



Groundwater Technical Assistance

Groundwater is a valuable resource in Texas and provides about 55 percent of the water used within the state—whether it is used for drinking water, agriculture, or industry. To understand the extent, availability, and quality of our groundwater resources, accessible technical data on the state’s groundwater is necessary.

The Texas Water Development Board’s (TWDB’s) Groundwater Technical Assistance Program aims to provide reliable and comprehensive answers to questions about Texas groundwater, such as:

- Do you want to know about the aquifers in the state?
- Do you want to know about the groundwater levels and quality in your area?
- Do you need information about groundwater conservation districts and groundwater management areas?

These are the types of questions our staff answers for citizens, businesses, municipalities, groundwater conservation districts, and regional water planning groups.

Groundwater Data and Well Information

We estimate that more than 1.68 million water wells have been drilled in Texas since 1900. The TWDB maintains a groundwater database with information on nearly 130,000 wells originally drilled for the purpose of water extraction and springs in Texas, of which 10 to 15 percent have relatively current information. The TWDB also maintains the submitted driller’s report database that currently includes information on nearly 400,000 water wells drilled in the last decade.

The database contains physical and water-related information on each inventoried well, including well location and construction, water level measurements, water chemistry, and aquifer properties.

Data on groundwater wells and aquifers are available online through the Water Data Interactive website at www3.twdb.texas.gov/apps/WaterDataInteractive/GroundWaterDataViewer.

Assisting Groundwater Conservation Districts

Groundwater conservation districts have the authority to regulate the spacing of water wells and the production from water wells. As of November 2022, there are 98 confirmed groundwater conservation districts in Texas. Groundwater

conservation districts are required to develop and submit a groundwater management plan to the TWDB for approval. Past and current plans and additional information about groundwater conservation districts are located online at www.twdb.texas.gov/groundwater/conservation_districts.

A groundwater management plan describes a district’s groundwater management goals. These goals include

- providing the most efficient use of groundwater;
- controlling and preventing waste of groundwater;
- controlling and preventing subsidence;
- addressing conjunctive surface water management issues;
- addressing natural resource issues that affect the use and availability of groundwater and are also affected by the use of groundwater;
- addressing drought conditions;
- addressing conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, or brush control, where appropriate and cost effective; and
- addressing desired future conditions of the aquifer(s).

Addressing these goals requires a great deal of technical information about groundwater resources, such as groundwater availability estimates, existing groundwater usage, projected groundwater usage, and annual recharge. The TWDB assists districts with developing their plans, provides technical assistance, and reviews the plans for administrative completeness.

Groundwater conservation districts are grouped into 16 groundwater management areas defined along major aquifer boundaries. Groundwater management areas’ voting members meet to evaluate and decide on the future groundwater availability or desired future conditions of relevant aquifers in public meetings. The TWDB’s Groundwater Division provides impartial guidance on technical modeling results, groundwater data, interpreting agency rules, and procedural tasks. Additional information about groundwater management areas is located online at www.twdb.texas.gov/groundwater/management_areas.

Groundwater Research

The TWDB also conducts groundwater research projects in cooperation with local groundwater districts and other state and federal agencies or at the request of the Texas Legislature. Projects have included

- evaluating recharge to the Ogallala Aquifer from playa lakes in the High Plains,
- a study of the hydrology and hydrogeology of the confined and unconfined aquifers of the state and how they interact with surface water, and
- comprehensive county-level studies of groundwater resources.

Details on the program can be found online at www.twdb.texas.gov/groundwater/special_projects.

More Information

To access groundwater data online, visit the Water Data Interactive website at www3.twdb.texas.gov/apps/WaterDataInteractive/GroundWaterDataViewer.

Please call 512-936-0871 for more information about aquifers, groundwater conservation districts, and groundwater well data.