

## **COMMENTS OF NATIONAL WILDLIFE FEDERATION AND TEXAS CENTER FOR POLICY STUDIES ON DRAFT STATE WATER PLAN**

### **ALTHOUGH THE DRAFT STATE PLAN INCLUDES VALUABLE INFORMATION, ITS SHORTCOMINGS MUST BE EXPRESSLY ACKNOWLEDGED.**

Consideration of adoption of the first State Water Plan pursuant to Senate Bill 1 (S.B. 1) represents an exciting step in water planning in Texas. The process set in place by S.B.1 in 1997 holds great promise for helping to maintain a high quality of life for Texans well into the future. The challenge of developing a truly comprehensive water plan is daunting. At the same time, it also is nothing less than essential. The regional planning group members, consultants, and Texas Water Development Board staff have labored mightily and have much to be proud of. They achieved a lot in a very short period of time, especially considering the size of the task. Although it certainly is important to acknowledge those accomplishments, it also is equally important to acknowledge the shortcomings of the draft State Water Plan. Fortunately, the architects of S.B.1 were wise enough to recognize that water planning must be an ongoing process and that the full task could not be achieved in only one abbreviated planning cycle. Future planning cycles provide the opportunity to refine and improve the State Water Plan. However, it is critical that this version of the State Water Plan expressly list those shortcomings so that the public and policy-makers, who will be faced with decisions about implementing the Plan, can understand what has been done and what has not.

The Board undertook a broad public outreach effort in order to elicit public input on the draft State Water Plan. That effort will prove to be counter-productive unless the Board acts in response to those comments. The often-stated position of the Texas Water Development Board's staff that the Board is basically powerless to make changes to the State Plan in response to public comments can only serve to foster cynicism about the value of public participation. Holding hearings around the state for the purpose of eliciting public input and then responding to those comments by saying nothing will be changed can only serve to discourage future participation. However, that is the message delivered by TWDB staff. Nothing in S.B. 1 or S.B. 2, passed earlier this year, mandates that result. The Board has broad authority in the planning process. The commenting parties do recognize that the Board now finds itself in a somewhat untenable position because it has an inadequate State Plan to consider and an impending statutory deadline for submitting the approved State Water Plan to the Governor and Legislature. It is understandable that the Board does not want to miss that deadline. Unfortunately, it is true that the Board largely abdicated its responsibility to ensure that individual regional plans complied with the requirements of S.B. 1 and of the Board's rules by approving plans that did not meet those requirements. Even so, the Board still retains significant authority to acknowledge and respond to public comments.

For example, the Board can respond to concerns about proposed reservoirs by not recommending questionable projects for designation as unique reservoir sites. In addition, as is illustrated by the text on page 85 of the draft State Water Plan (where the Board recommends further inter-regional consideration of transfers of water from East Texas as an alternative to new reservoirs), the Board can editorialize and encourage regional groups to look at better approaches. Regarding that particular text, the commenting parties do have concerns about interbasin

transfers, and particularly about any proposal to raise reservoir levels at B.A. Steinhagen Lake. However, we also recognize that if there are water needs that cannot be met through aggressive water conservation and drought management measures, as a general rule and subject to appropriate safeguards, reasonable reallocation of existing sources is preferable to new reservoirs as a way to meet those needs.

Key shortcomings of the draft State Water Plan that should be expressly acknowledged include: a failure to ensure that adequate water will be available to protect the natural resources of the state; inflated estimates of water demand and inadequate emphasis on conservation of water resources; a failure to incorporate meaningful demand reduction during drought periods; and a failure to protect groundwater resources.

### **THE DRAFT STATE WATER PLAN DOES NOT ENSURE PROTECTION OF NATURAL RESOURCES.**

S.B. 1 establishes broad requirements for the State Water Plan. One of those requirements is that the Plan ensure adequate water to protect natural resources. Section 16.051 (a) directs the development of a comprehensive state water plan that provides “for the orderly development, management, and conservation of water resources and preparation for and response to drought conditions, in order that sufficient water will be available at a reasonable cost to ... protect the ... natural resources of the entire state.”<sup>1</sup> There simply is no credible argument that the term natural resources does not include fish and wildlife. Accordingly, a basic requirement of S.B.1 is that the Plan address how flows necessary to protect fish and wildlife resources will be ensured. Moreover, protection of flows for fish and wildlife resources also is mandated by common sense. Fish and wildlife resources are not only a part of every Texan's quality of life, they are increasingly important components of local economies, especially in rural areas. Just as the state wouldn't develop a budget that left out funding for a major component of its responsibilities, it makes no sense to develop a State Water Plan that fails to address a major component of water demand. A Plan that doesn't account for all demand categories can't be relied upon.

Unfortunately, the Board has put itself in a difficult quandry by approving regional water plans that do not meet the requirements of S.B. 1 or the Board's planning guidelines. Again, with respect to ensuring water for fish and wildlife resources, S.B.1 is clear that regional water plans, like the State Water Plan, must provide "for the orderly development, management, and conservation of water resources and preparation for and response to drought conditions in order that sufficient water will be available at a reasonable cost to ... protect the ... natural resources of that particular region."<sup>2</sup> The Water Code also explicitly mandates the consideration in regional plans of “appropriate provision for environmental water needs and for the effect of upstream development on the bays, estuaries, and arms of the Gulf of Mexico and the effect of plans on navigation.”<sup>3</sup> Only the Region H Plan<sup>4</sup> includes specific consideration of that issue and

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<sup>1</sup> Tex. Water Code Ann. § 16.051 (a).

<sup>2</sup> Tex. Water Code Ann. § 16.053 (a).

<sup>3</sup> Tex. Water Code Ann. § 16.053 (e)(4)(F).

<sup>4</sup> The Region I Plan also acknowledges the importance of the issue with respect to inflows to Sabine Lake and indicates that the issue should be considered more completely in the future, but fails to provide any specific recommendations. The Region P Plan also notes the importance of the issue but, based on an

that consideration is limited to inflows to Galveston Bay and even then there is no specific proposal for actually ensuring that those freshwater inflow needs are met.

An environmentally sound water plan will explicitly recognize protection of the natural environment as a priority use of water. It will protect instream flows—the amounts of flowing water needed to support fish and wildlife resources in and along our rivers. It will also protect freshwater inflows for the bays and estuaries, which are needed to maintain acceptable salinity levels and supply nutrients and sediments for the estuarine areas that support marine life and other species. Taken together, these ‘environmental flows’ constitute a demand for water that must be met along with municipal, agricultural, and industrial demands.

Repeatedly, during the comment process on the Regional Water Plans, the National Wildlife Federation pointed out how the Regional Groups had largely ignored the needs of fish and wildlife for environmental flows; only new projects were assessed for such impacts (and, even then, that evaluation was often marginal at best). In some river basins, existing authorizations for dams and diversions of surface water already are sufficient to seriously impair environmental flows. In fact, some streams flow during dry periods only because existing water rights have not been fully exercised. As acknowledged in the October 2000 publication "Taking Care of Texas, A Report from the Governor's Task Force on Conservation," this is an issue of critical importance for the future of all Texans. Where existing rights already impair environmental flows, plans should propose measures for protecting or restoring needed flows, such as cancellation of unused rights or funding for acquisition of existing rights that could be converted to instream flow uses.

We acknowledge the recommendation contained in the *Highlights and Major Policy Recommendations* section of the draft State Water Plan that state agencies should “evaluate the status of environmental flows per river basin, assuming various scenarios, including the full exercise of existing rights.”<sup>5</sup> While we are encouraged by this limited acknowledgement of the need to more fully consider environmental flows, much more needs to be done. It is imperative that the Board explicitly recognize that those evaluations are needed in order to develop an informed, workable water plan. Until that information is available, it is not possible to develop realistic assessments of the potential for new projects to affect, or to be affected by, the environmental flow issue. Accordingly, it is essential that the State go slowly in attempting to implement major new projects to allow time to complete the assessment of environmental flow needs.

Numerous proposed projects have significant potential to adversely affect environmental flows. One project that poses major problems for freshwater inflows is the proposed diversion of up to 150,000 ac-ft/yr to the City of San Antonio from the Colorado River above Matagorda Bay, shown as Project A in Figure 1. This project, with an estimated cost of \$0.8 – 1.0 billion, consists of large diversion pumps, several large off-channel reservoirs, and a 170 mile pipeline.

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apparent misinterpretation of a LCRA study, mistakenly assumes the issue has been resolved with respect to inflows to Lavaca Bay.

<sup>5</sup> TWDB, Draft State Water Plan, Oct. 2001, pgs.13-14.

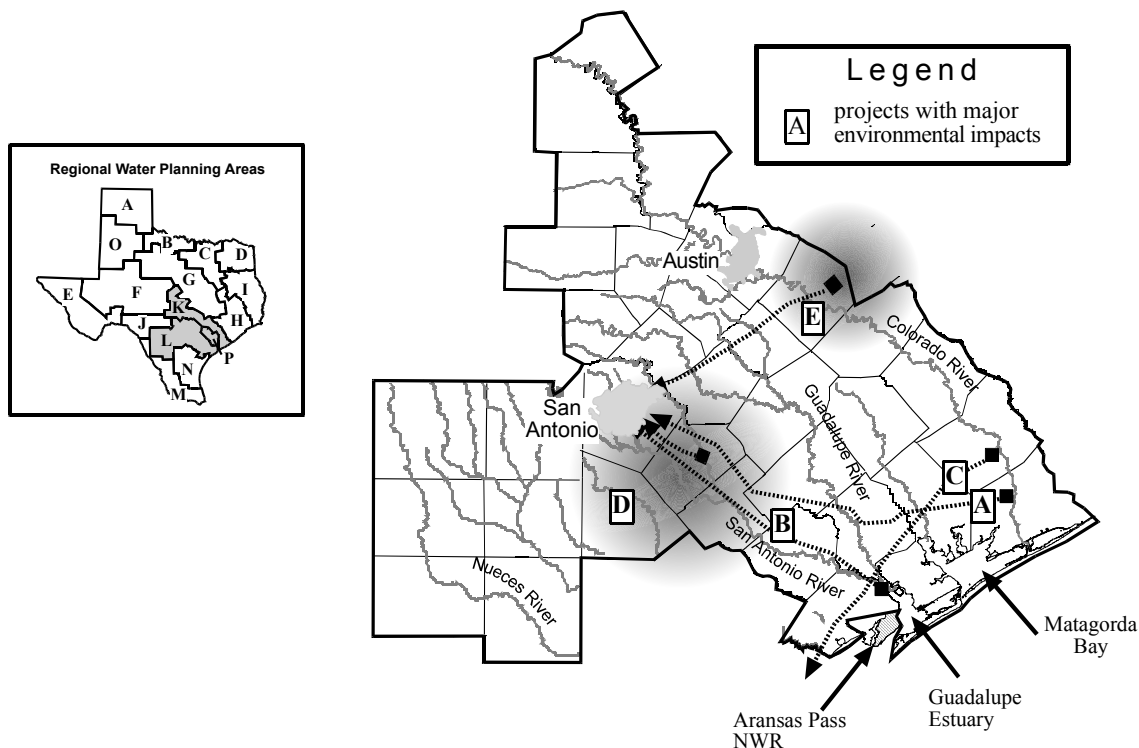


Figure 1. Major projects from the draft State Water Plan proposed in the central Texas area.

This project would significantly reduce inflows to Matagorda Bay, by how much will depend on the final project design. A 1997 study relating freshwater inflow needs (FIN) to salinity and productivity of Matagorda Bay, performed by LCRA with input from the Board and the Texas Parks and Wildlife Department, determined that 171,000 ac-ft/yr was the so called “Critical Inflow” from the Colorado River<sup>6</sup>. This is the amount of inflow thought to be required to maintain a lower salinity ‘refuge’ at the mouth of the river during drought conditions to help key species survive and repopulate the bay when conditions improve. The adequacy of this "Critical Inflow" approach for defining a minimum survival level of flows continues to be the subject of dispute among resource managers. Recently, as the result of the availability of new salinity data, LCRA tentatively proposed to revise the "critical inflow" amount to over 400,000 ac-ft/yr. The issue of a revision to that figure is still under discussion.

As shown in Figure 2, the proposed pipeline to San Antonio, if withdrawing 150,000 ac-ft/yr could reduce bay freshwater inflows during severe drought years to only about 87,000 ac-ft/yr. This is only about 51% of the “Critical” freshwater inflow level as determined in the LCRA’s 1997 study. It is less than 25% of the recently proposed revision of the critical FIN.

Another project with potentially great impact on Texas’ coast is the proposed diversion of water from the Guadalupe River to San Antonio (Project B on Figure 1). This project from the Region L Plan (Option SCTN-16 ) would divert at least 50,000 ac-ft/yr from the lower Guadalupe River just above the river’s entry into San Antonio Bay (Guadalupe Estuary). Although some of the

<sup>6</sup> Lower Colorado River Authority, Freshwater Inflow Needs of Matagorda Bay System, 1997.

water that would be diverted is already authorized for irrigation and industrial use, only about 36% of those rights is currently utilized<sup>7</sup>. Also, a significant portion of the current diversion for rice irrigation comes back to the river as return flows and ends up in the Guadalupe Estuary.

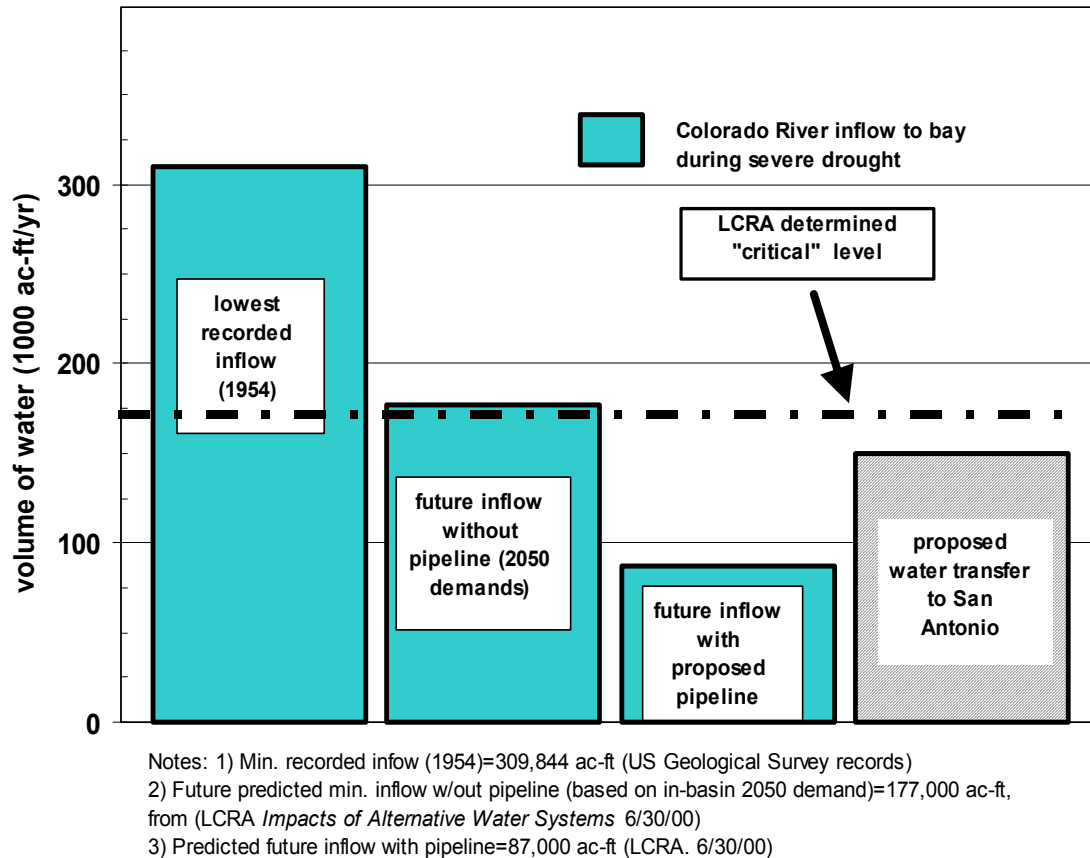


Figure 2. Potential impacts to Matagorda Bay of the San Antonio pipeline from the Colorado River.

In addition to the direct impacts to estuarine species of commercial and recreational fishing interest, this project also could harm endangered Whooping Cranes at the Aransas National Wildlife Refuge. The cranes rely on blue crabs as a primary food source. The blue crab population of the Guadalupe Estuary is very dependent upon adequate freshwater inflows to maintain an acceptable salinity balance.

At this juncture, the Board must confront and acknowledge these inadequacies. If the problems are acknowledged now and if definite provisions are made to address the deficiencies, damage to the water planning process and to the state's natural resources can be minimized. It certainly is

<sup>7</sup> South Central Texas Regional Water Planning Area, Region L, *Regional Water Plan*, Jan. 2001, Vol. III at page 3.2-3.

true that a shortage of time and information made addressing this issue during this first round of water planning a difficult task. Accepting that, **it is critical for the State Water Plan to include an express acknowledgement that, as currently drafted, it does not provide for water to protect the state's natural resources.** In addition to setting the stage for addressing those deficiencies in future planning cycles, **such an acknowledgement would serve as a warning that major projects with significant potential to affect natural resources must be re-evaluated with natural resource protection in mind. It also would serve to alert regional planning groups and decision-makers at all levels of the need to go slowly on implementation of components of the Plan that might affect, or might be affected by, flows needed for natural resource protection.**

**THE DRAFT STATE WATER PLAN USES INFLATED ESTIMATES OF WATER DEMAND AND PLACES INADEQUATE EMPHASIS ON CONSERVATION OF WATER RESOURCES**

Key Shortcomings

The Plan overestimates the need for water supply projects through the use of inflated demands.  
The Plan largely neglects pro-active water conservation as a means to reduce future demands on our water resources.

Although the draft State Water Plan states that “conservation is a very critical element to meeting the State’s long-term water needs,”<sup>8</sup> most of the sixteen Regional Water Planning Groups did little to promote aggressive water conservation in their plans. Only Region L affirmatively adopted a plan in which advanced municipal conservation is an integral part. The potential of water conservation, especially in municipalities, to offset or partially eliminate the need for costly and environmentally damaging water supply projects remains largely untapped.

The draft State Water Plan asserts that the need for 976,000 ac-ft/yr in new year 2050 supplies for municipal use is eliminated through the utilization of “baseline conservation assumptions.”<sup>9</sup> However, this purported savings is quite deceptive for two reasons. First, the calculated savings are based on an assumed 22 gallon per person per day (GPCD) savings from “current” rates of use. These savings would result from elements such as “installation of water-efficient plumbing fixtures and landscaping, public education<sup>10</sup>.” These hoped-for reductions are built into the projected water use rates supplied to the Regions by TWDB. Basically, they represent little more than an assumption that Texans will comply with state law in the form of the Water Saving Performance Standards for Plumbing Fixtures Act of 1991. That quantification does illustrate the value of the legislation. However, it does not constitute meaningful consideration of affirmative measures to achieve water conservation.

Second, for many Texas cities, the purported savings represent an essentially “fictitious conservation” because they are subtracted from grossly exaggerated initial water use rates. Because of a poor methodology using outdated water-use figures, the TWDB’s starting point in

<sup>8</sup> Texas Water Development Board, Draft State Water Plan: Water For Texas 2002, October 2001, pg. 11.

<sup>9</sup> TWDB, Draft State Water Plan, Oct. 2001, pg 33.

<sup>10</sup> Brazos G Regional Water Planning Area, *Regional Water Plan*, Jan. 2001, Vol. I, pg. 2-10.

forecasting municipal demands was inordinately high. The so called “current” or year 2000 use rate forecast by TWDB was the highest water use rate recorded by a city between 1982 and 1991<sup>11</sup>. The use of data almost two decades old neglects any recent progress made by a city to limit water use rates. Accordingly, the starting points for water use projections for most municipalities are not realistic in the draft State Water Plan, which means, in turn, that the baseline conservation assumptions lose much of their effect.

Figure 3 illustrates the inaccuracies in the TWDB results for several major cities. For these cities, their water use rates were already much lower in 1996, a very dry year for the whole State, than the TWDB’s projections for 2030, which included baseline conservation assumptions. In other words, for many cities, the projected water use rates 30 years in the future, supposedly assuming additional water conservation, don’t even decline to the levels they have already achieved.

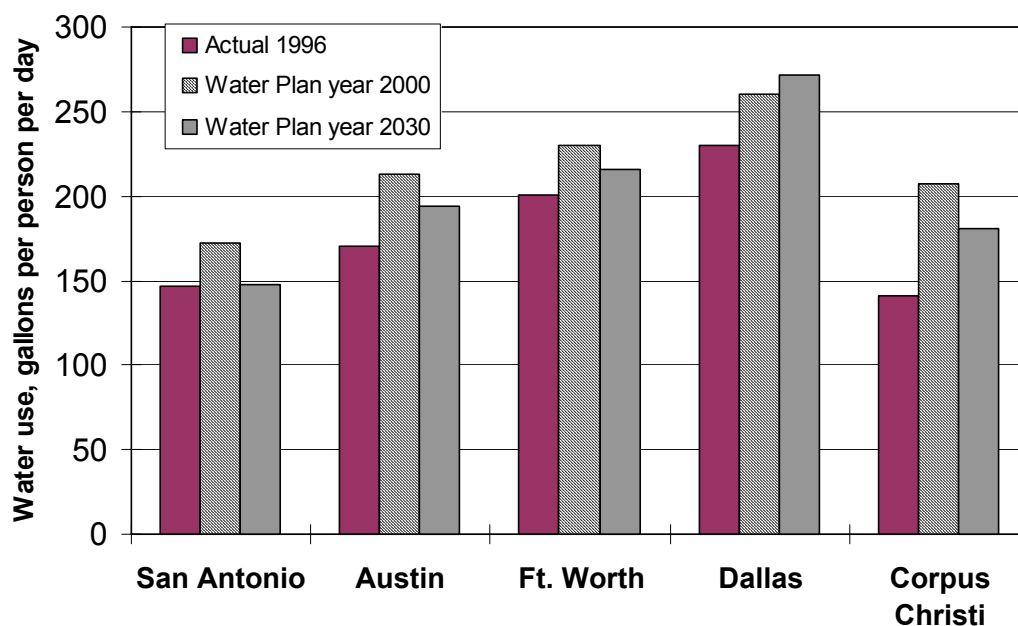


Figure 3. Comparing TWDB projected water use rates to actual recent use rates for several major cities.

This inflated demand is the driving force for many of the proposed environmentally damaging and economically costly projects in the draft State Water Plan. Two examples are discussed here in detail.

The Region N Plan (Corpus Christi and Coastal Bend region) finds that current supplies are largely sufficient to meet projected municipal demands of the City of Corpus Christi, even with the overestimation of water use rates apparent in Figure 3. However, sizeable shortages in industrial demand are projected to occur in the immediate Corpus Christi Bay area: 27,891 ac-

<sup>11</sup> TWDB, Draft State Water Plan, Oct. 2001, pg. 32.

ft/yr in Nueces County and 18,594 ac-ft/yr in San Patricio Counties<sup>12</sup>. These areas utilize the same water supply sources as the City of Corpus Christi, namely, the Lake Corpus Christi / Choke Canyon Reservoir system and the pipeline to Lake Texana. The projected shortages led the Region N Planning Group to recommend several new water supply projects.

Among these are a long pipeline to withdraw 35,000 ac-ft/yr from the Colorado River under the Garwood water right purchased by the City of Corpus Christi (shown as Project C on Figure 1 above). The Garwood pipeline has the potential to cause harm to Matagorda Bay and its estimated \$178 million recreational and commercial fishing industries. Much of the Garwood water right has historically not been used and implementation of this project could impact Matagorda Bay by reducing critical freshwater inflows needed by shrimp, oysters, and many fish, especially during a drought. The Region N Plan also proposes a large well field to pull 27,000 ac-ft/yr from the Gulf Coast Aquifer in Refugio County<sup>13</sup>. This withdrawal is projected to lower the water tables in the area by up to 200 feet, potentially leading to saltwater intrusion to the aquifer and land surface subsidence. Lowering the water tables could also have a marked negative impact on existing aquifer users in the area.

As shown in Figure 4, much of this demand could be met with current supply sources. The reason there is a projected shortage is fictitious because of the inflated demands used by TWDB and Region N for the City of Corpus Christi. The average water use rate for the City of Corpus Christi for the 1994-96 period was 143 GPCD<sup>14</sup>. In other words, the demand by Corpus Christi is overstated by approximately 21,000 ac-ft/yr and currently available supplies are already adequate to meet much of the projected future needs. Additional conservation in the City of Corpus Christi could potentially meet all or most of the remaining projected industrial demand.

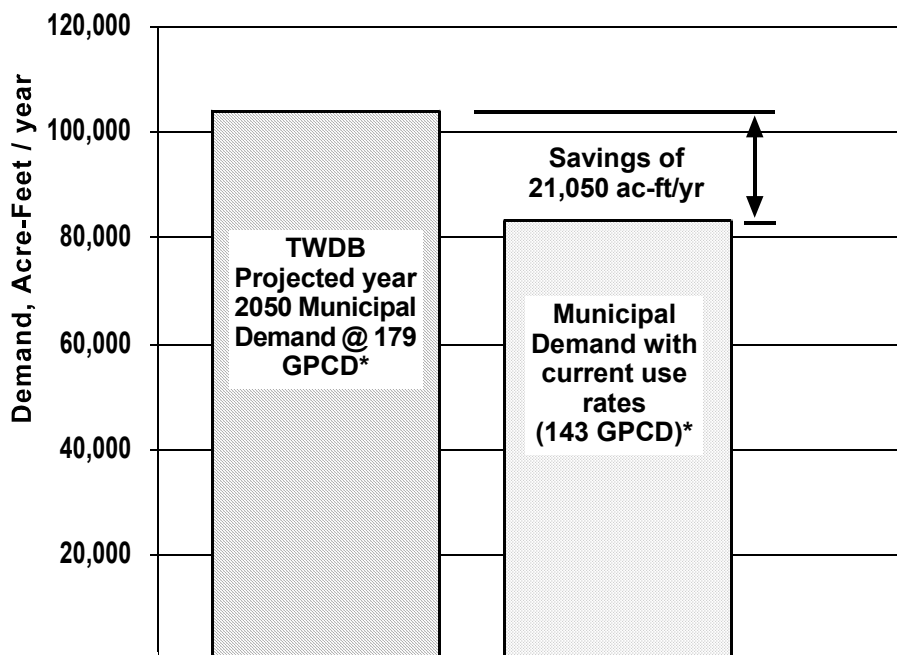
Furthermore, based on the cost figures provided in the Region N Water Plan, the Refugio Co. wellfield water would cost \$448 per ac-ft, and the Garwood pipeline would deliver water at \$484 per ac-ft. Advanced municipal conservation was found to cost \$449 per ac-ft/yr. In other words, it would be essentially the same price to adopt advanced municipal conservation practices compared to building the proposed water supply projects with major environmental consequences.

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<sup>12</sup> Coastal Bend Regional Water Planning Area, Region N, *Regional Water Plan*, Jan. 2001, Vol. I, Sec. 4.

<sup>13</sup> Region N, *Regional Water Plan*, Jan. 2001, Vol. I, Sec. 5.

<sup>14</sup> Region N, *Regional Water Plan*, Jan. 2001, Vol. I, Sec. 2.



notes: Calculated with Corpus Christi projected population and water use rates for 2050 from Region N Water Plan (Jan. 2001).

Figure 4. Portrayal of how inflated demands for the City of Corpus Christi lead to unnecessary water supply projects.

Another example of the link between inflated demand projections and the draft State Water Plan’s proposed water supply projects is the proposed Little River Dam and Reservoir. The Little River Reservoir was proposed by both the Region G (Brazos valley region) and Region H (Houston and SE Texas) Planning Groups. Twenty five percent of the yield of this project is proposed to go to the rapidly growing cities of Round Rock and Georgetown in Williamson County. However, once again, the need for this water supply project is in doubt because of the exorbitant water use rates projected for these cities.

As shown on Figure 5, Round Rock and Georgetown are projected to have water demands of 182 GPCD and 152 GPGD, respectively, in the year 2050<sup>15</sup>. These rates of municipal use are calculated with the projected population and water use figures presented in the Region G Water Plan. The projected rates of use, declining for several decades and then going back up, especially for Round Rock, are very suspect. There is no explanation offered in the Region G plan for this incongruous behavior. Nonetheless, these water use rates are driving the supposed need for the Little River dam and reservoir. If these two cities curtail their water use to 140 GPCD they could eliminate the need for the Little River dam and reservoir.

<sup>15</sup> Brazos G Regional Water Planning Area, *Regional Water Plan*, Jan. 2001, Vol. I, Sec 2.

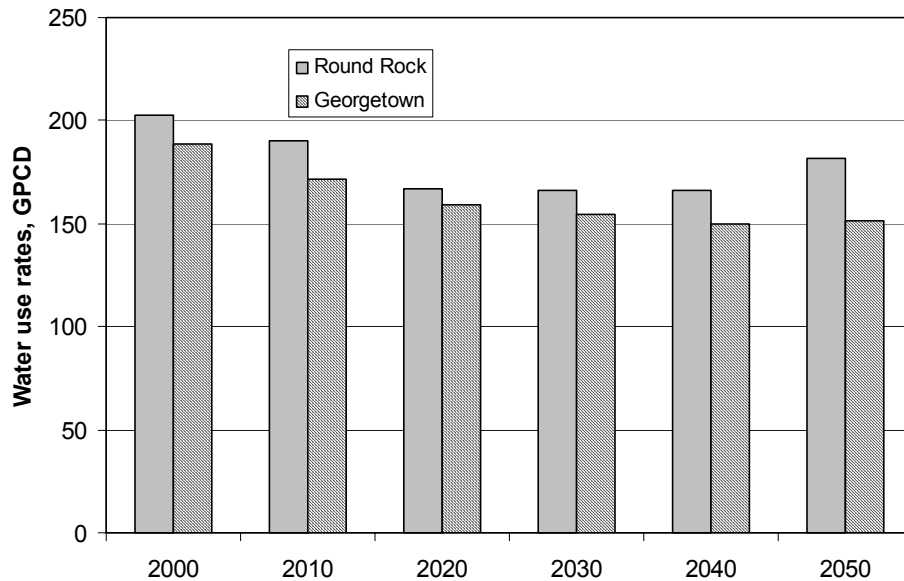
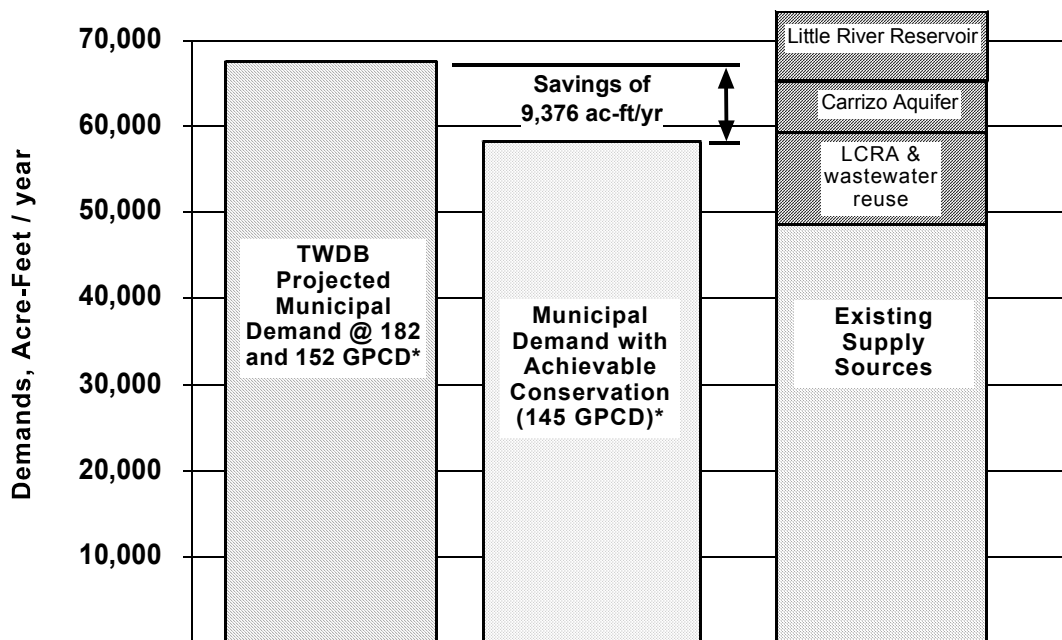


Figure 5. Water use rates from the Region G Water Plan for the Cities of Round Rock and Georgetown, who would receive water from the Little River dam and reservoir.



notes: Calculated with projected population and water use rates from Region G Water Plan (Jan. 2001).

Figure 6. Portrayal of how reasonable conservation by the cities of Georgetown and Round Rock would eliminate need for water supply projects including the proposed Little River dam and reservoir.

Not only are the TWDB projected water use rates inflated for many cities, there is also an extremely high disparity in use rates between cities which points to a significant lost opportunity to promote conservation. Figure 7 illustrates the wide disparity in municipal water use rates in

the draft State Water Plan as developed by the TWDB and supplied to the Regions<sup>16</sup>. Obviously, there is a high discrepancy in water use among the State's major cities. This high variability begs for an answer to the most rudimentary of questions - what is the true need for water in our municipalities? The TWDB has completely failed to even take up this most fundamental question of public water policy. Instead of developing a predictive indicator of need based on demographic, climate, or other socio- or geographic variables, the TWDB relied on a retroactive method by looking at past use rates. While this is one approximate measure of need, it unfortunately serves to perpetuate any past wasteful practices.

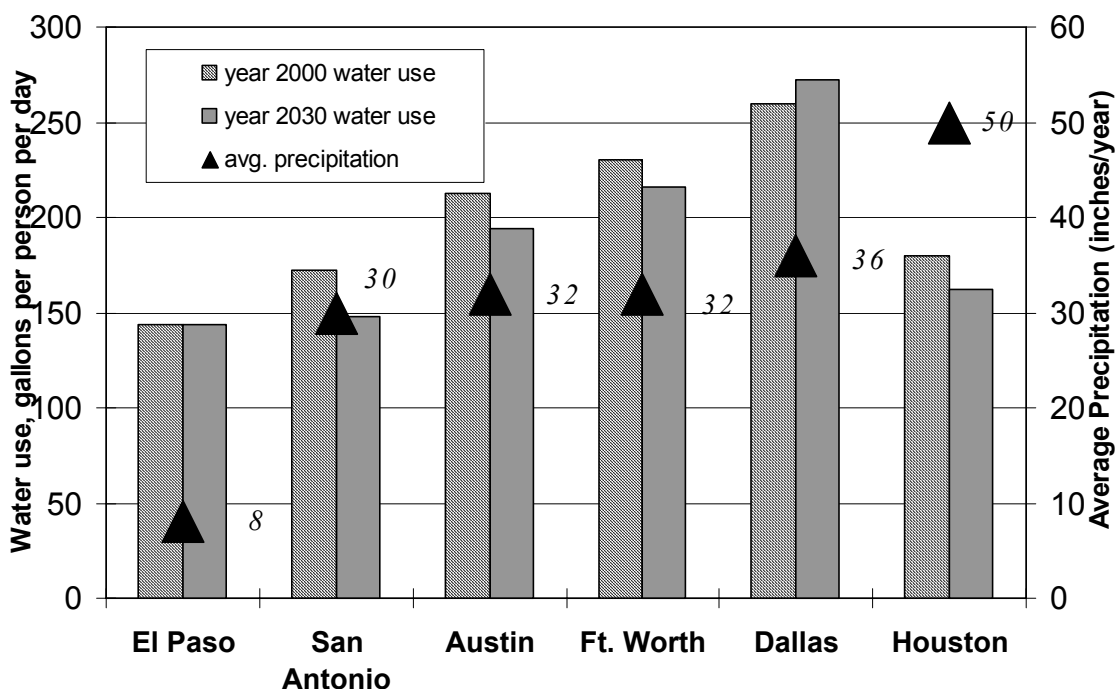


Figure 7. High variability in TWDB projected water use rates for several major cities.

The most glaring point of this figure is the high water use rates predicted for the cities of Dallas and Ft. Worth. While attempts are often made to justify those rates by citing the hot dry climate of the area as compared to the rest of the state, the argument just does not work. Also shown in Figure 7 are average annual rainfall data for each city read by comparing the dark triangles to the scale along the right hand side vertical axis (e.g. 8 inches in El Paso, 36 inches in Dallas). Although climate certainly plays a large part in water use rates, the wide differences projected by TWDB are poorly correlated to climate. For instance, the water use rates in Dallas and Ft. Worth are extremely high although the rainfall there is equal to or higher than several cities with lower use rates. Dallas and the DFW area cities of Irving and Lewisville are among only four cities listed among the 40 largest by the TWDB which have projected increases in water use rates through 2050<sup>17</sup>.

<sup>16</sup> TWDB, Draft State Water Plan, Oct. 2001, pg. 38.

<sup>17</sup> TWDB, Draft State Water Plan, Oct. 2001, pg. 38.

The exceptionally high water use rates for Dallas and Ft. Worth area cities are extremely important because they have led to the inclusion in the draft State Water Plan of a highly contentious project: the Marvin Nichols dam and reservoir (see Figure 8). This large dam and 172 mi. pipeline system would deliver 495,300 ac-ft/yr (161 billion gallons per year) to the Dallas and Ft. Worth area at a cost at least \$1.7 billion. This represents approximately 10% of the entire water supply expenditures estimated in the draft State Water Plan<sup>18</sup>. Water treatment plants to treat this water would add another approximately \$0.43 billion<sup>19</sup>. The dam and reservoir would flood 30,000 acres of high quality rare bottomland hardwood forest, and another 42,000 acres of other forest and family farms in Northeast Texas. Fish and wildlife habitat would also be affected for miles downstream of the dam.

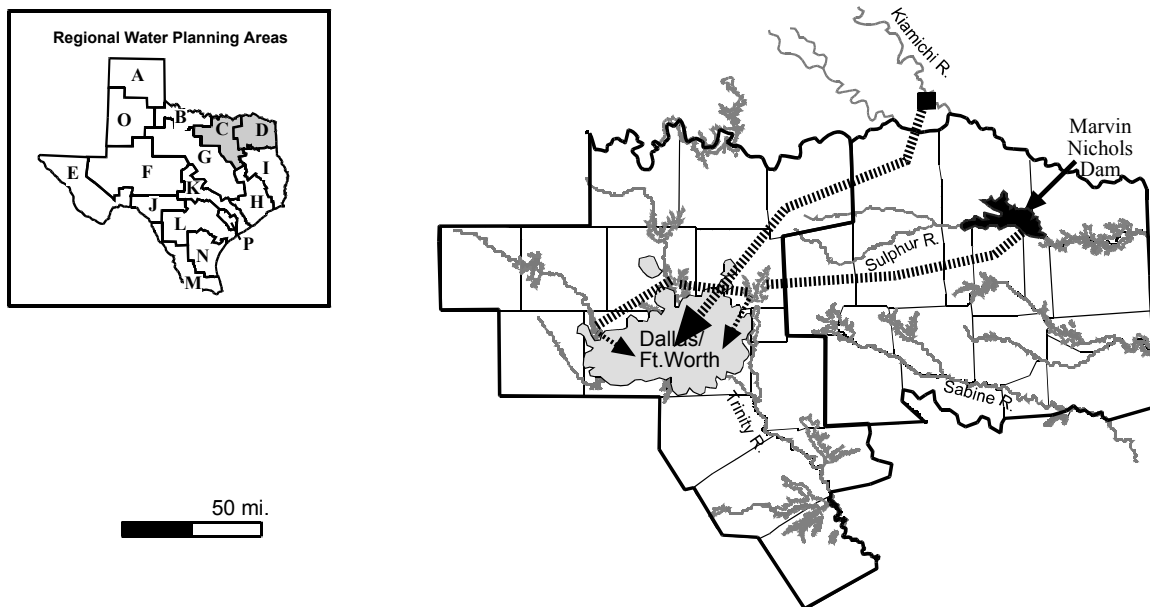


Figure 8. The proposed Marvin Nichols dam and reservoir on the Sulphur River.

This expensive and environmentally destructive project is unnecessary if Dallas and Ft. Worth area cities embark on water conservation programs to bring their use rates down by 22-24% over a 50-year period. For most of these cities, such reductions would still leave their use rates above the other major metropolitan areas in the State. The City of San Antonio achieved a reduction of 30% in thirteen years although this is not reflected in the TWDB data in the draft State Water Plan for reasons discussed above.

As shown in Figure 9, the Marvin Nichols dam and reservoir project is not needed by the City of Dallas if the water use rate in the city were reduced to 200 GPCD by the year 2050. Similar

<sup>18</sup> TWDB, Draft State Water Plan, Oct. 2001, pg. 82.

<sup>19</sup> Calculated with estimated cost to expand water treatment facilities as tabulated in the Region C Water Plan, Jan, 2001, Appendix R.

arguments are true for each of the four other participants in the project (North Texas Municipal Water District, Tarrant Regional Water District, City of Irving, and Dallas County other).

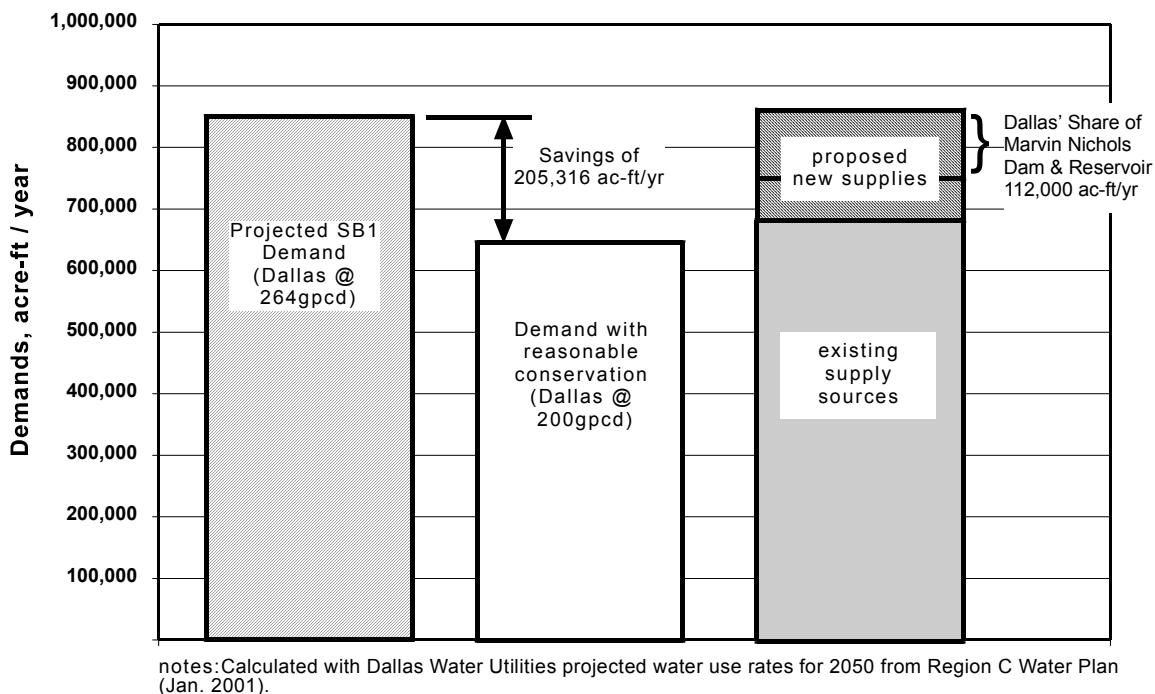


Figure 9. Portrayal of how reasonable conservation by the City of Dallas would eliminate need for the controversial Marvin Nichols dam and reservoir.

In summary, there is a tremendous lost opportunity in the draft State Water Plan to promote water conservation in the state. As a result, the Plan overemphasizes projects to increase water supply, which results in unnecessary expense and social and environmental damage. It only makes sense to focus first on using existing supplies as efficiently as is reasonably possible before incurring those costs.

**THE DRAFT STATE WATER PLAN FAILS TO INCLUDE MEANINGFUL DROUGHT RESPONSE PROVISIONS.**

**Key Shortcoming**

The Plan offers no realistic strategy for reducing water demand during a drought.

Section 16.051 of S.B. 1 indicates that the state water plan is to address preparation for and response to drought conditions.<sup>20</sup> Similarly, Section 16.055 addresses implementation of the drought response component of the state water plan.<sup>21</sup> However, the forecasting methodology utilized by the TWDB assumes that peak human demands, like lawn watering, must be met during the worst drought. In effect, the draft State Water Plan ignores the potential for managing

<sup>20</sup> TEX. WATER CODE ANN. § 16.051 (a).

<sup>21</sup> TEX. WATER CODE ANN. § 16.055 (a).

demand during drought conditions. Instead, the Plan seeks to develop water supplies sufficient to support activities such as lawn watering during the worst year of a drought in the same manner as during the wettest year on record. That approach likely will result in building supplies and capacity that only would be used once rarely. The marginal costs, in terms of dollars and social and natural resource costs, for those supplies are incredibly high. It would make far more sense to develop meaningful demand management scenarios to be used during periods of drought. For example, individuals might be paid by municipalities not to irrigate crops during drought years. The municipalities could make the payments from funds saved by not building additional supplies and the persons foregoing irrigation would be compensated for the losses associated with not irrigating. In addition, during drought periods, yard water should be limited to only that level necessary to keep lawns alive, as opposed to uniformly green, so that they can recover after the drought has ended. This approach has tremendous potential to save money and to protect natural resources and, in the long run, agricultural resources by minimizing the need for permanent transfers of water from agricultural uses to municipal uses.

It is obvious from Sections 16.051 and 16.055 of the Water Code that the legislature contemplates something other than business as usual during drought conditions. Unfortunately, the draft State Plan is seriously deficient in this regard.

**THE DRAFT STATE WATER PLAN FAILS ADEQUATELY TO PROTECT GROUNDWATER RESOURCES.**

Key Shortcoming

The Plan assumes the eventual depletion of many large aquifers in the State.

Water planning must be based on a fundamental premise of ensuring that water needs will be addressed on a permanently sustainable basis. For pumping from an aquifer, a sustained-yield approach is the key to sound water management and to ensuring that future generations will have an adequate supply of water. Unfortunately, the goal of sustainable yield management seems to be the exception more than the rule in the draft State Water Plan.

In the *Highlights and Major Policy Recommendations* section of the draft State Water Plan, the Board begins to consider this issue although in a very limited fashion. The TWDB advocates that Regional Water Planning Groups “evaluate ... the long-term sustainable level” of groundwater withdrawal. Unfortunately, this falls far short of a recommendation of sustained yield as a management goal, but at least it would provide a benchmark against which the proposed withdrawals in a given regional water plan could be evaluated.

The draft State Water Plan includes projects that would remove such large volumes of water from aquifers that they would be depleted in only a few generations. The consequences of this are many, both economic and environmental. In many cases, current local municipal and rural users of the aquifers will be negatively impacted by declining water levels. Also, where groundwater now supplies the baseflow of streams through discrete spring flows or by seepage along riverbanks or in river beds, surface water availability could be significantly reduced. A large scale loss of groundwater can reduce these seepage and spring flows, threatening wetlands

and wildlife.

Two of the most potent examples of aquifer depletion are shown as Projects D and E in Figure 1 above. Project D is a proposal to use large capacity wells to remove about 26,000 ac-ft/yr (8.4 bill gal/yr) from the Carrizo Aquifer in Atascosa, Wilson, & Gonzales Counties (Option CZ-10). This water would be delivered to San Antonio via a 90 mile pipeline. When combined with the other projected withdrawals from the Carrizo Aquifer in the area, the forecast impacts of the project include water level declines of up to 100 feet as portrayed in Figure 10<sup>22</sup>.

Figure 11 illustrates the impacts of the forecast reductions in water levels in a cross-sectional view along the line shown on Figure 10 in Gonzales County. NWF constructed this cross-sectional view based on current water levels given in the Region L Water Plan in conjunction with some supplementary information for water levels for TWDB monitoring Well #67-43-104 in the vicinity of Sandies Creek. The projected 2050 water table surface was based on the figures provided in Section 5.2.4 of the Region L Water Plan. As shown, currently aquifer levels are such that the Carrizo aquifer discharges to area streams such as the Guadalupe River and Sandies Creek. However, as the proposed large reductions in water progresses, the aquifer levels would fall below the base of streams and this discharge would cease. Therefore, not only would this decline in water levels affect current users, as shown, it would also reduce the baseflows to area streams during drought.

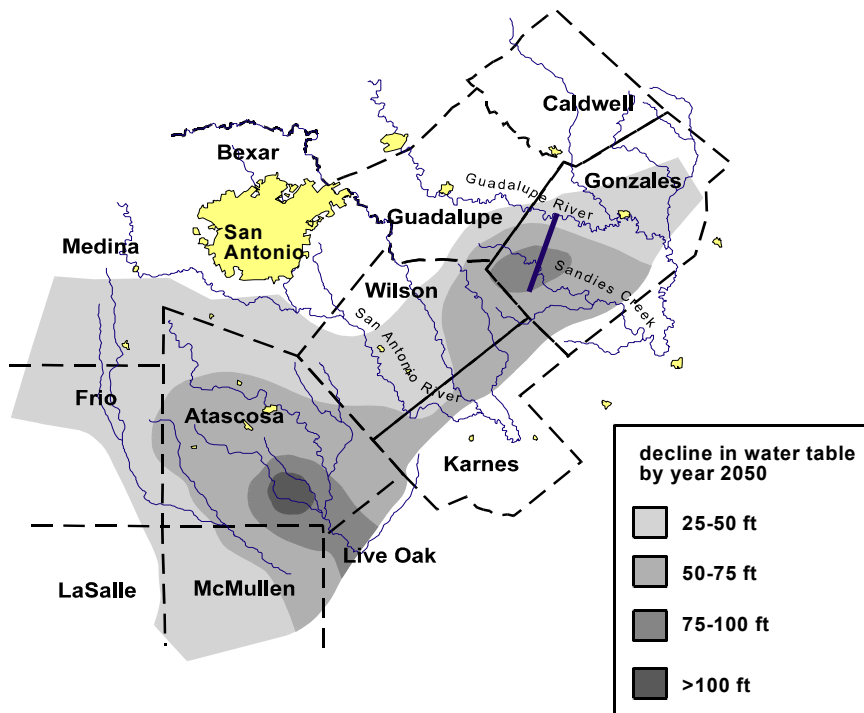


Figure 10. Forecast reductions in water levels in the Carrizo Aquifer southeast of San Antonio.

<sup>22</sup> South Central Texas Regional Water Planning Area, Region L, *Regional Water Plan*, Jan. 2001, Vol. II.

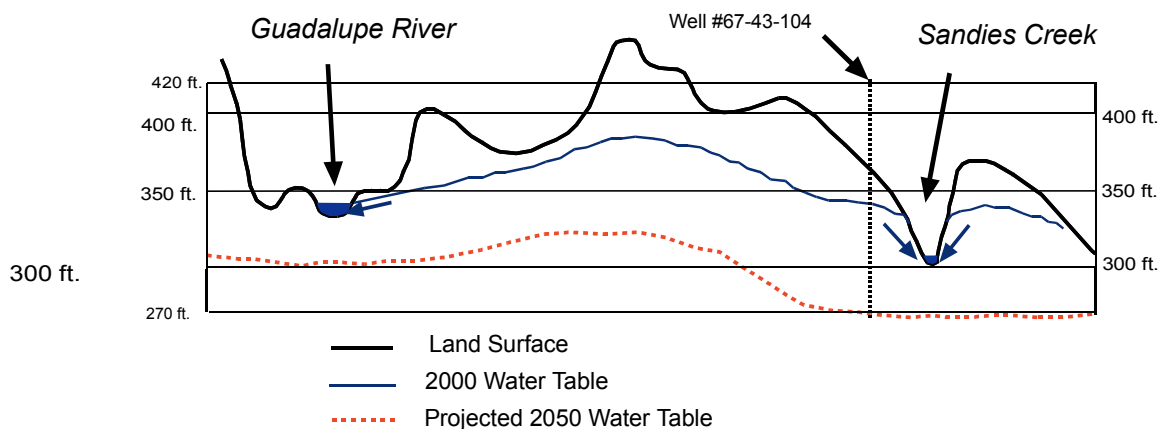


Figure 11. Cross-sectional view of the Carrizo Aquifer in Gonzales County showing the impact of proposed withdrawals and water level declines on baseflow discharges to area streams.

Project E on Figure 1 is a proposed unsustainable withdrawal of about 55,000 ac-ft/yr from the Simsboro Aquifer in Bastrop, Milam, & Lee Counties. The project consists of large capacity wells and 120 miles of pipeline. The impacts of this project include water-level declines of up to 100 feet affecting current users and, like the portrayal in Figure 11, the potential to negatively affect wetland habitats and species by reducing stream and springflows during drought.

## **COMMENTS ON TWDB POLICY RECOMMENDATIONS**

### **1.0 Highlights and Major Policy Recommendations:**

Input on specific policy recommendations has been provided through the Stakeholder Process. Other than noting generally that the Stakeholder Process was deeply flawed, those points will not be rehashed here. However, a few key points regarding the Board's policy recommendations deserve additional mention.

#### **Surface Water**

The junior priority provision for interbasin transfers serves a valuable purpose, particularly in the absence of clear quantification of flow needs for natural resource protection. Any consideration of waiving that provision would be premature in the absence of a comprehensive assessment of those flow needs for the basin of origin and the development and approval of an enforceable management plan to ensure the protection of those flows. In addition, acquiescence of regional planning groups is not an appropriate indicator of widespread public acceptance.

#### **Conservation**

As discussed further below, the primary component of projected water conservation "savings" in the draft State Water Plan is a simple quantification of the benefits of compliance with the Water Saving Performance Standards for Plumbing Fixtures Act of 1991. Although the quantification does demonstrate the value of that legislation, it falls short of compliance with the various requirements of S.B.1 for improved water

conservation. A mere compilation of the benefits of compliance with an existing state law cannot be construed as providing for improved water conservation in the state.

Existing state law also currently requires the preparation of water conservation plans by holders of major surface water rights. However, there is no requirement for ongoing reporting about implementation of those plans. The absence of any recommendation for a simple requirement that all major water users file periodic reports on the implementation of conservation measures is a major disappointment. The recommendations also fail to demonstrate a strong commitment to minimizing water usage during drought periods. Because all of the water demands in the draft State Water Plan are based on drought conditions, the lack of serious attention to drought management results in an overemphasis on development of new supplies, which, in turn, would result in unnecessary costs for all Texans.

### **Groundwater**

Regarding groundwater management, it is truly disappointing to see the Board fail to carry forward the consensus recommendation from the stakeholder process that the state should move toward a goal of sustainability. That recommendation did acknowledge that a sustainable yield might not be achievable throughout the state and that specific regional assessment, selection, and implementation of any particular goal is appropriate. The issue was extensively discussed and the achievement of consensus on the issue was one of the few highlights of a flawed process. This is a clear example of the Board failing to rise to the challenge of exercising leadership on an issue of major importance for future generations of Texans.

### **Environmental**

The introductory language to this section should acknowledge that, without further action, during dry periods many river reaches and estuaries may be entirely deprived of freshwater flows as a result of currently authorized diversions. That acknowledgement would help to convey the seriousness of the issue to be addressed.

### **Section 11.0 Environmental Planning**

The text in this section bears little resemblance to what happened in the planning process. First, TWDB rules simply failed to provide any meaningful guidance to regional planning groups on environmental assessments, with the limited exception of requiring the use of consensus criteria for new reservoirs or diversion projects. That lack of guidance resulted in a widespread failure of many planning groups to conduct meaningful assessments of environmental implications of proposed projects. Most of the regional water plans do not include the information on environmental issues required by S.B. 1. As a result, in many instances, both the public and key state and local decision-makers have been deprived of the information they need to make informed evaluations.

### **Section 11.1 Environmental Flow Needs and Unique Stream Segments**

The statement related to the designation of ecologically unique river and stream segments that "the Planning Groups agreed unanimously that the Legislature needed to better define the legal implications and limit any restrictions to the development of new reservoirs in a designated

segment" is unwarranted.<sup>23</sup> It is accurate to state that the Groups were unanimous in requesting better definition of the legal implications of those designations. However, a review of the Regional Plans demonstrates that it is not accurate to state that the Groups were unanimous in calling for any particular limitation on the implications of a designation.

Similarly, the statement that the challenge of defining environmental flow needs primarily resulted from a lack of sufficient models also is unjustified.<sup>24</sup> There simply is no evidence that, with only two limited exceptions, Regional Groups even considered defining environmental flow needs. The Region H Group did include a table quantifying freshwater inflow needs for Galveston Bay.<sup>25</sup> It is particularly telling that the Region H Group encountered difficulty in gaining TWDB acceptance of the inclusion of that statement of water need in the Regional Water Plan. It seems clear that the shortcomings in defining environmental flow needs resulted primarily from a failure of leadership on the part of TWDB to emphasize the critical nature of the issue. **The Board needs to make a clear statement that environmental water needs must be addressed in the planning process.**

The reference to the comprehensive "in-stream-flow study program" also is somewhat inaccurate.<sup>26</sup> S.B. 2 does mandate instream flow studies. The commenting parties certainly hope that those studies will be carried out in a timely manner. However, the statute leaves for future resolution the determination of priority sites for study. The draft State Water Plan states that the studies are to aimed at "potential future priority water-development sites." Simply including a statement in the draft State Water Plan indicating that the decisions have been made is not the appropriate way to make the determinations of priority study sites. Instead, an appropriate, an open, process is needed for prioritizing the location of study sites. Regardless, consideration of the issue of ensuring environmental flows cannot be pushed aside until site-specific studies are completed. Reasonable generalized estimates of flow requirements must be used in the absence of detailed studies so that planning to meet all water needs can go forward.

### **Section 14.3 Recommendations for Unique Reservoir Sites**

The commenting parties appreciate the Board's recognition that many of the reservoir sites nominated by Regional Groups for designation as unique were not adequately justified. However, a number of the sites recommended for designation by the Board also do not merit that status. Indeed, several of the Board's recommendations are inconsistent with its own rules.

First, no site should be recommended for designation by the Board if the Regional Group for the region in which the site is located did not recommend its designation. That is a simple fairness issue. Landowners whose property will be directly affected by the designation (and there can be no serious question that the designation will affect a landowner's ability to sell an interest in such property) realistically can only participate in their own region's process. To allow another region, which has no connection to the property, to drive the designation process, and to do so with no notice to the affected landowners, simply is unconscionable. It is not even clear that

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<sup>23</sup> Draft Plan at page 121.

<sup>24</sup> Draft Plan at page 121.

<sup>25</sup> The East Texas Planning Group acknowledged the importance of the issue but did not take any action on it.

<sup>26</sup> Draft Plan at page 121.

S.B. 1 authorizes a regional group to recommend a site outside of the region. The Little River Reservoir site is an excellent example of this issue. Region G, which is the Region in which the site is located, did not recommend its designation. Region H did. The Board should have identified the conflicting entries as an interregional conflict that should never have been allowed in approved plans. At any rate, **it is not appropriate for the Board to recommend the Little River Reservoir site for designation under these circumstances.**

Second, the Board should not recognize any recommendation by a regional planning group for designation of a unique reservoir site if the relevant region did not clearly recommend such designations early enough in the process to ensure meaningful public comment. This is a particular problem with the East Texas Regional Plan. The initially prepared plan merely stated that 13 "Reservoir sites" had been identified. That is not a sufficiently specific reference to put the public or potentially affected landowners on notice that unique reservoir site designation was proposed. It is not reasonable to expect that the reader would presume that a planning group is recommending every identified reservoir site for designation as a unique reservoir site. As a result, adequate public participation opportunities were not provided. Accordingly, **the Board should not recommend designation of Lake Eastex, Carthage Reservoir, or Rabbit Creek Reservoir as unique reservoir sites.**

Finally, sites simply are not eligible for recommendation by regional groups if information has not been provided in compliance with the TWDB's rules. Several of the recommended sites do not have adequate supporting information. The rules establish the basic requirements that must be met in recommending designation: site description, specific justification for unique designation, and identification of beneficiaries of water supply.<sup>27</sup> The rules also establish two categories of justifications: the reservoir is recommended as a specific water management strategy or as an alternative long-term scenario.<sup>28</sup> Presumably, the Board would agree it should abide by its own rules in making its recommendations for unique reservoir site designations. Some specific examples of inadequate supporting information are provided below.

For Prairie Creek Reservoir, there is no projected water need to be met which means that no beneficiaries of the supply have been identified. That designation has not been justified because there is no need for the projected water within the planning horizon so it is not a recommended strategy or an alternative scenario. With respect to the Big Pine Reservoir, no beneficiaries of the water supply are identified, no need for the water is documented, and no justification for designation is provided in either the regional plan or the draft State Plan. In addition, the information in the Regional Plan contains inaccurate information about conflicts with potential ecologically unique stream segments, which were not corrected even though the errors were pointed out in comments on the initially prepared plan. For Big Sandy Reservoir, the statement of potential beneficiaries is so general as to be meaningless ("potential beneficiaries ... include municipal and industrial water users with the upper portion of the Sabine River Basin and/or water users outside of the basin"<sup>29</sup>) and no specific justification for designation is given. The statement of potential beneficiaries of the Carl Estes Reservoir is also so general as to be meaningless and again no justification for designation is given in either the Regional Plan or the

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<sup>27</sup> 31 TAC § 357.9.

<sup>28</sup> 31 TAC § 357.9.

<sup>29</sup> Adopted Water Plan for North East Texas Planning Group at p. 207.

draft State Plan. Those same deficiencies exist with respect to the Carthage Reservoir site. Similarly, the Little Cypress Reservoir information fails to identify specific beneficiaries ("Potential beneficiaries ... include municipal and industrial users within the Cypress Creek Basin and/or water users outside of the basin."<sup>30</sup>) or a specific justification for designation. The recommended designation of the Palmetto Bend II site also lacks justification because the Regional Plan acknowledges the project is awaiting "the development of ... a purchaser for the water created."<sup>31</sup>

A basic issue of fundamental fairness exists with respect to all unique reservoir site designations. No specific information is given about the boundaries of the actual property proposed for designation for any site. As a result, there simply is no way for private property owners, whose rights would be adversely affected by designation, to receive adequate notice of the impacts of the proposed designations. That is just not right. They should at least have clear notice.

**Given the numerous flaws in the descriptions and process, which deprived potentially affected persons of a reasonable opportunity to comment on unique reservoir site proposals, the Board should not send any recommendations for unique reservoir site designation forward at this time.**

## **CONCLUSION**

In conclusion, the draft State Water Plan as it stands represents a beginning, but not a full realization, of the comprehensive water planning document that was envisioned by Senate Bill 1. Planning that fails to include an assessment of all major water needs or fails to include a proposal for meeting those needs—for instance those for Texas' fish and wildlife—is simply not adequate planning that can be relied upon to direct future water development. It will not be acceptable to the people of this state to devastate our fish and wildlife heritage by depriving rivers and bays of the water flows needed to keep them productive, or to fund expensive and damaging new water supply projects, when common-sense conservation practices have been ignored.

In the past, with respect to water development projects we generally have confronted fish and wildlife issues only when a provision of federal law forced us to do so. If we continue down the current path, that can only become a more frequent occurrence. Each such instance represents a failure of planning which can, and should, be avoided. It is not in the best interests of Texans overall, or of any of us individually, to defer addressing these issues any longer. The commenting parties are committed to ensuring truly **comprehensive** water planning in Texas. We look forward to continuing progress towards that goal.

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<sup>30</sup> Regional Plan at p. 205.

<sup>31</sup> Adopted Water Plan for Lavaca Regional Planning Group at "Task 6: Recommendations," p.1.