

The Texas Water Development Board (TWDB) designated groundwater management area boundaries in response to legislation passed in 2001. The areas were to cover all major and minor aquifers in the state. The objective was to delineate areas considered suitable for management of groundwater resources.

A groundwater management area should ideally coincide with the boundaries of a groundwater reservoir or a subdivision of a groundwater reservoir, but it may also be defined by other factors, including the boundaries of political subdivisions. In December 2002, the TWDB designated 16 groundwater management areas covering the entire state. Only one area, Groundwater Management Area 5, does not include any groundwater conservation districts.

Originally, the areas were useful for determining which districts needed to coordinate joint planning by sharing their management plans. In 2005, the legislature changed the direction of groundwater management.

The new requirements, codified in Texas Water Code Chapter 36.108, required joint planning in management areas among groundwater conservation districts. The new requirements indicated that, "Not later than September 1, 2010, and every five years thereafter, the districts shall consider groundwater availability models and other data or information for the management area and shall establish desired future conditions for the relevant aquifers within the management area."

This means that, rather than individual districts determining how much groundwater was available, the districts would meet together, at least annually, to decide what is now called desired future conditions. The desired future conditions are a description of the aquifers at some time in the future. This description is a precursor to developing a volumetric number called the managed available groundwater. The desired future conditions must be adopted by a two-thirds vote of the district representatives present at a groundwater management area meeting where at least two-thirds of the districts are present. Both the Texas Commission on Environmental Quality and the TWDB have processes developed and codified in their rules for the purpose of appealing either the desired future conditions or the joint planning process. The TWDB is responsible for providing each groundwater conservation district and regional water planning group, located wholly or partly in the management area, with managed available groundwater. Groundwater availability models and other data or information help in establishing managed available groundwater for the relevant aquifers within the management area. Once the managed available groundwater is determined, the districts begin issuing groundwater withdrawal permits to support the desired future condition of the aquifer up to the total amount of managed available groundwater. These permits express desired future conditions by only allowing withdrawals that will support the conditions established by the groundwater management area.