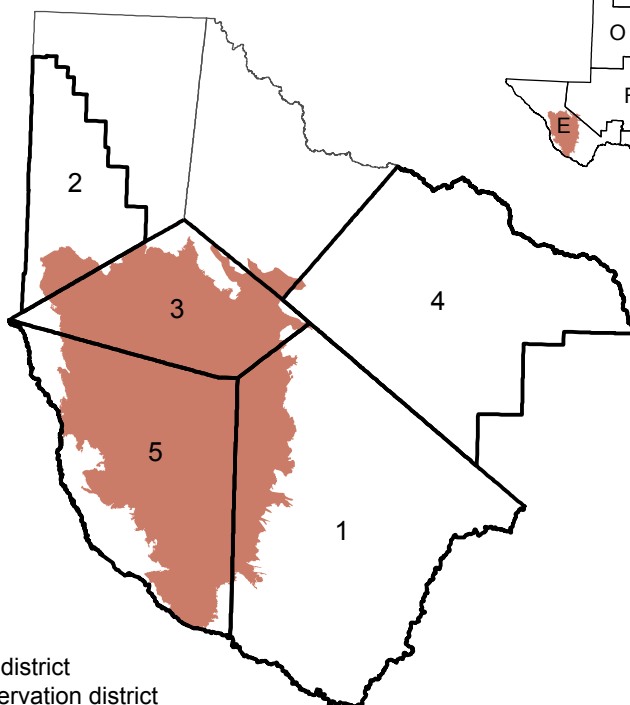
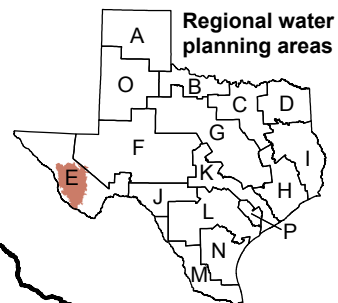
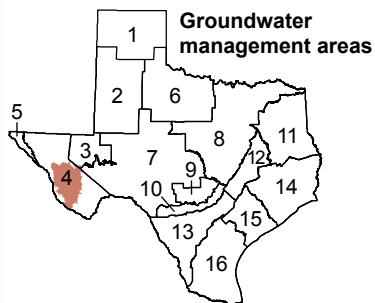


Igneous Aquifer



1. Brewster County GCD
2. Culberson County GCD
3. Jeff Davis County UWCD
4. Middle Pecos GCD
5. Presidio County UWCD

GCD = Groundwater conservation district
 UWCD = Underground water conservation district

The Igneous Aquifer, located in Far West Texas, is designated as a minor aquifer. The aquifer consists of volcanic rocks made up of a complex series of welded pyroclastic rock, lava, and volcanoclastic sediments and includes over 40 different named units up to 6,000 feet thick. The best water bearing zones are found in igneous rocks with primary porosity and permeability such as vesicular basalts, interflow zones in lava successions, sandstone, conglomerate, and breccia. Faulting and fracturing enhances aquifer productivity in poorly permeable rock units. In general, deeper units are less productive because pore spaces and fault-related porosity decreases. Water in the aquifer is fresh. Elevated levels of silica and fluoride have been found in water from some wells, reflecting the igneous origin of the rock. Water is mainly used to meet municipal and domestic needs for the cities of Alpine, Fort Davis, and Marfa and some agricultural needs. The Far West Texas Regional Water Planning Group did not recommend any water management strategies using the Igneous Aquifer.

Aquifer characteristics

- Area of aquifer: 6,075 square miles
- Availability: 14,600 acre-feet per year (2010 to 2060)
- Well yield: widely variable, yields decrease with depth as fractures become smaller
- Proportion of aquifer with groundwater conservation districts: 99 percent
- Number of counties containing the aquifer: 6

Groundwater supplies with implementation of water management strategies

