

INTRODUCTION

Texas is a rapidly growing state that in 1992 surpassed New York to become the second most populous state in the United States. Texas' population has doubled in the past 35 years from 9.5 million in 1960 to over 19 million today. The State Water Plan (TWDB 1997) predicts that Texas' population will double again in the next 50 years, increasing to over 39 million residents by the year 2050. Many problems are associated with such rapid population growth, none of which are more important than water resource issues. Water is a dynamic resource that is crucial to the State's economic development. Competition over limited water resources is sure to increase as rapid population growth continues. Water supply is dependent upon several factors including the amount of precipitation, evaporation, stream flow, and absorption into the ground. Climatic variations coupled with rapid population growth and economic development have resulted in increasing water quality and quantity problems for the state of Texas.

Water quality problems arise from natural and manmade pollution that can render water unusable or too costly to use. As populations and economic development continue to increase, so will associated pollution problems and water supply shortages. Shortages in water supplies required to meet municipal, industrial, and agricultural needs have already occurred in many regions of the state as evidenced during the drought of 1995 – 1996, which resulted in an estimated economic impact of \$6 billion¹¹. These water supply shortages and accompanying economic losses that occurred between 1995 and 1996 can partially be attributed to the fact that Texas was one of three Western states without a State Drought Contingency Plan at the time.

In response to the need for improved water management, the 75th Texas Legislature passed the water resource management legislation Senate Bill 1. This landmark legislation addresses many different aspects of water management and calls for grass roots water resource planning. Regional water plans from across the state will be merged to form the new State Water Plan by January 2002. Regional water planning areas were designated according to 31 TAC §357.3 (a) taking into consideration the following factors:

- (1) river basin and aquifer delineations
- (2) water utility development patterns
- (3) socioeconomic characteristics
- (4) existing regional water planning areas
- (5) political subdivision boundaries
- (6) public comment; and
- (7) other factors the Texas Water Development Board (TWDB) deemed relevant.

After the designation of regional water planning areas, the TWDB designated “regional water planning group representatives . . . to serve as the initial coordinating body to include at least one representative from each of the 11 interests listed in Texas Water Code §16.053 (c)” (31 TAC §357.4 (a)). The regional water planning groups (RWPG) consist of representatives from the public, counties, municipalities, industries, agricultural interests, environmental interests, small businesses, electric generating utilities, river authorities, water districts, and water utilities within the regional water planning area.

The goals of the regional water plans are consistent with that of the State Water Plan under Section 1.01 of Senate Bill 1. This section states that:

The state water plan shall provide for the orderly development, management, and conservation of water resources and preparation for and response to drought conditions, in order that sufficient water will be available at a reasonable cost to ensure public health, safety, and welfare; further economic development; and protect the agricultural and natural resources of the entire state.

Senate Bill 1 brings a new aspect to Texas water resource management by calling for the protection of the “natural resources of the entire state.” Environmental water needs of the state’s natural resources must be considered while planning for future water development. The guidelines for the development of regional water plans, 31 TAC §357.5, states that the RWPG should “recommend potentially feasible strategies that are cost effective and environmentally sensitive” and “consider environmental water needs” in their plans. Likewise, 31 TAC § 357.7, states that “regional water plan development shall include a description of ... natural resources ... and identified threats due to water quality or quantity problems.”

Furthermore, Senate Bill 1 offers the RWPG the opportunity to identify river and stream segments of unique ecological value. The details and criteria for this section are as follows:

31 TAC § 357.8 Ecologically Unique River and Stream Segments

(a) Regional water planning groups may include in adopted regional water plans recommendations for all or parts of river and stream segments of unique ecological value located within the regional water planning area by preparing a recommendation package consisting of a physical description giving the location of the stream segment, maps, and photographs of the stream segment and a site characterization of the stream segment documented by supporting literature and data. The recommendation package shall address each of the criteria for designation of river and stream segments of ecological value found in subsection (b) of this section. The regional water planning group shall forward the recommendation package to the Texas Parks and Wildlife Department and allow the Texas Parks and Wildlife Department 30 days for its written evaluation of the recommendation. The adopted regional water plan shall include, if available, Texas Parks and Wildlife Department's written evaluation of each river and stream segment recommended as a river or stream segment of unique ecological value.

(b) A regional water planning group may recommend a river or stream segment as being of unique ecological value based upon the following criteria:

- (1) **biological function**--stream 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;*
- (2) **hydrologic function**--stream segments which are fringed by habitats that perform valuable hydrologic functions relating to water quality, flood attenuation, flow stabilization, or groundwater recharge and discharge;*
- (3) **riparian conservation areas**--stream 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, or stream segments which are fringed by other areas managed for conservation purposes under a governmentally approved conservation plan;*

- (4) **high water quality/exceptional aquatic life/high aesthetic value**--stream 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
- (5) **threatened or endangered species/unique communities**--sites along streams where water development projects would have significant detrimental effects on state or federally listed threatened and endangered species, and sites along streams significant due to the presence of unique, exemplary, or unusually extensive natural communities.

The Region N (Coastal Bend) Regional Water Planning Area consists of 11 counties (Figure 1). The counties included are McMullen, Live Oak, Bee, Aransas, San Patricio, Nueces, Jim Wells, Duval, Kleberg, Brooks, and Kenedy. Only 4 stream segments were chosen by Texas Parks and Wildlife Department as ecologically significant river and stream segments (see Table1).

Table 1. Ecologically significant river and stream segments.

River / Stream Segment	Biological Function	Hydro. Function	Riparian Cons. Area	High Water Quality / Aesthetic Value	Endangered / Threatened Species
Nueces River (2103)	X	X		X	X
Nueces River (2102)	X	X	X	X	X
Nueces River Tidal (2101)	X	X	X	X	X
Aransas River Tidal (2003)	X	X	X	X	X

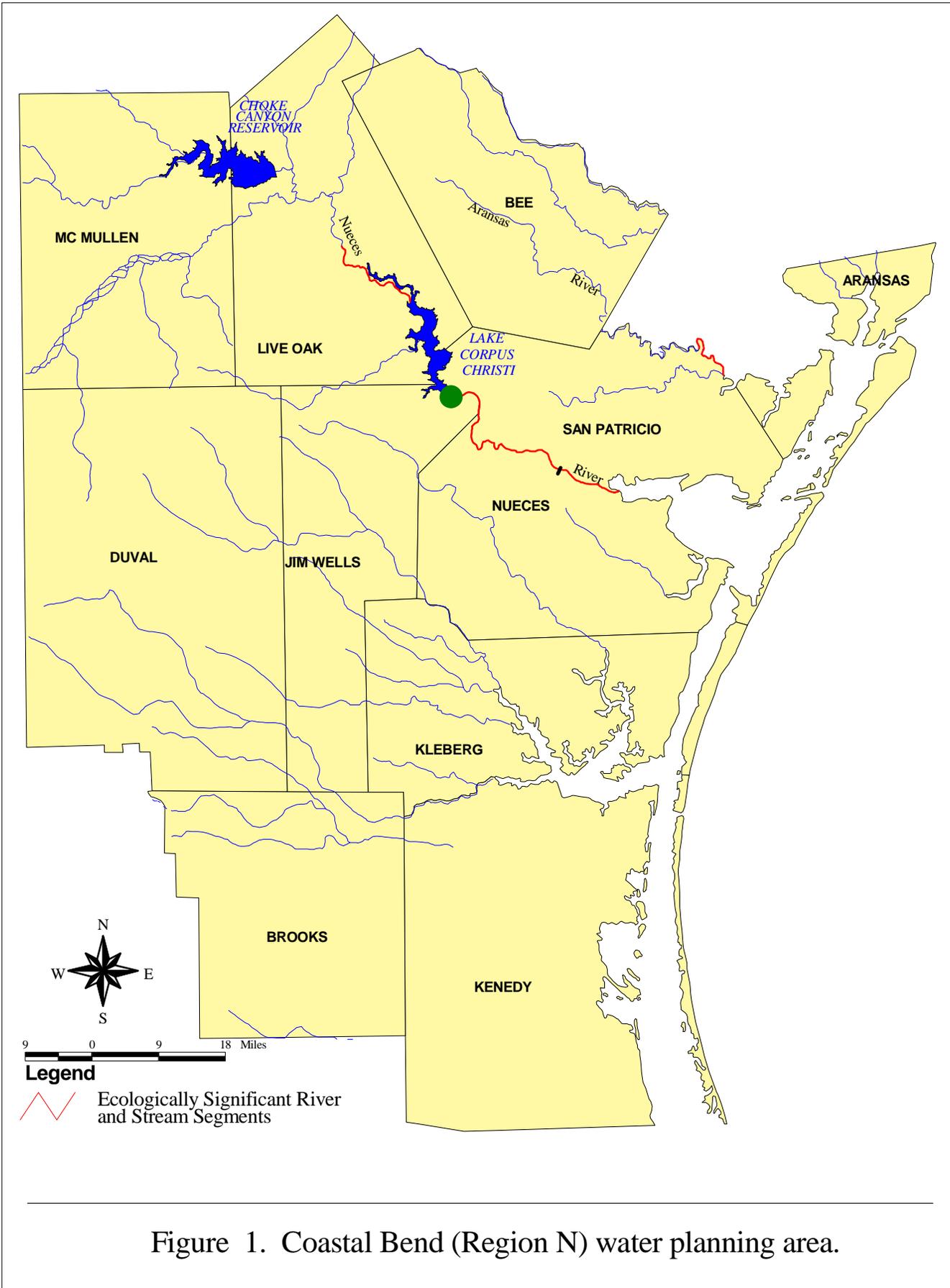


Figure 1. Coastal Bend (Region N) water planning area.