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
• **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

BY THE NUMBERS

- 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

- 151+ MGD wastewater treatment capacity

DID YOU KNOW?

- 250+ miles large-diameter wastewater pipelines

- 14 wastewater treatment plants

- 3 transfer stations
  up to 3,295 tons of solid waste/day

- 950,000+ tons/year accepted at landfill
Water Essential for Regional Prosperity

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

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

Demand

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

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New Water Supply
- Lower Bois D’arc Creek Reservoir

Energy Initiatives
- Supply and Demand

Protecting Watersheds
QUESTIONS

More info at www.NTMWD.com

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