

CHAPTER 8

POLICY RECOMMENDATIONS AND UNIQUE SITES

This page intentionally left blank.

8 POLICY RECOMMENDATIONS AND UNIQUE SITES

An important aspect of the regional water planning process is the opportunity for the Far West Texas Water Planning Group (FWTWPG) to discuss water policy issues that are important to this Region and provide recommendations for the improvement of future water management planning in Texas. The recommendations are designed to present new and/or modified approaches to key technical, administrative, institutional, and policy matters that will help to streamline the planning process, and to offer guidance to future planners regarding specific issues of concern within the Region. This chapter also addresses recommendations of “Ecologically Unique River and Stream Segments” and consideration of “Unique Sites for Reservoir Construction”. The FWTWPG approves of the legislative intent of the regional water planning process and supports the continuance of water planning at the regional level.

WATER MANAGEMENT POLICY

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. **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. The FWTWPG should be allowed to request additional funding for the data needs and contract for the studies.
3. **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.
4. **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.
5. **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 FWTWPG 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.

REGIONAL WATER PLANNING PROCESS

- 1. 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.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. 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.

6. 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.
7. 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.

WATER RESEARCH NEEDS

- There is a concern that some historical irrigation pumpage reported by the TWDB is inaccurate. The TWDB should continue its irrigation surveys and attempt to improve the estimates with the assistance of local irrigation and groundwater districts.
- A study should be performed to evaluate the feasibility and potential benefits of rechanneling a segment of the Rio Grande below Fort Quitman.
- A significant amount of groundwater is produced from Cretaceous limestone formations in southern Brewster County that exist outside the boundary of the Edwards-Trinity (Plateau) Aquifer. The communities of Lajitas, Terlingua, and Study Butte, along with other rural users rely on this sole source of water to meet their daily needs. An aquifer characterization study is needed to estimate its vertical and lateral extent, sustainable yield, and water quality.
- Provide funding for the development of the Transboundary Aquifer Model of the Mesilla Bolson. Ciudad Juarez has built the infrastructure needed to capture groundwater from the Conejos Medanos Aquifer, which is the southern extension of the Mesilla Bolson. Development of this regional model will allow water quantity and quality impacts to be evaluated.
- An Integrated Rio Grande Data Management System allowing for regional coordination of the Rio Grande for better management and decision making of irrigation releases and flood control is needed. Also, the Rio Grande Project delivery system is in need of a real-time water quantity and water quality monitoring system so that agriculture, municipal and regulatory agencies can better manage and account for the water. The benefits would improve efficiency, flood control management and warnings of contaminant releases. Thus, information systems analysis and hydrologic operations modeling are recommended.
- Provide research funding for the Rio Grande Salinity Management Coalition (RGSMC). The goal of the coalition is to ultimately reduce salinity concentrations in the Rio Grande, which will allow increased beneficial use of the water for agriculture, urban and environmental purposes.

ECOLOGICALLY UNIQUE RIVER AND STREAM SEGMENTS

As a part of the planning process, each regional planning group may include recommendations for the designation of Ecologically Unique River and Stream Segments in their adopted regional water plan (31 TAC 357.8). The Texas Legislature may designate a river or stream segment of unique ecological value following the recommendations of a regional water planning group. As per §16.051(f) of the Texas Water Code, this designation solely means that a state agency or political subdivision of the State may not finance the actual construction of a reservoir in a specific river or stream segment designated by the legislature under this subsection.

Stream segment designation is to be supported by a recommendation package that includes a physical description, maps, photographs, literature citations, and data pertaining to each candidate stream segment. In accordance with the TWDB's rules, the following criteria are to be used when recommending a river or stream segment as being of unique ecological value:

- **Biological Function** – Segments which display significant overall habitat value including both quantity and quality considering the degree of biodiversity, age, and uniqueness observed and including terrestrial, wetland, aquatic, or estuarine habitats;
- **Hydrologic Function** – Segments which are fringed by habitats that perform valuable hydrologic functions relating to water quality, flood attenuation, flow stabilization, or groundwater recharge and discharge;
- **Riparian Conservation Areas** – Segments which are fringed by significant areas in public ownership including state and federal refuges, wildlife management areas, preserves, parks, mitigation areas, or other areas held by governmental organizations for conservation purposes under a governmentally approved conservation plan;
- **High Water Quality/Exceptional Aquatic Life/High Aesthetic Value** – Segments and spring resources that are significant due to unique or critical habitats and exceptional aquatic life uses dependent on or associated with high water quality; or
- **Threatened or Endangered Species/Unique Communities** – Sites along segments where water development projects would have significant detrimental effects on state or federally listed threatened and endangered species, and sites along segments that are significant due to the presence of unique, exemplary, or unusually extensive natural communities.

A quantitative assessment of how recommended water management strategies (Chapter 5) potentially could affect flows deemed important by the FWTWPG to the Ecologically Unique River and Stream Segments (EURSS) was performed by considering the following criteria:

- Distance from the strategy supply source to the EURSS
- Does the strategy groundwater supply source (aquifer) contribute flow to the EURSS
- Does the strategy surface water supply source (Rio Grande) contribute flow to the EURSS
- Percent diminished flow to the EURSS resulting from implementation of the strategy

The FWTWPG chooses to respect the privacy of private landowners and therefore recommends only parts of river and stream segments that are within the management boundaries of State and National Parks, and

conservation lands managed by the Texas Nature Conservancy and Trans Pecos Water Trust at their request. Notification was given to the public that the FWTWPG would consider river and stream segments on private property only if requested by the landowner.

In previous planning periods, the FWTWPG has recommended three streams that lie within the boundaries of state-managed properties, four within National Park boundaries, and specified streams managed by the Texas Nature Conservancy and Texas Pecos Land Trust as listed below (Figure 8-1). All segments are recommended by the TWDB in the 2017 State Water Plan, and all recommended segments except the Alamito Creek (Texas Pecos Land Trust) and Terlingua Creek (Big Bend National Park) have been designated by the Texas Legislature. Recommendation packages for these two remaining segments were included in the *2011 (Alamito Creek – Appendix 8F) and 2016 (Terlingua Creek – Appendix 8A) Far West Texas Water Plans*, and their continued recommended status is consistent with this *2021 Plan*. Appendix 8A of this *Plan* provides the TPWD response to the continued recommendation of Alamito and Terlingua Creeks as Ecologically Unique Stream Segments in Far West Texas.

- **Rio Grande Wild and Scenic River (Big Bend National Park)** primarily depends on flows from the Rio Conchos and from springs and spring-fed tributaries along the Big Bend stretch of the River. No strategies occur in the aquifers that feed the springs and tributaries. Historically, the Upper Rio Grande (El Paso and Hudspeth Counties) flowed almost unabated through the Far West Texas stretch of the River. However, with today's upstream water demands on the River, only a minor flow from the Upper Rio Grande segment manages to periodically contribute to the Lower Rio Grande segment (Presidio, Brewster and Terrell Counties). Strategies presented in this plan do not significantly reduce this downstream contribution.
- **Terlingua Creek (Big Bend National Park)** flows six miles within Big Bend National Park to its confluence with the Rio Grande immediately downstream of Santa Elena Canyon, an area of exceptional aesthetic value. The National Park Service has declared Terlingua Creek to have exceptional aesthetic value. The Proserpine shiner is a desert fish with a limited geographic range and is threatened primarily by decreased spring flows, habitat loss and alteration of flow regimes. The species only occurs in Texas and was designated as critically threatened by TPWD in 1977. Terlingua Creek is within the natural habitat of this species.
- **McKittrick Canyon and Chosa Creek (Guadalupe Mountains National Park)** are spring fed at high elevations of the Capitan Reef Aquifer within the Park. Potential groundwater pumped and transported from the Diablo Farms section of the Capitan Reef Aquifer (Strategy E-16) is separated from the spring sources by distance, faulting and elevation. Also, pumping and transport of groundwater from the Bone Spring – Victorio Peak Aquifer in the Dell City area (Strategy E-17) is also separated from the spring sources by distance, faulting and elevation. Thus, pumping from these aquifers should have no impact on aquifer sources that contribute to springflow.
- **Cienega Creek (Chinati Mountains State Natural Area)** is spring fed from high elevation exposures of the Davis Mountains Igneous Aquifer. Only strategy E-59 in Fort Davis considers a pumping project in the Igneous Aquifer. However, the pumping location is distant from this designated stream and thus will have no water flow impact.
- **Alamito and Cienega Creeks (Big Bend Ranch State Park)** are spring fed from high elevation exposures of the Davis Mountains Igneous Aquifer. Only strategy E-59 in Fort Davis considers a

pumping project in the Igneous Aquifer. However, the pumping location is distant from this designated stream and thus will have no water flow impact.

- **Alamito Creek (Trans Pecos Water Trust)** is spring fed from high elevation exposures of the Davis Mountains Igneous Aquifer. Only strategy E-59 in Fort Davis considers a pumping project in the Igneous Aquifer. However, the pumping location is distant from this designated stream and thus will have no water flow impact.
- **Independence Creek (Texas Nature Conservancy – Independence Creek Preserve)** is spring fed from the Edwards-Trinity (Plateau) Aquifer. Only one strategy (E-65 Terrell County Mining) considers additional well pumping from the Edwards-Trinity (Plateau) Aquifer. However, this pumping is distant from this designated stream segment and thus will have no water flow impact.
- **Madera Creek, Canyon Headwaters of Limpia Creek, Little Aguja Creek, and Upper Cherry Creek (Texas Nature Conservancy – Davis Mountains Preserve)** are spring fed from high elevation exposures of the Davis Mountains Igneous Aquifer. Only strategy E-59 in Fort Davis considers a pumping project in the Igneous Aquifer. However, the pumping location is distant from this designated stream and thus will have no water flow impact.

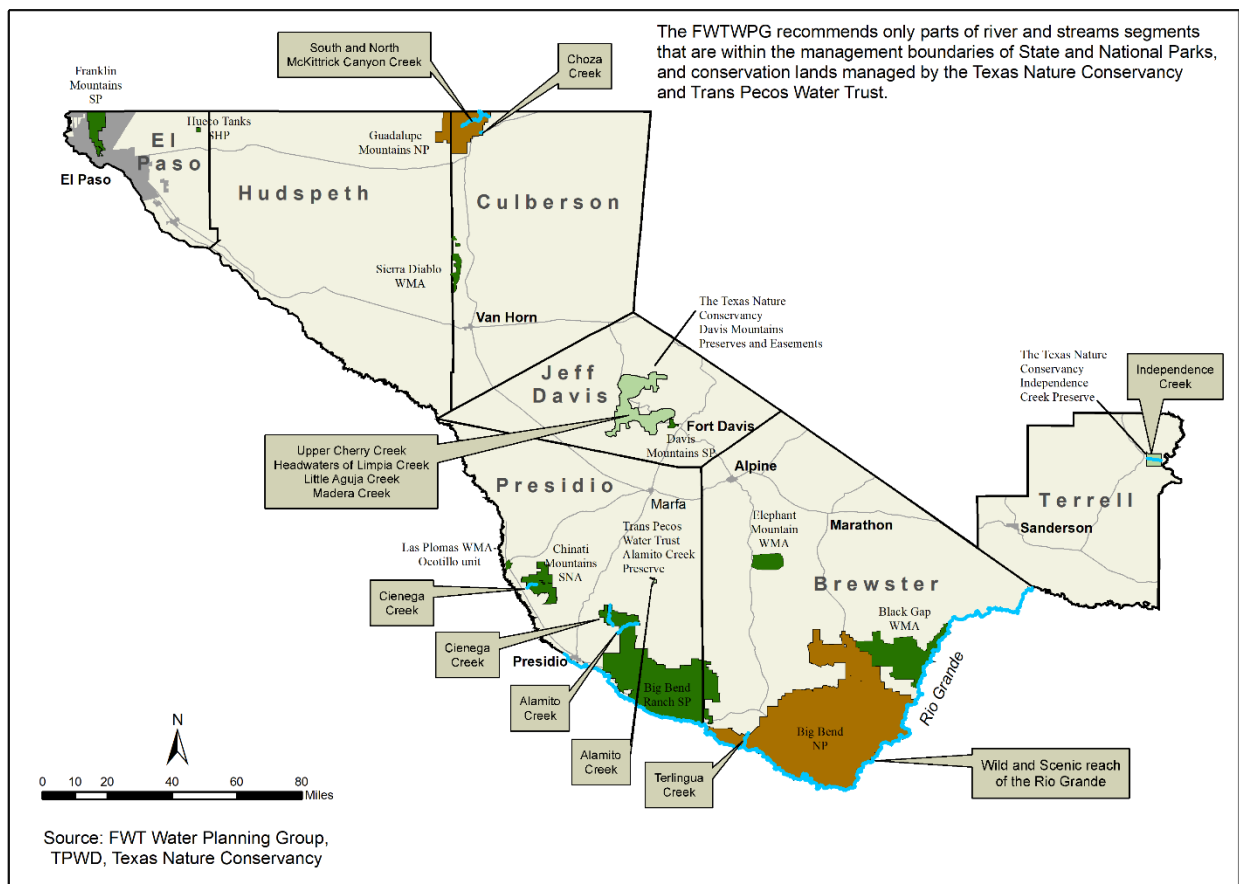


Figure 8-1. Recommended Ecologically Unique River and Stream Segments

CONSIDERATION OF UNIQUE SITES FOR RESERVOIR CONSTRUCTION

The regional water planning process gives each of the 16 regional water planning groups the opportunity to recommend stream locations for designation as “Unique Sites for Reservoir Construction”. The regional water planning process legislation and rules list many criteria to determine if a site is qualified for such designation.

The availability of water is one of the most important criteria in the selection of a reservoir site - if not the most important criterion. The low rainfall totals and the spotty nature of precipitation in Far West Texas limit the potential for sufficient runoff to maintain desired water levels in reservoirs.

Many canyons in the mountainous areas of Far West Texas might not retain large volumes of water because of the fractured and often highly permeable bedrock that forms the walls and floors of these topographic features. Any attempt to develop a reservoir in Far West Texas will require extensive and costly geological, geotechnical, and hydrological investigations to determine whether a site is suitable. The program of work would also require detailed state and federal environmental impact assessments. With regard to the Rio Grande, the 1944 International Treaty between the United States and Mexico specifies that a reservoir project considered by one country have the other country’s permission. Furthermore, the treaty stipulates that international reservoirs are to be operated by both countries.

On watercourses other than the Rio Grande, the water use reported to the TCEQ by surface water right holders gives some clues as to which watercourses are the most reliably used and therefore could be investigated for potential reservoir sites. Reported water use data, provided by the Rio Grande Watermaster and by TCEQ, have been examined to identify holders of surface water rights who can divert water in amounts greater than 1,000 acre-feet per year. The analysis indicates that Musquiz and Maravillas Creeks in Brewster County are probably the most reliable surface water sources.

On Alamito Creek in Presidio County, there is an existing recreational reservoir authorized to impound 18,700 acre-feet, but diversions are not authorized and therefore no use amounts are reported. Whether this reservoir stays reliably full is unknown, and the reliability of Alamito Creek in general is unknown.

A feasibility study for a recreational lake site near Alpine was previously conducted and consideration was given to its municipal water supply potential. The project was abandoned because of its high cost-to-yield potential.

Additional off-channel reservoir sites, as well as flood protection dam sites on major arroyos have been studied by the Hudspeth County Conservation and Reclamation District #1, El Paso-Hudspeth County Soil Conservation District, and the Hudspeth County Commissioners Court. None of these sites have been selected for construction. Additional flood retention dams have been considered for the El Paso area. These retention dams would have the added benefit of increasing recharge of the local aquifer by increasing infiltration of the retained water into the bolson deposits.

The firm yield for any reservoirs constructed on even the most reliable Far West Texas watercourses is not likely to exceed 2,000 acre-feet per year. For this reason, the *2021 Far West Texas Water Plan* does not recommend any watercourse for designation as “Unique Sites for Reservoir Construction.”

This page intentionally left blank.

APPENDIX 8A
TPWD RESPONSE TO UNIQUE
STREAM SEGMENT
RECOMMENDATION

This page intentionally left blank.