



Capital Planning Committee

*Water Resource Recovery Facility
Highlighted Projects*

March 19, 2019



WRRF Overview



Construction Projects Underway

8 Projects

\$161.7M in total



Rouge River Outfall

Project Type: Design Build

Cost: \$44.4M

Start Date: February 2016

End Date: September 2019

Highlights:

- Will provide disinfection for wet weather discharge
- Will provide redundant dry weather discharge
- Utilizes Sodium Hypochlorite for disinfection and Sodium Bisulfite for dichlorination
- Phase 1 Construction has been completed and the system went live on 1/24/19
- Regulatory driven



Rouge River Outfall New Hypo Building



Rouge River Outfall



Rouge River Outfall Chemical Diffusers

Aeration System Improvements

Project Type: Design Bid Build

Cost: \$15.8M

Start Date: October 2016

End Date: June 2019

Highlights:

- Rehabilitate four basins.
- Replace 3 of 5 VFDs for the Intermediate Lift Pumps
- Replace flow meters
- Allow ILP #7 redundancy to all four basins
- Last basin work just completed and put back into operation, waiting on the 30-day test
- Contractor is currently working on the punch list items and the final completion is expected in June 2019



Aeration System Improvements 120-inch Knife Valve Installation



Aeration System Improvements Pulling VFD Power Wire

Primary Clarifier Rehabilitation

Project Type: Design Bid Build

Cost: \$51.9M

Start Date: July 2016

End Date: May 2020

Highlights:

- Rehabilitate 12 rectangular tanks and 2 circular tanks, including mechanisms
- Rehabilitate pipe gallery sludge pumps and piping

Contractor is currently rehabbing primary tanks 5-8

Rehabilitation of primary rectangular tanks 9-12 were completed and put back into service.

Rehabilitation of primary circular clarifiers 15 and 16 were completed and put back into service.



Primary Clarifier Rehabilitation



Demo of Existing Scum Collector Trough



Primary Clarifier Rehabilitation Completed Circular Clarifier

Modification to Incineration Sludge Feed System

Project Type: Design Bid Build

Cost: \$18.6M

Start Date: April 2018

End Date: January 2021

Highlights:

- Reconstruct north side conveyors for the Complex 2 Incinerators
- Replace multiple Motor Control Centers and Substations
- Painting of complex 2 Dewatering and incineration basement are ongoing
- Installation of different conveyors are ongoing



Modification to Incineration Sludge Feed System New G Sludge Conveyor in Complex 2



Modification to Incineration Sludge Feed System New Switchgear for EB-26

PS#1 Rack and Grit Improvements

Project Type: Design Bid Build

Cost: \$22.6M

Start Date: November 2013

End Date: September 2019

Highlights:

- Replace 20 years old bar screens and grit removal systems
- Replace multiple Motor Control Centers
- Painting of Rack and Grit areas are ongoing
- All new equipment is installed and completing testing



PS#1 Rack and Grit Improvements New Bar Screens and Grit Collectors #5-8



PS#1 Rack and Grit Improvements New Grit Collector

Relocation of Industrial Waste Control to WRRF

Project Type: Design Bid Build

Cost: \$1.6M

Start Date: June 2018

End Date: April 2019

Highlights:

- Gordy Howe Bridge Driven
- IWC staff relocated to WRRF in the second week of January 2019
- Contractor is currently working on the punch list items



Relocation of Industrial Waste Control to WRRF Old Livernois Center



Relocation of Industrial Waste Control to WRRF Old Livernois Center

Conner Creek CSO Basin Rehabilitation

Project Type: Design Bid Build

Cost: \$5.1M

Start Date: June 2018

End Date: December 2019

Highlights:

- Outlet Gate Rehabilitation – alignment, gearing, seals, actuators and alternatives
- Restore compromised conduit run on top of basin
- Rehabilitation of 5 Flow meters



Conner Creek CSO Basin Rehabilitation Effluent Gate Actuators



Conner Creek CSO Basin Rehabilitation Barge Based Crane for Gate Work



Conner Creek CSO Basin Rehabilitation Effluent Launder Gates



Conner Creek CSO Basin Rehabilitation Rehab of Base Plate for Relief Gate

Baby Creek CSO Cleaning

Project Type: Design Bid Build

Cost: \$1.7M

Start Date: February 2018

End Date: March 2019

Highlights:

- Remove accumulated sludge/grit upstream of facility
- Add access hatches to ease cleaning access in future
- Inspect/rehab flow meters



Baby Creek CSO Cleaning Forebay after ~1800 CY Removed



Baby Creek CSO Cleaning Sludge/Grit Removal



Baby Creek CSO Cleaning Resteel for New Large Access Hatch



GLWA

Great Lakes Water Authority