

Water is for Fightin' Groundwater Regulation in Texas

Enrique Valdivia
District 7 Director
Edwards Aquifer Authority

We have a saying...



The Country of 1100 Springs



The Edwards Aquifer Region

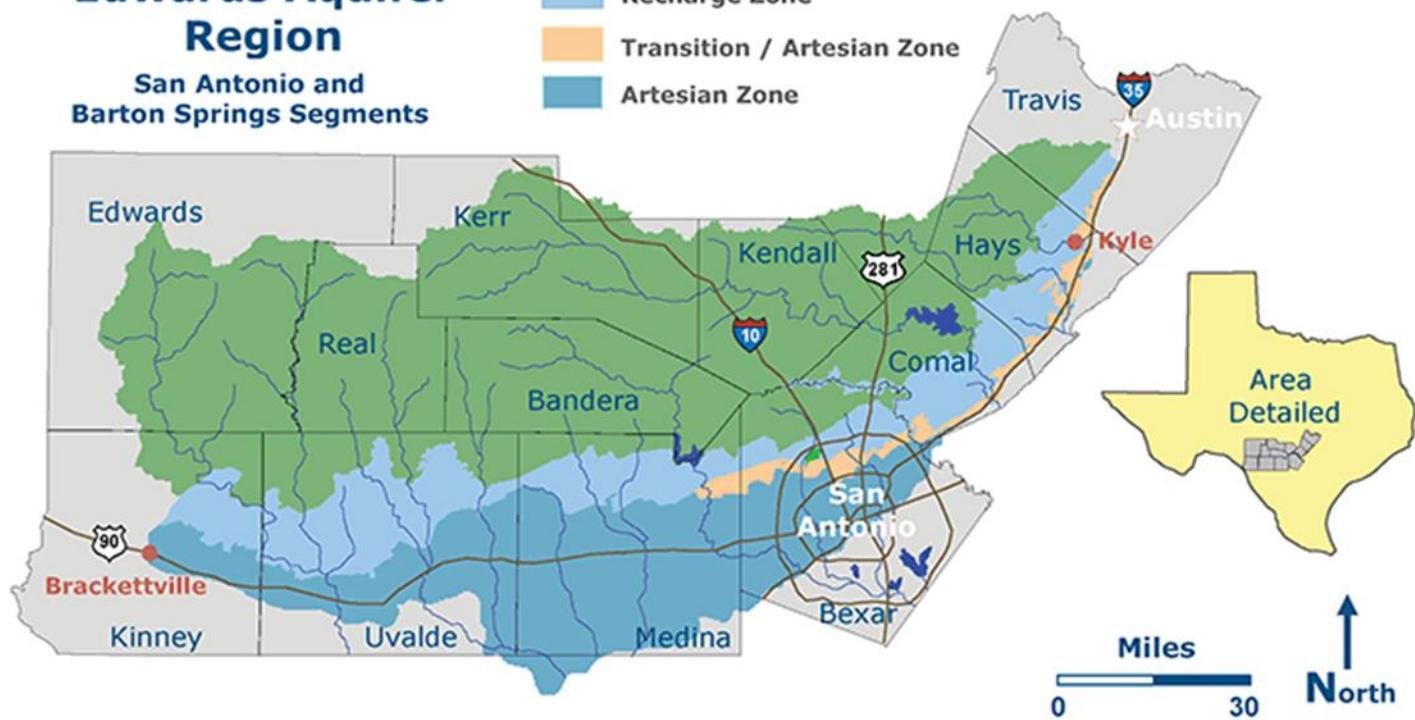
San Antonio and
Barton Springs Segments

Contributing Zone

Recharge Zone

Transition / Artesian Zone

Artesian Zone



A Brief History of Texas Groundwater Law

Texas Supreme Court East decision (1904)

Conservation Amendment (1917)

Texas Underground Water Conservation Act
(1949)

Drought of Record (1947-1957)

Sierra Club Endangered Species Lawsuit (1991)

Edwards Aquifer Authority Act (1993)

Groundwater Management Area Legislation (2001)

Voting Rights and Takings Litigation (ongoing)

Impossible to Regulate Groundwater?

“In respect to underground waters percolating, oozing, or filtrating through the earth...the existence, origin, movement, and course of such waters, and the causes which govern and direct their movements, are so secret, occult, and concealed that an attempt to administer any set of legal rules in respect to them would be involved in hopeless uncertainty, and would, therefore, be practically impossible.”

Ohio Supreme Court, Frazier vs. Brown (1861)

East Case Established Rule of Capture in Texas

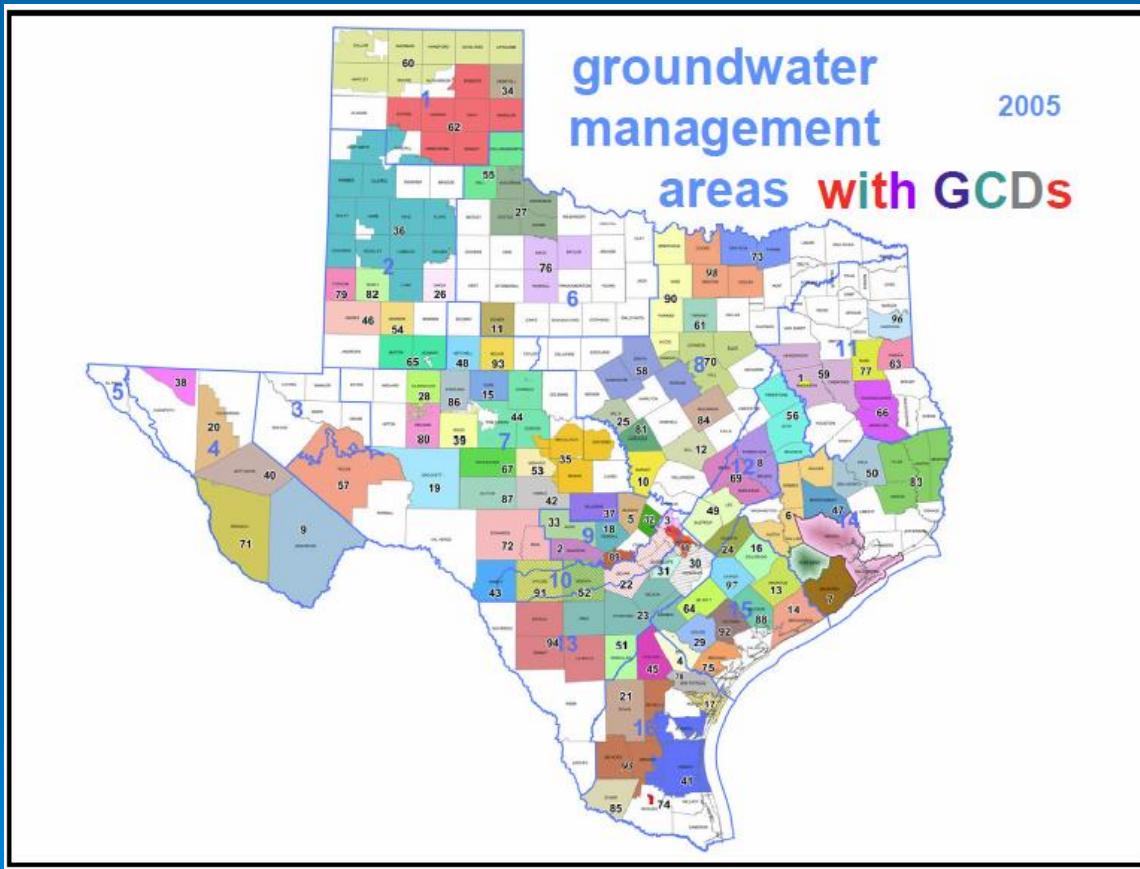
Pursuant to the rule of capture, a landowner:

- need not obtain a permit or other permission to drill and pump groundwater;
- may pump as much water as he can beneficially use;
- may even pump so much water that it causes his neighbor's wells to go dry;
- may use or sell the water produced for use anywhere feasible (transfers).

Groundwater in Place

- Who “owns” the water prior to it’s capture for beneficial use?
- This question is still being litigated today. The answer appears to be the landowner has a vested right in the groundwater “under” her land.

What is the difference between a groundwater management area and a groundwater conservation district?

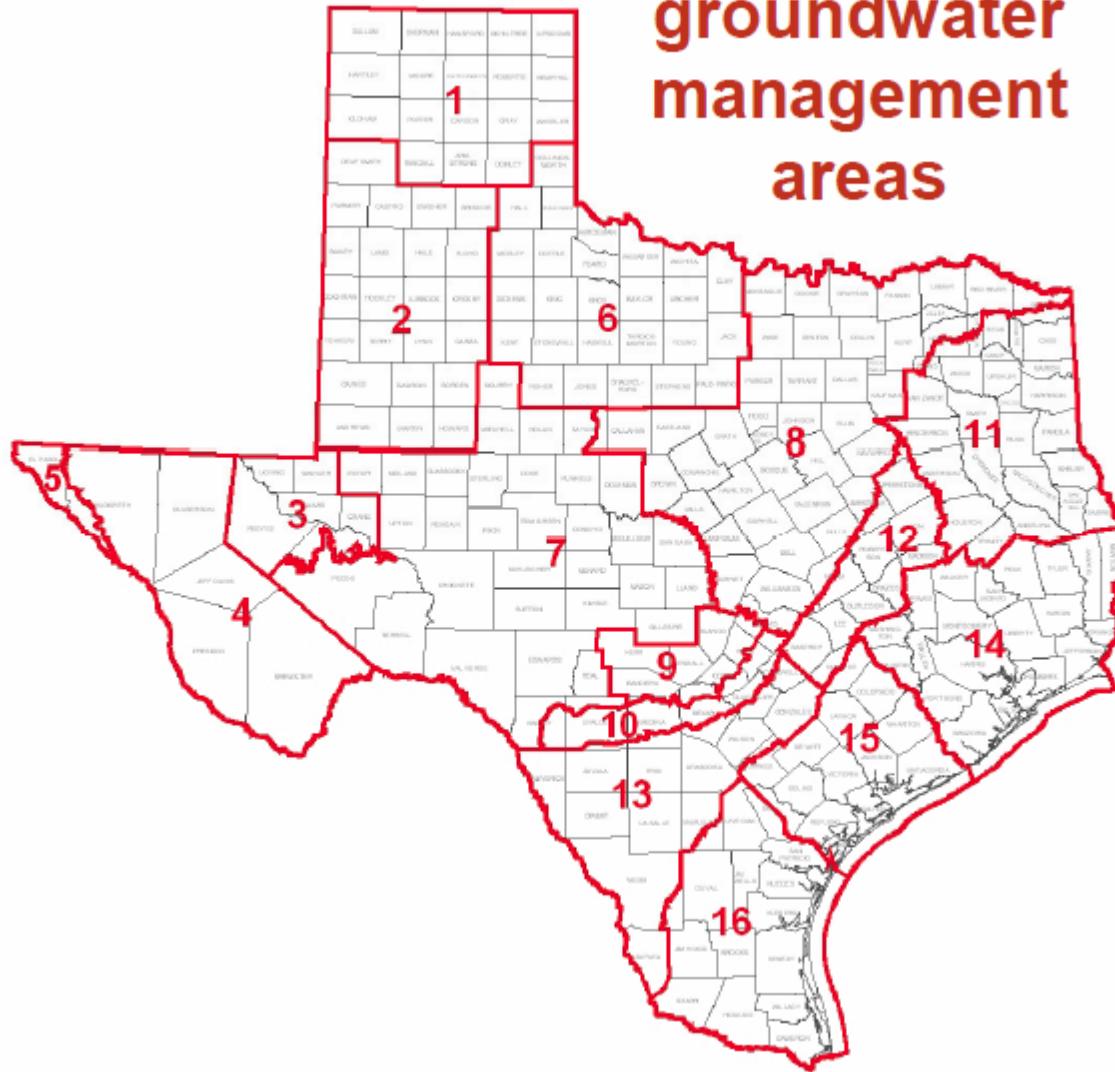


Groundwater Management Area

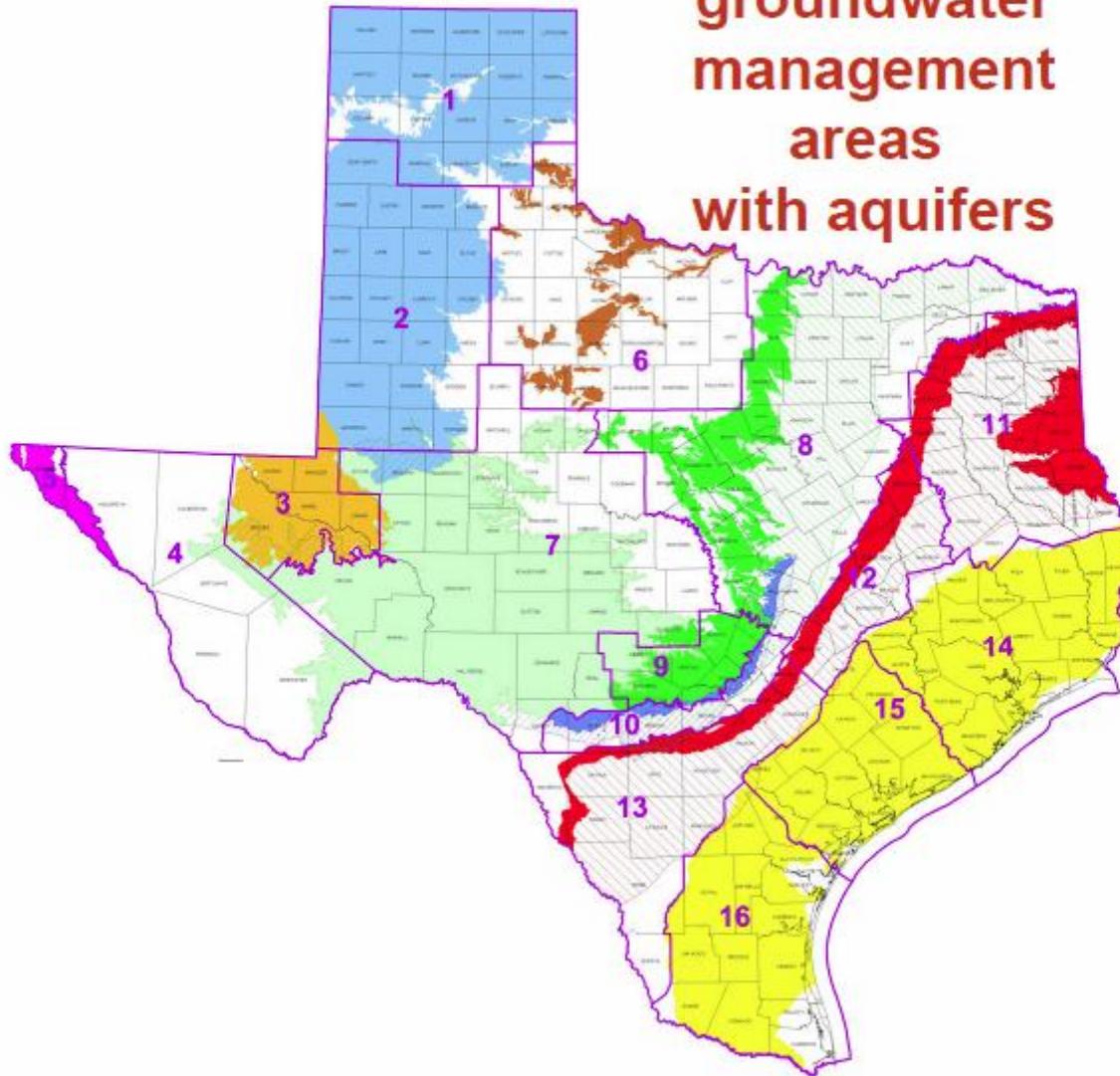
- A geological area that is suitable for the management of groundwater resources.
- GMAs generally coincide with the boundaries of aquifers.
- Determine Desired Future Conditions,
Apply Modeled Available Groundwater

groundwater management areas

2001



groundwater management areas with aquifers



Groundwater Conservation District

- A political entity whose boundaries may or may not coincide with aquifer boundaries.
- Often more than one GCD is located in a groundwater management area.

Powers of a groundwater conservation district

In general, districts:

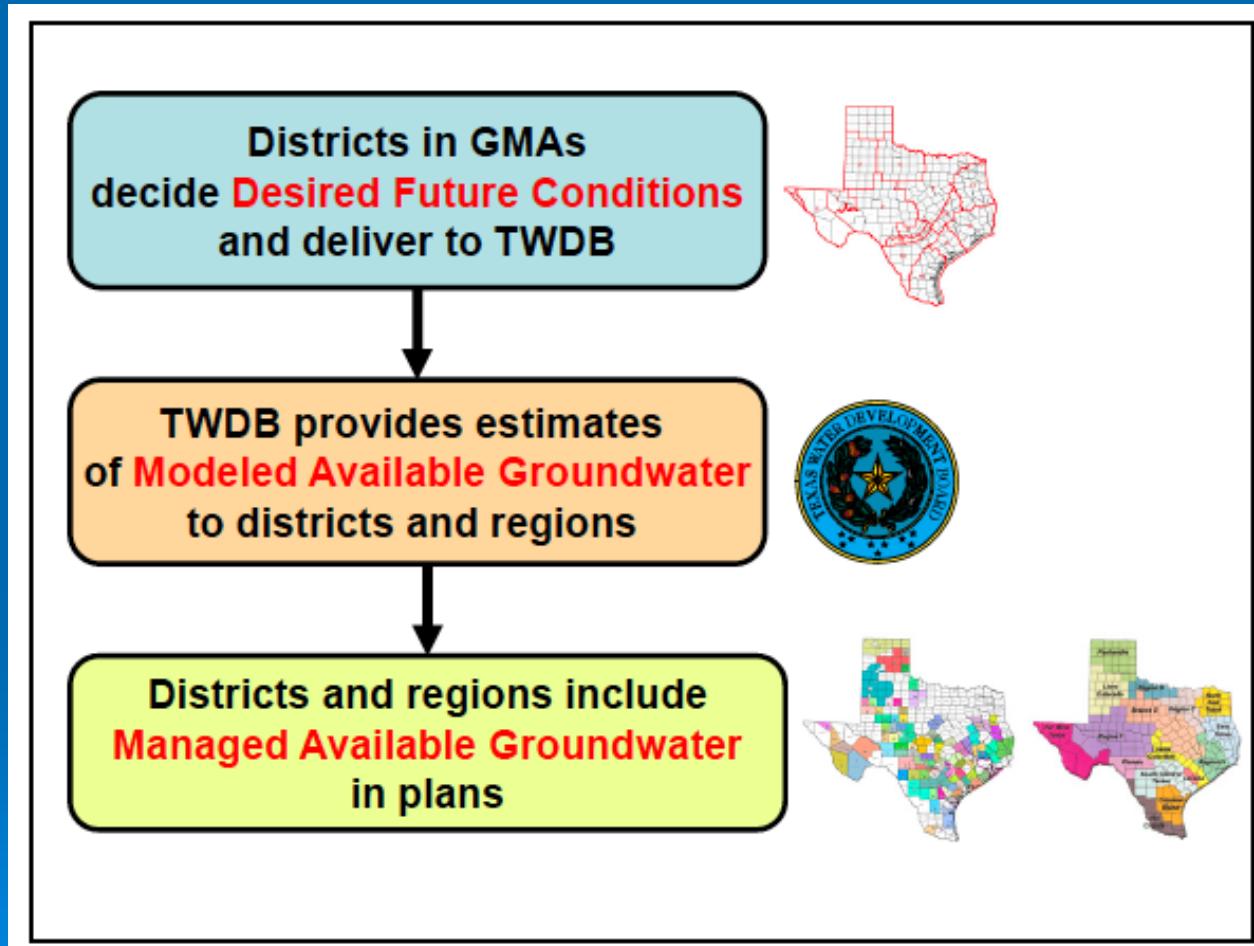
- Register wells
- Regulate well spacing
- Regulate pumping



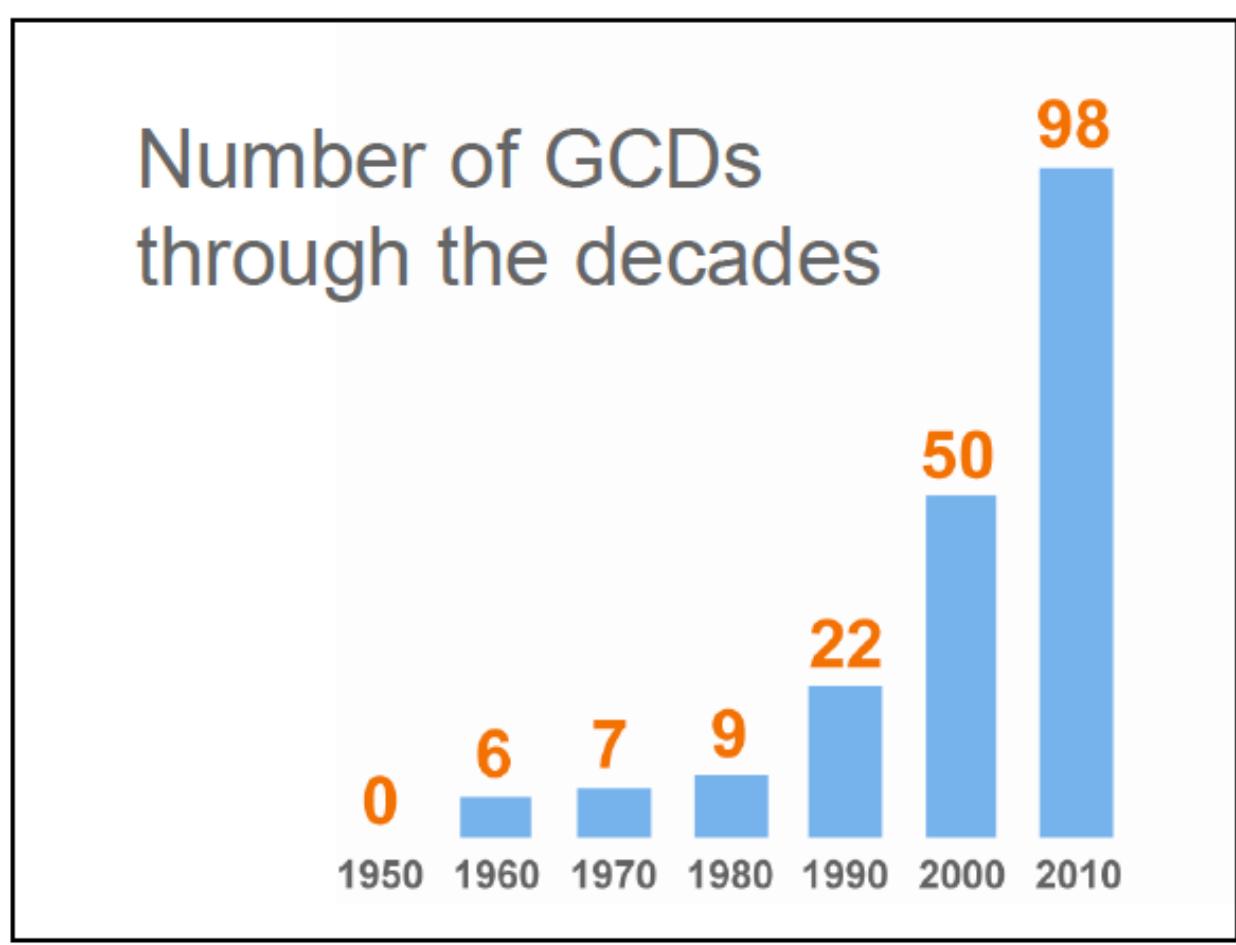
To know the powers:

- Chapter 36, Texas Water Code
- Enabling legislation
- Amendments to enabling legislation
- Rules

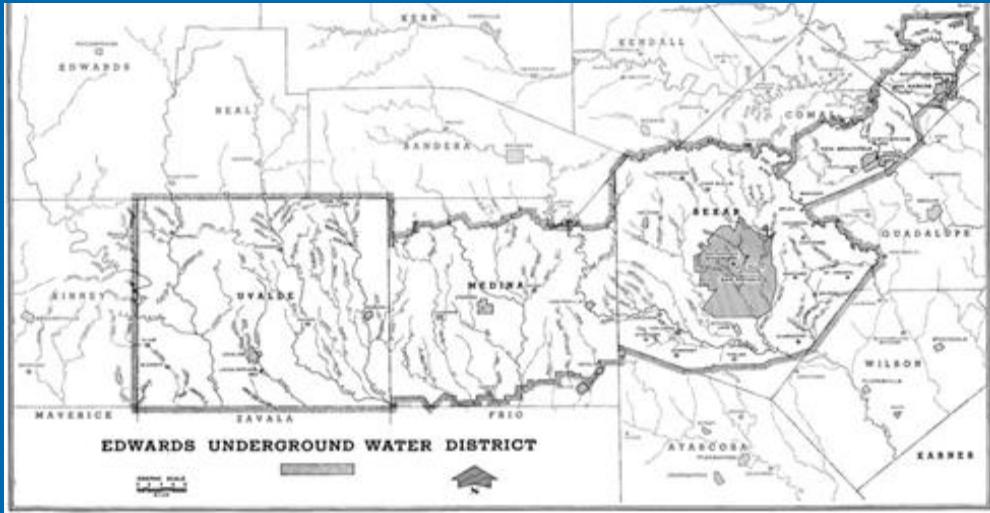
Water Planning in Texas



Texas Slow to Create GCDs

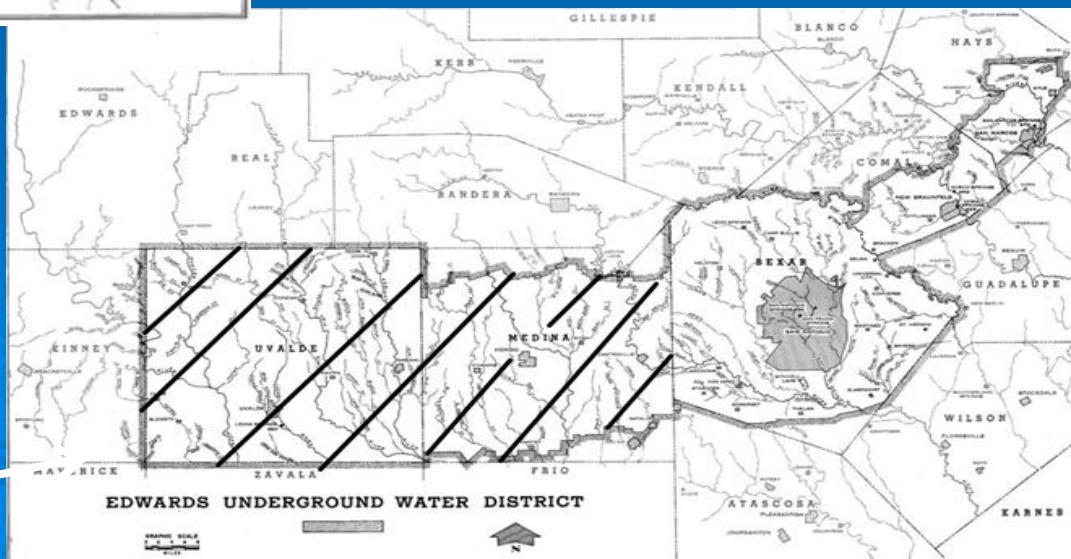


Edwards Underground Water District (1959 – 1996)



1st GCD without
rule-making ability

Legislature gives EUWD
drought plan rulemaking
authority in 1989.
Medina & Uvalde
counties withdraw from
EUWD as a result



Edwards Aquifer Authority (EAA)

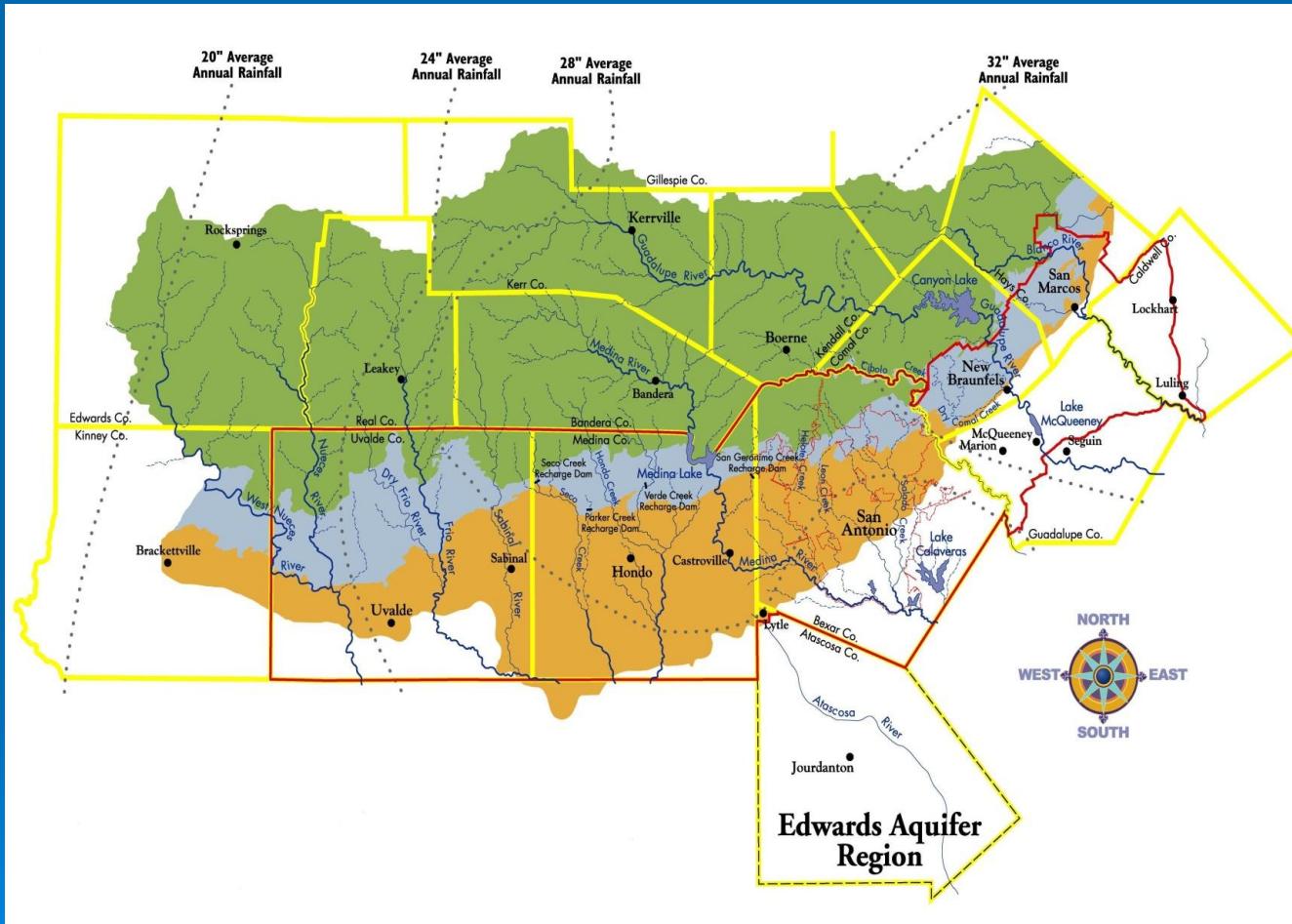
Established by the 73rd Legislature in May 1993

Legal challenges prevented the EAA from operating until June 28, 1996.

Approximately 2 million South Texans rely on the aquifer as their primary source of water.

Edwards Aquifer Authority

(Established June 28, 1996)



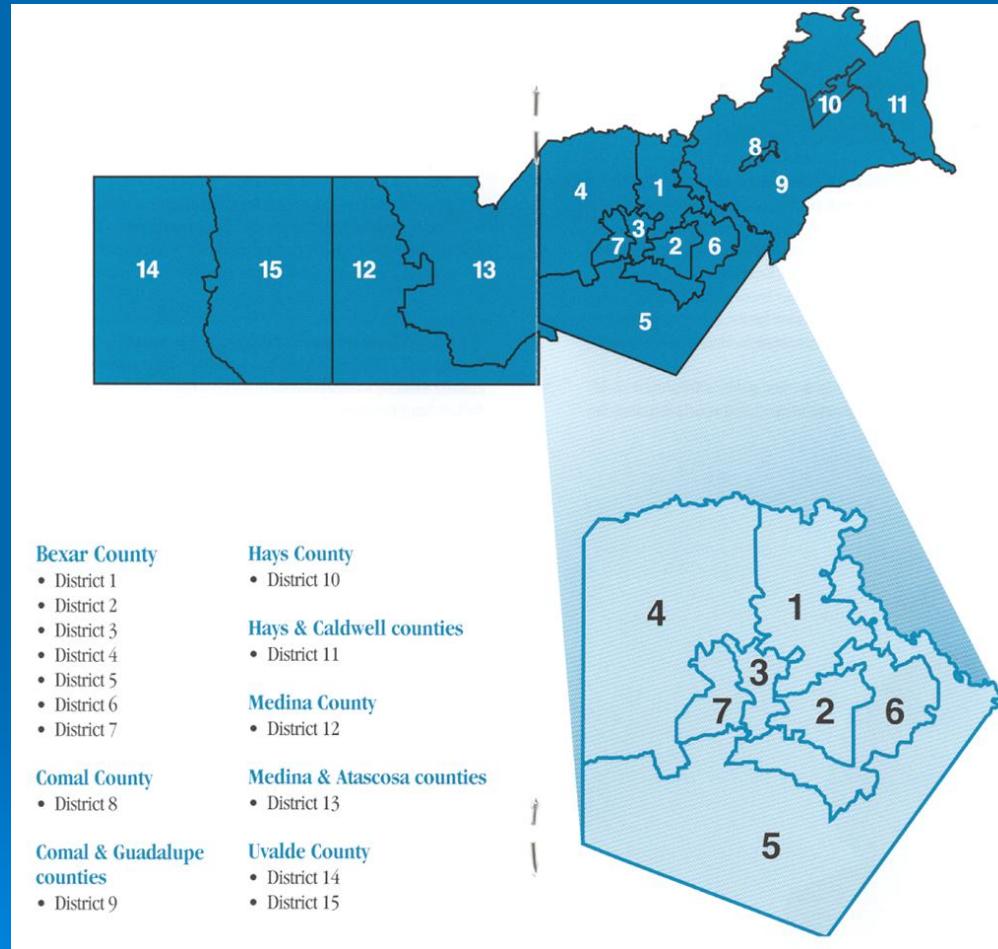
EAA Act Repeals Rule of Capture in Edwards Region

- Pre-June 28, 1996 - Rule of Capture
- Post-June 28, 1996 – Statutory-Based Permit System

Major Objectives of EAA Act

- Transition from the common law
- Provide for regulation/management, incl. drought mgmt
- Require groundwater rights to be “adjudicated”
- Diversify water supplies; create a water market
- Assign ESA compliance responsibility to the EAA
- Result in a level of protection for surface water systems
- Prohibit transfers (export) of Aquifer water

EAA Single-Member District Boundaries



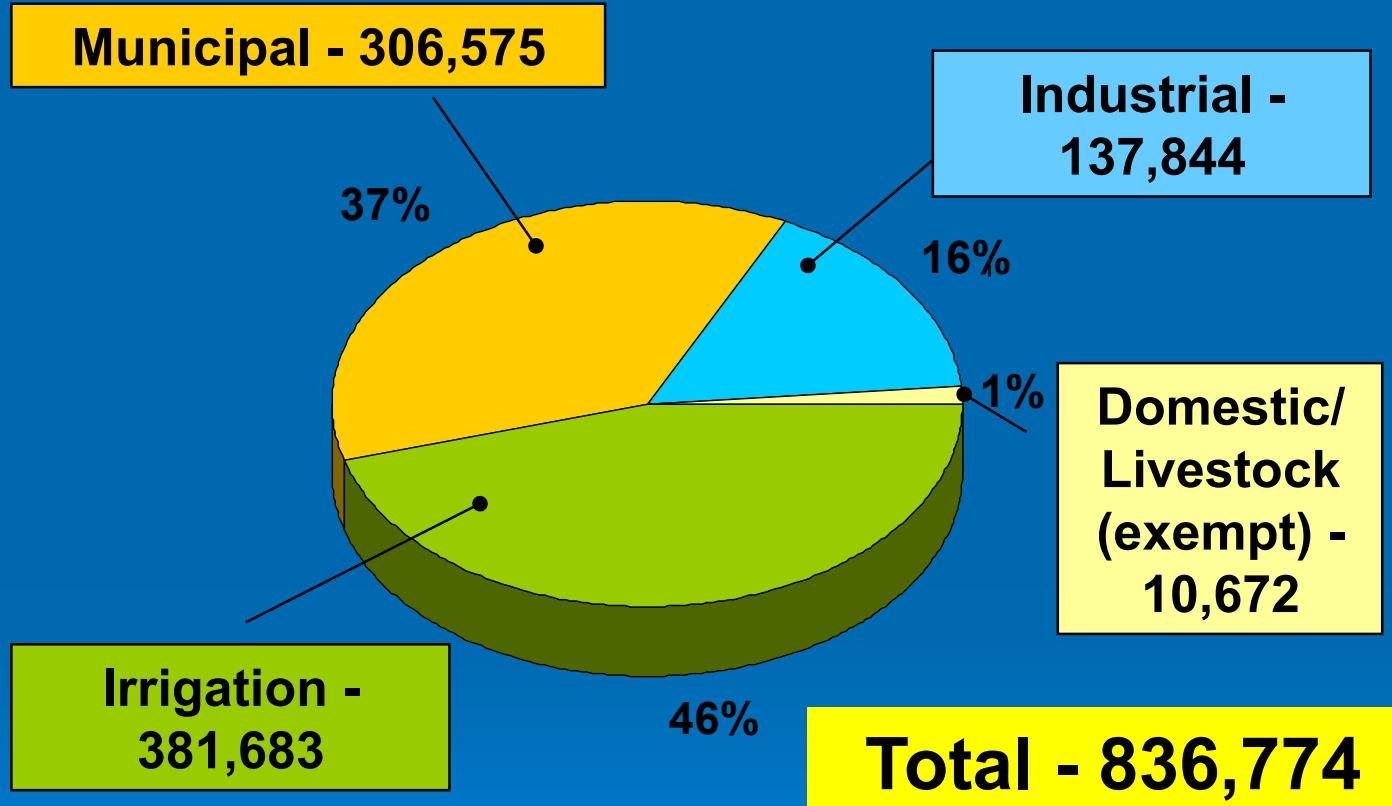
Initial EAA Act Overview

- Limits on permitted withdrawals
 - ❖ 450,000 acre-feet initially thru 12/31/07
 - ❖ 400,000 acre-feet beginning 01/01/08
- Legislative Mandates
 - ❖ EAA may hold federal Endangered Species Act permits
 - ❖ Meters on all wells, EAA pay all costs for irrigators
 - ❖ EAA must implement drought restrictions
 - ❖ EAA must implement a conservation plan
 - ❖ EAA Board includes “watch dog” group – South Central Texas Water Advisory Committee

Water Right = Beneficial Use During Historical Period

- To obtain an initial regular permit, an applicant must prove by convincing evidence that a well on the property pumped and beneficially used Aquifer water during a 21-year historical period from June 1, 1972 to May 31, 1993.

Original Claims Requested by Type (Acre-Feet)



*In November 2000, applicants requested 834,244 of historical groundwater withdrawal rights. Since November 2000, applicants requested an additional 2,530 acre-feet.

Source: Edwards Aquifer Authority Permit Files, 2003

Prohibitive Cost of Implementation

Permits (acre-feet)	557,000
Cap	(450,000)
Groundwater rights to be acquired	107,000
Price per acre-foot	\$5,000
Total Cost	\$535,000,000
Annual Cost (assuming 30-year debt)	\$34,802,500
Total 30-year Cost	\$1,044,100,000
Additional Cost to Get to 400k Acre Feet	> \$200,000,000

2007 Amendments

- Permitted withdrawals Increased to 572,000 acre-feet
- Prohibition on using EAA fees for water right retirement
- Drought Plan Placed in Statute
- EAA must participate in Recovery Implementation Program (referred to as EARIP)

Final Permit Disposition After 2007 Amendments

Pool	County	Municipal	Industrial	Irrigation	Total
San Antonio	Bexar	237,377	33,323	35,012	305,712
	Comal	11,180	11,385	1,067	23,632
	Hays	8,343	2,769	982	12,094
	Medina	9,210	1,418	90,369	100,997
	Guadalupe		345		345
	Atascosa			2,638	2,638
Sub total		266,110	49,240	128,220	445,418
Uvalde	Uvalde	5,915	646	119,058	125,619
Total		272,025	49,886	249,126	571,037

Critical Period Management Plan

Table 1 - Critical Period Triggers, Stages, and Withdrawal Reductions*

SAN ANTONIO POOL				
COMAL SPRINGS FLOW (CFS)	SAN MARCOS SPRINGS FLOW (CFS)	INDEX WELL J-17 LEVEL (MSL)	CRITICAL PERIOD STAGE*	WITHDRAWAL REDUCTION - SAN ANTONIO POOL
< 225	< 96	< 660	I	20%
< 200	< 80	< 650	II	30%
< 150	N/A	< 640	III	35%
< 100	N/A	< 630	IV	40%
< 45/40**	N/A	< 625	V**	44%

UVALDE POOL				
COMAL SPRINGS FLOW (CFS)	SAN MARCOS SPRINGS FLOW (CFS)	INDEX WELL J-27 LEVEL (MSL)	CRITICAL PERIOD STAGE*	WITHDRAWAL REDUCTION - UVALDE POOL
N/A	N/A	N/A	I	N/A
N/A	N/A	< 850	II	5%
N/A	N/A	< 845	III	20%
N/A	N/A	< 842	IV	35%
N/A	N/A	< 840	V	44%

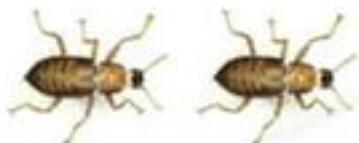
* Critical period triggers are based on the lower of Comal Springs or San Marcos Springs flow. ** Critical period triggers are based on the lower of Comal Springs or San Marcos Springs flow.

Edwards Aquifer Recovery Implementation Program

The Authority, with the assistance of Texas A&M University, shall cooperatively develop a RIP through a facilitated, consensus-based process that involves input from the United States Fish and Wildlife Service (Service), other appropriate federal agencies, and all interested stakeholders. The RIP shall be developed for the species that are:

1. listed as threatened or endangered species under federal law; and
2. associated with the aquifer.

Threatened and Endangered Species protected by the Edwards Aquifer Conservation Plan



Comal Springs Dryopid Beetle



Comal Springs Riffle Beetle



Fountain Darter

Strygoparthus Comalensis

Heterelmis Comalensis

Etheostoma Fonticola



Peck's Cave Amphipod



San Marcos Salamander



San Marcos Gambusia

Stygbromus Pecki

Eurycea Nana

Gambusia Georgei



Texas Blind Salamander



Texas Wild Rice

Eurycea Rathbuni

Zizania Texana

EARIP 26 Member Steering Committee

Named members:

- EAA, TCEQ, TPWD, TDA, TWDB, SAWS, GBRA, SARA, SCTWAC, Bexar County, CPS and Bexar Metropolitan Water District.

Appointed representatives:

- Retail public utility west of Bexar County
- Industrial IRP holder
- Industrial water right holder on the Guadalupe River
- Municipal water right holder on the Guadalupe River
- Retail public utility serving Comal or San Marcos springs
- Irrigation IRP holder
- an agricultural producer in the Edwards Aquifer region
- An environmental interest
- A recreational interest in the Guadalupe Basin
- Municipality < 50,000 east of Bexar County
- Representative of Edwards Aquifer region ratepayer
- A member of a conservation group
- A member of the Nueces River Authority
- Representative of Guadalupe Basin ratepayer

Average Annual HCP Cost

Category	Element	Cost
Flow Protection Measures	Emergency Stage V Critical Period Management Reductions	N/A
	SAWS ASR	\$6,953,000
	Municipal Conservation Program	\$1,619,250
	Voluntary Irrigation Suspension Program Option	\$4,172,000
Restoration, Minimization, and Mitigation Measures	Enhance Measures at San Marcos Springs	\$2,568,000
	Enhancement Measures at Comal Springs	
	Environmental Restoration / Protection Areas at Comal Springs	
	Riparian Habitat Restoration	
	Household Hazardous Waste Programs	
	Water Quality Protection & Monitoring	
	Gill Parasite Control	
	Wild Rice Restoration and Maintenance at San Marcos Springs	
Other Measures	Applied Research	\$680,000
	Ecological Model	\$137,700
	Science Panel	\$80,000
	NFHTC Refugia	\$1,700,000
	Project Management	\$750,000
	Total	\$18,600,000

Claiming Historical Use

In 1994, after the EAA Act was passed but before it became effective, Day and McDaniel purchased a tract overlying the Aquifer and within the boundaries of the Authority. During the EAA Act's historical period, the Aquifer well on the tract had no functioning pump or meter and had an uncontrolled continuous artesian flow through a ditch into a lake. Claiming historical use of Aquifer water from the lake to irrigate 350 acres, Day and McDaniel filed an application for an initial regular permit to withdraw 700 acre-feet per year.

Surface Water Doesn't Count!

The Authority determined that the pumping of water from the lake was the use of State surface water and did not constitute historical use of Aquifer water, but that Day and McDaniel had shown historical use by flood irrigation from the well of 7 acres. It issued a permit to withdraw 14 acre-feet per year of Aquifer water, two acre-feet per acre of historical irrigation use.

Did the EAA Take Day's Water?

Day and McDaniel filed an appeal in district court, claiming the agency had erred in failing to grant a withdrawal permit for 600 acre-feet based on historical use of Aquifer water to irrigate 300 acres. They also added constitutional claims, including a claim for inverse condemnation. Day and McDaniel asserted that the Authority had taken 1,834.80 acre-feet per year of their water, "because they own 917.40 acres of land, [and] they should be entitled to at least two acre-feet per acre."

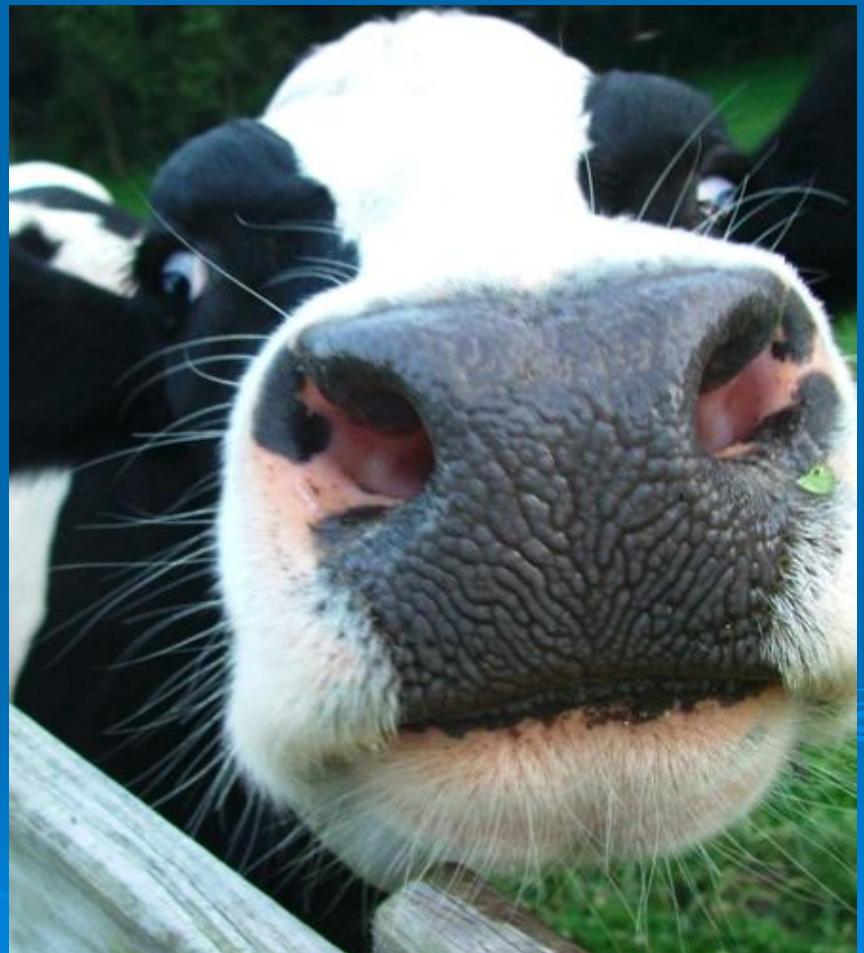
Day vs. EAA

The Texas Supreme Court has previously held that a landowner has a protected property right in groundwater that he brings to the surface, and that a landowner generally has a right to capture as much groundwater as he can beneficially use – even if it deprives his neighbor of water (aka the Rule of Capture). On February 24, 2012, the court issued a unanimous decision in Edwards Aquifer Authority v Day that a landowner has a constitutionally protected property interest in groundwater in place.

One Person One Vote?



“It's an old issue that cows are people and need to be represented in the electoral process,” LULAC attorney David R. Richards



Conclusions

- Rule of Capture Shaped Law, Attitudes About Groundwater Ownership
- Formation of Groundwater Conservation Districts Resisted
- New Legal Framework Developing Around Takings Litigation
- Stakeholder Approach Under Challenge

Questions?

