bill 4, creating SWIFT, and Proposition 6, this concern has, at least in part, been addressed. The regional planning groups have also recommended that the legislature address environmental needs for each of the basins, establish groundwater management tools and goals, strengthen the state's conservation and drought plan requirements, designate and acquire unique reservoir sites, address interbasin transfers to remove restrictions on the voluntary transfer of the water, establish an expedited amendment process to amend the regional and state water plans between planning cycles, and clarify the legal requirements to indirectly reuse wastewater. Many of these issues have been addressed by the legislature or the TWDB.

A. Amending the Regional and State Water Plans between Planning Cycles

Section 11.134 of the Texas Water Code prohibits the Texas Commission on Environmental Quality ("TCEQ") from granting any water rights permit application for a new or amended water right unless that application "addresses a water supply need in a manner that is consistent with the state water plan and the relevant approved regional water plan for any area in which the proposed appropriation is located, unless the commission determines that conditions warrant waiver of this requirement . . . ." TEX. WATER CODE ANN. § 11.134(b)(3)(E). Similarly, the TWDB may provide financial assistance to political subdivisions for water supply projects *only* if the needs to be addressed by the project "will be addressed in a manner that is consistent with the state water plan." *Id*. at § 16.053(j)(1); *see also* §§ 15.995, 17.124, and 17.125. Given these restrictions on permitting and funding water supply projects, water supply entities work with the regional planning groups to have their respective water supply projects included in the regional water plans as a water management strategy. With five years between planning cycles, entities can seek an amendment to the regional water plan to ensure that the projects are on the regional and state plans to meet the consistency requirement; however, prior 2005, there was no direct statutory authorization granting the TWDB with the authority to amend the plans between adoptions in an expedited fashion. *See* Acts of 2005, 79th Leg., R.S., ch. 1097, § 8, eff. June 18, 2005.

In 2005, the Texas Legislation adopted several measures related to clean coal projects, including the authorization to allow the TWDB by rule to provide "reasonable flexibility to allow for the timely amendment of a regional water plan . . . ." *Id*. If the amendment related to a clean coal project, the statute allowed for the amendment to be completed without providing notice or a public meeting or hearing if the amendment did not significantly change the regional water plan or adversely affected other water management strategies. *Id.* However, as the TWDB noted in the 2007 State Water Plan, outside of clean coal projects, other amendments to the regional and state plans could be "costly and time-consuming" because of the notice and comment period required to amend the plan, and public hearing process. *See* TEX. WATER DEV. BD., WATER FOR TEXAS: 2007 STATE WATER PLAN Vol. 1 at 23 (2007) (hereinafter "2007 State Water Plan").

To address this issue, the legislature adopted changes to section 16.053 of the Water Code as part of Senate Bill 3 ("SB 3") in 2007. *See* Act of June 16, 2007, 80th Leg., R.S., ch. 1430, eff. Sept. 1, 2007. With the changes, the regional planning groups were allowed to amend the regional water plans after they had been approved by the TWDB, but the amendments must go through the same notice, public meeting and public comment process that each new regional

water plan must go through. TEX. WATER CODE ANN. § 16.053(h)(10). The regional planning groups may also amend their plans through an expedited process if the amendment qualifies as a minor amendment. *Id*. at § 16.053(h)(11). Minor amendments, as defined by the TWDB, will not "result in the overallocation of any existing or planned source of water, does not relate to a new reservoir, and will not have a significant effect on instream flows and freshwater inflows to bays and estuaries." *Id.* The Executive Administrator of the TWDB must determine whether the proposed amendment is a minor amendment before it can be adopted by the regional planning group. *Id.* Once the amendment is determined to be a minor amendment, it may be adopted by the regional planning group at a public meeting held in accordance with the Open Meetings Act, and for which at least a two-week notice of the meeting has been given. *Id.* The public must also be allowed to provide public comment at the meeting. *Id*.

The TWDB adopted rules in 2008 to effectuate the change in the law. *See* 33 TEX. REG. 1350 (Feb. 18, 2008). In August 2012, the TWDB adopted revisions to those rules to add a process by which a political subdivision could petition the TWDB to consider amendments to the plan that the regional planning group was unwilling to consider, to more specifically describe the process to complete a minor amendment to the regional water plan, and to describe how major amendments to the regional and state plans may be made. *See* 37 TEX. REG. 5797 (Aug. 12, 2012) (repealing 31 TEX. ADMIN. CODE § 357.16, and replacing it with 31 TEX. ADMIN. CODE § 357.51).

B. Water Conservation

Senate Bill 1 rolled in a new requirement that water right holders appropriating 1,000 acre-feet of surface water for municipal, industrial or other uses, or 10,000 acre-feet of surface water for agricultural purposes must develop a water conservation plan, "consistent with the appropriate approved regional water plans," that adopts reasonable water conservation measures. TEX. WATER CODE ANN. § 11.1271. Additionally, SB 1 required entities applying for a new or amended water right, or for TWDB funds, to have a water conservation plan. *Id*. To effectuate this requirement, the TWDB, as part of its guidance to regional planning groups, requires the regional planning groups to consider water conservation plans in their planning efforts. *See* 31 TEX. ADMIN. CODE § 357.22. To that end, the TCEQ mandates that entities required to develop a water conservation plan to submit the plan, and any amendments, to the regional planning group. 30 TEX. ADMIN. CODE §§ 288.2 – 288.5.

During 2002, the TCEQ attempted to survey over 500 municipal water suppliers regarding the effectiveness of the water conservation plans. Of the 378 that completed the survey, a vast majority did not have a quantifiable water conservation goal or a time frame to reach it. The remaining entities either were unaware that a plan was required or where it was located. H.B. 2660 Bill Analysis, Senate Research Center, Engrossed (5-9-2003). Thus, in 2003, the 78th Texas Legislature passed House Bill 2660 which amended section 11.1271 of the Texas Water Code regarding the water conservation plan requirements. Specifically, it required all water conservation plans to have 5-year and 10-year targets for water savings, and goals for water loss programs and goals for water use in gallons per capita per day. The bill also required the TWDB and the TCEQ to develop best management practices, and required water suppliers with water conservation plans to submit implementation reports. Acts of 2003, 78th Leg., R.S., ch. 688, eff. June 20, 2003.

During the 2007 water planning process, thirteen of the sixteen regional planning groups made recommendations regarding water conservation. Additionally, the Water Conservation Implementation Task Force, which was established in 2003 with the passage of Senate Bill 1094, made twenty-five (25) recommendations to enhance the ability for Texas to implement conservation measures. 2007 State Water Plan, Vol. 1 at 23-25. Those recommendations included adopting a standard methodology to calculate gallons per capita per day water use, creating a water conservation advisory council, and encouraging planning groups to consider recommending water conservation water management strategies to meet identified water supply needs. *Id*. The 2007 State Water Plan recommended that the legislature review, adopt, and implement those 25 recommendations of the task force. *Id*.

In 2007, with SB 3, the Texas Legislature adopted an array of water conservation measures. First, the legislature established the Water Conservation Advisory Council, consisting of 17 members representing the following entities or interest groups: (1) TCEQ; (2) Texas Department of Agriculture; (3) Texas Park and Wildlife Department; (4) State Soil and Water Conservation Board; (5) TWDB; (6) regional planning groups; (7) federal agencies; (8) municipalities; (9) groundwater conservation districts; (10) river authorities; (11) environmental groups; (12) irrigation districts; (13) industries; (14) institutional water users; (15) professional organizations focused on water conservation; (16) higher education; and (17) agricultural groups. *See* TEX. WATER CODE ANN. Ch. 10. The purpose of the council is to monitor trends in water conservation, new water conservation and water saving technologies, effectiveness of public awareness programs, implementation of water conservation strategies included in the regional water plans, and the target and goal guidelines to be considered by the TWDB and TCEQ. TEX. WATER CODE ANN. § 10.010. SB 3 also extended the requirement to have a water conservation plan to all retail public utilities that provide potable water service to 3,300 or more connections and provided priority for funding of water conservation efforts. *See* TEX. WATER CODE ANN. § 13.145.

The Water Conservation Advisory Council, as part of its charge, prepared reports in 2008 and 2010 to the Texas Legislature reporting on its findings and providing recommendations regarding water conservation. In both the 2008 and 2010 reports, the council noted that there was not a standard methodology used by water suppliers to measure gallons per day per capita. The different figures reported by water suppliers and used for comparison created confusion regarding progress by municipal water suppliers in their conservation efforts. *See* Water Conservation Advisory Council, "Progress of Water Conservation in Texas: Report to the 82nd Texas Legislature," December 2010 (available at www.savetexaswater.org); Water Conservation Advisory Council, "Progress of Water Conservation in Texas: Report to the 81st Texas Legislature," December 2008 (available at www.savetexaswater.org). Both reports recommended that specific guidelines for how gallons per capita per day should be determined be developed.

In 2011, the Texas Legislature again addressed water conservation in terms of state water planning with the passage of Senate Bills 181 and 660. Section 16.053 was amended to require each regional planning group to submit to the TWDB a regional water plan that includes information on projected water use and conservation and the implementation of water conservation strategies. Acts of 2011, 82nd Leg., R.S., ch. 595 (SB 181), eff. June 17, 2011; Acts of 2011, 82nd Leg., R.S., ch. 1233 (SB 660), eff. Sept. 1, 2011. Senate Bills 181 and 660 also

added Texas Water Code §§ 16.403 and 16.404 which require the development of a uniform consistent methodology and guidance for calculating water use and conservation by cities and other water utilities and adoption of rules regarding the same. *Id*. At a minimum, the methodology must include the following:

> (1) a method of calculating water use for each sector of water users served by a municipality or water utility;
>
> (2) a method of classifying water users within sectors;
>
> (3) a method of calculating water use in the residential sector that includes both single-family and multifamily residences, in gallons per capita per day;
>
> (4) a method of calculating water use in the industrial, agricultural, commercial, and institutional sectors that is not dependent on a municipality's population or the number of customers served by a water utility; and
>
> (5) guidelines on the use of service populations by a municipality or water utility in developing a per-capita-based method of calculation, including guidance on the use of permanent and temporary populations in making calculations.

TEX. WATER CODE ANN. § 16.403. The TWDB and the TCEQ, working together in consultation with the Water Conservation Advisory Council, developed a guidance document for reporting on water conservation and water use. It was published in December 2012. *See* TWDB and TCEQ, "Guidance and Methodology for Reporting on Water Conservation and Water Use, December 2012 (available at www.twbd.state.tx.us/conservation/doc/SB181Guidance.pdf).

The Advisory Council continues to monitor trends in water conservation. In its 2012 progress report to the Texas Legislature, the Council identified several priority areas on which state, regional, and local entities should focus to achieve success in conservation. The Council recommended, among others, the following: (1) water providers and users should implement conservation strategies in the regional and state water plans and in their water conservation plans; (2) all retail water providers should conduct annual water loss audits; (3) there should be an increased effort to integrate energy and water supply planning; and (4) there should be more technical assistance provided for water management activities during times of drought. *See* Water Conservation Advisory Council, "A Report on Progress of Water Conservation in Texas: Report to the 83rd Texas Legislature," December 2012 (available at www.savetexaswater.org).

C. Environmental Flows

In 2005, the Texas Legislature considered but did not adopt strategies to ensure adequate environmental flows. In response, the 2007 State Water Plan recommended that the legislature "enact statutory provisions similar to those in Article 1, House Committee Substitute Senate Bill 3, 79th Legislative Session considering recommendations from the Environmental Flow Advisory Committee." 2007 State Water Plan, Vol. 1 at p. 17. Recognizing the importance of environmental flows, the 80th Legislature made it a priority to evaluate freshwater inflows and instream flow necessary to maintain the viability of the state's streams, rivers, bays and estuary systems. TEX. WATER CODE ANN. § 11.0235. The legislature prioritized the river basins,

requiring the appointed advisory committee to appoint a basin and bay area stakeholders committee for each river basin listed in Texas Water Code § 11.02362(b), and a basin and bay expert science team for each basin. *Id.* at § 11.02362. These committees with the help of the science team are to develop environmental flow regime recommendations and environmental flow standards for the basin, and submit those to the TCEQ for consideration. *Id.* The TCEQ is then required to propose and adopt environmental standards for the river basin. *Id.* § 11.1471. Once adopted, new water rights or amendments that increase the amount of water authorized to be stored, taken, or diverted will be subject to environmental flow standards established by these new rules. *Id.*

The TCEQ has received recommendations from, and adopted environmental flow standards for the Trinity River, San Jacinto River, Galveston Bay, Sabine River, Neches River, Sabine Lake Bay, Colorado River, Lavaca River, Matagorda and Lavaca Bays, Guadalupe River, San Antonio River, Mission and Aransas Rivers, and Mission, Copano, Aransas, and San Antonio Bays, Nueces River and Corpus Christi and Baffin Bays, the Brazos River and associated Bay and Estuary, and the Rio Grande, Rio Grande Estuary, and the Laguna Madre. 30 TEX. ADMIN. CODE ch. 298. The rules adopt environmental flow standards that are adequate to support a sound ecological environment, to the maximum extent reasonable considering other public interests and other relevant factors, after considering the environmental flow regimes proposed by the bay/basin experts and the recommendations of the bay/basin stakeholders. TEX. WATER CODE § 11.1471.

From a water planning perspective, the regional planning groups must consider the environmental flow standards, if any, when evaluating the impacts to environmental flows of various water supply strategies. *See* 31 TEX. ADMIN. CODE §§ 357.34(d)(3)(B).

D. Management of Groundwater by Groundwater Districts

With SB 3, groundwater districts were required to develop a groundwater management plan that addressed certain management goals, such as controlling subsidence, preventing waste, or ensuring the efficient use of the resource. *See* TEX. WATER CODE ANN. § 36.1071(a) (as enacted by SB 1 § 4.28 (1997)). These plans were certified by the TWDB and submitted to the regional planning groups for consideration. *See* SB 1 § 1.02 (1997). The planning groups then determined the groundwater availability and prepared the regional plans based on that availability. If the groundwater district did not agree with the regional planning group's availability numbers, the district could appeal the determination to the TWDB. *Id.*

In the 2002 State Water Plan, the stakeholders in the regional planning groups recommended that the groundwater districts and the regional planning groups work together to identify possible goals and water management strategies for potential implementation using the groundwater availability models ("GAMs") to evaluate and understand the impacts of these goals and strategies on the aquifer. The stakeholders also recommended that the Legislature consider the addition of a management goal addressing the groundwater district's desired future condition for the aquifer for inclusion in the district's adopted groundwater management plan, which were required as part of SB 1. *See* Water for Texas 2002 State Water Plan at p. 147.

As a result, in 2005 and again in 2011, the Legislature overhauled the process. Act of May 23, 2005, 79th Leg., R.S., ch. 970, 2005 Tex. Gen. Laws 3247; Act of 2011, 82nd Leg., R.S., ch. 1233 (SB 660), § 9. The legislature delegated back to the groundwater districts the responsibility to determine groundwater availability, but required the districts to work with other districts within its groundwater management area to develop and manage groundwater availability. *See* TEX. WATER CODE ANN. § 36.108. The regional planning groups are required to use the groundwater availability information adopted by the districts, instead of merely considering them. *Id.* § 16.053(e)(3)(A). If a groundwater district believes there is a conflict between the district's approved management plan (which is based in part on the groundwater availability information) and the approved state water plan, the TWDB, upon petition by the district, will facilitate a resolution to the conflict. *Id*. at § 16.053(p). If the TWDB cannot resolve the conflict, it will be sent to mediation. If the parties are still unable to resolve the conflict, the TWDB will resolve it through the procedures described in section 16.053 (p-1) through (p-4) of the Texas Water Code.

E. Alternative Water Supply Strategies

The 2002 State Water Plan recognized that there were impediments, either legally or financially, that stifled the development of alternative water management strategies, such as brush control and land management, desalination, rainwater harvesting, aquifer storage and recovery facilities, and weather modification. *See* 2002 State Water Plan at 151-152. In the 2007 and 2012 regional and state water plans, these innovative strategies are identified as water management strategies. The legislature has addressed, through changes in tax law and other financial aid provisions, some of the financial hurdles for these management strategies. *See e.g.* TEX. TAX CODE ANN. §§ 11.32 and 151.355; TEX. EDUC. CODE ANN. §§ 44.901 and 51.927, TEX. GOV'T CODE ANN. § 2166.402, TEX. LOCAL GOV'T CODE ANN. Ch. 302.

With respect to desalination of sea water and brackish groundwater, to make deep-well injection a more viable and affordable option for the disposal of the concentrate remaining after the desalination process, the legislature adopted provisions to ease the various permitting requirements, including establishing an expedited permitting process for authorizing non-hazardous Class I injection wells for the disposal for the desalination concentrate. *See* TEX. WATER CODE ANN. § 27.021, 27.025; 30 TEX. ADMIN. CODE §§ 331.201-331.206. To that end, the TCEQ has adopted its General Permit to Dispose of Nonhazardous Brine from a Desalination Operation or Non-hazardous Drinking Water Treatment Residuals into a Class I Well. *See* Class I UIC General Permit No. WDWG010000 (Issued December 15, 2009).

To promote the use of rainwater harvesting, the Texas Legislature has addressed several areas that have hindered the use of the technology. Texas Health and Safety Code § 341.042 was amended in 2011 and again in 2013 to require the TCEQ to establish recommended standards relating to the domestic use of harvested rainwater, including health and safety standards for its collection and treatment for drinking, cooking and bathing purposes and to require cross-connection safeguards. TEX. HEALTH & SAFETY CODE ANN. § 341.042(a), (b), (b-1). These systems must be installed by a licensed master plumber or journeyman plumber holding an endorsement issued by the Texas State Board of Plumbing Examiners as a water supply protection specialist, and the owner of the system must obtain consent of the public water system to install the system and provide written notice to the public water supply before the system is

installed. *Id*. at § 341.042(b-2) (b-3). Further, public water supply systems may not be held liable for any adverse health effects that may be caused by the consumption of the water collected by these systems. *Id*. at § 341.042 (b-3) (b-4).

To compliment these requirements, the Seller's Disclosure Notice that is completed by the seller of residential real property must disclose if there is a rainwater harvesting system that is able to be used for indoor potable purposes and is connected to a public water supply system. TEX. PROP. CODE ANN. § 5.008.

To address other barriers, the Texas Legislature mandated that no city or county may deny a building permit solely because the facility will implement rainwater harvesting, although cities and counties may require that these systems comply with the minimum state standards. TEX. LOCAL GOV'T CODE ANN. § 580.004(c).[2] Similarly, property owners' associations may not prohibit the installation of rainwater harvesting systems, although the association may prohibit these systems from being located in the front of the house, require the color and markings on the barrels be consistent with the architectural scheme of the area, and regulate the size, type, shielding of, and materials used in construction of a rainwater harvesting system that is located on the side of the house or at a location that is visible from the street, another lot, or common area. Nevertheless, these restrictions cannot make installation uneconomical. TEX. PROP. CODE ANN. § 202.007(d).

The viability and implementation of these alternative strategies continues to be a focus of the Texas Legislature. In January 2014, Lieutenant Governor David Dewhurst and House Speaker Joe Straus released interim charges for the Senate and House of Representatives, respectively. Lt. Gov. Dewhurst asked the Senate Natural Resources Committee to look at the use of brackish groundwater, including aquifer storage and recovery and desalination. Speaker Straus directed the House Natural Resources Committee to also look at these same types of projects.

IV. A Look Forward - Lingering Challenges in the Planning Process

Although the statutes and agency rules governing the state water planning process have been revised and refined after each legislative session, there remain a number of unsettled issues that may continue to pose challenges as the water plan is once again revised and as implementation of projects becomes a higher priority.

A. Board Recommendations on Policy Issues

With each state water plan, the Board makes recommendations for legislative changes and, in many instances, the legislature has responded. The 2012 State Water Plan contains a number of recommendations. TEX. WATER DEV. BD., 2012 STATE WATER PLAN, ch. 11: Policy Recommendations. Funding the water plan was one such recommendation that was addressed by the Texas Legislature in 2013. Remaining on the list as high priorities are reservoir designation, unique stream segments, and reservoir site acquisition remain high priority. 2012 State Water Plan at 239, 246.

[2] The TWDB provides rainwater harvesting training to the staff of cities and counties. *See* TEX. LOCAL GOV'T CODE ANN. § 580.004(b).

In the 2012 State Water Plan, some of the other policy issues that the Board has specifically called to the legislature's attention include:

(1) Eliminating unreasonable restrictions on the voluntary transfer of surface water from one basin to another. 2012 State Water Plan at 240.

(2) Removing TWDB from the petition process concerning the reasonableness of a desired future condition ("DFC") except for technical review and comment, which the Board argues. *Id.* at 240-42.

(3) Requiring all retail public utilities to conduct water loss audits on an annual basis, rather than every five years, and regardless of whether such entities receive Board funding. *Id.* at 242; *see* TEX. WATER CODE 16.0121(b); 31 TEX. ADMIN. CODE § 363.12(2)(E).

Repeal of restrictions on interbasin transfers is a repeat recommendation from the 2007 State Water Plan. *See* TEX. WATER DEV. BD., VOL. 1: HIGHLIGHTS OF THE 2007 STATE WATER PLAN at 16 (2007). In the 2013 legislative session, House Bill 3233 was passed amending Texas Water Code § 11.085 relating to interbasin transfer. While this bill did not remove the requirement that interbasin transfers become junior in priority to water rights granted before the application for the interbasin transfer, the bill provides additional specificity about the information required to be included with the application in an attempt to streamline the process. TEX. WATER CODE § 11.085.

The recommendation for audits has a clear connection to accurately accounting for and planning for future water supplies. House Bills 857, 1461, and 3605, passed in 2013 by the Texas Legislature, extend the water loss audit requirement to all retail public utilities. Retail public utilities serving more than 3,300 connections must submit the audit annually to the TWDB. TEX. WATER CODE § 16.0121(b). Retail public utilities with 3,300 connections or less must submit the audit every five years. *Id*. at § 16.0121(b-1). Additionally, retail public utilities are required to notify customers of the water loss that is reported in the audit. *Id*. at § 13.148.

The groundwater issues and other brewing issues are discussed more fully below.

B. Desired Future Conditions and Regional Planning

As discussed above, each regional water plan must be consistent with the desired future conditions ("DFCs") adopted under Texas Water Code § 36.108 for the relevant aquifers located in the regional water planning area as of the most recently adopted state water plan or as of a date that may be optionally established by the regional water planning group subsequent to the adoption of the most recent plan. TEX. WATER CODE § 16.053(e)(2-a). The 2011 Sunset report of the TWDB specifically recognized that the joint planning effort of the groundwater districts can have a direct effect on the Board's ability to effectively conduct statewide water planning and made a number of recommendations to address these concerns. Sunset Advisory Comm'n, FINAL REPORT: TEXAS WATER DEVELOPMENT BOARD at 1, 24-27 (July 2011). Groundwater conservation districts within each regional planning area must appoint one representative of a

groundwater conservation district located in the management area and in the regional water planning area to serve on the regional water planning group. TEX. WATER CODE § 16.053(c).

Alongside this planning function that relies on the DFC, the Board has responsibility for reviewing the Desired Future Conditions if challenged. Specifically, Texas Water Code § 36.1083 allows a petition to be filed with TWDB challenging the reasonableness of a DFC. Such a challenge can be filed by a person with a legally defined interest in a groundwater management area, a groundwater conservation district in or adjacent to a groundwater management area, or regional water planning group with territory in a groundwater management area can file the petition. TEX. WATER CODE § 36.1083(b); *see* 31 TEX. ADMIN. CODE § 356.41(b)(2). In reviewing a petition, the Board will review whether the consideration given by the districts to the factors specifically identified in Texas Water Code § 36.108(d) is unreasonable and whether the balance provided by the DFC is unreasonable. *See* 37 Tex. Reg. 10243. The question is "not whether the desired future condition is reasonable, but whether the petitioner has established that it is unreasonable." *Id.* After holding at least one public hearing, the TWDB will report its findings to the groundwater district. *Id.* § 36.1083(c); 31 TEX. ADMIN. CODE § 356.43; *see also* 37 Tex. Reg. 10237-47 (Dec. 28, 2012). The groundwater conservation district then must prepare a revised plan in accordance with the recommendations and hold another public hearing. TEX. WATER CODE § 36.1083(d). After the hearing, the groundwater district may adopt whatever desired future condition they deem appropriate, including the one that was originally adopted. *See* 2012 State Water Plan at 241-42; Sunset Report at 32.

Although revisions to its rules in December 2012 may improve the process, TWDB has included in its 2012 State Water Plan a specific request that the Legislature repeal or modify the petition process concerning the reasonableness of desired future conditions to otherwise limit TWDB to technical review and allow a judicial remedy instead of an agency appeal. This recommendation was also part of the recommendations of the Sunset Advisory Commission in 2011. Sunset Advisory Comm'n, FINAL REPORT: TEXAS WATER DEVELOPMENT BOARD at (July 2011). However, the Legislature did not modify the Board's role or process in this regard in 2011 or 2013.

The controversy over the DFC process and the role of the Board is highlighted in a pending case, *Environmental Stewardship v. Tex. Water Dev. Bd.*, No. D-1-GN-12-002201 (98th Dist. Court of Travis County, filed July 20, 2012). Environmental Stewardship ("ES") is a non-profit organization that owns land within Groundwater Management Area 12 ("GMA 12"). The suit seeks to reverse and remand the June 21, 2012 decision of the TWDB approving desired future conditions adopted by the groundwater conservation districts in GMA 12. GMA 12 encompasses all or part of Bastrop, Brazos, Burleson, Falls, Fayette, Freestone, Lee, Leon, Limestone, Madison, Milam, Navarro, Robertson, and Williamson Counties.

The suit alleges that the DFCs are unreasonable because over-pumping under the adopted DFCs would unreasonably threaten groundwater-surface water relationships and adversely impact surface water rights holders in the Colorado and Brazos Rivers. Further, the suit claims that the TWDB acted contrary to the law and its rules when it determined that the DFCs were reasonable. TWDB's position in the case is generally that there is no explicit requirement to consider the impacts between groundwater and surface water in the DFC review process. This case is still pending in Travis County District Court.

C. Conflicts between Regional Plans

Another issue brought to the courthouse steps is the Board's interpretation of its authority to identify and resolve conflicts between regional plans pursuant to Texas Water Code § 16.053. *See Texas Water Dev. Bd. v. Ward Timber, Ltd.*, 411 S.W.3d 554 (Tex. App. – Eastland 2013); *Ward Timber, Ltd. v. Tex. Water Dev. Bd*., No. D-1-GN-12-000079 (126th Dist. Ct. of Travis County, filed Jan. 12, 2012).

This dispute involves an alleged interregional conflict regarding the Marvin Nichols reservoir. Region D included specific language opposing the reservoir in its plan and identifying water needs for environmental uses in its plan that the Plaintiffs alleged created a clear conflict with the plans in the Region C plan for construction of the reservoir. In December 2012, the district court concluded that the Board erred in concluding that there was no interregional conflict between the two regional plans and reversed and remanded the matter to TWDB for further proceedings. *Ward Timber, Ltd. v. Texas Water Dev. Bd.*, Cause No. D-1-GN-11-000121, Final Judgment at 1-2 (126th Dist. Ct. of Travis County, Dec. 5, 2011).

On appeal, the Board has argued that its decision regarding the alleged interregional conflict is not subject to judicial review under either TEX. WATER CODE §§ 6.241 or 16.053. TWDB also argued that its interpretation of the term "interregional conflict," which is not defined by statute, was entitled to more deference than the district court provided. *Tex. Water Dev. Bd.*, 411 S.W.3d at 566, 569. The Board's position is that Region D's statement of opposition stated need for environmental flows do not create a conflict because the two regions were not relying on the same water to meet competing demands addressed by the plans. This is because environmental flow needs, under TWDB's interpretation, are not a specific water demand addressed by the plans.

The Court of Appeals disagreed with the TWDB on all points and affirmed the lower court's decision. The appellate court found that the TWDB's interpretation of the term "interregional conflict" to be inconsistent with legislative intent. *Texas Water Dev. Bd.*, 411 S.W.3d at 547.

In May 2014, in response to the Court of Appeals ruling, the TWDB issued a final recommendation to resolve the interregional conflict. *See* Interoffice Memorandum from K. Patteson, Executive Administrator for the TWDB to the TWDB Board Members (available at http://www.twdb.state.tx.us/home/tabs/doc/hot/regioncanddconflict.pdf). The TWDB staff is recommending, among others, that the Board (1) instruct the Region C planning group to readopt the development of the Marvin Nichols reservoir as a water management strategy or, alternatively, instruct Region C to make Marvin Nichols an alternative strategy, and (2) direct the Region D planning group to amend its plan to reflect that the conflict has been resolved. Two public hearings were held in April 2014, one in each region, to take comments on the proposed recommendation, and the proposal has been submitted to the Board for consideration. The Board has not yet set a date to consider the recommendation.

D. Recreational Use of Water as a 'Demand' in Water Planning

In 2012, recreational water interests specifically requested that recreational water demands be recognized and addressed by the Lower Colorado (Region K) regional water plan. The Region K Water Planning Group asked the Board for clarification of whether or not regional planning groups may consider demand projections that are not specifically mentioned in the statute. The planning group also asked the Board whether the database could accommodate new water demand categories and how new demand categories might be incorporated into the planning process. In response, the Board concluded that only the demands for water use categories specified by the Board in 31 Tex. Admin. Code § 357.31 are to be included in the regional planning process. These include: municipal, manufacturing, electric power production, irrigation, mining and livestock watering. Non-consumptive uses, such as recreation, "are not considered demands in regional and state water plans for meeting water supply needs during a repeat of the drought of record." Letter from Melanie Callahan, Exec. Director, TWDB to Chairman John Burke, Region K Planning Group, Re: Request for Clarification on Including New Water Demand Categories in the Lower Colorado (Region K) Regional Water Plan (Oct. 10, 2012) (on file with author). Rather, the Board offered that impacts to recreational water use of various water management strategies is more subject to evaluation under 31 Tex. Admin. Code § 357.34(d)(10). Nevertheless, to obtain a water right for a non-consumptive use, such as an amenity lake, the water right application must be consistent with the State Water Plan. *See* TEX. WATER CODE § 11.134(e)(3)(E). So, it remains to be seen how this issue will be addressed in future water plans.

V. State Water Plan Funding, Prioritization, and Conservation/Reuse Considerations

2013 saw another major milestone in the state water planning process – the dedication of a funding source for water management strategies in the State Water Plan. House Bill 4 and House Bill 1025, together with voter approval of Proposition 6 in November 2013, created the State Water Implementation Fund for Texas (SWIFT) to provide loans for State Water Plan projects, and transferred $2 billion from the Economic Stabilization Fund (Rainy Day Fund) into SWIFT.

HB 4 requires that at least 20% of the projects be for water conservation and water reuse projects, and allocates 10 % of the fund to be used on projects to serve rural areas. TEX. WATER CODE § 15.434. Additionally, the bill requires the regional planning groups to prioritize water projects within their respective regional plans. TEX. WATER CODE § 15.436. Projects will be prioritized based on (1) the decade in which the project will be needed; (2) the feasibility of the project; (3) the viability of the project; (4) the sustainability of the project; and (5) the cost-effectiveness of the project. *Id.*

The Stakeholder Committee required by HB 4 and created by the TWDB developed and submitted to the Board on November 25, 2013 a set of uniform standards for prioritizing regional water plan projects for the TWDB's consideration. The uniform standards consists of a spreadsheet that awards points based on each of the above-listed criteria. *See* "Uniform Standards to be used by Regional Water Planning Groups to Prioritize Project, November 25, 2013 (available at http://www.twdb.state.tx.us/swift/doc/HB_4_SHC_Uniform_Standards.pdf).

Based on this prioritization, the TWDB will then rank projects in the State Water Plan in order to receive funding from SWIFT.

Using a point system, the Board must give the highest consideration to projects that serve a large population, assist a diverse urban and rural population, provide regionalization, and meet a high percentage of the water supply needs of the water users served by the project. TEX. WATER CODE § 15.437. Additionally, the Board must also consider local contribution to finance the project, financial capacity to repay the loan, the ability of the TWDB and the applicant to timely leverage state financing with local and federal financing, whether there is an emergency need for the project, whether the applicant is ready to proceed with the project, the demonstrated or projected effect of the project on water conservation, and the project's priority given by regional planning group. *Id.*

Since the passage of the constitutional amendment in November 2013, the TWDB has been holding a series of stakeholder meetings to solicit public input on SWIFT implementation and related rulemaking. Specifically, the TWDB is seeking input on the point system for prioritizing projects. Issues raised by the TWDB include defining a "large population," a "diverse urban and rural population," "regionalization," "water conservation projects," among others. The TWDB expects to propose rules in June 2014 and adopt those rules in December 2014.

In the meantime, prior to final rule adoption, the regional planning groups are proceeding with ranking projects in the 2011 Regional Water Plans. Those draft prioritization lists are due to the TWDB on June 1, 2014. The TWDB will review and comment on those lists, and the final prioritization of projects from the 2011 Regional Water Plans are due to the TWDB by September 1, 2014. From this list, the TWDB will prioritize the projects from the regional planning groups for the first round of funding under SWIFT.

VI. Conclusion

While Texas has made great strides in planning for its long-term water security, the evolution of the water planning process as summarized in this paper, and the lingering unsettled issues, demonstrates that the process is necessarily dynamic and adaptive. Indeed, we need to remain adaptive and open to refinements as we face existing and new challenges in the planning environment and, most certainly, as we endeavor to implement water projects in coming years.