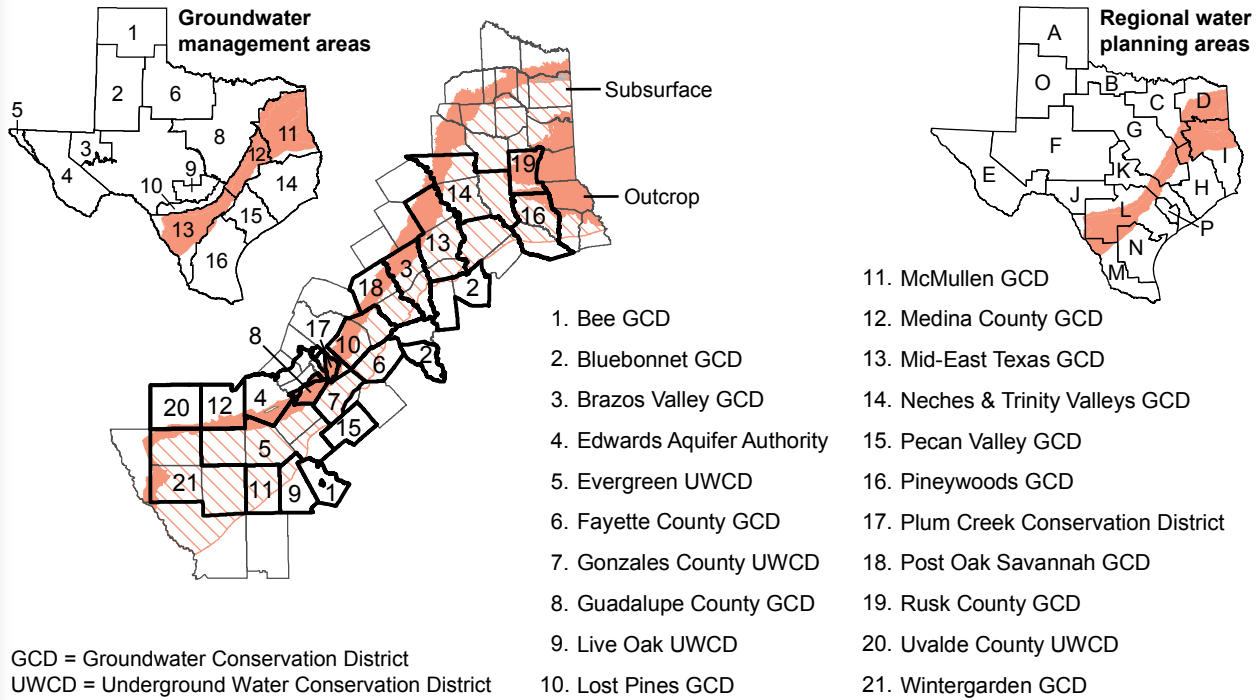


Carrizo-Wilcox Aquifer



The Carrizo-Wilcox Aquifer is a major aquifer that extends across much of eastern Texas. It consists of the Wilcox Group and the overlying Carrizo Formation of the Clairborne Group. The aquifer is primarily composed of sand that is locally interbedded with gravel, silt, clay, and lignite deposited during the Tertiary Period. South of the Trinity River and north of the Colorado River, the Wilcox Group is divided into three distinct formations: the Hooper, Simsboro, and Calvert Bluff. Of the three, the Simsboro typically contains the most massive water-bearing sands. Carrizo Springs, located in Dimmitt County, used to flow continuously until 1929 when declining aquifer levels reduced the flow to intermittent. The groundwater, although hard, is generally fresh in the outcrop, whereas softer groundwater with higher total dissolved solids occurs in the subsurface. High iron and manganese content is characteristic of much of the aquifer, and localized saline contamination has affected portions of the aquifer in the Winter Garden area. Pumpage for irrigation accounts for just over half the water pumped, and pumping for municipal supply accounts for another 40 percent. Water level declines have occurred in the Winter Garden area due to irrigation pumping and in the northeastern part of the aquifer due to municipal pumping. The planning groups recommend several water management strategies that use the Carrizo-Wilcox Aquifer, including new wells and well field development, additional withdrawals from existing wells, desalination, conjunctive use of surface water and groundwater, reallocation, and long distance transport.

Aquifer characteristics

- Area of outcrop: 11,186 square miles
- Area in subsurface: 25,409 square miles
- Availability: 1,014,753 acre-feet per year (2010) to 1,010,793 acre-feet per year (2060)
- Well yield: commonly 500 gallons per minute; some may reach 3,000 gallons per minute downdip
- Proportion of aquifer with groundwater conservation districts: 63 percent
- Number of counties containing the aquifer: 66

Groundwater supplies with implementation of water management strategies

