



The Future of Water in Texas

**Dallas Bar Association
Energy Law Section
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Types of Water

- **Surface Water** – all of the water under ordinary flow, underflow and tides of every flowing river, natural stream, lake, bay, arm of the Gulf of Mexico, and stormwater, floodwater, or rain water of every river, natural stream, canyon, ravine, depression and watershed in the state. (Texas Water Code §11.021)
- **Groundwater** – water percolating below the surface of the earth.

Surface Water

- Regulated and permitted by the Texas Commission on Environmental Quality (TCEQ)
- Texas and TCEQ use the prior appropriation doctrine – first in time is the first in right.

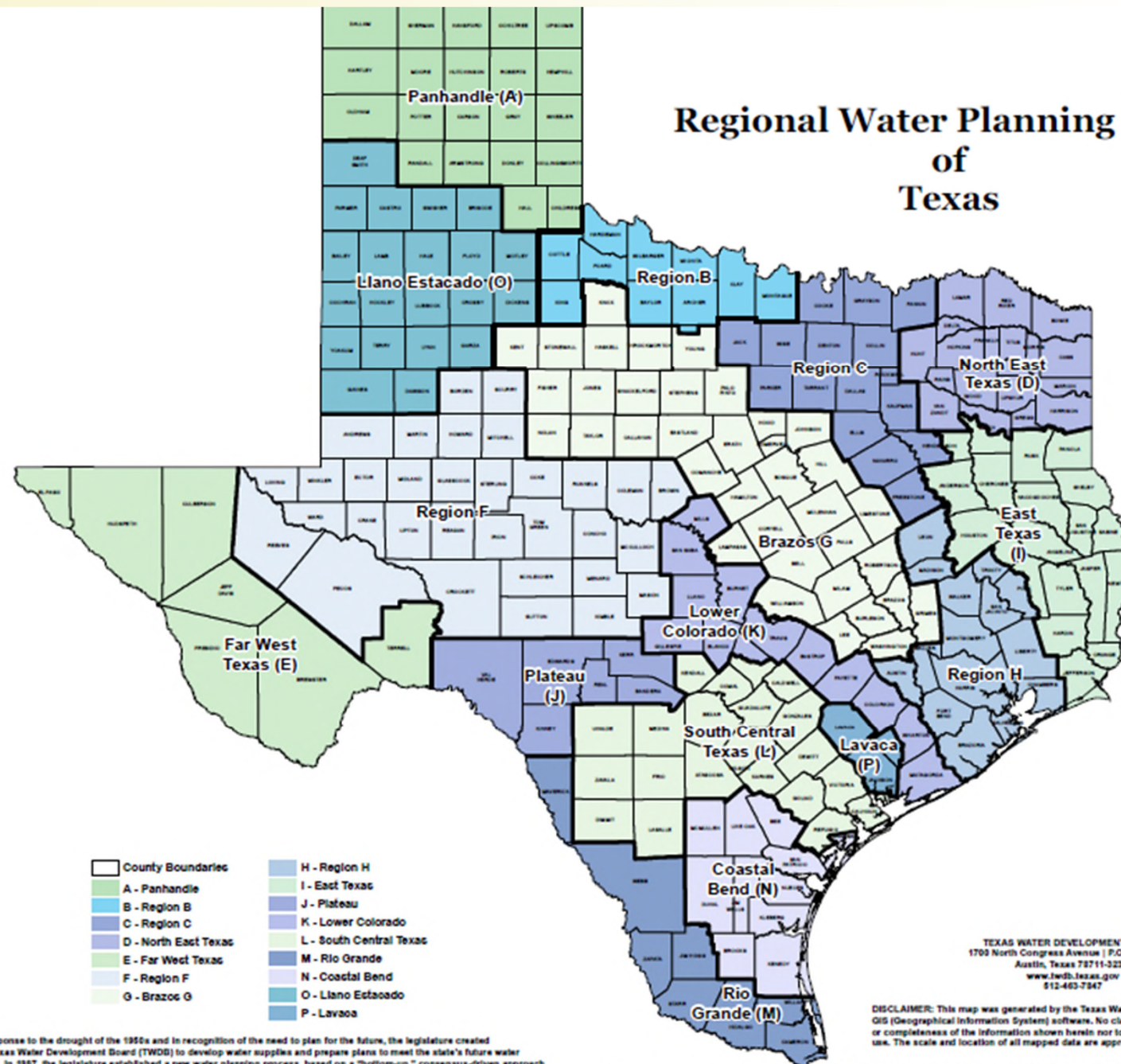
Groundwater

- Senate Bill 332 - 2011
 - Established in Section 36.002 of the Texas Water Code that a landowner owns the groundwater below the surface of the landowner's land as real property.
- Edwards Aquifer Authority v. Day
 - Confirmed the Legislature's statement of Texas groundwater law and stated that a landowner's right to produce groundwater is subject to the regulation of groundwater conservation districts (GCDs).

Recent Texas Water Legislation

- Senate Bill 1 – 1997
- Senate Bill 2 – 2001
- Senate Bill 3 – 2007
- House Bill 4, HB 1025, and SJR 1 – 2013

Regional Water Planning Area of Texas



In response to the drought of the 1950s and in recognition of the need to plan for the future, the legislature created the Texas Water Development Board (TWDB) to develop water supplies and prepare plans to meet the state's future water needs. In 1957, the legislature established a new water planning process, based on a "bottom-up," consensus-driven approach. Coordinating this water planning process are 16 planning groups, one for each regional water planning area (see map). The planning groups, each made up of about 10 members, represent a variety of interests, including agriculture, business,



State Water Implementation Fund for Texas (SWIFT) Legislative Package

- HB 4 - provides the framework and administration of the SWIFT and State Water Implementation Revenue Fund (SWIRFT) and the re-organization of the Texas Water Development Board (TWDB).
- Senate Joint Resolution (SJR)1 – proposes an amendment to Texas Constitution to create the SWIFT and SWIRFT to assist in the financing of water projects.
- HB 1025 - authorizes a one-time \$2 billion placement of funds from the Economic Stabilization Fund (Rainy Day Fund) into the SWIFT if the voters



Prop 6 – Approval of SWIFT by Texas Voters on November 5

- Voters of Texas approved Proposition 6 to amend the Texas Constitution to create the SWIFT.
- Proposition 6 approved by 73.37% of the voters.
- 836,424 voters voted in favor of Prop. 6
- 303,547 voters voted against Prop. 6

HB 4 (Ritter/Fraser) – SWIFT, SWIRFT, and TWDB Re-Organization

- Provides for framework and administration of SWIFT and SWIRFT.
- Re-organized several aspects of TWDB, including the leadership structure.
- TWDB will now have 3 full-time board members instead of 6 part-time board members.
- An advisory committee for the SWIFT is established which is comprised of the Comptroller and members appointed by Speaker and Lt. Governor. The advisory committee must make recommendations to the TWDB regarding the use of money in the SWIFT.
- Requires prioritization of projects by RWPGs and TWDB.
- TWDB must create a point system for prioritization of projects.



HB 4 (Ritter/Fraser) – SWIFT, SWIRFT, and TWDB Re-Organization

- SWIFT and SWIRFT were created to leverage \$2 billion to finance the nearly \$30 billion worth of water supply projects identified in the State Water Plan.
- The funds are revolving and self-supporting in nature.
- The funds are to be used to subsidize interest rates, to allow for longer and incremental repayment terms, and to enable entities to have deferral periods on the repayment of funds needed for water projects.

HB 4 (Ritter/Fraser) – Timelines for Action

- Sept. 1 = Board members appointed by Governor Perry begin terms.
- Nov. 5 = Voters approved Proposition 6
- ASAP after Nov. 5 = Advisory Committee members appt.
- Dec. 1 = RWPG stakeholder committee submits project prioritization standards to TWDB and TWDB must approve.
- Sept. 1, 2014 = RWPGs submit final prioritization of projects from 2011 RWPGs.
- March 1, 2015 = Deadline for TWDB adoption of rules.

TWDB Board Members Appointed by Governor Perry

- On August 16, 2013, Governor Perry appointed 3 board members to the TWDB pursuant to HB 4.
- Carlos Rubinstein, Bech Brunn, and Mary Ann Williamson were appointed effective September 1, 2013. Kathleen Jackson replaced Williamson.
- Rubinstein will serve as chair of the board for a term to expire at the pleasure of the governor.

Texas Groundwater Management / Law

- Exciting time to be involved with water issues in Texas
- Water management and Texas law governing water is evolving and organic
- 1997 – 38 GCDs in existence
- 2013 – 99 GCDs with 3 GCDs awaiting confirmation elections

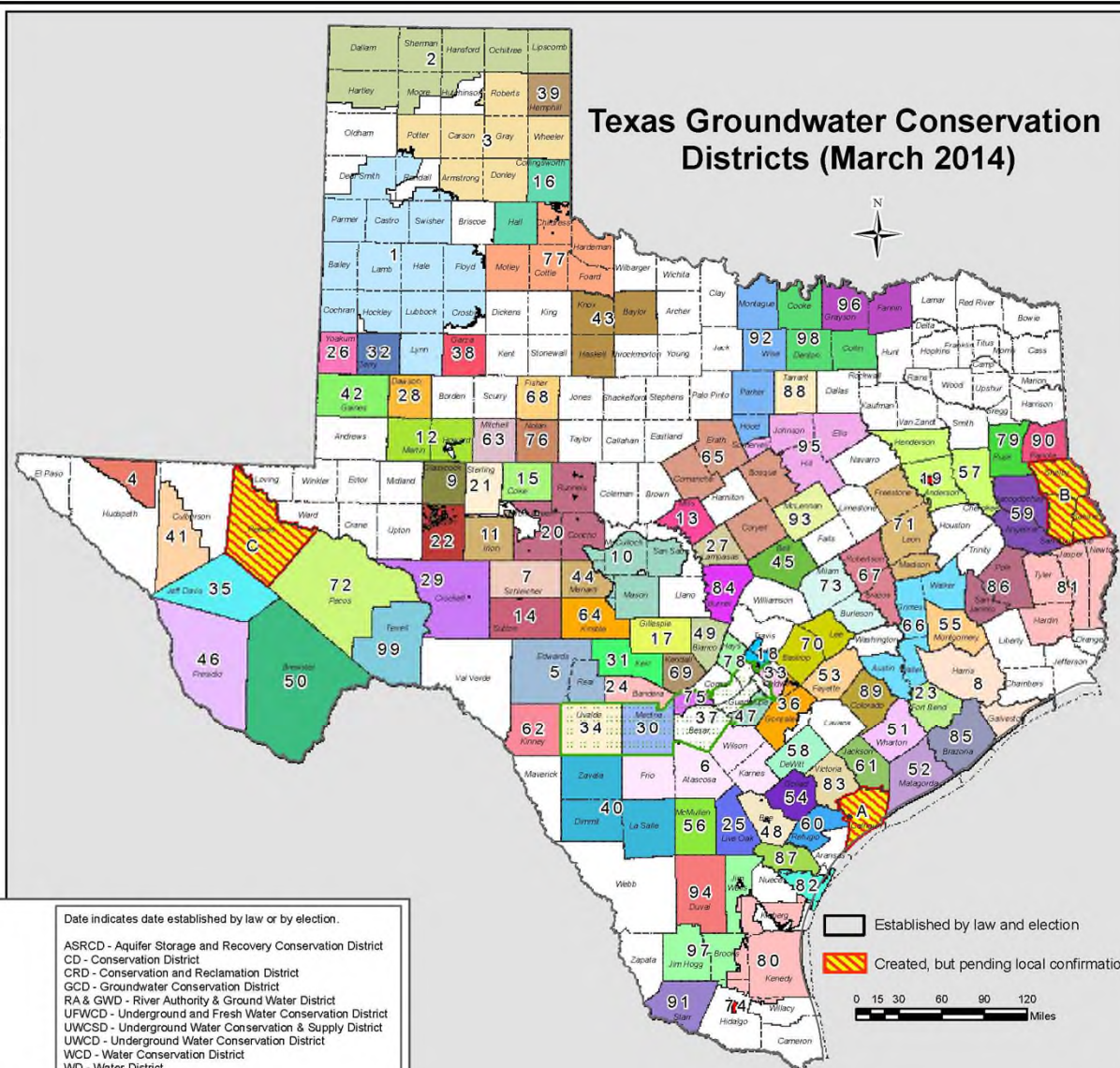
Groundwater Conservation Districts

- | | |
|--|---|
| 1 High Plains UWCD No.1 - 9/29/1951 | 53 Fayette County GCD - 11/8/2001 |
| 2 North Plains GCD - 1/2/1955 | 54 Goliad County GCD - 11/6/2001 |
| 3 Panhandle GCD - 1/21/1956 | 55 Lone Star GCD - 11/6/2001 |
| 4 Hudspeth County UWCD No. 1 - 10/5/1957 | 56 McMullen GCD - 11/6/2001 |
| 5 Real-Edwards C and R District - 5/30/1959 | 57 Neches & Trinity Valleys GCD - 11/6/2001 |
| 6 Evergreen UWCD - 8/30/1965 | 58 Pecan Valley GCD - 11/6/2001 |
| 7 Plateau UWC and Supply District - 3/4/1974 | 59 Pineywoods GCD - 11/6/2001 |
| 8 Harris-Galveston Subsidence District - 4/23/1975 | 60 Refugio GCD - 11/6/2001 |
| 9 Glasscock GCD - 8/22/1981 | 61 Texana GCD - 11/6/2001 |
| 10 Hickory UWCD No. 1 - 8/14/1982 | 62 Kinney County GCD - 1/12/2002 |
| 11 Irion County WCD - 8/2/1985 | 63 Lone Wolf GCD - 2/2/2002 |
| 12 Permian Basin UWCD - 9/21/1985 | 64 Kimble County GCD - 5/3/2002 |
| 13 Fox Crossing Water District - 4/4/1986 | 65 Middle Trinity GCD - 5/4/2002 |
| 14 Sutton County UWCD - 4/5/1986 | 66 Bluebonnet GCD - 11/5/2002 |
| 15 Coke County UWCD - 11/4/1986 | 67 Brazos Valley GCD - 11/5/2002 |
| 16 Mesquite GCD - 11/4/1986 | 68 Clear Fork GCD - 11/5/2002 |
| 17 Hill Country UWCD - 8/8/1987 | 69 Cow Creek GCD - 11/5/2002 |
| 18 Barton Springs/Edwards Aquifer CD - 8/13/1987 | 70 Lost Pines GCD - 11/5/2002 |
| 19 Anderson County UWCD - 10/17/1987 | 71 Mid-East Texas GCD - 11/5/2002 |
| 20 Lipan-Kickapoo WCD - 11/3/1987 | 72 Middle Pecos GCD - 11/5/2002 |
| 21 Sterling County UWCD - 11/3/1987 | 73 Post Oak Savannah GCD - 11/5/2002 |
| 22 Santa Rita UWCD - 8/19/1989 | 74 Red Sands GCD - 11/5/2002 |
| 23 Fort Bend Subsidence District - 8/28/1989 | 75 Trinity Glen Rose GCD - 11/5/2002 |
| 24 Bandera County RA & GWD - 11/7/1989 | 76 Wes-Tex GCD - 11/5/2002 |
| 25 Live Oak UWCD - 11/7/1989 | 77 Gateway GCD - 5/3/2003 |
| 26 Sandy Land UWCD - 11/7/1989 | 78 Hays Trinity GCD - 5/3/2003 |
| 27 Saratoga UWCD - 11/7/1989 | 79 Rusk County GCD - 6/5/2004 |
| 28 Mesa UWCD - 1/20/1990 | 80 Kennedy County GCD - 11/2/2004 |
| 29 Crockett County GCD - 1/26/1991 | 81 Southeast Texas GCD - 11/2/2004 |
| 30 Medina County GCD - 8/28/1991 | 82 Corpus Christi ASRCD - 8/17/2005 |
| 31 Headwaters UWCD - 11/5/1991 | 83 Victoria County GCD - 8/5/2005 |
| 32 South Plains UWCD - 2/8/1992 | 84 Central Texas GCD - 9/24/2005 |
| 33 Plum Creek CD - 5/1/1993 | 85 Brazoria County GCD - 11/8/2005 |
| 34 Uvalde County UWCD - 9/1/1993 | 86 Lower Trinity GCD - 11/7/2006 |
| 35 Jeff Davis County UWCD - 11/2/1993 | 87 San Patricio County GCD - 5/12/2007 |
| 36 Gonzales County UWCD - 11/2/1994 | 88 Northern Trinity GCD - 5/15/2007 |
| 37 Edwards Aquifer Authority - 7/28/1996 | 89 Colorado County GCD - 11/6/2007 |
| 38 Garza County UWCD - 11/5/1996 | 90 Panola County GCD - 11/6/2007 |
| 39 Hemphill County UWCD - 11/4/1997 | 91 Starr County GCD - 11/6/2007 |
| 40 Wintergarden GCD - 1/17/1998 | 92 Upper Trinity GCD - 11/6/2007 |
| 41 Culberson County GCD - 5/2/1998 | 93 Southern Trinity GCD - 6/19/2009 |
| 42 Llano Estacado UWCD - 11/3/1998 | 94 Duval County GCD - 7/25/2009 |
| 43 Rolling Plains GCD - 1/28/1999 | 95 Prairielands GCD - 9/1/2009 |
| 44 Menard County UWCD - 8/14/1999 | 96 Red River GCD - 9/1/2009 |
| 45 Clearwater UWCD - 8/21/1999 | 97 Brush Country GCD - 11/3/2009 |
| 46 Presidio County UWCD - 8/31/1999 | 98 North Texas GCD - 12/1/2009 |
| 47 Guadalupe County GCD - 11/14/1999 | 99 Terrell County GCD - 11/6/2012 |
| 48 Bee GCD - 1/20/2001 | |
| 49 Blanco-Pedernales GCD - 1/23/2001 | |
| 50 Brewster County GCD - 11/6/2001 | |
| 51 Coastal Bend GCD - 11/6/2001 | |
| 52 Coastal Plains GCD - 11/6/2001 | |

Pending Confirmation

- A - Calhoun County GCD
B - Deep East Texas GCD
C - Reeves County GCD

Texas Groundwater Conservation Districts (March 2014)



Texas Commission on Environmental Quality

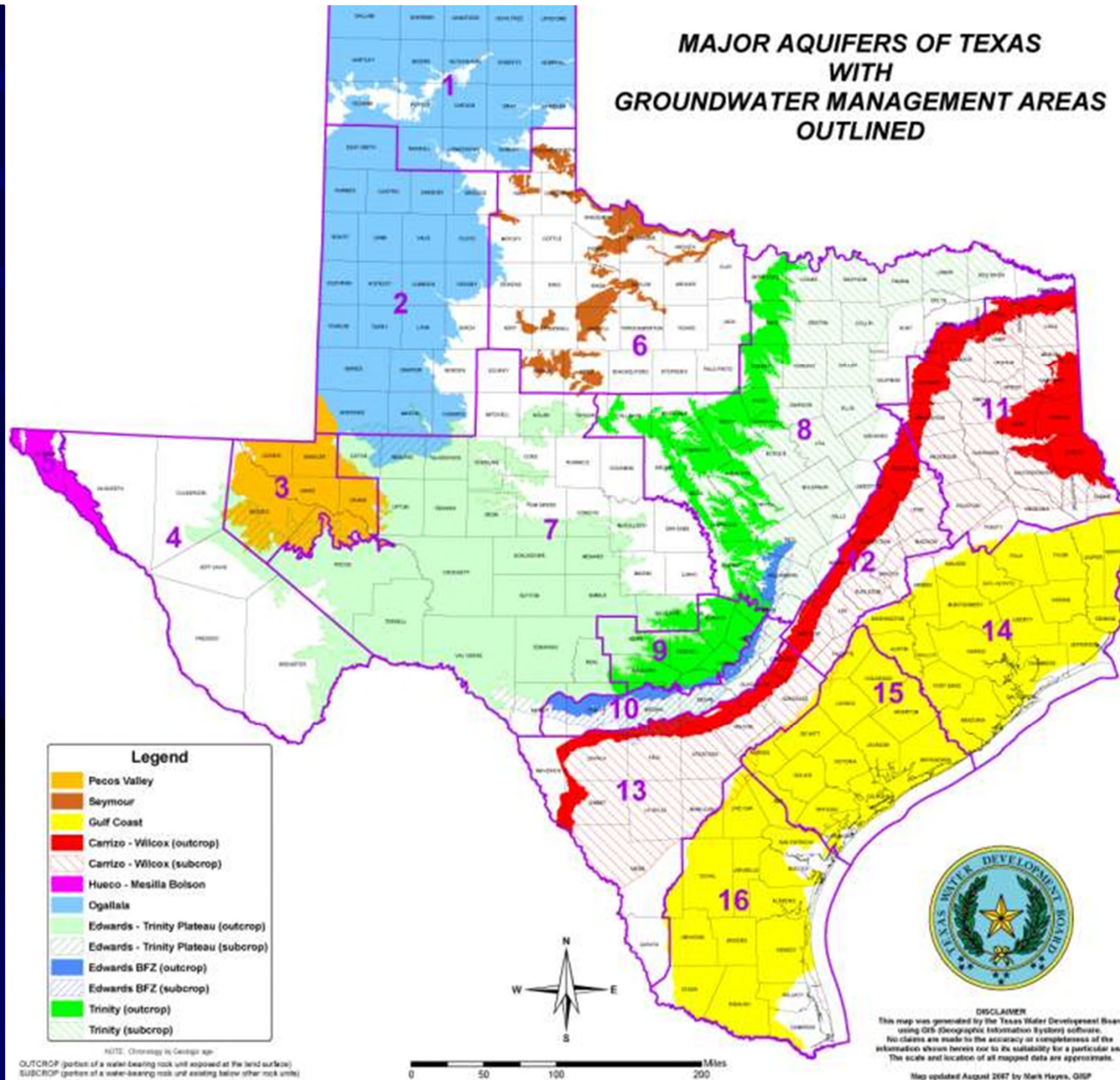


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Map printed March 3, 2014.

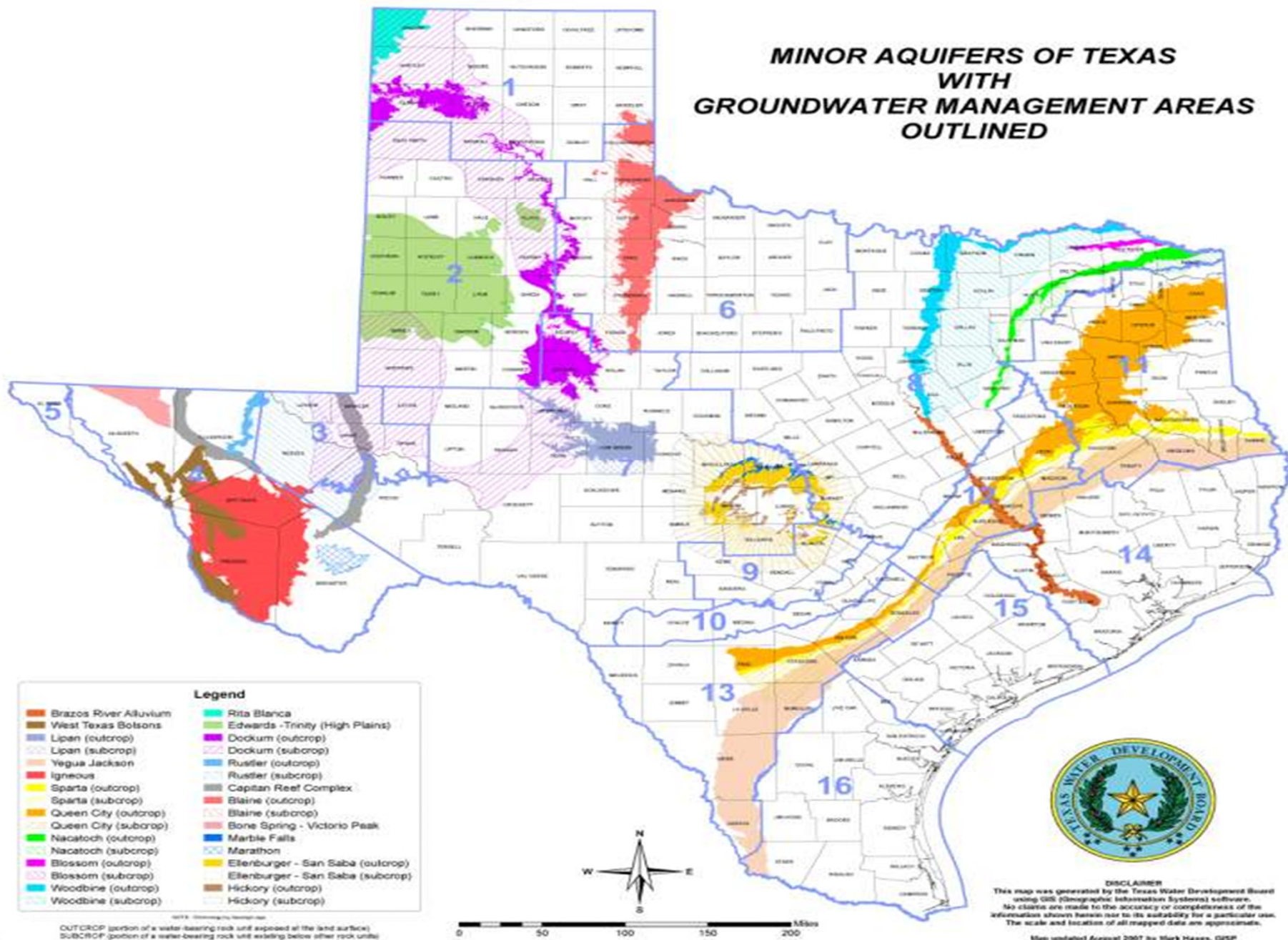
TCEQ Information Poster 481-3 (3/2014)

MAJOR AQUIFERS OF TEXAS WITH GROUNDWATER MANAGEMENT AREAS OUTLINED



NOTE: Chronology is Geologic age.
OUTCROP (portion of a water-bearing rock unit exposed at the land surface)
SUBCROP (portion of a water-bearing rock unit existing below other rock units)

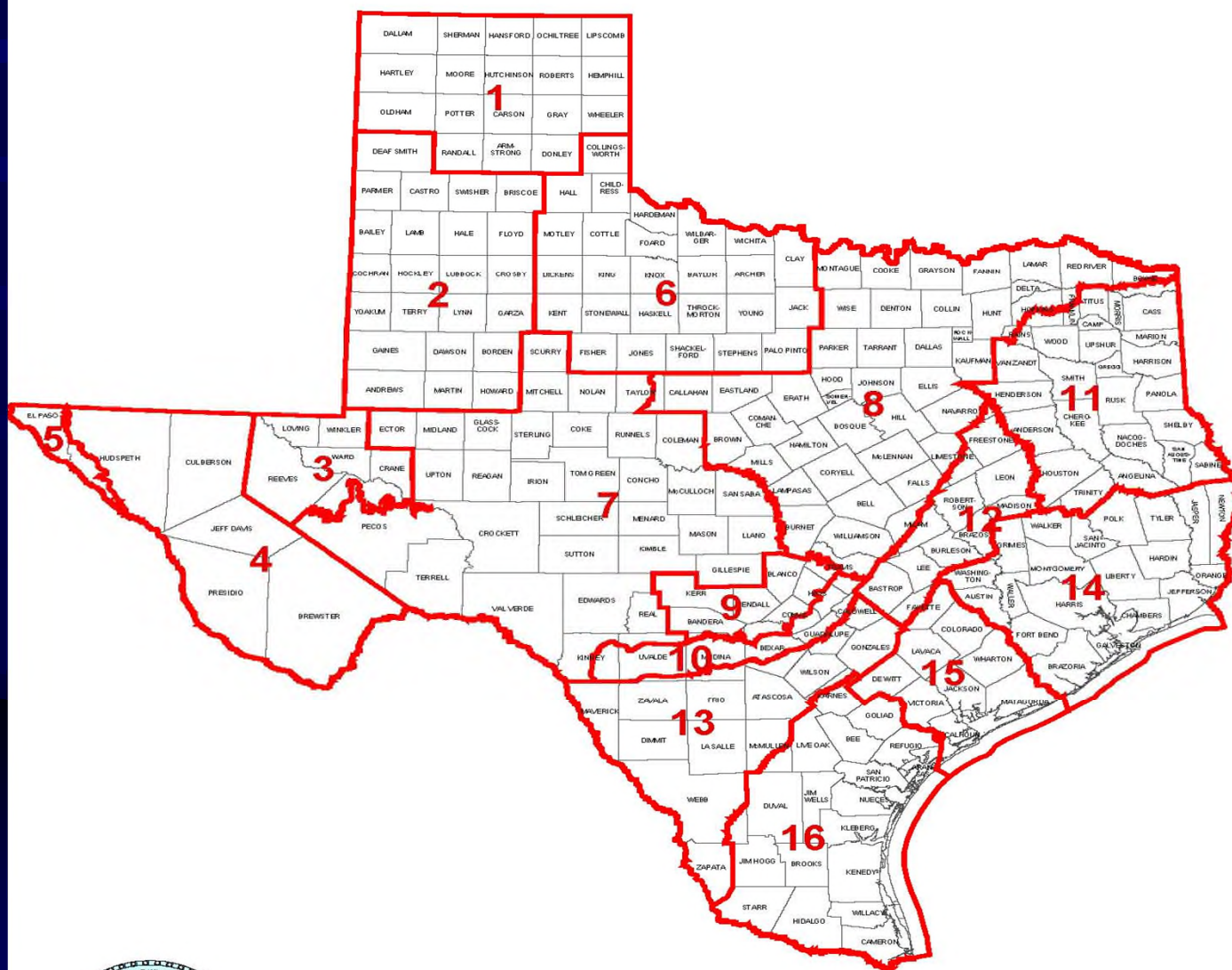
MINOR AQUIFERS OF TEXAS WITH GROUNDWATER MANAGEMENT AREAS OUTLINED



Texas Groundwater Management / Law

- Increased level of knowledge about groundwater resources and management but much more is needed
 - Ex. Middle Trinity GCD (Erath, Comanche, Bosque, and Coryell Counties)
- Science, science, science

Groundwater Management Areas in Texas



DISCLAIMER

This map was generated by the Texas Water Development Board using GIS (Geographical Information Systems) software. No claims are made to the accuracy or completeness of the information shown herein nor to its suitability for a particular use. The scale and location of all mapped data are approximate.

November 2002 - by Mark Hayes, GIS section

Groundwater Management Area (GMA) Process for GCDs

- Based on legislative changes made in 2011, the DFC Process was substantially revised.
- GCDs in each of the 16 GMAs must consider a list of 9 factors and propose DFCs for the aquifers within the GMA
- A 90 day public comment period begins after DFCs are provided to the GCDs

Groundwater Management Area (GMA) Process for GCDs

- GCDs hold public hearings during 90 day comment period and prepare summary reports
- GMA meets to consider summary reports and to adopt DFCs
- GMA prepares an explanatory report and submits DFC info to TWDB
- GMA provides DFC info to GCDs and GCDs adopt DFCs ASAP after receiving info

Groundwater Issues to be studied during Legislative Interim Period

- GCD Permitting Exemptions – Water involved in Oil and Gas activities
- Brackish groundwater / desalination
- Aquifer Storage and Recovery
- Long-Term Permitting by GCDs
- TDLR Regulation of Water Well Drillers

Section 36.117 of the Texas Water Code Permitting Exemptions for Oil and Gas Activities

- (b) A GCD may not require any permit issued by the GCD for:
 - The drilling of a water well used solely to supply water for a rig that is actively engaged in drilling or exploration operations for an oil and gas well permitted by the Railroad Commission of Texas provided that the person holding the permit is responsible for drilling and operating the water well and the well is located on the same lease or field associated with the drilling rig



Legal Issues Associated with Water Wells Used for Oil and Gas Activities

- Correlative rights / GCD approaches to permitting.
- Sale of groundwater placed in water storage tanks and transported to other operational sites
- Transportation Fees
- Water use associated with dominant mineral estate and effect on surface ownership

Texas Groundwater Management / Law

- Brackish groundwater / water quality
- Estimated that Texas has 2.7 billion acre-feet of brackish groundwater according to 2003 LBG-Guyton and Assoc. study.



2012 State Water Plan – Brackish Groundwater Desalination Projects

- 2012 State Water Plan recommended groundwater desalination in five regional water planning areas of Texas – Regions E, F, L, M, and O
- The volume of water that would result from brackish groundwater desalination would increase from 56,553 acre-feet in 2010 to approximately 181,568 acre-feet by 2060.

GCD Management of Brackish Groundwater

- No statutory definition of “brackish groundwater” in Texas law.
- Some want to define as groundwater that contains a total dissolved solids (TDS) concentration of more than 1,000 milligrams per liter.
- Some want to define as groundwater that contains a total TDS concentration of more than 10,000 milligrams per liter.

GCD Management of Brackish Groundwater

- Production of brackish groundwater is being permitted by GCDs today
- No differentiation in most GCDs' rules between potable groundwater and brackish groundwater
- Vast majority of Desired Future Conditions (DFCs) and Modeled Available Groundwater (MAG) don't differentiate between potable groundwater and brackish groundwater

GCD Management of Brackish Groundwater

- Do GCDs want to encourage the production and use of brackish groundwater?
- Yes. GCDs understand that growing communities and businesses need more water supplies but not at the expense of the groundwater resources within GCDs' boundaries and, particularly, potable groundwater resources

GCD Management of Brackish Groundwater

- Can GCDs encourage the production brackish groundwater under existing Texas law and within their existing regulatory frameworks?
- Yes. GCDs can authorize the production of brackish groundwater in greater amounts as part of well permitting process.
- Chapter 36 enables GCDs to adopt different DFCs related to brackish groundwater production and to establish management zones from which brackish groundwater can be produced.

Legislative Interim / 84th Legislature

- Stakeholder groups working on brackish groundwater issues
 - Texas Water Conservation Association
 - Texas Alliance of Groundwater Districts
 - Texas Desalination Association
- Interim Committee Studies with recommendations for 84th Texas Legislature

Surface Water Issues

- Addressing Drought Issues
- Colorado River – Highland Lakes vs. Rice Farmers
- Brazos River – Designation of Water Master below Possum Kingdom
- Conservation Efforts by Municipalities
- TCEQ Regulation of Surface Water Impoundments / Dam Safety

Questions?

- Any questions?
- Thank you.