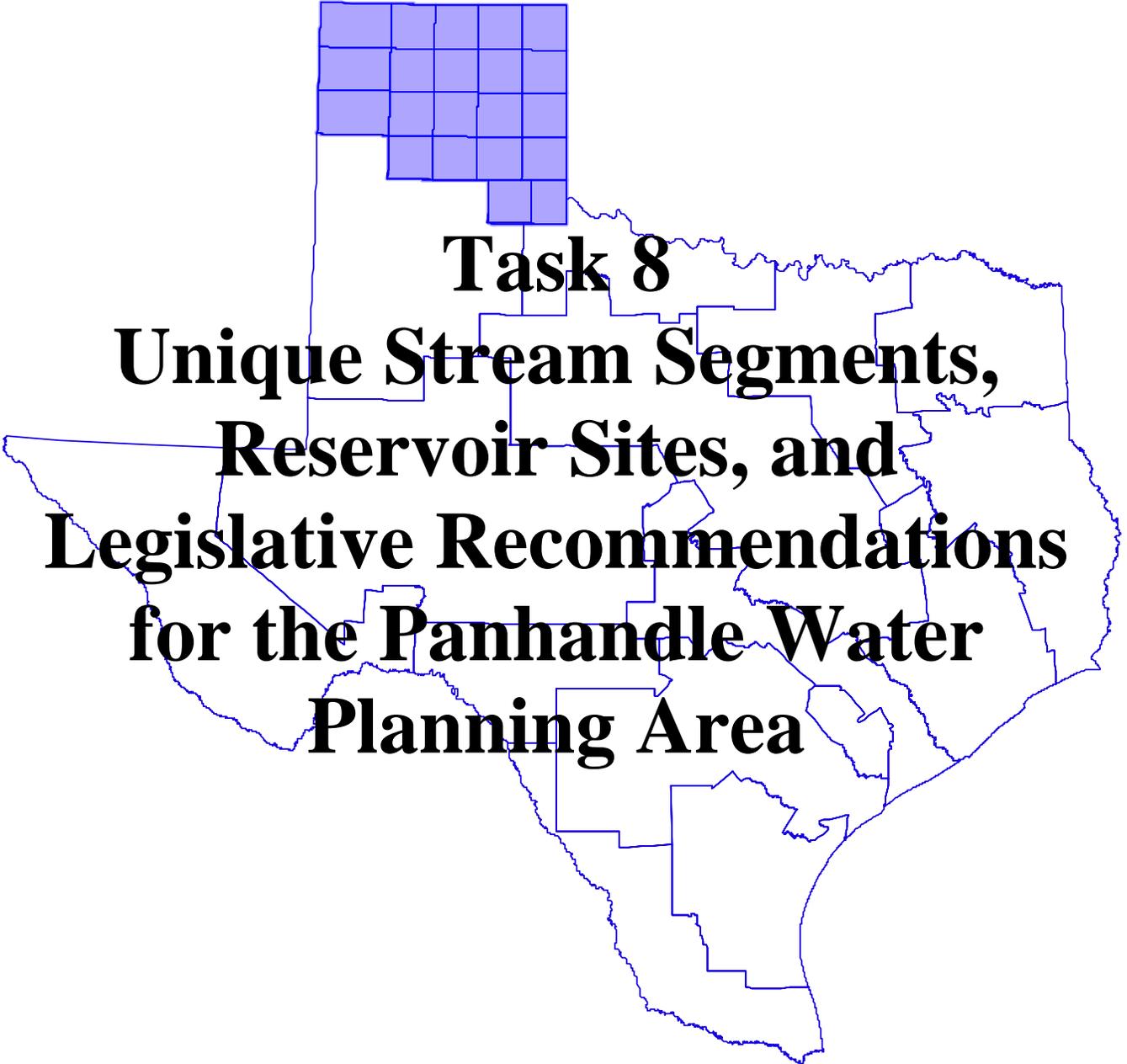


Task 8

**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.

More information regarding criteria set forth by TPWD can be found online at http://www.tpwd.state.tx.us/landwater/water/environconcerns/water_issues/sigsegs/.

TPWD has compiled a listing of ecologically significant stream segments located in Region A. 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.

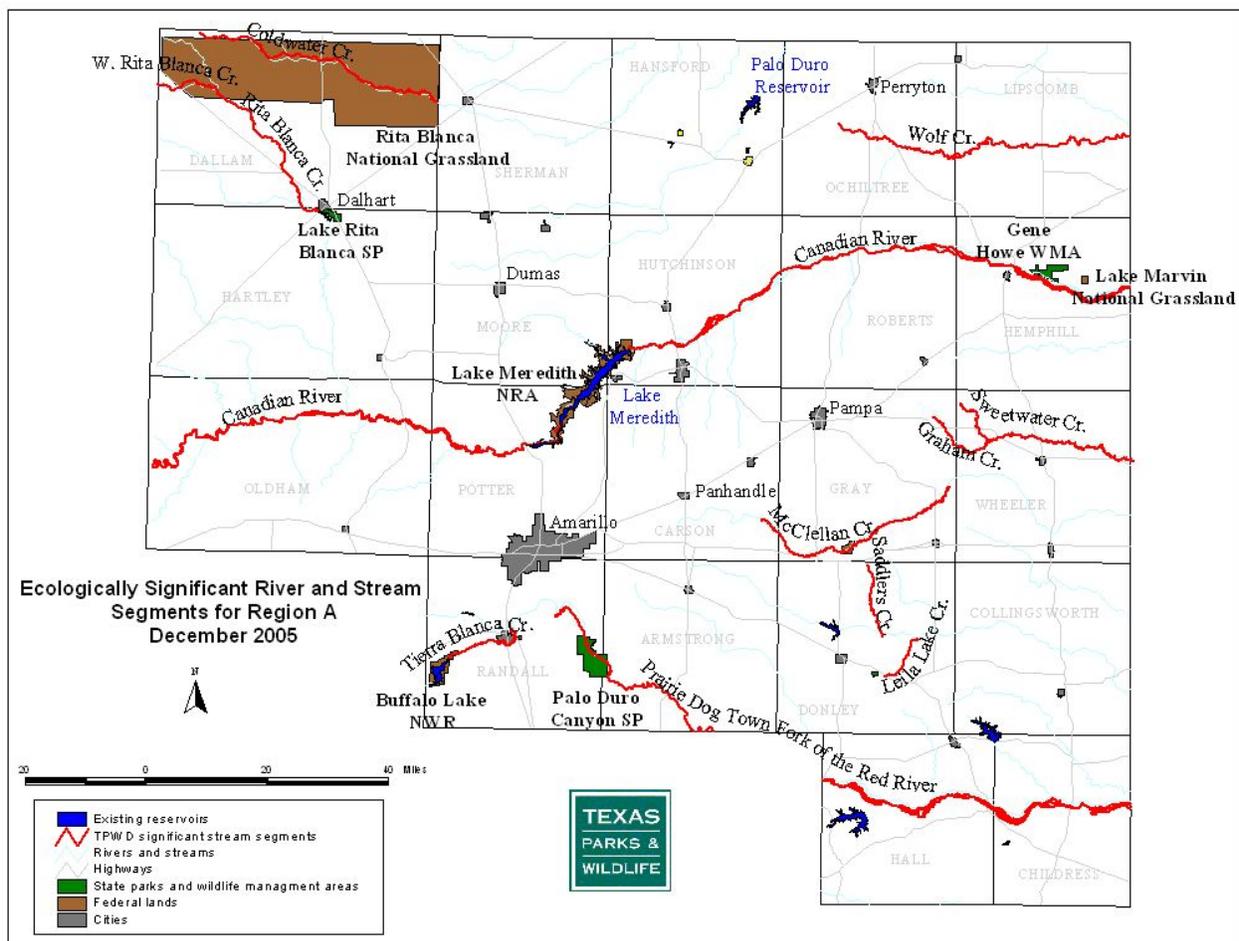


Figure 8-1: Ecologically Significant River and Stream Segments in Region A

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 Senate Bill

One-sponsored 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 for the TWDB to consider.

8.3.1 Regulatory Issues

- *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.
- *TWDB should modify the criteria used to evaluate the development of irrigation demands.* The PWPG believes that the development of irrigation demand numbers should be performed individually by each planning region using a state-approved methodology.
- *TWDB/TCEQ should evaluate the issue of groundwater rights vs. surface water rights.* The current rules and planning guidelines do not differentiate between handling surface water rights and groundwater rights. A surface water right is a renewable right that can be anticipated to be available every year. A groundwater right may not be necessarily available every year, especially in the case of the Ogallala aquifer which has limited effective annual recharge. The two types of rights also are treated differently under drought of record conditions and in drought management plan recommendations.
- TWDB should submit plans for and results of reservoir feasibility studies to the appropriate Compact Commission (Red River or Canadian River Compact Commission) for review.

8.3.2 Legislative Issues

- *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 Dockum, Rita Blanca, and Whitehorse aquifers.
- *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. It is recommended that the State sponsor programs to help implement these strategies and that the funding provided be specific to a region.
- *Manage groundwater resources through local groundwater conservation districts.* There remain certain areas of the Panhandle Water Planning Area, as well as other parts of the state, that are not within the boundaries of a groundwater district. In order to create an equal situation with regard to groundwater management, these areas should be included in a local district contained within the regional planning area.
- *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.

- *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.
- *Provide funding for expansion of the High Plains-PET network and integration into a statewide network.* 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 enhancement, expansion and/or cost sharing of operating costs of the High Plains-PET network and its integration into a statewide network. This would enable more farms to use the information provided by the network to schedule irrigations, thus using the water more efficiently.
- *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.
- *The PWPG requests that the State should require coordination between Regional Water Planning Groups and all State agencies, for example, regarding the development of the GAM and WAM models to ensure that the two models are not developed independently of or counter to each other.*

8.4 Recommendations for Future State Water Plans

- *TWDB should establish 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.
- *TWDB should improve the monitoring and quantification of small communities, county-
other, manufacturing, and livestock operator water use to provide better information for planning purposes.*
- *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.*
- *Clarification of the significance of designating unique reservoir sites and stream segments.* It is recommended that the purpose of designating a unique stream segment or reservoir site be defined before the next planning cycle. It is unclear what the implications are of such a designation.
- *Allow development of alternative near-term scenarios for systems that have less than 3,300 population.* Current planning rules require a single scenario be developed for meeting near-term needs. Since future permits must be consistent with the regional plan, a single State-approved scenario may hamper the ability of a community to make its own choice among viable sources of additional water supply.
- *Alternative definitions of the reliable supply from a reservoir.* The current water plan requires the use of firm yield as the definition of water availability in a reservoir. It is recommended that in future water plans the definition of supply from a reservoir match the owner's operational criteria or definition of supply. For example, a reservoir that is used for steam-electric power generation must maintain a minimum pool level in order to effectively

dissipate heat. Another example is the case where the water rights of a reservoir are less than the firm yield of the reservoir. In addition, many owners of reservoirs prefer to use the more conservative safe yield as the definition of reliable supply from their reservoirs to allow for more severe droughts than those experienced in the past.

- *Include reservoir sites in future water plans.* The PWPG proposes that the TWDB continue to include potentially feasible surface water supply projects in the Panhandle Water Planning Area, including, but not limited to, the potential Sweetwater Creek Reservoir site and the potential Lelia Lake Creek reservoir site. In addition, proposed flood control/aquifer recharge structures in the Red Deer Creek watershed should be included in future state water plans (PWPG Resolutions passed on February 29, 2000 and March 27, 2000).
- *Clarification of relationship between drought contingency planning and regional water supply planning.* Historically drought contingency planning has not been part of regional water supply planning. It is not clear what role drought contingency planning has in the regional planning process. Also, since one of the goals of drought contingency planning is demand reduction, it is particularly difficult to analyze conservation strategies because conservation is already included in the demand projections.
- *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. For example, if irrigated acreage is converted to dryland production, there is no provision for developing an economic impact of implementing that water management strategy. A municipal example would be the effects of water/sewer rates charged to each homeowner if a water management strategy is developed to provide for projected future needs.
- *Salinity and brush control projects for the Canadian River and/or Red River Basin.* Although there have been salinity control projects recently implemented in the Canadian and Red River Basins, future State Water Plans should continue to plan for future salinity control projects and their funding to continue to improve water quality in the basins.
- *Interbasin/Intrabasin water transfers.* Future state water plans should provide for a detailed assessment of the potential for transporting water into the Panhandle Water Planning Area from outside regions as well as the potential for transferring groundwater from counties within the region with potentially developable supplies to counties which are showing significant deficits.
- *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.