

We are pleased to introduce the first Monthly Progress Report for the Bois d'Arc Lake and other projects under construction. Bois d'Arc Lake is located northeast of Bonham in Fannin County. Project construction began on the 16,641-acre reservoir in May 2018. The lake and other projects will be able to treat and deliver up to 70 million gallons of clean water daily starting in 2022. This report will provide a monthly recap of construction progress and accomplishments.

# **Project Overview**

#### **Dam and Reservoir**

Construction includes the clearing for/building of a 2-mile-long dam embankment, a water spillway from the lake and other related structures.

- Clearing of trees and fences well underway.
- Construction on structures and embankment has begun.

## FM 897 and County Roads

Around 11 miles of county and state roads and bridges in Fannin County are being improved or constructed.

- Road construction continuing on the new FM 897 highway and bridge.
- Local county road work has begun.

#### Mitigation

Improvements are being made to more than 17,000 acres to counteract loss of habitat and impacts to local streams from construction of the lake.

 Crews are averaging between 24,000 and 40,000 trees planted in a day.

## **Leonard Water Treatment Plant**

Construction includes a high service pump station, storage reservoir and fivestep water treatment plant.

 Excavation is underway for the various structures at the future treatment plant.



## **Raw Water Pump Station and Pipeline**

These will pump untreated water out of the reservoir and carry it 35 miles to the new treatment plant.

- Designs for the raw water pipeline were completed in January 2019.
- Crews have finished excavating for pump station and are placing mud slabs for its foundation.

#### **Treated Water Pump Station and Pipeline**

A pump station and 25 miles of new pipe will transport the treated water to the existing regional system.

• Designs will be completed by mid-2019 for both the new treated water pump station and pipeline.

#### **Recreation Areas and Lake Operations Center**

NTMWD is building three public boat ramps, dam maintenance building and a Lake Operations Center for administrative operations and recreational and educational events.

• Designs for the center and ramps will be completed by the middle of this year.



## **Bois d'Arc Lake Construction**

### **Accomplishments**

- Clearing of vegetation at the dam site almost complete, and construction of an earthen embankment for the dam is well underway.
- Removed four stories of dirt and rock to make a football field-sized hole for the raw water pump station foundation.
- Final digging underway on dam service spillway and stilling basin, which will slow and control water release from the lake back into the creek.
- 90" pipe currently being laid near the dam to carry water out for treatment.



Four stories of earth have been removed for the foundation of the raw water pump station.



Crews lay a segment of 90" pipe that will help carry water away from Bois d'Arc Lake for treatment.

## **Up Next:**

- Flooding and heavy rains in the fall of 2018 led to some short-term delays, but these are not anticipated to impact the timing of the reservoir's completion (collecting water in 2020 with delivery by 2022).
- Pouring of concrete for the dam's intake structure began late January and will continue in 2019.
- Pouring of foundation for the raw water pump station also beginning early spring.

## **Road & Mitigation Work**

## **Accomplishments**

- Crews finished removing invasive plant species in one section at Riverby at the end of 2018.
- 628,000 trees of various preferred species (including Shumard Oak, Water Oak, Willow Oak, Pecan, Sugarberry and American Elm) were delivered and are being planted at the Riverby Site.
- The foundation and beams for the new FM 897 bridge are being installed. Grading work continues on the roadway north and south of the bridge.
- Most work on county roads is or will be underway by this summer.

## **Up Next:**

- Mitigation work on vegetation and streams at local sites will continue at various sections of Riverby Ranch.
- Around 1.2 million trees will be planted at the Riverby Mitigation Area by April.
- Construction on the new FM 897 bridge and its north and south roadway is progressing again with the warmer and drier weather.
- Nearby county road work is also anticipated to advance quickly this spring.



Mitigation crews planting a select mixture of tree species at the Riverby Site.



The FM 897 bridge under construction is being connected with new roadway to the south.



# **Project Spotlight: Pouring a Tower**

The Intake Tower for the new reservoir will collect and move water from the lake through the raw water pump station, where it can be pumped via pipeline to the Leonard Water Treatment Plant. The tower will stand 110 feet tall and, together with the raw water pump station, will be able to draw up to 236 gallons of lake water each day.

Now that the vegetation has been cleared from the dam footprint, crews have been building up the dam's earthen embankments and are laying the foundation for the Intake Tower. After formwork and rebar installation were completed, crews poured the first slab of concrete for the Intake Tower's foundation in late January. This is one of many major pours at the Intake Tower and spillway that will total around 30,000 cubic yards of concrete.

An onsite concrete batch plant produces the concrete, helping reduce truck traffic. In cases where more concrete is needed, additional quantities are available from a plant offsite in Bonham. Workers place the concrete using pump trucks, cranes, buckets and vibrators.



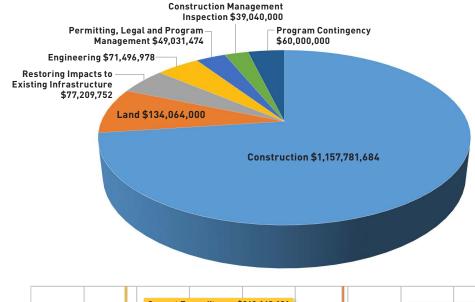
Bois d'Arc Lake Intake Tower.

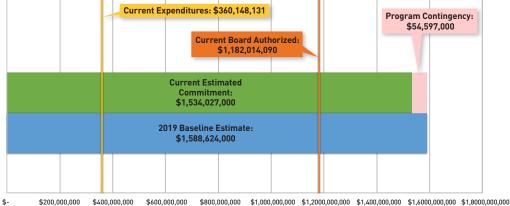
## **Current Cost Summary**

The planning, permitting, designing, purchasing land and constructing of the Bois d'Arc Lake and other projects is an important investment for North Texas' future.

The Bois d'Arc Lake and other projects are estimated to cost approximately \$1.6 billion. These costs will be shared by the up to 80 communities who receive water from NTMWD. The Texas Water Development Board has approved \$1.47 billion for these projects through the State Water Implementation Fund for Texas (SWIFT) program, which is anticipated to save NTMWD and its cities over \$230 million.

This pie chart offers a breakdown of expenses for the reservoir and other projects, and the bar chart shows current expenditures for each one.





As of February 19, 2019



# **TIMELINE FOR PROJECTS**



2003

Planning and Permitting Process Begins

#### **FEBRUARY 2018**

Army Corps of Engineers Issues 404 Permit and Record of Decision



#### **NOVEMBER 2018**

Leonard Water Treatment Plant Construction Begins



#### **AUGUST 2018**

Environmental Mitigation Work Begins



#### **MAY 2018**

Roadway/FM 897 Construction Begins



#### **MAY 2018**

Dam and Reservoir Construction Begins



#### **SPRING 2019**

Raw Water Pipeline Construction Begins



#### **FALL 2019**

Treated Water Pipeline Construction Begins



#### **FALL 2019**

Boat Ramps and Recreational Facilities Construction Begins



#### **SUMMER 2020**

Roadway/FM 897 Construction Complete



#### **SUMMER 2021**

Raw Water and Treated Water Pipelines Complete



#### **FALL 2020**

Reservoir Impoundment Begins



#### **FALL 2020**

Dam Substantially Complete



#### **SUMMER 2020**

Boat Ramps and Recreational Facilities Complete



#### **FALL 2021**

Leonard Water Treatment Plant Complete



#### **SPRING 2022**

Water Delivery Scheduled to Begin

### **SPRING 2023**

Environmental Mitigation Complete/Full Monitoring and Maintenance Begins

