



Financial Services Audit Committee Communication

Date: April 20, 2018

To: Great Lakes Water Authority Audit Committee

From: Andrew Sosnoski, Manager, Construction Accounting & Financial Reporting

Re: FY 2018 Construction Work-in-Progress Report through December 31, 2017

Background: The quarterly construction work-in-progress (CWIP) provides information and analysis related to the execution of the Great Lakes Water Authority capital improvement program.

Analysis: New this month is a CWIP dashboard (attached) in addition to the quarterly report.

Proposed Action: Receive and file report.



**Construction Work-in-Progress Quarterly Report
(Unaudited, Pre-close)**

As of December 31, 2017

For questions, please contact:

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4/20/2018**To Our Stakeholders:**

The contents of this report represent the financial presentation of construction work-in-progress activity for the Great Lakes Water Authority (GLWA) as of December 31, 2017. The information in this report presents a snapshot to inform decision makers and stakeholders. This is important as we manage the capital program for the remainder of FY 2018 and approach the implementation of the FY 2019–2023 Capital Improvement Plan (CIP).

This report is relatively new and will continue to improve each quarter to inform decision makers and stakeholders. Added to this report last period are the following:

- Allowance & Program Analysis
- Budget Amendments
- Coordination of Phase Reporting within the Capital Improvement Program (CIP) & Construction Work-In-Progress (CWIP) Reporting Documents

Report Contents and Organization

This report is divided into two sections: one for the Water System and one for the Wastewater System as identified in the table of contents. Each section includes analysis and reporting of the following:

Percent of Spend Compared to Budget and Capital Improvement Plan (CIP) Requests: Presentation of spend information is necessary to report our progress on CIP projects.

Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects: A combination of commentary and analysis provides further insight into risk factors and project status. An excerpt from the CIP for each of the selected projects follows the commentary as further background information.

Construction Work-in-Progress Rollforward: This table provides a list of all projects in the CIP along with status or financial activity. This table may be used to revisit priorities, workload, and phasing.

Budget Amendments / Allowance & Program Analysis: This information identifies the specific usage and the reallocation of allowance and program budgets to CIP projects

Financial Information

All project amounts are unaudited and are “pre-close”. This means that direct contractor costs are generally included in these totals with most pay estimates entered through December 31, 2017. There may, however, be some pay estimates that lag. The totals do not include indirect overhead or capitalized interest.

Budget vs. Plan

Generally, GLWA’s CIP projects span two or more fiscal years. The GLWA Board of Directors adopts a biennial “budget” and a five-year capital improvement “plan”.

- ✓ The adopted **budget** relates to operations and maintenance expense, annual fixed commitments such as debt service, and incremental adjustments to reserves. The budget provides authority to spend within defined amounts. The budget is also referred to as the “revenue requirement” for the utility.
- ✓ The CIP “budget” for the same biennial budget period above is based on the first two years of the CIP. Funding for these projects are established in the financial plan through a combination of bond proceeds and Improvement & Extension fund reserves
- ✓ The five-year capital improvement **plan** is a rolling plan that is updated at an administrative tracking level as projects move from estimated to actual bid numbers. An updated mid-cycle CIP would be presented to the Board for approval if the prioritization strategy was revised and/or the plan was in need of material revisions.

Future Enhancements

This report presents information that is readily available. Currently under development are enhancements that will provide the opportunity for improved CWIP reporting.

Monthly Capital Spend Projections – Improvements are underway related to preliminary monthly spend information, projected out for the duration of the CIP, and communicated with Treasury to allow for investment optimization. This reporting is being developed as a joint effort with our engineering partners. This will also allow for improved accuracy of our Key Performance Indicator on rate of spending.

Direct Labor Capitalization – Technology solutions are being evaluated to improve direct labor capture accuracy, timeliness and ease in which labor cost are captured.

Indirect Labor Capitalization – Presently an effort to identify indirect labor related to the capital process is underway.

Alignment of Budget & CIP – During the development of the FY 2019–2023 CIP Plan, FY 2018 budgeted CIP was reforecast to align with anticipated spend. The resulting budget amendments will be entered and reflected in future period CWIP reports.

Key Performance Indicators – KPI's under consideration include CIP spend vs book value assets, percentage growth of project in amount and duration, actual vs planned number of projects completed, and actual vs planned monthly capital spend.

WATER SYSTEM

Percent of Spend Compared to Annual Budget and Capital Improvement Plan (CIP) Requests

The rate of spend of is a key performance indicator. The ratios for FY 2017 (twelve months) of 37.9% and for FY 2018 (six months) of 17.6% are lower than simple benchmark of 80% and 50% respectively. This is attributable to three reasons. First is the competition for staff priorities during stand-up of the GLWA (primarily during FY 2017). Second, is the alignment of projects identified and staff or contractor resources to carry out the projects. Several key hires occurred during the past year which will improve this performance. Third, is the phasing of CIP activity which is being further refined throughout GLWA.

	FY 2017 Original Plan and Budget (Twelve Months)	FY 2017 Activity (Unaudited)	FY 2017 Activity as a Percentage of Budget (Unaudited)	FY 2018 Amended Budget	FY 2018 Prorated (Six Months)	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Water System Projects							
FY 2017 CIP Project Requests @ 100%	\$ 130,232,000	\$ 39,483,833	30.3%				
FY 2017 CIP Net Budget (approx. 80% of request)	104,185,600	39,483,833	37.9%				
FY 2018 CIP Project Requests @ 100%				\$ 137,655,000	\$ 68,827,500	\$ 9,710,202	14.1%
FY 2018 CIP Net Budget (approx. 80% of request)				110,124,000	55,062,000	9,710,202	17.6%

It should be noted that these interim reports have been prepared on a modified cash basis. This means that expenses may lag in vendor invoice receipt and posting. Known expenses, material in nature, have been accrued.

Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects

Of the total Water System Construction Bond spend for FY 2018 to date, **five projects account for \$6.5 million or 67.0% of the total spend.** Those projects are summarized in the following table. An analysis of each project and its related CIP summary follow the table. Note that the last page of this report provides a Glossary of Acronyms.

Water System Projects	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget Per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Project 114001- Springwells WTP 1958 Filter Rehabilitation	\$ 77,422,000	\$ 82,884,422	\$ 1,200,000	\$ 2,649,207	27.3%
Project 114015-Emergency Grating Replacement at Springwells WTP	2,500,000	253,623	2,000,000	1,557,636	16.0%
Project 122012-36-Inch Water Main in Telegraph Road	7,061,000	8,125,683	5,061,000	720,166	7.4%
Project 114003-Water Production Flow Metering Improvements at NE, SW, and SPW WTP Total	12,900,000	184,952	8,800,000	303,874	3.1%
Project 170502-Transmission System Valve Replacement and Rehabilitation	15,330,000	-	2,930,000	1,279,399	13.2%
Selected Projects as a Percentage of the Total	\$ 115,213,000	\$ 91,448,680	\$ 19,991,000	\$ 6,510,280	67.0%
Total			\$ 137,655,000	\$ 9,710,202	100.0%

The following analysis provides brief highlights related to these projects.

Project 114001 – Springwells Water Treatment Plant 1958 Filter Rehabilitation

Water System Projects	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget Per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Project 114001- Springwells WTP 1958 Filter Rehabilitation	\$ 77,422,000	\$ 82,884,422	\$ 1,200,000	\$ 2,649,207	27.3%

Project Engineer/Manager: Grant Gartrell

Manager: Grant Gartrell

Total Design Fees (previously budgeted elsewhere): \$6,500,000

Total Construction and Construction Assistance Budget: \$77,422,000

Timeline: To be completed by November 2018

FY 2018 Last Pay Estimate Processed: December 31, 2017

Key Contracts/Vendors: SP-563 Walsh Construction; CS-1425 & CS-200 CDM Michigan

Project Description: Installation of new filter media, underdrains, filter valves and rate controllers; replace the existing filter control console and hydraulic controls at Springwells Water Treatment Plant.

Purpose: Rehabilitation of both filter trains to restore filtration capacity and sustain the useful service life of the process treatment infrastructure.

Status: Project timeline has been extended to include additional scope. Billing is complete through December 31, 2017.

Additional Project Manager Comments: Contract SP-563 will be completed on or before November 12, 2018. Construction Change Directive No. 8 has been approved to use a portion of the contract’s provisional allowance to execute architectural and building mechanical improvements to the plant’s administration building and other additional site improvements. Major work currently being conducted by the Contractor includes installation of new stop logs and guides at the 1930 weir chamber, renovation of the laboratory, construction of the breezeway, and replacement of filter wash water header isolation valves.

Additional Construction Accounting & Financial Reporting Team Comments: Total project budget per the Board approved CIP schedule does not include the historical, pre-fiscal year 2017 budget for the design contract CS-1425 nor the allocation of the Water Treatment Plant Allowance to fund CS-200 the Owner's Representative (RPR) consultant contract. The design contract has a total budget amount of \$6,500,000.

FY 2018-2022 CIP Page VI-3 for Project 114001 – Springwells Water Treatment Plant 1958 Filter Rehabilitation

CIP Number: CIP 917
Title: SPRINGWELLS WATER TREATMENT PLANT 1958 FILTER REHABILITATION AND AUXILIARY FACILITIES

Classification: 114: Water > Treatment Plants & Facilities > Springwells
Managing Dept: Water Eng
RC Score: NA
Contract No.: CS-1425, SP-563
Significance: Rehabilitation of Springwells WTP 1958 Filters and 1930s failed filters to provide the WTP with a renovated capacity of 295 MGD
Location: Springwells WTP
Driver: N/A - Active
Explanation: N/A - Active

Preliminary Scope of Work:

This project includes the study, design (CS-1425) and construction assistance of improvements to the Springwells WTP that includes the replacement of Phosphoric Acid Feed System, rehabilitation of the 1958 Filters, rehabilitation of failed 1930s Filters, Update of Operation and Maintenance Manuals, and addition of polymer systems and controls. Provide construction services to furnish and install new filter media, underdrains, filter valves, and rate controllers; replace the existing filter control consoles, hydraulic control valves with electric control valves, enclosures; add appurtenances to enable automatic backwashing of the filters; provide a Filter Aid Polymer System to the 1930 and 1958 filter complexes; Programmable Logic Controller-based controls for automatic control of the polymer system; install a local instrumentation and controls system.

Challenges: N/A - Active

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Lifetime Actual Thru FY2016 (Unaudited)	Projected Expenditures FY2017	Projected Expenditures FY2018	Projected Expenditures FY2019	Projected Expenditures FY2020	Projected Expenditures FY2021	Projected Expenditures FY2022	Projected Expenditures FY2023 & Beyond	2018-2022 CIP Total	Phase Total
S/D/C A	Active	1/18/2008	1/18/2018	\$0	\$353	\$95	\$0	\$0	\$0	\$0	\$0	\$95	\$448
C	Active	7/8/2013	3/14/2018	\$56759	\$20000	\$215	\$0	\$0	\$0	\$0	\$0	\$215	\$76974
Totals				\$56759	\$20353	\$310	\$0	\$0	\$0	\$0	\$0	\$310	\$77422



Springwells filter building

*Budget Amendment 6094 for RPR Services increases planned CIP from \$310,000 to \$1,200,000

Project 114015 – Emergency Grating Replacement at Springwells WTP

Water System Projects	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget Per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Project 114015-Emergency Grating Replacement at Springwells WTP	2,500,000	253,623	2,000,000	1,557,636	16.0%

Project Manager/Manager: Erich Klun

Manager: Grant Gartrell

Total Budget: \$2,500,000

Timeline: Current contract work completion by May 1, 2018; pending change order for additional scope with completion by December 2018.

FY 2018 Last Pay Estimate Processed: December 31, 2017

Key Contracts/Vendors: SCP-DB-112 Barton Malow Company

Project Description: This project was initiated resulting from an emergency, a FY 2017 budget amendment funded this project from the Water Treatment Plant Allowance – 170100. Work includes demolition, removal, disposal and replacement of existing structural steel and grating that provides access to critical areas of Springwells. Condition of the structural steel and grating created safety issues for those working in the lower level of the Low Lift Station. Collapse of the structural steel posed the risk of flooding the Low Lift Station and interrupting Springwells production.

Purpose: Replace original 1930s-vintage deteriorated structural steel and grating posing safety concerns to operators.

Status: Project is on schedule with an anticipated completion date of May 1, 2018.

Additional Project Manager Comments: Change order has been initiated and scheduled to go for Board review and approval on April 25, 2018. Additional scope of work includes other emergency structural repairs around Springwells that need expeditious attention. Proposed change order will extend final completion date to December 2018.

Additional Construction Accounting & Financial Reporting Team Comments: Change order to increase scope and time to complete in process.

FY 2018-2022 CIP Page VI-71 for Project 114015 – Emergency Grating Replacement at Springwells

CIP Number: CIP 1412
Title: EMERGENCY GRATING REPLACEMENT AT SPRINGWELLS WTP

Classification: 114: Water > Treatment Plants & Facilities > Springwells
Managing Dept: WSO Engineering

RC Score: NA

Contract No.: NA

Significance: Original grating and supporting structural steel dating back to 1930 has deteriorated to the point where operator, consultant and contractor safety at Springwells is severely compromised. Additionally, structural failure could result in lost water production at Springwells.

Location: Springwells Water Treatment Plant

Driver: 1 – Condition

Explanation: Failure of structural components could injure personnel and/or take Springwells out of commission

Preliminary Scope of Work:

Refer to the RFP and proposals received. The scope is very well defined, and the winning proposal is very well authored. It involves a lot of demolition and replacement of deteriorated grating and structural steel at five (5) locations at Springwells, the bulk of which is in the Low Lift Station.

Challenges: Maintaining operations through execution of the work.

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Lifetime Actual Thru FY2016 (Unaudited)	Projected Expenditures FY2017	Projected Expenditures FY2018	Projected Expenditures FY2019	Projected Expenditures FY2020	Projected Expenditures FY2021	Projected Expenditures FY2022	Projected Expenditures FY2023 & Beyond	2018-2022 CIP Total	Phase Total
D	New	NA	NA	\$0	\$250	\$250	\$0	\$0	\$0	\$0	\$0	\$250	\$500
C	New	NA	NA	\$0	\$250	\$1750	\$0	\$0	\$0	\$0	\$0	\$1750	\$2000
Totals				\$0	\$500	\$2000	\$0	\$0	\$0	\$0	\$0	\$2000	\$2500



Project 122012-36-Inch Water Main in Telegraph Road

Water System Projects	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget Per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Project 122012-36-Inch Water Main in Telegraph Road	7,061,000	8,125,683	5,061,000	720,166	7.4%

Project Manager: Eric Kramp

Total Budget: \$7,061,000

Timeline: To be completed by December 2019

FY 2018 Last Pay Estimate Processed: November 28, 2017

Key Contracts/Vendors: WS-684A Ric-Man Detroit, Inc.

Project Description: Replacement of 36-Inch water main on Telegraph Road between Cherry Hill and Warren Avenue.

Purpose: Replacement of pipelines that have a history of frequent breaks and high maintenance costs.

Status: Project was delayed three months due to issues with flow stoppage. Billing is current. Project Manager drafting a change order to extend time to complete contract.

Additional Project Manager Comments: Project is waiting for high-demand season to complete final walk-through and high-pressure testing schedule for April 2018. Contract will stay open until December 2019 due to requirements for landscape maintenance mandated by MDOT.

Additional Construction Accounting & Financial Reporting Team Comments: The original CIP Budget does not include the budget for design fee completed as a task under As Needed Engineering Services contract CS-1488. Additionally the Life-to-Date Through June 30, 2017 includes capitalized interest, wage and benefit costs not included in the original CIP budget.

FY 2018-2022 CIP Page VI-67 for Project 122012-36-Inch Water Main in Telegraph Road

CIP Number: CIP 1404

Title: 36-INCH WATER MAIN IN TELEGRAPH ROAD

Classification: 122: Water > Field Services > Transmission System

Managing Dept: Unavailable

RC Score: NA

Contract No.: WS-684A

Significance: Excessive joint leaks warrant replacement; new water line to be placed in greenbelt

Location: Telegraph Rd, Cherry Hill to Warren Ave

Driver: N/A - Active

Explanation: N/A - Active

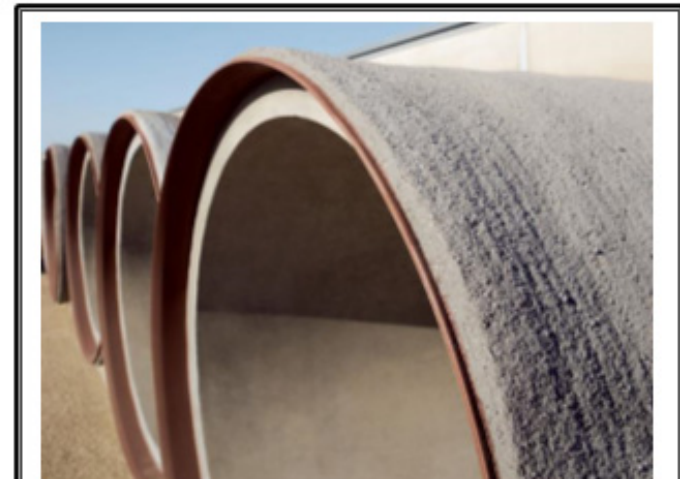
Preliminary Scope of Work:

This project includes installation of approximately 10,530 feet of 36-inch dia. water main in Telegraph Road from Cherry Hill to Warren Ave.

Challenges: N/A - Active

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Lifetime Actual Thru FY2016 (Unaudited)	Projected Expenditures FY2017	Projected Expenditures FY2018	Projected Expenditures FY2019	Projected Expenditures FY2020	Projected Expenditures FY2021	Projected Expenditures FY2022	Projected Expenditures FY2023 & Beyond	2018-2022 CIP Total	Phase Total
C	Not Yet Started	11/12/2013	6/19/2016	\$0	\$2000	\$5061	\$0	\$0	\$0	\$0	\$0	\$5061	\$7061
Totals				\$0	\$2000	\$5061	\$0	\$0	\$0	\$0	\$0	\$5061	\$7061



Water main ready to install

Project 114003-Water Production Flow Metering Improvements at NE, SW and SPW WTP

Water System Projects	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget Per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
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Project 114003-Water Production Flow Metering Improvements at NE, SW, and SPW WTP Total	12,900,000	184,952	8,800,000	303,874	3.1%
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Project Engineer/Manager: Jorge Nicholas

Manager: Grant Gartrell

Total Budget: \$12,900,000

Timeline: July 31, 2019

FY 2018 Last Pay Estimate Processed: December 31, 2017

Key Contracts/Vendors: CON-133 Lakeshore Global Corporation

Project Description: Removing, replacing or rehabilitating existing water production meters at Northeast, Southwest and Springwells Water Treatment Plants.

Purpose: To return water production flow meters back to reliable and accurate service.

Status: Project is on budget and billing complete through December 31, 2017.

Additional Project Manager Comments: The final completion date for CON-133 is July 31, 2019 and it is scheduled to be completed on time. Within CON-133 contract there are three Substantial Completion (SC) milestones; SC for SWWTP is May 2, 2018, SC for NEWTP is July 31, 2018 and SC for SPWTP is May 2, 2019. Delays were encountered in isolating the 72" main for the SWWTP therefore the aforementioned date for SC will not be met and a Change Order #1 for SC time extension is in preparation (for the SWWTP SC only). All other dates remain unchanged. Some CON-133 Contract work was deleted from the SPWTP to avoid duplication from another contract and a letter of credit was obtained from contractor. One CCD was processed, executed and the associated work is about 80% complete. No safety incidents reported to date and GLWA is working with the contractor and consultant to ensure the project is completed safely, on time and on budget.

Additional Construction Accounting & Financial Reporting Team Comments: None.

FY 2018-2022 CIP Page VI-17 for Project 114003-Water Production Flow Metering Improvements at NE, SW and SPW WTP

CIP Number: CIP 1264

Title: WATER PRODUCTION FLOW METERING IMPROVEMENTS AT NE, SW, AND SPW WTP

Classification: 114: Water > Treatment Plants & Facilities > Springwells

Managing Dept: Water Eng

RC Score: 41.4

Contract No.: NA

Significance: Existing water production flow meters need to be rehabilitated to place back into reliable and accurate service. Once completed, accurate flow measurement from these plants will answer non-revenue water questions.

Location: Springwells, Northeast and Southwest WTP

Driver: 7 - Financial

Explanation: Not provided.

Preliminary Scope of Work:

Water production metering is needed at the Water Treatment Plants to manage non-revenue and provide estimates of usage for non-wholesale customers.

Challenges: Removing and replacing existing meters in original piping requires isolation using existing yard piping and valving. Condition of existing pipe and valves needs to be adequately addressed in the final design documents and coordinated with operations.

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Lifetime Actual Thru FY2016 (Unaudited)	Projected Expenditures FY2017	Projected Expenditures FY2018	Projected Expenditures FY2019	Projected Expenditures FY2020	Projected Expenditures FY2021	Projected Expenditures FY2022	Projected Expenditures FY2023 & Beyond	2018-2022 CIP Total	Phase Total
C	Not Yet Started	NA	NA	\$0	\$1000	\$8800	\$2100	\$1000	\$0	\$0	\$0	\$11900	\$12900
Totals				\$0	\$1000	\$8800	\$2100	\$1000	\$0	\$0	\$0	\$11900	\$12900



Water production flow metering device

Project 170502 – Transmission System Valve Replacement and Rehabilitation

Water System Projects	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget Per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Project 170502-Transmission System Valve Replacement and Rehabilitation	15,330,000	-	2,930,000	1,279,399	13.2%

Project Engineer/Manger: Todd King

Manager: Grant Gartrell

Total Budget: \$15,330,000

Timeline: October 2019

FY 2018 Last Pay Estimate Processed: December 2017

Key Contracts/Vendors: CON-181 Lakeshore Global Corporation

Project Description: Contract is for furnishing all labor, equipment, and materials required for emergency repairs of large transmission mains (24-inch and larger).

Purpose: To have resources available to GLWA as necessary on a regular and emergency basis to make repairs to transmission mains, valves, manholes and appurtenances as directed by the GLWA project manager.

Status: Project is tracking according to financial plan.

Additional Project Manager Comments: In addition to regular and emergency repairs, this contract will be used to make major valve repairs and/or replacements as may be identified during the Valve Exercising project (WS-695C). CIP 170502 will also support the Units of Service project (CS-039) by investigating the state of blow off valves that may be contributing to non-revenue water.

Additional Construction Accounting & Financial Reporting Team Comments: Project is funding by the Transmission System Valve Replacement Program.

FY 2018-2022 CIP Page VI-62 for Project 170500 -Transmission System Valve Assessment and Rehabilitation/Replacement

CIP Number: CIP 1356

Title: TRANSMISSION SYSTEM VALVE ASSESSMENT AND REHABILITATION/REPLACEMENT

Classification: 122: Water > Field Services > Transmission System

Managing Dept: Water Eng

RC Score: 66.8

Contract No.: NA

Significance: Replacement/Rehabilitation of GLWA Transmission System Gate Valves will aid in implementing a regular valve exercising program as recommended by AWWA as well as increase the reliability of the transmission system.

Location: Transmission System Gate Valves

Driver: 1 - Condition

Explanation: Conditions of many of the gate valves are unknown and unreliable.

Preliminary Scope of Work:

Evaluate the existing conditions, provide the necessary replacement/ rehabilitation option, design and implement them.

Challenges: May require shutdown of large transmission mains.

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Life time Actual Thru FY 2016 (Unaudited)	Projected Expenditures FY 2017	Projected Expenditures FY 2018	Projected Expenditures FY 2019	Projected Expenditures FY 2020	Projected Expenditures FY 2021	Projected Expenditures FY 2022	Projected Expenditures FY 2023 & Beyond	2018-2022 CIP Total	Phase Total
DB	New	NA	NA	\$0	\$0	\$2930	\$3100	\$3100	\$3100	\$3100	\$0	\$15330	\$15330
Totals				\$0	\$0	\$2930	\$3100	\$3100	\$3100	\$3100	\$0	\$15330	\$15330



A large valve for a transmission pipe.

Construction Work-in-Progress Rollforward

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

The CWIP Rollforward provides a project status for each item.

Future Year:	Project that was included in the CIP with no expenditures (F)
Active:	Project in which procurement process has been initiated and expenditures incurred (A)
Pending Close:	Project that has no projected expenditures for the current fiscal year and has reached substantial completion (PC)
Closed:	Project that has been closed and capitalized (C)

Projects in bold font on the CWIP Rollforward were discussed in further detail previously in this report.

As shown in the summary below, the Water System CWIP Rollforward identifies 109 projects with a total budgeted value of \$1.17 billion. Of that total, \$163.5 million (unaudited) is in CWIP as of December 31, 2017 as shown in the table beginning on the next page.

The order of the report on the subsequent pages is from largest spend in FY 2018 dollars first.

Status	Project Count	Total Project Estimated Budget	Percent of Total
Future Years (Post FY 2018)	26	146,205,000	13%
Active	72	975,596,000	83%
Pending Close	8	45,537,000	4%
Closed	3	2,041,000	0%
Grand Total	109	1,169,379,000	100%

Water System Construction Work-in-Progress Quarterly Report

As of December 31, 2017

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward
Unaudited, Pre-Close Activity For the Quarter Ended December 31, 2017

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited)							Unaudited, Pre-Close CWIP Balance, December 31, 2017
					Construction: xx-xxxx (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Personnel (601995)	Capital Allocation: Benefits (601997)	
114001	Project 114001-Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities	A	\$ 78,312,000	\$ 82,884,422	\$ 2,134,688	\$ 406,815		\$ 64,602	\$ 30,930	\$ 12,172	2,649,207	\$ 85,521,456
114015	Project 114015-Emergency Grating Replacement at Springwells WTP	A	2,500,000	253,623	1,546,368				11,048	219	1,557,636	253,623
170502	Project 170502-Transmission System Valve Assessment and Rehabilitation/Replacement	A	15,330,000		1,279,399						1,279,399	1,279,399
122012	Project 122012-36-inch Water Main in Telegraph Road	A	7,061,000	8,125,683	711,830				5,954	2,381	720,166	8,843,467
170113	Project 170113-Water Plant Automation	A	1,610,000	12,933		582,004					582,004	594,936
114003	Project 114003-Water Production Flow Metering Improvements at NE, SW, and SPW WTP	A	12,900,000	184,952	286,271				12,681	4,922	303,874	483,903
122004	Project 122004-96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main	A	139,000,000	459,919		276,048			13,750	4,400	294,198	749,717
170107	Project 170107- Belle Isle Water Supply Intake Lagoon Main Entrance Bridge Pile Restoration	A	358,500	12,041	259,431	13,723			5,180	2,072	280,406	290,375
111006	Project 111006-Replacement of Filter Instrumentation and Raw Water Flow Metering Improvements at Lake Huron WTP	A	24,630,000	253,138		238,073					238,073	491,211
115001	Project 115001-Yard Piping, Valves and Venturi Meters Replacement at Water Works Park	A	53,900,000	8,977		184,015			3,231	1,292	188,538	196,222
132008	Project 132008-Needs Assessment Study for all Water Booster Pumping Stations	A	1,700,000	33,385		148,564			17,230	1,092	166,886	199,180
361001	Project 361001-Consolidated Process Control Systems	A	4,237,000	146,482	166,250						166,250	312,732
122003	Project 122003-New Waterworks Park to Northeast Transmission Main	A	130,000,000	19,372		147,853			4,857	1,943	154,653	172,082
170103	Project 17103-Belle Isle Water Supply Intake and Ice Boom Improvements	A	369,150	6,243	131,056	7,217					138,273	144,516
114009	Project 114009-Springwells Water Treatment Plant Service Area Redundancy Study	A	450,000	193,332		120,856			1,536	614	123,006	315,724
122015	Project 122015-30-Inch Water Main	PC	2,327,000	2,345,314	115,459						115,459	2,460,774

Water System Construction Work-in-Progress Quarterly Report

As of December 31, 2017

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward
Unaudited, Pre-Close Activity For the Quarter Ended December 31, 2017

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited)						FY 2018 Activity (Unaudited), Pre-Close	Unaudited, Pre-Close CWIP Balance, December 31, 2017	
					Construction: xx-xxxx (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Personnel (601995)			Capital Allocation: Benefits (601997)
122014	Project 122014-48-Inch Water Main Installation at Vining and Wick Roads in Romulus	A	4,535,000	3,839,433	110,084						110,084	3,949,517	
170109	Project 170109-Inspection of Raw Water Intakes and Tunnels	A	2,076,120	2,920,548		94,479				1,392	557	96,429	3,016,420
111007	Project 111007-Lake Huron WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements	A	7,133,000	9,332	80,456							80,456	89,788
114013	Project 114013-Springwells Reservoir Fill Line Improvements	A	7,914,000	119,663		75,505				4,721	188	80,414	199,889
115003	Project 115003-Comprehensive Condition Assessment at Waterworks Park WTP	A	575,000	-		74,815				2,019	608	77,442	76,835
170102	Project 170102-Water Production Plant Flow Metering Improvements at NE, SP & SW WTP	A	1,989,000	269,071		49,008						49,008	318,080
132003	Project 132003-Isolation Gate Valves for Line Pumps for West Service Center Pumping Station	A	1,521,000	66,236		45,641				750		46,391	112,627
113002	Project 113002-High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP	A	2,120,000	115,027		36,845				6,591	2,636	46,071	158,462
170104	Project 170104-Orion and Newburgh Pumping Stations Improvements	A	2,590,000	164,615		30,923				9,933	3,473	44,329	205,472
132004	Project 132004-Hydraulic Surge Control for North Service Center Pumping Station	A	2,800,000	75,075		33,739				3,286	1,314	38,339	112,100
170402	Project 170402-Emergency Manned Visual Inspection 84-Inch Transmission Main	A	163,500	121,400		34,620						34,620	156,020
380401	Project 380400-As-Needed CIP Implementation Assistance and Related Services	A	-	105,339		33,587						33,587	138,926
115004	Project 115004-Water Works Park WTP Chlorine System Upgrade	A	9,690,000	370,797		24,721				5,205	2,082	32,008	400,723
115002	Project 115002-Miscellaneous Concrete and Road Improvements at Waterworks Park WTP	PC	3,036,000	1,951,164	16,102	5,300				4,750	1,900	28,052	1,977,316
114011	Project 114011-Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP	A	6,250,000	279,784		22,475				4,333	1,133	27,941	306,591

**Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward
Unaudited, Pre-Close Activity For the Quarter Ended December 31, 2017**

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited)						FY 2018 Activity (Unaudited), Pre-Close	Unaudited, Pre-Close CWIP Balance, December 31, 2017	
					Construction: xx-xxxx (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Personnel (601995)			Capital Allocation: Benefits (601997)
113004	Project 113004-Residual Handling Facility's Decant Flow Modifications at Southwest WTP	A	5,509,000	141,675		17,605				4,173	1,669	23,447	163,453
114006	Project 114006-Replacement of Rapid Mix Units at Springwells WTP 1958 Process Train	A	1,250,000	104,286		18,236				3,000	900	22,135	125,521
111002	Project 111002 LHWTP Backflow Replacement	A	7,902,000	309,471		19,548				403	161	20,112	329,422
170120	Project 170120-Phosphoric Acid Feed System Improvements at Southwest WTP	A	207,500	87,031		13,345				3,648	1,459	18,452	104,024
112002	Project 112002-Low Lift Pumping Plant Caisson Rehabilitation at Northeast WTP	A	1,775,000	163,085		14,776				2,568	1,027	18,372	180,429
380901	Project 380901- General Engineering Services	A	-	74,791		18,232						18,232	93,023
170011	Project 170011-Miscellaneous Heating Improvements Southwest WTP	C	563,000	-	3,916					2,507	1,003	7,426	6,423
380501	Project 380501-Department-Wide General Engineering Services on an As-Needed Basis	A	5,260,000	132,282		5,763						5,763	138,045
380900	Project 390900-General Engineering Services	A	1,513,000	-						3,986	1,594	5,580	3,986
113001	Project 113001-Southwest Water Treatment Plant, Sludge Treatment & Waste Wash water Treatment Facilities	A	49,380,000	39,885						3,601	1,441	5,042	43,486
114002	Project 114002-Springwells Water Treatment Plant - Low Lift and High Lift Pump Station	A	86,000,000	22,480						4,490	146	4,637	26,971
111005	Project 111005-Miscellaneous Concrete Improvements at the Lake Huron WTP	PC	923,000	754,581						2,010	804	2,813	756,591
132006	Project 132006-Pressure and Control Improvements at the Electric, Ford Road, Michigan, and West Chicago Water Booster Pumping Stations	F	3,000,000	7,524						1,569	628	2,197	9,093
170110	Project 170110- WWP WTP Raw Water Smapling Improvements	A	535,600							402	161	562	402
170401	Project 170401-Emergency Bypass Around Ypsilanti Station	A	1,150,000	373,858						329	132	461	374,187
380601	Project 380601-General Engineering Services	A	8,014,000	157,971						329	82	411	158,300
380701	Project 380701-Engineering Services for Concrete Testing, Geotechnical Soil Borings and Services	A	2,556,000	115,418						288	115	403	115,706

**Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward
Unaudited, Pre-Close Activity For the Quarter Ended December 31, 2017**

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited)						Unaudited, Pre-Close CWIP Balance, December 31, 2017		
					Construction: xx-xxxx (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Personnel (601995)		Capital Allocation: Benefits (601997)	FY 2018 Activity (Unaudited), Pre-Close
170105	Project 170105-Phosphoric Acid and Heating System and NE-WTP	A	1,804,620	1,949,623						233	93	327	1,949,857
170201	Project 17020- Job Order Contract for Construction, Environmental, Speical Testing, Inspection and Other Technical Services	A	1,500,000							206	82	288	206
132001	Project 132001-Wick Road Station Rehabilitation	A	13,702,000	85						123	49	173	209
004430	Project 004430-DWSD: Contract Replacement Water Main	A	-	75,804								-	75,804
007414	Project 007414- Water Main Repairs shared service with DWSD	A		536,930								-	536,930
111001	Project 111001-Energy Management: Lake Huron Water Treatment Plant Low Lift Pumping Improvements	F	5,700,000	-								-	-
111003	Project 111003-Evaluation of Flocculation Improvement Alternatives at the LHWTP	F	125,000	-								-	-
111004	Project 111004-Electrical Tunnel Rehabilitation at Lake Huron WTP	F	5,600,000	-								-	-
112001	Project 112001-Yard Piping Replacement at Northeast Water Treatment Plant	F	800,000	-								-	-
113003	Project 113003-Replacement of Butterfly Valves and Sluice Gates for Rapid Mix Chamber at Southwest WTP	F	2,940,000	-								-	-
114004	Project 114004-Miscellaneous Concrete Improvements at Springwells WTP	A	998,000	-								-	-
114005	Project 114005-Administration Building Improvements at Springwells WTP	F	2,000,000	-								-	-
114007	Project 114007-Powdered Activated Carbon System Improvements at Springwells WTP	F	2,900,000	-								-	-
114008	Project 114008-1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements at Springwells WTP	F	7,500,000	-								-	-
114010	Project 114010-Yard Piping Improvements at Springwells WTP	F	25,000,000	-								-	-
114012	Project 114012-Springwells Water Treatment Plant 1930 Filter Building-Roof Replacement	F	3,000,000	-								-	-

**Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward
Unaudited, Pre-Close Activity For the Quarter Ended December 31, 2017**

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited)							Unaudited, Pre-Close CWIP Balance, December 31, 2017	
					Construction: xx-xxxx (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Personnel (601995)	Capital Allocation: Benefits (601997)		FY 2018 Activity (Unaudited), Pre-Close
116001	Project 116001-Miscellaneous Improvements to Raw Water Tunnels, Shafts and Related Structures	F	2,500,000	-								-	-
116002	Project 116002-Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements based on Contract CS-1623 Inspection Results	A	32,400,000	10,401								-	10,401
116003	Project 116003-Genesee and Lapeer County Transmission System Improvements	F	6,800,000	-								-	-
122001	Project 122001-Parallel 42-inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road	PC	30,008,000	32,570,891								-	32,570,891
122002	Project 122002-Replacement of Five (5) PRV Pits of Treated Water Transmission System	A	2,220,000	1,696,488								-	1,696,488
122005	Project 122005-Transmission System Water Main Work - Replacement of Schoolcraft Water Main	F	14,550,000	-								-	-
122006	Project 122006-Transmission System Water Main Work-Wick Road Parallel Water Main	A	19,350,000	23,300								-	23,300
122007	Project 122007-Design and Construction of a new Newburgh Road 24" Main along Newburgh Road between Cherry Hill and Glenwood Avenue	F	4,000,000	-								-	-
122009	Project 122009-Water System Improvements in Joy Road from Southfield Road to Trinity	PC	8,423,000	106,881								-	106,881
122010	Project 122010-Water Main Replacement within the City of Detroit - Joy Rd from Greenfield to Schaefer and Davison Ave from Linwood to Livernois	F	3,128,000	-								-	-
122011	Project 122011-Park-Merriman Water Main-Final Phase	F	4,000,000	-								-	-
122013	Project 122013-Lyon Township Transmission Main Extension Project	F	29,800,000	-								-	-
132002	Project 132002-Replacement of Switchgear at Joy Road Pumping Station	C	612,000	-								-	-

Water System Construction Work-in-Progress Quarterly Report

As of December 31, 2017

**Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward
Unaudited, Pre-Close Activity For the Quarter Ended December 31, 2017**

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited)							Unaudited, Pre-Close CWIP Balance, December 31, 2017		
					Construction: xx-xxxx (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Personnel (601995)	Capital Allocation: Benefits (601997)		FY 2018 Activity (Unaudited), Pre-Close	
132005	Project 132005-Energy Management: Evaluate Alternatives and Recommend Corrective Actions to Improve Power Factors (PF) at Various GLWA Booster Pumping Stations	F	250,000	-										
132007	Project 132007-Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station	F	1,000,000	-										
132009	Project 132009-Study Phase Services for Proposed East Service Center Booster Pumping Station and Reservoir	A	500,000	10,313										10,313
132011	Project 132011-Energy Management: West Service Center (WSC) VFD Installation	F	3,334,000	-										
161001	Project 161001-Comprehensive Water Master Plan Update	PC	290,000	-										
170100	Project 170100-Allowance: WTP/Pump Station	A	76,877,010	-										
170101	Project 170101-Master Specs	PC	300,000	-										
170106	Project 170106- Phosphoric Acid Tank Replacement LHWT	F	575,000	-										
170108	Project 170108- Adams Road Water Isolation Gate	A	1,092,500	625										625
170117	Project 170117-Instrument Air Compressor Systems Replacement at NE-WTP	PC	230,000	226,483										226,483
170118	Project 170118-1958 Sedimentation Basin	C	866,000	-										
170119	Project 170119- Belle Isle Water Supply Intake Lagoon	F	115,000	-										
170300	Project 170300-Water Treatment Plant Automation Program	A	5,890,000	-										
170400	Project 170400-Water Transmission Improvement Program	A	45,666,500	-										
170403	Project 170403-Lapeer County Chlorine Booster Station	A	3,020,000	579,723										579,723
170600	Project 170600-Water Transmission Main Asset Assessment Program	A	10,626,000	-										
170800	Project 170800-Reservoir Inspection, Design and Rehabilitation at Imlay Station, Adams Station, Haggerty Stations, LH-WTP, SP-WTP and SW-WTP	A	11,000,000	-										

**Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2018 Rollforward
Unaudited, Pre-Close Activity For the Quarter Ended December 31, 2017**

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited)						FY 2018 Activity (Unaudited), Pre-Close	Unaudited, Pre-Close CWIP Balance, December 31, 2017
					Construction: xx-xxxx (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Personnel (601995)		
170900	Project 170900-Suburban Water Meter Pit Rehabilitation and Meter Replacement	A	20,500,000	-							-	-
331001	Project 331002-Roofing Replacement	F	11,500,000	-							-	-
351001	Project 351001-Water Facility Lighting Renovations	F	2,799,000	-							-	-
361002	Project 361002-Data Control Reliab/Avail Improvements	A	2,851,000	16,080							-	16,080
361003	Project 361003-SCADA Radio Network Upgrade	A	3,484,000	467,427							-	467,427
380500	Project 380500-Department-Wide General Engineering Services on an As-Needed Basis	A	-	-							-	-
380600	Project 380600-General Engineering Services	A	-	-							-	-
380800	Project 380800-Geotechnical and Related Services on an As-Needed Basis	A	2,573,000	-							-	-
380801	Project 380801-Geotechnical and Related Services on an As-Needed Basis	A	-	82,476							-	82,476
381000	Project 381000-Energy Management: Electric Metering Improvement Program	A	3,000,000	-							-	-
132010	Project 132010-West Service Center/Duval Rd Division Valve Upgrades	A	11,800,000	-			(23,023)				(23,023)	(23,023)
170701	Project 170701-Booster Station & Reservoirs Program Management	A	11,975,000	12,913,885	(206,805)						(206,805)	12,707,080
114014	Project 114014-Springwells WTP Underground Fire Protection Loop Improvements	F	3,289,000	-							-	-
Total # of Projects and Dollars		109	\$ 1,169,379,000	\$ 159,099,050	\$ 6,634,506	\$ 2,771,307	\$ -	\$ -	\$ 64,602	\$ 183,241	\$ 9,710,202	\$ 168,752,706
FY 2018 - 2022 Water CIP Total (Page IV-2)			\$ 1,169,378,000	\$ 159,099,050							9,710,202	
Difference due to rounding			(1,000)	-							-	
Items to be reclassified to Capital Outlay FY 2018				287,488								
Total CWIP Reported on FY 2017 Financial Statements				159,386,538								

CIP Allowance and Program Summary

Within the FY 2018 – 2022 CIP, GLWA has developed budgets for allowances and programs that provide GLWA flexibility in capital development and improvements.

Allowances are established to provide funding related to unanticipated pipeline and equipment failures that require immediate repair and rehabilitation to continuously meet level of service requirements. Allowances can also be allocated to projects with anticipated or actual spend in excess of CIP budget.

Programs are established to provide funding related to specific capital improvements that are system specific, reoccurring, and vary from year to year.

Below are the allowances and programs within the Water System.

Allowance

170100: Water Treatment Plant / Pump Station Allowance

Programs

170200: As Needed Construction Materials, Environmental Media and Special Testing, Construction Inspection, and Other Technical Services

170300: Water Treatment Plant Automation Program

170400: Water Transmission Improvement Program

170500: Transmission System Valve Rehabilitation and Replacement Program

170600: Water Transmission Main Asset Assessment Program

170700: Reservoirs Inspection, Repair and Rehabilitation Program

170800: Reservoir Inspection, Design and Rehabilitation at Imlay Station, Adams Station, Haggerty Station, LH-WTP, SPW-WTP and SW-WTP

170900: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Allowance: 170100 Water Treatment / Pump Station

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
Water Treatment / Pump Station Allowance					19,650,000	20,000,000	20,000,000	10,000,000	10,000,000
112002	CON-215	Low Lift Chaisson Rehabilitation at NEWTP	6857	Administrative	(247,000)	(195,000)	0	0	0
114001	CS-200	Resident Project Representative and O&M for SP-564	6904	Administrative	(890,000)	0	0	0	0
114013	SCP-CS-038	Professional Engineering Services Springwell WTP	6905	Administrative	(207,000)	(172,500)	(34,500)	0	0
170011	SCP-SW-011	Miscellaneous Heating Improvements at Southwest WTP			0	0	0	0	0
170101	SCP-CS-1630	Water Transmission Pipeline Improvements			0	0	0	0	0
170102	SCP-CS-1656	Water Production Plant Flow Meter	6859	Administrative	(105,000)	0	0	0	0
170103	SCP-CON-094	Belle Isle Ice Boom Replacement & Reinforcement Upgrade			0	0	0	0	0
170104	SCP-CS-1738	Orion Pumping Station Improvements	6923	Administrative	(500,000)	(1,800,000)	0	0	0
170105	SCP-NE-017	Phosphoric Acid and Heating System Improvements			0	0	0	0	0
170106	SCP-LH-398	Phosphoric Acid Tank Replacement LHWT			0	0	0	0	0
170107	SCP-DWS-059	Belle Isle Water Intake Bridge Improvements	6862	Administrative	(358,500)	0	0	0	0
170108	SCP-DWS-063	Adams Rd Water Booster Isolation Gate	6900	Administrative	(192,500)	0	0	0	0
170109	SCP-CS-1623	Inspection of Three Water Intakes	6864	Board	(500,000)	(3,000)	0	0	0
170110	CON-153	WWPWP Raw Water Sampling Improvements			0	0	0	0	0
170117	SCP-NE-007A	Instrument Air Compressor NEWTP			0	0	0	0	0
170118	SCP-SP-009	Sedimentation Basin Sludge Removal			0	0	0	0	0
170119	SCP-CS-1685	Belle Isle Water Supply Intake Lagoon			0	0	0	0	0
170120	SCP-CS-1692	Acid and Chlorine Feed Improvements SWWP			0	0	0	0	0
Available Balance					16,650,000	17,829,500	19,965,500	10,000,000	10,000,000

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 170200 As Needed Construction Materials, Environmental Media and Special Testing Services
Construction Inspection, and other Technical Services

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
170200		As Needed Materials and Services			500,000	500,000	500,000	0	0
Available Balance					500,000	500,000	500,000	0	0

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 170300 Water Treatment Plant Automation

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
170300		Water Treatment Plant Automation Program			1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
170113	CS-108	Water Plant Automation Needs Assessment	6867	Board	(1,090,000)				
Total		Available Balance			410,000	1,500,000	1,500,000	1,500,000	1,500,000

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 170400 Water Transmission Improvement

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
170400		Water Transmission Improvements Program			10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
170402	PO# 0004292	84" Transmission Water Main Assessment in Troy							
170403	GLWA-DBW-070	Lapeer County Chlorine Booster Stations	6932	Board	(2,900,000)	(120,000)			
		Available Balance			7,100,000	9,880,000	10,000,000	10,000,000	10,000,000

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 170500 Transmission System Valve Rehabilitation and Replacement

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
170500		Transmission System Valve Assessment and Rehabilitation / Replacement			5,036,000	5,036,000	3,036,000	2,186,000	36,000
170502	CON-181	Transmission System Valve Assessment and Rehabilitation and Replacement	6977	Board	(2,930,000)				
170502	CON-181	Transmission System Valve Assessment and Rehabilitation and Replacement	9223 - Pending	Board	(2,106,000)	(4,964,000)			
		Available Balance			0	72,000	3,036,000	2,186,000	36,000

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 170600 Water Transmission Main Asset Assessment

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
170600		Water Transmission Main Asset Assessment Program			2,626,000	2,000,000	2,000,000	2,000,000	2,000,000
		Available Balance			2,626,000	2,000,000	2,000,000	2,000,000	2,000,000

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 170700 Reservoirs Inspection, Repair and Rehabilitation

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
170700		Booster Stations and Reservoirs Inspection, Rehabilitation and Inspection Repair Program			88,000				
170701	DWS-874	Booster Stations & Reservoirs Inspection	N/A		(88,000)	0	0	0	0
		Available Balance			0	0	0	0	0

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 170800 Reservoir Inspection, Design and Rehabilitation at Implay Station, Adams Station
Haggerty Station, LH-WTP, SPW-WTP and SW-WTP

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
170800		Reservoir Inspection, Design and Rehabilitation at Implay Station, Adams Station, Haggerty Station, LH-WTP, SP-WTP and SW-WTP Program			3,300,000	2,550,000	2,550,000	2,550,000	
Available Balance					3,300,000	2,550,000	2,550,000	2,550,000	0

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 170900 Suburban Water Meter Pit Rehabilitation and Meter Replacement

CIP#	Contract Number	Description	Current Year Budget Amendment	Board /Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
170900		Suburban Water Meter Pit Rehabilitation and Meter Replacement Program			4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Available Balance					4,000,000	4,000,000	4,000,000	4,000,000	4,000,000

Budget Amendment Reporting

Scope: Budget amendments seek to properly allocate funds from the allowance and programs within the Capital Improvement Plan (CIP) for the budgeted years by the reallocation of funds from the budgeted allowance or programs level to the actual project level.

Process: Steps are listed below.

- 1) Properly identify projects that utilize funds from the allowance or programs
- 2) Reallocate the funds from the budgeted allowance or programs level through a journal entry
- 3) Attach documents that support the reallocation (CIP funding request, contract transmittal, or change orders)
- 4) Create, review, and approve budget amendment journal entry

Budget Amendments Processed for FY 2018 through December 31, 2017

Budget Amendments / Descriptions / Reasons / GL Strings	Amount
6857	
CIP 170100 Water Treatment / Pump Station Allowance	
To fund Salaries, Benefits and Construction Services that exceeds FY 2018-2022 CIP	
Allocation of Allowance Budget	
5519-882111.000-616900-170100	(247,000)
CIP 112002 Low Lift Chaisson Rehabilitation at NE-WTP	
To fund Salaries, Benefits and Construction Services that exceeds FY 2018-2022 CIP	
Executed Contract in excess of CIP Budget	
5519-882111.000-616900-112002	147,000
Benefits Allocation (Not included in FY 2018 - 2022 CIP)	
5519-882111.000-601997-112002	40,000
Salaries Allocation (Not included in FY 2018 - 2022 CIP)	
5519-882111.000-601995-112002	60,000
6859	
CIP 170100 Water Treatment / Pump Station Allowance	
To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP	
Allocation of Allowance Budget	
5519-882111.000-616900-170100	(105,000)
CIP 170102 Water Production Plant Flow Meter	
To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP	
Project was not included in FY 2018-2022 CIP	
5519-882111.000-617950-170102	20,000
Benefits Allocation (Not included in FY 2018 - 2022 CIP)	
5519-882111.000-601997-170102	34,000
Salaries Allocation (Not included in FY 2018 - 2022 CIP)	
5519-882111.000-601995-170102	51,000

Budget Amendments Processed for FY 2018 through December 31, 2017

6862

CIP 170100 Water Treatment / Pump Station Allowance

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

Allocation of Allowance Budget

	5519-882111.000-616900-170100	(358,500)
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CIP 170107 Belle Isle Water Intake Bridge Improvements

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

Project was not included in FY 2018-2022 CIP

	5519-882111.000-616900-170107	321,000
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Benefits Allocation (Not included in FY 2018 - 2022 CIP)

	5519-882111.000-601997-170107	15,000
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Salaries Allocation (Not included in FY 2018 - 2022 CIP)

	5519-882111.000-601995-170107	22,500
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6864

CIP 170100 Water Treatment / Pump Station Allowance

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

Allocation of Allowance Budget

	5519-882111.000-616900-170100	(500,000)
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CIP 170109 Inspection of Three Water Intakes

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

Project was not included in FY 2018-2022 CIP

	5519-882111.000-617950-170109	447,400
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Benefits Allocation (Not included in FY 2018 - 2022 CIP)

	5519-882111.000-601997-170109	21,040
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Salaries Allocation (Not included in FY 2018 - 2022 CIP)

	5519-882111.000-601995-170109	31,560
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Budget Amendments Processed for FY 2018 through December 31, 2017

6867

CIP 170300 Water Plant Automation Needs Assessment

To Fund Design Services Salaries, and Benefits related to budgeted program assigned
Allocation of Program Budget

5519-882111.000-616900-170300 (1,090,000)

CIP 170113 Water Plant Automation Needs Assessment

To Fund Design Services Salaries, and Benefits related to budgeted program assigned
Benefits Allocation

5519-882111.000-601997-170113 42,000

Program Needs Assigned

5519-882111.000-617950-170113 985,000

Allocation of Program Salaries

5519-882111.000-601995-170113 63,000

6900

CIP 170100 Water Treatment / Pump Station Allowance

To fund Contracted Constructed Services, Materials, Salaries and Benefits not budgeted for in FY 2018-2022 CIP
Allocation of Allowance Budget

5519-882111.000-616900-170100 (192,500)

CIP 170108 Adams Road Water Booster Isolation Gate

To fund Contracted Constructed Services, Materials, Salaries and Benefits not budgeted for in FY 2018-2022 CIP
Project was not included in FY 2018-2022 CIP

5519-882111.000-616900-170108 97,000

5519-882111.000-617955-170108 70,000

Benefits Allocation (Not included in FY 2018 - 2022 CIP)

5519-882111.000-601997-170108 10,200

Salaries Allocation (Not included in FY 2018 - 2022 CIP)

5519-882111.000-601995-170108 15,300

Budget Amendments Processed for FY 2018 through December 31, 2017

6904

CIP 170100 Water Treatment / Pump Station Allowance

To fund Owner's Rep Service that were not part of FY2018-2022 CIP Plan
Allocation of Allowance Budget

5519-882111.000-616900-170100 (890,000)

CIP 114001 Resident Project Representative for SP-563

To fund Owner's Rep Service that were not part of FY2018-2022 CIP Plan
Executed Contract in excess of CIP Budget

5519-882111.000-617950-114001 890,000

6905

CIP 170100 Water Treatment / Pump Station Allowance

To fund Salaries, Benefits and Construction Services that exceed FY 2018-2022 CIP
Allocation of Allowance Budget

5519-882111.000-616900-170100 (207,000)

CIP 114013 Professional Engineering Services Springwells WTP

To fund Salaries, Benefits and Construction Services that exceed FY 2018-2022 CIP
Executed Contract in excess of CIP Budget

5519-882111.000-617950-114013 180,000

Benefits Allocation (Not included in FY 2018 - 2022 CIP)

5519-882111.000-601997-114013 10,800

Salaries Allocation (Not included in FY 2018 - 2022 CIP)

5519-882111.000-601995-114013 16,200

Budget Amendments Processed for FY 2018 through December 31, 2017

6923

CIP 170100 Water Treatment / Pump Station Allowance

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

Allocation of Allowance Budget

5519-882111.000-616900-170100 (500,000)

CIP 170104 Orion Pumping Station Improvements

To fund Contracted Design Services, Salaries and Benefits not budgeted for in FY 2018-2022 CIP

Project was not included in FY 2018-2022 CIP

5519-882111.000-616900-170104 450,000

Benefits Allocation (Not included in FY 2018 - 2022 CIP)

5519-882111.000-601997-170104 20,000

Salaries Allocation (Not included in FY 2018 - 2022 CIP)

5519-882111.000-601995-170104 30,000

6932

CIP 170400 Water Transmission Improvements Program

To Fund Construction, Inspection, Salaries and Benefits related to budgeted program assigned

Allocation of Program Budget

5519-882111.000-616900-170400 (2,529,000)

5519-882111.000-617950-170400 (371,000)

CIP 170403 Lapeer County Chlorine Booster Stations

To Fund Construction, Inspection, Salaries and Benefits related to budgeted program assigned

Benefits Allocation

5519-882111.000-601997-170403 9,900

Program Needs Assigned

5519-882111.000-601998-170403 6,600

Allocation of Program Salaries

5519-882111.000-601995-170403 17,500

Allocation for Design Services Contract

5519-882111.000-617950-170403 371,000

Allocation for Construction Services Contract

5519-882111.000-616900-170403 2,495,000

Budget Amendments Processed for FY 2018 through December 31, 2017

6977

CIP 170500 Transmission System Valve Assessment and Rehabilitation / Replacement Program

To Fund Construction, Inspection, Salaries and Benefits related to budgeted program assigned

Allocation of Program Budget

	5519-882111.000-601995-170500	(24,000)
	5519-882111.000-601997-170500	(9,000)
	5519-882111.000-601998-170500	(1,000)
	5519-882111.000-616900-170500	(2,896,000)

CIP 170502 Transmission System Valve Assessment and Rehabilitation and Replacement

To Fund Construction, Inspection, Salaries and Benefits related to budgeted program assigned

Allocation for Program Inspection Services

	5519-882111.000-601998-170502	1,000
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Allocation for Program Benefits

	5519-882111.000-601997-170502	10,000
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Allocation for Program Salaries

	5519-882111.000-601995-170502	25,000
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Allocation for Program Design Services

	5519-882111.000-617950-170502	320,000
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Allocation for Program Construction Services

	5519-882111.000-616900-170502	2,574,000
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Grand Total

0

WASTEWATER SYSTEM

Percent of Spend Compared to Annual Budget and Capital Improvement Plan (CIP) Requests

The rate of spend is a key performance indicator. The ratios for FY 2017 (twelve months) of 55% and for FY 2018 (six months) of 52.1% are lower than simple benchmark of 80% and 50% respectively. This is attributable to three reasons. First is the competition for staff priorities during stand-up of the GLWA (primarily during FY 2017). Second, is the alignment of projects identified and staff or contractor resources to carry out the projects. Several key hires occurred primarily during fiscal FY 2017 will improve this performance. Third, is the phasing of CIP activity which is being further refined throughout GLWA.

Wastewater System Projects	FY 2017 Original Plan and Budget (Twelve Months)	FY 2017 Activity (Unaudited)	FY 2017 Activity as a Percent of Budget (Unaudited)	FY 2018 Amended Budget	FY 2018 Prorated Amended Budget (Six Months)	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
FY 2017 CIP Project Requests @ 100%	\$ 128,973,000	56,788,123	44.0%				
FY 2017 CIP Net Budget (approx. 80% of request)	103,178,400	56,788,123	55.0%				
FY 2018 CIP Project Requests @ 100%				\$ 160,746,000	80,373,000	33,486,214	41.7%
FY 2018 CIP Net Budget (approx. 80% of request)				128,596,800	64,298,400	33,486,214	52.1%

It should be noted that these interim reports have been prepared on a modified cash basis. This means that expenses may lag in vendor invoice receipt and posting. Known expenses, material in nature, have been accrued.

Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Project

Of the total Wastewater System Construction Bond spend for FY 2018 to date, **four projects account for \$20.2 million or 60.5% of the total spend**. Those projects are summarized in the following table. An analysis of each project and its related CIP summary follow the table. Note that the last page of this report provides a Glossary of Acronyms.

Wastewater System Projects	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Project 211001: Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	\$ 51,903,000	\$ 10,243,275	\$ 12,097,000	\$ 8,442,931	25.2%
Project 212003: Aeration System Improvements	\$ 16,203,000	\$ 3,804,993	\$ 11,197,000	\$ 3,507,963	10.5%
Project 212006: PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract	\$ 47,599,000	\$ 6,872,993	\$ 15,800,000	\$ 6,226,742	18.6%
Project 232002: Freud and Connor Creek Pump Station Improvements	\$ 22,500,000	\$ 2,100,803	\$ 5,900,000	\$ 2,065,157	6.2%
Selected Projects as a Percentage of the Total	\$ 138,205,000	\$ 23,022,064	\$ 44,994,000	\$ 20,242,793	60.5%
Total			\$ 160,746,000	\$ 33,486,214	100.0%

Project 211001–Rehabilitation of Primary Rectangular Clarifiers

	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Wastewater System Projects					
Project 211001: Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	\$ 51,903,000	\$ 10,243,275	\$ 12,097,000	\$ 8,442,931	25.2%

Project Engineer/Manager: Nicolas Nicolas

Manager: Philip Kora

Total Project Budget: \$51,903,000

Timeline: To be completed by May 2020

FY 2018 Last Pay Estimate Processed: December 31, 2017

Key Contracts/Vendors: PC-757 Toolles Contracting Group

Project Description: The Rehabilitation of Primary Rectangular Clarifiers Tanks, Drain Lines, Electrical/Mechanical Building, Pipe Gallery, and Replacement of Rake Arm assembly for Circular Primary Clarifiers 15 and 16 at the Water Resource Recovery Facility (WRRF).

Purpose: To improve the operating and maintenance efficiencies that meets the regulatory National Pollution Discharge Elimination (NPDES) Permit and National Electrical code (NEC) requirements.

Status: Rehabilitation of Primary rectangular clarifiers 11 and 12 (flight equipment only) is complete and the 30-day commissioning period activities are ongoing. Contractor/GLWA and vendor are working to resolve the pump issues by conducting performance tests to determine lowest cost modifications.

Additional Project Manager Comments: There are no additional comments to provide at this time.

Additional Construction Accounting & Financial Reporting Team Comments: There are no additional comments to provide at this time.

FY 2018-2022 CIP Page VI-73 for Project 211001–Rehabilitation of Primary Rectangular Clarifiers

CIP Number: CIP 291

Title: REHABILITATION OF PRIMARY CLARIFIERS RECTANGULAR TANKS, DRAIN LINES, ELECTRICAL/MECHANICAL BUILDING AND PIPE GALLERY

Classification: 211: Wastewater > WRRF > Primary Treatment

Managing Dept: WW Eng

RC Score: NA

Contract No.: PC-757

Significance: Rehabilitation for meeting NPDES Permit and NEC requirements

Location: WRRF

Driver: N/A - Active

Explanation: N/A - Active



Pipe gallery

Preliminary Scope of Work:

The work to be completed under this project will include installing ventilation and atmospheric control for the pipe gallery; providing new lights and emergency lights, etc.. This work also includes rehabilitation of 12 drain lines from rectangular clarifiers 3-12, circular clarifiers 16 and 16, installation of large manhole with sump pumps to collect drainage and discharge to clarifier, and concrete crack repairs, and rehabilitation work in Electrical/Mechanical Building.

Challenges: N/A - Active

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Lifetime Actual Thru FY2016 (Unaudited)	Projected Expenditures FY2017	Projected Expenditures FY2018	Projected Expenditures FY2019	Projected Expenditures FY2020	Projected Expenditures FY2021	Projected Expenditures FY2022	Projected Expenditures FY2023 & Beyond	2018-2022 CIP Total	Phase Total
C	Active	TBD	TBD	\$0	\$10848	\$12097	\$20990	\$7968	\$0	\$0	\$0	\$41055	\$51903
Totals				\$0	\$10848	\$12097	\$20990	\$7968	\$0	\$0	\$0	\$41055	\$51903

Project 212003-Aeration System Improvements

	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Wastewater System Projects					
Project 212003: Aeration System Improvements	\$ 16,203,000	\$ 3,804,993	\$ 11,197,000	\$ 3,507,963	10.5%

Project Engineer/Manager: Vinod Sharma

Manager: Philip Kora

Total Project Budget: \$15,985,000

Timeline: To be completed by September 2018

FY 2018 Last Pay Estimate Processed: December 31, 2017

Key Contracts/Vendors: CS-1498, CS-157-Metco Services, PC-796-Weiss Construction

Project Description: The Aeration System Improvements will improve the aeration system and provide necessary inter-connections.

Purpose: To increase the efficiency of oxygen used in the High Purity Oxygen (HPO) activated sludge process, reduce the risk of mechanical failures with the replacement/rehabilitation of the Influent and Return Activated Sludge(RAS) valves/pipeline would meet regulatory guidelines to comply with NPDES Permit.

Status: The construction work associated with aeration deck No. 4 process piping/valve is completed. The replacement Variable Frequency Drive (VFD) has been installed and deck No. 4 is put back into operation. The rehab work associated with Basin No. 3 is ongoing. The project is behind schedule by two months due to VFD#4 startup issues.

Additional Project Manager Comments: There are no additional comments to provide at this time.

Additional Construction Accounting & Financial Reporting Team Comments: There are no additional comments to provide at this time.

FY 2018-2022 CIP Page VI-83 for Project 212003-Aeration System Improvements

CIP Number: CIP 1194

Title: AERATION SYSTEM IMPROVEMENTS

Classification: 212: Wastewater > WRRF > Secondary Treatment & Disinfection

Managing Dept: WW Eng

RC Score: NA

Contract No.: CS-1498, PC-796

Significance: Improve aeration system and provide necessary inter-connections

Location: WRRF

Driver: N/A - Under Procurement

Explanation: N/A - Under Procurement

Preliminary Scope of Work:

The scope of work includes study, design, and construction assistance for the oxygen baffle on Bay 10 of A1 & A2 decks, replacement of influent, Return Activated Sludge (RAS) piping, isolation gate and valves for decks Nos. 3 & 4, replace RAS and influent magmeters for Intermediate Lift Pumps (ILP) Nos. 3, 4 & 7. The work also includes replacement of influent gates and operators on Aeration Deck No. 1 & 2.

Challenges: N/A - Under Procurement

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Lifetime Actual Thru FY2016 (Unaudited)	Projected Expenditures FY2017	Projected Expenditures FY2018	Projected Expenditures FY2019	Projected Expenditures FY2020	Projected Expenditures FY2021	Projected Expenditures FY2022	Projected Expenditures FY2023 & Beyond	2018-2022 CIP Total	Phase Total
S/D/CA	Active	2/21/2012	2/28/2018	\$0	\$106	\$97	\$16	\$0	\$0	\$0	\$0	\$113	\$219
C	Under Procurement	TBD	TBD	\$0	\$2242	\$11100	\$2642	\$0	\$0	\$0	\$0	\$13742	\$15984
Totals				\$0	\$2348	\$11197	\$2658	\$0	\$0	\$0	\$0	\$13855	\$16203



Equipment for aeration system

Project 212006-Rouge River Outfall Project

	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Wastewater System Projects					

Project 212006: PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract	\$ 47,599,000	\$ 6,872,993	\$ 15,800,000	\$ 6,226,742	18.6%
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Project Engineer/ Manager: Philip Kora and Darrel Field (PMA)

Manager: Philip Kora

Total Project Budget: \$47,599,000

Timeline: To be substantially complete by April 2019

FY 2018 Last Pay Estimate Processed: December 31, 2017

Key Contracts/Vendors: CS-1781- PMA Consultants and PC-797-CDM Construction

Project Description/Purpose: The Rouge River Outfall Disinfection Project (Phase 2) is MDEQ approved to provide chlorination and de-chlorination to the Rouge River Outfall (RRO) effluent during wet weather events.

Status: Current work efforts include the construction of the new hypo building foundation and chemical storage tanks, and the installation of the secondary effluent diffusers near the Screened Final Effluent Building.

Additional Project Manager Comments: There are no additional comments to provide at this time.

Additional Construction Accounting & Financial and Reporting Team Comments: There are no additional comments to provide at this time.

FY 2018-2022 CIP Page VI-98 for 212006-Rouge River Outfall Project

CIP Number: CIP 1302
Title: ROUGE RIVER OUTFALL (RRO) DISINFECTION (ALTERNATIVE)
Classification: 212: Wastewater > WRRF > Secondary Treatment & Disinfection
Managing Dept: WW Eng
RC Score: NA
Contract No.: PC-797, CS-1781
Significance: Provide project oversight and design build services for alternative disinfection services to meet NPDES Permit requirements at existing Rouge River Outfall
Location: Rouge River Outfall
Driver: 3 – Regulatory (Environmental/Legal)



Explanation: In order to be in compliance with its NPDES permit, GLWA’s WRRF must provide disinfection to all effluent flows from the DRO and RRO by April 2019. Only the DRO currently has disinfection; this project will provide chlorination and de-chlorination for RRO effluent during wet weather events.

Preliminary Scope of Work:

The consultant shall provide comprehensive professional services for project oversight and Owner’s representation for the PC-797 RRO Disinfection Progressive Design-Build Contract. The scope of work consists of completing basis of design, design and construction services to develop and implement a solution that will result in 100% disinfection of wet weather flow discharged from WRRF to Detroit River outfall and Rouge River Outfall in order to meet NPDES Permit requirements.

Challenges: N/A - Under Procurement

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Lifetime Actual Thru FY2016 (Unaudited)	Projected Expenditures FY2017	Projected Expenditures FY2018	Projected Expenditures FY2019	Projected Expenditures FY2020	Projected Expenditures FY2021	Projected Expenditures FY2022	Projected Expenditures FY2023 & Beyond	2018-2022 CIP Total	Phase Total
S/D/C	Under Procure.	2/19/2016	12/31/2019	\$729	\$2690	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3419
CM	Under Procure.	TBD	TBD	\$0	\$1000	\$800	\$520	\$100	\$0	\$0	\$0	\$1420	\$2420
C	Not Yet Started	2/19/2016	12/31/2019	\$0	\$2840	\$15000	\$15000	\$8920	\$0	\$0	\$0	\$38920	\$41760
Totals				\$729	\$6530	\$15800	\$15520	\$9020	\$0	\$0	\$0	\$40340	\$47599

Project 232002-Freud & Connor Creek Pump Station Improvements

Wastewater System Projects	Total Project Budget per CIP (Life of Projects)	Life-to-Date Through June 30, 2017 (Unaudited)	FY 2018 Requested Budget per CIP	FY 2018 Pre-Close Activity (Six Months) (Unaudited)	FY 2018 Pre-Close as a Percent of Prorated Budget (Six Months) (Unaudited)
Project 232002: Freud and Connor Creek Pump Station Improvements	\$ 22,500,000	\$ 2,100,803	\$ 5,900,000	\$ 2,065,157	6.2%

Project Engineer/Manager: Mini Panicker

Manager: Biren Saparia

Total Project Budget: \$22,500,000

Timeline: To be completed by August 2022

FY 2018 Last Pay Estimate Processed: December 31, 2017

Key Contract/Vendor: CS-120-Arcadis, CON-109-Lakeshore Global, PO 0003783-PCI LLC

Project Description: The Freud & Connor Creek Pump Station Improvements will optimize the overall performance between both pumping stations and the Connor Creek Retention and Treatment Basin.

Purpose: To build an operational strategy to optimize the utilization of interconnected piping and operation between both pumping stations and the Connor Creek Retention and Treatment Basin.

Status: Three conceptual alternatives were developed during the study phase. An alternative evaluation workshop is being scheduled to engage customers/stakeholders and select the right alternative for the design.

Additional Project Manager Comments: The Systems and Controls team is working to coordinate the alternative selection process with stakeholders and the wastewater master plan team to determine the best path forward with respect to alternative selection or development of an interim approach pending the completion of the wastewater master plan findings.

Additional Construction Accounting & Financial and Reporting Team Comments: There are no additional comments to provide at this time.

FY 2018-2022 CIP Page VI-103 for 232002-Freud & Connor Creek Pump Station Improvements

CIP Number: CIP 1315

Title: FREUD & CONNER CREEK PUMP STATION IMPROVEMENTS

Classification: 232: Wastewater > SCC > Pumping Stations

Managing Dept: WW Eng

RC Score: 79.6

Contract No.: CON-109

Significance: The primary objective of this project is to study the overall performance of Connor Creek and Freud sewage pumping stations and develop design, and build an operational strategy to optimize the utilization of interconnected piping and operation between both pumping stations and the Connor Creek Retention and Treatment Basin.

Location: Conner Creek & Freud Pump Stations

Driver: 2 - Performance

Explanation: During peak wet weather there is a potential for the sewers to surcharge and flood the street.

Preliminary Scope of Work:

Provide basis of design, and final design for an operational strategy to optimize the utilization of interconnected piping and operation between Connor Creek and Freud pumping stations and the Connor Creek Retention and Treatment Basin. Provide construction of the emerging project and construction assistance during construction of the emerging project.

Challenges: Meeting the collection system transport capacity during the construction

Initial Project Cost Estimates (in \$1000s)

Phase	Status	Start Date	End Date	Lifetime Actual Thru FY2016 (Unaudited)	Projected Expenditures FY2017	Projected Expenditures FY2018	Projected Expenditures FY2019	Projected Expenditures FY2020	Projected Expenditures FY2021	Projected Expenditures FY2022	Projected Expenditures FY2023 & Beyond	2018-2022 CIP Total	Phase Total
S	Not Yet Started	NA	NA	\$0	\$100	\$500	\$0	\$0	\$0	\$0	\$0	\$500	\$600
D	Not Yet Started	NA	NA	\$0	\$340	\$3400	\$0	\$0	\$0	\$0	\$0	\$3400	\$3740
C	Not Yet Started	NA	NA	\$0	\$5636	\$0	\$5100	\$2460	\$1000	\$0	\$0	\$8560	\$14196
C	Under Procure.	NA	NA	\$0	\$1964	\$2000	\$0	\$0	\$0	\$0	\$0	\$2000	\$3964
Totals				\$0	\$8040	\$5900	\$5100	\$2460	\$1000	\$0	\$0	\$14460	\$22500



Freud Pump Station

Otherwise Noteworthy Project

CIP 214001: CON-280: Relocation of the Industrial Waste Control Group (IWC)

Project Engineer/ Manager: Ali Khraizat

Manager: Ali Khraizat

Total Project Budget: \$7,000,000

Key Contract/Vendor: Sigma/Albert Kahn

Project Description: The Relocation of the Industrial Waste Control Group (IWC) located at GLWA Livernois Center at 303 South Livernois Avenue and the GLWA Analytical Lab located at 2727 Second Avenue to Water Resource Recovery Facility (WRRF).

Purpose: The existing Industrial Waste Control Group (IWC) facility is primarily used for sampler cleaning and preparation and location to house staff and division vehicles. The IWC is currently situated at the GLWA Livernois Center at 303 South Livernois Avenue, Detroit, while the GLWA Analytical Lab is located at 2727 Second Avenue, Detroit. There is a two-phase approach to relocate both groups to the GLWA WRRF consolidating the existing plant Operations Lab with the Analytical Lab making efficient use of space by utilizing owned facilities versus leased ones and increasing synergy between the lab groups by having them located at the WRRF. The IWC relocation will also make way for the new Detroit River International Crossing (Gordie Howe Bridge project).

Status: The bid documents are being prepared for advertisement.

Additional Project Manager Comments: The Scope of Work includes relocation of the IWC from its current location to the 1st floor of the Ragland Building and 2nd floor of the New Administration Building (NAB) at the WRRF. Twenty of the IWC team members and a document storage area will be accommodated in the current Engineering/Drafting areas on the NAB 2nd floor. Renovation of the north bay and shower/restroom area of the existing locker room located on the 1st floor of the Ragland Building will be completed to accommodate the IWC sampler preparation, storage, and work space for IWC field personnel.

Additional Construction Accounting & Financial and Reporting Team Comments: There are no additional comments to provide at this time.

Construction Work-in-Progress Rollforward

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

The CWIP Rollforward provides a project status for each item.

Future Year:	Project that was included in the CIP with no expenditures (F)
Active:	Project in which procurement process has been initiated and expenditures incurred (A)
Pending Close :	Project that has no projected expenditures for the current fiscal year and has reached substantial completion (PC)
Closed:	Project that has been closed and capitalized (C)

Projects in bold font on the CWIP Rollforward were discussed in further detail previously in this report.

As shown in the summary below, the Wastewater System CWIP Rollforward for FY 2018 thru 2022 identifies 85 projects with a total budgeted value of \$1.1 billion. Of that total, \$186.2 million (unaudited) is in CWIP as of December 31, 2017 as shown in the table beginning on the next page.

The order of the report on the subsequent pages is from largest spend in FY 2018 dollars first.

Status	Project Count	Total Project Cost	Percent of Total
Future	28	371,444,000	33%
Active	40	694,649,000	62%
Pending Close	5	8,098,000	1%
Closed	12	41,029,000	4%
Grand Total	85	\$ 1,115,220,000	100%

Great Lakes Water Authority
Wastewater Construction Work-on-Progress (CWIP) FY 2018 Rollforward
(Unaudited), Pre-Close Activity For the Quarter Ended December 31, 2017

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited) Pre-Close							FY 2018 Activity (Unaudited), Pre-Close	(Unaudited), Pre-Close CWIP Balance, as of December 31, 2017
					Construction: (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Salary & Wages-Direct (601995)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Employee Benefits (601997)		
211001	Project 211001: Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	A	51,903,000	10,243,275	8,251,380	104,291	-	-	62,328	-	24,931	8,442,930	18,686,205
212003	Project 212003: Aeration System Improvements	A	16,203,000	3,804,993	3,374,581	93,259	-	-	28,659	-	11,463	3,507,962	7,312,955
212006	Project 212006: PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract	A	47,599,000	6,872,993	5,833,185	355,271	-	-	27,347	-	10,939	6,226,742	13,099,735
260301	Project 260301: Roof Replacement of Complex II	A	1,871,000	-	1,542,847	-	-	-	-	-	-	1,542,847	1,542,847
232002	Project 232002: Freud and Connor Creek Pump Station Improvements	A	22,500,000	2,100,803	1,229,037	676,810	-	-	2,694	155,539	1,078	2,065,157	4,165,960
215001	Project 215001: Rehabilitation of Combined Sewer Overflow (CSO) Retention Treatment Basins (RTB), Screening and Disinfection Facilities (SDF)	A	31,977,000	763,690	1,024,214	169,379	-	-	11,324	-	4,530	1,209,447	1,973,137
260201	Project 260201: Conveyance System Interceptor Rehab	A	1,828,000	90,500	4,465,947	421,991	-	-	3,783	-	1,513	4,893,234	4,983,734
260203	Project 260203: SCP-CON-068: Inland: Sewer Inspection	A	4,464,000	3,306,028	937,665	-	-	-	1,703	-	681	940,049	4,246,077
260101	Project 260101: Plant-Wide Replacement of Emergency Lighting	PC	1,680,000	289,743	838,609	-	-	-	15,926	-	6,370	860,905	1,150,648
211004	Project 211004: Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements	A	21,494,000	20,944,123	951,846	-	-	-	94,307	-	37,723	1,083,876	22,027,999
213003	Project 213003: Sewage Sludge Incinerator Air Quality Improvements at WRRF	A	36,043,000	36,153,036	436,443	-	-	-	13,847	-	5,539	455,829	36,608,865
361001	Project 361001: Consolidated Process Control System Upgrades	A	331,000	173,127	142,500	-	-	-	-	-	-	142,500	315,627
213004	Project 213004: Biosolids Dryer Facility at WRRF	A	135,968,000	2,023,774	124,798	-	-	-	2,899	-	1,159	128,856	2,152,630
260302	Project 260302: CON 127: Repair HVAC	A	110,000	56,282	160,329	-	-	-	8,444	-	3,378	172,150	228,432
213001	Project 213001: Replacement of Belt Filter Presses for Complex I and Upper Level Complex II	C	1,901,000	-	-	(63,150)	-	-	1,062	-	425	(61,663)	(61,663)
216001	Project 216001: Underground Electrical Duct Bank Repair and EB-1, EB-2, and EB-10 Primary Power Service Improvements - WRRF	A	27,144,000	31,636,300	-	(423)	-	-	12,417	-	4,967	16,961	31,653,261
4824	DWSD-Reha/Replacement Existing Sewer	PC	-	56,280	-	-	-	-	-	-	-	-	56,280
211002	Project 211002: Pump Station No. 2 Pumping Improvements	A	3,533,000	108,416	141,688	14,000	-	-	6,869	-	2,748	165,306	273,722
211003	Project 211003: Rehabilitation of Primary Clarifiers	A	581,000	1,701,631	-	-	-	-	739	-	296	1,035	1,702,666
211005	Project 211005: Pump Station No. 2 Improvements	F	10,800,000	-	-	-	-	-	-	-	-	-	-
211006	Project 211006: Pump Station No. 1 Improvements	F	13,129,000	88	-	-	-	-	-	-	-	-	88
211007	Project 211007: Replacement of Bar Racks and Grit Collection System at Pump Station No. 2	F	9,667,000	-	-	-	-	-	-	-	-	-	-
211008	Project 211008: Rehabilitation of Ferric Chloride Feed systems at the Pump Station -1 and Complex B Sludge Lines	F	9,633,000	-	-	-	-	-	-	-	-	-	-
211009	Project 211009: Rehabilitation of the Circular Primary Clarifier Scum Removal System	F	10,480,000	-	-	-	-	-	-	-	-	-	-
212001	Project 212001: Returned Activated Sludge (RAS) Pumps, Influent Mixed Liquor System and Motor Control Centers (MCC) Improvements for Secondary Clarifiers	C	24,175,000	-	-	-	-	-	-	-	-	-	-

Great Lakes Water Authority
 Wastewater Construction Work-on-Progress (CWIP) FY 2018 Rollforward
 (Unaudited), Pre-Close Activity For the Quarter Ended December 31, 2017

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited) Pre-Close							FY 2018 Activity (Unaudited), Pre-Close	(Unaudited), Pre-Close CWIP Balance, as of December 31, 2017
					Construction: (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Salary & Wages-Direct (601995)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Employee Benefits (601997)		
212002	Project 212002: Study, Design, & Construction, Management Services for Modified Detroit River Outfall No. 2 - WRRF	A	8,482,000	10,818,870	-	-	-	-	-	-	-	-	10,818,870
212004	Project 212004: Chlorination/Dechlorination Process Equipment Improvements	A	5,000,000	85,850	-	-	-	-	233	-	93	327	86,177
212005	Project 212005: Rouge River Outfall No. 2 (RRO-2) Segement 1-WWTP Modifications	C	12,187,000	-	-	-	-	-	-	-	-	-	-
212007	Project 212007: Rehabilitation of the Secondary Clarifiers	F	30,999,000	-	-	-	-	-	-	-	-	-	-
213002	Project 213002: Rehabilitation of Central Offload Facility	A	17,750,000	202,142	-	381,060	-	-	9,024	-	3,610	393,694	595,836
213005	Project 213005: Complex I Incinerators Decommissioning and Reusability	F	1,100,000	-	-	-	-	-	773	-	309	1,083	1,083
213006	Project 213006: Improvements to Sludge Feed Pumps at Dewatering Facilities	A	1,185,000	4,856	-	-	-	-	-	-	-	-	4,856
213007	Project 213007: Construction of the Improved Sludge Conveyance and Lighting System at the WWTP	F	18,922,000	-	-	-	-	-	3,684	-	1,474	5,158	5,158
213008	Project 213008: Rehabilitation of the Wet and Dry Ash Handling Systems	F	18,316,000	-	-	-	-	-	-	-	-	-	-
213009	Project 213009: Phosphorous Recovery Facility at the WRRF	F	15,000,000	-	-	-	-	-	-	-	-	-	-
214001	Project 214001: Relocation of Industrial Waste Division and Analytical Laboratory Operations	A	7,000,000	181,500	-	-	-	-	350	-	140	490	181,990
216002	Project 216002: Plant-wide Fire Alarm Systems Upgrade/ Integration and Fire Protection Improvements	A	6,014,000	-	-	-	-	-	2,989	-	1,196	4,185	4,185
216003	Project 216003: Repair Potable Water, Screened Final Effluent, natural Gas, and Compressed Air Pipelines at the WWTP	F	5,000,000	-	-	-	-	-	-	-	-	-	-
216004	Project 216004: Rehabilitation of Various Sampling Sites and PS# 2 Ferric Chloride System at WWTP	A	5,000,000	311,736	-	-	-	-	292	-	117	409	312,145
216005	Project 216005: Rehabilitation of the Main Plant Maintenance Building, Replacement of various Plant Maintenance Areas and Work Environment Improvement.	F	12,900,000	-	-	-	-	-	-	-	-	-	-
216006	Project 216006: Rehabilitation of the Screened Final Effluent (SFE) Pump Station and Secondary Water System	F	50,000,000	-	-	-	-	-	-	-	-	-	-
216007	Project 216007: DTE Primary Electric 3rd Feed Supply Line to the WRRF	A	7,000,000	15,074	292,200	13,500	-	-	-	-	-	305,700	320,774
222001	Project 222001: Intercommunity Relief Sewer Modifications in Detroit Oakwood District	F	11,000,000	-	-	-	-	-	-	-	-	-	-
222002	Project 222002: Detroit River Interceptor Evaluation and Rehabilitation	A	20,321,000	5,380	-	-	-	-	1,089	-	436	1,525	6,905
222003	Project 222003: North Interceptor East Arm (NIEA) Evaluation and Rehabilitation	F	26,000,000	-	-	-	-	-	-	-	-	-	-
222004	Project 222004: Collection System Valve Remote Operation Structures Improvements	F	2,763,000	-	-	-	-	-	-	-	-	-	-
222005	Project 222005: Collection System Access Hatch Improvements	F	7,197,000	-	-	-	-	-	-	-	-	-	-
222006	Project 222006: GLWA CSO Outfalls Rehabilitation	F	36,000,000	-	-	-	-	-	812	-	325	1,137	1,137
222007	Project 222007: North Interceptor East Arm (NIEA) Evaluation and Rehabilitation from WRRF to Gratiot Ave. and Sylvester St.	F	21,000,000	-	-	-	-	-	-	-	-	-	-

Great Lakes Water Authority
Wastewater Construction Work-on-Progress (CWIP) FY 2018 Rollforward
(Unaudited), Pre-Close Activity For the Quarter Ended December 31, 2017

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited) Pre-Close							FY 2018 Activity (Unaudited), Pre-Close	(Unaudited), Pre-Close CWIP Balance, as of December 31, 2017
					Construction: (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Salary & Wages-Direct (601995)	Capital Allocation: Non-Personnel (601998)	Capital Allocation: Employee Benefits (601997)		
232001	Project 232001: Fairview Pumping Station - Replace Four Sanitary Pumps	A	32,400,000	778,162	-	453,361	-	-	8,404	-	3,362	465,127	1,243,289
232003	Project 232003: Northeast Pump Station Improvements	F	26,328,000	-	-	-	-	-	-	-	-	-	-
233001	Project 233001: Collection System Backwater Gates and Regulator Gates Rehabilitation	F	9,301,000	-	-	-	-	-	-	-	-	-	-
233002	Project 233002: Collection System In System Storage Devices (ISDs) Improvements	F	3,550,000	-	-	-	-	-	-	-	-	-	-
251002	Project 251002: Wastewater System Wide Instrumentation & Controls Software and Hardware Upgrade	F	5,862,000	-	-	-	-	-	-	-	-	-	-
260100	Project 260100: Water Resource Recovery Facility (WRRF), Lift Station & Wastewater Collection System Allowance	A	52,843,000	-	-	-	-	-	-	-	-	-	-
260102	Project 260102: Replace Stairs - WWTP	C	500,000	-	-	-	-	-	-	-	-	-	-
260103	Project 260103: Replace 4 DS-706 Centrifuges WWTP	C	600,000	-	-	-	-	-	-	-	-	-	-
260104	Project 260104: Pur Installation of EB-25 Unit WWTP	C	1,195,000	-	-	-	-	-	-	-	-	-	-
260105	Project 260105: Replace Various Air Distribution Equip	C	286,000	-	-	-	-	64	-	26	90	90	90
260107	Project 260107: Pump Station 2 Replacement	F	331,000	-	-	-	-	-	-	-	-	-	-
260108	Project 260108: Sanitary Meter Replacement: Neff Road	C	448,000	-	-	-	-	-	-	-	-	-	-
260110	Project 260110: CS060: Black & Veatch:	A	2,266,000	1,458,339	-	122,208	-	5,454	-	2,182	129,844	1,588,183	1,588,183
260111	Project 260111: SCP-PC-015: W-3 Construct: Overhead Door	C	593,000	-	-	-	-	-	-	-	-	-	-
260112	Project 260112: DWS-065: Tooles: Connor Creek	C	345,000	-	-	-	-	984	-	394	1,378	1,378	1,378
260113	Project 260113: Fire Remediation	A	10,500,000	17,005,859	-	-	-	-	-	-	-	-	17,005,859
260200	Project 260200: Sewer and Interceptor Evaluation and Rehabilitation Program NNB	A	72,320,000	-	-	-	-	-	-	-	-	-	-
260300	Project 260300: Schedule Replacement Program of Critical Assets NNB	A	23,519,000	-	-	-	-	-	-	-	-	-	-
260400	Project 260400: Sewage Meter Design, Installation, Replacement and Rehabilitation Program	F	3,000,000	-	-	-	-	-	-	-	-	-	-
331002	Project 331002: Roofing Systems Replacement at GLWA Wastewater Treatment Plant, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)	F	9,050,000	-	-	-	-	-	-	-	-	-	-
361002	Project 361002: Data Center Reliability/Availability Improvements	PC	3,163,000	17,253	-	-	-	-	-	-	-	-	17,253
361003	Project 361003: SCADA Radio Network Upgrade	PC	2,955,000	852,872	-	-	-	-	-	-	-	-	852,872
380400	Project 380400: As-needed CIP Implementation Assistance and Related Services NNB	A	3,135,000	-	-	-	-	-	-	-	-	-	-
380401	Project 380401: CS-1433: PMA: As Needed CIP Services	A	3,135,000	105,279	-	107,902	-	-	-	-	-	107,902	213,181
380500	Project 380500: Department-wide General Engineering Services on an As-needed Basis	A	4,960,000	-	-	-	-	-	-	-	-	-	-

Great Lakes Water Authority
Wastewater Construction Work-on-Progress (CWIP) FY 2018 Rollforward
(Unaudited), Pre-Close Activity For the Quarter Ended December 31, 2017

CIP #	Brief Description	Status	Total Project Estimate from CIP	CWIP Balance July 1, 2017 (Unaudited)	FY 2018 Activity (Unaudited) Pre-Close						FY 2018 Activity (Unaudited), Pre-Close	(Unaudited), Pre-Close CWIP Balance, as of December 31, 2017		
					Construction: (616900)	Contractual Engineering Services (617950)	Capitalized Interest (703115)	Other Expenses (617900)	Capital Allocation: Salary & Wages-Direct (601995)	Capital Allocation: Non-Personnel (601998)			Capital Allocation: Employee Benefits (601997)	
380501	Project 380501: CS-1499:MetcoServices:General Engineer	PC	300,000	148,366	-	15,165	-	-	-	-	-	15,165	163,531	
380600	Project 380600: General Engineering Services	A	7,016,000	-	-	-	-	-	-	-	-	-	-	
380601	Project 380601: CS-1432A:Alfred Benesh:General Engineer	A	250,000	157,929	-	23,627	-	-	-	-	-	23,627	181,556	
380700	Project 380700: As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services	C	-	-	-	-	-	-	-	-	-	-	-	
380701	Project 380701: Engineering Svc Concrete Testing,Soil Borings	A	-	115,388	-	123,018	-	-	-	-	-	123,018	238,406	
380800	Project 380800: Geotechnical and Related Services on an As- Needed Basis	F	1,116,000	-	-	-	-	-	-	-	-	-	-	
380800	Project 380800: Geotechnical and Related Services on an As- Needed Basis	C	(1,201,000)	-	-	-	-	-	-	-	-	-	-	
380801	Project 380801: CS-1490: Nth Consultants: As needed GIS	A	85,000	82,476	-	-	-	-	-	-	-	-	82,476	
380900	Project 380900: General Engineering Services	A	649,000	-	-	-	-	-	-	-	-	-	-	
380901	Project 380901: CS-1481:Sigma Assoc: General Engineering	A	270,000	63,426	-	112,231	-	-	-	-	-	112,231	175,657	
381000	Project 381000: Energy Management: Electric Metering Improvement Program	F	3,000,000	-	-	-	-	-	-	-	-	-	-	
Total # of Projects and Dollars			85	1,115,220,000	152,735,840	29,747,270	3,123,500	-	-	328,503	155,539	131,403	33,486,214	186,222,054
FY 2018 - 2022 Wasterwater CIP Total (Page IV-3)				<u>1,115,218,000</u>	<u>152,735,840</u>									
Difference due to Rounding				<u>(2,000)</u>										
Items to be reclassified to Capital Outlay FY 2018					<u>605,618</u>									
Total CWIP Reported on FY 2017 Financial Statements					<u>153,341,458</u>									

CIP Allowance and Program Summary

Within the FY 2018 - 2022 CIP, GLWA has developed budgets for allowances and programs that provide GLWA flexibility in capital development and improvements.

Allowances are established to provide funding related to unanticipated nature of pipeline and equipment failures that require immediate repair and rehabilitation to continuously meet level of service requirement. Allowances can also be allocated to projects with anticipated or actual spend in excess of CIP budget.

Programs are established to provide funding related to specific capital improvements that are systemic, reoccurring, and vary from year to year.

Below are the allowances and programs within the Wastewater System.

Allowance

260100: WRRF, Lift Station and Wastewater System Structure Allowance

Programs

260200: Sewer and Interceptor Evaluation and Rehabilitation

260300: Scheduled Replacement of Program of Critical Assets

260400: Sewage Meter Design, Installation, Replacement and Rehabilitation Program

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Allowance: 260100 Water Resource Recovery Facility, Lift Station, and Wastewater Collection System Structures

CIP#	Contract Number	Description	Current Budget Amendment	Board/Administrative Approved	FY2018 Estimate	FY 2019 Estimate	FY 2020 Estimate	FY 2021 Estimate	FY 2022 Estimate
260100		WRRF, Lift Station and Wastewater Collection System Structures	6991/6992	Board	21,821,000.00	12,000,000.00	15,000,000.00	15,000,000.00	12,000,000.00
260101	SCP-PC-014	Replacement Emergency Lighting and Signage			579,000.00				
260110	CS-060	Study and Design for Modification of Sludge Feeds Systems	6920	Board	(174,000.00)				
260113		Fire Remediation	6991/6992	Board	(10,500,000.00)				
211004	CON-250	Rack and Grit at Pump Station No. 1	9023	Board	(1,740,000.00)				
213007	CON-197	Modify Sludge Feeds Systems in Complex II	9024	Board	(1,709,083.00)				
260602	DB-261	CSO Facilities Fire Alarm	Pending	Administrative	(834,788.00)				
215001	CON-234	Effluent Gates	9025	Board	(500,000.00)				
260601	CON-254	Oakwood CSO Control Facility Rehabilitation	Pending	Administrative	(200,000.00)				
Total	7 Available Balance				6,742,129.00	12,000,000.00	15,000,000.00	15,000,000.00	12,000,000.00

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 260200 Sewer and Interceptor Evaluation and

CIP#	Contract Number	Description	Current Budget Amendment	Board/Administrative Approved	FY2018	FY 2019	FY 2020	FY 2021	FY 2022
260200		Sewer and Interceptor Evaluation and Rehabilitation Program			8,000,000.00	8,000,000.00	20,000,000.00	20,000,000.00	20,000,000.00
260201	CS-168	Conveyance Sstem Interceptor Rehab	7013	Board	(1,000,000.00)	(1,000,000.00)	(1,000,000.00)		
260201	CON-149	CON-149 Inland: DRI, Sec Insl, Evaluation, Design	7013	Board	(4,795,540.00)	(6,600,000.00)	(3,404,460.00)		
260203	CS-068	CON-068 Inland: Sewer Inspection	7011	Board	(2,140,460.00)				
Total	3 Available Balance				64,000.00	400,000.00	15,595,540.00	20,000,000.00	20,000,000.00

Great Lakes Water Authority
Board Approved CIP Allowance /Program Summary
Allowance: 260300 Scheduled Replacement of Program of Critical

CIP#	Contract Number	Description	Current Budget Amendment	Board/Administrative Approved	FY2018	FY 2019	FY 2020	FY 2021	FY 2022
260300		Schedule Replacement Program of Critical Assets			3,721,000.00	5,000,000.00	5,000,000.00	5,000,000.00	5,000,000.00
260301	CON-143	Roof Replacement of Complex II	6990	Board	(1,567,400.00)				
260301	CON-127	CON-127: Repair HVAC		Administrative	(26,822.00)				
260113	Fire Remediation	Fire Remediation	6992	Board	(2,000,000.00)				
Total	3	Available Balance			126,778.00	5,000,000.00	5,000,000.00	5,000,000.00	5,000,000.00

Great Lakes Water Authority
Board Approved CIP Allowance/Program Summary
Program: 260400 Sewage Meter Design, Installation, Replacement and Rehabilitation

CIP#	Contract Number	Description	Current Budget Amendment	Board/Administrative Approved	FY2018	FY 2019	FY 2020	FY 2021	FY 2022
260400		Sewage Meter Design, Installation, Replacement and Rehabilitation Program			500,000.00	500,000.00	500,000.00	500,000.00	500,000.00
Total	0	Available Balance			500,000.00	500,000.00	500,000.00	500,000.00	500,000.00

Budget Amendment Reporting

Scope: Budget amendments seek to properly allocate funds from the allowance and programs within the Capital Improvement Plan (CIP) for the budgeted years by the reallocation of funds from the budgeted allowance or programs level to the actual project level.

Process: Steps are listed below.

- 1) Properly identify projects that utilize funds from the allowance or programs
- 2) Reallocate the funds from the budgeted allowance or programs level through a journal entry
- 3) Attach documents that support the reallocation (CIP funding request, contract transmittal, or change orders)
- 4) Create, review, and approve budget amendment journal entry

Budget Amendment Processed for FY 2018 through December 31, 2017

Budget Amendments/Descriptions/Reasons/GL Strings	Amount
6920	
CIP 260100: Water Resource Recovery Facility, Lift Station, and Wastewater Collection System Structures Allowance	
To fund Contracted Construction Services not budgeted for in FY 2018-2022 CIP	
Cost in Excess of CIP Budget	
5421-892211.000-616900-260100	(\$174,000)
CIP 260110: CS-060: Upgraded Sludge Conveyance System Design	
To fund Contracted Construction Services not budgeted for in FY 2018-2022 CIP	
Cost in Excess of CIP Budget	
5421-892211.000-616900-260110	\$174,000
6990	
CIP 260300: Scheduled Replacement of Program of Critical Assets	
To Fund Contracted Construction Services related to budgeted program assigned	
Fire Remediation-Roof Replacement	
5421-892211.000-616900-260300	(\$1,567,400)
CIP 260301: CON-143: Roof Replacement of Complex II	
To Fund Contracted Construction Services related to budgeted program assigned	
Fire Remediation-Roof Replacement	
5421-892211.000-616900-260301	\$1,567,400
6992	
CIP 260100: Water Resource Recovery Facility, Lift Station, and Wastewater Collection System Structures Allowance	
To Fund Contracted Construction Services related to budgeted program assigned	
Fire Remediation	
5421-892211.000-616900-260100	\$2,000,000
CIP 260300: Scheduled Replacement of Program of Critical Assets	
To Fund Contracted Construction Services related to budgeted program assigned	
Fire Remediation	
5421-892211.000-616900-260300	(\$2,000,000)

Budget Amendment Processed for FY 2018 through December 31, 2017

7011		
CIP 260203: CON-068: Inland: Sewer Inspection		
To Fund Contracted Construction Services related to budgeted program assigned		
Allocation of Program		
	5421-882301.000-616900-260203	\$2,140,460
CIP 260200: Sewer and Interceptor Evaluation and Rehabilitation		
To Fund Contracted Construction Services related to budgeted program assigned		
Allocation of Program		
	5421-892211.000-616900-260200	(\$500,460)
	5421-892211.000-617950-260200	(\$1,640,000)
7013		
CIP 260201: CON-149: Inland: DRI, Evaluation, Design		
To Fund Contracted Construction Services related to budgeted program assigned		
Allocation of Program		
	5421-882301.000-616900-260201	\$4,795,540
CIP 260201: Conveyance System Interceptor Rehab		
To Fund Contracted Construction Services related to budgeted program assigned		
Allocation of Program		
	5421-882301.000-617950-260201	\$1,000,000
CIP 260200: Sewer and Interceptor Evaluation and Rehabilitation		
To Fund Contracted Construction Services related to budgeted program assigned		
Allocation of Program		
	5421-892211.000-616900-260200	(\$4,795,540)
	5421-892211.000-617950-260200	(\$1,000,000)
Grand Total		0

Glossary of Acronyms

ACRONYM	DEFINITION	ACRONYM	DEFINITION
CCD	Construction Change Directive	NPDES	National Pollution Discharge Elimination System
CSO	Combined Sewer Overflow	RAS	Return Activated Sludge
DCB	Detailed Cost Breakdown	RRO	River Rouge Outfall
ECR	Equipment Shutdown Request	RTB	Retention Treatment Basin
HPO	High Purity Oxygen	SDF	Screening and Disinfection Facility
ISDs	In System Storage Devices	SFE	Screened Final Effluent
IWC	Industrial Waste Control	SPW	Springwells Water Treatment Plant
MCC	Motor Control Centers	VFD	Variable Frequency Drive
MDEQ	Michigan Department of Environmental Quality	WRRF	Water Resource Recovery Facility
NAB	New Administration Building	WTP	Water Treatment Plant
NIEA	North Interceptor East Arm	WWTP	Wastewater Treatment Plant