

# Illegal Dams and the Llano River

March 7, 2024

Jordan Furnans, PhD, PE, PG  
Vice President – TX Operations  
[Jordan.Furnans@lrewater.com](mailto:Jordan.Furnans@lrewater.com)

512-736-6485

TEXAS

# Illegal dam in Mason County blocking water from refilling Highland Lakes

by: [David Yeomans](#), [Eric Henrikson](#)

Posted: Oct 12, 2023 / 04:12 PM CDT

Updated: Oct 13, 2023 / 01:42 PM CDT



[kxan.com/news/texas/illegal-dam-in-mason-county-blocking-water-from-refilling-highland-lakes/](https://kxan.com/news/texas/illegal-dam-in-mason-county-blocking-water-from-refilling-highland-lakes/)

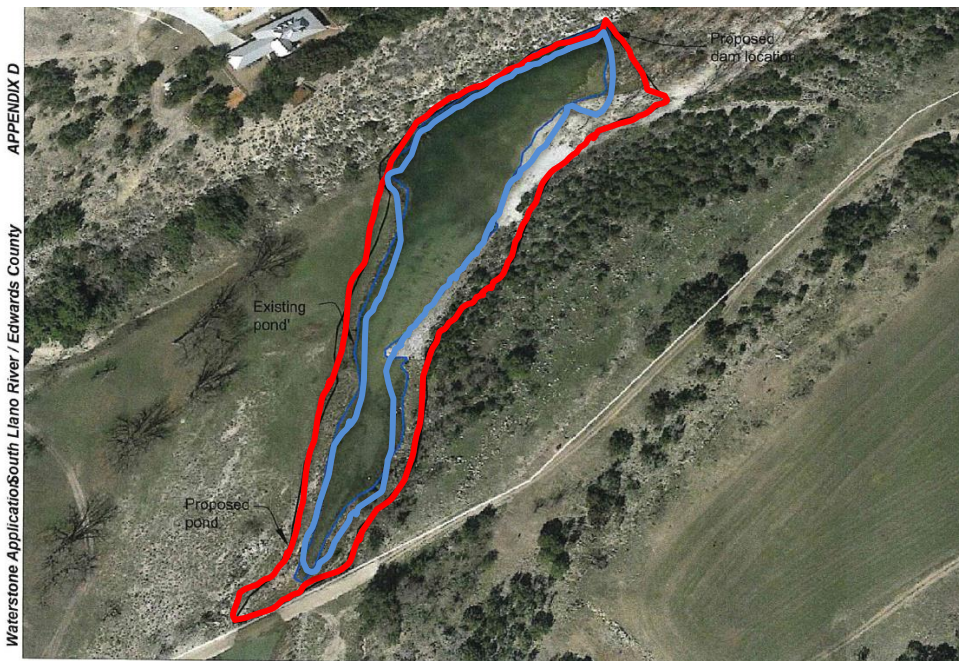
What appears to be freshly-poured concrete extends the width of the James River in Mason County — a tributary to the Llano River, which flows into the Highland Lakes. (KXAN Photo/David Yeomans)

# Llano River communities fight former oil executive's plan for a private dam

★ THE TEXAS TRIBUNE

Texas has thousands of private dams, but a former oil executive's application to build one on the South Llano River would be the first in the watershed for recreational use. Opponents fear it would harm the river's health and encourage more private dams.

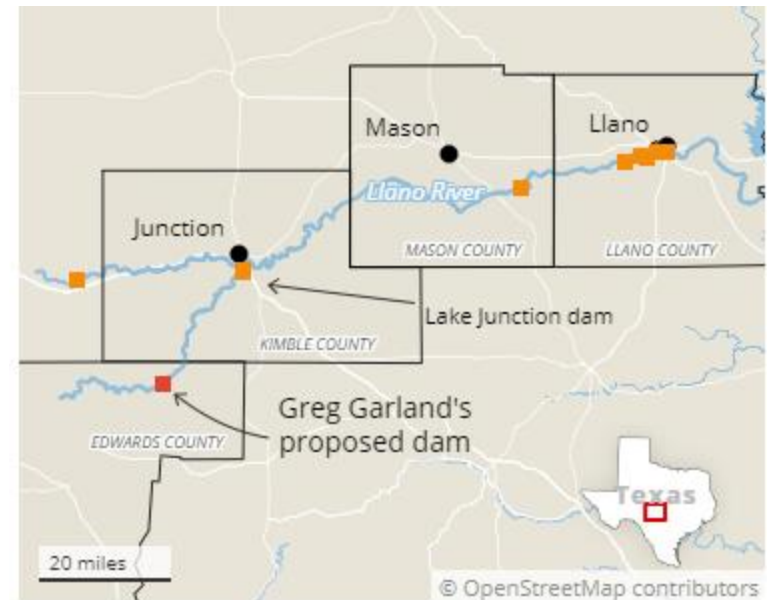
BY ALEJANDRA MARTINEZ OCT. 17, 2023 5 AM CENTRAL



NOTE: Top of low water crossing slab,  
minimum elevation = 1892.54'.  
Top of proposed dam elevation = 1892'

WATERSTONE APPLICATION

Area of Existing Pond = 2.7 acres  
Area of Proposed Pond = 4.77 acres



Source: Texas Commission on Environmental Quality

Credit: Victoria Stavish

**\*\*12 acre-ft/yr of LCRA FIRM Water**

<https://www.texastribune.org/2023/10/17/texas-llano-river-private-dam-tceq>

# PRIVATE POND DETAILS

## James River Pond – Mason County

- Volume Impounded – Unknown
- Private Land Ownership
- Intended Use – Unknown
- Texas Parks and Wildlife Violation
- Cease and Desist – US Army Corps

No documentation provided by owner

## S. Llano River Pond – Edwards County

- Volume Impounded – 12 acre-ft
- Private Land Ownership
- Intended Use – Recreation
- Permit Application to TCEQ
- LCRA Firm Yield Contract
- Sufficient Documentation
- Compliance with State laws

**Both projects stopped by PUBLIC OUTCRY**

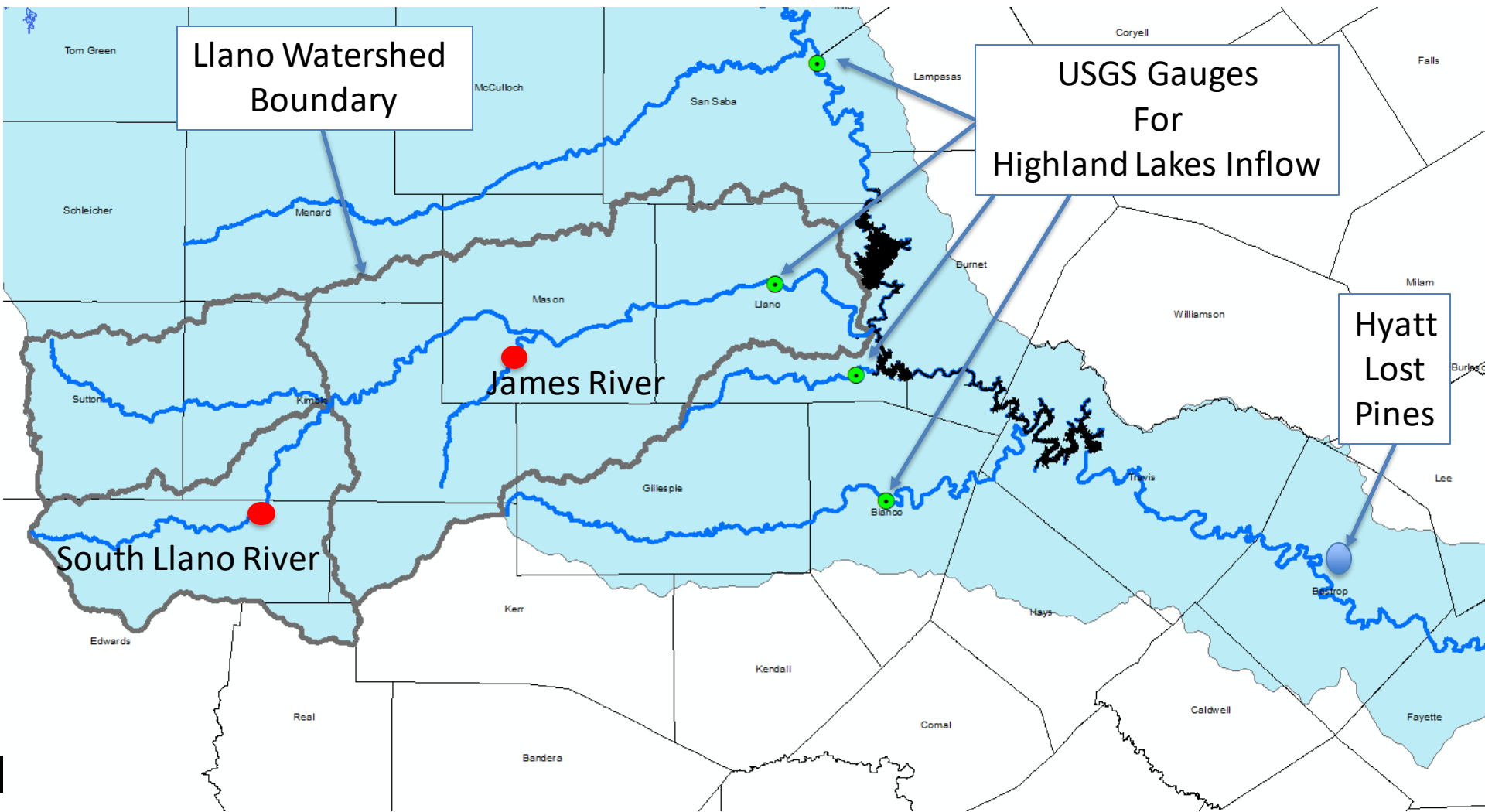
**Prevent “Private” Waste**

**Protect Environment**

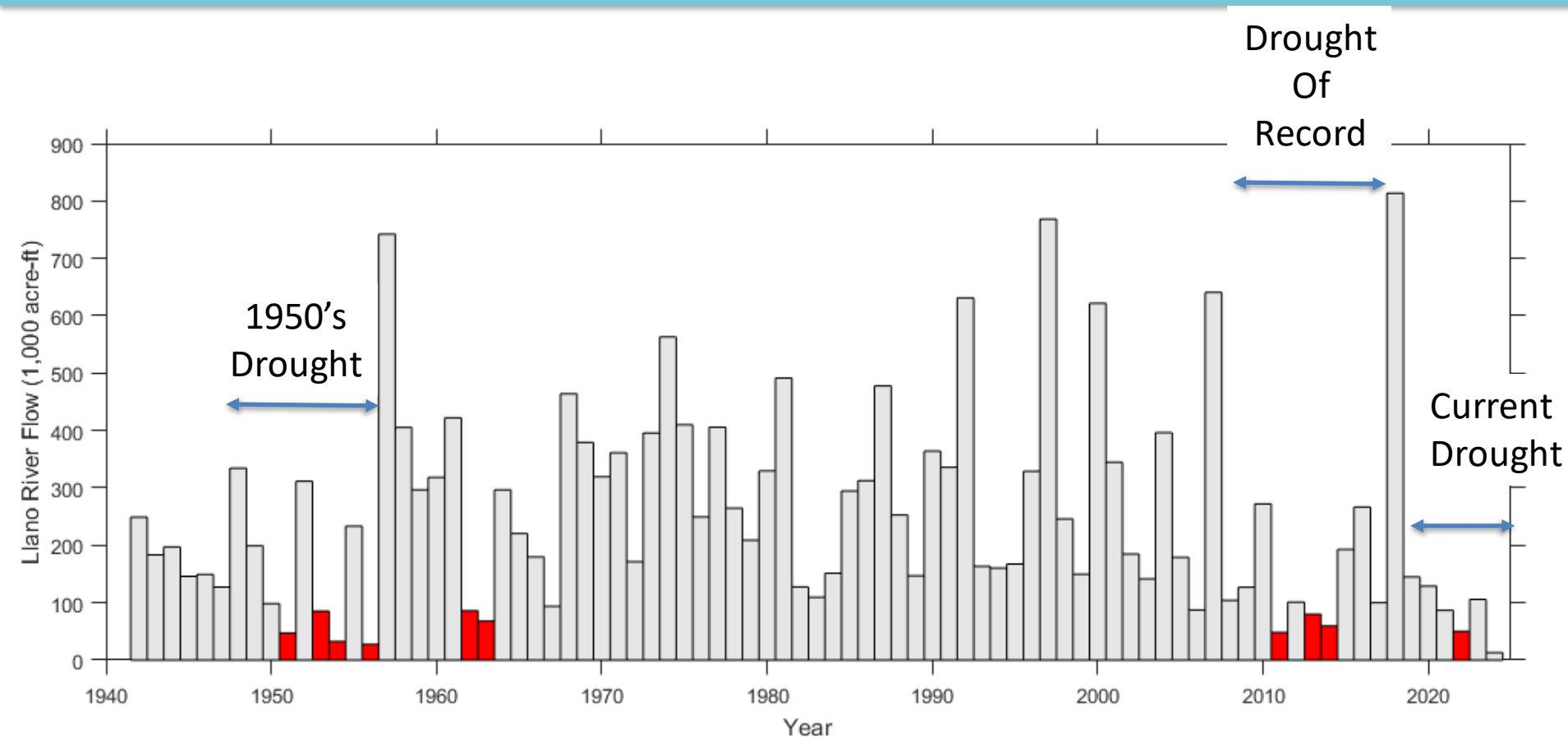
**Save Highland Lakes**



# GEOGRAPHIC PERSPECTIVE



# LLANO RIVER HISTORICAL STREAMFLOW

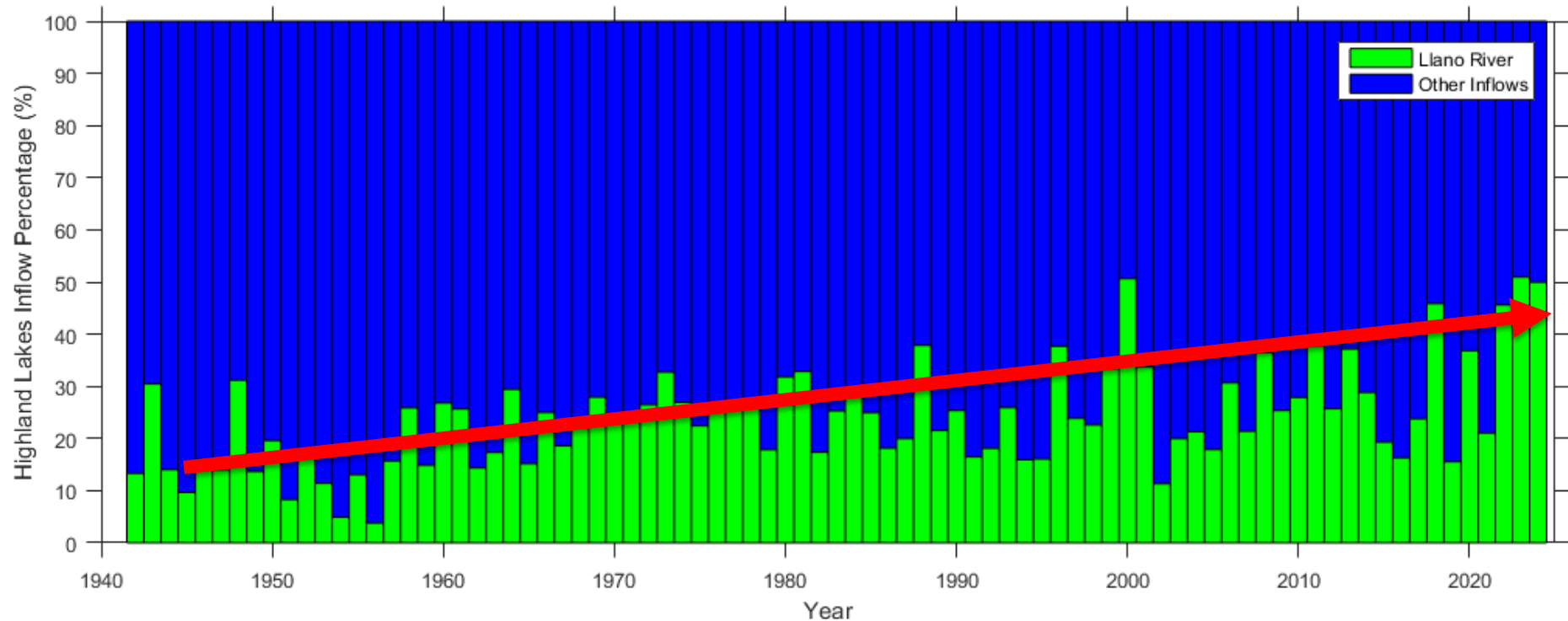


Red = Top 10 Years with Lowest Flows

# LLANO RIVER HISTORICAL STREAMFLOW

Llano River is providing a greater % of Highland Lake Inflows!

Drought  
Of  
Record



# AN ENGINEER'S TAKE ON LEGALITIES – *TEXAS WATER CODE*

Sec. 11.142. PERMIT EXEMPTIONS. (a)

Without obtaining a permit, a person may construct on the person's own property a dam or reservoir with normal storage of not more than 200 acre-feet of water for domestic and livestock purposes. []. This exemption does not apply to a commercial operation.



**No Permit – Domestic & Livestock Use**



**Permit Required –  
Commercial & Recreational Use**



# AN ENGINEER'S TAKE ON LEGALITIES – *TEXAS WATER CODE*

Sec. 11.142. PERMIT EXEMPTIONS. (a)

Without obtaining a permit, a person may construct on the person's own property a dam or reservoir with normal storage of not more than 200 acre-feet of water for domestic and livestock purposes. []. This exemption does not apply to a commercial operation.

(b) Without obtaining a permit, a person may construct on the person's property a dam or reservoir with normal storage of not more than 200 acre-feet of water for fish and wildlife purposes if the property on which the dam or reservoir will be constructed is qualified open-space land, as defined by Section 23.51, Tax Code. This exemption does not apply to a commercial operation.

# AN ENGINEER'S TAKE ON LEGALITIES – *TEXAS WATER CODE*

(b) Without obtaining a permit, a person may construct on the person's property a dam or reservoir with normal storage of not more than 200 acre-feet of water for fish and wildlife purposes if the property on which the dam or reservoir will be constructed is qualified open-space land, as defined by Section [23.51](#), Tax Code. This exemption does not apply to a commercial operation.

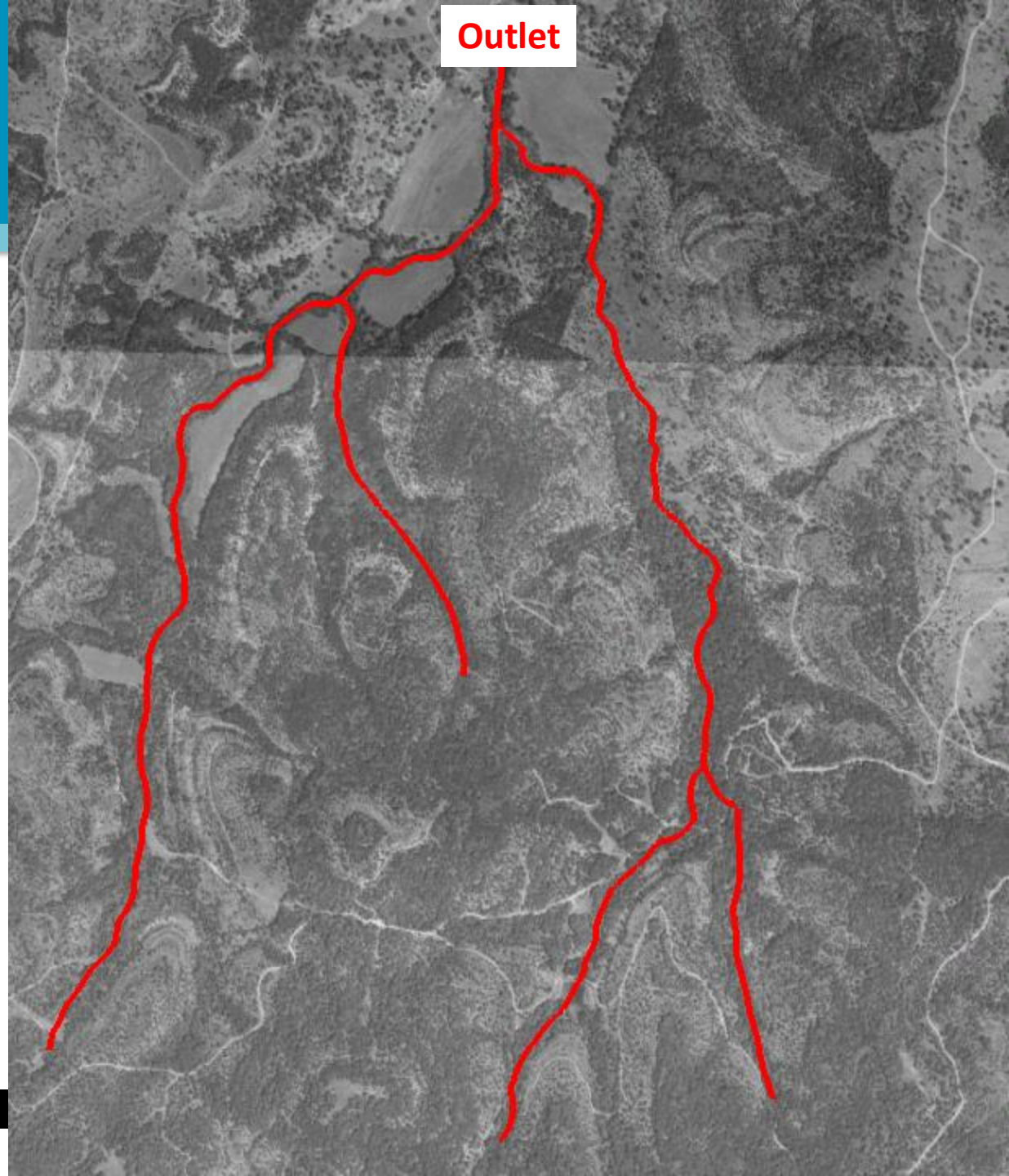
## Amended: 2009

(b) Without obtaining a permit, a person may construct on the person's property in an unincorporated area a dam or reservoir with normal storage of not more than 200 acre-feet of water for commercial or noncommercial wildlife management, including fishing, but not including fish farming.

# SMALL POND IMPACTS

Example: Onion Creek  
Hays County

1996 – No Ponds on Drainage  
Network = All Runoff goes  
downstream





# SMALL POND IMPACTS

Example: Onion Creek  
Hays County

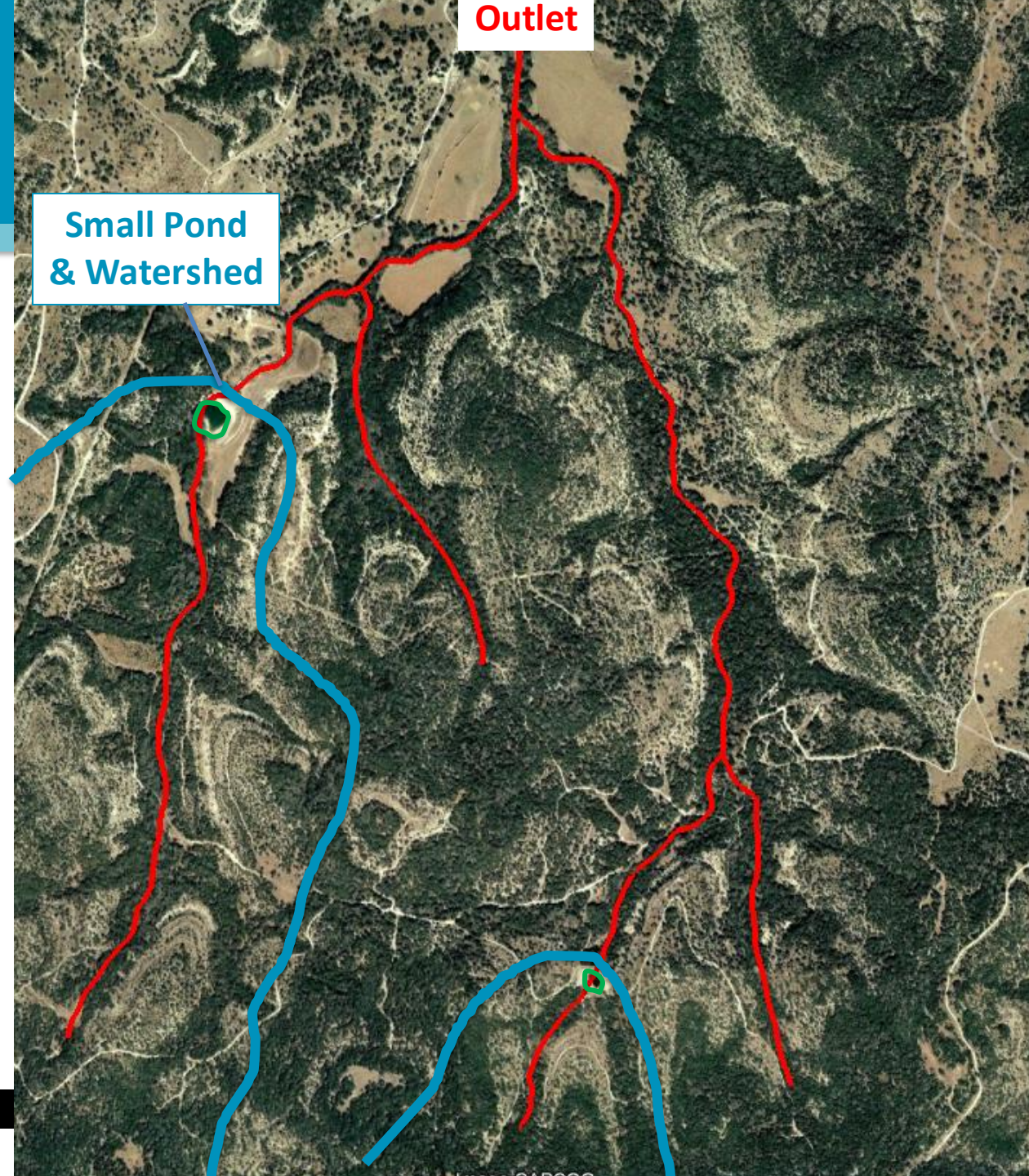
2008 – Two Small Ponds

Drainage Area Reduced by 40%

Ponds must be full for runoff  
To flow downstream

Ponds were:  
“Domestic & Livestock”

*But really for recreation*





# SMALL POND IMPACTS

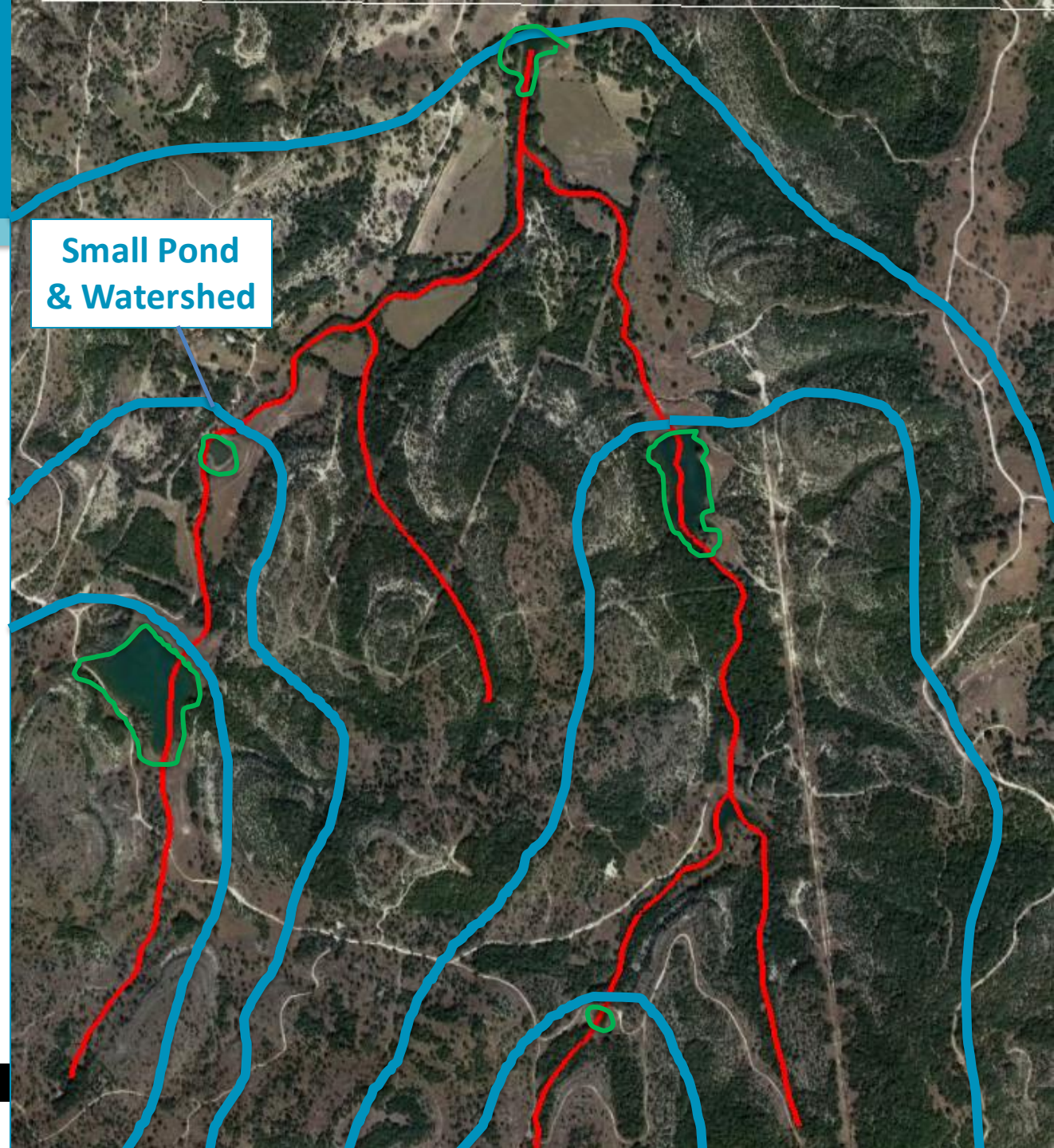
Example: Onion Creek  
Hays County

2024 – Five Small Ponds

Drainage Area Reduced by  
100%

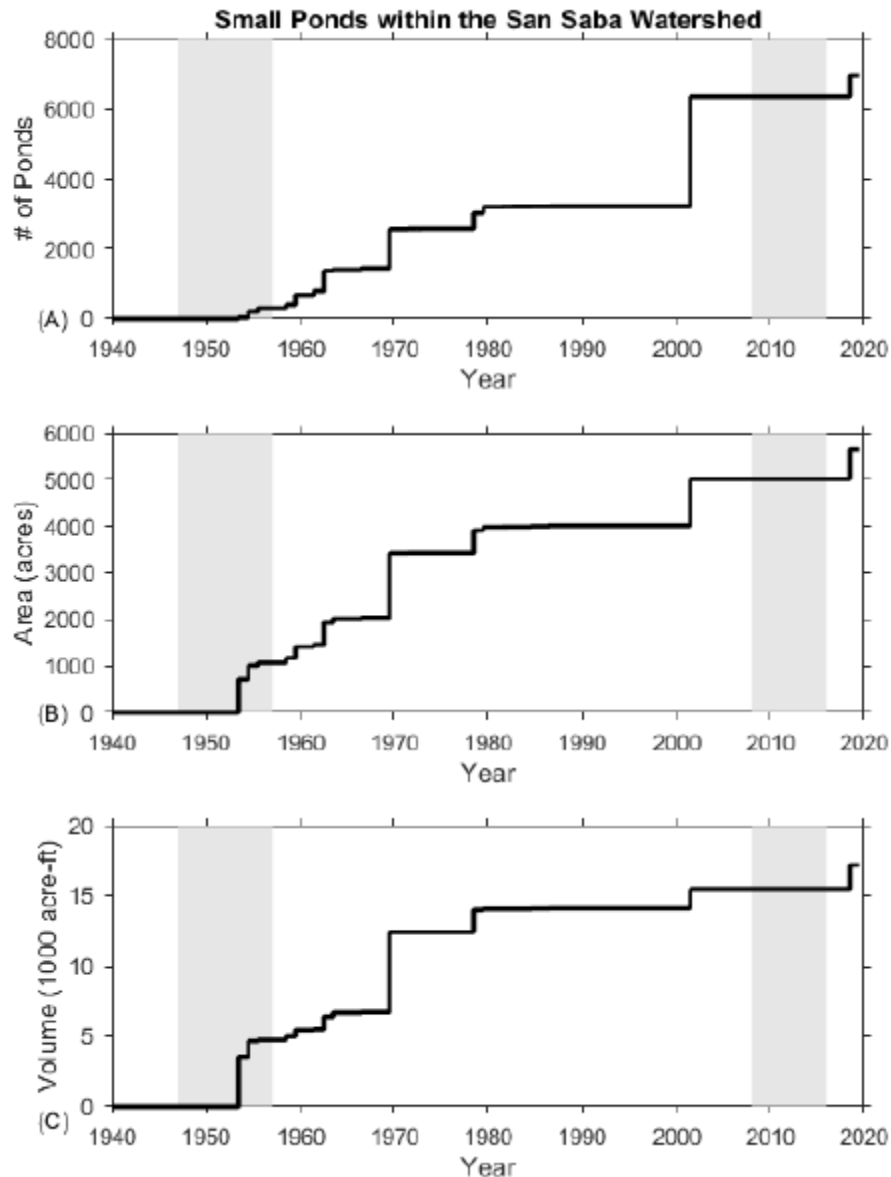
Neighbor's suing each other

Small Pond  
& Watershed





# HOW “BIG” IS THIS PROBLEM?



## Final Report: Evaluation of Rainfall-Runoff Trends in the Upper Colorado River Basin (Phase Two)

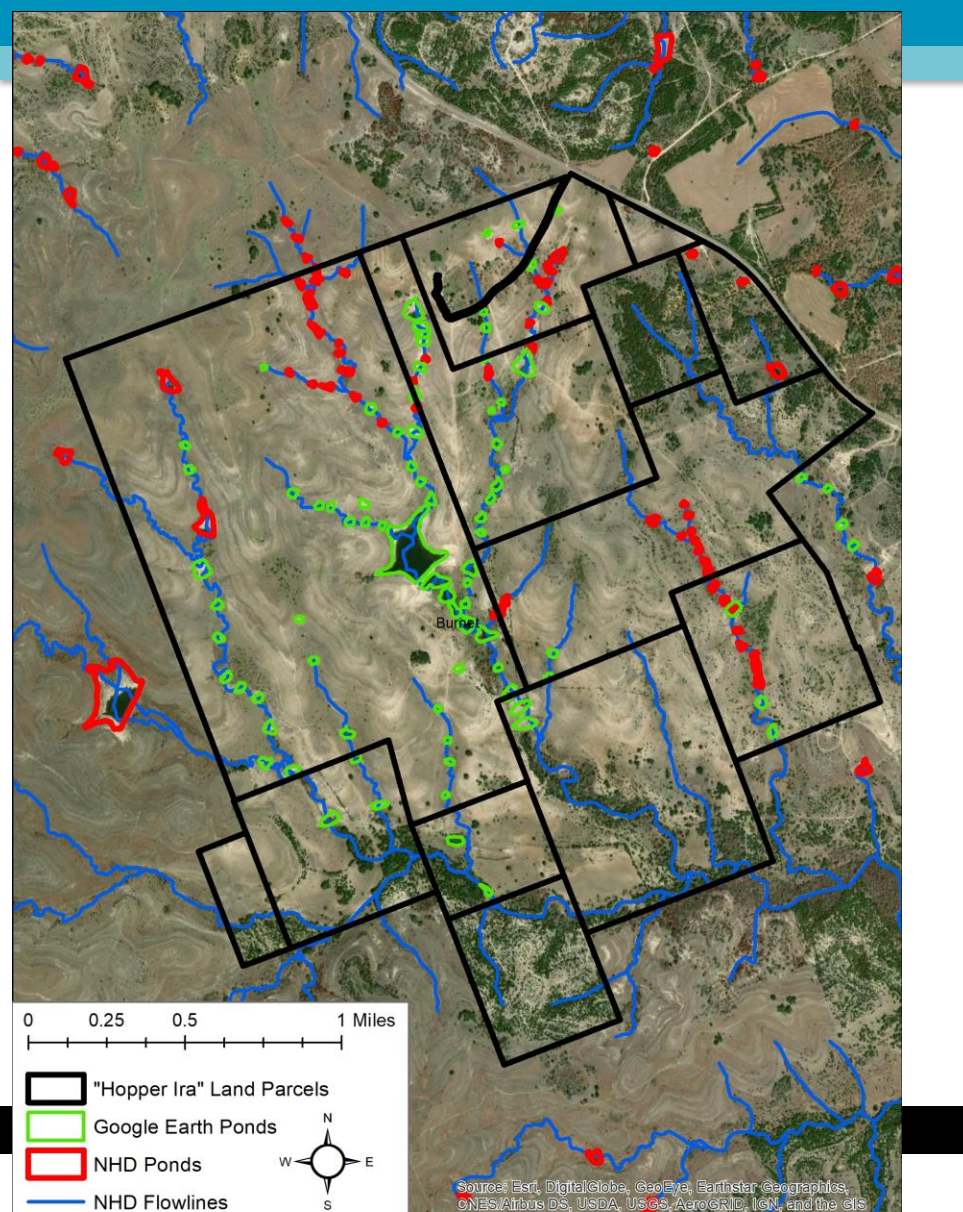
**TWDB Contract Number  
1800012283**

*Prepared By*

Jordan Furnans, Ph.D., P.E., P.G.  
Michael Keester, P.G.  
LRE Water, LLC

Kirk Kennedy, P.G.  
Kennedy Resource Company

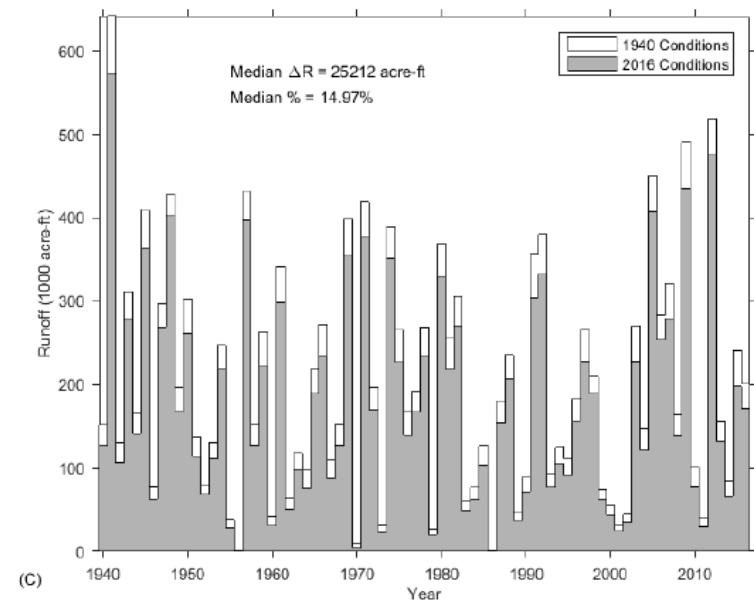
# HOW “BIG” IS THIS PROBLEM?



No limitation on # of Ponds Per Parcel

As long as each pond < 200 acre-ft storage

Streamflow reductions: 2% to 20%  
Varying by basin, year





# LLANO RIVER - 3-MILE STRETCH







Jordan Furnans, PhD, PE, PG  
Vice President – TX Operations

[Jordan.Furnans@lrewater.com](mailto:Jordan.Furnans@lrewater.com)

512-736-6485