

Trinity Edwards Springs Protection Association (TESPA) and Protecting the Surface Water of the Texas Hill Country

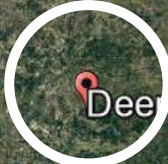
Jim Blackburn

President, Trinity Edwards Springs Protection Association (TESPA)

September 21 , 2017



Our Place



Deer Lake Rd

Image Landsat / Copernicus
© 2017 Google

Google Earth

29°53'14.26" N 98°16'18.20" W elev 949 ft eye alt 109.32 mi



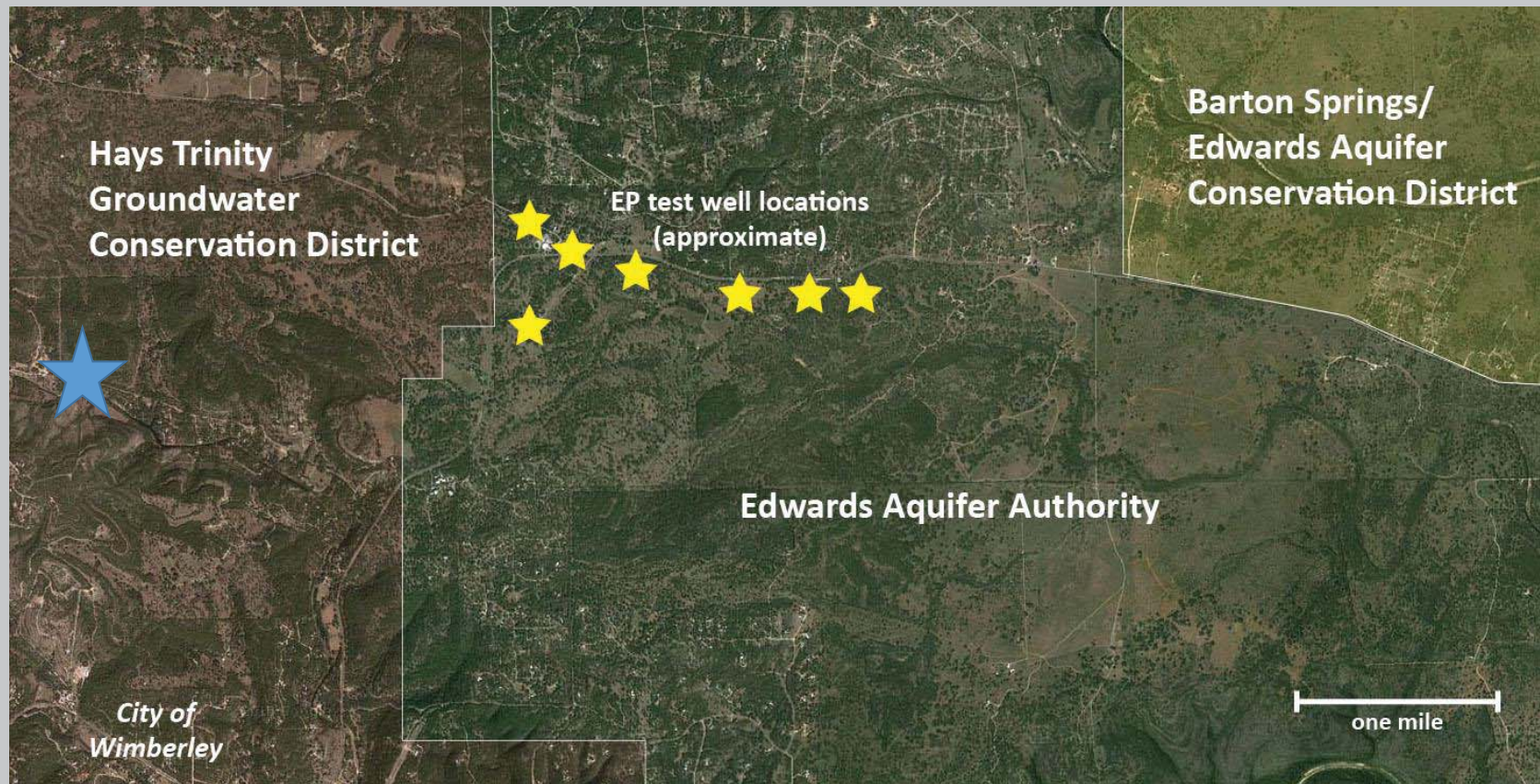
STOP THE WATER GRAB!

SAVE OUR WELLS

IT'S TRINITY WATER, NOT "INFINITY" WATER.

WWW.SAVEOURWELLS.COM

Drawdown From 1.5 mgd = 90 feet 5 miles away –
EP Initially Proposed 5.3 mgd



TESPA Formed To Combat Groundwater Plunder

TESPA

Trinity Edwards Springs
Protection Association



Vanessa Puig-Williams

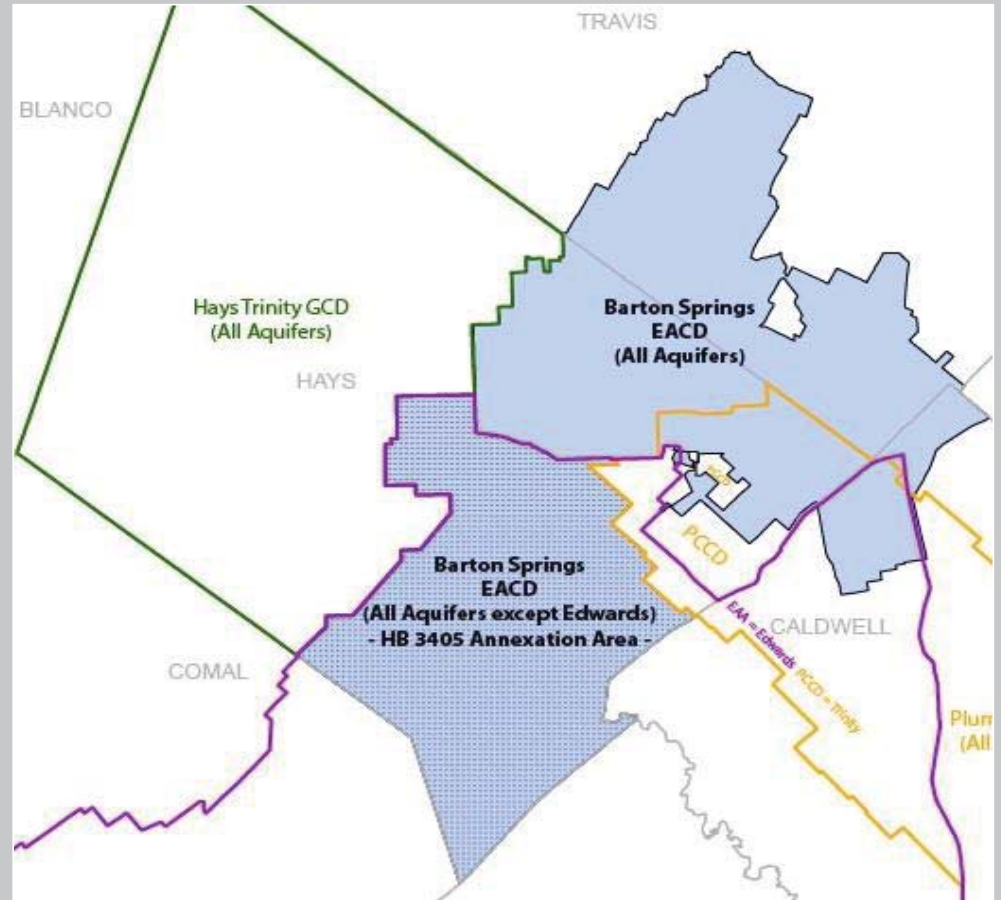
**Executive Director
and General
Counsel**



Jeff Mundy

Trial Counsel

HB 3405: Brought “White Area” under jurisdiction of BSEACD



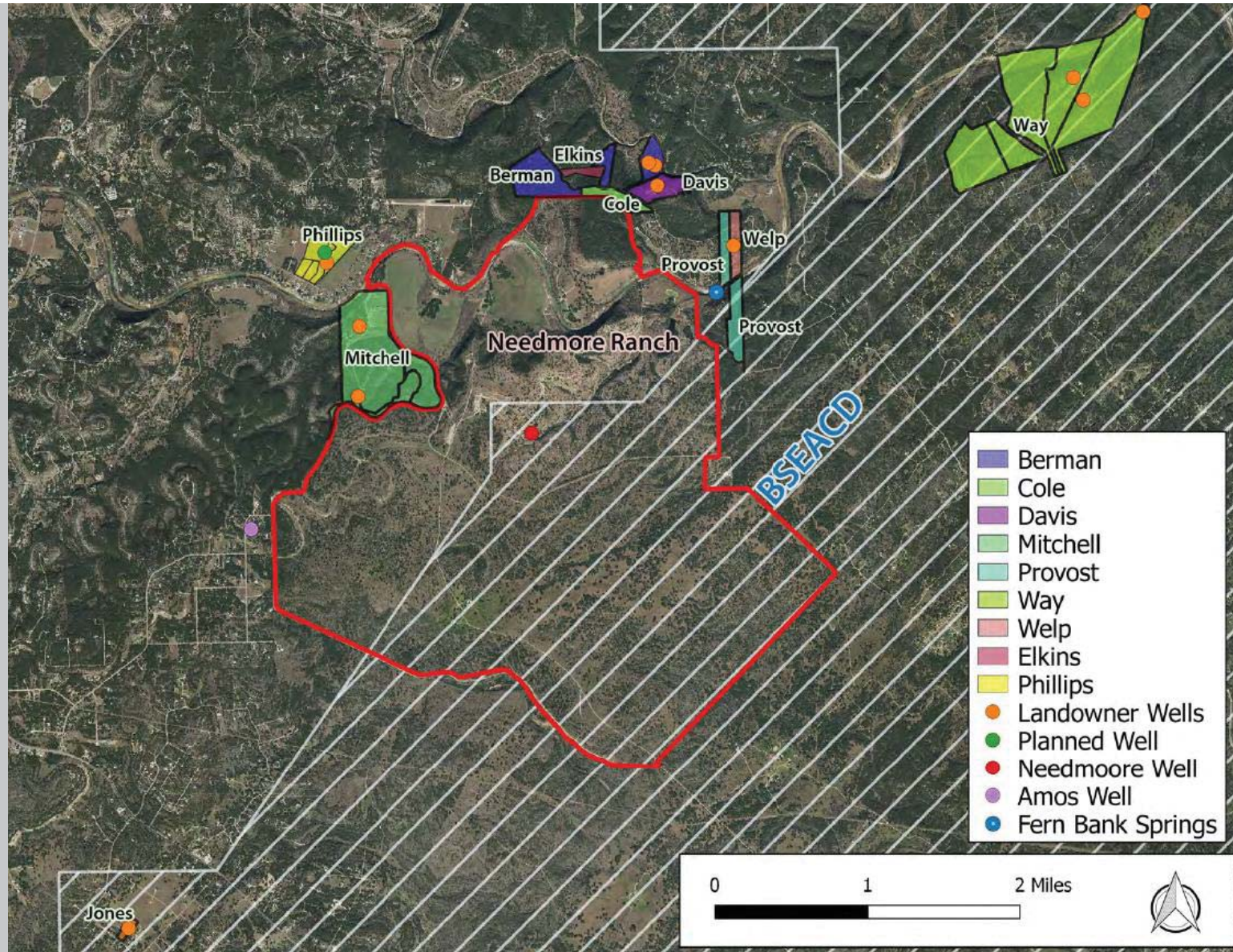
Current Situation

Application of
Needmore MUD for
289,000,000 gallons

Contested Case
Request Granted

New Application By
EP Pending. Will seek
contested case.

We Are Fighting!!



A Texan Plan for the Texas Hill Country

(continued from front flap)

and beyond. Using these studies and ecotourism opportunities, Blackburn has formulated a plan that links the economic health to the ecological health of the Texas coast. He argues that in order for an environmental plan to be successful, it needs, at least in part, to be about making money.

But money alone cannot be the motivation for caring about the Texas coast. Through stunning photographs and personal stories about spirituality, litigation, and willpower, Blackburn shares his knowledge of and love for this landscape, encouraging Texans to get to know it better. Deeply informed and accessibly written, *A Texan Plan for the Texas Coast* weaves together a challenging, but promising plan to protect the coast through a combination of economic motivation, thoughtful litigation, informed appreciation, and just simple affection for the beauty and life to be found on the Texas coast.



JIM BLACKBURN is professor in the practice of environmental law in the civil and environmental engineering department at Rice University. He is also the codirector of the Severe Storm Prediction Education and Evacuation from Disaster (SSPEED) Center at Rice University. He has been a practicing environmental lawyer and planner since 1973 and is the author of *The Book of Texas Bays*.

NUMBER THIRTY-ONE
Gulf Coast Books
Sponsored by
Texas A&M University-Corpus Christi

Cover photo by Geoff Winningham

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College Station

Texas A&M University Press, College Station
www.tamupress.com



JIM BLACKBURN



For an environmental plan to be successful in Texas, it needs to be about making money and pursued with resolve and heart.

In this powerful call to action, conservationist and environmental lawyer Jim Blackburn offers an unconventional yet feasible plan to protect the Texas coast. As the state's population continues to increase and natural resources remain finite, both the productivity and natural beauty of the coast are threatened. The biggest threat, Blackburn argues, is that Texans do not really know their coast and, as a result, are in denial about the major threats it faces and unaware that the long-term health of the coast provides significant economic benefits.

To save coastal resources, a successful plan must address the realities of our current world. How can we sustain economic growth and encourage entrepreneurship and protect limited natural resources at the same time? In *A Texan Plan for the Texas Coast*, Blackburn identifies a path to conservation while supporting the oil and gas industries as well as saving the agricultural and ranching traditions along the coast.

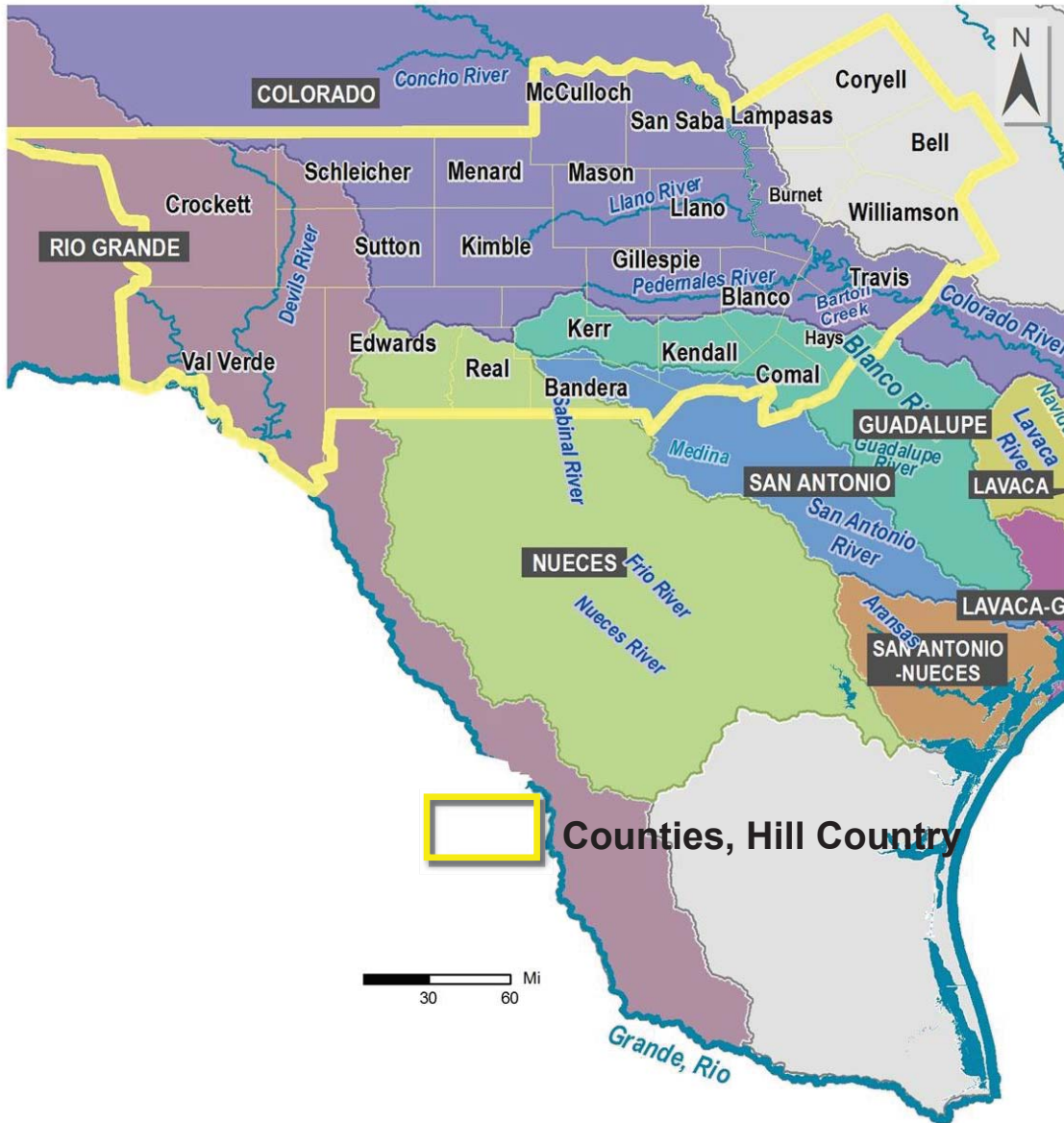
The coast provides immense services through what Blackburn terms its "gray" assets (industrial and development infrastructure) and "green" assets (natural ecological systems). Not only is it the site for unparalleled industrial complexes and international trade, it also offers valuable tourism and recreation opportunities. But we get much more: We get carbon dioxide removed from the air and put into trees and soil. We get fish and shellfish production. We get water storage and recharge. We get flood control. These services are beginning to be appreciated for their dollar values, a trend that might offer Texas farms and ranches the potential for cash flow, which may in turn alter conservation practices throughout Texas

(continued on back flap)

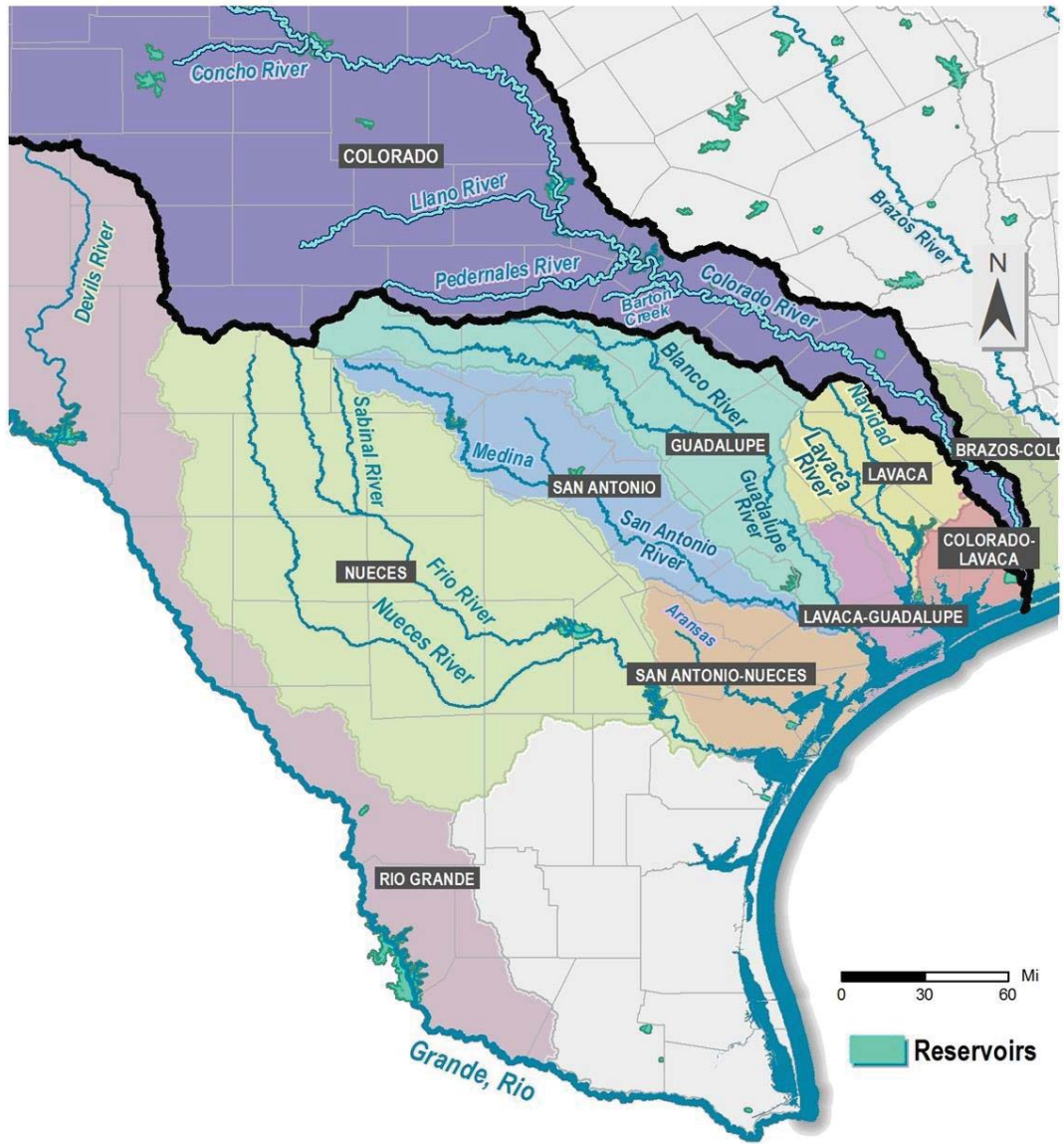
A Texan Plan for the Texas Hill Country

- You have to fight for what is important to you
- If you don't fight for it, you will lose it
- Today – you fight with the legal system
- So what are we fighting for?

•Our Property!!!!!!!!!!



**Surface Water of
Texas
is
Owned By the Public**





**Llano
River**

Photo By Jim Olive

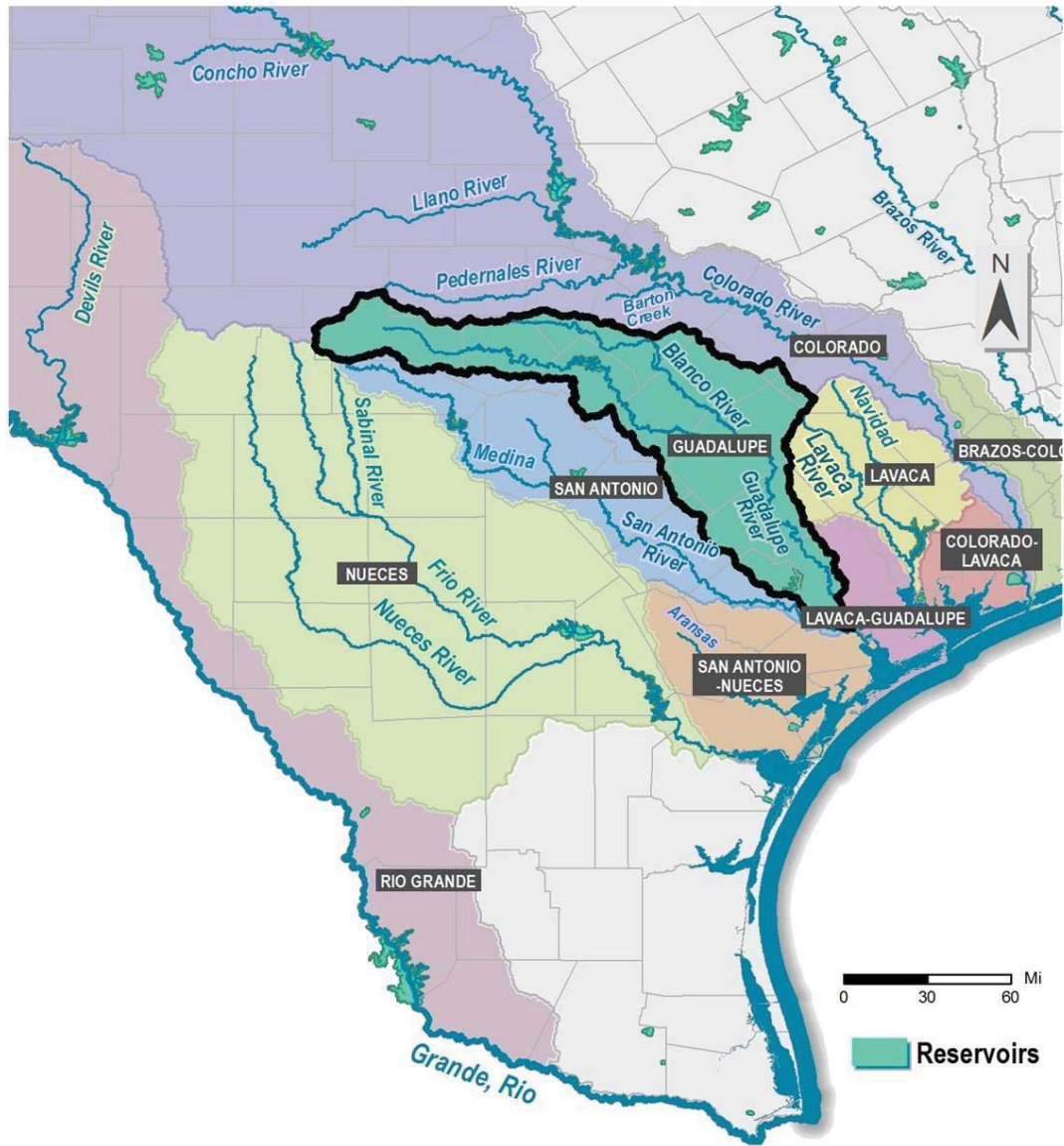




Photo By Jim Olive

Blanco River



**Guadalupe
River**

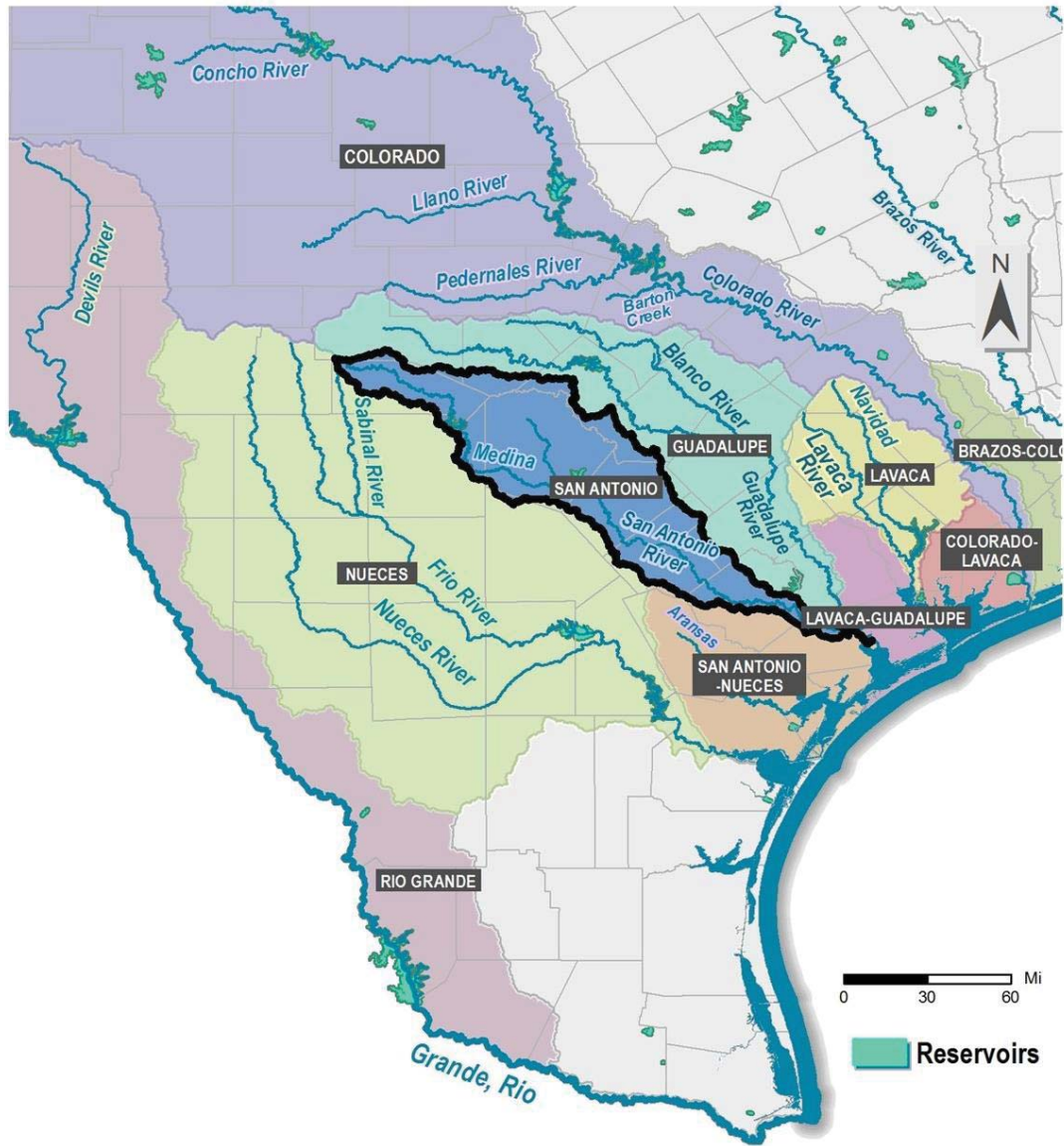




Photo By Jim Olive

Medina River

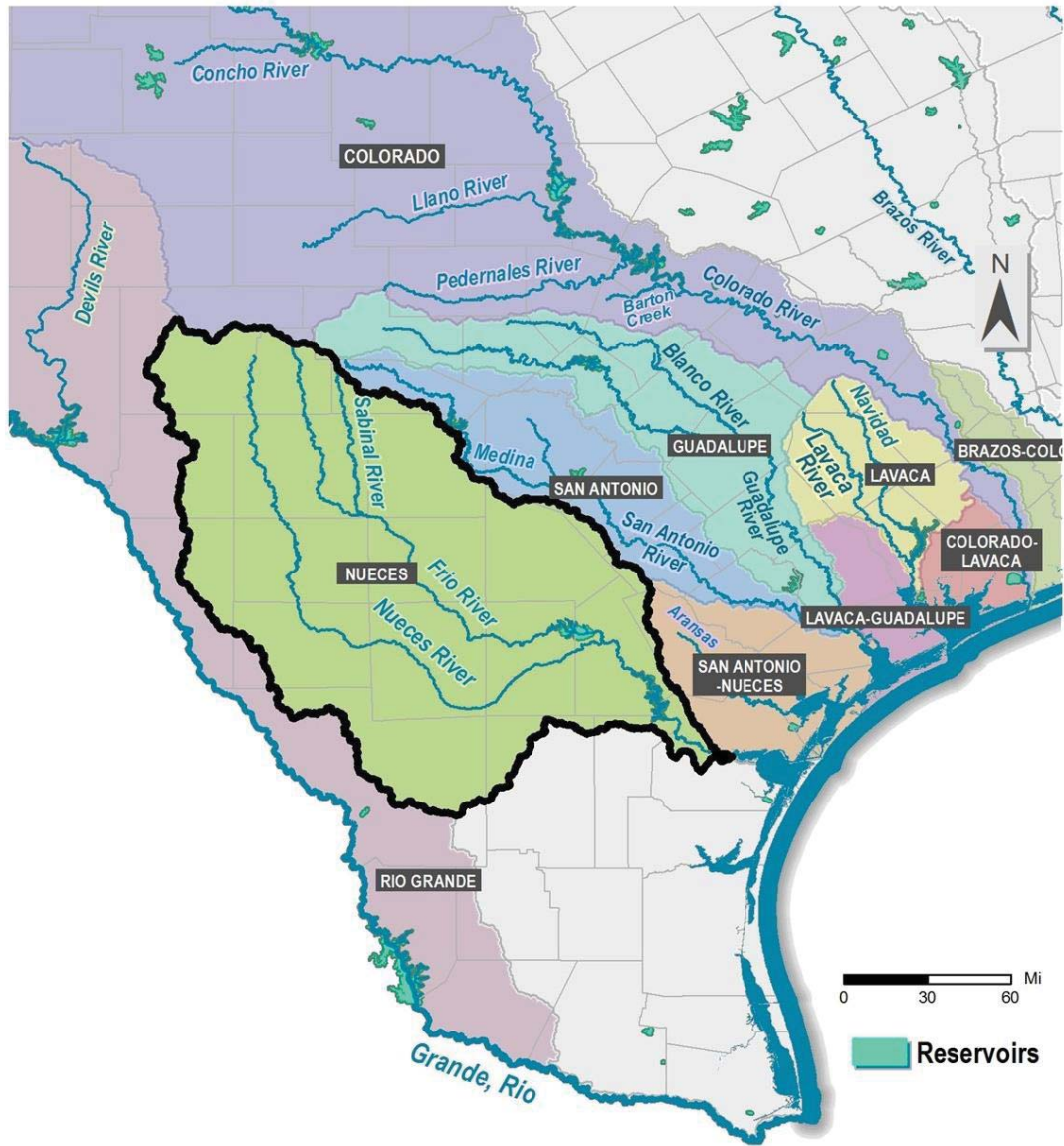
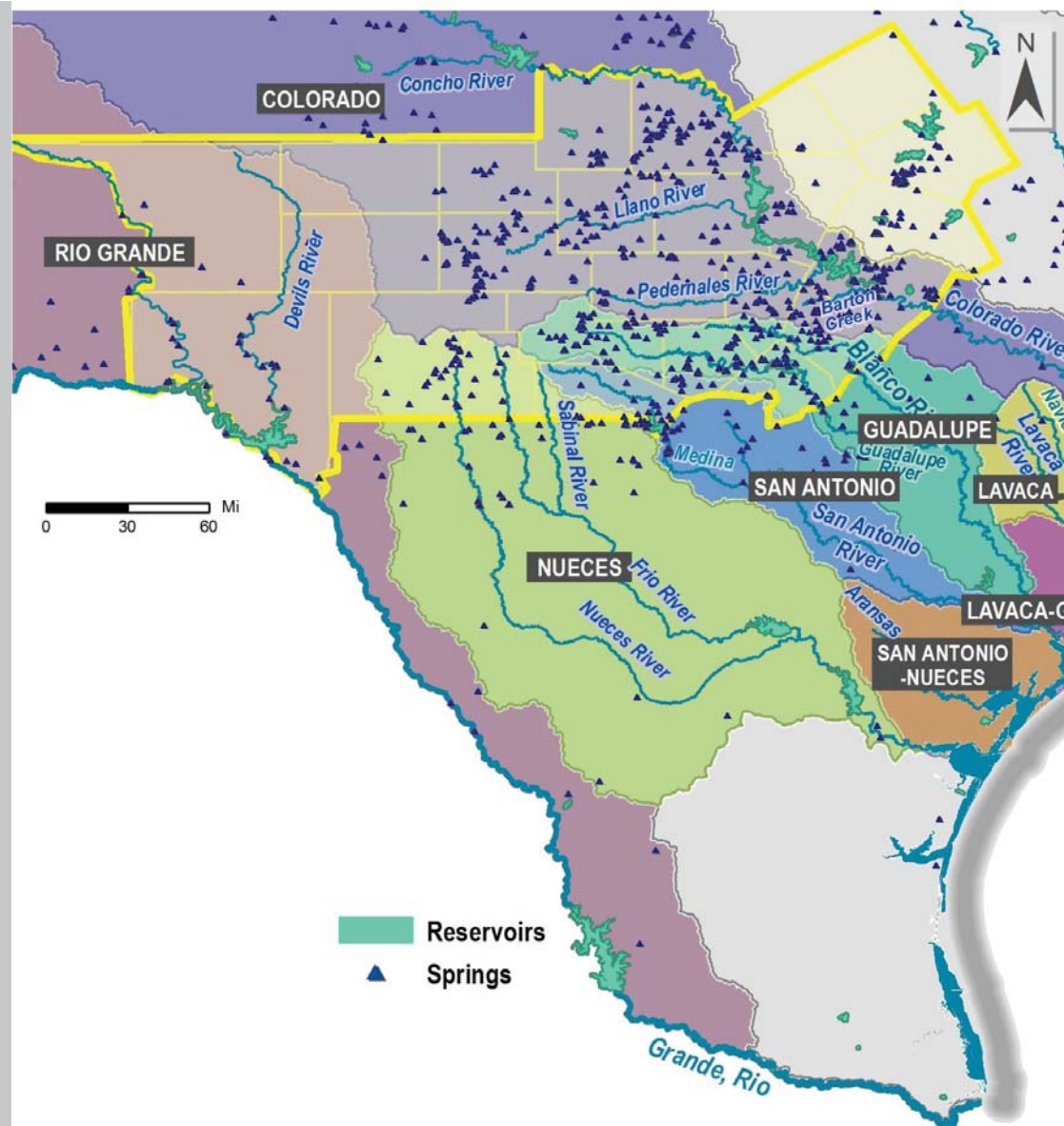




Photo By Jim Olive

Nueces River



Surface Water
Connected to
Groundwater By Springs

If the Springs Don't Flow,
Our Surface Water Public
Property Would Be
STOLEN

Edwards Aquifer Authority v. Day
Texas Supreme Court, 2012

- Created In Situ Property Rights in Groundwater (as opposed to actually capturing it)
- This is both a positive and a negative
- CREATIVITY

A Texan Plan for the Texas Hill Country

- You have to fight for what is important to you
- If you don't fight for it, you will lose it
- Today – you fight with the legal system
- **The worst case situation can and will happen**

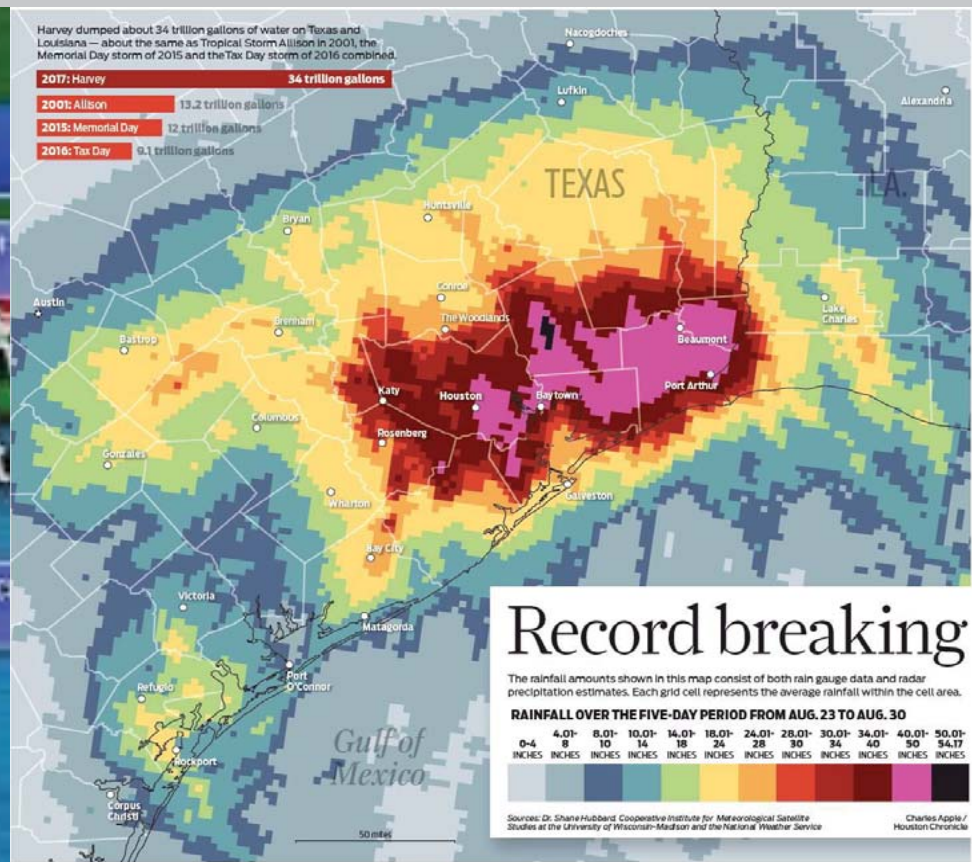
Rio Grande Mouth Silted Over in 2000



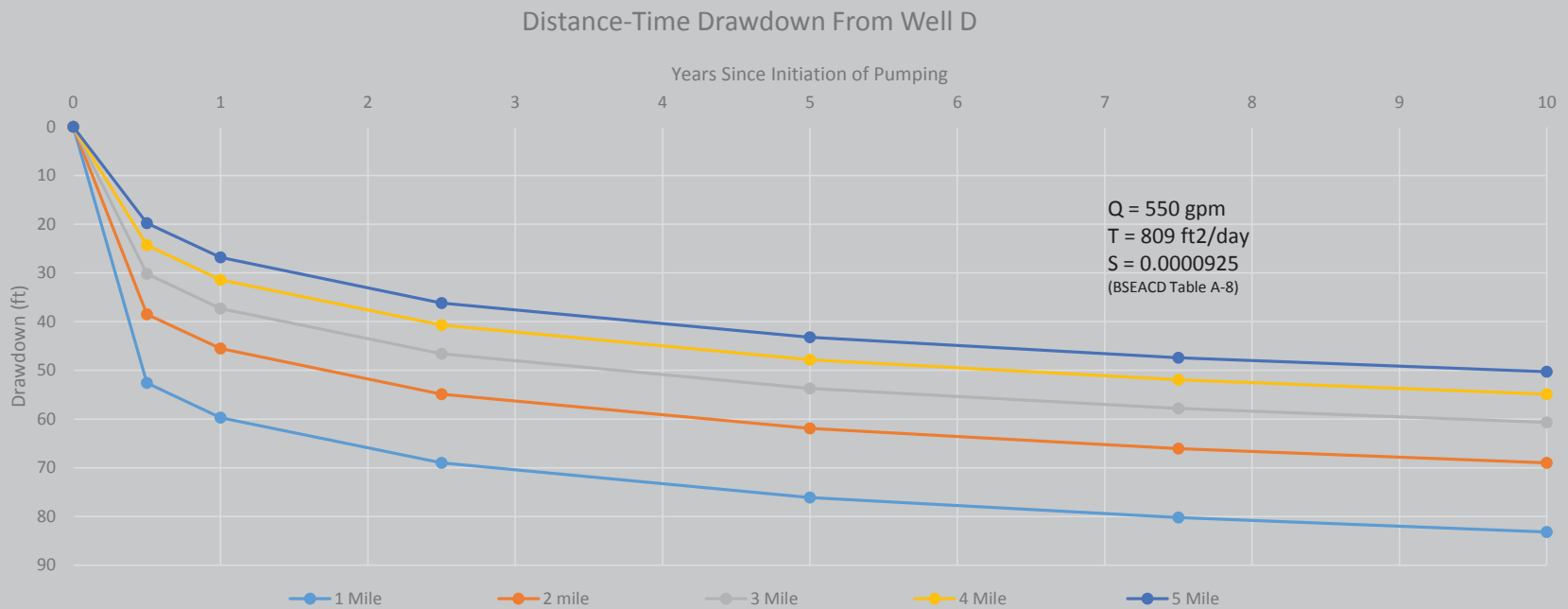
TCEQ BBEST Study (2011) Finds Nueces Bay Essentially Ecologically Dead



If We Had Predicted This - They Would Have Said We Were Crazy



Worst Case Texas Hill Country Scenarios - You Lose Your Groundwater



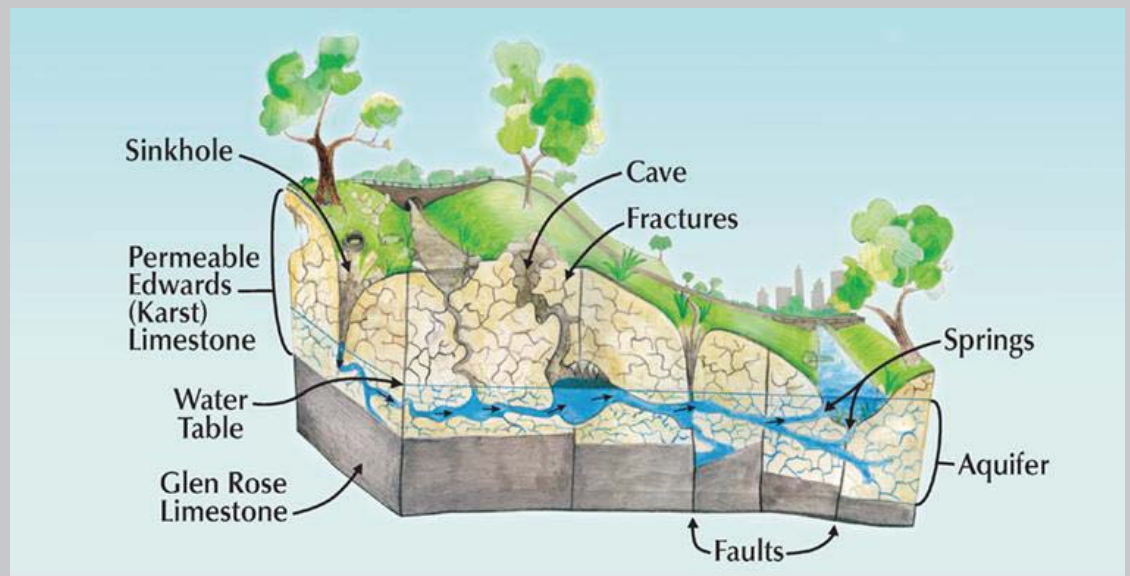
Note: T(ave) w/o Well D



Karst Geology

Dry Up The Springs

Collapse the Karst Formations



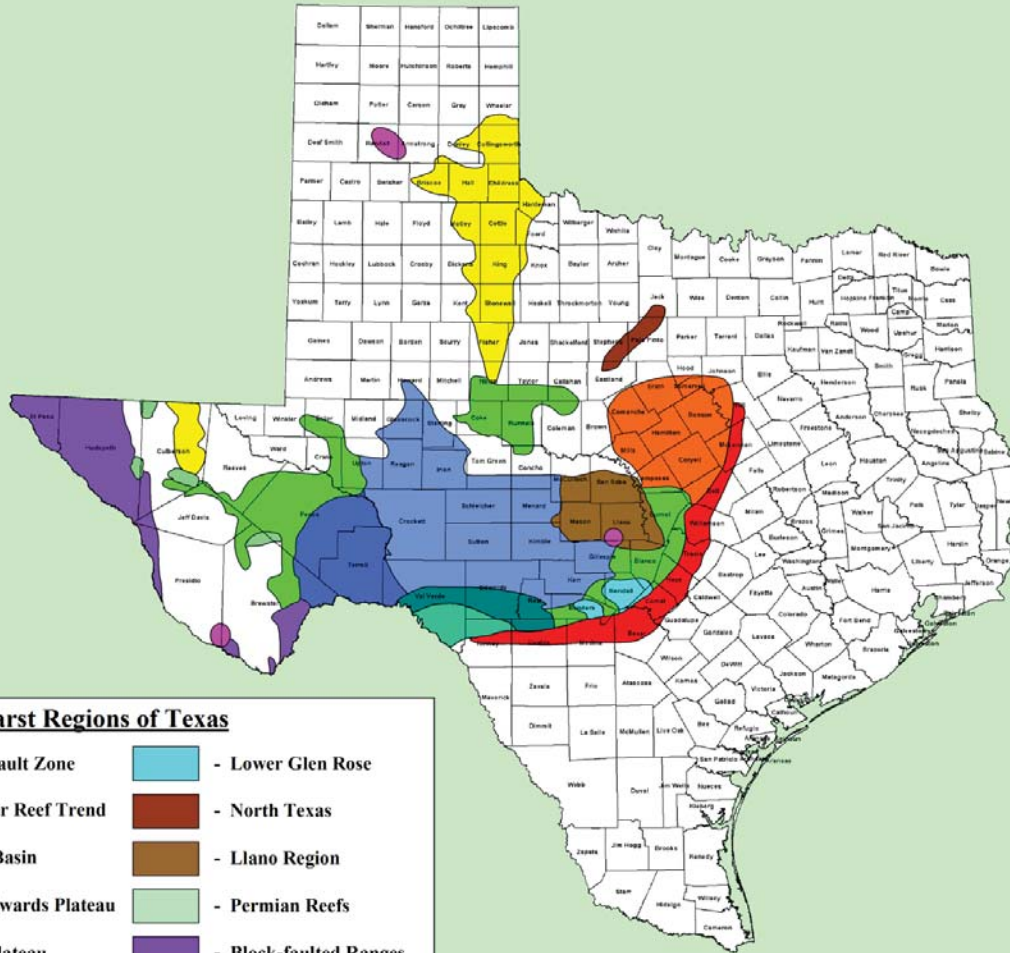
Climate Change

- **Weird Weather Is Happening**
- **Greater Variations In Groundwater Recharge**
- **Less Dependable Spring Flow**
- **Projected Decrease in Base Flow**









Lessons From The Texas Coast

- You have to fight for what is important to you
- If you don't fight for it, you will lose it
- Today – you fight with the legal system
- The worst case situation can and will happen
- **Science is your friend**

KARST REGIONS of TEXAS

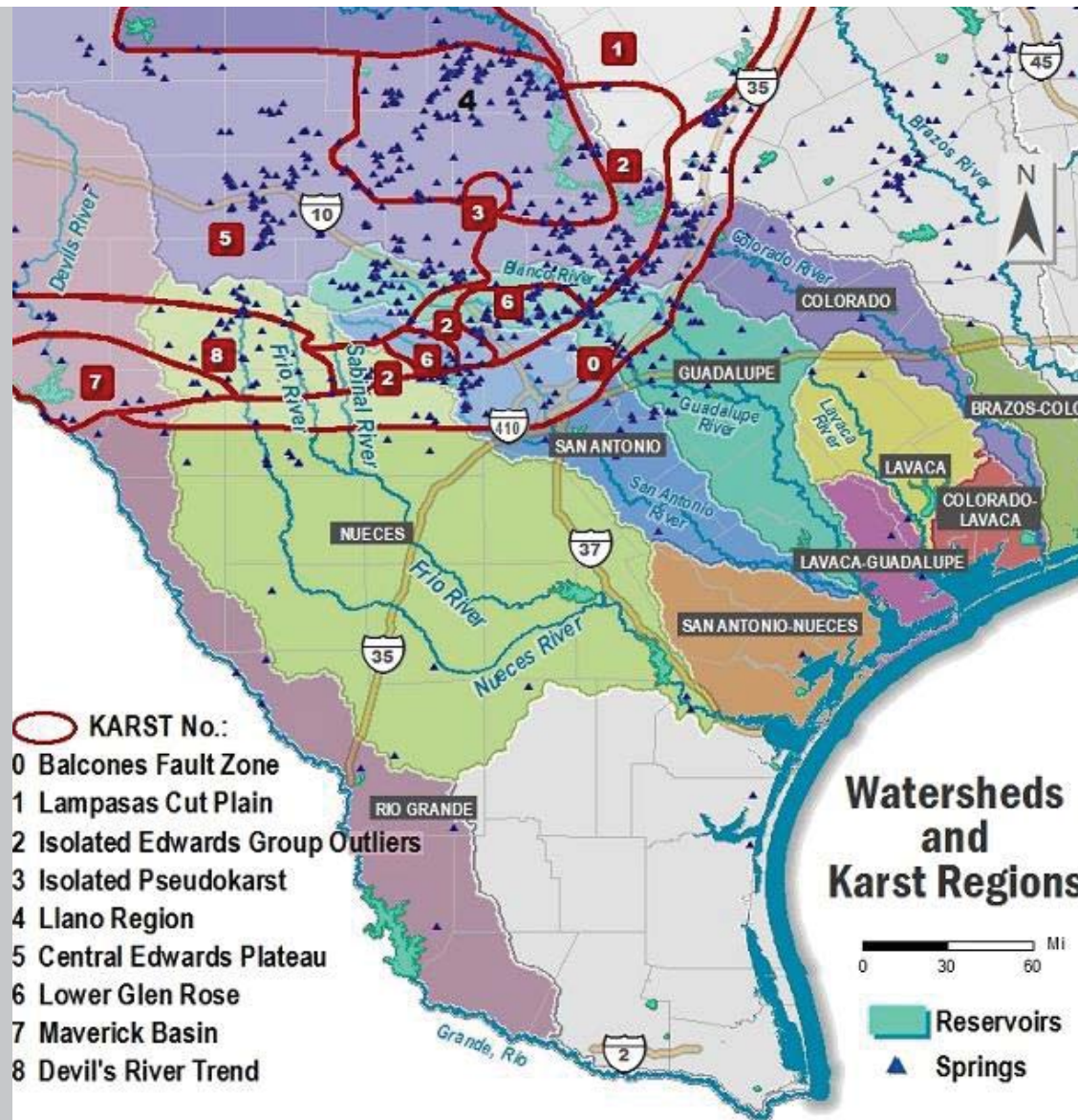


Karst Regions of Texas

- | | |
|---|--|
|  - Balcones Fault Zone |  - Lower Glen Rose |
|  - Devils River Reef Trend |  - North Texas |
|  - Maverick Basin |  - Llano Region |
|  - Central Edwards Plateau |  - Permian Reefs |
|  - Stockton Plateau |  - Block-faulted Ranges |
|  - Lampasas Cut Plain |  - Permian Gypsum Karst |
|  - Isolated Edwards Group Outliers |  - Isolated Pseudokarst |
- Modified from: Elliott and Yost (1994)

Copyright © 2007 by the Texas Speleological Survey

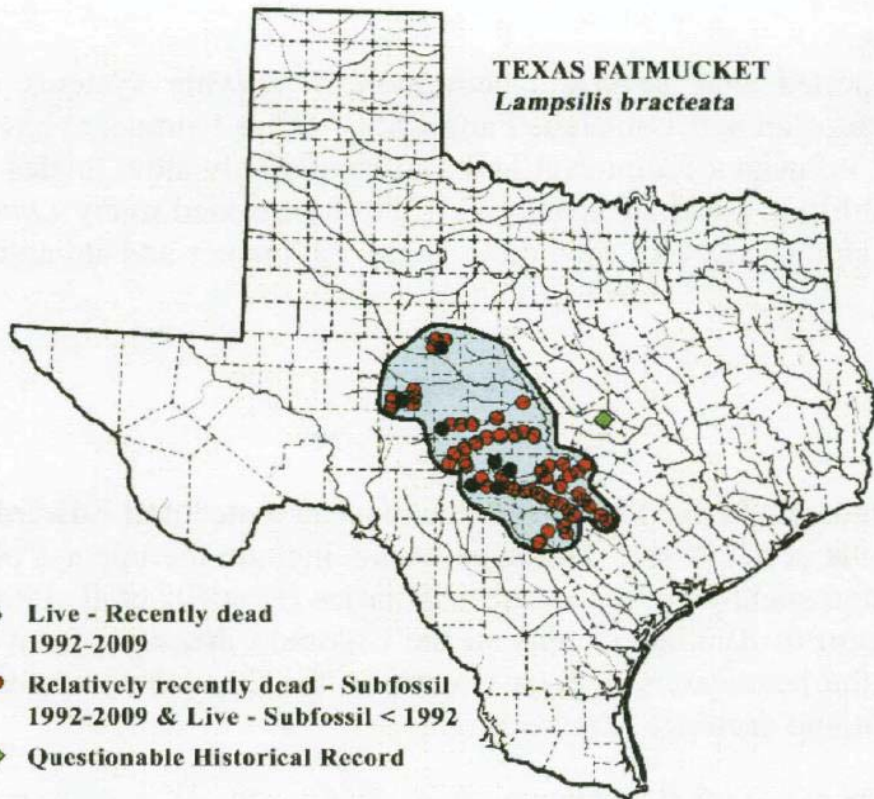
Karst Region
of Texas
a.k.a.
The Texas
Hill Country



Golden-Cheeked Warbler Breeding Area Showing Recovery Regions

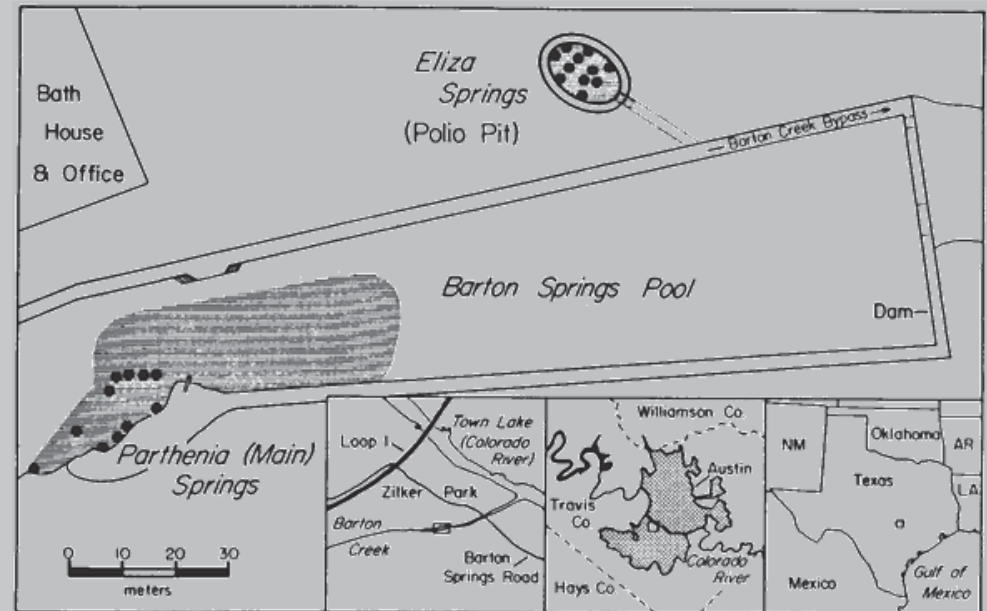
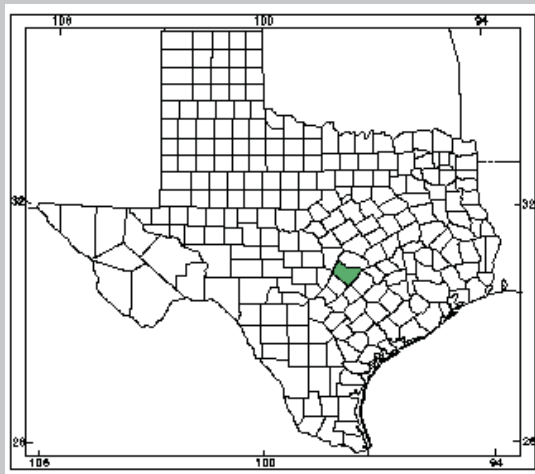


Texas Fatmucket





Barton Springs Salamander

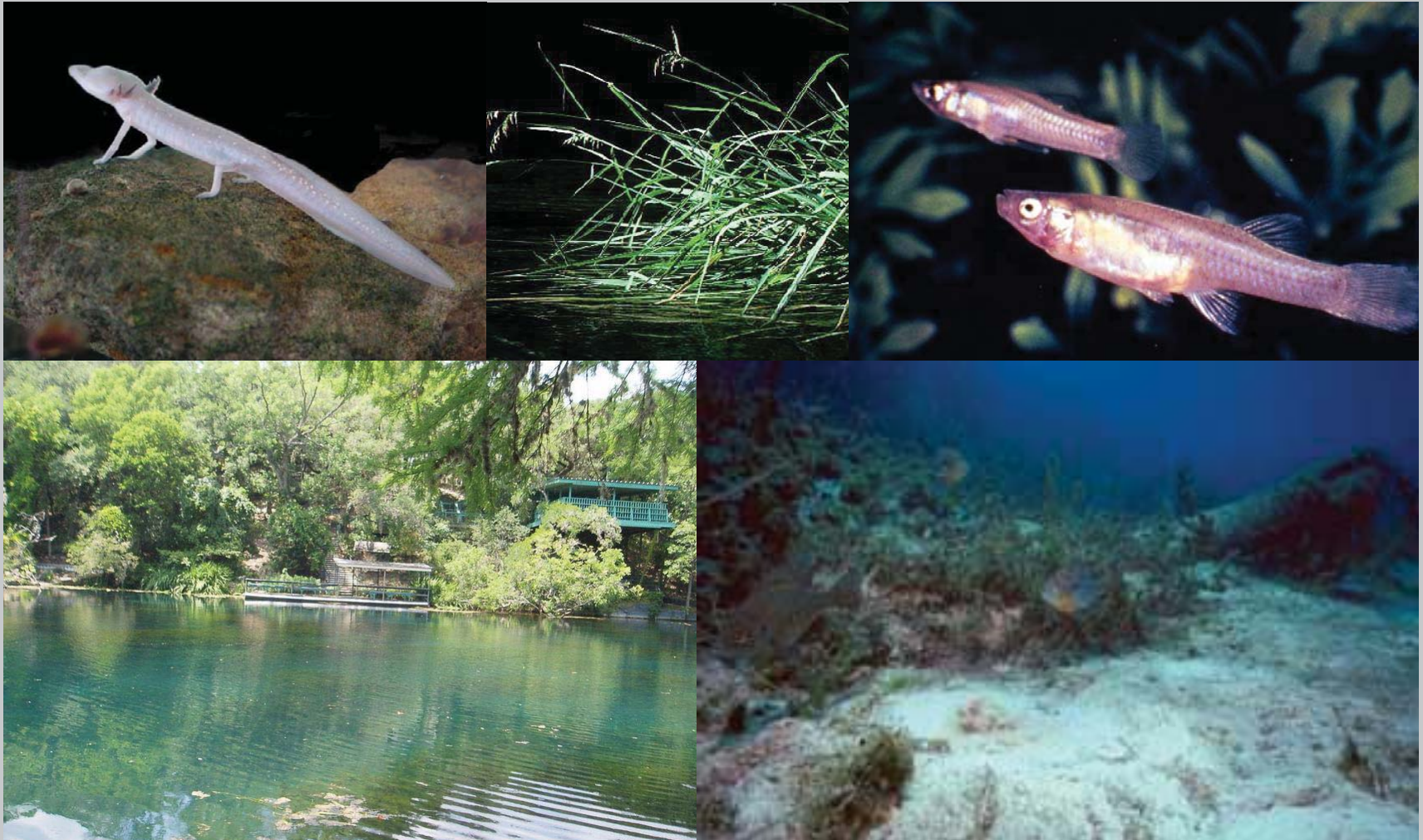


Known distribution of the Barton Springs Salamander. Solid dots mark spring outflows.

Lessons From The Texas Coast

- You have to fight for what is important to you
- If you don't fight for it, you will lose it
- Today – you fight with the legal system
- The worst case situation can and will happen
- Science is your friend
- **Federal environmental law is your friend**

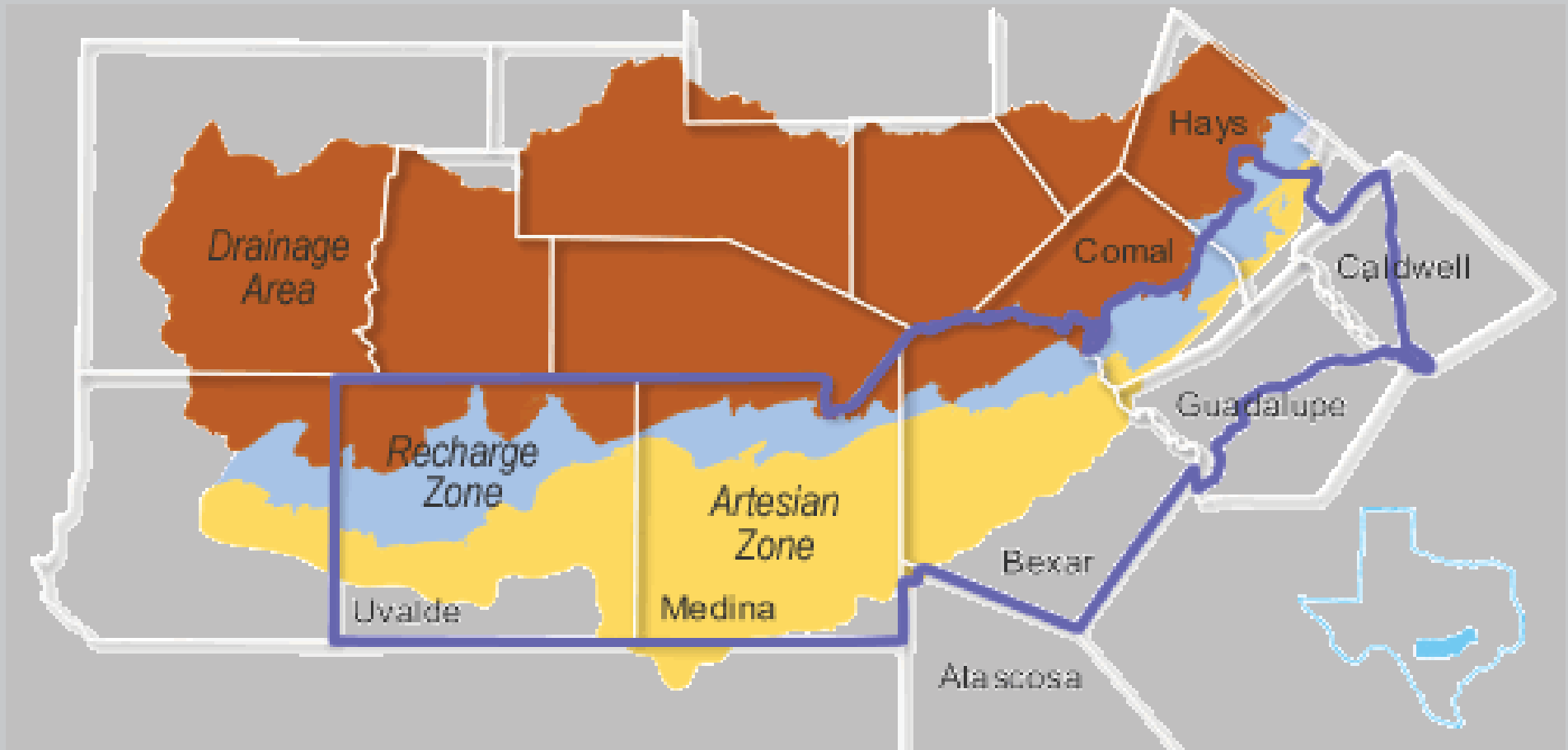
Endangered Species – *Sierra Club v. Babbitt*



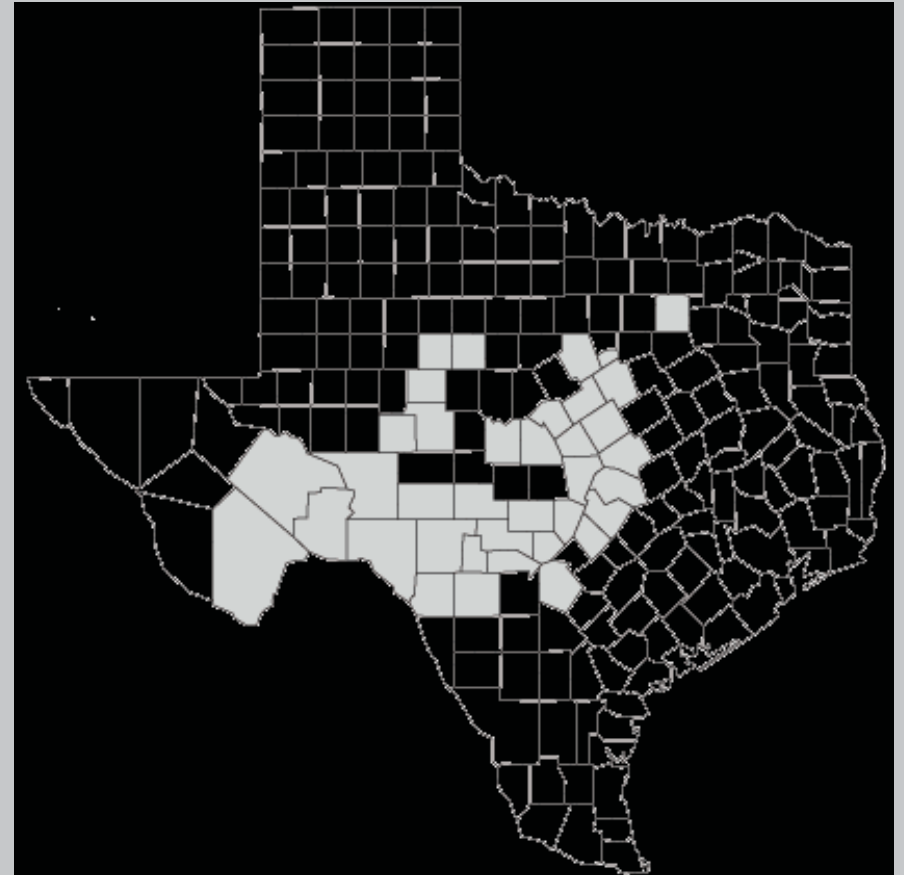
Sierra Club v. Babbitt

- Suit against U.S. Fish and Wildlife Service for failure to establish minimum drawdown limits on Edwards Aquifer to maintain springs flows at San Marcos and Comal Springs
- Suit filed by Sierra Club, Guadalupe-Blanco River Authority, City of San Marcos and City of New Braunfels
- Led to creation of Edwards Aquifer Authority by the Texas Legislature to regulate groundwater withdrawals
- Led to the adoption of a Habitat Conservation Plan to protect the endangered species of Comal and San Marcos Springs

Edwards Aquifer Authority

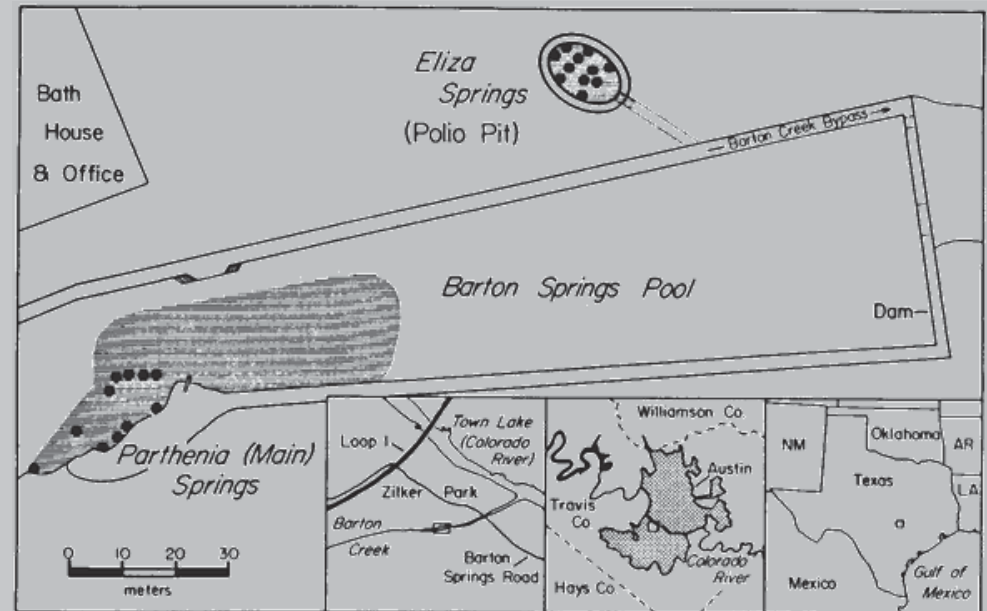
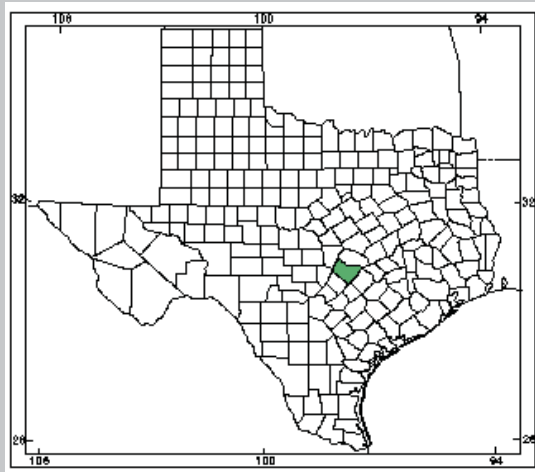


Black Capped Vireo Range



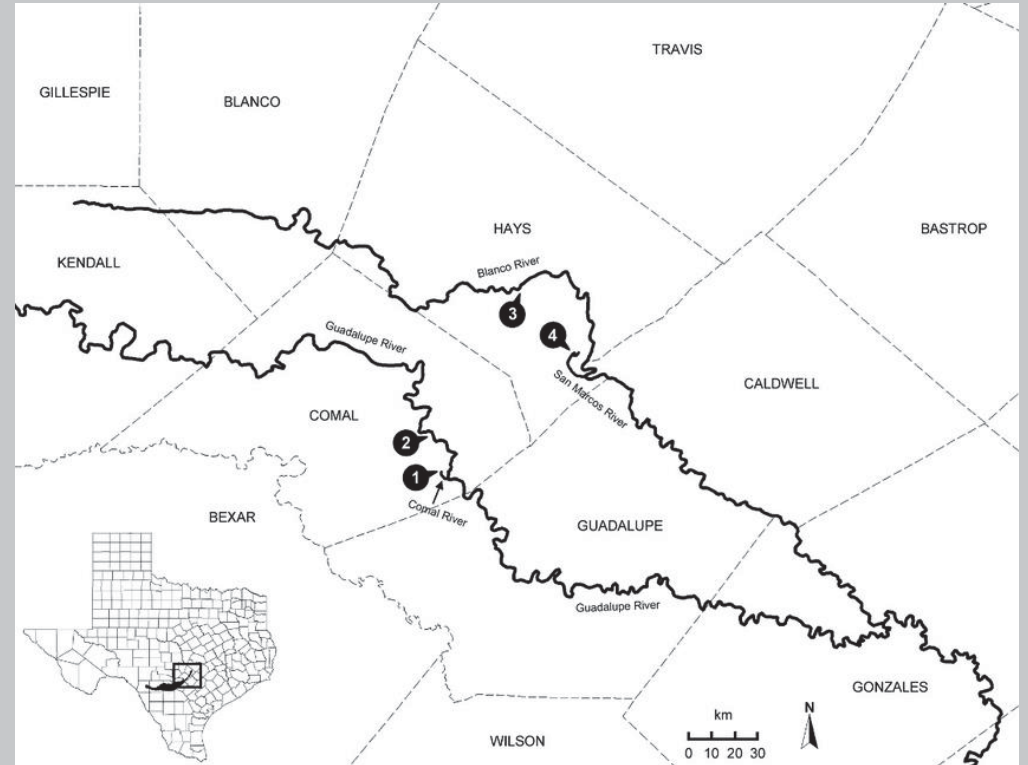


Barton Springs Salamander



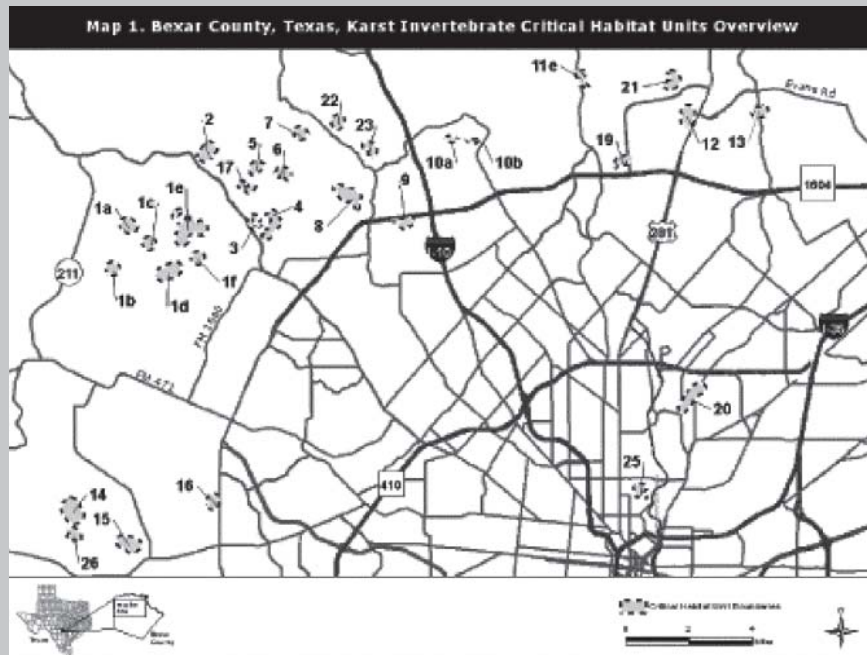
Known distribution of the Barton Springs Salamander. Solid dots mark spring outflows.

Comal Springs Dryopid Beetle



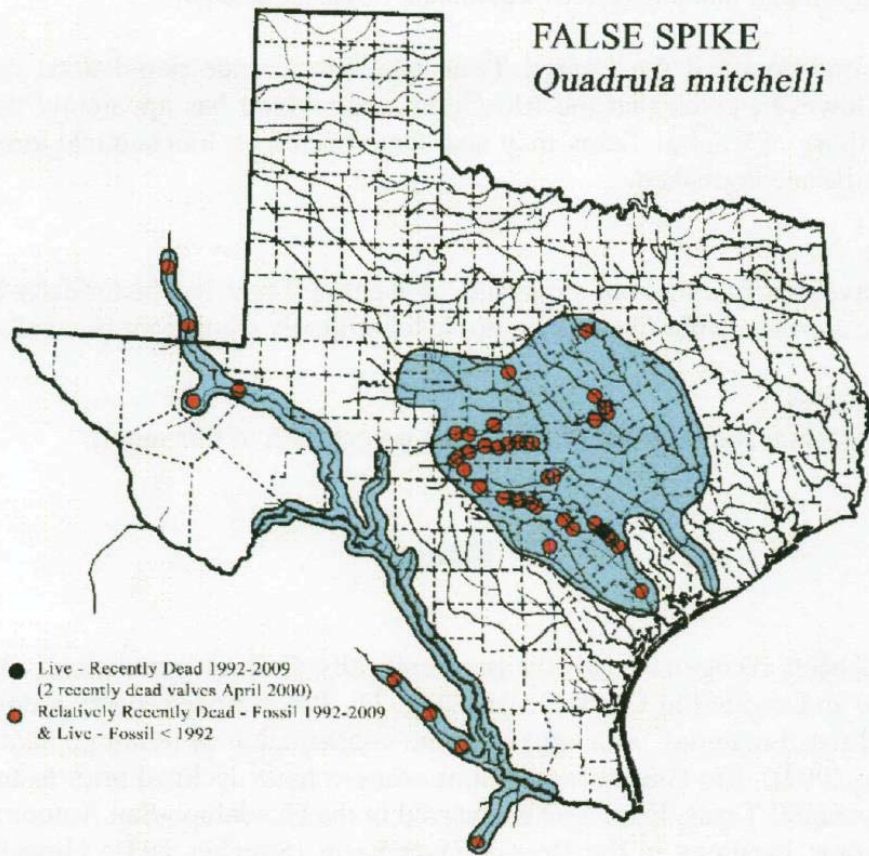
The Comal Springs dryopid beetle was first discovered in 1987 and officially described in 1992 and listed in 1997. .

Karst Invertebrates Bexar, Travis and Williamson Counties

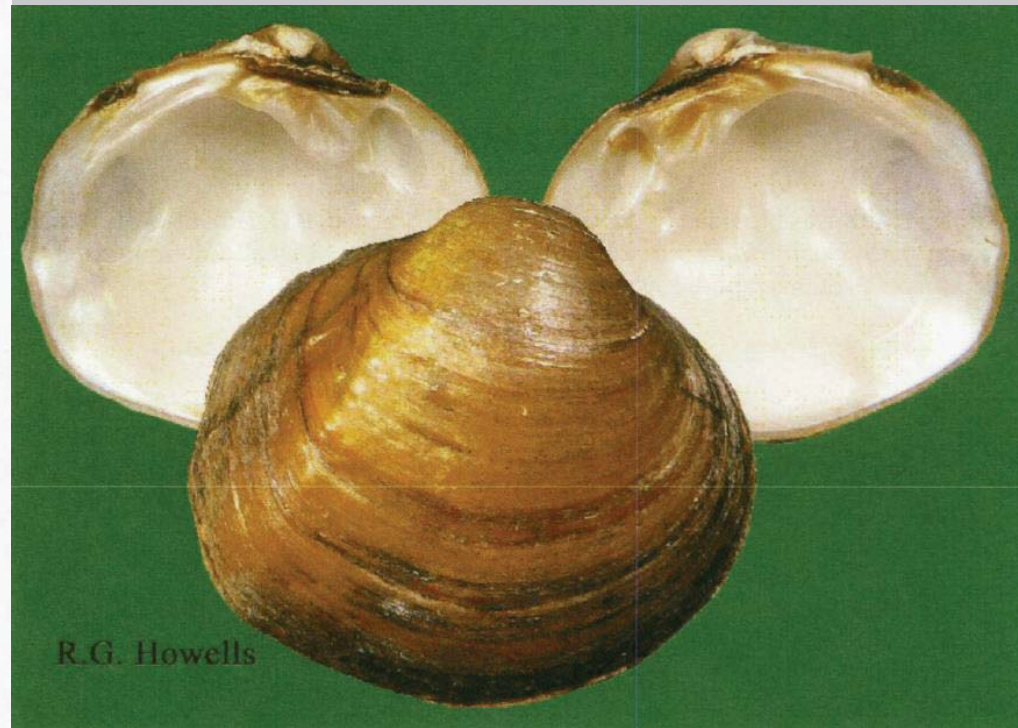
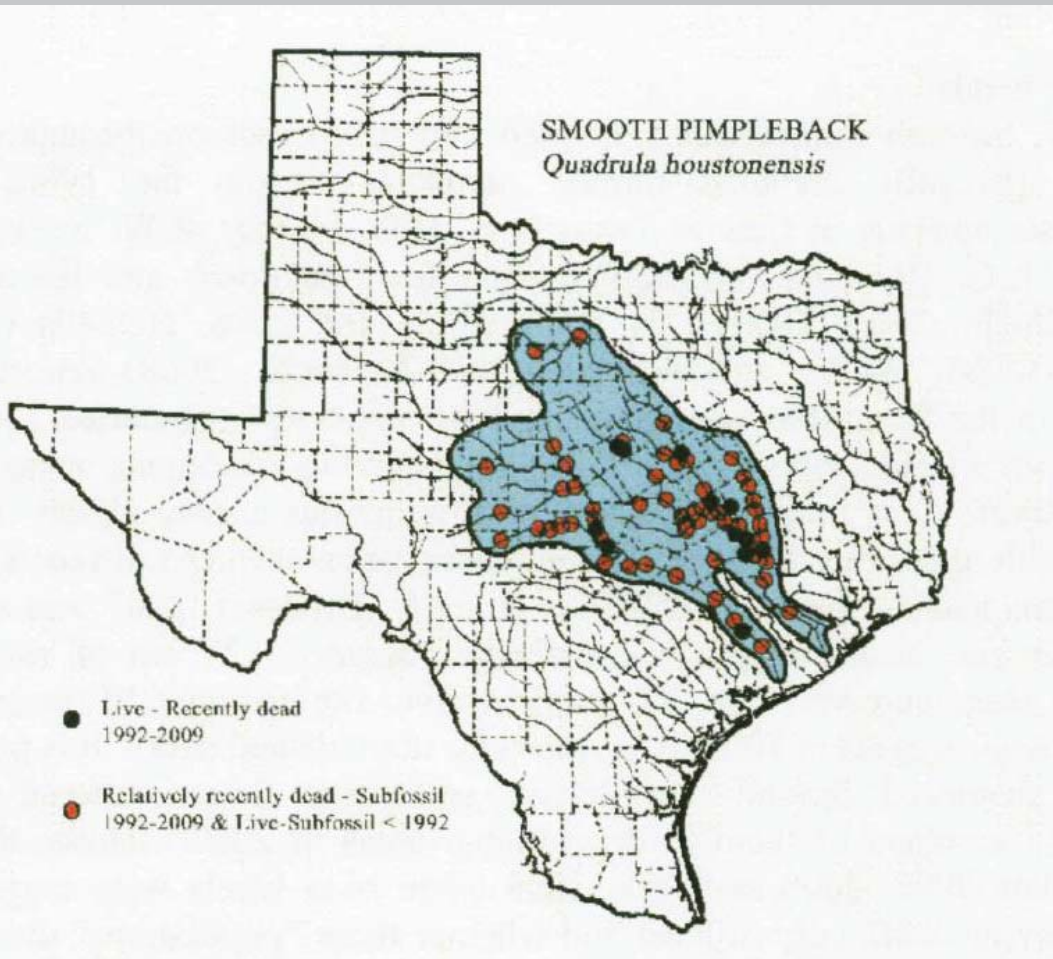


1. The USFWS listed seven karst invertebrates from Travis and Williamson County as endangered in 1994, granting them protection under the Endangered Species Act.
2. Nine additional karst invertebrates from Bexar County were listed as endangered in 2000.
3. Critical Habitat for Bexar County karst invertebrates was designated by the USFWS in 2012.

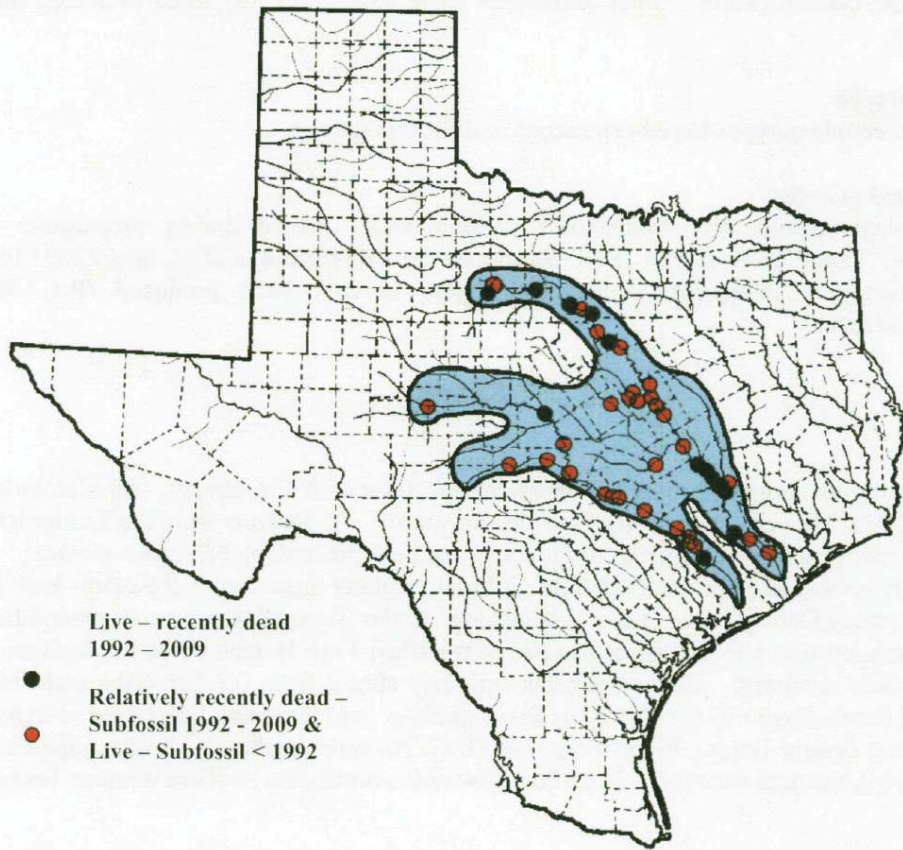
False Spike



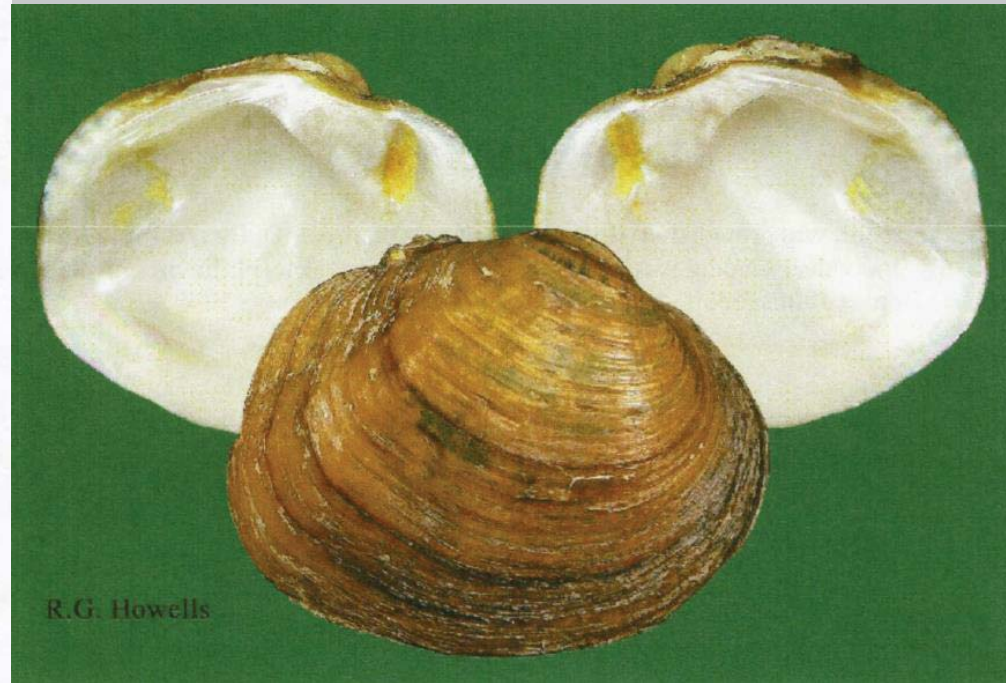
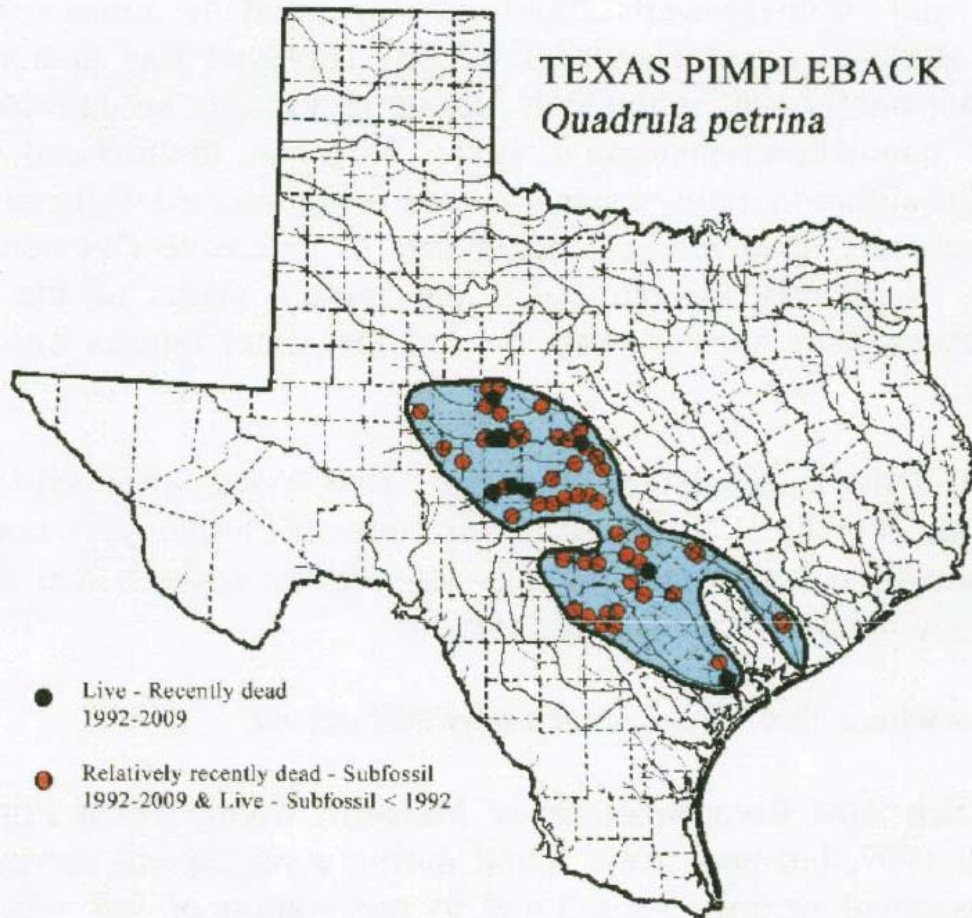
Smooth Pimpleback



Texas Fawnsfoot



Texas Pimpleback



Commonality Among These Species

- Water is essential to the survival of these species
- Most require specific springs or riverine flows
- Birds require seeps and springs
- All occur within the Texas Hill Country

**Endangered Species Are The Best Ally of
Groundwater, Spring Flow and Surface Water
Protection In Texas**

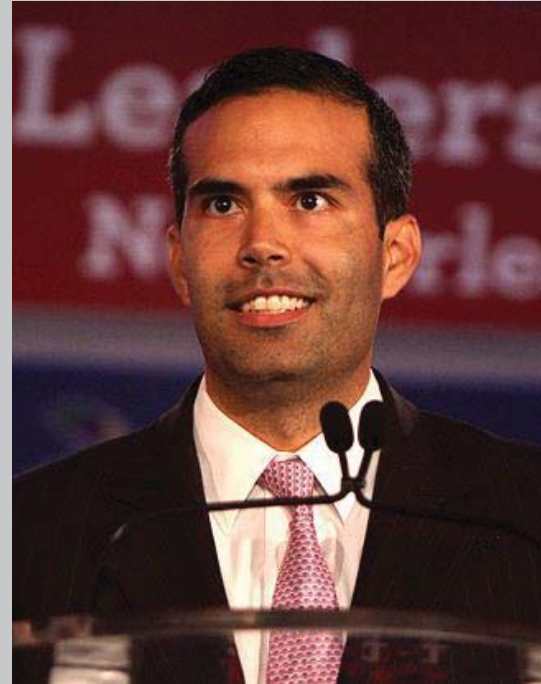
Lessons From The Texas Coast

- You have to fight for what is important to you
- If you don't fight for it, you will lose it
- Today – you fight with the legal system
- The worst case situation can and will happen
- Science is your friend
- Federal law is your friend
- **The government likely is not your friend**

State Efforts to Delist Golden-Cheeked Warbler



Then-Comptroller Susan Combs filed petition to delist in 2015 based on study by Texas A&M



Commissioner of GLO George P. Bush filed lawsuit to compel delisting based on pleadings prepared by Texas Public Policy Foundation

Current Efforts To Prevent Listing of 6 Mussels



Effort led by Robert Gulley

Working With Comptroller Glen Hagar

**Did excellent work on Edwards Aquifer
Recovery Implementation Plan**

**Could lead to protection of mussels and
water in exchange for no listing**

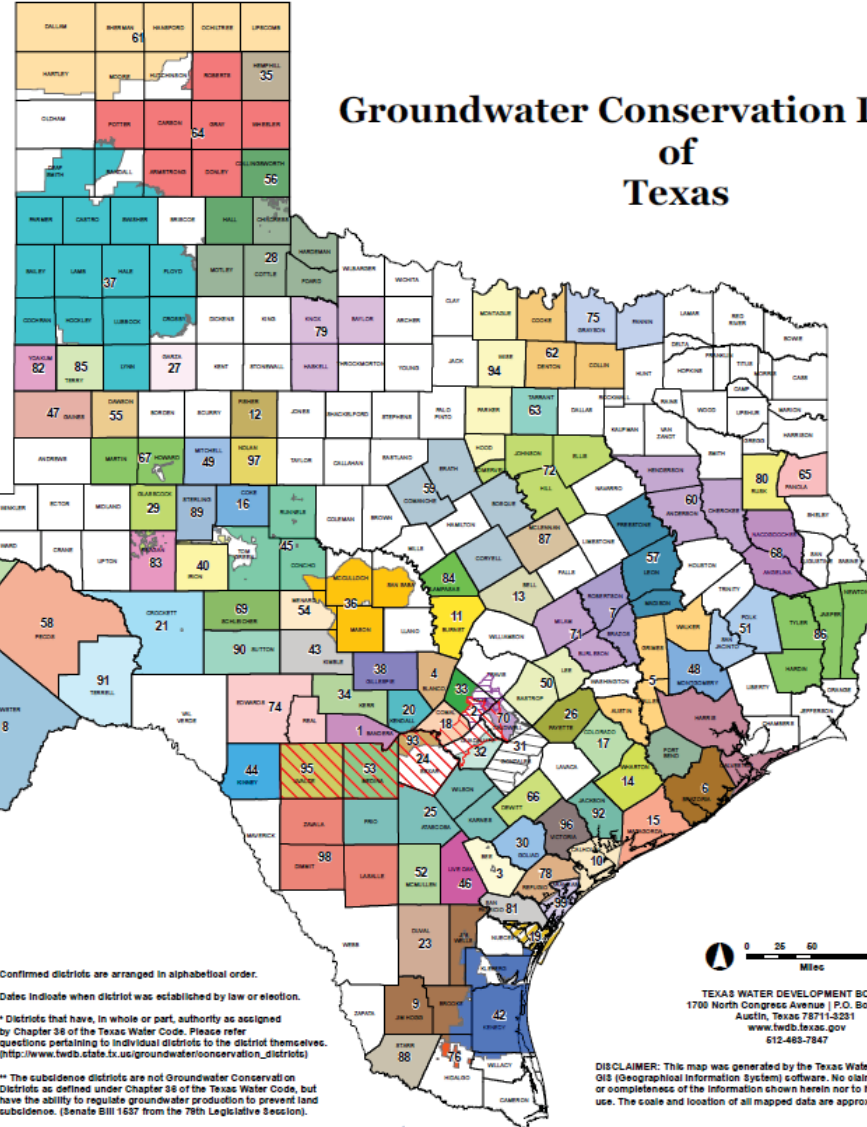
**Could work against mussels and water in
the Hill Country and Texas**

Groundwater Conservation Districts of Texas

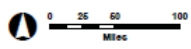
- Confirmed Groundwater Conservation Districts ***
1. Bandera County River Authority & Ground Water District - 11/7/1989
 2. Barton Springs/Edwards Aquifer CD - 8/13/1987
 3. See GCD - 1/20/2001
 4. Blanco-Federmans GCD - 1/23/2001
 5. Bluebonnet GCD - 11/6/2002
 6. Brazos County GCD - 11/8/2006
 7. Brazos Valley GCD - 11/6/2002
 8. Brewster County GCD - 11/8/2001
 9. Brush Country GCD - 11/3/2009
 10. Calhoun County GCD - 11/4/2014
 11. Central Texas GCD - 8/24/2006
 12. Clear Fork GCD - 11/6/2002
 13. Clearwater UWCD - 8/21/1989
 14. Coastal Bend GCD - 11/8/2001
 15. Coastal Plains GCD - 11/8/2001
 16. Coke County UWCD - 11/4/1988
 17. Colorado County GCD - 11/8/2007
 18. Comal Trinity GCD - 8/17/2016
 19. Corpus Christi A&RCD - 8/17/2006
 20. Cow Creek GCD - 11/6/2002
 21. Crockett County GCD - 1/28/1981
 22. Culberson County GCD - 6/2/1988
 23. Duval County GCD - 7/26/2009
 24. Edwards Aquifer Authority - 7/28/1998
 25. Evergreen UWCD - 8/30/1986
 26. Fayette County GCD - 11/8/2001
 27. Garza County UWCD - 11/6/1998
 28. Gateway GCD - 6/3/2003
 29. Glasscock GCD - 8/22/1981
 30. Goliad County GCD - 11/8/2001
 31. Gonzales County UWCD - 11/2/1984
 32. Guadalupe County GCD - 11/14/1989
 33. Hays Trinity GCD - 6/8/2003
 34. Headwaters GCD - 11/6/1981
 35. Hemphill County UWCD - 11/4/1987
 36. Hickory UWCD No. 1 - 8/14/1982
 37. High Plains UWCD No. 1 - 8/28/1961
 38. Hill Country UWCD - 8/8/1987
 39. Hudspeth County UWCD No. 1 - 10/6/1967
 40. Irion County WCD - 8/2/1986
 41. Jeff Davis County UWCD - 11/2/1983
 42. Kenedy County GCD - 11/2/2004

- Confirmed Groundwater Conservation Districts (Cont.) ***
43. Kimble County GCD - 6/3/2002
 44. Kinney County GCD - 1/12/2002
 45. Lipan-Kiskapoo WCD - 11/3/1987
 46. Live Oak UWCD - 11/7/1988
 47. Llano Estacado UWCD - 11/3/1988
 48. Lone Star GCD - 11/8/2001
 49. Lone Wolf GCD - 2/22/1992
 50. Lost Pines GCD - 11/6/2002
 51. Lower Trinity GCD - 11/7/2008
 52. McMullen GCD - 11/8/2001
 53. Medina County GCD - 8/28/1981
 54. Menard County UWCD - 8/14/1989
 55. Meca UWCD - 1/28/1989
 56. Mesquite GCD - 11/4/1988
 57. Mid-East Texas GCD - 11/6/2002
 58. Middle Peacos GCD - 11/6/2002
 59. Middle Trinity GCD - 6/4/2002
 60. Neches & Trinity Valleys GCD - 11/8/2001
 61. North Plains GCD - 1/2/1966
 62. North Texas GCD - 12/12/09
 63. Northern Trinity GCD - 6/16/2007
 64. Panhandle GCD - 1/21/1968
 65. Panola County GCD - 11/8/2007
 66. Peano Valley GCD - 11/8/2001
 67. Permian Basin UWCD - 8/21/1986
 68. Playwoods GCD - 11/6/2001
 69. Plateau UWCD and Supply District - 3/4/1974
 70. Plum Creek CD - 6/1/1993
 71. Post Oak Savannah GCD - 11/6/2002
 72. Prairielands GCD - 8/1/2009
 73. Precidio County UWCD - 8/31/1989
 74. Real-Edwards C and R District - 6/30/1989
 75. Red River GCD - 8/1/2008
 76. Red Sands GCD - 11/6/2002
 77. Reeves County GCD - 11/3/2016
 78. Refugio GCD - 11/8/2001
 79. Rolling Plains GCD - 1/28/1989
 80. Rusk County GCD - 8/6/2004
 81. San Patricio County GCD - 8/12/2007
 82. Sandy Land UWCD - 11/7/1989
 83. Santa Rita UWCD - 8/18/1988
 84. Saratoga UWCD - 11/7/1988
 85. South Plains UWCD - 2/8/1992
 86. Southeast Texas GCD - 11/2/2004
 87. Southern Trinity GCD - 8/19/2009
 88. Starr County GCD - 1/8/2007
 89. Sterling County UWCD - 11/3/1987
 90. Sutton County UWCD - 4/6/1988
 91. Terrell County GCD - 11/8/2012
 92. Texas GCD - 11/6/2001
 93. Trinity Glen Rose GCD - 11/8/2002
 94. Upper Trinity GCD - 11/8/2007
 95. Uvalde County UWCD - 8/1/1989
 96. Victoria County GCD - 8/6/2005
 97. West-Tex GCD - 11/6/2002
 98. Wintergarden GCD - 11/7/1988

- Unconfirmed Groundwater Conservation Districts**
- 99. Aransas County GCD + #
 - * Pending Election Results
 - # Created by the 84th Legislature
- Subsidence Districts ****
- Harris-Oalvection Subsidence District
 - Fort Bend Subsidence District
 - County Boundaries



Confirmed districts are arranged in alphabetical order.
 Dates indicate when district was established by law or election.
 * Districts that have, in whole or part, authority as assigned by Chapter 36 of the Texas Water Code. Please refer questions pertaining to individual districts to the district themselves. (http://www.twdb.state.tx.us/groundwaterconservation_districts)
 ** The subsidence districts are not Groundwater Conservation Districts as defined under Chapter 36 of the Texas Water Code, but have the ability to regulate groundwater production to prevent land subsidence. (Senate Bill 1637 from the 79th Legislative Session).
 Groundwater Conservation District GIS Data created by the Texas Commission on Environmental Quality. For more information, please contact TCEQ at 612-238-1000 or wrsg@tceq.texas.gov.



TEXAS WATER DEVELOPMENT BOARD
 1700 North Congress Avenue | P.O. Box 18231
 Austin, Texas 78711-8231
www.twdb.texas.gov
 612-463-7847

DISCLAIMER: This map was generated by the Texas Water Development Board using GIS (Geographical Information System) 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. Map date: NOV-2016

MISSION: The Texas Water Development Board's (TWDB) mission is to provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas.



Lessons From The Texas Coast

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- If you don't fight for it, you will lose it
- Today – you fight with the legal system
- The worst case situation can and will happen
- Science is your friend
- Federal law is your friend
- The government likely is not your friend
- **Be creative and do not fear failure**

Go After The Rule of Capture – It's Bad Law

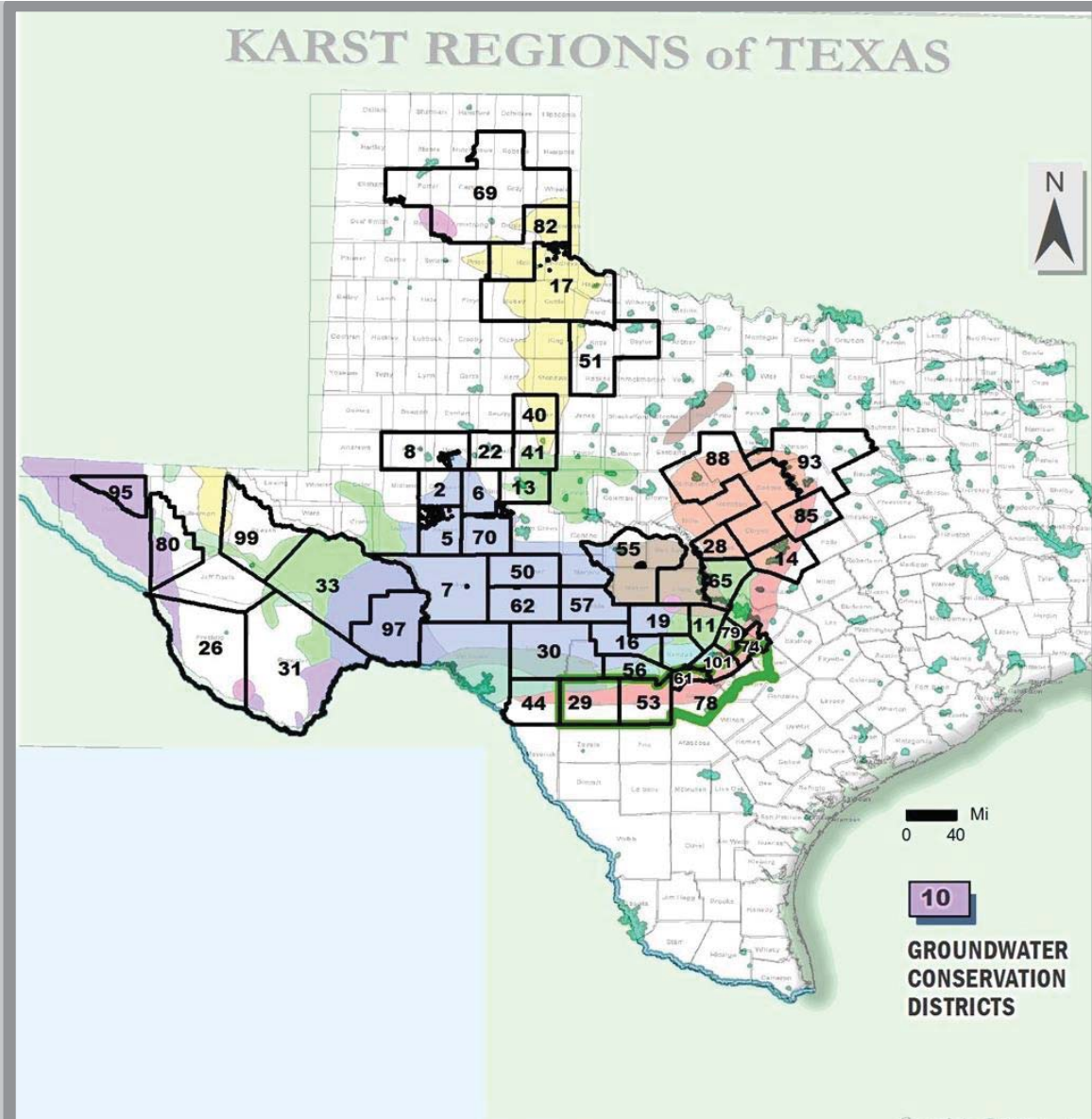
Adopted in 1904

Houston & Texas Central Railway Co. v. East



- Adopted Rule of Capture re: groundwater
- Landowner may take groundwater
- Even if neighbor is negatively harmed
- Damnum absque injuria
- “(1) Because the origin, movement and course of [groundwater] and the causes that govern and direct their movement are so secret, **occult** and concealed that an attempt to administer any set of legal rules in respect to them would therefore be practically impossible.

Attempt to Compel a
Master Groundwater
District for the Karst
Geological Region
Based on
Endangered Species
Law?



Constitutional Lawsuit To Protect Public Property



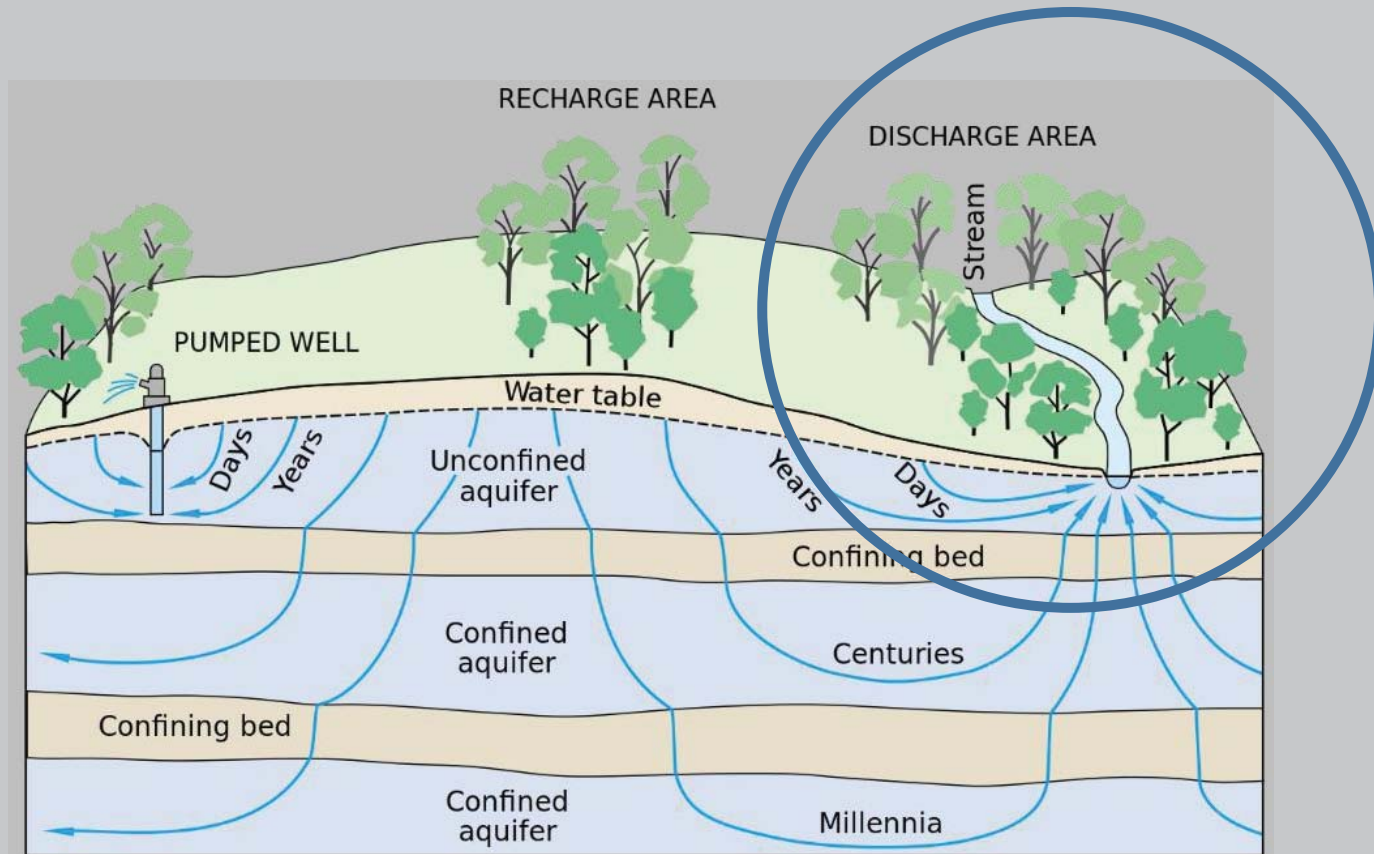
Creative Use of Economics

- If we can talk money, everyone will listen
- Can we buy rights to springs?
- Can we set up market systems to reward groundwater stewards?
- Can we devise a system of paying landowners for good stewardship decisions?

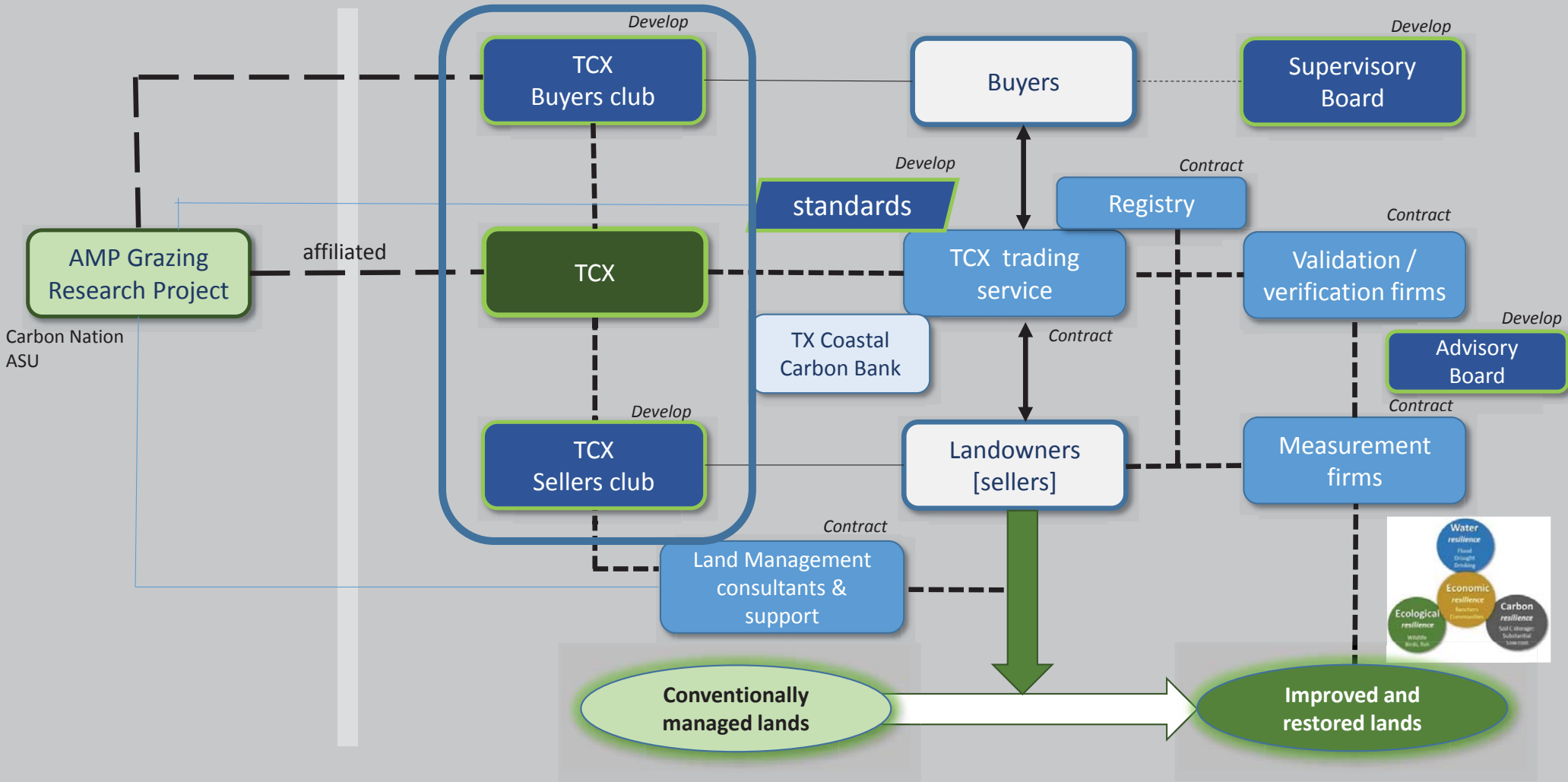


Let's Have An Ecological and a Spring Restoration Conversation

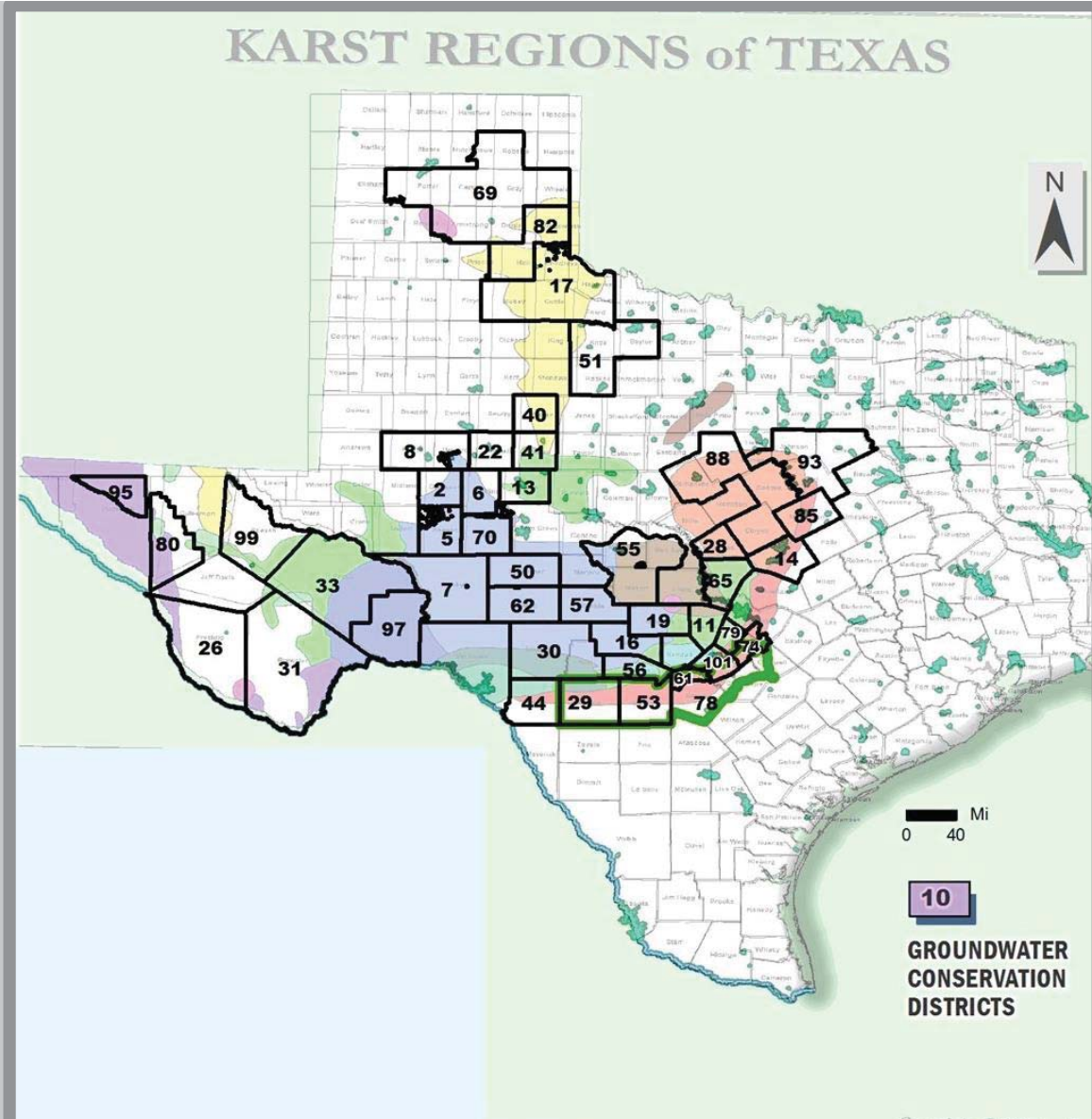
Water Supply Enhancement



The Texas Coastal Exchange: Buying and Selling Ecosystem Services



What About Creating
A Groundwater
District Takings
Defense Fund?
Or Just a
Groundwater District
Defense Fund?



Lessons From The Texas Coast

- You have to fight for what is important to you
- If you don't fight for it, you will lose it
- Today – you fight with the legal system
- The worst case situation can and will happen
- Science is your friend
- Federal law is your friend
- The government likely is not your friend
- Be creative and do not fear failure
- **Just do it – and we at TESPAs will help you do it!!!!**



Thank You

Photo By Jim Olive