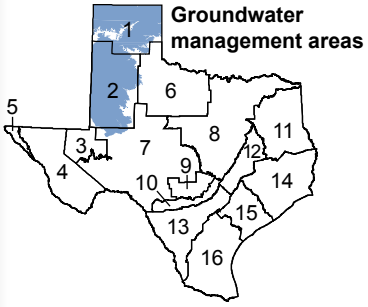
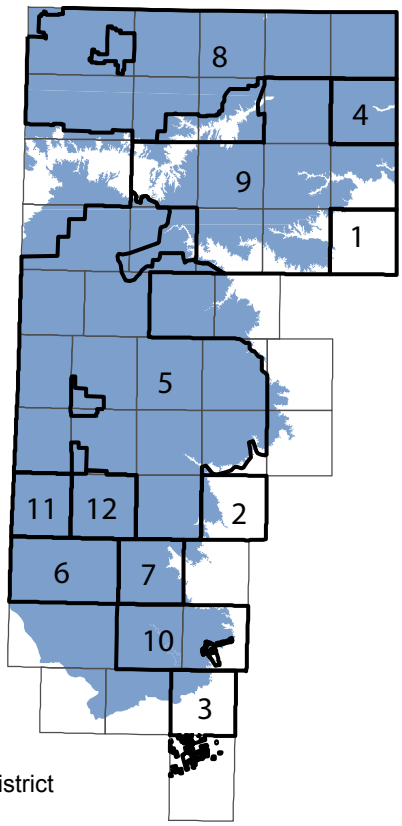
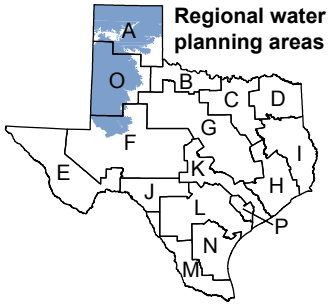
Ogallala Aquifer







1. Collingsworth County UWCD
2. Garza County Underground and Fresh WCD
3. Glasscock GCD
4. Hemphill County UWCD
5. High Plains UWCD No. 1
6. Llano Estacado UWCD
7. Mesa UWCD
8. North Plains GCD
9. Panhandle GCD
10. Permian Basin UWCD
11. Sandy Land UWCD
12. South Plains UWCD

GCD = Groundwater conservation district
UWCD = Underground water conservation district
WCD = Water conservation district

The Ogallala Aquifer is the largest aquifer in the United States and is a major aquifer of Texas that underlies much of the High Plains region. The aquifer consists of sand, gravel, clay, and silt. Water quality to the north of the Canadian River is generally fresh, with total dissolved solids typically less than 400 milligrams per liter. Salinity increases to the south, where large areas contain total dissolved solids in excess of 1,000 milligrams per liter and naturally-occurring high levels of arsenic, radionuclides, and fluoride. The Ogallala Aquifer provides significantly more water for users than any other aquifer in the state, primarily for irrigation. Water level declines in excess of 300 feet have occurred in several areas over the last 50 to 60 years, although the rate of decline has slowed and water levels have risen in a few areas. The Panhandle and Llano Estacado regional water planning groups recommend numerous water management strategies using the Ogallala Aquifer, including new wells and well field development, overdrafts, and reallocation.

Aquifer characteristics

- Area of aquifer: 36,497 square miles
- Availability: 5,968,260 acre-feet per year (2010) to 3,534,124 acre-feet per year (2060)
- Well yield: ranges from <100 to about 1000 gallons per minute, averages about 500 gallons per minute
- Proportion of aquifer with groundwater conservation districts: 81 percent
- Number of counties containing the aquifer: 47

Groundwater supplies with implementation of water management strategies