

POLICY RECOMMENDATIONS IN THE 2021 INITIALLY PREPARED PLANS (IPP)

Prepared in support of the Interregional Planning Council. Please note that this document does not include 2021 IPP policy recommendations of specific unique stream segments or unique reservoir sites. Policy recommendations from the IPPs have been grouped into four categories by TWDB staff and numbered for organization purposes only. While policy recommendations may include multiple agencies, recommendations have not been repeated by region.

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Region A

Legislative Action

1. **Manage groundwater resources through local groundwater conservation districts.** There remain certain areas of the PWPA that are not within the boundaries of a groundwater district. Many of these areas do not have substantial quantities of groundwater or located in areas with no aquifers. However, areas with groundwater should be included in a local district contained within the regional planning area to create an equitable situation with regard to groundwater management, provided that it is feasible and locally supported.
2. **Create a water conservation reserve program for irrigated acreage management.** A water conservation reserve program should be created to make it economically feasible for farmers to convert irrigated acreage to dryland.
3. **Encourage the federal government to continue to support Conservation Reserve Program (CRP) participation.** This program continues to help protect local groundwater resources. As properties currently in CRP are coming out, property owners may convert and reestablish the properties to irrigated agriculture and utilize higher volumes of groundwater.
4. **Evaluate policy barriers to use playa lakes for conservation purposes.** The State should evaluate the current legislative barriers to using playa lakes. The barriers should be removed or reduced to allow using the playas for aquifer recharge or other beneficial water supply purposes.
5. **Maintain the functionality and viability of the Water Conservation Advisory Council.** The group currently operates on a volunteer basis with no state or federal funding.
6. **Provide funding for administration of the regional water planning process.** Current funding only allows reimbursement of direct expenses for administrative activities. The public process requires considerable coordination and staff assistance to comply. The costs to administer the PWPA regional planning process are \$70,000 per year, which is funded solely through local funds. As a result of the lack of funding, several planning areas are struggling to identify and maintain a political subdivision administrator.
7. **Provide funding for educational events including demonstrations of irrigation conservation strategies to encourage adoption.** Irrigation conservation relies on the adoption of measures by individual producers. Education is the first step to making long-term conservation efforts become a reality.
8. **Provide funding for more information on agricultural water use to better inform the TWDB baseline estimates and irrigation conservation strategies.** Considering that agricultural use accounts for more than 90 percent of total usage in the PWPA, a thorough understanding of agricultural water use is critical to the future of the region. Many of the agricultural conservation strategies are dependent on knowing the water use and acreage by crop.
9. **Updated analysis of groundwater supplies and availability.** The PWPG supports continuing funding of the TWDB's groundwater availability models for the major and minor aquifers of Texas. The PWPG appreciates TWDB's leadership in this initiative and recognizes the importance

of the data that comes from these models. Therefore, the PWPG stresses how imperative it is to continue funding this effort at an amount similar to or greater than the past.

TWDB Action

1. TWDB should establish and continue to promote clear guidelines for eligibility for funding and needs assessment for very small cities and unincorporated areas. Statements to the effect that "entities which fall under the planning limits retain eligibility for state funding assistance for water-related projects without having specific individual needs identified in the Regional Water Plan" would greatly enhance the ability of these small systems to provide their users with a safe and adequate supply of water.
2. TWDB should continue to improve the monitoring and quantification of small communities, county-other, manufacturing, and livestock operator water use to provide better information for planning purposes.
3. Clarification of relationship between drought contingency planning and regional water supply planning. It is not clear what role drought contingency planning has in the regional planning process.
4. TCEQ should be made an ex-officio member of the RWPGs and be required to attend RWPG meetings to provide input on known water quality/quantity problems.
5. ***Brush control.*** TWDB guidance is needed on how to account for brush control projects in the context of a source of "new surface water" for municipal, industrial, agricultural, and other uses. The Canadian River watershed has more than 50% cover of mixed brush species that are amenable to control for rangeland improvement and water enhancement purposes.

Other Agency Action

1. ***TCEQ - Continue to evaluate the rules governing reuse to encourage the use of wastewater effluent.*** The current regulatory environment provides a number of barriers to encourage the reuse of wastewater effluent. TCEQ should re-evaluate the current rules and change the rules to provide and quantify incentives for municipalities, industries and agriculture to reuse wastewater effluent.
2. ***TCEQ - Updated analysis of surface water supply inflows and availability.*** The regional surface water supply has steadily decreased over the past ten to fifteen years to the extent that regional lakes experienced new historical low storage levels. The existing tools to assess the reliable supply from regional surface water do not include the recent droughts. The Legislature did recommend that four river basin Water Availability Models be updated, including the Red River Basin. It is recommended that TCEQ also extend the current Water Availability Model for the Canadian Basin to capture the current drought in the PWPA.

General Issues

1. ***Enhance groundwater recharge.*** Groundwater accounts for a major source of water in the PWPA. Recharge rates are near zero for most of the area over the Ogallala aquifer with slopes around playas having the highest rates. Other regional aquifers, such as the Seymour Aquifer, may be more amenable to enhanced recharge. Means of enhanced recharge also include any

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man-made structure(s) that slow down or hold surface water to increase the probability of groundwater recharge. With current drought conditions, alternative sources of rechargeable water need to be identified and studies conducted to determine the feasibility of enhancing recharge with these water sources.

2. ***Salinity and brush control projects for the Canadian River and/or Red River Basin.*** Although there have been salinity and brush control projects recently implemented in the Canadian and Red River Basins, future State Water Plans should continue to plan for future salinity and brush control projects and their funding to continue to improve water quality and quantity in the basins.

Region B

Legislative Action

1. **Funding for Comprehensive Studies.** In preparing the Region B Water Plan there are several regional water planning, management, and conservation related issues which will require additional funding for data collection and administrative activities in order to adequately assess their viability or feasibility as a cost effective management strategy for Region B. For example, additional funds are needed to further evaluate and cost-share in the implementation of brush management programs in an effort to increase water yields, to identify and designate unique stream segments and/or reservoir sites for protection of these areas, and to implement various other chloride control measures and wastewater reuse programs throughout Region B.
2. **Conservation.** Region B supports the efforts of the State-appointed Water Conservation Task Force and encourages the practices of water conservation within the region and state. The Regional Water Planning Group also recognizes the differences in water use and needs among water users and different regions. Region B encourages the Legislature to allow each region to establish realistic, appropriate and voluntary water conservation goals for the region. These goals should only be established after sufficient data on water use have been collected using consistent data reporting requirements. The use of the measurement of gallons per capita per day is appropriate only for residential water use or as a guideline for historical trends for a single entity. Region B does not support the establishment of statewide standards for water use.
3. Based on the results of the Lake Kemp and Lake Arrowhead brush management studies, it is recommended that the State consider providing adequate funding to implement brush management and other land stewardship programs in an attempt to increase watershed yields.
4. Region B recommends that the state support both federal and state efforts to rehabilitate existing sediment control structures and encourage funding and support for the construction of new structures and other land management practices in watersheds that would produce the greatest sediment control benefits.
5. Region B requests that the Legislature continue to extend the protections for unique reservoir sites in order to ensure that reservoir sites such as Lake Ringgold that are identified as water management strategies remain protected under the Texas Water Code until applications and permits are filed.
6. It is recommended that the state fund the development, implementation, and evaluate the necessary management strategies adopted as part of this regional plan. This includes strategies identified to meet a specific need as well as general strategies to increase water supply in the region.
7. It is recommended that the Legislature support the grass-roots regional water planning process enacted by SB1 and strongly encourages the process be continued with adequate state funding for all planning efforts including administrative activities and data collection.
8. It is recommended that the state continue to fund agricultural water use data collection and agricultural water use management/conservation projects.

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9. With regards to conservation it is recommended that the Legislature continue to allow each region to establish realistic, appropriate, and voluntary water conservation goals as opposed to the establishment of statewide standards.
10. Senate Bill 1 requires future projects to be consistent with the approved regional water plan to be eligible for TWDB funding and TCEQ permitting. It is recommended that surface water uses that will not have a significant impact on the region's water supply and water supply projects that do not involve the development of or connection to a new water source should be deemed consistent with the regional water plan even though not specifically recommended in the plan.
11. Given a new drought of record, firm water availability from existing and new surface water supplies may be overstated. Therefore it is recommended that funding be provided to update the hydrology for all Water Availability Models (WAMS) with additional funding for regular maintenance updates.

TWDB Action

1. Region B recommends that the gallons per capita per day (gpcd) calculation of water use be based on residential water use only.
2. With irrigation being such a large component of water use, it is recommended that the economic model be updated and that the future crop mix and base year irrigation demands be reevaluated.

Other Agency Action

1. ***Regulatory Review of Nitrate MCL.*** In Region B, there are a number of small user groups which utilize water with nitrate levels in excess of 10 mg/l. For the most part this supply is their only source of water, and advanced treatment for the removal of nitrates is very costly. Presently these systems employ bottled water programs for customers that may be sensitive to nitrate concentrations (pregnant women and infants). It is the consensus of the Region B Water Planning Group that the TCEQ review its MCL standards for smaller systems which have no cost effective means to comply with the current nitrate MCL of 10 mg/l, and consider funding new studies to determine the health effects of nitrates in drinking water.

General Issues

1. It is recommended that the Chloride Control Project on the Wichita River and the Pease River be made a regional priority in order to enhance the water quality of Lake Kemp and Lake Diversion and reclaim those lakes as a viable cost effective short term and long term regional water supply source.

Region C

Legislative Action

1. **Encourage Formation of a Working Group on Stream Segments of Unique Ecological Value.** As in previous planning cycles, the Region C Water Planning Group continues to recommend the formation of a working group comprised of representatives of TWDB, TPWD, TCEQ, and the sixteen water planning regions to bring clarity, purpose, and direction to the legislative mandate to “identify river and stream segments of unique ecological value. “ Specifically, it is expected that the working group would:
 - a. Research, verify, and publicize the intent of ecologically unique river and stream segment legislation.
 - b. Research agency rules and recommend changes or clarifications where needed.
 - c. Ensure common understanding of “reservoir” as used in ecologically unique river and stream segment legislation and agency rules.
 - d. Identify the lateral extent of ecologically unique river and stream segment designations.
 - e. Seek clarification of quantitative assessment of impacts on ecologically unique river and stream segments.
 - f. Illustrate the value of ecologically unique river and stream segment designations

2. **Support Legislative and State Agency Findings Regarding Water Use Evaluation.** Per capita water use is unique to each water supplier and each region of the State. A statewide per capita water use value is not appropriate for the State, considering its wide variation in rainfall, economic development, and other factors.

The Texas Legislature has found that:

“...using a single gallons per capita per day metric to compare the water use of municipalities and water utilities does not produce a reliable comparison because water use is dependent on several variables, including differences in the amount of water used for commercial and industrial sector activities, power production, permanent versus temporary service populations, and agricultural sector production...” and

“a sector-based water use metric, adjusted for variables in water use by municipalities and water utilities, is necessary in order to provide an accurate comparison of water use and water conservation among municipalities and water utilities.”

Similarly, in its Guidance and Methodology for Reporting on Water Conservation and Water Use, the TCEQ/TWDB/WCAC recognized that “a simple comparison of total gallons per capita per day among Texas municipal water providers may lead to inaccurate conclusions about comparative water use efficiencies among those municipal water providers. When examining the profiles of municipal water providers individually, significant differences may be found in climate, geography, source water characteristics, and service population profiles. As a metric, total gallons per capita per day has its limitations.” The Guidance further recommends use of sector-specific metrics in tracking and comparing water conservation and water.

The Region C Water Planning Group supports these findings and encourages continued development and refinement of sector-specific metrics for tracking water use.

3. ***Eliminate Supplemental Requirements Added to the Regional Water Plans after Contracts have been Executed, When Additional Funding is Not Provided.*** House Bill 807 was passed by the 86th Texas Legislature in 2019 adding five additional requirements to the regional water planning process. These requirements were added without increasing the funding for developing the regional water plans or extending the schedule. Adding additional requirements to the regional water plans without increasing funding or extending the schedule necessarily reduces the overall quality of the regional plan by allowing less time to be spent on the original scope of work. Region C recommends that no additional requirements be added to the regional water plans after the initial development of the scope of work, unless the new requirements are accompanied by appropriate funding and schedule amendments.
4. ***Requirements for Interbasin Transfers Introduced in Senate Bill One.*** In 1997, Senate Bill One introduced a number of new requirements for applications for water rights permits to allow interbasin transfers. The requirements are found in Section 11.085 of the Texas Water Code (9).

The code includes many provisions that are not required of any other water rights, including:

- a. Public meetings in the basin of origin and the receiving basin.
- b. Simultaneous (and dual) notices of an interbasin transfer application in newspapers published in every county located either wholly or partially in both the basin of origin and the receiving basin, without regard to the distance or physical relationship between the proposed interbasin transfer and any such county's boundaries.
- c. Additional notice to county judges, mayors, and groundwater districts in the basin of origin.
- d. Additional notice to legislators in the basin of origin and the receiving basin.
- e. TCEQ request for comments from each county judge in the basin of origin.
- f. Proposed mitigation to the basin of origin. Demonstration that the applicant has prepared plans that will result in the "highest practicable water conservation and efficiency achievable..."

Exceptions to these extra requirements placed on interbasin transfers are made for emergency transfers, small transfers (less than 3,000 acre-feet under one water right), transfers to an adjoining coastal basin, transfers to a county partially within the basin of origin, transfers within a retail service area, and certain imports of water from outside the state.

The effect of these changes is to make obtaining a permit for interbasin transfer significantly more difficult than it was under prior law and thus to discourage the use of interbasin transfers for water supply. This is undesirable for several reasons:

- a. Interbasin transfers have been used extensively in Texas and are an important part of the Region C's and the state's current water supply.
- b. Current supplies greatly exceed projected demands in some basins of origin, and the supplies already developed in those basins can only be beneficially used as a result of interbasin transfers.
- c. Senate Bill One water supply plans for major metropolitan areas in Texas (Dallas-Fort Worth, Houston, and San Antonio) rely on interbasin transfers as a key component of their plans.

- d. Texas water law regards surface water as “state water” belonging to the people of the state, to be used for the benefit of the state as a whole and not merely that area or region of the state where abundant surface water supplies may exist (10).
- e. The current requirements for permitting interbasin transfers provide unnecessary barriers to the development of the best, most economical, and most environmentally acceptable source of water supplies.

The legislature should revisit the current law on interbasin transfers and remove some of the unnecessary, unduly burdensome, and counterproductive barriers to such transfers that now exist.

5. ***Continued and Expanded State Funding for Texas Water Development Board Loans and the State Participation Program.*** The total capital cost of strategies recommended in the 2017 State Water Plan is \$63 billion, including \$23.6 billion for Region C recommended strategies. Municipal water providers anticipate needing \$36.2 billion from state financial assistance programs. The Texas Water Development Board’s loan and State Participation Programs have been important tools in the development of existing supplies, but funding for many of these programs has been insufficient to serve all applicants. The SWIFT/SWIRFT funding program began in 2015 and has committed more than \$8.2 billion towards water projects through Fiscal Year 2018. Twenty percent of the SWIFT funding is reserved for water conservation and reuse projects. The SWIFT funding program is expected to finance \$27 billion in state water plan projects over the next 50 years.

These programs should be continued and expanded with additional funding as needed to assist in the development of the water management strategies recommended in the regional water plans to meet the future water needs in Texas. Region C supports the continued expeditious implementation of the SWIFT/SWIRFT funding program and does not support diversion of existing funding for other purposes.

6. ***Expand Eligibility for SWIFT Funding to Include Consistency with Adopted Regional Water Plans.*** The current legislation specifies that a water supply project must be in the adopted State Water Plan to be eligible for SWIFT funding. To allow the TWDB sufficient time to develop the State Water Plan, there is a one-year period between when a regional water plan is adopted and when the TWDB approves the corresponding State Water Plan. During this one-year period, the State Water Plan is based on recommended projects in a superseded regional water plan. Under current law, if a project is included in the current regional water plan but not in the superseded regional water plan, the project sponsor must amend the superseded regional water plan to receive SWIFT funding. This could mean that the regions and project sponsors are expending funds for a process that has already been completed for the current regional water plan. Region C recommends that the consistency requirement with the State Water Plan for eligibility for SWIFT funds be expanded to include the currently adopted regional water plans.
7. ***State Funding for Water Conservation Efforts.*** In 2007, the Texas Legislature formed the Water Conservation Advisory Council to serve as an expert resource to the state government and the public on water conservation in Texas. The Council publishes biennial reports to the Legislature on progress of water conservation in Texas. In its December 2018 report, the Council recommended that “the Texas Legislature appropriate up to \$3 million per year to the TWDB to implement a statewide water conservation public awareness program as directed by the Texas

Legislature in 2007 with the passage of Senate Bill 3 and House Bill 4(14).” A statewide public awareness campaign titled “Do or Dry” is currently being developed by Texas State University in collaboration with TWDB to promote conservation and emphasize the importance of water. It is anticipated that the “Do or Dry” campaign will be launched in the next couple of years. Region C encourages adequate funding for the Water Conservation Advisory Council and for a statewide water conservation awareness campaign.

8. **State Funding for Reservoir Site Acquisition.** As described in Section 8.3, the State of Texas has designated unique sites for reservoir development. However, the designation of these sites does not fully protect them for development as reservoirs. Region C recommends that TWDB and the Legislature consider assisting with the acquisition of sites to achieve a greater degree of protection for development of the sites as reservoirs. Actions that could be taken include:
 - a. The use of state funds to acquire reservoir sites.
 - b. Changing TWDB regulations so that Water Infrastructure Fund resources can be used for the acquisition of reservoir sites before completion of the permitting process.
 - c. Encouraging voluntary sales of land in these reservoir sites to entities planning to develop the reservoirs.

9. **Consider Alternative Financing Arrangements for Large Projects.** The Texas Water Development Board offers low-interest financing for development of projects from the State Water Plan through the Water Infrastructure Fund. TWDB also offers deferred financing with delayed requirements for repayment, but the terms for deferred financing are not as flexible as they could be. To address this issue, the TWDB has created two flexible financing options in the SWIFT/SWIRFT funding program:
 - a. Deferred loans have maturities of 20 to 30 years and may be used to fund developmental costs, such as planning and design. Principal and interest are deferred up to eight years or until end of construction, whichever is sooner.
 - b. Board participation loans allow entities to reasonably finance the total debt for an optimally sized regional facility through temporary TWDB ownership interest in the facility. The local sponsor repurchases TWDB’s interest on a repayment schedule that defers principal and interest. The typical maturity of a Board participation loan is 34 years.
 - c. Region C supports the flexible financing options offered under the SWIFT/SWIRFT funding program and encourages the Texas Water Development Board and the Legislature to continue to consider more flexible deferred financing.

10. **Adequate Funding of Groundwater Conservation Districts.** In recent years, the Texas Legislature has created a great number of new groundwater conservation districts across the state. Especially in the early years of their existence, many of these districts struggle to find adequate resources to develop and implement their rules. We recommend that the state fund a grant program to provide financial resources for the development of the initial rules of these districts.

11. **Funding for NRCS Structures as a Form of Watershed Protection.** One key element of water supply planning is the protection of the quality and usability of supplies already developed. Over the past 50 to 60 years, the U.S. Natural Resources Conservation Service (NRCS, formerly the Soil Conservation Service) has built numerous small dams for sediment control and flood control in

Texas. The NRCS reservoirs improve water quality, prevent erosion in the watershed, provide water for livestock and provide increased streamflow during low flow periods.

The design life for the majority of the NRCS dams is 50 years. Most of the existing projects were built in the 1950s and 1960s and are nearing the end of their design life. Many NRCS structures are in need of maintenance or repair to extend their useful life. Under the PL-566 program, the NRCS provides technical assistance and funding for repair and rehabilitation of existing NRCS structures. The rehab program is a 65/35 split of federal funds to the sponsor's funds. In U.S. Congressional Districts located completely or partially within Region C, there are 1,180 existing NRCS dams, of which about 66 percent are located in Region C. In these Congressional Districts, there are 123 dams in need of repairs. The estimated repair cost for these dams is approximately \$34.4 million.

In addition, the NRCS and local sponsors plan to construct new dams in Region C. Under the PL-566 program and the similar PL-534 program, the NRCS will provide 100 percent of the construction costs of new dams, and the sponsor provides the land acquisition costs.

The State should develop a program to provide funding for the development and rehabilitation of new and existing NRCS structures, as a form of watershed protection. Elements of such a program could include:

State grants or matching funding for studies of NRCS structures
Seminars on watershed protection.

The Region C Water Planning Group recommends that the State seek additional federal funding to improve and maintain NRCS structures. Region C also recommends that the State provide funding to local sponsors to aid them in paying for their required 35 percent of the cost for the dam rehabilitation projects.

12. **Support for Research to Advance Reuse and Desalination.** Water reuse and desalination are extremely important sources of water supply for Texas. However, these sources have unique challenges related to water quality and cost-effective implementation. Region C recommends that the Legislature and the TWDB continue to support research to advance these water supply strategies in the coming years.
13. **Funding Assistance for Water Reuse Projects.** The Region C Water Plan includes reuse as a key water management strategy to meet the water needs of the Region between now and 2070. Water reuse projects are rapidly developing in Region C. In the 2016 Region C Water Plan, the 2070 supply from existing reuse projects was almost 361,000 acre-feet per year (17). In the current plan, newly developed projects have increased the supply available from existing reuse projects to more than 411,000 acre-feet per year by 2070. The current plan also calls for development of an additional 485,000 acre-feet per year in reuse projects by 2070. Statewide, 14 of the 16 regions included reuse as a water management strategy in their most recent water plans (17). In order to achieve implementation of the significant quantities of reuse there is a critical need to develop implementation approaches, funding support, and the technology and science associated with reuse. The Texas Water Development Board developed a research agenda that identified seven research priorities in Texas (18):

- a. Understanding the role of environmental buffers in surface water indirect potable reuse projects
 - b. Effectiveness of treatment wetlands in improving reclaimed water quality
 - c. Use of managed aquifer recharge systems to facilitate water reclamation in Texas
 - d. Understanding the effectiveness of nutrient removal processes in reduction of constituents of concern relative to indirect potable reuse
 - e. Understanding the potential for utilizing nanofiltration as a beneficial treatment process relative to reclaimed water in Texas
 - f. Organizational, institutional, and public awareness framework to advance water reuse in Texas
 - g. Development of integrated water quality models for the Trinity River System
 - h. Region C recommends that the State Legislature provide funding support to perform research in the priority categories identified by the Texas Water Development Board.
14. ***Continued and Increased State Support of Efforts to Develop Water Supplies for Oklahoma.*** In recent years, water suppliers in Region C have been seeking to develop unused water resources in Oklahoma. We encourage the State of Texas to continue and increase its support of efforts to develop unused water resources in Oklahoma.
15. ***Oversight of Groundwater Conservation District Rule Making.*** The Legislature has established groundwater conservation districts across Texas, often without regard for aquifer boundaries. These groundwater conservation districts develop rules and regulations regarding groundwater pumping within their boundaries. Often, the rules that have been developed by these districts are inconsistent from one district to the next, resulting in inconsistent regulation of the same aquifer. Although one-size-fits all regulations are inappropriate, the groundwater conservation districts need state oversight, particularly with regard to their rule-making policies. Region C recommends that the TWDB or TCEQ provide oversight for the current and future groundwater conservation districts.
16. ***Revise Federal Section 316(b) Regulations on Power Plant Cooling Water.*** USEPA regulations adopted in 2017 implementing Section 316(b) of the Clean Water Act place requirements on cooling water intake structures that are intended to reduce fish/shellfish mortality due to impingement on screens/barriers or entrainment into flow entering an industrial facility. Although the regulations do not mandate cooling towers for new or existing power plants, they do generally require equivalent performance in terms of intake flowrates and velocities. Compared to once-through cooling (which was the usual approach in Texas prior to the new regulations), cooling towers reduce the amount of water diverted for a power plant but significantly increase the amount of water consumed. There is also a secondary impact; operation of cooling towers creates a high TDS (total dissolved solids) waste stream known as blowdown, that must be managed and/or treated, often resulting in additional increased water consumption. This higher water consumption is not good for Texas, where water supplies are scarce. We encourage TWDB and TCEQ to work with the Federal government on Section 316(b) regulations to allow the efficient use and conservation of water supplies for power plants and the state.

TWDB Action

1. **Allow Waivers of Plan Amendments for Entities with Small Strategies.** Region C recommends that the Texas Water Development Board allow waivers for consistency issues for plan amendments that involve projects resulting in small amounts of additional supply.
2. **Coordination between TWDB and TCEQ Regarding Use of the WAMs for Planning and Permitting.** The TWDB requires that the Water Availability Models (WAMs) developed under the direction of TCEQ be used in determining available surface water supplies. The models were developed for the purpose of evaluating new water rights permit applications and are not appropriate for water supply planning. The assumptions built into the WAM (full use of all existing water rights, full operation of priority calls at all times, full permitted area and capacity, overlapping of environmental flow criteria developed during the Senate Bill 3 process and special conditions for instream flows developed using other statistical approaches) do not match the actual operations of supplies and could prohibit the issuance of water rights permits upon which implementation of the regional plans is dependent. Using these conservative assumptions could result in unnecessary water supply projects to meet projected needs that might otherwise be satisfied through the flexible operation of existing supplies. The TWDB and TCEQ should coordinate their efforts to determine the appropriate data and tools available through the WAM program for use in water planning and permitting. The TWDB should allow the regional water planning groups flexibility in applying the models made available for planning purposes, and TCEQ should exercise flexibility in permitting to allow for optimization of existing or future water supplies.
3. **TWDB's recognition of Region C's designation of the Sulphur River Basin Authority as a wholesale water provider in the Regional Water Planning Process.** According to 31 TAC §357.10(3), a wholesale water provider is:
 - a. "Any person or entity, including river authorities and irrigation districts, that has 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. The regional water planning groups shall include as wholesale water providers other persons and entities that enter or that the regional water planning group expects or recommends to enter contracts to sell more than 1,000 acre-feet of water wholesale during the period covered by the plan."
 - b. As described in previous sections, the Marvin Nichols Reservoir and Wright Patman Reallocation strategies are recommended for NTMWD, UTRWD, and TRWD and are alternative strategies for Dallas and the City of Irving. It is expected that SRBA would permit and construct Marvin Nichols Reservoir in the Sulphur Basin and would sell more than 1,000 acre-feet per year of water from the reservoir to these Region C entities. For these reasons, the RCWPG voted to designate SRBA as a WWP at its September 28, 2015 meeting. RCWPG requested TWDB's recognition of this designation in the regional water planning process.
4. **Clear Separation between Regional Water Plans and Regional Flood Plans.** The 86th Texas Legislature recently passed Senate Bill 8 (SB8) which requires the TWDB to prepare and adopt a comprehensive state flood plan before September 1, 2024 and every five years thereafter. Region C recommends that the TWDB maintain a clear separation between the Regional Water

Plans and the new Regional Flood Plans. Region C also suggests renaming the Regional Water Plans to Regional Water Supply Plans to maintain a clear distinction from the new Regional Flood Plans.

5. ***Funding Assistance for Desalination Projects.*** The Red River and Lake Texoma in Region C have high concentrations of salts. The water from these sources must either be blended with a less saline supply or desalinated for direct use. The smaller communities neighboring these water supplies could potentially use this water with help in funding the necessary desalination process. These sources would be more economical for the smaller communities than building small pipelines of great lengths to purchase water from a larger supplier. Region C recommends that the TWDB provide funding assistance for desalination projects for smaller communities. Region C also recommends that federal funds be sought for desalination projects.

Support ongoing efforts of state agencies to develop additional data and information related to evaluating the feasibility of ASR projects. House Bill 807 requires that the regional water plan include a specific assessment of the feasibility of aquifer storage and recovery (ASR) projects for any regional water planning area with significant identified water needs. The Region C planning group acknowledges that ASR can be an effective water supply strategy under specific conditions. However, ASR is not a suitable or feasible strategy in all areas. Region C supports efforts to develop data and information regarding the site-specific applicability of ASR and the conditions under which ASR is or isn't a feasible WMS.

Other Agency Action

1. ***TCEQ - Cancellation of Water Rights for Non-Use.*** Texas Water Code allows the Texas Commission on Environmental Quality to cancel certain water rights, in whole or in part, for ten consecutive years of non-use. In 2013 the Texas Legislature provided the following additional exceptions to cancellation for non-use:
 - a. If a significant portion of the water authorized has been used in accordance with a specific recommendation for meeting a water need included in an approved regional water plan;
 - b. If the water right was obtained to meet demonstrated long-term public water supply or electric generation needs as evidenced by a water management plan developed by the holder and is consistent with projections of future water needs contained in the state water plan; or
 - c. If the water right was obtained as the result of the construction of a reservoir funded, in whole or in part, by the holder of the water right as part of the holder's long-term water planning.
 - d. These changes assist with long-term water supply planning and allow construction of reservoirs to meet future needs, even if only part of the supply is used in the first ten years of the reservoir's operation, Region C supports these exceptions to cancellation of water rights for non-use.

General Issues

1. None specified.

Region D

Legislative Action

1. **Standardize Statistics Used For Conservation Assessments.** The NETRWPG recommends that the Texas Legislature standardize the method used to derive the statistic known as “gpcd” (gallons per capita per day) and also known as “municipal per capita usage”. Recently, the TWDB funded the Statewide Water Conservation Quantification Project (Averitt & Associates, 2017). This research project observed the difficulty for utilities to identify the gpcd used for regional planning purposes, which is defined as the annual volume of water pumped, diverted, or purchased minus the volume exported (sold) to other water systems or large industrial facilities divided by the permanent resident population of the municipal water user group in the regional water planning process divided by 365. However, utilities are noted to use a different formula for deriving gpcd, as defined in the TWDB water conservation plan annual report as the Total Gallons in System divided by the Permanent Population divided by 365.

While the move to utility-based planning for the present round of regional water planning has been a positive move towards more consistency, the uncertainties regarding the methods used to define gpcd remain. The justification for this recommendation is demonstrated by the need to have a successful conservation program in areas that are projected to need water management strategies. The NETRWPG supports conservation as a water management strategy for any entity that has a gpcd ratio greater than the goal of 140 gpcd. Assessing the progress of communities engaged in conservation will be more reliable with a standardized method for comparison.

Analyses in the Sulphur River Basin (SRBA Watershed Study; 2014) suggest that although the historic Drought of Record for the basin is 1951 to 1956, a more significant drought occurs between 2002 and 2006. As a result, the SRBA study suggests the official TCEQ “Sulphur WAM misses the critical drought” that forms the basis for calculations of firm supply, since the official TCEQ WAM for the Sulphur River Basin is based upon historic data from 1940 to 1996. Indeed, an effort is already underway to update the hydrology for Sulphur River Basin WAM that is being funded by the Riverbend Water Resources District. While this effort has not produced a model in time for the purposes of the 2021 Region D Plan, it is likely that the result of this effort will be considered in the next round of water planning for Region D. Further, during the most recent legislative session HB 723 was passed requiring TCEQ to obtain or develop updated water availability models for the Red River Basin and Neches River Basins, within Region D, as well as the Brazos and Rio Grande River Basins.

Given the proximity of these river basins to the remaining river basins within the North East Texas Region, it is not unreasonable to consider similar hydroclimatologies existing in the remaining basins. If a worse drought exists than the current Drought of Record utilized in the official TCEQ WAMs, this poses additional uncertainty with regard to the modeled firm yields and reliabilities upon which water supplies in the North East Texas Region are based.

Thus, the NETRWPG recommends that the legislature initiate a process through TCEQ to appropriately update the Sabine, and Cypress Water Availability Models (WAMs) in a manner consistent with these WAMs’ original development, to reflect more recent information on the hydroclimatology of the river basins in the North East Texas Region, and provide additional certainty to resultant calculations of firm supplies in the Region.

The NETRWPG recommends additional funding is made available to allow for greater scrutiny of rural water supply entities at the Sub-Water User Group (Sub-WUG) level. As in the previous round of regional water planning, such entities are aggregated and represented within the Plan as a “County-Other” WUG. Where necessary, extra effort has been given to identify and evaluate the needs for entities within this “County-Other” category, but with limited funding in the present round as compared to previous rounds the level of overall effort to distinguish these entities has been necessarily diminished. Additional funding affords the capability to more rigorously evaluate these smaller, rural entities, which comprise a significant portion of the Region D population, as was done in previous rounds of regional planning.

TWDB Action

1. **Designation of Wholesale Water Providers.** The NETRWPG supports the designation of a Wholesale Water Provider (WWP) as described in the Texas Administrative Code §357.10(43) as:
 - a. Any person or entity, including river authorities and irrigation districts, that delivers or sells water wholesale (treated or raw) to WUGs or other WWPs or that the RWPG expects or recommends to deliver or sell water wholesale to WUGs or other WWPs during the period covered by the plan.
 - b. The NETRWPG supports the granting of a designation of WWP for an entity within Region D depending upon a written request from that entity to the NETRWPG that demonstrates said entity has entered or the RWPG expects or recommends to enter into contracts to sell more than 1,000 acre-feet of water wholesale during the period covered by the plan, including the designation of expected demand and the expected supply. Without a request that includes sufficient identification of expected contractual demand and expected supply, the NETRWPG cannot plan for such an entity. With this noted, Region D expects that the water supply out of Lake Wright Patman will continue to be with Texarkana and Riverbend Water Resources District control as WWPs.
2. The NETRWPG believes that the regional water planning process should provide greater flexibility in development of water demand projections. TWDB rules and guidelines regarding population and water demand projections tend to confine rural and smaller urban areas to past rates of growth without allowing for consideration of alternative scenarios for future growth and economic development initiatives. Because the region has a relatively small population and water demands, the impact of a major new water user, such as a paper mill or a power plant, could dramatically alter the water supply and demand equation at a county or even basin level. There is no mechanism in the current process to provide for these potential increases, until the five year review period.
 - a. TWDB rules also build into municipal water demand projections conservation assumptions which may be unrealistic. In rural areas that already have low rates of per capita use, there often is an increase in per capita use as development occurs in the area. Assumptions about conservation in these areas that already use far less on a per capita basis than the very large and rapidly growing urban areas could have the effect of limiting future development. There are more than 40 water user groups in the North East Texas Region with per capita usage levels well below the 115 gallons per capita per day (gpcd) level set as the “floor” by the NETRWPG. Some usage rates are in the 70-80 gpcd range, a sharp contrast with large urban areas where 200 gpcd or more is not uncommon. Landscape watering, a prime target for urban water conservation programs,

- is much less prevalent in rural areas. Further, the housing stock is not undergoing rapid growth or replacement, thus reducing the potential impact of plumbing fixture efficiency standards.
- b. The NETRWPG recommends that the TWDB should revise procedures for calculating water demand reduction projections contained in its conservation scenarios by recognizing a floor for the application of demand reduction for rural and small city areas where the per capita water consumption levels are already very low.
3. Further, for the present round of planning, the TWDB established a floor for water demand at 60 gpcd. In previous rounds, the RWPGs were allowed the capability to establish individual floors, whereby Region D used an amount of 115 gpcd. It appears inappropriate to assume that usage less than 115 gpcd can be sustained over the long-term planning horizon. For those communities using in excess of 250 gallons per day, it should be noted that TWDB planning rules for this current round of planning are enabling 50 year forecasts for systems using 4 times or more than another community. This rule, as applied, is inherently unfair, and eliminates small per capita usage systems from ever having a normal usage, as it basically confines that system to always serving an area that is constraining growth. The growth cannot be higher usage (water usage generally increases as disposable income per household increases) with the TWDB methodology as presently applied, which appears to contradict the inherent conservatism generally embedded within the State water planning process.
 - a. The NETRWPG recommends that the TWDB allow the RWPGs to establish individual regional thresholds of gpcd for a given region, as this provides a more equitable solution for the establishment of future demands in the region.
 4. It is recommended that the groundwater availability determination of the NETRWPG for the purposes of the 2021 Region D Water Plan be incorporated into the determination of Desired Future Conditions (DFCs) for GMA 8 and GMA 11. Model results developed by the TWDB as well as the local hydrogeological assessment performed by the NETRWPG contains relevant information of potential utility to the ongoing DFC process. Consideration of this information could improve and enhance the efficacy of the regional planning process.

Other Agency Action

1. **TCEQ - Texas Commission on Environmental Quality Regulations.** The TCEQ minimum requirement of 0.6 gallons per minute per connection for public drinking water systems is a significant issue for many water providers in the North East Texas Region. Currently, this requirement is not directly reflected in TWDB rules relating to regional water planning. Many providers indicate that this requirement exceeds the real needs of water users and would require major additions to supplies, storage, and delivery capacities. In areas of marginal groundwater quantity, numerous wells may be required. Well spacing of approximately one half mile between wells means new well fields would occupy extensive geographic areas. In order to protect the investment in a new field from the effects of the rule of capture, providers must also purchase enough land to provide a buffer around the targeted supply. These new well fields might have to be located at remote sites, possibly triggering complaints, common in other parts of the state, of one population mining groundwater at the expense of the exporting area. Costs of new pipeline construction are also a major concern.

Methyl Tertiary Butyl Ether (MTBE) and other contaminants pose a significant threat to water supply sources in the North East Texas Region, as has happened in the past at Lake Tawakoni.

There are two dimensions to this issue. On the one hand, the NETRWPG has urged TCEQ to phase out the use of MTBE specifically, and both the state and federal regulators across the country are looking for substitute components for reformulated gasoline. Aside from the regulatory imposition of the use of MTBE (and this is only one of many potential contaminants that can find their way into drinking water sources), there is the additional lesson from the Tawakoni experience that those providers with more than one water source were best able to deal with that crisis. It is desirable for water user groups with vulnerable sources to plan on emergency access to backup supplies.

TCEQ regularly updates its list of streams, lakes and other water bodies that fail to meet the water quality standards established for specific water uses. Many of these water bodies are drinking water sources. This issue differs from the MTBE contamination episode at Lake Tawakoni, which was an accidental spill that was removed from the system in a matter of weeks. That temporary circumstance did not have a long term effect on overall water quality of the lake. The planning process needs to take account, however, of continuing problems in drinking water sources that may lead to placement on the state list such as: low dissolved oxygen levels, excessive waste loads, mercury and other contaminants, etc.

The NETRWPG has adopted the following recommendations with regard to TCEQ regulatory policies:

- a. There should be consistency between TWDB rules for Regional water supply planning and TCEQ rules for drinking water systems with regard to minimum requirements for water supply.
 - b. TCEQ should expedite the effort to replace MTBE in reformulated gasoline with additives that do not pose a risk to drinking water supplies.
2. **TRC – Concerning Oil and Gas Wells.** The NETRWPG recommends that the Texas Railroad Commission review the practices and regulations concerning the protection of the fresh water supply located in the aquifers that supply much of East Texas with fresh water as to the regulation of the drilling, maintaining and plugging of oil or gas wells with regards to public fresh water supply wells.

In a report presented December 9, 2004, by Mr. Tommy Konezak, Kilgore, Texas, and summarized here, the NETRWPG heard that approximately 40,000 wells have been drilled in the East Texas Field since it opened. Since these production wells penetrate some of the essential aquifers that supply much of the east Texas fresh water there is adequate opportunity for contamination of the fresh water supply. Current regulations require public water supply wells to have a 150 foot sanitary easement in relation to a petroleum well, but there is no similar requirement for the drilling of an oil or gas well as regards to public water supply wells. The initial drilling of a petroleum well allows for the placement of 100 feet of surface pipe on a well even though the aquifer may have 800 feet of formation. The plugging of wells termed dry holes has not kept up with the times and the existing regulations should be enforced strictly.

General Issues

1. **Marvin Nichols Reservoir Sites.** The Marvin Nichols Reservoir Sites (including but not limited to I, IA and II) in the Sulphur River Basin as designated in the 2001 plan has remained of great concern in the 2021 Plan preparation. In December 2002 the NETRWPG amended the 2001 plan

to change the designation of the sites from proposed sites to potential sites, but the issue has remained at each of the subsequent planning meetings.

In May 2005, the NETRWPG voted to completely remove the Marvin Nichols I site from the Region D Water Plan. The 2006 and 2011 Region D Plans state that the Marvin Nichols I reservoir should not be included in any regional water plan as a water management strategy and not be included in the State Water Plan as a water management strategy. For the purposes of the 2016 Region D Plan, Region D continued to oppose Marvin Nichols Reservoir, but did not challenge Marvin Nichols Reservoir as a unique reservoir site for the purposes of that plan. The NETRWPG stated that the Marvin Nichols I Reservoir was not consistent with protecting the timber, agricultural, environmental and other natural resources as well as third parties in the Region D area. Among the specific issues are basic rights of the property owners and the local governmental entities.

Based on the reasons set forth in Section 6.9 of this regional plan, it has been the position of the NETRWPG that Marvin Nichols reservoir should not be included in the 2022 State Water Plan as a water management strategy. Region D continues to oppose Marvin Nichols Reservoir, but is willing to work with other regions to obtain water supplies from the Sulphur River Basin that do not involve new reservoir construction. As noted previously, per the terms of agreement set forth from the October 5, 2015 mediation between Regions C and D and ratified by the NETRWPG at its October 21, 2015 meeting, the NETRWPG does not challenge Marvin Nichols Reservoir as a unique reservoir site for the purposes of this Plan. At the time of publication of this Initially Prepared Plan, no agreement has been made between Regions C and D for the purposes of the 2021 Region D Plan.

Subject to the comments in Chapter 6, the following recommendations should apply to all reservoirs considered in NETRWPG area:

- a. All other alternatives such as conservation, alternate available water supply sources and water resources in existing reservoirs must be exhausted prior to consideration of new reservoir development.
- b. New mitigation rules must be considered, such as, requiring the mitigation area to be acquired from the basin or region requesting the new reservoir. It is believed to be too harsh a requirement to take property from a basin for a reservoir and then acquire more property from the same basin to mitigate the property taken for the new reservoir especially at a requirement of 2-10 times the reservoir property.
- c. Property owners must be afforded more rights when confronted with acquisition of their property. These rights should include, but not be limited to, proper notification of the consideration of acquisition in a timely manner; extent of considered acquisition; the maximum compensation possible including compensation based on replacement value; royalties for water stored above acquired properties as compensation for yielding ongoing earnings potential; and the additional rights for use of mitigation lands.
- d. Local governmental taxing agencies, including school districts, should receive direct payments in lieu of taxation for waters stored in the NETRWPG area reservoirs for transfer to other regions. This is considered partial replacement value for lost revenue for the local agencies.
- e. Local government, school districts, and economic areas affected directly by the consideration of development of a reservoir site shall receive assistance for the recapture of lost resources, jobs, or income.

- f. The NETRWPG area will retain a portion of the impounded water of the developed reservoir for future use by the region.

Concerning the potential Marvin Nichols reservoir sites (including but not limited to I, IA and II) the NETRWPG does not recommend any of the potential reservoir sites for designation as a Unique Reservoir Site. Also, the potential Marvin Nichols reservoir site as described in the Reservoir Site Protection Study, TWDB Report 370, published July 2008, is not recommended by the NETRWPG for designation as a unique Reservoir Site. As noted previously, per the terms of agreement set forth from the October 5, 2015 mediation between Regions C and D and ratified by the NETRWPG at its October 21, 2015 meeting, the NETRWPG does not challenge Marvin Nichols Reservoir as a unique reservoir site for the purposes of this Plan. At the time of publication of this Initially Prepared Plan, no agreement has been made between Regions C and D for the purposes of the 2021 Region D Plan.

2. ***The Growth of Giant Salvinia.*** The NETRWPG received a report from Lee Thomas, Northeast Municipal Water District, in October of 2009, concerning the presence of Giant Salvinia within the NETRWP Area.

Giant Salvinia is an invasive floating aquatic weed and presents a significant threat to the state resources because of its severe impacts in freshwater ecosystems. It adversely affects the biodiversity and functioning of wetlands and riparian ecosystems, water quality, water storage and distribution infrastructure, recreation and amenity values. It has often been described as one of the “world's worst weeds.” Production losses combined with the control and management costs it has incurred annually reach a multi-billion dollar figure worldwide. The environmental costs will never be fully known but is well in excess of the management costs in dollar terms.

Specifically, Giant Salvinia is a free-floating, sterile aquatic fern that reproduces by vegetative growth and fragmentation. Under normal conditions, up to three lateral buds may develop on each node. Salvinia typically passes through three vegetative growth forms starting with the primary juvenile or invasive form, followed by the secondary then tertiary forms. As growth progresses through each phase, the leaves become larger, begin to fold upwards and the plants become more compact. While the primary phase is easily distinguished from the tertiary, there are many factors that can affect the development of Giant Salvinia. In a rapidly expanding population, it is quite easy to find all three forms present. Under ideal growth conditions, it has been reported that Giant Salvinia can achieve extraordinary growth rates, doubling its biomass in as little as two days.

The NETRWPG recommends that available State funds be dedicated to the control of Giant Salvinia and that governmental sources provide additional resources when available, such as enactment of complementary legislation to support control efforts and prevent distribution of Giant Salvinia. The Texas Legislature is also recommended to approve legislation that will assist local and state officials in controlling the spread and elimination of existing infestations of the plant.

It is further recommended by the NETRWPG that the local and state governments adopt the following:

2021 Initially Prepared Plan Policy Recommendations

- a. Continue to research and develop efficient, effective and appropriate control techniques.
 - b. Provide extension and education services to urban and industry stakeholders.
 - c. Support enforcement of legislation and control measures.
 - d. Ensure that Giant Salvinia is identified in local, regional, and State level pest management plans.
 - e. Coordinate with landholder, community and industry interest groups to cooperatively manage and control Giant Salvinia infestations.
 - f. Research and develop best management practices.
 - g. Monitor water pollution.
 - h. Periodically inspect all water bodies for Giant Salvinia.
 - i. Promote reporting of new Giant Salvinia infestations.

 - j. The NETRWPG also recommends that the appropriate State and Federal governmental departments adopt the following actions:
 - k. Develop awareness campaigns to discourage the transportation and/or possession of Giant Salvinia.
 - l. Eradicate infestations where feasible, and ensure Giant Salvinia control is undertaken on all federally managed land.
3. **Toledo Bend Reservoir and Pipeline.** At the previous request of the Sabine River Authority, the NETRWPG recommends that the Toledo Bend Reservoir be designated a supply strategy for meeting the upper Sabine Basin needs within the NETRWPG area and a supply option for Region C. This reservoir along, with the proposed pipeline from Toledo Bend to the Prairie Creek Reservoir will eventually be used as a supply source for the upper Sabine Basin.
4. **Concerning Mitigation.** The NETRWPG recommends that any planning group or entity proposing a new reservoir or any other water management strategy should address the subject of mitigation in conjunction with any and all feasibility studies. As evidenced in Section 6.9 of this plan, a study on possible mitigation effects should be undertaken and completed in conjunction with any and all feasibility studies. Information should include estimates of mitigation, predication ratios, and other information useful to landowners potentially affected by mitigation requirements. Also, any new reservoir proposed by a planning group must be accompanied by a map of the proposed reservoir and a map of the land proposed to be mitigated, including proposed acreage.

The NETRWPG recognizes that the rules concerning mitigation and the method of accomplishing mitigation have evolved. Some suggested references for updated mitigation rules and information are the National Wetlands Mitigation Action Plan (<https://www.epa.gov/cwa-404/national-wetlands-mitigation-action-plan>), the EPA Mitigation Banks under CWA Section 404 (<https://www.epa.gov/cwa-404/mitigation-banks-under-cwa-section-404>), the EPA Background about Compensatory Mitigation Requirements under CWA Section 404 (<https://www.epa.gov/cwa-404/background-about-compensatory-mitigation-requirements-under-cwa-section-404>) and the Corps Regulatory Program (<https://www.usace.army.mil/missions/civil-works/regulatory-program-and-permits/>). The following information was derived in part from these references. [...]

The NETRWPG further recommends that future mitigation strongly consider utilization of land that may have previously been a functional wetland. An emphasis on restoration of wetland functions can be of more significant benefit than preservation of existing functions, and could be accomplished through the use of marginal farmland or low-lying areas for mitigation purposes.

5. ***Future Interbasin Transfers from the North East Texas Region.***

The North East Texas Region currently supplies surface water to other areas of the state through interbasin transfers and is identified in the current state water plan as a likely source of additional future water supply for various entities in Region C. Specifically, the 1997 State Water Plan includes recommendations that one or more new reservoirs be developed in the Sulphur River Basin as a source of future water supply for the Dallas-Ft. Worth Metroplex. In addition to potential future water transfers from the North East Texas Region to Region C, there may also be water management strategies for meeting needs within the North East Texas Region that will involve conveyance of supplies from one river basin to another within the region.

Among its many provisions, State Bill (SB) 1 included provisions (TWC, Section 11.085) requiring the TCEQ to weigh the benefits of a proposed new interbasin transfer to the receiving basin against the detriments to the basin supplying the water. However, these provisions relate only to river basins of origin, not to the water planning regions of origin. SB 1 established the following criteria to be used by the TCEQ in its evaluation of proposed interbasin transfers: The need for the water in the basin of origin and in the proposed receiving basin based on the period for which the water supply is requested, but not to exceed 50 years.

Factors identified in the applicable approved regional water plans which address the following:

- a. the availability of feasible and practicable alternative supplies in the receiving basin to the water proposed for transfer
- b. the amount and purposes of use in the receiving basin for which water is needed
- c. proposed methods and efforts by the receiving basin to avoid waste and implement water conservation and drought contingency measures
- d. proposed methods and efforts by the receiving basin to put the water proposed for transfer to beneficial use
- e. the projected economic impact that is reasonably expected to occur in each basin as a result of the transfer
- f. the projected impacts of the proposed transfer that are reasonably expected to occur on existing water rights, instream uses, water quality, aquatic and riparian habitat, and bays and estuaries that must be assessed under TWC Sections 11.147, 11.150, and 11.152 in each basin. If the water sought to be transferred is currently authorized to be used under an existing permit, certified filing, or certificate of adjudication, such impacts shall only be considered in relation to that portion of the permit, certified filing, or certificate of adjudication proposed for transfer and shall be based on historical uses of the permit, certified filing, or certificate of adjudication for which amendment is sought.

Proposed mitigation or compensation, if any, to the basin of origin by the applicant.

The continued need to use the water for the purposes authorized under the existing permit, certified filing, or certificate of adjudication, if an amendment to an existing water right is sought.

The information required to be submitted by the applicant.

As an added protection to water rights and water users in a basin of origin, SB 1 also included a requirement that amending an existing water right for a new interbasin transfer would result in

the water right acquiring a new priority date. The effect of this requirement is to give all other water rights in the basin of origin a higher priority than the amended right.

Current state law and policy regarding interbasin transfers of surface water provide a useful starting point for inter-regional discussions on the development of a new reservoir in the Sulphur River Basin. Several of the criteria that TCEQ is to consider in its review of interbasin transfers are of particular relevance, including:

- a. Future needs for water supply in the Sulphur River Basin.
- b. Economic impacts of future reservoir development and interbasin transfer on the Sulphur River Basin.
- c. Environmental impacts.
- d. Mitigation of impacts to Sulphur River Basin and compensation for the interbasin transfer.

6. **Future Water Needs.** A widely held view within the North East Texas Region is that future water needs within the region must be assured before additional interbasin transfers are permitted. Many residents of the region express support for future reservoir development and interbasin transfers provided the region's long term water demands are met. This sentiment is supported by TWDB rules for regional water planning, which require that the evaluation of interbasin transfer options include consideration of "...the need for water in the basin of origin and in the proposed receiving basin."

The results of the supply and demand assessment for the North East Texas Region indicate that at the regional level, currently legally available surface and groundwater sources are adequate to meet projected needs through 2070. This conclusion also applies for each of the river basins within the region. More importantly, however, the supply and demand assessment indicates that numerous individual water user groups are projected to experience shortages during the planning period, including several in the Sulphur River Basin. However, a majority of these shortages are projected to occur in small communities and rural areas and it is generally believed that local water supply options will be the preferred strategy for meeting those needs.

The issue of how much water is needed in the North East Texas Region for local use is not as simple as just comparing estimates of existing water supply to projections of future water demand. It should be remembered that the water demand projections adopted by the NETRWPG and the TWDB for development of the regional plan are based largely on an extrapolation of past growth trends. While this is a common and accepted method for forecasting future conditions, there are nonetheless significant uncertainties in the projections.

Shifting demographics and economic and technological change could result in substantially higher demand for water in the North East Texas Region than is currently projected. For example, there is an observed trend over the past decade in many areas of the U.S. of higher population growth in small and medium sized cities and rural areas. This has been attributed in part to advancements in telecommunications and the evolving information and service based economy, which no longer requires a concentration of labor in large cities. Another factor is the aging of the population and the trend toward retirement in rural areas. Also, development of a new reservoir in the Sulphur Basin could, itself, act as a significant catalyst for economic development and growth in the area. In fact, some in the planning region have expressed interest in building reservoirs as part of an overall regional economic development strategy. Results from the SRBA (2014) Sulphur River Basin Feasibility Study suggest a wide variety of

potential demands in the region, many significantly higher than those estimates developed for regional planning.

Such factors suggest that the NETRWPG may want to review a possible policy recommendation regarding the definition of "need" in the basin of origin. Some members have also suggested broadening the test of need for interbasin transfers to consideration of projected needs throughout the region of origin, not just the basin of origin.

7. ***Economic and Environmental Impacts.*** The NETRWPG recommends considering potential economic and environmental impacts associated with reservoir development. For example, a significant amount of taxable private property could be removed from local tax rolls thereby increasing the tax burden on other property owners. The effects of new development are uncertain and likely include both negative and positive consequences.

Reservoir development would also alter the natural environment, perhaps resulting in significant losses of ecologically valuable wetlands and riparian areas. However, state and federal regulations require that such impacts be minimized and mitigated to the extent possible, often through the set-aside and protection of other valuable ecological resources. Some water planners in the region have expressed the concern that mitigation requirements for large reservoirs in one basin might have to be met by restricting uses of riparian areas in other basins, thus limiting future possibilities for development at those sites.

8. ***Compensation for Reservoir Development and Interbasin Transfers.*** Perhaps the most important consideration in inter-regional discussions regarding reservoir development and interbasin transfers is the question of compensation. A common view is that future interbasin transfers should be of direct benefit to both the basin-of-origin and the receiving basin. As noted in the case of future water needs, RWPG members have also expressed strong interest in the distribution of benefits to the region as well as the basin of origin. In essence, it is a question of equity or fairness. There are several ways that compensation for the transfer of additional water supplies from the Sulphur Basin could be approached. Examples include:
 - a. Retaining ownership of water rights by an entity in the basin of origin with a portion of the water transferred out of basin under long term contract.
 - b. Reserving some portion of the yield of a new reservoir for future use within the basin of origin.
 - c. Setting rates on water sales sufficient to cover both the costs of developing and operating a new reservoir plus additional revenues for other purposes (e.g., supporting the functions of the local project sponsor).
 - d. Direct payments to the governmental entities in the impacted area.
 - e. Given the significance and implications of new reservoir development and future interbasin transfers across regional lines, the NETRWPG should consider adopting a policy statement addressing the issue of future water needs within the basins of origin and/or within the North East Texas Region as a whole, economic and environmental impacts of reservoir development, and inter-regional equity and compensation issues. It should be noted the issue of compensation is applicable to all reservoir development whether an interbasin transfer is contemplated or not.
9. ***Conversion of Public Water Supplies to Surface Water from Groundwater.*** Many water suppliers in the North East Texas Region rely solely on local groundwater supplies. Most of these

suppliers will likely continue to use groundwater for future needs. However, in some areas, groundwater supplies will not be adequate to meet future needs and alternative sources of supply need to be considered. Also, in many areas of the region, groundwater supplies are of poor quality and do not meet current state and federal drinking water standards. Where groundwater supplies are available but are of poor quality, one supply strategy could be to develop additional groundwater with advanced treatment. However, because of the cost of treatment, and particularly the cost of disposal of the waste streams, acquisition of surface water supplies may be the most economically viable alternative.

Acquisition of surface water supplies would require that there be both legal and physical access to surface water supplies. Some communities may be in relatively close proximity to an existing surface water source but do not have access to those supplies because the water is fully committed to other users. In other cases, the physical infrastructure required to transport surface water from its source to a user does not exist and may be too costly.

Building regional water supply systems may offer the potential for significant cost savings in acquiring new water supplies and improving the reliability and quality of supplies. For some small water systems, regional approaches to water supply may be the only economically viable approach to conversion from groundwater to surface water. Connecting a number of independent systems can take many forms. It can include the development of regional water supply facilities, the physical consolidation or interconnection of two or more existing water systems or the management of two or more independent systems by a single entity. Some local water providers and customers may object to loss of direct local control over the system, or they may feel that cost sharing formulas are unfair. For such reasons, each proposal for a regional system must be considered on a case-by-case basis.

10. ***Wright Patman Lake/Reservoir.*** The NETRWPG recommends that before any new reservoirs are planned in the North East Texas Water Planning Area, the alternative of raising the level of the Wright Patman Lake /Reservoir be considered.

Region E

Legislative Action

1. **Rio Grande Interstate Litigation.** The FWTWPG recognizes the potential impact of diminished water-supply availability from the Rio Grande resulting from excess diversion of Rio Grande surface water and the hydrologically connected underground water downstream of Elephant Butte Reservoir that is intended for use within the Rio Grande Project. The FWTWPG considers this action contrary to the purpose and intent of the Rio Grande Compact and encourages the State of Texas to continue its pursuit of rectifying the action through whatever action is deemed most appropriate.
2. **Needed Funding for Data Collection in Rural Areas.** Rural areas need to be able to access State funding to gather the information needed to draft a substantive regional plan. This funding is needed for test wells, monitoring equipment, observation wells, modeling, and to obtain more data on the West Texas aquifers. Specific data-need recommendations for the rural areas are included in the “Data Needs” section. The FWTWPG should be allowed to request additional funding for the data needs and contract for the studies.
3. **Elimination of Unfunded Mandate.** The current regulations of the TWDB require local entities to pay for 100 percent of the administrative costs of developing the plans. This is difficult to sell when a local government has to tell its constituents that they have to do with one less full-time deputy, a lower level of funding for the library, and no new fire truck – but that they can afford to pay for a water plan. Trying to force local “buy-in” by requiring local funding causes resentment of the process and antagonism toward the plan. The State should pay for what the State thinks is important. The current 100/100 Plan is an improvement over the original concept (pursuant to which the State was to pay for 75 percent of everything, including administration), but it is still an unfunded mandate, and is still a bad idea – no matter how good the idea being funded.
4. **State Mandated Water Planning.** State mandated water planning for this region began in 1999. The water plan to be completed in 2021 will be the fifth round of planning. The details of water planning in this region are not changing dramatically over five year periods. Funding is needed for the implementation of the water supply projects presented in the Water Plan.

TWDB Action

1. **Colonias.** Far West Texas contains a significant portion of the colonias in the State of Texas. While much effort has gone into rectifying the substandard water and wastewater conditions in the region (see Section 1.10 in Chapter 1 of this Plan), many of these economically distressed neighborhoods continue to exist. The FWTWPG encourages State and Federal agencies to continue their financial programs so that all citizens, regardless of their social and economic status, can be provided with a safe and healthy living environment. The FWTWPG is specifically appreciative of the reestablishment of the TWDB Economically Distressed Area Program (EDAP) and encourages the legislature to properly fund this vital program.
2. **Regionalization.** Participants (municipal utilities) in the FWTWPG continue to maintain a robust regional relationship by helping unserved or underserved water systems become sustainable and resilient. Funding policies may impede this effort by suggesting regionalization through

consolidation of water districts. The FWPWPG finds that entities in unserved or underserved areas should still be eligible for financial assistance. The grant or loan eligibility for unserved or underserved service area should be treated independently from the provider of some services through interlocal agreements.

The FWTWPG finds that many unserved or underserved rural areas lack technical, financial, managerial, or funding to operate some field or administrative aspect required by funding agencies to maintain or provide safe affordable water or wastewater services in a sustainable manner. However, water utilities contiguous to the local utilities have the capacity to assist as many do through interlocal agreements between the utilities. The FWTWPG promotes these efforts and finds that funding mechanisms should account for regionalized relationships other than consolidation when considering funding for projects. The utilities by virtue of interlocal agreements may be able to satisfy eligibility requirements regarding experience, capacity, and sustainability, which demonstrate the capacity to provide essential and sustainable water and sewer service to the areas in need.

3. ***Re-emphasis of the Planning Function of the Regional Water Planning Group and Need for More Local Planning Initiatives.*** The planning process increasingly focuses too heavily on meeting the technical requirements of the regional water planning process and the TAC rules, to the detriment of allowing for local planning initiatives. The role of the Regional Water Planning Group no longer seems to include “planning”; rather, it meets primarily to ratify deadlines and requirements of the TWDB. Certainly, this seems to contradict the goal of Senate Bill 1. Providing for more local influence of the process and reducing the numerous, standardized checklists of the requirements of the Plan would help. The planning process and the ultimate Plan must be flexible because of the unique characteristics of the border region. The FWTWPG should have the legal ability to consider all water resources available to the Region, regardless of whether or not they are located within Texas.
4. ***Modification of Demand Numbers.*** Modification of demand numbers should be allowed further into the planning process. Demand errors may not be discovered until the supply-demand analysis is performed. The manner in which the irrigation and livestock demand numbers increase during drought scenarios is inappropriate because other factors influence the demand. For example, during a drought in Far West Texas, livestock are sold, thus reducing the overall demand on groundwater. There needs to be a better understanding of the process of how livestock, drought and water demand interact, and this understanding needs to be reflected in the demand numbers.
Contractual guidelines for the performance of regional water planning should be established at the beginning of each 5-year planning period, and not modified, especially without added funding, during that planning period. Inter-period modifications result in unscheduled distractions, time and expense, in performing the required planning procedures in which the contracts are based. Legislative modifications thus should only be implemented at the beginning of the existing planning period.

The Task 5A requirement to develop a scope of work and budget allotment for water management strategy evaluation is unfunded, time consuming, and does not result in better plan development. It is recognized that the requirement is intended to ensure that budget allotments are justifiably spent; however, there is no obvious improvement to the planning process.

Other Agency Action

1. None specified.

General Issues

1. **Stormwater / Flood Planning.** In 2019, voters approved a constitutional amendment providing for the creation of the Flood Infrastructure Fund to assist in the financing of drainage, flood mitigation, and flood control projects. The FWTWPG fully supports this new initiative and suggest that, in time, the program will grow to encompass projects that encourage retained stormwater as a vital new water-supply resource. Such planning is recognized in this 2021 Far West Texas Water Plan as a recommended water management strategy. Effective stormwater planning will be beneficial to regional water resources including aquifer recharge and optimization of surface water resources. The FWTWPG looks forward to coordinating with the State's Regional Flood Planning groups (<http://www.twdb.texas.gov/flood/index.asp#recentnews>).
2. **Plan Implementation.** Implementation of the plan's recommendations must be the responsibility of the local governments, entities, and individuals within the region. The Water Planning Group is not intended to assume a supervisory or command-and-control role. The Water Planning Group's function will be to monitor implementation and assist the local governments, entities, and individuals within the region as requested.

Region F

Legislative Action

1. *Surface water policy recommendations.*

- a. Require that any time a request is made to amend a water right, if the change involves an increase in the quantity, a change in the purpose of use or a change in the place of use, all water rights holders in the basin must be notified.
- b. The water availability models show that the Colorado River Basin is over appropriated. Region F opposes any legislation that would repeal or modify the “junior priority provision” for interbasin transfers from the Colorado River Basin (Water Code 11.085 (t)).
- c. Review the State’s surface water policy of prior appropriation to see if this is a policy that will work in Texas over the next 50 years.
- d. Recommend that State water law be amended to incorporate river basin subordinations as set forth in regional water plans.

2. *Groundwater policy recommendations.*

- a. To support retention of the Rule of Capture while encouraging fair treatment of all stakeholders, and the State’s policy that groundwater districts are the preferred method for managing Texas’ groundwater resources.
- b. To support local control and management of groundwater through confirmed groundwater conservation districts, while providing encouragement and incentives for cooperation among the groundwater conservation districts within the region.
- c. That all persons or entities seeking to export a significant amount of water from a groundwater district must submit notice of their plan to the affected GCD and the Regional Water Planning Group.
- d. All state agencies with land within GCDs must be subject to groundwater district rules and production limits and must provide information on existing and proposed groundwater projects to the relevant Regional Water Planning Group.

3. *Environmental policy recommendations.*

- a. That brush control and desalination are Region F priority strategies for protecting environmental values while developing new water supply for municipal and other economic purposes.
- b. That because of the very limited water resources in this region, there must be a carefully managed balance in the development, allocation and protection of water supplies, between supporting population growth and economic enterprise and maintaining environmental values. Consequently, while recognizing the need for, and importance of, reservations of adequate water resources for environmental purposes, the RWPG will not designate any special stream segments until the Texas Parks and Wildlife Department, working in cooperation with local entities such as groundwater districts, county soil and water conservation districts, local conservation groups and landowners, completes comprehensive studies identifying and quantifying priority environmental values to be protected within the region and the quantification of minimum stream flows necessary to maintain those environmental values.
- c. To support legislative funding and diversion of TPWD resources, for undertaking the studies described above; and

- d. To support the creation of cooperative local stakeholder groups to assist the TPWD in studies described above.
 - e. There are insufficient water supplies within Region F to meet projected municipal, agricultural and environmental needs through 2070; therefore, Region F RWPG opposes the export of surface water outside of the region except for existing contracts for such export, and will give priority consideration to needs within the region, including protection of environmental values, in evaluating any future proposed contracts for export.
 - f. Land (range and cropland) conservation and management practices (including brush management and proper follow-up grazing and burn management) are priority strategies to provide optimum conditions for most efficient utilization of the region's limited rainfall. These practices should receive top priority for funding from the Texas legislature and State agencies charged with protecting and developing our water resources.
4. **Interbasin Transfers.** The State of Texas has 23 river basins that provide surface water to users in 16 regions. The current statutes require any new water right diverted from one river basin to another to become "junior" in priority to other rights in that basin. Also, as part of the water rights application, an economic impact analysis is required for both basins involved in the transfer. These requirements are aimed at protecting the basin of origin while allowing transfers of water to entities with needs. The Region F Water Planning Group:
 - a. Supports retention of the junior water rights provision (Water Code 11.085(s) and (t)).
 - b. Urges the legislature and TCEQ to study and develop mechanisms to protect current water rights holders.
5. **Brush Control.** Brush control is recognized as an important tool in the management and maintenance of healthy rangelands that can allow for more efficient circulation of rainfall into the soil profile. This in turn can add to the effectiveness of aquifer recharge and restoration of streams and springs.
 - a. Region F supports brush control where it has the greatest effect on rivers, streams, and springflow, such as riparian zones, and areas of the region with the highest rainfall per year. Region F recognizes that the key to water restoration is managing the land to promote a healthy and vigorous soil and vegetative condition, of which brush control can play an important part.
 - b. Region F supports legislative efforts to promote funding for brush control activities for the purpose of river, stream, and spring enhancement in those areas that allow for the greatest success. The Region F Water Planning Group recommends the Texas legislature continue to support the State Water Supply and Enhancement Program through:
 - c. Funding for on-going maintenance of brush removal in the region, and
 - d. Continued cooperation with federal agencies to secure funds for brush control projects that will improve water quality.
6. **Desalination.** There are significant reserves of brackish groundwater in Region F. Region F Planning Group recommends the Texas Legislature continue to provide funds to assist local governments in the implementation of development of these water resources.
7. **Weather Modification.** There are currently two operational weather modification programs in the region – the West Texas Weather Modification Association (WTWMA) and the Trans Pecos

Weather Modification Association (TPWMA). The WTWMA estimated a 15% increase in rainfall in their targeted area during 2014 due to their rain enhancement efforts, while the TPWMA estimated a 6.8% increase. Weather modification is one of the region's recommended strategies, together with brush control and desalination, for augmenting water supply.

Recommendations include:

- a. Support legislative funding for operational programs, research, and evaluation of impact on rainfall.
 - b. Support the creation of additional programs.
8. **Reuse.** Reuse of water is a major source of "new water" especially in Region F. Reclaimed or new water developed from a demineralization or reclamation project can be stored for use in aquifers that have been depleted. Region F Water Planning Group recognizes the importance of reuse for the region and State, and recommends the following:
- a. Support legislation that will encourage and allow the reuse of water in a safe and economical manner.
 - b. Work with the State's congressional delegation and federal agencies to develop procedures that will allow reject water from demineralization and reclamation projects to be disposed of in a safe and economical manner.
 - c. Support legislation that will encourage and allow aquifer storage and recovery projects to be developed and managed in an economical manner.
 - d. Support legislation at both the State and federal levels to provide funding for demineralization, reclamation and aquifer storage and recovery pilot projects.
9. **Groundwater Conservation Districts**
- a. There are 16 established groundwater conservation districts in Region F that oversee groundwater production in more than half of the region. Region F recognizes and supports the State's preferred method of managing groundwater resources through locally controlled groundwater districts. In areas where groundwater management is needed, existing districts could be expanded or new districts could be created taking into consideration hydrological units (aquifers), sociological conditions, and political boundaries. Recommendations include:
 - b. Legislation developed for managing the beneficial use and conservation of groundwater must be fair for all users.
 - c. Rules and regulations must respect property rights and protect the right of the landowners to capture and market water within or outside of district boundaries.
 - d. The region does not support the use of historical use limits in granting permits.
 - e. The region does not support the use of groundwater fees for wells used exclusively for dewatering purposes.
 - f. The legislature should support the collection of groundwater data that would be used to carry out regional water planning.
 - g. The region also recognizes that the State has groundwater resources associated with state lands that may or may not be governed by local groundwater districts. Region F encourages the State to review its groundwater resources on all state-owned land and how those resources should be managed to the benefit of all of Texas.
10. **Funding.** The Region F Water Planning Group recognizes that the ability to implement the water plan will depend in part on the ability to fund the recommended projects. The TWDB and Texas Legislature have responded to this concern by providing different funding vehicles for water

projects, including the State Water Implementation Fund that is specifically dedicated to implementing projects identified in the State Water Plan. However, many entities are still struggling with financing water projects. For many of these entities, the regional water planning process is essential in identifying water needs and potential strategies. The Region F Water Planning Groups recommends:

- a. The State provides increased grant funding to smaller communities with limited financial resources for implementation of strategies in the regional water plans.
- b. The State should continue to fund the regional water planning process at a sufficient level to adequately address the Legislative requirements and provide a planning assessment for the many smaller communities in rural Texas.
- c. Consider providing adequate funds for the administration of the regional water planning process since the TWDB and the Legislature has continued to increase the responsibilities of the administrator.

11. **Frequency of State Water Plan Development.** The State is required by law to develop and update the State Water Plan every five years. The 2022 State Water Plan will be the fifth plan since the passage of SB1. Over the past 20 years, the regional and state water plans have captured the local water supply issues and a comprehensive path forward has been developed. In response to recommendations that the development of the State Water Plan be conducted every 10 years instead of every five years, with funding of special studies between planning cycles, the Texas Legislature provided a simplified planning option for non-census planning cycles. The simplified planning option still requires the planning groups to develop and independently verify most, if not all, of the data required under the standard methodology. The simplified planning option does not meet the intent of changing the planning cycle from every five years to ten years. It also does not provide a funding mechanism to conduct more in-depth region-specific special studies. Region F recommends that the Texas Legislature reconsider changing the planning cycle from five years to ten years with the opportunities for regions to apply for funding for special studies during non-regional planning periods.

TWDB Action

1. **Allow Waivers of Plan Amendments for Entities with Small Strategies.** Region F recommends that the Texas Water Development Board (TWDB) allow waivers for consistency issues for plan amendments that involve projects resulting in small amounts of additional supply rather than requiring the regional water planning groups to grant consistency waivers. With the change in structure of the TWDB, TWDB Directors are fully capable of making such decisions.
2. **Coordination between TWDB and TCEQ Regarding Use of the WAMs for Planning.** The TWDB requires that the Water Availability Models (WAMs) developed under the direction of TCEQ be used in determining available surface water supplies. The models were developed for the purpose of evaluating new water rights permit applications and are not appropriate for water supply planning. The TWDB and TCEQ should coordinate their efforts to determine the appropriate data and tools available through the WAM program for use in regional water planning. The TWDB should allow the regional water planning groups some flexibility in applying the models made available for planning purposes.
3. **Expand Consistency with the State Water Plan for SWIFT Funding to Include Adopted Regional Water Plans.** The current legislation specifies that a water supply project must be in the adopted State Water Plan for eligibility for SWIFT funds. To allow the TWDB sufficient time to

develop the State Water Plan, there is a one-year period between when a regional water plan is adopted and when the TWDB approves the corresponding State Water Plan. During this year period the State Water Plan is based on recommended projects in a superseded regional water plan. Under current law, if a project is included in the current regional water plan but not in the superseded plan, the project sponsor must amend the superseded plan to receive SWIFT funding. This could mean that the regions and project sponsors are expending funds for a process that has already been completed for the current regional water plan. It is recommended that the consistency requirement with the State Water Plan for eligibility for SWIFT funds be expanded to include the currently adopted regional water plan.

Other Agency Action

1. ***TCEQ – Water Quality.*** Region F has multiple water sources that are impaired for water quality. Local geologic formations contribute salts and total dissolved solids to streams and reservoirs. Some groundwater sources are affected by elevated minerals (including arsenic and fluoride), nitrates, and radionuclides. For many smaller communities, these impaired water sources are the only available water supply. Region F recognizes the challenges in developing new water supplies and/or treating the impaired water supply for these communities.
 - a. To provide greater certainty in supply development and use of impaired water sources, Region F recommends:
 - b. TCEQ authorize small, rural water suppliers who currently cannot afford the necessary capital improvements to their existing water systems and who have no reasonable available alternate water source to utilize bottled water options to the fullest extent possible and apart from the threat of TCEQ enforcement. The alternative is for the water supplier to receive grants, not loans, to construct, operate, and maintain a treatment system to reduce drinking water constituents that exceed the established MCLs of the federal drinking water standard level.
 - c. The State of Texas sponsor an oral ingestion study to determine the epidemiology of radium in potable water before enforcing minimum MCLs for radium. Region F is concerned about enforcement of State and federal regulations for radium in drinking water. A cluster cancer investigation was conducted by the Texas Cancer Registry of the Texas Department of Health and found that the cancer incidence and mortality in the area were within ranges comparable to the rest of the State. The Texas Radiation Advisory Board also expressed concern that EPA rules are “unwarranted and unsupported by public health information (specifically epidemiological data)”.
 - d. TCEQ revise its policy on requiring the use of secondary water standards, particularly TDS, when granting permits. Meeting secondary water standards should be the option of local water suppliers who must consider local conditions such as the economy, availability of water, community concerns, and the volunteer use of technologies such as point-of-use.
2. ***Railroad Commission – Oil and Gas Operations.*** Protection of the quality of the region’s limited groundwater resources is very important within Region F. Prevention of groundwater contamination from oil and gas well operations requires constant vigilance on the part of the Railroad Commission rules. Orphan oil and gas wells that need proper plugging have become a problem and a liability for the State, the oil and gas industry as a whole, and the Texas Railroad Commission. In response to this problem, the State initiated a well plugging program that is

directed by the Railroad Commission. This program enables a large number of abandoned wells to be properly plugged each year and has accomplished much by preventing water pollution.

- a. In light of the importance of local groundwater supplies to users in Region F and the vulnerability of these supplies to contamination, the Region F Water Planning Group recommends:
- b. Stringent enforcement of the oil and gas operations rules and supports the levy of fines by the Commission against operators who violate the rules.
- c. Continuing support for the industry funded, Commission supported abandoned well and plugging program.
- d. The Legislative Budget Board and the Texas Legislature provide adequate personnel and funding to the Railroad Commission to carry out its mandated responsibility to protect water supplies affected by oil and gas industry activities.
- e. The Texas Legislature restore funds to the industry-initiated and industry-funded well plugging account, which were transferred to the general revenue following the 2003 budget crisis. The well plugging fund is not tax money, but industry funds contributed for a specific purpose.
- f. The clean-up and remediation of all contamination related to the processing and transportation of oil and gas. This includes operational or abandoned gas processing plants, oil refineries, and product pipelines.

General Issues

1. **Uncommitted Water.** The Texas Water Code currently allows the TCEQ to cancel any water right, in whole or in part, for ten consecutive years of non-use. This rule inhibits long-term water supply planning. Water supplies are often developed for ultimate capacity to meet needs far into the future. Some entities enter into contracts for supply that will be needed long after the first ten years. Many times, only part of the supply is used in the first ten years of operation.
 - a. The regional water plans identify water supply projects to meet water needs over a 50-year use period. In some cases, there are water supplies that are not currently fully utilized or new management strategies that are projected to be used beyond the 50-year planning period. To support adequate supply for future needs and encourage reliable water supply planning policy recommendations include the following:
 - b. Opposes cancellation of uncommitted water contracts/rights.
 - c. Supports long term contracts that are required for future projects and drought periods.
 - d. Supports shorter term “interruptible” water contracts as a way to meet short term needs before long-term water rights are fully utilized.
2. **Instream Flows.** Region F is located in an arid area with much of the rainfall occurring in short bursts. This results in widely varying stream flows with many streams being intermittent, having water only part of the year. During drought, stream flows can be very low, but this is a natural occurrence and the ecological environment in Region F has developed under these conditions. Region F recognizes that future flow conditions in Texas’ rivers and streams must be sufficient to support a sound ecological environment that is appropriate for the area. As required under Senate Bill 3, TCEQ has established instream flow requirements for the Colorado River Basin and Brazos River Basin. No instream flow requirements have been established to date for the Pecos River Basin. Under current policy, these standards apply only to new water rights and some amendments to existing water rights. Region F supports this policy and believes it is imperative that existing water rights are protected now and in the future.

- 3. *Municipal Conservation.*** The Region F Water Planning Group recognizes the importance of water conservation as a means to prolong existing water supplies that have shown to be vulnerable under drought conditions. The Water Conservation Task Force presented to the Texas legislature a summary of conservation recommendations, including statewide municipal conservation goals. Since that time, the legislature has created the Water Conservation Advisory Council which was given multiple duties including monitoring new technologies for inclusion by the TWDB as best management practices. Considering the drought-prone nature of Region F and the role of the Water Conservation Advisory Council, the Region F Water Planning Group:

 - a. Supports that conservation targets should be voluntary.
 - b. Supports the State's efforts to encourage conservation by providing technical assistance to water users and not force conservation through mandatory goals for water use.
 - c. Recommends the State continue participation in research and demonstration projects for the development of new conservation ideas and technologies.
 - d. Supports the funding of a statewide public information and education program to promote water conservation. Water conservation can only be successful with the willing support of the general public.
 - e. Recommends consideration of excess use rates, water budget rates and seasonal rates that encourage water conservation, and recognition of water conservation as an appropriate goal in determining water rates.

- 4. *Electric Generation Industry.*** Region F encourages the use of higher TDS water for electric generation when possible to conserve available fresh water sources within the region. In addition, Region F encourages the continued assessment of generation technologies that use less water

Region G

Legislative Action

1. ***Streamlining the Processes for Project Implementation.*** Brazos G recommends that the Texas Legislature direct all State agencies involved in planning, reviewing, and/or permitting water projects to develop defined outcomes and measures of the process for evaluating, approving, permitting, coordinating and funding in order to allow timely project implementation. Processing timelines are critical factors in the development of new resources. The timely development of new sources, consistent with adopted plan strategies, is a major element of meeting the State's water demands. The amount of time required to gain approval for surface water projects is just one example of the need for more structured and cost effective processes.
2. ***Planning Process Improvements.*** In order to realize the value of the planning process, Brazos G recommends the Texas Legislature provide funding and direct the TWDB to adopt policies in the following areas:
 - a. **Strategic Initiatives.** TWDB should provide funds for studies deemed important by the regional water planning groups as strategic initiatives that should be pursued. These would be similar to the Phase 1 studies performed during the third cycle of the regional water planning process prior to development of the 2011 regional water plans.
 - b. **Planning Support for Small Systems.** Small systems are often at higher risk of losing water supply during drought, and the TWDB should provide support and funding for closer coordination with small systems through subregional planning.
 - c. **Mid-cycle Legislative Requirements.** The Texas Legislature should not change the requirements of the regional water plans after the current planning cycle has commenced without also providing additional funding for increased requirements.
3. ***Interbasin Transfers of Surface Water.*** Brazos G recognizes that Interbasin Transfers (IBTs) have been a critical component of water management in the Brazos G Area and are a necessary component of overall State water management strategies. The automatic assignment of junior rights to an interbasin water transfer is a deterrent and suppresses the development of interbasin water supply projects. We recommend the re-evaluation of the junior water rights provision that is automatically assigned to interbasin transfers. We also recommend that statutory rules, policies and administrative code be reviewed and the permitting and review process be streamlined to eliminate any unnecessary obstacles to IBTs.
4. ***Reservoir Water Management.*** Brazos G recognizes that the primary purpose of conservation storage capacity in Texas reservoirs authorized for water supply is, in fact, water supply. Although recreational and aesthetic benefits of these reservoirs may provide economic impacts locally, these are secondary incidental benefits. Therefore, we recommend that appropriate state agencies and state legislative bodies uphold the critically important primary purpose of Texas water supply reservoirs to ensure long-standing agreements and contracts are honored and deliveries are not jeopardized by secondary interests. Further, consideration of providing educational programs regarding reservoir purpose and management and other appropriate assistance for businesses and others impacted is recommended.
 - a. Additionally, Brazos G recommends that appropriate state agencies and state legislative bodies protect water supply reservoirs from future policies or rules that could cause a conversion from water supply purposes to flood control purposes (i.e. mandates of pre-releases, seasonal drawdown protocols, re-allocation of conservation storage, etc.).

TWDB Action

1. **Municipal Per Capita Water Use.** Brazos G recommends the regional water planning process be changed to separate non-residential and residential water use and look at both separately. The current practice of using a WUG's overall gallons per capita per day (gpcd) does not take into account the variation of land use or density of WUG service areas. Adopting better definitions and metrics for water planning beyond the limitations of gpcd would improve the water supply planning process as well as allow for more useful comparisons between WUGs. An example of this could be allocating expected water use per acre based on customer type, (e.g. Residential, Commercial, Institutional, and Industrial). Also, there needs to be consistency in all water use calculations, and better guidance as to whether regional planning groups are to use raw water delivered or treated water provided in calculating water use for resource planning.
2. **Consistency of Water Planning Rules with Texas Administrative Code.** Planning guidelines promulgated by the TWDB often appear to exceed the requirements of the Texas Administrative Code, and planning funds might better be utilized focused on the development of plans to provide the water supplies necessary to meet projected demands during severe droughts and not on ancillary, albeit important, issues.
3. **Plan Implementation.** Brazos G recognizes the need for expeditious implementation of the State Water Plan facilitated by the use of the State Water Implementation Fund for Texas (SWIFT).

Other Agency Action

1. None specified.

General Issues

1. **Coordination between Regional Water Planning Groups and Groundwater Conservation Districts.** Brazos G is committed to working cooperatively with Groundwater Conservation Districts (GCDs) and Groundwater Management Areas (GMAs) when developing the Regional Plan. The GCDs are requested to review population and water demand projections for their respective Districts and comment accordingly.

Brazos G recognizes modeled available groundwater (MAG) as the amount of water that the TWDB Executive Administrator determines may be produced on an average annual basis to maintain or achieve the desired future conditions (DFCs) adopted by the GCDs within a GMA. "Desired future condition" means a quantitative description of the desired condition of the groundwater resources in a management area at one or more specified future times.

GMAs are tasked with the joint planning of groundwater resources as prescribed in Texas Water Code Chapter 36.108. DFCs proposed must provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in the management area. Regional water plans are required to use the MAGs in place at the time of adoption of TWDB's state water plan in the next regional water planning cycle or, at the option of the regional water planning group, established subsequent to the adoption of the most recent plan. TWDB revised its planning rules to include a MAG Peak Factor that ensures regional water plans have the ability to fully reflect how, under current statute, GCDs anticipate managing groundwater

production under drought conditions. However, additional work and efforts to implement regional water plan projects into the groundwater availability model pumping dataset would further assist and benefit uniform, comprehensive joint planning by both groups, further defining the potential impacts and outlook for the future.

Planning of and management to DFCs as a view of the health of aquifers without unreasonably depleting aquifers is consistent with Brazos G's historical policy not to support water management strategies that would substantially deplete aquifers.

Brazos G recognizes and supports the protection of local aquifer systems accomplished through planning and management by groundwater conservation districts and those entities, at present or in the future, invested in groundwater production. Maintaining fluidity and flexibility of the planning processes is in everyone's best interest for setting goals for the future.

2. ***Conjunctive Use of Groundwater and Surface Water.*** Brazos G recognizes conjunctive use as an important management strategy to maximize use of available resources to meet water demands of the State Water Plan. As conjunctive use projects are identified, they should be recommended water management strategies for the regional water plan because Brazos G encourages development of conjunctive use projects. Conjunctive use is the systematic utilization of groundwater and surface water to optimize the combined yield from both sources. Conjunctive use seeks to maximize the advantages and minimize the disadvantages of each source when both are utilized together. Construction of surface water reservoirs, which provide new sources of water, along with judicious use of groundwater resources, which can be of finite quantity, will provide an integrated solution for the water needs of the future. Brazos G also encourages consideration of applicable water quality and environmental issues related to conjunctive use.
3. ***System Operation of Water Facilities.*** Brazos G recognizes the inherent benefit of system operations of existing water supply sources and recommends that State water planning as well as permitting continue to promote such water management strategies. System operation involves coordinated operation of two or more water supply sources (including surface water reservoirs, run-of-river diversions and aquifers) such that the system yield is greater than the sum of the individual sources.

System operation provides several significant benefits to the State, including: more effective utilization of existing infrastructure; efficient use of water supplies to meet water demand; delay or avoidance of expensive new water supply infrastructure; and reduced negative environmental impacts potentially resulting from major new projects.

4. ***Rule of Capture.*** While Brazos G recognizes that the Rule of Capture remains valid law in Texas, we also recognize that advances in science, changes in water marketing, Texas Supreme Court and case law rulings, and increasing pressures on groundwater add complexity to this issue.

The groundwater supply is being tapped to its limits, and in many instances, landowners risk loss due to depletion by over-pumping. Local management through checks and balances can most effectively and fairly regulate usage and protect individual property rights. GCDs are appropriate mechanisms to provide local management of groundwater, to fairly preserve historic use, ensure future sustainability, and protect private property rights – both the rights of those

pumping groundwater, and their neighbors. In areas without a GCD and their modification of the Rule of Capture, it is vital to engage individual local entities utilizing the resource in the current and future planning of the resource through the regional water planning group and GMA.

As such, Brazos G supports the continued management of fresh, brackish, and saline groundwater by GCDs. Planning for these groundwater resources should be continued by GCDs and TWDB in defining brackish groundwater zones.

5. ***Aquifer storage and recovery (ASR) and Aquifer Recharge Project (ARP)***. ASR projects have the potential to store large amounts of water, eliminate evaporative losses of stored water, reduce impacts to groundwater and surface water resources in times of peak demand, and minimize the impact on surface owners when compared to large reservoir projects. However, it is important to note the significant time component of ASR projects regarding injection and withdrawal. ASR historically is associated with water injection in the winter months, or times of high supply and low demand, and recovered in the following summer months, times of low supply and high demand. The longer the injected water is left in place, the greater potential for the injected water to migrate and disintegrate with the native water source. While ASR projects could be beneficial, there are a number of questions regarding ownership of the injected water, percentage of injected water that is recoverable over time, impact to existing groundwater users, and the quality to which injected water must be treated. An improved legal/public policy framework is needed to address these issues and enhance adoption. Further, we recommend that these water management strategies include sufficient hydrologic study to protect receiving aquifers.

An ARP means a project involving the intentional recharge of an aquifer by means of an injection well or other means of infiltration, including actions designed to reduce declines in the water level of the aquifer, supplement the quality of groundwater available, improve water quality in an aquifer, and improve spring flows and other interactions between groundwater and surface water and/or mitigate subsidence. ARPs have the potential to provide another avenue for water resource stewardship to benefit local and regional water supplies. Quantity and quality reporting for these projects will be vital for use in regional water planning activities to fully account for supplies available during times of drought. Brazos G encourages the use and development of ARPs to enhance and protect water resources available in our region.

6. ***Watershed Planning/Source Water Protection***. Brazos G will promote water development policies that support efforts to protect both groundwater and surface water sources by encouraging sound practices that will not adversely affect water supply or quality. We support other agencies and organizations in their efforts to encourage responsible land management and will oppose any practice or action in our watersheds or recharge zones that could adversely affect our water resources. Maintaining our watershed health, economic sustainability and community viability are all critical elements in our water planning efforts. Sensible stewardship of the areas adjacent to and around river basins, sensitive sub-basins, aquifers and re-charge zones is essential for maintaining these resources. Through source water protection, Texas can promote equitable costs for present and future water sources. Furthermore, Brazos G encourages all governmental agencies, when making regulatory/ permitting decisions or influencing decisions regarding land and resource use, to give preference to alternatives to

protect or enhance the quality of water so that such water resources may be utilized for beneficial use.

7. ***Water Pricing and Conservation.*** Acknowledging that water providers must protect a limited resource, pricing signals for both retail and wholesale water should incentivize conservation. Brazos G encourages water providers to seriously consider implementing appropriate rate structures that would be consistent with best management practices for the water industry. State agencies responsible for regulating these rate structures should provide water providers with the ability to not only cover the cost of service, but allow water rate structures to act as a tool in recovering the known future costs of developing or acquiring the next available resource.
8. ***Reuse of Wastewater Effluent.*** Brazos G promotes the full development of municipal wastewater effluent as a resilient water resource that can be responsibly used to help meet the water needs of the State of Texas. We further support state agencies and organizations in their efforts to develop technologies and permit the storage and reuse of wastewater effluent as a resilient water source.
9. ***Education.*** Brazos G believes strongly that water education is important and supports water conservation and public awareness programs at the state and local level. Research indicates that there is a strong relationship between knowledge of water sources and a willingness to conserve. Conservation can be a cost-effective means of securing future water supply.
10. ***Effects of the Federal Safe Drinking Water Act (SDWA) on Water Supply Systems.*** Brazos G recognizes the difficulty in meeting the standards of the Federal Safe Drinking Water Act for some water supply systems. Therefore, we encourage the regionalization of these systems, and/or education and proactive planning.

Region H

Legislative Action

1. The RHWPG recommends that the Legislature remove the unnecessary and counterproductive barriers to interbasin transfers that exist in current law.
2. The RHWPG recommends establishment of additional and dedicated funding to pursue necessary future efforts of the State's bay and estuary programs.
3. The RHWPG supports continued usage of the Rule of Capture as the basis of groundwater law throughout the State of Texas except as modified through creation of certified groundwater conservation districts.
4. The RHWPG supports creation of groundwater conservation districts, as necessary, by local subarea water interests. These districts provide a unique opportunity for balancing local management with regional planning through the joint planning exercises of Groundwater Management Areas.
5. The RHWPG wishes to recognize the Legislature's efforts in implementing the SWIFT program and also supports ongoing and expanded support for financing methods by the State of Texas for development of water supply projects recommended within adopted Regional Water Plans.
6. The RHWPG supports continued funding for the Groundwater Availability Modeling effort and recommends comprehensive analysis of all groundwater resources within the state.
7. The RHWPG supports funding of research and development studies associated with the efficient usage of irrigation technologies and practices.
8. The RHWPG supports water conservation and recommends that the Legislature continue to address and improve water conservation activities in the state. In addition, the RHWPG recommends the State consider improvements to statewide efforts and messaging regarding the importance of water conservation.
9. The RHWPG recommends that the State fund research into advanced conservation technologies.
10. The RHWPG recommends that the State consider legislation clarifying the liability exposure of reservoir operators for passing storm flows through water supply reservoirs.
11. The RHWPG recommends that the State direct the State Demographer's office to explore the potential changes in population distribution made possible by rapid advancements in information technology.
12. The RHWPG recommends increasing the funding of the State Revolving Funds Program in future decades and expand the program to include coverage for system capacity increases to meet projected growth for communities.

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13. Provide a mechanism to leverage federal grant programs for agriculture by providing the local matching share. Increase funding of associated loan programs and consider adding a one-time grant or subsidy component to stimulate early adoption of conservation practices by individual irrigators. Provide opportunities for joint cooperation between growers and landowners to facilitate the use of funding programs for property under long-term lease agreements.
14. The RHWPG recommends continued state and federal support of the Texas Community Development Program and increase the allocation of funds for the Small Town Environment Program.
15. The RHWPG recommends continued support and increased funding of Water and Waste Disposal Loans and Grants from USDA Rural Utilities Service at the federal level.
16. Provide technical assistance grants for the advancement of desalination water supplies and implementation of new desalination technologies available to wholesale and retail water suppliers. Provide resources for identification and feasibility assessment of opportunities for aquifer storage and recovery projects. Continue to fund appropriate demonstration facilities to develop a customer base and pursue federal funding for desalination programs.
17. Region H supports the forming of regional partnerships and encourages the State to allow them the greatest possible latitude for financing in their governing regulations. Additionally, funding opportunities should be made available to these public/private partnerships and to private nonprofit water supply corporations.

TWDB Action

1. The RHWPG recommends that the TWDB request additional and adequate funding and the adoption of the appropriate administrative procedures from the Legislature to facilitate ongoing activities of the RWPGs. Funding should be made available throughout the entirety of the planning cycle without funding gaps that make it difficult for planning groups to accomplish their ongoing efforts.
2. The RHWPG recommends that the TWDB determines, in conjunction with the TCEQ and TPWD, which specific environmental studies and analysis are required for each category of management strategy (i.e., new water right, new reservoir, etc.). Furthermore, the guidance should be added to the Planning Guidelines, so that Regional Water Planning Groups can reflect the cost of those requirements in their budgets and scopes of work. Adding environmental guidelines will also make water plans consistent across the state.
3. Provide for additional opportunities for Groundwater Management Areas and Regional Water Planning Groups to align their planning through rules that recognize the inherent differences of these processes and account for the timing of the methodologies so that changes in groundwater management can be reflected in the Regional Water Plans.
4. Work with water utilities and planners to identify the limitations of current planning approaches regarding One Water management and how these programs may best be reflected in regional plans. This will have the added benefit of promoting these options for comprehensive water management.

Other Agency Action

1. ***TCEQ*** - The RHWPG recommends that TCEQ continue routine updates to Water Availability Models across the state based on a prioritized methodology based on observed climate conditions and the overall limitation on water resources in each basin. This may be prescribed in future rulemaking. Furthermore, these rules should require that the most recent model for each basin be made available through the TCEQ website for use by both the RWPGs and the public.
2. ***TPWD*** - The RHWPG recommends that the TPWD, in cooperation with TWDB and the Regional Water Planning Groups, develop an updated analysis of ecologically significant river and stream segments, including identification of river and stream segments of unique ecological value.

General Issues

1. None specified.

Region I

Legislative Action

1. **Continued Funding by the State of the Regional Water Planning Process on a Five-Year Cycle.** The ETRWPG believes the grassroots planning effort created by Senate Bill 1 is important to the state of Texas and should be continued. In addition, the ETRWPG believes that the most fair and efficient method of financing continuation of this effort for future planning cycles is to continue funding of this effort by the state with administrative expenses for the region being provided from sources within the region. There are important tasks that need to continue. Improvement of data for the next planning cycle is very important. State funding of those efforts needs to be made available.
2. **Funding for Additional Groundwater Modeling.** The ETRWPG recommends that funding for groundwater modeling for development of desired future conditions (DFCs) and modeled available groundwater (MAGs) be provided to the TWDB. This would improve the development of DFCs and MAGs by enabling a consistent, standardized approach across Groundwater Conservation District (GCD) boundaries to groundwater modeling.

TWDB Action

1. **Flexibility in Determining Water Plan Consistency.** In previous planning cycles, the ETRWPG has expressed concern that small cities and unincorporated areas that fall under the group of “county-other” may not have specific water needs and water management strategies identified in the regional water plan due to the nature of aggregating these entities. As such, there is concern that these entities may not be eligible for state funding assistance. The ETRWPG is also concerned that there is not sufficient flexibility in identifying and implementing water management strategies as it pertains to permitting and funding such projects. Water suppliers need to have a full range of options as they seek to provide new water supplies for Texas' future. It is impossible to foresee all the possibilities for new water supplies in a planning process such as this, and changing circumstances can change the timing, amounts, and preferred options for new supplies very quickly. The inclusion of alternate strategies in regional water planning is the first step in providing this flexibility. In addition, the ETRWPG recommends that the following steps be taken to address these concerns.
 - a. The TWDB should add language to their guidance for funding that allows entities that fall under the planning limits to retain eligibility for state funding of water related projects without having specific needs identified in the regional water plans.
 - b. The TWDB and the TCEQ should interpret existing legislation to give the maximum possible flexibility to water suppliers as they seek to serve the public and provide new supplies. Changes in the timing of supply development, the order in which strategies are implemented, the amount of supply from a management strategy, or the details of a project should not be interpreted as making that project inconsistent with the regional plan.
 - c. Willing buyer/willing seller transactions of water rights and treated water should not be controlled by this regulation. Such transactions may be beneficial to all concerned and may simply not have been foreseen in the planning process.
 - d. The TWDB and TCEQ should make use of their ability to waive consistency requirements if local water suppliers elect strategies that differ from those in the regional plan.

2. **Funding.** In order to take advantage of the variety of funding options available through the TWDB, increased flexibility by the agency is needed. For example, TWDB guidance currently excludes the replacement of aging infrastructure from eligibility for funding through the existing Water Infrastructure Fund & State Water Implementation Fund for Texas. The ETRWPG recommends that the TWDB expand existing programs to assist entities with funding replacement and repairs to aging infrastructure and/or allow replacement of water supply infrastructure to be funded through the Water Implementation Fund program. This would include existing well fields, transmission lines, and storage facilities.

In addition, the TWDB does not provide for sufficient flexibility in categorical exclusions for Environmental Information Documents that are required for funding of water projects. Increasing flexibility regarding these exclusions could ease the crisis in funding available for water projects.

The TWDB offers the Economically Distressed Areas Program (EDAP) to certain areas in need of water projects. The EDAP provides grants, loans, or combination grant/loans when requirements are met:

- a. for water and wastewater services;
- b. in economically distressed areas; and
- c. present facilities are inadequate to meet residents' minimal needs.

However, requirements to meet the EDAP are very difficult for local governments and areas to administer, causing otherwise eligible local governmental entities to elect to not pursue the EDAP funding. EDAP requirements should be revised to reduce unnecessary and difficult requirements for eligibility, including requirements for model subdivision planning.

3. **Standardized Processes for Regional Water Plan Development.** The process of permitting a federal water project, such as a reservoir, is a long, detailed, and resource intensive projects that must follow federal guidelines of the National Environmental Policy Act (NEPA) process. The ETRWPG recommends that the TWDB develop guidelines for regional water planning evaluations of federally permitted water projects that will produce documentation that can be integrated and used in the NEPA process. In addition, the TWDB is encouraged to continue to develop relationships with federal authorities to allow the use of the state and regional water planning population projections in the NEPA process.
4. **Allow Groundwater Supplies to Exceed the Modeled Available Groundwater.** TWDB policy regarding the use of MAGs in regional water planning currently states that the MAG values are a cap for water supply and strategy development. However, the MAG is not necessarily considered a cap for permitting purposes by GCDs according to Chapter 36 of the Water Code. In addition, MAGs are unenforceable in areas with no groundwater regulation (i.e., with no GCDs). Chapter 36 describes the process of managing to DFCs. The MAG is an estimate of the groundwater availability based on the DFC, but Chapter 36 provides flexibility for GCDs to permit above or below the MAG based on local knowledge, usage patterns, and other factors. The ETRWPG recommends that the TWDB allow groundwater supplies to exceed the MAG in the regional water plan if the Regional Water Planning Group obtains written agreement from the relevant GCD. This approach assumes that the strategy is consistent with the management plan of the GCD, but allows for minor shortages to be covered without excessive administrative actions, such as alternate strategies that would ultimately require a plan amendment. It also

allows a GCD to apply local knowledge to account for variations in permitting approaches and usage patterns, while honoring the DFCs associated with the aquifer. This approach could also be used in areas with no GCDs if the Regional Water Planning Group demonstrates compliance with the DFCs.

Other Agency Action

1. None specified.

General Issues

1. **Water Reuse.** The ETRWPG recommends that current regulations as they pertain to the reuse of treated wastewater (i.e., water reuse) should be reviewed and amended, as necessary, to encourage the development of these resources.
2. **Uncommitted Surface Water.** The Texas Water Code currently allows the TCEQ to cancel any water right, in whole or in part, for ten consecutive years of non-use. This rule inhibits long-term water supply planning. Water supplies are often developed for ultimate capacity to meet needs far into the future. Some entities enter into contracts for supply that will be needed long after the first ten years. Many times, only part of the supply is used in the first ten years of operation.

The regional water plans identify water supply projects to meet water needs over a 50-year use period. In some cases, there are water supplies that are not currently fully utilized or new management strategies that are projected to be used beyond the 50-year planning period. To support adequate supply for future needs and encourage reliable water supply planning, the ETRWPG:

- a. Opposes unilateral cancellation of uncommitted water contracts/rights;
 - b. Supports long term contracts that are required for future projects and drought periods; and
 - c. Supports “interruptible” water supply contracts as a way to meet seasonal and short-term needs before long-term water rights are fully utilized.
3. **Clarification of Unique Stream Segment Criteria.** Consideration of the designation of stream segments of unique ecological value (unique stream segments) is a component of regional water planning throughout the State. For some, however, there is a significant concern about the use of unique stream segments because of a lack of clarity about how the designation might be used in the future. In particular, there are concerns about the possibility of restriction of property rights for landowners adjacent to designated unique stream segments. House Bill 1016 of the 84th Texas Legislature proposes language specific to the Region L Water Planning Area, providing clarification by stating that the designation of a river or stream segment as being of unique ecological value:
 - a. means only that a state agency or political subdivision of the state may not finance the actual construction of a reservoir in the designated segment;
 - b. does not affect the ability of a state agency or political subdivision of the state to construct, operate, maintain, or replace a weir, a water diversion, flood control, drainage, or water supply system, a low water crossing, or a recreational facility in the designated segment;
 - c. does not prohibit the permitting, financing, construction, operation, maintenance, or replacement of any water management strategy to meet projected water supply needs

- recommended in, or designated as an alternative in, the 2011 or 2021 Regional Water Plan, and
- d. does not alter any existing property right of an affected landowner.

The ETRWPA supports the proposed clarifications found in House Bill 1016 and recommends that these clarifications be incorporated into the regional water planning process on a statewide basis.

12. **Recommendations Regarding Water Management Strategy Prioritization.** The ETRWPG has previously commented on the prioritization process that was required in 2013 by the 83rd Texas Legislature through House Bill 4. The Region's comments and concerns about the prioritization process included in the 2016 Plan are included as Appendix 8-B of the 2021 Plan. Specific recommendations of the ETRWPG associated with the referenced technical memorandum include the following:
 - a. Project Description: Care should be taken in development of the DB17 to provide more clarity, resolve problems, and minimize risk of inappropriate scoring. In addition, a commentary section should be added to the scoring template to enable additional detail to be added by the RWPG as necessary.
 - b. Scoring to Minimize Ties: Water planning regions should be allowed to add their own unique scoring criteria to be used specifically for the purpose of breaking scoring ties.
 - c. Uniform Standard 2A: Uniform Standard 2A should be modified to provide for a maximum score for new surface water sources if modeling suggests a sufficient quantity of water would be available.
 - d. Uniform Standard 3C: This standard should be modified to eliminate the advantage in scoring given to project sponsors with only one recommended WMS.
 - e. Uniform Stand 3D: A more detailed scoring breakdown is needed to distinguish between two WUGs served and numbers of WUGs greater than two.
 - f. Projects Shared across Regions: Clarification is needed on how projects serving more than one region will be integrated into one list.
 - g. Evaluation across Water Type and Water Use Categories: The prioritization process should be modified to minimize the comparison of raw water and treated water strategies or water use categories.
 - h. Rolled up Projects: The TWDB should clarify the definition of what constitutes a rolled-up project.

In addition, the ETRWPG recommends that, for purposes of prioritization of water management strategies identified in a regional water plan, the definition of a "project" be clarified to exclude strategies that do not have a capital cost associated with them. This will significantly reduce the effort required to prioritize identified projects by eliminating the requirement to prioritize strategies that will not need to seek funding anyway.

Region J

Legislative Action

1. **Headwaters GCD Access to Groundwater under State-Owned Land.** The Texas Legislature recognizes that a landowner owns the groundwater below the surface of the landowner's land as real property (*Water Code Chapter 36.002 Ownership of Groundwater*). Water Code Chapter 36.104 states that a groundwater district may purchase, sell, transport and distribute surface water or groundwater. For the long-term benefit of meeting the future water demands of the citizens in Kerr County, Texas, the PWPG recommends that the State of Texas enter into a long-term lease agreement or contract that will allow the Headwaters Groundwater Conservation District to retain/acquire the groundwater rights located under all State-owned property within the boundaries of Kerr County. This will provide for:
 - a. better long-term management of local groundwater sources,
 - b. additional drilling sites for test/monitor wells,
 - c. more county-wide data collection and monitoring of aquifer conditions, and
 - d. increased availability of scientific data for local water management planning.
 - i. The District's enabling legislation (*Special District Local Laws Code Chapter 8842 Section 102.B*) states that the District may contract with a state agency or another governmental body to carry out any function of the District. The access right to groundwater underlying State-owned land would be included in the District's Management Plan.
2. **Regional Planning Coordination.** The two regional planning processes developed by the Legislature (Regional Water Planning and Groundwater Management Areas) have in some cases resulted in conflicting methodologies of reaching long-term planning goals. The PWPG encourages better communication between the stakeholders at earlier stages of both processes in the future. The PWPG also encourages the Legislature to examine ways in which both planning processes can better interact for the good of all citizens and economies in the impacted regions.

TWDB Action

1. **Transient Population Impact on Water Demand.** Municipal water use reports capture the total amount of water produced and distributed by the city. In concept, this volume includes water consumed by both permanent and transient populations within the community. However, the counties of the Plateau Region have a high transient influx of vacationers and hunters that frequent the more remote areas and are not likely included in the water demand estimates. Likewise, there are a high percentage of second-home owners in the rural counties that is also not accounted. Officials in the most rural counties in the Region estimate that as much as 70 percent of landowners are not permanent residents. This transient water demand likely has a significant impact on water demand estimates used by the planning group. The PWPG encourages the TWDB to consider this water-use category and develop a method for estimating its impact.
2. **Better Methodologies for Estimating Population and Water Demand.** The revision of population and demand estimates should be discussed by regional water planning groups and put before the public for several months, and then be presented to the planning groups for

consideration and adoption. This will allow more time for water users within the region to hear about the planning effort and to have input to the revisions of population, water demand, and water supply.

- a. Modification of demand numbers should be allowed further into the planning process. Demand errors may not be discovered until the supply-demand analysis is performed. Some entities or water-use categories may have been overlooked early in the process and their demands need to be added later for the supply-demand analyses to match.
3. **County-Other Demand Distribution.** In the regional water planning process, water supply demand is determined on a county and river basin basis and is then evenly distributed over the designated area. In some cases this results in a misrepresentation of the actual rural density within segments of the county-river basin area. The primary disadvantage of this is that a high-density rural area may have a legitimate need of water supply management even though the county-river basin statistical numbers do not indicate a supply shortage. A recommended water management strategy in an area such as this does not register as high of a priority as it realistically should. The PWPG therefore recommends that the TWDB develop a planning process that will justifiably recognize the high-priority needs of such County-Other areas.
4. **Irrigation Surveys.** In the regional water planning process, water supply demand is determined on a county and river basin basis and is then evenly distributed over the designated area. In some cases this results in a misrepresentation of the actual rural density within segments of the county-river basin area. The primary disadvantage of this is that a high-density rural area may have a legitimate need of water supply management even though the county-river basin statistical numbers do not indicate a supply shortage. A recommended water management strategy in an area such as this does not register as high of a priority as it realistically should. The PWPG therefore recommends that the TWDB develop a planning process that will justifiably recognize the high-priority needs of such County-Other areas.
5. **Peak-Use Management.** Drought management plans need to be developed based on peak use demand instead of annual production capabilities. The current Plan is based on drought-of-record conditions on an annual basis. While this is a good starting point in the planning process, it would be beneficial to also plan based on peak demand during a year. For example, current planning does not address water needs during the peak use period of summer months. During the summer, in many areas of the State, severe water problems may exist that are not apparent based on an annual water management plan. This results in a plan that may indicate that water supply needs are satisfied for a region, when in reality such needs may not be satisfied throughout the year. This presents a significant problem in the current planning process.
6. **MAG Availability Alternative.** Modeled Available Groundwater (MAG) is the quantitative limit set by Groundwater Management Areas for groundwater use in a given area, and is the cap for groundwater source use in regional water planning. The PWPG recommends that MAGs be used as the water planning cap unless the Planning Group obtains written permission from a Groundwater Conservation District (GCD) to allow a water management strategy to be recommended that uses more groundwater than the MAG cap.
 - a. This approach assumes that the strategy is consistent with the GCD Management Plan, but allows for minor supply shortages to be covered without excessive administrative actions;

- b. Allows the GCD to apply local knowledge to account for variations in permitting approaches and usage patterns;
 - c. The approach could also be used in areas with no GCDs.
7. **Training for New Regional Water Planning Group Members.** The TWDB is encouraged to continue providing training opportunities for new planning group members. Planning group members provide better input to the planning process when they fully understand the requirements, schedules, and the multitude of internal components of the regional plan.
8. **Emphasis on Basic TWDB Water Evaluation Studies.** In the past, the TWDB has provided significant knowledge concerning the groundwater resources in the State in the form of basic data and reports. The Board's current emphasis on groundwater modeling with its intended use as a water management planning tool is recognized as an important advancement in providing planning tools. However, the Board should not abandon its important basic data gathering and evaluation responsibility. The Board should emphasize more realistic and useful groundwater studies that include the extensive field data collection necessary for such studies.
9. **Groundwater/Surface Water Relationship.** The PWPG defines groundwater availability as a maximum level of aquifer withdrawal that results in an acceptable level of long-term aquifer impact such that the base flow in rivers and streams is not significantly affected beyond a level that would be anticipated due to naturally occurring conditions. This water supply policy definition can best be achieved when the relationship between groundwater and surface water is fully understood. The PWPG encourages the State (TWDB) to embrace this concept and focus water availability studies on this topic.
10. **Impact of Transient Water Demand in Rural Counties.** The concern pertaining to transient population water demand in rural counties was expressed in Section 8.1.8. A study is needed to quantify this impact that is not based solely on the resident population but rather considers the total count of individuals within the respective area.
11. **Underestimated Water Demand of Exotic Animals.** The PWPG investigated the water use generated by the expanding exotic animal industry within the Region (see Appendix 2B of the *2011 Plan*) and expects to build on this information to generate more accurate water demand estimates in future regional plans. The PWPG encourages the TWDB and other agencies to continue funding for this endeavor in the Plateau Region and throughout the State.

Other Agency Action

1. **Watershed Management Practices.** Selective vegetative (brush) management, as a tool to improve watershed yields and water quality, is a strategy of great interest in the Plateau Region, as well as in surrounding planning regions. A balanced approach to brush control contributes to the land's ability to absorb, retain, filter, and slow rainfall runoff. However, a narrow goal only to encourage the enhancement of runoff should be avoided.

The State should draft legislation based upon the best available science and input from all stakeholders to provide a cost-share funding program to landowners in the targeted watersheds for selective brush management and required other practices. It is generally recognized that brush infestations are the symptom of deeper ecological disturbances such as fire control,

drought, grazing mismanagement, wildlife overpopulations and other causes. As such, the cost-share program should involve a long-range contract between the State and the landowner for at least ten (10) years of post-treatment management with required brush re-invasion treatments. To accurately assess the benefits, treated watersheds will require thorough monitoring of groundwater, springs and surface waters by appropriate state and federal agencies. Information and assistance are available from the USDA Natural Resources Conservation Service (NRCS) and the Texas State Soil and Water Conservation Board.

Currently, Texas Parks & Wildlife Department (TPWD) has a program specifically developed for landowners involving brush management in areas possibly containing endangered species. As has been proven on the Kerr Wildlife Management Area (TPWD) with long-term studies, selective brush management coupled with good rangeland management can benefit endangered species and ranchers as well. It is highly likely that watershed values will fit into the same package to provide a win-win situation for all.

2. **Require Participation of State Agencies Involved with the Planning Process.** Representatives of State agencies involved in the regional planning process could effectively derail a regional plan at the end of the planning period - without attending as much as one meeting. The PWPG recommends that nonvoting members of State agencies be required to attend and provide input at every planning group meeting. If an agency's nonvoting representative does not contribute or fails to attend meetings, then that agency should not be permitted to object to or alter contents of a planning group's adopted plan. It should be noted that TWDB and TPWD staff were very active (and much appreciated) in the Plateau Region planning process.
3. **Unpermitted Withdrawals of Riparian Water.** A significant amount of unpermitted riparian water is withdrawn from rivers and their tributaries in the Region. Unpermitted pumping is particularly escalated during drought periods when increased withdrawals occur for irrigation of lawns. This water use is unaccounted for in the Water Availability Models that are developed for these waterways. State water agencies should devise a survey method to establish a reasonable estimate of these diversions.

General Issues

1. **Riparian Stewardship.** The interaction between soil, water and vegetation in the floodplains and along streambeds constitutes riparian function, which buffers and slows floodwaters, filters sediment, improves natural infiltration and recharge of alluvial aquifers, and enhances water quality. The PWPG encourages riparian landowners to learn and implement land stewardship practices that support healthy riparian function. The PWPG continues to encourage funding for projects aimed at the eradication and long-term suppression of salt cedar, *Arundo donax*, and other nuisance phreatophytes in the Regional watersheds.
2. **Conservation Management of State-Owned Lands.** All state-owned land should be managed in ways that enhance water conservation. State agencies need to take the lead in water conservation, and it should start on state-owned properties. Unless State agencies set good conservation examples for the public, any public program encouraging such conservation will likely be perceived as "do as I say, not as I do", something that never plays well. Considering

that approximately 95 percent of Texas land is privately owned, the State needs to be convincing when making recommendations to the public if it hopes to be successful.

3. **Rainwater Harvesting as an Alternative Source of Water.** Rainwater harvesting programs should be supported by the State. Rainwater harvesting is one way to meet rural or urban domestic water demands, as well as use for limited irrigation, such as vineyards, orchards or small farms under drip irrigation. Livestock and wildlife can also be provided supplemental water by rainwater harvesting. This should be widely encouraged by funded education programs and cost-share funding to individual homeowners, farmers, businesses, public entities and ranchers.
4. **Conservation and Drought Planning.** Because portions of the Plateau Region are particularly susceptible to water-supply shortages during periods of drought conditions, these areas are especially encouraged to develop conservation-oriented management plans. Likewise, water-user entities within these areas should become actively involved in the regional water planning activities associated with this Plan.
5. **Val Verde County Groundwater Management.** The PWPG considers all groundwater sources recognized in this *Plan* as being critical to the future health and economic welfare of the Plateau Region. Because of the reliance on groundwater to meet current and future water needs, the PWPG recommends that a local Groundwater Conservation Districts be formed in Val Verde County to administer sound, reasonable, and scientifically-based management objectives.
6. **GCD Management of Brackish Groundwater.** Brackish-quality groundwater is recognized State-wide as an underutilized water supply source, and programs are in place in the State's water agencies to encourage the development of this source to meet future water supply shortages. Science recognizes that most of these brackish aquifers represent a down-dip component of an aquifer's fresh water zone, and that the withdrawal of water from the brackish portion may impact the updip fresh-water portion of the same aquifer. The Legislature has declared that groundwater conservation districts are the State's recognized authority to locally manage groundwater sources. The PWPG affirms that local groundwater conservation districts have the authority and should retain the authority to manage the brackish portion of aquifers.
7. **Recharge Structures.** Recharge structures are a relatively low cost method of enhancing aquifer recharge if sited to provide adequate streambed water percolation based upon the best available science. Recharge structures such as small dams, gabions, or terraces can provide multiple benefits under ideal conditions as has been proven along the Edwards Aquifer Recharge Zone. This interest in recharge structures should be encouraged, funding provided, and perhaps some streamlining of any required permitting procedures as possible and as advised. Programs and funding should be available to identify appropriate locations for recharge structures and technical assistance provided for construction and maintenance.
8. **Edwards-Trinity (Plateau) Aquifer.** All six counties in the Plateau Region are partially or fully underlain by the Edwards- Trinity (Plateau) Aquifer. Even though a groundwater availability model (GAM) has been constructed for this aquifer, there remain many hydrological questions about the aquifer. Specific counties are embroiled in controversy pertaining to groundwater

supply availability. At issue is the disagreement about the total amount of water in the county that is available on an annual basis to meet all of the counties projected water demands now and into the future, and the amount of groundwater in excess of that amount that might be available for other purposes other than in-county use. All concerned agree that sound science is needed to assess this quantification.

A basic, unbiased, scientific study that encompasses the hydrologic characterization of the Edwards-Trinity (Plateau) Aquifer and adjacent associated aquifers (Edwards-BFZ and Austin Chalk) and the inter-formational flow between them, their contribution to surface water flows, and the historical withdrawals from the aquifers is needed in order for the local groundwater management entities and the PWPG to make sound management decisions and recommendations.

9. ***Radionuclides in Trinity Aquifer Groundwater.*** Recent groundwater sampling by groundwater conservation districts have identified elevated levels of radionuclides in the Trinity Aquifer. Further studies are needed to - identify the specific source of the radionuclides, map their areal distribution and concentration, determine their health concerns, and monitor their changing concentrations over time.
10. ***Upper Guadalupe River Basin Groundwater/Springflow Analysis.*** Surface water base flow in the three branches of the upper Guadalupe River in western Kerr County is derived almost exclusively from groundwater discharge through springs. Both the PWPG and members of Groundwater Management Area 9 recognize the need to manage groundwater use in this area where critical surface water/groundwater interaction occurs. However, developing management decisions is impaired by the lack of current understanding of how groundwater level elevations relate to spring flow rates. Only one monitoring well is in place that provides continuous water level readings, and no attempt has thus far been made to relate this recent data to spring flows. A study is needed to evaluate this critical interaction so that future management decisions can be based on a more substantial level of scientific knowledge.

Region K

Legislative Action

1. **Linking Groundwater and Surface Water Models.** The LCRWPG encourages the Legislature to: Support State funding for linking groundwater and surface water models by the TWDB during the development of the next generation of Groundwater Availability Models/Water Availability Models (GAMs/WAMs) with a priority for specific areas where groundwater and surface water closely relate and interact, such as concentrations of base-flow springs or stream-based recharge. Encourage the validation and calibration of models with data and technical reviews available from the public and private sectors.
2. **Instream Flows and Freshwater Inflows to Bays and Estuaries.** The LCRWPG encourages the Legislature to:
 - a. Provide funding for BBASC and Bay and Basin Area Expert Science Teams (BBEST) for a robust revision process for adopted environmental flow standards that produces science-based standards adequate to protect a sound ecological environment that include either the environmental flow set-asides called for by the 80th Texas Legislature through Senate Bill 3 or alternative approaches as identified by the BBASC.
 - b. Appropriate funding to support further research and field studies dedicated to updated environmental flows standards and potential strategies to meet the standards.
 - c. Appropriate funding to support the purchase and conversion of water rights to environmental uses through voluntary transactions.
 - d. Further clarify the status of environmental flows as a use category as part of the regional water planning process.
3. **Sustainable Growth.** The LCRWPG encourages the Legislature to provide for a comprehensive water sustainability study to address:
 - a. Relationships between water planning and economic growth
 - b. Long-term sustainability of water supplies
 - c. Combined impacts to all water users of fully implementing all region-recommended water management strategies
 - d. Impact on long-term food security, for Texas and national-markets, due to the conversion of water currently used for agriculture to other uses, and the depletion over time of agricultural water supplies
 - e. Best practice methods used by other states or nations to encourage sustainable economic growth and water use conservation and efficiencies by all users.
 - f. The LCRWPG further encourages the Legislature to fully fund the Water IQ public education program, adjusting the curriculum to include education on sustainability as presented in the above policy statement.
4. **Groundwater.** The LCRWPG encourages the Texas Legislature to:
 - a. Sufficiently fund TWDB programs specifically related to GMA planning, groundwater conservation, protection, enhancement, groundwater availability modeling (including development/ review/ updating/ recalibration), technical assistance to GCDs and GMAs,

and database management and accessibility. Specifically, funding should be provided to the TWDB to be allocated for GMAs for regional water planning in a manner similar to funding available to Regional Water Planning Groups; and

- b. Confirm that the State has joint liability with GCDs when GCD decisions that are made to satisfy statutory groundwater management obligations are judged to be compensable takings. Such joint liability would require that the State contribute financially to the just compensation for the taking.
5. **Potential Impacts to Agricultural and Rural Water Supplies.** The LCRWPG encourages the Legislature to:
 - a. Strengthen GCDs' abilities to reasonably protect and preserve groundwater supplies for both present and future local uses.
 - b. Maintain water policies that protect basins of origin in interbasin transfers of surface water.
 - c. Require that TCEQ provide notice to regional water planning groups of pending water supply actions.
 - d. Support funding for rural community infrastructure and water supply planning for regional planning, emergency water connections and redundant drinking supplies
6. **Dedicated Conservation Funding.** Encourage the State to adopt legislation that would allow water providers to set up a dedicated funding stream for water conservation.
7. **Brush Management.** The LCRWPG encourages the Texas Legislature to reinstate and fund the WSEP sufficiently to accomplish significant water supply enhancement throughout the areas most negatively impacted by the invasion of brushy plants and more specifically those areas experiencing significant reduction from average of their water supply reservoir storage levels. Based on the economic analysis included in the published brush control feasibility study, just for the Pedernales River watershed, \$23.6 million is needed to fully implement brush control on all acres identified for treatment (*Pedernales River Watershed Brush Control Assessment and Feasibility Study*, Lower Colorado River Authority, 2000).
8. **Coordination of Planning Cycles for Determination of Desired Future Conditions by GCDs and Generation of the Regional Water Plan by RWPGs.** Introduce legislation to alter the planning cycle for GCDs to derive DFCs within their assigned GMA so that finalized data can go into the regional water planning process in a timely and useful fashion. GCDs should not be burdened with a compressed cycle in order to accomplish this action.
9. **Regional Water Planning Process.**
 - a. The LCRWPG continues to support action by the State to provide for the integration of water quantity (supply) and water quality planning. Improvements have been made but more coordination is needed between TWDB and TCEQ, especially in the area of permitting for new water supply projects, in order to facilitate the implementation of key water management strategies. TWDB, TCEQ and other state, local, and federal entities are doing a good job of providing a clearinghouse for infrastructure funding options through the Texas Water Infrastructure Coordination Committee (TWICC). TWDB and TCEQ should also work to

- coordinate the regional planning process with the Texas Clean Rivers Program, which is a partnership that uses a watershed management approach to identify and evaluate water quality issues. The RWPGs are considering water quality issues during this revision to the plan and continued coordination with the Texas Clean Rivers Program is desirable.
- b. The LCRWPG supports action by the State to continue to fund programs for the collection of water data and groundwater availability information, which remains a critical need in the planning process. The State should provide adequate, continuous funding in order to improve the collection, development, monitoring, and dissemination of such water data.
 - c. The LCRWPG continues to support action by the State to provide assistance to the RWPGs with public information materials and administrative support.
 - d. The LCRWPG continues to support action by the State to provide for the opportunity to have improved representation of women and minorities on the RWPGs to ensure a true diversity of interests.
 - e. The LCRWPG supports action by the State to structure the planning process to include environmental needs in order to get a clear picture of the amount of available water resources for all users. Environmental needs and water supply strategies should be planned for just like Agricultural, Municipal, Industrial and other uses in the state.
 - f. The LCRWPG supports adequate and timely state funding for the regional water planning process. This funding is critical for the development of long-term, sustainable, environmentally protective and conservation-effective water management strategies as well as the collection of water data and groundwater availability information, including the refinement of modeling data, public information materials, and administrative assistance.
 - g. The LCRWPG recognizes the importance of the role of the GMA planning process in determining groundwater availability for planning purposes and supports providing the necessary resources and technical support to facilitate effective water planning.
 - h. The LCRWPG supports the Texas Open Meetings Act, which encourages participation by all interested parties in governmental decision making. All regional water planning group meeting and committee meeting agendas are posted 72 hours in advance of the meetings and are open to the public. Public inputs and concerns during all meetings are encouraged by including at least one item on each agenda for public participation/comment. Allowing participation by committee members through conference calling during the committee meetings only would facilitate the ability of members representing all of the various constituencies and areas (including remote and outlying areas) in the regional water planning group to contribute their insights to the recommendations presented to the entire regional water planning group. Under current rules, regional water planning group members in remote and outlying areas have more difficulty and face a higher bar for participation in committee meetings, including their time and expenses, due to their location. Allowing conference calling for committee meetings only would allow for greater inclusion and participation throughout the regional water planning process. The LCRWPG recommends that the State Legislature amend Section 16.053(h)(12) of the Texas Water Code to allow committees or subcommittees of a regional water planning group to include telephone conference calling by members of the committee and members of the public in order to allow full participation by those members in remote and outlying areas who are unduly burdened by travel requirements.

10. **Radionuclides in the Hickory and Marble Falls Aquifers.** The Texas Legislature should appropriate funding to support a study regarding the potential impacts of DWDR events and, if appropriate, recommendations for incorporating DWDR event planning into the State and Regional Water Plans. If appropriate, prior to the Sixth Cycle of Regional Water Planning, the TWDB should consider amending the Guidelines to the RWPGs to include additional options and examples of variance requests to address DWDR planning. If appropriate, the State should consider amending title 31 Chapters 357 and 358 of the Texas Administrative Code to incorporate DWDR event planning in the Regional and State Water Plans.

TWDB Action

1. **Groundwater.** The LCRWPG encourages TWDB to:
 - a. Seek adequate funding for GMA planning, groundwater related programs, GAM needs, and technical assistance to GCDs and GMAs;
 - b. Continue assisting GCDs in their management planning, groundwater quantity and quality research, water conservation programs, and inter-agency cooperative database management efforts (such as the Texas Water Information Network);
2. **Agriculture Water Conservation.** The LCRWPG encourages TWDB to aid the NRCS State Conservationist in targeting water conservation program funding to projects that offer the most water conservation benefit for the state. The TWDB should also offer expert testimony to the Agriculture Committees of both the Senate and the House regarding the need and effectiveness of water conservation accomplished through EQIP in order to highlight the ongoing need for adequate NRCS EQIP funding. The LCRWPG further encourages TWDB to provide leadership in encouraging corporate sponsorship of agricultural water conservation initiatives.
3. **Municipal/Industrial Conservation.** The LCRWPG encourages the continued support for efforts by the TWACAC to develop consistent methodology for calculating commercial, industrial, and institutional measurements that can successfully track water use and water savings over time for these water use sectors.
4. **Consistent Water Savings Metrics.** The LCRWPG encourages the funding of research efforts to determine water savings and incorporate the information into current and future BMPs found on the Council website. This information should be aimed at providing water suppliers with useful information for developing and implementing conservation goals and successful management strategies.
5. **Additional Financial Assistance to Reduce Water Loss.** Should market the SWIFT funding for utility water loss projects. The funds would be used to replace aging or deteriorated pipe, to replace inaccurate or incorrectly sized water meters, to enhance leak detection efforts, or to implement a pressure reduction strategy if warranted.

Other Agency Action

1. Linking Groundwater and Surface Water Models. The LCRWPG encourages TCEQ to:

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- a. Include provisions in water right permits related to inter-basin transfers that protect the basin of origin. Obtain concurrence that draft permits are consistent with the regional water planning process.
 - b. Provide the Regional Water Planning Groups with technical review summaries including WAM runs for pending permits affecting the region to ensure consistency with the regional planning process.
2. **Groundwater.** The LCRWPG encourages GCDs to:
 - a. Work cooperatively with GMA and regional planning efforts; and
 - b. Continue to expand or develop groundwater research and database efforts in order to be the primary resource for groundwater data in their jurisdiction.
3. **Potential Impacts to Agricultural and Rural Water Supplies.** The LCRWPG encourages TCEQ to provide pertinent technical reviews and draft surface water permits to affected regional water planning groups to confirm consistency with regional water plans.
4. **Agriculture Water Conservation.** The LCRWPG encourages that Congress sufficiently fund NRCS programs aimed at implementing known water conservation technology and at developing promising, new technology for water conservation.
5. **Agriculture Water Conservation.** Develop water use metrics and efficiency standards and best management practices, including monitoring and delivery systems basin-wide.
6. **Conservation Coordinators.** The LCRWPG encourages the TCEQ to amend Title 30, Texas Administrative Code (TAC) Chapter 288, so that all public water suppliers required to have a conservation plan are also required to have a designated water conservation coordinator with the duties before mentioned.
7. **Reuse.** *Texas Commission on Environmental Quality* – LCRWPG encourages TCEQ to continue its thorough review and approval processes for indirect reuse applications. It is through this application process that potential impacts, including environmental and water rights impacts, should be addressed. The LCRWPG encourages TCEQ to develop standards and best management practices for Direct Potable Reuse projects to minimize and mitigate for any risk to the environment and human health and safety.
8. **Brush Management.** The LCRWPG encourages the Texas State Soil and Water Conservation Board (TSSWCB) to request Water Supply Enhancement Plan (WSEP) brush control cost-share funding in an amount sufficient to accomplish the greatest water supply enhancement for areas that are experiencing the greatest percentage reduction from average of their water supply reservoir storage levels. The LCRWPG recognizes that the WSEP governing statute and agency rules currently limit the program to the Pedernales River watershed. The LCRWPG encourages the TSSWCB to conduct brush control feasibility studies for the Lake Buchanan, Lake LBJ watersheds, and other watersheds in the region in order to estimate the potential water yield from brush control. Based on current WSEP governing statute and agency rules, completed feasibility studies for these watersheds would “open up” eligibility for WSEP cost-share funds to landowners in these watersheds.

9. **Coordination of Planning Cycles for Determination of Desired Future Conditions by GCDs and Generation of the Regional Water Plan by RWPGs.** Each of the 16 groundwater management areas should review this proposal and submit recommendations in favor of or in opposition to the proposal.

General Issues

1. **Inter-Basin Transfers.** It is essential that current water supplies be protected and preserved to meet water commitments within the basin. Inter-basin transfers (IBTs) should follow principles established by LCRWPG in the first planning cycle, and revised in each subsequent planning cycle, for transporting water outside of the region.

In addition to the required elements for obtaining an IBT permit from TCEQ, the following nine-point policy identifies the conceptual elements and guidelines for transporting water outside of the Lower Colorado Regional Water Planning Area (LCRWPA):

- a. A cooperative regional water solution shall benefit each region.
 - b. The LCRWPA's water shortages shall be substantially reduced.
 - c. Proposed actions for inter-regional water transfers shall have minimal detrimental water quality, environmental, social, economic, and cultural impacts.
 - d. Regional water plans with exports of significant water resources shall provide for the improvement of lake recreation and tourism in the LCRWPA over what would occur without water exports.
 - e. Each region shall determine its own water management strategies to meet internal water shortages when those strategies involve internal water supplies and/or water demand management.
 - f. Cooperative regional solutions shall include consideration of alternatives to resolve conflicts over groundwater availability and should be consistent with LCRWPG's groundwater policies and the applicable rules of involved groundwater conservation districts.
 - g. Any water export from the Colorado River shall not be guaranteed on a permanent basis.
 - h. Any water export from the Colorado River shall make maximum use of flood or excess inflows below Austin and shall occur only after in-basin demands are met in the LCRWPA. Provisions and supporting technical reviews included in a draft permit to support this principle shall be reviewed by the Regional Water Planning Group to assure consistency with the planning process.
 - i. Any water export from the Colorado River shall comply with the LCRA's inter-basin water transfer policy.
2. **Agriculture Water Conservation.** The LCRWPG encourages all planning groups to adopt water plans that capitalize on the potential for partnering between water user groups to accomplish much needed water conservation in ways that share both the burdens and the benefits between water user groups.
 3. **Inflows to Highland Lakes:** The LCRWPG recommends the State continue to provide funding for studies to evaluate rainfall-runoff trends in the Upper Colorado River Basin. Further study should include elements recommended the Phase II study, including:

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- a. Develop a semi- or fully- distributed rainfall/runoff model of the study area watersheds, that would be able to simulate both surface runoff and subsurface infiltration processes. The model should account for the extent and water usage properties of the noxious brush common to each watershed.
- b. Further comprehensive study of the potential impacts of noxious brush, likely through modeling and empirical study of results generated from recently completed and published paired watershed studies.
- c. Additional small pond analysis, including expanding the analysis to the entire Colorado River watershed and defining drainage areas for the ponds to allow better quantification of the impact of each pond to its local portion of the watershed. This analysis should facilitate modeling the rainfall-runoff response for the flow network over time.
- d. Modeling future temperature and precipitation scenarios as derived from Global Climate model data.
- e. In addition, since the Phase II study was not able to obtain sufficient groundwater pumping data to evaluate its impact on streamflows, the LCRWPG recommends future studies include an analysis focusing on identifying and quantifying the potential streamflow impacts of groundwater pumping from alluvial wells.
- f. The purpose of these recommended studies is to further quantify the impacts of land use/land cover, surface water-groundwater interaction, and small impoundments on inflows to the Highland Lakes.

Region L

Legislative Action

1. **Agriculture Water Conservation Programs.** The SCTRWPG recommends adequately funding the agricultural water conservation programs provided by the TWDB.
2. **Notice of Groundwater Projects.** Where no GCD exists, the SCTRWPG recommends that the Texas Legislature develop a process requiring public notice that clearly describes the project and its economic and environmental impacts prior to initiation of the project. The public notice should be published in a newspaper of general circulation and a copy sent to the County Clerk's Office, within the county or counties in which the project is located.
3. **Groundwater Availability Model Updates.** The SCTRWPG recommends that the hydrologic information for groundwater availability models (GAMs) be updated to include available hydrologic data periodically at least every 10 years so that hydrologic data in the models include data to within 10 years of the most-recent available year of data. The SCTRWPG also recommends that sufficient funding be allocated to the TWDB to accomplish this task. Although a new drought of record has not occurred since the 1950s, the recommended update would increase the simulation period and thereby increase the overall functionality of the models.
4. **Reliance on Groundwater and Surface Water for Future Needs.** The SCTRWPG recognizes a need to rely on both groundwater and surface water resources to develop a practical and reasonable plan to address water needs within the region for the future. The SCTRWPG recommends that the state provide incentives to develop conjunctive use projects that more efficiently utilize groundwater and surface water
5. **Surface Water Availability Model Updates.** The SCTRWPG recommends that the Water Availability Models (WAMs) for the Guadalupe-San Antonio River Basin and Nueces River Basin be updated to include available hydrologic data from the most recent available year of data. The SCTRWPG also recommends that sufficient funding to accomplish this task be allocated to the TCEQ. Although a new drought of record has not occurred for the Guadalupe-San Antonio Basin since the 1950s, the recommended update would increase the simulation period by at least 50 percent and facilitate development of improved estimates of channel losses and missing streamflow records (especially those during the drought of record) throughout the watersheds. Furthermore, an extension of the Guadalupe-San Antonio WAM naturalized flow set would enhance the permitting process by providing additional hydrologic data used in the determination of the attainment frequencies associated with freshwater inflow regimes. Periodic updates to the Guadalupe-San Antonio and Nueces WAMs should be performed at least every 10 years so that hydrologic data included in the models is within 10 years of the current date.
6. **Implementation of Water Conservation Advisory Committee Recommendations.** The SCTRWPG recognizes and supports recent legislative focus on successfully passing legislation that promotes implementation of broad-based conservation measures throughout the state. The SCTRWPG supports legislation and funding to implement the HB 4 (2007) Water Conservation Advisory Committee's recommendations, particularly the statewide public education programs such as Water IQ, further definition of gallons per capita per day objectives, and the development of regional conservation data that can be used by the SCTRWPG members to

optimize future conservation efforts. The SCTRWPG also supports further efforts by the legislature and state agencies that aggressively promote practical and successful water conservation measures as an important component to future water plans.

7. **Assistance for Alternative Water Supply Strategies.** The legislature should increase funding to assist water planning regions and local water entities in developing demonstration projects for alternative water supply strategies and technologies, such as, but not limited to, desalination and direct potable reuse. By funding demonstration projects for alternative technologies, the state can help local water management entities avoid adverse impacts to the environment, to property rights, and to local socio-economic conditions. In this way, the state can play a crucial role in guiding regions to water supply solutions that meet needs. Funding to demonstrate the feasibility and value of innovative long-term strategies can help achieve cost-saving, efficient regional and local water management solutions.
8. **Assistance for Alternative Rangeland Management.** The SCTRWPG encourages the legislature to increase funding to the Texas State Soil and Water Conservation Board for the purpose of studying the effectiveness of proven rangeland management practices.
9. **Water Reuse.** The SCTRWPG encourages the legislature to amend the TWC to add a new chapter to include reuse in the state's administration of water rights.
10. **Ecosystem Health, Quality of Life, and Growth Management for Texas.** State water policies should address these issues and evaluate land use and the health of its ecosystem in order to prepare for the future and support a sustainable quality of life for all Texans.
11. **Ecologically Unique Stream Segments and Unique Reservoir Sites.** The SCTRWPG is appreciative of legislative action in the form of HB 1016. The SCTRWPG encourages the state to continue funding the TCEQ and other entities in monitoring the water quality of the five river and stream segments designated as being of unique ecological value.
12. **Instream Flow and Bays and Estuaries.** The SCTRWPG recommends that the legislature provide definitive direction on continued stakeholder involvement and scientific review of the process for evaluating potential changes to the adopted environmental flow standards.
13. **Plan Implementation.** Given the current level of effort necessary to obtain SWIFT funding from the TWDB, the SCTRWPG encourages the legislature to review all components of the SWIFT program in an effort to streamline its processes and achieve the intent of the program, which is to construct water projects in a timely manner.
14. **Water Data Collection.** The legislature should fully fund the cooperative, federal-state-local program of basic water data collection, including (1) stream gages-quantity and quality, (2) groundwater monitoring-water levels and quality, (3) hydrographic surveys and sediment accumulation in reservoirs, (4) water surface evaporation rates, (5) water use data for all WUGs, (6) population projections, and (7) Clean Rivers Program.
15. **Public Education on Water.** The state should fund a statewide program to educate the general public about water in coordination with the Agricultural Extension Service offices. The program should produce water-related materials with special components adapted for each water

planning region and should also include a component comparable to the "Major Rivers" program that would be available to the public schools through the Regional Education Service Centers and by other means.

TWDB Action

1. **Irrigation Water Needs.** The SCTRWPG recommends that the TWDB, in cooperation with the agriculture industry agencies and trade groups in Texas, undertake studies of the factors that influence decisions regarding development of irrigation water supplies for the purpose of developing the best approach to (1) project future irrigation water needs and (2) identify the instances in which regional water planning efforts would be the most appropriate mechanism for developing strategies to meet future needs.
2. **Water Use Information.** The SCTRWPG recommends that the TWDB develop the necessary programs and processes to accurately estimate annual water use for irrigation, including water use associated with agricultural activities unrelated to federal or state funding programs, and livestock watering categories.
3. **Collaboration Between Regional Planning Areas.** In order to ensure effectiveness of the recommendations developed as part of the interregional planning council, the SCTRWPG encourages the TWDB to fund and support the interregional planning group's recommendations.
4. **Groundwater Management.** To improve the evaluation of WMSs, the following are recommended as optional guidance for other RWPGs or for the TWDB to provide to other RWPGs. Recognizing the management challenges facing GCDs with multiple recommended WMSs potentially seeking permits to withdraw groundwater supplies in excess of amounts determined to be available, the SCTRWPG approved the following series of recommendations applicable at appropriate locations in the 2021 Regional Water Plan:
 - a. **Other Recommendation No. 1:** When allocated groundwater exceeds the MAG in any decade, the SCTRWPG recommends that exempt use be maintained at the full estimated amount, while the permitted and grandfathered use amounts are reduced proportionately for planning purposes so that the total firm supply equals the MAG.
 - b. **Other Recommendation No. 2:** Where potentially feasible WMSs are contemplated that require new permits and allocated groundwater exceeds the MAG, show a firm supply of zero in the plan for the WMSs for planning purposes, but explain that groundwater for the WMSs may be obtained under existing permits through the Carrizo/Wilcox Transfers WMS or under new permits issued in accordance with GCD rules.
 - c. **Other Recommendation No. 3:** Where potentially feasible WMSs are contemplated that require new permits and allocated groundwater is less than the MAG, but allocated groundwater plus WMSs exceeds the MAG, show firm supplies of no more than the difference between allocated groundwater and the MAG in the plan for planning purposes, but explain that supplemental groundwater for the WMSs may be obtained under existing permits through the Carrizo/Wilcox Transfers WMS or under new permits issued in accordance with GCD rules.

- d. **Other Recommendation No. 4:** For potentially feasible WMSs with firm supplies proportionately reduced or shown as zero for MAG compliance, evaluate facilities and costs for WMSs at both the reduced firm supply value associated with MAG compliance without transfers and at the supply amount that the sponsor seeks to develop.
- e. **Other Recommendation No. 5:** For existing groundwater supplies that are fully permitted, or grandfathered, by a GCD and are proportionately reduced in quantity for planning purposes in this plan for MAG compliance, include the following explanatory note in the regional water plan document and database at appropriate locations:
 - i. "For each aquifer in the region, the GCDs have adopted desired future conditions (DFCs). In some GCDs, full use of all groundwater supplies (permitted, grandfathered and exempt) may result in non-achievement of the DFCs for an aquifer. To ensure consistency with the DFCs, TWDB currently requires that groundwater availability for each aquifer be limited for planning purposes to the modeled available groundwater (MAG) for the aquifer. This has resulted, for planning purposes only, in adjustments to supply amounts in this plan for some areas for certain time periods. This should not be construed as recommending or requiring that GCDs make these adjustments. SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater use in accordance with their permits and it recognizes and supports the GCDs' discretion to issue permits and grandfather historical users for amounts in excess of the MAG. SCTRWPG may not modify groundwater permits that GCDs have already issued or limit future permits that GCDs may issue. If the MAG is increased during or after this planning cycle, SCTRWPG may amend this Plan to adjust groundwater supply numbers that are affected by the new MAG amount."
- f. **Other Recommendation No. 6:** For potentially feasible WMSs that have GCD permits for a portion of the needed supply and the remainder is not yet permitted, include the following explanatory note in the regional water plan document and database at appropriate locations:
 - i. "For each aquifer in the region, the GCDs have adopted desired future conditions (DFCs). In some GCDs, full use of all groundwater supplies (permitted, grandfathered and exempt) may result in non-achievement of the DFCs for an aquifer. To ensure consistency with the DFCs, TWDB currently requires that groundwater availability for each aquifer be limited for planning purposes to the MAG for the aquifer. This has resulted, for planning purposes only, in adjustments to permit amounts, and a lack of firm water available for future permits in this plan for some areas for certain time periods. This should not be construed as recommending or requiring that GCDs make these adjustments or deny future permit applications. SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater use in accordance with their permits and it recognizes and supports the GCDs discretion to issue permits and grandfather historical users for amounts in excess of the MAG. SCTRWPG may not modify groundwater permits that GCDs have already issued or limit future permits that GCDs may issue. If the MAG is

increased during or after this planning cycle, SCTRWPG may amend this Plan to adjust groundwater supply numbers that are affected by the new MAG amount."

5. ***Coordination of Regional Water Planning and Groundwater Management Area Process.*** The SCTRWPG experiences significant planning issues caused by Regional Water Planning Rule §357.32(d) that requires the use of MAGs (which are appropriately developed to be consistent with DFCs) which lack the necessary definition or detail to be sufficient for determining available groundwater for existing supplies and recommended WMSs. While Regional Water Planning Rule §357.32(d)(3) allows an RWPG to apply for a MAG Peak Factor which, if approved, would "allow temporary increases in annual availability for planning purposes," this does not address the long-term considerations included in managing to the DFC.
 - a. The difference between groundwater permits being managed at the groundwater district level to the more-comprehensive DFC, and RWPGs utilizing the MAG as a cap, creates a regional water planning scenario whereby WUGs are unable to rely on the full permitted production volume during a 50-year regional water planning horizon. In instances where a WUG baseloads a water supply, the full volume is utilized each year, leaving no volume remaining for utilization of the MAG Peak Factor. This has the potential for limiting an existing supply or a recommended WMS based on the MAG. This limitation then necessitates that a WUG create an additional WMS in the Regional Water Plan, which it does not intend to implement, just to ensure that there are no "paper" shortages in the plan.
 - b. The SCTRWPG recommends that 31 TAC §357.32 be revised to allow RWPGs to:
 - c. Develop groundwater availability volumes based on MAGs, DFCs, and factors similar to those utilized by GCDs in issuing permits under Section 36.1132 of the TWC; and
 - d. Use the groundwater availability volumes to evaluate existing water supplies and recommended water management strategies.
6. ***Groundwater Availability Model Updates.*** The SCTRWPG recommends that a systematic process be put in place, such that changes to the TWDB GAMs are documented, and that those changes are associated with official numbered versions of each of the GAMs. Furthermore, these rules should require that the most recent version for each basin GAM is made available through the TWDB website for use by both the RWPGs and the public at all times.
7. ***Water Reuse.*** The SCTRWPG recommends that the state, through the TWDB and TCEQ (1) financially support research for determining appropriate technology and risk mitigation approaches necessary to significantly expand water reuse with appropriate protections for public, environmental, and worker health and (2) assist the funding and development of incentive programs to advance water reuse projects.
8. ***Recognition of Potential Additional Stream Segments of Unique Ecological Value.*** The SCTRWPG recommends increased TWDB funding to be allocated for future planning cycles to conduct analyses necessary for designation of additional stream segments.
9. ***Population and Water Demand Projections.*** The SCTRWPG encourages greater TWDB flexibility through relaxation of current methodological assumptions holding county, regional, and state

population projection totals fixed. Water demand projections used in developing the Regional Water Plan should be consensus figures arrived at by using TWDB data along with local input from the cities, counties, and groundwater districts.

10. **Planning Requirements.** There should be no changes in the regional water planning process or additional planning requirements, except through the formal rule-making procedure. Contract requirements should be established and in place prior to submission of grant proposals.

Other Agency Action

1. **Surface Water Rights Monitoring and Administration.** The Texas Commission on Environmental Quality (TCEQ) should be adequately staffed and funded to ensure the legal and appropriate use of permitted surface water rights through comprehensive monitoring and administrative programs, such as the Watermaster program. Such monitoring and administrative programs should address surface water/groundwater interactions in cooperation with appropriate GCDs and the administration of water rights. The SCTRWPG reaffirms its commitment to safeguarding the integrity of water rights.
2. **Surface Water Availability Model Updates.** The SCTRWPG recommends that a systematic process be put in place, such that changes to the TCEQ WAMs are documented, and that those changes are associated with official numbered versions of each of the WAMs. Furthermore, these rules should require that the most recent version for each basin WAM be made available through the TCEQ website for use by both the RWPGs and the public at all times.
3. **Support of Habitat Conservation Plans.** The SCTRWPG supports the state's use of habitat conservation plans as approved by the United States Fish and Wildlife Service (USFWS), resulting in the issuance of an incidental take permit that allow for protection of endangered species and the development of adequate water supplies for the region.
4. **Water Quality.** The SCTRWPG recommends that the TCEQ and local governments promote practices and/or regulations to avoid or mitigate threats to water quality in surface water and groundwater sources.

General Issues

1. **Groundwater Sustainability.** The SCTRWPG recommends the management of groundwater resources toward the goal of long-term sustainability and recommends WMSs that support achievement of this goal. This recommendation is intended to help protect all users of aquifers, to help preserve the long-term integrity of aquifers, and to build awareness of the effects of groundwater production and development on those aquifers. The SCTRWPG recommends that anyone implementing any WMS within this Regional Water Plan relying on groundwater resources incorporate groundwater monitoring of both quantity and quality, recharge protection and enhancement, conservation methods and related practices, as determined to be appropriate by local groundwater districts. Where no district exists, the developer should monitor impacts and, when appropriate, take corrective action consistent with the goal of groundwater sustainability.
2. **Shared Groundwater Resources Among Planning Regions.** In the event a water user group (WUG) relies on a groundwater WMS to meet the WUG's demand during the planning period and the strategy would have a significant impact on a groundwater resource shared among

planning region(s), notice should be provided to the region(s) of the proposed date of implementation and anticipated acre-feet per year demand on the shared groundwater resource.

3. **Reliance on Groundwater and Surface Water for Future Needs.** The SCTRWPG recognizes a need to rely on both groundwater and surface water resources to develop a practical and reasonable plan to address water needs within the region for the future. The SCTRWPG recommends that the state provide incentives to develop conjunctive use projects that more efficiently utilize groundwater and surface water.
4. **Land Stewardship.** The SCTRWPG encourages state support of implementing or enhancing land stewardship management practices that are shown to augment the quality and quantity of surface water and groundwater resources.
5. **Seawater Desalination.** The SCTRWPG supports the funding of state and/or federal programs for research and potential incentives to make desalination more affordable.
6. **Rainwater Harvesting and Other Systems.** The SCTRWPG encourages the study of the effectiveness of rainwater harvesting systems in both commercial and residential new development. The SCTRWPG recommends the TWDB develop programs to educate the public and building industry on the potential benefits of rainwater harvesting, water reuse, and gray water systems.
7. **Weather Modification.** Weather modification could potentially support water supplies in general and the state should continue to support the existing Weather Modification Program and the development of innovative technology.
8. **Drought Management.** Recognizing that implementation of appropriate WMSs is a matter of local choice, the SCTRWPG recommends due consideration of economically viable drought management as an interim strategy to meet near-term needs through demand reduction until such time as economically viable long-term water supplies can be developed.
9. **Instream Flows and Bays and Estuaries.** The SCTRWPG encourages completion of the Texas Instream Flow Studies Program and improvement of the state's bays and estuaries freshwater inflow studies.
10. **Environmental Studies.** The SCTRWPG recommends that additional environmental studies be undertaken to be able to evaluate the effects of such projects on the ecosystems that rely on inflow to San Antonio Bay and flows of the Guadalupe River and San Antonio River watersheds.
11. **Funding.** The SCTRWPG encourages more active state support in solicitation of federal funding for development of new water supply sources, especially when the need for which is based in part upon federal requirements, such as the Endangered Species Act.
12. **Access to State Water Data.** There should be adequate funding for the critical roles of TWDB, TCEQ, and TPWD in facilitating access to water data essential for local and regional planning and plan implementation purposes.

13. **Public Education on Water.** The SCTRWPG supports continued funding to support implementation of the Water Conservation Task Force recommendations, particularly the statewide public education programs, such as Water IQ. The SCTRWPG encourages partnerships with local and regional utilities who have active education programs, and who may have the ability to offer students opportunities for field trips to water supply, treatment, and other facilities. The SCTRWPG also encourages partnership with the Texas American Water Works Association Education Division.

Region M

Legislative Action

1. Recent droughts make it imperative that the Rio Grande Water Availability Model (WAM) is continually updated. The naturalized flow record in the current Rio Grande WAM extends from 1940 through 2000. The period from 1999 to 2000 was among the most severe modeled droughts, and the drought that continued into 2003 is likely a new drought of record, which could significantly impact water availability, as the basis for planning. The state should fully fund the revision and update to the WAM to extend the naturalized flows using the most current data available.
2. The State should appropriate sufficient funds to the Texas Railroad Commission to allow for capping abandoned oil and gas wells that threaten groundwater supplies.
3. The Texas Legislature should continue to provide technical and financial assistance to implement WMSs identified in the regional water plans. In 2013 the Texas legislature passed House Bill 4 and Senate Joint Resolution 1, which created the State Water Implementation Fund for Texas (SWIFT) and the State Water Implementation Revenue Fund for Texas. Companion legislation, House Bill 1025, provided \$2 billion in initial funding for SWIFT from the state's Economic Stabilization Fund. In November of 2013, Texas voters approved the funding to support the implementation of projects recommended by the State Water Plan.
4. The Texas legislature should appropriate funds to continue the regional water planning process.

TWDB Action

1. The Lower RGV farmers, as a result of the uncertainty of surface water delivery and the fact that most farmers do not own their own Rio Grande water rights, are limited in their ability to provide collateral for loans for on-farm conservation and improvements. This makes many of the loan programs currently available to farmers in other regions of Texas difficult for farmers in the RGV to access. Additionally, in many cases the types of irrigation conservation measures used in the RGV are installed underground as opposed to aboveground equipment like center pivots used in the High Plains. The TWDB and the State of Texas should work with farmers in the region to develop loan programs that enable on farm water conservation specific to this region.

Other Agency Action

1. **TCEQ** – The Texas Commission on Environmental Quality (TCEQ) should work with the Rio Grande RWPG to review rules on converting water rights from one use to another and considers appropriate rule amendments, if necessary. As water rights are converted from irrigation to municipal and the WAM is updated, it is recommended that the conversion factor rule and operational rules should be reevaluated. These conversions may have the effect of reducing the water volume demand on the Rio Grande making the reservoir system less efficient. In this regard it is noted that the conversion rule is an administrative rule in that it was not required in the court adjudication in the Valley Water Suit Judgement or in the adjudication case covering the Middle Rio Grande.

General Issues

State Issues

1. The RWPG recommends continued evaluation of the connection between the pumping of groundwater and its impact on surface water, specifically the impact of pumping groundwater in the Pecos and Devils River watersheds on the flows into the Rio Grande. For example, current studies indicate that up to one-third of the recharge flows into Amistad Reservoir depend on flow from the Pecos and Devils River valleys and Goodenough Springs, which are shown to be sensitive to groundwater pumping. There is not a Groundwater Conservation District (GWCD) in the area, which could provide a mechanism for local management of these interconnected resources. The RWPG recommends enforcement of current laws and consideration of new laws establishing rules for permitting that acknowledge the impact of groundwater development on surface water.
2. There is not a mechanism or entity in the RGV to accept on-farm irrigation conservation loans from the TWDB and to lend those funds to farmers for on-farm water conservation.
3. Stakeholders who depend on the water of the Rio Grande should be involved and informed of state activities related to negotiations with Mexico regarding implementation of the 1944 Treaty.
4. The State should continue to consider the impacts of climate change in terms of Regional Water Planning and future water supplies. The US Bureau of Reclamation's Lower Rio Grande Basin Study evaluated climate impacts on the availability, which should be considered in future planning efforts.
5. The State should encourage IBWC to give Mexico delivery credit of the annual minimum 350,000 acft from only the named tributaries as stipulated in the 1944 Treaty.
6. The State should assist in finding new technical and financial resources to help the region combat Arundo Donax, aquatic weeds, and salt cedar and thus protect its water supplies. The Region M WPG encourages funding for projects aimed at eradicating Arundo Donax, aquatic weeds, and salt cedar in the Rio Grande watershed and for ongoing long-term brush management activities. The USDA has studied and implemented a biological controls program with costs and quantified water savings, and continued work and monitoring is recommended WMS in this Plan.
7. The State should continue providing technical and financial resources to fully develop the regional groundwater availability models. The Brackish Resources Aquifer Characterization (BRACS) 2014 report for the Lower RVG is an essential resource as brackish groundwater desalination continues to be one of the recommended strategies to meet future needs.
8. The RWPG encourages entities within the region to cooperate to resolve water issues through such means as regional water and wastewater utilities. The Rio Grande Regional Water Authority, Southmost Regional Water Authority, and other entities have pursued and, in some cases, constructed regional projects that supply water to multiple cities.
9. The formation of GWCDs should be encouraged as a means to protect groundwater supplies, which are increasingly being tapped as a new water supply for municipal, industrial use, and

mining use. As the aquifers in Region M are more extensively developed, the impact of pumping has started to be seen in spring flows and drawdown. Region M supports new and expanded groundwater districts to protect the regional groundwater resources, and recommends that the state provide continued technical assistance regarding formation, structure, and technical basis for GCDs to operate meaningfully.

10. Educational programs for farmers, ID Boards of Directors, and ID employees are recommended and should be supported by the TWDB, TCEQ, and universities in Texas.
11. The Rio Grande Center for Ag Water Efficiency (Texas AWE) flowmeter demonstration and calibration facility is intended to be available as an educational, testing, and calibration resource for districts looking to implement or expand their metering programs. Continued funding and expanded use of these facilities is recommended by the Region M WPG.
12. Continued evaluation of ID infrastructure is recommended, including the work that has been done by Texas A&M University through the Texas Water Resource Institute and the ID Engineering and Assistance Program. This program has assisted districts in mapping and evaluating the current state of their conveyance systems and rates of urbanization. These measures can assist districts in prioritizing improvements so that the greatest gains are made with the least cost.
13. Since the Watermaster program collects funds through assessed fees, it is recommended that the fund balances be rolled over into the operating budget for the next fiscal year. It is also recommended that the Watermaster Advisory Committee (WAC) continue to oversee the Watermaster budget.
14. It is recommended that the United States be officially recognized as a water user by Mexico and allocate water to the United States as a part of its annual water allocation process.

Federal and International Issues

1. The State of Texas, the US Congress, and the IBWC should renew efforts to ensure that Mexico complies with Minute 309 and set in place means to achieve full compliance with the 1944 Treaty, including enforcement of Minute 234, which addresses the actions required of Mexico to completely eliminate water delivery deficits within specified treaty cycles. Water saved in irrigation conservation projects in Mexico should be dedicated to ensure deliveries to the Rio Grande pursuant to the 1944 Treaty under Article 4B(c) and Minute No. 309.
2. The United States and Mexico should reinforce the powers and duties of both sections of the IBWC pursuant to Article 24(c) which provides, among other things, for the enforcement of the Treaty and other agreement provisions that "... each Commissioner shall invoke when necessary the jurisdiction of the Courts or other appropriate agencies of his Country to aid in the execution and enforcement of these powers and duties."
3. Projects funded by national and international agencies to modernize and improve the facilities of IDs in the Rio Grande Basin should be supported and given priority. In particular, both countries should support continued grant funding for conservation projects.

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4. The conservation irrigation projects are authorized through the Bureau of Reclamation for improvement to the irrigation systems of IDs in the Rio Grande Basin in the United States should be supported, and the US Congress should be encouraged to appropriate money to pay for approved projects.
5. For purposes of clarity, the IBWC should approve a Minute setting out the definition of “extraordinary drought” as that term is implicitly defined in the second subparagraph of Article 4B(d) as an event that makes it difficult for Mexico “ ... to make available the run-off of 350,000 acre feet (431,721,000 cubic meters) annually.” A drought condition occurs when there is less than 1,050,000 acft annually of runoff waters in the watersheds of the named Mexican tributaries in the 1944 Treaty, measured as water enters the Rio Grande from the named tributaries, of which the US 1/3 share is 350,000 acft. For better water management in the Lower Reach of the Rio Grande, downstream of Anzalduas Dam, both countries should reaffirm operational policies that Mexico continue to take its share of waters through the Anzalduas canal diversion at the Anzalduas Dam or account for its water at that point, including any diversions by Mexico from the proposed Brownsville Weir Project storage, to the extent of its participation in the project and at other points of diversion by Mexico users downstream of Anzalduas Dam.
6. IBWC should convene a binational meeting of water planners and water use stakeholders in both countries within 6 months following completion of the annual water accounting where an annual deficit in flows from the named Mexican tributaries in the 1944 Treaty occurs. This meeting would be designed to share data and information useful in planning for water needs and contingencies in the intermediate future.
7. IBWC should restore the Rio Grande below Fort Quitman, Texas.
8. The IBWC should assume all local and regional financial responsibility for upkeep and maintenance of El Morillo Drain.
9. IBWC should coordinate bilateral efforts to review and evaluate existing sources of data regarding groundwater development in both countries in the Rio Grande Basin below Fort Quitman to the Gulf of Mexico. This effort should be focused on the potential impact on surface water supply in the Rio Grande watershed, with the goal of pursuing such actions as may be necessary to evaluate present conditions and promote programs protecting the historical surface water supply in affected regions.
10. Regional watershed planning should be encouraged on both sides of the Rio Grande throughout the basin, including efforts to promote binational coordination of long-range water plans.
11. Interstate compacts between affected states in Mexico, similar to the Rio Grande compact and Pecos River compact between affected states in the United States, which deal with apportionment of available water supply from the Rio Grande and its tributaries to each state consistent with existing domestic and international law, should be encouraged.
12. The Rio Grande RWPG joins with the far West Texas and Plateau RWPGs to encourage funding for projects aimed at eradicating Arundo Donax, salt cedar, and aquatic weeds in the Rio Grande

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watershed and for ongoing long-term brush management activities. These activities are not constrained to state or national boundaries and would benefit from widespread support.

13. The RWPG supports US Congressional legislation that authorizes the US State Department to report to Congress periodically on the status of Mexico's deliveries of water to the Rio Grande for US use.
14. The IBWC should give Mexico delivery credit of the annual minimum 350,000 acft from only the named tributaries as stipulated in the 1944 Treaty.
15. The El Morillo drain system does not currently convey the design flow; the pump station is capable of operating at the design flow, but the channel is not currently capable of conveying the full design flow. The RWPG recommends that the IBWC and CILA make the necessary improvements to convey the design flow.

Region N

Legislative Action

1. **General Policy Statement 1.** The Texas Legislature is urged to declare that: i) all water resources of the State are hydrologically inter-related and should be managed on a “conjunctive use” basis, wherever possible; ii) existing water supplies should be more efficiently and effectively used through improved conservation and system operating policies; and iii) water re-use should be promoted, wherever practical, taking into account appropriate provisions for protection of downstream water rights, domestic and livestock uses, and environmental flows.
2. **General Policy Statement 2.** The Coastal Bend Region urges the legislature to support policies and programs to meet Texas’ water supply needs and prepare for and respond to drought conditions.
3. **General Policy Statement 3.** The Texas Legislature should continue to provide funding to the TWDB and other state agencies for water conservation initiatives, including providing technical support and assistance to water user groups regarding public information programs; leak detection, repair, and monitoring; meter testing and replacement; or other best management practices included in their water conservation programs.
4. **General Policy Statement 4.** The Texas Legislature is urged to make funds available through regional water planning groups and groundwater conservation districts to educate the citizens of Texas about all water issues, as well as the powers and benefits of groundwater conservation districts and river authorities.
5. **Desalination Statement 1.** The Texas Legislature is urged to direct TCEQ to investigate the current regulatory status of the “concentrate” or “reject water” produced during the desalination of brackish ground water, brackish surface water and seawater in industrial and municipal treatment processes and compare these to reject water requirements for the oil and gas industry and arrive at a common set of standards for the disposal of these waste products so that safe, economical methods of disposal will be available to encourage the application of these technologies in Texas.
6. **Desalination Statement 2.** The Texas Legislature is urged to direct TCEQ to work with TWDB and TPWD to develop information on the potential environmental impacts of concentrate discharges from seawater desalination facilities and to facilitate the permitting of these discharges into tidal waters where site specific information shows that minimal environment damage would occur.
7. **Desalination Statement 3.** Texas Legislature is urged to amend state laws governing the procurement of professional services by public agencies in order to allow municipalities, water districts, river authorities, smaller communities, and other public entities, provided that they have the expertise, to utilize alternative delivery methods for public work projects, including desalination facilities. For example, some large-scale desalination facilities are now constructed using CMAR (Construction-Management-at-Risk) or Public Private Partnership methods, allowing for a cost-effective transfer of project risks to the private sector.

8. **Desalination Statement 4.** The Texas Legislature is urged to support evaluation, construction and implementation of a pilot desalination plant to quantify and qualify impacts of operating a brackish or seawater desalination facility in the Coastal Bend Region.
9. **Groundwater Management 1.** The Texas Legislature is urged to provide funding for the Groundwater Management Areas to support their efforts towards the evaluation of groundwater availability and desired future conditions.
10. **Groundwater Management 2.** The Texas Legislature is urged to require the Texas Railroad Commission to cooperate with TWDB and TCEQ to encourage oil and gas well drillers to furnish e-logs, well logs, and other information and require logging of shallow, groundwater bearing formations to facilitate the better identification of aquifer characteristics.
11. **Groundwater Management 3.** The Texas Legislature is urged to appropriate additional funds for TWDB to continue and expand their statewide groundwater data program and to appropriate new funds, through regional institutions such as Texas A&M University–Corpus Christi and Texas A&M University–Kingsville, for a regional research center to support research, data collection, monitoring, modeling, and outreach related to groundwater management activities in the Coastal Bend region of Texas.
12. **Groundwater Management 4.** The Texas Legislature is urged to prohibit in-situ mining in aquifers that serve as drinking water sources for residents and livestock.
13. **Groundwater Management 5.** The Coastal Bend Region recognizes the importance of considering groundwater and surface water interaction when managing water resources and evaluating development of future water supplies. The Region encourages the Texas Legislature to provide funding for groundwater conservation districts and groundwater management areas to consider protection of springs and groundwater-surface water interaction when considering new DFCs.
14. **Surface Water Management.** The Texas Legislature is urged to provide funding for the development of periodic updates to surface water availability models, (WAMs), with specific consideration to updating the Nueces River Basin WAM through any new drought period.
15. **Regional Water Resources Data Collection and Information Management.** The Texas Legislature is urged to provide SB1 planning funds, through the Coastal Bend RWPG to a regional institution, to support regional water resources data collection and activities to develop and maintain a “Regional Water Resources Information Management System” for the Coastal Bend area.
16. **Role of RWPGs.** The Texas Legislature is urged to continue funding the TWDB to provide support for state mandated regional water planning group activities.

TWDB Action

1. **Groundwater Management 1.** The TWDB, TCEQ, and the Texas Railroad Commission are urged to expand and intensify their activities in collecting, managing, and disseminating information on groundwater conditions and aquifer characteristics throughout Texas.

2. **Groundwater Management 2.** The TWDB is urged to continue funding for updates to the groundwater availability models at least on a five-year basis, specifically the Groundwater Management Area 16 Groundwater Flow Model covering the Coastal Bend Region.
3. **Groundwater Management 3.** The TWDB is urged to consider local mining projects (such as natural gas from the Eagleford shale) when developing mining water demand projections in the future for regional planning. The TWDB is urged to continue to provide guidance on how planning groups should address local mining water projects, especially those associated with gas production from the Eagleford shale or other projects with variable, and often indeterminate production timelines.

Other Agency Action

1. **Groundwater Management 1.** TCEQ is urged to amend rules and regulations to require routine water quality monitoring, by a non-partisan third-party, of mining operations and enforcement of water quality standards, including in situ mining and those with deep well injection practices.
2. **Surface Water Management.** The TCEQ is urged to enforce existing rules and regulations with respect to water impoundments.

General Issues

1. **Groundwater Management 1.** The Railroad Commission is urged to continue its identification of improperly plugged and abandoned oil and gas wells that adversely affect local groundwater supplies. Funding should be provided to address known problems and/or force responsible parties to properly plug abandoned wells, including oil, gas, and water wells.
2. **Reservoir Sites.** The Lavaca Navidad River Authority (LNRA) is considering an off-channel variation of Stage II Lake Texana (Palmetto Bend) which was previously included in the 2016 Region N Plan but removed from active study in this plan. The Coastal Bend Region supports initiatives by Region P and Lavaca Navidad River Authority (LNRA) regarding the Lavaca Off-Channel Reservoir Project. However, the Coastal Bend Region does not recommend specific tracts of land for the Lavaca Off-Channel Reservoir Project and encourages those wishing to pursue such options to discuss with property owners and mediate if necessary, prior to Federal, State, or local recommendation of specific location(s).

Region O

Legislative Action

1. **Funding for Project Implementation.** Since the completion of the 2001 Llano Estacado Regional Water Plan, it has been clear that some level of state financial assistance will be required, both within the Llano Estacado Region and statewide, in order to implement regional water plans within the necessary time frame. The LERWPG strongly supports the funding that the Texas Legislature has provided for project implementation in past years and would like to thank the State Legislature for creating the State Water Implementation Fund for Texas (SWIFT) loan program. The SWIFT program is a step in the right direction, and the LERWPG acknowledges that progress toward funding the necessary projects has been made; however, the LERWPG recommends that additional programs be developed that offer direct grants and/or cost-sharing arrangements in addition to the SWIFT loan program. The LERWPG recommends ongoing dedicated funding for regional and state water plan projects so that future generations of Texans will have reliable, affordable, and sufficient water supplies.

The LERWPG supports the implementation of high-priority projects and would like to see additional funding that supports completion of the following.

- a. Implement water management strategies and water conservation incentives for water user groups in the plan, including loans for public water supply, brush management, water conservation, and research/development of drought tolerant species and more efficient technologies.
- b. Increase state public education programs regarding water supply issues, including water conservation.
- c. Continue funding and support for collecting, processing, and analyzing water data needed to continually update and improve understanding of regional surface and groundwater resources.
- d. Continue funding and support for ongoing development and improvements to the TWDB's groundwater availability models (GAMs) for Texas' major and minor aquifers and to the Texas Commission on Environmental Quality's (TCEQ) water availability models (WAMs). The LERWPG fully appreciates and recognizes the importance of the systematic review and integration of new data and effects of changed conditions for re-calibration and re-verification of these models, and feels it is imperative that funding for this effort be sustained.

TWDB Action

1. **Non-Municipal Water Demand Estimation.** The LERWPG recommends including RWPG interest group representatives in developing methodologies for non-municipal demand projections. For example, this could include convening a committee of industrial business sector representatives, including steam-electric, mining, and manufacturing interests, to assist the TWDB staff in developing the methodology for industrial water demands, and an agriculture committee for determining irrigation and livestock water demands. The proposed involvement by non-municipal water user groups in developing water demands could achieve better acceptance of the TWDB-calculated water demands by local interests in future regional water planning cycles.
2. **Planning Process Improvements.** The LERWPG proposes that the planning process be expanded to allow for more involvement from the regional water planning groups and for the use of

higher quality local data, where available. In particular, the LERWPG feels that some of the TWDB's per capita water use and population projection data are over-estimates and that the planning process would be improved if the planning group is able to revise these data. Additionally, the LERWPG would like to be able to override the TWDB's prescribed approach when justified.

3. In the previous planning cycle, the LERWPG recommended that the planning process be reviewed by a representative stakeholder group made up of planning group members from across the state, leading to revisions to better capture region-specific characteristics as part of the planning process. The LERWPG appreciates that the TWDB has convened this recommended group in this planning cycle.

Other Agency Action

1. None.

General Issues

1. **Planning Issues for the Agricultural Sector.** The LERWPG is concerned that the regional water planning process seems to be geared more toward industry and municipalities and does not help solve the problems faced by the agricultural industry. While municipal and industrial water users exhibit a more consistent water use pattern, agricultural water use fluctuates greatly. This fluctuation is a product of commodity prices, growing season rainfall, and other factors. The agricultural projections do not reflect actual conditions, showing large water needs in the agricultural sector that skew the region's water needs, given that producers will change their practices as mandated by economics and groundwater availability. Water supply projects cannot be developed and implemented in the agricultural sector as they can in other sectors, and thus the planning process does not satisfy agricultural water needs. The LERWPG would like there to be a better way to adapt the process to allow greater participation for agricultural interests in order to realistically address the water supply problems.
2. **Right of Capture and the Common Law Doctrine of Groundwater Ownership.** The LERWPG supports the Rule of Capture, as modified by the rules and regulations of existing underground water conservation districts, and the Common Law Doctrine of Groundwater Ownership. The planning group also supports the state's policy that groundwater conservation districts are the preferred method of managing groundwater and supports the creation and operation of groundwater conservation districts that are organized and function under Chapter 36 of the Texas Water Code (TWC). Accordingly, the planning group urges the Texas Legislature not to empower the regional water planning groups with any water management or regulatory authority.
3. **Playa Best Management Practices.** As stated in the 2016 Llano Estacado Regional Water Plan (LERWP), the LERWPG supports and encourages the development and voluntary use of BMPs to improve recharge and protect playa basins from siltation, including creating and preserving native grass buffers on land surrounding playas to maintain their water holding capacity.
4. **Control of Invasive Species.** The LERWPG supports implementing brush management and controlling invasive aquatic vegetation as water conservation practices, and particularly supports and encourages the efforts by the Canadian River Municipal Water Authority (CRMWA) and City of Lubbock to control salt cedar as a means to increase water flow to the reservoirs for

water supply and environmental purposes. Further, the LERWPG encourages similar controls be applied to other watersheds regionally, including those of Lake Mackenzie and White River Lake. The LERWPG also supports controlling invasive aquatic species, such as zebra mussels, quagga mussels, golden algae, milfoil and hydrilla, giant salvinia, and water hyacinth that have the potential to negatively impact the state's lakes, reservoirs, and existing infrastructure.

5. ***Protection of Springs and Seeps.*** The LERWPG supports the voluntary protection of springs and seeps as they exist within the region, and encourages landowners to use BMPs to protect and maintain these important water resources for not only their practical value for livestock and wildlife, but as aesthetic resources as well. As addressed in past appendices to LERWPGs, there are some remnant spring and seep sites across the region that can experience renewed flow in instances of strong rainfall such as in the spring and early summer of 2019.

A key to the continued life of springs and seeps in the Southern Plains region is maintaining soil health on both farmlands and rangelands across the breadth of the Llano Estacado Region. This is a voluntary measure on the part of landowners, but where soil health is sufficient for the maintenance of improved organic matter in the soil, the ability of the soil to absorb water is greatly enhanced, as further described in *Springs and Seeps of the Llano Estacado Region* prepared by LERWPG member Jim Steiert and included as Appendix H.

6. ***Voluntary Water Transfers.*** The LERWPG supports voluntary water transfers between willing buyers and sellers, but stresses that the governing bodies of each involved party would have to agree before any potential connections and/or transfers could be made.

Region P

Legislative Action

1. **Ongoing Regional Water Planning Activities.** LRWPG recommends that the Texas Legislature establish funding through TWDB for the continued existence of the regional planning groups. Duties would include the monitoring of ongoing research needed for planning, environmental flows issues, processing of any amendments to the plan, and monitoring the implementation of new crop varieties and other improvements to the area's primary water user. Provision of funding to pursue the above activities will allow LRWPG to continue to perform a vital role as a focal point for communications with the various user groups concerning development of and amendments to the Plan.

TWDB Action

1. None.

Other Agency Action

1. **Limits for Groundwater Conservation Districts.** LRWPG recommends that the sustainable yield of the aquifer be used for all GCDs in the region as the upper limit of groundwater available for all uses. For this region, there is no overall surplus of groundwater and any use of groundwater contemplated outside the region must be subject to the same rules for protection of the basin of origin as interbasin transfers of surface water.

General Issues

1. **Environmental Issues.** LRWPG has developed a water plan to address projected water demands within LRWPA. The construction of the Palmetto Bend Stage II reservoir was considered as a potential management strategy to meet shortages in the 2001 and 2006 RWPs for LRWPA. Currently, LNRA has designated an off-channel option in its Management Plans as the desired future treatment of the Lavaca River. The LRWPG has recommended this off-channel reservoir option in this regional water plan. An off-channel reservoir would negate many of the environmental issues related to an on-channel impoundment. The LRWPG understands that any water development strategy can have potentially threatening environmental consequences and fully supports efforts to identify and mitigate environmental impacts to the extent feasible.
2. **Inter-Regional Coordination.** LRWPG recognizes the importance of inter-regional coordination efforts in order to maintain consistency among regional plans in situations where activities in one region may impact water availability or project needs in other regions. As population growth and other development activities increase over time for much of the state, multi-regional issues and the ability of regions to cooperatively use resources will be of increasing importance. The LRWPG supports the creation of the Interregional Planning Council established by House Bill 807 from the 86th Legislative Session.
3. **Conservation Policy.** LRWPG supports existing and continued efforts of agricultural producers to practice good stewardship of surface and groundwater resources of the state of Texas. The group recognizes the economic impact that a voluntary conservation effort has on the viability of agricultural operations on the area. The group also supports state and federally funded programs administered by NRCS, State Soil and Water Conservation Board, and local soil and water conservation districts. These programs provide technical and financial assistance to

agricultural producers to install, manage, and maintain structural and vegetative measures for increased irrigation efficiency and overall water conservation. They are important in successfully implementing the regional water plan.

4. ***Sustainable Yield of the Gulf Coast Aquifer.*** LRWPG supports the use of the sustainable yield of the Gulf Coast aquifer as the amount of water that should be included in the State Water Plan for areas using the Gulf Coast aquifer. While the Gulf Coast aquifer has significant amounts of water in storage, the aquifer levels impact regional agricultural, municipal, and manufacturing users directly. Mining of significant quantities of water over and above the sustainable annual yield will result in increasing pumping costs for all users. Increased pumping costs will have the most detrimental effect on agricultural production in the area.
5. ***Support of the Rule of Capture.*** LRWPG supports the Rule of Capture as the means of allocating groundwater in the state of Texas. The group also supports TWDB in its monitoring activities with regard to well static-water levels and groundwater pumpage in the state.
6. ***Groundwater Conservation Districts.*** LRWPG supports the control of groundwater resources through local control by GCDs. The group supported the creation of the Coastal Bend GCD in Wharton County and the Texana GCD in Jackson County. The primary focus of the districts is to preserve and protect groundwater supplies in their respective counties for future generations. The management plans for the Coastal Bend and Texana districts were certified by TWDB on September 28, 2004. The Coastal Bend GCD management plan was updated most recently on April 10, 2018, and the Texana GCD management plan was updated most recently on February 18, 2016. The group supports the further efforts of these districts as a tool in protecting water resources in the Lavaca Regional Water Planning Area.
7. ***Establishment of Fees for Groundwater Export.*** LRWPG supports the use of the sustainable yield of the Gulf Coast aquifer as the limit for water development and the use of groundwater conservation and management districts as the appropriate method of retaining local control of groundwater. LRWPG understands large-scale groundwater mining of the Gulf Coast aquifer is in direct opposition to the concept of sustainable yield for aquifer management. While local entities are encouraged to conserve groundwater for the use of local citizens with attendant impacts on the local economy, the citizens of large municipalities at great distances from the Lavaca area are relatively insulated from the impacts of increasing depth to the water table for the Lavaca area. Use of an export fee may help offset the negative impacts of transferring water out of the basin to other areas of the state. The transfer of water by export would be permitted provided the transfer would not present the possibility of unreasonable interference with the production of water from exempt, existing, or previously permitted wells. This could potentially be administered by the local GCDs through their regulations.