NORTH TEXAS MUNICIPAL WATER DISTRICT

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



BOIS D'ARC LAKE: WATER FOR NORTH TEXAS

Greater Texoma Association of Realtors

January 13, 2020

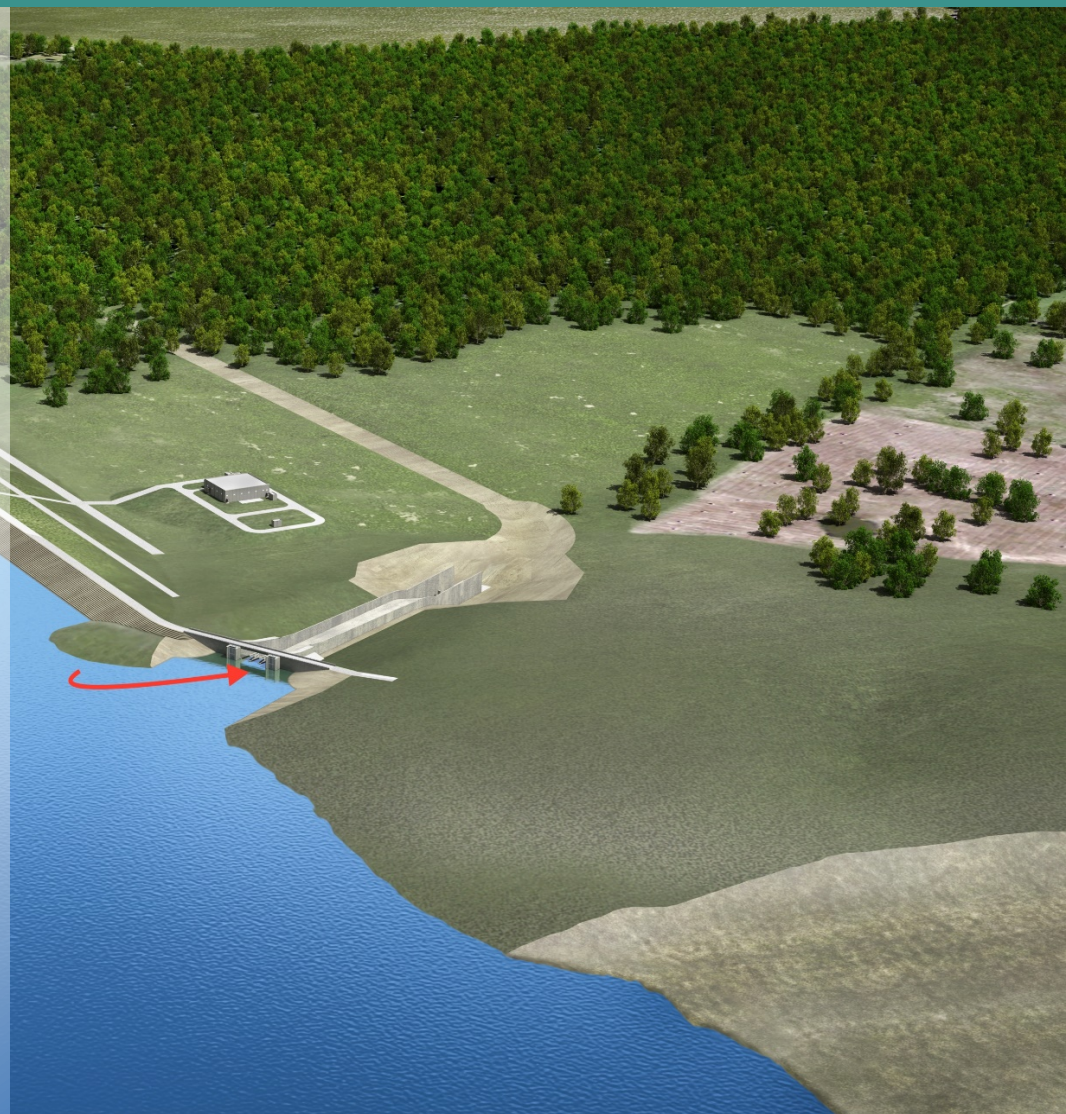
Fain Butler, Assistant Construction Manager

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BOIS D'ARC LAKE

- First major Texas reservoir constructed in nearly 30 years
- Surface Area: 16,641 acres
- Supply: Firm Yield of 108 MGD
- Average/Max Depth: 22/70 ft
- Lake Elevation: 534 ft mean sea level (MSL)
- Owner & operator: NTMWD
- Cost Estimate: $1.6B
- Construction began May 2018
- Impoundment expected Fall 2020
- Water delivery expected Spring 2022
- BoisdArcLake.org



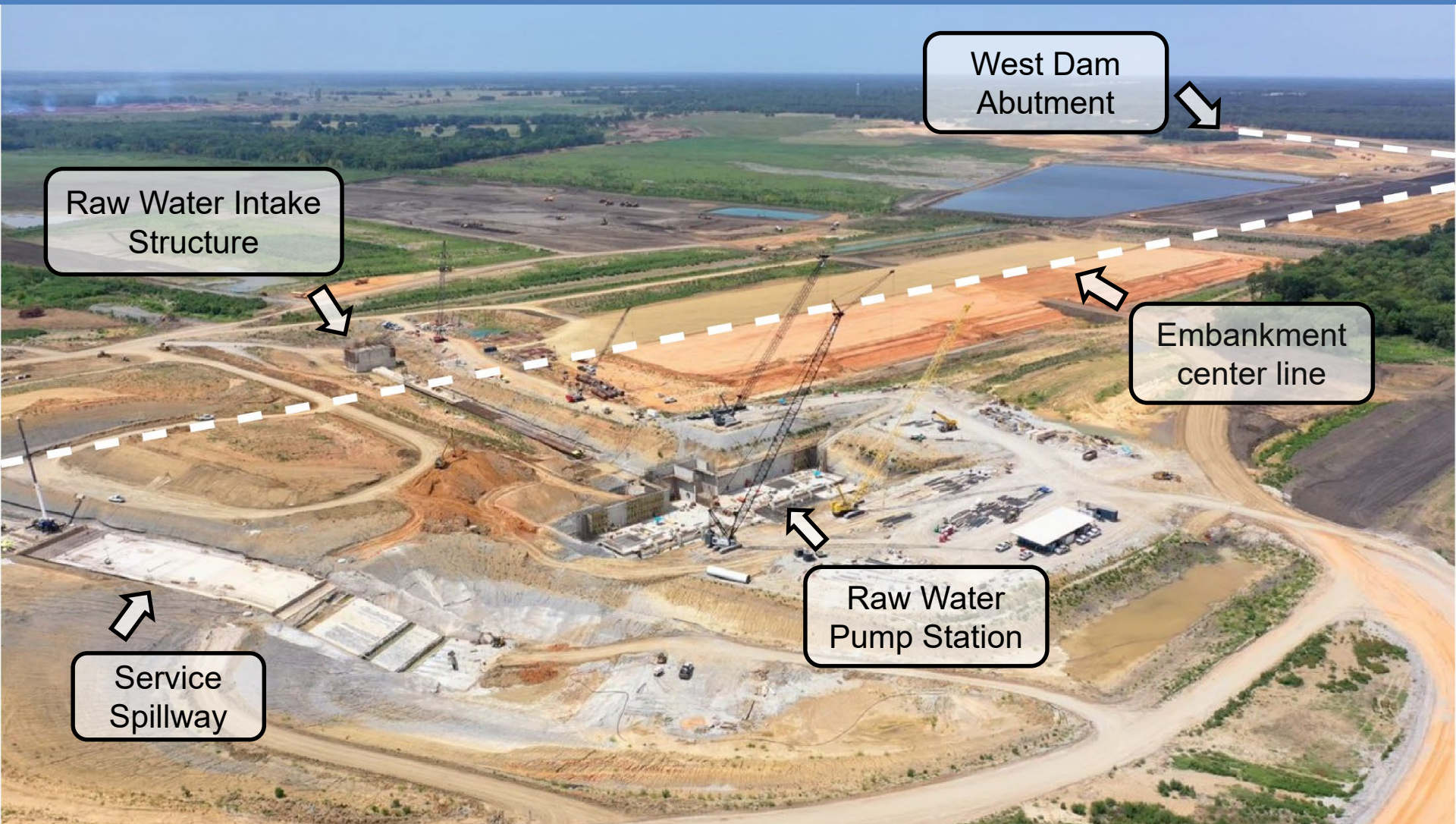
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BOIS D'ARC LAKE: KEY COMPONENTS



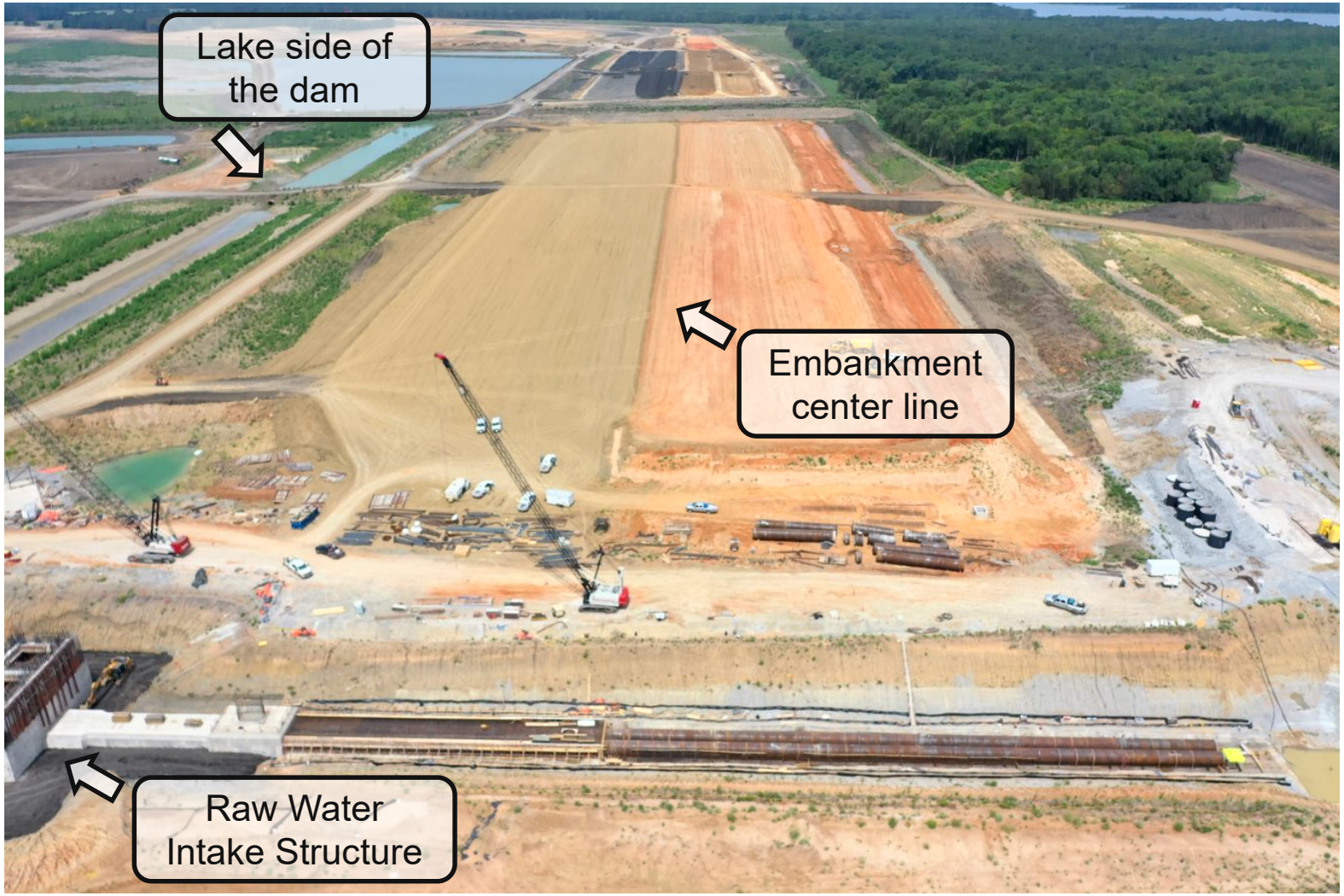
Dam, Pump Station & Intake Overview

BOIS D'ARC LAKE DAM AND RESERVOIR



Lake Dam – 2 miles long, 90 ft. tall

BOIS D'ARC LAKE DAM AND RESERVOIR



Raw Water Intake Tower

BOIS D'ARC LAKE DAM AND RESERVOIR

2018



Approx. 60 feet tall currently
Approx. 110-feet tall when complete

2019



Two 78-inch pipes carry water from
Intake Tower to Raw Water Pump Station

Raw Water Pump Station

BOIS D'ARC LAKE DAM AND RESERVOIR

2018



Initially 90 MGD
236 MGD at full build-out

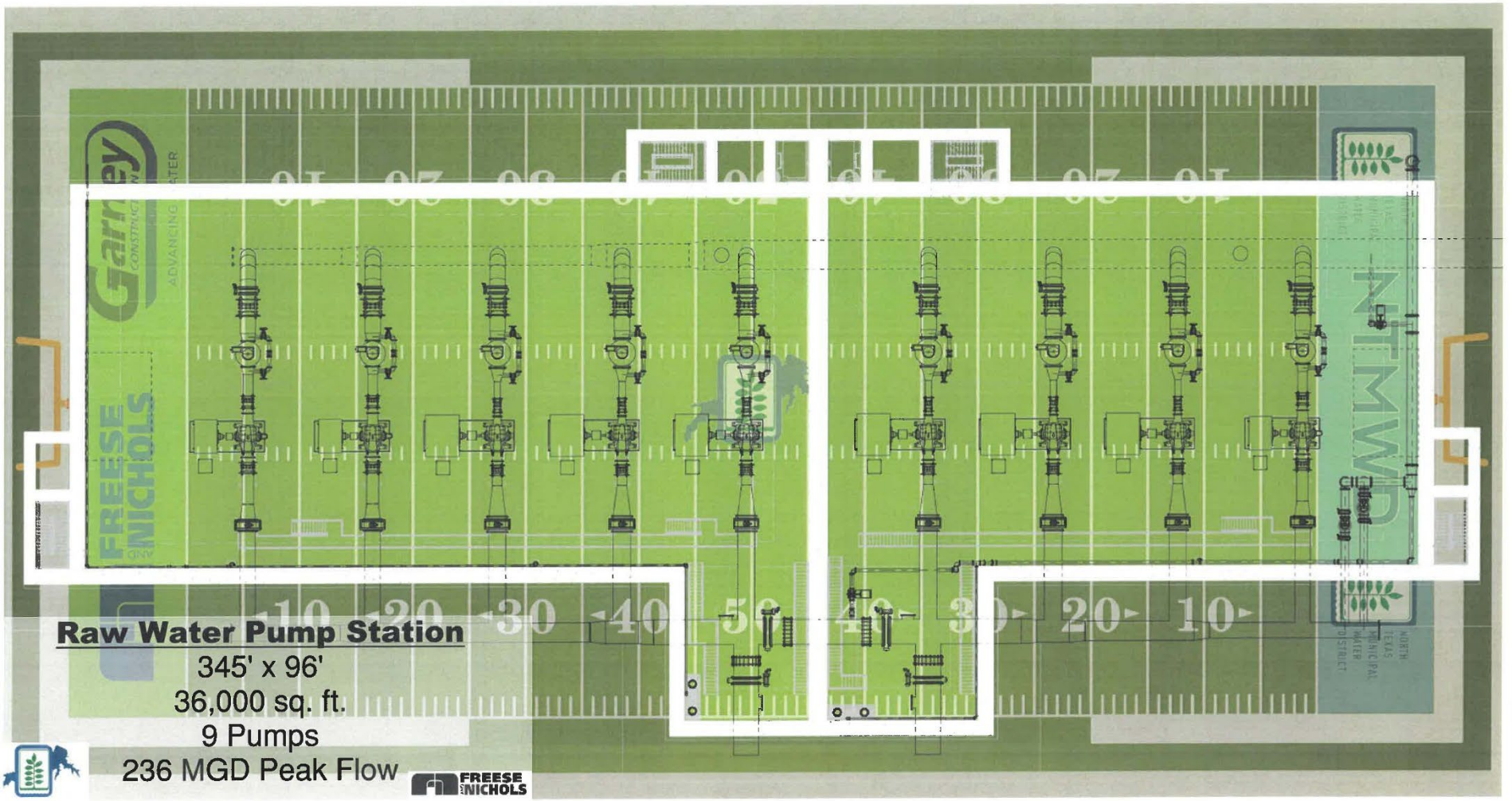
2019



Initially contain three pumps;
Will contain nine pumps at full build-out

Raw Water Pump Station

BOIS D'ARC LAKE DAM AND RESERVOIR



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Raw Water Pump Station

BOIS D'ARC LAKE DAM AND RESERVOIR





Replacing Trees & Improving Streams

BOIS D'ARC LAKE REQUIRED MITIGATION



Live staking streams
1.6 million trees planted in 2018



Emergent wetland

Replacing Trees & Improving Streams

BOIS D'ARC LAKE REQUIRED MITIGATION



Over 70 miles of stream improvements



Before and After stream restoration

Raw Water Pipeline

BOIS D'ARC LAKE RELATED INFRASTRUCTURE



90-inch pipe



35 miles of pipe

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Raw Water Pipeline

BOIS D'ARC LAKE RELATED INFRASTRUCTURE



3,696 total pieces of pipe



Each section of pipe =
50 ft. long; weighs 25,000 lbs.

FM 897 Bridge & County Roads

BOIS D'ARC LAKE ROADS



60% of roadway complete
38% of deck complete



66% of beams complete
80% of columns complete
100% of drilled shafts complete

FM 897 Bridge & County Roads

BOIS D'ARC LAKE ROADS



CR 2610 (above) turned over to Fannin County



Lake Operations Center off FM 897

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Leonard Water Treatment Plant

BOIS D'ARC LAKE RELATED INFRASTRUCTURE



Leonard Water Treatment Plant

BOIS D'ARC LAKE RELATED INFRASTRUCTURE



Concrete pour for Pretreatment facility



Operations building

Leonard Water Treatment Plant

BOIS D'ARC LAKE BENEFITS



Texas Parks and Wildlife stocked several ponds in the reservoir footprint with ShareLunker fingerlings



Fish habitat near FM 897

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PROJECT TIMELINE

2003
Planning and Permitting Process Begins

JUNE 2015
Texas Commission on Environmental Quality Issues State Water Use Permit

FEBRUARY 2018
Army Corps of Engineers Issues 404 Permit and Record of Decision

MAY 2018
Dam and Reservoir Construction Begins

MAY 2018
Roadway/FM 897 Construction Begins

AUGUST 2018
Environmental Mitigation Work Begins

NOVEMBER 2018
Leonard Water Treatment Plant Construction Begins

FALL/WINTER 2020
Dam Substantially Complete

SUMMER 2020
Boat Ramps and Recreational Facilities Complete

SUMMER 2020
Roadway/FM 897 Construction Complete

WINTER 2019
Treated Water Pipeline Construction Begins

FALL 2019
Boat Ramps and Recreational Facilities Construction Begins

SPRING 2019
Raw Water Pipeline Construction Begins

FALL 2020
Reservoir Impoundment Begins

SUMMER/FALL 2021
Raw Water and Treated Water Pipelines Complete

FALL 2021
Leonard Water Treatment Plant Complete

SPRING 2022
Water Delivery Scheduled to Begin

SPRING 2023
Environmental Mitigation Complete/Full Monitoring & Maintenance Begins

BOIS D'ARC LAKE

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News Stream Project Pipeline

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