

Groundwater

GCDs

GAMs

GMAAs

DFCs

MAGs

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Brief History of Groundwater Management in Texas

- 1904 – “Rule of Capture”
- 1949 – Legislature allows Districts
- 1951 – High Plains UWCD created
- 1995 – Legislature allows GMAs
- 2001 – TWDB designates GMAs
- 2005 – GCDs in GMAs required to set DFCs and TWDB determines MAG

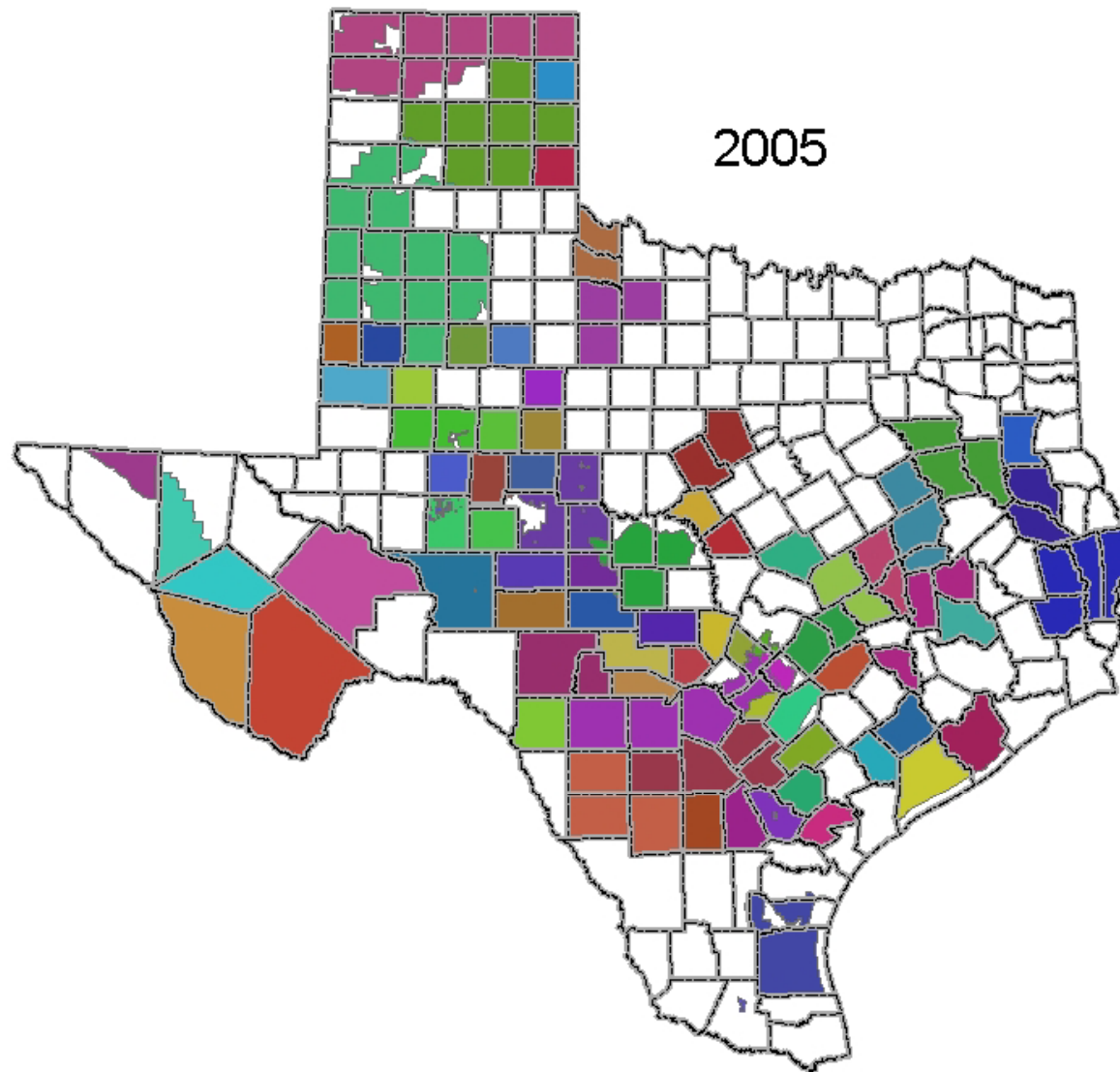


GCDs

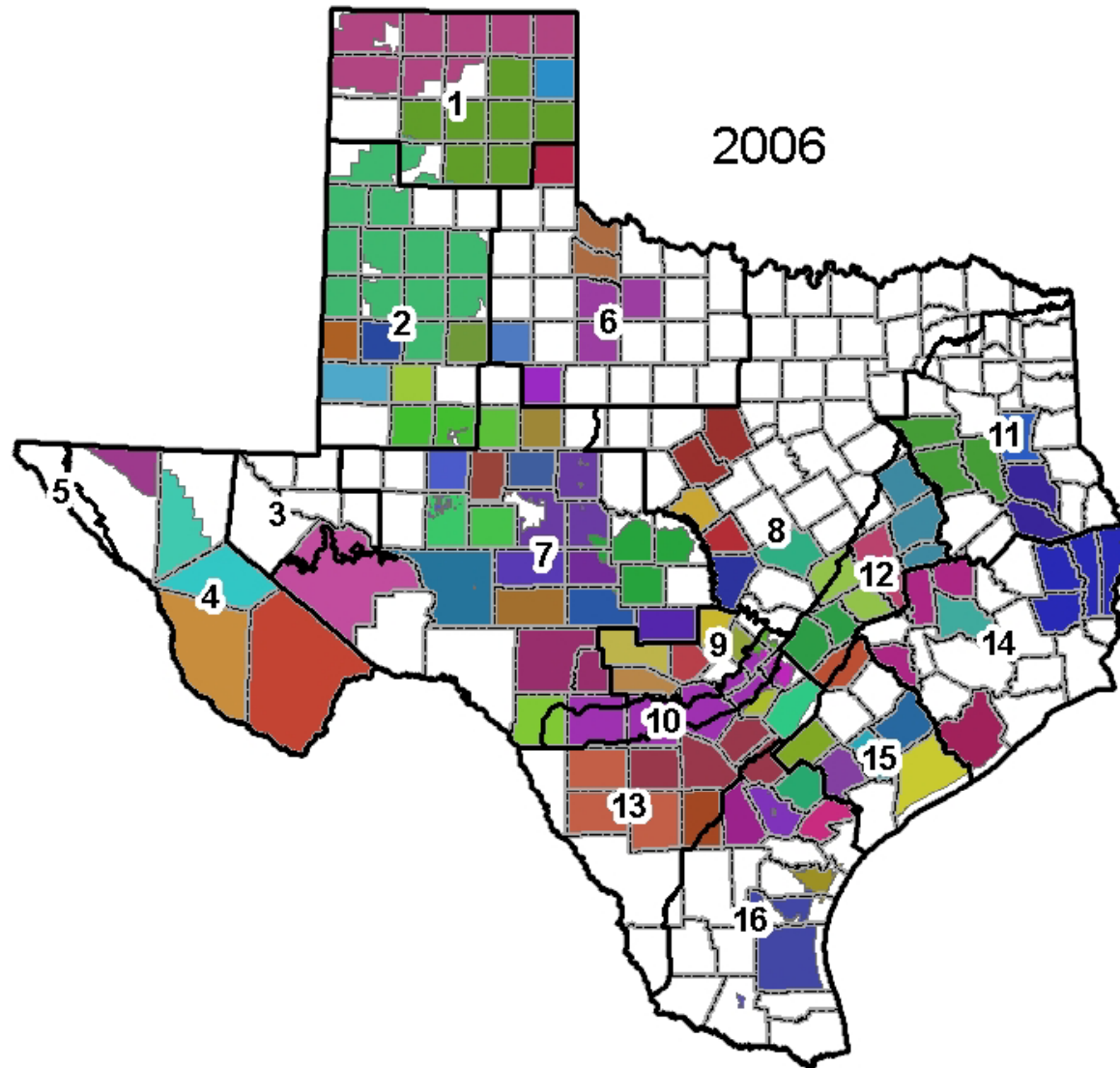
- Well Permitting
- Well Construction Standards
- Well Spacing
- Water Level Monitoring
- Water Quality Testing and Monitoring
- Data Collection and Distribution
- Public Education



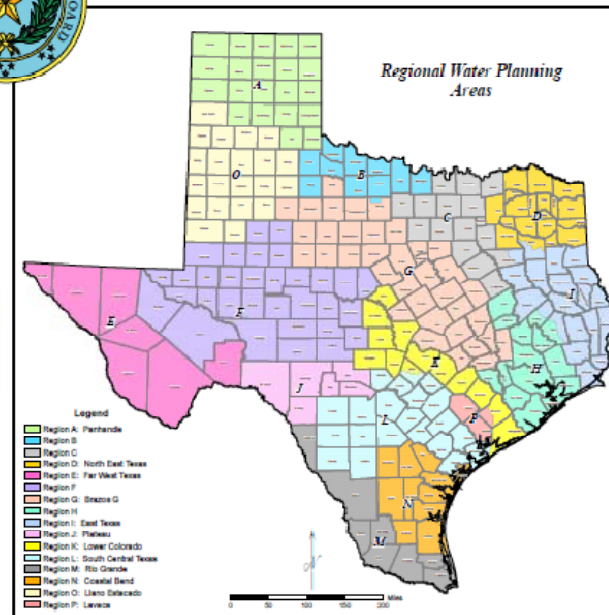
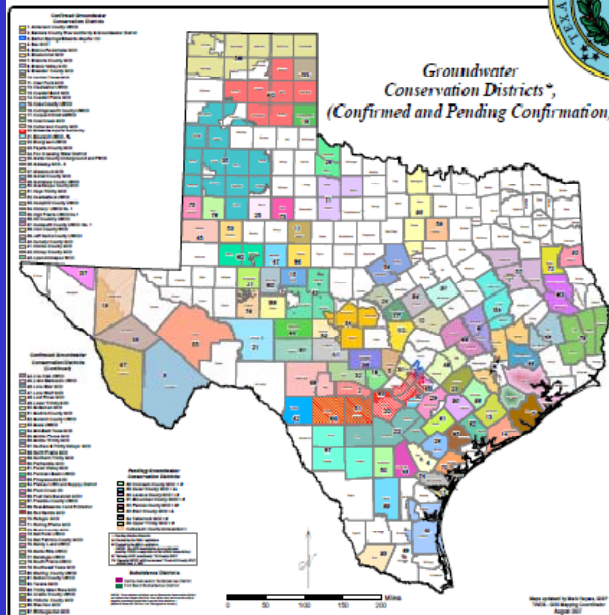
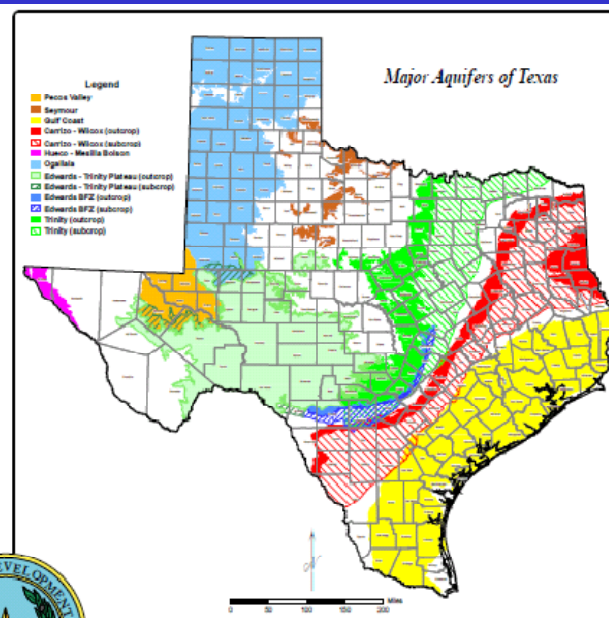
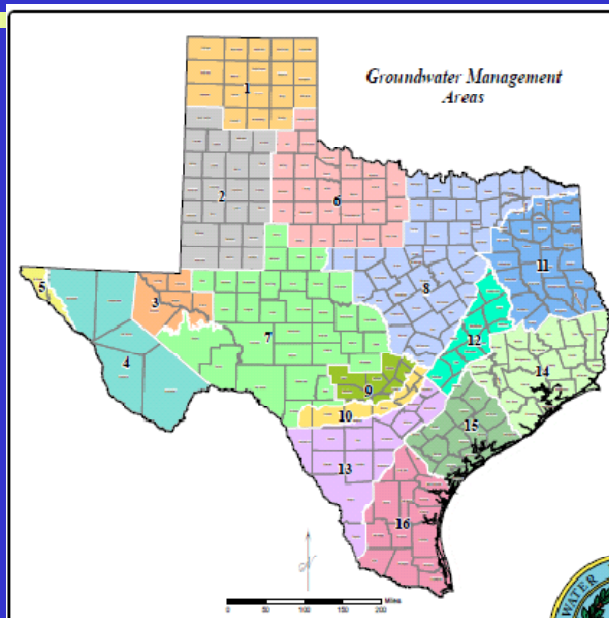
District Creation



GMAs



GCDs, GMAs, RWPGs



Some History

- GCD- Groundwater Conservation Districts
- **GAM** – Groundwater Availability Model
- RWPG – Regional Water Planning Groups
- **GMA** – Groundwater Management Area
- DFC – Desired Future Condition
- **MAG** – Managed Available Groundwater



Status

- GCDs are “preferred”
- 90% of groundwater usage is within districts
- Increase in the number of GCDs
- Increase in potential acquisitions/permits/restrictions
- Increased scrutiny of all permits
- Aquifer science really does matter



What is groundwater availability or MAG?

- The amount of groundwater available for use
- The State does not directly decide how much groundwater is available for use: GCDs will through the GMA process



DFC Timeline & Approach

- DFCs are due to TWDB no later than Sept 2010
- Response time by TWDB to assess MAGs varies with workload



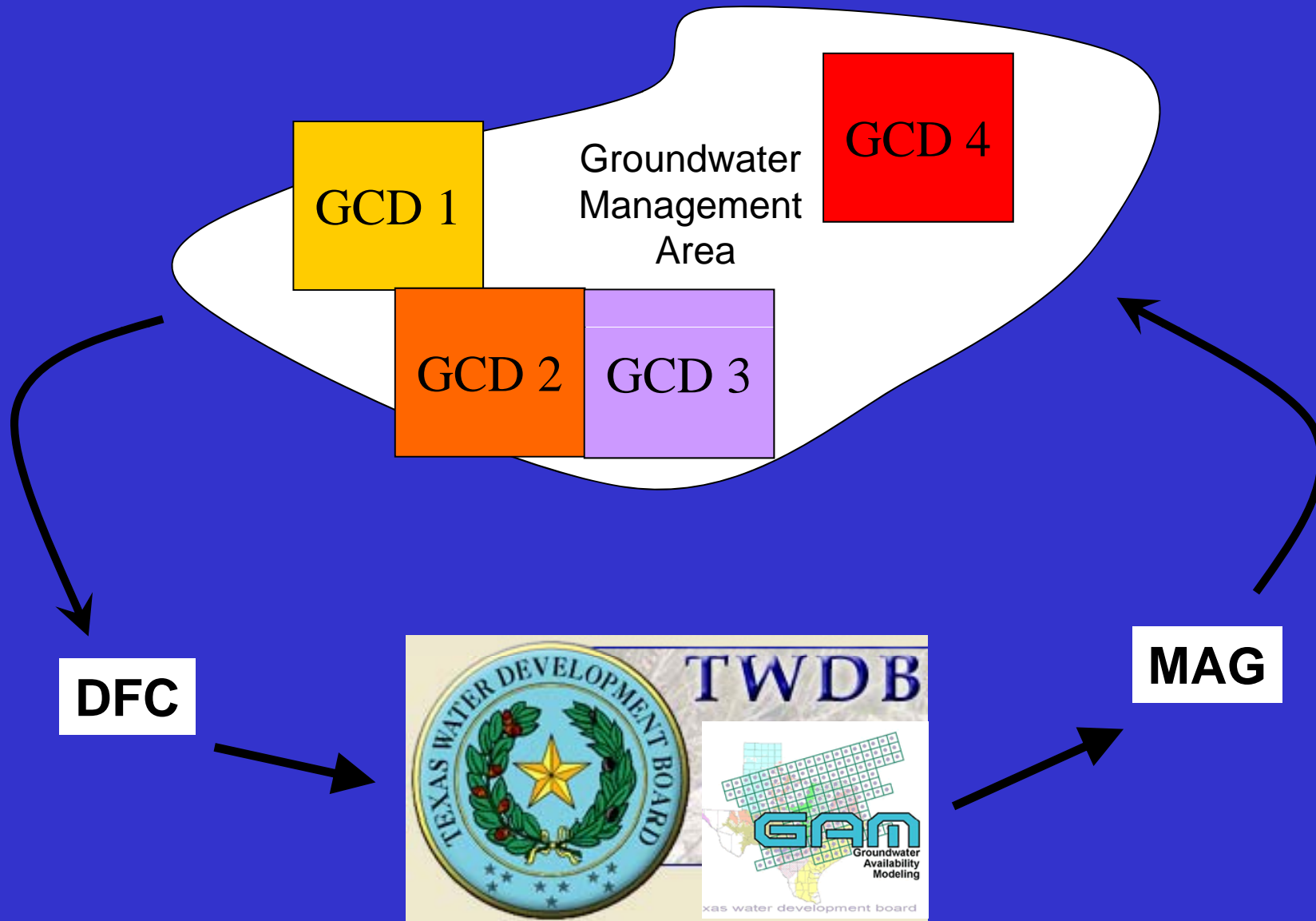
The GMA Process

(condensed)

- GCDs in the GMAs set the DFCs and TWDB uses the GAMs to determine the MAG which RWPGs then use for planning and the GCDs use to permit
- Regulators, stakeholders, attorneys, consultants will continue to argue over details



How it's supposed to work



Approaches for Defining MAG

- Water Budget
 - DFC: Predetermined decline
- Springflow or stream impact
 - DFC: Maintain springs during drought
- Water Quality
 - DFC: limited or no degradation
- Sustainability
 - DFC: long-term inflow = outflow
- Combination
 - DFC: Agency/stakeholder defined



Important observations

(restating the obvious)

- Location still matters
 - Historical use does shape economies & perspectives
 - Sustainability (lifestyle, economy, environment)
 - Environmental
 - Aesthetic/recreational
 - Future growth will drive demands
 - “No-fault” planning-development disconnect
 - Water is only one of many factors
 - Aquifer type
 - Confined/unconfined
 - Recharge, transmissivity, storage
 - Surface water interaction



Important observations

(restating the obvious)

- Groundwater perspectives and debates often stem from much more fundamental beliefs
 - Private property/government intervention
 - Stewardship (prioritization of people and environment)
 - Sustainability



Summary

- Groundwater permitting and management is changing
- It will continue to change as the GMA process plays out
- Potential for complexity and disputes is much greater, especially in high demand areas

