

A topographic map of Texas and surrounding regions, showing elevation and state boundaries. A semi-circular area in central Texas is highlighted in yellow, representing the Edwards Aquifer region. A semi-transparent grey box is overlaid on the map, containing the title text.

The Edwards Aquifer Ecosystem
The Heart of Texas

Edwards Aquifer Region

● Largest springs in Texas

■ Cities and towns



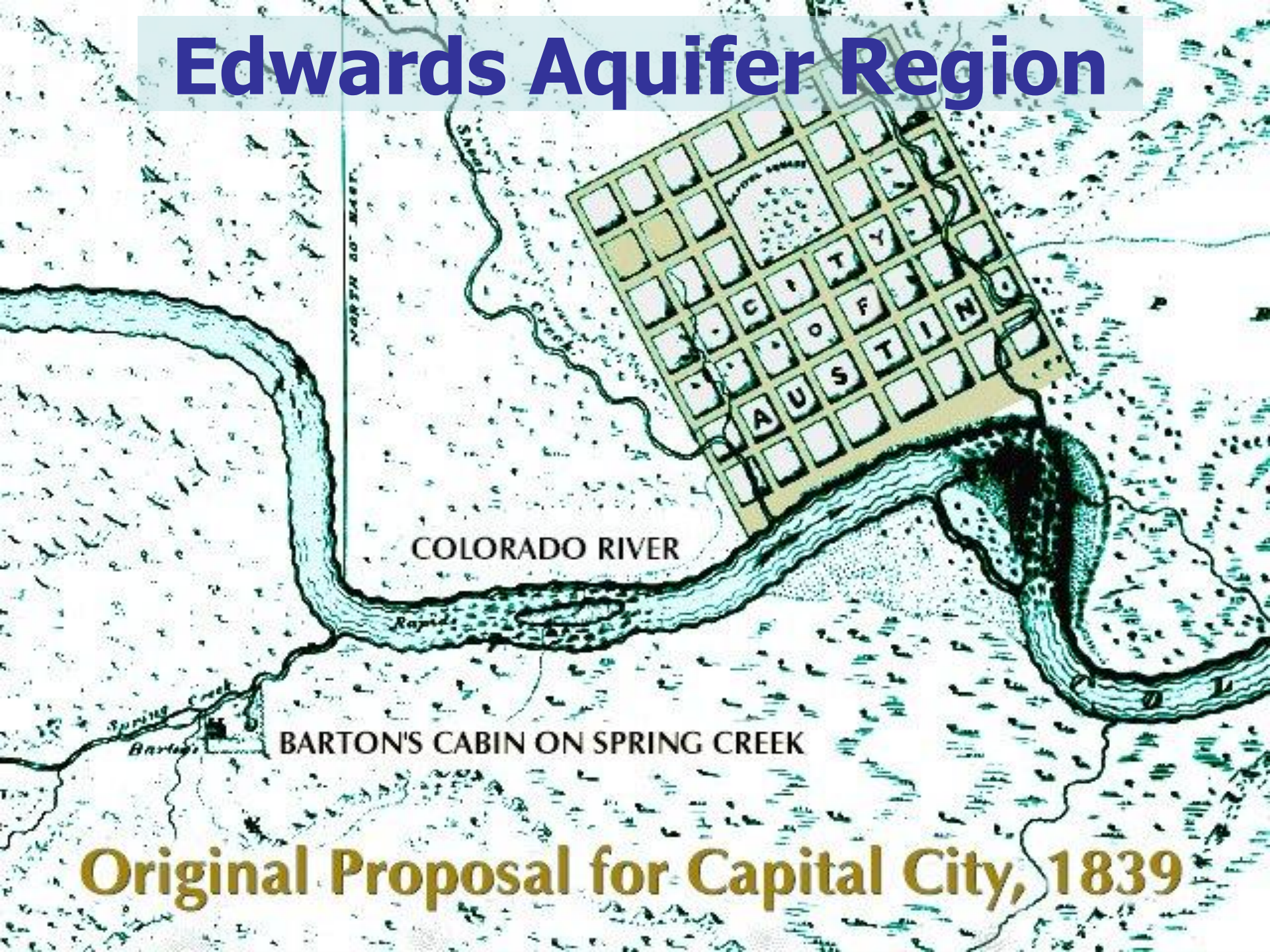
Edwards Aquifer Region

FIRST MASS IN TEXAS

CELEBRATED 1675

SAN FELIPE SPRINGS

Edwards Aquifer Region



COLORADO RIVER

BARTON'S CABIN ON SPRING CREEK

Original Proposal for Capital City, 1839

Edwards Aquifer Ecosystem

Home to over 50 plant and animal species that live nowhere else in the world.



Edwards Aquifer Ecosystem

Home to over 50 plant and animal species that live nowhere else on the planet



Edwards Aquifer Ecosystem

Home to over 50 plant and animal species that live nowhere else on the planet

Texas wild rice

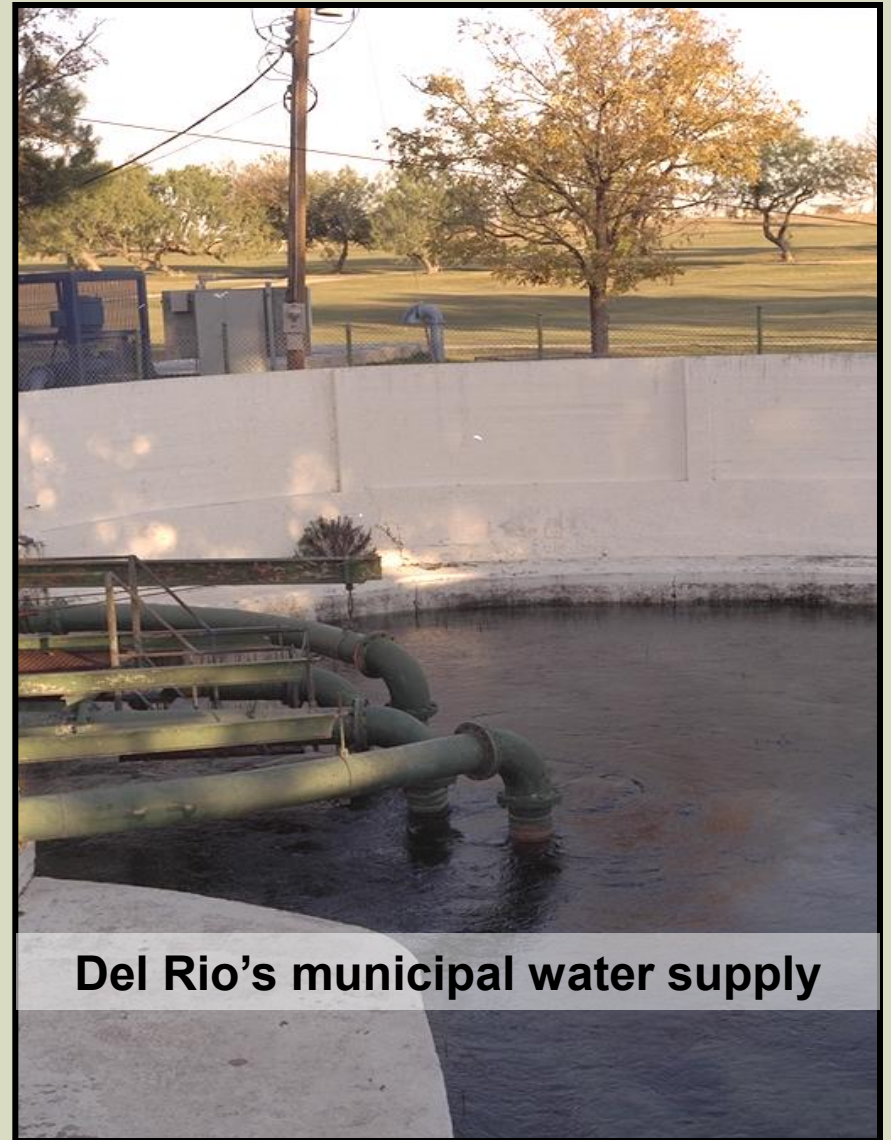


Fountain darters



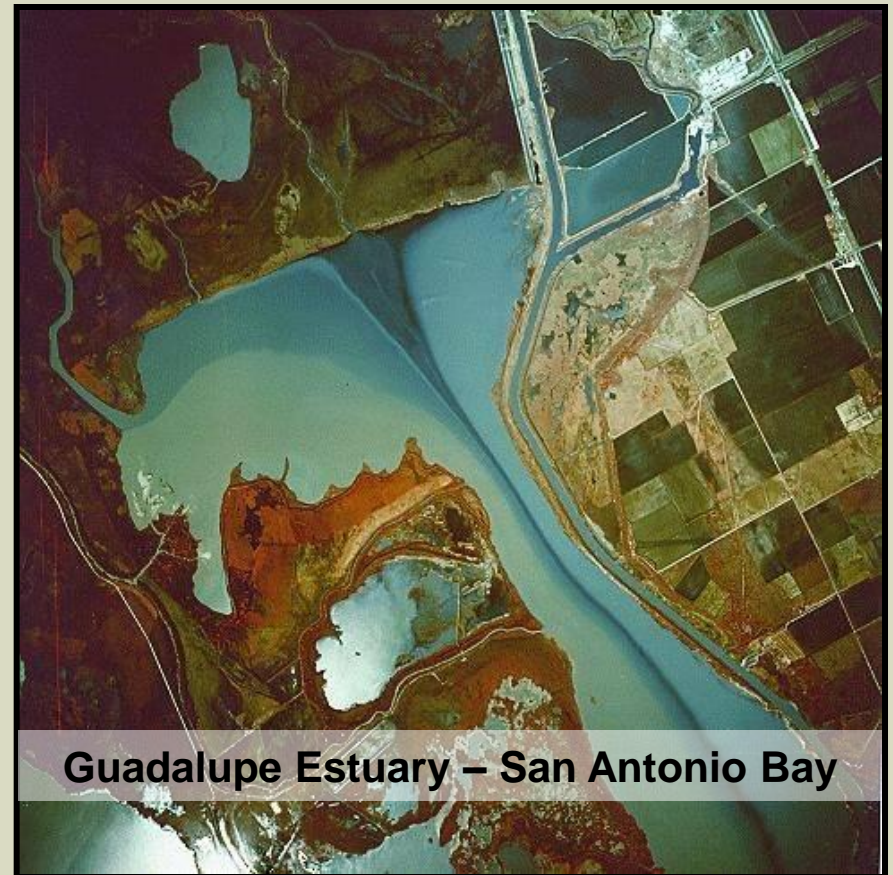
Edwards Aquifer Ecosystem

Providing the sole source of drinking water for over 1.5 million citizens.



Edwards Aquifer Ecosystem

Sustaining essential freshwater flows to bays and estuaries during times of drought

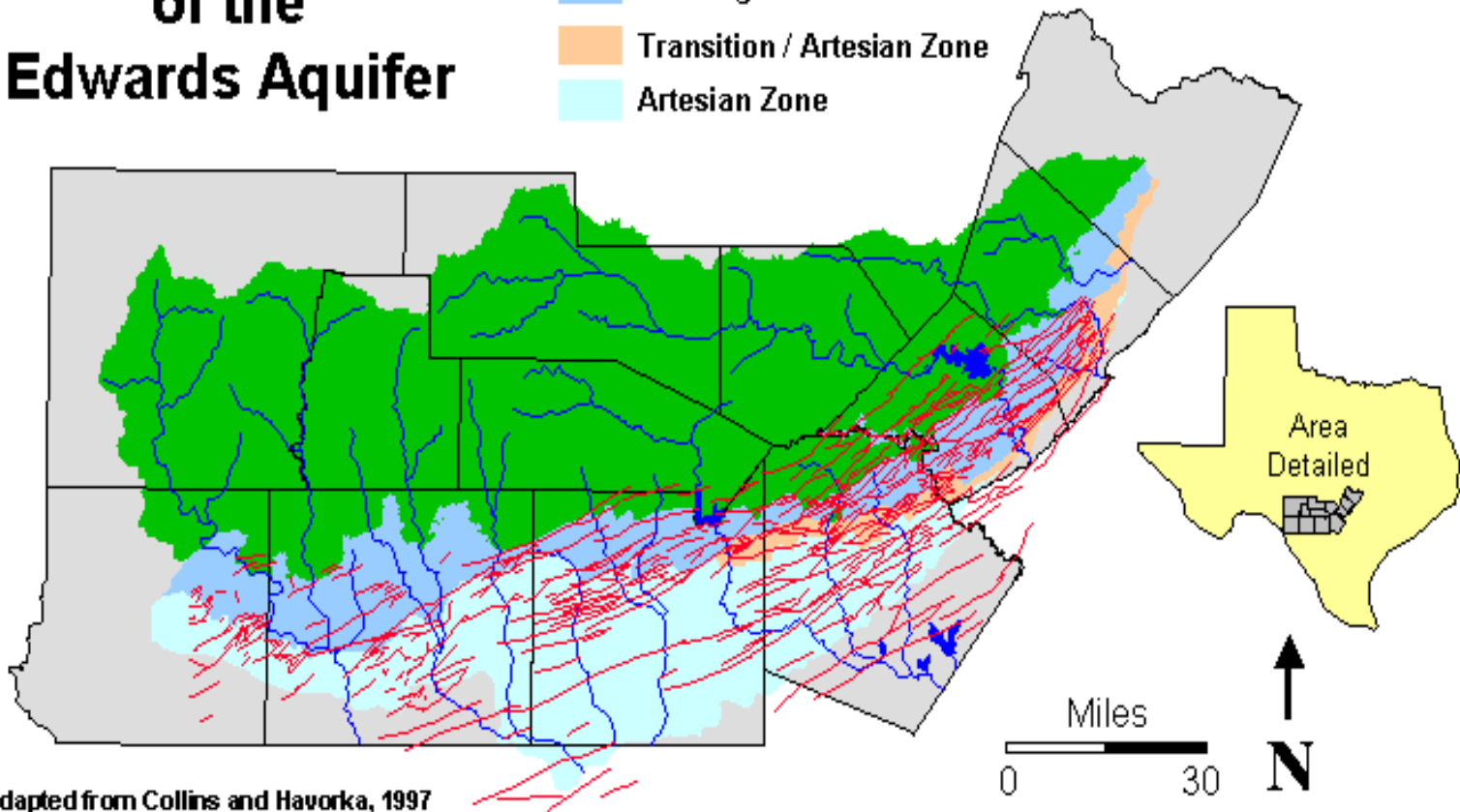


Edwards Aquifer Ecosystem

A Treasure at Risk

Major Faults of the Edwards Aquifer

- Contributing Zone
- Recharge Zone
- Transition / Artesian Zone
- Artesian Zone



Adapted from Collins and Havorka, 1997

EDWARDS PLATEAU

HILL COUNTRY

GULF COASTAL PLAIN

A

B

Catchment

Edwards

fault zone

Recharge Zone

Artesian Zone

Midway Group

Wilcox and Claiborne Groups

Group

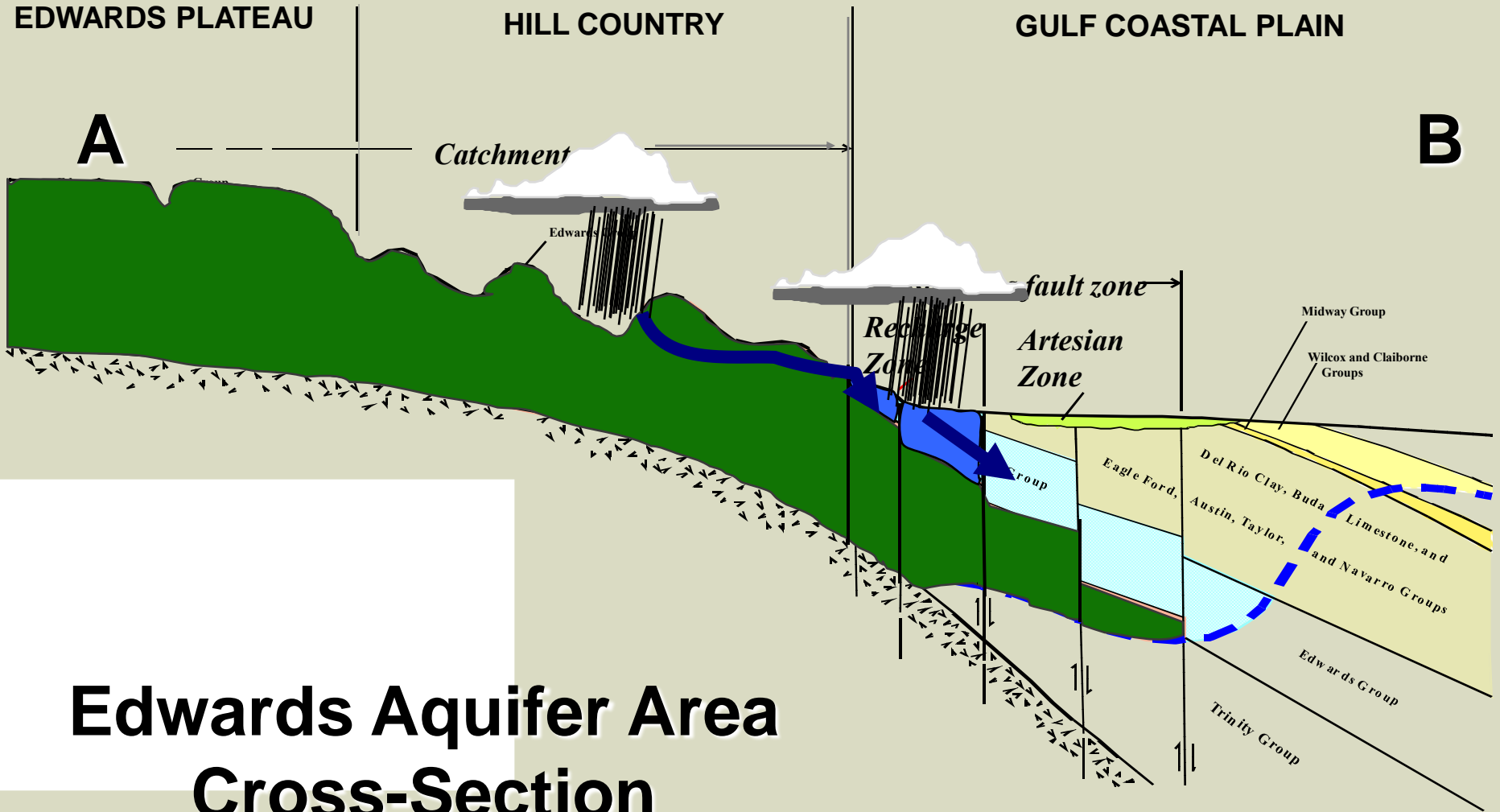
Eagle Ford,

Del Rio Clay, Buda Limestone, and Austin, Taylor, and Navarro Groups

Edwards Group

Trinity Group

Edwards Aquifer Area Cross-Section



Edwards Aquifer Ecosystem

A Treasure at Risk

Thin to non-existent Hill Country soils . . .



Edwards Aquifer Ecosystem

A Treasure at Risk

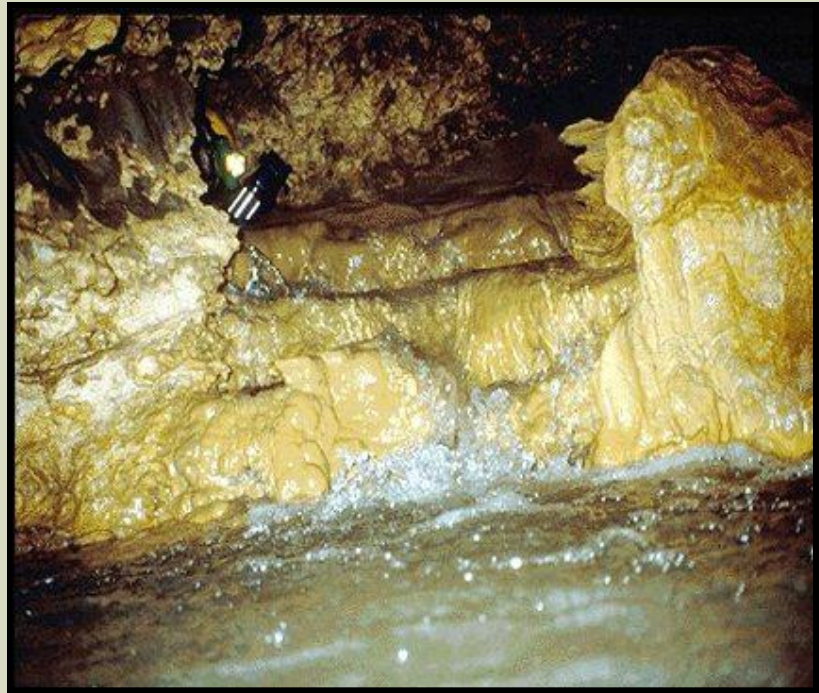
. . . rapid, groundwater recharge. . .



Edwards Aquifer Ecosystem

A Treasure at Risk

. . . rapid open channel flow . . .



Edwards Aquifer Ecosystem

A Treasure at Risk

. . . provides minimal filtration of pollutants that enter the aquifer . . .



Edwards Aquifer Ecosystem

A Treasure at Risk

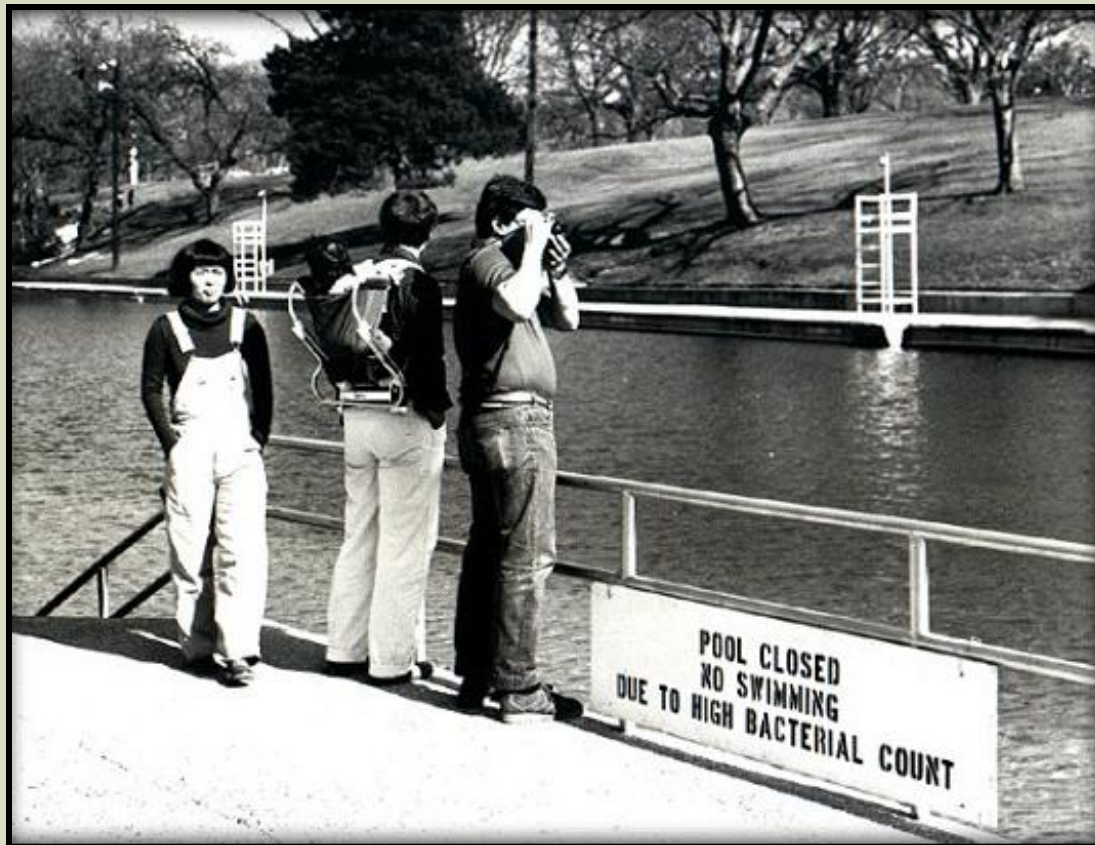
... combine to make the Edwards Aquifer more vulnerable to pollution than any other major aquifer in Texas.



Edwards Aquifer Ecosystem

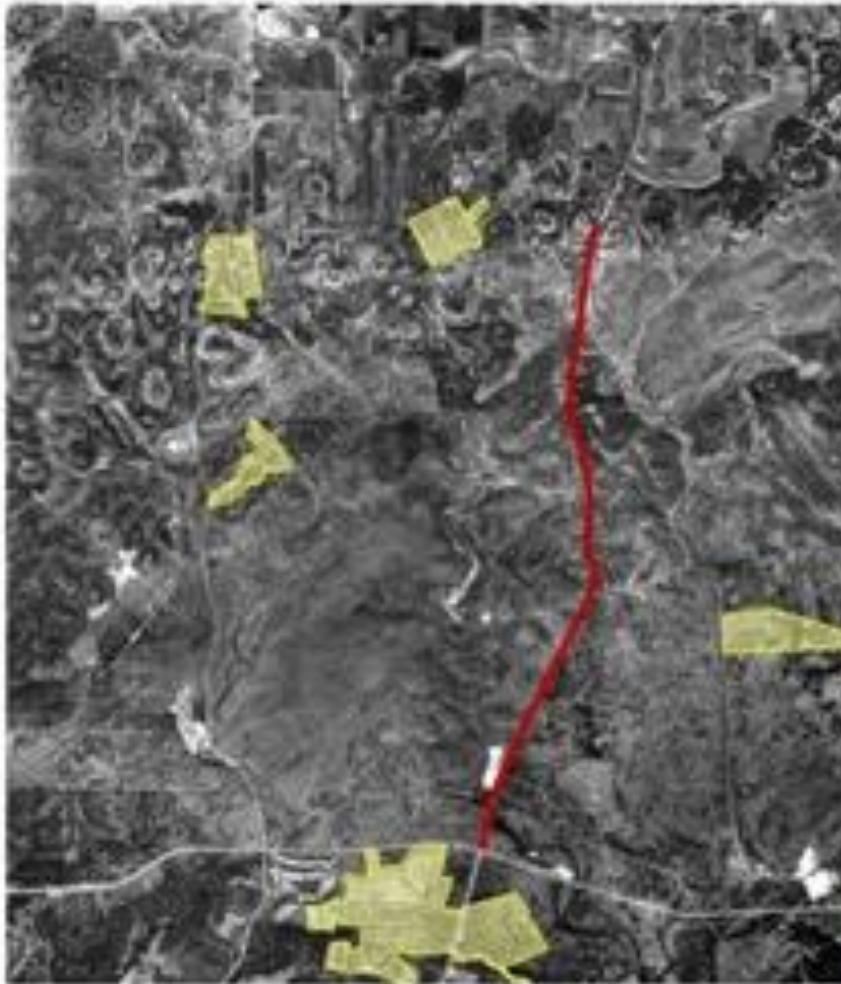
A Treasure at Risk

Rapid, unsustainable urbanization threatens pollution of the Great Springs of Texas.



US 281 on the Edwards Aquifer Recharge Zone in San Antonio, Texas

1973



2009



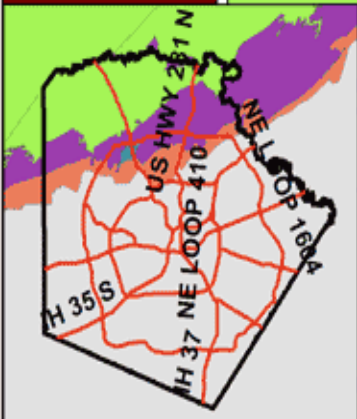
Development in 1973



Development from 1973 to 2009



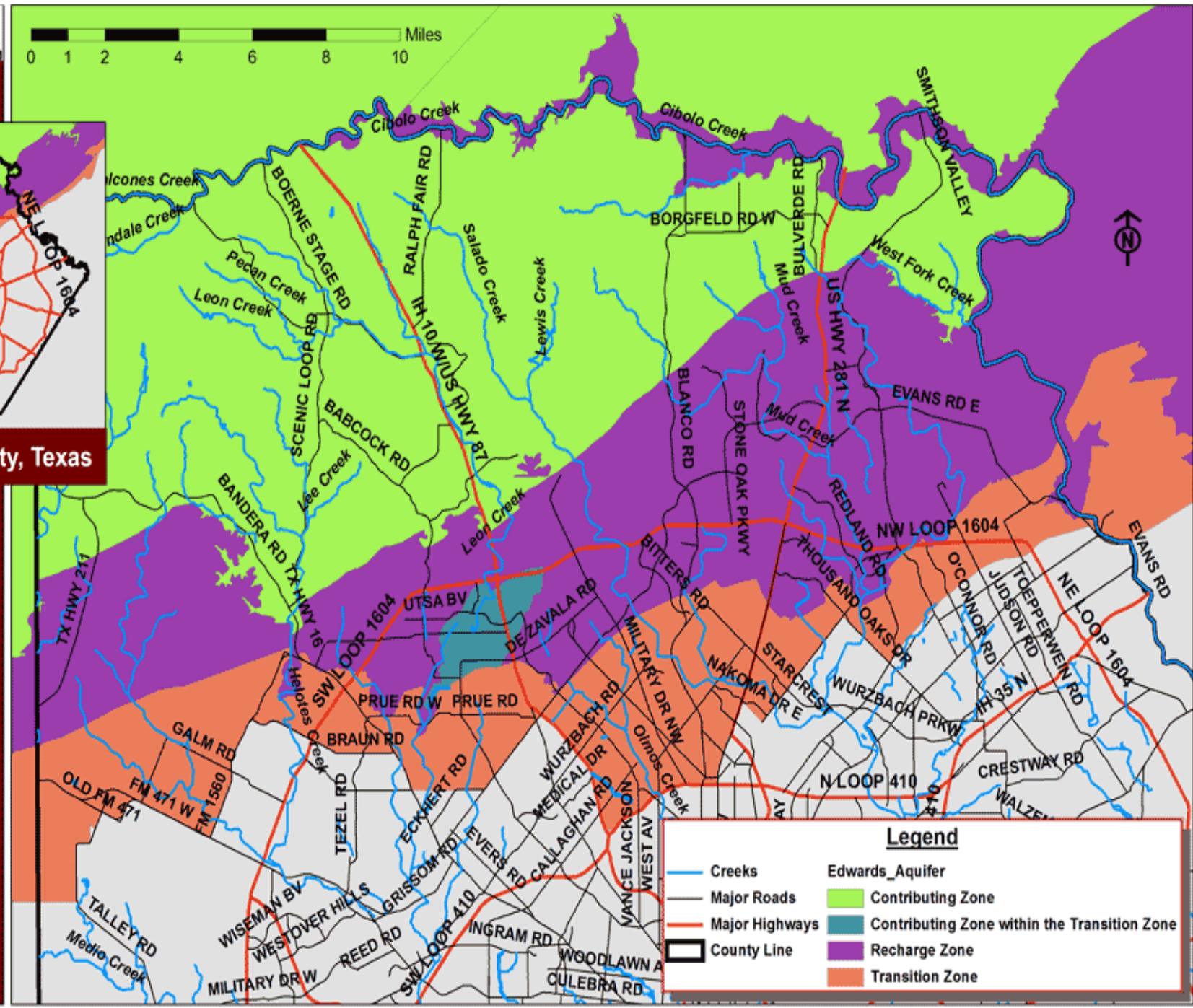
US 281 Project Corridor



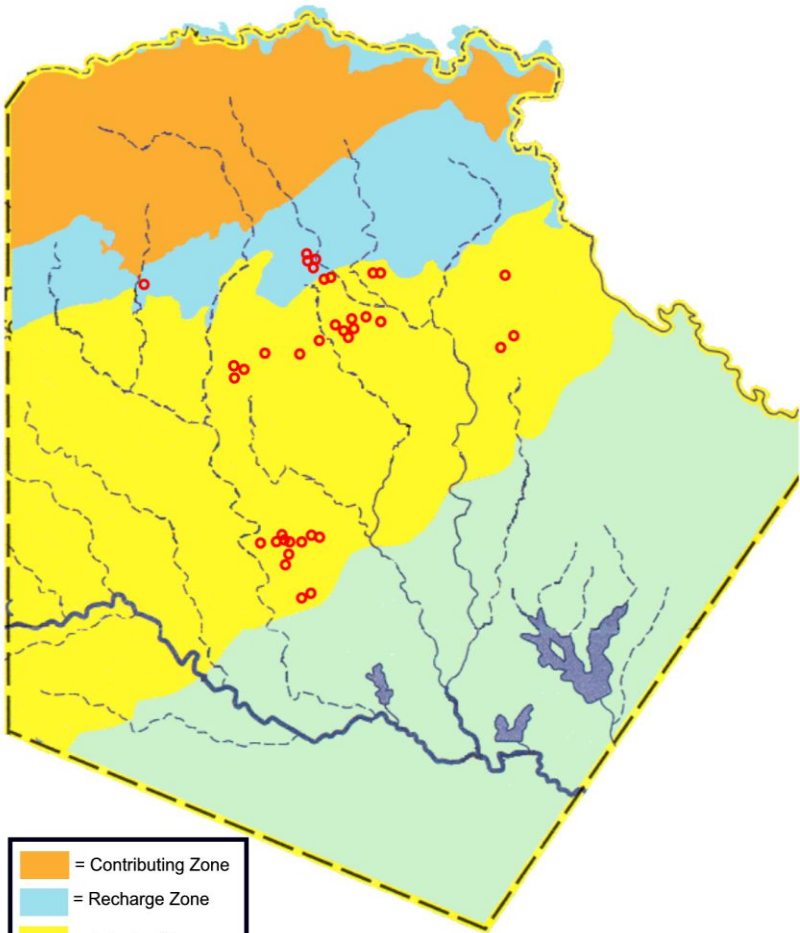
Bexar County, Texas

Edwards Aquifer in Bexar County, Texas

October 7, 2005



Legend	
	Creeks
	Major Roads
	Major Highways
	County Line
	Edwards_Aquifer Contributing Zone
	Contributing Zone within the Transition Zone
	Recharge Zone
	Transition Zone

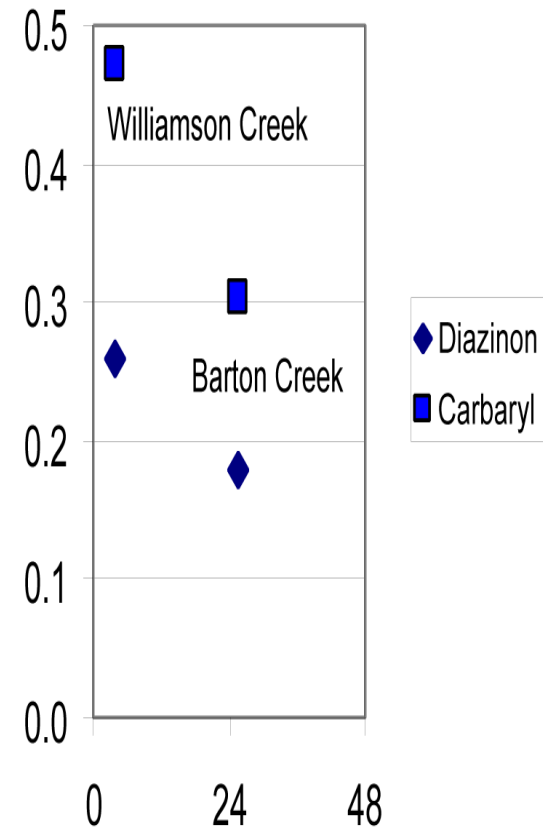
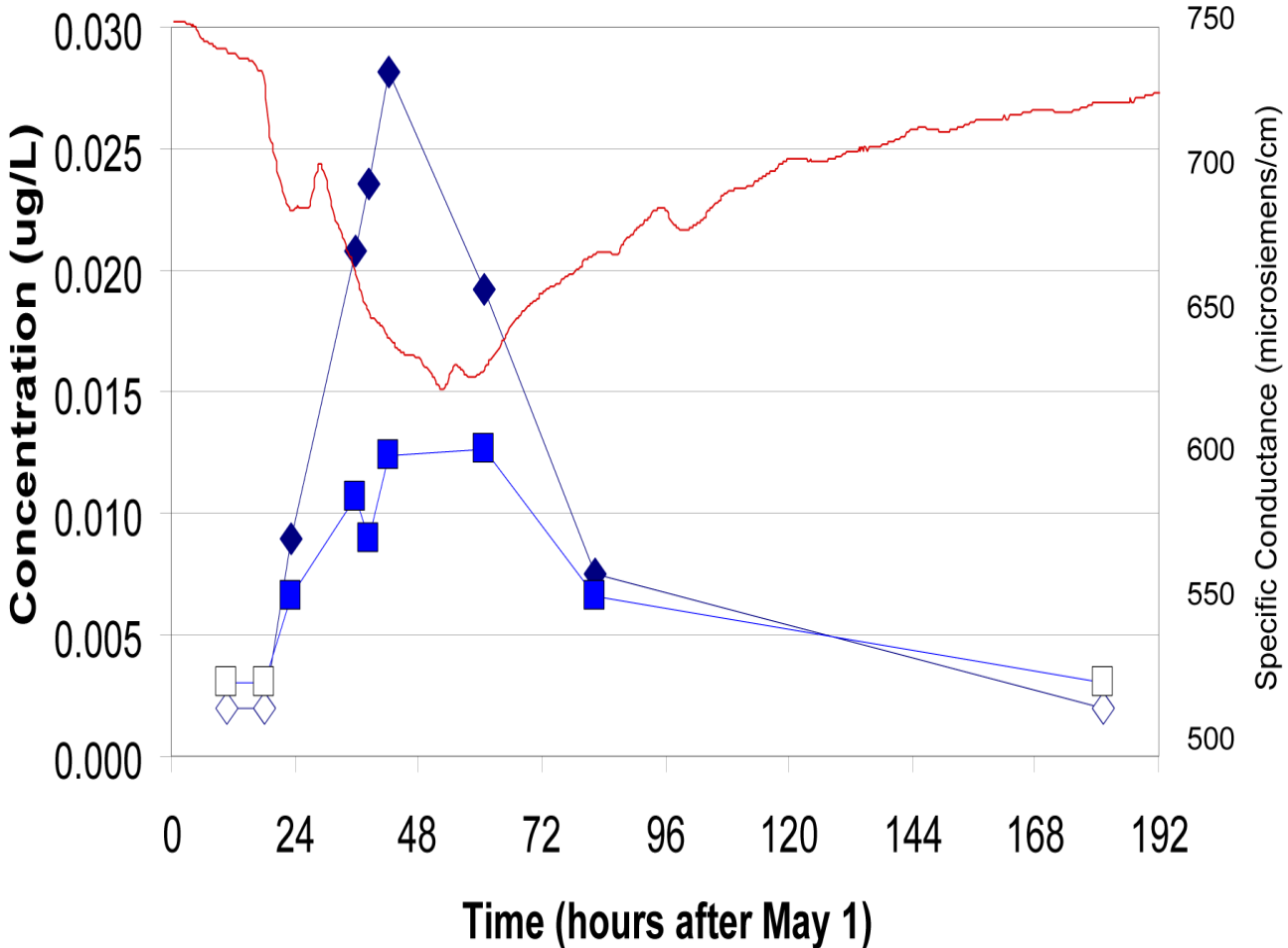


- = Contributing Zone
- = Recharge Zone
- = Artesian Zone
- = Well (approximate location)

**Bexar County
Public Supply Wells Found to
Contain Chlorinated Solvents**



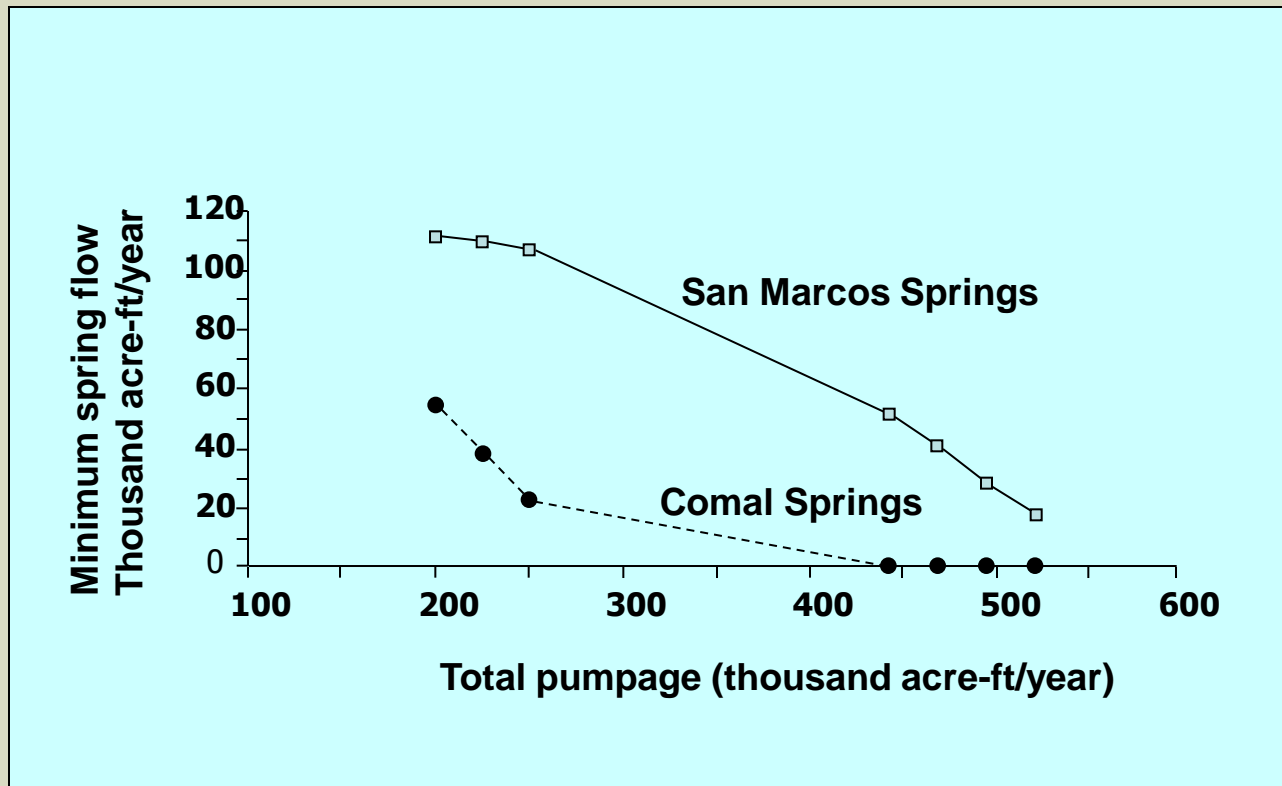
Carbaryl and Diazinon in Barton Springs



Edwards Aquifer Ecosystem

A Treasure at Risk

Rapid, unsustainable urbanization threatens to overpump the aquifer.



Edwards Aquifer Ecosystem

A Treasure at Risk

Rapid, unsustainable urbanization is pushing aquatic species to the brink of extinction



Barton Springs salamander with gas bubble disease

A Need for Action

- Rapid regional population and urban growth predicted to continue.
- Multiple jurisdictions with no coherent plan or vision for the region
- TxDOT and River Authorities building infrastructure without local accountability

A Need for Action

Based on regional scientific consensus

“Government, private corporations and citizens should act promptly to direct urban development away from the aquifer through control of infrastructure investment....”

“Restrict impervious cover to levels to levels that will sustain existing water quality.” (<12%)

A Need for Action

Based on regional economic consensus

Chamber of Commerce's "New Century Economic Report" confirms that a high quality environment is necessary for a healthy economy

A Need for Action

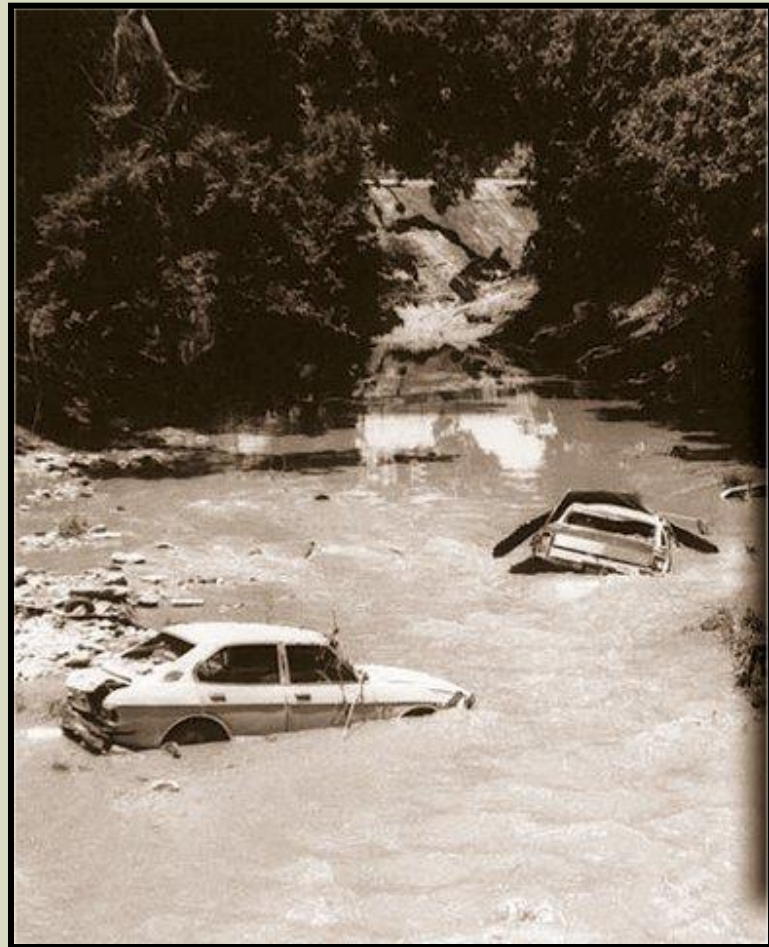
Current measures are inadequate:
Structural controls often fail to prevent pollution.



A Need for Action

Current measures
are inadequate:

Increased
impervious cover
increases
stormwater flows,
erosion, and
flooding.



Pollutants found in Barton Springs or Contributing Stream Sediments Above Levels which are Toxic to Aquatic Life

Heavy Metals

Arsenic
Cadmium
Copper
Lead
Mercury
Silver

Pesticides

P-P'-DDD
P-P'-DDE
P-P'-DDT
Aldrin
Endrin
Heptachlor Epoxide
Beta-BHC
Delta-BHC
Gamma-BHC (lindane)
PCD

Polyaromatic hydrocarbons

Benzo(A)anthrocene
Benzo(B)fluoranthene
Benzo(K)fluoranthene
Benzo(A)pyrene
Chrysene
Dibenz(AH)anthracene
Fluoranthene
Phenanthrene
Pyrene

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Texas Monthly

Life & Death
at NASA
by STEPHEN HARRIGAN

hill country

FOREVER

by JOHN GRAVES, SUZY BANKS,
and KINKY FRIEDMAN



School Finance
For Dummies
by PAUL BURKA

David Koresh Will
Be Resurrected
Any Day Now
by MICHAEL HALL

The Woman Who
Ratted Out Enron
by PAMELA COLLOFF



**Nurture the
“Hidden Heart of Texas”
The Edwards Aquifer
and the Texas Hill Country**

Join GEAA’s
Texans for Every Drop
Business Campaign

at

www.AquiferAlliance.org

Save It, Don't Pave It



Local GEAA Member Groups

- AGUA
- Boerne Together
- Cibolo Nature Center
- Friends of Government Canyon
- Hill Country Planning Association
- Helotes Heritage Association
- Kendall County Well Owners Association
- San Geronimo Valley Alliance
- Scenic Loop/Boerne Stage Alliance
- And more...visit our groups at www.AquiferAlliance.org

TEXANS FOR EVERY DROP

NOURISHING THE HIDDEN HEART OF TEXAS

2007

www.AquiferAlliance.org

GEAA
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MEMBER**

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According to a *San Antonio Business Journal* Poll (Jan. 08)

55% said they are more likely to buy products if a business goes “green”

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