

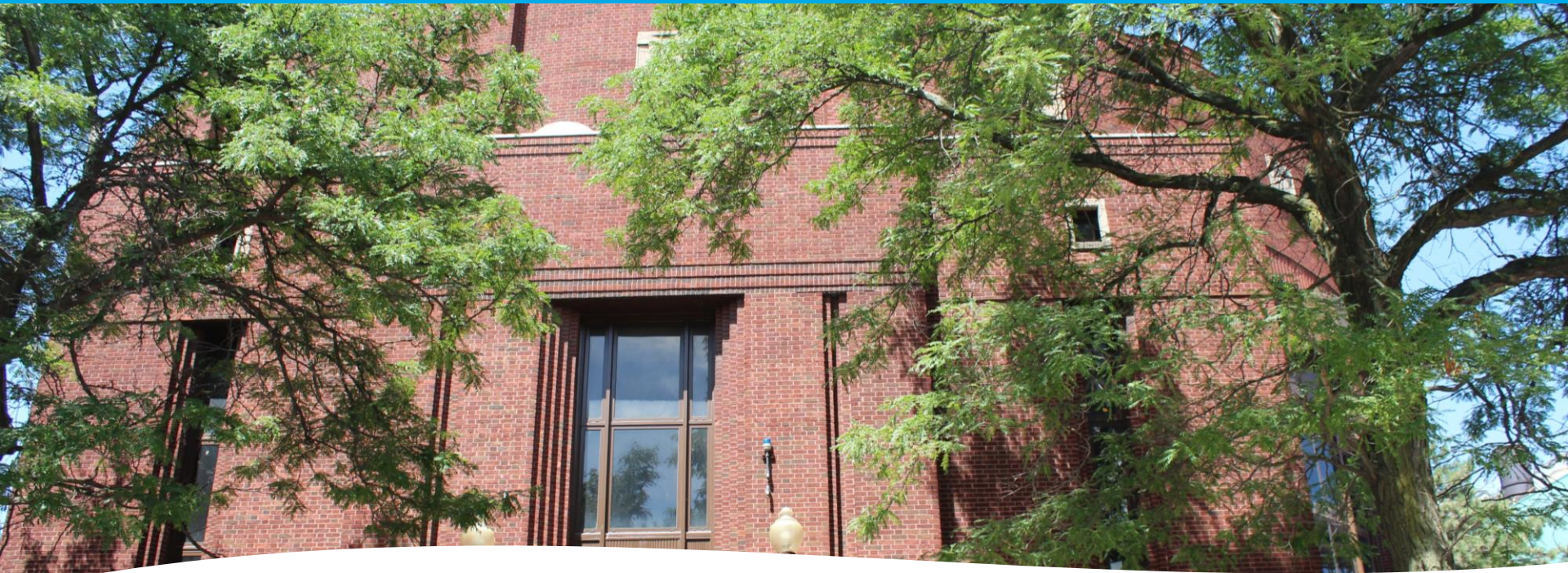
A dynamic splash of clear blue water against a white background, with a thick blue horizontal bar at the bottom.

# Wastewater Operations CIP Presentation

*Dan Alford, P.E.*

*Director of Wastewater  
Engineering and Maintenance*





# Capital Improvement Plan (CIP) Project Updates

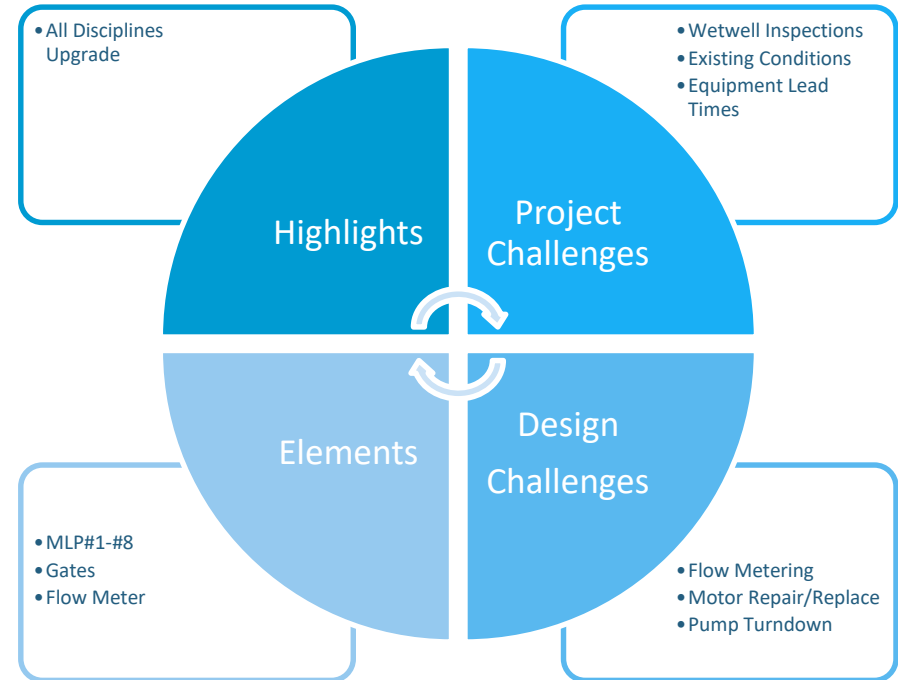
- 211006, PS No. 1 Improvements
- 211007, PS #2 Bar Racks Replacements and Grit Collection System Improvements
- 211009, Rehabilitation of the Circular Primary Clarifier Scum Removal System
- 212007, Rehabilitation of the Secondary Clarifiers
- 212008, Rehabilitation of ILP #1&2 and to Aeration Decks 1&2...
- 213006, Improvements to Sludge Feed Pumps at Dewatering Facilities
- 216011, Structural improvements

# CIP Project Update, 211006

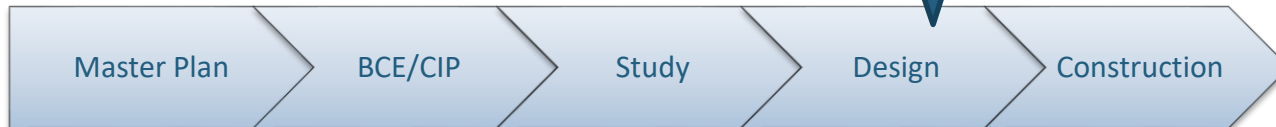
(PS No. 1 Improvements)

## ☐ Comments

- Main Lift Pump Rehabilitation
- Influent Gate Rehab/Replace
- Effluent Gate Rehabilitation
- Elbow Flow Meter Installation
- Grease Lubrication System
- Entrance/Access Door
- Relocation of Electrical Equipment
- Relocation of SCADA Equipment



We Are Here



November 2021

(PS No. 1 Improvements, Cont'd)



(PS No. 1 Improvements, Cont'd)

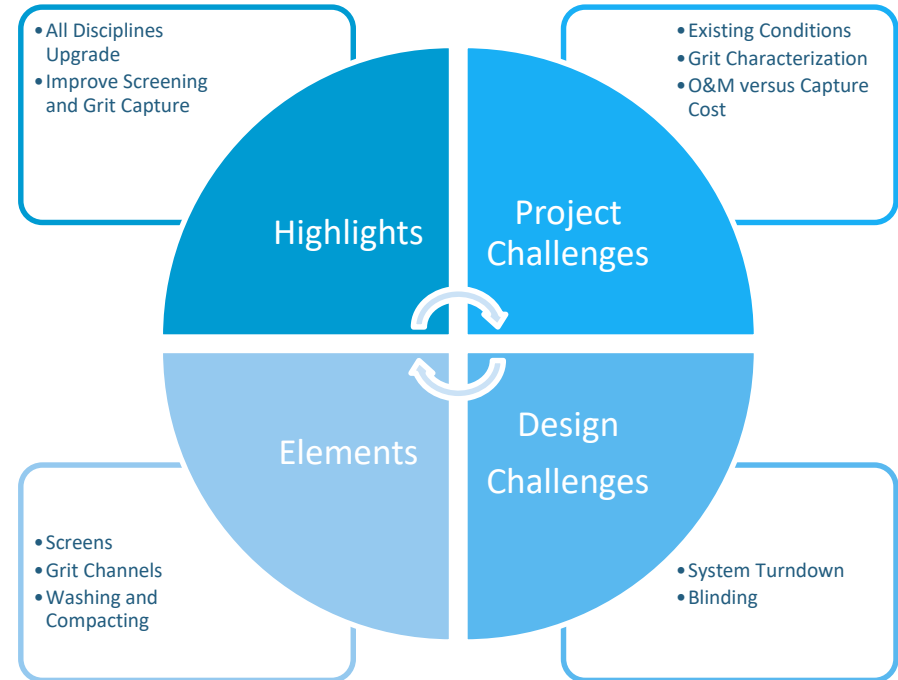


# CIP Project Update, 211007

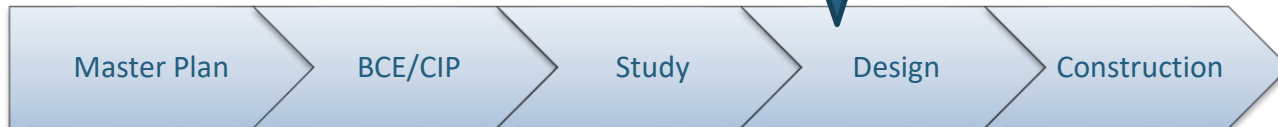
(PS #2 Bar Racks Replacements & Grit Collection System Improvements)

## ☐ Comments

- Single Stage Versus Two Stage Screenings
- Screenings and Grit Removal Strategies
- Dry Weather Facility



We Are Here



August 2022

## (PS #2 Bar Racks Replacements & Grit Collection System Improvements, Cont'd)



## (PS #2 Bar Racks Replacements & Grit Collection System Improvements, Cont'd)



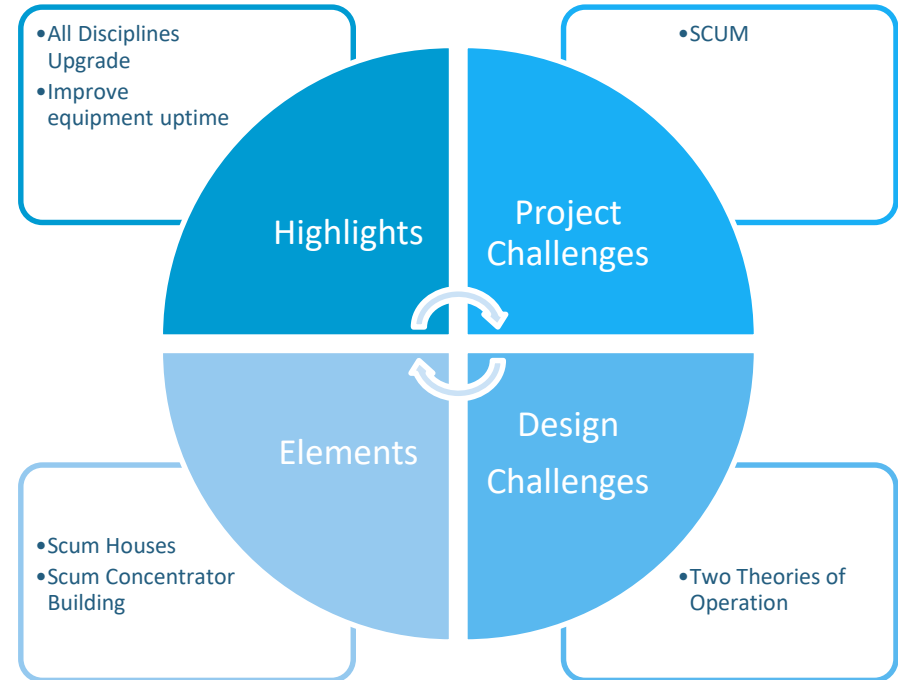


# CIP Project Update, 211009

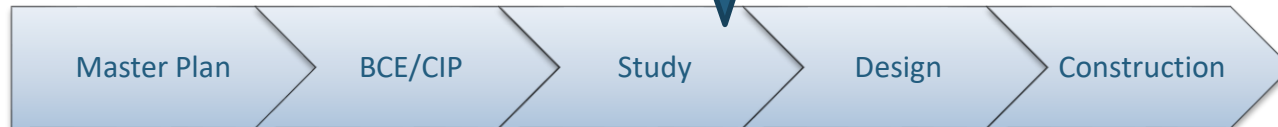
(Rehabilitation of the Circular Primary Clarifier Scum Removal System)

## ☐ Comments

- Large Amount of Equipment in Existing Process, Difficult to Keep in Operation
- Plugging
- Re-Bidding Design Phase



We Are Here



May 2021

## (Rehabilitation of the Circular Primary Clarifier Scum Removal System, Cont'd)



## (Rehabilitation of the Circular Primary Clarifier Scum Removal System, Cont'd)

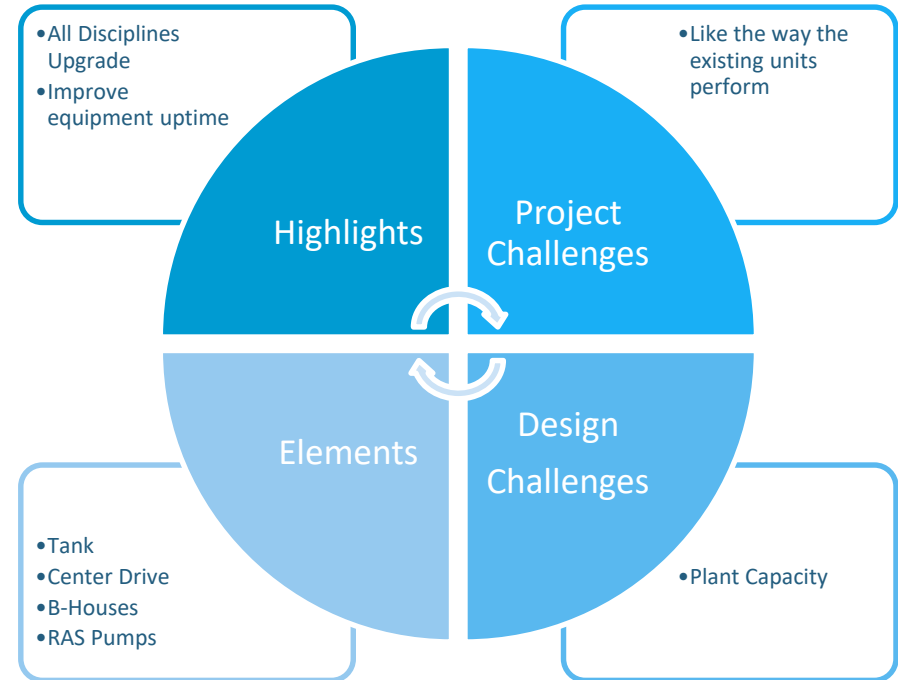


# CIP Project Update, 212007

(Rehabilitation of the Secondary Clarifiers)

## ☐ Comments

- Future Project
- Programmatic Approach
- 25 Clarifiers, Only 1 can be Turned Over to Contractor



## (Rehabilitation of the Secondary Clarifiers, Cont'd)



## (Rehabilitation of the Secondary Clarifiers, Cont'd)

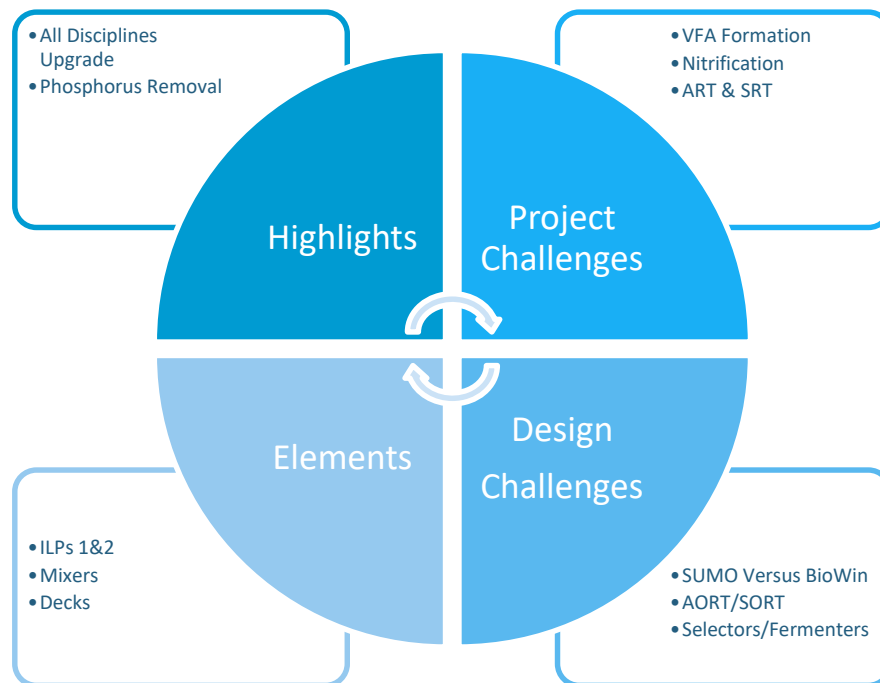


# CIP Project Update, 212008

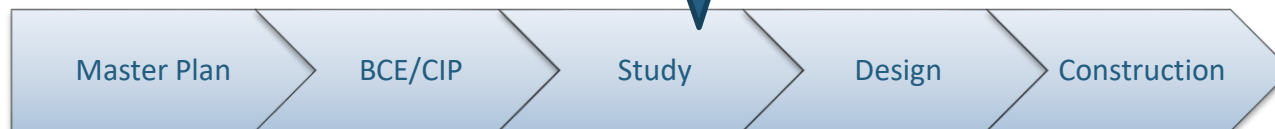
(Rehabilitation of ILPs 1&2 and Modifications to Aeration Decks 1&2 to Incorporate Biological Phosphorus Removal and Step Feed)

## ☐ Comments

- Working with Consultant, University of Michigan, and University of California Los Angeles
- Primary Effluent Discharge
- Primary Tank Efficiency
- Step Feed / Solids Holdup
- pH Adjustment



We Are Here



August 2021

## (Rehabilitation of ILPs 1&2 and Modifications to Aeration Decks 1&2 to Incorporate Biological Phosphorus Removal and Step Feed, Cont'd)





## (Rehabilitation of ILPs 1&2 and Modifications to Aeration Decks 1&2 to Incorporate Biological Phosphorus Removal and Step Feed, Cont'd)

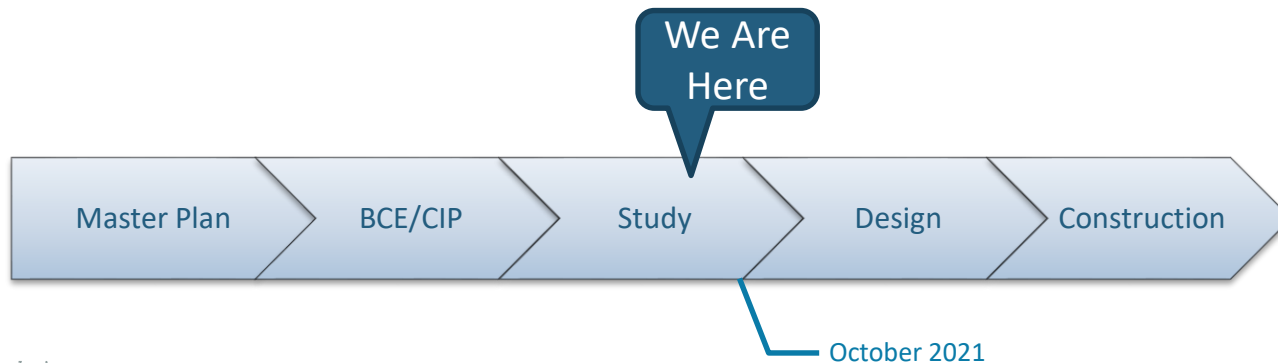
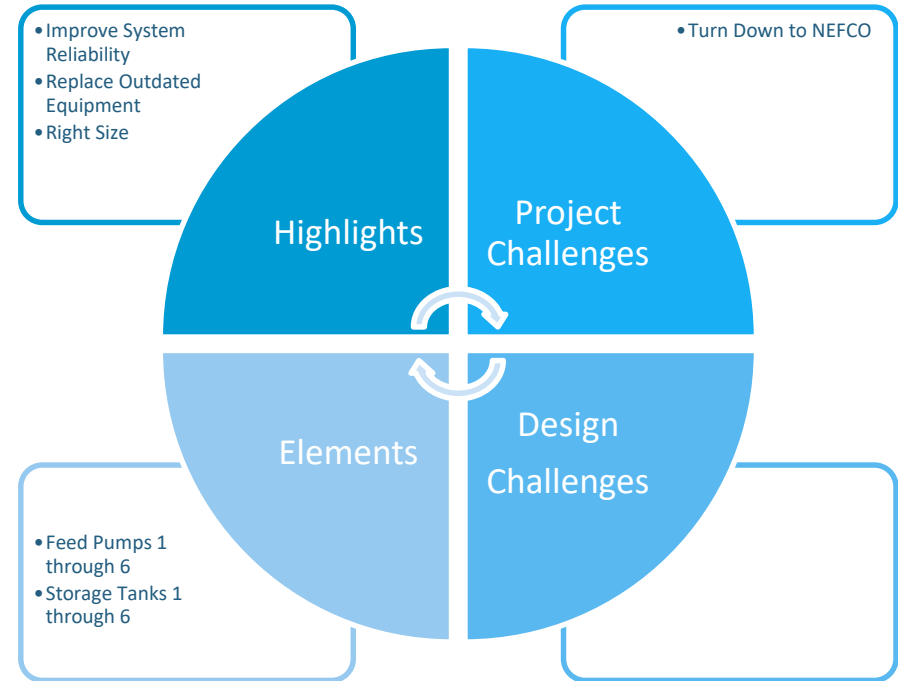


# CIP Project Update, 213006

(Improvements to Sludge Feed Pumps at Dewatering Facilities)

## ☐ Comments

- Separated into 3 phase
  - Bypass Valve
  - Right Size Feed Pump
  - Design Header System
- Phase 1 and 2, GLWA Design
- Phase 3, DBB



# CIP Project Update, 213006

(Improvements to Sludge Feed Pumps at Dewatering Facilities)

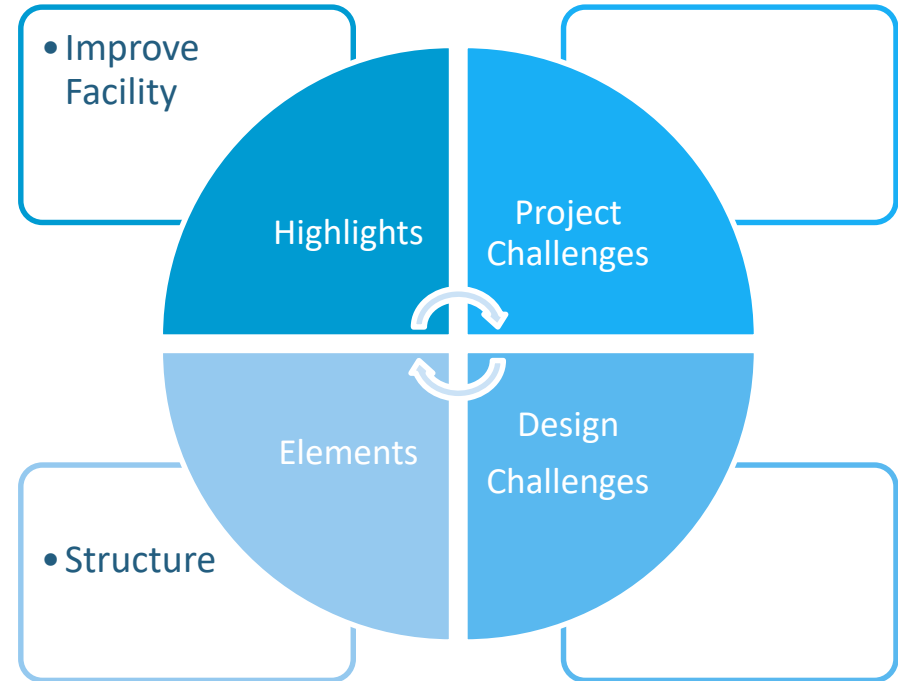


# CIP Project Update, 216011

(Structural improvements)

## ☐ Comments

- Primary Clarifiers #17 and #18
- Aeration
- Sludge Storage Tanks
- Complex B Gravity Thickeners
- Secondary Clarifiers B-Houses
- Administration Building
- Chlorination and Dechlorination



September 2021

## (Structural improvements, Cont'd)



## (Structural improvements, Cont'd)



# Questions?



# THANK YOU



# GLWA

*Great Lakes Water Authority*