Water Operations
Water CIP Highlighted Projects

Pete Fromm– Manager
Water Engineering

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CIP No. 122003
Waterworks Park WTP to Northeast WTP Transmission Phase 1 – Northeast Flow Control Facility

Project Type: Design Build

PROJECT MANAGER: MIKE GARRETT

PROJECT DESCRIPTION

The project involves the design and construction of a flow control structure and three sections of large diameter pipeline that connect the flow control structure to the existing potable water supply system on both the upstream and downstream sides of the Northeast Water Treatment Plant (NE WTP). The Work includes the design and construction of:

- A large, below-ground, reinforced concrete structure;
- Flow control valves and associated piping;
- An above-ground superstructure with bridge crane and truck access;
- Three large diameter connecting pipelines;
- A connection to, and extension of, the existing NE WTP filtered water conduits' Junction Chamber No. 1;
- A connection to an existing 60-inch transmission main on the west side of the NE WTP yard;
- A variety of appurtenant features;
- Associated utility and site improvements; and
- Electrical and control system components.

PROJECT COST AND SCHEDULE SUMMARY

Contract Cost	
Total Contract Amount:	$24,593,619.00
Total Billed to Date:	$24,365,353.61
Percentage of Completion	99.07%

Contract Time	
Contract Start Date	September 5, 2019
Scheduled Final Completion Date	March 6, 2023

PROJECT JUSTIFICATION

The Northeast Flow Control Facility will provide additional finish water supply redundancy to the Northeast and Water Works Park service areas to avoid loss of service scenarios in the future. Additionally, it is a predecessor project to decommissioning treatment at the Northeast WTP necessary to align installed treatment capacities with overall system demands.

SEPTEMBER 2020

Lower Weir Floor Poured, Re-steel and Forms for wall stated

Framework & Re-steel - Lower Weir with 96" Flanged Thimble set

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NOVEMBER 2020

Pouring West all of Weir Chamber

Setting 42” Spool Pieces on 84” Header

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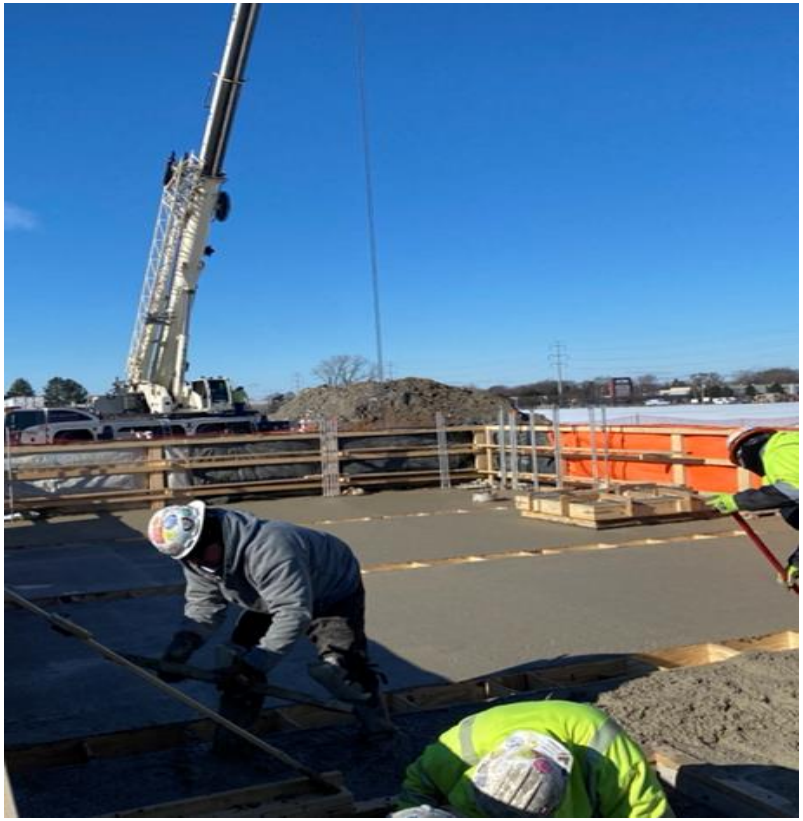
JANUARY 2021

Delivery of 96" Pipe

Pouring Concrete slab over Weir Chamber with trench drains



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APRIL 2021

42" Saddle Tap on Garland Main – Framework for Base of Vault Started

Excavator holding 42" pipe in place to prevent floating in CLSM backfill

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JULY 2021

48" Gate Valves for Valve bay in FCF

Setting the last Gate Valve on the Weir wall. All the spool pieces and Plunger Valves had to be lowered into valve bay before last roof truss could be set.

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OCTOBER 2021

New roofing membrane installation

Valve Trains being assembled

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DECEMBER 2021

Driveways and Sidewalks poured

Support pedestals poured under valve trains

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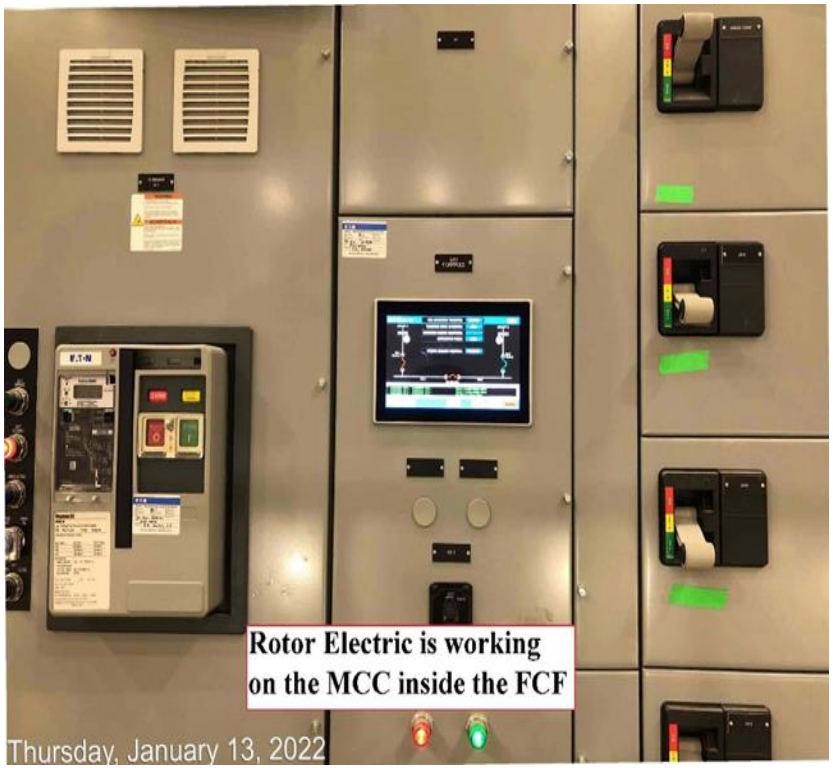
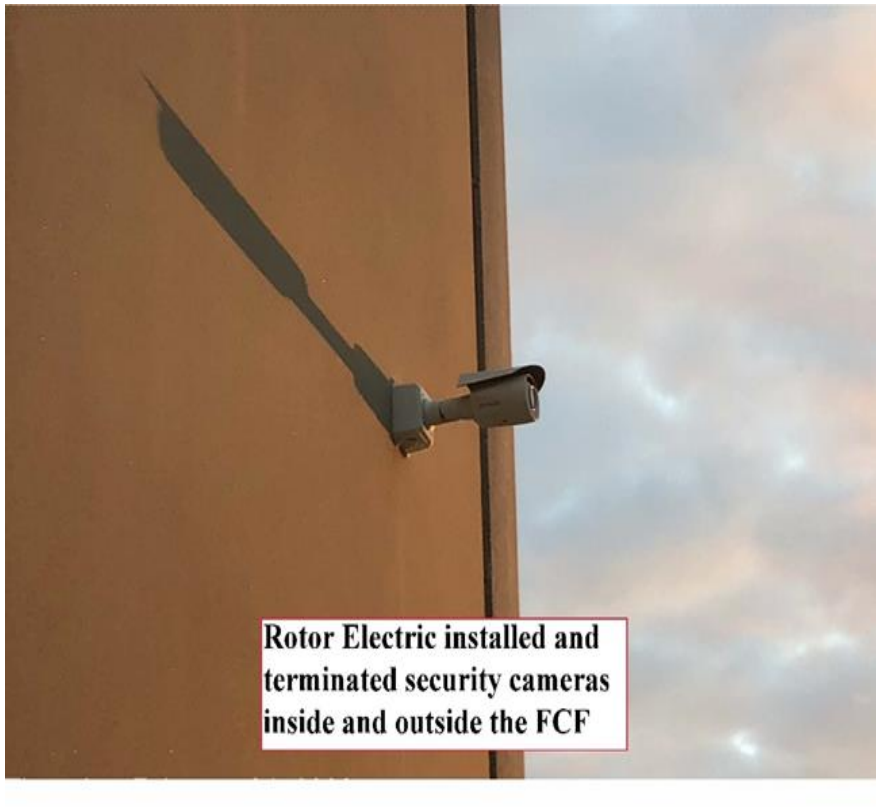
FEBRUARY 2022

MCC operating



Security systems is being installed



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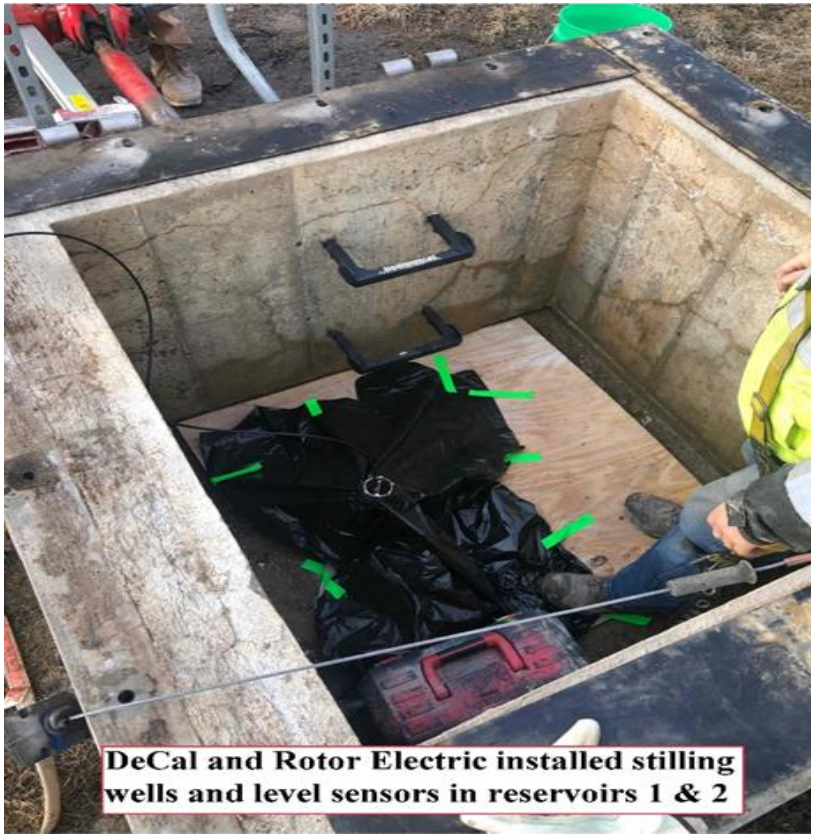
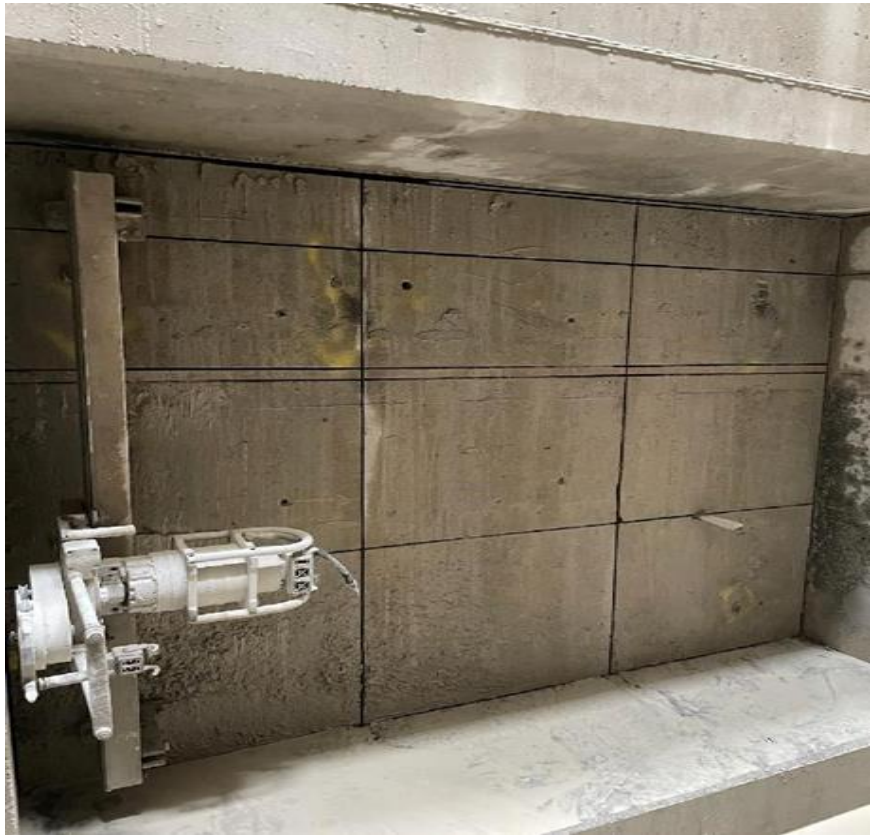
APRIL/MAY 2022

Reservoir level sensors installed with stilling wells



DeCal and Rotor Electric installed stilling wells and level sensors in reservoirs 1 & 2

Saw cutting the wall of existing JC1 to connect to the new extension



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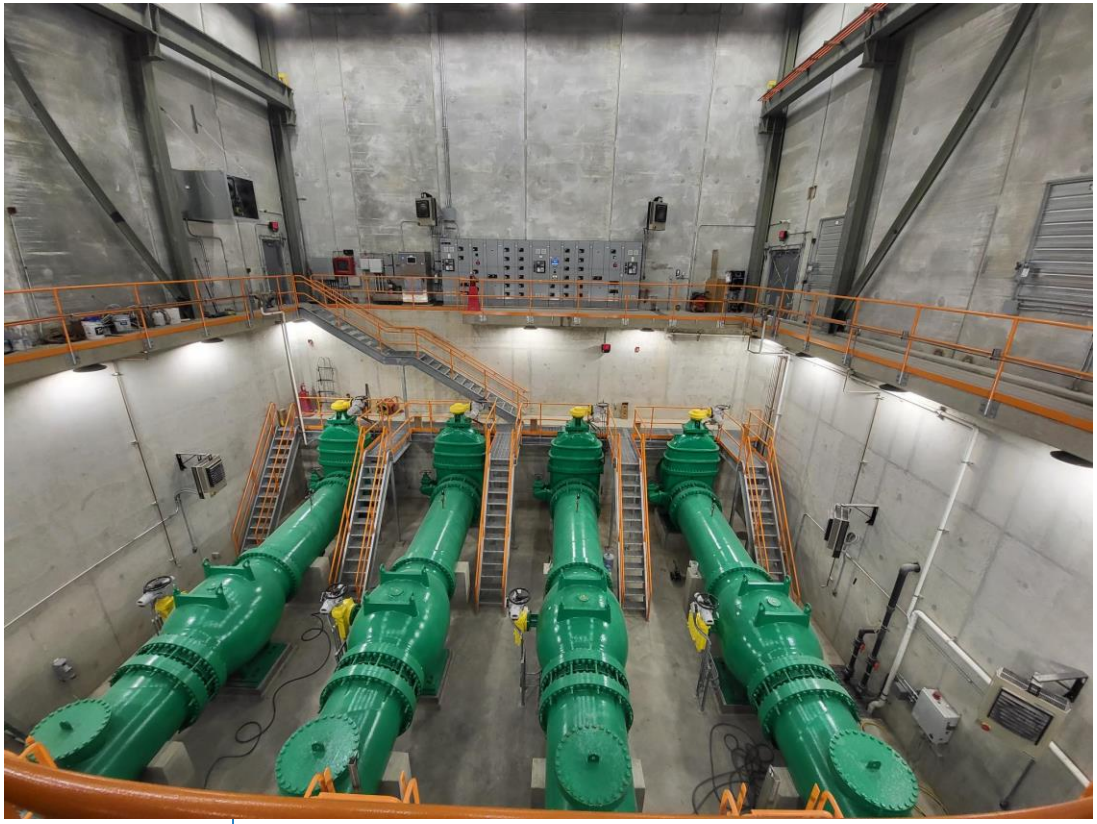
MAY 2022

Inside of the new Flow Control Facility looking at the valve trains



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CIP No. 132010
West Service Center Reservoirs, Reservoir Pump House & Division Valve Replacement

Project Type: Design Build

Project Manager: Andrew Juergens

PROJECT DESCRIPTION

The existing reservoirs at the West Service Center Booster Station were constructed in the early 1960's and are past their intended service life. The existing reservoirs are in poor condition and continue to require periodic repairs despite numerous past repairs. Additionally, half of the existing reservoir pumps experience suction hydraulic issues when the reservoir level falls below half full.

Additionally, construction of new of West Service Center Division Valves is needed to convey flows originating from the Lake Huron Water Treatment Plant through the West Service Center to the Springwells Water Treatment Plant high-pressure service area while the Springwells raw water tunnel is out of service for repairs.

PROJECT COST AND SCHEDULE SUMMARY

Contract Cost	
Total Contract Amount:	44,900,000.00$
Total Billed to Date:	27,456,896.88
Percentage of Completion	61.15 %

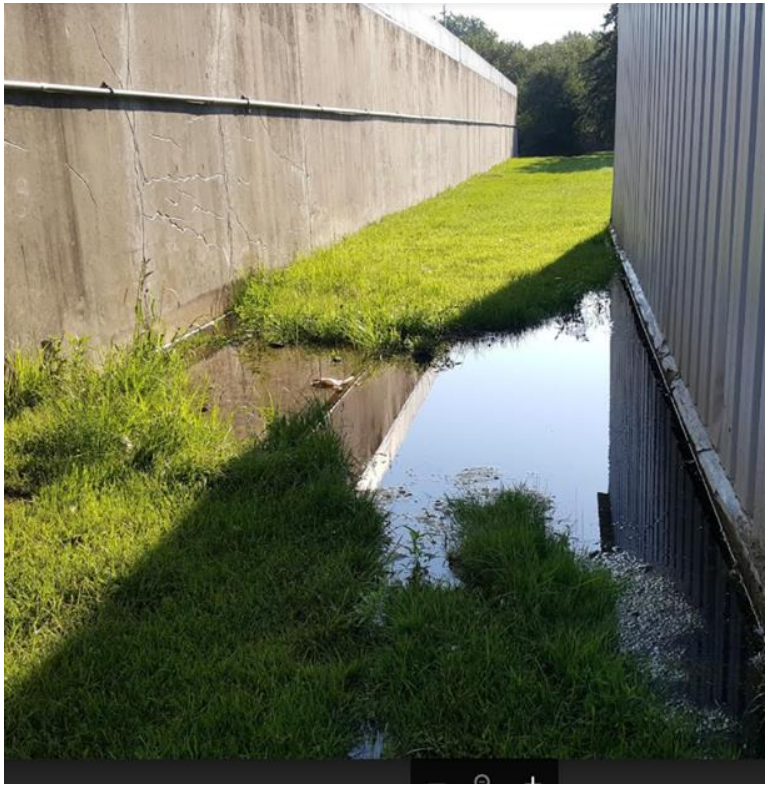
Contract Time	
Contract Start Date	March 15, 2020
Scheduled Final Date	March 14, 2024
Final Completion Date	July 12, 2024

PROJECT JUSTIFICATION

Construction of West Service Center Division Valves is needed to convey Lake Huron WTP flow through the West Service Center to the Springwells WTP high service area while the Springwells WTP raw water tunnel is out of service for repairs. Construction of the active bypass around the Newburgh Pump Station

EXISTING CONDITIONS PRIOR TO PROJECT START

Existing – Ponding between Pump House No 1 and Reservoir



Existing Reservoir Pump Houses No 1 & No 2

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EXISTING CONDITIONS PRIOR TO PROJECT START

Existing Valve Well No. 3

Existing Valve Well No. 1

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APRIL 2021

Excavation is Underway for New Reservoir Pump House

Sheet Piling Installed at Valve Well No.3

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JUNE 2021

Progress on construction of the new Reservoir Pump House

Valve Well No. 3 Demolition in progress

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SEPTEMBER/OCTOBER 2021

New Reservoir Pump House – Rebar framework in place

Installation of Reservoir Fill Yard Piping

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JANUARY/FEBRUARY 2022

Installation of 42" Reservoir Pump House Discharge Piping

New masonry walls are being constructed

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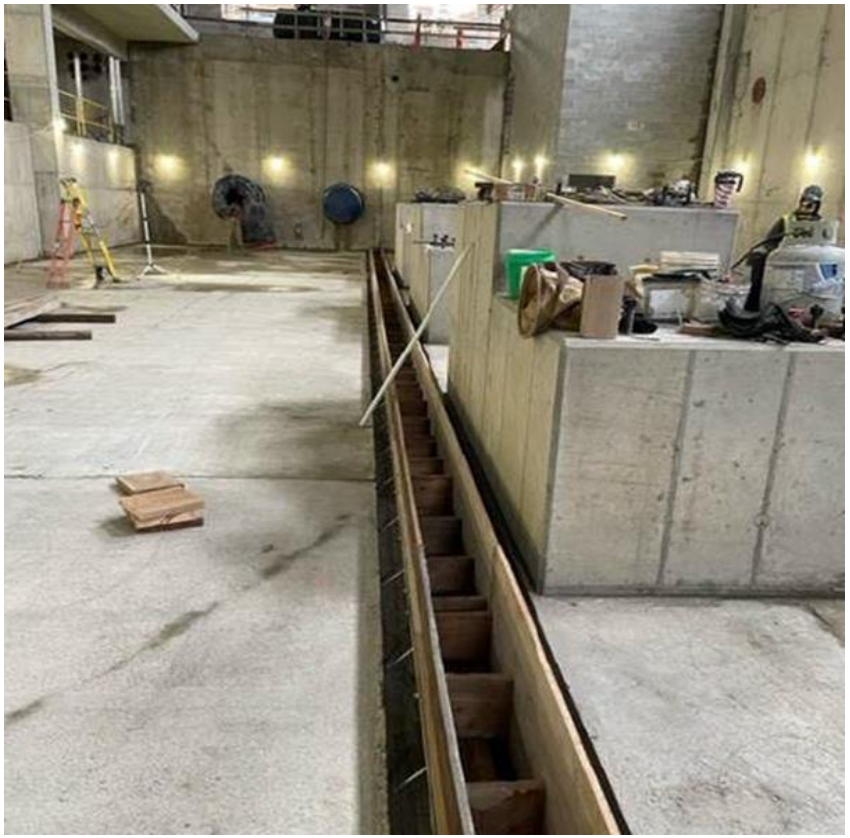
MARCH 2022

Pouring concrete for Reservoir Pump Bases

Reservoir Pump House bases and trench drain in progress



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APRIL 2022

North reservoir base slab pour

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MAY 2022

North Reservoir Support Columns in Progress

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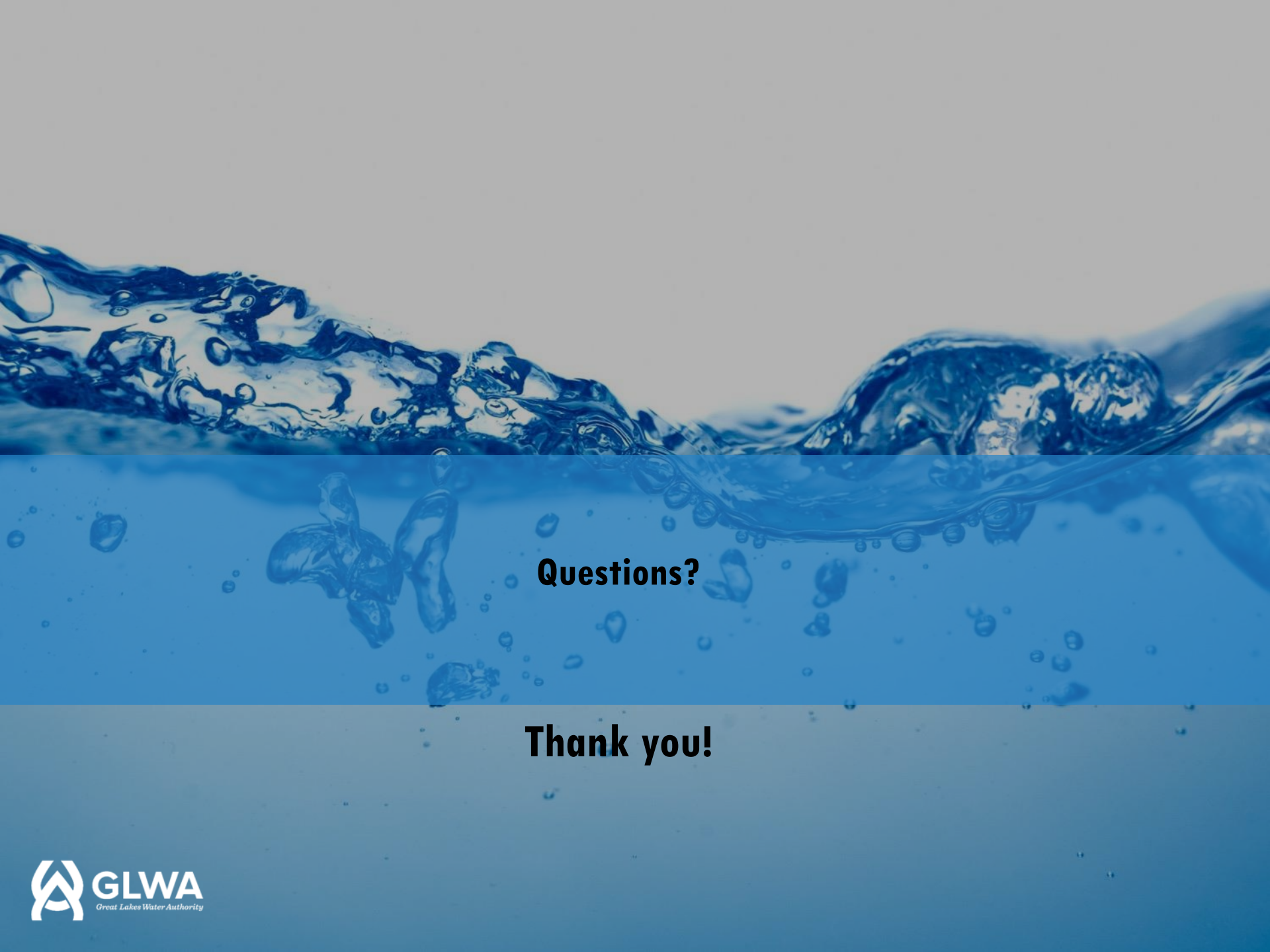

Questions?

Thank you!

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