

Why Monitor Groundwater Levels?

Groundwater is a major resource in Texas and its importance cannot be overstated. There are nine major and twenty-two minor aquifers in the state which range from shallow, unconsolidated sand and gravel deposits underlying river valleys to deep rock aquifers that cover large parts of the state.

In 2021, Texans used approximately 14.4 million acre-feet (ac-ft) of water, with approximately 54 percent (7.8 million ac-ft) from groundwater sources, 42 percent (6.1 million ac-ft) from surface water, and less than four percent (500,000 ac-ft) from reuse.

Because of the importance of Texas' groundwater supplies, the Texas Water Development Board (TWDB) and local Groundwater Conservation Districts (GCDs) monitor water levels statewide to detect changes. Water level information is important for managing groundwater resources, developing groundwater availability models, and planning to meet future demands for water. TWDB and their cooperators maintain a statewide water level monitoring network consisting of approximately 8,000 wells. Once a year, field technicians measure the depth to water in most of these wells.

Monitoring groundwater levels in wells serves much the same purpose as periodically checking the oil-level dipstick on an automobile engine. If the engine developed a problem and started using oil, the dipstick oil mark would alert the driver before expensive repairs are needed. Similarly, the monitoring well network helps serve as an early warning system that can identify where groundwater use is occurring at a rate that the aquifers of Texas cannot sustain indefinitely.

Resources and Useful Links

- Texas Water Development Board (TWDB), Groundwater Data webpage, <https://www.twdb.texas.gov/groundwater/data/>
- TWDB, Historical Water Use Summary and Data Dashboard, <https://www.twdb.texas.gov/waterplanning/waterusesurvey/dashboard/index.asp>
- Texas Alliance of Groundwater Districts (TAGD) website, <https://texasgroundwater.org/>
- United States Geological Survey (USGS) Groundwater Data for the Nation webpage, <https://waterdata.usgs.gov/nwis/gw>

Other Frequently Asked Questions (FAQs)

To find additional FAQs visit the Texas Groundwater Protection Committee's FAQ webpage at <https://tgpc.texas.gov/frequently-asked-questions-faqs>.