

EAST TEXAS REGIONAL WATER PLANNING AREA

2011 UPDATE OF THE REGIONAL WATER PLAN
FINAL PLAN

SEPTEMBER 1, 2010



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Executive Summary

In 1997 the State Legislature, through Senate Bill 1, determined that water planning should be accomplished at a regional level rather than with the centralized approach employed previously by the Texas Water Development Board (TWDB). To accomplish this task, the TWDB divided the state into 16 regional water planning areas and appointed representational Regional Water Planning Groups (RWPGs) to guide the development of each region's plan. In 2001, revised rules and guidelines from the TWDB were enacted through Senate Bill 2. The planning process is cyclic, with updated Regional Water Plans and State Water Plans produced every five years.

The designated water planning area for the east and southeast portions of Texas is the East Texas Regional Water Planning Area (ETRWPA), also known as Region I or the East Texas Region. The water planning process in the ETRWPA is guided by the East Texas Regional Water Planning Group (ETRWPG). These individuals are charged with the responsibility for development of the 2011 update to the ETRWPA water plan (the 2011 Plan). The ETRWPG is currently comprised of the following voting members representing specific community interests:

- David Alders - Agriculture
- Jeff Branick - Counties
- David Brock - Municipalities
- George Campbell - Other
- Jerry Clark - River Authorities
- Josh David - Other
- Chris Davis – Counties
- Mark Dunn – Small Businesses
- Michael Harbordt - Industries
- William Heugel – Public
- Dr. Joe Holcomb – Small Businesses
- Kelley Holcomb - Water Utilities
- Bill Kimbrough - Other
- Glenda Kindle - Public
- Duke Lyons - Municipalities
- Dale Peddy - Electric Power

- Hermon Reed - Agriculture
- Monty Shank - River Authorities
- Darla Smith - Industries
- Scott Hall - River Authorities
- Worth Whitehead - Water Districts
- Leon Young - Environment

At its core, the regional water planning process involves the evaluation of water demands, identification of water supplies, and development of water management strategies designed to meet potential water shortages. However, the process also involves the evaluation of a broad range of issues that directly relate to water planning. Some of these issues notably include protection of natural resources and agricultural resources, water conservation and drought contingency, and water management strategy quantity, reliability, and cost.

Regional water planning in the ETRWPA is a public process, involving frequent public meetings of the ETRWPG, careful consideration of the requests and needs of the various water user groups in the region, and an understanding of the need to allow for public comment throughout the planning cycle. For an in-depth discussion of any of the topics addressed in this Executive Summary, the reader is referred to the full report document of the 2011 Plan. An electronic copy of the Final 2011 Plan is available online at the ETRWPA website: <http://www.etexwaterplan.org/> and at the TWDB website: <http://twdb.state.tx.us>.

ES.1 Regional Description

The ETRWPA consists of all or portions of the following 20 counties located in the Neches, Sabine, and Trinity River Basins, and the Neches-Trinity Coastal Basin:

Anderson	Jefferson	Rusk
Angelina	Nacogdoches	Sabine
Cherokee	Newton	San Augustine
Hardin	Orange	Shelby
Henderson(partial)	Panola	Smith (partial)
Houston	Polk (partial)	Trinity (partial)
Jasper	Rusk	

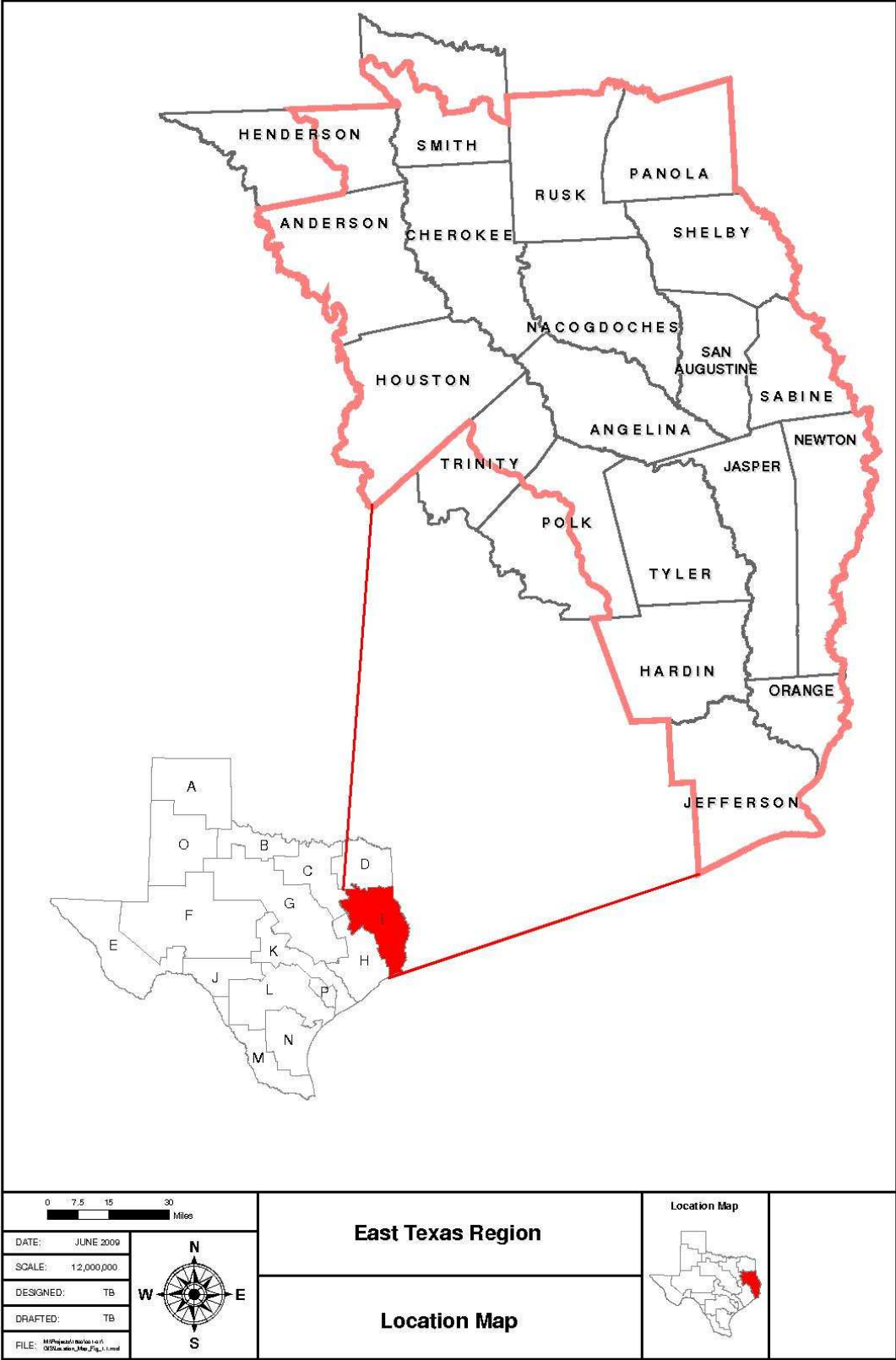
The region extends from the southeastern corner of the state for over 150 miles north and northwest as illustrated on Figure ES.1. The ETRWPA consists of approximately 10,329,800 acres of land, accounting for roughly six percent of the total area of the State of Texas.

Much of the ETRWPA is forested, supporting various types of timber industry. Plant nurseries are common in portions of the region. Oil production is scattered throughout the region, and beef cattle are prominent. Poultry production and processing are prevalent in Shelby and Nacogdoches Counties and very significant in Angelina and Panola Counties. There is diverse manufacturing in addition to timber industries. Commercial fishing is an important economic characteristic of Sabine Lake. Tourism is important in many areas, especially on and around large reservoirs, Sabine Lake, and the Gulf of Mexico. Timbered areas include a number of state parks and national forests, etc., that offer recreational and hunting opportunities.

Agriculture is a vital component of the ETRWPA economy and culture. According to the United States Department of Agriculture, the 20 counties that make up the ETRWPA contain over 9,000 farms with a total of over a million acres of crop land.

ES.2 Regional Population and Water Demands

Projecting the demand for water over the planning period is a crucial element of planning. Water demands were developed for six categories of use, including municipal, manufacturing, irrigation, steam-electric, mining, and livestock. Before municipal demands can be estimated, however, population projections must be developed. A summary of the population and water demand projections, as well as demand projections for wholesale water providers follows.



ES.2.1 Population Projections. In the 2006 Plan, the population of the ETRWPA was projected to increase from approximately 1.09 million people in 2010 to almost 1.5 million in 2060. For the 2011 Plan, the TWDB directed all regions to retain the population projections from the 2006 Plan for the 2011 update. The ETRWPG decided to keep the population projections for each county in the region at the level identified in the 2006 Plan, as well. Population shifts within counties were confined to Angelina and Nacogdoches Counties, where five new water user groups (WUGs) were identified.

It should be noted that for Smith County, and particularly for the City of Tyler, population estimates for the 2011 Plan are significantly below the Texas State Data Center estimates for population. This understatement of population for the City of Tyler could present a significant problem for water planning in the ETRWPA in the future if not corrected. Other water suppliers including the City of Nacogdoches and Woodville expressed concerns regarding a possible underestimate of population. The ETRWPG's expectation is that the population of the region's constituent cities and counties will be appropriately adjusted in the next round of planning, based on the 2010 census, and that population projections will be more accurately reflected for Smith County and the City of Nacogdoches and Woodville.

ES.2.2 Water Demand Projections. Total water demand for the ETRWPG has been projected for the 2010 to 2060 planning period for six categories of water use, and is summarized as follows:

Water User Category	2010	2020	2030	2040	2050	2060
Municipal	189,559	196,828	202,761	208,193	218,705	233,622
Manufacturing	299,992	591,904	784,140	821,841	857,902	893,476
Irrigation	151,100	151,417	151,771	152,153	152,575	153,040
Steam-Electric	44,985	80,989	94,515	111,006	131,108	155,611
Livestock	23,613	25,114	26,899	29,020	31,546	34,533
Mining	21,662	37,297	17,331	18,385	19,432	20,314
Total for Region	730,911	1,083,549	1,277,417	1,340,598	1,411,268	1,490,596

The following changes to demand are included in the 2011 Plan:

- Increased steam-electric water demand in Angelina County.
- Municipal water demands for newly identified WUGs in Angelina and Nacogdoches Counties (no net change on a county-wide basis).
- Reduced manufacturing water demand for Angelina County.
- Increased manufacturing water demand for Jefferson County.
- Reduced irrigation water demands for Hardin and Jefferson Counties.
- Increased mining water demands in Angelina, Cherokee, and Nacogdoches Counties.
- New mining water demands for Shelby and San Augustine Counties.

ES.2.3 Wholesale Water Provider Demand Projections. Wholesale water providers are those that have contracts to sell more than 1,000 acre-feet per year (ac-ft per

year) of water wholesale. Water may be provided wholesale either to municipal or manufacturing customers. As required, the ETRWPG must include such entities individually in the water plan. Wholesale water providers identified in the ETRWPA include the following:

- Angelina and Neches River Authority
- Athens Municipal Water Authority
- City of Carthage
- City of Jacksonville
- City of Nacogdoches
- City of Tyler
- Lower Neches Valley Authority
- Sabine River Authority
- Angelina-Nacogdoches Water Control and Improvements District No. 1
- City of Beaumont
- City of Center
- City of Lufkin
- City of Port Arthur
- Houston County WCID No. 1
- Panola County Freshwater Supply District No. 1
- Upper Neches River Municipal Water Authority

ES.3 Water Supplies in the East Texas Regional Water

Planning Area

The ETRWPG identified currently available water supplies to the region by source and user. The supplies available by source are based on the supply available during drought-of-record conditions. Surface water and groundwater represent the primary types of sources of water supply, although there are other potentially significant types of sources as well. A summary of the available supplies within the ETRWPA follows:

Source of Supply	2000	2010	2020	2030	2040	2050	2060
Reservoirs (permitted)	1,966,474	1,962,698	1,958,512	1,954,328	1,950,141	1,945,955	1,941,769
Reservoirs (unpermitted)	340,300	330,874	321,857	312,841	303,825	294,808	285,790

**2011 Water Plan
East Texas Region**

Run-of-the-River (freshwater)	623,004	623,004	623,004	623,004	623,004	623,004	623,004
Run-of-the-River (brackish)	1,035,982	1,035,982	1,035,982	1,035,982	1,035,982	1,035,982	1,035,982
Groundwater	446,043	446,043	446,043	446,043	446,043	446,043	446,043
Local Supplies	13,094	13,094	13,094	13,094	13,094	13,094	13,094
Direct Reuse	1,518	1,518	1,518	1,518	1,518	1,518	1,518
Indirect Reuse	16,559	16,559	13,687	13,687	13,687	13,687	13,687
Total	4,442,974	4,429,772	4,413,697	4,400,497	4,387,294	4,374,091	4,360,887

Surface water supplies were determined using the TCEQ-approved Water Availability Models. In the ETRWPA, four river basins were evaluated: Neches, Neches-Trinity, Trinity, and Sabine.

In Texas, joint groundwater planning is conducted by Groundwater Conservation Districts. The counties in the ETRWPA fall into Groundwater Management Areas-11 or -14. The Texas Water Code now requires that the ETRWPG rely on estimates made by the Groundwater Management Areas that are determined from desired future conditions in the aquifer. However, desired future conditions were not established by the Groundwater Management Areas in the ETRWPA within the time frame required to be included in this regional water plan. Therefore, groundwater supplies have not been modified from the 2006 Plan.

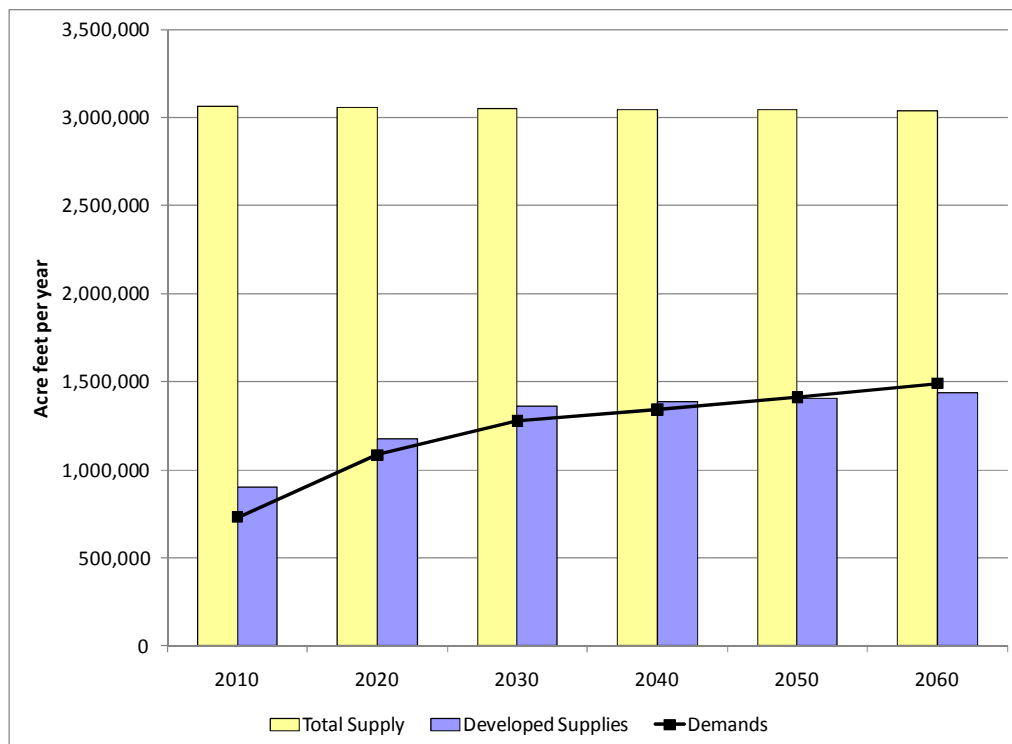
Other water supplies considered for planning purposes include reuse of treated wastewater, saline sources, and local supplies. Local supplies generally include stock ponds that do not require water rights permits, and local mining supplies. These supplies are assessed based on historical and current use.

ES.4 Water Management Strategies to Meet the Region’s Needs

The development of water management strategies (WMSs) to meet projected water demands is a central element of water planning. The process of strategy development includes a comparison of demand to supplies, identification of shortages, and identification and evaluation of water management strategies to meet the shortages.

Figure ES.2 summarizes the comparison of total currently available water supply and total projected water demand for the ETRWPA. The region as a whole has a currently available surplus of 169,352 ac-ft per year in 2010, changing to a shortage of nearly 3,000 ac-ft per year by 2050, and increasing to a shortage of 55,867 by 2060. However, because not all water is available in all places, location-specific shortages can, and do, occur throughout the region. The actual total shortages of individual WUGs in the ETRWPA total 182,145 ac-ft per year by 2060.

Figure ES.2 Comparison of Regional Water Supplies to Demands



On a regional basis, sufficient supplies exist for municipal and irrigation water uses. Regional shortages are identified for manufacturing, steam-electric power, mining and livestock. The largest percentage of shortages is attributed to anticipated steam-electric power plant development in the region. The steam-electric power shortages are for projected growth that currently does not have an identified source or infrastructure. Most of the manufacturing shortages are the result of considerable growth in demands and supplies that are limited to existing contract amounts. Mining shortages are largely associated with new mining demands associated with natural gas development and mining demands in Hardin County that are no longer substantiated based on current use. Livestock water use is also expected to grow in some counties, which will require the development of additional resources and/or infrastructure. Even though the municipal water use shows a net surplus in every decade of the planning period, there are individual cities that are projected to have shortages during the planning period.

Twelve counties are identified with shortages over the planning horizon, with Anderson, Angelina, Nacogdoches, Newton, and Orange Counties having the largest projected shortages by 2060. Anderson and Angelina Counties are expected to have the largest percent shortages (52 and 57 percent) in 2060, and Tyler County is expected to have the largest percentage surplus (48 percent) in 2060. Projected surpluses and shortages by county for each decade of the planning period are summarized below.

County	Projected Shortages (ac-ft per year)					
	2010	2020	2030	2040	2050	2060
Anderson	4,230	-7,508	-9,688	-12,284	-15,428	-19,218
Angelina	-6,089	-18,070	-18,362	-23,058	-28,317	-34,632
Cherokee	4,788	3,373	4,595	4,393	4,065	3,532
Hardin	-5,080	-6,417	-7,120	-7,830	-8,645	-9,434
Henderson (P)	2,818	876	387	-89	-700	-1,455
Houston	2,012	1,536	973	370	-339	-1,154
Jasper	2,932	2,728	2,670	2,762	2,808	2,808
Jefferson	71,958	58,255	55,789	52,733	49,251	44,206
Nacogdoches	9,720	5,385	9,013	5,305	-6,827	-12,638

Newton	10,895	2,551	96	-2,930	-6,615	-11,096
Orange	19,110	13,537	6,890	141	-6,391	-13,947
Panola	4,321	4,028	3,849	3,686	3,512	3,252
Polk (P)	290	-75	-374	-602	-773	-959
Rusk	26,188	23,243	18,482	12,802	5,672	-3,305
Sabine	1,369	1,226	1,103	971	814	637
San Augustine	-1,419	-7,004	-104	-224	-380	-549
Shelby	1,059	-1,182	-1,072	-2,621	-4,504	-6,827
Smith (P)	17,874	15,669	13,707	11,744	8,163	3,167
Trinity (P)	128	94	90	73	50	25
Tyler	2,249	1,922	1,729	1,696	1,725	1,720
TOTAL	169,352	94,167	82,653	47,038	-2,859	-55,867

Note: The sum of needs by county shown in the table above is based on total supplies to the county less the total county demands. The sum of the individual needs of water user groups within a county will differ. These needs are shown in Chapter 4A, Table 4A.5

For the ETRWPA, 68 WUGs were identified with shortages that cannot be met by existing infrastructure and/or water supplies. A total of five wholesale water providers were identified as having shortages that cannot be met by existing infrastructure and/or supplies.

The ETRWPG evaluated long-term WMSs available to meet the demands in the ETRWPA. The strategies considered include the following:

- Water conservation and drought management
- Wastewater reuse
- Expanded use of existing supplies
- New supply development
- Interbasin transfers

Water management strategies and alternate water management strategies were evaluated using screening criteria established by the ETRWPG in order to assess the feasibility of the strategies. These criteria were adopted as guidelines, and strategies

could be retained or dismissed at the discretion of the ETRWPG. The screening criteria included the following:

- The strategy must have an identified sponsor or authority.
- The strategy must consider the end use. This includes water quality, distance to end use, etc.
- The strategy should provide a reasonable percentage of the projected need (except conservation, which will be evaluated for all needs).
- The strategy must meet existing federal and state regulations.
- The strategy must be based on proven technology.
- The strategy must be able to be implemented.
- The strategy must be appropriate for regional water planning.

ES.5 Analysis of Impacts of Water Management Strategies

For the 2011 Plan, the ETRWPG reviewed selected water quality parameters, and addressed how water management strategies could affect water quality. In addition, potential impacts of moving water used for rural or agricultural purposes to urban uses were evaluated.

Water quality parameters selected by the ETRWPG as parameters that could be impacted by water management strategies included Total Dissolved Solids, Dissolved Oxygen, Nutrients, Metals, and Turbidity. The following table summarizes how the various types of water management strategies could impact these key water quality parameters.

Water Quality Parameter	Water Management Strategy Types							
	Expanded Use of Surface Water	Inter-basin Transfers	New Reservoirs	Expanded Use of Ground-water	Indirect Reuse	Expanded Use of Local Supplies*	Voluntary Re-distribution**	Water Conservation***
TDS	•	•	•	•	•		•	
Dissolved Oxygen	•	•	•		•			
Nitrogen	•	•	•		•		•	
Phosphorus	•	•	•		•		•	
Metals	•	•	•	•	•		•	
Turbidity		•					•	

*Expanded use of local supplies would not typically be expected to have a significant impact on water quality.

**Voluntary Redistribution could have an impact on the water quality of the receiving water body

***Water conservation would not typically be expected to have a significant impact on water quality

As the population of the ETRWPA increases, municipal and industrial water demands will rise accordingly, even with the implementation of conservation measures. The largest proportion of additional municipal water supply that will be utilized in the ETRWPA over the planning period will be from expanded use of existing surface water supplies and, to some extent, development of new surface water supplies such as Lake Columbia. Surface water demand will increase for municipal and industrial water users. However, as currently planned, the expanded use of surface water is not expected to involve significant transfers of agricultural supplies to municipal or industrial supplies. The proposed increases in municipal water surface water supplies will rely on existing water rights or new water rights from currently unpermitted supplies.

ES.6 Water Conservation and Drought Management

Water conservation plans are long-term, permanent strategies to reduce water use. Drought contingency plans are similar to conservation plans in that they aim to reduce water use, but are only intended for temporary periods during drought conditions.

Some water demand projections incorporate an expected level of conservation to be implemented over the planning period. For municipal use, the assumed reductions in per capita water use are the result of the implementation of the State Water-Efficiency

Plumbing Act. Within the ETRWPA, this amounts to about an 8 percent reduction in municipal water use (20,600 ac-ft per year) by the end of the planning period.

Conservation savings were also included in the steam-electric power demands. Demands for steam-electric power were developed with the assumption that long-term power needs will be met with more water-efficient facilities. The estimated water savings associated with the higher efficiency power plants is nearly 27 percent of the total demands or 57,100 ac-ft per year in the ETRWPA. Reductions in demands due to conservation were not quantified by the TWDB for manufacturing, mining, irrigation and livestock uses.

The TCEQ requires water conservation plans for all municipal and industrial water users with surface water rights of 1,000 ac-ft per year or more and irrigation water users with surface water rights of 10,000 ac-ft per year or more. Water conservation plans are also required for all water users applying for a State water right, and may also be required for entities seeking State funding for water supply projects. In the ETRWPA, 28 entities hold municipal or industrial rights in excess of 1,000 ac-ft per year and three entities have irrigation water rights greater than 10,000 ac-ft per year.

Conservation activities for municipal water users in the ETRWPA are focused primarily on education and public awareness programs, reduction of unaccounted for water through maintenance of water systems, and water rate structures that discourage water waste.

The ETRWPA is a water-rich region and water conservation in the region is driven by economics and not by lack of water supply. The ETRWPG believes that water users in the ETRWPA will implement advanced water conservation measures (i.e. savings associated with active conservation measures) as economic conditions dictate to each individual user. Currently, over one fourth of the municipal water users in the ETRWPA have per capita water use less than 100 gallons per person per day and 57 percent are less than the Water Conservation Implementation Task Force recommended state average of 140 gallons per person per day. While municipal use represents about 20

percent of the total regional water demands, the potential savings from advanced municipal conservation are relatively small. This opinion may change as economics and water supply conditions change in East Texas.

Drought management is a temporary strategy to conserve available water supplies during times of drought or emergencies. This strategy is not recommended to meet long-term growth in demands, but rather acts as a means to minimize the adverse impacts of water supply shortages during drought. The TCEQ requires drought contingency plans for wholesale water suppliers and irrigation districts, as well as retail public water suppliers serving 3,300 or more connections.

The majority of the drought contingency plans in the ETRWPA use trigger conditions based on a combination of water supply and demands placed on the water distribution system. All plans include measures that range from voluntary water restrictions in Stage I to mandatory restrictions in the final stage. Some drought contingency plans include an emergency stage not directly related to drought, but rather related to system rupture or failure.

ES.7 The 2011 Plan and Long-Term Protection of Water and Agricultural Resources

An important goal of water planning is the long-term protection of resources that contribute to water availability, and to the quality of life in the State. One requirement for the 2011 plan is to describe how the plan is consistent with the long-term protection of the State's water resources, agricultural resources, and natural resources.

ES.7.1. Protection of Water Resources. To be consistent with the long-term protection of water resources, the 2011 Plan must recommend strategies that minimize threats to the region's sources of water over the planning period. The water management strategies identified in Chapter 4 were evaluated for threats to water resources. The recommended strategies represent a comprehensive plan for meeting the needs of the

region while effectively minimizing threats to water resources. Some of the major strategies for the 2011 Plan are as follows:

- Water conservation
- Indirect reuse
- Development of Lake Columbia
- Use of water from Toledo Bend by Regions C and D
- Optimized use of existing surface water resources
- Optimized use of groundwater

ES.7.2 Protection of Agricultural Resources. Agriculture is an important economic cornerstone of the ETRWPA. Even with adequate rainfall, irrigation is a critical aspect of some agriculture in the region. Water availability modeling for the region's river basins indicates adequate availability of surface water to meet the projected irrigation demands for the planning period.

ES.7.3 Protection of Natural Resources. The ETRWPA contains abundant natural resources, which must be considered in water planning. Natural resources include threatened or endangered species; local, state, and federal parks and public land; and energy/mineral reserves.

The ETRWPA includes twenty species of birds, six mammals, 21 reptiles/amphibians, nine fish, and thirteen mollusks that are considered species of special concern, including some species classified as threatened or endangered. In general, water management strategies planned for the ETRWPA would not affect threatened or endangered species.

The ETRWPA contains national forests, wildlife refuges, and a preserve; as well as state parks, forests, and wildlife management areas. None of the water management strategies currently proposed for the ETRWPA is expected to adversely impact state or local parks or public land.

Much of the ETRWPA is heavily forested and timber is an important economic resource for the region. In general, water management strategies for the region would not be expected to significantly affect this use.

Numerous oil and gas wells are located within the ETRWPA, including the East Texas Oil Field, and four of the top 10 producing gas fields in the state. These resources represent an important economic base for the region. None of the water management strategies is expected to significantly impact oil, gas, or coal production in the region.

ES.7.4 Consistency of the 2011 Plan with Water Planning Requirements.

To be considered consistent with long-term protection of the State's water, agricultural, and natural resources, the ETRWPA Water Plan must also be determined to be in compliance with the regulations and guidelines pertaining to water planning. The regulations for water planning are found in 31 Texas Administrative Code Chapters 357 and 358. The information, data, evaluation, and recommendations included in the 2011 Plan were evaluated and determined to demonstrate compliance with these regulations.

ES.8 Regional Water Planning and Legislative Recommendations

The 2011 Plan includes recommendations to the Texas Legislature regarding future regional water planning activities. The ETRWPG was charged with considering recommendations for ecologically unique stream segments, unique reservoir sites, and general water planning needs.

ES.8.1 Unique Stream Segments. The ETRWPG considered available information regarding potential unique stream segments in the region and voted to not recommend any stream segments in the region for unique status. The ETRWPG concluded that sufficient programs are already in place to protect the regions' streams from inappropriate reservoir construction.

ES.8.2 Unique Reservoir Sites. The ETRWPA has a long history of water supply planning and reservoir development. There are numerous sites that have been identified as being hydrologically and topographically unique for reservoir development. Two sites in the ETRWPA are currently designated as unique: Lake Columbia and Fastrill Reservoir. Lake Columbia received its unique designation by the State Legislature through SB 1362. Fastrill Reservoir was designated by the 79th Legislature through SB 3. Other sites have not previously been recommended for designation as unique.

The ETRWPG recognizes that reservoirs can have major impacts on the environment and that protection of the environment is already afforded through a process which is more thorough than the regional water planning effort. The ETRWPG is not recommending in this planning cycle that any additional proposed sites be designated as unique reservoir sites. The ETRWPG is recommending that these sites be recognized as potential long-term water management strategies for the time period more than fifty years in the future. The ETRWPG believes that the lengthy and thorough economic and environmental review process will determine if any of these reservoirs are constructed as opposed to any decision by the ETRWPG.

ES.8.3 Legislative Recommendations. The ETRWPG reviewed previous legislative recommendations made pursuant to regional water planning requirements and evaluated new potential recommendations. Proposed recommendations were brought to the ETRWPG for consideration. Legislative recommendations adopted by the ETRWPG for the 2011 Plan include the following:

- **Junior Water Rights.** The ETRWPG supports legislation allowing exemptions to junior water rights by contracts that reserve sufficient surface water to meet 125% of the total projected demand of the basin of origin for the next 50 years.
- **Flexibility in Determining Water Plan Consistency.** The ETRWPG recommends that the following steps be taken to address concerns that small cities and unincorporated areas may not have specific water needs

and water management strategies identified in the regional water plan due to the nature of aggregating these entities. Hence, these entities may not be eligible for state funding assistance.

- The TWDB should add language to their guidance for funding that allows entities that fall under the planning limits to retain eligibility for state funding of water related projects without having specific needs identified in the regional water plans.
 - The TWDB and the TCEQ should interpret existing legislation to give the maximum possible flexibility to water suppliers as they seek to serve the public and provide new supplies.
 - Willing buyer/willing seller transactions of water rights and treated water should not be controlled by existing regulation. Such transactions may be beneficial to all concerned and may simply not have been foreseen in the planning process.
 - The TWDB and TCEQ should make use of their ability to waive consistency requirements if local water suppliers elect strategies that differ from those in the regional plan.
- **Continued Funding by the State of the Regional Water Planning Process on a Five-Year Cycle.** The ETRWPG believes the grassroots planning effort created by Senate Bill 1 is important to the state of Texas and should be continued.
 - **Groundwater Conservation Districts.** The ETRWPG recognizes the critical importance of groundwater conservation and proper management of this resource in the ETRWPA. Therefore, as an important component of regional planning, the ETWRPG encourages those portions of the ETRWPA not presently participating in a groundwater conservation district to carefully review groundwater management practices in their

area and to consider whether creating or joining a groundwater conservation district would be appropriate.

- **Unique Reservoir Designation Limitations.** The ETRWPG recommends that the designation of unique reservoir for the sites currently designated be extended to 2060, which would be through the current planning period. The ETRWPG also recommends that the United State Army Corps of Engineers Mitigation Bank Review Teams have TWDB and appropriate regional water planning agencies be added to the teams.
- **Wastewater Reuse.** The ETRWPG recommends that current regulations as they pertain to wastewater reuse should be reviewed and amended, as necessary, to encourage the reuse of wastewater effluent.
- **Funding Expansion.** The ETRWPG recommends that the TWDB expand existing programs to assist entities with funding replacement and repairs to aging infrastructure and/or allow replacement of water supply infrastructure to be funded through the Water Infrastructure Fund program. In addition, the ETRWPG recommends that requirements for funding by the TWDB for the Economically Distressed Areas Program (EDAP) be revised to reduce unnecessary and difficult requirements for eligibility, including requirements for model subdivision planning.
- **Environmental Flows.** The ETRWPG acknowledges the importance of these studies for the future of its water resources and supports the efforts of the various advisory teams and stakeholders in this endeavor. The ETRWPG also recognizes the need for water for growth and economic development. The ETRWPG also recognizes that future flow conditions in Texas' rivers and streams must be sufficient to support a sound ecological environment that is appropriate for the area. However, the ETRWPG believes it is imperative that existing water rights be protected. In addition, SB 2 and SB 3 processes that relate to environmental flows

should be closely coordinated with the SB 1 planning effort, involving regional water planning.

- **Uncommitted Water.** The ETRWPG opposes unilateral cancellation of uncommitted water contracts/rights; supports long term contracts that are required for future projects and drought periods; and, supports shorter term “interruptible” water contracts as a way to meet short term needs before long-term water rights are fully utilized.

ES.9 Infrastructure Financing Recommendations

The purpose of the infrastructure financing report is to identify funding needed to implement the WMSs recommended in the 2011 Plan. A survey of WUGs with identified infrastructure needs was conducted by the ETRWPG and the TWDB. The survey was conducted after the Initially Prepared Plan was approved by the ETRWPG.

Surveys were sent to 17 municipal WUGs and seven wholesale water providers with projected water shortages. Surveys were completed and returned for eight of the municipal WUGs and six of the wholesale water providers. There were 31 WUGs with needs identified in the 2011 Plan not surveyed. These WUGs were in the manufacturing, power generation, irrigation, livestock, and mining categories. In the IFR study, \$1,348,737,330 of water supply and infrastructure needs were identified. Of that, \$1,236,774,491 was the estimated cost of new surface water supply projects and major transmission systems. The remaining \$111,962,839 was in development of new wells, local infrastructure, and public/private partnership projects. .

ES.10 Public Participation and Adoption of Plan

Regional water planning in Texas is a public process, requiring strategy for ensuring that the region’s citizens are able to participate in the process. Development and adoption of the final 2011 Plan included regular meetings of the ETRWPG, consultation with representatives of the major water user groups, publication of a region newsletter,

distribution of regular press releases, and maintenance of a website for the ETRWPA. In addition, the ETRWPG held a Public Hearing to introduce the 2011 IPP and accept public comment. In all, comments were received from eight persons on behalf of various agencies or groups. These included one oral comment provided at the Public Hearing for the 2011 IPP, one hand-written response provided at the Public Hearing, and six letters received during the comment period. In four cases, the comments received related to a single issue of the commenter. The other comments received addressed multiple issues. Copies of comments and the ETRWPG responses to comments are included in Chapter 10.

The final *2011 East Texas Regional Water Plan* was submitted to the TWDB by September 1, 2010.