District 101: How POSGCD Manages Groundwater

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What is a Groundwater Conservation District?

- A **political subdivision of the state** - a local government entity created under state law to carry out specific public responsibilities within a defined area
- Created by local voters/legislation or the Texas Commission on Environmental Quality to manage groundwater
- Operates under Texas Water Code, Chapter 36 + enabling legislation

Purpose

Chapter 36.0015

- Provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater (Also must provide for most efficient use of the groundwater resources)
- Groundwater Conservation Districts are the state's preferred method of groundwater management through rules developed, adopted, and promulgated by a district

Rulemaking Power

Sec. 36.101

A district may make and enforce rules, including rules limiting groundwater production **based on tract size or the spacing of wells,** to provide for conserving, preserving, protecting, and recharging of the groundwater or of a groundwater reservoir or its subdivisions in order to control subsidence, prevent degradation of water quality, or prevent waste of groundwater and to carry out the powers and duties provided by this chapter.

- During the rulemaking process, the board shall consider **all groundwater uses and needs** and shall develop rules which are fair and impartial.
- After notice and hearing, the board **shall** adopt and enforce rules

Enforcement of Rules

Section 36.102

- A district may enforce this chapter and its rules by injunction, mandatory injunction, or other appropriate remedy in a court of competent jurisdiction
- The board **by rule may set** reasonable civil penalties for breach of any rule of the district not to exceed $25,000 per day per violation, and each day of a continuing violation constitutes a separate violation
- If the district prevails in any suit to enforce its rules, the district may seek and the court shall grant, in the same action, recovery for attorney's fees, costs for expert witnesses, and other costs incurred by the district before court. Also applies to defense to suit

GCD Balancing Act

Rights of Landowners and the highest practicable level of groundwater production

Conservation, preservation, protection, recharging and prevention of waste of groundwater

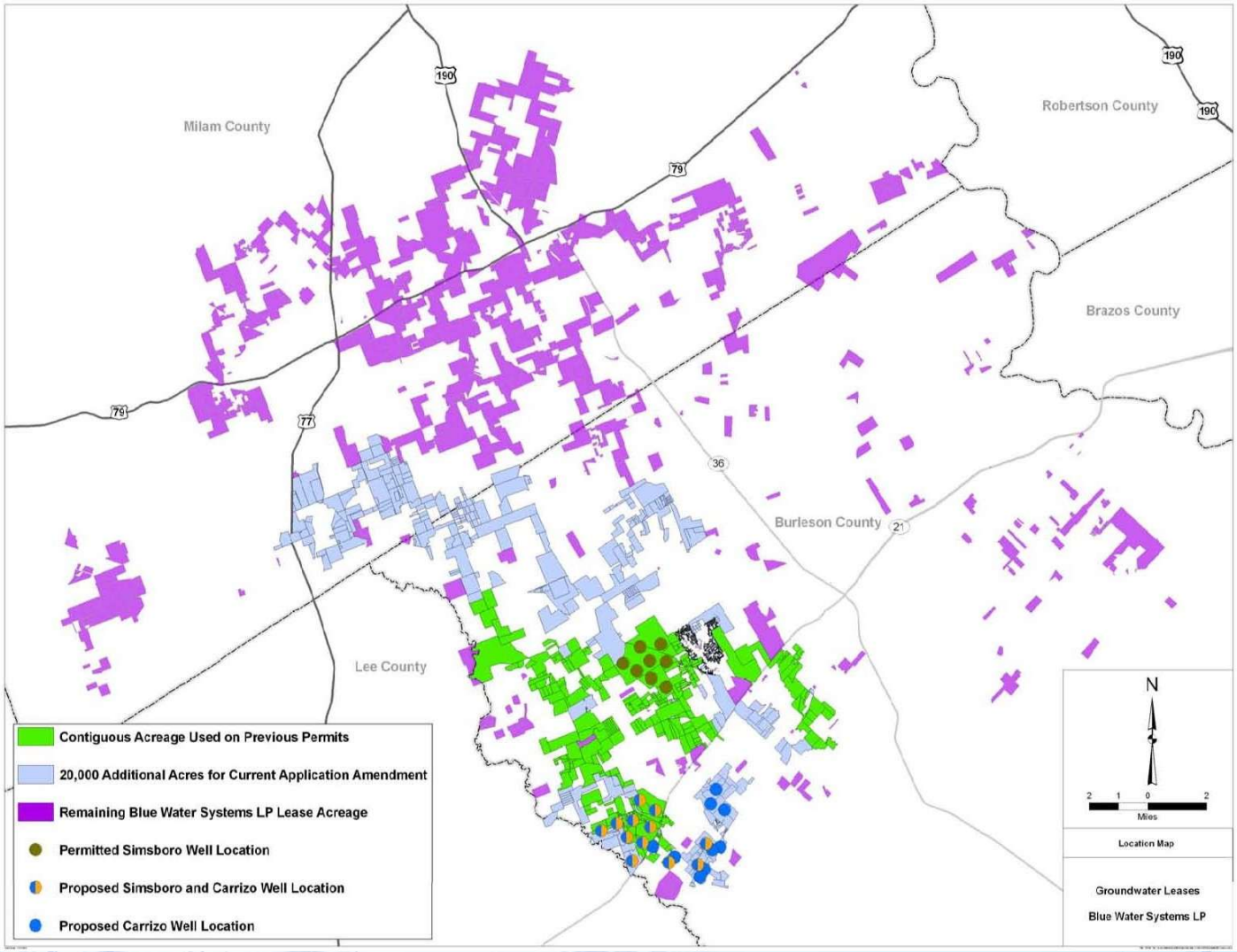
What is POSGCD?

What is POSGCD?

- Political subdivision of the state created to regulate groundwater in Burleson and Milam counties

- Created by local voters due to concerns regarding leased water, local groundwater dependence, and potential for future growth due to central location.
  - 35,000 acres of water rights leased by 2000

- POSGCD's enabling legislation is House Bill 1784, passed by the Texas Legislature in 2001, confirmed by voters in 2002.


Milam County
Robertson County
Brazos County
Burleson County
Lee County
190
79
77
36
21
Contiguous Acreage Used on Previous Permits
20,000 Additional Acres for Current Application Amendment
Remaining Blue Water Systems LP Lease Acreage
Permitted Simsboro Well Location
Proposed Simsboro and Carrizo Well Location
Proposed Carrizo Well Location
N
2 1 0 2
Miles
Location Map
Groundwater Leases
Blue Water Systems LP

Who Oversees the District

- 10-member appointed board
- Public meetings/open records
- Ch. 36 of Texas Water Code
- Enabling Legislation
- Financial and State Audits
- TWDB – DFC Process and Management Plan Administrative Completeness
- TCEQ – Petition for Inquiry, Violation of Management Plan

Board of Directors

Post Oak Savannah GCD is governed by a 10-member board of directors:

- Five from Burleson County
- Five from Milam County
- Appointed by the County Commissioners' Courts
- Represent agriculture, municipalities, industry, and rural water
  - The fifth director from each county is an at-large representative
- Directors are required to take AI Awareness Training and Cyber Security Training

POSGCD Funding

- NOT tax based (though some GCDs can be) – funded by production and transport fees
- Production Fee - $0.045 / 1000 gallons
- Transport Fee - $0.206 / 1000 gallons

Documents & Resources to Know

- Management Plan
- District Rules
- District's Monthly Reports
- Desired Future Conditions Compliance Report
- Regional Water Plan
- Website: Interactive Maps, Water Level Viewer, Water Well Applications
- District Programs

Management Plan

What is the Management Plan?

- The District's state-required roadmap for managing groundwater
- Explains goals, monitoring, DFC implementation, and management programs

Use it to find:

- District's overall priorities and how it plans to manage groundwater
- Information about our aquifers, desired future conditions (DFCs) or pumping limits, and when/how we manage drawdown

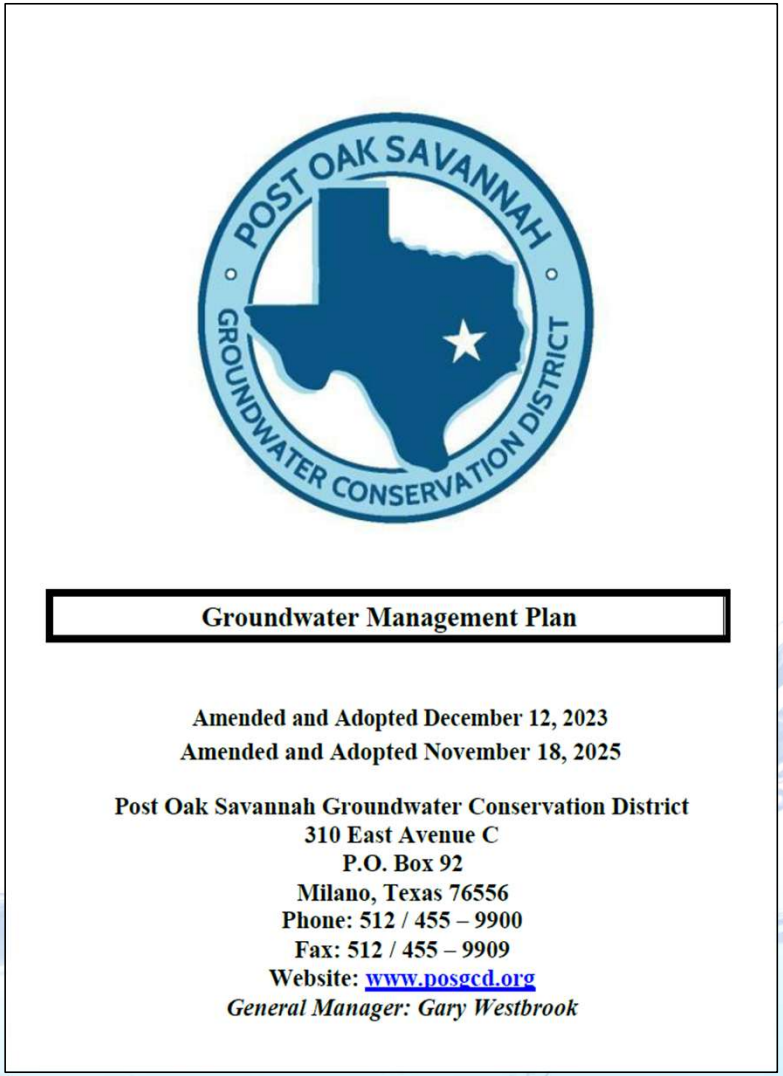
Our Management Plan

First plan adopted in 2004, last amended in 2025

Passed before the Rules

What You Can Find in the Management Plan

- Management Zones and Areas
- Water Well Inventory & Groundwater Monitoring
- Unreasonable Impacts
- Groundwater Well Assistance Program, Aquifer Conservation Program, Local Water Utility Program
- Methodology for tracking and achieving management plan goals
- Management Goals, Objectives, & Performance Standards
- Desired Future Conditions (DFCs), Protective Drawdown Limits (PDLs), and modeled available groundwater



Management Plan: Key Terms

- **DFC - Desired Future Condition**
  - The adopted long-term goal for an aquifer's condition, generally expressed as allowable average drawdown.
- **GAM - Groundwater Availability Model**
  - Computer model used to estimate how aquifers may respond to pumping over time.
- **MAG - Modeled Available Groundwater**
  - Estimated amount of groundwater that can be produced annually while achieving the DFC.
- **PDL - Protective Drawdown Limit**
  - A District-established drawdown limit used to protect heavily used portions of an aquifer.

Management Plan: Key Terms

- **Management Zone/Area**
  - Geographic sections of an aquifer that the District monitors and manages separately.
- **Threshold Level**
  - A point that triggers closer review or possible management action based on pumping or water-level changes.
- **Unreasonable Impact**
  - A significant, site-specific effect on wells or the aquifer involving water levels, saturated thickness, subsidence, or water quality.
- **Acre-foot**
  - The amount of water needed to cover one acre one foot deep - about 326,000 gallons.

District Rules

What are the District Rules?

- The District's adopted framework for carrying out its responsibilities and managing groundwater
  - Including requirements for wells, permits, spacing between wells, production, reporting, and enforcement

Use it to find:

- Whether your well needs a registration, or permit
- Spacing, acre-foot allotment per acre owned, metering, reporting, fees, curtailment, 5-year review, subdivision requirements and production requirements
- How the District reviews permits and responds to rule violations

District Rules: Key Terms

- **Registration:** The certificate issued by the District for an exempt well.
- **Certificate to Proceed with Drilling:** District authorization required before drilling a new exempt well.
- **Drilling Permit:** Authorization to drill, replace, re-drill, or alter a non-exempt well.
- **Operating Permit:** Authorization to withdraw a specified amount of groundwater at a specified rate.

District Rules: Key Terms

- **Variance:** A District-approved exception to a specific rule requirement.
- **Unreasonable Impact:** A significant effect on wells or aquifer conditions that may require additional protections or management action
- **Production Capacity:** The maximum pumping rate allowed for a well, usually expressed in gallons per minute.
- **Domestic Use:** Water well drilled, completed, or equipped so that it is incapable of 25,000 gallons a day (17.36 gpm) and for household or domestic activity (livestock).
- **Acre-foot:** 1 acre-foot of water is about 325,851 gallons of water

Exempt Wells: What You Need to Know

- Commonly used for domestic and livestock purposes.
- Must be incapable of producing more than **25,000 gallons per day**.
- New domestic/livestock exempt wells generally require at least **two acres of groundwater rights**.
- Require District approval before drilling and registration required after well completion.
- Must meet applicable spacing, location, and construction standards..
- Not metered or charged production fees.
- Changes in use or capacity may cause a well to lose exempt status.

Before You Drill a Well

- Obtain District authorization first
- Demonstrate required acreage and groundwater rights
- Meet well-to-well, property-line, septic, and contamination setbacks
- Follow construction and completion standards
- Submit the driller’s log after completion (Fee returned)*

New Non-Exempt Wells

- Any well that does not qualify for an exemption under District Rules.
- Requires a drilling permit and an operating permit.
- Subject to acreage allotment based on aquifer completion, spacing, and production.
- Requires metering, production reporting, and applicable fees.
- Larger wells may require groundwater modeling, pumping tests, monitoring equipment, or other technical information.
- Drilling and Operating permits are reviewed every five years.

Existing Non-Exempt Wells

- A well that is already in existence prior to District Rules.
- Requires a **operating permit.**
- Subject to acreage allotment based on aquifer completion, spacing, and production.
- Requires metering, production reporting, and applicable fees.
- Larger wells may require groundwater modeling, pumping tests, monitoring equipment, or other technical information.
- Operating permits are reviewed every five years.

Non-Exempt Permits

- Overall production limit based on contiguous acreage
- Different per-acre limits by aquifer, formation, and depth
- Difference between pumping capacity and annual permitted production
- Existing permits may operate under different provisions than new applications

Specifics of the District Rules

Section 4 - Spacing

- Minimum Spacing for all wells – 50 feet from property line, 100 feet from septic absorption fields/spray areas or dry litter poultry facility, 150 feet from concentrated sources of potential contamination (Livestock or poultry yards)
- Simsboro Spacing:
  - 1 foot per 1 gallon per minute (1 ft/1 gpm)of production capacity from any well in Simsboro
  - one-half foot per gallon per minute (1/2 ft / 1 gpm) from the property line
- Carrizo, Calvert Bluff or Hooper Spacing:
  - two feet per one gallon per minute (2 ft / 1 gpm) production capacity from any well in the same formation
  - one foot per gallon per minute (1 ft / 1 gpm) from the property line

Section 4 - Spacing

Yegua-Jackson, Trinity, Sparta or the Queen City Spacing

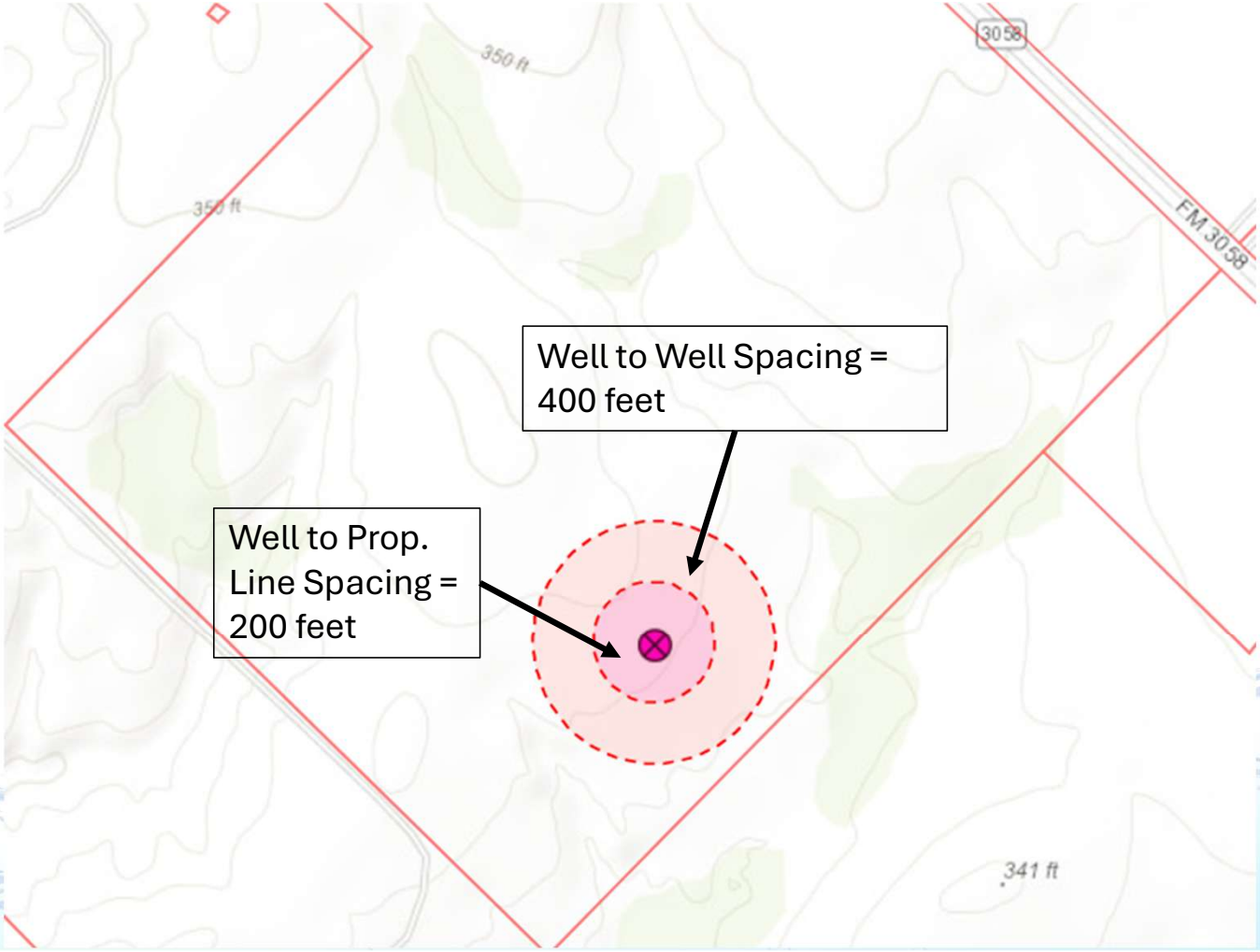
Production Capacity		Minimum Spacing Per GPM of Production Capacity	
More Than	Equal to or less than	From any well	From Property Line
N/A	50 gpm	2 feet	1 foot
50 gpm	100 gpm	3 feet	1.5 feet
100 gpm	150 gpm	4 feet	2 feet
150 gpm	200 gpm	5 feet	2.5 feet
200 gpm	N/A	7 feet	3 feet

- Yegua-Jackson has extra requirement, well produces 35 gpm or more, all portions of screen are 200 feet below the lowest portion of well screen of associated well not controlled by the owner within a 2,500 foot radius of location

Section 4 – Spacing Examples

Carrizo 200 gpm Spacing:

- Prop Line = 1 ft / 1 gpm
- Well to Well = 2 ft / 1 gpm

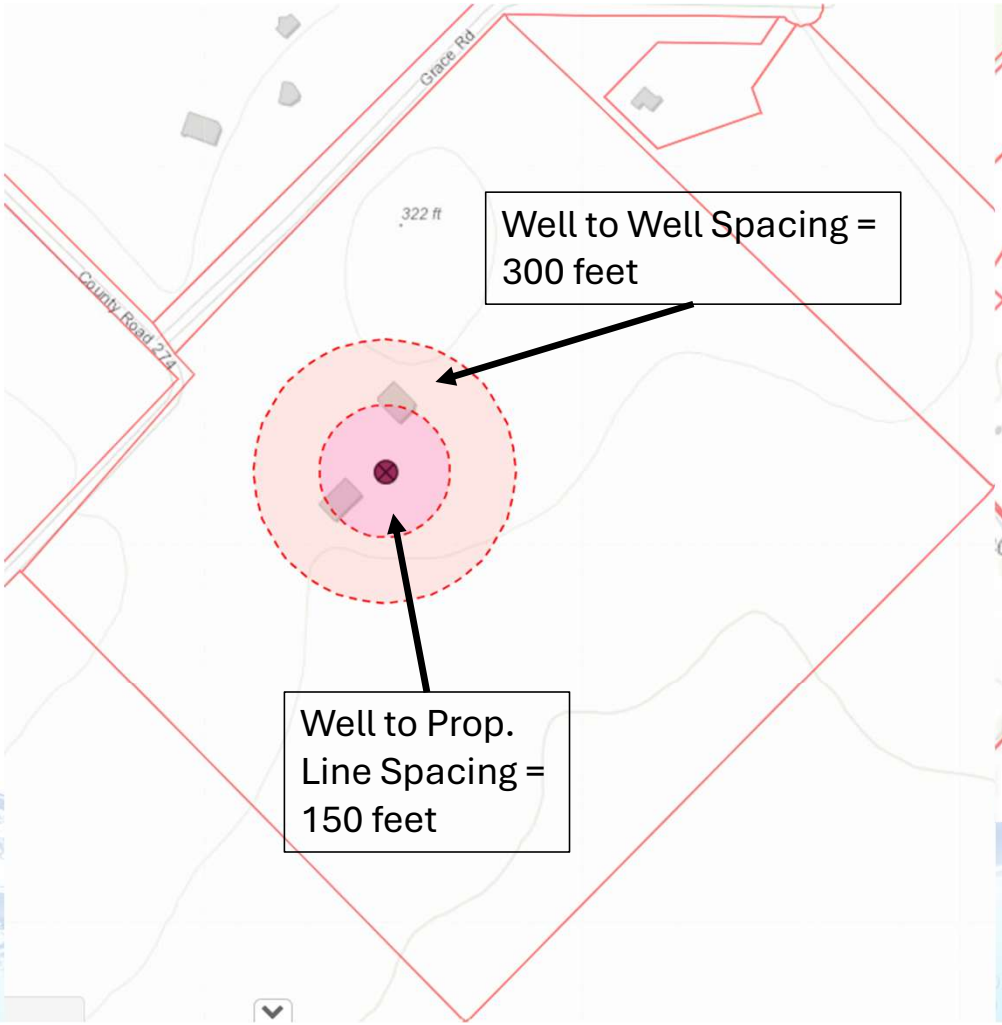


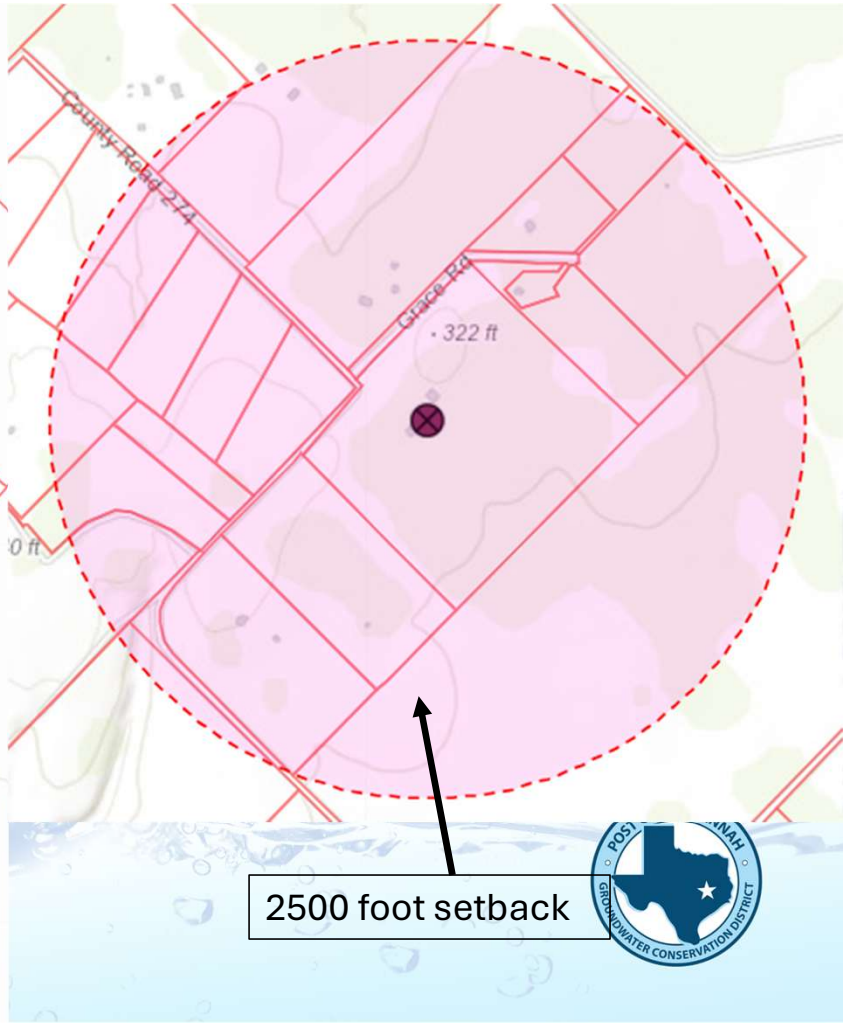
Section 4 – Spacing Examples

Yegua-Jackson 100 gpm Spacing:

- 1.5 ft / 1 gpm Prop Line
- 3 ft / 1 gpm Well to Well

Extra Spacing: Screen 200 feet lower then other Well in Yegua-Jackson within 2500 feet





Section 5 – Production Limitations

- Maximum allowable production is 2 acre-feet per acre owned
- Alluvial Formations – 2 acre-feet
- Carrizo:
  - Depth of 0 to 800 feet – 0.5 acre-foot
  - Depth of greater than 800 feet – 1 acre-foot
- Trinity – 1 acre-foot
- Yegua-Jackson – 0.5 acre-foot
- Queen City – 0.5 acre-foot
- Sparta – 0.5 acre-foot
- Simsboro:
  - Depth of 0 to 400 feet – 0.5 acre-foot
  - Depth of 401 to 1800 feet – 1 acre-foot
  - Depth of greater than 1800 feet – 1.5 acre feet
- Hooper – 0.5 acre-foot
- All other water bearing formations – 0.5 acre-foot

Section 7 – Permits, Records, Reports, and Logs (Exempt)

- Drilling Certificate & Registration - no permit required
- Less than 17.36 gallons per minute
- Incapable of producing 25,000 gallons per day
- 2 acres of water rights
- Spacing from Property Line and Septic
- Domestic, livestock
- Not Metered

Section 7 – Permits, Records, Reports, and Logs (Exempt)

- Oil and Gas exploration
- Monitor Wells (Non-producing)
- Well used in developing large producing well
- Drilling Certificate & Registration - no permit required

Section 7 – Permits, Records, Reports, and Logs (Non-Exempt)

- Permit required
- Does not meet the requirements of Exempt well
- Meter required
- Production fees (Unless Agricultural)
- Public Hearings (Unless Agricultural)
- Spacing Requirements based on Capacity
- Production reporting

Section 7 – Permits, Records, Reports, and Logs (Non-Exempt)

- Aquifer Studies (Past a certain capacity)
- Can be limited
- 5-year reviews (Unreasonable Impacts & DFC Compliance)
- If using a lease, required to provide updated lease schedule every year by January 15 (Only required to supply leases used for production permit)
- Bound by the acre-foot allotment per acre
- Must have water rights!

What Goes Into Granting a Permit?

- Are the goals with the District Management Plan met?
- Is the water needed, and are alternatives available?
- Could pumping affect neighboring wells or surface water?
- Will the water be put to beneficial use without waste?
- Does the applicant have unused permitted amounts?
- What does modeling and technical reviews show?
- Would the proposed pumping cause unreasonable impacts?

Board Considerations for Granting a Permit

- the Management Plan
- the quality, quantity, and availability of alternative water supplies
- the impact on other landowners and well owners from a grant or denial of the permit, or the terms prescribed by the permit including whether the well will interfere with the production of water from exempt, existing or previously permitted wells and surface water resources
- whether the permit will result in a beneficial use at the location(s) and not cause or contribute to waste
- if the applicant has existing production permits that are underutilized and fails to document a substantial need for additional permits to increase production
- if the simulated drawdowns indicate that the permitted production will cause unreasonable impacts as defined by Rule 16.4.6.

What Happens After a Permit Is Issued?

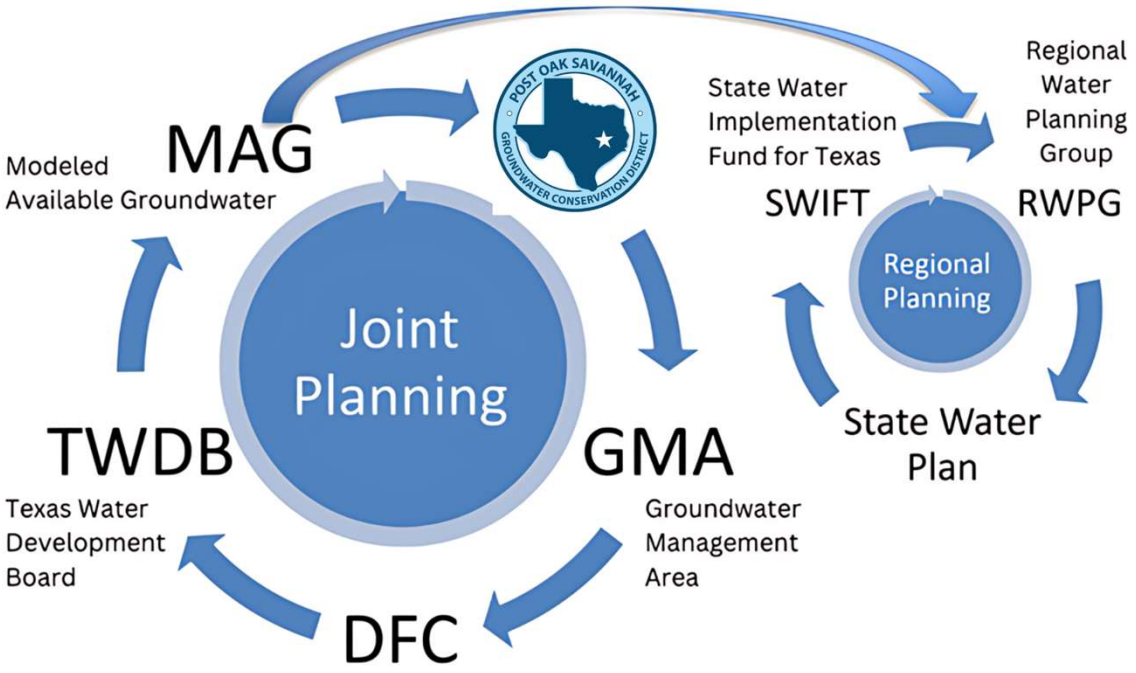
- Metering, reporting, and production fees
- Compliance with permit conditions
- Groundwater monitoring and technical review
- Five-year operating-permit reviews
- Possible permit changes or production reductions as aquifer conditions change
- Investigations, hearings, appeals, and enforcement

Other Rules of Interest

- Rule 1.1 – Definition of Terms
- Section 8 – Transport (Applications, Permits, Hearings)
- Section 9 – Fees (Authority to Issue)
- Section 11 – Metering and Measuring (Meter Calibration, Types of Meters, Meter Accuracy)
- Section 12 – Well Location and Completion
- Section 14 – Hearings on Non-Exempt Well Applications
- Section 15 – Investigations and Enforcement
- Section 16 – Management of Water Availability and Production (Curtailment, 5-Year Review, Unreasonable Impacts)
- Section 18 – Subdivision Requirements (Water Availability Study Requirements)

Joint Planning

Separate & Different Processes: GCD Management vs. State Water Plan

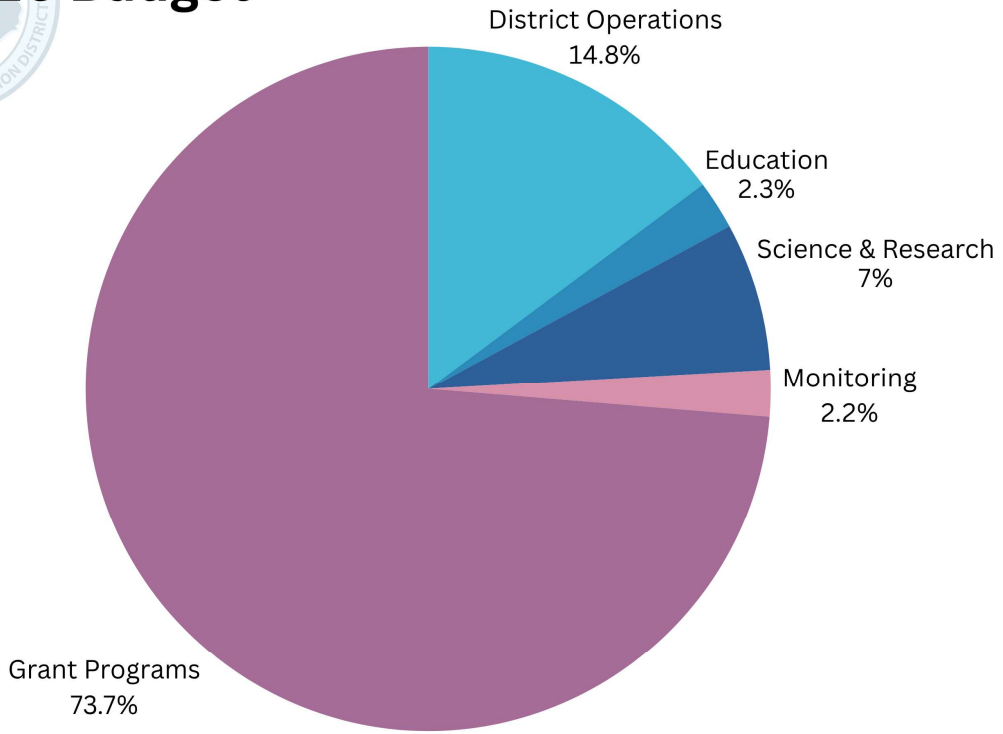


Management Beyond Permitting

- Rules regulate groundwater use
- Programs help conserve, protect wells, support communities, and educate residents
- 16 different programs and services
  - Some programs help individual residents; others support community-wide needs

District Programs

2026 Budget


District Operations
14.8%
Education
2.3%
Science & Research
7%
Monitoring
2.2%
Grant Programs
73.7%

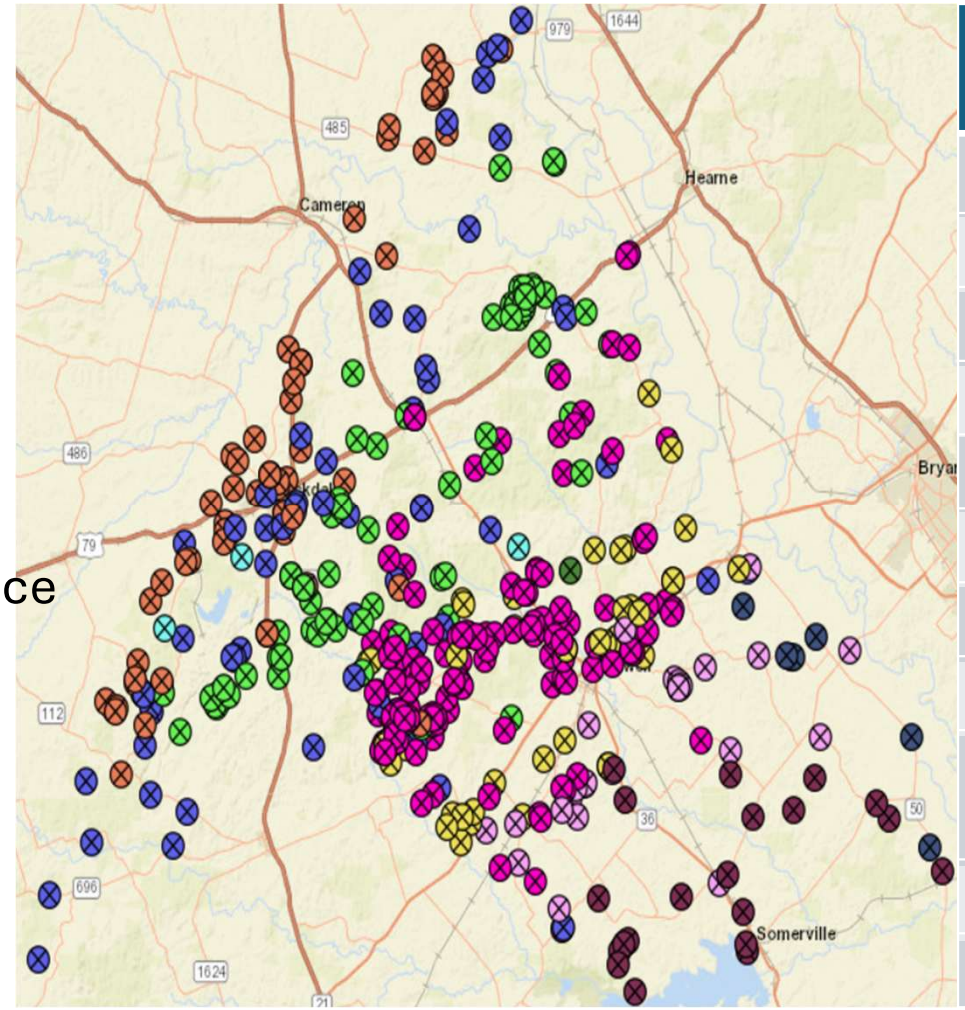
Monitoring

Model Updates

Localized Impacts

Regional Impacts

DFC/PDL Compliance



Aquifer/Aquitard	# of Monitoring Wells
Brazos River Alluvium	7
Calvert Bluff	86
Carrizo	152
Hooper	67
Queen City	45
Reklaw	3
Simsboro	72
Sparta	26
Yegua-Jackson	22
To Be Determined	10
TOTAL	**490**

Rainwater Harvesting Rebate

- The Rainwater Harvesting Rebate program encourages the adoption of rainwater harvesting systems by offering financial incentives to residents within Burleson or Milam counties.
- One rebate per household annually, with a maximum of $5,000, calculated at $1.00 per gallon of the system's storage capacity.
- This rebate is meant to help cover expenses related to system installation, including tanks and necessary components.

Last year:

- $69,780 reimbursed
- 101,133 gallons of storage
- 1,140,732 gallons of collection potential per year

Aquifer Conservancy Program

- Participating landowners agree **not** to produce or lease their groundwater for a defined term in exchange for annual compensation.
- Gives landowners an alternative to leasing their groundwater rights for large-scale production
- Eligible landowners can enroll acreage over the **Carrizo-Wilcox Aquifer (maps)**
- Participants keep ownership and control of their property and groundwater rights while receiving an annual payment
- Helps conserve groundwater and limit future large-scale production within enrolled areas

Program Status:

- 74,175 acres enrolled since 2019
- $6.4 million paid to landowners

CONTRACT TERM	ANNUAL PAYMENT (PER ACRE)
5 years	$10
10 years	$16
20 years	$20
30 years	$30
50 years	$50

Programs for Well Owners

Groundwater Well Assistance Program

- Provides technical and financial assistance to eligible well owners whose water levels decline below their pumps because of regional groundwater production in Groundwater Management Area 12.
- District works with hydrogeologists using groundwater models to identify wells at risk of being impacted and determines appropriate corrective actions
  - Actions may include lowering a pump, modifying a well, or drilling a replacement well
  - "GWAP Annual Needs Assessment (GANA) Report"
  - Driller's Guidance Tool

Last year:

- 13 wells assisted
- $179,314.84 funded

Well Plugging Assistance Program

- Abandoned wells can serve as direct channels for contaminants to enter aquifers, posing a pollution risk.
- Covers the full cost of well plugging up to a maximum of $3,500 per well.
- Eligible wells must have been registered with the district by the end of the previous year and comply with the State's "abandoned well" definition.

Last year:

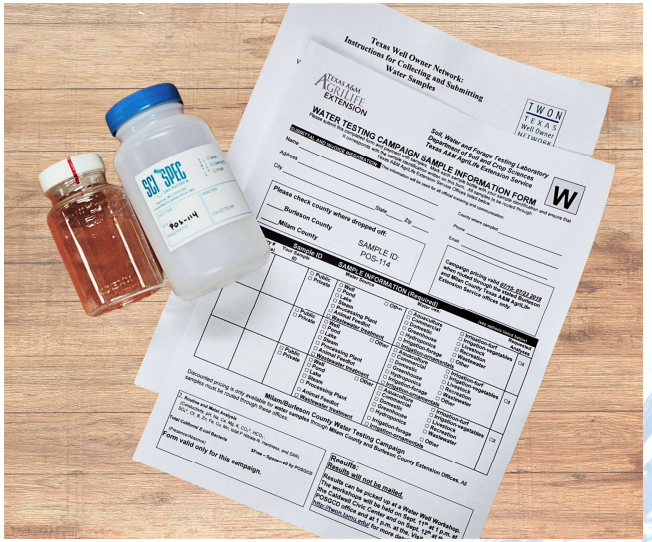
- 12 wells plugged
- $30,804 reimbursed

In-House Coliform Testing

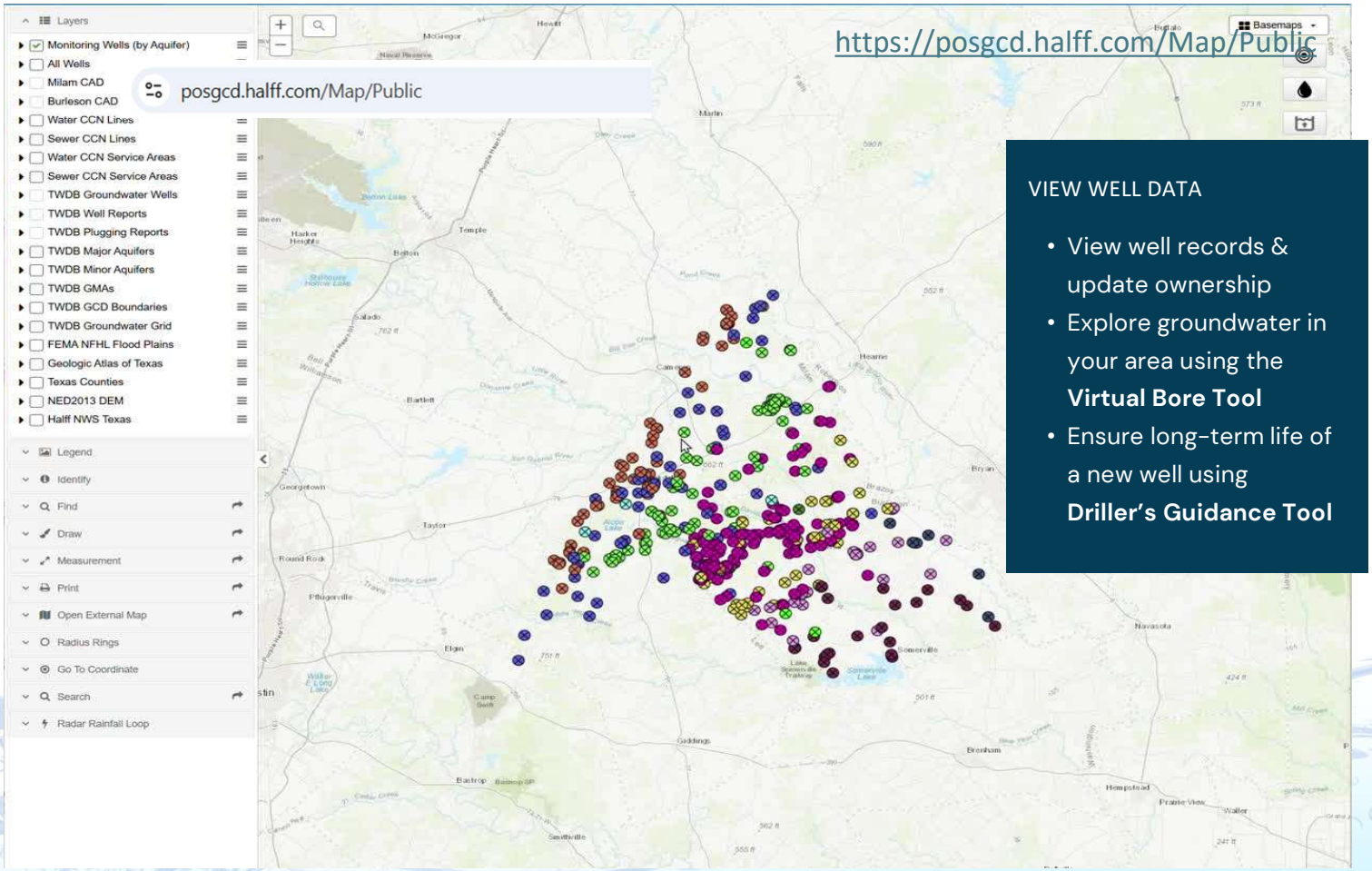
- Free in-house E. coli and total coliform testing
  - Monday–Thursday sample acceptance
  - Approximately 24-hour turnaround
  - Recommended after flooding, well repairs, maintenance, or another event that may have affected water quality

Annual Well Testing Campaign

- Partners with Texas Well Owner Network and Texas A&M AgriLife Soil and Water Laboratory
- Offers annual, comprehensive testing for private wells in Burleson and Milam counties
- Screens for more than the routine bacteria, including hardness, heavy metals, and minerals
- Participants receive their results and are able to attend a workshop to cover test results, maintenance, common concerns, and treatment options



Interactive Maps



https://posgcd.halff.com/Map/Public

VIEW WELL DATA

- View well records & update ownership
- Explore groundwater in your area using the **Virtual Bore Tool**
- Ensure long-term life of a new well using **Driller's Guidance Tool**

Education Programs

AgriLife Classes

TEXAS A&M AGRILIFE EXTENSION

Rainwater Harvesting 101

Learn the basics of collecting and using rainwater, including system components, sizing, water-saving benefits, and how to get started at home.

Rainwater Harvesting 201

Take a closer look at system design, filtration, pumps, maintenance, troubleshooting, and other considerations for building or improving a rainwater harvesting system.

EarthKind Landscapes

Learn practical landscaping methods that conserve water, protect the environment, and support healthy, attractive yards with less maintenance.

POST OAK SAVANNAH GROUNDWATER CONSERVATION DISTRICT

District Outreach & Education Classes

- Annual Groundwater Summit
- Real Estate Seminar – August 26, 2026
- Local Water Utilities Training – October 27, 2026
- Annual County-level Well Inspections Training
- Public presentations and information sessions, booths, sponsorships, etc.

Tinker Water Education Program & Conservation Kits

- Provides a locally focused, TEKS-aligned water education program for fifth-grade students in schools throughout the District.
- The program combines classroom lessons, digital activities, assessments, and take-home Water Conservation Kits containing practical water-saving devices.
- Students use the kits with their families to apply water conservation lessons at home and track the resulting savings.

2025–2026 school year:

- 5 schools participated
- 13 teachers participated
- 430 students and Water Conservation Kits
- 2,377,444 gallons in projected annual program-wide water savings

4H20 Water Ambassadors Scholarship and Sponsorship Program

- Offers financial support to students in Burleson and Milam Counties accepted to the Texas 4-H Water Ambassador Program (4-H2O)
- Covers participation fees, provides reimbursements for program-related activities, and awards an annual scholarship aimed at fostering future water industry leaders
  - $1,250 scholarship awarded per year in 4H20, up to $5,000

Other Education & Public Programs

Public Presentations

- Informative sessions on groundwater conservation and management

Events, Classes, and Workshops

- Professional development classes for educators, local water utilities, and real estate agents
- Annual Groundwater Summit with updates on groundwater projects and legal frameworks
- Conservation-based classes with AgriLife, including rainwater harvesting, EarthKind landscaping, etc.

Stay Informed

- Quarterly newsletter
- Email updates
- Media outreach – social media, press releases for local newspapers, etc.

Community Support

Volunteer Fire Department Reimbursements

- Reimburse local VFDs for equipment or improvements that help conserve water
- No set reimbursement cap
- Can support needs such as storage, plumbing, filling systems, or other water-saving upgrades

County Funding – Interlocal Agreements with Counties

- Each county within the district's jurisdiction receives an annual allocation of **$125,000** to give to each county environmental office.

Local Water Utility Grants

- Help utilities complete conservation-focused infrastructure projects
- Common uses include repairing or replacing aging systems, reducing leaks, and improving water efficiency
- More than **$22.7 million awarded since 2006**

Questions?

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