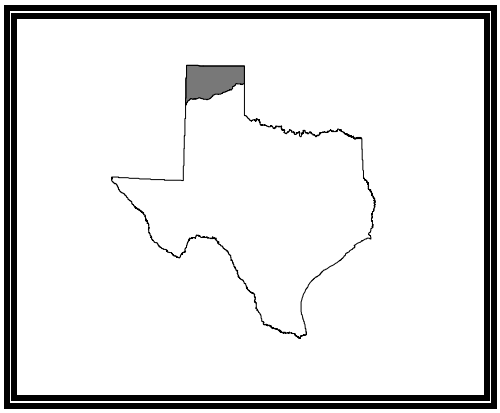
Basin 01

Canadian River



Canadian River Basin Narrative Summary

The Canadian River originates in northeastern New Mexico, flows eastward across the Texas Panhandle into Oklahoma, and merges with the Arkansas River. The economy of the river basin is based on agriculture, agribusiness, oil and gas production, and varied manufacturing activities.

The Canadian River Basin is a semi-arid region; virtually treeless with native deciduous timber only along the fringes of the streams and reservoirs. Salt cedar, a deleterious non-native woody plant, has become established and is spreading throughout the basin.

The Canadian River Basin is divided into five classified segments. The segments include 294 miles of river and tributary streams and two reservoirs, Lake Meredith on the Canadian River (16,504 acres) and Lake Rita Blanca (524 acres) on Rita Blanca Creek. There are an additional six unclassified segments which comprise 148 miles of tributaries and 2410 acres in Palo Duro Reservoir. There are 34 monitoring stations in the basin at which water quality data are collected by TCEQ, U.S. Geological Survey (USGS), and the Red River Authority (RRA).

The Canadian River at the New Mexico-Texas state line is moderately saline during low flow due to natural conditions. Additionally, a natural brine artesian aquifer with total dissolved solids greater than 30,000 mg/L seeps into the river near the Texas-New Mexico border. Elevated chloride, sulfate, and total dissolved solids (TDS) levels are concerns for public water supply in Lake Meredith and general use in Rita Blanca Lake is partially supported due to high TDS . The city of Dalhart discharges treated domestic wastewater directly to Rita Blanca Lake. As a result, the reservoir has experienced increased bacterial concentrations and elevated pH levels. Additionally, two classified and two unclassified segments have concerns for bacteria. The contact recreation use is not supported in Dixon Creek due to bacteria. Aquatic life uses are partially supported because of low dissolved oxygen (DO) levels in two unclassified segments . Nutrient concerns exist in one classified and two unclassified segments.