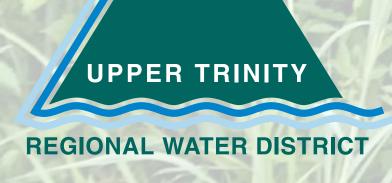
# AQUATIC MIGATION

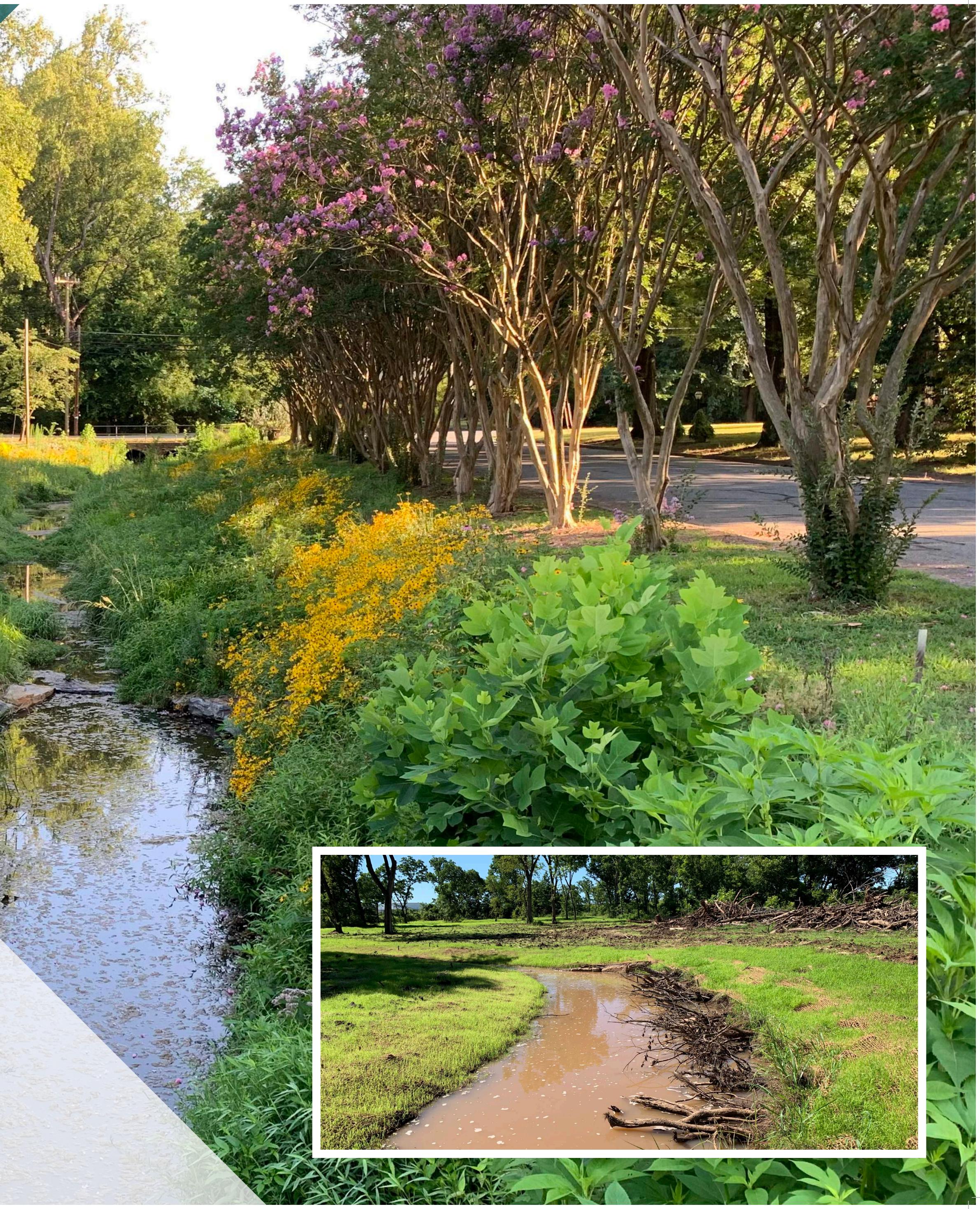
### **OVERVIEW:**

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

 Creation of 8 acres of Emergent Wetlands







# CLEARING & DEMOLITION

### **OVERVIEW:**

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

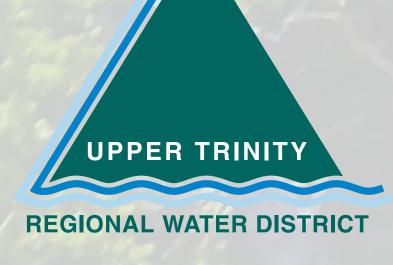


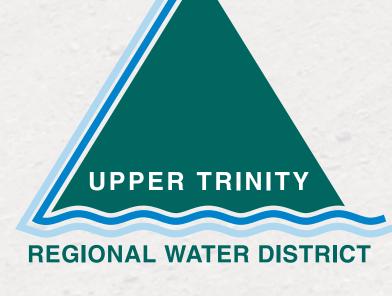


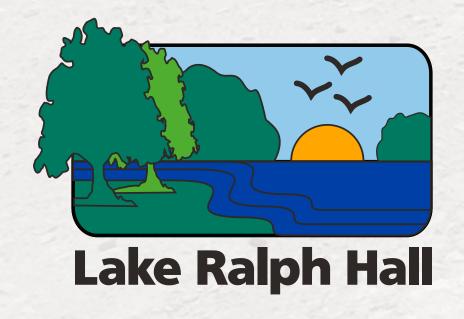


Photo Courtesy of North Texas Municipal Water District

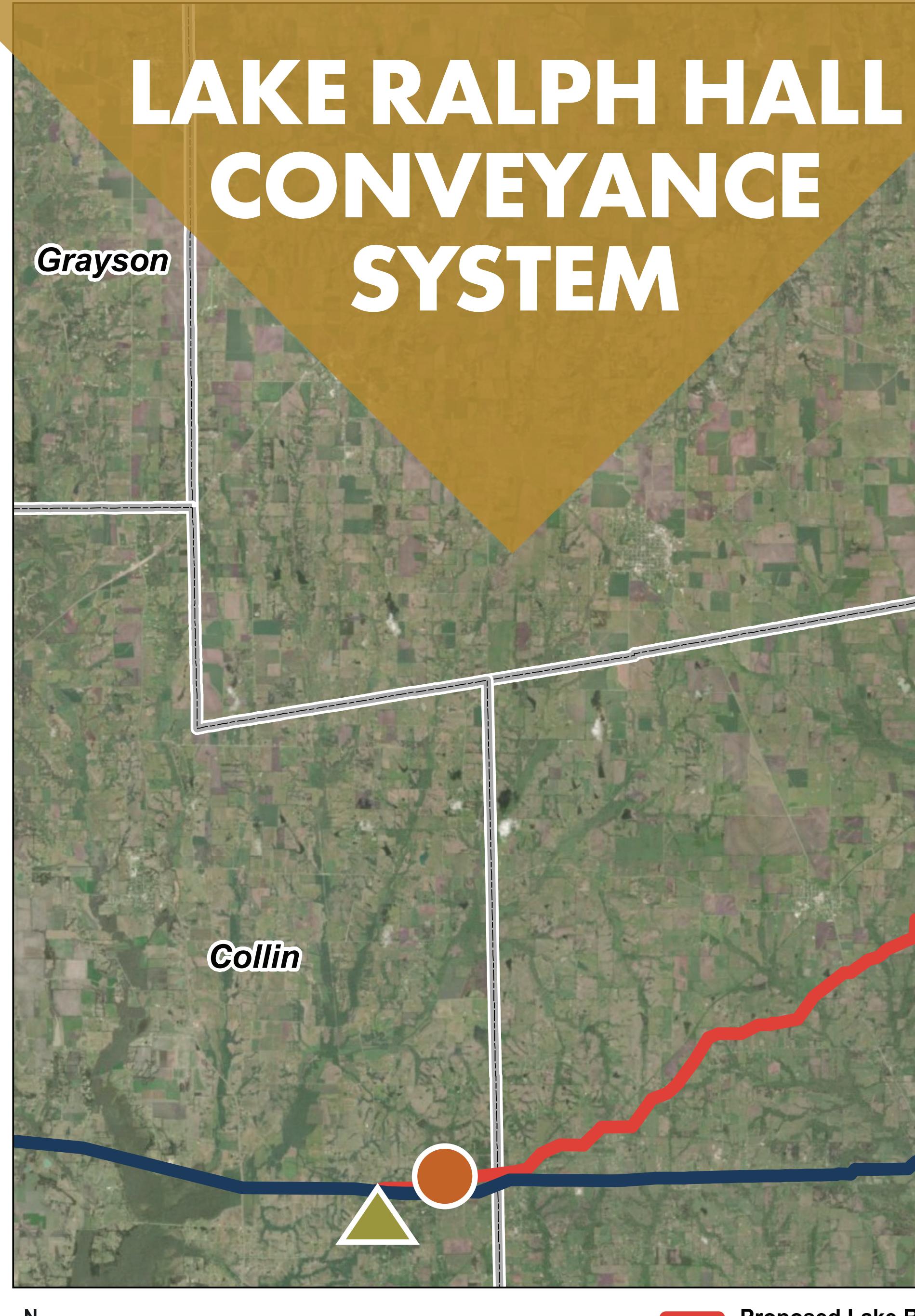
# CONVEYANCE ELEMENTS

- Pipeline Length = 32 miles
- Diameter = 54 or 60 inch
- Balancing Reservoir = 5 acres
- Pump Station:
  - 45 MGD Initial Phase
  - 80 MGD Ultimate -















**Proposed Lake Ralph Hall Pipeline Existing Chapman Lake Pipeline** 



Future Lake Ralph Hall



Fannin



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, Aer

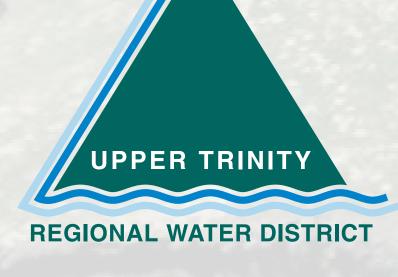


Existing Irving Balancing Reservoir and Proposed Lake Ralph Hall Balancing Reservoir **Existing Irving Pump Station** 



# LEON HURSE SPILLWAYS

- Embankment Length = 2.32 miles Maximum Height = 103 ft. • Top Width = 20 ft.Embankment Fill = 3 million CY RCC Spillway = 125,000 CY
- Reinforced Concrete = 7,500 CY







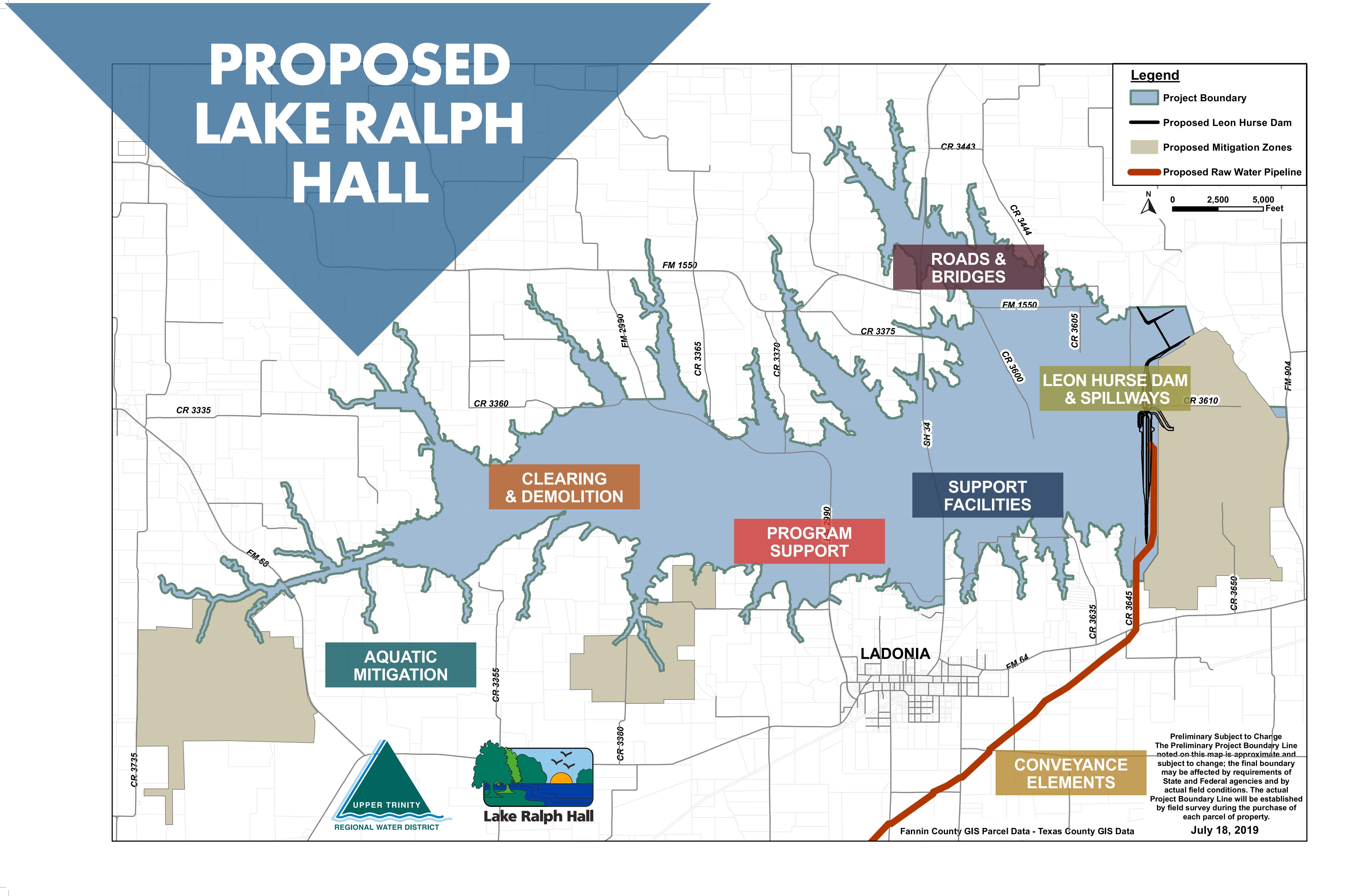
# PROGRAM SUPPORT

- Program Quality Assurance Laboratory
- Staff Augmentation for Program Support
  - Specialty Inspection
  - Construction Management Support
  - Miscellaneous Engineering -
- Program Management Infrastructure



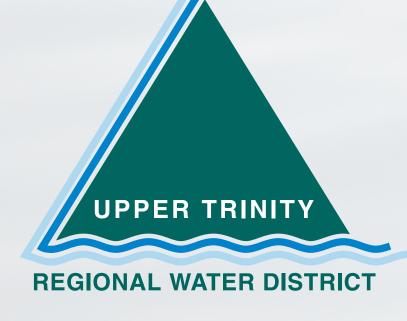






# ROADS & BRDCES

- FM 1550 Relocation = 2.7 miles
- SH 34 Relocation Length = 3 miles
  - Bridge at North Sulphur River = 6,000 ft.
  - Bridge at Merrill Creek = 600 ft.
  - Overall Width of Bridge Section = 58 ft.
  - Min. Clearance at Main Channel = 40 ft.
- Termination of 10 county roads







# ( )

#### 404 Permit

Dam & Spillways Cultural Resources Procurement Construction

#### **Roads & Bridges**

Cultural Resources Procurement Design Construction **Roadway Demolition** 

#### **USFS Land Exchange**

#### Aquatic Mitigation

Cultural Resources Procurement Streams Area A (Construction) Streams Area B (Construction) Streams Area C (Construction) Emergent Wetlands (Construction)

#### **Clearing & Demolition**

Procurement **Clearing & Demolition** 

#### **Conveyance Elements**

Procure GEC Preliminary Design (GEC) Cultural Resources **Right-of-Way Acquisition** Designer Procurement Final Design **Contractor Procurement** Construction

#### Support Facilities

Design Procurement Design **Construction Procurement** Construction

#### **Program Support**

Procurement Support Services

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# SUPPORT FACILITES

# **OVERVIEW:**

### Lake Headquarters & **Administration Facilities**

Located on SH 34 Lake Management & Administration Meeting Facility

### Maintenance

- Located near the Dam
- Lake, Dam & Pump Station Operations & Maintenance









