Representing the largest project in Texas using reclaimed water to augment a surface water supply source, the East Fork Raw Water Supply Project will provide the North Texas Municipal Water District (NTMWD) with over 102,000 acre-feet of water per year, enough water to serve a half million people.

When completed, this project will consist of diverting an average of 91 million gallons per day (MGD) of effluent dominated water from the East Fork of the Trinity River and polishing the water in one of the largest constructed wetlands in the country (1,840 acres). After passage through the wetland, the water will be pumped through an 84-inch pipeline 44 miles north of the project site to Lake Lavon for storage, blending, and water supply use.

Components of the Project:
- 165 MGD peak capacity diversion pump station to take water from the East Fork of the Trinity
- 1,840-acre constructed wetland to provide polishing treatment of the diverted East Fork water
- 165 MGD peak capacity conveyance pump station to pump the polished water to Lake Lavon
- Electrical substation to provide power for the conveyance pump station
- 44 miles of 84-inch diameter conveyance pipeline starting near Crandall, Texas and extending through Kaufman, Rockwall, and Collin counties to transfer water from the wetland to Lake Lavon
- Nature center to provide educational opportunities
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The East Fork Raw Water Pipeline route runs through Kaufman, Rockwall and Collin Counties. A significant challenge was to determine a route that minimized pipe length and static head for the conveyance pump station. Several routes were studied with the use of aerial photography, parcel maps and DEM topographic information to select the preferred pipeline alignment. The pipeline is divided into 3 pipeline segments: Northern, Central and Southern. Associated with the northern pipeline segment is the design of the Lavon Lake outfall structure, which includes the challenge of meeting budget and maintenance requirements of the NTMWD and permitting requirements of the USACE.

The conveyance pipeline transfers polished raw water from the constructed wetland to an outfall constructed at Lavon Lake. This pipeline is about 44 miles long, starting near Crandall, Texas, and extending north to an outfall on the northeast side of Lavon Lake. The 84-inch diameter pipeline design includes several stream, railroad, highway, and utility crossings as well as other unique design challenges.

### Sedimentation Basins
- **Number of Sedimentation Basins:** 3
- **Average Detention Time:** 24 Hours

### Constructed Wetland
- **Total Size:** 1,840 acres
- **Overall Size:** 1.4 miles by 3.7 miles
- **Number of Wetland Cells:** 24
- **Approximate Number of Wetland Plants:** 1.6 million
- **Average detention time:** 7 to 10 days
- **Shallow Water Depth:** 12 to 18 inches
- **Deepwater Zone Depth:** 4 to 6 feet

### Conveyance Pump Station
- **Pumping Units:** Vertical Turbine
- **Number of Pumps:** 3 plus 1 future
- **Pump Capacities and Horsepowers**
  1. 33,620 gpm and 3,000 HP with VFD
  2. 33,620 gpm and 3,000 HP
  3. 33,620 gpm and 3,000 HP

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**Service, Integrity, Commitment.**

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