

# NEW WTP Expansion 2.5 MGD

Contract Amount: \$41.6M

Anticipated Plant Start Up:  
November 2021

Current Progress:  
70% Complete

Designer:  
McKim & Creed

Contractor:  
T.A. Loving Company







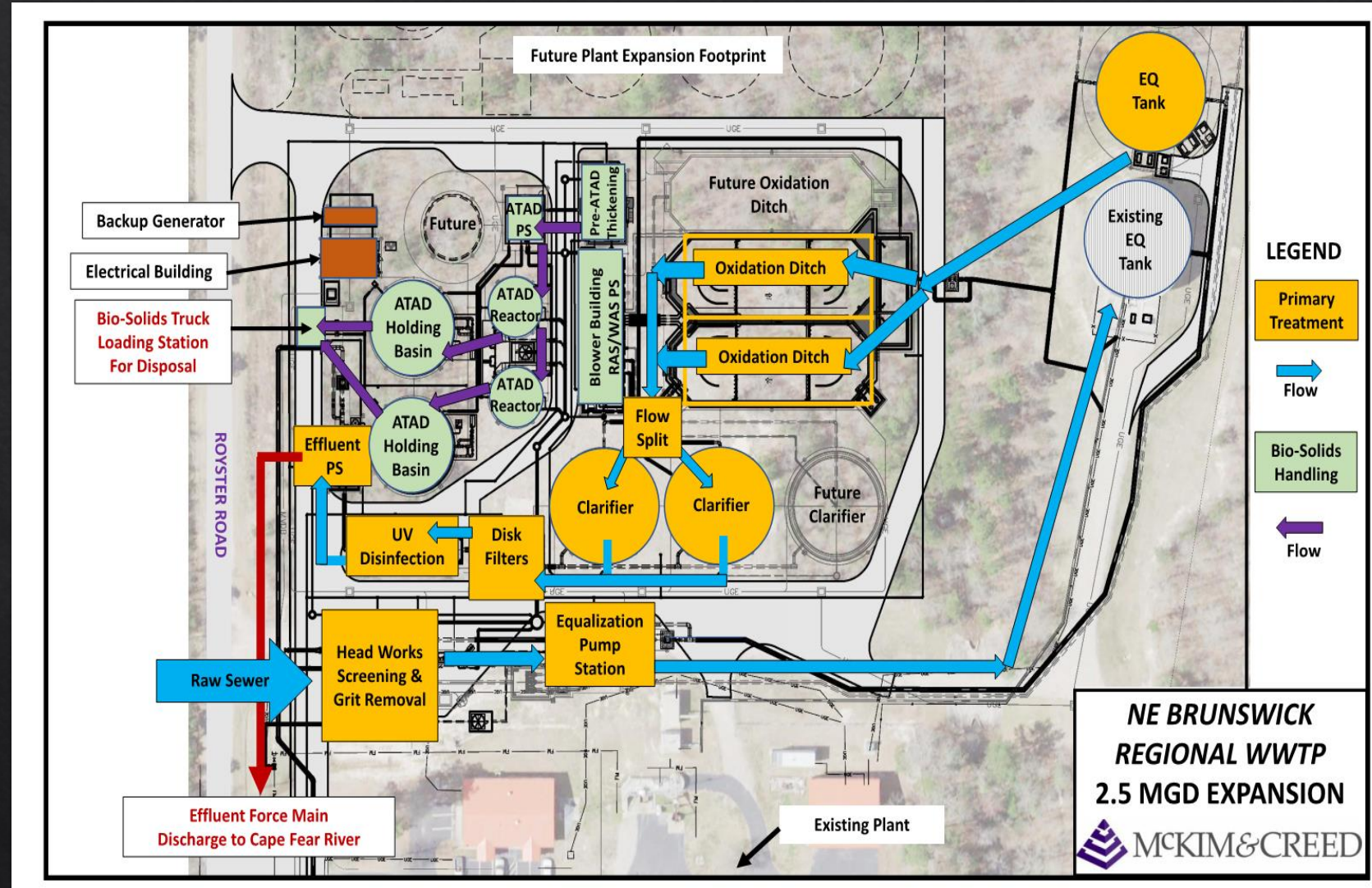
# Milestones

- ◆ Major Milestones
  - ◆ Project approaching 75% completion mark
  - ◆ Major structures have been constructed and exterior coatings have been applied
  - ◆ Major equipment arriving and being installed
  - ◆ Plant process piping being installed
  - ◆ Buildings have been dried in and interior work continues



# NEWWTP Expansion Overview

- ◇ As influent wastewater moves through the treatment plant, solids are separated from the liquids
- ◇ The solids and liquids are individually treated by a biological process
- ◇ Several major structures must be constructed for the process to occur
- ◇ The major structures for the treatment of the liquid: EQ Tanks, Oxidation Ditches and Clarifiers
- ◇ The major structures for the treatment of solids: Pre-ATAD Thickener, ATAD Pump Station, Reactors and Holding Tanks







NOVEMBER 2020

This aerial photograph captures the extensive construction of a wastewater treatment plant. The site is a large, cleared area of land, mostly brown and dusty, with various construction materials and equipment scattered throughout. In the center, several large circular structures are under construction, surrounded by a network of concrete walls and ditches. To the right, a large, rectangular concrete structure with a complex internal layout is being built. The surrounding area includes parking lots with several vehicles, including trucks and cars, and some smaller buildings or trailers. The overall scene depicts a major engineering project in progress.

ATAD THICKENER

ATAD PUMP STATION

ELECTRICAL BUILDING

ATAD REACTORS

ATAD HOLDING TANKS

OXIDATION DITCHES

CLARIFIERS

EQ PUMP STATION

EFFLUENT PUMP STATION





ELECTRICAL BUILDING AND GENERATOR

ATAD HOLDING TANKS

ATAD PUMP  
STATION BUILDING

ATAD THICKENER  
BUILDING

HEADWORKS

ATAD REACTORS

BLOWER BUILDING

DISK FILTERS

CLARIFIERS

OXIDATION DITCHES

EQ PUMP STATION

MARCH 2021





Exterior Coatings Completed  
on Major Structures





Equipment Arriving and  
Being Installed Daily





Plant Process Piping Being Installed





Buildings Have Been Dried In Allowing for  
Major Equipment to be Housed





Construction Progresses Daily  
to Allow for Future Growth  
and Meet the Needs of the  
Citizens of Brunswick County





# Northeast Regional Wastewater Offsite Force Mains

## Trenchless Pipe Installation by Horizontal Directional Drill Method

Horizontal Directional Drill  
Machine Pushes Metal Rods  
Through the Earth



Bentonite is Pumped Through the  
Metal Rods to Stabilize the Hole



Metal Rods Connect to Pipe at the  
Far End of the Drill Which is Then  
Pulled Back Through the Hole





# Northwest WTP Expansion and Reverse Osmosis Construction Project

Contract Amount: \$129.1 M

Reverse Osmosis Beneficial Use:  
June 2023

Construction Progress:  
20% Complete

Designer:  
CDM-Smith

Contractor:  
Oscar Renda Construction





## Two Separate Nighttime Bypass Tie-Ins Have Been Completed

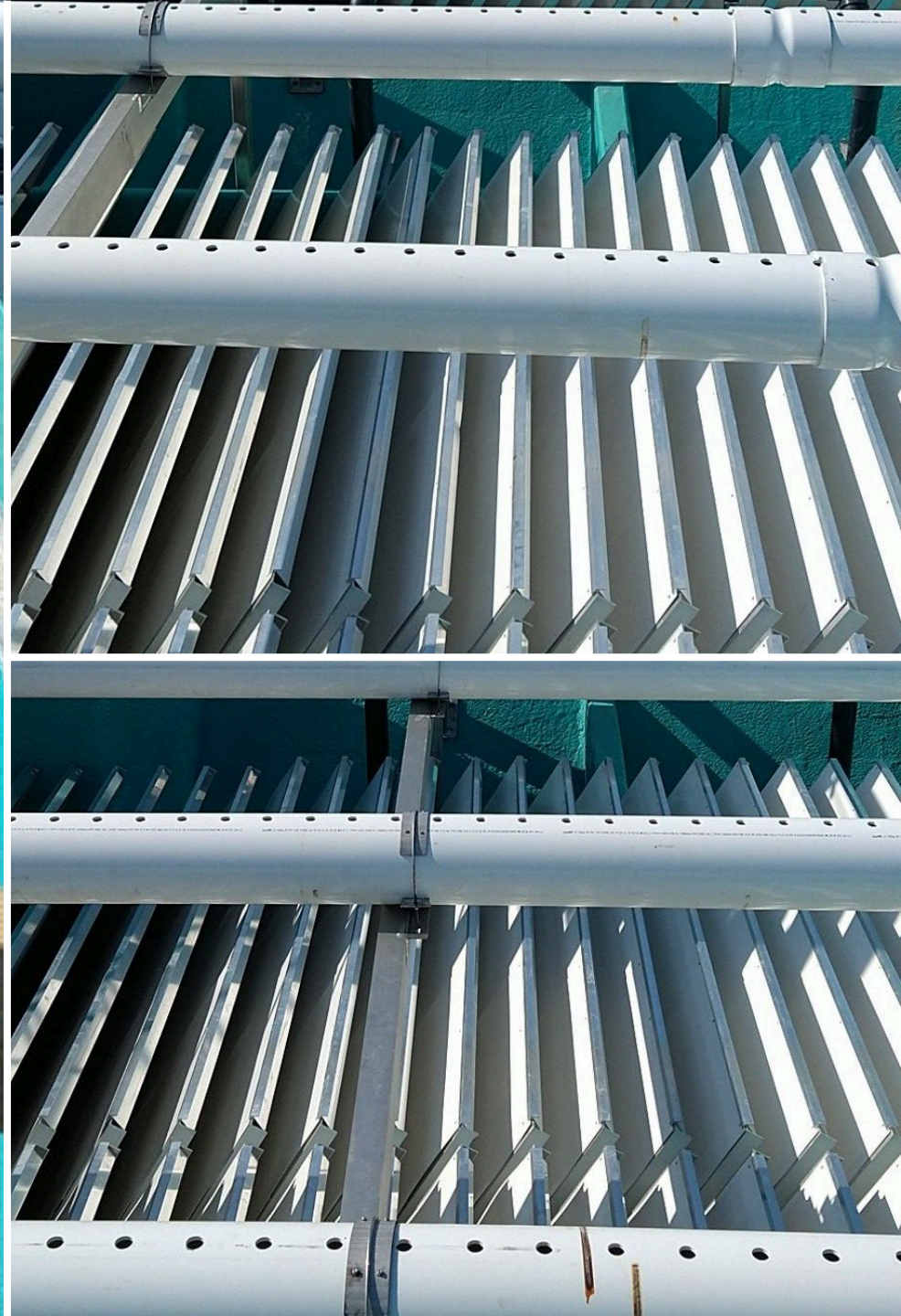


A new 24" raw water valve needed to be installed to keep the west side flowing for the duration of the project. August 21<sup>st</sup>, 2020





East Side Clarifier  
Equipment  
Installed and Put  
Back Into Service





# Work Progresses on the New Filters and Rapid Mix Structures





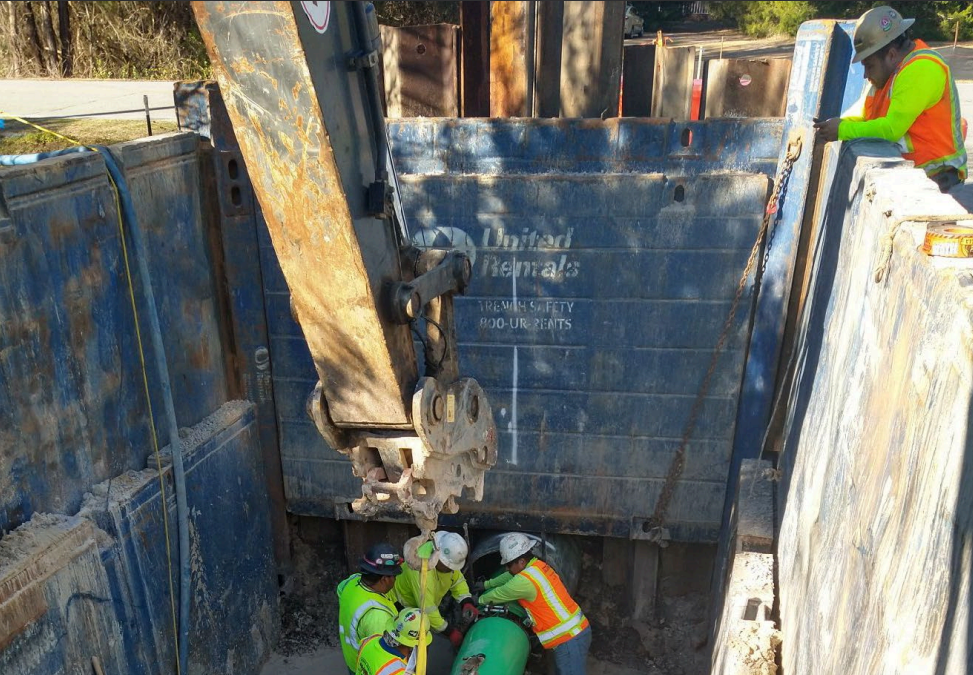
# LPRO Concentrate Pipeline

Project 90% Complete.

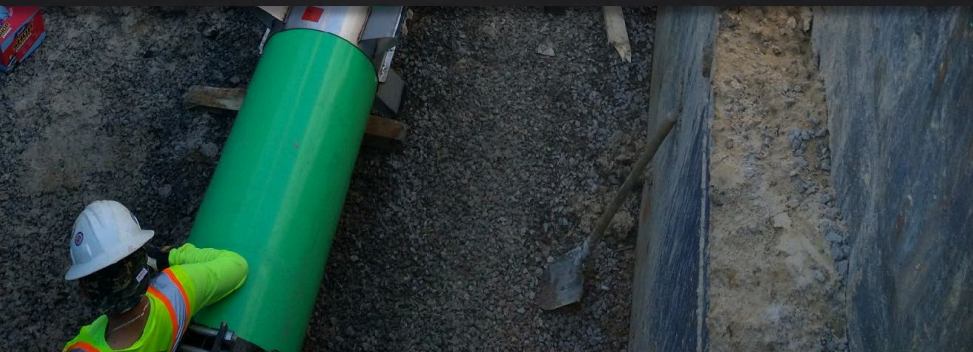
This new pipeline will  
carry discharge from the  
NWWTP to the Cape  
Fear River



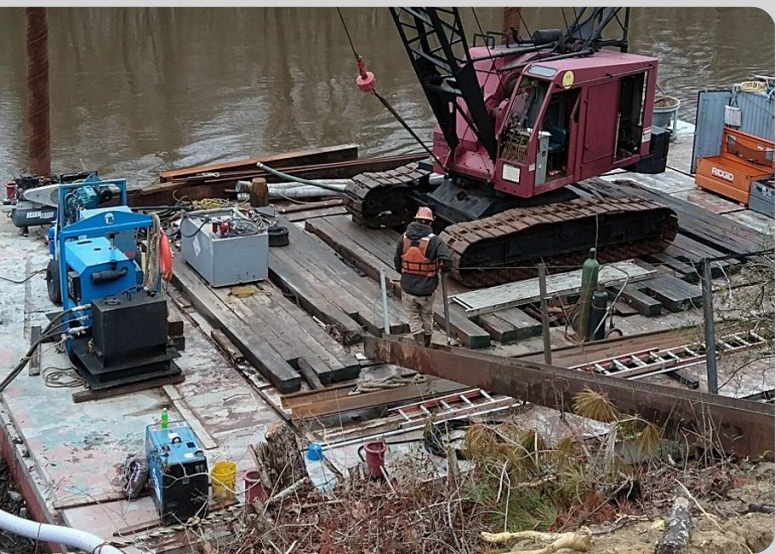




36-inch Welded Steel Casing Pipe Installed Underneath Mt Misery Rd. to Allow for Installation of the New Concentrate Discharge Pipeline







Coffer dam installed in the Cape Fear River to accommodate the pipeline outfall structure. When work is complete, the cofferdam will be flooded, and commercial divers will torch off the metal sheathing which will be removed by a crane.



# 74/76 - MAP/ILP Industrial Park Sewer

ILP Gravity Sewer &  
Polymer Receiving  
Manhole



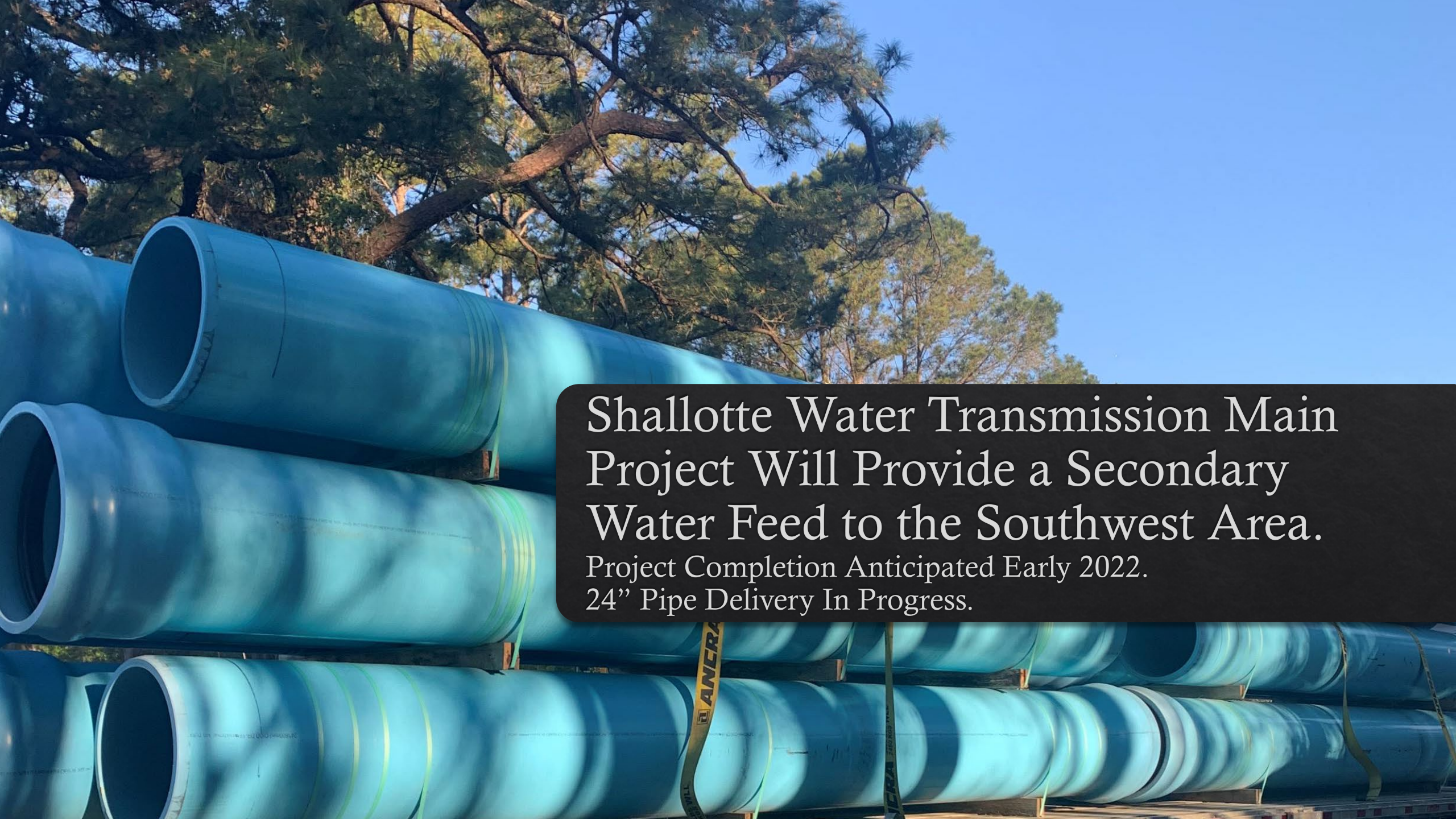
ILP Concrete Pour



MAP Pump Station





The image shows several large, blue, cylindrical pipes stacked horizontally in an outdoor setting. The pipes are arranged in multiple rows, with some showing green straps used for securing them. In the background, there are tall, leafy trees and a clear blue sky. A dark, semi-transparent text box is overlaid on the right side of the image, containing white text.

# Shallotte Water Transmission Main Project Will Provide a Secondary Water Feed to the Southwest Area.

Project Completion Anticipated Early 2022.  
24" Pipe Delivery In Progress.