



Regional Service Through Unity... Meeting our Region's Needs Today and Tomorrow



ENSURING REGIONAL PROSPERITY

Society of American Military Engineers: Infrastructure Forum

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OUR VISION, MISSION AND GOALS

VISION: Regional Service Through Unity – Meeting Our Region’s Needs Today and Tomorrow

MISSION: Provide high quality and dependable water, wastewater and solid waste services in a cost efficient manner



Goal 1: Provide Superior Water, Wastewater and Solid Waste Services Today



Goal 2: Secure the Future for Water, Wastewater and Solid Waste Supplies and Services



Goal 3: Maintain Strong Relationships with Member Cities, Customers, Partners and the Public



Goal 4: Maintain our Infrastructure to Provide Reliable Service Today and Tomorrow



Goal 5: Take Care of Our People



AGENDA

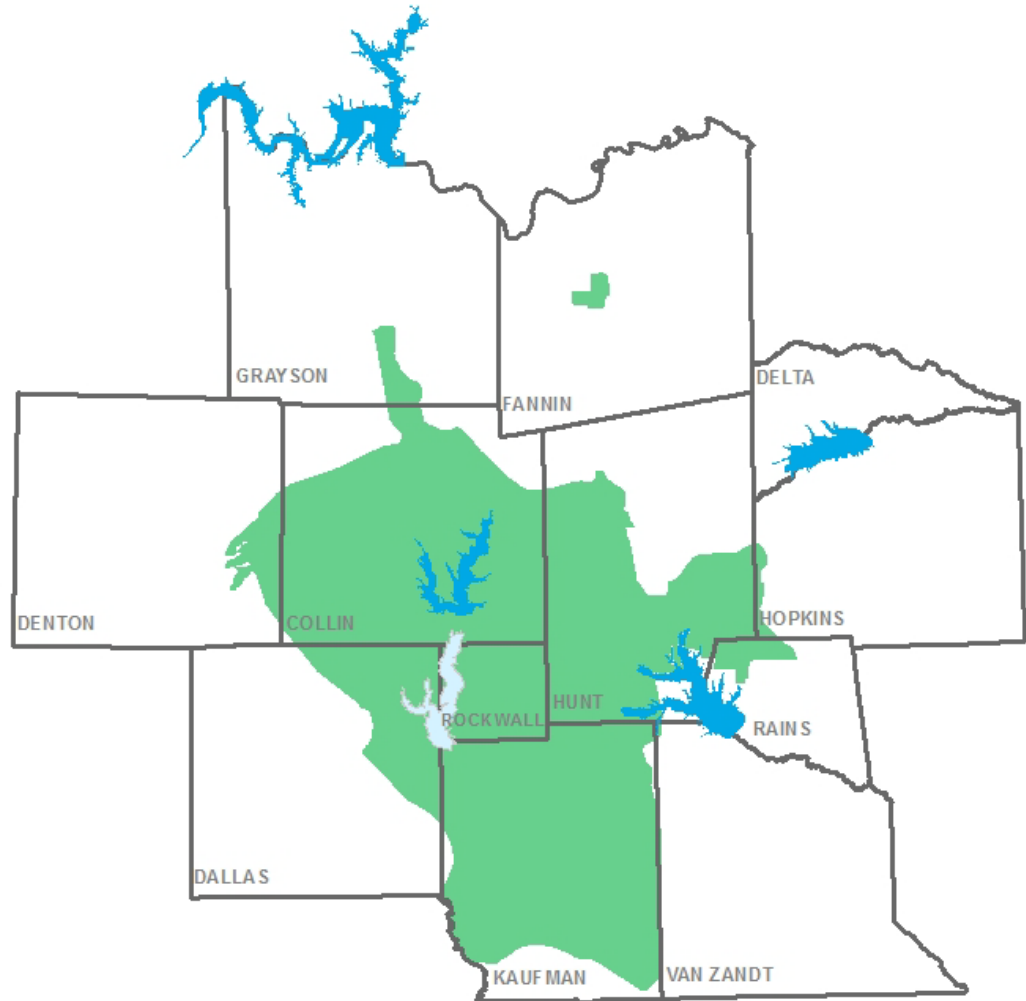
- **Services and Communities Served**
- **Water Essential for Regional Prosperity**
- **Future Supplies: LBCR Status**
- **Energy Initiatives**
- **Watershed Protection**
- **Questions**





REGIONAL PROVIDER: WATER, WASTEWATER, SOLID WASTE

- *Serve 10-county area nearly twice the size of Rhode Island*
- *Shared systems provide cost-efficiencies for communities served*





REGIONAL PROVIDER: WATER, WASTEWATER, SOLID WASTE



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BY THE NUMBERS

DID YOU KNOW?



SERVE
up to
90

COMMUNITIES
75 Daily basis
15 Emergency basis

Service area of 2,200
square miles in 10 counties

Serving 1.6 million people in one
of the fastest-growing regions
in the country



14

**WATER PUMP
STATIONS**

6

WATER TREATMENT PLANTS
806+ MGD Capacity
(million gallons/day)

**573
MILES**

**WATER TRANSMISSION
PIPELINES**



**250+
MILES**

**LARGE-DIAMETER
WASTEWATER PIPELINES**

14

**WASTEWATER
TREATMENT PLANTS**

**151+
MGD**

**WASTEWATER TREATMENT
CAPACITY**
MGD (million gallons/day)



**3 TRANSFER
STATIONS**

up to 3,295 tons
of solid waste/day

950,000+
tons/year
accepted
at landfill





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Water Essential for Regional Prosperity

Water supply infrastructure is the driving force of community and business vitality



Legacy West - Plano



The Star - Frisco



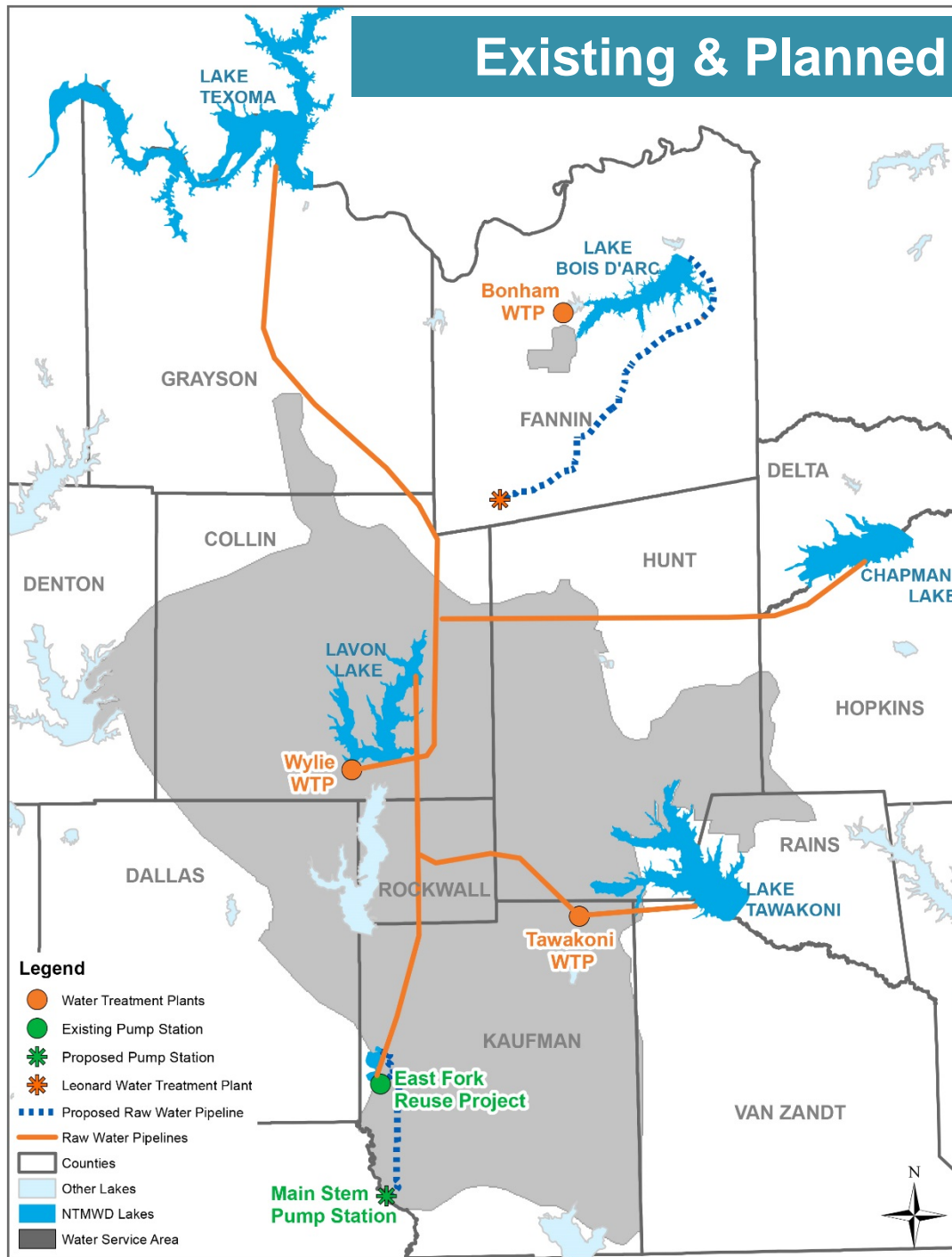
Watters Creek Convention Center - Allen



Craig Ranch - McKinney



Existing & Planned Raw Water Supplies



Existing:

- Lavon Lake
- Lake Texoma
- Lake Tawakoni
- Chapman Lake
- Reuse/Wetland

Proposed:

- Lower Bois d'Arc Creek Reservoir



LOWER BOIS D'ARC CREEK RESERVOIR PROJECT

First major reservoir to be constructed in Texas in the last 30 years

Location: Fannin County, TX

Area: 16,526 acres

Supply: up to 108 MGD

Average/ Max Depth: 22/70 ft

Lake Elevation: 534 ft msl

Owner & operator: NTMWD

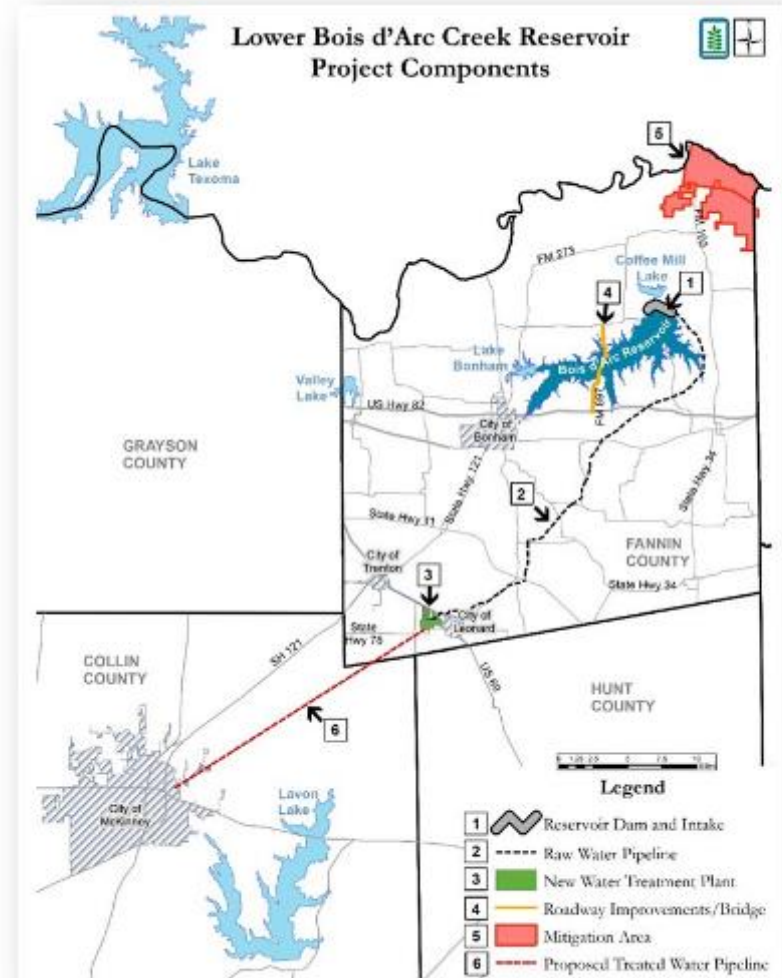
Cost Estimate: ~\$1.2B (2016 Dollars)

Permitting Required:

- Water Rights – received June 2015
- USACE Section 404 – under review

Anticipate federal permit any day with water delivery in 2022*

**Final schedule dependent on permitting*



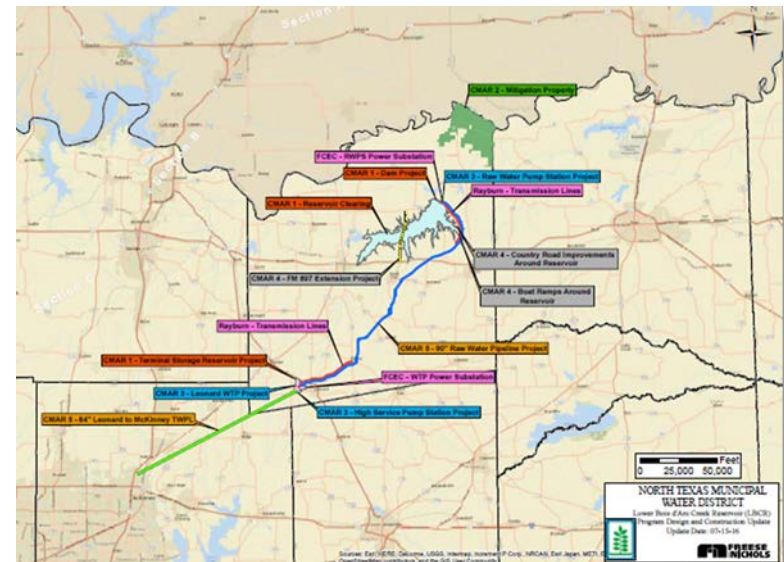


PROJECT COMPONENTS

LBCR Program delivery is organized into five construction teams

- Generally organized by work-type
 - CMAR 1 – Dam, Reservoir Clearing, and Terminal Storage Reservoir
 - Team 2 – Mitigation (Performance Contract)
 - CMAR 4 – Roadways and Boat Ramps
 - CMAR 3 – Water Treatment Plant and Pump Stations
 - CMAR 5 – Pipelines: Raw Water and Treated Water

Main 2018 Construction Activity Projects





CMAR 1 – DAM & TERMINAL STORAGE RESERVOIR (TSR)

Goal:

- **By December 2020;**
 - Begin impounding water
 - Complete terminal storage reservoir at Leonard WTP

Highlights:

- **Dam; Intake Tower; Clearing**
- **210 MG (420 MG ultimate) terminal storage reservoir**
- **Start immediately upon CWA 404 permit receipt**
- **Needs three dry summers**
- **Prior to impoundment – concurrent project coordination to de-conflict**
 - Roads (FM 897 and County): Structures, timber clearing, and ponds
 - Utility conflicts cleared
 - Lake Bonham Dam improvements





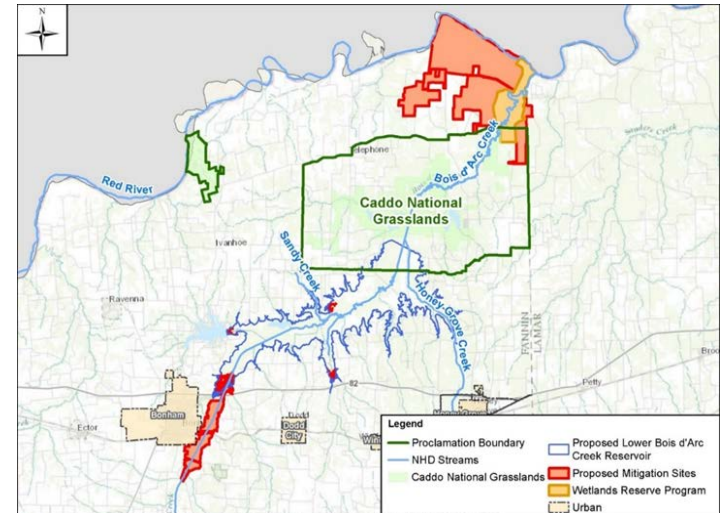
TEAM 2 – MITIGATION

Goal:

- Replace trees, wetlands, streams, and wildlife habitat inundated by LBCR

Highlights:

- Conversion of Riverby Ranch to a mitigation area
- Current mitigation plan added;
 - Wetlands Reserve Property (WRP) to Riverby area – additional tree planting
 - Upstream Mitigation Area – tree planting in flood plain of Bois d' Arc Creek
- Ranch is divided into 5 sections for design and construction
- Construction start immediately upon CWA 404 permit receipt
- 3 sections will be 100% designed by construction start





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CMAR 3 – WATER TREATMENT PLANT & PUMP STATIONS

Goal: Complete and operational prior to March 15, 2022

Highlights:

- Raw Water Pump Station at the dam
- 70 MGD Leonard Water Treatment Plant (WTP) (280 MGD ultimate)
- High Service Pump Station at WTP site
- Coordination load is significant for these projects
- Ultimately planned to accept both LBCR and Texoma water at this site
- Leonard WTP – 60% design complete
- Raw Water Pump Station – 30% design complete
- High Service Pump Station – Preliminary design complete



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CMAR 4 – ROADWAYS & BOAT RAMPS

Goal:

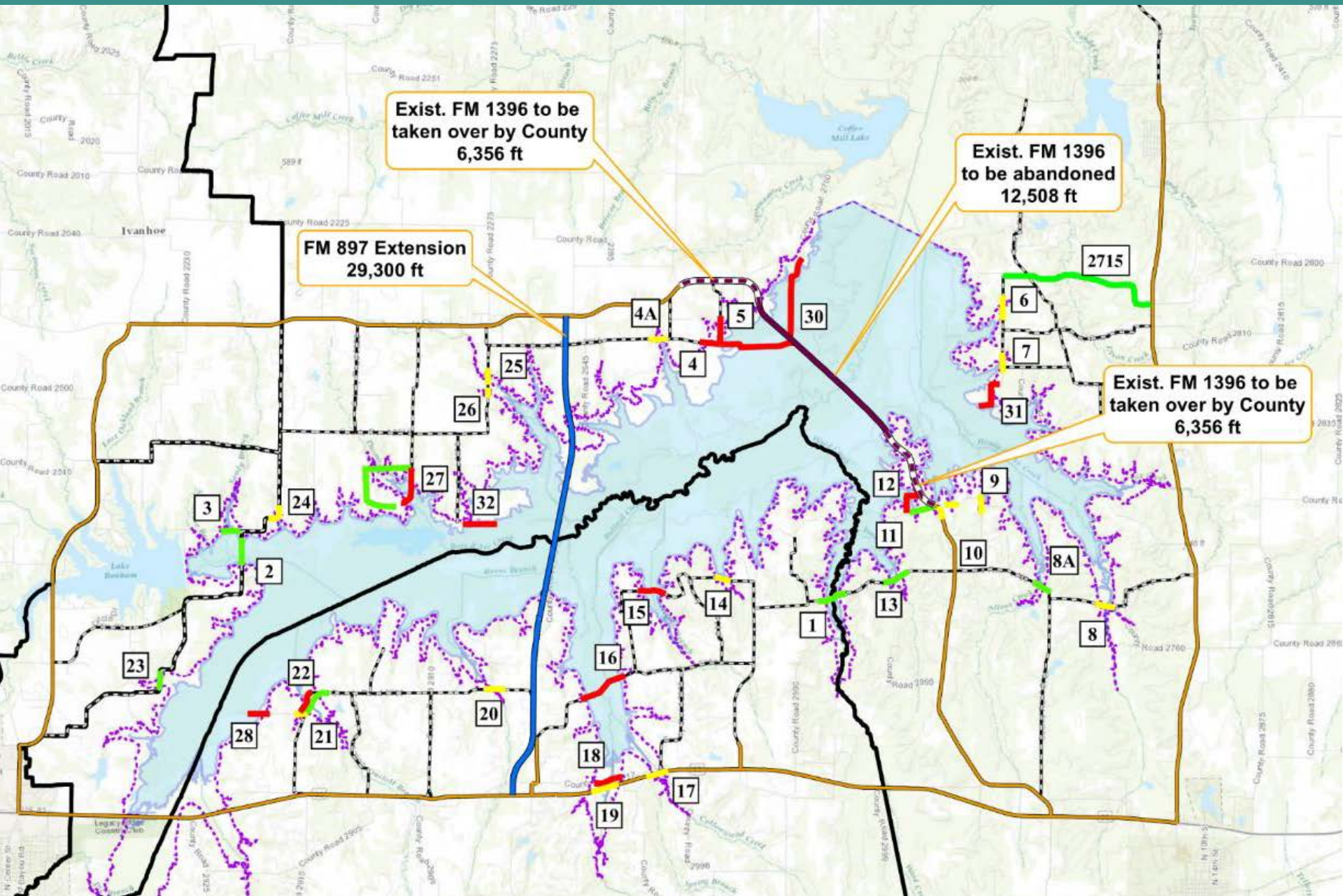
- Before impoundment, complete the following
 - FM 897; Fannin County Road improvements
 - 3 boat ramps

Highlights:

- FM 897 (existing FM 1396 will be submerged)
 - 5.1 miles of FM roadway; 1.5 miles of bridge
 - Deed to TxDOT once construction complete
- County roads
 - Improvements at 9 locations
 - 4 roads to be shortened or closed
- Boat Ramps



CMAR 4 – ROADWAYS & BOAT RAMPS





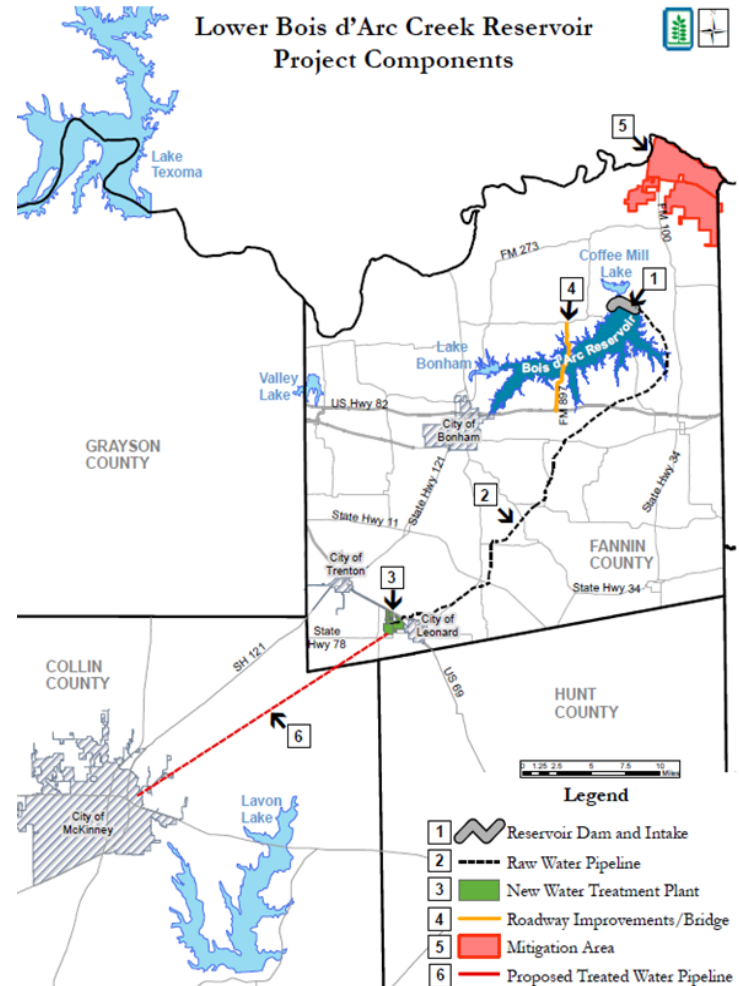
CMAR 5 – PIPELINES

Goal:

- Complete by mid-2021

Highlights:

- 35 miles of 90" raw water (RWPL)
- 25 miles of 84" treated water (TWPL) pipelines
- 5 consultants
 - RWPL – 3 consultants approved by the Board and under contract
 - TWPL – 2 consultants onboard in early 2018
- Coordination with 5 consultants
 - Design standards, standard details, system surge and hydraulic analysis, survey/property documents, corrosion protection design, and fiber optic design





ENERGY MANAGEMENT PROGRAM

Supply



Demand



Goals:

- 1) Maximize Predictability
- 2) Minimize Volatility
- 3) Achieve lowest practical rates

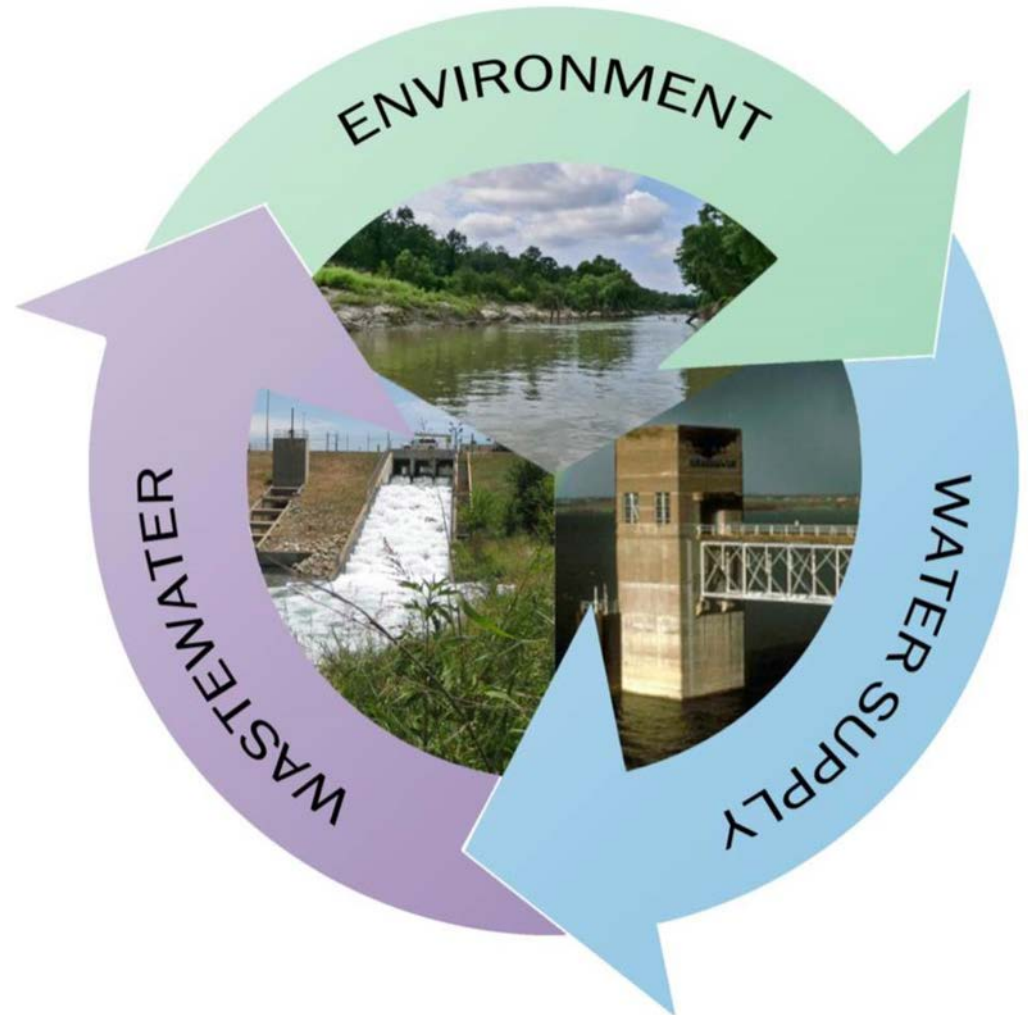
Goals:

- 1) Operational Visibility
 - Extensive Sub-metering
- 2) Energy & Expense Reduction
 - Oncor CLM Program
 - 4CP Optimization



TOTAL WATER RESOURCE MANAGEMENT

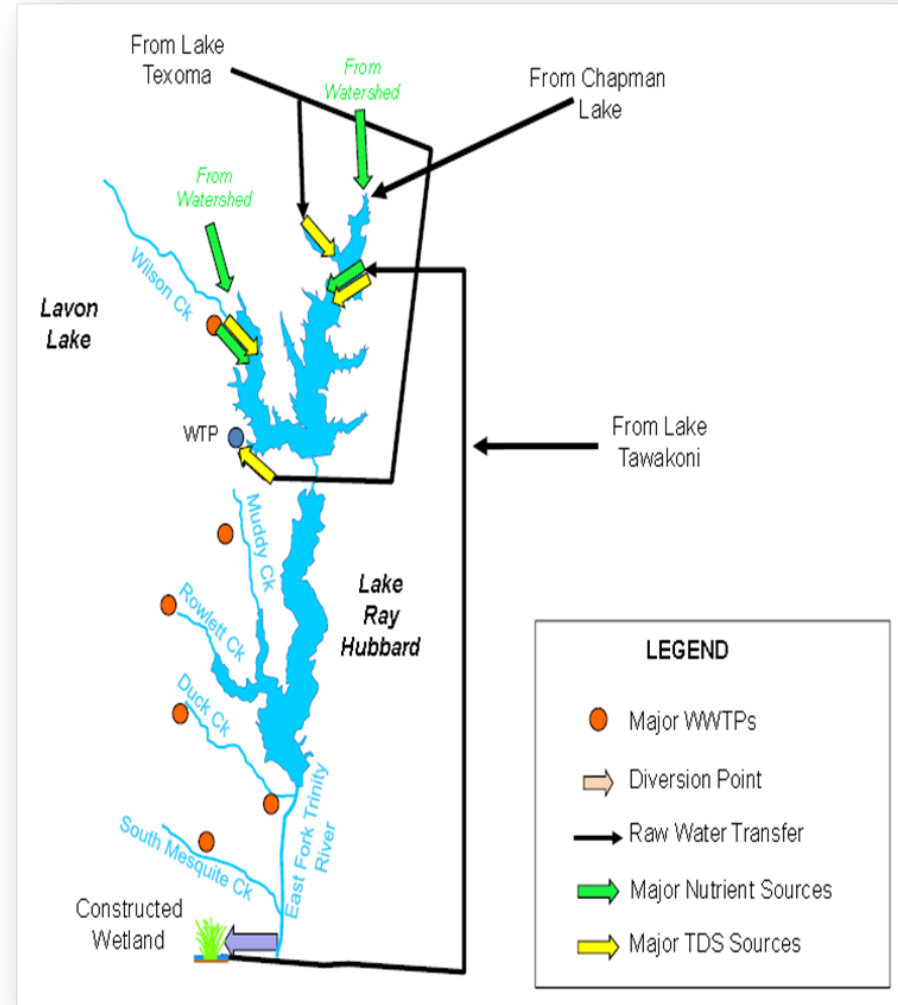
- We all live in a watershed
- Watershed Management embraces concept of “One Water”
- Storm run-off and treated wastewater returns to streams & lakes
- Becomes part of sources of supply





NTMWD WATERSHED PROTECTION

- Intended to protect and improve the quality of NTMWD source water supplies
- Focus on development of voluntary Watershed Protection Plans (WPP)
 - Interjurisdictional collaboration is key
- Source water quality concerns:
 - Nutrients
 - Sediment
 - Bacteria
 - Toxic/Hazardous Materials





WATER ESSENTIAL FOR REGIONAL PROSPERITY

Water supply infrastructure is the driving force of community and business vitality

New Water Supply

- Lower Bois D'arc Creek Reservoir

Energy Initiatives

- Supply and Demand

Protecting Watersheds





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QUESTIONS

More info at www.NTMWD.com

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First Name

Last Name

☐ News Stream ☐ Project Pipeline

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