



Wastewater Operations CIP Presentation

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of Wastewater
Engineering and
Maintenance*



Pump Station 2 Bar Screen and Grit System

Project Stats

- CIP Number: 211007
- Project Number: 1904337
- Project Engineer: Jason Williams
- Total CIP Budget: \$76,596,000
- Dates
 - Design Award, September 2020
 - Completion of Design, March 2022
 - Start of Construction, September 2022
 - End of Construction, May 2027

The image shows a screenshot of a project information form from the GLWA (Great Lakes Water Authority) system. The form is titled "WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements" and is associated with CIP 211007. It includes fields for project status, budget, location, and a detailed problem statement and scope of work. The form also features a small image of the bar racks and grit collection system.

GLWA Great Lakes Water Authority

GLWA FY 2021-2025 CIP 211007 CIP

WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements

Project Status: Active
CIP Type: Project
Project New To CIP: Yes

Project Engineer/Manager: Jason Williams
Director: Dan Altora
Managing Dept: WW Design Eng

Date Original Business Case Prepared: 10/12/2016
Year Project Added to CIP: 2016

Budget: Wastewater
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Location: City of Detroit
Fund and Cost Center: Wastewater 5421.89221.1

Problem Statement: Replacement of all bar racks and associated equipment and addition of fine screens (1/4 inch) for more reliable and efficient screenings removal. Addition of screenings washing and compaction to reduce truck traffic and cost of disposal. Improvement of grit collection system with more efficient, state of the art, grit collection and the grit screenings and grit removal and handling systems will improve the performance of all downstream processes, reduce maintenance costs and increase life of downstream equipment.

Scope of Work / Project Alternatives: The work consists of evaluation, design and construction of the replacement of the existing bar racks and screenings washing and compaction, addition of new fine screens (1/4 inch) downstream of the bar racks, addition of aeration tank and grit washing and/or classification, inclusion of stacked tray grit removal or other technology within the necessary of the existing building that houses the screens and the screenings and grit handling and load out, including all civil, structural, HVAC, plumbing, electrical, and architectural work. New instrumentation and controls for operators and monitoring will also be provided. System shall be designed to meet long-term wet weather capacity requirements of PS2.

Other Important Info: *Innovation note: Include new grit removal equipment rather than replacement in kind (cyclonic).
The CIP Project Proposal - CIP 1314 - "Replacement of Bar Racks of Pump Station No. 2" and CIP Project Proposal CIP 1223 "Rehabilitation of Grit and Screening System at PS 2 and Rehabilitation of Sampling Sites at WW1" are combined into one project under CIP 1314. That combined new budget for CIP 1314 (CIP 1223 and 1314) has a total amount of \$11,617,000. The design of "Rehabilitation of Sampling Sites" is completed and will be bid separately for construction. The previous design for Bar Rack System by Sigma under As Needed Engineering

Pump Station 2 Bar Screen and Grit System

Project Overview

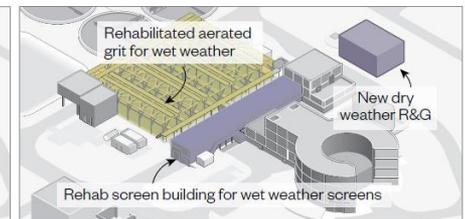
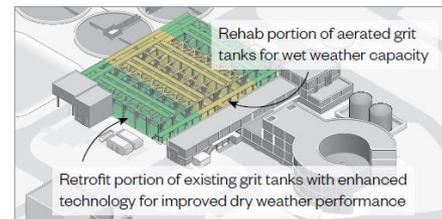
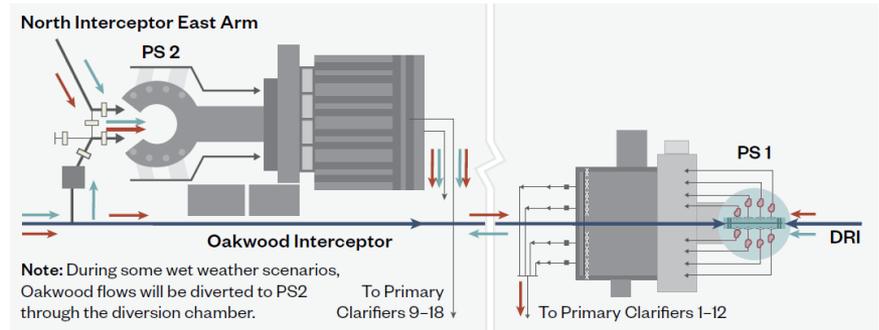
- Rehabilitate Screenings Building Channels, Grit Channels, Gates, Stop Logs, and Supporting Systems

Study

- Bar Rack to fine screening
- Grit Removal Technology
- Conveying Systems
- Grit and Screenings Washing
- Grit and Screenings Compacting

Major Changes

- Removing Clamshell Crane
- Increasing Screening (Fine and Course)
- Improved Grit Removal



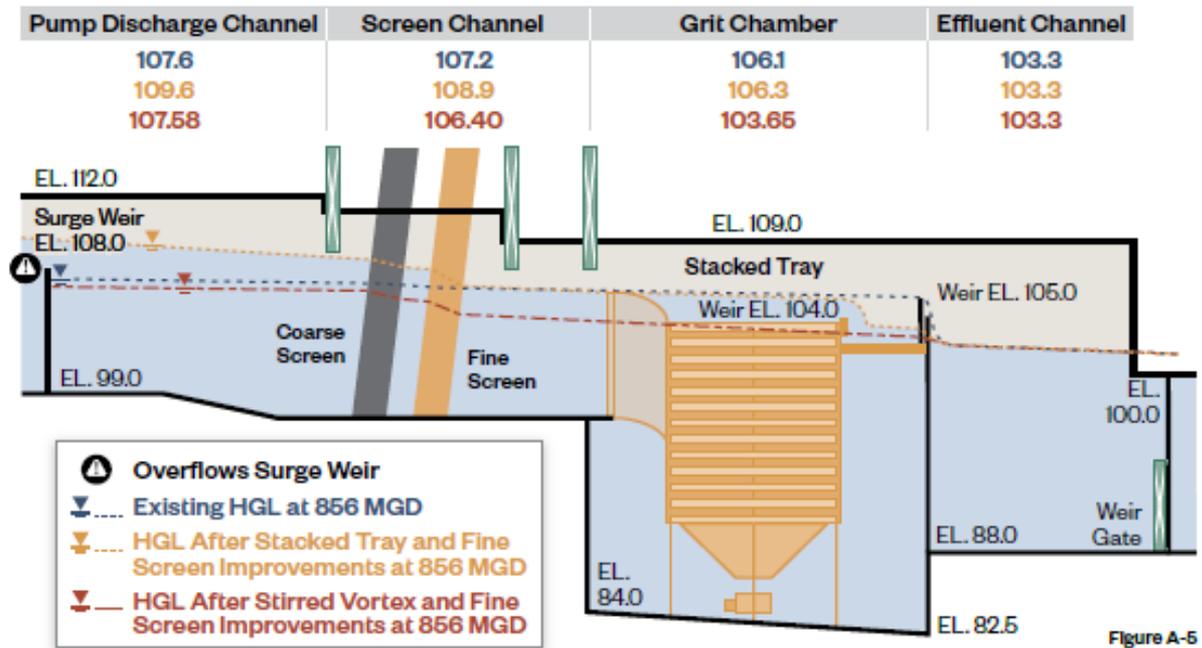
Pump Station 2 Bar Screen and Grit System

Project Update

- Pending Board Approval

Upcoming Events

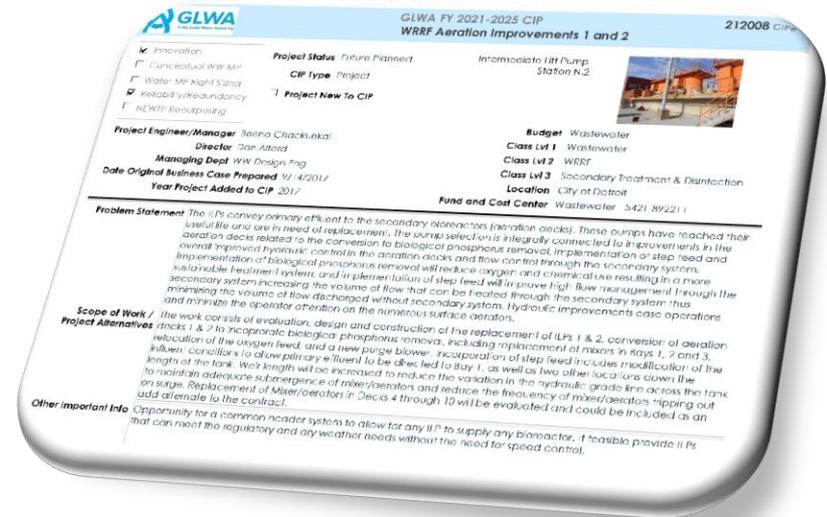
- Award NTP



Aeration System Improvements

Project Stats

- CIP Number: 212008
- Project Number: Part of CS-272 Task# 7
- Project Engineer: Chris Wilson
- Total CIP Budget: \$76,000,000
- Dates
 - Study Report, April 2021
 - RFP, September 2021
 - Construction Start, February 2022
 - Construction Complete, January 2026



Aeration System Improvements

Project Update

- Current Status; AECOM Conducting Study and Working on RFP.

Upcoming Events

- Engineering, Operations, and Maintenance Staff Workshops with AECOM.



Short Term Engineering Projects

Project List

- Replace Reducers and RAS Flow Meters in Five B-houses
- Parking Structure Repairs
- Diesel Storage Tank Rehabilitation
- JOC for I&C calibration
- Improve Access to Railcar Gate
- Complex A Biosolids Dryer Facility (BDF) Sludge Feed Pump
- Yard Piping Rehabilitation
- Complex II bridge and duct work
- Pump Station #2 Outdoor Switchgear

Replacement

- Incinerator Complex II, Refractory Inspection and Repair
- Controls upgrade for Generators D1 and D2
- Complex A sub basement pump gallery Concrete rehab
- Aeration Deck Repair
- Grit Flight for Pump Station 1
- EB1 Roof Repair
- Primary Circular Clarifier Flow Meter Replacement
- Grit Tracking at PS#1 and PS#2
- BOD Instrumentation Testing at Aeration Deck #1

Questions?





GLWA

Great Lakes Water Authority