

# Water for the People...It Takes Leadership

Fannin County, Texas  
Commissioners Court Meeting  
May 11, 2021

Larry N. Patterson, P.E.  
Executive Director

UPPER TRINITY

REGIONAL WATER DISTRICT  
1908 KEELY

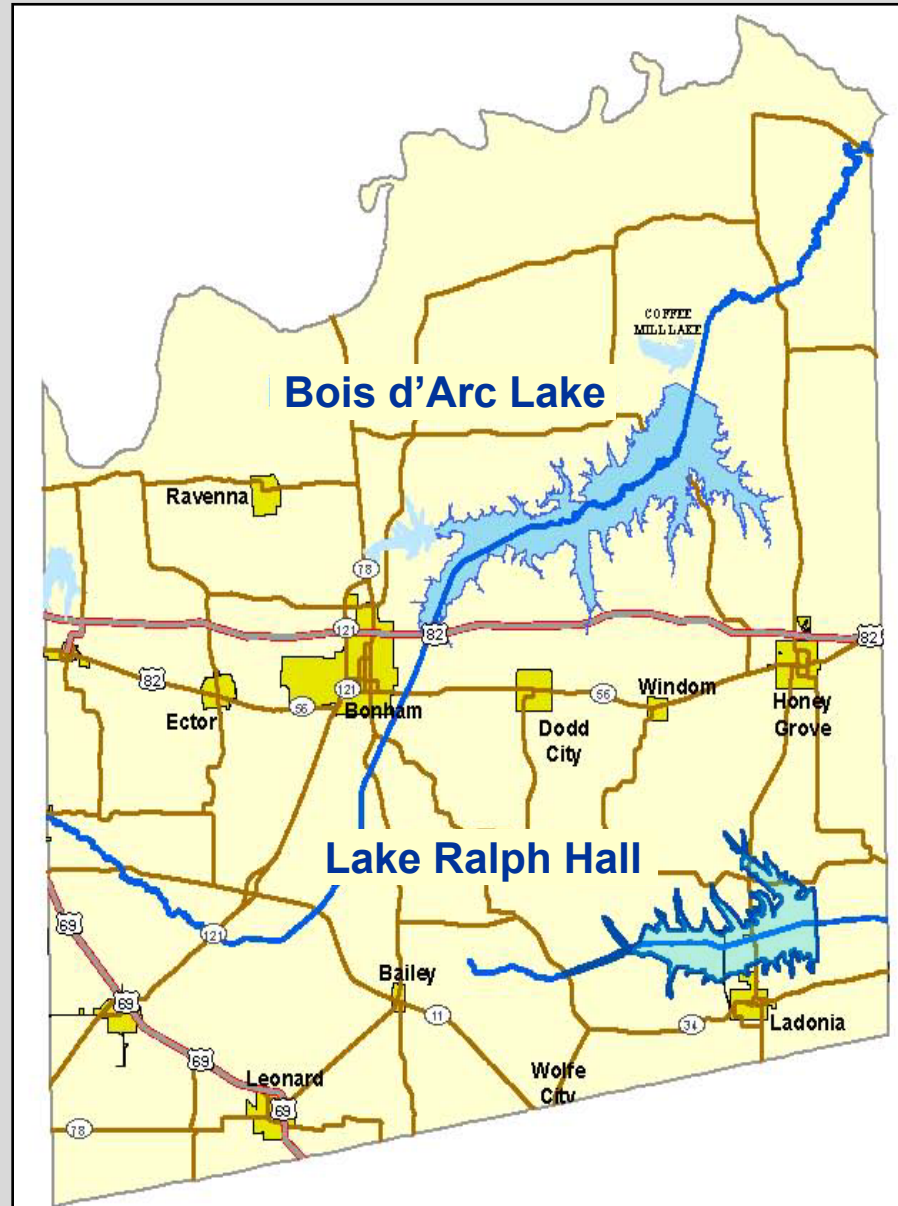
# Water Supply Needed – Mid-2020s



## Bois d'Arc Lake

16,500 acres

113 MGD



## Lake Ralph Hall

7,600 acres

35 MGD



Go Ahead "Jump-in"

# Lake Ralph Hall


- “Unique Site” - - Deep Channel
- No Oil & Gas Wells
- Reasonable mitigation requirements
- Helps Restore Environment
- Water for Fannin County and UTRWD
- Promotes Economic Development
- Local Support for Lake

*“A Great Lake Site”*



# YES to - - Lake Ralph Hall Project

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**



**WATER USE PERMIT**

Type §§ 11.121, 11.085

Permit No. 5821

Permittee: Upper Trinity Regional Water District

Filed: August 13, 2004

Purposes: Municipal, Industrial, Agricultural, and Recreation

Watercourse: North Sulphur River, Tributary of the Sulphur River

Address: P.O. Drawer 305  
Lewisville, Texas 75067

Granted: December 11, 2013

Counties: Fannin, Collin, Cooke, Dallas, Denton, Grayson, and Wise

Watershed: Sulphur and Trinity River Basins

WHEREAS, Upper Trinity Regional Water District (UTRWD, Applicant or Permittee) applied for a water use permit to construct and maintain a dam and reservoir (Lake Ralph Hall) with a maximum capacity of 180,000 acre-feet of water and a surface area of approximately 8,500 acres, on the North Sulphur River, tributary of the Sulphur River, Sulphur River Basin in Fannin County for recreation purposes; and

WHEREAS, Applicant seeks to divert and use not to exceed 45,000 acre-feet of water per year from the perimeter of Lake Ralph Hall for municipal, industrial, and agricultural purposes at a maximum combined diversion rate of 205 cfs (92,000 gpm); and

WHEREAS, Applicant indicates that diversions from the reservoir may be "overdrafted" as a part of the system operation with existing UTRWD supplies from other basins to achieve maximum conservation of limited water resources; and

WHEREAS, Applicant indicates that of the 45,000 acre-feet of water per year requested, 34,082 acre-feet of water per year is available on a firm basis; and

This water use permit is issued subject to all superior and senior water rights in the Sulphur River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this permit.

This water use permit is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State resources exercised by the Commission.




**DEPARTMENT OF THE ARMY PERMIT**

Permittee: Upper Trinity Regional Water District

Permit No. SWF-2003-00336

Issuing Office: Fort Worth District



NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:** The Project would include the construction of an earth-filled dam embankment across the valley of the North Sulphur River with a concrete uncontrolled principal spillway located adjacent to the existing channel of the river and an excavated unlined earthen channel emergency spillway located within the embankment on the former northern floodplain of the river. The embankment placed would vary between 566 feet and 568 feet North American Vertical Datum of 1988 (NAVD88) to account for anticipated settlement of the embankment thus providing an effective elevation of 566 feet NAVD88 after settlement and would adjoin the existing ground surface on both ends of the structure. The proposed Lake Ralph Hall reservoir would have a conservation pool storage capacity of approximately 160,235 acre-feet (AF) (at an elevation of 551.0 feet above MSL), and at that capacity, the surface area of the reservoir would be approximately 7,568 acres. The maximum depth of the reservoir at the dam would be approximately 90 feet. The firm annual yield of the proposed project would be approximately 34,050 AF/year.

Raw water would be conveyed from the Project reservoir in the Sulphur River Basin via a proposed 60-inch raw water transfer pipeline. Water will be conveyed to the existing Tom Harpool Water Treatment Plant (WTP) located adjacent to Lewisville Lake in the Trinity River Basin or directly into Lewisville Lake for use at the existing Thomas E. Taylor Regional WTP. Associated with the pipeline, a 4.5-acre balancing reservoir is proposed in uplands as part of the pipeline portion of the project near the existing Irving Balancing Reservoir. Additionally, State Highway (SH) 34 and County Roads (CR) 3444, 3443 and 3640 will require some realignment and upgrade.

**Project Location:** The dam would be located on the North Sulphur River approximately 3.6 miles northeast of Ladonia, Fannin County, Texas. The proposed dam coordinates are approximately Latitude 33 degrees 27'44.73" seconds N and Longitude 95 degrees 54'06.55" W. The proposed project and related activities are described and shown in section 1.5 of the Final Environmental Impact Statement prepared for the project and shown in the attached figures.

**Permit Conditions:**

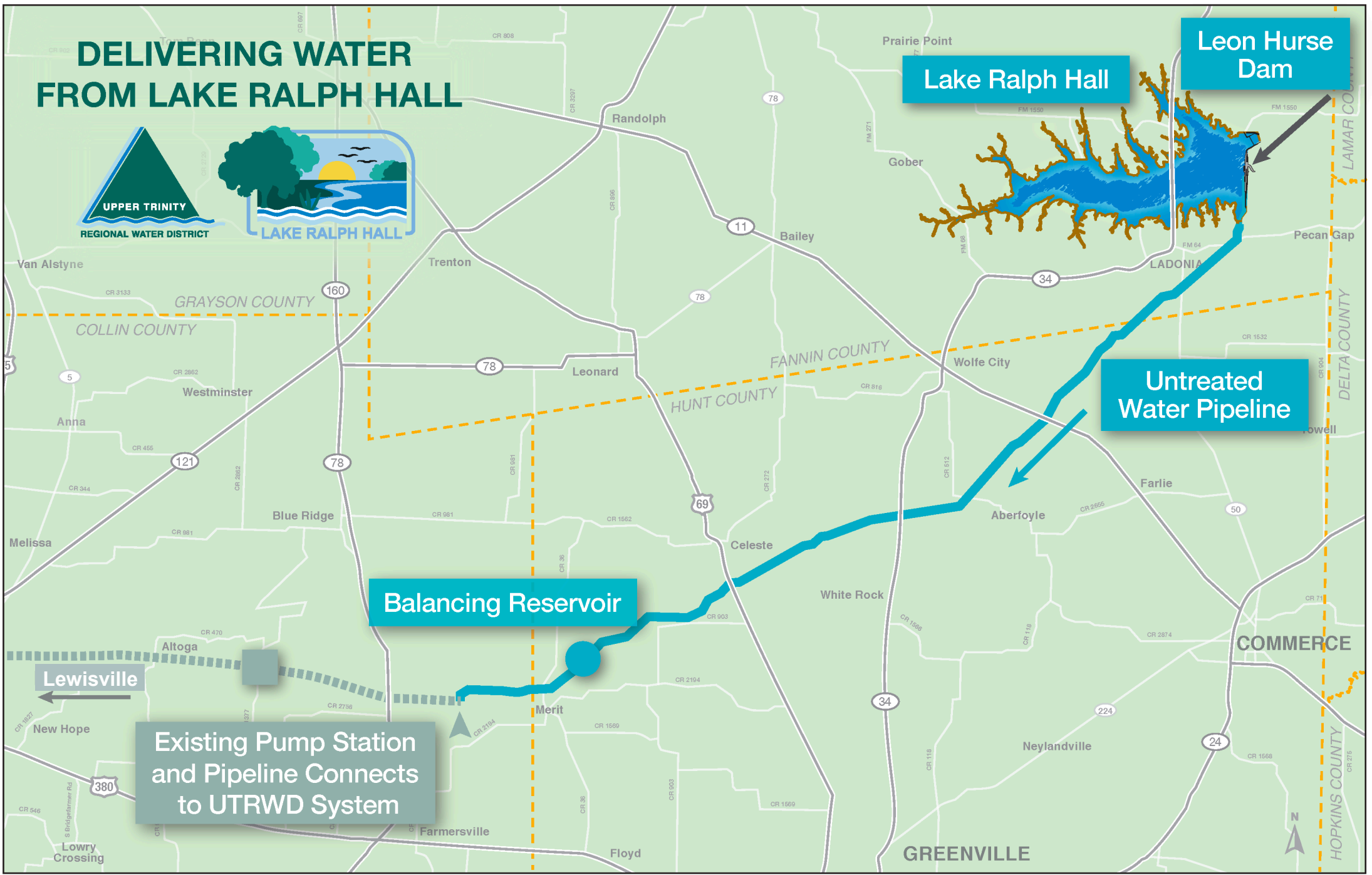
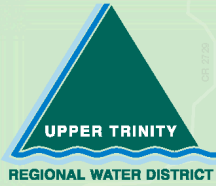
**General Conditions:**

1. The time limit for completing the work authorized ends on December 31, 2030. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the date is reached.

**Issued Dec. 11, 2013**

**Issued Jan. 30, 2020**

# DELIVERING WATER FROM LAKE RALPH HALL



Lake Ralph Hall

Leon Hurse Dam

Untreated Water Pipeline

Balancing Reservoir

Existing Pump Station and Pipeline Connects to UTRWD System

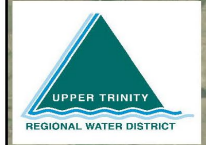
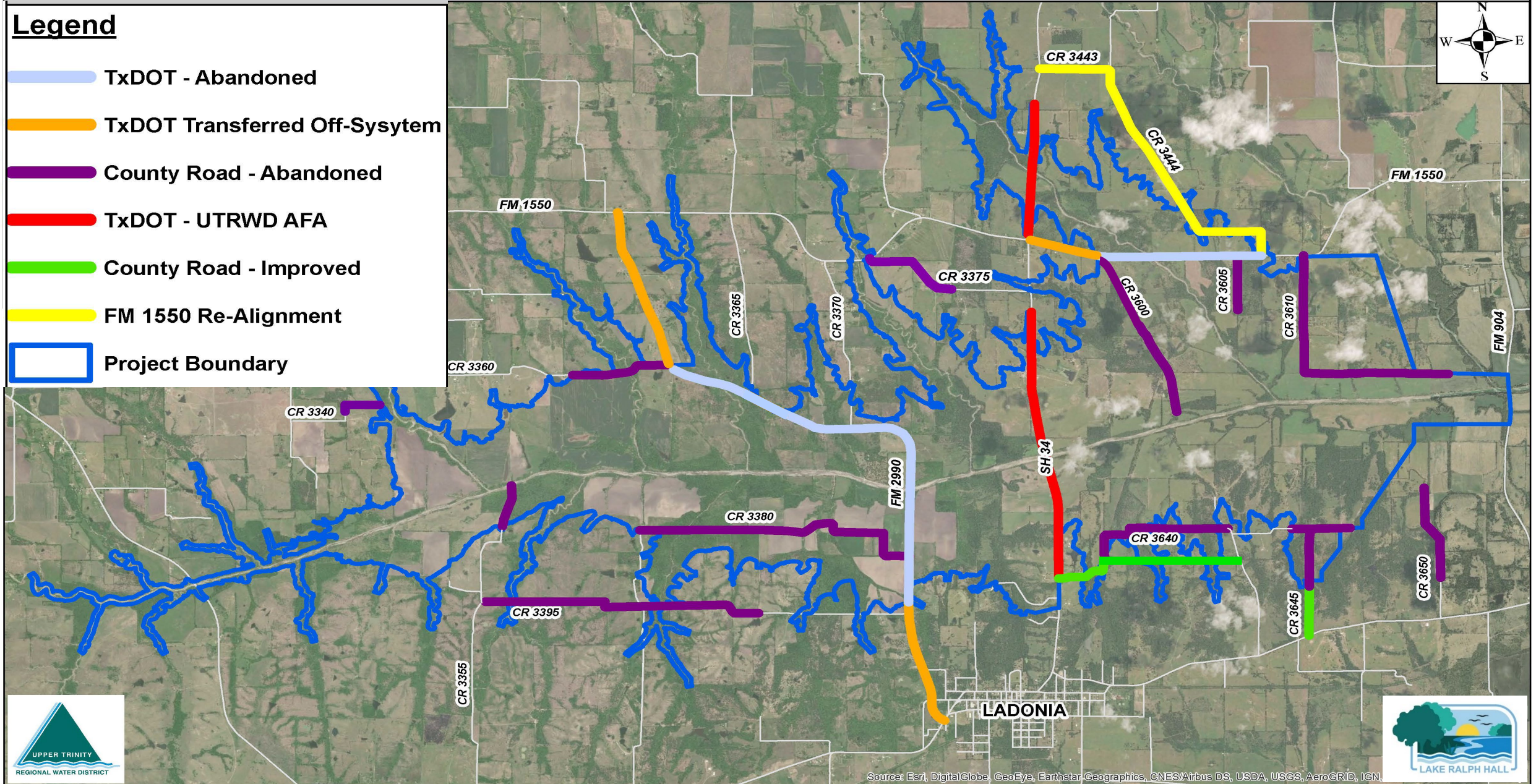
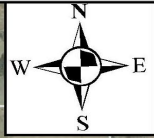
Lewisville



# Lake Ralph Hall - - Roadway Relocations

**Legend**

- TxDOT - Abandoned
- TxDOT Transferred Off-System
- County Road - Abandoned
- TxDOT - UTRWD AFA
- County Road - Improved
- FM 1550 Re-Alignment
- Project Boundary



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN.

# North Sulphur River Bridge - - SH 34

Bridge Length = 1.1 miles

Overall Width = 59 ft.

Includes Bike/Ped Path = 12 ft.

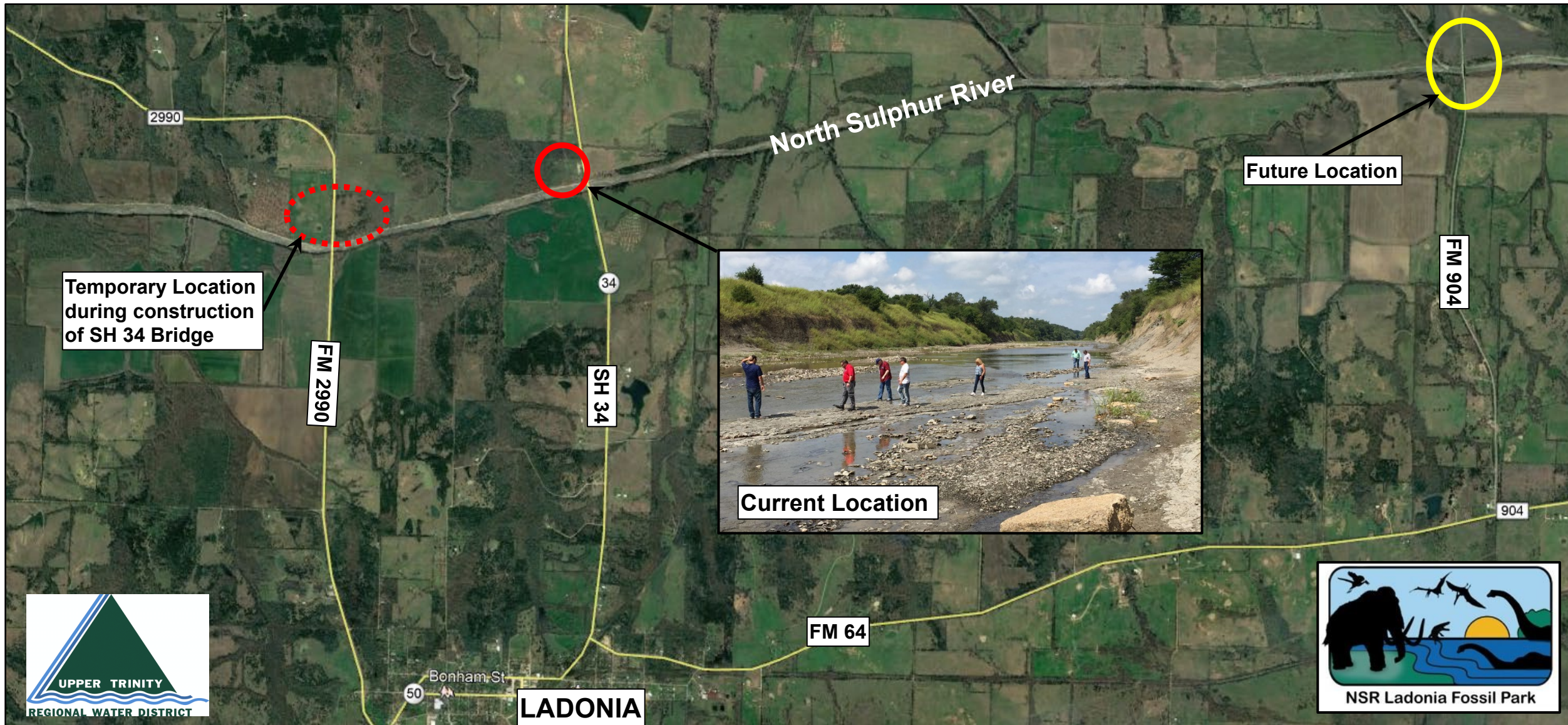
Clearance at Main Channel = 30 ft.

## Flatiron Constructors, Inc.

- Construction begins - - June 2021
- Bridge to be transferred to TxDOT



# Ladonia NSR Fossil Park - -Transition





# Leon Hurse Dam

- Embankment Length – 2.3 Miles
- Permitted Storage Capacity – 180,000 ac-ft
- Maximum Height – 113 feet

*Earthen Dam  
Embankment*

*Service Spillway  
& Outlet Works*

*Emergency  
Spillway*

*FM 1550*

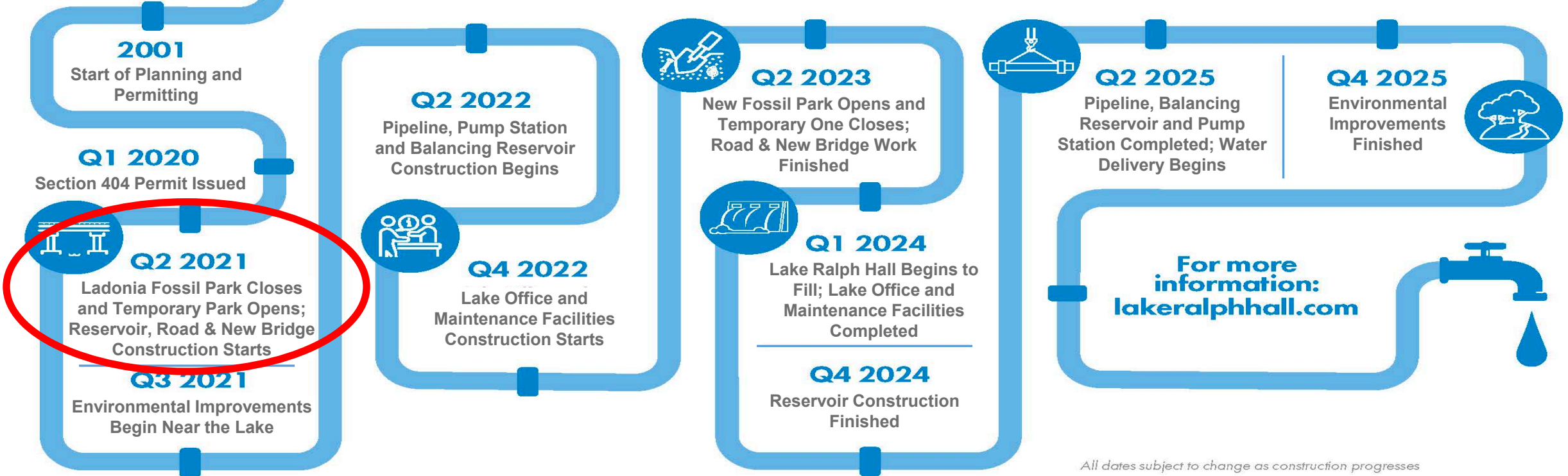
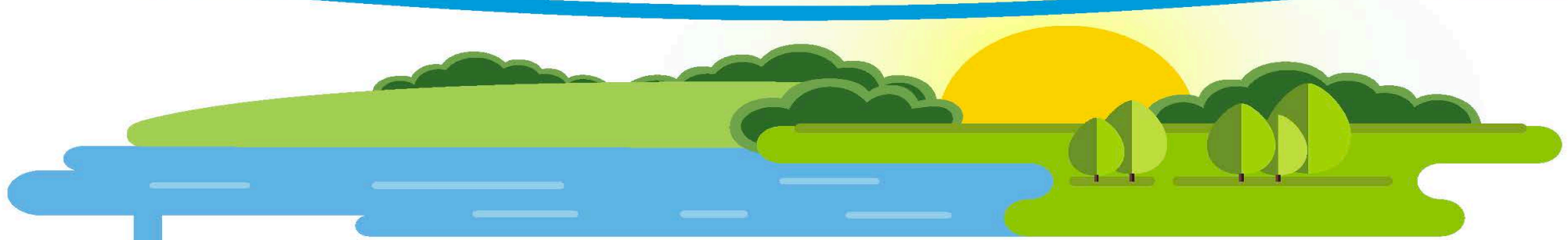
Granite Construction Company

Construction Begins - - June 2021





# PROJECT SCHEDULE



# Overview - - LRH Development Agreement Executed April 2008

## **Fannin County Committed to Support:**

- **Permitting & Planning**
- **Land Acquisition**
- **Adjustments to Roadways**
- **Zoning around the Lake**
- **Water Quality Protection**
- **Economic Development**
- **Exercise Police Powers to Protect Public Health & Safety**



# Next Steps for Lake Ralph Hall

- **Begin Construction - - June 2021**
- **Continue Land Acquisition Program**
- **Complete Cultural Resources Surveys**
- **Initiate development of a Comprehensive Plan and Zoning Regulations**
- **Fannin County / UTRWD - - evaluate implementation of Other Joint Activities**
- **Programmed Water Delivery 2025**



# With Vision and Courage, We Plan



***WATER FOR THE PEOPLE***

# Follow Us



**972-219-1228**



**[www.lakeralphhall.com](http://www.lakeralphhall.com)**



**Lake Ralph Hall**










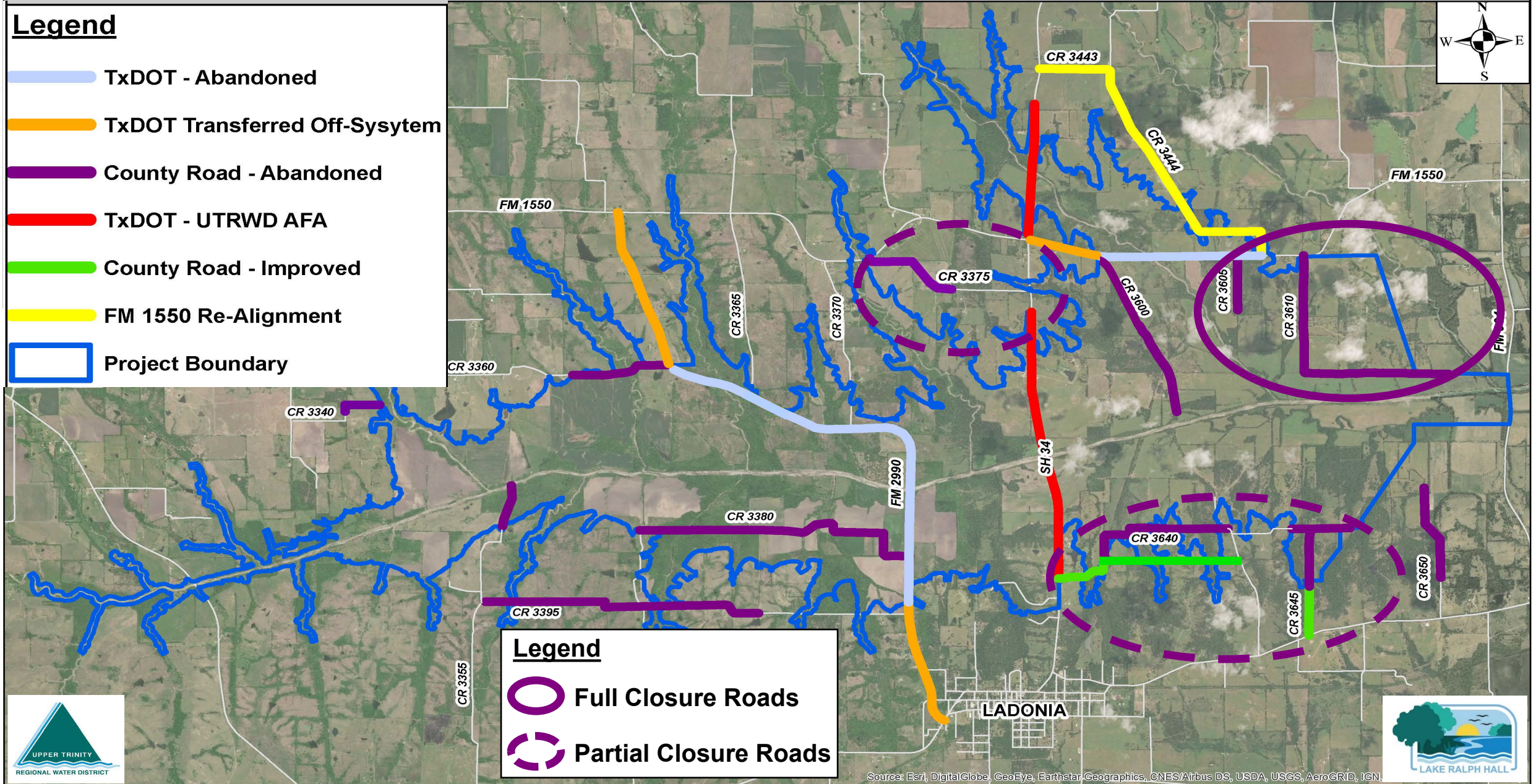
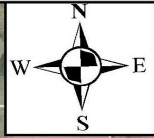
**@LakeRalphHall1**





# Lake Ralph Hall - - Roadway Relocations

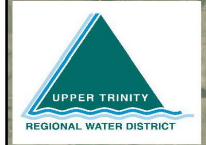
**Legend**

-  TxDOT - Abandoned
-  TxDOT Transferred Off-System
-  County Road - Abandoned
-  TxDOT - UTRWD AFA
-  County Road - Improved
-  FM 1550 Re-Alignment
-  Project Boundary



**Legend**

-  Full Closure Roads
-  Partial Closure Roads



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN.