

The Blossom Aquifer is a minor aquifer located in Bowie, Red River, and Lamar counties in the northeast corner of Texas. The aquifer consists of the Blossom Sand Formation, which is made up of alternating sequences of sand and clay. In places, the aquifer is as much as 400 feet thick, although no more than about a third of this thickness consists of sand. The aquifer yields water of usable quality to wells located mostly in outcrop areas. However, in part of Red River County, water with total dissolved solids less than 3,000 milligrams per liter extends underground for about six miles south of the outcrop. Groundwater in the Blossom Aquifer is generally soft, slightly alkaline and, in some areas, high in sodium, bicarbonate, iron, and fluoride. Water quality, although not acceptable for irrigation, is generally acceptable for non-industrial uses. Municipal pumping accounts for a large percentage of total pumpage from the aquifer. Historically, Clarksville and the Red River Water Supply Corporation in Red River County have pumped the greatest amounts from the aquifer, which has resulted in water-level declines. However, in recent years, the rate of decline has slowed or even stabilized in some wells as a result of more surface water use in the area. The planning groups did not recommended any water management strategies using the Blossom Aquifer.

Aquifer characteristics

- Area of outcrop: 182 square miles
- Area in subsurface: 95 square miles
- Availability: 2,270 acre-feet per year (2010 to 2060)
- Well yield: averages 75 gallons per minute (maximum of 650 gallons per minute) in Red River County; decreases to an average of 75 gallons per minute in western half of aquifer
- Proportion of aquifer with groundwater conservation districts: 0 percent
- Number of counties containing the aquifer: 3

Groundwater supplies with implementation of water management strategies

