

# Overview of Groundwater Management in Texas

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Oklahoma Governor's Water Conference

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# The Rule of Capture

*a/k/a law of the biggest pump*



McDonald Irrigation Well, 1000 Gallons per Minute, Hereford, Texas.

Landowners have the right to capture an ***unlimited amount*** of groundwater beneath their property **without being liable to their neighbors**

# Limits on Rule of Capture

- Trespass
- Malicious or wanton conduct
- Waste
- Subsidence due to negligent over-pumping



# What is a Groundwater Conservation District (GCD)?

Political  
subdivision  
of the State

Modifies the  
Rule of  
Capture  
within  
jurisdiction

*“State’s preferred method  
of groundwater  
management in order to  
protect private property  
rights & balance the  
conservation and  
development of  
groundwater to meet the  
needs of the state”*

Powers  
expressly  
granted by  
Legislature

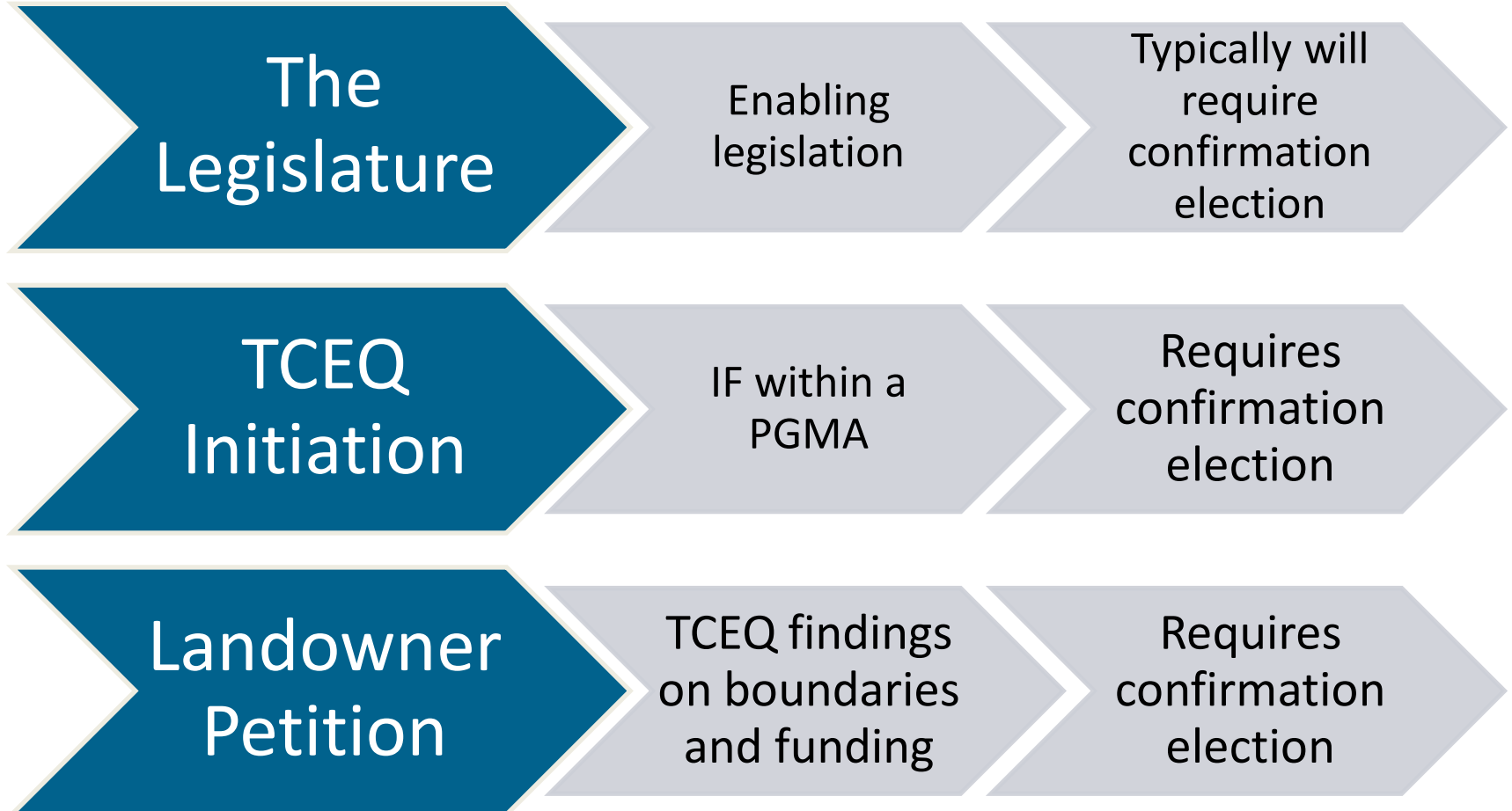
Specific  
authority to  
manage  
groundwater



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TEXAS ALLIANCE OF  
GROUNDWATER DISTRICTS

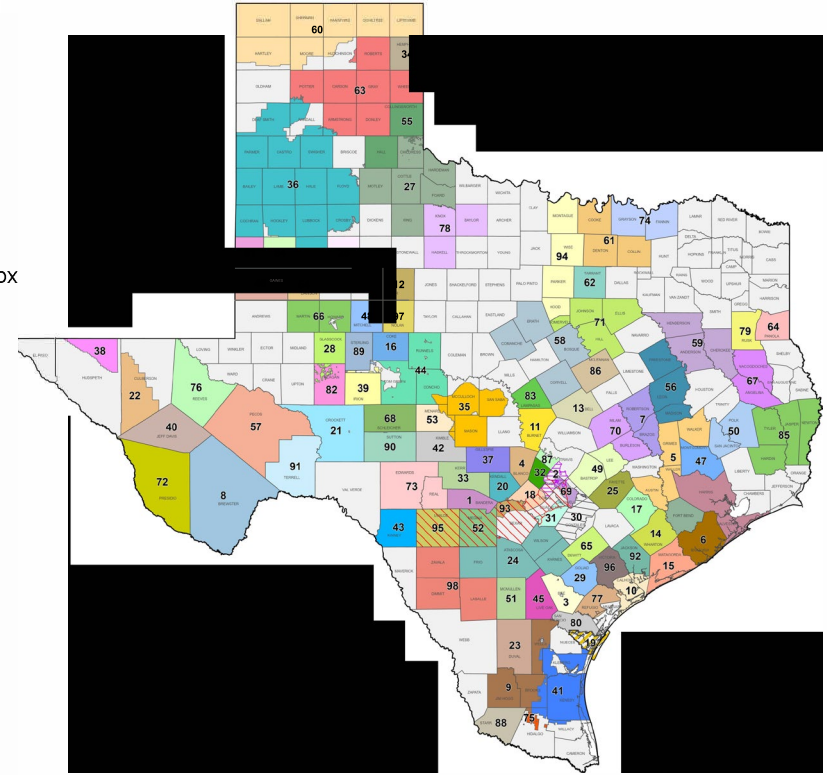
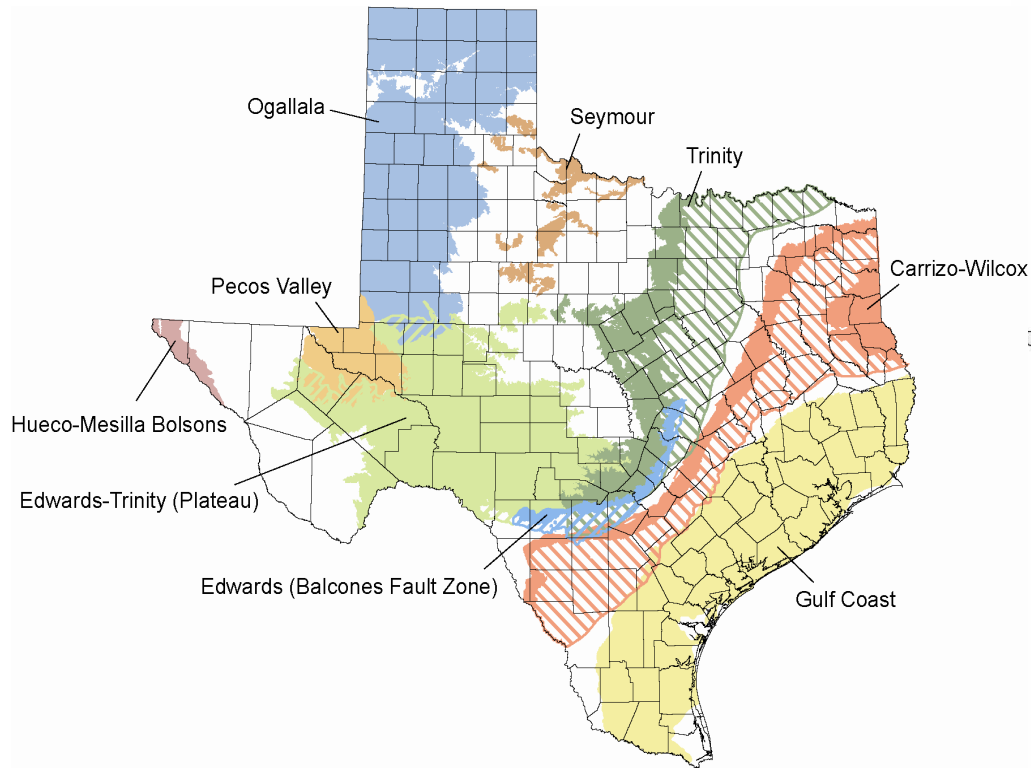
# How are GCDs created?



# 98 Groundwater Conservation Districts

GCDs overlie  
~85% of aquifers

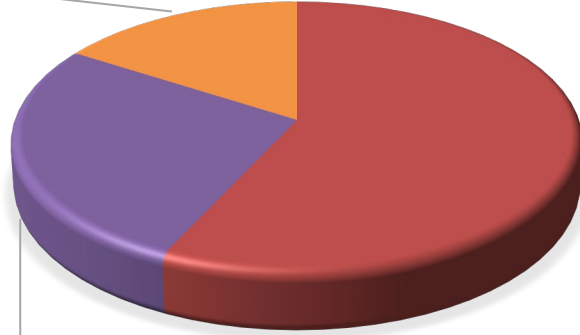
GCDs cover 175  
of 254 Counties



## FUNDING

Both  
16%

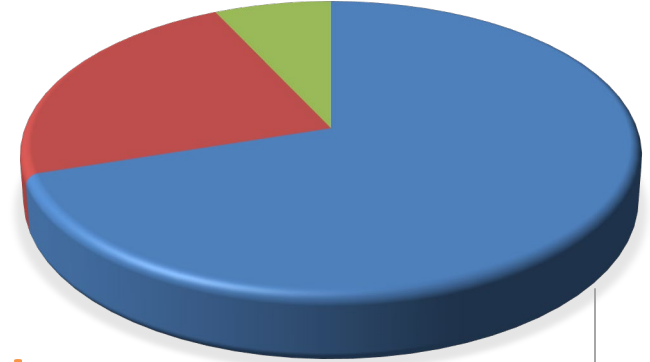
Property  
tax 57%



Production  
fees 27%

## GOVERNANCE

Appointed  
23% Both  
7%

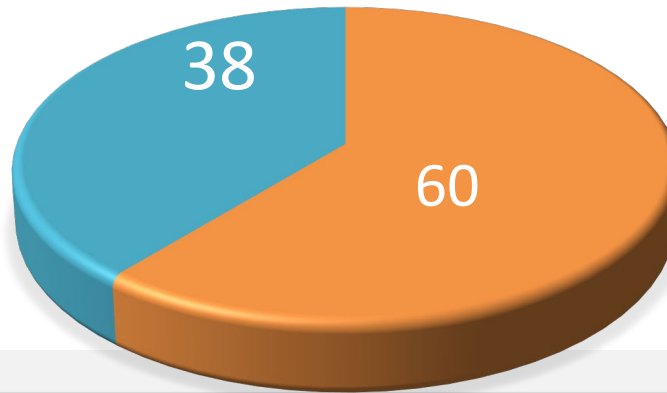


Elected  
70%

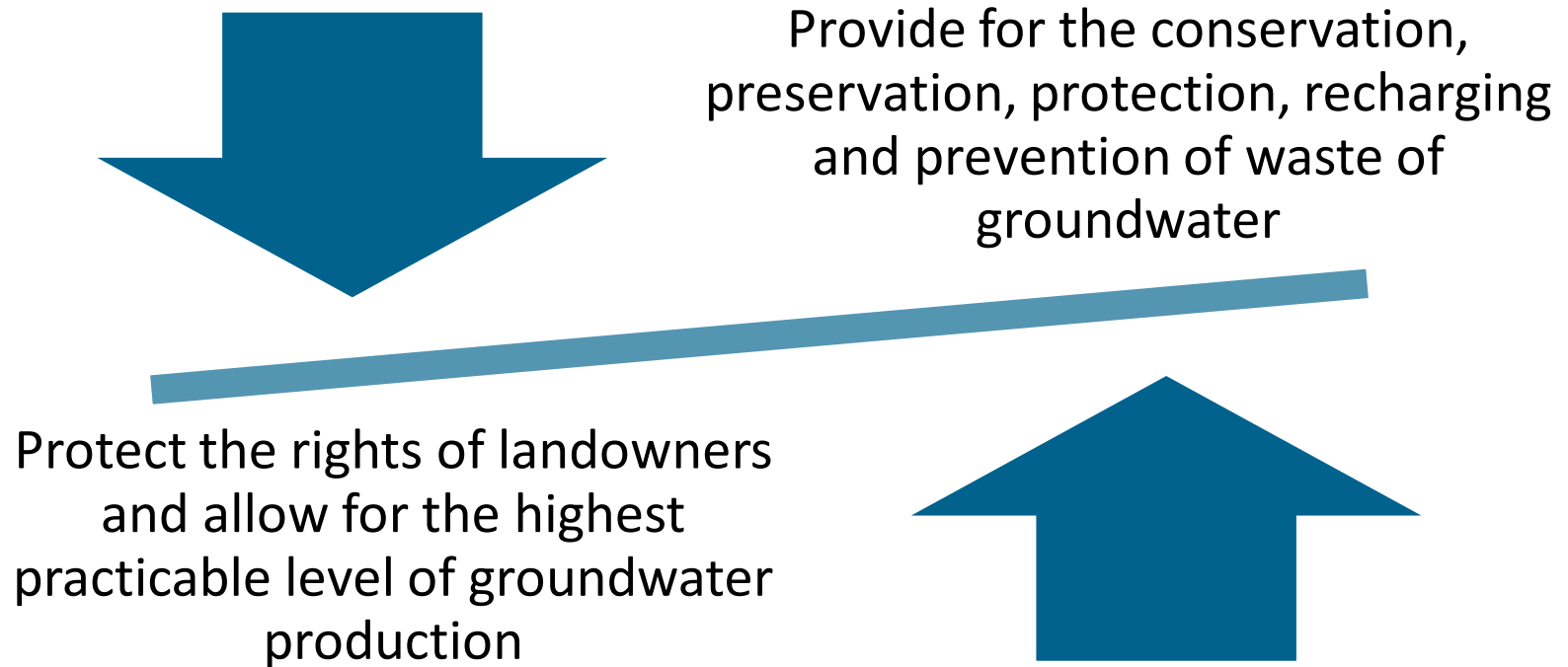
## COMPOSITION

Multiple  
Counties  
38

Single  
County  
60

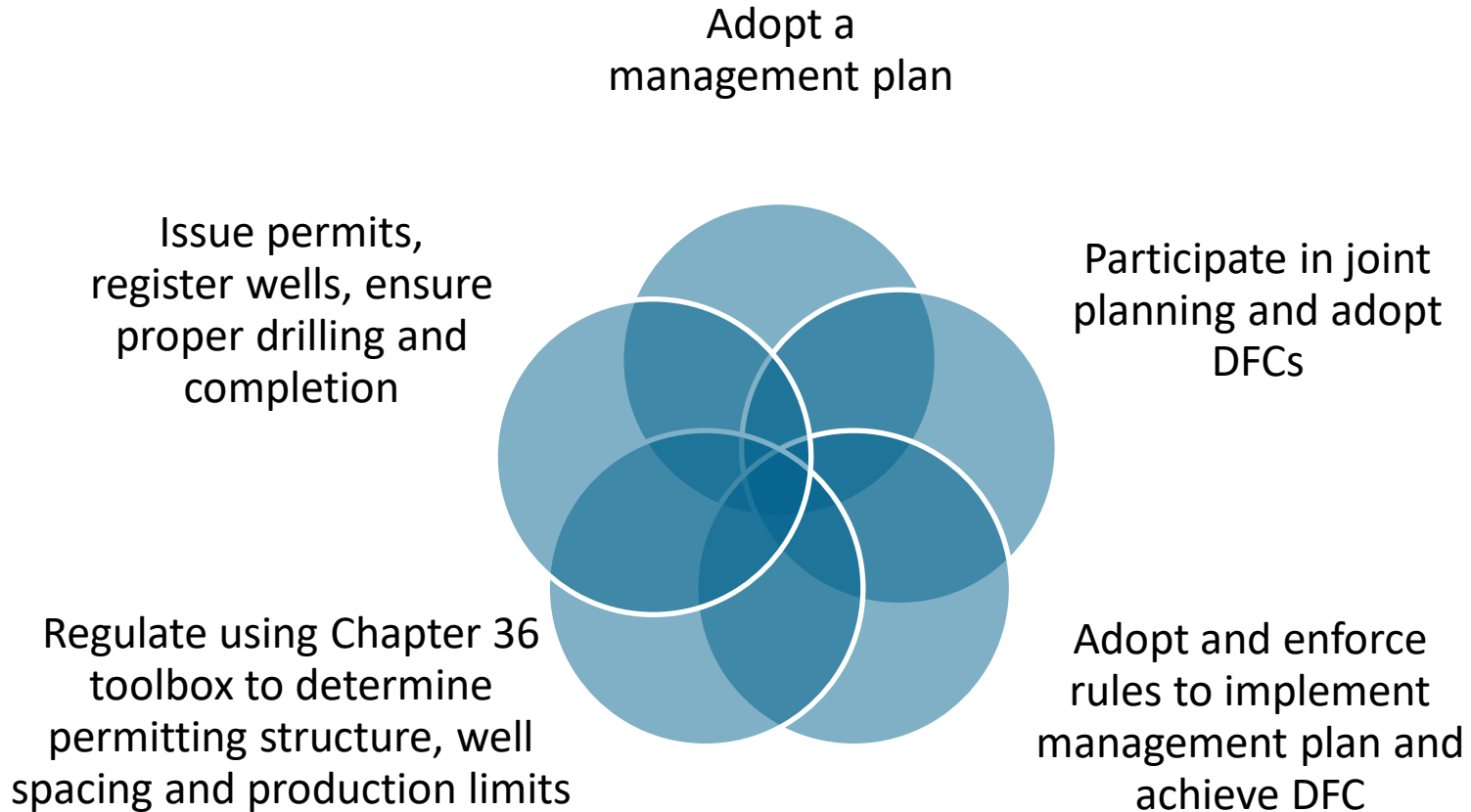


# The GCD Balancing Act





# Powers and Duties



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# GCD Regulation of Wells

Well  
Registration  
Requirements

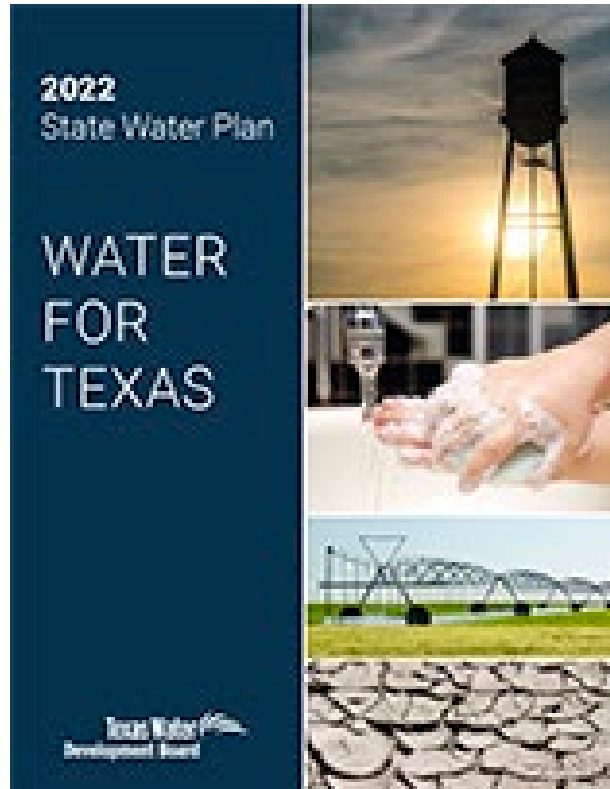
Well  
Construction  
Standards

Well  
Permitting  
Requirements

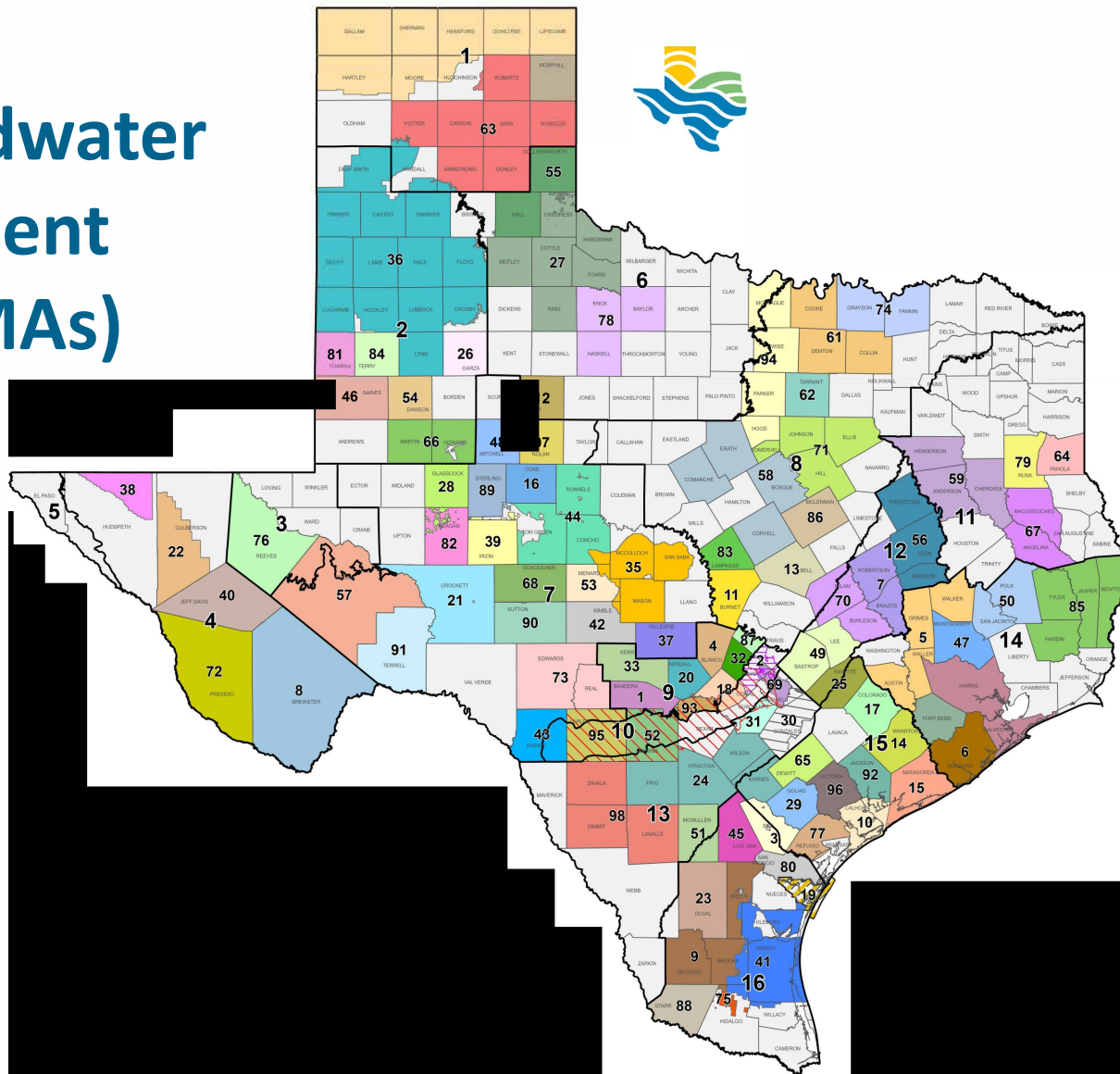
- Production limitations
- Spacing requirements

Production  
Metering &  
Reporting  
Requirements

# Joint & Regional Planning



# 16 Groundwater Management Areas (GMAs)



## Desired Future Condition (DFC)

**An expression of local groundwater management that provides a snapshot of what a specific aquifer will look like at a specified time in the future**

**May be expressed in a variety of ways such as water levels/drawdown, spring flow, or storage volume**

## Modeled Available Groundwater (MAG)

**The amount of water that may be produced on an average annual basis to achieve a DFC**

**MAG determined by the TWDB using groundwater availability models (GAMs)**

# Science & Policy

DFC

Groundwater  
Policy



Decision on  
future aquifer  
condition



MAG

Groundwater  
Science



Physical  
expression of  
aquifer capacity

Aquifer Uses  
or Conditions

State Water  
Plan

Hydrological  
Conditions

Private  
Property  
Rights

Impact on  
Subsidence

Socioeconomic  
Impacts

Feasibility of  
Achieving DFC

Environmental  
Impacts

Any other  
Relevant  
Information

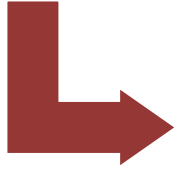


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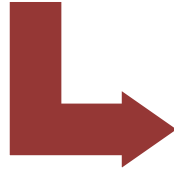
# DFC Adoption Process

Meet and review groundwater conditions

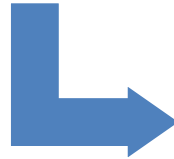


Vote to propose DFCs

May 2026



Comment period and public hearings



Vote to adopt DFCs

January 2027



Receives DFCs and explanatory report



Adopt DFCs

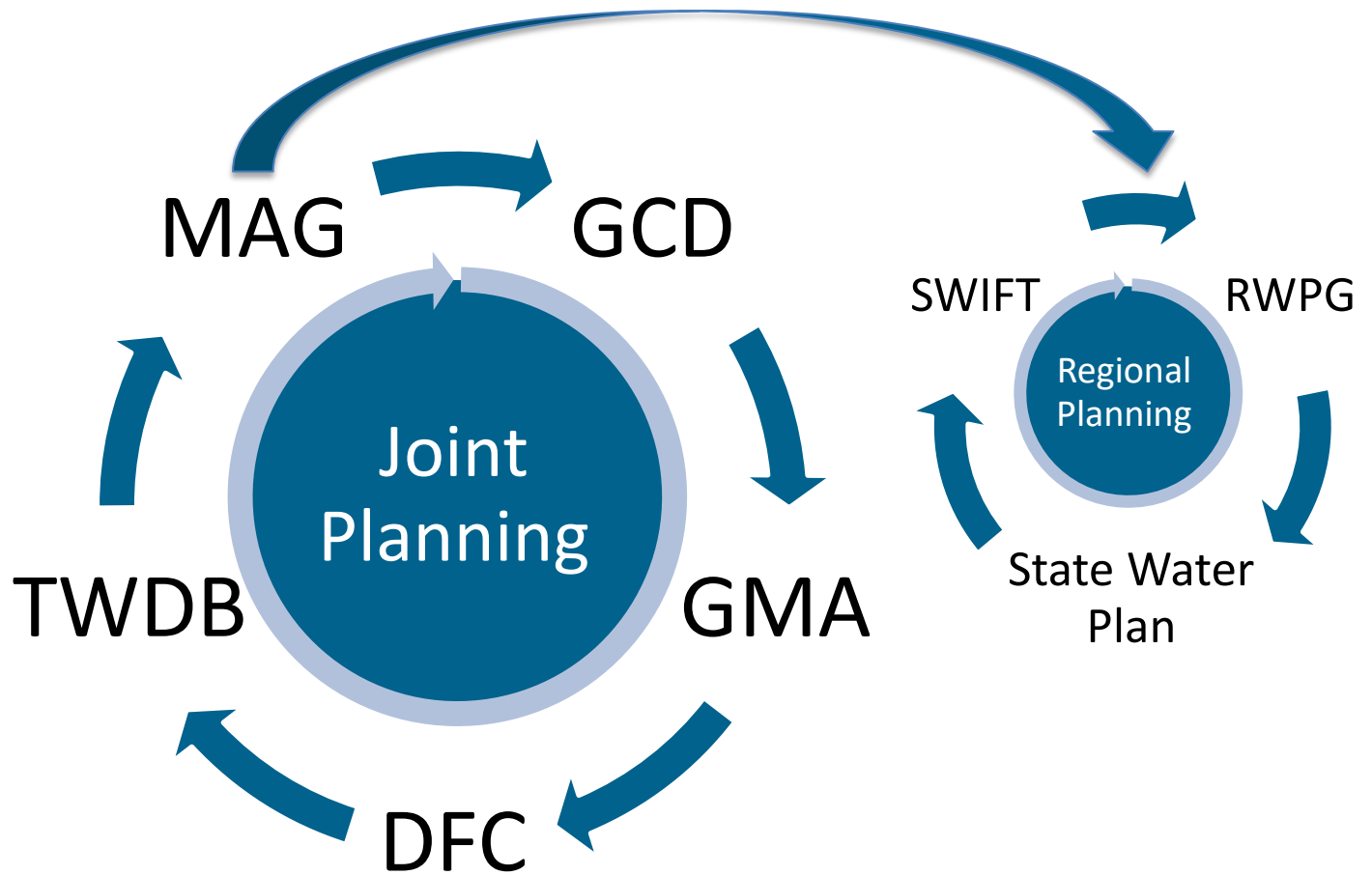
District representatives in GMA

Individual districts

Texas Water Development Board

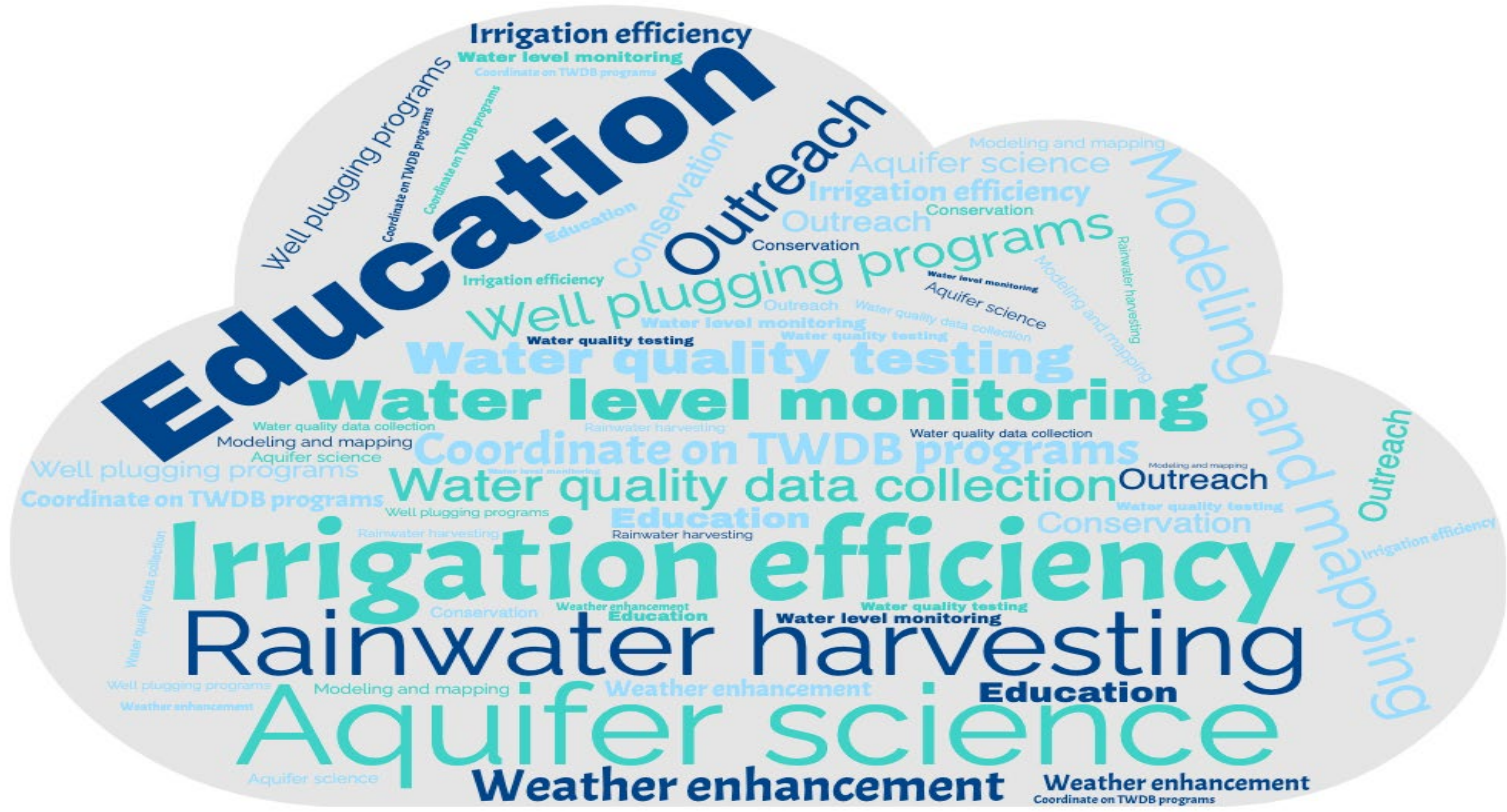


# Regional & State Water Plan





# What else to GCDs Do?



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# Questions?



Keep up with TAGD @TXTAGD

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# Compliance and Enforcement

- Over-pumping
- Waste
- Illegal well construction
- Covering/capping deteriorated or abandoned wells
- Reporting and metering requirements
- Non-payment of fees



# Groundwater Ownership and GCDs

- Landowners own groundwater below the surface
- Landowner entitled to drill for and produce groundwater, but not a specific amount
- GCDs may limit or prohibit drilling based on spacing or tract size and regulate production of groundwater
- GCDs can be liable for takings if their regulations go “too far” (but we don’t know how far too far is...)