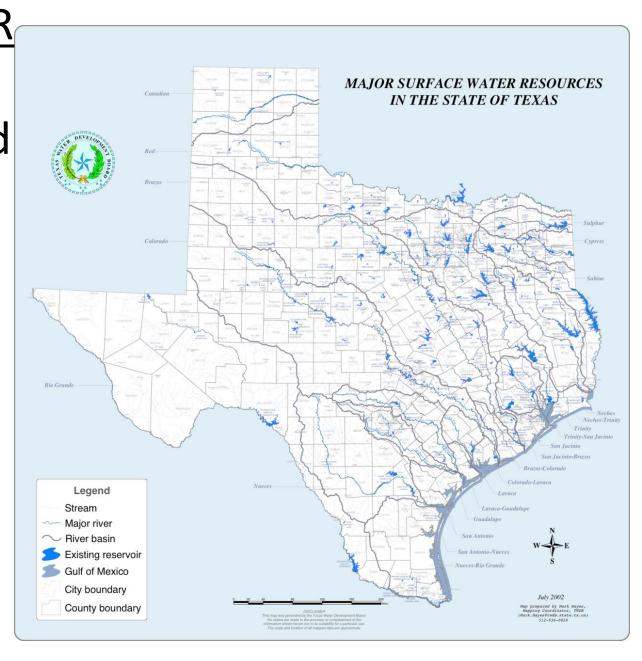


### The Basics:

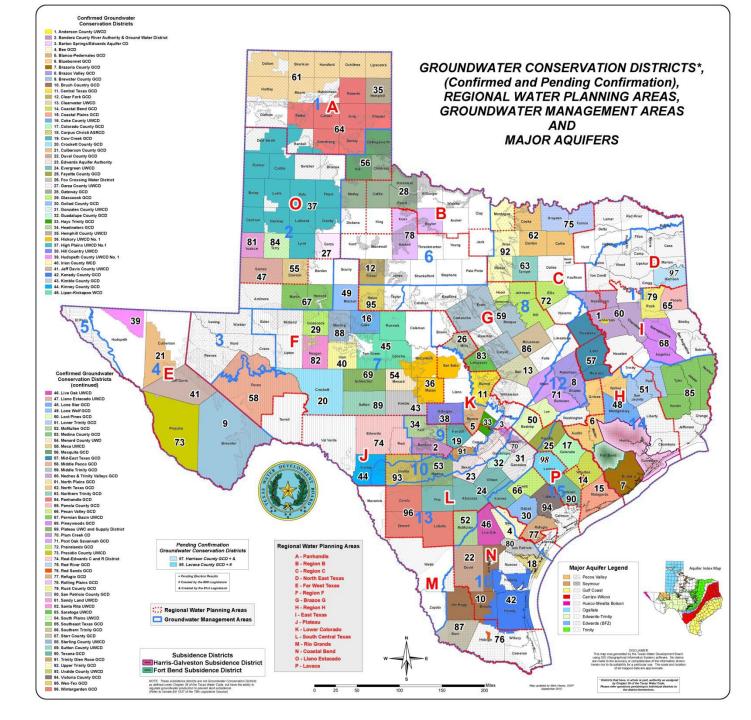
Management of Texas Water Resources and

Responsibilities of Groundwater Conservation Districts

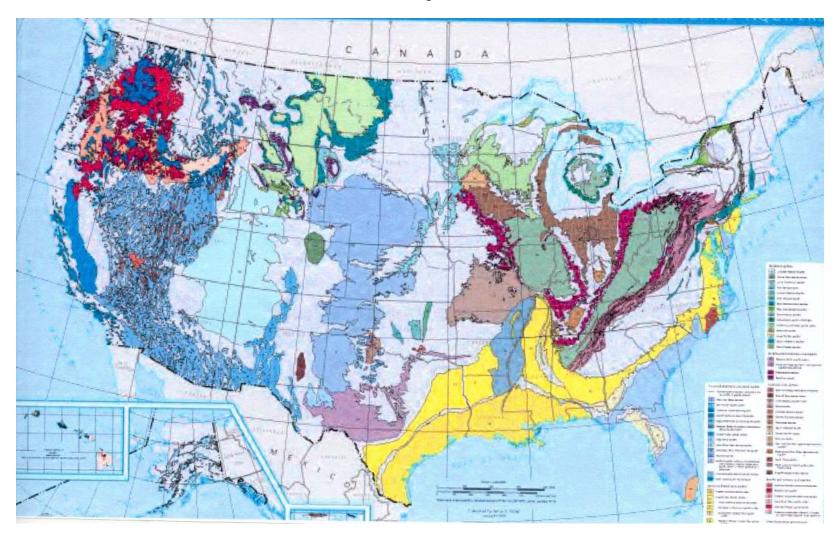
**SURFACE WATER** Owned by the State, Regulated by Texas Commission on **Environmental** Quality (TCEQ), & managed by River **Authorities** 



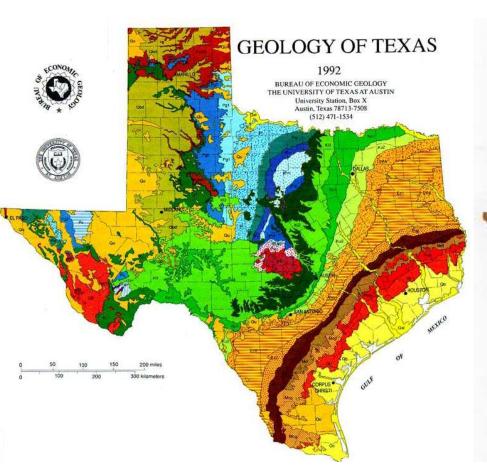
Groundwater in Texas aquifers is privately owned & regulated by 100 Groundwater Conservation **Districts** (GCDs)

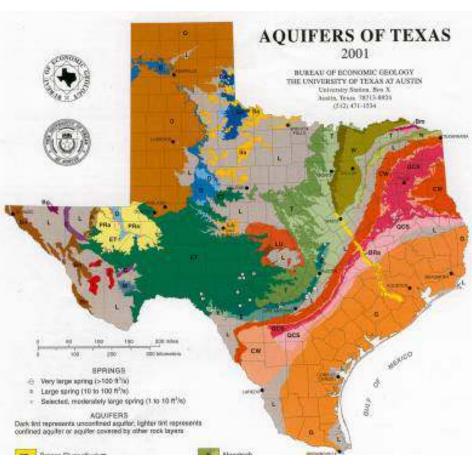


# U.S. Aquifers



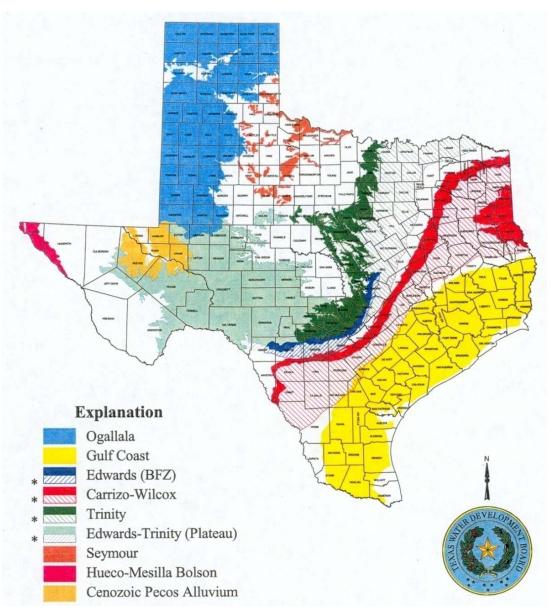
# Geology / Aquifers





# Major Aquifers of Texas

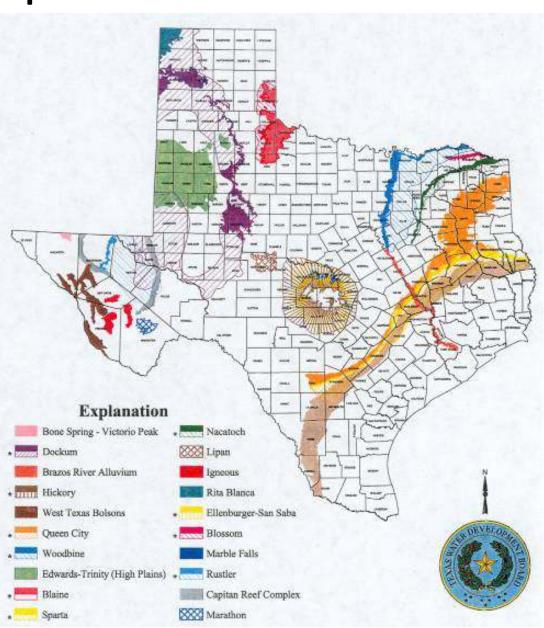
POSGCD Carrizo-Wilcox

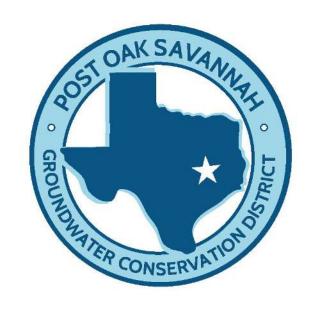


# Minor Aquifers of Texas

### **POSGCD**

Queen City Sparta Yegua-Jackson Brazos Alluvium





# Groundwater Conservation Districts

**Powers and Purposes** 

# Common Law/Rule of Capture

- Common Law- Historically developed
- Rule of Capture- Old English Rule
- Under Rule of Capture Landowners have the right to pump unlimited groundwater from the land they own, as long as not malicious or wasteful, without liability to neighbors

## **Political Subdivisions**

- GCDs are Political Subdivisions of State (Specific authority and responsibilities in a defined geographic area)
- "Political subdivision" means a county, municipality, or other body politic or corporate of the state, including a district or authority created under Section 52, Article III, or Section 59, Article XVI, Texas Constitution, a state agency, or a nonprofit water supply corporation created under Chapter 67. (Ch. 36.001)
- Empowered by Chapter 36, Texas Water Code

#### **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

#### **Ownership of Groundwater**

TWC 36.002 states: The groundwater ownership and rights described by this section: (1) entitle the landowner,... to drill for and produce the groundwater below the surface of real property, subject to Subsection (d), without causing waste or malicious drainage of other property or negligently causing subsidence, but does not entitle a landowner,... to the right to capture a specific amount of groundwater below the surface of that landowner's land; and (2) do not affect the existence of **common law defenses** or other defenses to liability under the **rule of capture**.

Subsection (d), mentioned above, states:

This section does not... prohibit a district from limiting or prohibiting the drilling of a well by a landowner for failure or inability to comply with minimum well spacing or tract size requirements adopted by the district,... (or) affect the ability of a district to regulate groundwater production as authorized... under this chapter...

#### **ADMINISTRATION**

**Section 36.051** 

The governing body of a district is the board of directors . . . \*\*\*may be appointed or elected- please reference enabling legislation.

# POSGCD Directors (appointed by Commissioner's Courts)

Milam County	<u>Interest</u>	Burleson County
Steven Wise	At Large	<b>Becky Goetsch</b>
Durwood Tucker	Agriculture	Jay Wilder
Chris Whittaker	Municipal	Tommy Tietjen
Sid Youngblood	Industrial	Lee Alford, III
Bob Wilson	Rural Water	Ed Savage

### Other

#### GCDs may be Created by:

- TCEQ- Priority Groundwater Management Area
- Legislation- Locally filed

#### Confirmation Election

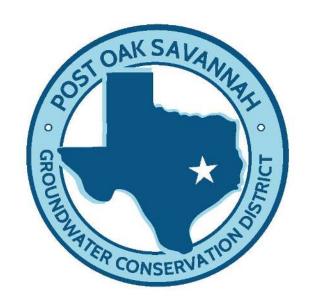
- Temporary Directors prior
- Permanent Directors after

#### Revenues

- Tax Based
- Fee Based
- Both

#### Powers and Authorities from 2 sources

- Chapter 36
- Enabling or Special Legislation of District- takes precedent over Chapter 36
  - Add or amend powers (fee structure)
  - Remove Powers (eminent domain)



# Why Post Oak Savannah Groundwater Conservation District in Burleson and Milam Counties?

POSGCD created by 77<sup>th</sup> Legislature, HB1784, 2001

# **POSGCD History**

- 2001- Created by 77<sup>th</sup> Legislature (HB1784)
- 2002- Confirmed by election both counties
- 2003- Resolution for Local Water Utilities
- 2004- Adopt Rules and Management Plan
- 2005- Adopt strategies to protect shallow aquifers

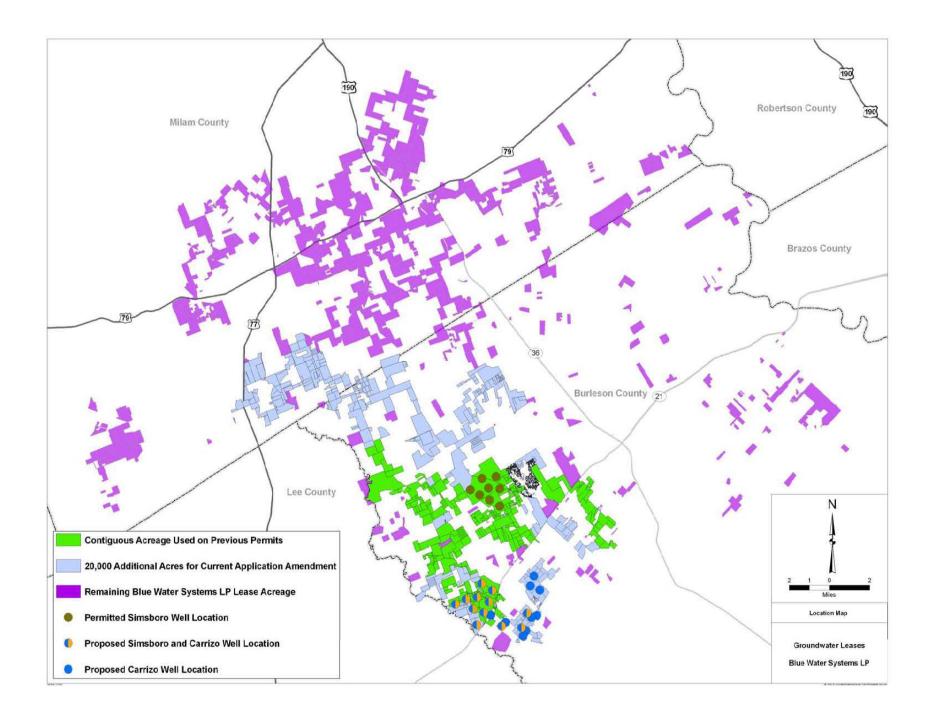
# POSGCD Background and Reasons for creation (2001)

I. Resources + Location + Growth =>35,000 acres water rights leased by 2000



#### II. Local Concerns

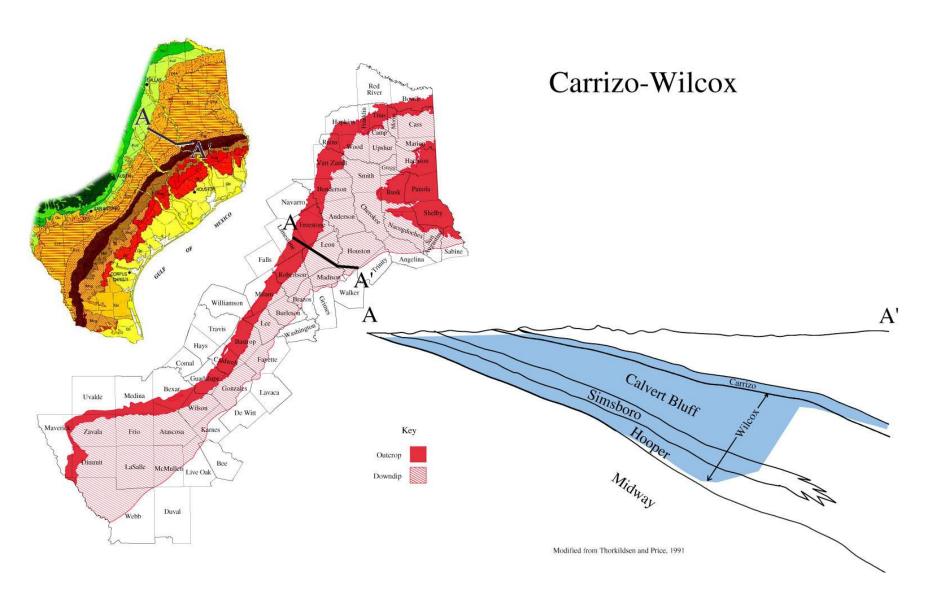
- a. Existing Area Users (100% Burl. Co., 90% Milam Co.- use groundwater)
  Municipal, Industrial, Agricultural
- b. Future Growth
- c. Reasonableness of Management Strategies
- d. Insufficient Science
- e. Unknown area future projects (in and out of District)
- f. Property Rights

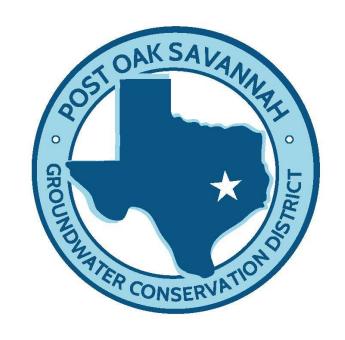




# Groundwater Resources within POSGCD

# Carrizo-Wilcox Aquifer





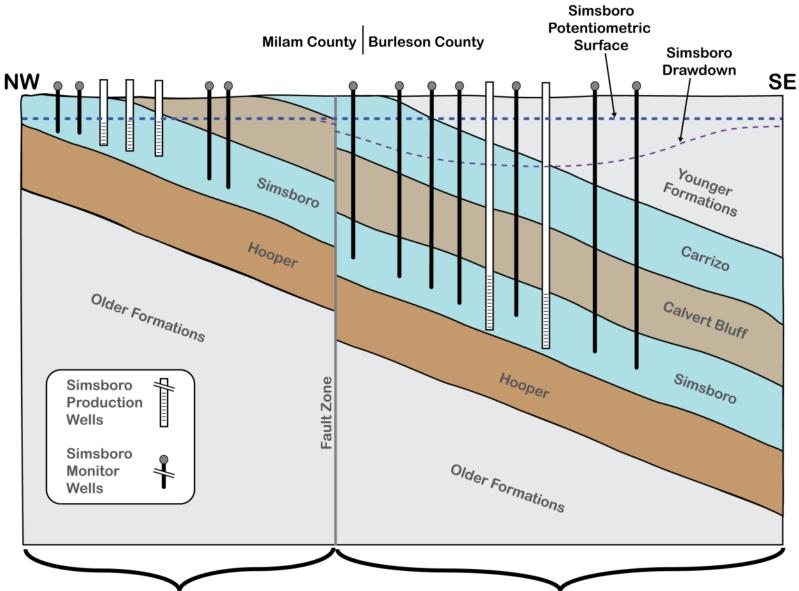
# Management Strategies of POSGCD

#### **Summary of POSGCD Management Strategies**

Aquifer/Formation	Over all DFC	PDL- Unconfined Area
Sparta	28	10
Queen City	30	10
Carrizo	67	20
Calvert Bluff (Upper Wilcox)	149	20
Simsboro (Middle Wilcox)	318	20
Hooper (Lower Wilcox)	205	20
Yegua/Jackson	100	15

(These DFCs are expressed as average drawdowns for a 60-year period beginning January 2000 and ending December 2069, for the area covered by each aquifer in Milam and Burleson Counties.)

# Schematic Cross Section Simsboro Drawdown



Avg. Drawdown in Shallow Simsboro Wells is 15' x 326 sq. miles Avg. Drawdown in Deep Simsboro Wells is 400' x 809 sq. miles

# Relevant Factors for Consideration in GCD Management of Groundwater Resources

- Chapter 36, Texas Water Code;
- Balance between conservation and highest production;
- State Water Plan;
- The purpose of the rules of the District;
- The equitable distribution of the resource;
- The economic hardship resulting from grant or denial of a permit, or the terms prescribed by the permit;
- The potential effect the permit may have on the aquifer, sustainability of the recharge on the aquifer as a whole, and groundwater users;
- The Desired Future Conditions and the estimated Modeled Available Groundwater Values; and
- The Management Goals, Objectives, and Performance Standards

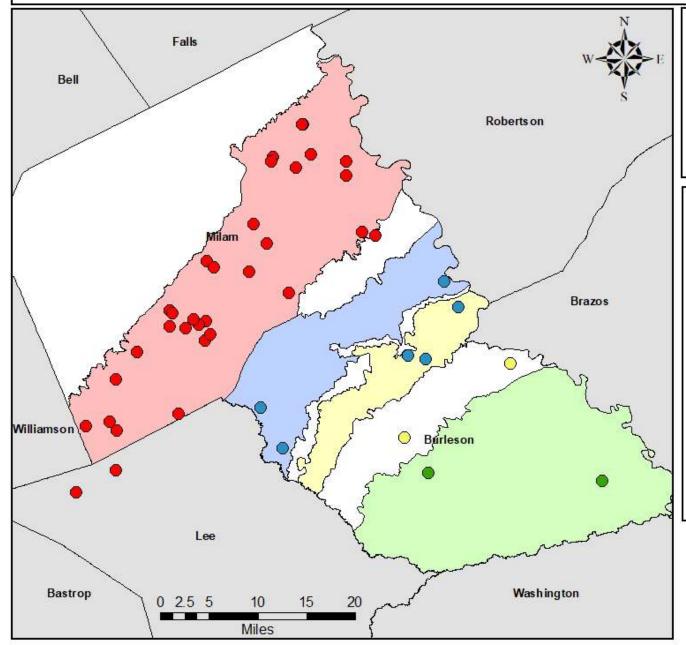
# Groundwater Management

- Protection of water levels
  - Overall Desired Future Conditions
  - Shallow zones restrictions
  - District Monitor well network
- Respect for Property Rights
  - To produce
  - When not producing\*\*

# Ways to protect water levels

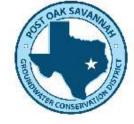
- Well Spacing
- Contiguous Acreage requirements
- Management Zones
- Production per acre
- Total permitted
- Permit requirements
- Five year reviews
- DFC Process (GMA and District)
- Thresholds and Monitoring

#### District Monitoring Wells - Shallow (<400) Management Zone



This map illustrates the wells in the District's Monitoring Network that are identified to be in the shallow management zone set for 400 feet. The District makes an effort to make management decisions that are supported through best available science, In an effort to improve this science, more wells are needed to increase the quantity and quality of data. While the Carrizo-Wilcox has been prioritized, there is a strong need for some shift towards the minor aquifers in regards to number of shallow monitoring wells. This document is





# **Monitoring Summary**

- 201 monitoring wells (adding more)
  - 169 incidental wells (manual measurements)
  - 32 continual wells (hourly measurements)
- Monitoring results available on website
- Continuous evaluations and reports to Board
- Water Level trends are stable



# **POSGCD Programs**

## District Education Program

- Public presentations (Master Gardeners, groups, service clubs, Co. Extension events, Big Spring Clean, etc.)
- Milam and Burleson Counties Groundwater Summit
- Commissioners Court Annual Updates
- Website- www.posgcd.org
- Newspapers
- Newsletters
  - Quarterly Paper
  - Monthly Email
- Schools- Public and private
  - Water Wise- 4<sup>th</sup> and 5<sup>th</sup> grades
  - In person presentations- 6<sup>th</sup> & 7<sup>th</sup> grade science
  - Additional resources- Water IQ for all levels
  - Extension Service

#### **District Groundwater Conservation Grants**

#### >>Local Water Utilities in District

Must be used for conservation of groundwater or recharge of aquifer(s)

History (since 2006)

- Awarded 85 grants
- 23 different Local Water Utilities (All in District)
- Approximately \$12.3 Million
- 2018 Four Recipients totaling \$1,254,150
- 2019 Budgeted amount of \$1 Million

# **District Groundwater Conservation Grants** (continued)

### >> Fire Departments in the District (\$25,000 per year)

Available for water conservation materials and equipment

- -Absorbent materials
- -Foam
- -Foam dispersing nozzles
- -ProPaks

### >>Well Plugging (\$25,000 per year)

District reimburses 100% of expense up to \$2500

### **Groundwater Well Assistance Program (GWAP)**

Purposes-

- -Increase # of monitoring wells
- -Predict and correct issues with water supply

### **Aquifer Conservancy Program (ACP)**

Conserve water for future generations

# Questions?

Contact info:

Gary Westbrook

**General Manager** 

Post Oak Savannah GCD

Phone: 512-455-9900

Fax: 512-455-9909

Email: gwestbrook@posgcd.org

Website: www.posgcd.org



Serving the Citizens of Milam and Burleson Counties

**POSGCD** Aquifer Conservancy Program CONSTRACEPIOGRAM

Who do you know that might be interested in the Post Oak Savannah **Aquifer Conservancy** Program?



CONSERVANCY PROGRAM

## How much land do you own? Where is your land located?

(It must be over the Carrizo-Wilcox Aquifer)
If in Milam County look at map
or www.posgcd.org/public-interface/

Who holds your water rights?

Would you like to conserve your water for future generations by placing all or part of your water rights into a conservancy stewardship?

### Join the Post Oak Savannah Aquifer Conservancy Program by placing your land in the Conservancy

## No one takes possession of Your water rights!

You simply agree not to lease or permit that water during the term of commitment.

You will receive payment for not leasing or pumping your water.

Of course, you can still have an Exempt Well for personal and livestock use.

## You can reserve part of your water rights:

- for row crops,
- pecan grove,
- irrigate a hay patch,
- etc.

# You choose the length of commitment, five years, ten years or twenty years.

You will be able to end the agreement:

- at the end of the term,
- if you sell your property,
- transfer it to your heirs,
- •at the time of death of the landowner.

# Why would you want to commit your water rights into the

ACP?

### The ACP empowers landowners to work with the District to help Conserve Water for future generations.

# Why is it necessary to commit your water rights into the

ACP?

## As population in Texas continues to grow, demands will increase on all resources.

### The Purpose of ACP

- Empower landowners through stewardship
- Establish a legacy of conservation
- Compliment current sustainable practices
- Conserve groundwater
- Add a long-term tool to the current Toolbox of management strategies



- Spacing requirements
- Contiguous acreage requirements
- Maximum Production limits
- Ability To Adjust Permit terms
- Monitoring water levels
- Desired Future Conditions
- Protective drawdown limits

#### -NEW tool-

Aquifer conservancy program (ACP)

Post Oak Savannah GCD Toolbox are the strategies and practices used by the District to manage groundwater.



### Flexible commitment Options Enrollment Incentive - \$10/acre for 2019

- A. Five years-\$5 per acre per year
- B. Ten years-\$8 per acre per year
- C. Twenty years-\$10 per acre per year
- D. there is an option with no payment

- Funded by production and Transport Fees collected by the District. Stand alone dedicated Budget item.
- POSGCD never assumes ownership of landowner groundwater rights
- Owner must own both surface of land and unencumbered groundwater rights
- 4. ACP New member 90 Day sign-up period annually
- Cannot lease or permit groundwater rights during selected term - Exempt wells under POSGCD Rules (Domestic & Livestock) are acceptable
- 6. Change in ownership ends agreement, Transfer to living estate or heirs, Sale of property, Death, (new owner has option to continue)

#### Post Oak Savannah Groundwater Conservation District

Aquifer Conservancy Program For more info see our website

www.POSGCD.org or call our office 512-455-9900