

# Waters the Land: Texas Rivers

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Austin Water - Center for Environmental Research



# The Regional Context of Texas Rivers

## Central Drainage to Gulf of Mexico





About 2,000 miles (3,219 km) across

0 200 400  
Miles

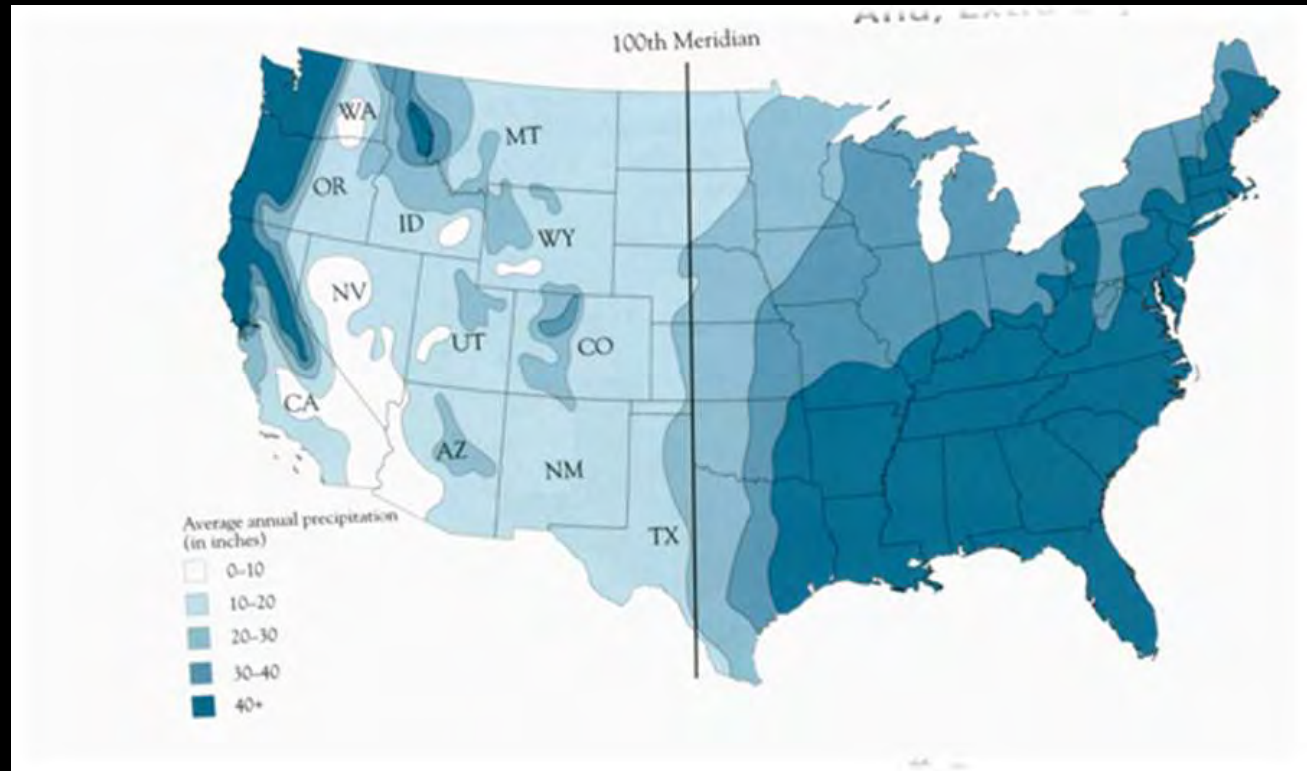
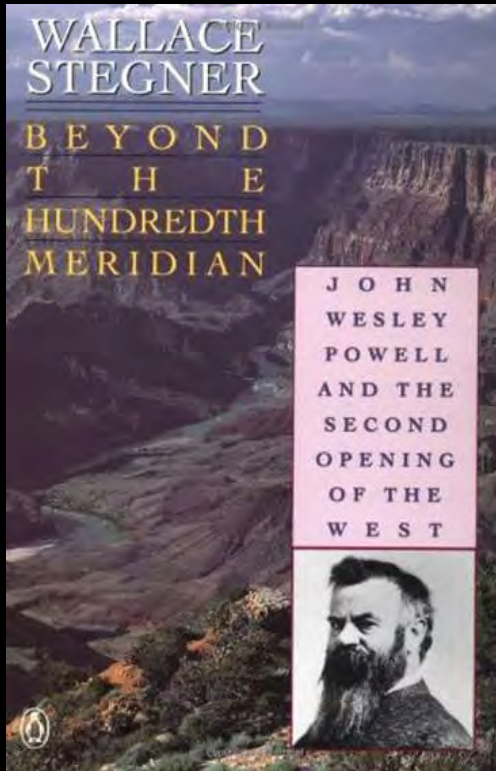
0 500 1,000  
Kilometers

Average Flow in cubic feet per second (cfs):

1,000 2,500 10,000 50,000 250,000 650,000



# Beyond the 100<sup>th</sup> Meridian and The Great American Desert



Powell's expeditions led to his belief that the arid West was not suitable for agricultural development, except for about 2% of the lands that were near water sources.

His Report on the Lands of the Arid Regions of the United States proposed irrigation systems and state boundaries based on watershed areas (to avoid squabbles).

For the remaining lands, he proposed conservation and low-density, open grazing.

Walter Prescott Webb 1888-1963

Webb maintains that the Great Plains stand as a distinct environmental entity radically different from the wet timbered areas of the East.

Three characteristics differentiated the Plains from the East:

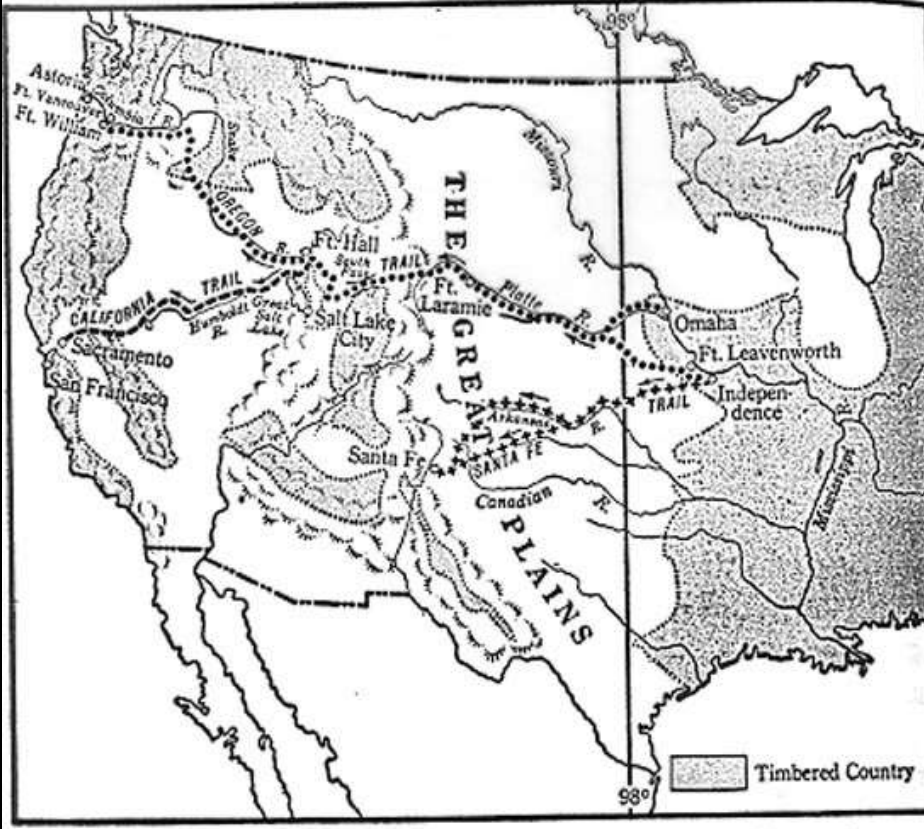
- 1. their level nature,
- 2. the scarcity of timber,
- 3. their semi-arid climate.

Webb argues that between the 98th meridian and the western slope of the Rocky Mountain system from Canada to Mexico the two most important elements of life in the eastern United States - abundant rainfall or available water and large stands of timber - were missing.

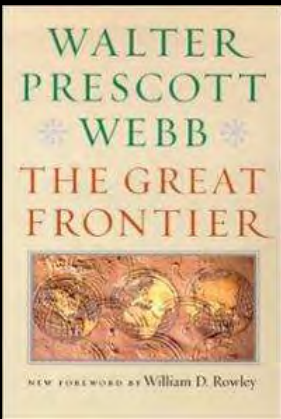
This environment was absolutely foreign to the citizen of the United States, who found the Plains impossible to cope with for a long period of time.

Settlement, therefore, jumped from the wet forests of the East to the Western Pacific Slope of California and Oregon.

Thus, for a period of time, the United States was a two-ocean land mass with an enormous corridor known as the "Great American Desert" that lay uninhabited and undeveloped by the citizens of the nation.



The trans-Plains trails, usually called transcontinental



## “Rain follows the plow”

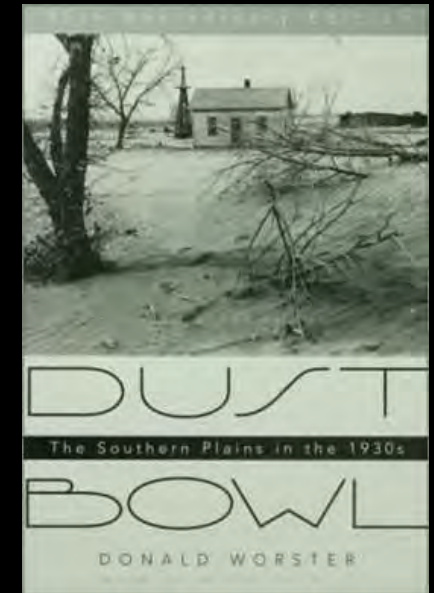
Railroad companies, who owned vast tracts of lands granted in return for building the lines, did not agree with his opinion.

They aggressively lobbied Congress to reject Powell's policy proposals and to encourage farming instead, as they wanted to develop their lands. The politicians agreed and developed policies that encouraged pioneer settlement based on agriculture.

They based such policy on a theory developed by Professor Cyrus Thomas and promoted by Horace Greeley. He suggested that agricultural development of land causes arid lands to generate higher amounts of rain - “Rain follows the plow”

At an 1883 irrigation conference, Powell would remark: "Gentlemen, you are piling up a heritage of conflict and litigation over water rights, for there is not sufficient water to supply the land."





Powell's recommendations for development of the West were largely ignored until after the Dust Bowl of the 1920s and 1930s, resulting in untold suffering associated with pioneer subsistence farms that failed due to insufficient rain.

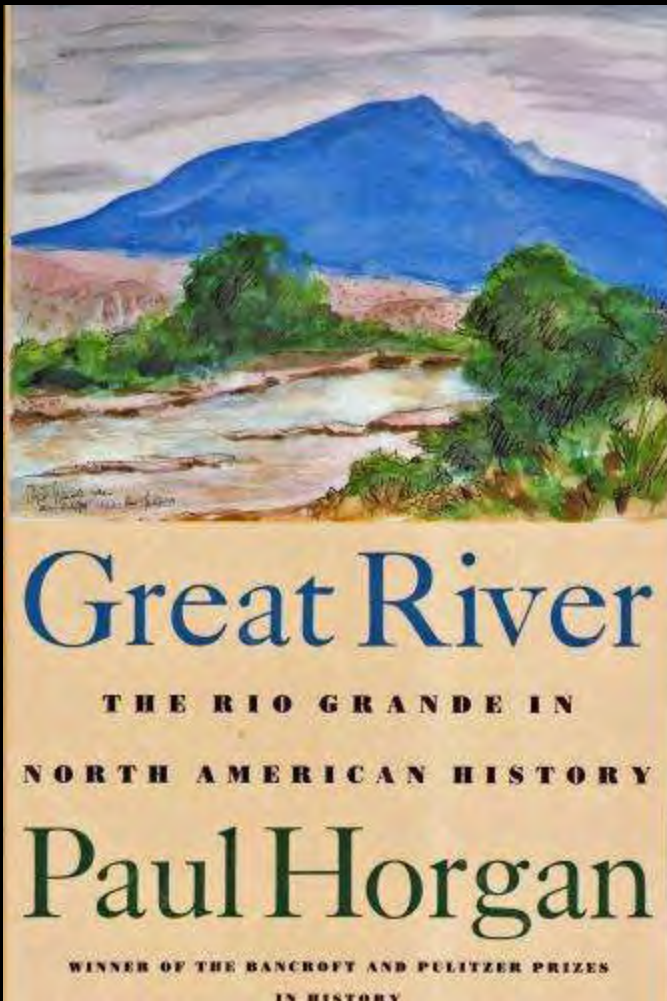


Angelina River	Navasota River
Aransas River	Neches River
Blanco River	Nolan River
Bosque River	Nueces River
Brazos River	Paluxy River
Colorado River	Pease River
Concho River	Pecos River
Canadian River	Pedernales River
Comal River	Prairie Dog Town Fork
Devils River	Red River
Frio River	Rio Grande
Guadalupe River	Sabine River
James River	Sabinal River
Lampasas River	San Antonio River
Lavaca River	San Bernard River
Leon River	San Gabriel River
Little River	San Jacinto River
Llano River	San Marcos River
Medina River	San Saba River
Navidad River	Sulphur River
	Trinity River



Paul Horgan 1903-1995

*Great River: The Rio Grande in North American History*  
1954



# THE DISAPPEARING RIO GRANDE

A CONVERSATION AND SLIDESHOW

Wednesday, October 22nd  
La Posada Milagro hosting at  
Espresso...y Poco Mas  
in the Terlingua Ghost Town  
8:00pm  
*(please bring a chair)*

Photo by Erich Schlegel

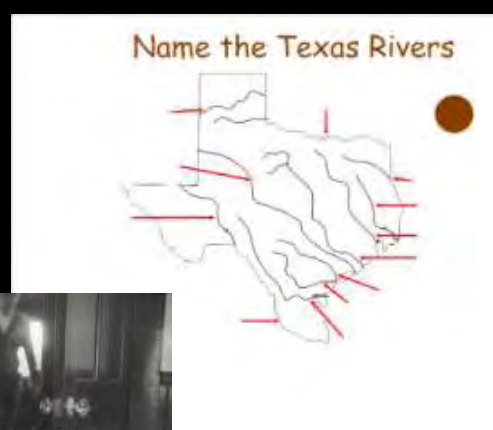
Reporter Colin McDonald and photojournalist Erich Schlegel are traveling the length of the Rio Grande, interviewing those who depend on and control it, taking photos and videos, and cataloging the chemistry and biology of the river from the Rocky Mountains to the Gulf of Mexico.

Sponsored by The Texas Tribune • More info at [riogrande.texastribune.org](http://riogrande.texastribune.org)



<http://riogrande.texastribune.org/>

# The Texas Rivers Song



Lend me your hand  
Li, li, li, le, le, le  
Lend me your hand  
Li, li, li, le, le, le  
Lend me your hand  
There's many a river  
That waters the land

Now the fair Angelina  
Runs glossy and gliding  
The crooked Colorado  
Runs weaving and winding  
The slow San Antonio  
Courses the plain  
But I never will walk  
By the Brazos again

She kissed me and she hugged me  
And she called me her dandy  
The Trinity's muddy  
But the Brazos quick sandy  
She kissed me and she hugged me  
And she called me her own  
But down by the Brazos  
She left me alone

Now the girls of Little River  
They're plump and they're pretty  
The Sabine and the Sulphur  
Hold beauties a'many  
The banks of the Neches  
There are girls by the score  
But down by the Brazos  
I'll wander no more

We crossed the wild Pecos  
We forded the Nueces  
We swum the Guadalupe  
And we followed the Brazos  
Red River runs rusty  
The Wichita clear  
But down by the Brazos  
I courted my dear



Now the fair Angelina  
Runs glossy and gliding



The crooked Colorado  
Runs weaving and winding



The slow San Antonio  
Courses the plain



## The Trinity's muddy





We crossed the wild Pecos



We forded the Nueces



We swum the Guadalupe



Red River runs rusty



## The Wichita clear



But down by the Brazos  
I courted my dear



*Ain't no more cane on the Brazos  
It's all been ground down to molasses*

John A. Lomax (1867-1948) and, his sons, John Jr. and Alan Lomax

African American Prison Songs, Work Songs, Spirituals, Blues

Recordings on Smithsonian Folkways Records and  
Deep River of Song subset of Rounder's Alan Lomax Collection series

Deep River of Song: Big Brazos  
Texas Prison Recordings, 1933 and 1934  
Rounder Records



## The Brazos

Ain't no more cane on the Brazos

Oh, oh, oh, oh...

Its all been ground down to molasses

Oh, oh- oh, oh- oh...

You shoulda been on the river in 1910

They were driving the women just like they drove the men.

Go down old Hannah, don'cha rise no more

Don't you rise up til judgment day's for sure

Ain't no more cane on the Brazos

Its all been ground down to molasses

Captain, don't you do me like you done poor old shine

Well ya drove that bully til he went stone blind

Wake up on a lifetime, hold up your own head

Well you may get a pardon and then you might drop dead

Ain't no more cane on the Brazos

Its all been ground down to molasses.





# The Brazos

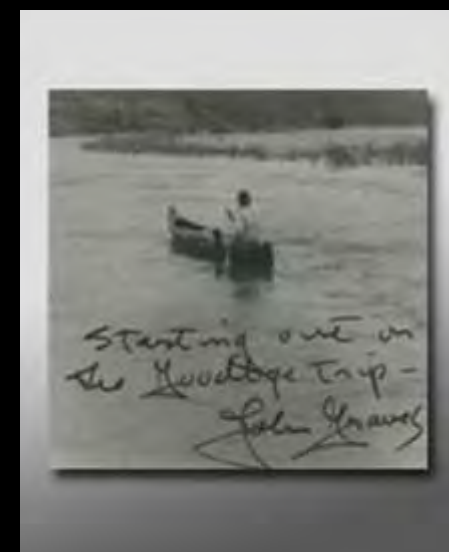
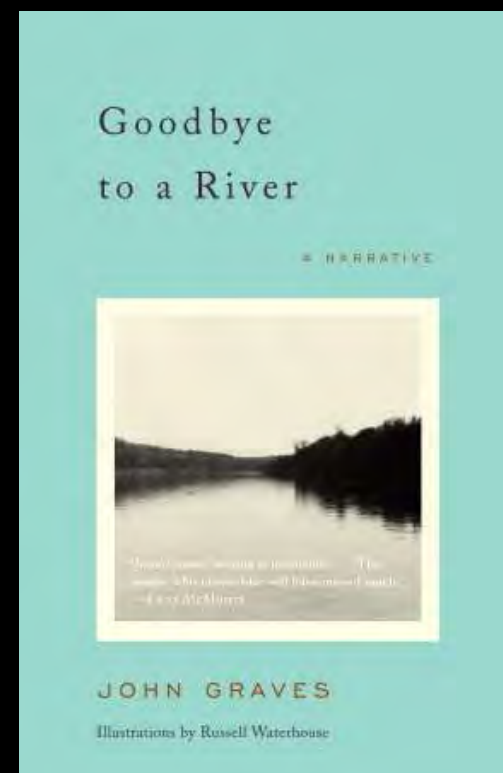
John Graves

1920 - 2013

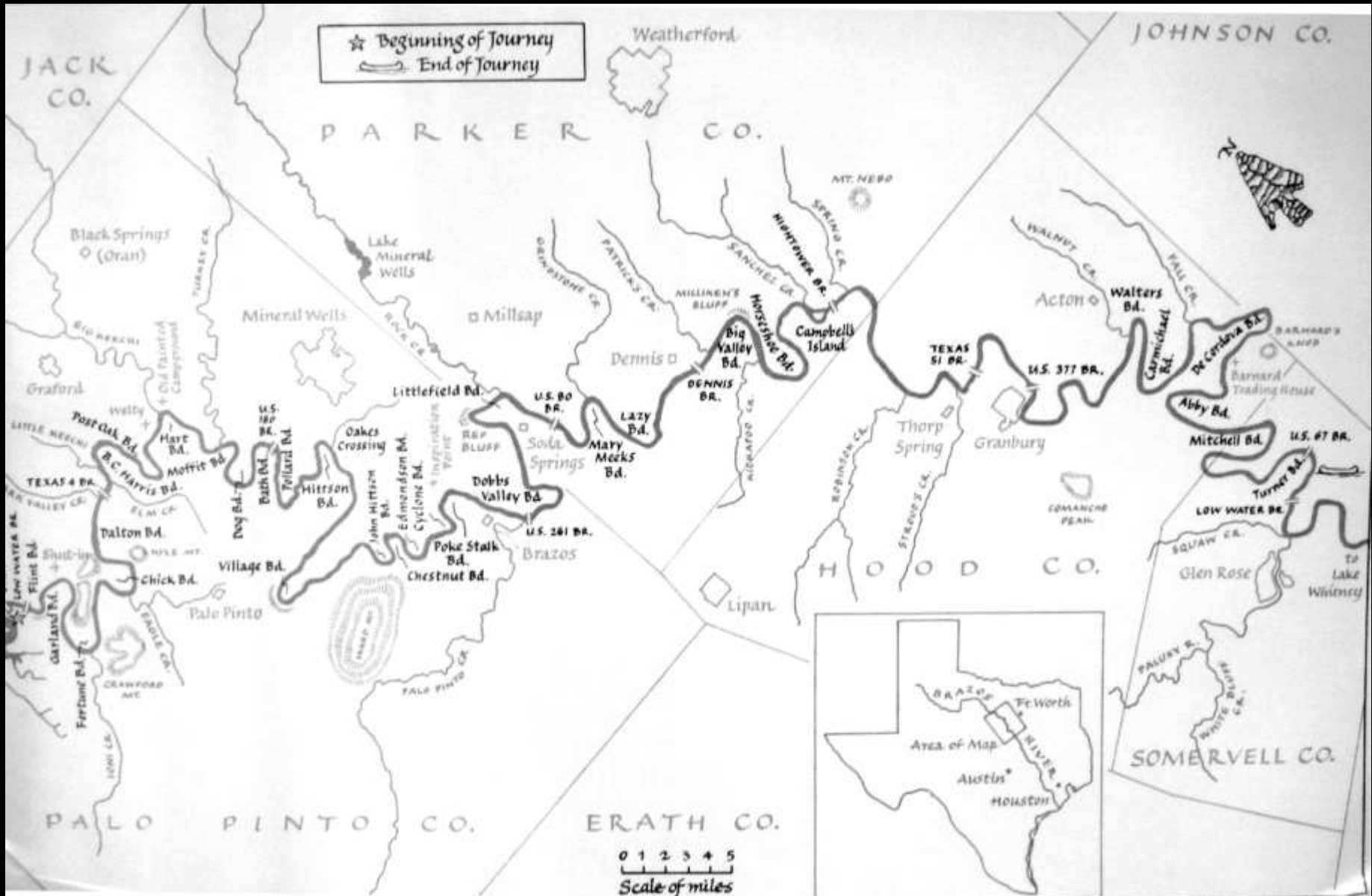
*Goodbye to a River* (1960)

In the spring of 1957 Graves returned home to help care for his gravely ill father. In November of that year, Graves completed a three-week canoe trip down part of the Brazos River that he feared was about to be changed forever by dams.

His narrative chronicle of the trip was first published as a magazine article in *Holiday*, and later Graves added history, philosophy and folklore which resulted in his first major book, *Goodbye to a River* (1960). The book attracted national attention and critical praise for its original style.



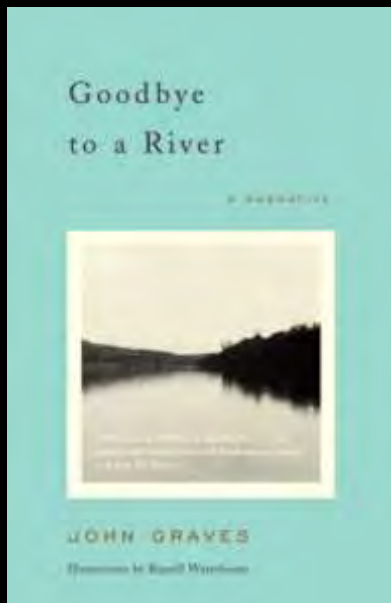
A three week trip down the Brazos River in November 1957



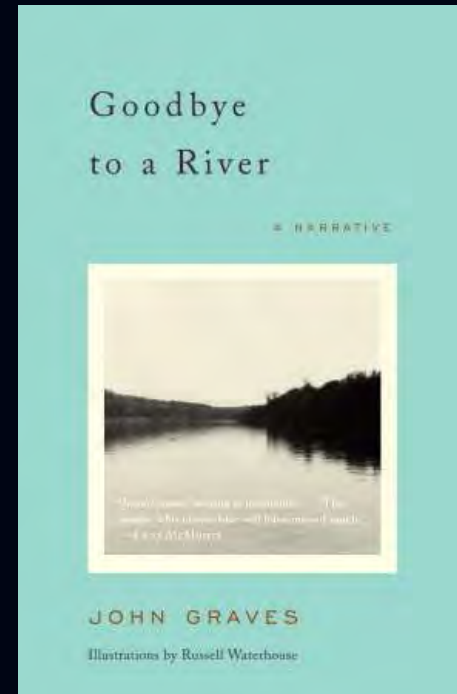
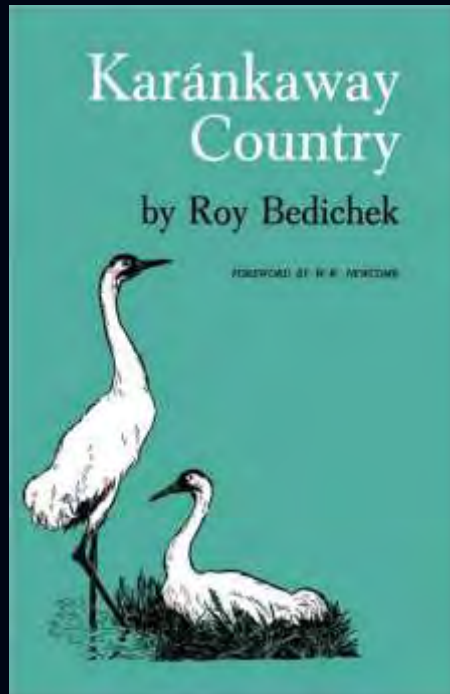
## The Real Whole River

A whole river is mountain country and hill country and flat country and swamp and delta country, is rock bottom and sand bottom and weed bottom and mud bottom, is blue, green, red, clear, brown, wide, narrow, fast, slow, clean, and filthy water, is all kinds of trees and grasses and all the breeds of animals and birds and men that pertain and have ever pertained to its changing shores, is a thousand differing and not compatible things in-between that point where enough of the highland drainlets have trickled together to form it, and the wide, flat, probably desolate place where it discharges itself into the salt of the sea.

It is also an entity, one of the real wholes, but to feel the whole is hard because to know it is harder still.



# Graves, Bedichek, and Texas Rivers

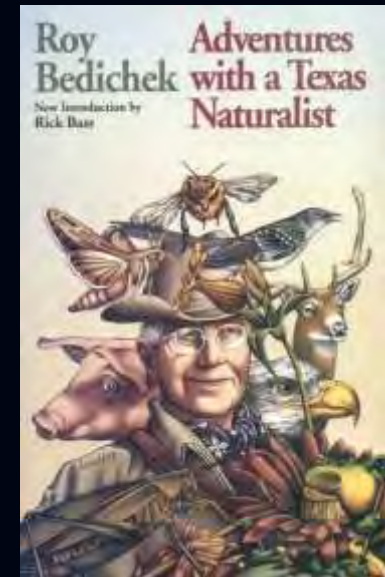


## Origins

### *Roy Bedichek's Vanishing Frontier*

Rob Tranchin, Co-Producer/Writer/Director

Tranchin wrote, produced and directed *Roy Bedichek's Vanishing Frontier*, a one-hour documentary about the life of a Texas naturalist that aired nationally on PBS in April 2003.



## Roy Bedichek 1878-1959



All his books were written at the end of his life. Walter Prescott Webb and J. Frank Dobie arranged for him to spend a year before his retirement writing his first book at Webb's Friday Mountain ranch, about sixteen miles southwest of Austin.

*Adventures with a Texas Naturalist* (1947)

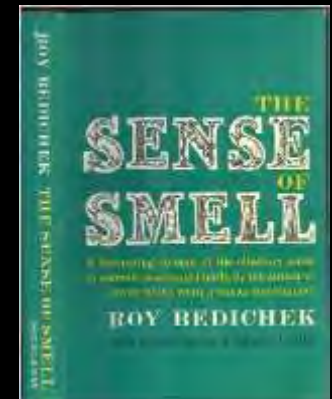
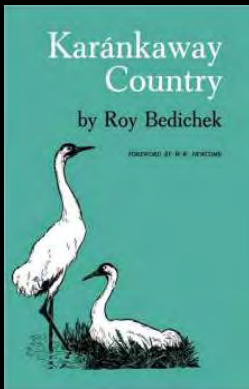
*Karankaway Country* (1950)

posthumous *The Sense of Smell* (1960).

1947

1950

1960





From John Graves, *Myself and Strangers*

Journal entry Oct 4, 1955

Reading Bedichek, *Adventures with a Texas Naturalist*. A very pleasant hodgepodge. I suppose all nature writers in English are influenced by the same British models in terms of form – White's *Selbourne*, Lord Grey, etc. – which in some hands becomes license to have no form at all. Bedichek shares many of my own prejudices against nature-destruction and artificiality, but surely he needs to smile when he says that seeing the vermilion flycatcher for the first time is a major event in one's life. It might even be true, but the smile would help.

Altogether, however, he is an even-tempered, sadly amused man of intelligence, taking himself a little seriously, but don't we all?

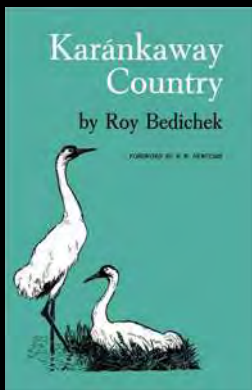


## Problem of river terminology – mouth, head, source

I think that ancient misnomer ‘mouth,’ which we use to designate the place where a river empties, has done the cause of conservation incalculable harm. Our river imagery is muddled at its source. We speak of the head of a river, but there is no mouth in the head. That orifice in our curious anatomy is at the other end. We speak of *the* source of a river, but a river has a thousand sources.

There is no better place than at the so-called ‘mouth’ of a diseased river to diagnose its ailment, for there we find out what it is being fed, whether it is digesting what it is taking in, the condition of its circulatory system, and whether or not its eliminations are normal. By the same token, there is generally no worse place to begin the treatment of the disease after its nature is discovered. 233-4

A river is not a colt to be “broken,” trained, stalled, and depended upon thereafter to do the will of his master. It is eccentric, unaccountable, either has no law of behavior or often keeps it secret from human investigators. Centuries, even, do not delimit its extremes. 244



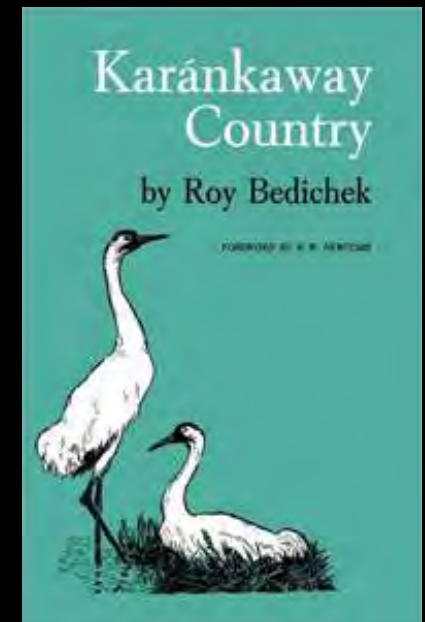


## *Karánkaway Country - Bedichek and Texas Rivers*

Rivers intrigue me. I can sit on a log and look upon a flowing stream for an hour at a time without feeling those twinges of conscience which come while idling in other environments.

The river is a living organism, or at least it presents characteristics so similar to those of a living organism that to speak of it as such is more than mere metaphor. A river system is one of Nature's units, and it must be dealt with as such if it is to be dealt with successfully for serving human needs.

Texas rivers were once truly "rivers of life." As long as Nature was in control, each river system was nourished as an organism, and its business was conducted for all, impartially, on a self-sustaining basis.

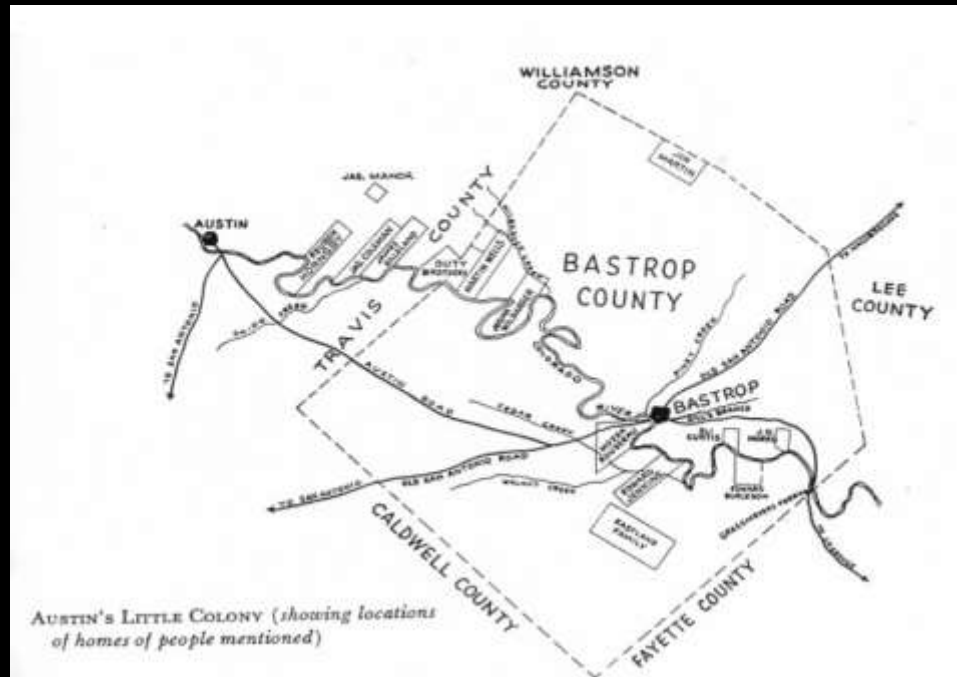


# Texas Rivers and 19<sup>th</sup> Century Settlement

Stephen F. Austin describing the Colorado River near Bastrop 1821

“Tuesday, August 7 [1821]. Came to the Colorado River – poor, gravelly ridges and near the river heavy pine timber, grapes in immense quantities on low vines, red, large, and well flavored, good for Red wine. The Colorado River is sometimes less than the Brazos, banks very high – generally clear of overflow – bottom and banks gravelly, water very clear and well tasted, current brisk, the river very much resembles Cumberland River, except that there are no rocks and it is some larger.

The bottomland where the road crosses is about five miles, mostly prairie, clear of overflow, land rich, timber Pecan, Ash, Oak, Cedar, abundance of fish.”



Bedichek – born 1878

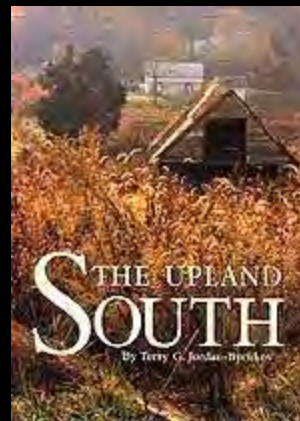
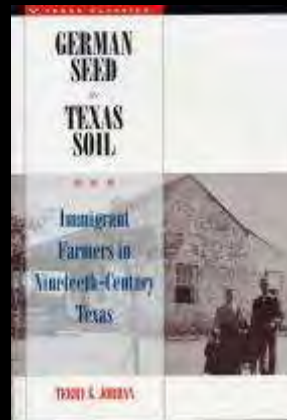
“I have seen in my boyhood days the crown and upper slopes of gentle hills, on which the black soil is mixed with fragmented limestone, produce ninety bushels of oats to the acre. Now many of these slopes are all bleached out, pale as death, and really dead in so far as ability to support vegetable life is concerned. Many old-timers have seen bale-to-the-acre land in 1883 abandoned as worthless in 1903.”  
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# ANTECEDENTS OF THE LONG-LOT IN TEXAS\*

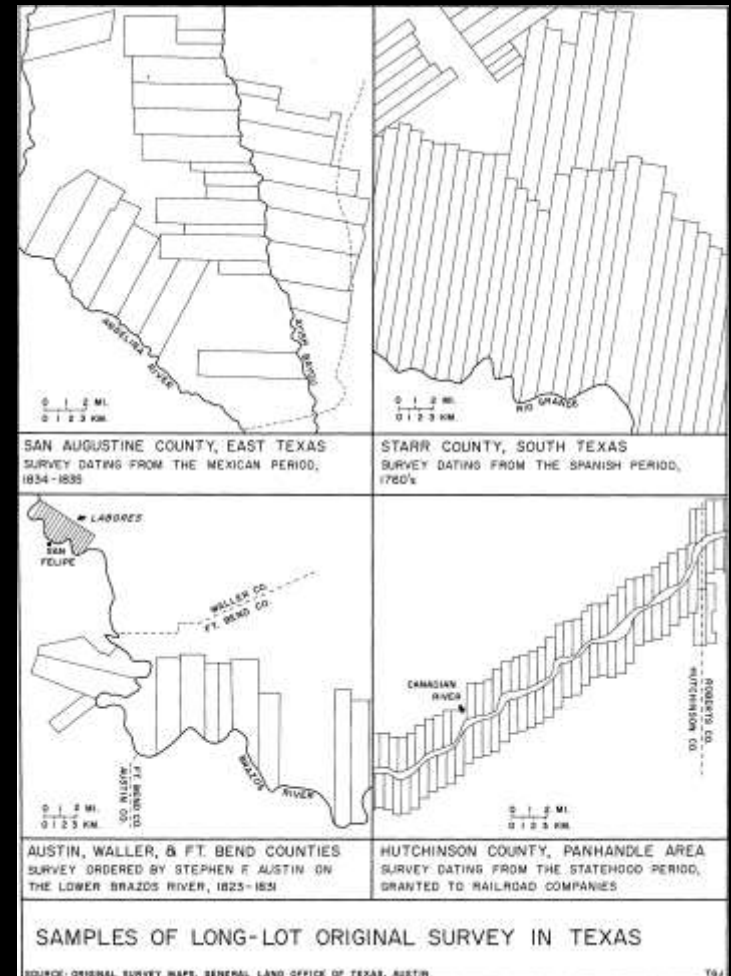
TERRY G. JORDAN

**ABSTRACT.** Riverine long-lot original surveys were employed in many parts of Texas for about 150 years, beginning in the Spanish period and extending well into the era of statehood. No precedent for the use of long-lots was found either in Spain or New Spain. The evidence suggests that long-lots were diffused to Texas from Central Europe, by way of northern France, Québec, and the French colonies in Missouri and Louisiana. Long-lot survey left an imprint in cadastral, road, and street patterns which is still observable. **KEY WORDS:** *Cultural landscape, Long-lots, Survey patterns, Texas.*



## Terry G. Jordan 1938 – 2003

Terry G. Jordan held the Walter Prescott Webb Chair in History and Ideas in the geography department at The University of Texas at Austin.



# Transformation 1850-1950

## Agriculture – Cattle and Crops



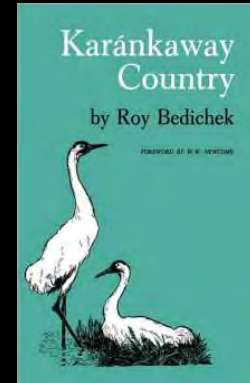
## Bedichek - The Little Waters

Formerly, timbered bottoms, brushy hillsides, and wide grasslands, thickly sodded, soaked up rain water like a sponge.

It seeped into the subsoil and eventually filled sandy underground strata from which it found its way by devious paths into bubbling springs at lower levels, trickling off to join other trickles to form [on still lower levels] streamlets whose confluence made streams – all moving unhurried in a widespread network toward the river channel...

Nature was not interested in turning turbines or floating barges, but in producing just as much vigorous, varied, and abundant life as possible, dispersed along the way from plains to sea.

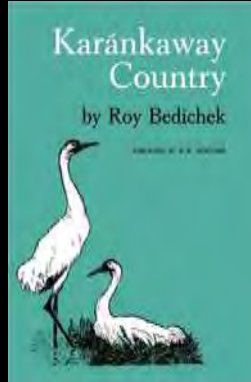
Some think this is a dream. Not so: the overwhelming proof lies in the land richness and life richness which we found here...Under natural conditions, the whole expansive watershed was a giant sponge.



# Bedichek – The Brush/Cedar Problem

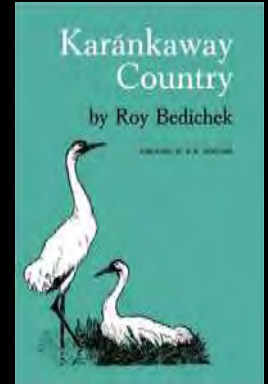
I hear landlord and lease holder discussing brush clearance and quoting the learned bulletins of agricultural experimental stations, and when I see them readying the terrific machines for action, I can imagine the debouchment areas of the Nueces and of other Texas rivers yawning for the gargantuan mouthfuls of soil which have been detained in their place for the best part of a century by invasion of the despised brush.

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## Brush, Soil, Rivers, and Watersheds

Ignorance of the conservation function of brush has hung like a pall of smoke over popular thinking since remotest antiquity. Land stripped of forest or of grass seems to know that nakedness is sin. It hastily grabs up anything within reach with which to cover its shame. [Weeds, invading shrubs, vines]...Nature abhors an organic vacuum as much as she does and inorganic one. 110



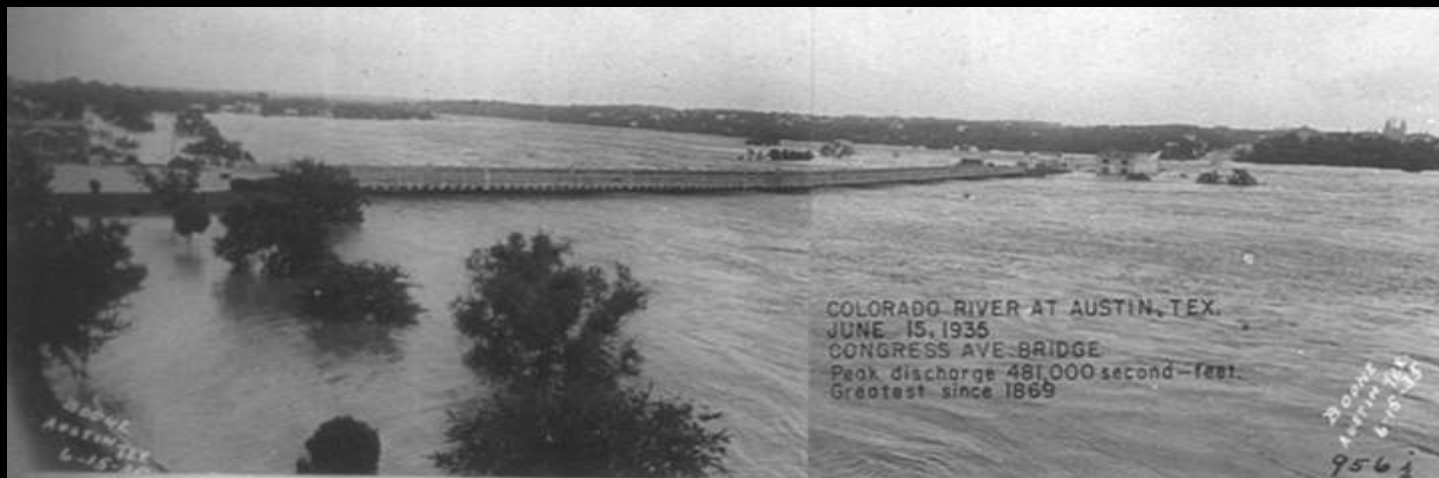
In spite of its cinema reputation, Texas is not tough, that is, ecologically. It is really a tender land, and cannot stand the buffetings that certain other areas of the world have endured and still support a human population in health and vigor. 278



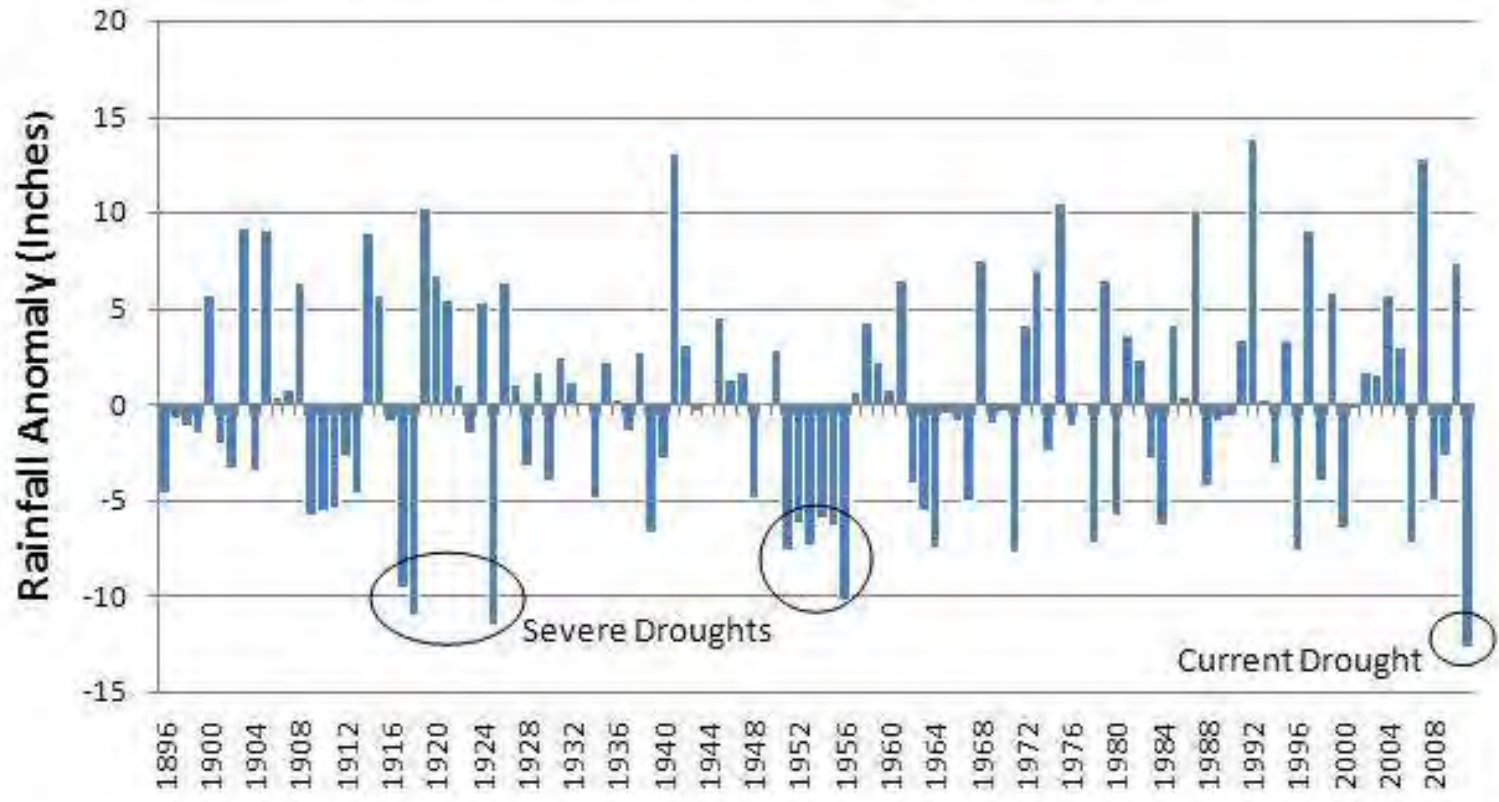


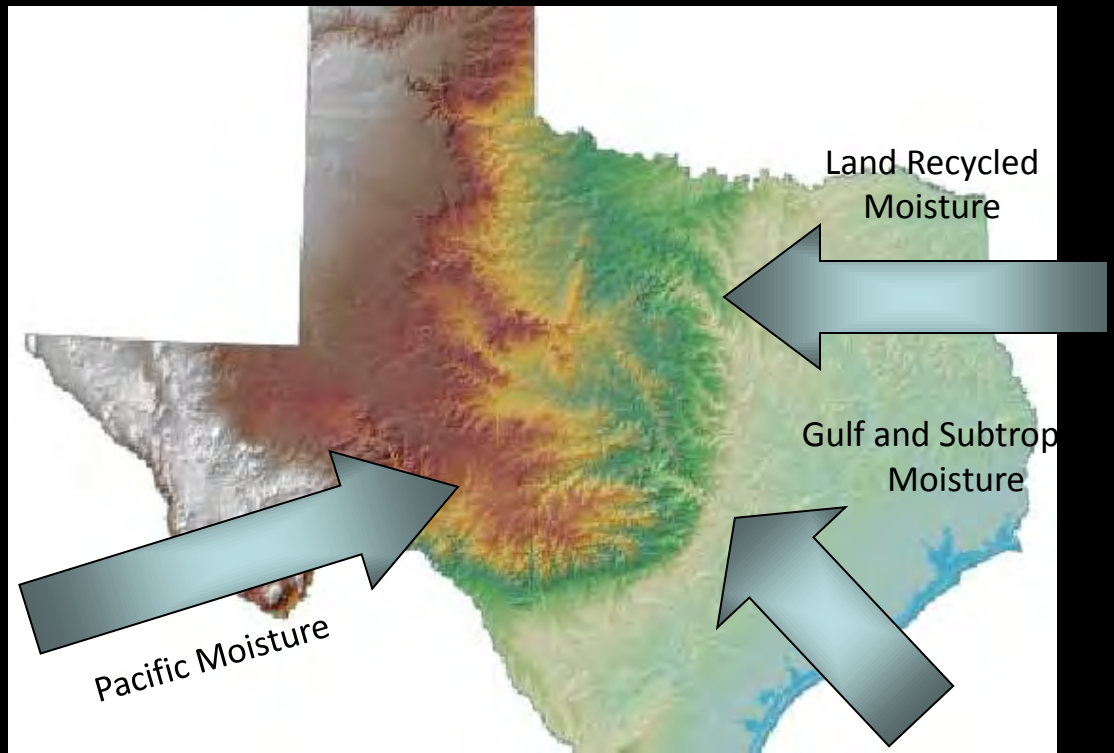
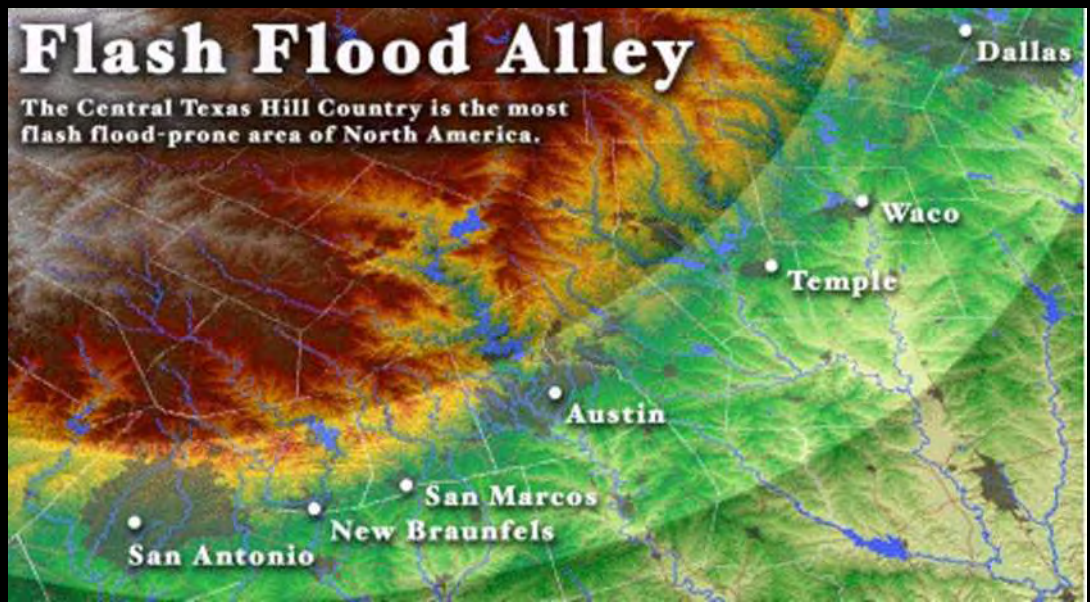
# Texas Rivers

## Drought and Flood



# Texas Precipitation, August-July





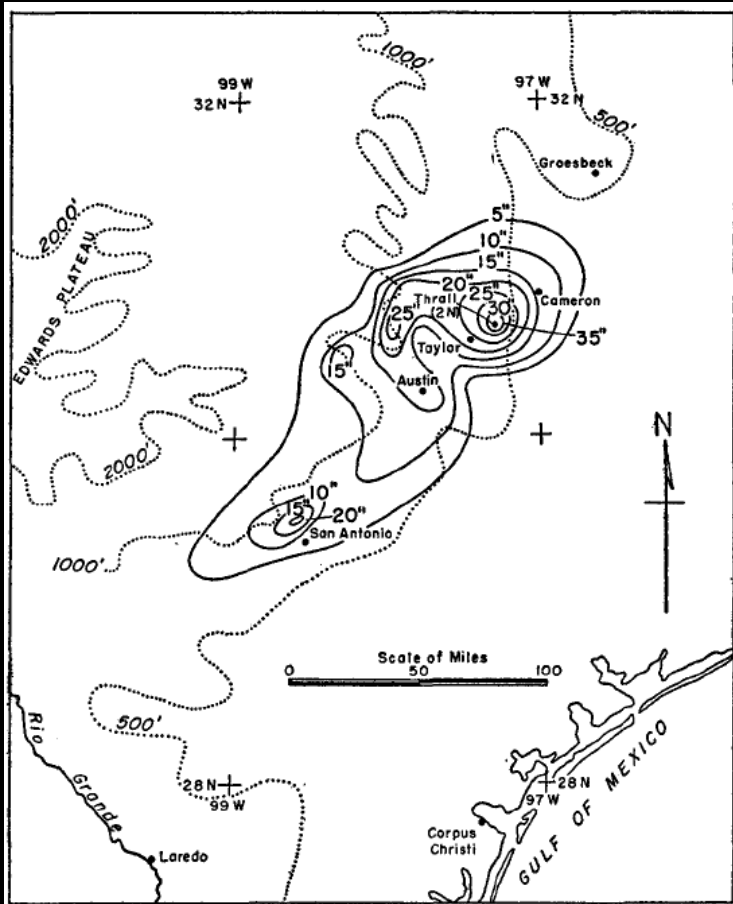


FIGURE 2.—Generalized isohyetal pattern (solid lines, in inches) for the Thrall, Tex., rainstorm, covering the period noon Sept. 8 to noon Sept. 10 (local time), 1921, superimposed on the ground contours (dotted lines, in feet). The intense rain fell in two bursts which traveled from the southwest to the northeast.

## Thrall Flood 1921

This storm caused the most deadly floods in Texas, with a total of 215 fatalities.

On September 9 and 10, 1921, the remnants of a hurricane moved over Williamson County. The center of the storm became stationary over Thrall, dropping a storm total of 39.7 inches of rain in 36 hours.

The 24-hour rainfall total ending 7 AM on September 10, 1921 (38.2 inches) at a U.S. Weather Bureau station in Thrall.

Eighty-seven people drowned in and near Taylor, and 93 in Williamson County.

## Current Record 24 hour total rainfall

On July 25, 1979 Tropical Storm Claudette stalled over Alvin and inundated the region with 45 inches in 42 hours. That total included 43 inches in 24 hours, the maximum 24-hour rainfall in US history.

Marble Falls 2007 18 Inches in 9 hours, 9 inches in 1 hour

**June 1935:** Floodwaters from heavy Hill Country rains cause the Colorado River in Austin to crest at 50 feet, one foot below the 1869 record. The river overwhelms the Congress Avenue Bridge, cutting Austin in half. The Llano River rises to its highest recorded stage of 41½ feet, streamflow 388,000 cubic feet per second.

**September 1936:** Floodwaters from heavy rains throughout the basin pour through the Colorado River at Austin for a 20-day period, cresting at 31.4 feet. Earlier, floodwaters from a 30-inch rain on the Concho River had washed away nearly 300 buildings in San Angelo.

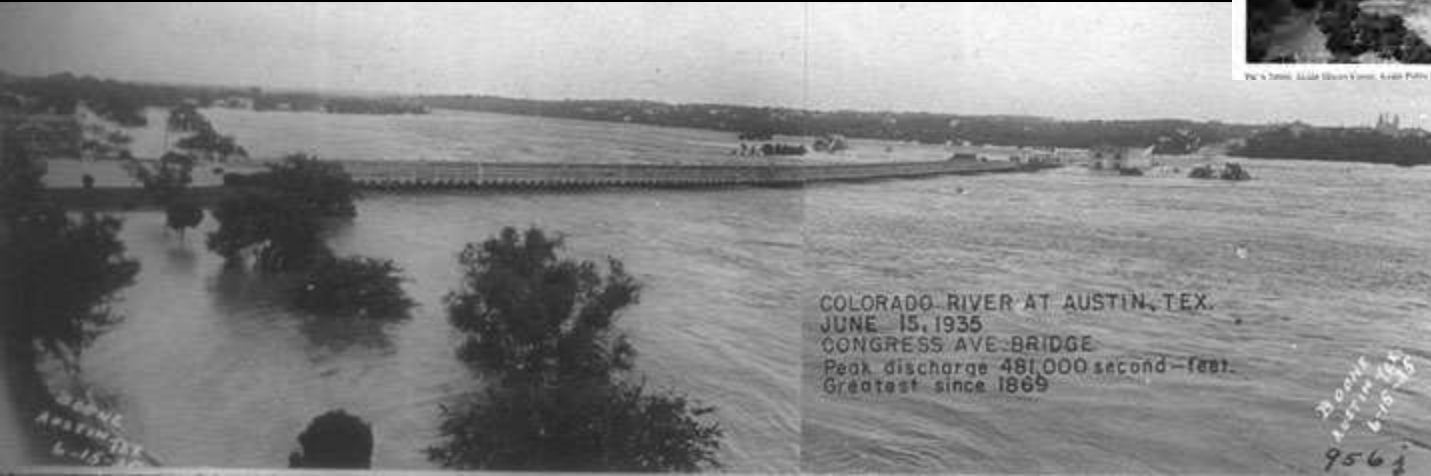
**July 1938:** Twenty inches of rain over 12 counties pour more than 3 million acre-feet of floodwaters into newly completed Lake Buchanan, forcing LCRA to open 22 of Buchanan Dam's 37 floodgates.



CD8484-A Austin History Center, Austin Public Library



Photo from 1935-1936, Austin History Center, Austin Public Library



COLORADO RIVER AT AUSTIN, TEX.  
JUNE 15, 1935  
CONGRESS AVE. BRIDGE  
Peak discharge 481,000 second-feet.  
Greatest since 1869

3804  
Austin, Tex.  
1935  
956



Texas has a river unity  
which invites unified  
treatment of Texas rivers

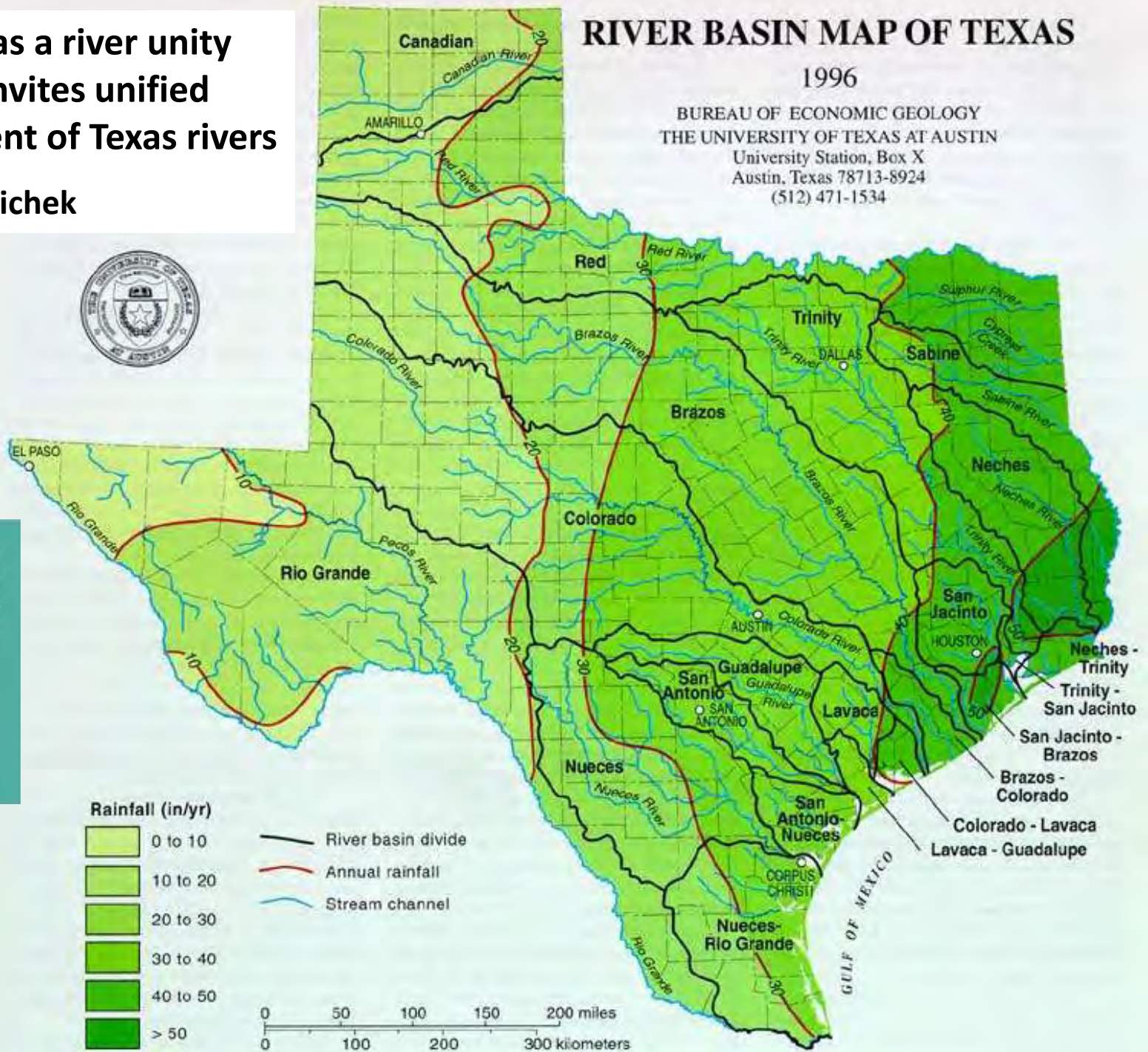
Roy Bedichek



# RIVER BASIN MAP OF TEXAS

1996

BUREAU OF ECONOMIC GEOLOGY  
THE UNIVERSITY OF TEXAS AT AUSTIN  
University Station, Box X  
Austin, Texas 78713-8924  
(512) 471-1534



Karankaway  
Country

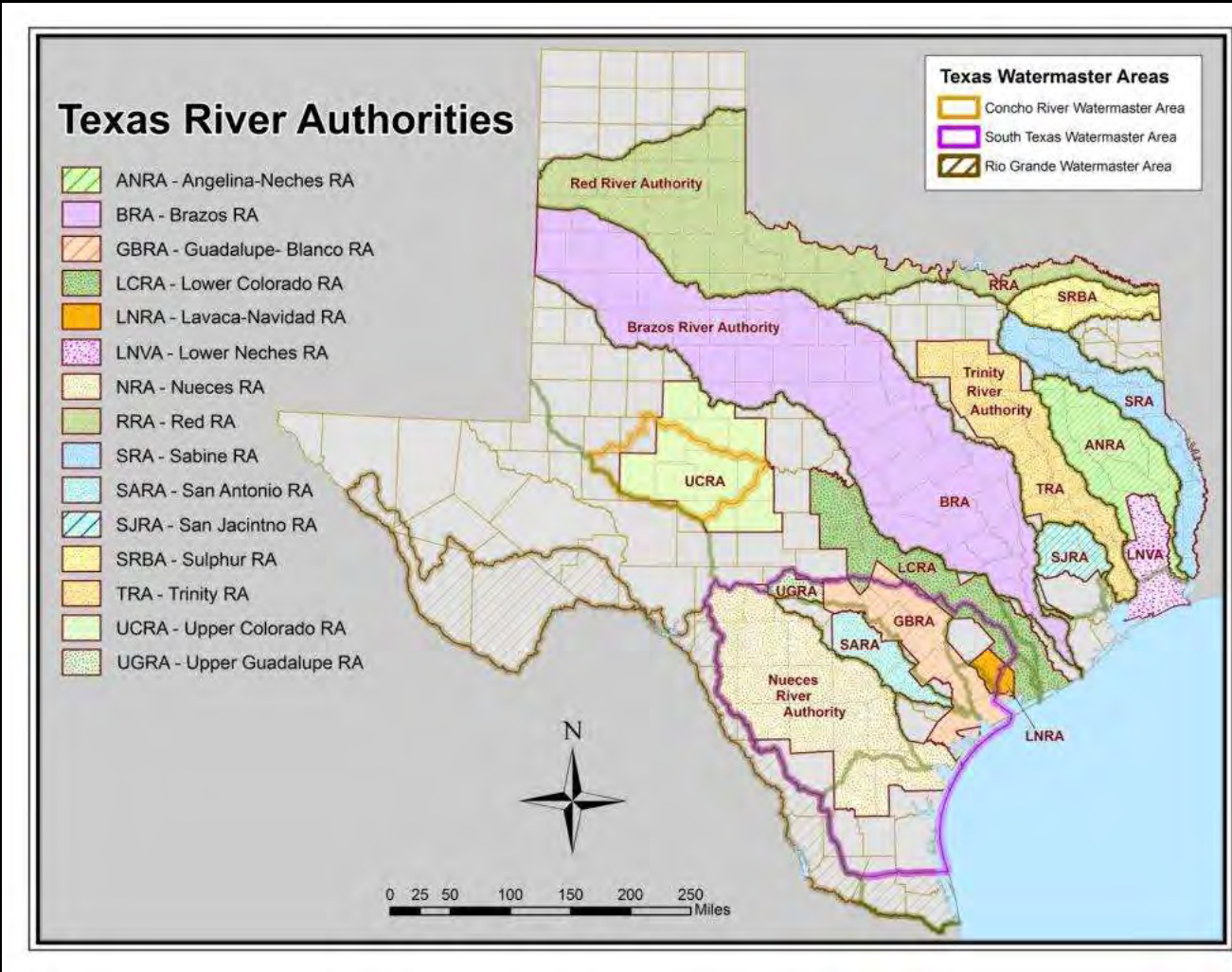
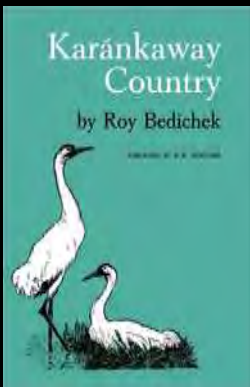
by Roy Bedichek



## Controlling Texas Rivers

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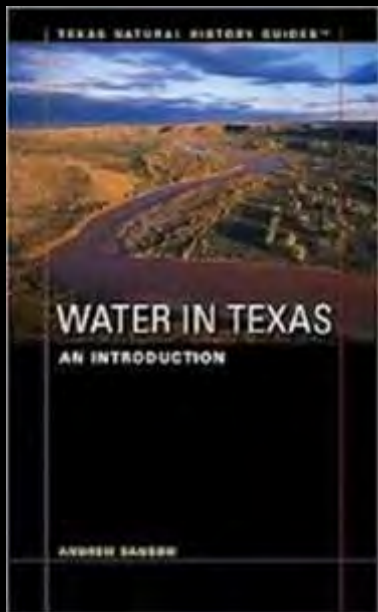
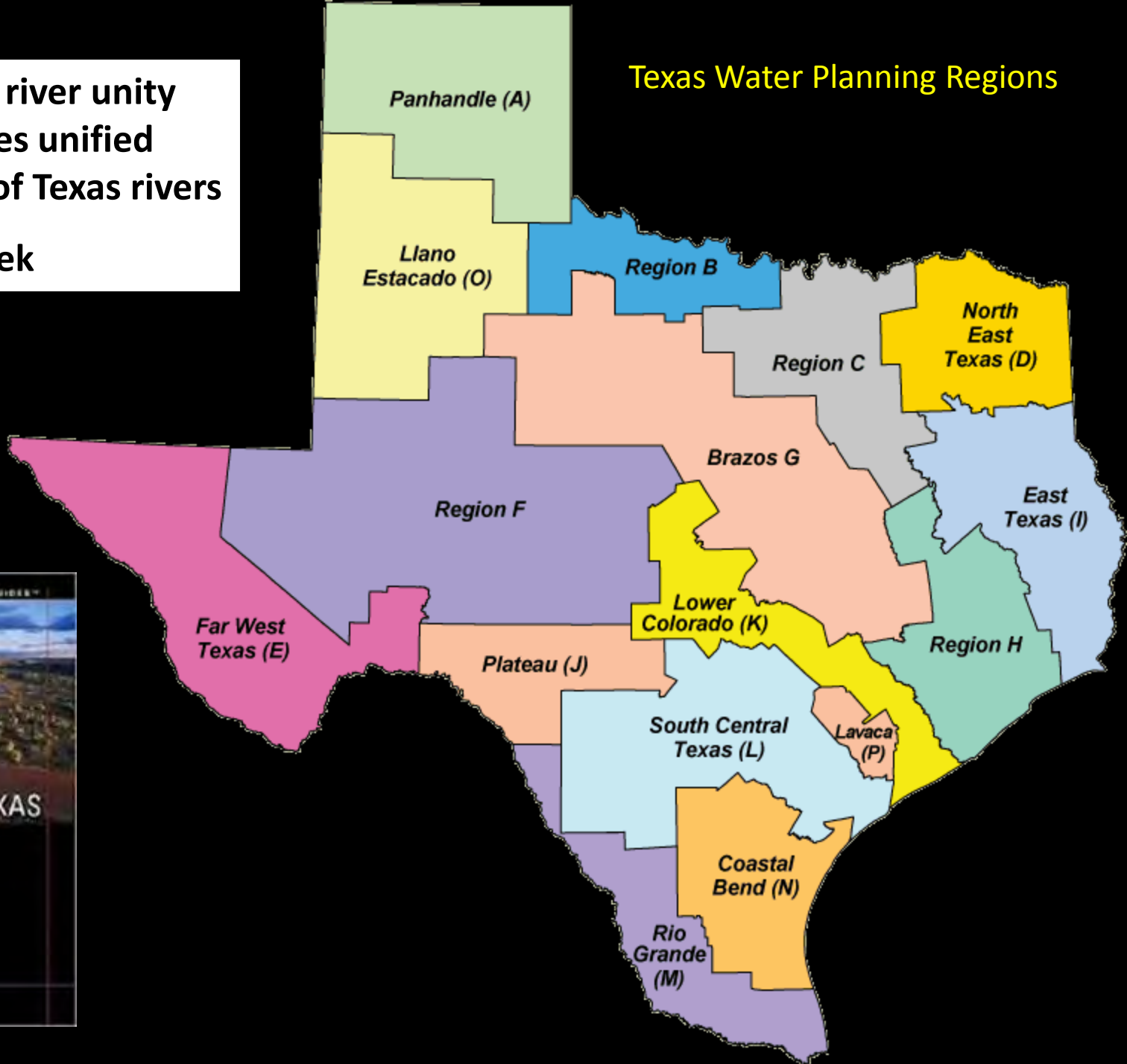
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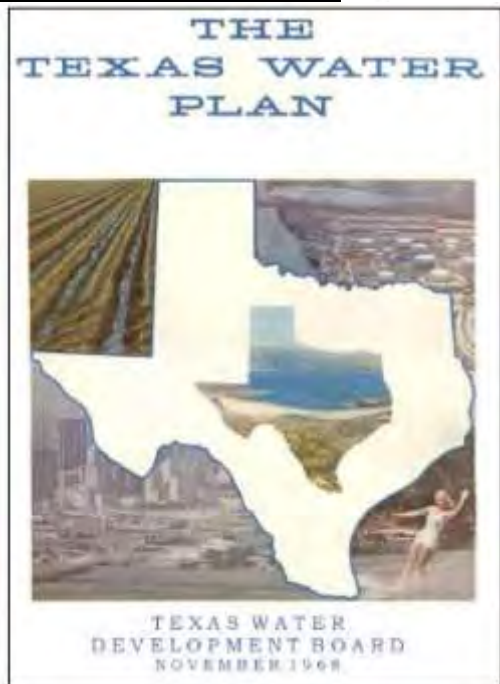
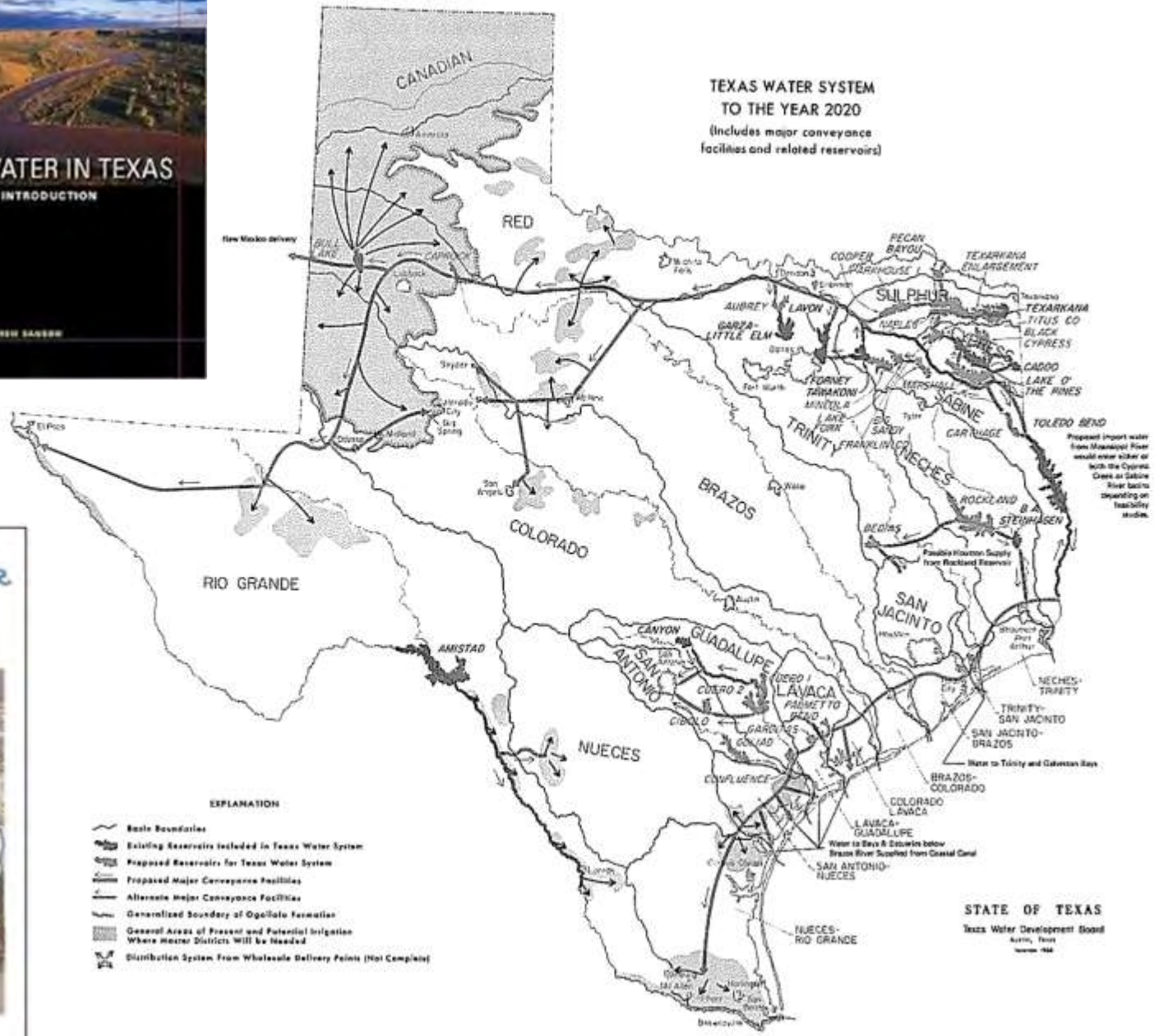
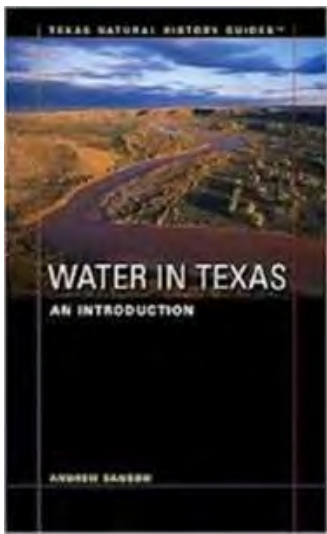
## Texas Water Planning Regions





# Interbasin Transfers

In 1968 the Texas Water Development Board put forward the Texas Water Plan to prepare for water requirements projected for the year 2020.



# 1968 State Water Plan



A major obstacle to the plan's implementation was a report issued by the Bureau of Reclamation and the Mississippi River Commission in 1973.

The report found that excess water is available from the Mississippi River, but concluded that "while it is feasible to divert water from the Mississippi River to the High Plains, the cost of moving the water would be very high and the environmental impacts to the Gulf area and along the diversion route could be significantly adverse."

The television documentary *Living with the Trinity* examines the period from 1965 to 1973 when the Trinity River was nearly transformed into a barge canal running from North Texas to the Gulf of Mexico.

U.S. Congressman Jim Wright of Fort Worth, working with the Johnson Administration, was able to win Congressional approval of nearly \$1-billion for what would become a highly controversial project.



# LIVING WITH THE TRINITY



Dallas and Fort Worth as inland seaports?  
In the 1970s, the dream nearly came true...but then the battle began.

A new documentary by KERA's Rob Tranchin

Monday, November 23 at 9pm on KERA TV

Major funding provided by The Meadows Foundation and The Dixon Water Foundation.

Explore a River's Story at [TrinityRiverTexas.org](http://TrinityRiverTexas.org) | **KERA**

Photo by Luther Smith [www.luthersmith.net](http://www.luthersmith.net)

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## Trinity Canal Goes Down to Defeat As Dallas County Votes Solid 'No'

By DOROTHY ERWIN

The Trinity River Project went down a defeat late Tuesday night in another round of the Trinity River Authority's special elections.

Dallas County voters solidly opposed the Trinity River Project.

The heavy vote in favor of the project in the Trinity watershed may spell the end of Dallas-Fort Worth's long-held dream of restoring flood protection.

Eight tightly-pollinated counties gave majority votes to TRA's proposition for a tax and a bond issue. Eight others defeated the proposition.

Tarrant County also rejected it. At midnight, when the TRA closed down for the night, official totals including complete tallies from all counties across Tarrant (and including 168 of Tarrant County's 178 precincts) showed Proposition 1 defeated by a vote of 127,738 to 104,312.

Dallas County voted against the 1% of voters (as contained in the proposition) by 80,812 to 42,642.

Proposition 2, authorizing \$50 million in bonds based on the tax levy, was defeated by 105,812 by 85,111.

The total vote on Proposition 1 was 111,887 to 81,042. It was a phenomenally large vote for a bond election in Dallas County. Last May's special election on a junior college drew a total of 81,800 voters,

and last November's city bond issue drew only 42,000.

The tax proposition carried in Henderson, Anderson, Finney, Liberty, Love, Trinity, Kaufman and Navarro counties. It failed, however, in complete reliance from only another counties of Fock, Walker, Ellis, Chambers, Houston and San Jacinto.

Midland County figures had not been reported late Tuesday night. TRA general manager David H. Stone said his agency would await completion of the Corps of Engineers' environmental impact statement on the project before deciding whether to call for a bond election.

County by County Tabulation, Page 7A.

Another election, and would also determine "congressional attitudes" on funding of the project, before deciding on an economic impact plan.

However, he said, TRA will continue work on its water and sewage projects. Despite the election setback, he said, "TRA has plenty of other work to do."

Stone, in his columnists late Tuesday night after Dallas County's decisive vote was to announce the setback to "city voters" that he said frustrated the campaign discounts. Part facilities and land ownership along the river were among those he named.

"We failed to articulate the economic impact that is favorable to the project," Stone said.

The bond issue proposed in Proposition 2 on the ballot, which was on its way to defeat in some states, they claim in those of Proposition 1—was vital to the financing of a navigation canal from Fort Worth to the Gulf as well as floodways in Dallas and Tarrant Counties.

TRA could legally set another election re-bid or another financing proposition after 30 days' notice. It appeared highly unlikely, however, that another election would be held and conditions outside a change of voters' mood.

Appropriately declines in voters' support of the plan in Dallas County were the widely-pollinated opinion of the project's economic feasibility and its

Required for passage of both propositions was a majority of the total vote and a majority in at least nine of the affected counties.

Proposition 1 would have authorized a tax of valueless tax, the maximum permitted TRA with voter approval under its state legislation. Proposition 2 would have authorized a \$100-million bond issue to be paid off from this tax levy.

The defeat of the specific propositions on issue Tuesday appeared also to be a significant setback for the technique used by proponents of the project in their campaign.

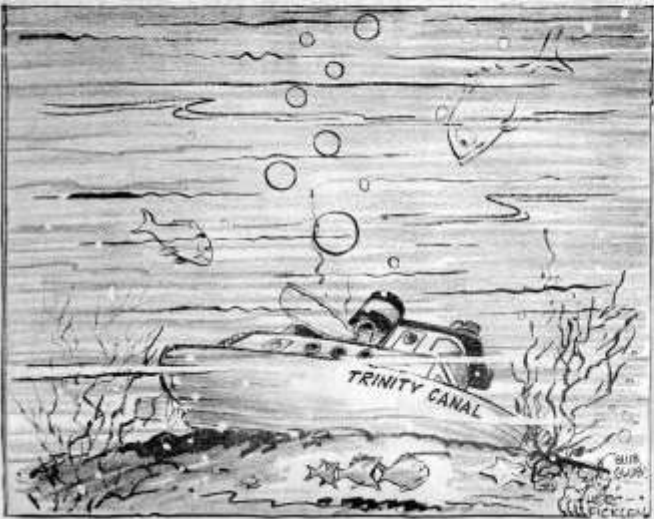
Previously surprised by the public interest and the intensity of criticism of the project that had long been considered accepted and wanted by Dallas

and Tarrant citizens, the proponents mounted a big-name, professionally-run campaign on short notice.

Their most vocal opponents, usually given the overexposed label of "environmental extremists" in the Trinity advertising, were a diverse group of college professors, environmentalists and a few businessmen.

Their responsibility for campaign literature and advertising was a product compared to that of the proponents.

The pre-election debate proved that many other voters besides environmentalists were revivifying the justification channel proposal—a main cause back in the 1950s—in the new context of the 1970s.



## Release Set Friday New POW List Has 5 Notables

WASHINGTON (UPI)—The names of five prominent prisoners of war, including the long-held POW in American hands) and the senior American diplomat captured by the Communists in Vietnam, appeared Tuesday on the Viet Cong list of captives to be set free Friday.

Among the 22 names on the list were also those of the Army doctor who was wounded during the Vietnam war, the Democratic national convention, and Marine who had been killed in Vietnam, who is "returning home the dead," and another who was originally thought to be a deserter.

The announcement of POWs scheduled to be in the next Viet Cong release to

because the most prominent POW wife in the nation last July by ascending McGovern's resignation at Miami Beach. Earlier, she had figured in a controversial attack on President Nixon's war policies.

• Marine Sgt. Ronald L. Sledge, 23, of Houston, who was part of a 3-year patrol, was included among the five names to be set free in 1973. Sledge was identified as Sgt. Sledge because he was shot in the chest by the enemy in 1967. He was held in the official Communist list of POWs in January.

• Marine Pvt. Freddie Lewis III, 25, of Brentwood, N.Y., until the Communist identification of POWs in January, the Pentagon had considered (short a quarter, though officials

Canal opposition on environmental and economic grounds grew in the early 1970s, with advocacy by the Citizens' Organization for a Sound Trinity (COST), and through litigation by the Sierra Club, Houston Sportsmen's Club, Audubon Society and the Texas Shrimp Association.

Votes against bonds for the canal, and judgments against one of the locks (at Wallisville), brought the canal proposal to a halt.

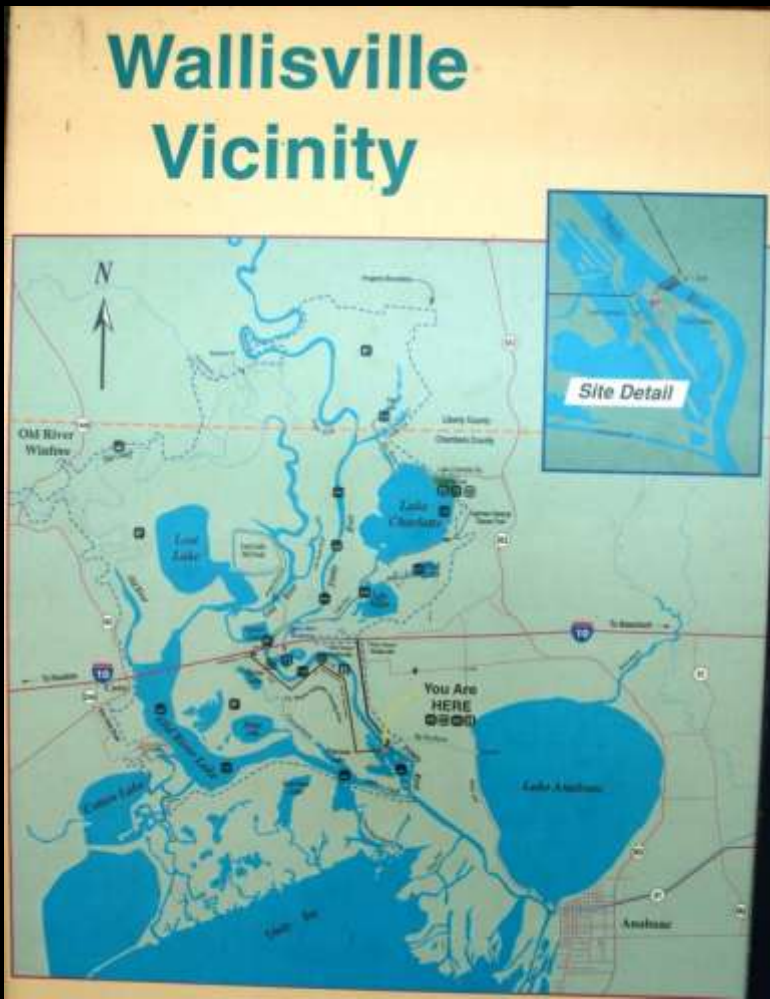


The government purchased the property and construction began in 1966. At this point, the project would have been a 19,700 acre reservoir with surface elevation of four feet above mean sea level.

In September 1971, a lawsuit was filed by the Sierra Club in U.S. District Court against the construction of the project. At approximately 72 percent complete, the construction was halted in 1973 by a decision of the court.

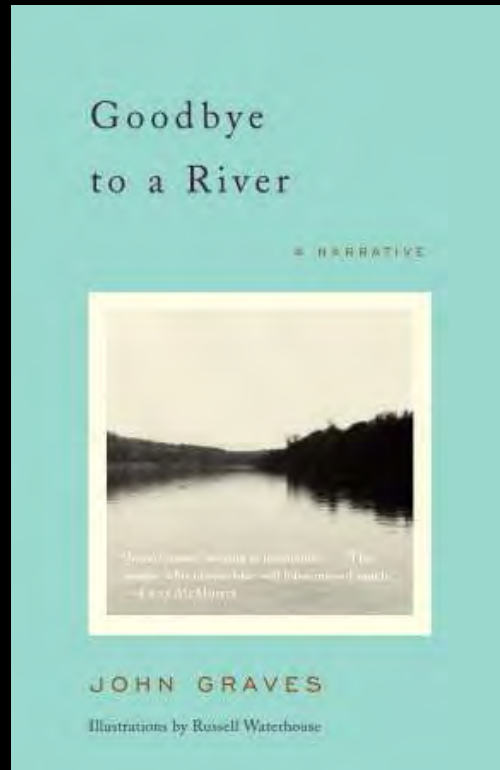
Between 1973 and 1987 the project was revised and reevaluated. And in May of 1987 the Fifth Circuit Court of Appeals dismissed the lawsuit in favor of the government and lifted the injunction against continuing construction. Then in November of 1989 a pair of nesting bald eagles was discovered near Miller Lake and the project was reevaluated again.

This reevaluation gave rise to the project as it stands today: a set of levees along the east and west banks of the Trinity in conjunction with the dam across the Trinity, the navigation lock and engineered navigation channel, the gated control structure on main stem of the Trinity, and parks and recreation areas. The original 39,000 feet long concrete dam structure across the marsh was abandoned after it was breached in 2001 to allow for normal water flows of the Old River and several smaller streams and bayous. Modifications resulted in a saltwater barrier project, with no reservoir pools, to emulate pre-project conditions as closely as possible.



# Texas River Protection

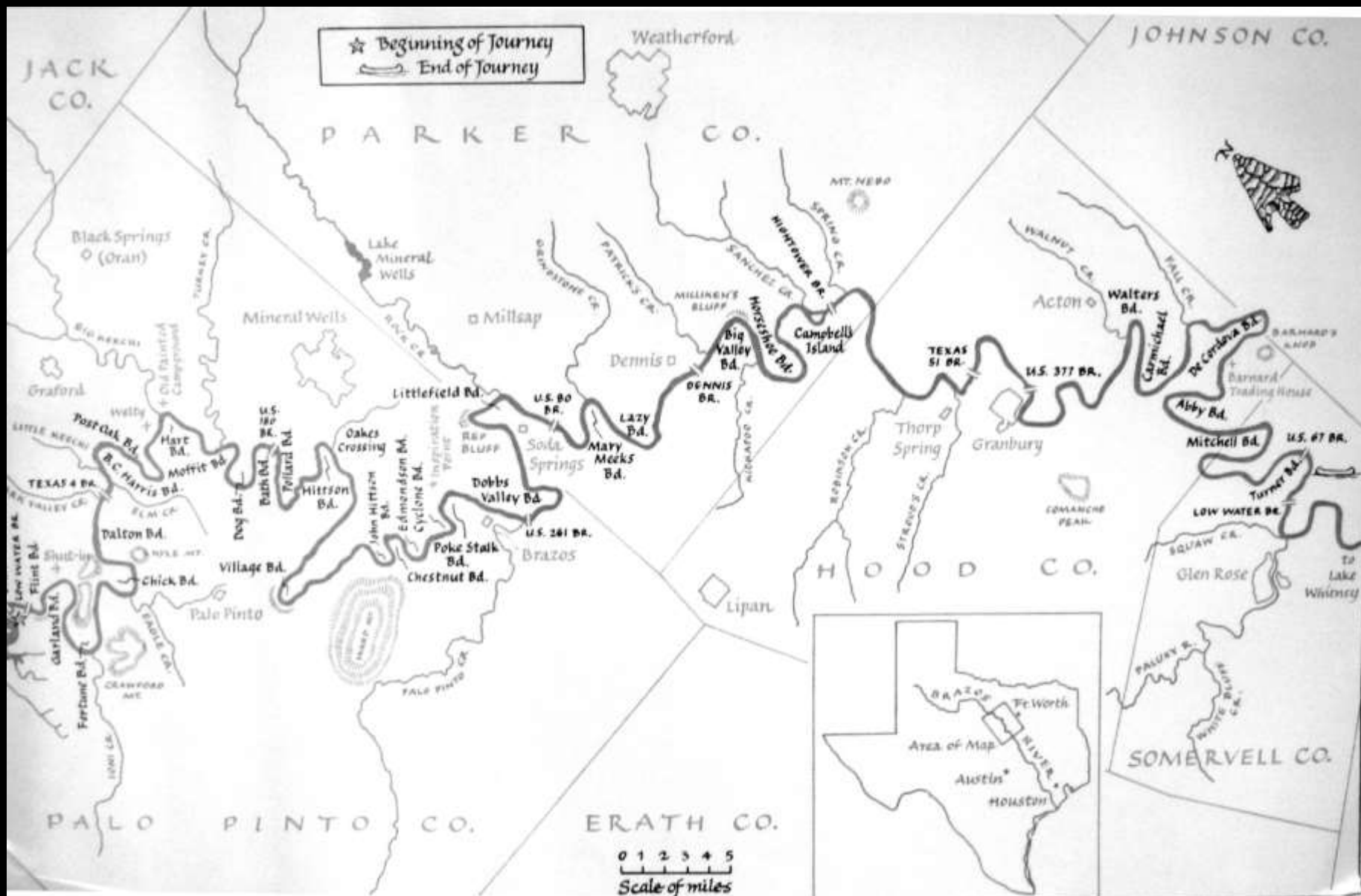
One river, seen right, may well be all rivers that flow to the sea...



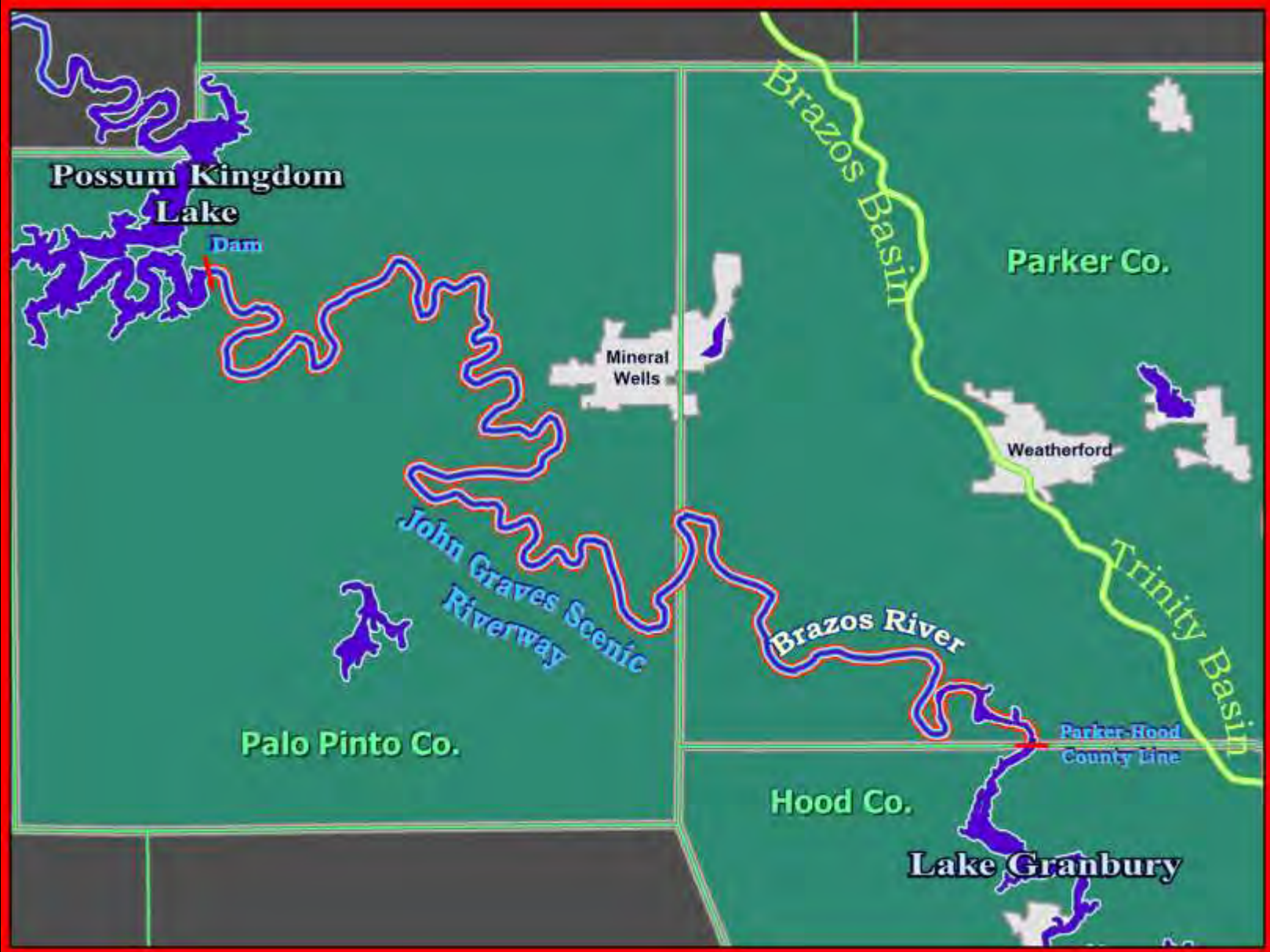
# SUMMARY OF FAILED TEXAS RIVER PROTECTION BILLS

Proposed Legislation	# of River Segments Designated	Classification System	Prohibited Uses of Designated Rivers	Riparian Land Protection Mandated	Riparian Landowner Incentives	Funding Mechanisms
1969 Natural Rivers Act	16	All segments designated as natural river areas	Dams and other projects	Yes	Tax incentives for easements	Donations, appropriations
1971 Natural Rivers Act of Texas	1	All segments designated as natural rivers	Not specified in the legislation	Yes	Tax incentives for easements	Gifts, grants
1973 Natural and Scenic Rivers Act	0	All segments designated as natural and scenic rivers	Channelization, clearing/snagging, reservoirs, channel realignment	Not specifically required, but condemnation authorized	Normal riparian activities not affected- no incentives	Gifts, grants
1973 Texas Public Rivers Act	Generally applicable to all navigable inland waterways	Not specified in the legislation	Construction of navigation barriers	Not specifically required, but condemnation authorized	Landowner rights not affected- no incentives	Not specified
1987 Texas Rivers Conservation Act	13	Segments designated as wild, scenic or recreational	Channelization, clearing/snagging, reservoirs, channel realignment	No	Landowner rights not affected- no incentives	Texas rivers conservation fund, donations, watercraft tag fees
1989 Texas Rivers Protection Act	3 with 4 more potential segments to be studied	All segments designated as protected river segments	Channelization, reservoirs, channel realignment	No	Landowner rights not affected- no incentives	Not addressed
1991 Texas Rivers Protection Act	2	All segments designated as protected river segments	Channelization, reservoirs, channel realignment	No	Landowner rights not affected- no incentives	Grants, donations
1993 San Marcos River Protection Act	1	Not specified in the legislation	Channelization, reservoirs, channel realignment	No	Landowner rights not affected- no incentives	Grants, donations
1995 San Marcos River Protection Act	1	Not specified in the legislation	Large scale channelization	No	Landowner rights not affected- no incentives	Grants, donations

A three week trip down the Brazos River in November 1957

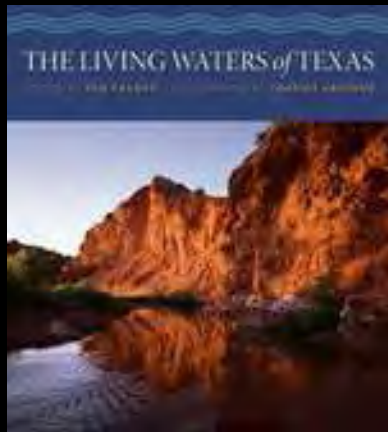




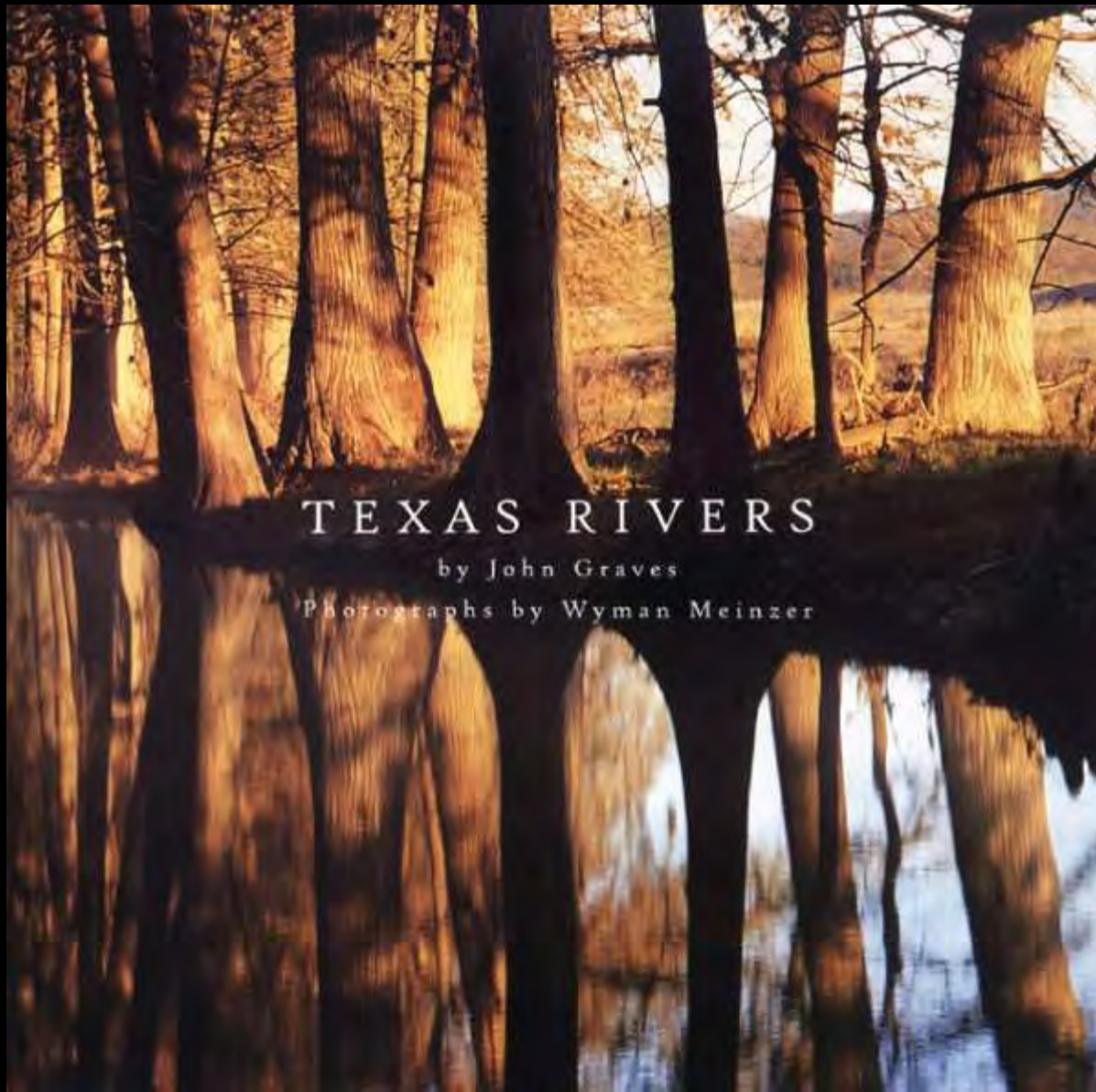


113-mile segment of the Brazos River between Possum Kingdom Lake and Lake Granbury

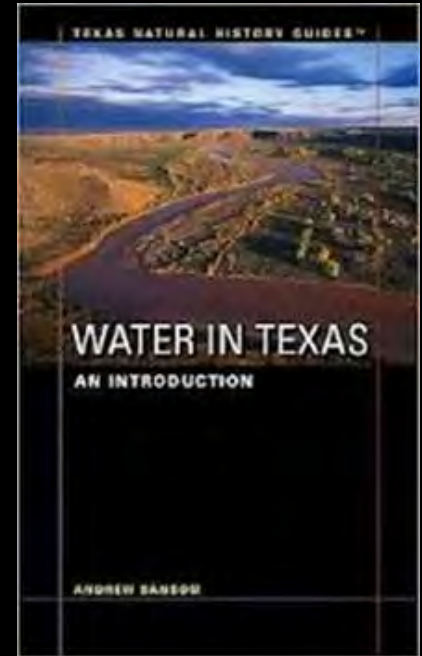
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