A map of Texas with a grid overlay in the northern panhandle region. The grid is composed of 12 columns and 4 rows of squares. The text 'Chapter 8' is centered over the grid.

Chapter 8

**Unique Stream Segments,
Reservoir Sites, and Legislative
Recommendations for the
Panhandle Water Planning Area**

8.1 Unique Stream Segments

Under regional planning guidelines, each planning region may recommend specific river or stream segments to be considered by the Legislature for designation as ecologically unique. The Legislative designation of a river or stream segment would only mean that the State could not finance the construction of a reservoir that would impact the segment. The intent is to provide a means of protecting the segments from activities that may threaten their environmental integrity.

TPWD requires that the following criteria be used when recommending a unique river or stream segment:

- *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.

TPWD has compiled a listing of ecologically significant stream segments located in PWPA. These stream segments were selected by TPWD because of the above-listed criteria.

As part of the planning process, fourteen segments were evaluated by the PWPG for potential recommendation as unique stream segments. After careful consideration of the unknown consequences of recommendation, the PWPG makes no recommendations for river and stream segments of unique ecological value. The following stream segments were presented to the planning group for consideration by TPWD:

- Canadian River (TCEQ Segment 0101)
 - From the Oklahoma State line in Hemphill County upstream to Sanford Dam in Hutchinson County
- Canadian River (TCEQ Segment 0103)
 - From a point immediately upstream of the confluence of Camp Creek in Potter County to the New Mexico State line in Oldham County
- Coldwater Creek
 - From the Dallam/Sherman County line upstream to the Texas/Oklahoma State line
- Graham Creek
 - From the confluence with Sweetwater Creek east of Mobeetie in Wheeler County upstream to SH 152 in northeast Gray County
- Lelia Lake Creek
 - From the confluence with the Salt Fork of the Red River in Donley County upstream to US 287 in Donley County
- McClellan Creek
 - From the confluence with the North Fork of the Red River in east Gray County upstream to its headwaters in the southwestern part of Gray County
- Prairie Dog Town Fork Red River (TCEQ Segment 0229)
 - From the Armstrong/Briscoe County line upstream to Lake Tanglewood in Randall County
- Prairie Dog Town Fork Red River (TCEQ Segment 0207)
 - From the Childress/Hardeman County line upstream to the Hall/Briscoe County line
- Rita Blanca Creek
 - From the headwaters of Lake Rita Blanca in Hartley County upstream to US 87 in Dallam County

- Saddlers Creek
 - From the confluence with the Salt Fork of the Red River eight miles northwest of Clarendon in Donley County upstream to its headwaters located about two miles southeast of Evans in north Donley County
- Sweetwater Creek
 - From the Oklahoma State line in Wheeler County upstream to its headwaters in northwest Wheeler County
- Tierra Blanca Creek
 - From the confluence with Prairie Dog Town Fork of the Red River upstream to Buffalo Lake in Randall County
- West Fork of Rita Blanca Creek
 - From the confluence with Rita Blanca Creek in Dallas County upstream to the New Mexico State line
- Wolf Creek (TCEQ Segment 0104)
 - From the Oklahoma State line in Lipscomb County to a point 1.2 miles upstream of FM 3045 in Ochiltree County

8.2 Sites of Unique Value for the Construction of Reservoirs

Regional water planning guidelines (§357.9) instruct that planning groups may recommend sites of unique value for construction of reservoirs by including descriptions of the sites, reasons for the unique designation, and expected beneficiaries of the water supply to be developed at the site. The following criteria shall be used to determine if a site is unique for reservoir construction:

- (1) site-specific reservoir development is recommended as a specific water management strategy or in an alternative long-term scenario in an adopted plan; or
- (2) the location, hydrologic, geologic, topographic, water availability, water quality, environmental, cultural, and current development characteristics, or other pertinent factors make the site uniquely suited for:
 - (A) reservoir development to provide water supply for the current planning period; or
 - (B) where it might reasonably be needed to meet needs beyond the 50-year planning period.

The same river and stream segments were evaluated by the PWPG for potential recommendation as unique reservoir sites. No sites were recommended by the planning group as sites of unique value for the construction of reservoirs.

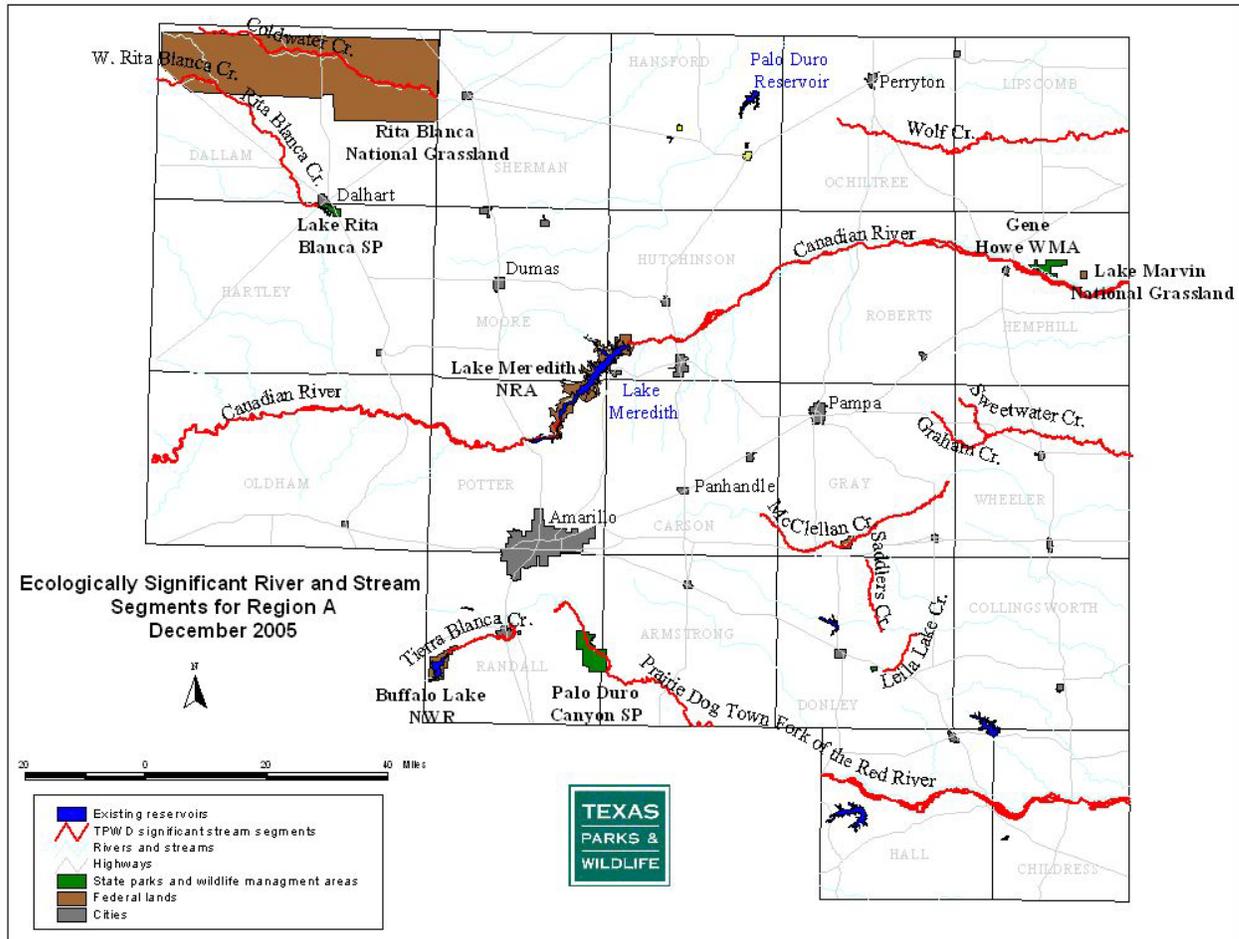


Figure 8-1: Ecologically Significant River and Stream Segments in Region A

8.3 Legislative Recommendations

As the PWPG has gone through the preparation of the regional water supply plan, several items have been identified which the PWPG recommends be considered before the next planning cycle. Title 31 of the Texas Administrative Code (TAC) §357.7(a)(9) states that the regional water plans will include: “regulatory, administrative, or legislative recommendations that the regional water planning group believes are needed and desirable to: facilitate the orderly development, management, and conservation of water resources and preparation for and response to drought conditions in order that sufficient water will be available at a reasonable cost to ensure public health, safety, and welfare; further economic development; and protect the agricultural and natural resources of the state and regional water planning area.” Following is a list of recommendations:

8.3.1 Regulatory Issues

- a) *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.
- b) *Assessments and evaluation of the Ogallala aquifer in the Region A Planning Area need to consider the minimal recharge rates comparable to other major aquifers in the State of Texas.* The Ogallala aquifer is a mined and finite resource that has minimal recharge as identified in recharge study conducted for the PWPA (BEG, 2009).

8.3.2 Legislative Issues

- a) *Continue state-sponsored water availability modeling for minor aquifers.* This information is particularly important in the evaluation of the minor aquifers in the Panhandle. There was extremely limited information available regarding supplies which are anticipated to be available from the minor aquifers in the region.
- b) *Expand funding for implementation of water supply strategies.* Many water supply strategies, particularly those associated with brush control, water conservation and irrigated agriculture, have limited means of implementation other than public outreach and education. The PWPG recommends that the state and federal governments sponsor programs to implement these strategies.
- c) *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. In order to create an equitable situation with regard to groundwater management, these areas should be included in a local district contained within the regional planning area.
- d) *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.
- e) *Encourage the federal government to continue to support Conservation Reserve Program (CRP) participation.* As properties currently in CRP are coming out, property owners may convert and reestablish the properties to irrigated agriculture and utilizing higher volumes of groundwater. From 2008 to 2010, there are an estimated 1.2 million acres in the High Plains that will no longer be enrolled in the CRP.
- f) *Develop or improve grant and loan programs for utilities to replace/repair aging infrastructure.* Development of a program similar to the TWDB Wastewater Revolving Loan Program to address aging water infrastructure and metering programs.

- g) *Provide funding for continuation of the High Plains-PET.* This support should be administered through the network team annually, through groundwater conservation districts within the network area. The State should provide funding to allow continuation and/or cost sharing of operating costs of the High Plains-PET network and its integration into a statewide network.
- h) *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.
- i) *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.
- j) *Adopt recognized definitions for gallons per capita per day (GPCD) proposed by the Water Conservation Advisory Council.* Recognized standard definitions for GPCD will allow better communication across the state on water conservation.

8.4 Recommendations for Future State Water Plans

- a) *TWDB should establish and continue to promote clear guidelines for eligibility for funding and needs assessment for very small cities, unincorporated areas.* Statements to the effect that those "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 appropriate Regional Water Plan" would greatly enhance the ability of these small systems to provide their users with a safe and adequate supply of water.
- b) *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.*
- c) *TCEQ should be made at least an ex-officio member of the RWPGs and be required to attend RWPG meetings to provide input on known water quality/quantity problems.*
- d) *Allow development of alternative near term water supply strategies for water systems that service fewer than 3,300 population.*
- e) *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.
- f) *Include an economic impact analysis for the result of implementing water management strategies.* The current planning rules provide for an economic analysis of not meeting water demands. However, there is no provision for economic analysis of implementing a water management strategy. The analysis should include impacts on water suppliers, users and major economic sectors.

- g) *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.
- h) *Include projects for future groundwater quality in the region.* Salinity, nitrates, arsenic, and other contaminants have become concerns for municipal water supplies in the region.
- i) *Interbasin/Intrabasin water transfers.* Future state water plans should provide for a detailed assessment of the potential for transporting water into or out of the PWPA.
- j) *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.
- k) *Analysis of means to improve groundwater recharge.*
- l) *Updated analysis of surface water supply inflows and availability.* The regional surface water supply has steadily decreased over a ten year period to the extent that regional lakes are at all time lows.