



# TEXAS WATER DEVELOPMENT BOARD



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**TO:** Board Members

**THROUGH:** Carolyn L. Brittin, Deputy Executive Administrator  
Water Resources Planning and Information *CYB*  
Dan Hardin, Director, Water Resources Planning Division *DH*

**FROM:** Matt Nelson, Manager, Regional Water Planning *Time for Matt*

**DATE:** October 6, 2010

**SUBJECT:** Briefing and Discussion on the Process of Developing, Adopting, and Approving 2011 Regional Water Plans

## ACTION REQUESTED

This is an informational item presenting the development, adoption, and review processes for the 2011 regional water plans. No action is required.

## BACKGROUND

Section 16.051 of the Texas Water Code (TWC) requires the Texas Water Development Board (TWDB) to develop and adopt a comprehensive state water plan every five years that incorporates the regional water plans developed under TWC Section 16.053. The state water plans are prepared by TWDB based on the regional water plans that are developed every 5 years by the 16 regional water planning groups.

### *Third Cycle of Regional Water Planning*

Texas is now at the tail end of the third cycle of the regional water planning process that was created in 1997 by Senate Bill 1, 75<sup>th</sup> Texas Legislature. Fifteen of the regional water planning groups have adopted their final regional water plans and submitted them to the TWDB for approval by the Board. Final adopted regional water plans, for 13 of the 16 regions, were due September 1, 2010. Final adopted plans for Regions C and M were due October 1, 2010 and the adopted Region F plan is due December 1, 2010.

### *Our Mission*

*To provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas.*

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Due to the lack of new population data from the U.S. Census Bureau, the 2011 regional water plans are updates to the 2006 regional water plans, focused primarily on changed conditions. The planning groups performed region-specific studies during the first two years of this planning cycle; the second portion of this planning cycle has been focused on development of the regional water plans.

Planning group members representing a variety of interests, including 11 interests defined by statute, requested funding from TWDB and prepared the regional water plans under regional water planning grant contracts with TWDB. The 11 interests include: agriculture, industry, environment, public, municipalities, business, water districts, river authorities, water utilities, counties, and power generation. Each planning group approves bylaws to govern methods of conducting business and each group has a political subdivision of the state, such as a river authority or council of government, to administer the planning process and manage contracts related to developing their regional water plan.

From developing their proposed scopes of work to completing and adopting their draft and final plans, the planning groups conducted their work at open meetings and in a participatory manner. With the support of their political subdivision and technical consultants, each regional water planning group:

- developed a scope of work for developing their regional water plan with public input;
- applied for regional water planning funds from TWDB based on that scope of work and TWDB application guidelines;
- developed an Initially Prepared Regional Water Plan (IPP) at public meetings by performing the ten tasks described in the next section;
- submitted the IPP to TWDB staff for review;
- held at least one public hearing to solicit comments on the IPP;
- considered public comments and revised their plan in response to public comment; and,
- adopted their final plan and submitted it to TWDB for approval.

All this work is performed by regional water planning groups and their consultants in conformance with TWC §16.053; Texas Administrative Code, Chapter 357; and TWDB agency guidance documents, *General Guidelines for Regional Water Plan Development* and *General Guidelines for Regional Water Planning Data Deliverables*. Together, these documents provide a framework on which the regional water plans are developed and which allows the TWDB to combine the regional plans in a meaningful way when preparing the state water plan. The agency rules and guidance documents, for example, provide general standards that help regions to:

- evaluate existing water supplies in a consistent manner;
- develop comparable water management strategy costs; and,
- provide equivalent data to the online planning database which is used to develop the state water plan.

Attachment A is a glossary of selected water planning terms that includes many of the most common terms that are used in water supply planning and that will be frequently referred to during presentations of the regional water plans that will be considered for approval by the Board.

### *Development of Regional Water Plans*

Regional water plans are water supply plans that are based on:

- ‘drought of record’ conditions: the period of time during which natural hydrological conditions usually provide the least amount of water supply;
- dry year water demands (2000);
- decadal periods over a 50-year planning horizon;
- existing supplies and strategies on a “firm” or “safe” yield basis; and
- 2008 dollars

Developing each regional water plan requires performing 10 tasks as described below.

#### **1. Description of the Regional Water Planning Area:**

Regional plans summarize the general characteristics of the region including:

- Major water providers
- Current water use
- Sources of groundwater and surface water
- Agricultural and natural resources
- Regional economy
- Local water plans
- Other information the region considers relevant

#### **2. Quantification of projected population and water demands:**

All population and demand projections are proposed by agreement of four agencies (TWDB, Texas Commission on Environmental Quality, Texas Parks and Wildlife Department, Texas Department of Agriculture) and, by statute, require Board approval. Population projections are based on census data using cohort-component demographic models.

Population and associated municipal water demand projections are developed for:

- approximately 1,800 cities and water utilities (sub-county water users)
- 254 ‘county-other’ water users (county-wide rural populations not included in city or utility populations)

In addition, county-based water demand projections are developed for the following water use categories:

- Manufacturing
- Mining
- Irrigation
- Steam Electric
- Livestock

In accordance with statute, each of these water user categories is further split by river basins. This results in county-basin based 'water user groups'. In total, water demand projections are developed for over 3,600 distinct county-basin water user groups. This facilitates summarizing planning data by counties or by entire river basins.

Planning groups review projections and may propose revisions resulting from changed conditions or new information. Due to the lack of detailed new census data during this round of planning, these were the only changes in demands that were made for 2011 regional water plans from the 2006 regional water plans.

**3. Evaluation and quantification of existing water supplies:**

Regional water planning groups evaluate the adequacy of the existing water supplies available to each water user group in their region. Existing water supply is the amount of water available to water user groups and wholesale water providers under drought of record conditions taking into account any physical constraints such as transmission or treatment facilities that would limit supplies and any legal or policy constraints. An existing supply must be connected, meaning that it currently has infrastructure for conveying water to water users.

Planning groups determine existing surface water supplies based on firm yield, or the maximum amount of water available in a given year during drought of record conditions, for both reservoirs and surface water diversions. For groundwater supplies, planning groups calculate the greatest annual amount of water available from an aquifer under drought of record conditions, without violating the most restrictive physical and/or regulatory conditions. In many cases, this resulted in using groundwater availability estimates from Groundwater Conservation District (GCD) management plans. When estimating groundwater supplies, planning groups use TWDB Groundwater Availability Models, unless better site specific information is available.

If groundwater districts within a groundwater management area determined the desired future condition for their aquifers, and the TWDB translated the desired future conditions into an estimated managed available groundwater (MAG) by January 1, 2008; then planning groups were required to incorporate these MAG estimates as the basis for groundwater supplies. Regions C, D, G, and K included MAG numbers in their plans as a result of Groundwater Management Area 8 delivering Desired Future Conditions in time for TWDB to provide the associated MAGs. (Note: Some planning groups negotiated an extended deadline for the use of managed available groundwater supplies based on desired future conditions.)

**4. Identification of surpluses and needs:**

Planning groups compare existing water supplies with current and projected water demands of each water user group to identify when and where additional water supplies are needed for each water user group and wholesale water provider.

**5. Evaluation of water management strategies and preparation of plans to meet needs:**

If existing water supplies are not sufficient to meet future demand for particular water user groups, planning groups identify, evaluate, and recommend specific water management strategies to meet those water supply needs.

Potentially feasible water management strategies to meet the water needs are identified with public input and include, for example:

- Water conservation practices (must be considered for each identified need)
- Drought management measures
- Reuse of wastewater
- Expanded use of existing supplies
- New supply development
- Interbasin transfers
- Other measures

Before a potentially feasible water management strategy can be recommended, it must be evaluated based on:

- Water quantities generated;
- Reliability;
- Financial costs;
- Environmental factors;
- Impacts on agricultural, recreational and other water resources; and
- Other factors deemed relevant by the planning group

Planning groups then recommended water management strategies to meet identified water needs. Some regional water planning groups also adopted 'alternative' water management strategies that are fully evaluated strategies which may be substituted into the regional water plans in the event that a recommended water strategy becomes unfeasible.

Costs only include expenses associated with infrastructure needed to convey water from sources and treat water for end user requirements and do not include expenses associated with internal distribution networks outside of treatment plants and major transmission facilities.

In some instances, regions determined that there were no economically feasible water management strategies to meet certain identified water needs and left some needs unmet by the plan; primarily these were irrigation needs.

- 6. Evaluation of impacts of water management strategies on water quality:**  
Planning groups evaluate and summarize the major impacts of recommended water management strategies on key parameters of water quality identified by the regional water planning group as important to the use of the water resource. This includes comparing water quality conditions with the recommended water management strategies to current conditions.
- 7. Description of how plan is consistent with long-term protection of the state's water, agricultural, and natural resources:**  
Planning groups evaluate and summarize how the regional water plan is consistent with long-term protection of the state's water resources, agricultural resources, and natural resources.
- 8. Recommendation of regulatory, administrative, and legislative changes:**  
Planning groups may develop regulatory, administrative, or legislative recommendations that the regional water planning group believes are needed and desirable to: facilitate 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 ensure public health, safety, and welfare; further economic development; and protect the agricultural and natural resources of the state and regional water planning area.
- 9. Description of how sponsors of water management strategies will finance projects:**  
Planning groups conduct a survey of municipal water user groups with recommended water management strategies to develop estimates of funding assistance required to implement strategies.

TWDB staff has provided an online survey instrument to be used for this task, and will provide summarized results on a regional and statewide basis. Final survey results will be available in December 2010.

**10. Adoption of the plan, with the required level of public participation:**

Planning groups: conduct their meetings in accordance with the open meetings act; include public participation; hold hearings; accept and consider public comments; and adopt their plans all in accordance with associated public notice and agency rule requirements.

**KEY ISSUES**

The 2012 State Water Plan is due to the Governor, Lieutenant Governor, Speaker of the Texas House of Representatives, and the House and Senate Natural Resource Committees by January 5, 2012. The state water plans are prepared by TWDB staff and adopted by the Board based on the regional water plans that are developed by the 16 regional water planning groups.

Specific issues related to review and approval of the 2011 regional water plans on which the 2016 State Water Plan will be based are presented in the following sections.

*Review of Initially Prepared (Draft) Regional Water Plans*

TWDB staff reviewed the 2011 Initially Prepared Regional Water Plans (IPPs) to determine whether statutory and regulatory requirements had been satisfactorily met. After reviewing these draft regional water plans, TWDB staff provided a comment letter to each regional water planning group that included comments and questions that had to be satisfactorily addressed in their final, adopted regional water plan in order to meet statutory, agency rule, and/or contract requirements.

Regional water planning groups then modified their plans to address the TWDB comments and in consideration of other agency and public comments received during the 60-day public comment period following their IPP hearings. Planning groups then adopted their final regional water plans and submitted them to TWDB for approval by the Board.

*Review of Adopted Regional Water Plans Submitted to TWDB for Approval*

In accordance with the memorandum to Board Members dated April 14, 2010 regarding required actions for approving 2011 regional water plans (Attachment B), the TWDB staff is conducting reviews of the final adopted regional water plans focusing on the following key issues:

1. Determinations of whether the plans were developed according to the general provisions for planning included in statute and rule.
2. Determinations of consistency between regional water plans which include water management strategies that rely on water supply sources located outside the region.
3. Determination that all documented interregional conflicts have been resolved.
4. Determination that no water supply sources in the region have been over-allocated, both from an intraregional and interregional perspective.
5. Determination that environmental planning criteria were used to appropriately provide instream and bay and estuary inflow for water management strategies utilizing surface water.
6. Determination that cost estimates developed in the plan were prepared in accordance with the provisions of the contract.
7. Determination that all comments received by the regional water planning groups on the initially prepared plans from the TWDB, other state and federal agencies, and the public within the specified comment period have been satisfactorily addressed.
8. Determination that there is a consistency between the selected water management strategies contained in the regional water plans and the supporting electronic data submitted by the regions.
9. Determination that water conservation was considered as a means to meet all identified water needs.

An interregional conflict is determined to exist if more than one regional water plan attempts to rely upon the same water source, so that there is not sufficient water available to fully implement both plans. Resolution of an interregional conflict will first be through TWDB facilitated coordination between the involved regions. If initial attempts to resolve the conflict are unsuccessful, then statute prescribes that the TWDB will resolve the conflict. Conflicts will be identified and must be resolved (either by the regions or by the Board) prior to Board approval of the final adopted plans.

*Required Board Actions for the 2011 Regional Water Plans*

Once compliance has been determined by staff, individual plans will be submitted to the Board for approval, at the October through December Board meetings. Requests to consider approval of five of these regional water plans follow this Board item. The remaining 11 regional water plans will be reviewed and brought before the Board at subsequent Board meetings.

As indicated at the April 2010 Work Session (Attachment B), once all adopted regional water plans are approved by the Board, staff anticipates developing a Summary of 2011 Regional



Board Members

October 6, 2010

Page 9

Water Plans to deliver to Legislature no later than January 2011 that will include the following elements:

- Introduction
- Summary of state totals
- Implementation of State Water Plan Projects
- Infrastructure funding needs
- Summary of regional plans

**RECOMMENDATION**

No action is required.

Attachment A: Glossary of Selected Water Planning Terms

Attachment B: April 14, 2010 Memorandum to the Board

# **ATTACHMENT A**

## **Glossary of Selected Water Planning Terms**

## Glossary of Selected Water Planning Terms

**acre-foot:** volume of water needed to cover 1 acre to a depth of 1 foot. It equals 325,851 gallons.

**aquifer:** geologic formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs. The formation could be sand, gravel, limestone, sandstone, or fractured igneous rocks.

**availability:** maximum amount of water available during the drought of record, regardless of whether the supply is physically or legally available.

**brackish water:** water with total dissolved solids between 1,000 and 10,000 milligrams per liter.

**capital cost:** portion of the estimated cost (based on 2008 dollars) of a water management strategy that includes both the direct costs of constructing facilities, such as materials, labor, and equipment, and the indirect expenses associated with construction activities, such as costs for engineering studies, legal counsel, land acquisition, contingencies, environmental mitigation, interest during construction, and permitting costs.

**conjunctive use:** the combined use of groundwater and surface water sources that optimizes the beneficial characteristics of each source.

**desalination:** process of removing salt from seawater or brackish water.

**drought:** term is generally applied to periods of less than average precipitation over a certain period of time. Associated definitions include meteorological drought (abnormally dry weather), agricultural drought (adverse impact on crop or range production), and hydrologic drought (below average water content in aquifers and/or reservoirs).

**drought of record:** period of time during recorded history when natural hydrological conditions provided the least amount of water supply.

**estuary:** bay or inlet, often at the mouth of a river, in which large quantities of freshwater and seawater mix together.

**existing water supply:** maximum amount of water available from existing sources for use during drought of record conditions that is physically and legally available for use.

**firm yield:** maximum water volume a reservoir can provide each year under a repeat of the drought of record.

**flood control storage:** storage in a lake or reservoir, between two designated water surface elevations, that is dedicated to storing floodwater so that flood damages downstream are eliminated or reduced.

**freshwater inflow needs:** freshwater flows required to maintain the natural salinity and nutrient and sediment delivery in a bay or estuary that supports their unique biological communities and ensures a healthy ecosystem.

**groundwater availability model:** numerical groundwater flow models used by TWDB to determine groundwater availability of the major and minor aquifers in Texas.

**groundwater management area:** area designated and delineated by TWDB as an area suitable for management of groundwater resources.

**infrastructure:** physical means for meeting water and wastewater needs, such as dams, wells, conveyance systems, and water treatment plants.

**instream flow:** water flow and water quality regime adequate to maintain an ecologically sound environment in streams and rivers.

**interbasin transfer:** physical conveyance of surface water from one river basin to another.

**major reservoir:** reservoir having a storage capacity of 5,000 acre-feet or more.

**needs:** projected water demands in excess of existing water supplies for a water user group or a wholesale water provider.

**recharge:** amount of water that infiltrates to the water table of an aquifer.

**recommended water management strategy:** specific project or action to increase water supply or maximize existing supply to meet a specific need.

**reuse:** use of surface water that has already been beneficially used once under a water right or the use of groundwater which has already been used.

**run-of-river diversion:** Water right permit that allows the permit holder to divert water directly out of a stream or river.

**safe yield:** firm yield in addition to an amount of water supply for an additional period of time.

**sedimentation:** action or process of depositing sediment in a reservoir, usually silts, sands, or gravel.

**storage:** natural or artificial impoundment and accumulation of water in surface or underground reservoirs, usually for later withdrawal or release.

**subordination agreement:** contracts between junior and senior water right holders where the senior water right holder agrees not to assert its priority right against the junior.

**unmet needs:** portion of the demand for water that exceeds water supply after inclusion of all recommended water management strategies in a regional water plan.

**water availability model:** numerical surface water flow models to determine the availability of surface water for permitting in the state.

**water demand:** quantity of water projected to meet the overall necessities of a water user group in a specific future year.

**water user group:** identified user or group of users for which water demands and water supplies have been identified and analyzed and plans developed to meet water needs. Water user groups are defined at the county level for the manufacturing, irrigation, livestock, steam-electric power generation, and mining water use categories. Municipal water user groups include (a) incorporated cities and selected Census Designated Places with a population of 500 or more; (b) individual or groups of selected water utilities serving smaller municipalities or unincorporated areas; and (c) rural areas not included in a listed city or utility, aggregated for each county.

**wholesale water provider:** person or entity, including river authorities and irrigation districts, that had contracts to sell more than 1,000 acre-feet of water wholesale in any one year during the five years immediately preceding the adoption of the last regional water plan.

## **ATTACHMENT B**

April 14, 2010 Memorandum to the Board



# TEXAS WATER DEVELOPMENT BOARD



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**TO:** Board Members

**THROUGH:** Carolyn L. Brittin, Deputy Executive Administrator *DH*  
Water Resources Planning and Information

**FROM:** Dan Hardin, Director, Water Resources Planning *DH*  
Matt Nelson, Manager, Regional Water Planning *mn*  
Temple McKinnon, Team Lead, Regional Water Planning *TM*  
Kathleen Ligon, Special Assistant, Water Resources Planning and Information *KL*

**DATE:** April 14, 2010

**SUBJECT:** Briefing and discussion on status of current regional water planning activities, and upcoming actions by Texas Water Development Board for 2011 Regional Water Plans and 2012 State Water Plan.

## ACTION REQUESTED

This is an informational item presenting the proposed review and approval process of the 2011 regional water plans and a plan for the development of the 2012 State Water Plan. No action is required; however, comments and guidance would be appreciated.

## BACKGROUND

TWDB has been preparing plans to meet the state's future water needs since 1957. Under the agency's original authority, TWDB published six state water plans: 1961, 1968, 1984, 1990, 1992 and 1997. In 1997, the Texas Legislature established the regional water planning process, a new approach to water planning that directly involves local and regional decision makers and the public. This process is outlined in Texas Water Code, Section 16.053 (statutes are provided in Attachment A). Section 16.051 of the Texas Water Code requires TWDB to develop and adopt a comprehensive state water plan that incorporates the regional water plans every five years. The plan includes legislative recommendations that the Board believes are needed to facilitate voluntary water transfers, and can identify river and stream segments of unique ecological value and sites of unique value for the construction of reservoirs that the Board recommends for protection.

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Regional water planning, as directed by statute and agency rules, is a consensus-driven process coordinated by 16 regional water planning groups. The planning groups are made up of about 20 members that represent 11 interests defined by statute: agriculture, industry, environment, public, municipalities, business, water districts, river authorities, water utilities, counties, and power generation. Each planning group approves bylaws to govern methods of conducting business and each group has a political subdivision of the state, such as a river authority or council of government, to administer the planning process and manage contracts related to developing their regional water plan.

The planning groups conduct all functions at open meetings in a participatory manner. The 5-year regional water planning cycle consists of 10 tasks:

- describe the regional water planning area;
- quantify existing and projected population and water demand over a 50-year planning horizon;
- evaluate and quantify existing water supplies;
- identify surpluses and needs;
- evaluate water management strategies and prepare plans to meet needs;
- evaluate impacts of water management strategies on water quality;
- describe how plan is consistent with long-term protection of the state's water, agricultural, and natural resources;
- recommend regulatory, administrative, and legislative changes;
- describe how sponsors of water management strategies will finance projects; and
- adopt the plan, with the required level of public participation.

Each regional water planning group develops an Initially Prepared Regional Water Plan (IPP), holds public meetings and a public hearing to solicit comments on the IPP, and revises the plan in response to public comment. Once each planning group adopts their final regional water plan, the plan is sent to TWDB for approval. When all regional water plans are approved by the Board, the agency compiles information from the plans and other sources to develop the state water plan.

The 2002 State Water Plan was the first plan that was developed through the regional water planning process. The 2007 State Water Plan was the second and the 2012 plan will be the third. The last state water plan, Water for Texas—2007, included population and water demand projections based on U.S. census data that was new at the time, and its issuance coincided with the 50<sup>th</sup> anniversary of the TWDB and the commencement of the 80th Texas Legislative session.

The 2012 State Water Plan is due to the Governor, Lieutenant Governor, Speaker of the Texas House of Representatives, and the House and Senate Natural Resource Committees by January 5, 2012. Due to the lack of new population data from the U.S. Census Bureau, the plan will be



based on regional water plans that are updates to the 2006 plans, focused primarily on changed conditions. The planning groups performed special studies during the first two years of this planning cycle; the second portion of the cycle has been focused on development of the regional water plans.

Specific issues related to review and approval of the 2011 regional water plans and development of the 2012 State Water Plan are presented in the following sections.

### **KEY ISSUES**

#### *Status, Future Activities, and Required Board Actions for the 2011 Regional Water Plans*

TWDB staff will first review the 2011 Initially Prepared Regional Water Plans (IPPs) to determine whether statutory and regulatory requirements have been satisfactorily met. Staff review of the IPPs is currently underway. The majority of IPPs were received on March 1, 2010. The Region C regional water planning group received a one-month extension and their plan was received on April 1, 2010. The Region F regional water planning group IPP is due June 1. Final adopted regional water plans, for 14 regions, are due September 1, 2010. Final adopted plans for Region C and Region F are due October 1 and December 1, 2010, respectively.

Texas Water Code §16.053, Chapter 357 of the Texas Administrative Code, General Guidelines for Regional Water Plan Development and General Guidelines Regional Water Planning Data Deliverables provide a framework by which the regional water plans must be developed.

TWDB is conducting a review of the IPPs, and will conduct a review of the final adopted regional water plans, which focuses on the following key issues:

1. Determinations of whether the plans were developed according to the general provisions for planning included in statute and rule.
2. Determinations of consistency between regional water plans which include water management strategies that rely on water supply sources located outside the region.
3. Determination that all documented interregional conflicts have been resolved (see following paragraph for additional discussion).
4. Determination that no water supply sources in the region have been over allocated, both from an intraregional and an interregional perspective.
5. Determination that environmental planning criteria were used to appropriately provide instream and bay and estuary inflow for water management strategies utilizing surface water.
6. Determination that cost estimates developed in the plan were prepared in accordance with the provisions of the contract.

**Board Members**

**April 14, 2010**

**Page 4 of 8**

- 7. Determination that all comments received by the regional water planning groups on the initially prepared plans from the TWDB, other state and federal agencies, and the public within the specified comment period have been satisfactorily addressed.**
- 8. Determination that there is a consistency between the selected water management strategies contained in the regional water plans and the supporting electronic data submitted by the regions.**
- 9. Determination that water conservation was considered as a means to meet all identified water needs.**

**Planning groups determine existing surface water supplies based on firm yield, or the maximum amount of water available in a given year during drought of record conditions, for both reservoirs and surface water diversions. For groundwater supplies, planning groups calculate the greatest annual amount of water available from an aquifer under drought of record conditions, without violating the most restrictive physical and/or regulatory conditions. If groundwater districts within a groundwater management area determined the desired future condition for their aquifers, and the TWDB translated the desired future conditions into an estimated managed available groundwater (MAG) by January 1, 2008; then planning groups used these MAG estimates as the basis for existing groundwater supplies. (Note: Some groups negotiated an extended deadline for the use of managed available groundwater supplies based on desired future conditions.)**

**An interregional conflict will be determined to exist if more than one regional water plan attempts to rely upon the same water source, so that there is not sufficient water available to fully implement both plans. Resolution of an interregional conflict will first be through TWDB facilitated coordination between the involved regions. If initial attempts to resolve the conflict are unsuccessful, then statute prescribes that the TWDB will resolve the conflict. Conflicts will be identified and must be resolved (either by the regions or by the Board) prior to TWDB approval of the final adopted plans.**

**Staff is in the process of review and will certify to the Board that the plans meet statutory and regulatory requirements when the 2011 Regional Water Plans are considered for Board approval. Once compliance has been determined by staff, individual plans will be submitted to the Board for approval, beginning in October 2010. Staff anticipates that Board approval of regional water plans will occur over a period of three months (October – December). The number of plans presented to the Board in any one month will depend upon staff determination of compliance and the region’s ability to respond to critical items in a timely manner.**

***Proposed Content of the Summary of Regional Water Plans for the Texas Legislature and the 2012 State Water Plan***

**As directed by statute, the state water plan provides “...for the 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 ensure public health, safety, and welfare; further economic development; and protect the agricultural and natural resources of the entire state.” Section 16.051 of the Texas Water Code further provides that the state water plan, as adopted by the Board, be a guide to state water policy.

The current planning cycle did not require complete revisions of the regional water plans due to the lack of new population data from the U.S. Census Bureau. Therefore, TWDB did not conduct a full scale revision to the population and water demands of each planning area, but did allow revisions for changed conditions. In general, during this planning cycle the regional water planning groups focused on specific areas of water demand and water supply availability; evaluated new water management strategies in response to changed conditions; reevaluated population and water demand projections under the presence of changed conditions; updated the costs of water management strategies; performed interregional coordination; and performed administrative and public participation activities.

Because the final 2012 State Water Plan is due in the legislative interim, staff proposes to produce a summary of the 2011 Regional Water Plans to be available when the legislature convenes in January 2011. The summary would provide a high level overview of each regional water plan, as well as a summary of associated state totals, including a summary of projects that have received State Water Plan funding and outstanding funding needs. An in-depth discussion of policy issues; the groundwater joint planning and environmental flows processes; and other complex issues would be reserved for the 2012 State Water Plan. The summary would be presented to the Board for approval at the December 2010 meeting.

The proposed Summary of the 2011 Regional Water Plans would include:

- Introduction
- Summary of associated state totals (population growth, water demands, existing supplies, needs, strategies, and cost of recommended water management strategies)
- Implementation of State Water Plan projects
- Future infrastructure funding needs
- Summary of data from each regional water plan
- Brief preview of 2012 State Water Plan content
- Appendix: Recommended Water Management Strategies and Cost Estimates table

The 2012 State Water Plan would be a more comprehensive volume that describes the regional water plans and policy issues in detail. Staff proposes a single volume plan that would include the following:

- **Executive Summary:** Synopsis of the key findings of the State Water Plan including population and water demand projections for the 50-year planning horizon; analysis of current water supplies; analysis of water needs; presentation of water management

strategies recommended to meet needs and the costs associated with those strategies; and policy recommendations.

- **Introduction:** Description of the regional water planning process and basis for planning, including planning history, statutes, rules, regulations, and Texas water supply institutions.
- **Population and water demand:** Description of methods used for projecting future population and water demands, including demands for municipal, manufacturing, irrigation, steam-electric, mining and livestock watering.
- **Water Quality:** Methods to address water quality problems related to water supply and to address drought response planning.
- **Climate of Texas:** Climatic zones, rainfall distribution, frequency and magnitude of Texas droughts, and climate change science.
- **Existing and future water supplies:** Surface water, groundwater and reuse supplies, and groundwater and surface water modeling. (The plan will reference the detailed river basin and aquifer summaries in the 2007 State Water Plan, and will describe basin and aquifer boundary revisions where applicable.)
- **Future water supply needs:** Comparison of water demand and supply to identify surpluses and needs for water; the socioeconomic impact of not meeting needs; and needs for which no feasible water management strategies exist.
- **Water management strategies:** Recommended solutions to meet needs including conservation, groundwater, surface water, reuse, desalination, and other strategies; evaluation and selection methodology; timing of implementation.
- **Plan implementation funding:** Cost of recommended strategies; State Water Plan project implementation; and future needs for infrastructure funding.
- **Challenges and uncertainty:** Risks and uncertainties in the planning process, including implementation of strategies, drought and other natural disasters, climate variability, and others.
- **Policy recommendations:** Regulatory, administrative, and legislative policy recommendations from regional water planning groups and the TWDB, including recommendations of river and stream segments of unique ecological value and sites of unique value for construction of reservoirs.
- **Glossary of terms**
- **Acknowledgements**
- **Appendices**

At the August 2011 Board meeting, the Board will be asked to consider approving release of the draft 2012 State Water Plan for public comment. After approval, notice of the intent to adopt the State Water Plan will be published in the *Texas Register*. Notice will also be mailed to each regional water planning group, and public meetings and a public hearing will be held to further solicit public comment. At the November 2011 meeting, the Board will be briefed on comments received on the draft plan, changes made in response to the comments, and will consider

Board Members

April 14, 2010

Page 7 of 8

adoption of the final plan. After Board adoption, the 2012 State Water Plan will be printed and delivered to the Governor, Lieutenant Governor, Speaker of the Texas House of Representatives, and the House and Senate Natural Resource Committees by January 5, 2012.

Attachment B includes a timeline for the regional and state water plan activities that must be accomplished by the statutory deadlines.

*Project Funding Requirements Related to Determination of Consistency with Regional and State Water Plans*

The Water Infrastructure Fund (WIF) was established in Senate Bill 2, 77th Legislature, to provide affordable financing for water conservation and development projects, particularly for implementation of recommended strategies in the state water plan. House Bill 1, 80th Legislature, appropriated funds to the Board to implement the WIF and rules implementing the program were adopted by the Board in December 2007. Texas Water Code Section 15.973 requires that a project is eligible for WIF only if it is a recommended water management strategy through the state and regional water planning processes under Sections 16.051 (State Water Planning) and 16.053 (Regional Water Planning). In practice, staff reviews projects requesting WIF funding to determine if the projects are contained in the currently approved regional water plan and state water plan, which at this time are the 2006 regional water plans and 2007 State Water Plan. Additionally, other applications for TWDB financial assistance for water supply projects must be reviewed for 'consistency' (in general, interpreted with regard to the source of water) with the approved regional and state water plans.

Consistent with the process approved by the Board at their September 2005 Work Session with respect to the 2006 Regional Water Plans and 2007 State Water Plan (Attachment C), staff recommends that the Board allow projects that are recommended water management strategies in the adopted initially prepared plans or adopted 2011 regional water plans to be considered eligible for WIF funding and meet the consistency requirements for funding from other programs. Continuation of this policy would avoid the need to revise 2006 Regional Water Plans and amend the 2007 State Water Plan after March 1, 2010.

*Potential Rule Revisions and Review of Planning Area Boundaries*

Texas Water Code §16.051(d) directs the Board, in coordination with the Texas Commission on Environmental Quality (TCEQ), Texas Department of Agriculture (TDA), and Texas Parks and Wildlife Department (TPWD), to review and update its administrative rules for regional and state water planning at least every five years. Staff has begun this review and is currently drafting proposed revisions to 31 TAC Chapters 357 and 358. These revisions will consolidate the notice requirements for public participation, eliminate redundant guidance, and clarify and simplify the information presented. An estimated timeline for completion of the internal draft is September

Board Members  
April 14, 2010  
Page 8 of 8

2010. These draft revisions will then be sent to TCEQ, TDA, and TPWD, as well as regional water planning stakeholders for their review and comment. Staff will bring proposed rule revisions to the Board for their consideration for posting for public comment late in 2010 or early in 2011.

Texas Water Code §16.053(b) directs the Board to review and update the regional water planning area designations as necessary but at least every five years. The regional water planning areas were designated in 1998 after taking into consideration such factors as river basin and aquifer delineations, water utility development patterns, socioeconomic characteristics, existing regional water planning areas, political subdivision boundaries, and public comment, and other factors the Board deems relevant. The Board is currently in the process of taking public comment through June 1, 2010 on the geographic boundaries of the current regional water planning areas in the state. Notice was posted with the Secretary of State and sent to interested parties on April 2, 2010 (Attachment D). Staff will review the comments received and draft recommendations for Board action or draft a briefing of results if no action is considered necessary. Staff will bring these findings to the Board for consideration no earlier than the August 2010 Board meeting.

### **RECOMMENDATION**

This recommendation has been reviewed by legal counsel and is in compliance with applicable statutes and Board rules.



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Ken Petersen  
General Counsel

Attachment A: §16.051. State Water Plan: Drought, Conservation, Development and Management; Effect of Plan, and §16.053 Regional Water Plans

Attachment B: Timeline for Regional and State Water Plan Activities

Attachment C: Memo to Board dated: September 13, 2005  
Subject: Project Funding Requirement for Consistency with Regional and State Water Plans

Attachment D: Notice of Opportunity to Comment on Water Planning Area Boundaries

## **Attachment A**

**§ 16.051. STATE WATER PLAN: DROUGHT, CONSERVATION,  
DEVELOPMENT, AND MANAGEMENT; EFFECT OF PLAN.**

**and**

**§ 16.053. REGIONAL WATER PLANS**

**§ 16.051. STATE WATER PLAN: DROUGHT, CONSERVATION,**

**DEVELOPMENT, AND MANAGEMENT; EFFECT OF PLAN. (a) Not later than**

**January 5, 2002, and before the end of each successive five-year period after that date, the board shall prepare, develop, formulate, and adopt a comprehensive state water plan that incorporates the regional water plans approved under Section 16.053. The state water plan shall 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 ensure public health, safety, and welfare; further economic development; and protect the agricultural and natural resources of the entire state.**

**(b) The state water plan, as formally adopted by the board, shall be a guide to state water policy. The commission shall take the plan into consideration in matters coming before it.**

**(c) The board by rule shall define and designate river basins and watersheds.**

**(d) The board, in coordination with the commission, the Department of Agriculture, and the Parks and Wildlife Department, shall adopt by rule guidance principles for the state water plan which reflect the public interest of the entire state. When adopting guidance principles, due consideration shall be given to the construction and improvement of surface water resources and the application of principles that result in voluntary redistribution of water resources. The board shall review and update the guidance principles, with input from the commission, the Department of Agriculture, and the Parks and Wildlife Department, as necessary but at least every five years to coincide with the five-year cycle for adoption of a new water plan as described in Subsection (a).**

**(e) On adoption the board shall deliver the state water plan to the governor, the lieutenant governor, and the speaker of the house of representatives and present the plan for review to the appropriate legislative committees. The plan shall include legislative recommendations that the board believes are needed and desirable to facilitate more voluntary water transfers. The plan shall identify river and stream segments of unique ecological value and sites of unique value for the construction of reservoirs that the board recommends for protection under this section.**

**(f) The legislature may designate a river or stream segment of unique ecological value. This designation solely means that a state agency or political subdivision of the state may not finance the actual construction of a reservoir in a specific river or stream segment designated by the legislature under this subsection.**



(g) The legislature may designate a site of unique value for the construction of a reservoir. A state agency or political subdivision of the state may not obtain a fee title or an easement that would significantly prevent the construction of a reservoir on a site designated by the legislature under this subsection.

(h) The board, the commission, or the Parks and Wildlife Department or a political subdivision affected by an action taken in violation of Subsection (f) or (g) may bring a cause of action to remedy or prevent the violation. A cause of action brought under this subsection must be filed in a district court in Travis County or in the county in which the action is proposed or occurring.

Amended by Acts 1977, 65th Leg., p. 2207, ch. 870, § 1, eff. Sept. 1, 1977; Acts 1985, 69th Leg., ch. 795, § 1.046, eff. Sept. 1, 1985; Acts 1991, 72nd Leg., ch. 516, § 4, eff. Sept. 1, 1991; Acts 1997, 75th Leg., ch. 1010, § 1.01, eff. Sept. 1, 1997; Acts 1999, 76th Leg., ch. 456, § 4, eff. June 18, 1999; Acts 1999, 76th Leg., ch. 979, § 4, eff. June 18, 1999; Acts 1999, 76th Leg., ch. 1223, § 2, eff. June 18, 1999; Acts 2001, 77th Leg., ch. 966, § 2.16, eff. Sept. 1, 2001.

§ 16.053. REGIONAL WATER PLANS. (a) The regional water planning group in each regional water planning area shall prepare a regional water plan, using an existing state water plan identified in Section 16.051 of this code and local water plans prepared under Section 16.054 of this code as a guide, if present, 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 ensure public health, safety, and welfare; further economic development; and protect the agricultural and natural resources of that particular region.

(b) No later than September 1, 1998, the board shall designate the areas for which regional water plans shall be developed, taking into consideration such factors as river basin and aquifer delineations, water utility development patterns, socioeconomic characteristics, existing regional water planning areas, political subdivision boundaries, public comment, and other

factors the board deems relevant. The board shall review and update the designations as necessary but at least every five years.

(c) No later than 60 days after the designation of the regions under Subsection (b), the board shall designate representatives within each regional water planning area to serve as the initial coordinating body for planning. The initial coordinating body may then designate additional representatives to serve on the regional water planning group. The initial coordinating body shall designate additional representatives if necessary to ensure adequate representation from the interests comprising that region, including the public, counties, municipalities, industries, agricultural interests, environmental interests, small businesses, electric generating utilities, river authorities, water districts, and water utilities. The regional water planning group shall maintain adequate representation from those interests. In addition, representatives of the board, the Parks and Wildlife Department, and the Department of Agriculture shall serve as ex officio members of each regional water planning group.

(d) The board shall provide guidelines for the consideration of existing regional planning efforts by regional water planning groups. The board shall provide guidelines for the format in which information shall be presented in the regional water plans.

(e) Each regional water planning group shall submit to the development board a regional water plan that:

(1) is consistent with the guidance principles for the state water plan adopted by the development board under Section 16.051(d);

(2) provides information based on data provided or approved by the development board in a format consistent with the guidelines provided by the development board under Subsection (d);

(3) identifies:

(A) each source of water supply in the regional water planning area, including information supplied by the executive administrator on the amount of managed available groundwater in accordance with the guidelines provided by the development board under Subsections (d) and (f);

(B) factors specific to each source of water supply to be considered in determining whether to initiate a drought response;

(C) actions to be taken as part of the response; and

(D) existing major water infrastructure facilities that may be used for interconnections in the event of an emergency shortage of water;

(4) has specific provisions for water management strategies to be used during a drought of record;

(5) includes but is not limited to consideration of the following:

(A) any existing water or drought planning efforts addressing all or a portion of the region;

(B) approved groundwater conservation district management plans and other plans submitted under Section 16.054;

(C) all potentially feasible water management strategies, including but not limited to improved conservation, reuse, and management of existing water supplies, conjunctive use, acquisition of available existing water supplies, and development of new water supplies;

(D) protection of existing water rights in the region;

(E) opportunities for and the benefits of developing regional water supply facilities or providing regional management of water supply facilities;

(F) 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;

(G) provisions in Section 11.085(k)(1) if interbasin transfers are contemplated;

(H) voluntary transfer of water within the region using, but not limited to, regional water banks, sales, leases, options, subordination agreements, and financing agreements; and

(I) emergency transfer of water under Section 11.139, including information on the part of each permit, certified filing, or certificate of adjudication for nonmunicipal use in the region that may be transferred without causing unreasonable damage to the property of the nonmunicipal water rights holder;

(6) identifies river and stream segments of unique ecological value and sites of unique value for the construction of reservoirs that the regional water planning group recommends for protection under Section 16.051;

(7) assesses the impact of the plan on unique river and stream segments identified in Subdivision (6) if the regional water planning group or the legislature determines that a site of unique ecological value exists; and

(8) describes the impact of proposed water projects on water quality.

(e-1) On request of the Texas Water Advisory Council, a regional planning group shall provide the council a copy of that planning group's regional water plan.

(f) No later than September 1, 1998, the board shall adopt rules:

(1) to provide for the procedures for adoption of regional water plans by regional water planning groups and for approval of regional water plans by the board; and

(2) to govern procedures to be followed in carrying out the responsibilities of this section.

(g) The board shall provide technical and financial assistance to the regional water planning groups in the development of their plans. The board shall simplify, as much as possible, planning requirements in regions with abundant water resources. The board, if requested, may facilitate resolution of conflicts within regions.

(h)(1) Prior to the preparation of the regional water plan, the regional water planning group shall, after notice, hold at least one public meeting at some central location within the regional planning area to gather suggestions and recommendations from the public as to issues that should be addressed in the plan or provisions that should be considered for inclusion in the plan.

(2) The regional water planning group shall provide an ongoing opportunity for public input during the preparation of the regional water plan.

(3) After the regional water plan is initially prepared, the regional water planning group shall, after notice, hold at least one public hearing at some central location within the regional water planning area. The group shall make copies of the plan available for public inspection at least one month before the hearing by providing a copy of the plan in the county courthouse and at least one public library of each county having land in the region. Notice for the hearing shall include a listing of these and any other location where the plan is available for review.

(4) After the regional water plan is initially prepared, the regional water planning group shall submit a copy of the plan to the board. The board shall submit comments on the regional water plan as to whether the plan meets the requirements of Subsection (e) of this section.

(5) If no interregional conflicts exist, the regional water planning group shall consider all public and board comments; prepare, revise, and adopt the final plan; and submit the adopted plan to the board for approval and inclusion in the state water plan.

(6) If an interregional conflict exists, the board shall facilitate coordination between the involved regions to resolve the conflict. If conflict remains, the board shall resolve the conflict. On resolution of the conflict, the involved regional water planning groups shall prepare revisions to their respective plans and hold, after notice, at least one public hearing at some central location within their respective regional water planning areas. The regional water planning groups shall consider all public and board comments; prepare, revise, and adopt their respective plans; and submit their plans to the board for approval and inclusion in the state water plan.

(7) The board may approve a regional water plan only after it has determined that:

(A) all interregional conflicts involving that regional water planning area have been resolved;

(B) the plan includes water conservation practices and drought management measures incorporating, at a minimum, the provisions of Sections 11.1271 and 11.1272; and

(C) the plan is consistent with long-term protection of the state's water resources, agricultural resources, and natural resources as embodied in the guidance principles adopted under Section 16.051(d).

(8) Notice required by Subdivision (1), (3), or (6) of this subsection must be:

(A) published once in a newspaper of general circulation in each county located in whole or in part in the regional water planning area before the 30th day preceding the date of the public meeting or hearing; and

(B) mailed to:

(i) each mayor of a municipality with a population of 1,000 or more that is located in whole or in part in the regional water planning area;

(ii) each county judge of a county located in whole or in part in the regional water planning area;

(iii) each special or general law district or river authority with responsibility to manage or supply water in the regional water planning area;

(iv) each retail public utility that:

area; or

(a) serves any part of the regional water planning

planning area; and

(b) receives water from the regional water

(v) each holder of record of a permit, certified filing, or certificate of adjudication for the use of surface water the diversion of which occurs in the regional water planning area.

(9) Notice published or mailed under Subdivision (8) of this subsection must contain:

(A) the date, time, and location of the public meeting or hearing;

(B) a summary of the proposed action to be taken;

(C) the name, telephone number, and address of the person to whom questions or requests for additional information may be submitted; and

(D) information on how the public may submit comments.

(i) The regional water planning groups shall submit their adopted regional water plans to the board by January 5, 2001, for approval and inclusion in the state water plan. In conjunction with the submission of regional water plans, each planning group should make legislative recommendations, if any, to facilitate more voluntary water transfers in the region. Subsequent regional water plans shall be submitted at least every five years thereafter. Public participation for revised regional plans shall follow the procedures under Subsection (h).

(j) The board may provide financial assistance to political subdivisions under Subchapters E and F of this chapter, Subchapters C, D, E, F, J, O, Q, and R, Chapter 15, and Subchapters D, I, K, and L, Chapter 17, for water supply projects only if:

(1) the board determines that the needs to be addressed by the project will be addressed in a manner that is consistent with the state water plan;

(2) beginning January 5, 2002, the board:

(A) has approved a regional water plan as provided by Subsection (i), and any required updates of the plan, for the region of the state that includes the area benefiting from the proposed project; and

(B) determines that the needs to be addressed by the project will be addressed in a manner that is consistent with that regional water plan; and

(3) the board finds that the water audit required under Section 16.0121 has been completed and filed.

(k) The board may waive the requirements of Subsection (j) of this section if the board determines that conditions warrant the waiver.

(l) A political subdivision may contract with a regional water planning group to assist the regional water planning group in developing or revising a regional water plan.

(m) A cause of action does not accrue against a regional water planning group, a representative who serves on the regional water planning group, or an employee of a political subdivision that contracts with the regional water planning group under Subsection (l) for an act or omission in the course and scope of the person's work relating to the regional water planning group.

(n) A regional water planning group, a representative who serves on the regional water planning group, or an employee of a political subdivision that contracts with the regional water planning group under Subsection (l) is not liable for damages that may arise from an act or omission in the course and scope of the person's work relating to the regional water planning group.

(o) The attorney general, on request, shall represent a regional water planning group, a representative who serves on the regional water planning group, or an employee of a political subdivision that contracts with the regional water planning group under Subsection (l) in a suit arising from an act or omission relating to the regional water planning group.

(p) If a groundwater conservation district files a petition with the development board stating that a conflict requiring resolution may exist between the district's approved management plan developed under Section 36.1071 and an approved state water plan, the development board shall provide technical assistance to and facilitate coordination between the district and the involved region to resolve the conflict. Not later than the 45th day after the date the groundwater conservation district files a petition with the development board, if the conflict has not been resolved, the district and the involved region shall mediate the conflict. The district and the involved region may seek the assistance of the Center for Public Policy Dispute Resolution at The University of Texas School of Law or an alternative dispute resolution system established under Chapter 152, Civil Practice and Remedies Code, in obtaining a qualified impartial third party to mediate the conflict. The cost of the mediation services must be specified in the agreement between the parties and the Center for Public Policy Dispute Resolution or the alternative dispute resolution system. If the district and the involved region cannot resolve the conflict through mediation, the development board shall resolve the conflict not later than the 60th day after the date the mediation is completed as provided by Subsections (p-1) and (p-2).

(p-1) If the development board determines that resolution of the conflict requires a revision of an approved regional water plan, the development board shall suspend the approval of that plan and provide information to the regional water planning group. The regional water planning group shall prepare any revisions to its plan specified by the development board and shall hold, after notice, at least one public hearing at some central location within the regional water planning area. The regional water planning group shall consider all public and development board comments, prepare, revise, and adopt its plan, and submit the revised plan to the development board for approval and inclusion in the state water plan.

(p-2) If the development board determines that resolution of the conflict requires a revision of the district's approved groundwater conservation district management plan, the development board shall provide information to the district. The groundwater district shall prepare any revisions to its plan based on the information provided by the development board and shall hold, after notice, at least one public hearing at some central location within the district. The groundwater district shall consider all public and development board comments, prepare, revise, and adopt its plan, and submit the revised plan to the development board.

(p-3) If the groundwater conservation district disagrees with the decision of the development board under Subsection (p), the district may appeal the decision to a district court in Travis County. Costs for the appeal shall be set by the court hearing the appeal. An appeal under this subsection is by trial de novo.

(p-4) On the request of the involved region or groundwater conservation district, the development board shall include discussion of the conflict and its resolution in the state water plan that the development board provides to the governor, the lieutenant governor, and the speaker of the house of representatives under Section 16.051(e).

(q) Each regional planning group shall examine the financing needed to implement the water management strategies and projects identified in the group's most recent approved regional plan and, not later than June 1, 2002, shall report to the board regarding:

(1) how local governments, regional authorities, and other political subdivisions in the region propose to pay for water infrastructure projects identified in the plan; and

(2) what role the regional planning group proposes for the state in financing projects identified in the plan, giving particular attention to proposed increases in the level of state participation in funding for regional projects to meet needs beyond the reasonable financing



capability of local governments, regional authorities, and other political subdivisions involved in building water infrastructure.

Text of subsec. (r) as added by Acts 2005, 79th Leg., Ch. 1097, §

8

(r) The board by rule shall provide for reasonable flexibility to allow for a timely amendment of a regional water plan, the board's approval of an amended regional water plan, and the amendment of the state water plan, to facilitate planning for water supplies reasonably required for a clean coal project, as defined by Section 5.001. The rules may allow for amending a regional water plan without providing notice and without a public meeting or hearing under Subsection (h) if the amendment does not:

- (1) significantly change the regional water plan, as reasonably determined by the board; or
- (2) adversely affect other water management strategies in the regional water plan.

Text of subsec. (r) as added by Acts 2005, 79th Leg., Ch. 1200, §

1

(r) Information described by Subsection (e)(3)(D) that is included in a regional water plan submitted to the board is excepted from required disclosure under the public information law, Chapter 552, Government Code.

Amended by Acts 1977, 65th Leg., p. 2207, ch. 870, § 1, eff. Sept. 1, 1977; Acts 1985, 69th Leg., ch. 795, § 1.047, eff. Sept. 1, 1985; Acts 1997, 75th Leg., ch. 1010, § 1.02, eff. Sept. 1, 1997; Acts 1999, 76th Leg., ch. 456, § 5, eff. June 18, 1999; Acts 1999, 76th Leg., ch. 979, § 5, eff. June 18, 1999; Acts 1999, 76th Leg., ch. 1180, § 1, eff. June 18, 1999; Acts 1999, 76th eg., ch. 1222, § 2, eff. June 18, 1999; Acts 1999, 76th Leg., ch. 1223, § 3, eff. June 18, 1999; Acts 2001, 77th Leg., ch. 966, § 2.17 to 2.19, eff. Sept. 1, 2001; Acts 2001, 77th Leg., ch. 1234, § 25, eff. Sept. 1, 2001; Acts 2003, 78th Leg., ch. 744, § 2, eff. Sept. 1, 2003; Acts 2003, 78th Leg., ch. 1057, § 5, eff. June 20, 2003; Acts 2003, 78th Leg., ch. 1275, § 3(45), eff. Sept. 1, 2003;

Acts 2005, 79th Leg., ch. 970, § 1, eff. Sept. 1, 2005; Acts 2005, 79th Leg., ch. 1097, § 8, eff. June 18, 2005; Acts 2005, 79th Leg., ch. 1200, § 1, eff. Sept. 1, 2005.

# **Attachment B**

**Timeline for Regional and State Water Plan Activities**

## **Timeline for Regional and State Water Plan Activities**

### **2011 Regional Water Plan Activities**

Final Adoption by Regional Water Planning Groups of Regional Water Plans and submittal to TWDB – September 1, 2010 - December 1, 2010

Staff review of Adopted Regional Water Plans for compliance with rules and statutes and any interregional conflicts – September 1, 2010 through December 15, 2010

Board consideration of approval of 16 Regional Water Plans – October, November, and December 2010

### **2012 State Water Plan**

Staff development of Summary of 2011 Regional Water Plans – October to December 2010

Board approval of Summary of 2011 Regional Water Plans – December 2010

Summary of 2011 Regional Water Plans distributed to Governor, Lieutenant Governor, Speaker of the House, and Legislature – January 2011

Development of policy recommendation for 2012 State Water Plan at monthly work sessions – June and July 2011

Board consideration of publication of draft 2012 State Water Plan – August 2011

Draft 2012 State Water Plan published – August 2011

Up to 16 public meetings (one per regional water planning area) across the state on the draft 2012 State Water Plan – September and October 2011

Public hearing in Austin on draft 2012 State Water Plan – October 2011

Staff revision of 2007 State Water Plan based on public comment – October to November 2011

Board consideration of adoption of final 2012 State Water Plan – November 2011

Send 2012 State Water Plan to the printer – November 2011

2012 State Water Plan distributed to Governor, Lieutenant Governor, Speaker of the House, and Legislature – January 5, 2012

### **Other Important Dates (2016 Regional Water Plans and 2017 State Water Plan)**

**TWDB accepts comments on potential revision of Regional Planning Boundaries – April and May, 2010**

**Potential Board consideration of boundary changes (if any) – September 2010**

**Request authorization to publish draft Regional and State Water Planning Rule revisions – December 2010**

**TWDB accepts comments on potential rule revisions – January and February 2011**

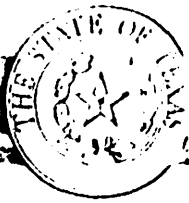
**Board consideration of final rule revisions – March 2011**

**Issue Request for Proposals for 2016 Regional Water Planning cycle – May 2011**

## **Attachment C**

**Memo to Board dated: September 13, 2005**

**Subject: Project Funding Requirement for Consistency with Regional and State Water Plans**



# TEXAS WATER DEVELOPMENT BOARD



F. G. Rod Pittman, *Chairman*  
William W. Meadows, *Member*  
Dario Vidal Guerra, Jr., *Member*

J. Kevin Ward  
*Executive Administrator*

Luck Hunt, *Vice Chairman*  
Thomas Wen Labatt III, *Member*  
James F. Herring, *Member*

**TO:** Board Members

**THROUGH:** Bill Mullican, Deputy Executive Administrator, Office of Planning *BM*

**FROM:** Carolyn L. Brittin, Director, Water Resources Planning Division *CLB*

**DATE:** September 13, 2005

**SUBJECT:** Project Funding Requirement for Consistency with Regional and State Water Plans

**ACTION REQUESTED**

Briefing, discussion, and consideration of agency policy on granting a waiver of the statutory requirement that a proposed project for financing be consistent with the approved 2002 State Water Plan and applicable 2001 Regional Water Plan during the adoption period for the Regional Water Plans and the 2007 State Water Plan.

Staff recommends that the Texas Water Development Board (TWDB) adopt a policy that allows waivers of the statutory requirement for funding projects (Texas Water Code Section 16.053(j)), for projects that are recommended water management strategies to meet a need in Initially Prepared Regional Water Plans (draft), or adopted 2006 Regional Water Plans, prior to final adoption of the appropriate 2006 Regional Water Plans and the 2007 State Water Plan.

**BACKGROUND**

In 1997, the Texas Legislature established a new process for state water planning to include the regional water planning process. At the same time, the legislature conditioned funding for water supply projects in Texas Water Code Section 16.053(j) and (k) as follows:

(j) The board may provide financial assistance to political subdivisions under Subchapters E and F of this chapter, Subchapters C, D, E, F, and J, Chapter 15, and Subchapters D, I, K, and L, Chapter 17, for water supply projects only if:

(1) the board determines that the needs to be addressed by the project will be addressed in a manner that is consistent with the state water plan; and

*Our Mission*

*to provide for the long-term water needs of the state of Texas by developing and implementing a comprehensive water plan that is consistent with the state water plan and the regional water plans...*

*STAFF*  
*10/1*

(2) beginning January 5, 2002, the board:

(A) has approved a regional water plan, as provided by Subsection (i), and any required updates of the plan, for the region of the state that includes the area benefiting from the proposed project; and

(B) determines that the needs to be addressed by the project will be addressed in a manner that is consistent with that regional water plan.

(k) The board may waive the requirements of Subsection (j) of this section if the board determines that conditions warrant the waiver.

Since January 5, 2002, the TWDB has required loan applicants to seek amendment to the appropriate 2001 Regional Water Plan, if the project they were requesting financial assistance for is not identified as a recommended water management strategy to meet a need in the subject plan. The amendment process currently requires public notice and hearing at the same level of effort as required for final adoption of the plans. The amendment process takes significant time and the cost of notice has ranged from \$4,000 to over \$10,000 for some regions. Since 2001, there has been one waiver approved by the TWDB based on unanticipated growth and incorrect identification of the groundwater source in the 2001 Region C Water Plan.

#### **KEY ISSUES**

Several Planning Groups are completing the process of amending 2001 Regional Water Plans to meet the statutory requirements (also included in Senate Bill 1 in 1997) for obtaining a water right permit from the Texas Commission of Environmental Quality (Texas Water Code Section 11.134(b)(3)(E)). One entity is seeking funding from the TWDB for a project that is recommended as part of the draft 2006 Regional Water Plan, but which is not a recommended strategy in their 2001 Regional Water Plan.

Continuation of the policy to require amendment of Regional Water Plans, prior to the formal adoption of 2006 Regional Water Plans and the 2007 State Water Plan, will require certain loan applicants to amend 5-year old regional water plans to fund projects that are already recommended in 2006 draft or adopted Regional Water Plans.

Projects that are recommended to be considered for waivers of Texas Water Code Section 16.053(j) are projects that are contained in 2006 Initially Prepared Plans or finally adopted Regional Water Plans which have undergone a full analysis and public hearing process. This recommended policy would eliminate the requirement that 2001 Regional Water Plans be amended when a Planning Group has already evaluated, considered, and recommended new strategies in the current cycle of planning.



Board Members  
September 13, 2005  
Page 3

**RECOMMENDATION**

Staff recommends that the TWDB adopt a policy that allows waivers of the statutory requirement for funding projects (Texas Water Code Section 16.053(j)), for projects that are recommended water management strategies to meet a need in Initially Prepared Regional Water Plans (draft), or adopted 2006 Regional Water Plans, prior to final adoption of the appropriate 2006 Regional Water Plans and 2007 State Water Plan.

This recommendation has been reviewed by legal counsel and is in compliance with applicable statutes and Board rules

*by R.M. Pigott*  
\_\_\_\_\_  
Deputy Counsel

**Attachment D**

Texas Water Development Board's Announcement Published in  
April 2, 2010 *TEXAS REGISTER*

**Announcement Published in  
April 2, 2010 TEXAS REGISTER**

**Texas Water Development Board**

**Notice of Opportunity to Comment on Water Planning Area Boundaries**

Texas Water Code §16.053(b) directs the Texas Water Development Board (TWDB) to designate the areas for which regional water plans shall be developed, taking into consideration such factors as river basin and aquifer delineations, water utility development patterns, socioeconomic characteristics, existing regional water planning areas, political subdivision boundaries, public comment, and other factors the Board deems relevant. As a result, 16 regional water planning areas were designated in the state in 1998. The Board is currently in the process of reviewing the designations to determine whether any updates are necessary. Members of the public are encouraged to provide relevant and material comments concerning the existing regional water planning area boundaries, which may be viewed at <http://www.twdb.state.tx.us/wrpi/rwp/map.htm>.

Any person may submit written comments on or before Tuesday, June 1, 2010 by mail to Temple McKinnon at Water Resource Planning and Information, Texas Water Development Board, P.O. Box 13231, Capitol Station, Austin, Texas 78711 or by email to [rulescomments@twdb.state.tx.us](mailto:rulescomments@twdb.state.tx.us). Comments must be received by 5:00 p.m. on June 1.

If you need assistance obtaining maps of the boundaries, please call (512) 475-2057 for arrangements to view them. After the close of the comment period, the Board may consider proposing boundary revisions but will not do so prior to the regular Board meeting currently scheduled for Thursday, August 19, 2010.

TRD-201001446

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Deputy General Counsel

Texas Water Development Board

Filed: March 24, 2010

# Status of current regional water planning activities, and upcoming actions by Texas Water Development Board for 2011 Regional Water Plans and 2012 State Water Plan

## Senate Bill 1: The Birth of Regional Water Planning

**CHAPTER 37**  
**REGIONAL WATER PLANNING (S.B. 1302)**  
Effective January 1, 2002 (amended by Acts of 2002, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, 2019, 2021, 2023)

**SECTION 37.001. PURPOSE AND SCOPE.**

**37.002. DEFINITIONS.**

**37.003. REGIONAL WATER PLANNING AREA.**

**37.004. DESIGNATION OF REGIONAL WATER PLANNING AREAS.**

**37.005. INITIAL REGIONAL WATER PLANNING GROUPS.**

**37.006. REGIONAL WATER PLANNING GROUPS.**

**37.007. REGIONAL WATER PLANNING GROUP CHAIRPERSON.**

**37.008. REGIONAL WATER PLANNING GROUP MEMBERSHIP.**

**37.009. REGIONAL WATER PLANNING GROUP MEETINGS.**

**37.010. REGIONAL WATER PLANNING GROUP REPORTS.**

**37.011. REGIONAL WATER PLANNING GROUP FEES.**

**37.012. REGIONAL WATER PLANNING GROUP ASSISTANCE.**

**37.013. REGIONAL WATER PLANNING GROUP CONFLICTS.**

**37.014. REGIONAL WATER PLANNING GROUP RECORDS.**

**37.015. REGIONAL WATER PLANNING GROUP LIABILITY.**

**37.016. REGIONAL WATER PLANNING GROUP TERMINATION.**

**37.017. REGIONAL WATER PLANNING GROUP REORGANIZATION.**

**37.018. REGIONAL WATER PLANNING GROUP MERGERS.**

**37.019. REGIONAL WATER PLANNING GROUP SUCCESSION.**

**37.020. REGIONAL WATER PLANNING GROUP AMENDMENTS.**

**37.021. REGIONAL WATER PLANNING GROUP REVISIONS.**

**37.022. REGIONAL WATER PLANNING GROUP REVIEWS.**

**37.023. REGIONAL WATER PLANNING GROUP APPROVALS.**

**37.024. REGIONAL WATER PLANNING GROUP REVISIONS.**

**37.025. REGIONAL WATER PLANNING GROUP REVISIONS.**

**37.026. REGIONAL WATER PLANNING GROUP REVISIONS.**

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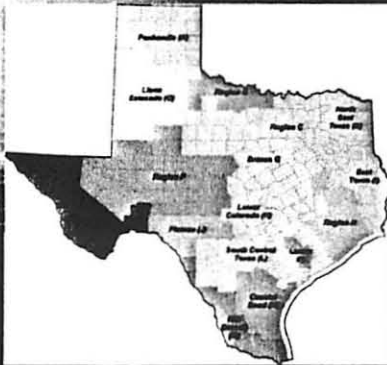
**37.099. REGIONAL WATER PLANNING GROUP REVISIONS.**

**37.100. REGIONAL WATER PLANNING GROUP REVISIONS.**

**TWDB responsibilities:**

- Designate regional water planning areas
- Designate initial regional water planning groups
- Provide technical and financial assistance to the regional water planning groups
- Approve regional water plans and facilitate resolution of interregional conflicts
- Develop State Water Plan every five years

## Designation of Regional Water Planning Areas



### Criteria:

- river basin and aquifer delineations
- water utility development patterns
- socioeconomic characteristics
- existing regional water planning areas
- political subdivision boundaries
- public comment
- other factors

## Regional Water Planning Groups: 11 Statutory Interests

- Public
- Counties
- Municipalities
- Industries
- Agriculture
- Environment
- Small businesses
- Electric-generating utilities
- River authorities
- Water districts
- Water utilities

## Basic Steps in Regional Water Planning

- Describe the regional water planning area
- Quantify existing and projected population and water demand over 50-year planning horizon
- Evaluate and quantify existing water supplies
- Identify surpluses and needs
- Evaluate water management strategies and prepare plans to meet the needs
  - Evaluate impacts of water management strategies on water quality
  - Describe how plan is consistent with long-term protection of the state's water, agricultural, and natural resources
  - Recommend regulatory, administrative, and legislative changes
  - Describe how sponsors of water management strategies will finance projects
  - Adopt the plan, including the required level of public participation

## Task 1: Region Description



- Major water providers
- Current water use
- Sources of groundwater and surface water
- Agricultural and natural resources
- Regional economy
- Local water plans
- Other information

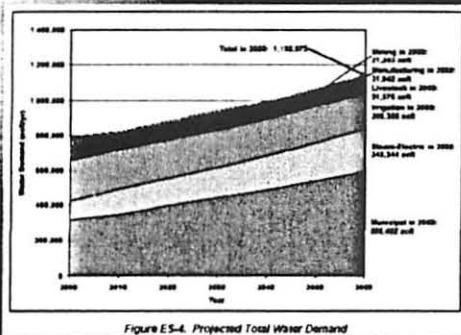
## Task 2: Develop Population and Demand Projections

- All population and demand projections are proposed by agreement of four agencies (TWDB, TCEQ, TPWD, TDA) and, by statute, require Board approval.
- TWDB develops population projections for about 1,800 cities and water utilities based on census data using cohort-component demographic models.
- Planning groups review projections and may propose revisions resulting from changed conditions or new information (only changes made for 2011 plans).

## Population Projections

- TWDB has been projecting population of Texas for water planning purposes since the 1968 State Water Plan.
- 2000 Census population was 20.85 million. Previous projections for 2000 were:
  - 1968 SWP – 21.2 million
  - 1984 SWP – 19.6 to 21.2 million
  - 1990 SWP – 20.99 million
  - 1997 SWP – 20.2 million
  - 2002 SWP – 20.86 million

# Demand Projections

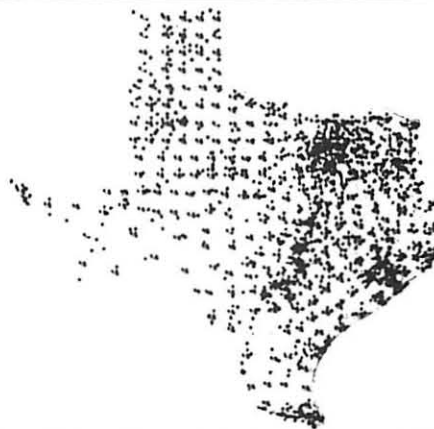


Developed for:

- Cities (greater than 500 pop.)
- Retail public utilities
- Wholesale water providers
- Categories of water use:
  - Municipal
  - Manufacturing
  - Irrigation
  - Steam electric power generation
  - Mining
  - Livestock watering

# Total Water User Groups: 2,564

- Cities: 956
- Utilities: 378
- County-Other: 254
- Manufacturing: 174
- Steam Electric: 83
- Livestock: 254
- Mining: 226
- Irrigation: 239





## Municipal Demand Projections

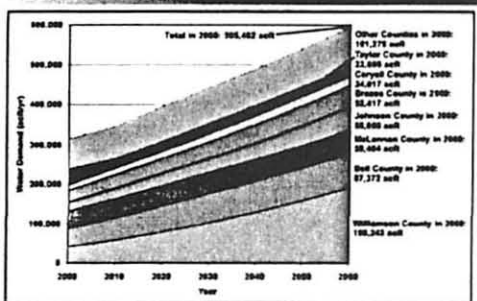
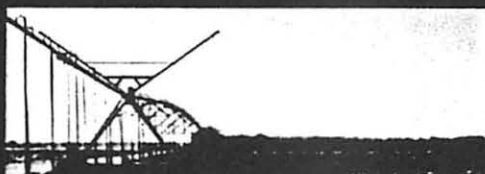


Figure 2-5. Municipal Water Demand Projections

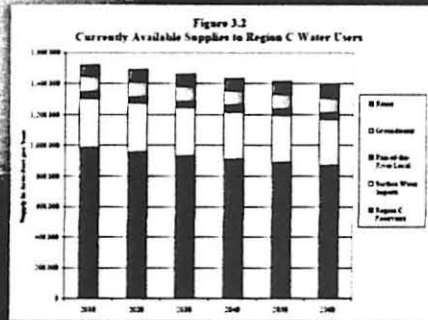
- Projected population is multiplied by estimated per capita water use rates from TWDB Water Use Survey
- Includes residential, commercial and institutional water use
- Accounts for "passive" water conservation from regulatory requirements governing installation of water efficient fixtures in new construction

## Industrial and Agricultural Demand Projections

- Projections developed for each of Texas' 254 counties
- Incorporate expectations of increasing water efficiency



## Task 3: Evaluate Existing Supply



Evaluation of adequacy of existing water supplies legally and physically available to the regional water planning area for use during drought of record.

**Drought of record:** The period of time when natural hydrological conditions provided the least amount of water supply.


## Supply: Surface Water

- Analysis based on **firm yield**; the supply a reservoir can provide each year during a drought of record
- Uses TCEQ Water Availability Models

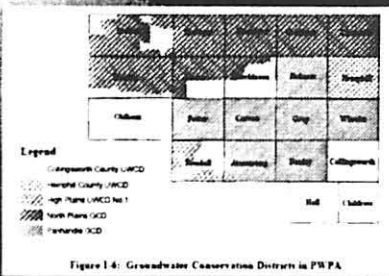


## Supply: Groundwater

- Planning groups calculate the greatest annual amount of water available from an aquifer without violating the most restrictive physical and/or regulatory conditions limiting withdrawals under drought of record conditions.
- When estimating groundwater supplies, planning groups use TWDB Groundwater Availability Models unless better site specific information is available.



## Supply: Groundwater

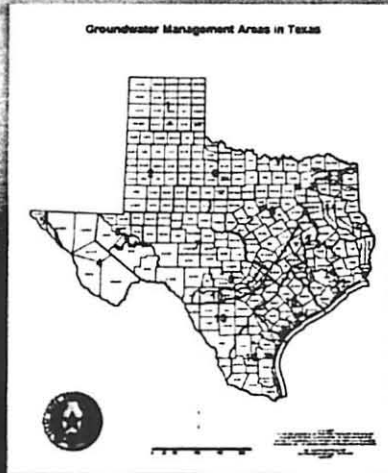


**Legend**

- Orange County UWCD
- Hempel County UWCD
- High Plains UWCD No. 1
- North Plains UWCD
- Perkins UWCD

If groundwater districts within a groundwater management area determined desired future condition for their aquifers and TWDB translated desired future conditions into estimated managed available groundwater by January 1, 2008, then planning groups must use these estimates as the basis for existing groundwater supplies.

## Supply: Groundwater

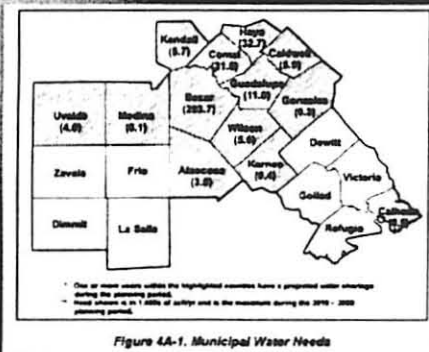


Planning groups using managed available groundwater figures this cycle:

- Region K (Edwards Balcones Fault Zone and Marble Falls aquifers)
- Region C (Trinity and Woodbine aquifers)
- Region G (Trinity Aquifer)
- Region D (Woodbine Aquifer)

All planning groups will use managed available groundwater in the next planning cycle (2011-2016).

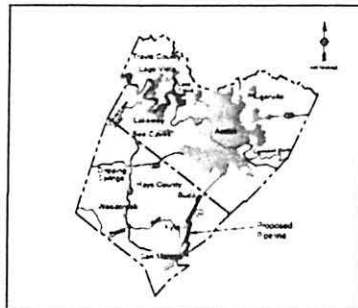
## Task 4: Identify Surpluses and Needs



Planning groups compare existing water supplies with current and projected water demands to identify when and where additional water supplies are needed for each water user group and wholesale water provider.

## Tasks 5-7: Evaluation and Selection of Potentially Feasible Water Management Strategies

Figure 4.7: Obtain Surface Water Through the GBRA System



If existing supplies do not meet future demand, planning groups recommend specific water management strategies to meet water supply needs.

## Types of Water Management Strategies

- Water conservation practices (must be considered for each identified need)
- Drought management measures
- Reuse of wastewater
- Expanded use of existing supplies
- New supply development
- Interbasin transfers
- Other measures



## Evaluation of Water Management Strategies

### Criteria:

- Water quantities generated
- Reliability
- Financial costs
- Environmental factors
- Impacts on agricultural, recreational and other water resources

Table 4.99 Conjunctive Use of Groundwater Issues

Management Strategy	Environmental Flows	Wildlife Habitat	Cultural Resources	Agricultural Resources	Other Water Resources	Social/Economic
Conjunctive Groundwater Use	Increased irrigation return flows to bay and estuaries	None anticipated	None anticipated	None anticipated	Localized drawdowns of aquifers may affect wells	Cost exceeds irrigators' ability to pay

## Task 8: Regulatory, Administrative, and Legislative Recommendations

### Legislative recommendations (2006):

- Regional Planning Funding
- Groundwater Conservation Districts
- Brush Control
- Water Reuse
- Groundwater Availability Modeling
- Conservation Education
- Alternative Water Management Strategies
- Unique stream segments and reservoir sites

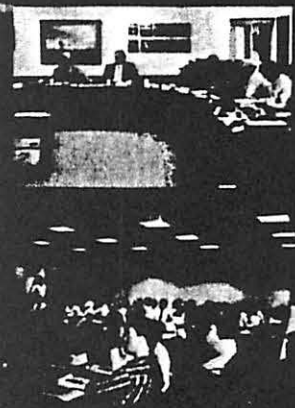


## **Task 9: Describe How Sponsors of Water Management Strategies Will Finance Projects**

RWPGs conduct survey of municipal water user groups with needs to develop estimates of funding assistance required to implement recommended water management strategies.

TWDB staff have provided an online survey instrument to be used for this task, and will provide summarized results on a regional and statewide basis.

## **Task 10: Adopt Plan with Public Coordination**



## Regional Water Plan Process and Timeline

Regions deliver Initially Prepared Plans (March – June 2010), hold public meetings and hearings to solicit comments.

TWDB reviews plans to determine if statutory and regulatory requirements have been met and will provide comment letters providing details of changes that must be made to meet requirements.

## Regional Water Plan Process and Timeline (continued)

- TWDB resolves interregional conflicts, if present.
  - *An interregional conflict exists if more than one regional water plan attempts to rely upon the same water source, so that there is not sufficient water available to fully implement both plans.*
- Regions adopt final plans (September – December 2010), plans will be submitted for Board approval beginning in October.



## **Summary of Regional Water Plans**

Staff proposes developing Summary of 2011 Regional Water Plans to deliver to Legislature in January 2011.

Elements included:

Introduction

Summary of state totals

Implementation of State Water Plan Projects

Infrastructure funding needs

Summary of regional plans

Preview of 2010 State Water Plans

## **2012 State Water Plan**

Due January 5, 2012.

Draft will be presented for Board approval in August 2011, public meetings and a public hearing will be held to solicit comments.

Final plan will be presented for Board approval in November 2011.

## 2012 State Water Plan

### Elements of State Water Plan:

- Introduction
- Population and water demand
- Water quality
- Climate of Texas
- Existing and future water supplies
- Future water supply needs
- Water management strategies
- Plan implementation funding
- Challenges and uncertainty
- Policy recommendations

## Project Funding Requirements

Statute requires that projects are eligible for State Water Plan funding only if they are recommended water management strategies in regional and state water plans, and eligible for other funding only if they are consistent with current plans.

Recommend that projects which are recommended strategies in Initially Prepared Plans be considered eligible for funding.

## **Potential Rule Revisions and Review of Planning Area Boundaries**

Statute requires review and update of rules for regional and state water planning at least every five years

Staff will propose revisions to consolidate notice requirements, eliminate redundant guidance, and clarify and simplify information.

Will request authorization to publish in December 2010.

Statute requires review and update of planning area designations at least every five years.

Public comment period will be open through June 1, 2010.

Recommendations (if any) will be presented for Board consideration no earlier than August 2010.

## **Summary of Board Responsibilities in Regional and State Water Planning**

- Board must approve all population and demand projections and all projection revisions.
- Board must approve all adopted Regional Water Plans.
- Board must approve draft and final State Water Plan.
- Board must approve amendments to Regional and State Water Plans.
- Board must approve proposed rule revisions and potential regional boundary changes.