

GROUNDWATER GOVERNANCE IN FAR WEST TEXAS

Who manages the water beneath our feet?

MEADOWS
RESEARCH INSTITUTE
FOR WEST TEXAS
WATER

Groundwater is the lifeblood of Far West Texas. It supplies homes and communities, supports ranching and agriculture, sustains springs and wildlife, and contributes to the region's economy. But who decides how groundwater is managed?

In Texas, groundwater is a private property right of the landowner, subject to local regulation by Groundwater Conservation Districts (GCDs) which work within a larger regional and statewide planning system designed to balance today's groundwater use with the needs of future generations.

START LOCAL: GROUNDWATER CONSERVATION DISTRICTS

Groundwater Conservation Districts provide the foundation for the management of groundwater in Texas. Operating under Chapter 36 of the Texas Water Code, GCDs manage groundwater resources within their boundaries by:

- Developing rules governing water wells and groundwater production
- Issuing permits and make groundwater permitting decisions
- Monitoring groundwater conditions
- Developing groundwater management plans
- Working with neighboring districts to plan for shared aquifers

Each GCD develops a Groundwater Management Plan that guides the district. These plans are reviewed and approved by the Texas Water Development Board and must be updated every five years.

THINK REGIONAL: GROUNDWATER MANAGEMENT AREAS

Aquifers don't follow county or district boundaries. That's where Groundwater Management Areas (GMAs) come in. Texas is divided into 16 GMAs that provide a framework for GCDs sharing groundwater resources to plan together. Most of Far West Texas is part of Groundwater Management Area 4 (GMA 4). Districts within GMA 4 jointly plan for shared aquifers, including the Igneous and West Texas Bolsons aquifers.

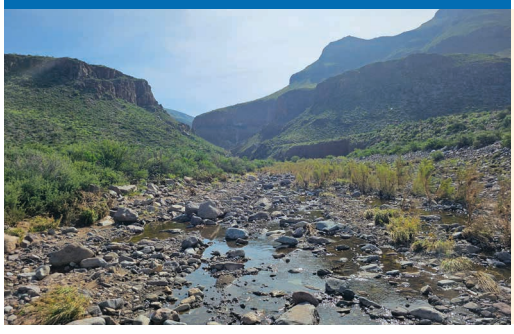
What is a Desired Future Condition?

One of the most important jobs of a GMA is establishing Desired Future Conditions, or DFCs. Simply put, a DFC describes what we want an aquifer to look like in the future. Every five years, GCDs within each GMA work together to review and establish these long-term groundwater management goals. The Texas Water Development Board provides groundwater models and technical information to support the process. Once DFCs are adopted, they help guide groundwater management and planning at the local level.

WHY IT MATTERS

Groundwater governance may sound complicated, but its purpose is practical. The decisions made today help determine how groundwater resources will be understood, managed and available tomorrow. In an arid region where communities, landowners, agriculture, springs and wildlife all depend on groundwater, informed local participation and sound science are essential to building a resilient water future.

Groundwater is difficult to study because we cannot see it. We rely on scattered wells and geologic information to understand where groundwater occurs, how much is available, how it moves, and how pumping may affect nearby wells, springs, and streams. It is important to have management strategies from local to state wide in order to assure a sustainable water future for Texas.



HOW THE PIECES FIT TOGETHER

LOCAL - Groundwater Conservation Districts
Manage groundwater locally and develop district management plans.

REGIONAL GROUNDWATER- Groundwater Management Areas
Bring GCDs together to plan for shared aquifers and establish Desired Future Conditions.

REGIONAL WATER- Regional Water Planning Groups
Consider groundwater alongside other water supplies, projected water demands and strategies for meeting future needs.

STATE - Texas Water Development Board
Provides groundwater science and modeling, reviews GCD management plans and regional water plans, and develops the State Water Plan.

THE BIGGER WATER - PLANNING PICTURE
Far West Texas is part of Regional Water Planning Area E, one of 16 such areas in Texas. Regional water planning groups evaluate groundwater (along with surface water and other supplies), projected population and water demands, and strategies for meeting future needs. The resulting regional plans become building blocks for the Texas State Water Plan.

LEARN MORE

Groundwater Division | Texas Water Development Board
Information about GCDs, district boundaries, management plans and groundwater management in Texas.

Groundwater Management Area 4
Groundwater Management Area 4 | Texas Water Development Board
Maps, participating districts, Desired Future Conditions, Modeled Available Groundwater and joint-planning information for GMA 4.

Far West Texas Regional Water Planning Area – Region E
Region E | Texas Water Development Board
Regional plans, maps and information about long-term water planning for Far West Texas.

Far West Texas Planning Group
westtexaswaterplanning.org
Meadows Research Institute for West Texas Water
The Meadows Research Institute advances collaborative water solutions in Far West Texas through applied research, education and technical assistance that serve people, land and wildlife.

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