

The background image shows the entrance to the Upper Trinity Regional Water District. On the left, a tall flagpole holds three flags: the district's logo flag (green and white), the Texas state flag, and the United States flag. To the right, a stone wall features the text 'UPPER TRINITY' in large green letters, 'REGIONAL WATER DISTRICT' in smaller black letters, and '9008 TLEALY' below it. The scene is set against a blue sky with light clouds and lush green trees and bushes.

# Upper Trinity Regional Water District

## Water for the People...It Takes Leadership

Society of America Military Engineers  
Fort Worth Chapter

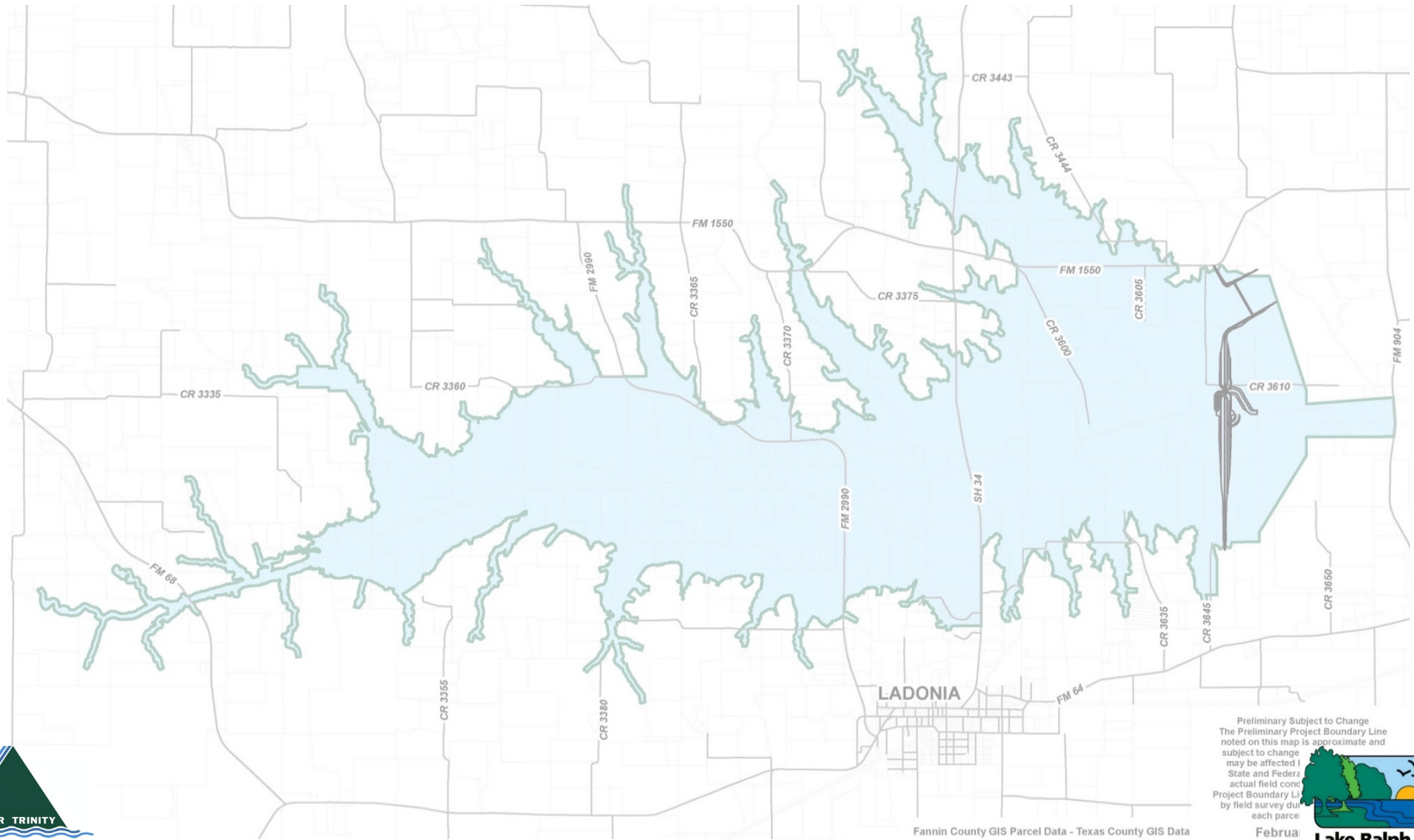
October 7, 2019

Edward M. Motley, P.E., BCEE  
Lake Ralph Hall Program Manager

# A Quote From Jack

*“We’re wasting our time talking about the problem.  
We need to start talking about solutions.”*

# Upper Trinity Regional Water District





# Upper Trinity Regional Water District

Created by the Texas Legislature in 1989  
under Article XVI, Section 59 of the  
Texas Constitution

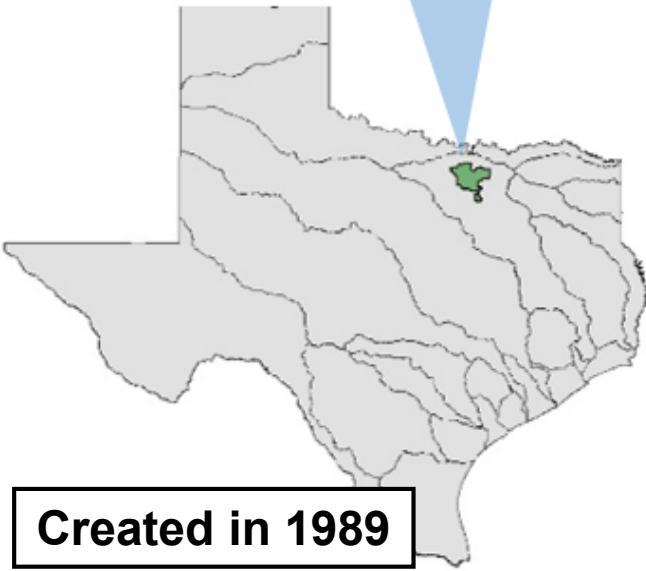
Authorized to provide to its members  
and customers services related:

- Water Supply
- Wastewater
- Solid Waste





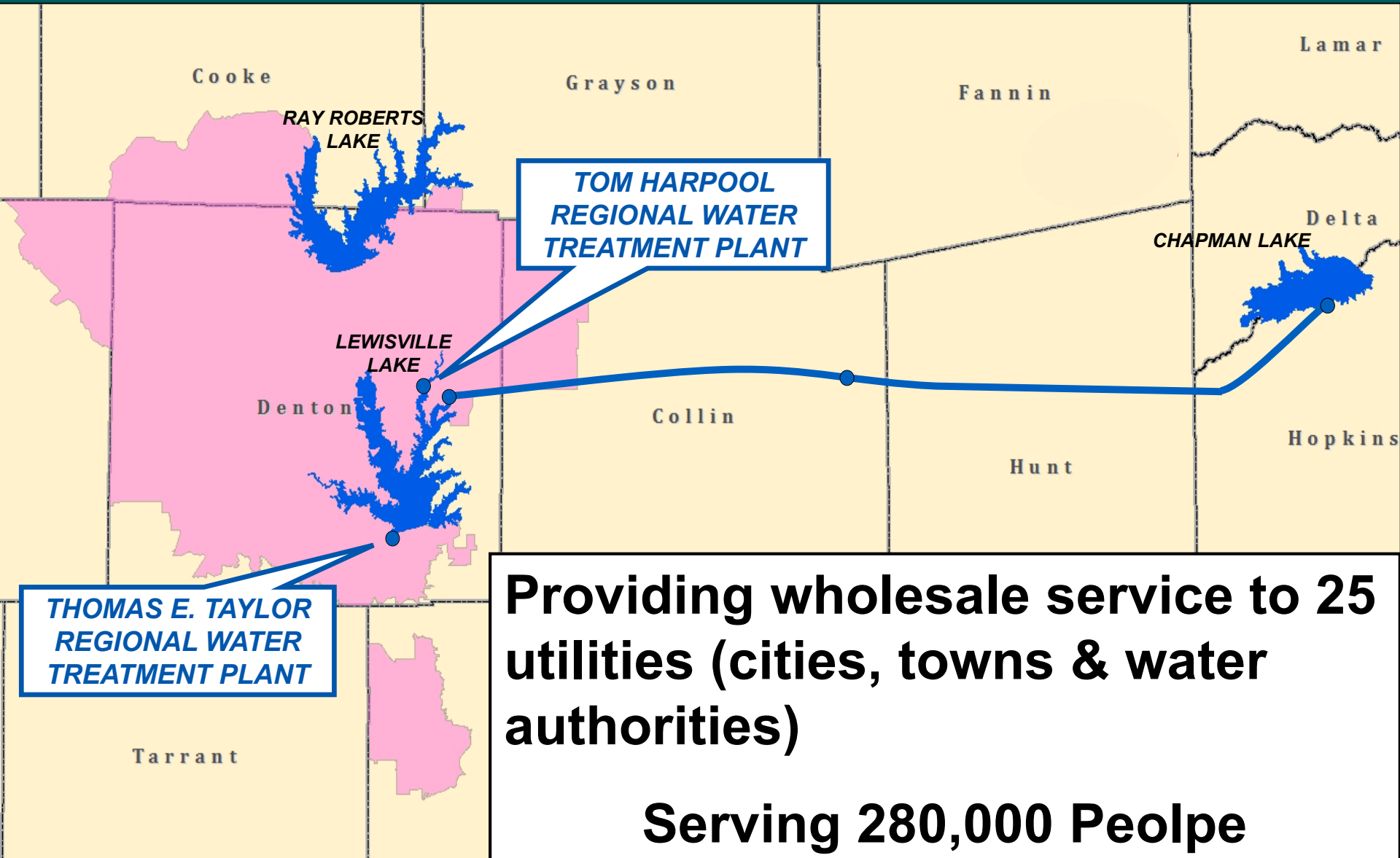
# Upper Trinity Regional Water District Members and Customers



Argyle	Double Oak
Argyle WSC	Flower Mound
Aubrey	Highland Village
Bartonville	Irving
Celina	Justin
Copper Canyon	Krum
Corinth	Lake Cities MUA
Cross Timbers WSC	Lewisville
Denton	Mustang SUD
Denton County	Northlake
DCFWSD # 1A	Pilot Point
DCFWSD # 7	Ponder
DCFWSD # 8A	Prosper
DCFWSD #10	Providence Village
DCFWSD # 11A	Sanger

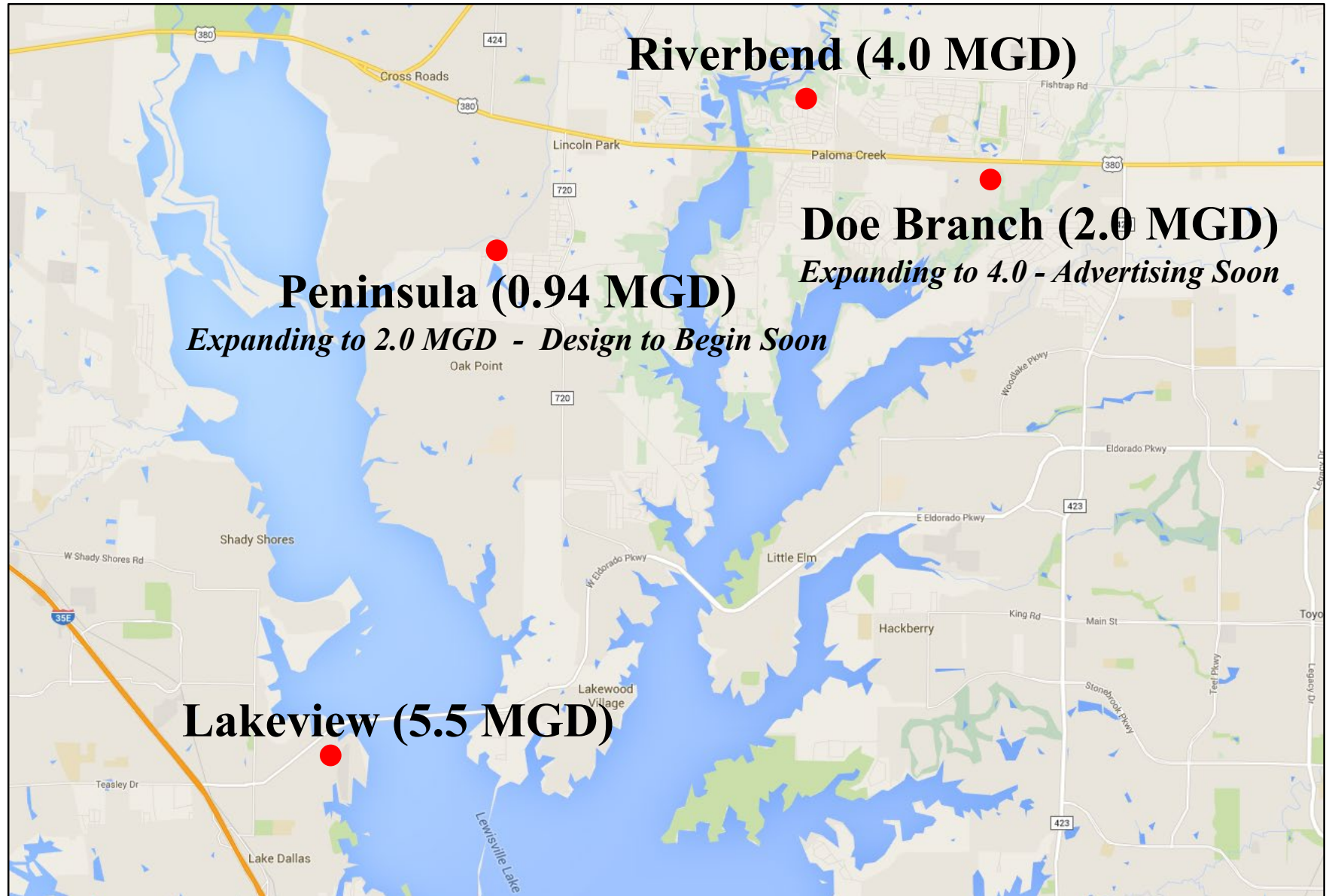
# Upper Trinity Regional Water District

## Water System Service Area & Sources

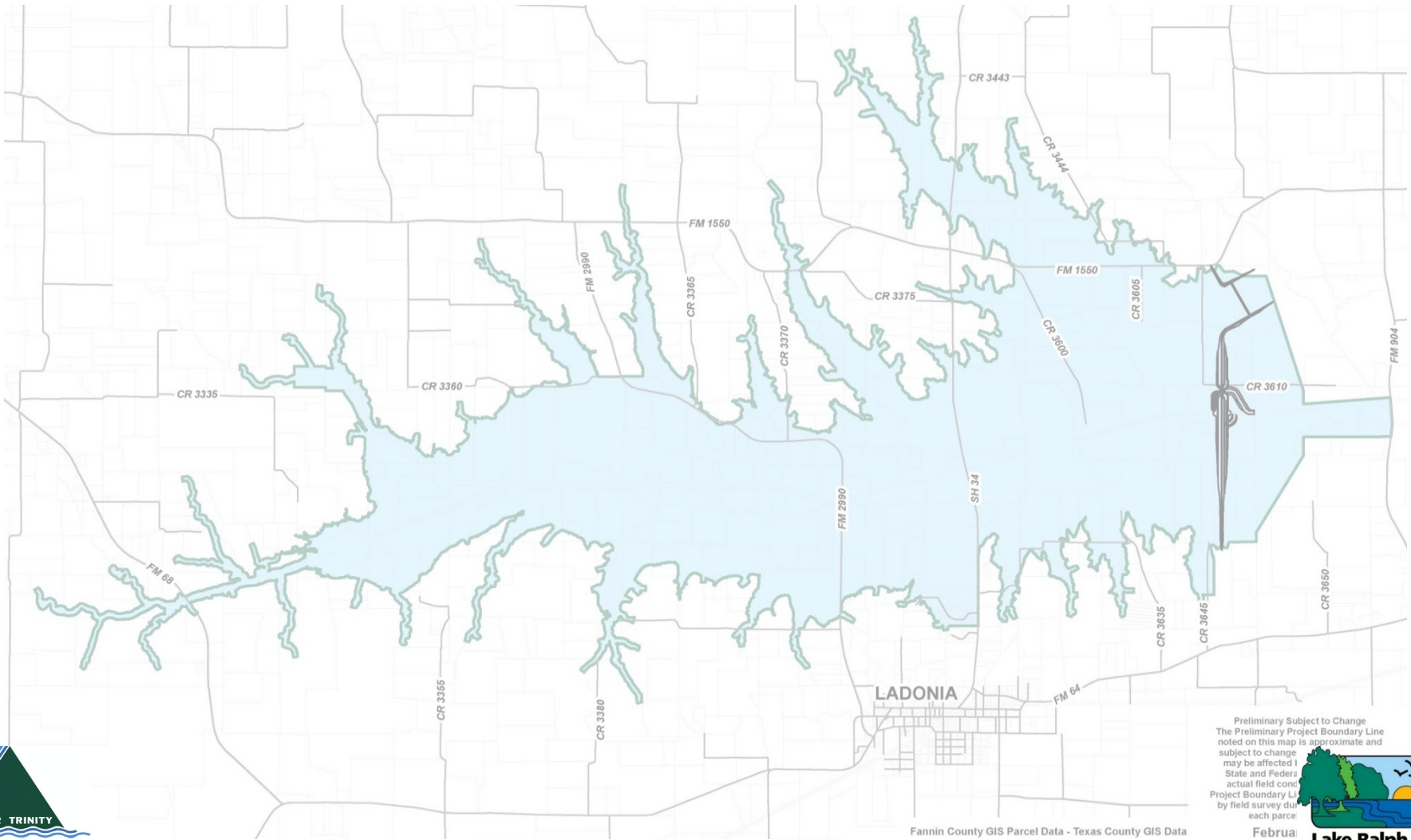




# Water Reclamation Plants



# UTRWD Future Water Supplies



Preliminary Subject to Change  
The Preliminary Project Boundary Line  
noted on this map is approximate and  
subject to change  
may be affected by  
State and Federal  
actual field conditions  
Project Boundary Line  
by field survey during  
each parcel

February



Lake Ralph Hall

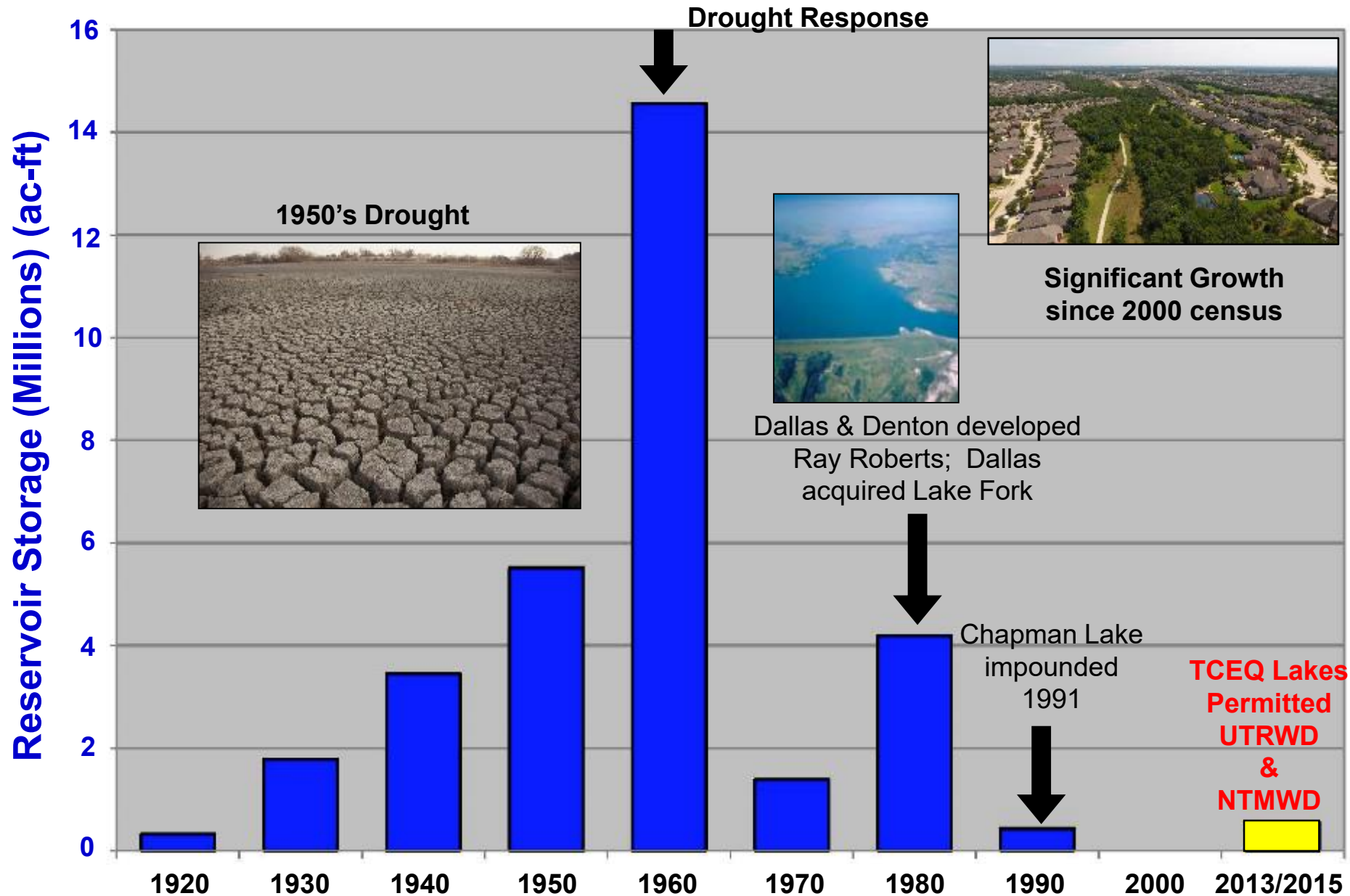


REGIONAL WATER DISTRICT

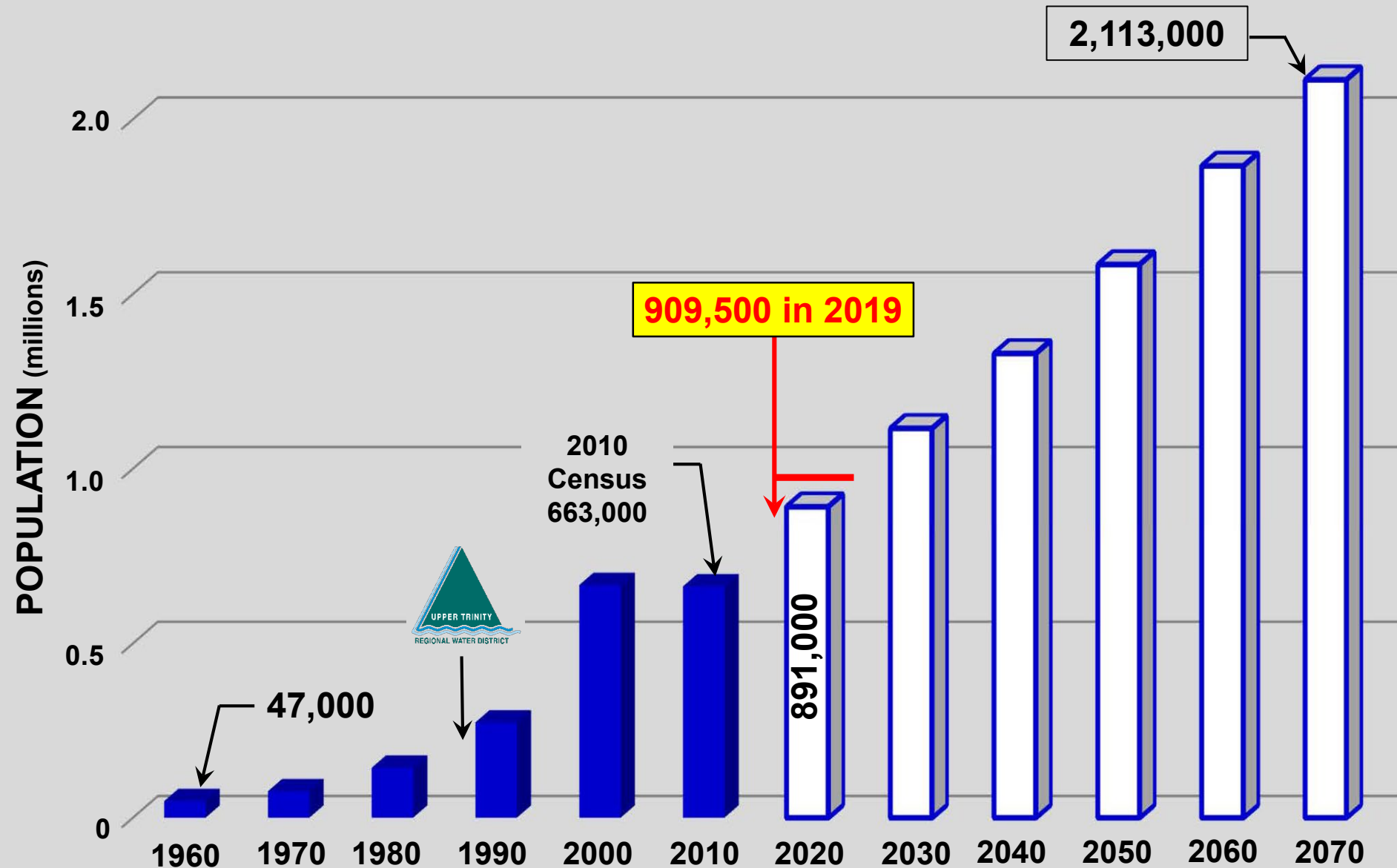
Fannin County GIS Parcel Data - Texas County GIS Data



# Texas Reservoir Storage Added By Decade



# Denton County Population Growth

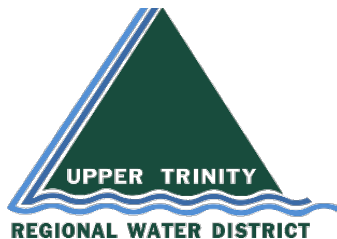




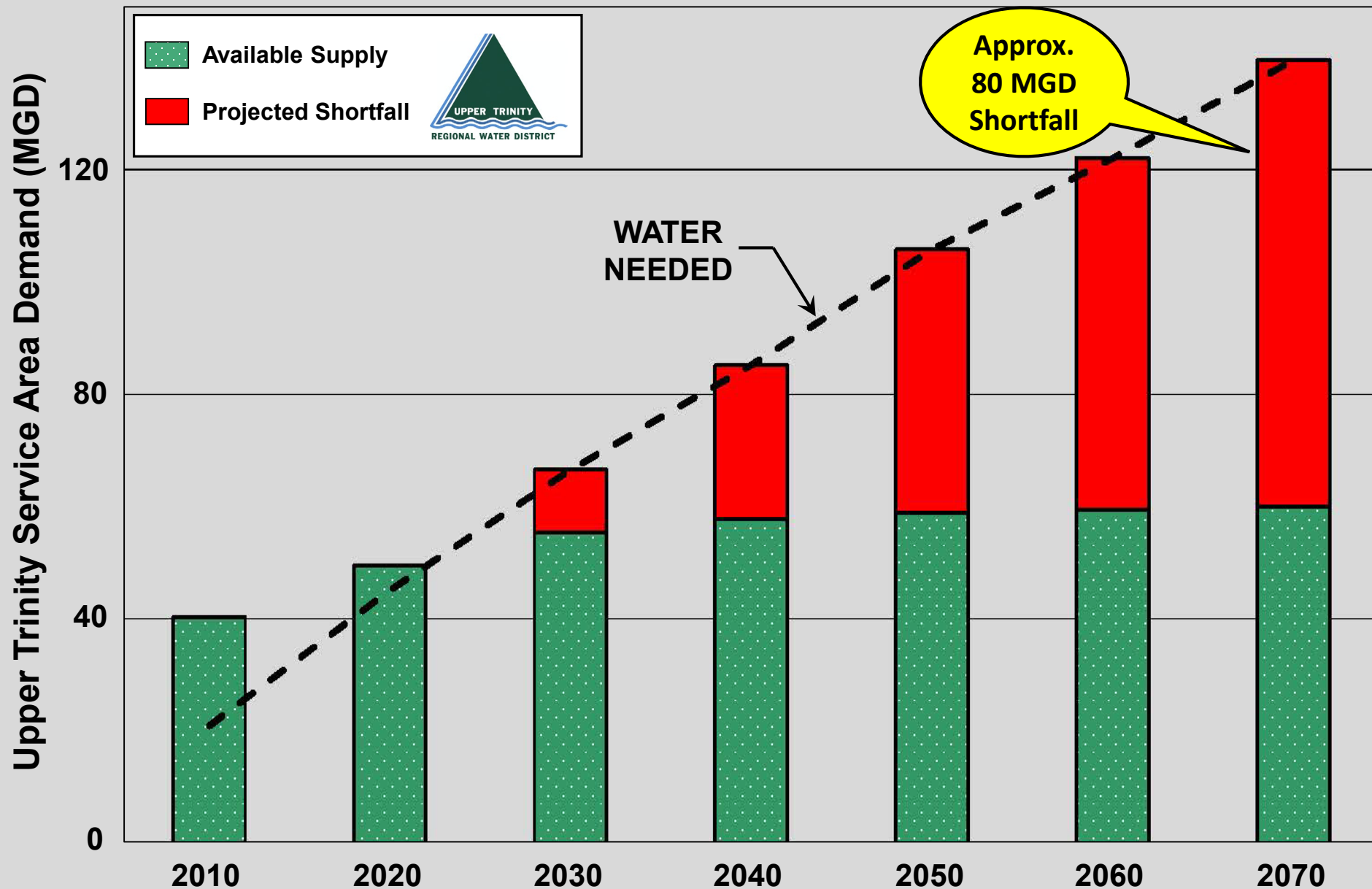
# Regional Water Conservation Programs



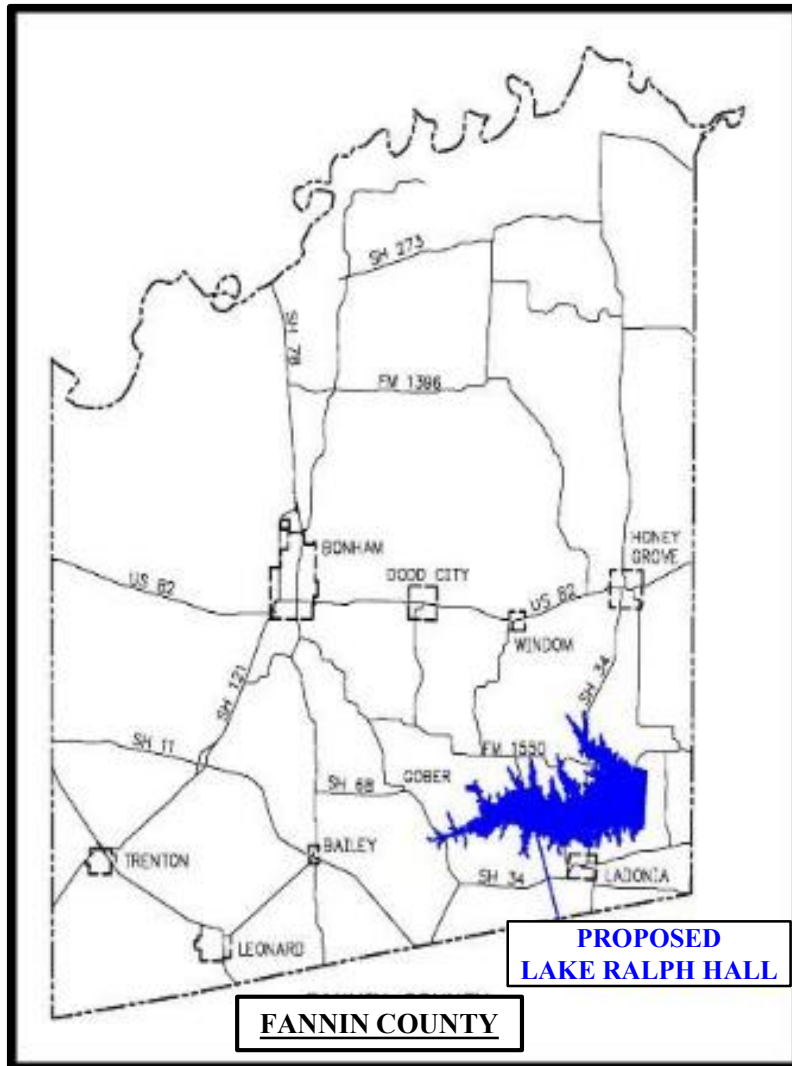
**SaveTarrantWater.com**  
Save water. Nothing can replace it.



# Water Resources Projections



# Water Supply Needed – Mid-2020s

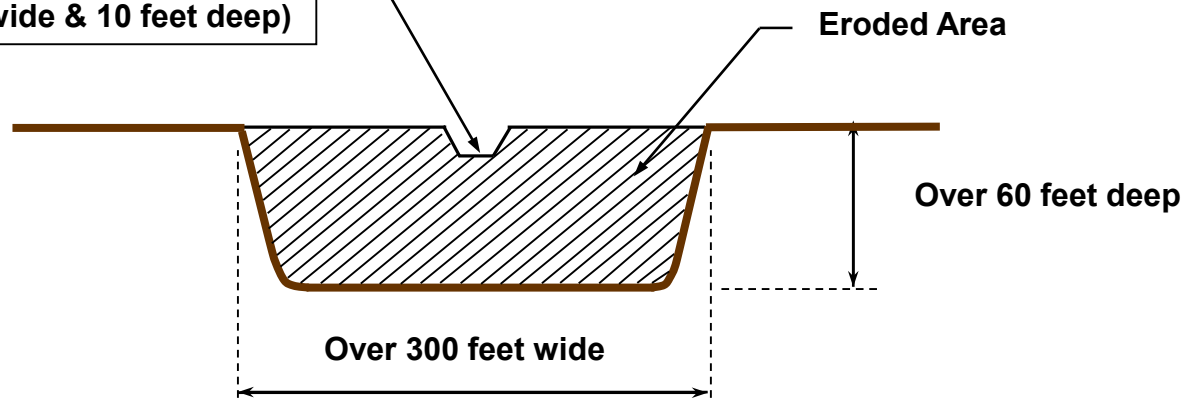




# North Sulphur River

- River channelized in the late 1920's
- Agricultural Project
- Intended to improve drainage

Original Channel Cross-Section  
(Approx. 16 feet wide & 10 feet deep)



**Current Channel Cross-Section**





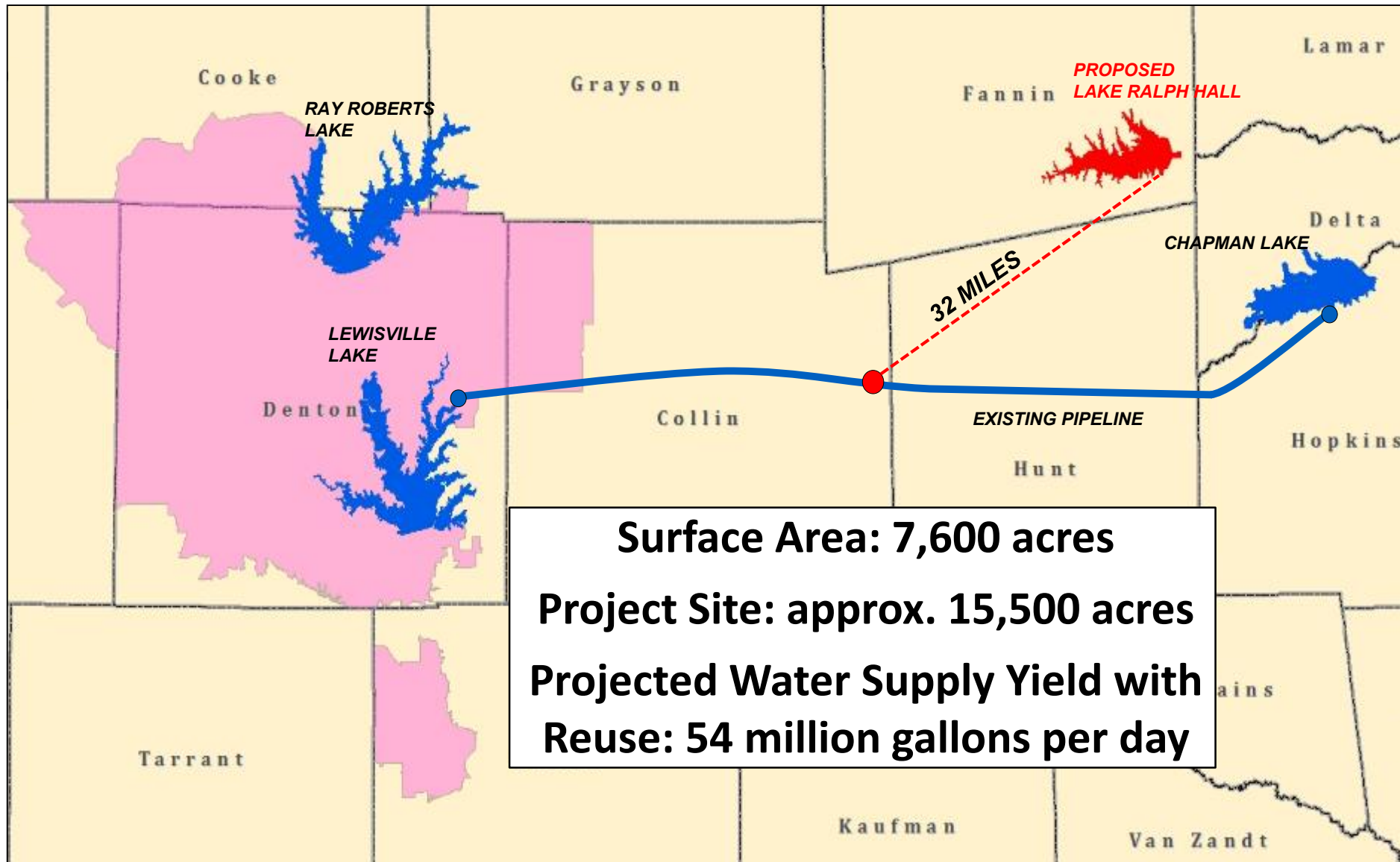
**Channel Upstream of Hwy 34 Bridge**

**Nov. 2008**



# Upper Trinity Regional Water District

## Water System Sources





# Lake Ralph Hall Status

- Water Rights Permit No. 5821 Issued by TCEQ December 2013
- Section 404 Clean Water Act Permit
  - Application filed -- November 2006
  - Environmental Impact Statement (EIS) initiated -- October 2008
  - Final EIS noticed -- September 27, 2019



Fannin County GIS Parcel Data - Texas County GIS Data

Preliminary Subject to Change  
The Preliminary Project Boundary Line  
noted on this map is approximate and  
subject to change  
may be affected by  
State and Federal  
actual field conditions  
Project Boundary Line  
by field survey during  
each parcel

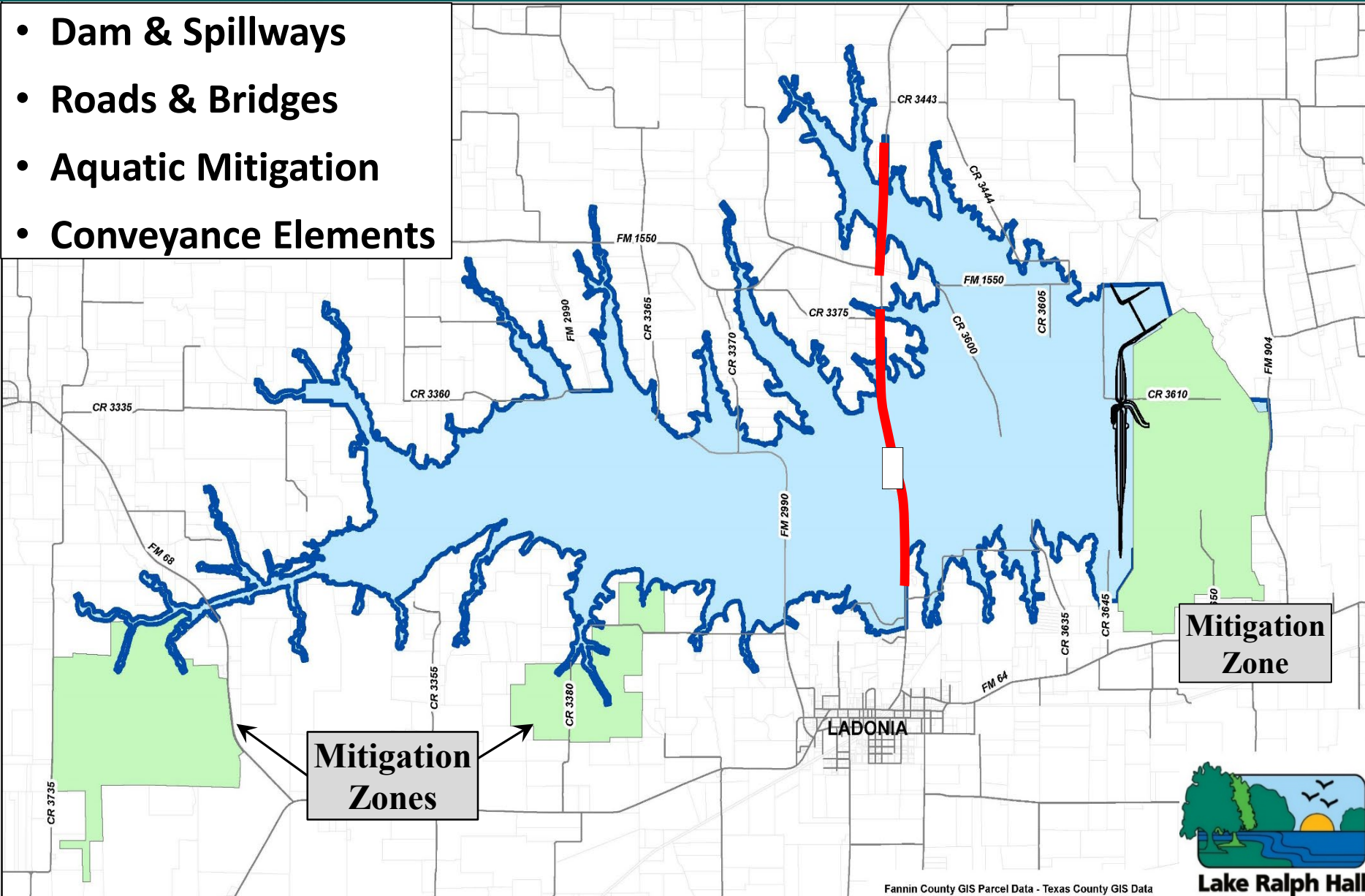
February



Lake Ralph Hall

# Proposed Lake Ralph Hall

- Dam & Spillways
- Roads & Bridges
- Aquatic Mitigation
- Conveyance Elements





# Lake Ralph Hall Schedule



2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

**Planning  
2 Years**

**State & Federal Permitting  
17 Years**

**Land Acquisition  
15 Years**

**Design  
7 Years**

**Construction  
5 Years**

**Filling  
3 Years**



# Leon Hurse Dam Design

*Embankment  
EL. 566 ft.*

*Principal  
Spillway*

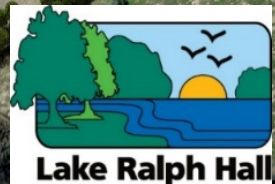
**Embankment Length = 2.32 miles**

**Max. Height = 103 feet**

**Top Width = 20 feet**

*North Sulphur River*

*Emergency  
Spillway  
EL. 556 ft.*





# SH 34 Bridge

**Length of Bridges = 1.25 miles**

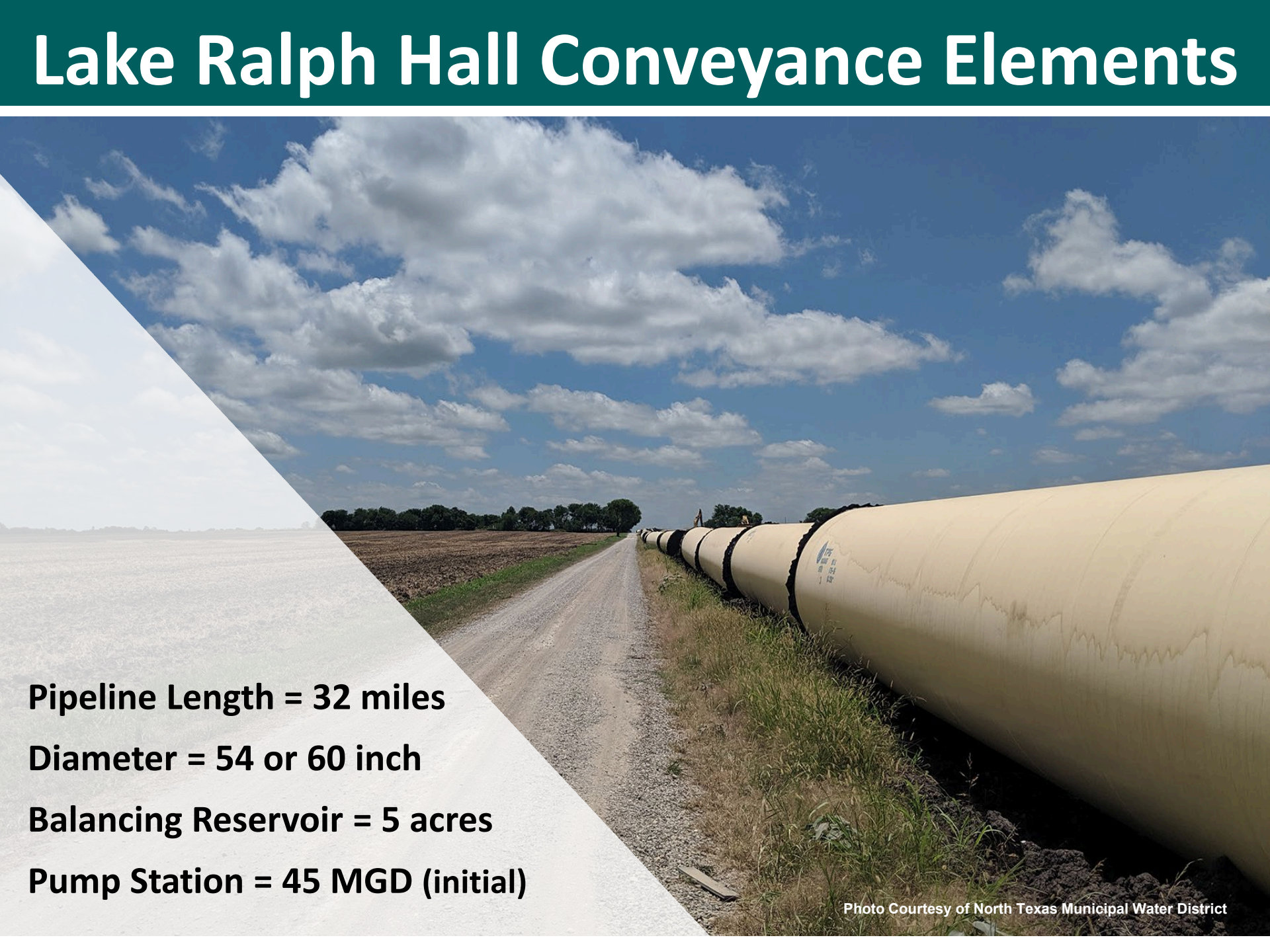
**Overall Width of Bridge Section = 58 ft.**

**Min. Clearance over Main Channel = 40 ft.**





# Lake Ralph Hall Conveyance Elements

A photograph showing a long, yellow pipeline running parallel to a dirt road. The pipeline is supported by black straps. The background features a flat landscape with some trees in the distance under a bright blue sky with scattered white clouds. A white diagonal overlay covers the left side of the image, containing project details.

**Pipeline Length = 32 miles**  
**Diameter = 54 or 60 inch**  
**Balancing Reservoir = 5 acres**  
**Pump Station = 45 MGD (initial)**

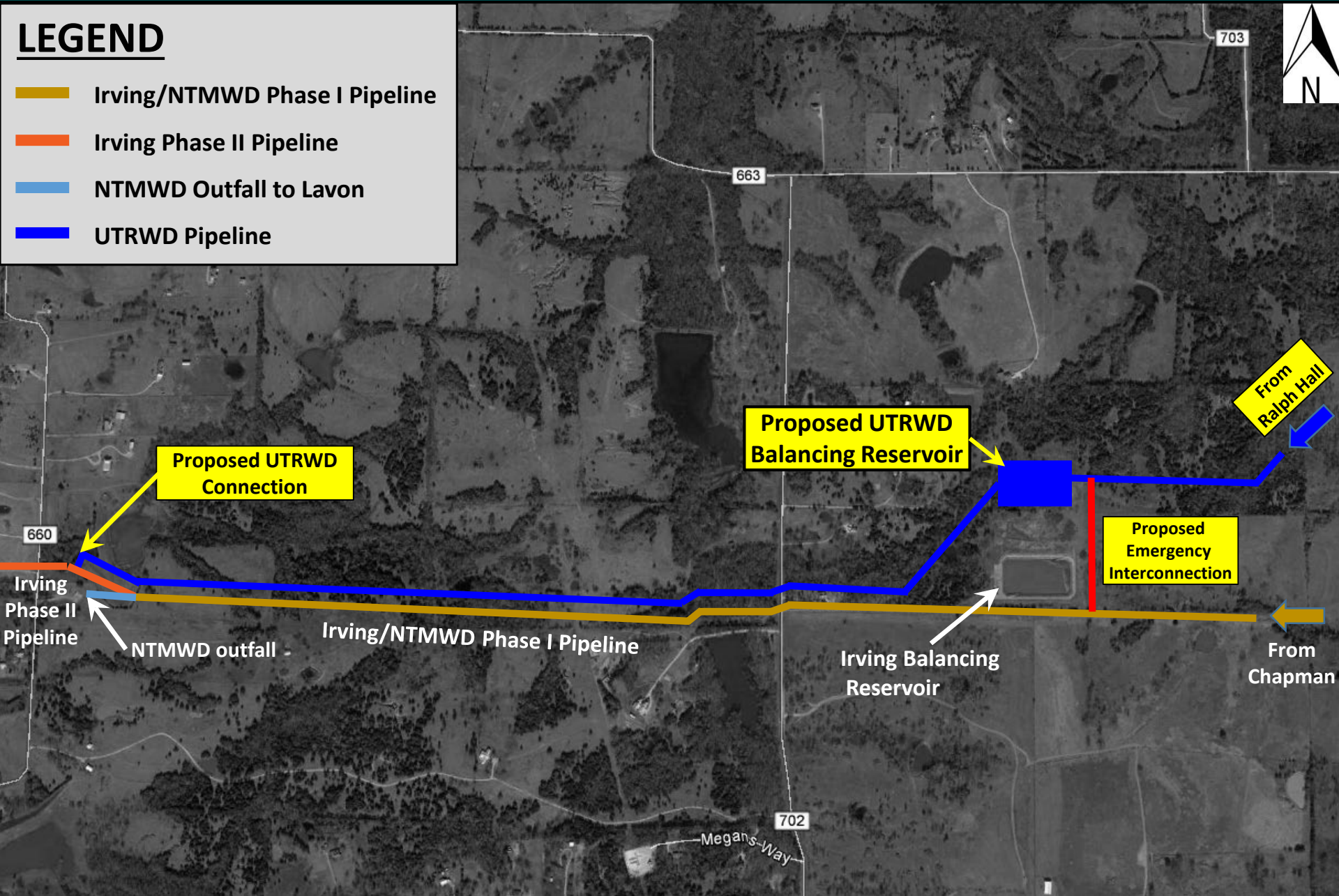
Photo Courtesy of North Texas Municipal Water District



# Lake Ralph Hall Conveyance System

## LEGEND

- Irving/NTMWD Phase I Pipeline
- Irving Phase II Pipeline
- NTMWD Outfall to Lavon
- UTRWD Pipeline





# Lake Ralph Hall Aquatic Mitigation

**Stream Enhancement &  
Restoration = 52 miles  
(Ephemeral & Intermittent)**

**Creation of 8 acres of  
emergent wetlands**





# SUPPORT FACILITIES

## OVERVIEW:

### *Administration Campus*

- Located on SH 34
- Lake Management & Administration
- Meeting Facility

### *Maintenance*

- Located near the Dam
- Lake Ralph Hall Operations & Maintenance





# CLEARING & DEMOLITION

## OVERVIEW:

**Goal:** Clear Navigation Hazards & Potential Water Quality Threats

**Clearing Limits:** Defined by UTRWD's Use Plan for Lake Ralph Hall

- Clearing Selected Areas Within Conservation Pool
- Demolition of Existing Structures & Fence Removal
- Grading to Remove Navigation Hazards

Photo Courtesy of North Texas Municipal Water District



A photograph of two construction workers wearing hard hats (one orange, one white) and work shirts, leaning over a table and reviewing architectural plans. In the foreground, two more hard hats (one red, one yellow) and a pair of orange gloves are visible on the table. The background shows a construction site with scaffolding and a building under construction.

# PROGRAM SUPPORT

## OVERVIEW:

**Goal:** Support the Lake Ralph Hall Program & Enhance UTRWD's Capital Program Capabilities

UTRWD will Manage the Program with Internal Staff, But Will Employ Consultant Staff to Fill Gaps

# Next Steps for Lake Ralph Hall

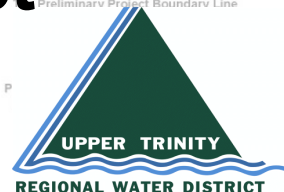
- **Secure Mitigation Plan Approval**
  - **Projected November 2020**
- **Acquire Federal 404 Construction Permit**
  - **Projected early 2020**
- **Receive Funding**
- **Complete Land Acquisition Program**
- **Prepare Final Design & Construct Project**

**Texas Water**  
**Development Board**



**Lake Ralph Hall**

Fannin County GIS Parcel Data - Texas County GIS Data







# STAY UP TO DATE

**Monitor the Website:** [www.lakeralphhallinfo.com](http://www.lakeralphhallinfo.com)

RFQs, RFPs and Bids will be advertised on CIVCAST and other media as required by law

## **Meetings with UTRWD Staff**

- UTRWD is Committed to an Open and Fair Procurement Process
- We Understand Your Needs
- Will Meet as Time Permits, up to the Date of a Bid or Proposal Solicitation

# Other Upcoming Programs

- Harpool WTP Expansion
- Ground Storage at the Southwest PS
- Additional Elevated Storage
- Ground Storage at Taylor WTP
- Pipeline Condition Assessment and Replacement
- TxDOT Driven Relocations





# Questions?



Lake Ralph Hall  
Consulting and Contracting  
Industry Briefing  
*August 8, 2019*