Structural Inspection & Structural Improvements
Photo Submitted by: Kashmira Patel of Wastewater Operating Services

GLWA
Great Lakes Water Authority

CIP

FY2025-2029

CAPITAL IMPROVEMENT PLAN

Updated February 16, 2024
Approved February 28, 2024

Appendix A: Water Business Case Evaluation (BCE)

96-Inch Water Transmission Main Relocation and Isolation Valve Installations
Photo Submitted by: Corey Brecht of Water and Field Services

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Lake Huron

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

79.7

- [x] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Representative Switchgear to be Replaced under CIP 111001

Project Manager: Eric Kramp

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 3/3/2010

Year Project Added to CIP: 2010

CIP Budget: Water

Project Jurisdiction: Saint Clair County

Lookup Location: Lake Huron WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Problem Statement:

This project addresses multiple issues at the LHWTP, primarily focused on electrical, pumping, and limited chemical feed system improvements.

Improvements are needed to align the existing low lift pumping rate with the Lake Huron WTP production rate per the 2015 Water Master Plan Update. Currently, constant speed pumping at the low-lift portion of the plant can force it to operate in a semi-batch mode during night-time, low-demand periods. Existing electrical gear for low- and high-lift pumping units and filter backwash pumps are original to plant, beyond useful service life and need to be replaced to improve reliability, serviceability, maintainability, and efficiency.

The High Lift pumping is oversized for the needs of the station, resulting in pumps that do not have sufficient graduation to efficiently cover the range of flows needed by the Plant. Also they pump at too high a pressure to meet best practice for the PCCP water main downstream of the station. This project will provided for smaller pumps that will allow LHWTP to step its discharge rates in line with member-partner demand.

The phosphoric acid chemical storage tanks and associated fill piping are also past their useful service life. The piping has had leaks and many repairs. This project will provide for a replacement of this system with one appropriately sized gear in line with the recommendations of the Corrosion Control Project.

Scope of Work/Project Alternatives:

This CIP will be delivered using a design-bid-build project delivery method. The project's scope of improvements will generally include rehabilitation or replacement of the following systems and equipment:
1. High and medium voltage electrical system
2. Low-lift pumps, to be right-sized to current and projected demands.
3. High-lift pumping units, right-sized to current and projected demands.
4. Filter wash water pumps and related equipment.
5. Phosphoric acid storage tanks and fill piping.
6. Update instrumentation, controls and supervisory, control and data acquisition (SCADA) systems related to the pumping system equipment.

Other Important Info:

*Innovation note: Ensure energy efficiency. Coordination between existing pumping unit and motor required during design. Critical speed analysis may show the pump improvements needed to operate at reduced speeds. Developing an innovative rehabilitation design to minimize maintenance of existing drives.

This project will also replace the existing 60 MGD wash water "on-demand" system with an elevated tank system, decreasing the potential of filter upset by control loss.

Primary Driver: 2 - Performance

Driver Explanation:

Right-sizing the low- and high-lift pumping systems at Lake Huron will improve the reliability of pumping as it will eliminate the semi-batch mode operation. Condition/age is another driver for the project.

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Scoring

Project Manager Weighted Score:	**80.7**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	C. High risk of breakdown or imminent failure with serious impact on performance, D. Immediate replacement or rehabilitation required	One WWP and one HL Pump are abandoned in place, with cost of repair found too high for LHWTP staff to consider addressing. Switchgear parts are no longer made and failures are a chief concern of the staff.
Performance (Service Level/Reliability)	5	B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures, D. Canceling project significant, persistent, ongoing, continuous service interruption and/or reliability issues†, E. Project impact >11 wholesale, 1M retail, or critical customer	Different parts of the project meet different criteria. HL Pumps pump at too high a pressure to be protective of the 120" WM, per planning. Impact of even a temporary loss of the 120" incalculable. HL Pumps pump too much water for meaningful steps in production. LHWTP can not step production effectively. LL Pumps have two pumps that address 95% of all flow at the plant. The other two pumps would only be effective at 99.9% flow rates, or would otherwise over produce water compared to HL flow
Regulatory (Environmental/Legal)	3	C. Canceling project potential for moderate env. impact to neighborhood, possibility for wider ecosystem impact; non-compliance risk in 1-3 years	This project addresses new corrosion control equipment for communities with a population of approximately 1 million people, including the City of Flint. Once new recommendations are issued on corrosion control, this project is poised to immediately address it.

Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation, D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	Of the three HL VFD-driven pumps, only one is operational, in bypass. This project will simplify HL Pump operation by replacing the VFDs with more, smaller pumps. LL Pumps currently do not meet flow conditions at LHWTP approximately 30% of the time, requiring constant "batch" operation. This creates some turbidity challenges for the plant. The plant has maintained water quality from its settled water conduit through station discharge only through dedicated team effort.
Health and Safety	2	B. Project limited positive impact on staff/public H&S‡; No major staff or hazard issues or concerns addressed	A 3 could be argued, but not changing from previous year's score. The only pedestrian/tool cart pathway to the high lift pumping area is through the 13,200 Volt (AC) switchgear space, generally considered bad practice. This project will relocate the switchgear to a more safe location.
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers, C. Moderate additional revenue/savings for GLWA ($100K-$499K/yr), E. /stakeholder relationships/confidence in GLWA	Moderate savings are anticipated with the elevated tanks.
Financial	4	B. Project will likely result in avoidance of fines, potential litigation, emergency repairs or damage to asset/public, E. Canceling project significant financial consequences from revenue loss, repair /restoration/O&M cost, downtime, potential litigation, fines, damage, etc.; some budget implications requiring deferral or cutbacks in other areas.	See previous discussion on state of electrical gear.

Efficiency and Innovation	5	A. Right-sizing system results in substantial operational efficiencies, significantly increasing revenue/savings., C. Major & measurable positive impact on: Energy use & conservation/environmental responsibility & sustainability i.e. >=20% energy reduction, stabilizing demand; net financial; Wear & tear	A sizable portion of the energy used to pump water at LHWTP is lost at the NSC I-Valves and Imlay Reservoir Fill System. A primary driver of this project is to deliver water to these systems at a lower pressure, saving these costs. The revised elevated tank wash water tank system is inherently protective of the filters, currently very suspect with the plant. It will also ease draw down in the HL suction well

Review Committee Weighted Score: 79.7

Criteria Name	Score	Comment
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	5	Scores carried over from previous year
Health and Safety	2	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	4	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/14/2020

End Date: 7/26/2030

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: Water Master Plan Update

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,307	$154	$147	$121	$171	$171	$171	$172	$171	$856	$183

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	3/14/2020	7/26/2030
Capital Delivery Salary (Fringes)	3/14/2020	7/26/2030

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Phase: Design & Construction Assistance # 1 (1803769)

Phase Title: Design & Construction Assistance # 1 (1803769)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/14/2020

End Date: 6/30/2030

Phase Comments/Description:

Existing LL Pumps: 2 - 100 mgd and 2 - 200 mgd; firm = 400 mgd
Future LL Pumps: 2 - 150 mgd and 2 - 100 mgd: firm = 350 mgd
Future: LL Pumps 1 - 150 mgd pump will have VFD. 1 - 100 mgd pump will have a VFD by the time this project is started via another contract being executed by plant O&M staff.

Cost Est. Class: Class 1

Cost Est. Date: 3/12/2020

Cost Est. Source: Arcadis

Cost Est. Prepared By: Arcadis- Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (1803769)	$15,003	$3,603	$3,389	$1,215	$1,503	$2,593	$2,640	$1,391	$1,136	$9,263	$1,136

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1803769)	3/14/2020	6/30/2030

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/15/2025

End Date: 1/26/2028

Phase Comments/Description:

Existing LL Pumps: 2 - 100 mgd and 2 - 200 mgd; firm = 400 mgd
New LL Pumps are under design, with current selection around 2 @ ~120 MGD and 2 @ ~ 170 MGD with flow control alternates being reviewed. 3 different alternates are being reviewed for the lowest cost.

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: Arcadis

Cost Est. Prepared By: Arcadis

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$25,000	$0	$0	$0	$0	$9,476	$9,854	$5,670	$0	$25,000	$0

Phase Dates

Activity Name	Start Date	End Date
Construction - Switchgear Improvements	7/15/2025	1/26/2028

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Phase: Construction (Build) # 2

Phase Title: Construction (Build) # 2

Phase Budget: Water

Phase Status: Future Planned New

Start Date: 7/14/2027

End Date: 6/30/2030

Phase Comments/Description:
This project captures the corrections to the Wash Water System and High Lift System, et al, at the LHWTP.

Cost Est. Class: Class 5

Cost Est. Date: 7/22/2022

Cost Est. Source: Arcadis TMs

Cost Est. Prepared By: Arcadis

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 2	$97,000	$0	$0	$0	$0	$0	$0	$31,617	$32,692	$64,308	$32,692

Phase Dates

Activity Name	Start Date	End Date
Construction (Phase 2)	7/14/2027	6/30/2030

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Phase: Construction (Build) # 3

Phase Title: Construction (Build) # 3

Phase Budget: Water

Phase Status: Future Planned New

Start Date: 7/25/2028

End Date: 6/30/2030

Phase Comments/Description:

This project is for Phosphoric Acid and Phosphoric Acid Free process water systems

Cost Est. Class: Class 5

Cost Est. Date: 7/22/2022

Cost Est. Source: Arcadis TMs

Cost Est. Prepared By: Arcadis

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 3	$2,100	$0	$0	$0	$0	$0	$0	$0	$1,014	$1,014	$1,086

Phase Dates

Activity Name	Start Date	End Date
Construction (Phase 3)	7/25/2028	6/30/2030

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,307	$154	$147	$121	$171	$171	$171	$172	$171	$856	$183
Design & Construction Assistance # 1 (1803769)	$15,003	$3,603	$3,389	$1,215	$1,503	$2,593	$2,640	$1,391	$1,136	$9,263	$1,136
Construction (Build) # 1	$25,000	$0	$0	$0	$0	$9,476	$9,854	$5,670	$0	$25,000	$0
Construction (Build) # 2	$97,000	$0	$0	$0	$0	$0	$0	$31,617	$32,692	$64,308	$32,692
Construction (Build) # 3	$2,100	$0	$0	$0	$0	$0	$0	$0	$1,014	$1,014	$1,086
Totals	$140,410	$3,757	$3,536	$1,335	$1,674	$12,240	$12,665	$38,849	$35,013	$100,442	$35,097

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$5,500	$200	$2,500	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,700
2019	$9,631	$0	$0	$0	$401	$1,611	$3,169	$4,450	$42,757	$0	$0	$0	$0	$0	$52,388
2020	$19,631	$0	$0	$0	$401	$1,611	$3,169	$4,450	$10,000	$32,757	$0	$0	$0	$0	$52,388
2021	$42,719	$0	$0	$14	$1,236	$1,636	$1,749	$13,725	$12,768	$12,841	$11,121	$0	$0	$0	$55,090
2022	$37,084	$0	$0	$14	$198	$1,992	$1,962	$4,581	$8,866	$10,838	$10,838	$11,489	$4,329	$2,069	$57,178
2023	$6,113	$0	$0	$14	$198	$1,686	$1,582	$1,600	$0	$0	$0	$4,513	$12,984	$8,377	$69,391
2024	$66,332	$0	$0	$14	$198	$1,686	$1,021	$1,252	$1,553	$1,549	$12,040	$12,458	$38,731	$34,914	$140,410

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$140,410,608	$3,536,463	$1,335,372	$1,674,293	$12,240,286	$12,664,959	$38,848,717	$35,013,470	$100,441,726	$35,097,047

Description of CIP Changes:

Related project "Greenwood Pump Station"

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Lake Huron

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

60.5

- [x] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Eric Kramp

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 6/26/2014

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: Saint Clair County

Lookup Location: Lake Huron WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: PDB (Progressive Design-Build)

Delivery Method Details:

- [x] Is a Predecessor Project?

Successor Projects: 111010

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Problem Statement:

The instrumentation, filter controls, and raw water metering at the Lake Huron WTP is beyond useful life, no longer per industry standards, and is in need of replacement or rehabilitation.

Scope of Work/Project Alternatives:

The Contract has been redeveloped as a PDB to give full consideration to CS-108 guidelines.

Other Important Info:

Contract is being redeveloped for full integration with CS-108 guidelines.

Primary Driver: 1 - Condition

Driver Explanation:

The instrumentation has exceeded its useful life.

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Scoring

Project Manager Weighted Score:	**77.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance, B. Excessive maint. levels for the equipment/process area	Failures have been found in the existing Instrumentation & Controls for the LHWTP, in the filters. Many of the filter control limit switches have failed and do not reliably produce signals. Most PLCs at the site are end of life, discontinued, and often single point of failures. Most of the control board in the control room is non-functional. Bases and or supports for 3 of 5 controls valves' cylinders for each filter (Influent, Drain, and Surface Wash) are in poor condition or have failed.
Performance (Service Level/Reliability)	4	F. Likelihood of serious inconveniencies and business impacts for affected customers; impact 6-10 wholesale, 100K retail, critical customers, B. High risk of performance failure; doesn't meet future requirements, A. Expected performance failures under normal conditions	Many PLCs are functioning with N+0 redundancy, most especially the "Head PLCs" for filters. When these PLCs fail, control is only at its most local and data must be manually collected four times an hour for each affected filter in operation.

Regulatory (Environmental/Legal)	4	C. Canceling project risk of non-compliance in near term; potential permit violations; regulatory scrutiny; sig. measurable negative environmental impact to wide area, A. Relatively high, but not imminent,, D. Some historical evidence of permit/regulatory/contract violations support the decision	LHWTP currently hand-inputs hourly data that it supplies to regulators monthly. This increases the opportunity for errors in this data. The chemical feed system critical for meeting LHWTP's NPDES Permit requires excessive maintenance, and is subject to freezing and overfeeding. SCC Drain Commission Agreement for Galbraith Drain Flushing, while not exposing GLWA to flooding litigation, requires manual control of valving around the Parshall flume totalizer that does not work automatically.
Operations and Maintenance	5	F. Measurable reduction (>=75%) in reactive maint., B. Requires constant monitoring/manual operation because it is unable to be run automatically, A. Unsustainable levels of O/M required to keep in service that will still not ensure future stable/proper operation	Chemical feed manipulation is often manual operation. Production data recording is currently manual. Other parameters are not historized and are only recorded manually, making trending impossible.
Health and Safety	2	B. Project limited positive impact on staff/public H&S‡; No major staff or hazard issues or concerns addressed	There are some H&S improvements associated with this project. Work on the cylinders sometimes requires work on the "wrong side" of the safety partitions. Additional PPE is required to correctly perform work on this equipment.
Public Benefit	3	F. Canceling project moderate chance of moderate neg. publicity, E. /stakeholder relationships/confidence in GLWA, A. Project part of GLWA strategic plan*, but no new customers	Any of a number of LHWTP instrumentation or control failures could create significant negative publicity. While each failure is relatively unlikely, the failure of one system is moderately likely.

Financial	2	E. Total financial consequence of $100,000 - $249,999, B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	Considerable and unsustainable personnel expense would be generated by some of this equipment going out of service, or GLWA would be forced to accept a 33% reduction of capacity from LHWTP until equipment was replaced. Proof of maintaining compliance with GLWA's production and NPDES permits is maintained through this project.
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings, B. Moderate positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	This project anticipates going from single common alarms for multiple systems to high performance graphics for critical systems, allowing LHWTP to track system operations much more efficiently. It also will greatly decrease the amount of manual control and data collection necessary to operate this station.

Review Committee Weighted Score: 60.5

Criteria Name	Score	Comment
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	3	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	2	Scores carried over from previous year
Public Benefit	4	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	5	Scores carried over from previous year

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/20/2015

End Date: 5/18/2029

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/1/2016

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$400	$101	$92	$44	$54	$54	$54	$54	$47	$263	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	3/20/2015	5/18/2029
Capital Delivery Salary (Fringes)	3/20/2015	5/18/2029

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/17/2020

End Date: 12/30/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$188	$188	$188	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71020A.01)	8/17/2020	12/30/2020

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Phase: Design/Engineering (CS-1771)

Phase Title: Design/Engineering (CS-1771)

Phase Budget: Water

Phase Status: Cancelled

Start Date: 3/20/2015

End Date: 5/18/2029

Phase Comments/Description:
Project terminated with 200832

Cost Est. Class: Class 1

Cost Est. Date: 7/20/2020

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-1771)	$963	$963	$963	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-1771)	3/20/2015	5/18/2029

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Phase: Design/Engineering (CS-1499)

Phase Title: Design/Engineering (CS-1499)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2017

End Date: 6/29/2018

Phase Comments/Description:
CS-1499 element complete with CS-1771

Cost Est. Class: Class 1

Cost Est. Date: 7/24/2020

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-1499)	$44	$44	$44	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-1499)	7/1/2017	6/29/2018

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget:

Phase Status:

Start Date: 12/15/2016

End Date: 5/18/2029

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$1,100	$0	$0	$0	$0	$273	$287	$287	$253	$1,100	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	12/15/2016	5/18/2029

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Phase: Design-Build (2101680)

Phase Title: Design-Build (2101680)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 5/1/2023

End Date: 5/18/2029

Phase Comments/Description:
Progressive Design Services under the PDB boilerplate

Cost Est. Class: Class 3

Cost Est. Date: 7/5/2022

Cost Est. Source: Median of Proposals Received

Cost Est. Prepared By: Kramp

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build (2101680)	$37,125	$788	$94	$2,643	$2,927	$7,917	$8,161	$8,183	$7,200	$34,388	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (2101680)	5/1/2023	7/17/2025
Construction (2101680)	5/1/2023	5/18/2029

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$400	$101	$92	$44	$54	$54	$54	$54	$47	$263	$0
Professional Services	$188	$188	$188	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-1771)	$963	$963	$963	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-1499)	$44	$44	$44	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering	$1,100	$0	$0	$0	$0	$273	$287	$287	$253	$1,100	$0
Design-Build (2101680)	$37,125	$788	$94	$2,643	$2,927	$7,917	$8,161	$8,183	$7,200	$34,388	$0
Totals	$39,819	$2,083	$1,381	$2,687	$2,981	$8,244	$8,501	$8,525	$7,500	$35,751	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$24,530	$100	$600	$12,150	$11,780	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,630
2019	$25,419	$253	$643	$43	$8,647	$9,816	$6,909	$4	$0	$0	$0	$0	$0	$0	$26,315
2020	$9,999	$0	$735	$55	$3,333	$3,333	$3,333	$0	$0	$0	$0	$0	$0	$0	$10,789
2021	$15,612	$0	$0	$778	$236	$235	$235	$2,330	$6,184	$6,628	$0	$0	$0	$0	$16,626
2022	$15,501	$0	$286	$43	$744	$215	$5,196	$5,222	$5,082	$1	$0	$0	$0	$0	$16,789
2023	$18,850	$253	$481	$43	$295	$200	$67	$600	$960	$3,490	$6,900	$6,900	$5,750	$0	$25,941
2024	$30,424	$253	$481	$43	$295	$201	$8	$197	$1,027	$1,023	$9,184	$9,581	$9,609	$8,453	$40,357

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$39,819,439	$1,381,274	$2,687,206	$2,980,917	$8,244,233	$8,501,349	$8,524,640	$7,499,820	$35,750,960	$0

Description of CIP Changes:

Contract is being redeveloped for full integration with CS-108 guidelines.

CIP Number: 111008

Project Title: Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building Improvements

Project Status: Future Planned - Ten Year CIP

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Lake Huron

- ☐ Project New to CIP
- ☐ Useful Life > 20 Yrs
- ☐ Multiple Phases

Project Score

49.5

- ☐ Innovation
- ☐ WW Master Plan
- ☐ Water Master Plan Right Sizing
- ☐ Wet Weather Resiliency
- ☐ Redundancy
- ☐ Predecessor Project(s)
- ☐ Linear Assets Outside of Facilities
- ☐ CSO
- ☐ Pumps
- ☐ Storage
- ☑ Treatment

Project Manager: Brian VanHall

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/27/2017

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Saint Clair County

Lookup Location: Lake Huron WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

☐ **From Program?**

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

☐ **Is a Predecessor Project?**

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 111008

Project Title: Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building Improvements

Problem Statement:

The Lake Huron Water Treatment Plant started operating in 1976. The existing process control laboratory and administration building interiors are original construction, including flooring, wall coverings, doors, ceilings, lab cabinetry, control room boards, bathroom fixtures, and lighting fixtures. The original control room board is still located in the laboratory and consumes a large amount of space that is not used and inefficient. The architectural layout of the laboratory and administration building is designed around the 1970s workflows and technology. There are exterior doors that could be used to access the retention basins, sludge pumping stations and transfer pump house for daily operations and maintenance activities, however, the path to access these areas is not walkable and requires that staff to take a longer route using the roadway. This is inefficient.

Scope of Work/Project Alternatives:

This project will start with a study phase to determine the most efficient architectural layout that meets current process laboratory control technology and administrative workflow practices; and that can be provided through a construction renovation project within the existing building footprint. Additional minor architectural needs will be evaluated in the study phase that include stairs from the exterior door down to the retention basin area and interior/exterior doors.

Other Important Info:

N/A

Primary Driver: 1 - Condition

Driver Explanation:

Laboratory and Administration Building are orignal to plant construction.

CIP Number: 111008

Project Title: Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building Improvements

Scoring

Project Manager Weighted Score:	**46**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	B. Functionally sound and acceptable, signs of normal wear	Score carried over from previous year.
Performance (Service Level/Reliability)	3	B. Performance acceptable–marginal; likely not to meet future req's, E. Canceling project potential for service/reliability issues† a few times/yr	The original control room board is still located in the laboratory and consumes a large amount of space that is not used and inefficient. The architectural layout of the laboratory and administration building is designed around the early 1970s workflows and technology.
Regulatory (Environmental/Legal)	1	B. Low/no impact on specific reg. compliance issues	Score carried over from previous year.
Operations and Maintenance	2	D. Project moderate to low positive impact on O&M, but no critical assets; alleviate very few ongoing O&M issues	Score carried over from previous year.
Health and Safety	2	B. Project limited positive impact on staff/public H&S‡; No major staff or hazard issues or concerns addressed	Score carried over from previous year.
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area, B. Negligible additional revenues/savings; Requires all new infrastructure	Score carried over from previous year.
Financial	1	B. Minimal/no positive financial implications of <$100K/ROI >= 20 yrs	Score carried over from previous year.
Efficiency and Innovation	1	B. Low impact on business process optimization; no time/cost saving	Score carried over from previous year.

CIP Number: 111008

Project Title: Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building Improvements

Review Committee Weighted Score:	**49.5**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	2	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	1	Scores carried over from previous year
Health and Safety	2	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 111008

Project Title: Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2033

End Date: 6/30/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2016

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2033	6/30/2034
Capital Delivery Salary (Fringes)	7/1/2033	6/30/2034

CIP Number: 111008

Project Title: Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2033

End Date: 6/30/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/12/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$775	$0	$0	$0	$0	$0	$0	$0	$0	$0	$775

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2033	6/30/2034

CIP Delivery Team

CIP Number: 111008

Project Title: Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7
Design/Engineering	$775	$0	$0	$0	$0	$0	$0	$0	$0	$0	$775
Totals	$782	$0	$0	$0	$0	$0	$0	$0	$0	$0	$782

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$0	$0	$0	$0	$0	$0	$0	$300	$0	$0	$0	$0	$0	$300
2020	$0	$0	$0	$0	$0	$0	$0	$0	$300	$0	$0	$0	$0	$300
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,299	$0	$0	$0	$1,299
2022	$77	$0	$0	$0	$0	$0	$0	$0	$0	$77	$309	$271	$269	$1,196
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$507	$350	$856
2024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$782

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$782,112	$0	$0	$0	$0	$0	$0	$0	$0	$782,112

Description of CIP Changes:

Revised schedule and budget, problem statement and scope of work. BPV 7/2/22
No changes for this CIP update. BPV 6/14/2023

CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

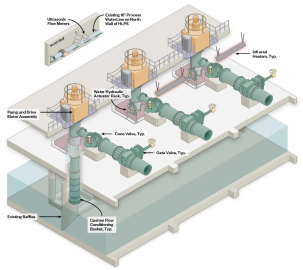
Class Lvl 3: Lake Huron

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

75.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment



Conceptual new h/L pump arrangement

Project Manager: Brian VanHall

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/26/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Saint Clair County

Lookup Location: Lake Huron WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Problem Statement:

Three new, smaller capacity, high-lift pumping units are needed to provide reduced finished water flows out of Lake Huron WTP to accommodate the relocation of the 96-inch transmission main south of Dorsey-Dickenson valve and to accommodate the installation of a new water production flow meter at the Lake Huron WTP. The three, new smaller capacity high -lift pumping units will also serve a longer term need to better match lower diurnal demands seen at the Lake Huron WTP. Installation of the new water production flow meter can only occur after the three new smaller high-lift pumping units are installed.

Scope of Work/Project Alternatives:

This project will be delivered using a design-build project delivery method. The scope of work involves designing and building a new water production flow meter and associated meter vault to more accurately measure finished water production flows from the facility. This work will also entail constructing additional high-lift, finished water header piping, valves and appurtenances to facilitate construction of the new metering infrastructure. The scope also includes installing three new 35 million-gallon-per day (MGD) high-lift pumping units, including pumps, motors, instrumentation, control, and electrical work.

Other Important Info:

N/A

Primary Driver: 6 - Public Benefit

Driver Explanation:

This project is a predecessor project to relocating the 96-inch transmission main outside the closed G&H Industrial landfill, as well as to improve the accuracy of water production flow metering.

CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Scoring

Project Manager Weighted Score:	**60.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	A. Asset has <50% of its design service life remaining, C. May have minor failures or diminished efficiency; some performance deterioration	Score carried over from previous year
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure, B. Performance acceptable–marginal; likely not to meet future req's	Score carried over from previous year
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	Score carried over from previous year
Operations and Maintenance	3	C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues	Score carried over from previous year
Health and Safety	3	B. Project moderate positive impact on staff/public H&S‡	Score carried over from previous year
Public Benefit	5	A. Project is key part of a strategic plan* for GLWA or politically driven, E. Canceling project very likely causes catastrophic negative public impact (major gov't/regulatory investigation; widespread negative media	Score carried over from previous year
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA., F. Total financial consequence of $250,000 - $999,999	Score carried over from previous year
Efficiency and Innovation	5	A. Right-sizing system results in substantial operational efficiencies, significantly increasing revenue/savings.	Score carried over from previous year

Review Committee Weighted Score:	**75.7**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	2	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	3	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 10/26/2020

End Date: 1/4/2025

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2016

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$434	$338	$313	$80	$42	$0	$0	$0	$0	$42	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	10/26/2020	1/4/2025
Capital Delivery Salary (Fringes)	10/26/2020	1/4/2025

CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Phase: Professional Services (CS-272)

Phase Title: Professional Services (CS-272)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/5/2019

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-272)	$252	$252	$252	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71002A.01)	8/5/2019	12/31/2022

CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Phase: Professional Services (CS-166)

Phase Title: Professional Services (CS-166)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 11/17/2021

End Date: 10/31/2025

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-166)	$295	$128	$120	$64	$83	$28	$0	$0	$0	$112	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-166)	11/17/2021	10/31/2025

CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Phase: Design-Build # 1

Phase Title: Design-Build # 1

Phase Budget: Water

Phase Status: Project Execution

Start Date: 10/26/2020

End Date: 1/4/2025

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/26/2020

Cost Est. Source: Weis Construction

Cost Est. Prepared By: Weiss Construction- Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1	$30,023	$7,098	$4,015	$16,008	$10,000	$0	$0	$0	$0	$10,000	$0

Phase Dates

Activity Name	Start Date	End Date
Contractual Professional Services (Haz. Mat. Remediation) (1803990)	10/7/2022	1/4/2025
Design-Build (1803990)	10/26/2020	1/4/2025

CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$434	$338	$313	$80	$42	$0	$0	$0	$0	$42	$0
Professional Services (CS-272)	$252	$252	$252	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services (CS-166)	$295	$128	$120	$64	$83	$28	$0	$0	$0	$112	$0
Design-Build # 1	$30,023	$7,098	$4,015	$16,008	$10,000	$0	$0	$0	$0	$10,000	$0
Totals	$31,003	$7,815	$4,699	$16,151	$10,125	$28	$0	$0	$0	$10,153	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2020	$26,090	$16	$9,030	$10,030	$7,030	$0	$0	$0	$0	$0	$0	$0	$26,106
2021	$28,648	$30	$548	$1,856	$3,554	$8,991	$10,561	$3,686	$0	$0	$0	$0	$29,226
2022	$29,724	$30	$86	$640	$1,061	$7,060	$7,583	$7,021	$7,000	$0	$0	$0	$30,481
2023	$19,303	$36	$81	$1,610	$9,021	$9,021	$9,047	$1,236	$0	$0	$0	$0	$30,051
2024	$19,151	$36	$81	$1,610	$1,309	$8,715	$12,610	$6,515	$26	$0	$0	$0	$30,900

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$31,003,499	$4,699,252	$16,151,022	$10,125,087	$28,137	$0	$0	$0	$10,153,224	$0

Description of CIP Changes:

Cost and schedule projections were revised to capture scope changes that were initiated to minimize operational risks during construction and change the pump selection to operate at lower header pressures in the future (to extend life of 120" water transmission main). - BPV 7/7/2022 Project status updated to reflect that construction has started. - BPV 6/14/2023

CIP Number: 111010

Project Title: Lake Huron WTP Filtration Improvement

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Lake Huron

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

77.4

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Eric Kramp

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 7/25/2019

Year Project Added to CIP: 2019

CIP Budget: Water

Project Jurisdiction: Saint Clair County

Lookup Location: Lake Huron WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 111010

Project Title: Lake Huron WTP Filtration Improvement

Problem Statement:

Significant issues exist in the filtration process of the Lake Huron WTP:
Filter influent and drain valves do not seal well, creating water loss and burdening the solids handling system with more influent than necessary.
Filter underdrains have not been evaluated and require condition assessment.
Filter media has lost considerable depth.
Isolation valves between the filters, filtered water conduit, filter to drain, and clearwells currently leak heavily

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work will generally include the following:
1. Construct filtration improvements, including filter media, filter auxiliary scouring equipment, filter wash water troughs, and other filter tank work.
2. Replace the existing filter control valves and valve operators.
3. Rehabilitate concrete associated with the filters.
4. Replace isolation and valves as necessary
5. Repaint WW Conduit
6. Replace underdrain and/or media as necessary

Other Important Info:

n/a

Primary Driver: 1 - Condition

Driver Explanation:

Existing filters are original construction, including filter media and associated mechanical equipment and are beyond their useful service life.

CIP Number: 111010

Project Title: Lake Huron WTP Filtration Improvement

Scoring

Project Manager Weighted Score:	**76.3**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining	Both influent and drain valves (30 each) do not seal very well, increasing water loss and increasing loads on the waste wash water treatment facility. 66% of Filter Valves are approximately 50 years old, and the balance are over 25 years old. Valve life-spans are typically taken to be 25 years. Loss of filter media has been observed both in Imlay reservoir and in the clarifier basin, suggesting some amount of media break-through of the non-fluidized media and some degradation of media.
Performance (Service Level/Reliability)	4	D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*, E. Not doing the project frequent and repetitive service interruption and/or reliability issues†	Filter media loss will continue to be an ongoing issue, as will the increased loads on the waste wash water treatment facility.
Regulatory (Environmental/Legal)	4	B. Project not part of mandated or enforceable program, but directly related to know expected future requirements; will increase compliance, C. Canceling project risk of non-compliance in near term; potential permit violations; regulatory scrutiny; sig. measurable negative environmental impact to wide area	Filter media is under specification and could create a issues with jurisdictional authorities. Concerns on filter breakthrough are beginning to rise. LWHTP currently, accordingly to TSS, washes at too low a flow rates but is losing media. Filter troughs are too low for optimal media retention at ten state standard wash water rates. Additional trough height would improve this situation.

Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation, D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	Better filter control, media thickness, and other improvements should improve filter run length and UFRV.
Health and Safety	3	C. Likely to address minor hazard issues or concerns, D. Canceling project pose limited–moderate staff/public safety/hazard issues, some potential for minor injury/regulatory violations	This project will decrease the potential of filter breakthrough.
Public Benefit	2	A. Low to moderate impact by supporting City/region/neighborhood growth, C. Additional revenue/savings for GLWA (<$100K/yr)	Jurisdictional authorities have begun to make some inquiries regarding media condition/thickness/evaluation. LHWTP has responsibly performed the analysis which has reinforced the necessity of the project.
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	Approximation of additional treatment and water loss created by the failures in the filter influent / waste valves, additional loads on the WW and Sedimentation system, are anticipated to be about 1-2% of LHWTP's water production. This is potential savings.
Efficiency and Innovation	3	B. Moderate positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	Considerable improvements are considered in UFRV are necessary to reach "optimized" status. Improvements to valves will make water use more much efficient.

Review Committee Weighted Score: 77.4

Criteria Name	Score	Comment
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	4	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	3	Scores carried over from previous year

CIP Number: 111010

Project Title: Lake Huron WTP Filtration Improvement

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/2/2027

End Date: 7/6/2034

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$527	$0	$0	$0	$0	$0	$0	$75	$75	$150	$376

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/2/2027	7/6/2034
Capital Delivery Salary (Fringes)	7/2/2027	7/6/2034

CIP Number: 111010

Project Title: Lake Huron WTP Filtration Improvement

Phase: Design & Construction Assistance # 1

Phase Title: Design & Construction Assistance # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/2/2027

End Date: 7/6/2034

Phase Comments/Description:
Unchanged from FY 2034

Cost Est. Class: Class 5

Cost Est. Date: 8/14/2020

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1	$7,058	$0	$0	$0	$0	$0	$0	$1,142	$1,142	$2,284	$4,755

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/2/2027	7/6/2034

CIP Number: 111010

Project Title: Lake Huron WTP Filtration Improvement

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 5/23/2030

End Date: 7/6/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/14/2020

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$51,053	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,850

Phase Dates

Activity Name	Start Date	End Date
Construction	5/23/2030	7/6/2034

CIP Number: 111010

Project Title: Lake Huron WTP Filtration Improvement

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$527	$0	$0	$0	$0	$0	$0	$75	$75	$150	$376
Design & Construction Assistance # 1	$7,058	$0	$0	$0	$0	$0	$0	$1,142	$1,142	$2,284	$4,755
Construction (Build) # 1	$51,053	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,850
Totals	$58,638	$0	$0	$0	$0	$0	$0	$1,217	$1,217	$2,434	$55,981

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2021	$60	$0	$0	$0	$0	$12	$48	$5,572	$0	$0	$0	$5,632
2022	$108	$0	$0	$0	$0	$9	$38	$61	$103	$104	$103	$42,206
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,558	$3,116	$58,433
2024	$1,217	$0	$0	$0	$0	$0	$0	$0	$0	$1,217	$1,217	$58,638

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$58,638,596	$0	$0	$0	$0	$0	$1,217,022	$1,217,022	$2,434,045	$55,981,145

Description of CIP Changes:

Flocculation work has been split from this CIP and given a priority.

CIP Number: 111011

Project Title: Lake Huron WTP Pilot Plant

Project Status: Project Execution - Pending Closeout

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

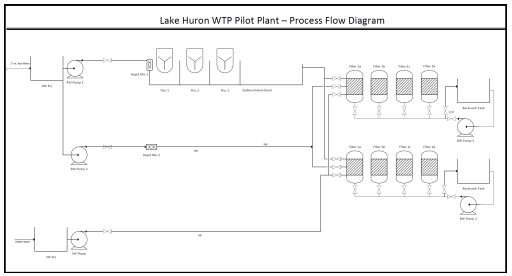
Class Lvl 3: Lake Huron

- [ ] **Project New to CIP**
- [ ] **Useful Life > 20 Yrs**
- [ ] **Multiple Phases**

Project Score

50.7

- [x] **Innovation**
- [ ] **WW Master Plan**
- [ ] **Water Master Plan Right Sizing**
- [ ] **Wet Weather Resiliency**
- [ ] **Redundancy**
- [ ] **Predecessor Project(s)**
- [ ] **Linear Assets Outside of Facilities**
- [ ] **CSO**
- [ ] **Pumps**
- [ ] **Storage**
- [x] **Treatment**



Lake Huron WTP Pilot Plant - Process Flow Diagram

Project Manager: Nichole Sajdak

Director: John Norton

Managing Dept.: Energy Management

Date Original Business Case Prepared: 8/22/2019

Year Project Added to CIP: 2019

CIP Budget: Water

Project Jurisdiction: Saint Clair County

Lookup Location: Lake Huron WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] **From Program?**

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] **Is a Predecessor Project?**

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 111011

Project Title: Lake Huron WTP Pilot Plant

Problem Statement:

Water Operations staff at Lake Huron would benefit from the ability to test potential changes to existing water treatment practices and investigate new and innovative treatment advances.

Scope of Work/Project Alternatives:

A small scale pilot plant provides opportunity for testing and investigation without disruption to the full scale facility. Skid mounted units mimicking treatment at Lake Huron: Chemical addition, modified direct filtration facilities and data monitoring and recording are being provided for team education and training.

Other Important Info:

Scope of work to include engineering services for planning, construction and training.

Primary Driver: 1 - Condition

Driver Explanation:

.

CIP Number: 111011

Project Title: Lake Huron WTP Pilot Plant

Scoring

Project Manager Weighted Score:	**76.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	D. Immediate replacement or rehabilitation required	Previous pilot plant demolished; construction is 35-40% complete on new pilot plant.
Performance (Service Level/Reliability)	2	C. Project moderate to low positive impact on service levels and/or system reliability	pilot plant is completely separate from full scale plant but informs decision making process (ie chem feed; filter profiles, backwash details, etc).
Regulatory (Environmental/Legal)	4	B. Project not part of mandated or enforceable program, but directly related to know expected future requirements; will increase compliance	Pending meeting with EGLE to discuss flocculation improvements at LH may include piloting new flocculation strategies.
Operations and Maintenance	3	C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues	Pilot plant does not alleviate O&M directly; however using the pilot plant to validate alternative flocculation strategies may.
Health and Safety	3	C. Likely to address minor hazard issues or concerns	improved lighting in chemical basement and added emergency shower.
Public Benefit	2	C. Additional revenue/savings for GLWA (<$100K/yr)	improving process controls (chem feed, filter profiles etc) may result in future savings.
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Contract with DB contractor in place; equipment ordered.
Efficiency and Innovation	5	D. efficiency; Water use, effluent reuse/recycling or other GLWA strategic initiatives*; Business process optimization and institutional knowledge; Process efficiency for a more robust system and less O&M; knowledge capture; or time & cost savings	Will allow for testing for LH process optimization.

CIP Number: 111011

Project Title: Lake Huron WTP Pilot Plant

Review Committee Weighted Score:	**50.7**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	2	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	1	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 111011

Project Title: Lake Huron WTP Pilot Plant

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 2/8/2021

End Date: 2/8/2024

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 11/22/2023

Cost Est. Source: TBD

Cost Est. Prepared By: TBD

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$110	$0	$0	$110	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	2/8/2021	2/8/2024
Capital Delivery Salary (Fringes)	2/8/2021	2/8/2024

CIP Number: 111011

Project Title: Lake Huron WTP Pilot Plant

Phase: Design-Build # 1 (1904449)

Phase Title: Design-Build # 1 (1904449)

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 3/14/2020

End Date: 12/21/2028

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 2/3/2021

Cost Est. Source: Brown & Caldwell-Contract

Cost Est. Prepared By: Brown & Caldwell-Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1 (1904449)	$3,157	$3,076	$3,076	$81	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	3/14/2020	12/21/2028
Construction (1904449)	2/8/2021	2/8/2024

CIP Number: 111011

Project Title: Lake Huron WTP Pilot Plant

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$110	$0	$0	$110	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1 (1904449)	$3,157	$3,076	$3,076	$81	$0	$0	$0	$0	$0	$0	$0
Totals	$3,267	$3,076	$3,076	$192	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2021	$0	$0	$0	$0	$0	$0	$0	$1,794	$0	$0	$0	$1,794
2022	$3,190	$0	$58	$1,720	$1,470	$0	$0	$0	$0	$0	$0	$3,248
2023	$1,618	$0	$199	$1,506	$1,506	$111	$0	$0	$0	$0	$0	$3,323
2024	$0	$0	$199	$2,038	$1,031	$0	$0	$0	$0	$0	$0	$3,267

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$3,267,770	$3,076,105	$191,665	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Change to DB format with Master Planning component and pulled forward in schedule.
The project has moved forward to FY 21 utilizing I/E funding. NS 8/26/20.

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Lake Huron

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

91.5

- [x] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [x] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Eric Kramp

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/14/2020

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: Saint Clair County

Lookup Location: Lake Huron

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Problem Statement:

The flocculators at the Lake Huron Water Treatment Plant are non-functional. While the plant has been able to maintain water quality, the State of Michigan has identified this a serious issue. This project solves this problem and addresses other issues with the flocculation systems such as any found defects that in process and structure that are identified.

Scope of Work/Project Alternatives:

The project will be executed on a traditional design/bid/build delivery process. Design/build would be unsuitable as the selection of flocculation technology will be the primary driver of overall cost, and is unknown.

Other Important Info:

The contract will also correct a process defect in the plant, where a section of the station conduits can not be taken out of service without loss of the entire station. This will entail the construction of approximately 150 lineal feet of new parallel raw water conduit.

This project will also, if approved, separate the two flocculation and sedimentation basins into four, decreasing the impact of sediment upset on filter efficient and/or UFRB.

Primary Driver: 1 - Condition

Driver Explanation:

Most of the flocculators at site are currently non-functional. Emergency replacement non-lubricated liners installed six months ago have already failed.

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Scoring

Project Manager Weighted Score:	**92.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	B. Excessive maint. levels for the equipment/process area, F. Replace. or major rehab needed immediately, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance	Approximately 70% of the flocculators are not working, and have been flagged by the Jurisdictional Authority as an area of concern.
Performance (Service Level/Reliability)	4	C. Equipment/process OOS 25% to 50% of the time., B. High risk of performance failure; doesn't meet future requirements, A. Expected performance failures under normal conditions	Currently, approximately 70% of the flocculators are not working. The temporary work of replacing the existing greased bearings with water lubricated bearings has failed in under 12 months. The current CIP attempts to improve this with much lower effort from the plant.
Regulatory (Environmental/Legal)	5	D. Numerous historical evidence of permit/regulatory violations, C. Measurable positive regulatory/compliance impact (CSO, permits), B. Project part of a mandated or otherwise enforceable program, A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public	The Jurisdictional Authority has expressed serious concern regarding the status of these flocculators. GLWA must address the issues immediately and is doing so through this project.
Operations and Maintenance	4	F. Measurable reduction (50% - 74%) in reactive maintenance, D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues, C. Repairs total >=40% of the assets original value, A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	Through the innovation (see below) CIP 111012 is evaluating how to minimize the O&M associated with flocculation at LHWTP. The solution currently under review would eliminate lubrication issues for the flocculation system entirely. The backup solution would eliminate all bearings under water. Either solution is an improvement.
Health and Safety	2	B. Project limited positive impact on staff/public H&S‡; No major staff or hazard issues or concerns addressed	Time spent in confined space efforts would be greatly decreased, when compared to the time to properly maintain this equipment.

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Public Benefit	2	F. Canceling project minor chance off public impact; no neg. gov't/reg. interest, C. Additional revenue/savings for GLWA (<$100K/yr)	O&M Savings are likely to be recognized compared to the cost associated with retaining the existing system and bringing it to fully functional operation. Regulator Interest on this project is very high, so a 2 may be too low. However, the balance of the scores compensate for this.
Financial	3	C. Moderate positive financial implications of $250,000 - $999,999 or a ROI of 10-15 years, A. Implementing the project will generate moderate increase revenue or savings for GLWA.	Pursuing this CIP shall avoid the O&M replacement of the bearing sleeves every six months to a year.
Efficiency and Innovation	4	B. Project will remove significant operational hurdles/ obstacles for significant equipment/process, C. Significant positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	Technologies contemplated will remove the vast majority of O&M expense associated with the flocculation at LHWTP.

Review Committee Weighted Score: 91.5

Criteria Name	Score	Comment
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	5	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	2	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/25/2022

End Date: 2/4/2028

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$462	$21	$18	$72	$103	$103	$103	$62	$0	$372	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/25/2022	2/4/2028
Capital Delivery Salary (Fringes)	1/25/2022	2/4/2028

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Phase: Design & Construction Assistance

Phase Title: Design & Construction Assistance

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/25/2022

End Date: 2/4/2028

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/25/2022

Cost Est. Source: CDM Smith- Contract

Cost Est. Prepared By: CDM Smith- Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance	$7,870	$872	$724	$1,336	$1,772	$1,553	$1,553	$932	$0	$5,809	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (2004549)	1/25/2022	2/4/2028

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Phase: Construction (Build)

Phase Title: Construction (Build)

Phase Budget: Water

Phase Status: Future Planned New

Start Date: 1/11/2024

End Date: 2/4/2028

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 3/22/2022

Cost Est. Source: TMs of the Work

Cost Est. Prepared By: CDM

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build)	$43,000	$0	$0	$4,977	$10,562	$10,562	$10,562	$6,337	$0	$38,023	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	1/11/2024	2/4/2028

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$462	$21	$18	$72	$103	$103	$103	$62	$0	$372	$0
Design & Construction Assistance	$7,870	$872	$724	$1,336	$1,772	$1,553	$1,553	$932	$0	$5,809	$0
Construction (Build)	$43,000	$0	$0	$4,977	$10,562	$10,562	$10,562	$6,337	$0	$38,023	$0
Totals	$51,331	$892	$742	$6,385	$12,437	$12,218	$12,218	$7,331	$0	$44,204	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2022	$17,426	$46	$538	$469	$5,563	$5,428	$5,428	$5,065	$4,000	$0	$26,537
2023	$28,049	$1	$936	$2,112	$1,799	$8,446	$8,446	$7,243	$3,092	$0	$32,079
2024	$39,560	$1	$463	$169	$1,787	$2,385	$11,785	$11,785	$11,817	$11,139	$51,332

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$51,331,404	$741,978	$6,385,319	$12,437,042	$12,218,102	$12,218,102	$7,330,861	$0	$44,204,107	$0

Description of CIP Changes:

"Other Important Info" has been updated to include innovations supplied by the Engineer beyond what was originally envisioned by the author of the RFP.

CIP Number: 111013

Project Title: Lake Huron Water Treatment Plant Fireloop and Plant Water Improvements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Lake Huron

- [x] **Project New to CIP**
- [x] **Useful Life > 20 Yrs**
- [ ] **Multiple Phases**

Project Score

63.3

- [ ] **Innovation**
- [ ] **WW Master Plan**
- [ ] **Water Master Plan Right Sizing**
- [ ] **Wet Weather Resiliency**
- [ ] **Redundancy**
- [ ] **Predecessor Project(s)**
- [ ] **Linear Assets Outside of Facilities**
- [ ] **CSO**
- [ ] **Pumps**
- [ ] **Storage**
- [x] **Treatment**

Project Manager: Brian VanHall

Director: Peter Fromm

Managing Dept.: Water Eng

Date Original Business Case Prepared: 7/18/2022

Year Project Added to CIP: 2022

CIP Budget: Water

Project Jurisdiction: Saint Clair County

Lookup Location: --

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] **From Program?**

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] **Is a Predecessor Project?**

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 111013

Project Title: Lake Huron Water Treatment Plant Fireloop and Plant Water Improvements

Problem Statement:

The Lake Huron fire loop is ductile iron piping in the yard installed in the early 1970s that has had multiple failures and needs to be replaced. Excavating a portion of the pipe for an urgent repair showed the existing piping had areas of significant material losses from corrosion. Most plant water piping was installed in the early 1970s and significant scaling has been observed on portions of piping where connections have been made for other work. Excessive pressure drops or plugging of plant water piping can interrupt critical equipment since this piping is used for chlorine injection, chemical carrier water, filter surface sweeps, various water actuators, high lift pump cooling and low lift pump cooling.

Scope of Work/Project Alternatives:

Demolition and abandonment of the existing fire loop piping and installation of a new pipeline. At a minimum, the design will determine the pipe routing, sizing, materials, cathodic protection, portions to be concrete encased; roadway replacements where pipe passes underneath; and locations of hydrants, valves and manways. GLWA is performing a condition assessment to further examine the existing piping and soil conditions that will be used to establish final scope to be included for design and construction. The design will evaluate the plant water systems holistically for all usages and determine which sections should be cleaned or replaced. The plant water piping scope needs to be coordinated with other CIP projects that are replacing portions of the system as needed.

Other Important Info:

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Primary Driver: 6 - Public Benefit

Driver Explanation:

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CIP Number: 111013

Project Title: Lake Huron Water Treatment Plant Fireloop and Plant Water Improvements

Scoring

Project Manager Weighted Score:	**64.7**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	C. High risk of breakdown or imminent failure with serious impact on performance	Fireloop has failed multiple times, plant water piping is heavily scaled
Performance (Service Level/Reliability)	4	A. Expected performance failures under normal conditions, B. High risk of performance failure; doesn't meet future requirements	Fireloop has failed multiple times, plant water piping is heavily scaled
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	Fire water needs to be maintained at all times
Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	Repairs are for portions that fail and requires additional repairs for future failures in other areas
Health and Safety	2	B. Project limited positive impact on staff/public H&S‡; No major staff or hazard issues or concerns addressed	The fireloop is unlikely to fail on both sides at the same time with an active fire. Plant water scaling will most likely result in slow drop in pressure at end user.
Public Benefit	1	C. Minimal/no impact on public/GLWA image & relationships	Mitigation measures should prevent failures from causing interruptions to customers.
Financial	4	F. Total financial consequence of $1,000,000 - $5,000,000	Multiple repairs or full replacement are expected to be between $1-5M based on expected scope.
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	O&M time will need to be spent on coordinating urgent repairs.

CIP Number: 111013

Project Title: Lake Huron Water Treatment Plant Fireloop and Plant Water Improvements

Review Committee Weighted Score:	**63.3**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	4	
Regulatory (Environmental/Legal)	2	
Operations and Maintenance	4	
Health and Safety	2	
Public Benefit	1	
Financial	3	
Efficiency and Innovation	2	

CIP Number: 111013

Project Title: Lake Huron Water Treatment Plant Fireloop and Plant Water Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/24/2029

End Date: 1/21/2033

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$55	$4	$3	$1	$0	$0	$0	$0	$0	$0	$51

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/24/2029	1/21/2033
Capital Delivery Salary (Fringes)	7/24/2029	1/21/2033

CIP Number: 111013

Project Title: Lake Huron Water Treatment Plant Fireloop and Plant Water Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/24/2029

End Date: 1/21/2033

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 5/22/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$1,400	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,400

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/24/2029	1/21/2033

CIP Number: 111013

Project Title: Lake Huron Water Treatment Plant Fireloop and Plant Water Improvements

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 6/24/2031

End Date: 1/21/2033

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 5/22/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$8,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,600

Phase Dates

Activity Name	Start Date	End Date
Construction	6/24/2031	1/21/2033

CIP Number: 111013

Project Title: Lake Huron Water Treatment Plant Fireloop and Plant Water Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$55	$4	$3	$1	$0	$0	$0	$0	$0	$0	$51
Design/Engineering	$1,400	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,400
Construction	$8,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,600
Totals	$10,055	$4	$3	$1	$0	$0	$0	$0	$0	$0	$10,051

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$10,055,000	$3,308	$936	$0	$0	$0	$0	$0	$0	$10,050,756

Description of CIP Changes:

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CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Northeast

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

82.2

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Corey Brecht

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/27/2017

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Northeast WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Problem Statement:

Existing mechanical, electrical, instrumentation, and control system equipment within the high-lift pumping plant at the Northeast Water Treatment Plant is mostly original (i.e. 1956). The following equipment is beyond its useful life:
Both medium-voltage and low-voltage switchgear. (Stock replacement parts are no longer available. Medium-voltage switchgear cubicles are irreparable. All medium-voltage cables are (especially with respect to insulation properties)
Primary service transformers (being evaluated for replacement).
Existing high-lift pumping units.
Steam heating system (no redundancy in the existing system).
An existing, former City of Detroit Public Lighting Department (PLD) transformer is incapable of delivering adequate power.
New dedicated heating for the high-lift pumping station is needed. Interior and exterior windows, doors, handrails, and grating systems are original to the plant and need to be replaced with new, more energy efficient styles.

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work generally includes:
1) Replace medium voltage switchgear, Unit Substation 1, all motor control centers (MCCs), power panels, transformers, and lighting panels.
2) Replace HL Pumps and size according to projected demands.
3) Replace pump motor controls to accommodate remote operation.
4) Replace primary transformers and test/replace feeders to property lines. Coordinate with DTE to ensure that medium-voltage transformers are capable of delivering the required power.
5) Replace all heating equipment in high lift area and install new boiler.
6) Replace windows, doors, handrails and grating systems.

Other Important Info:

NA

Primary Driver: 1 - Condition

Driver Explanation:

MV Switchgear is past its serviceable lifespan. Replacement parts are no longer available. Some cubicles are beyond repair.

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**93.5**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, F. Replace. or major rehab needed immediately, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance, B. Excessive maint. levels for the equipment/process area	
Performance (Service Level/Reliability)	5	D. Canceling project significant, persistent, ongoing, continuous service interruption and/or reliability issues†, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures, A. Will cause, or IS causing significant capacity problems	
Regulatory (Environmental/Legal)	3	E. Moderate historical evidence gives minor support for project, D. Project not part of mandated or enforceable program but directly or indirectly related to expected future requirements	
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues, C. Repairs total >=40% of the assets original value, A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	5	C. Likely to address major hazard issues or concerns, B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents	
Public Benefit	2	D. Low impact on public/GLWA image, minor recognition	
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	
Efficiency and Innovation	4	A. Right-sizing system significant operational efficiency, moderately increasing revenue/savings, B. Project will remove significant operational hurdles/ obstacles for significant equipment/process	

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Review Committee Weighted Score:	**82.2**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	3	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 7/2/2041

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2016

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,149	$31	$31	$0	$0	$0	$0	$0	$0	$0	$466

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2029	7/2/2041
Capital Delivery Salary (Fringes)	7/1/2029	7/2/2041

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/17/2020

End Date: 10/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$527	$527	$527	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71018A.01 / 71023A.01)	8/17/2020	10/31/2022

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Phase: Design & Construction Assistance (Electrical Service)

Phase Title: Design & Construction Assistance (Electrical Service)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 6/30/2038

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/6/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance (Electrical Service)	$11,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,486

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2029	6/30/2038

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Phase: Design/Engineering (Non-Critical Electrical Service Changes)

Phase Title: Design/Engineering (Non-Critical Electrical Service Changes)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2034

End Date: 7/2/2041

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/6/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (Non-Critical Electrical Service Changes)	$11,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (RPR Services)	7/1/2034	7/2/2041

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Phase: Construction (Electrical Service Change)

Phase Title: Construction (Electrical Service Change)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2031

End Date: 6/30/2038

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/6/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Electrical Service Change)	$68,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$29,147

Phase Dates

Activity Name	Start Date	End Date
Construction (Critical Electrical Service Changes)	7/1/2031	6/30/2038

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Phase: Construction (Non-Critical Electrical Service Changes)

Phase Title: Construction (Non-Critical Electrical Service Changes)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2036

End Date: 7/2/2041

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/6/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Non-Critical Electrical Service Changes)	$80,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (Non-Critical Electrical Service Changes)	7/1/2036	7/2/2041

CIP Delivery Team

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,149	$31	$31	$0	$0	$0	$0	$0	$0	$0	$466
Professional Services	$527	$527	$527	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance (Electrical Service)	$11,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,486
Design/Engineering (Non-Critical Electrical Service Changes)	$11,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Electrical Service Change)	$68,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$29,147
Construction (Non-Critical Electrical Service Changes)	$80,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$171,675	$557	$558	$0	$0	$0	$0	$0	$0	$0	$38,098

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$0	$0	$0	$0	$0	$0	$0	$62,265	$0	$0	$0	$0	$0	$62,265
2020	$0	$0	$0	$0	$0	$0	$0	$0	$62,234	$0	$0	$0	$0	$62,234
2021	$3,651	$0	$0	$0	$0	$0	$40	$1,228	$2,383	$53,914	$0	$0	$0	$57,565
2022	$4,901	$0	$0	$6	$279	$173	$215	$862	$1,931	$1,721	$4,376	$7,252	$13,248	$71,546
2023	$20,000	$0	$0	$6	$218	$142	$1,000	$15,000	$4,001	$0	$0	$1,133	$12,456	$72,116
2024	$17,242	$0	$0	$6	$219	$313	$7	$0	$0	$2,770	$2,770	$11,702	$10,428	$171,661

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$171,675,596	$557,608	$123	$0	$0	$0	$0	$0	$0	$38,098,117

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Description of CIP Changes:

This project has been adjusted to start in FY30 as GLWA is already in the process of doing high-lift pumping work at Lake Huron WTP and Springwells WTP. Performing high-lift upgrades at more than two WTPs at the same time is challenging as it adds more complexity to maintaining service to customers while work is being done at the high-lift plants. Additionally, pump procurement becomes challenging when multiple pump projects are placing excessive demands on the pump suppliers. For these reasons, the schedule for this project has been extended to be completed from FY30-FY34.

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Northeast

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

82.4

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Brian VanHall

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/1/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Northeast Water Treatment Plant

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Problem Statement:

The existing flocculators are not operable and are beyond repair, which reduces sedimentation effectiveness and creates a greater load on the filtration process. The State of Michigan Department of Environment, Great Lakes & Energy (EGLE) noted the condition of the existing flocculators at the Northeast Water Treatment Plant as a deficiency in ELGE's 2021 Northeast Water Treatment Plant Sanitary Survey, dated March 4, 2021.

Scope of Work/Project Alternatives:

This CIP project is being delivered under a design-bid-build project delivery method and generally includes the following scope of work:
1. Demolish and remove existing flocculators including drives, motors, shafts, paddle wheels, control panels, electrical service, and related appurtenances.
2. Install a complete, new flocculation system designed to current industry standards.
3. Construct new stairways and platforms to improve access to the flocculator drive galleries.

Other Important Info:

Existing flocculators are original to the plant (circa 1956) and are (1) not operable, (2) beyond repair, and (3) do not provide present day flocculation mixing energies. The new flocculation system is designed to current and best industry standards for flocculation mixing energies, tapered flocculation, and is conducive to easier operation and maintenance.

Primary Driver: 3 - Regulatory

Driver Explanation:

Michigan EGLE has identified the non-operational condition of the flocculation system at the Northeast Water Treatment Plant as a noted deficiency in its 2021 Sanitary Survey report

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Scoring

Project Manager Weighted Score:	**93**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, F. Replace. or major rehab needed immediately, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance	Score carried over from previous year
Performance (Service Level/Reliability)	5	D. Canceling project significant, persistent, ongoing, continuous service interruption and/or reliability issues†, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures, A. Will cause, or IS causing significant capacity problems	Score carried over from previous year
Regulatory (Environmental/Legal)	5	F. Compliance failure significant fines, enforcement actions, measurable environmental impact, E. Deferring/canceling project immediate risk of non-compliance, major permit violations, regulatory scrutiny; sig. measurable negative environmental impact on a regional or statewide level w/ lingering or permanent/irreversible impact on wider ecosystem, A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public, D. Numerous historical evidence of permit/regulatory violations	Score carried over from previous year
Operations and Maintenance	4	C. Repairs total >=40% of the assets original value, A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	Score carried over from previous year
Health and Safety	2	B. Project limited positive impact on staff/public H&S‡; No major staff or hazard issues or concerns addressed	Score carried over from previous year
Public Benefit	3	F. Canceling project moderate chance of moderate neg. publicity, E. /stakeholder relationships/confidence in GLWA, C. Moderate additional revenue/savings for GLWA ($100K-$499K/yr)	Score carried over from previous year
Financial	3	C. Moderate positive financial implications of $250,000 - $999,999 or a ROI of 10-15 years, D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Score carried over from previous year
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	Score carried over from previous year

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Review Committee Weighted Score:	**82.4**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	4	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	3	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/24/2022

End Date: 3/18/2027

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2018

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$478	$426	$373	$63	$15	$15	$11	$0	$0	$42	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/24/2022	3/18/2027
Capital Delivery Salary (Fringes)	1/24/2022	3/18/2027

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Phase: Professional Services (CS-272)

Phase Title: Professional Services (CS-272)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/12/2019

End Date: 1/10/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-272)	$60	$60	$60	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71001A.01)	8/12/2019	1/10/2020

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Phase: Professional Services (CS-166)

Phase Title: Professional Services (CS-166)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/22/2022

End Date: 2/26/2027

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-166)	$210	$62	$59	$33	$44	$44	$29	$0	$0	$118	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-166)	3/22/2022	2/26/2027

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Phase: Contractual Professional Services (1904321)

Phase Title: Contractual Professional Services (1904321)

Phase Budget:

Phase Status: Cancelled

Start Date: 1/24/2022

End Date: 3/18/2027

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Contractual Professional Services (1904321)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Contractual Professional Services (1904231) (net-zero cost account to be archived)	1/24/2022	3/18/2027

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/24/2022

End Date: 3/18/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/24/2022

Cost Est. Source: CCC Executed Contractor

Cost Est. Prepared By: CCC Executed Contractor

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$12,699	$4,385	$3,627	$2,395	$2,459	$2,459	$1,759	$0	$0	$6,677	$0

Phase Dates

Activity Name	Start Date	End Date
Contractual Professional Services (1904231) (HazMat Removal)	1/24/2022	3/18/2027
Construction (1904231)	1/24/2022	3/18/2027

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$478	$426	$373	$63	$15	$15	$11	$0	$0	$42	$0
Professional Services (CS-272)	$60	$60	$60	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services (CS-166)	$210	$62	$59	$33	$44	$44	$29	$0	$0	$118	$0
Contractual Professional Services (1904321)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$12,699	$4,385	$3,627	$2,395	$2,459	$2,459	$1,759	$0	$0	$6,677	$0
Totals	$13,446	$4,932	$4,119	$2,491	$2,519	$2,519	$1,799	$0	$0	$6,837	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2020	$2,715	$3	$1,356	$1,356	$3	$0	$0	$0	$0	$0	$0	$0	$2,718
2021	$6,648	$3	$460	$2,773	$3,026	$849	$0	$0	$0	$0	$0	$0	$7,111
2022	$11,075	$3	$183	$55	$2,522	$3,022	$3,022	$2,509	$0	$0	$0	$0	$11,316
2023	$13,800	$3	$183	$68	$0	$2,760	$2,760	$2,760	$2,760	$2,760	$0	$0	$14,054
2024	$9,775	$3	$183	$68	$79	$3,265	$2,638	$2,631	$2,631	$1,879	$0	$0	$13,375

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$13,446,474	$4,118,792	$2,490,718	$2,519,051	$2,519,051	$1,798,861	$0	$0	$6,836,964	$0

Description of CIP Changes:

Updated primary driver from condition to regulatory. G.G.
Project status updated, schedule and budget revised. BPV 7/7/2022

CIP Number: 112007

Project Title: NEWTP-Header Galleries and Washwater Building Structural Repair

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Northeast

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

95.2

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Govind Patel

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 7/6/2022

Year Project Added to CIP: 2022

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: NA

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: CMAR (Construction Management At Risk)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 112007

Project Title: NEWTP-Header Galleries and Washwater Building Structural Repair

Problem Statement:

The NEWTP was constructed in 1953 and consist largely of reinforced concrete frames and slabs. Deterioration due to water infiltration from the hatch covers and other cracks over time has weakened some structures and and resulted in corrosion to header, catwalks, and staircase.

Scope of Work/Project Alternatives:

The scope of the project includes repair of concrete beams with new reinforcement, CFRP shear wrap and crack injection, roof slab crack injection, and crack injection of the Plant North and South High Lift vault walls. It also includes replacing all the concrete Hatch covers with steel covers and surrounding curbs to prevent water entering the hatches, together with adding concrete topping to improve drainage by providing surface area drains.

Other Important Info:

Concrete debris fell from ceiling beams on catwalks and the south header pipe vault floor during the mid-night shift on March 13, 2021. No one injured, but this incident highlighted the risk to employee safety

Primary Driver: 5 - Public Health and Safety

Driver Explanation:

NA

CIP Number: 112007

Project Title: NEWTP-Header Galleries and Washwater Building Structural Repair

Scoring

Project Manager Weighted Score:	**96.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	F. Replace. or major rehab needed immediately	Rehabilitation of structure is required.
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, F. No redundancy or feasible temporary options	If structure fail or header damaged and incapable of discharge, may effect water distribution.
Regulatory (Environmental/Legal)	5	A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public	Falling concrete is health risk and may lead to legal obligation for injury or death.
Operations and Maintenance	2	D. Project moderate to low positive impact on O&M, but no critical assets; alleviate very few ongoing O&M issues	Low impact on O & M.
Health and Safety	5	B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents, E. serious injury/death, & major safety reg. violations.	Serious injury/death, and major safety reg. violations.
Public Benefit	5	E. Canceling project very likely causes catastrophic negative public impact (major gov't/regulatory investigation; widespread negative media	Collapse of structure or part of top slab failure may cause widespread negative effect.
Financial	5	B. Project will result in avoidance of fines, litigation, emergency repairs or damage to asset/public., E. Canceling project major/extensive financial consequences from revenue loss, repair/restoration/O&M cost, downtime, fines, damages, litigation etc.; major budget implications requiring deferral or cutbacks in other areas	Failing of structure or header may stop water distribution and income to GLWA
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	This is structural rehabilitation and no impact on energy efficiency.

CIP Number: 112007

Project Title: NEWTP-Header Galleries and Washwater Building Structural Repair

Review Committee Weighted Score:	**95.2**	
Criteria Name	**Score**	**Comment**
Condition	5	
Performance (Service Level/Reliability)	5	
Regulatory (Environmental/Legal)	4	
Operations and Maintenance	3	
Health and Safety	5	
Public Benefit	4	
Financial	5	
Efficiency and Innovation	1	

CIP Number: 112007

Project Title: NEWTP-Header Galleries and Washwater Building Structural Repair

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 7/2/2027

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$60	$0	$0	$11	$16	$16	$16	$0	$0	$49	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2023	7/2/2027
Capital Delivery Salary (Fringes)	7/1/2023	7/2/2027

CIP Number: 112007

Project Title: NEWTP-Header Galleries and Washwater Building Structural Repair

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 7/2/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date:

Cost Est. Source: WSP

Cost Est. Prepared By: WSP

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$625	$235	$235	$55	$111	$111	$111	$1	$0	$334	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2023	7/2/2027

CIP Number: 112007

Project Title: NEWTP-Header Galleries and Washwater Building Structural Repair

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2024

End Date: 7/2/2027

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$6,000	$1	$1	$0	$1,996	$1,996	$1,996	$11	$0	$5,999	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2024	7/2/2027

CIP Number: 112007

Project Title: NEWTP-Header Galleries and Washwater Building Structural Repair

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$60	$0	$0	$11	$16	$16	$16	$0	$0	$49	$0
Design/Engineering	$625	$235	$235	$55	$111	$111	$111	$1	$0	$334	$0
Construction	$6,000	$1	$1	$0	$1,996	$1,996	$1,996	$11	$0	$5,999	$0
Totals	$6,685	$235	$236	$66	$2,124	$2,124	$2,124	$12	$0	$6,383	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2024	$6,685	$0	$140	$2,177	$2,177	$2,177	$12	$0	$6,685

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$6,685,115	$235,924	$66,361	$2,123,731	$2,123,731	$2,123,731	$11,637	$0	$6,382,831	$0

Description of CIP Changes:

NA

CIP Number: 112008

Project Title: Northeast Water Treatment Plant Filter Replacement

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Northeast

- [x] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

93.5

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Peter Fromm

Director: Erich Klun

Managing Dept.: Water Eng

Date Original Business Case Prepared: 6/14/2023

Year Project Added to CIP: 2023

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: --

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 112008

Project Title: Northeast Water Treatment Plant Filter Replacement

Problem Statement:

The existing filter components are beyond their useful life and are not meeting the performance standards. There are multiple filters out of service due to damage underdrains or other components. The State of Michigan Department of Environment, Great Lakes & Energy (EGLE) noted the condition of the existing filters at the Northeast Water Treatment Plant as a deficiency in EGLE's latest Sanitary Survey.

Scope of Work/Project Alternatives:

This CIP project is being delivered under a design-build project delivery method and generally includes the following scope of work: 1. Remove and replacement of the filter media 2. Remove and replacement of the surface wash water system 3. Rehabilitation of the existing filter underdrain system 4. Remove and replacement of the filter piping 5. Remove and replacement of the filter valves.

Other Important Info:

The existing filters components are mostly original to the plant (circa 1956) and are (1) no operable, (2) beyond useful life, and (3) do not provide run time standards.

Primary Driver:

3 - Regulatory

Driver Explanation:

The performance of the filters are not meeting the standard run time, which requires for additional filter backwashes.

CIP Number: 112008

Project Title: Northeast Water Treatment Plant Filter Replacement

Scoring

Project Manager Weighted Score:	**75.7**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational	The condition of the existing components are beyond their useful life and require replacement.
Performance (Service Level/Reliability)	4	A. Expected performance failures under normal conditions	The filters are not meeting standard run times and some filters have failed over the years.
Regulatory (Environmental/Legal)	4	D. Some historical evidence of permit/regulatory/contract violations support the decision	The State of Michigan Department of Environment, Great Lakes & Energy (EGLE) noted the condition of the existing filters at the Northeast Water Treatment Plant as a deficiency in EGLE's latest Sanitary Survey.
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	The plant staff has worked on maintaining the filters.
Health and Safety	3	D. Canceling project pose limited–moderate staff/public safety/hazard issues, some potential for minor injury/regulatory violations	The potential of losing additional filters and not being able to provide enough water.
Public Benefit	2	D. Low impact on public/GLWA image, minor recognition	Low impact to the public
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Upgrade to the filters will increase the filter run times and should help decrease the chemical usage.
Efficiency and Innovation	2	D. Little to no time and cost saving	Low impact of E&I

CIP Number: 112008

Project Title: Northeast Water Treatment Plant Filter Replacement

Review Committee Weighted Score:	**93.5**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	4	
Regulatory (Environmental/Legal)	5	
Operations and Maintenance	4	
Health and Safety	4	
Public Benefit	3	
Financial	3	
Efficiency and Innovation	3	

CIP Number: 112008

Project Title: Northeast Water Treatment Plant Filter Replacement

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget:

Start Date: 7/1/2024

Phase Status: Future Planned Start

End Date: 1/2/2032

Phase Comments/Description:

Cost Est. Class:

Cost Est. Source:

Cost Est. Date:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$50	$0	$0	$0	$7	$7	$7	$7	$7	$33	$17

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2024	1/2/2032
Capital Delivery Salary (Fringes)	7/1/2024	1/2/2032

CIP Number: 112008

Project Title: Northeast Water Treatment Plant Filter Replacement

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/1/2024

End Date: 1/2/2032

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 3/14/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$10,000	$0	$0	$0	$3,500	$3,500	$544	$546	$544	$8,634	$1,366

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2024	1/2/2032

CIP Number: 112008

Project Title: Northeast Water Treatment Plant Filter Replacement

Phase: Construction

Phase Title: Construction

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/1/2026

End Date: 1/2/2032

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 3/14/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$75,500	$0	$0	$0	$0	$0	$13,697	$13,734	$13,697	$41,127	$34,373

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2026	1/2/2032

CIP Number: 112008

Project Title: Northeast Water Treatment Plant Filter Replacement

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$50	$0	$0	$0	$7	$7	$7	$7	$7	$33	$17
Design/Engineering	$10,000	$0	$0	$0	$3,500	$3,500	$544	$546	$544	$8,634	$1,366
Construction	$75,500	$0	$0	$0	$0	$0	$13,697	$13,734	$13,697	$41,127	$34,373
Totals	$85,550	$0	$0	$0	$3,507	$3,507	$14,247	$14,286	$14,247	$49,795	$35,755

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$85,550,000	$0	$0	$3,506,656	$3,506,656	$14,247,462	$14,286,495	$14,247,462	$49,794,729	$35,755,271

Description of CIP Changes:

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CIP Number: 113003

Project Title: Southwest Water Treatment Plant Low- and High lift Pumping station Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Southwest

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

89.4

- [x] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/19/2014

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Southwest WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 113003

Project Title: Southwest Water Treatment Plant Low- and High lift Pumping station Improvements

Problem Statement:

Most of the plant's process mechanical, building mechanical and electrical systems are original to the plant (circa1962) and are nearing or are past end of useful service life. As a result, additional plant maintenance effort is necessary to meet plant operational needs.

Scope of Work/Project Alternatives:

The work includes design and construction services for the replacement of numerous large-diameter butterfly valves and water-control gates throughout the low-lift, high-lift, filtration, and flocculator buildings. The low- and high-lift pumping units, and filters will all be right sized taking into consideration the current and 20-year projected demands.

Other Important Info:

This work is included in the 2015 water master plan update. It also recommends that GLWA consider decommissioning treatment at the Southwest Water Treatment Plant if water demand continues to trend in a downward direction.

Primary Driver: 3 - Regulatory

Driver Explanation:

The existing low- and high-lift pumping equipment and filtration system need to be replaced in order to provide continued reliable operation of these critical plant systems.

CIP Number: 113003

Project Title: Southwest Water Treatment Plant Low- and High lift Pumping station Improvements

Scoring

Project Manager Weighted Score:	**88.3**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational	Score same as previous year. JEM 7/7/2022
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure	Score same as previous year. JEM 7/7/2022
Regulatory (Environmental/Legal)	5	A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public	Score same as previous year. JEM 7/7/2022
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	Score same as previous year. JEM 7/7/2022
Health and Safety	2	A. Low chance of failure occurring; failure easily mitigated w/ no safety/health/env. impacts	Score same as previous year. JEM 7/7/2022
Public Benefit	2	A. Low to moderate impact by supporting City/region/neighborhood growth	Score same as previous year. JEM 7/7/2022
Financial	1	A. Minimal to no impact to GLWA	Score same as previous year. JEM 7/7/2022
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	Score same as previous year. JEM 7/7/2022

Review Committee Weighted Score:	**89.4**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	5	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 113003

Project Title: Southwest Water Treatment Plant Low- and High lift Pumping station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/2/2029

End Date: 7/9/2041

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2016

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,657	$0	$0	$0	$0	$0	$0	$0	$0	$0	$689

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/2/2029	7/9/2041
Capital Delivery Salary (Fringes)	7/2/2029	7/9/2041

CIP Number: 113003

Project Title: Southwest Water Treatment Plant Low- and High lift Pumping station Improvements

Phase: Design & Construction Assistance # 1

Phase Title: Design & Construction Assistance # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/2/2029

End Date: 7/9/2041

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/19/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1	$30,395	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,398

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/2/2029	7/9/2041

CIP Number: 113003

Project Title: Southwest Water Treatment Plant Low- and High lift Pumping station Improvements

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/12/2033

End Date: 7/9/2041

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/19/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$130,058	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,241

Phase Dates

Activity Name	Start Date	End Date
Construction	7/12/2033	7/9/2041

CIP Number: 113003

Project Title: Southwest Water Treatment Plant Low- and High lift Pumping station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,657	$0	$0	$0	$0	$0	$0	$0	$0	$0	$689
Design & Construction Assistance # 1	$30,395	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,398
Construction	$130,058	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,241
Totals	$162,109	$0	$0	$0	$0	$0	$0	$0	$0	$0	$13,328

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$0	$0	$0	$0	$0	$0	$0	$2,940	$0	$0	$0	$0	$0	$0	$2,940
2019	$0	$0	$0	$0	$0	$0	$0	$0	$148,286	$0	$0	$0	$0	$0	$148,286
2020	$0	$0	$0	$0	$0	$0	$0	$0	$0	$148,286	$0	$0	$0	$0	$148,286
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,314	$0	$0	$0	$14,314
2022	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$20	$81	$7,237	$21,812
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,271	$21,812
2024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,178	$184,285

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$162,109,919	$0	$0	$0	$0	$0	$0	$0	$0	$13,328,481

Description of CIP Changes:

This project has been adjusted to start in FY30 as GLWA is already in the process of doing high-lift pumping work at Lake Huron WTP and Springwells WTP. Performing high-lift upgrades at more than two WTPs at the same time is challenging as it adds more complexity to maintaining service to customers while work is being done at the high-lift plants. Additionally, pump procurement becomes challenging when multiple pump projects are placing excessive demands on the pump suppliers. For these reasons, the schedule for this project has been extended to be completed from FY30-FY34.
Note: The flocculator improvements that were originally part of the 113003 CIP have been split into a separate CIP 113010 so that the higher priority flocculation improvements could be completed earlier in the CIP cycle.

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Southwest

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

90.6

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/27/2017

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Southwest WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Problem Statement:

The existing chlorine gas scrubber is nearing its end of useful service life and its absorption media will be expiring within the next few years. Similarly, the existing raw water screening system is original to the plant (circa 1962), is not functional, and is beyond repair. As a result, this system also requires replacement. Both the chlorine gas scrubber and raw water screening systems will require ancillary equipment improvements related to electrical, alarms, instrumentation, and controls.

Scope of Work/Project Alternatives:

This project will be delivered using a design-build project delivery model. The existing gas chlorine scubber and raw water screens will be replaced with new system equipment meeting current building codes and industry best practices. The new gas chlorine scrubber and raw water screens will be designed for current and projected water demands in accordance with the recommendations of the 2015 Water Master Plan Update. The new equipment will be right-sized.

Other Important Info:

GLWA intends to use the services of AECOM under its CIP program management contract to implement this design-build project.

E. Klun 8/27/20 update as follows:
1. RFP for DB contract delivery underway by AECOM under CS-272 Task 71011A.

Primary Driver: 5 - Public Health and Safety

Driver Explanation:

As chlorine gas is acutely toxic to human health, chlorine gas scrubbing equipment is needed to prevent gas chlorine leaks that occur in the chlorine storage and feeder rooms from exhausting to the outside environment.

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Scoring

Project Manager Weighted Score:	**90.6**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining, C. Shows abnormal wear and is likely to cause significant performance deterioration in the near term, D. Replacement or major rehab needed in the short term	Scores same as last year. JEM 7/7/2022
Performance (Service Level/Reliability)	3	C. Equipment/process is out of service 5% to 25% of the time, G. Low redundancy in the area	Scores same as last year. JEM 7/7/2022
Regulatory (Environmental/Legal)	4	E. Reg compliance failure moderate fines, enforcement actions, environmental impact	Scores same as last year. JEM 7/7/2022
Operations and Maintenance	2	D. Project moderate to low positive impact on O&M, but no critical assets; alleviate very few ongoing O&M issues	Scores same as last year. JEM 7/7/2022
Health and Safety	5	B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents, C. Likely to address major hazard issues or concerns, D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for, E. serious injury/death, & major safety reg. violations.	Scores same as last year. JEM 7/7/2022
Public Benefit	4	E. Canceling project chance to have major negative public impact	Scores same as last year. JEM 7/7/2022
Financial	1	A. Minimal to no impact to GLWA	Scores same as last year. JEM 7/7/2022
Efficiency and Innovation	3	B. Moderate positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	Scores same as last year. JEM 7/7/2022

Review Committee Weighted Score:	**90.6**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	4	Scores carried over from previous year
Operations and Maintenance	2	Scores carried over from previous year
Health and Safety	5	Scores carried over from previous year
Public Benefit	4	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	3	Scores carried over from previous year

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 1/28/2020

End Date: 7/1/2023

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2016

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$176	$138	$138	$39	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/28/2020	7/1/2023
Capital Delivery Salary (Fringes)	1/28/2020	7/1/2023

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 2/26/2020

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 11/17/2023

Cost Est. Source: TBD

Cost Est. Prepared By: TBD

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$304	$304	$304	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71011A.01)	2/26/2020	12/31/2022

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Phase: Design/Engineering (Study)

Phase Title: Design/Engineering (Study)

Phase Budget: Water

Phase Status: Cancelled

Start Date: 1/28/2020

End Date: 9/16/2022

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/12/2023

Cost Est. Source: NA

Cost Est. Prepared By: NA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (Study)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (Study) (net-zero cost account to be archived)	1/28/2020	9/16/2022

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Phase: Design-Build # 1

Phase Title: Design-Build # 1

Phase Budget: Water

Phase Status: Closed Out

Start Date: 10/1/2021

End Date: 7/1/2023

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/1/2021

Cost Est. Source: Kokosing-Executed Contract

Cost Est. Prepared By: Kokosing-Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1	$6,840	$5,666	$5,666	$1,174	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design-Build (2002193)	10/1/2021	7/1/2023

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$176	$138	$138	$39	$0	$0	$0	$0	$0	$0	$0
Professional Services	$304	$304	$304	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (Study)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1	$6,840	$5,666	$5,666	$1,174	$0	$0	$0	$0	$0	$0	$0
Totals	$7,320	$6,108	$6,108	$1,213	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$0	$0	$0	$0	$0	$0	$0	$7,032	$0	$0	$0	$0	$0	$7,032
2020	$0	$0	$0	$0	$0	$0	$0	$0	$7,032	$0	$0	$0	$0	$7,032
2021	$4,753	$0	$0	$0	$260	$2,238	$2,238	$17	$0	$0	$0	$0	$0	$4,753
2022	$6,956	$0	$0	$130	$245	$4,683	$1,595	$557	$78	$42	$0	$0	$0	$7,331
2023	$4,398	$0	$0	$130	$74	$3,422	$4,398	$0	$0	$0	$0	$0	$0	$8,024
2024	$12	$0	$0	$130	$75	$2,279	$4,768	$12	$0	$0	$0	$0	$0	$7,264

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$7,320,576	$6,107,633	$1,212,943	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Due to the limited remaining service life of the gas chlorine scrubbing system and condition of the raw water screens, this project has been moved ahead in the CIP schedule from last year. SA 8/8/2019

CIP Number: 113007

Project Title: Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Project Status: Future Planned - Ten Year CIP

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Southwest

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

38.7

- [x] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/27/2017

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Southwest WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 113007

Project Title: Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Problem Statement:

Most of the existing low- and high- lift pumping station and administration buildings' mechanical equipment (HVAC, dehumidification, plumbing) and architectural components such as doors, windows, floors, and furnishings, are over 50 years old and are beyond their normal useful service life. Additional architectural improvements at Southwest Water Treatment Plant will include renovation of staff locker rooms and bathrooms, including a restroom for female staff.

Scope of Work/Project Alternatives:

This project would be delivered using a design-bid-build project delivery method. The scope of work would generally include:
1. Design of the project.
2. Remove existing building mechanical and architectural systems.
3. Install new heating and ventilating systems process and administration areas.
4. Install new air-conditioning systems for administration areas.
5. Install new dehumidification systems for the high-lift header vault.
6. Install new interior and exterior doors and windows.
7. Install new lockers, bath fixtures, water closets, flooring, ceiling, and related items in men's locker rooms and bathrooms
8. Construct new locker room and related bath facilty for women's changing and bathing facilities.
9. Provide new furnishings for administration offices.

Other Important Info:

CS-1528 water master plan update included these improvements.

Primary Driver: 1 - Condition

Driver Explanation:

Existing building mechanical and architectural components are mainly original to the plant (1962).

CIP Number: 113007

Project Title: Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Scoring

Project Manager Weighted Score:	**40.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	B. Functionally sound and acceptable, signs of normal wear	
Performance (Service Level/Reliability)	1	D. Project will have low to no measurable positive impact on service levels and/or system reliability / decreased overall risk	
Regulatory (Environmental/Legal)	2	A. Low risk of causing	
Operations and Maintenance	3	C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues	
Health and Safety	1	B. Project minimal positive impact on staff/public H&S; No major hazard issues/concerns to addressed	
Public Benefit	3	D. May not receive media coverage; positive influence on community	
Financial	2	A. Low financial impact to GLWA; No grants/other external funding	
Efficiency and Innovation	4	C. Significant positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	

Review Committee Weighted Score:	**38.7**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	2	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	1	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 113007

Project Title: Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2033

End Date: 7/1/2038

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2016

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$141	$0	$0	$0	$0	$0	$0	$0	$0	$0	$28

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2033	7/1/2038
Capital Delivery Salary (Fringes)	7/1/2033	7/1/2038

CIP Number: 113007

Project Title: Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Phase: Design & Construction Assistance # 1

Phase Title: Design & Construction Assistance # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2033

End Date: 7/1/2038

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/21/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$322

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2033	7/1/2038

CIP Number: 113007

Project Title: Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2036

End Date: 7/1/2038

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$7,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2036	7/1/2038

CIP Delivery Team

CIP Number: 113007

Project Title: Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$141	$0	$0	$0	$0	$0	$0	$0	$0	$0	$28
Design & Construction Assistance # 1	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$322
Construction	$7,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$8,640	$0	$0	$0	$0	$0	$0	$0	$0	$0	$350

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$0	$0	$0	$0	$0	$0	$0	$37,336	$0	$0	$0	$0	$0	$37,336
2020	$0	$0	$0	$0	$0	$0	$0	$0	$37,336	$0	$0	$0	$0	$37,336
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$98	$0	$0	$0	$98
2022	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8	$3,167
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,000
2024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,641

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$8,640,647	$0	$0	$0	$0	$0	$0	$0	$0	$350,333

Description of CIP Changes:

Engaged AECOM under its CIP program management contract to review and validate the estimated capital cost of this CIP. 8/2019 NH
No change FY 22 SA 8/28/20

CIP Number: 113009

Project Title: SW Flight and Chain Upgrades

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Southwest

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

68.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Vittoria Hogue

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 3/14/2022

Year Project Added to CIP: 2022

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: SWTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 113009

Project Title: SW Flight and Chain Upgrades

Problem Statement:

The existing flight and chains are not in service and require replacement due to poor performance.

Scope of Work/Project Alternatives:

The flight and chain system will be removed and replaced with upgraded components and new control logic.

Other Important Info:

Project not scored by risk committee since it is far advanced

Primary Driver: 1 - Condition

Driver Explanation:

The existing flight and chains are not in service which constitutes poor performance.

CIP Number: 113009

Project Title: SW Flight and Chain Upgrades

Scoring

Project Manager Weighted Score:	**68.7**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life	Existing equipment is out of service
Performance (Service Level/Reliability)	4	A. Expected performance failures under normal conditions	
Regulatory (Environmental/Legal)	3	A. Moderate risk of causing	
Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers	
Financial	4	A. Project will generate significant increased revenue/savings	
Efficiency and Innovation	4	A. Right-sizing system significant operational efficiency, moderately increasing revenue/savings	

Review Committee Weighted Score:	**68.7**	
Criteria Name	**Score**	**Comment**
Condition	5	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	4	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	3	Committee score carried over from current year Project Manager score
Operations and Maintenance	4	Committee score carried over from current year Project Manager score
Health and Safety	3	Committee score carried over from current year Project Manager score
Public Benefit	3	Committee score carried over from current year Project Manager score
Financial	4	Committee score carried over from current year Project Manager score
Efficiency and Innovation	4	Committee score carried over from current year Project Manager score

CIP Number: 113009

Project Title: SW Flight and Chain Upgrades

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 3/31/2025

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$27	$0	$0	$13	$14	$0	$0	$0	$0	$14	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2023	3/31/2025
Capital Delivery Salary (Fringes)	7/1/2023	3/31/2025

CIP Number: 113009

Project Title: SW Flight and Chain Upgrades

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 3/31/2025

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 5/5/2023

Cost Est. Source: Colasanti

Cost Est. Prepared By: Colasanti

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$5,100	$0	$0	$2,397	$2,703	$0	$0	$0	$0	$2,703	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2023	3/31/2025

CIP Number: 113009

Project Title: SW Flight and Chain Upgrades

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$27	$0	$0	$13	$14	$0	$0	$0	$0	$14	$0
Construction	$5,100	$0	$0	$2,397	$2,703	$0	$0	$0	$0	$2,703	$0
Totals	$5,127	$0	$0	$2,410	$2,717	$0	$0	$0	$0	$2,717	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2024	$3,027	$0	$1,454	$1,450	$123	$0	$0	$0	$3,027

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$5,127,222	$0	$2,409,894	$2,717,328	$0	$0	$0	$0	$2,717,328	$0

Description of CIP Changes:

na

CIP Number: 113010

Project Title: Southwest Water Treatment Plant Flocculation Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Southwest

- [x] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

89.4

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/19/2014

Year Project Added to CIP: 2023

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Southwest WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 113010

Project Title: Southwest Water Treatment Plant Flocculation Improvements

Problem Statement:

Flocculation system requires constant maintenance and only 70% of the drives are currently operational.

Scope of Work/Project Alternatives:

This work includes design and construction services for the replacement of the flocculation system. The total number of basins will be right-sized taking into consideration current and 20-year projected demands.

Other Important Info:

NA

Primary Driver: 3 - Regulatory

Driver Explanation:

EGLE listed this is as a major deficiency in the 2022 Sanitary Survey and strongly advises that the flocculation improvements be fast-tracked

CIP Number: 113010

Project Title: Southwest Water Treatment Plant Flocculation Improvements

Scoring

Project Manager Weighted Score:	**88.3**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational	Score same as previous year. JEM 7/7/2022
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure	Score same as previous year. JEM 7/7/2022
Regulatory (Environmental/Legal)	5	A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public	Score same as previous year. JEM 7/7/2022
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	Score same as previous year. JEM 7/7/2022
Health and Safety	2	A. Low chance of failure occurring; failure easily mitigated w/ no safety/health/env. impacts	Score same as previous year. JEM 7/7/2022
Public Benefit	2	A. Low to moderate impact by supporting City/region/neighborhood growth	Score same as previous year. JEM 7/7/2022
Financial	1	A. Minimal to no impact to GLWA	Score same as previous year. JEM 7/7/2022
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	Score same as previous year. JEM 7/7/2022

Review Committee Weighted Score:	**89.4**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	5	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 113010

Project Title: Southwest Water Treatment Plant Flocculation Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget:

Start Date: 7/1/2025

Phase Status: Future Planned Start

End Date: 6/30/2033

Phase Comments/Description:

Cost Est. Class:

Cost Est. Source:

Cost Est. Date:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$50	$0	$0	$0	$0	$6	$6	$6	$6	$25	$25

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2025	6/30/2033
Capital Delivery Salary (Fringes)	7/1/2025	6/30/2033

CIP Number: 113010

Project Title: Southwest Water Treatment Plant Flocculation Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/1/2025

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 6/23/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$4,933	$0	$0	$0	$0	$1,187	$1,187	$641	$639	$3,654	$1,279

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2025	6/30/2031

CIP Number: 113010

Project Title: Southwest Water Treatment Plant Flocculation Improvements

Phase: Construction (Build) #1

Phase Title: Construction (Build) #1

Phase Budget:

Phase Status: Future Planned Start

Start Date: 3/1/2028

End Date: 6/30/2033

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 6/23/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) #1	$17,242	$0	$0	$0	$0	$0	$0	$1,728	$5,171	$6,900	$10,342

Phase Dates

Activity Name	Start Date	End Date
Construction	3/1/2028	6/30/2033

CIP Number: 113010

Project Title: Southwest Water Treatment Plant Flocculation Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$50	$0	$0	$0	$0	$6	$6	$6	$6	$25	$25
Design/Engineering	$4,933	$0	$0	$0	$0	$1,187	$1,187	$641	$639	$3,654	$1,279
Construction (Build) #1	$17,242	$0	$0	$0	$0	$0	$0	$1,728	$5,171	$6,900	$10,342
Totals	$22,225	$0	$0	$0	$0	$1,193	$1,193	$2,376	$5,817	$10,579	$11,646

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$22,225,247	$0	$0	$0	$1,193,071	$1,193,071	$2,375,905	$5,816,898	$10,578,944	$11,646,303

Description of CIP Changes:

NA

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

90.9

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 3/29/2004

Year Project Added to CIP: 2004

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Problem Statement:

Existing low- and high-lift pumping system electrical switchgear is original to the plant (1930s) and well beyond it's useful service life. This switchgear is unsafe, unreliable and is oversized for current and projected demands. The existing pumping units are a mix of 1930s and 1950s units and are in need of either replacement or in the case of the pumps rehabilitation. The exterior windows on the pumping plant building are original (1930s), in poor condition and are not well insulated. As a result, all of the exterior windows on the pumping plant building need to be replaced with new, energy efficient windows.

Scope of Work/Project Alternatives:

This CIP project will be delivered under a design-bid-build project delivery using a single-prime engineering consultant and multiple prime construction contracts to deliver the entire project. The scope of work generally includes:
1. Replacement of low- and high-lift pumping units, including pumps, motors, valves, and piping.
2. Replacement of exterior windows in the pump house, turbine house, boiler house, and switch house.
3. Replacement of medium-voltage electrical system.
4. Replacement of all pump isolation gates.

E. Klun 8/19/20 Updates:
5. Replacement of the existing three (3) primary 24 kV transformers and existing three (3) DTE 24kV feeders. DTE/ITC will bring 120 kV feeders to Springwells and GLWA to own three (3) new 120 kV transformers. Collectively this is referred to as the new 120 kV Substation.
6. GLWA is pursuing acquisition of Conrail property to the east of the existing Springwells property on which the new 120 kV substation will be built.
7. Replacement of six (6) 84-inch gate valves in the High Lift Station that did not provide adequate isolation during execution of SP-563. 84-inch gate valves are needed to replace the high lift pumping units.
8. New Utility Bridge to carry medium voltage cabling between the 120 kV Substation and new switchgear. The bridge will allow all demolition of all underground ductbanks such that yard piping can be replaced under CIP#114010 without the threat of power interruption.
9. Addition of preparation of equipment procurement contracts for pumping units and process valves.
10. Additional instrumentation scope to meet the automation requirements of CS-108 Water Treatment Plant Automation Needs Assessment.

E. Klun 7/30/21 Updates:
11. Equipment pre-purchase/procurement packages for long-lead, custom equipment identified during execution of Contract C development. Procurement

Other Important Info:

E. Klun 8/19/20 updates:
1. Scope updates are being added to the design being completed under Contract CS-103 via Amendment No. 2 that is expected to go for approval in September of October 2020. Cashflow and schedule updates herein reflect both the engineering and construction impacts of an approved CS-103 Amendment No. 2.

Primary Driver: 1 - Condition

Driver Explanation:

Existing low- and high-lift pumps are original to plant construction with most of them nearing 90 years old.

E. Klun 8/19/20 Updates:
1. CS-103 coordination with DTE resulted in DTE noting that the existing feeders could not reliably supply power to Springwells under the new proposed operating conditions due to capacity issues and age of the existing feeders.

packages for pumping equipment and process valves will result in six procurement contracts allowing GLWA to pre-purchase equipment that will be assigned to the Contract C installation contract.

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**98.3**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance	No change in score.
Performance (Service Level/Reliability)	5	E. Project impact >11 wholesale, 1M retail, or critical customer, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures	No change in score.
Regulatory (Environmental/Legal)	4	A. Relatively high, but not imminent,	No change in score.
Operations and Maintenance	5	B. Requires constant monitoring/manual operation because it is unable to be run automatically, A. Unsustainable levels of O/M required to keep in service that will still not ensure future stable/proper operation	No change in score.
Health and Safety	5	E. serious injury/death, & major safety reg. violations., D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for, C. Likely to address major hazard issues or concerns, B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents, A. Catastrophic failure w/ safety/health/environmental impacts imminent (2 years or less) as supported by engineering reports, studies, inspections, historical evidence, etc.	No change in score.
Public Benefit	5	B. Project will have a major and measurable positive impact by supporting member partners; coordination/ shared outcomes w/ other agencies/departments; project has a major impact on quality of life/aesthetics; Major positive impact on public	No change in score.
Financial	4	D. Significant financial implications $1M - $5M or ROI of 5-10 yrs, A. Project will generate significant increased revenue/savings	No change in score.
Efficiency and Innovation	5	B. Project removes major operational hurdles or obstacles on critical equipment/process; major time & cost savings, A. Right-sizing system results in substantial operational efficiencies, significantly increasing revenue/savings., C. Major & measurable positive impact on: Energy use & conservation/environmental responsibility & sustainability i.e. >=20% energy reduction, stabilizing demand; net financial; Wear & tear, D. efficiency; Water use, effluent reuse/recycling or other GLWA strategic initiatives*; Business process optimization and institutional knowledge; Process efficiency for a more robust system and less O&M; knowledge capture; or time & cost savings	

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Review Committee Weighted Score:	**90.9**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	5	Scores carried over from previous year
Health and Safety	5	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	3	Scores carried over from previous year

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/2/2018

End Date: 12/31/2028

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$2,727	$859	$836	$263	$361	$361	$361	$362	$182	$1,627	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/2/2018	12/31/2028
Capital Delivery Salary (Fringes)	1/2/2018	12/31/2028

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/9/2020

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$101	$101	$101	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71012A.01 / 71017A.01 / 71026A.05)	3/9/2020	12/31/2022

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Phase: Professional Services (MISC)

Phase Title: Professional Services (MISC)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 12/1/2016

End Date: 6/30/2017

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (MISC)	$20	$20	$20	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (MISC)	12/1/2016	6/30/2017

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Phase: Design/Engineering (CS-103)

Phase Title: Design/Engineering (CS-103)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/2/2018

End Date: 12/31/2028

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/2/2018

Cost Est. Source: CDM Smith- Executed Contract

Cost Est. Prepared By: CDM Smith- Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-103)	$15,244	$9,309	$9,083	$1,365	$1,711	$880	$880	$882	$444	$4,796	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-103)	1/2/2018	12/31/2028

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Phase: Design-Build # 1 (Contract A, 1900134, 1904795)

Phase Title: Design-Build # 1 (Contract A, 1900134, 1904795)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/1/2019

End Date: 6/28/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 2/11/2020

Cost Est. Source: Barton Malow- Executed Contract

Cost Est. Prepared By: Barton Malow

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1 (Contract A, 1900134, 1904795)	$17,161	$14,677	$14,266	$2,895	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (net-zero cost account to be archived)	9/1/2019	6/30/2020
Design-Build (1900134 - Contract A)	2/11/2020	6/28/2024
Construction (1904795 - Emergency Excavation)	6/1/2020	6/30/2020

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Phase: Construction (Contract B)

Phase Title: Construction (Contract B)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 2/1/2023

End Date: 11/4/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/9/2023

Cost Est. Source: Clark-Executed Contract

Cost Est. Prepared By: Clark

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Contract B)	$64,458	$5,305	$2,312	$14,500	$18,908	$12,329	$12,329	$4,080	$0	$47,646	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (Contract B)	2/1/2023	11/4/2027

Phase: Construction (Contract C)

Phase Title: Construction (Contract C)

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Phase Budget: Water
Phase Status: Future Planned Start
Start Date: 8/25/2024
End Date: 6/30/2035

Phase Comments/Description:

Cost Est. Class: Class 2
Cost Est. Date: 6/15/2023
Cost Est. Source: CDM Smith & GLWA
Cost Est. Prepared By: CDM Smith & GLWA

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Contract C)	$200,000	$0	$0	$0	$7,245	$8,530	$26,009	$23,032	$22,959	$87,774	$97,797

Phase Dates

Activity Name	Start Date	End Date
Construction (Contract C)	7/2/2026	6/30/2035
Construction Equipment (Purchase E)	8/25/2024	6/30/2032
Construction Equipment (Purchase F)	8/25/2024	6/30/2032
Construction Equipment (Purchase G)	8/25/2024	6/30/2032
Construction Equipment (Purchase H)	8/25/2024	6/30/2032
Construction Equipment (Purchase I)	8/25/2024	6/30/2032
Construction Equipment (Purchase J)	8/25/2024	6/30/2032

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Phase: Construction (Contract D)

Phase Title: Construction (Contract D)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 1/2/2026

End Date: 1/2/2028

Phase Comments/Description:

Cost Est. Class: Class 2

Cost Est. Date: 6/15/2023

Cost Est. Source: CDM Smith & GLWA

Cost Est. Prepared By: CDM Smith & GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Contract D)	$16,000	$0	$0	$0	$0	$3,940	$7,989	$4,071	$0	$16,000	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (Contract D)	1/2/2026	1/2/2028

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$2,727	$859	$836	$263	$361	$361	$361	$362	$182	$1,627	$0
Professional Services	$101	$101	$101	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services (MISC)	$20	$20	$20	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-103)	$15,244	$9,309	$9,083	$1,365	$1,711	$880	$880	$882	$444	$4,796	$0
Design-Build # 1 (Contract A, 1900134, 1904795)	$17,161	$14,677	$14,266	$2,895	$0	$0	$0	$0	$0	$0	$0
Construction (Contract B)	$64,458	$5,305	$2,312	$14,500	$18,908	$12,329	$12,329	$4,080	$0	$47,646	$0
Construction (Contract C)	$200,000	$0	$0	$0	$7,245	$8,530	$26,009	$23,032	$22,959	$87,774	$97,797
Construction (Contract D)	$16,000	$0	$0	$0	$0	$3,940	$7,989	$4,071	$0	$16,000	$0
Totals	$315,711	$30,272	$26,618	$19,024	$28,225	$26,039	$47,568	$32,427	$23,584	$157,844	$97,797

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$59,500	$0	$1,500	$2,000	$12,500	$22,000	$21,500	$26,500	$0	$0	$0	$0	$0	$0	$86,000
2019	$25,270	$22	$463	$1,433	$2,481	$1,453	$11,228	$8,675	$59,748	$0	$0	$0	$0	$0	$85,503
2020	$68,880	$0	$498	$2,607	$5,985	$9,302	$13,724	$13,724	$26,145	$42,831	$0	$0	$0	$0	$114,816
2021	$76,776	$0	$0	$2,080	$3,039	$7,113	$12,893	$18,905	$18,690	$19,175	$92,940	$0	$0	$0	$174,835
2022	$91,610	$0	$579	$1,582	$3,336	$11,813	$16,546	$18,135	$19,954	$18,583	$18,391	$21,032	$21,033	$21,032	$224,222
2023	$108,951	$22	$476	$1,583	$3,415	$7,448	$14,472	$11,999	$20,000	$25,952	$24,999	$25,999	$34,401	$35,513	$281,907
2024	$146,567	$22	$476	$1,583	$3,415	$7,448	$9,523	$8,533	$22,556	$30,487	$28,861	$36,138	$28,527	$23,850	$315,711

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$315,711,970	$26,618,429	$19,023,746	$28,224,788	$26,039,240	$47,567,930	$32,427,477	$23,584,348	$157,843,783	$97,797,072

Description of CIP Changes:

E. Klun 2018 Updates: (1) Updated construction cost based on design development and OPCC by CS-103 consultant; (2.) Moved construction expenditure forward to FY20 to execute a DB contract to install Low Lift pump suction isolation gates (valued at $8M based on CS-103 OPCC). Extended the duration for construction by one year to be more conservative and realistic for the completion of this work based on the progress of the design currently being performed. E. Klun 2018

E. Klun 6/12/19 Updates: (1) CO-01 to CS-103 executed to split the CS-103 design into three (3) different contracts. 1900134 is a DB contract administered internally by GLWA. Medium voltage electrical replacement and pumping unit replacement are the other two design being completed by the CS-103 Consultant.

E. Klun 8/9/19 Updates: (1) Project split into three construction contracts to reduce construction sequencing complexity, reduce GLWA risk exposure during construction, and expedite the overall construction schedule. The three construction contracts include Project A, Low Lift Suction Gate Replacement; Project B, Medium Voltage Electrical System Replacement; and Project C, Low- and High-Lift Pumping System Improvements.

E. Klun 8/19/20 Updates: (1) addition of Contract D, 120 kV Substation; (2) addition of project scope changes described above under Scope of Work; (3) updated schedule, cost and cashflow for development of equipment procurement contracts by CDM Smith under Contract CS-103. Procurement needed to secure delivery of long-lead equipment to maintain CIP spend; (4) project schedule, cost and cashflow are updated to reflect an approved Contract CS-103 Amendment No. 2 and the current OPCCs and schedules of the four (4) associated construction contracts.

E. Klun 7/30/21 Updates: (1) cost and schedule adjustments to Contract A (1900134) based on CO-01; (2) cost and schedule adjustments to Contract B (2003511) based on final design; (3) cost and schedule adjustment to Contract C based on 30% design; (4) cost and schedule adjustment to Contract D based on latest schedule for Conrail property purchase; (5) addition of equipment pre-purchase/procurement packages resulting in up to six additional contacts (Contracts E thru J) for equipment to be installed under Contract C; (6) created separate accounts with schedules and cashflow for each contract under CIP#114002.

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

76.4

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 6/26/2014

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Problem Statement:

Existing administration building, bathrooms, machine shop and offices throughout the facility are nearly 90 years old with many of its facilities being original to the plant. The building needs architectural, plumbing and electrical improvements.

Scope of Work/Project Alternatives:

The work includes removal and replacement of the existing plumbing and electrical along with architectural upgrades. The machine shop will be upgraded to include new air conditioning. There is an existing locker room that will be converted to a training center.

Other Important Info:

Challenges: . All plumbing needs to be replaced, the majority of which is in existing walls. The underground facilities (e.g., electrical duct banks, gas service mains, fiber optic, tunnels, conduits, major pipelines, etc.) at Springwells have been modified several times since initially being commissioned around 1930.

Primary Driver: 1 - Condition

Driver Explanation:

Existing architectural, plumbing, and electrical are nearly 90 years old and require upgrades.

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Scoring

Project Manager Weighted Score:	**53.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	C. May have minor failures or diminished efficiency; some performance deterioration	The building needs architectural, plumbing and electrical improvements.
Performance (Service Level/Reliability)	2	D. Equipment/process is out of service 5% or less of the time	The facilities require upgrades do to must of the bathrooms, offices, and machine shop are original.
Regulatory (Environmental/Legal)	1	A. No risk of causing	With removing the fire loop replacement from this CIP, the regulatory level drops down to a 1.
Operations and Maintenance	2	A. Low levels of O/M keeps meantime between failure standard	With removing the fire loop replacement out of this CIP, O& M level reduces.
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts, B. Project moderate positive impact on staff/public H&S‡	This project will provide a positive impact on the staff at Springwells.
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	There is low impact to the public for this project.
Financial	2	A. Low financial impact to GLWA; No grants/other external funding	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Review Committee Weighted Score:	**76.4**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	4	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 1/1/2032

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2018

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$281	$91	$91	$0	$0	$0	$0	$0	$0	$0	$190

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2029	1/1/2032
Capital Delivery Salary (Fringes)	7/1/2029	1/1/2032

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/10/2020

End Date: 11/30/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$57	$57	$57	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71017A.02 / 71026A.04)	8/10/2020	11/30/2022

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Phase: Design/Engineering (CS-282)

Phase Title: Design/Engineering (CS-282)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/10/2019

End Date: 1/1/2032

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 6/10/2019

Cost Est. Source: WSP- Executed Contract

Cost Est. Prepared By: WSP

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-282)	$633	$633	$633	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-282)	6/10/2019	1/1/2032

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Phase: Design/Engineering (CS-201)

Phase Title: Design/Engineering (CS-201)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/5/2018

End Date: 7/5/2021

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-201)	$539	$539	$539	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-201)	7/5/2018	7/5/2021

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 1/1/2032

Phase Comments/Description:

Cost Est. Class: Class 3

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$782	$0	$0	$0	$0	$0	$0	$0	$0	$0	$782

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2029	1/1/2032

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 1/1/2032

Phase Comments/Description:

Cost Est. Class: Class 2

Cost Est. Date: 4/29/2022

Cost Est. Source: WSP-Final Design

Cost Est. Prepared By: WSP-Final Design

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$4,846	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,846

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2029	1/1/2032

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$281	$91	$91	$0	$0	$0	$0	$0	$0	$0	$190
Professional Services	$57	$57	$57	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-282)	$633	$633	$633	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-201)	$539	$539	$539	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering	$782	$0	$0	$0	$0	$0	$0	$0	$0	$0	$782
Construction (Build) # 1	$4,846	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,846
Totals	$7,138	$1,320	$1,321	$0	$0	$0	$0	$0	$0	$0	$5,818

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$2,000	$0	$0	$300	$1,700	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,000
2019	$8,125	$0	$0	$30	$413	$2,258	$3,820	$1,604	$0	$0	$0	$0	$0	$0	$8,125
2020	$8,095	$0	$0	$30	$413	$2,258	$3,820	$1,604	$0	$0	$0	$0	$0	$0	$8,125
2021	$8,015	$0	$0	$264	$417	$2,302	$4,198	$1,515	$0	$0	$0	$0	$0	$0	$8,696
2022	$7,940	$0	$0	$10	$934	$376	$3,660	$3,780	$500	$0	$0	$0	$0	$0	$9,260
2023	$0	$0	$0	$11	$933	$235	$650	$0	$0	$0	$0	$0	$0	$0	$10,108
2024	$0	$0	$0	$11	$933	$234	$32	$6	$0	$0	$0	$0	$0	$0	$6,591

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$7,138,426	$1,320,523	$0	$0	$0	$0	$0	$0	$0	$5,817,904

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Description of CIP Changes:

Up-dated the Scope development and procurement dates.

Up-dated the "scope of work and other important info" under the "Detailed Project Information". Changed the score. P.F- July 2022

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Project Status: Cancelled

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

36.8

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Picture

Project Manager: Justin Kietur

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 6/26/2014

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Problem Statement:

Powdered activated carbon (PAC) is added to the treatment process to address taste and odor issues in the raw water supply. Taste and odor issues are infrequent, but the existing PAC system is difficult to operate and maintain. A more operator friendly and easier to maintain system is needed. Currently the plant is able to feed PAC through extraordinary measures due to deficiencies in the system. This creates additional operations and maintenance expense and inefficiencies. If raw water quality deteriorates unexpectedly and taste and odor causing compound concentrations steadily increase replacement of the PAC system at an earlier date would be warranted. This project has been cancelled as the PAC system is not currently used at Springwells and there is no immediate need for the system.

Scope of Work/Project Alternatives:

Replacement of the existing powdered activated carbon system with a new system designed for improved operations and maintainability when PAC dosing is needed.
The scope of work will generally include the following:
1)Repair of concrete and piping at the dry carbon delivery station and replacement of dust collectors.
2)Inspection of underground carbon slurry tanks and repair of damage to concrete and fiberglass lining.
3)Replacement of PAC transfer pumps and associated piping, valves and controls.
4)Replacement of PAC metering pumps and associated piping, valves and controls.

This project has been cancelled as the PAC system is not currently used at Springwells and there is no immediate need for the system.

Other Important Info:

Project Challenges: PAC equipment runs through congested storage areas and pipe chases.

Primary Driver: 2 - Performance

Driver Explanation:

Existing PAC system is cumbersome and difficult to operate and maintain, but it is functional and rarely needed.

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Scoring

Project Manager Weighted Score:	**36.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	C. May have minor failures or diminished efficiency; some performance deterioration	
Performance (Service Level/Reliability)	2	A. Meets all design requirements under normal conditions; up to date	
Regulatory (Environmental/Legal)	1	A. No risk of causing	
Operations and Maintenance	1	A. O&M levels are routine;	
Health and Safety	1	A. No failure reasonably expected to occur, C. Staff/public safety/hazard issues not a concern	
Public Benefit	2	D. Low impact on public/GLWA image, minor recognition, E. No media coverage, minor impact on comm./stakeholder relations	
Financial	1	A. Minimal to no impact to GLWA	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**36.8**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	2	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	1	Scores carried over from previous year
Health and Safety	1	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Cancelled

Start Date: 6/28/2028

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	6/28/2028	6/30/2031
Capital Delivery Salary (Fringes)	6/28/2028	6/30/2031

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget:

Phase Status:

Start Date: 6/28/2028

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Contractual Professional Services	6/28/2028	6/30/2031

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Cancelled

Start Date: 6/28/2028

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 7/12/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	6/28/2028	6/30/2031

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Cancelled

Start Date: 2/23/2030

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 7/12/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	2/23/2030	6/30/2031

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$2,900	$0	$0	$0	$900	$2,000	$0	$0	$0	$0	$0	$0	$0	$0	$2,900
2019	$0	$0	$0	$0	$0	$0	$0	$0	$3,939	$0	$0	$0	$0	$0	$3,939
2020	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,938	$0	$0	$0	$0	$3,938
2021	$63	$0	$0	$0	$0	$0	$0	$0	$0	$63	$4,125	$0	$0	$0	$4,188
2022	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$42	$331	$4,021
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$476	$4,021
2024	$6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6	$632	$4,034

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Revised project scoring & changed project status to 10-year CIP to coincide with current condition and functionality of the PAC system, which is now tested and operable. Change in Project Status for FY 24 update. JK 07/08/22

T. Kuhns - 8/26/23 - This project has been cancelled as the PAC system is not currently used at Springwells and there is no immediate need for the system.

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

86.1

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Updated project photo

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 6/26/2014

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Problem Statement:

Existing sedimentation basin gates, guides and hoists are early 1930s and are in need of replacement. Operation of the sluice gates in their existing condition and design does not meet current best practices for safe maintenance and operation.

Scope of Work/Project Alternatives:

This CIP project is being delivered under a design-build project delivery method and generally includes the following scope of work:
1. Demolition of the existing eight (8) 1930 sedimentation basins gates, guides, and hoist.
2. Installation of the new eight (8) 1930 sedimentation basins gates, guides, and actuators.
3. Concrete restoration within the four (4) 1930 sedimentation basins.
4. Concrete repairs to the air vents, access ramp, access hatches on top of the 1930 sedimentation basin.
5. Electrical upgrades to the four (4) sedimentation basin gate houses.

Other Important Info:

Challenges: Work will require the 1930's plant to be shutdown during three low demand seasons to complete the work. This contractor will need to coordination with CON-170: Sludge Removal and Disposal for cleaning the sedimentation basins, SP-563, CON-253, and other construction projects to ensure that the system can handle the long duration shutdown.

Primary Driver: 5 - Public Health and Safety

Driver Explanation:

The existing sluice gates are unsafe to operate and the guides are in poor condition.

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Scoring

Project Manager Weighted Score:	**91.9**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, B. Excessive maint. levels for the equipment/process area, F. Replace. or major rehab needed immediately	
Performance (Service Level/Reliability)	5	A. Will cause, or IS causing significant capacity problems	
Regulatory (Environmental/Legal)	3	A. Moderate risk of causing	
Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	5	A. Catastrophic failure w/ safety/health/environmental impacts imminent (2 years or less) as supported by engineering reports, studies, inspections, historical evidence, etc., B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents, C. Likely to address major hazard issues or concerns, D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for, E. serious injury/death, & major safety reg. violations.	
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	
Financial	1	A. Minimal to no impact to GLWA	
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	

Review Committee Weighted Score:	**86.1**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	2	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	5	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/24/2018

End Date: 12/29/2023

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$273	$258	$254	$19	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/24/2018	12/29/2023
Capital Delivery Salary (Fringes)	1/24/2018	12/29/2023

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/10/2020

End Date: 11/30/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$76	$76	$76	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71017A.03 / 71026A.02 / 71026A.06)	8/10/2020	11/30/2022

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Phase: Contractual Professional Services (1802774)

Phase Title: Contractual Professional Services (1802774)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 2/1/2021

End Date: 3/31/2021

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 5/28/2019

Cost Est. Source: Kokosing-Executed Contract

Cost Est. Prepared By: Kokosing-Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Contractual Professional Services (1802774)	$23	$23	$23	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Contractual Professional Services (1802774)	2/1/2021	3/31/2021

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Phase: Design/Engineering (CS-289)

Phase Title: Design/Engineering (CS-289)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 1/24/2018

End Date: 6/30/2021

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-289)	$23	$23	$23	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-289)	1/24/2018	6/30/2021

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Phase: Design-Build # 1 (1802774)

Phase Title: Design-Build # 1 (1802774)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 5/28/2019

End Date: 12/29/2023

Phase Comments/Description:

Kokosing Industrial and Alfred Benesch is the design-build team under 1802774.

Cost Est. Class: Class 1

Cost Est. Date: 5/28/2019

Cost Est. Source: Kokosing-Executed Contract

Cost Est. Prepared By: Kokosing-Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1 (1802774)	$13,703	$11,828	$11,789	$1,914	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1802774) (net-zero cost account to be archived)	5/28/2019	6/30/2020
Construction (1802774)	5/28/2019	12/29/2023

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

*Design & Construction costs are inclusive of salaries where salaries are not defined

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$273	$258	$254	$19	$0	$0	$0	$0	$0	$0	$0
Professional Services	$76	$76	$76	$0	$0	$0	$0	$0	$0	$0	$0
Contractual Professional Services (1802774)	$23	$23	$23	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-289)	$23	$23	$23	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1 (1802774)	$13,703	$11,828	$11,789	$1,914	$0	$0	$0	$0	$0	$0	$0
Totals	$14,098	$12,208	$12,166	$1,932	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$7,500	$0	$1,200	$2,000	$4,000	$300	$0	$0	$0	$0	$0	$0	$0	$0	$7,500
2019	$17,107	$0	$0	$424	$4,153	$6,830	$5,697	$3	$0	$0	$0	$0	$0	$0	$17,107
2020	$16,683	$0	$0	$442	$4,153	$6,830	$5,697	$3	$0	$0	$0	$0	$0	$0	$17,125
2021	$10,677	$0	$0	$178	$3,386	$10,327	$331	$19	$0	$0	$0	$0	$0	$0	$14,241
2022	$2,552	$0	$5	$178	$3,198	$7,990	$2,485	$67	$0	$0	$0	$0	$0	$0	$13,924
2023	$0	$0	$0	$196	$3,186	$7,784	$2,815	$0	$0	$0	$0	$0	$0	$0	$13,980
2024	$0	$0	$0	$196	$3,186	$7,784	$612	$2,286	$0	$0	$0	$0	$0	$0	$14,062

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$14,098,497	$12,166,018	$1,932,479	$0	$0	$0	$0	$0	$0	$0

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Description of CIP Changes:

Up-dated the scope development and procurement dates. Add the Ruby CS-289 Contract for the 30% design.

Up-dated the "Scope of work and other information" under the "Detailed Project Information" tab.

8/13/2020: Up-dated the project status, related project, and predecessor project name(s).

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

58.3

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/8/2016

Year Project Added to CIP: 2012

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Problem Statement:

Six (6) of the seven (7) 72-inch mains leaving the site are original to the 1930 plant construction and consist of riveted steel pipe material. Main No. 7 is a prestressed concrete cylinder pipe material installed in 1958. The steel mains are leaking and in need of replacement to maintain system reliability. Additionally, isolation valves associated with the 72-inch mains need to be replaced because several are leaking and unable to isolate flow. It is suspected that the other large -diameter isolation valves are in similar poor condition. Other yard piping, including gravity sewers and miscellaneous utility piping are also 1930 and 1958 vintage and therefore require rehabilitation/renewal or replacement.

Scope of Work/Project Alternatives:

This project consists of removal and replacement of the High Pressure Zone (HPZ) and Intermediate Pressure Zone (IPZ) discharge header piping and yard piping with additional replacement occurring outside the Springwell's Property to locations that minimize the number of isolation points required for work to be completed. The scope will be divided between IPZ and HPZ to maintain operations during construction. This project also includes miscelaneous site infrastructure improvements such as the 12" Fire Loop, new guardhouse, secondary entrance off of Tireman Ave, contractor trailer and lay down yard with utilities, replacement of access drives, sewer investigation and rehabilitation along misc. site electrical.

Other Important Info:

E. Klun 8/28/20 update based on the outcome of AECOM's effort on CS-272 Task 71013A, Phase I is as follows:

The project will be delivered by multiple projects comprised of equipment procurement, DB construction, consultant services, and DBB construction contracts as follows:

1.Contract A, Procurement of large diameter, high-performance butterfly valves to be installed under Contract D.
2.Contract B, Procurement of pressure regulating/flow control valves to be installed under Contract E.
3.Contract C, Procurement of isolation gate valves for both head and yard piping isolation valves to be installed under Contracts E and F.
4.Contract D, Installation of the butterfly valves procured under Contract A.
5.Contract E, DB Contract for intermediate pressure system header and yard piping replacement, installation of valves procured under Contracts B and C, and replacement of mains in Central Ave. and Indiana Ave.
6.Contract F, DBB Contract for high pressure system header and yard piping replacement, installation of valves procured under Contract C, Header Vault rehabilitation, various miscellaneous yard/site improvements, and site restoration.

Primary Driver: 6 - Public Benefit

Driver Explanation:

E. Klun 8/28/20 update as follows:
1.Experiences on CON-133 and CON-253 demonstrated that isolating mains with existing transmission system valves is difficult, and sometimes not possible. Condition of the the valves is such that if not addressed prior to piping replacement, contractor delays and change order can be expected. Segments of leaking and badly corroded mains were repaired under CON-133, demonstrating condition as being poor.

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

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CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Scoring

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CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Project Manager Weighted Score:	**68**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, F. Replace. or major rehab needed immediately, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance, B. Excessive maint. levels for the equipment/process area	Based on Phase II of the scope development under CS-272, the 54" plant outfall needs an immediate structural repair because failure would result in loss of filter backwash capability, essentially taking Springwells out of service. Due to heavy corrosion, joint and joint restraint hardware on the header piping needs to be replaced if the header piping replacement is delayed.
Performance (Service Level/Reliability)	4	F. Likelihood of serious inconveniencies and business impacts for affected customers; impact 6-10 wholesale, 100K retail, critical customers, E. Not doing the project frequent and repetitive service interruption and/or reliability issues†, B. High risk of performance failure; doesn't meet future requirements, A. Expected performance failures under normal conditions	No change in score.
Regulatory (Environmental/Legal)	2	A. Low risk of causing	No change in score.
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues, A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	No change in score. However, the longer the project gets pushed out, more O&M will be required to maintain the same level of service. The components keep getting older.
Health and Safety	3	D. Canceling project pose limited–moderate staff/public safety/hazard issues, some potential for minor injury/regulatory violations, B. Project moderate positive impact on staff/public H&S‡, A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	No change in score.
Public Benefit	5	D. Seen as sig. positive achievement for GLWA/communities/regions served; improve community/stakeholder relationships/confidence, B. Project will have a major and measurable positive impact by supporting member partners; coordination/ shared outcomes w/ other agencies/departments; project has a major impact on quality of life/aesthetics; Major positive impact on public, A. Project is key part of a strategic plan* for GLWA or politically driven	No change in score.
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	No change in score.
Efficiency and Innovation	4	B. Project will remove significant operational hurdles/ obstacles for significant equipment/process	No change in score.

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Review Committee Weighted Score:	**58.3**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	4	Scores carried over from previous year
Financial	3	Scores carried over from previous year
Efficiency and Innovation	3	Scores carried over from previous year

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 12/26/2037

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,968	$160	$160	$0	$0	$0	$0	$0	$0	$0	$1,064

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2029	12/26/2037
Capital Delivery Salary (Fringes)	7/1/2029	12/26/2037

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Phase: Professional Services (CS-272)

Phase Title: Professional Services (CS-272)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/9/2020

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-272)	$1,648	$1,648	$1,648	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71013A.01 / 71017A.04 / 71026A.07 / 71027A.01 / 71027A.02)	3/9/2020	12/31/2022

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Phase: CMAR #1

Phase Title: CMAR #1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 12/26/2037

Phase Comments/Description:

Cost Est. Class: Class 3

Cost Est. Date: 7/22/2021

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
CMAR #1	$215,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$169,872

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CMAR #1)	7/1/2029	12/26/2037
Construction (CMAR #1)	1/22/2030	12/26/2037

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,968	$160	$160	$0	$0	$0	$0	$0	$0	$0	$1,064
Professional Services (CS-272)	$1,648	$1,648	$1,648	$0	$0	$0	$0	$0	$0	$0	$0
CMAR #1	$215,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$169,872
Totals	$218,615	$1,807	$1,808	$0	$0	$0	$0	$0	$0	$0	$170,936

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$25,000	$0	$0	$2,000	$7,000	$8,000	$8,000	$0	$0	$0	$0	$0	$0	$0	$25,000
2019	$0	$0	$0	$0	$0	$0	$0	$0	$110,129	$0	$0	$0	$0	$0	$110,129
2020	$72	$0	$0	$0	$0	$0	$0	$0	$72	$110,578	$0	$0	$0	$0	$110,650
2021	$22,022	$0	$0	$4	$0	$1	$46	$608	$9,409	$11,958	$90,587	$0	$0	$0	$112,613
2022	$51,354	$0	$0	$4	$237	$267	$1,568	$4,614	$13,057	$16,057	$16,057	$22,122	$22,123	$22,122	$200,472
2023	$0	$0	$0	$4	$237	$290	$572	$0	$0	$0	$0	$0	$816	$1,878	$195,689
2024	$0	$0	$0	$4	$238	$291	$1,173	$101	$0	$0	$0	$0	$0	$11,353	$218,614

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$218,615,445	$1,807,947	$0	$0	$0	$0	$0	$0	$0	$170,935,989

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Description of CIP Changes:

(1) Moved start of contract expenditures from FY24 to FY25. JPM 8/8/2019
(2) Mains 1,2,3,4 could not be isolated during work under CON-133 and pose a risk to member communities in the event of a system pipe breach. JPM 8/8/2019
(3) CIP cost estimate updated to reflect pricing form a engineers opinion of cost for WWP CS-055 Yard Pipe Replacement a Class 3 estimate. JPM 8/8/2019
(4) CIP Cost updated to reflect replacement of all 72 inch yard piping within the Springwells fence line and out to the first valve outside the fence line as well as the 1930 pipe along Warren from Indiana to McDonald Avenue. JPM 8/8/2019
(5) Planned project using multiple DB contracts predicated on using the services of AECOM under its CIP program management services contract. 8/16/19 GAG

Although the cost of this CIP has been increased significantly from last fiscal year, the estimated cost of this total project will continue to be refined over the next fiscal year as more cost information is gathered. JPM 8/8/2019

E. Klun 8/28/20 update as follows:
1.Revised scope, schedule and costs based on CS-272 Task 71013A study report.
2.Schedule and spend moved up approximately 5 years to offset spend delay on CIP#114010 and to ensure the high lift pumping units can be isolated and replaced under CIP#114002

E. Klun 8/2/21 Updates as Follows: (1) updated to include CS-272 Subtask 27A, which is a 20% design and a basis of design report to be used in RFPs for professional services and CMAR contract; (2) updated costs and schedule to reflect change from last year's update of multiple engineering and construction contracts to a single design contract and CMAR contract based on the result of the final deliverable under CS-272 Subtask 13A; and (3) incorporating the SUE investigation completed under CS-201.

T. Kuhns 8/25/23 Updates as follows: (1) medium voltage system upgrades and low/high lift pump replacement are not scheduled to be completed until FY30, so this worked was delay to occur in series with the medium voltage work to limit the amount of work completed at the plant at one time.

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

77

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Maintenance building photo 1 of finished section of piping

Project Manager: Brian VanHall

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 3/6/2012

Year Project Added to CIP: 2012

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Problem Statement:

The steam, condensate return, compressed air, and natural gas piping systems at the Springwells WTP need to be replaced. These systems are original to the plant (i.e. 1930 or 1958) and are beyond their useful life. The existing steam and condensate systems are in poor condition and require multiple repairs each heating season due to frequent failures. This often requires taking the entire steam system out of service which places equipment at risk of freezing. Active steam, condensate, and air leaks require that the steam generators and air compressors run at higher loads to keep up with demand, resulting in additional stress on this equipment. Leaking steam and condensate contribute to significant moisture and condensation within the facility, which creates conditions for corrosion of other aging plant infrastructure. Failure of these lines is hazardous since steam and condensate could cause severe burns, and high pressure line breaks could result in injury from fast moving air.

Scope of Work/Project Alternatives:

This project is being delivered using a design-bid-build project delivery method. This engineering services contract involves designing a new, more energy-efficient steam heating system for the entire Springwells Water Treatment Plant, including all steam unit heaters, steam piping, condensate return piping, condensate return pumping stations, steam pressure reducing valves, and appurtenances. This project also includes replacing the compressed air piping in the plant used for service air. Once completed, the project will provide energy savings by eliminating extensive steam and condensate leaks. This project includes design and construction administration (CS-1671) and construction (CON-252) to replace the leaking steam piping, condensate return piping and compressed air piping throughout the plant. The scope of work includes replacing unit heaters, radiators, condensate return pump stations, pressure reducing valves, regulators, and heating system appurtenances throughout the plant. Once completed, the project will provide energy savings by eliminating extensive steam and condensate leaks. Replacement of steam generators was added to the scope by an approved change order.

Other Important Info:

Many components of the existing system are original to the existing heating system, are not functioning and need to be replaced. Seasonal work and sequencing with the heating season is required.

Primary Driver: 1 - Condition

Driver Explanation:

Frequent failures with steam and condensate piping that cannot be maintained reduces the heating effectiveness of the entire heating system and places heavy burdens on plant staff to repair leaks.

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Scoring

Project Manager Weighted Score:	**90.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, F. Replace. or major rehab needed immediately, E. Could initiate immediate funding request b/c "Urgent Necessity" in near term, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance	Score carried over from previous year
Performance (Service Level/Reliability)	5	F. No redundancy or feasible temporary options, B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures	Score carried over from previous year
Regulatory (Environmental/Legal)	1	B. Low/no impact on specific reg. compliance issues	Score carried over from previous year
Operations and Maintenance	4	F. Measurable reduction (50% - 74%) in reactive maintenance, D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues, C. Repairs total >=40% of the assets original value, A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	Score carried over from previous year
Health and Safety	5	E. serious injury/death, & major safety reg. violations., D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for, C. Likely to address major hazard issues or concerns, B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents	Score carried over from previous year
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	Score carried over from previous year
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	Score carried over from previous year
Efficiency and Innovation	4	C. Significant positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	Score carried over from previous year

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Review Committee Weighted Score:	**77**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Closed Out

Start Date: 5/18/2016

End Date: 5/7/2024

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2017

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$206	$206	$199	$7	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	5/18/2016	5/7/2024
Capital Delivery Salary (Fringes)	5/18/2016	5/7/2024

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/10/2020

End Date: 12/14/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$8	$8	$8	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71017A.05)	8/10/2020	12/14/2020

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Phase: Professional Services (MISC)

Phase Title: Professional Services (MISC)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 12/1/2016

End Date: 12/31/2016

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (MISC)	$5	$5	$5	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (MISC)	12/1/2016	12/31/2016

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Phase: Contractual Professional Services (Clark Const CON-252)

Phase Title: Contractual Professional Services (Clark Const CON-252)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 11/1/2021

End Date: 1/31/2022

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 2/1/2019

Cost Est. Source: Clark- Executed Contract

Cost Est. Prepared By: Clark

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Contractual Professional Services (Clark Const CON-252)	$277	$277	$277	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Contractual Professional Services (Clark Const CON-252)	11/1/2021	1/31/2022

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Phase: Design/Engineering (CS-1671)

Phase Title: Design/Engineering (CS-1671)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 5/18/2016

End Date: 5/7/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 5/18/2016

Cost Est. Source: METCO- Executed Contract

Cost Est. Prepared By: METCO

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-1671)	$1,776	$1,618	$1,515	$261	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-1671)	5/18/2016	5/7/2024

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Phase: Construction (Build) # 1 (CON-252)

Phase Title: Construction (Build) # 1 (CON-252)

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 2/1/2019

End Date: 5/7/2024

Phase Comments/Description:
NTP 2/1/2019

Cost Est. Class: Class 1

Cost Est. Date: 2/1/2019

Cost Est. Source: Clark-Executed Contract

Cost Est. Prepared By: Clark-Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (CON-252)	$25,920	$24,724	$23,957	$1,962	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (CON-252)	2/1/2019	5/7/2024

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$206	$206	$199	$7	$0	$0	$0	$0	$0	$0	$0
Professional Services	$8	$8	$8	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services (MISC)	$5	$5	$5	$0	$0	$0	$0	$0	$0	$0	$0
Contractual Professional Services (Clark Const CON-252)	$277	$277	$277	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-1671)	$1,776	$1,618	$1,515	$261	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1 (CON-252)	$25,920	$24,724	$23,957	$1,962	$0	$0	$0	$0	$0	$0	$0
Totals	$28,192	$26,837	$25,962	$2,230	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$5,950	$300	$3,450	$2,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,250
2019	$10,891	$280	$450	$1,406	$4,824	$4,654	$7	$0	$0	$0	$0	$0	$0	$0	$11,621
2020	$21,407	$0	$473	$3,109	$5,392	$7,754	$8,261	$0	$0	$0	$0	$0	$0	$0	$24,989
2021	$14,577	$0	$0	$2,373	$6,948	$6,932	$6,932	$713	$0	$0	$0	$0	$0	$0	$23,898
2022	$5,701	$0	$158	$1,900	$8,026	$9,756	$5,373	$328	$0	$0	$0	$0	$0	$0	$25,540
2023	$808	$261	$193	$1,900	$7,710	$8,381	$6,580	$808	$0	$0	$0	$0	$0	$0	$25,853
2024	$1,282	$261	$193	$1,900	$7,710	$8,381	$5,757	$2,484	$1,282	$0	$0	$0	$0	$0	$27,987

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$28,192,123	$25,961,710	$2,230,413	$0	$0	$0	$0	$0	$0	$0

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Description of CIP Changes:

Construction contract CON-252 was awarded and the CIP was updated this year to reflect the actual contract value and cash flow for the construction contract. In addition, funds have been added to this CIP this year for additional resident project representation (RPR), construction administration and project management services under the consulting engineering services contract CS-1671. BPV 8-6-19
Spend projections were revised to capture actuals to date and updated forecasting. BPV 8/20/20
Costs and schedule updated to capture scope change to replace steam generators. BPV 7/7/2022
Updated scope to include steam generator replacement. BPV 6/14/2023

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

71.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/1/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells WTP

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Problem Statement:

The existing concrete pavement that covers the 1958 settled water conduits has failed with significant concrete deterioration and corrosion of the reinforcement steel. The condition of the concrete pavement has deteriorated over the past 12 months and the concrete is crumbling in many areas. The conditions in certain areas are such that there are now potential safety hazards to those walking on the pavement. The plant chemists have to walk some of the areas frequently to obtain settled water samples. The concrete pavement over the 1958 settled water conduits also serves as a service road that provides vehicular access to the 1958 filter building. This paved service road also serves as the roof to the settled water conduit that conveys settled water to the 1958 filter train at Springwells.

Scope of Work/Project Alternatives:

This CIP project is being delivered under a design-bid-build project delivery method and generally includes the following scope of work:
1. Demolition of the existing concrete pavement that covers the 1958 settled water conduit and the loading dock.
2. Placement of new concrete pavement that covers the 1958 settled water conduit and the loading dock.
3. Demolition and installation of handrail around the 1958 settled water conduit.
4. Demolition of the existing concrete loading dock.
5. Placement of new concrete loading dock.

Other Important Info:

Challenge: There are equipment limitations on the settled water conduit to avoid damaging the structure concrete of the settled water conduit.

Primary Driver: 1 - Condition

Driver Explanation:

The existing concrete pavement has failed in multiple areas and is extensive.

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Scoring

Project Manager Weighted Score:	**72.6**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, C. High risk of breakdown or imminent failure with serious impact on performance, D. Immediate replacement or rehabilitation required	The concrete topping slab of the 1958 Settled Water Conduit is in poor condition and required replacement.
Performance (Service Level/Reliability)	4	A. Expected performance failures under normal conditions	When the 1958 Settled Water Conduit topping slab was being removed, it was clearly identified that it started to cause structural issues to the structural concrete of the Settled Water Conduit. Additional demo was required in some areas to get to sound concrete.
Regulatory (Environmental/Legal)	1	B. Low/no impact on specific reg. compliance issues	
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	
Health and Safety	4	A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years	
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	
Financial	1	A. Minimal to no impact to GLWA	
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Review Committee Weighted Score:	**71.7**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/9/2021

End Date: 5/2/2022

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2018

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$115	$115	$115	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	3/9/2021	5/2/2022
Capital Delivery Salary (Fringes)	3/9/2021	5/2/2022

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 10/9/2019

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$228	$228	$228	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71005A.01 / 71005B.01 / 71017A.06 / 71026A.03)	10/9/2019	12/31/2022
Design/Engineering (CS-272)	10/9/2019	12/31/2022

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Phase: Professional Services (CS-166)

Phase Title: Professional Services (CS-166)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2021

End Date: 5/2/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-166)	$10	$10	$10	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-166)	6/1/2021	5/2/2022

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Closed Out

Start Date: 9/7/2021

End Date: 11/30/2021

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$26	$26	$26	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-259)	9/7/2021	11/30/2021

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Phase: Design/Engineering (CS-272)

Phase Title: Design/Engineering (CS-272)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 10/9/2019

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-272)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-272) (net-zero cost account to be archived)	10/9/2019	12/31/2022

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/9/2021

End Date: 5/2/2022

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/9/2021

Cost Est. Source: Spencer Brothers- Executed Contract

Cost Est. Prepared By: Spencer Brothers- Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$1,187	$1,187	$1,187	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	3/9/2021	5/2/2022

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$115	$115	$115	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$228	$228	$228	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services (CS-166)	$10	$10	$10	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering	$26	$26	$26	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-272)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$1,187	$1,187	$1,187	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$1,565	$1,565	$1,566	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2020	$862	$0	$206	$656	$0	$0	$0	$0	$0	$0	$0	$0	$862
2021	$1,670	$0	$94	$1,663	$7	$0	$0	$0	$0	$0	$0	$0	$1,764
2022	$2,001	$0	$90	$189	$566	$1,435	$0	$0	$0	$0	$0	$0	$2,281
2023	$0	$1	$94	$333	$1,096	$0	$0	$0	$0	$0	$0	$0	$1,524
2024	$0	$1	$95	$334	$1,154	($38)	$0	$0	$0	$0	$0	$0	$1,543

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$1,565,739	$1,565,739	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Updated the "primary driver" under the "Detaited project Information" tab and adjusted the "Public health and Safety" score under the "Project Scoring"

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

89.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Nichole Sajdak

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/1/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Problem Statement:

The existing 1958 flocculators are beyond useful service life and require replacement.

Scope of Work/Project Alternatives:

This CIP will be delivered under a design-bid-build project delivery model. The scope of work will generally include the following:
1. Replacement of the existing flocculator drives, motors, and control panels.
2. Replacement of all drive shaft bearings and associated grease lines.
3. Replacement of access doors between the flocculator chambers
4. Replacement of ladder rungs to all flocculators.
5. Improvement of flocculation system related instrumentation and controls.
6. Flocculator basin improvements.
7. Installation of new turbidity meters including two (2) builds to measure the effluent turbidity of the 1958 Sedimentation Basin.

Other Important Info:

Implementation of this CIP project is being sequenced and coordinated with the 1930 Sedimentation Basins Sluice Gate Improvements Project.

Primary Driver: 3 - Regulatory

Driver Explanation:

Existing flocculators are beyond the useful service life

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Scoring

Project Manager Weighted Score:	**88.5**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining, B. Equipment/process functions but requires high level of maintenance to remain operational, D. Replacement or major rehab needed in the short term	
Performance (Service Level/Reliability)	4	B. High risk of performance failure; doesn't meet future requirements	There are currently 5 out of 20 flocculators not in service. Last years CIP update, there were 3 flocculators out of service and over one year, there a two additional. This could impact the performance of the 1958 train with not all flocculators in service.
Regulatory (Environmental/Legal)	5	A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public, B. Project part of a mandated or otherwise enforceable program, D. Numerous historical evidence of permit/regulatory violations	the 1958 Flocculators are listed has one of the two significant deficiencies on the 2022 Sanitary Survey completed by EGLE.
Operations and Maintenance	3	B. Will run in automatic mode	
Health and Safety	1	A. No failure reasonably expected to occur	
Public Benefit	2	A. Low to moderate impact by supporting City/region/neighborhood growth	
Financial	2	A. Low financial impact to GLWA; No grants/other external funding	
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Review Committee Weighted Score:	**89.7**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	4	
Regulatory (Environmental/Legal)	5	
Operations and Maintenance	3	
Health and Safety	2	
Public Benefit	2	
Financial	3	
Efficiency and Innovation	2	

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 1/19/2021

End Date: 5/11/2027

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2018

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$309	$101	$94	$46	$59	$59	$51	$0	$0	$169	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/19/2021	5/11/2027
Capital Delivery Salary (Fringes)	1/19/2021	5/11/2027

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/10/2020

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$83	$83	$83	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71017A.07 / 71026A.01)	8/10/2020	12/31/2022

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Phase: Design & Construction Assistance # 1

Phase Title: Design & Construction Assistance # 1

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/19/2021

End Date: 5/11/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/19/2021

Cost Est. Source: Fishbeck- Executed Contract

Cost Est. Prepared By: Fishbeck- Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1	$1,893	$924	$843	$264	$275	$275	$237	$0	$0	$786	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (2000279)	1/19/2021	5/11/2027

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Phase: Design/Engineering (CS-259)

Phase Title: Design/Engineering (CS-259)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 9/1/2021

End Date: 9/30/2021

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-259)	$45	$45	$45	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-259)	9/1/2021	9/30/2021

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 5/1/2023

End Date: 5/11/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 5/22/2023

Cost Est. Source: FH Pashcen- Executed Contract

Cost Est. Prepared By: FH Pashcen- Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$25,469	$1,976	$0	$6,253	$6,712	$6,712	$5,792	$0	$0	$19,215	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	5/1/2023	5/11/2027

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$309	$101	$94	$46	$59	$59	$51	$0	$0	$169	$0
Professional Services	$83	$83	$83	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$1,893	$924	$843	$264	$275	$275	$237	$0	$0	$786	$0
Design/Engineering (CS-259)	$45	$45	$45	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$25,469	$1,976	$0	$6,253	$6,712	$6,712	$5,792	$0	$0	$19,215	$0
Totals	$27,798	$3,128	$1,065	$6,563	$7,045	$7,045	$6,080	$0	$0	$20,170	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2020	$2,328	$0	$0	$0	$10	$2,314	$4	$0	$0	$0	$0	$0	$2,328
2021	$9,267	$0	$29	$315	$635	$2,265	$6,035	$17	$0	$0	$0	$0	$9,296
2022	$11,790	$0	$1	$567	$371	$6,474	$4,942	$2	$0	$0	$0	$0	$12,358
2023	$19,940	$0	$1	$188	$600	$660	$8,850	$8,850	$1,581	$0	$0	$0	$20,730
2024	$23,147	$0	$1	$188	$706	$1,225	$6,004	$5,987	$5,987	$5,167	$0	$0	$25,267

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$27,798,447	$1,065,249	$6,563,378	$7,044,961	$7,044,961	$6,079,898	$0	$0	$20,169,819	$0

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Description of CIP Changes:

New project added to the CIP. PF 2018

The cost of this CIP was increased from last fiscal year because the cost of consulting engineering services was added this fiscal year, and the estimated cost for construction was increased because the concept design of the project was advanced from last year. In addition, the schedule to implement this CIP was expanded to account for procurement of engineering services, conducting the detailed design, and to coordinate with another project at Springwells related to replacement of the 1930 sedimentation basin sluice gates. PF 8/9/2019

Cost for engineering services was updated with contract value. The cost for construction increased to include full replacement of flocculator equipment.

CIP Number: 114018

Project Title: Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Springwells

- [ ] **Project New to CIP**
- [ ] **Useful Life > 20 Yrs**
- [ ] **Multiple Phases**

Project Score

62.7

- [ ] **Innovation**
- [ ] **WW Master Plan**
- [ ] **Water Master Plan Right Sizing**
- [ ] **Wet Weather Resiliency**
- [ ] **Redundancy**
- [ ] **Predecessor Project(s)**
- [ ] **Linear Assets Outside of Facilities**
- [ ] **CSO**
- [ ] **Pumps**
- [ ] **Storage**
- [x] **Treatment**

Picture

Project Manager: Justin Kietur

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/12/2019

Year Project Added to CIP: 2019

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Water Treatment Plants

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] **From Program?**

Program Number:

Delivery Method: PDB (Progressive Design-Build)

Delivery Method Details:

- [ ] **Is a Predecessor Project?**

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 114018

Project Title: Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements

Problem Statement:

The electrical substation located inside the Service Building provides electrical service to the entire service building including the filter wash water pumping units. The existing electrical substation has experienced corrosion to its interior components and electrical cables. As a result the substation does not automatically switch-over during power trips and requires manual switch-over. This substation provides power to the filter wash water pumps and if there are power disruptions associated with the substation, the plant is not able to wash filters.

The electrical breaker panel located in the 1930 filter building is original construction and is severely corroded. This panel supplies power to a portion of the 1930 Filter Building and its failure would result in loss of water production capacity.

The concrete area of the phosphoric acid outdoor fill station is deteriorated and the water service to the associated emergency eye-wash station suffers frequent breaks.

Scope of Work/Project Alternatives:

Project will be delivered using a progressive design-build project delivery. The scope of improvements will generally include:
1. Replacement of the electrical substation in the 1958 Service Building
2. Connection of replacement electrical substation to Ovation for status monitoring
3. Replacement of electrical panel in 1930 plant and new conduit and cable runs to the associated equipment
4. Rehab of masonry on exterior of phosphoric acid fill station
5. Insulation of piping and pipe chase behind phosphoric acid fill station
6. Installation of tank level gauges and alarms at fill station to prevent overfilling of chemical storage tanks

Other Important Info:

None

Primary Driver: 1 - Condition

Driver Explanation:

The substation is in poor condition due to corrosion of components.

CIP Number: 114018

Project Title: Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements

Scoring

Project Manager Weighted Score:	**56**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	C. Shows abnormal wear and is likely to cause significant performance deterioration in the near term, D. Replacement or major rehab needed in the short term	
Performance (Service Level/Reliability)	3	E. Canceling project potential for service/reliability issues† a few times/yr, G. Low redundancy in the area	
Regulatory (Environmental/Legal)	1	C. Not part of mandated/enforceable program	
Operations and Maintenance	3	C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues	
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	
Public Benefit	1	C. Minimal/no impact on public/GLWA image & relationships	
Financial	2	A. Low financial impact to GLWA; No grants/other external funding	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**62.7**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 114018

Project Title: Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 11/13/2029

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$178	$0	$0	$0	$0	$0	$0	$75	$75	$150	$28

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2027	11/13/2029
Capital Delivery Salary (Fringes)	7/1/2027	11/13/2029

CIP Number: 114018

Project Title: Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/10/2020

End Date: 12/14/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71017A.08) (net-zero cost account to be archived)	8/10/2020	12/14/2020

CIP Number: 114018

Project Title: Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 11/13/2029

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/18/2021

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$2,163	$0	$0	$0	$0	$0	$0	$58	$1,533	$1,592	$571

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2027	6/30/2028
Construction	7/1/2028	11/13/2029

CIP Number: 114018

Project Title: Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$178	$0	$0	$0	$0	$0	$0	$75	$75	$150	$28
Professional Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering	$2,163	$0	$0	$0	$0	$0	$0	$58	$1,533	$1,592	$571
Totals	$2,340	$0	$0	$0	$0	$0	$0	$133	$1,608	$1,741	$599

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2021	$1,508	$0	$0	$90	$1,378	$40	$0	$0	$0	$0	$0	$1,508
2022	$1,445	$0	$100	$80	$95	$7	$1,263	$0	$0	$0	$0	$1,545
2023	$2,305	$0	$0	$30	$55	$1,800	$450	$0	$0	$0	$0	$2,335
2024	$133	$0	$0	$0	$0	$0	$0	$0	$0	$133	$1,608	$2,341

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$2,340,568	$0	$0	$0	$0	$0	$133,325	$1,608,071	$1,741,395	$599,172

Description of CIP Changes:

Changes made for FY 23 CIP update. JK 08/05/21

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Water Works Park

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

77.9

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 4/23/2007

Year Project Added to CIP: 2007

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Waterworks Park WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Problem Statement:

The existing yard piping is 80-140 years old and requires replacement with new piping installed in a more efficient configuration.

Scope of Work/Project Alternatives:

This project is being delivered using a design-bid-build project delivery method. The scope of work generally includes:
1. Removing existing yard piping, valves and buried venturi meters and related vaults.
2. Constructing new yard piping, valves, water production flow meters, buried valve and meter vaults, and related system equipment.
3. Connecting to existing transmission main piping.
4. Testing and commissioning the new main, valves and water production flow metering equipment.
5. Restoring the site.

Other Important Info:

This project is being coordinated with the new Waterworks Park to Northeast Transmission Main project.

Challenges: Complicated sequence of construction, and demands of DWSD must be maintained along with the coordination transmission system between Water Works Park and Northeast WTPs. Condition of existing valves required to complete the work is unknown. Complex construction staging is accounted for in the design to avoid loss of service and delays to the construction contract. Multiple line stops are included as contingency to construction contract in case existing valves do not provide isolation.

Primary Driver: 1 - Condition

Driver Explanation:

Yard piping is long past its design service life and there is a history of leaks and breaks. The yard piping is critical for delivery of finished water when the Northeast WTP is taken offline.

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Scoring

Project Manager Weighted Score:	**78.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, C. High risk of breakdown or imminent failure with serious impact on performance, D. Immediate replacement or rehabilitation required, F. Replace. or major rehab needed immediately	Scores same as last year. JEM 7/7/2022
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, E. Project impact >11 wholesale, 1M retail, or critical customer	Scores same as last year. JEM 7/7/2022
Regulatory (Environmental/Legal)	1	A. No risk of causing	Scores same as last year. JEM 7/7/2022
Operations and Maintenance	5	A. Unsustainable levels of O/M required to keep in service that will still not ensure future stable/proper operation, F. Measurable reduction (>=75%) in reactive maint.	Scores same as last year. JEM 7/7/2022
Health and Safety	2	B. Project limited positive impact on staff/public H&S‡; No major staff or hazard issues or concerns addressed	Scores same as last year. JEM 7/7/2022
Public Benefit	4	A. Project key part of a strategic plan* for GLWA (i.e. good probability leads to new customers), D. Significant, noticeable impact on the public & GLWA image; seen as achievement for GLWA/communities/regions served	Scores same as last year. JEM 7/7/2022
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA., D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Scores same as last year. JEM 7/7/2022
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	Scores same as last year. JEM 7/7/2022

Review Committee Weighted Score:	**77.9**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	2	Scores carried over from previous year
Public Benefit	4	Scores carried over from previous year
Financial	3	Scores carried over from previous year
Efficiency and Innovation	3	Scores carried over from previous year

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 6/26/2017

End Date: 3/2/2026

Phase Comments/Description:

Cost Est. Class: Class 4

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$504	$126	$123	$111	$162	$109	$0	$0	$0	$270	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	6/26/2017	3/2/2026
Capital Delivery Salary (Fringes)	6/26/2017	3/2/2026

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2016

End Date: 6/30/2017

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$9	$9	$9	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-055)	7/1/2016	6/30/2017

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Phase: Design/Engineering (CS-055)

Phase Title: Design/Engineering (CS-055)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 6/26/2017

End Date: 6/29/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 6/26/2017

Cost Est. Source: AECOM- Executed Contract

Cost Est. Prepared By: AECOM

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-055)	$5,598	$3,403	$3,258	$770	$939	$631	$0	$0	$0	$1,570	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-055)	6/26/2017	6/29/2027

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Phase: Design/Engineering - (RECLASSIFICATION 115001/115003/115004)

Phase Title: Design/Engineering - (RECLASSIFICATION 115001/115003/115004)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 1/1/2020

End Date: 1/31/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering - (RECLASSIFICATION 115001/115003/115004)	$44	$44	$44	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering - (RECLASSIFICATION 115001/115003/115004)	1/1/2020	1/31/2020

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Phase: Construction (Build) # 1 (2000610)

Phase Title: Construction (Build) # 1 (2000610)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 10/19/2020

End Date: 6/29/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/19/2020

Cost Est. Source: LGC-Executed Contract

Cost Est. Prepared By: LGC-Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (2000610)	$49,468	$28,705	$25,337	$9,283	$8,885	$5,964	$0	$0	$0	$14,848	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2000610)	10/19/2020	6/29/2027

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Phase: Miscellaneous

Phase Title: Miscellaneous

Phase Budget: Water

Phase Status: Closed Out

Start Date: 5/1/2010

End Date: 6/30/2015

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Miscellaneous	$450	$450	$450	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Pre-CAFR Actuals	5/1/2010	6/30/2015

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$504	$126	$123	$111	$162	$109	$0	$0	$0	$270	$0
Professional Services	$9	$9	$9	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-055)	$5,598	$3,403	$3,258	$770	$939	$631	$0	$0	$0	$1,570	$0
Design/Engineering - (RECLASSIFICATION 115001/115003/115004)	$44	$44	$44	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1 (2000610)	$49,468	$28,705	$25,337	$9,283	$8,885	$5,964	$0	$0	$0	$14,848	$0
Miscellaneous	$450	$450	$450	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$56,073	$32,736	$29,221	$10,164	$9,986	$6,703	$0	$0	$0	$16,688	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$53,900	$0	$5,500	$27,900	$20,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$53,900
2019	$70,630	$9	$412	$968	$20,771	$34,466	$14,397	$28	$0	$0	$0	$0	$0	$0	$71,051
2020	$51,999	$0	$682	$899	$17,333	$17,333	$17,333	$0	$0	$0	$0	$0	$0	$0	$53,580
2021	$70,008	$0	$0	$1,760	$251	$5,462	$13,349	$21,478	$20,883	$8,836	$0	$0	$0	$0	$72,019
2022	$31,449	$0	$430	$1,077	$882	$4,372	$6,322	$6,322	$6,321	$6,322	$6,163	$6,500	$10,105	$0	$54,815
2023	$37,502	$9	$672	$1,077	$631	$2,911	$11,790	$11,790	$11,823	$11,790	$2,100	$0	$0	$0	$55,042
2024	$28,420	$9	$672	$1,077	$631	$2,911	$6,287	$15,616	$10,657	$10,628	$7,134	$0	$0	$0	$56,073

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$56,073,060	$29,220,785	$10,163,865	$9,985,688	$6,702,722	$0	$0	$0	$16,688,409	$0

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Description of CIP Changes:

Project costs updated based on actual bid costs.

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Water Works Park

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

93

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Water Works Park Water Treatment Plant

Project Manager: Michael Dunne

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/1/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Water Works Park WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Problem Statement:

The existing ventilation systems are not adequate for the chemical storage rooms, the ozone generator room, ozone destruct room, laboratory rooms, pilot plant rooms, flocculation and sedimentation rooms, and filter galleries at the Water Works Park Water Treatment Plant. Inadequate ventilation poses safety hazards to employees and visitors.

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work will generally include the following:
1) Design of the improved, new ventilation systems for the facility.
2) Selective removal of existing ventilation system equipment.
3) Construction of new mechanical ventilation systems.
4) Installation of electrical feeders for new mechanical ventilation equipment.
5) Installation of new instrumentation equipment for monitoring and alarms, including interlocks with the process control network.
6) Corrective work on concrete roof of Ozone Contactor 1 to mitigate deteriorating concrete conditions and weather proof to avoid further degradation.

Other Important Info:

Many of the areas of work are adjacent to the tour path. Ventilation improvements should eliminate noxious gasses from entering the tour path.

Primary Driver: 5 - Public Health and Safety

Driver Explanation:

Inadequate ventilation system poses potential health and safety hazards to employees and visitors.

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Scoring

Project Manager Weighted Score:	**94.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	A. Asset has <50% of its design service life remaining, D. Moderate renewal or rehab needed in short term	Ventilation system is at or very near its design life.
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*	Ventilation is so poor in some locations of the plant, staff believes that the atmosphere is accelerating the degradation of plant process equipment.
Regulatory (Environmental/Legal)	5	C. Measurable positive regulatory/compliance impact (CSO, permits)	The ventilation system is not capable of removing noxious gasses from many rooms. Ozone warning beacons and alarms are inoperative.
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value, C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues	Moderate levels of O&M work is needed.
Health and Safety	5	B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents, C. Likely to address major hazard issues or concerns, D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for	Lack of proper ventilation in chemical storage rooms and ozone rooms exposes plant staff to hazardous environments.
Public Benefit	4	E. Canceling project chance to have major negative public impact	Moderate impact to public benefit will be made during this project.
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Canceling project will lead to more degradation of plant process equipment that is exposed to hazardous environments.
Efficiency and Innovation	2	C. Low positive impact on water use, effluent reuse/recycling or other GLWA strategic initiative*; business process optimization and institutional knowledge; O&M process/operational efficiency	Low impact to efficiency or innovation will be made during this project.

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Review Committee Weighted Score:	**93**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	5	Scores carried over from previous year
Operations and Maintenance	2	Scores carried over from previous year
Health and Safety	5	Scores carried over from previous year
Public Benefit	3	Scores carried over from previous year
Financial	3	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/29/2020

End Date: 8/29/2025

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2018

Cost Est. Source: HRC

Cost Est. Prepared By: HRC

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$238	$70	$41	$90	$92	$15	$0	$0	$0	$107	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	9/29/2020	8/29/2025
Capital Delivery Salary (Fringes)	9/29/2020	8/29/2025

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Phase: Design & Construction Assistance # 1 (1802499)

Phase Title: Design & Construction Assistance # 1 (1802499)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/29/2020

End Date: 2/26/2026

Phase Comments/Description:
Engineering Services Contract to be retained

Cost Est. Class: Class 1

Cost Est. Date: 9/29/2020

Cost Est. Source: HDR-Executed Contract

Cost Est. Prepared By: HDR-Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (1802499)	$1,350	$1,000	$936	$191	$191	$31	$0	$0	$0	$223	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1802499)	9/29/2020	2/26/2026

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Phase: Construction (Build) # 1 (2103380)

Phase Title: Construction (Build) # 1 (2103380)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 8/1/2022

End Date: 2/26/2026

Phase Comments/Description:
Construction contract to be determined

Cost Est. Class: Class 1

Cost Est. Date: 8/1/2022

Cost Est. Source: CCC-Excuted Contract

Cost Est. Prepared By: CCC-Excuted Contract

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (2103380)	$14,953	$8,393	$4,965	$5,814	$3,585	$589	$0	$0	$0	$4,174	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2103380)	8/1/2022	2/26/2026

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$238	$70	$41	$90	$92	$15	$0	$0	$0	$107	$0
Design & Construction Assistance # 1 (1802499)	$1,350	$1,000	$936	$191	$191	$31	$0	$0	$0	$223	$0
Construction (Build) # 1 (2103380)	$14,953	$8,393	$4,965	$5,814	$3,585	$589	$0	$0	$0	$4,174	$0
Totals	$16,541	$9,462	$5,942	$6,096	$3,868	$636	$0	$0	$0	$4,504	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2020	$5,064	$7	$507	$3,907	$650	$0	$0	$0	$0	$0	$0	$0	$5,071
2021	$8,527	$0	$1,614	$1,999	$3,610	$2,539	$379	$0	$0	$0	$0	$0	$10,141
2022	$4,235	$0	$1	$380	$523	$1,621	$1,592	$400	$100	$307	$0	$0	$4,924
2023	$10,600	$0	$1	$562	$286	$5,399	$3,101	$2,101	$0	$0	$0	$0	$11,449
2024	$12,058	$0	$1	$562	$201	$3,718	$5,580	$5,564	$915	$0	$0	$0	$16,541

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$16,541,211	$5,941,877	$6,095,727	$3,867,803	$635,803	$0	$0	$0	$4,503,606	$0

Description of CIP Changes:

Updated requested CIP budget based on final recommendations of the Contract CS-147 condition assessment report. Also, updated the detailed project information again based on the final CS-147 recommendations relative to the scope of work. 8/15/2019 MD

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Water Works Park

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

53.9

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Water Works Park Water Treatment Plant

Project Manager: Michael Dunne

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/15/2019

Year Project Added to CIP: 2019

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Water Works Park WTP

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Problem Statement:

Many of the existing roadways and pedestrian sidewalks have substantial cracking, crumbling concrete and un-even surfaces whose condition becomes deteriorates every year. The concrete bases for several portions of the site perimeter security fencing are also heavily deteriorated with crumbling concrete. Additionally, there is insufficient employee and visitor parking space for the facility and new parking areas are needed to meet the needs of employees and visitors. There is no truck vehicle weight scale on site to verify the quantities of chemicals delivered to the site from suppliers or to verify quantities of dewatered sludge transported off site for disposal. Currently, vendor-generated quantities are used solely for payment purposes putting GLWA at a disadvantage whenever disputes arise. Lastly, there are several areas throughout the grounds with concrete in a poor condition that requires rehabilitation.

Scope of Work/Project Alternatives:

This project will be delivered using a design-build project delivery. The schedule is predicated on using AECOM's design build assistance services under its CIP Program Management Contract CS-272. The scope of work for this project includes the following:
1. Construct 30 car parking lot adjacent to plant employee lot.
2. Construct 20 car parking lot across from maintenance garage to serve as GLWA vehicle parking.
3. Construct 10 car parking lot across from engineering building to serve as visitor parking.
4. Construct 20 car parking lot adjacent to current engineering building lot.
5. Install hardscape, softscape, and signage on engineering building.
6. Install truck weigh scale.
7. Repair perimeter fencing and support structures.
8. Repair misc. concrete defects by shallow spall repair and crack injections.
9. Remove and replace areas of failing roadway.

Other Important Info:

Concrete conditions will continue to worsen over the years.

Primary Driver: 5 - Public Health and Safety

Driver Explanation:

Many of the existing roadways, sidewalks and other structures have deteriorated concrete conditions that require rehabilitation

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Scoring

Project Manager Weighted Score:	**57**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	C. May have minor failures or diminished efficiency; some performance deterioration, D. Moderate renewal or rehab needed in short term	Significant number of cracks and concrete repairs are needed throughout the plant grounds and process areas.
Performance (Service Level/Reliability)	3	B. Performance acceptable–marginal; likely not to meet future req's	Continued degradation of concrete components may lead to premature failure.
Regulatory (Environmental/Legal)	3	D. Project not part of mandated or enforceable program but directly or indirectly related to expected future requirements	Spall repair and crack injection is needed in many areas of the process building.
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	Moderate levels of O&M work are needed.
Health and Safety	2	A. Low chance of failure occurring; failure easily mitigated w/ no safety/health/env. impacts	Little impact to health and safety will be made as a result of this project.
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area, C. Minimal/no impact on public/GLWA image & relationships	The project will have a low impact on public benefit.
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Canceling the project will increase the financial burden as the condition of the assets continue to degrade.
Efficiency and Innovation	1	B. Low impact on business process optimization; no time/cost saving	No impact to efficiency or innovation will take place as a result of this project.

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Review Committee Weighted Score:	**53.9**	
Criteria Name	**Score**	**Comment**
Condition	2	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	2	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/23/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$164	$0	$0	$0	$0	$0	$0	$41	$41	$82	$82

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2027	6/30/2031
Capital Delivery Salary (Fringes)	7/1/2027	6/30/2031

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Phase: Design & Construction Assistance # 1 (CS-272)

Phase Title: Design & Construction Assistance # 1 (CS-272)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2031

Phase Comments/Description:
AECOM is the Contract No. CS-272 vendor

Cost Est. Class: Class 5

Cost Est. Date: 8/23/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (CS-272)	$1,343	$0	$0	$0	$0	$0	$0	$341	$340	$681	$662

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2027	6/30/2031

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Phase: Construction (Build) # 1 (TBD)

Phase Title: Construction (Build) # 1 (TBD)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 6/6/2029

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/23/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (TBD)	$4,389	$0	$0	$0	$0	$0	$0	$0	$145	$145	$4,244

Phase Dates

Activity Name	Start Date	End Date
Construction	6/6/2029	6/30/2031

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$164	$0	$0	$0	$0	$0	$0	$41	$41	$82	$82
Design & Construction Assistance # 1 (CS-272)	$1,343	$0	$0	$0	$0	$0	$0	$341	$340	$681	$662
Construction (Build) # 1 (TBD)	$4,389	$0	$0	$0	$0	$0	$0	$0	$145	$145	$4,244
Totals	$5,895	$0	$0	$0	$0	$0	$0	$382	$526	$908	$4,988

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2021	$0	$0	$0	$0	$0	$0	$0	$5,643	$0	$0	$0	$5,643
2022	$6	$0	$0	$0	$0	$0	$0	$6	$297	$805	$3,801	$5,882
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$390	$1,834	$5,881
2024	$382	$0	$0	$0	$0	$0	$0	$0	$0	$382	$526	$5,896

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$5,895,650	$0	$0	$0	$0	$0	$382,149	$525,813	$907,962	$4,987,688

Description of CIP Changes:

Removed sidewalk construction from entrance to admin building - completed in scope of 115001.

CIP Number: 115007

Project Title: Water Works Park High Lift Pumping Station Modernization

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Water Works Park

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

58.3

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Water Works Park High Lift Pumping Station

Project Manager: Michael Dunne

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/20/2020

Year Project Added to CIP: 2022

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Water Works Park WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: PDB (Progressive Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 115007

Project Title: Water Works Park High Lift Pumping Station Modernization

Problem Statement:

The Water Works Park Water Treatment Plant high-lift system is original construction from 1960. The pumping system is nearing the end of its useful lift and there is a need to improve configurations, capacity, redundancy, electrical efficiency, instrumentation, monitoring and controls of the High Lift pumping system at Water Works Park.

Scope of Work/Project Alternatives:

This project will be delivered under a Progressive Design Build delivery method. In general, the scope will contain the following items:
1. Replace and/or re-engineer pumps and motors based on an evaluation of contemporary and future flows, pressure, and energy needs.
2. Replace and/or improve the current high-pressure water system to create a more robust process.
3. Improve ventilation in the pump room to allow pumping units to operate at proper working temperatures.
4. Replace or repair isolation gates in the High Lift suction well.
5. Convert current DC excitation system with modern AC system.
6. Systematic upgrades to the electrical supply and equipment.
7. Improvements to the instrumentation related to water quality, pump operating parameters, water pressures, and valving.

Other Important Info:

The current pumping system in the High Lift building at Water Works Park was constructed in the early 1960s. Now, 60 years later, it is necessary to realign Water Works Park's pumping system with contemporary and future flow, pressure, and energy requirements.

Primary Driver: 8 - Efficiency

Driver Explanation:

The station's construction is original to the 1960s. Although the original system is providing consistent service, GLWA should start planning for rehab of the station within the CIP planning cycle.

CIP Number: 115007

Project Title: Water Works Park High Lift Pumping Station Modernization

Scoring

Project Manager Weighted Score:	**57.4**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	B. Functionally sound and acceptable, signs of normal wear, C. May have minor failures or diminished efficiency; some performance deterioration	Signs of normal wear for age can be seen on the building architecture (100+ years) and pumping equipment (60+) years.
Performance (Service Level/Reliability)	3	B. Performance acceptable–marginal; likely not to meet future req's	The project will eliminate single points of failures and improve reliability and redundancy.
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	Little impact to regulatory standards/laws will be made as a result of this project.
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	Moderate levels of O&M work is needed.
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	The project intends to increase the reliability of the station, thereby reducing risk of water delivery interruptions and pressure loss in the distribution system.
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	Project added to CIP as recommended by 2015 Water Master Plan to compensate for repurposing of the Northeast Water Treatment Plant.
Financial	2	E. Total financial consequence of $100,000 - $249,999	Moderate impact to financial consequences will be made as a result of this project.
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	New pumping components and configuration will allow for better efficiencies in the future.

CIP Number: 115007

Project Title: Water Works Park High Lift Pumping Station Modernization

Review Committee Weighted Score:	**58.3**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	2	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	3	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 115007

Project Title: Water Works Park High Lift Pumping Station Modernization

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 3/20/2039

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,035	$0	$0	$0	$0	$0	$0	$0	$0	$0	$532

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2029	3/20/2039
Capital Delivery Salary (Fringes)	7/1/2029	3/20/2039

CIP Number: 115007

Project Title: Water Works Park High Lift Pumping Station Modernization

Phase: Design-Build

Phase Title: Design-Build

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 3/20/2039

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/18/2020

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build	$114,055	$0	$0	$0	$0	$0	$0	$0	$0	$0	$18,373

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2029	3/20/2039
Construction	12/19/2033	3/20/2039

CIP Number: 115007

Project Title: Water Works Park High Lift Pumping Station Modernization

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,035	$0	$0	$0	$0	$0	$0	$0	$0	$0	$532
Design-Build	$114,055	$0	$0	$0	$0	$0	$0	$0	$0	$0	$18,373
Totals	$115,089	$0	$0	$0	$0	$0	$0	$0	$0	$0	$18,905

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2022	$13,826	$0	$280	$530	$530	$780	$11,705	$18,494	$18,310	$18,187	$88,946
2023	$0	$0	$50	$0	$0	$0	$0	$0	$2,650	$2,000	$96,800
2024	$2,012	$0	$0	$0	$0	$0	$0	$0	$2,012	$2,006	$115,090

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$115,089,667	$0	$0	$0	$0	$0	$0	$0	$0	$18,905,312

Description of CIP Changes:

T. Kuhns 8-25-23 - This project has beed adjusted with a delayed start of FY30. This project has been adjusted to start in FY30 as GLWA is already in the process of doing high-lift pumping work at Lake Huron WTP and Springwells WTP. Performing high-lift upgrades at more than two WTPs at the same time is challenging as it adds more complexity to maintaining service to customers while work is being done at the high-lift plants. Additionally, pump procurement becomes challenging when multiple pump projects are placing excessive demands on the pump suppliers. For these reasons, the schedule for this project has been extended to be completed from FY30-beyond.

CIP Number: 115009

Project Title: Water Works Park Sedimentation Basins Structural Upgrades

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Water Works Park

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

90.4

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Photo of Water Works Park Plant

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 7/30/2021

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: City of Detroit

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 115009

Project Title: Water Works Park Sedimentation Basins Structural Upgrades

Problem Statement:

The existing pre-stressed precast concrete beams that support the plate settlers in the sedimentation basins have developed extensive cracks. Additionally, the concrete knee walls that support the beams have begun to delaminate and spall. The integrity of the structural support system is not compromised at this time, however, to avoid further deterioration of the structure the cracks and spall need to be addressed.

Scope of Work/Project Alternatives:

This project will be delivered under a Progressive Design Build delivery model. The structural system will be examined to confirm preliminary findings, methods for rehabilitation will be proposed, and upgrades will be completed to address the present deterioration of the beams and supports with the goal of extending their service life.

Other Important Info:

Reliability of all treatment systems at Water Works Park is critical to support system right-sizing and decommissioning of Northeast WTP.

Primary Driver: 3 - Regulatory

Driver Explanation:

Current extensive cracking exposes the concrete reinforcement in the beams and supports to further deterioration. Not addressing this issue now result in higher costs in the future should total replacement be necessary rather than rehabilitation.

CIP Number: 115009

Project Title: Water Works Park Sedimentation Basins Structural Upgrades

Scoring

Project Manager Weighted Score:	**90.4**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	C. Shows abnormal wear and is likely to cause significant performance deterioration in the near term	Scores same as last year. JEM 7/7/2022
Performance (Service Level/Reliability)	3	D. Project moderate positive impact on service levels/reliability/lower risk, E. Canceling project potential for service/reliability issues† a few times/yr	Scores same as last year. JEM 7/7/2022
Regulatory (Environmental/Legal)	5	A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public	Increased score to 4. JEM 7/7/2022
Operations and Maintenance	1	A. O&M levels are routine;, D. Project low/negative impact on O&M; no critical assets involved; not expected to significantly impact any O&M issues.	Scores same as last year. JEM 7/7/2022
Health and Safety	4	A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years, C. Canceling project continue to pose significant staff/public safety/hazard issues, some potential for significant injury and significant regulatory violations (i.e. OSHA).	Scores same as last year. JEM 7/7/2022
Public Benefit	2	D. Low impact on public/GLWA image, minor recognition	Scores same as last year. JEM 7/7/2022
Financial	5	A. Prevent higher cost projects; Substantial increase in revenue or savings; New customer acquisition for GLWA, E. Canceling project major/extensive financial consequences from revenue loss, repair/restoration/O&M cost, downtime, fines, damages, litigation etc.; major budget implications requiring deferral or cutbacks in other areas	Scores same as last year. JEM 7/7/2022
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	Scores same as last year. JEM 7/7/2022

Review Committee Weighted Score:	**90.4**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	5	Scores carried over from previous year
Operations and Maintenance	1	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	2	Scores carried over from previous year
Financial	5	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 115009

Project Title: Water Works Park Sedimentation Basins Structural Upgrades

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 8/4/2027

End Date: 5/2/2031

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$179	$0	$0	$0	$0	$0	$0	$43	$48	$91	$88

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	8/4/2027	5/2/2031
Capital Delivery Salary (Fringes)	8/4/2027	5/2/2031

CIP Number: 115009

Project Title: Water Works Park Sedimentation Basins Structural Upgrades

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 8/4/2027

End Date: 2/10/2028

Phase Comments/Description:

Cost Est. Class: Class 4

Cost Est. Date: 7/27/2021

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$793	$0	$0	$0	$0	$0	$0	$793	$0	$793	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (DB)	8/4/2027	2/10/2028

CIP Delivery Team

CIP Number: 115009

Project Title: Water Works Park Sedimentation Basins Structural Upgrades

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 5/5/2028

End Date: 5/2/2031

Phase Comments/Description:

Cost Est. Class: Class 4

Cost Est. Date: 7/27/2021

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$15,874	$0	$0	$0	$0	$0	$0	$828	$5,301	$6,129	$9,745

Phase Dates

Activity Name	Start Date	End Date
Construction (DB)	5/5/2028	5/2/2031

CIP Delivery Team

CIP Number: 115009

Project Title: Water Works Park Sedimentation Basins Structural Upgrades

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$179	$0	$0	$0	$0	$0	$0	$43	$48	$91	$88
Design/Engineering	$793	$0	$0	$0	$0	$0	$0	$793	$0	$793	$0
Construction	$15,874	$0	$0	$0	$0	$0	$0	$828	$5,301	$6,129	$9,745
Totals	$16,845	$0	$0	$0	$0	$0	$0	$1,664	$5,349	$7,013	$9,833

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$0	$0	$0	$0	$0	$0	$0	$3,296	$5,155	$18,338
2024	$1,664	$0	$0	$0	$0	$0	$0	$1,664	$5,349	$16,846

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$16,845,902	$0	$0	$0	$0	$0	$1,664,298	$5,348,731	$7,013,030	$9,832,872

Description of CIP Changes:

New CIP project added to FY 2023-2027 7/28/2021 AC.

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: General Purpose

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

94.3

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/11/2015

Year Project Added to CIP: 2016

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Springwells, Northeast, & Pennsylvania raw water tunnels

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: PDB (Progressive Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Problem Statement:

Significant structural distress in the form of cracking and ovality have been detected in the Pennsylvania, Northeast (NE) and Springwells (SPRG) raw water tunnels that deliver raw water to the Northeast and Springwells Water Treatment Plants. The extent and magnitude of the distress requires that these segments of tunnel be rehabilitated and restored to provide renewed structural integrity and reliability.

Scope of Work/Project Alternatives:

This project is being delivered using Progressive Design-Build. The scope of work generally includes supplemental remove operated vehicle (ROV) and personnel diver underwater, detailed investigations to determine the nature, magnitude and extent of total tunnel rehabilitation required. The detailed investigations are also used to collect sufficient information and data to determine the preferred design and construction approach best suited to the conditions identified. The investigation work of DB-150 focused on those sections of tunnel where concerns were observed during the condition assessment work conducted under Contract No. CS-1623. Three areas were identified including the Pennsylvania Tunnel at Water Works Park (WWP) (non-structural rehab), NE Raw Water Tunnel (structural rehab) located in the Outer Drive greenbelt and a portion of the SPRG Tunnel near the SPRG WTP (structural rehab). Project alternatives evaluated included tunnel dewatering with rehab done in dry conditions along with tunnel bypass pumping; new tunnel construction, and tunnel rehab in the wet using underwater diver teams was selected.

Other Important Info:

These tunnels are 80 to 100 feet below ground surface. Dewatering the tunnels for repair will create extensive stresses that must be considered. Maintaining a supply of raw water to SPRGW, NE and WWP throughout construction to meet the demands of the system must be accommodated. Specialized construction will be involved.

Project History: Portions of the Raw Water Tunnel system are approaching 100 years of service. This project is based on the recommendations of CS-1623, which is inspecting all GLWA raw water tunnels.
Project not scored by risk committee since it is far advanced

Primary Driver: 2 - Performance

Driver Explanation:

Failure of the affected raw water tunnels could impact as much as 50% of GLWA customers.

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Scoring

Project Manager Weighted Score:	**94.3**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	D. Immediate replacement or rehabilitation required	
Performance (Service Level/Reliability)	5	D. Canceling project significant, persistent, ongoing, continuous service interruption and/or reliability issues†	
Regulatory (Environmental/Legal)	5	E. Deferring/canceling project immediate risk of non-compliance, major permit violations, regulatory scrutiny; sig. measurable negative environmental impact on a regional or statewide level w/ lingering or permanent/irreversible impact on wider ecosystem	
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	
Health and Safety	5	C. Likely to address major hazard issues or concerns	
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**94.3**	
Criteria Name	**Score**	**Comment**
Condition	5	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	5	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	5	Committee score carried over from current year Project Manager score
Operations and Maintenance	4	Committee score carried over from current year Project Manager score
Health and Safety	5	Committee score carried over from current year Project Manager score
Public Benefit	1	Committee score carried over from current year Project Manager score
Financial	3	Committee score carried over from current year Project Manager score
Efficiency and Innovation	1	Committee score carried over from current year Project Manager score

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/29/2018

End Date: 3/28/2025

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$891	$139	$136	$359	$396	$0	$0	$0	$0	$396	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/29/2018	3/28/2025
Capital Delivery Salary (Fringes)	1/29/2018	3/28/2025

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2016

End Date: 6/30/2017

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$9	$9	$9	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services	7/1/2016	6/30/2017

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Phase: Design/Engineering (CS-187)

Phase Title: Design/Engineering (CS-187)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 1/29/2018

End Date: 4/1/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-187)	$132	$132	$132	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-187)	1/29/2018	4/1/2022

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Phase: Design/Engineering (CS-166)

Phase Title: Design/Engineering (CS-166)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 10/1/2019

End Date: 2/28/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-166)	$45	$45	$45	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-166)	10/1/2019	2/28/2020

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Phase: Design-Build # 1 (DB-150, CS-166, CS-187)

Phase Title: Design-Build # 1 (DB-150, CS-166, CS-187)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 4/1/2019

End Date: 3/28/2025

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/29/2018

Cost Est. Source: Ballard Marine- Executed Contract

Cost Est. Prepared By: Ballard Marine

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1 (DB-150, CS-166, CS-187)	$94,577	$68,458	$65,881	$16,404	$12,292	$0	$0	$0	$0	$12,292	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (DB-150)	4/1/2019	3/28/2025

CIP Delivery Team

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Phase: Miscellaneous

Phase Title: Miscellaneous

Phase Budget: Water

Phase Status: Closed Out

Start Date: 5/1/2010

End Date: 6/30/2015

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Miscellaneous	$3,103	$3,103	$3,103	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Pre-CAFR Actuals	5/1/2010	6/30/2015

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$891	$139	$136	$359	$396	$0	$0	$0	$0	$396	$0
Professional Services	$9	$9	$9	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-187)	$132	$132	$132	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-166)	$45	$45	$45	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1 (DB-150, CS-166, CS-187)	$94,577	$68,458	$65,881	$16,404	$12,292	$0	$0	$0	$0	$12,292	$0
Miscellaneous	$3,103	$3,103	$3,103	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$98,756	$71,885	$69,305	$16,763	$12,689	$0	$0	$0	$0	$12,689	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$31,900	$500	$2,000	$10,000	$15,000	$4,900	$0	$0	$0	$0	$0	$0	$0	$0	$32,400
2019	$29,444	$10	$3,625	$9,042	$5,468	$5,468	$5,468	$3,998	$0	$0	$0	$0	$0	$0	$33,079
2020	$20,399	$0	$2,178	$7,513	$5,467	$5,467	$5,467	$3,998	$0	$0	$0	$0	$0	$0	$30,090
2021	$50,392	$0	$0	$10,200	$653	$14,138	$21,917	$8,810	$5,527	$0	$0	$0	$0	$0	$61,245
2022	$72,446	$0	$2,168	$8,022	$5,221	$7,024	$8,360	$17,395	$23,303	$18,016	$5,372	$0	$0	$0	$94,880
2023	$54,690	$10	$2,168	$8,022	$5,210	$12,120	$13,663	$13,663	$13,701	$13,663	$13,663	$0	$0	$0	$98,986
2024	$26,682	$10	$2,168	$8,022	$5,211	$12,120	$25,480	$15,961	$15,334	$11,348	$0	$0	$0	$0	$98,757

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$98,756,636	$69,304,687	$16,763,243	$12,688,707	$0	$0	$0	$0	$12,688,707	$0

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Description of CIP Changes:

The detailed tunnel investigation/inspection was completed this past fiscal year under the active progressive design-build contract (DB-150) and determined that the scope of required tunnel rehabilitation was expanded by about 40% beyond that previously discovered during the CS-1623 condition assessment work. Note that the extent and magnitude of tunnel rehabilitation work estimated under CS-1623 was merely based on a cursory tunnel inspection. The DB-150 contract work has involved significantly more detailed tunnel inspection to quantity the required rehabilitation. NAH 8/26/19

CIP Number: 116005

Project Title: Belle Isle Seawall Rehabilitation

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Water Works Park

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

57.5

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Aerial image of Belle Isle intake structure and lagoon.

Project Manager: Michael Dunne

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 7/23/2020

Year Project Added to CIP: 2020

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Belle Isle Intake

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 116005

Project Title: Belle Isle Seawall Rehabilitation

Problem Statement:

The Belle Isle intake system is the source water intake for three of the five GLWA water treatment plants. The intake is surrounded by a man-made dike system that creates a large lagoon on the northeast tip of Belle Isle. The dike system is showing signs of substantial erosion on the tip of the southern dike. Other areas on the southern dike are showing signs of erosion to a lesser degree.

Scope of Work/Project Alternatives:

This design/build project will evaluate and recommend solutions to permanently correct ongoing erosion issues and current deficiencies that may result in future dike erosion and failure. The general scope will include.
1. Installing sheet piling, tie backs, and rip rap at the tip of the lagoon.
2. Stabilize lampposts that are leaning due to erosion.
3. Install armor stone where erosion is beginning, but not yet significant.
4. Grade and dress the lagoon access road in select areas.
5. Replace existing sections of the stormwater system and re-establish shoreline.
6. Improve the retaining wall on southwest end of southern lagoon dike.

Other Important Info:

The Belle Isle lagoon, formed by the man-made dikes, was designed to prevent frazil ice from impeding water flow into the raw water tunnels. Continued erosion of the dike system will lead to short circuiting of the intake lagoon. The design intent of the lagoon, and its benefits, will be compromised and leave the raw water intake which supplies three water treatment plants vulnerable.

Primary Driver: 1 - Condition

Driver Explanation:

If a permanent solution to the erosion issues on the Belle Isle dike system are not implemented, failure of the dike will ultimately occur.

CIP Number: 116005

Project Title: Belle Isle Seawall Rehabilitation

Scoring

Project Manager Weighted Score:	**57.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational, D. Replacement or major rehab needed in the short term	Significant erosion is advancing at the tip of the southern dike.
Performance (Service Level/Reliability)	3	E. Canceling project potential for service/reliability issues† a few times/yr, G. Low redundancy in the area	Canceling the project may lead to compromising the lagoon and intake system.
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	The project will have a low impact on regulatory issues.
Operations and Maintenance	2	A. Low levels of O/M keeps meantime between failure standard	Negligible impacts to O&M will be impacted by this project.
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	Failure of the dike system may have moderate impacts on raw water quality.
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area, B. Negligible additional revenues/savings; Requires all new infrastructure, C. Minimal/no impact on public/GLWA image & relationships	No impact to public benefit will take place as a result of this project.
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Without necessary repairs, the erosion will continue to progress and increase costs of rehabilitation.
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency, B. Low impact on business process optimization; no time/cost saving	No impact to efficiency or innovation will take place as a result of this project.

Review Committee Weighted Score:	**57.5**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	2	
Operations and Maintenance	2	
Health and Safety	3	
Public Benefit	2	
Financial	3	
Efficiency and Innovation	1	

CIP Number: 116005

Project Title: Belle Isle Seawall Rehabilitation

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/1/2022

End Date: 3/26/2025

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$136	$5	$2	$66	$69	$0	$0	$0	$0	$69	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	9/1/2022	3/26/2025
Capital Delivery Salary (Fringes)	9/1/2022	3/26/2025

CIP Number: 116005

Project Title: Belle Isle Seawall Rehabilitation

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/1/2022

End Date: 3/26/2025

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/10/2022

Cost Est. Source: Dean Marine- executed Contract

Cost Est. Prepared By: Dean Marine

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$2,158	$207	$155	$532	$1,471	$0	$0	$0	$0	$1,471	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	9/1/2022	9/24/2024
Construction	10/10/2022	3/26/2025

CIP Number: 116005

Project Title: Belle Isle Seawall Rehabilitation

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$136	$5	$2	$66	$69	$0	$0	$0	$0	$69	$0
Design/Engineering	$2,158	$207	$155	$532	$1,471	$0	$0	$0	$0	$1,471	$0
Totals	$2,294	$212	$157	$598	$1,539	$0	$0	$0	$0	$1,539	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2022	$1,832	$0	$319	$1,231	$281	$0	$0	$0	$0	$0	$1,832
2023	$2,300	$0	$240	$600	$1,700	$0	$0	$0	$0	$0	$2,540
2024	$737	$0	$1	$438	$737	$0	$0	$0	$0	$0	$1,175

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$2,294,680	$157,202	$598,088	$1,539,390	$0	$0	$0	$0	$1,539,390	$0

Description of CIP Changes:

N/A

CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Water Works Park

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

55.8

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Belle Isle Intake

Project Manager: Michael Dunne

Director: Terry Daniel

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/19/2020

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Belle Isle

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Problem Statement:

The Belle Isle Intake structure and man-made lagoon were constructed in the 1930s. Periodic maintenance and improvements have taken place over the years to keep the building and lagoon in operating condition. As a result of recommendations from the State and CS-187 - Raw Water Condition Assessment, another project is needed. The intake system has experienced a buildup of sediment in critical areas that needs to be removed. Vegetation has grown on the dike system and needs to be removed to prevent future damage, and the emergency poppet valves need evaluating and possible reconditioning. Additional improvements should be done to the raw water monitoring system, electrical infrastructure, and the chemical delivery system.

Scope of Work/Project Alternatives:

This CIP project will be delivered under a design-bid-build project delivery method and will generally include the following:
1. Removal of accumulated sediment in the intake building, emergency intake system, and tunnel system.
2. Electrical modernization on the intake grounds.
3. Architectural repairs to the intake building superstructure including, painting, masonry tuck-pointing, roofing, and stonework.
4. A code compliant emergency eyewash and shower.
5. Roof structure to protect the sodium hypochlorite tank and system.
6. Improve lagoon access road and lagoon dikes.
7. Recommendation for removal methods for sediment that has accumulated.
8. Evaluation for repair or replacement of emergency intake poppet valves.
9. Assessment of early warning water quality monitoring system and its integration with the Ovation control system.
10. Recommendations for improvement of the hypochlorination system on Belle Isle.

Other Important Info:

The intake system is the very first step in the water treatment process. A fully reliable and modern intake system is crucial in maintaining superior drinking water.

Primary Driver: 1 - Condition

Driver Explanation:

Maintaining reliability of the Belle Isle Intake and modernizing its features to align with today's water treatment technologies is paramount to the GLWA water treatment system.

CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Scoring

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CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Project Manager Weighted Score:	**55.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	B. Functionally sound and acceptable, signs of normal wear	Multiple issues exist on the grounds that need addressing to prevent escalation into larger problems.
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure, B. Performance acceptable–marginal; likely not to meet future req's	The accumulation of sediment in the emergency intake tunnel should not prevent the use of it hydraulically, but it is expected that a large increase in raw water turbidity will occur if it is used. Existing electrical system is at capacity - an expanded electrical system is needed for future monitoring and process equipment.
Regulatory (Environmental/Legal)	3	D. Project not part of mandated or enforceable program but directly or indirectly related to expected future requirements	The emergency poppet valves are to be tested once a year per the State. Testing has been discontinued due to sediment build up in the emergency intake tunnel that will cause a severe spike in turbidity. A code compliant eyewash/shower station is needed for yearly hypochlorite control of zebra mussels.
Operations and Maintenance	3	C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues	The hypochlorination system has frequent leaks and maintenance issues. During the yearly operation and the weeks prior to and after operation, many man hours are spent repairing the system.
Health and Safety	1	A. No failure reasonably expected to occur	Little impact to public health and safety will be made during this project.
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	Little impact to public benefit will be made during this project.
Financial	2	E. Total financial consequence of $100,000 - $249,999	Canceling project will have limited financial consequences.
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	A robust early warning water quality monitoring system can be designed to make GLWA an industry leader.

CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Review Committee Weighted Score:	**55.8**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	3	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	1	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$235	$0	$0	$0	$0	$0	$0	$59	$59	$117	$117

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2027	6/30/2031
Capital Delivery Salary (Fringes)	7/1/2027	6/30/2031

CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Phase: Design & Construction Assistance

Phase Title: Design & Construction Assistance

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/18/2021

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance	$1,987	$0	$0	$0	$0	$0	$0	$653	$648	$1,301	$686

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2027	6/30/2031

CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$235	$0	$0	$0	$0	$0	$0	$59	$59	$117	$117
Design & Construction Assistance	$1,987	$0	$0	$0	$0	$0	$0	$653	$648	$1,301	$686
Totals	$2,221	$0	$0	$0	$0	$0	$0	$712	$706	$1,418	$804

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2022	$350	$0	$0	$300	$50	$0	$0	$0	$0	$0	$350
2023	$0	$0	$0	$0	$0	$0	$0	$0	$338	$225	$3,363
2024	$712	$0	$0	$0	$0	$0	$0	$0	$712	$707	$2,222

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$2,221,841	$0	$0	$0	$0	$0	$711,874	$706,360	$1,418,234	$803,607

Description of CIP Changes:

none.

CIP Number: 116007

Project Title: System Electrical Power Improvements

Project Status: Active - Pre-Procurement - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: General Purpose

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

77.1

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Eric Griffin

Director: Tim Kuhns

Managing Dept.: Energy Management

Date Original Business Case Prepared: 9/30/2021

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Multiple Counties

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: PDB (Progressive Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 116007

Project Title: System Electrical Power Improvements

Problem Statement:

Electrical power redundancy and reliability is critically important for the successful operation of the sewage pumping stations, especially during storm events. Storm events and performance of certain sewage pumping stations during the summer of 2021 require that GLWA review the firm and total installed capacities of pumping units, the redundancy and reliability of power supplies, electrical switchgear configurations, and backup power generation capabilities at its sewage pumping stations. Deficiencies and improvement needs will be addressed with this CIP project.

Scope of Work/Project Alternatives:

Conduct a condition assessment and needs assessment of the primary and secondary electrical systems at all GLWA's sewage pumping stations to include.
1.Primary power feeds
2.Electrical system configuration
3.Electrical switchgear, motor control centers, VFDs.
4.Motor controls
5.Medium-voltage power system
6.Onsite backup power generation and distribution
7.Other electrical power, distribution and controls that impact the redundancy and reliability of the pumping units
Once the necessary improvements have been identified, they will be designed and constructed under a progressive design build contracting approach which will include the following principle services:
A.Study phase services, including the condition and needs assessments, and alternative evaluations
B.Design phase services.
C.Construction phase services

Other Important Info:

N/A

Primary Driver: 2 - Performance

Driver Explanation:

The existing sewage pumping stations are under increasing demand to perform more reliably due to the more extreme and frequent occurrence of extreme storm events. Therefore, an innovative progressive design build approach that includes study phase services is proposed for this CIP.

CIP Number: 116007

Project Title: System Electrical Power Improvements

Scoring

Project Manager Weighted Score:	**78.3**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational, C. Shows abnormal wear and is likely to cause significant performance deterioration in the near term	
Performance (Service Level/Reliability)	5	B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*	
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	
Health and Safety	4	A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years	
Public Benefit	2	B. Measurable impact on economic development; minor & indirect impact on quality of life/aesthetics; Mostly requires new infrastructure	
Financial	1	A. Minimal to no impact to GLWA	
Efficiency and Innovation	4	B. Project will remove significant operational hurdles/ obstacles for significant equipment/process	

Review Committee Weighted Score:	**77.1**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	4	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	4	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 116007

Project Title: System Electrical Power Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 8/1/2023

End Date: 10/30/2025

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$102	$0	$0	$34	$51	$17	$0	$0	$0	$68	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	8/1/2023	10/30/2025
Capital Delivery Salary (Fringes)	8/1/2023	10/30/2025

CIP Number: 116007

Project Title: System Electrical Power Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 8/1/2023

End Date: 10/30/2025

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$3,908	$0	$0	$762	$2,412	$734	$0	$0	$0	$3,146	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	8/1/2023	10/30/2025

CIP Number: 116007

Project Title: System Electrical Power Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$102	$0	$0	$34	$51	$17	$0	$0	$0	$68	$0
Design/Engineering	$3,908	$0	$0	$762	$2,412	$734	$0	$0	$0	$3,146	$0
Totals	$4,010	$0	$0	$796	$2,462	$751	$0	$0	$0	$3,214	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$4,000	$0	$2,229	$1,771	$0	$0	$0	$0	$0	$4,000
2024	$3,441	$0	$568	$2,286	$1,155	$0	$0	$0	$0	$4,010

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$4,010,060	$0	$796,236	$2,462,473	$751,351	$0	$0	$0	$3,213,824	$0

Description of CIP Changes:

New project added to FY 2023-2027 CIP Plan 7/30/2021 AC.

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

76.8

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Corey Brecht

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/8/2016

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: WWP to NE WTP

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Problem Statement:

The 2015 GLWA Water Master Plan (WMP) update indicated that the regional system has significant excess capacity for water treatment compared to projected water demands. The analysis indicated that for average day demand conditions, the five WTPs typically operate between 23 percent to 35 percent of the rated treatment capacity and for maximum day demand conditions typically operate between 38 percent to 67 percent of the treatment rated capacity. To address this the WMP update recommended reducing the regional treatment capacity to better align it with future system water demands and recommended that a new water transmission main be constructed from the Water Works Park WTP to the Northeast WTP to provide finished water to the Northeast reservoirs. Updated cost evaluations in 2023 revealed that the cost of the proposed pipelines to decommission treatment at the Northeast WTP were more expensive than rehabilitating the Northeast Treatment Plant. Further, the 120-inch main break in August of 2022 revealed that capacity in excess of the 160 MGD (that would be provided under the decommissioned condition) would be needed to provide service during emergency conditions. For these reasons, the efforts to decommission treatment at the Northeast site were put on hold indefinitely.

Scope of Work/Project Alternatives:

This project included three separate construction phases for the completion of the overall water transmission system from Water Works Park to Northeast:
(1) Phase 1 - Construction of 84-inch yard piping and a Flow Control Facility at the Northeast site.
(2) Phase 2 - Construction of 4 miles of 81-inch water transmission main (WTM) from the Northeast site to I-94.
(3) Phase 3 - Construction of 6,000 feet of 60-inch/69-inch WTM along Hurlbut from I-94 to the intersection of Hurlbut/Sylvester.

Only Phase 1 of this project was completed, Phases 2 and 3 will not be completed as part of this project.

Other Important Info:

Challenges: Construction of large diameter WTM in the road ROW north of I-94 and along Hurlbut south of I-94.

Primary Driver: 8 - Efficiency

Driver Explanation:

This project was intended to provided finished water to the Northeast WTP in order to decommission treatment at the Northeast WTP, but updated cost evaluations in 2023 revealed that the cost of the proposed pipelines to decommission treatment at the Northeast WTP were more expensive than rehabilitating the Northeast Treatment Plant. Further, the 120-inch main break in August of 2022 revealed that capacity in excess of the 160 MGD (that would be provided under the decommissioned condition) would be needed to provide service during emergency conditions. For these reasons, the efforts to decommission treatment at the Northeast site were put on hold indefinitely.

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Scoring

Project Manager Weighted Score:	**78**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	2	B. Sound and well maintained, slight signs of normal wear	
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*	
Regulatory (Environmental/Legal)	3	E. Moderate historical evidence gives minor support for project	
Operations and Maintenance	4	B. Asset can run in automatic operation, but frequently trips out unless it is manually operated due to component failure	
Health and Safety	4	B. Project significant positive impact on staff/public H&S‡; Likely to address significant hazard issues or concerns	
Public Benefit	1	B. Negligible additional revenues/savings; Requires all new infrastructure	
Financial	1	B. Minimal/no positive financial implications of <$100K/ROI >= 20 yrs	
Efficiency and Innovation	5	A. Right-sizing system results in substantial operational efficiencies, significantly increasing revenue/savings., B. Project removes major operational hurdles or obstacles on critical equipment/process; major time & cost savings	

Review Committee Weighted Score:	**76.8**	
Criteria Name	**Score**	**Comment**
Condition	1	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	5	Scores carried over from previous year
Health and Safety	1	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	5	Scores carried over from previous year
Efficiency and Innovation	5	Scores carried over from previous year

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 6/1/2020

End Date: 3/31/2039

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,134	$1,134	$1,134	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	6/1/2020	7/1/2038
Capital Delivery Salary (Fringes)	6/1/2020	7/1/2038
Other Capital Improvement Costs	6/1/2020	3/31/2039

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 12/1/2016

End Date: 6/30/2017

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$19	$19	$19	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (Contractor OH)	12/1/2016	6/30/2017

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Phase: Professional Services (CS-272)

Phase Title: Professional Services (CS-272)

Phase Budget:

Phase Status: Closed Out

Start Date: 8/1/2022

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-272)	$23	$23	$23	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272)	8/1/2022	12/31/2022

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Phase: Design/Engineering (CS-152)

Phase Title: Design/Engineering (CS-152)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2020

End Date: 6/30/2023

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 6/15/2020

Cost Est. Source: Jacobs-Executed Contract

Cost Est. Prepared By: Jacobs

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-152)	$4,448	$4,448	$4,448	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-152)	7/1/2020	6/30/2023

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Phase: Phase #1 (1803258)

Phase Title: Phase #1 (1803258)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 3/6/2023

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 9/5/2019

Cost Est. Source: Walsh- Executed Contract

Cost Est. Prepared By: Walsh- Executed Contract

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Phase #1 (1803258)	$24,548	$24,548	$24,548	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1803258)	6/1/2020	3/6/2023

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Phase: Design-Build Phase #2 (1904254)

Phase Title: Design-Build Phase #2 (1904254)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2023

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 4/21/2023

Cost Est. Source: Dan's- 100% Design OPCC

Cost Est. Prepared By: Dan's Excavting

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build Phase #2 (1904254)	$7,114	$7,114	$7,114	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1904254)	6/1/2020	6/30/2023

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Phase: Design-Build Phase #3

Phase Title: Design-Build Phase #3

Phase Budget: Water

Phase Status: Cancelled

Start Date: 7/1/2034

End Date: 3/31/2039

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 11/21/2023

Cost Est. Source: TBD

Cost Est. Prepared By: TBD

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build Phase #3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2034	7/1/2037
Construction (2003102)	7/1/2034	3/31/2039

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Phase: Design-Build Phase #4 (2003102)

Phase Title: Design-Build Phase #4 (2003102)

Phase Budget: Water

Phase Status: Cancelled

Start Date: 11/1/2029

End Date: 7/1/2038

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 11/21/2023

Cost Est. Source: TBD

Cost Est. Prepared By: TBD

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build Phase #4 (2003102)	$1,458	$1,458	$1,458	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (2003102) (net-zero cost account to be archived)	11/1/2029	6/30/2033
Construction (2003102)	7/1/2033	7/1/2038

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,134	$1,134	$1,134	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$19	$19	$19	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services (CS-272)	$23	$23	$23	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-152)	$4,448	$4,448	$4,448	$0	$0	$0	$0	$0	$0	$0	$0
Phase #1 (1803258)	$24,548	$24,548	$24,548	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build Phase #2 (1904254)	$7,114	$7,114	$7,114	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build Phase #3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build Phase #4 (2003102)	$1,458	$1,458	$1,458	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$38,742	$38,742	$38,743	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$92,500	$0	$1,500	$5,000	$10,000	$74,000	$2,000	$37,500	$0	$0	$0	$0	$0	$0	$130,000
2019	$104,285	$19	$1,305	$1,372	$8,622	$17,547	$46,022	$30,722	$25,270	$0	$0	$0	$0	$0	$130,879
2020	$100,381	$0	$1,655	$1,121	$871	$15,786	$24,115	$29,615	$29,994	$30,115	$0	$0	$0	$0	$133,272
2021	$87,797	$0	$0	$2,611	$1,169	$11,703	$18,407	$18,678	$18,170	$20,839	$65,949	$0	$0	$0	$157,526
2022	$73,872	$0	$23	$44	$5,123	$11,235	$14,593	$9,214	$14,535	$13,836	$21,696	$27,213	$25,686	$24	$143,218
2023	$100,234	$19	$1,635	$960	$2,575	$16,135	$7,089	$23,904	$19,122	$19,069	$19,069	$19,069	$19,121	$0	$147,769
2024	$721	$19	$1,635	$960	$2,575	$16,134	$13,631	$1,788	$144	$144	$144	$144	$144	$144	$294,831

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$38,742,580	$38,742,580	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

CIP budget has been updated based on bid costs for Northeast Flow Control Facility (1803258) and part 1 (design) for phase 2 from Northeast WTP to I-94 (1904254). All Pipeline renewal costs for Hurlbut, Bewick, and Garland mains are contained in CIP 122018.
T. Kuhns 8/26/23 - Updated cost evaluations in 2023 revealed that the cost of the proposed pipelines to decommission treatment at the Northeast WTP were more expensive than rehabilitating the Northeast Treatment Plant. Further, the 120-inch main break in August of 2022 revealed that capacity in excess of the 160 MGD (that would be provided under the decommissioned condition) would be needed to provide service during emergency conditions. For these reasons, the efforts to decommission treatment at the Northeast site were put on hold indefinitely.

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

77.5

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Corey Brecht

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/1/2015

Year Project Added to CIP: 2016

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Imlay Station to North Service Center

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Problem Statement:

This project is critical to providing isolation and redundancy to Lake Huron WTP supply, while protecting the water supply from potential contamination at the former G&H Industrial Landfill site. The project includes relocation around existing superfund landfill and addition of isolation valves along the 96-inch water transmission main.

Scope of Work/Project Alternatives:

Relocate 2.5 miles of 96-inch transmission main currently located in an EPA NPL landfill, a portion of which is submerged in landfill leachate. Relocation includes crossing the Clinton River, coordination with various authorities having jurisdiction and easement acquisition. The isolation valve installation portion of the project provides the ability to isolate segments of the 96-inch main between Imlay Station and North Service Center for maintenance while maintaining customer expected level of service. The project also includes installation of a new parallel main along 96" main between NSC and Almont's master meter to facilitate maintenance of service during construction as well as provide a long-term solution to backup water supply to those member partners served off the existing 96" main north of Romeo.

Other Important Info:

Challenges: Shutdown, continued customer service, isolation valve installations while maintaining the Lake Huron WTP supply to Rochester Station. Property acquisition will be required for the chesterfield temporary booster station and East Pond Creek discharge facility for relocation around the landfill.

Primary Driver: 2 - Performance

Driver Explanation:

The 96-inch transmission main currently has only one isolation valve along its entire 34 mile reach with no means for bypass to community connections at their master meters. This main represents single feeds to those connected to the 96-inch main and when service is disrupted they are all impacted. Installation of additional isolation valves with large-bypasses at master meter locations along with the construction of the Lapeer County intertie transmission main will provide long-needed redundancy and improve reliability. The additional isolation valves and intertie water transmission main will afford the opportunity for future condition assessments. Lastly, that portion of the 96-inch main that is located in the former G&H Industrial landfill site will be removed from service and decommissioned.

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Scoring

Project Manager Weighted Score:	**83.5**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	B. Excessive maint. levels for the equipment/process area, C. High risk of breakdown or imminent failure with serious impact on performance	
Performance (Service Level/Reliability)	5	A. Will cause, or IS causing significant capacity problems, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, E. Project impact >11 wholesale, 1M retail, or critical customer	
Regulatory (Environmental/Legal)	4	A. Relatively high, but not imminent,, B. Project not part of mandated or enforceable program, but directly related to know expected future requirements; will increase compliance	
Operations and Maintenance	5	B. Requires constant monitoring/manual operation because it is unable to be run automatically	
Health and Safety	4	A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years	
Public Benefit	5	A. Project is key part of a strategic plan* for GLWA or politically driven, B. Project will have a major and measurable positive impact by supporting member partners; coordination/ shared outcomes w/ other agencies/departments; project has a major impact on quality of life/aesthetics; Major positive impact on public	
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA.	
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	

Review Committee Weighted Score:	**77.5**	
Criteria Name	**Score**	**Comment**
Condition	2	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	5	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/6/2017

End Date: 11/6/2028

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2017

Cost Est. Source: Jacobs

Cost Est. Prepared By: Jacobs

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$2,950	$900	$548	$624	$408	$408	$408	$409	$144	$1,779	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	2/28/2022	11/6/2028
Capital Delivery Salary (Fringes)	2/28/2022	11/6/2028
Other Capital Improvement Costs	3/6/2017	11/6/2028

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/29/2017

End Date: 6/30/2017

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$6	$6	$6	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (Contractor OH)	3/29/2017	6/30/2017

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Professional Services (CS-272)

Phase Title: Professional Services (CS-272)

Phase Budget:

Phase Status: Closed Out

Start Date: 8/15/2022

End Date: 5/19/2023

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-272)	$90	$90	$90	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272)	8/15/2022	5/19/2023

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Design/Engineering (1900741)

Phase Title: Design/Engineering (1900741)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 6/15/2020

End Date: 11/6/2028

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 6/15/2020

Cost Est. Source: Jacobs- executed Contract

Cost Est. Prepared By: Jacobs

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (1900741)	$31,510	$18,483	$17,249	$2,961	$2,594	$2,594	$2,594	$2,601	$917	$11,300	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1900741)	6/15/2020	11/6/2028

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Design/Engineering (CS-165)

Phase Title: Design/Engineering (CS-165)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/6/2017

End Date: 3/29/2019

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-165)	$1,687	$1,687	$1,687	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-165)	3/6/2017	3/29/2019

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Design/Engineering (MISC - Route Study)

Phase Title: Design/Engineering (MISC - Route Study)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2016

End Date: 6/30/2017

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (MISC - Route Study)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (MISC - Route Study) (net -zero cost account to be archived)	7/1/2016	6/30/2017

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Design/Engineering (2204326)

Phase Title: Design/Engineering (2204326)

Phase Budget:

Phase Status: Pending Close-out

Start Date: 3/1/2023

End Date: 4/1/2023

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/3/2023

Cost Est. Source: R.A.- Executed Contract

Cost Est. Prepared By: R.A.

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (2204326)	$280	$245	$185	$95	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (2204326)	3/1/2023	4/1/2023

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Construction (Build) # 1 (CMAR - 2004825)

Phase Title: Construction (Build) # 1 (CMAR - 2004825)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/17/2022

End Date: 8/25/2028

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 8/28/2022

Cost Est. Source: Kiewit- Executed Contract

Cost Est. Prepared By: Kiewit

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (CMAR - 2004825)	$38,889	$35,493	$28,855	$7,107	$704	$704	$704	$706	$108	$2,927	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2004825)	2/28/2022	8/25/2028
Construction - Procurement of Equipment (net -zero cost account to be archived)	1/17/2022	1/16/2026

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Construction (Build) # 2 (2300600)

Phase Title: Construction (Build) # 2 (2300600)

Phase Budget:

Phase Status: Active - Procurement - Board Approved

Start Date: 9/1/2023

End Date: 12/30/2025

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 5/10/2023

Cost Est. Source: Ric-Man/Clark- Contract

Cost Est. Prepared By: Ric-Man/Clark JV

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 2 (2300600)	$56,351	$1,364	$0	$18,256	$25,373	$12,721	$0	$0	$0	$38,094	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2300600)	9/1/2023	12/30/2025

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Construction (Build) # 2 (TBD)

Phase Title: Construction (Build) # 2 (TBD)

Phase Budget:

Phase Status: Future Planned Start

Start Date: 1/1/2026

End Date: 8/25/2028

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 6/1/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 2 (TBD)	$90,000	$0	$0	$0	$0	$16,829	$33,936	$34,029	$5,207	$90,000	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (TBD)	1/1/2026	8/25/2028

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Construction Materials (2100998)

Phase Title: Construction Materials (2100998)

Phase Budget:

Phase Status: Project Execution

Start Date: 1/17/2022

End Date: 2/1/2026

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/17/2022

Cost Est. Source: Northwest- Executed Contract

Cost Est. Prepared By: Northwest Pie

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction Materials (2100998)	$9,238	$4,100	$2,304	$3,341	$2,321	$1,272	$0	$0	$0	$3,592	$0

Phase Dates

Activity Name	Start Date	End Date
Construction - Procurement of Equipment (2100998)	1/17/2022	2/1/2026

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Construction Materials (TBD)

Phase Title: Construction Materials (TBD)

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/1/2025

End Date: 6/30/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 6/1/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction Materials (TBD)	$2,300	$0	$0	$0	$0	$1,150	$1,150	$0	$0	$2,300	$0

Phase Dates

Activity Name	Start Date	End Date
Construction - Procurement of Equipment (TBD)	7/1/2025	6/30/2027

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Construction Materials

Phase Title: Construction Materials

Phase Budget:

Phase Status: Future Planned Start

Start Date: 1/1/2025

End Date: 6/30/2027

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 6/1/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction Materials	$3,000	$0	$0	$0	$596	$1,202	$1,202	$0	$0	$3,000	$0

Phase Dates

Activity Name	Start Date	End Date
Construction - Procurement of Equipment	1/1/2025	6/30/2027

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Phase: Land Acq., Utilities Relocation, etc.

Phase Title: Land Acq., Utilities Relocation, etc.

Phase Budget:

Phase Status: Project Execution

Start Date: 1/2/2022

End Date: 11/6/2027

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Land Acq., Utilities Relocation, etc.	$1,253	$82	$82	$910	$78	$78	$78	$28	$0	$261	$0

Phase Dates

Activity Name	Start Date	End Date
Land Acq., Permits, Utilities Relocation, etc.	1/2/2022	11/6/2027

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$2,950	$900	$548	$624	$408	$408	$408	$409	$144	$1,779	$0
Professional Services	$6	$6	$6	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services (CS-272)	$90	$90	$90	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (1900741)	$31,510	$18,483	$17,249	$2,961	$2,594	$2,594	$2,594	$2,601	$917	$11,300	$0
Design/Engineering (CS-165)	$1,687	$1,687	$1,687	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (MISC - Route Study)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (2204326)	$280	$245	$185	$95	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1 (CMAR - 2004825)	$38,889	$35,493	$28,855	$7,107	$704	$704	$704	$706	$108	$2,927	$0
Construction (Build) # 2 (2300600)	$56,351	$1,364	$0	$18,256	$25,373	$12,721	$0	$0	$0	$38,094	$0
Construction (Build) # 2 (TBD)	$90,000	$0	$0	$0	$0	$16,829	$33,936	$34,029	$5,207	$90,000	$0
Construction Materials (2100998)	$9,238	$4,100	$2,304	$3,341	$2,321	$1,272	$0	$0	$0	$3,592	$0
Construction Materials (TBD)	$2,300	$0	$0	$0	$0	$1,150	$1,150	$0	$0	$2,300	$0
Construction Materials	$3,000	$0	$0	$0	$596	$1,202	$1,202	$0	$0	$3,000	$0
Land Acq., Utilities Relocation, etc.	$1,253	$82	$82	$910	$78	$78	$78	$28	$0	$261	$0
Totals	$237,553	$62,450	$51,006	$33,294	$32,074	$36,958	$40,072	$37,773	$6,376	$153,253	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$106,800	$500	$1,500	$6,000	$35,900	$31,700	$31,700	$31,700	$0	$0	$0	$0	$0	$0	$139,000
2019	$74,248	$460	$570	$1,797	$2,644	$895	$23,087	$45,825	$57,389	$0	$0	$0	$0	$0	$132,667
2020	$96,792	$0	$1,130	$837	$5,000	$6,000	$26,453	$35,886	$23,453	$33,907	$0	$0	$0	$0	$132,666
2021	$80,563	$0	$0	$1,790	$2,549	$5,267	$15,765	$19,937	$19,797	$19,797	$59,969	$0	$0	$0	$144,871
2022	$45,978	$0	$255	$502	$1,059	$2,077	$2,577	$7,613	$10,625	$12,582	$12,582	$24,606	$24,620	$26,049	$144,852
2023	$170,000	$460	$670	$658	$29	$7,858	$8,533	$15,000	$40,000	$40,000	$40,000	$35,000	$35,000	$36,636	$259,843
2024	$207,560	$459	$670	$658	$29	$7,858	$6,547	$40,615	$85,218	$58,316	$20,536	$20,536	$22,954	$4,218	$268,615

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$237,553,383	$51,006,439	$33,293,718	$32,074,172	$36,957,778	$40,072,336	$37,773,183	$6,375,758	$153,253,227	$0

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Description of CIP Changes:

Based on the conclusions made during the route study and implementation strategy development conducted under Contract No. CS-165, it has been determined by a new parallel transmission main is not required to construct this project. Therefore, a new parallel main is not included in this scope. Instead, the project scope involves installing large (i.e. about 42-inch diameter) by-passes strategically located at each master meter along the 96-inch main between the Dorsey-Dickenson Valve and North Service Center. In addition, the cost of this CIP has been increased to account for the actual bid submitted for engineering services as well as the updated, estimated cost of construction. GAG 8/26/2019. Design Contract 1900741 has been approved and awarded to Jacobs Consultant on January 22, 2020. The contract start of work is June 15, 2020, and the final completion date is November 6, 2027. KH 8/31/2020

FY22 to FY23 major changes -
1. Added Lapeer County intertie water transmission main to provide reliable maintenance of water service during construction for communities served north of the Dorsey-Dickenson isolation valve, and to provide permanent redundancy to the same service area. The Lapeer County intertie transmission main also affords the ability for future condition assessment, maintenance and repair of the 96-inch transmission main and its appurtenances between Imlay Station and the Dorsey Dickenson isolation valve. Approximate cost $36-million.
2. Added South Branch Flint River Discharge Facility to ensure maintenance of water quality to communities served west of Imlay Station along the 72-inch transmission main and too simplify operations during construction of the Lake Huron water treatment plant. Approximate cost $3.5-million.
3. Added the replacement of 150 appurtenances along the entire 96-inch transmission main between Imlay Station and the North Service Center because it will not be entirely taken out of service. Existing appurtenances are 60 years old and represent weak points on the pipeline and when replaced with new will improve overall pipeline reliability. Approximate cost $7-million.
4. Increased CIP project budget to account for recent market price increases in commodities (e.g., steel prices). Approximate cost $16-million.
5. Increased CIP project budget to account for the estimated costs for additional construction contractor overhead due to additional project management, supervision and coordination of the additional scope items mentioned above. Approximate cost $29-million.
6. Increased CIP project budget to include additional contingency associated with the additional scope items mentioned above. Approximate cost $6-million.
Note that these approximate costs are based on a 30% design opinion of probable construction cost.
Revision: July 30, 2021, G. Gartrell

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

54.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/17/2015

Year Project Added to CIP: 2016

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Schoolcraft water main

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Problem Statement:

Currently there is an existing 48-inch water transmission main on West Bound Schoolcraft Road. This existing PCCP transmission main was manufactured by Interpace Corporation which has a long-documented history of PCCP failures due to manufacturing means and methods associated with the pre-stressed wires. Due to excessive breaks over the years and the downstream effect on customers, this project will improve the transmission system reliability and redundancy by installing a new 48-inch water transmission main on Eastbound Schoolcraft Road.

Scope of Work/Project Alternatives:

Design and Construction of approximately 12,000 linear feet of new PCCP or Carbon Steel 48-inch water transmission main along Eastbound Schoolcraft service drive between Middlebelt and Beech Daly. Including isolation valves, blowoff's, valve vaults, manhole entrances and related appurtenances. Upon completion and tie-in of the new Eastbound Schoolcraft transmission main the existing will be abandoned in place.

Other Important Info:

Designed under CS-1488 by Somat Engineering

Primary Driver: 2 - Performance

Driver Explanation:

Existing main has a track history of excessive breaks associated with the pipe manufacturer. New main will help alleviate any disruption of service.

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Scoring

Project Manager Weighted Score:	**53.5**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	1	D. Does not impact performance, meets all expected future requirements	
Performance (Service Level/Reliability)	2	G. Moderate redundancy in the area to limit impacts.	
Regulatory (Environmental/Legal)	3	E. Moderate historical evidence gives minor support for project	
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	
Health and Safety	1	C. Staff/public safety/hazard issues not a concern	
Public Benefit	1	B. Negligible additional revenues/savings; Requires all new infrastructure	
Financial	1	B. Minimal/no positive financial implications of <$100K/ROI >= 20 yrs	
Efficiency and Innovation	2	B. Low – moderate positive impact on energy use, conservation, environmental responsibility& sustainability i.e. 1-5% energy reduction	

Review Committee Weighted Score:	**54.7**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/4/2018

End Date: 6/15/2023

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$810	$810	$807	$2	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	6/4/2018	6/15/2023
Capital Delivery Salary (Fringes)	6/4/2018	6/15/2023
Interlocal Agreement or Intergovernmental Agreement	6/4/2018	6/15/2023

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/4/2018

End Date: 5/2/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$144	$144	$144	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-166)	6/4/2018	5/2/2022

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Phase: Design & Construction Assistance # 1 (CS-1488, CS-259)

Phase Title: Design & Construction Assistance # 1 (CS-1488, CS-259)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/4/2018

End Date: 6/15/2023

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/11/2019

Cost Est. Source: Somat- Executed Contract

Cost Est. Prepared By: Somat

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (CS-1488, CS-259)	$579	$579	$579	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-259)	6/4/2018	6/15/2023

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Phase: Design/Engineering (CS-1488 - to be moved to CS-259)

Phase Title: Design/Engineering (CS-1488 - to be moved to CS-259)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2017

End Date: 6/28/2019

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/11/2019

Cost Est. Source: Somat- Executed Contract

Cost Est. Prepared By: Somat

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-1488 - to be moved to CS-259)	$35	$35	$35	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-1488 - to be moved to CS-259)	7/1/2017	6/28/2019

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Phase: Construction (Build) # 1 (1804129)

Phase Title: Construction (Build) # 1 (1804129)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 2/1/2020

End Date: 1/6/2022

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 1/9/2020

Cost Est. Source: LGC-Executed Contract

Cost Est. Prepared By: LGC

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (1804129)	$12,590	$12,590	$12,686	($96)	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1804129)	2/1/2020	1/6/2022

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Phase: Construction (Phase #2)

Phase Title: Construction (Phase #2)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/6/2022

End Date: 1/2/2023

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Phase #2)	$612	$612	$612	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2103952)	7/6/2022	1/2/2023

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Phase: Construction (2201870)

Phase Title: Construction (2201870)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/6/2022

End Date: 6/30/2023

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 7/6/2020

Cost Est. Source: Mark Anthony- Executed Contract

Cost Est. Prepared By: Mark Anthony

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (2201870)	$3,266	$3,266	$3,266	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2201870)	7/6/2022	6/30/2023

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Phase: Construction (1802448)

Phase Title: Construction (1802448)

Phase Budget:

Phase Status: Closed Out

Start Date: 2/1/2020

End Date: 1/6/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (1802448)	($4)	($4)	$0	($4)	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1802448)	2/1/2020	1/6/2022

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$810	$810	$807	$2	$0	$0	$0	$0	$0	$0	$0
Professional Services	$144	$144	$144	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1 (CS-1488, CS-259)	$579	$579	$579	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-1488 - to be moved to CS-259)	$35	$35	$35	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1 (1804129)	$12,590	$12,590	$12,686	($96)	$0	$0	$0	$0	$0	$0	$0
Construction (Phase #2)	$612	$612	$612	$0	$0	$0	$0	$0	$0	$0	$0
Construction (2201870)	$3,266	$3,266	$3,266	$0	$0	$0	$0	$0	$0	$0	$0
Construction (1802448)	($4)	($4)	$0	($4)	$0	$0	$0	$0	$0	$0	$0
Totals	$18,030	$18,030	$18,128	($98)	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$14,550	$0	$0	$7,300	$7,250	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,550
2019	$13,789	$0	$16	$50	$6,249	$6,899	$591	$0	$0	$0	$0	$0	$0	$0	$13,805
2020	$17,878	$0	$4	$180	$8,100	$9,145	$633	$0	$0	$0	$0	$0	$0	$0	$18,062
2021	$14,623	$0	$0	$141	$3,342	$13,141	$1,482	$0	$0	$0	$0	$0	$0	$0	$18,106
2022	$7,606	$0	$0	$137	$1,245	$6,337	$7,606	$0	$0	$0	$0	$0	$0	$0	$15,326
2023	$0	$0	$4	$137	$1,241	$5,313	$8,355	$0	$0	$0	$0	$0	$0	$0	$15,049
2024	$0	$0	$4	$137	$1,241	$5,313	$8,038	$3,360	$0	$0	$0	$0	$0	$0	$18,093

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$18,030,480	$18,128,095	($97,615)	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Updated the Engineering cost per FY to cover the RPR.

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

62.9

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Corey Brecht

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/17/2015

Year Project Added to CIP: 2016

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Romulus

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Problem Statement:

Existing water main from Wick Station to Ypsilanti station has a history of excessive breaks. Additionally, the main is the only primary connection between the two facilities with multiple community Master Meters along its alignment. A break in this line is disruptive to several communities depending on the failure location. The purpose of this is to improve the transmission system reliability/redundancy by means of constructing a parallel 48-inch water main along Wick Road.

Scope of Work/Project Alternatives:

Design and Construction of the new 48-inch transmission main along Westbound Wick Road in Romulus, MI including isolation valves and interconnects that will tie-in with the existing main along the alignment. Completion of this project will alleviate pressures and potential transients between the two mains, as well as increase reliability/redundancies in the general area.

Other Important Info:

N.A.

Primary Driver: 2 - Performance

Driver Explanation:

This project completes the remainder of the parallel main between Wick Station and Ypsilanti Station.

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Scoring

Project Manager Weighted Score:	**63.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining	
Performance (Service Level/Reliability)	4	G. Limited redundancy	
Regulatory (Environmental/Legal)	3	E. Moderate historical evidence gives minor support for project	
Operations and Maintenance	1	E. Negligible/no reduction (1% - 5%) in reactive maintenance	
Health and Safety	3	B. Project moderate positive impact on staff/public H&S‡	
Public Benefit	2	A. Low to moderate impact by supporting City/region/neighborhood growth	
Financial	1	B. Minimal/no positive financial implications of <$100K/ROI >= 20 yrs	
Efficiency and Innovation	4	B. Project will remove significant operational hurdles/ obstacles for significant equipment/process	

Review Committee Weighted Score:	**62.9**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	3	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	3	Scores carried over from previous year

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 8/26/2019

End Date: 6/15/2024

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$240	$205	$205	$35	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	8/26/2019	6/15/2024
Capital Delivery Salary (Fringes)	8/26/2019	6/15/2024

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/17/2020

End Date: 10/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$1,007	$1,007	$1,007	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71022A.01)	8/17/2020	10/31/2022

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Phase: Design/Engineering (CS-259)

Phase Title: Design/Engineering (CS-259)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/1/2019

End Date: 6/15/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/11/2019

Cost Est. Source: Somat- Executed Contract

Cost Est. Prepared By: Somat

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-259)	$977	$932	$932	$45	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-259)	9/1/2019	6/15/2024

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Phase: Design/Engineering (CS-1488)

Phase Title: Design/Engineering (CS-1488)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2016

End Date: 9/30/2020

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/11/2019

Cost Est. Source: Somat- Executed Contract

Cost Est. Prepared By: Somat

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-1488)	$247	$247	$247	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-1488)	7/1/2016	9/30/2020

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Phase: Construction (Build) # 1 (CON-306, 1803621)

Phase Title: Construction (Build) # 1 (CON-306, 1803621)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 8/26/2019

End Date: 6/15/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 8/26/2019

Cost Est. Source: Ric-Man - Executed Contract

Cost Est. Prepared By: Ric-Man

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (CON-306, 1803621)	$23,439	$22,473	$22,328	$1,110	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1803621)	8/26/2019	6/15/2024

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Phase: Construction (MISC CSX)

Phase Title: Construction (MISC CSX)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/26/2019

End Date: 6/15/2024

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (MISC CSX)	$333	$333	$333	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (MISC CSX)	8/26/2019	6/15/2024

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$240	$205	$205	$35	$0	$0	$0	$0	$0	$0	$0
Professional Services	$1,007	$1,007	$1,007	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-259)	$977	$932	$932	$45	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-1488)	$247	$247	$247	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1 (CON-306, 1803621)	$23,439	$22,473	$22,328	$1,110	$0	$0	$0	$0	$0	$0	$0
Construction (MISC CSX)	$333	$333	$333	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$26,242	$25,197	$25,053	$1,190	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$9,350	$10,000	$9,350	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$19,350
2019	$24,280	$23	$16	$1,743	$12,373	$10,154	$10	$0	$0	$0	$0	$0	$0	$0	$24,319
2020	$30,422	$0	$126	$1,370	$18,028	$12,334	$60	$0	$0	$0	$0	$0	$0	$0	$31,918
2021	$15,755	$0	$0	$420	$6,163	$9,975	$5,780	$0	$0	$0	$0	$0	$0	$0	$22,338
2022	$4,774	$0	$0	$294	$5,609	$11,743	$4,774	$0	$0	$0	$0	$0	$0	$0	$22,420
2023	$0	$23	$103	$291	$5,487	$11,231	$8,564	$0	$0	$0	$0	$0	$0	$0	$25,697
2024	$0	$23	$103	$290	$5,487	$11,231	$5,374	$3,314	$0	$0	$0	$0	$0	$0	$25,821

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$26,242,643	$25,052,703	$1,189,941	$0	$0	$0	$0	$0	$0	$0

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Description of CIP Changes:

CIP cost updated this year to reflect the actual construction bid pricing received. NAH 8/6/2019

T. Kuhns - 8/26/23 - The start schedule for this project has been adjusted in FY30. Recent investigations at other priority stations (NWB/NSC) have revealed the need to complete work at NWB/NSC ahead of work at the WCK station. Further, GLWA will re-evaluate plans to consolidate the WCK with YPS station.

CIP Number: 122007

Project Title: Merriman Road Water Transmission Main Loop

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

76.8

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Construction on Merriman Rd.

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/11/2015

Year Project Added to CIP: 2016

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Merriman Rd, Marquette Rd to Lower Rouge River

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 122007

Project Title: Merriman Road Water Transmission Main Loop

Problem Statement:

Currently, several member partners (served by master meters WL-08, WL-03, WL-01, WL-12, WY-01, RS-01, GC-03) are fed by a single 36-inch water transmission main along Michigan Avenue. Construction of this proposed Merriman Road transmission main will provide a second feed to these customers and therefore provide redundancy. In addition, construction of this proposed Merriman Road transmission main improves and reinforces water service delivery to the point where the Michigan Avenue Booster Pumping Station is not needed anymore. Therefore, as was recommended in the 2015 Water Master Plan Update, this proposed project is also a predecessor project to decommissioning the Michigan Avenue Booster Station.

Scope of Work/Project Alternatives:

This project includes design and construction services associated with the installation of 2 miles of new 30-inch transmission main along Merriman Road between Lower Rouge River and Marquette Road. Alternatives evaluated included new main on either:
1. Hannon Road (rejected because of its poor route relative to other options)
2. Newburgh Road (rejected because it is not technically feasible as it will not meet contract pressures).
3. Merriman Road (accepted because it is superior in its transmission capabilities, routing and opportunity to decommission the Michigan Avenue Pump Station).

Other Important Info:

None

Primary Driver: 2 - Performance

Driver Explanation:

Allowing Michigan Avenue Pump Station and Ford Road Station to support one another will greatly improve redundancy in this portion of the transmission system.

CIP Number: 122007

Project Title: Merriman Road Water Transmission Main Loop

Scoring

Project Manager Weighted Score:	**76.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	1	C. Little to no wear shown and no repairs outside of regular maint.	Scores same as last year. JEM 7/7/2022
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, F. No redundancy or feasible temporary options	Scores same as last year. JEM 7/7/2022
Regulatory (Environmental/Legal)	1	A. No risk of causing	Scores same as last year. JEM 7/7/2022
Operations and Maintenance	4	F. Measurable reduction (50% - 74%) in reactive maintenance	Scores same as last year. JEM 7/7/2022
Health and Safety	3	D. Canceling project pose limited–moderate staff/public safety/hazard issues, some potential for minor injury/regulatory violations	Scores same as last year. JEM 7/7/2022
Public Benefit	4	D. Significant, noticeable impact on the public & GLWA image; seen as achievement for GLWA/communities/regions served	Scores same as last year. JEM 7/7/2022
Financial	4	E. Canceling project significant financial consequences from revenue loss, repair /restoration/O&M cost, downtime, potential litigation, fines, damage, etc.; some budget implications requiring deferral or cutbacks in other areas.	Scores same as last year. JEM 7/7/2022
Efficiency and Innovation	4	B. Project will remove significant operational hurdles/ obstacles for significant equipment/process	Scores same as last year. JEM 7/7/2022

Review Committee Weighted Score:	**76.8**	
Criteria Name	**Score**	**Comment**
Condition	1	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	4	Scores carried over from previous year
Financial	4	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 122007

Project Title: Merriman Road Water Transmission Main Loop

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 7/4/2035

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$435	$0	$0	$0	$0	$0	$0	$54	$54	$109	$271

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2027	7/4/2035
Capital Delivery Salary (Fringes)	7/1/2027	7/4/2035

CIP Number: 122007

Project Title: Merriman Road Water Transmission Main Loop

Phase: Design & Construction Assistance # 1

Phase Title: Design & Construction Assistance # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 7/4/2035

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/19/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1	$5,111	$0	$0	$0	$0	$0	$0	$954	$951	$1,905	$2,601

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2027	7/4/2035

CIP Number: 122007

Project Title: Merriman Road Water Transmission Main Loop

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 8/10/2030

End Date: 7/4/2035

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/19/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$20,663	$0	$0	$0	$0	$0	$0	$0	$0	$0	$16,404

Phase Dates

Activity Name	Start Date	End Date
Construction	8/10/2030	7/4/2035

CIP Number: 122007

Project Title: Merriman Road Water Transmission Main Loop

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$435	$0	$0	$0	$0	$0	$0	$54	$54	$109	$271
Design & Construction Assistance # 1	$5,111	$0	$0	$0	$0	$0	$0	$954	$951	$1,905	$2,601
Construction (Build) # 1	$20,663	$0	$0	$0	$0	$0	$0	$0	$0	$0	$16,404
Totals	$26,209	$0	$0	$0	$0	$0	$0	$1,008	$1,006	$2,014	$19,275

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$4,000	$0	$1,800	$2,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,000
2019	$5,241	$0	$6	$653	$1,611	$2,076	$901	$0	$0	$0	$0	$0	$0	$0	$5,247
2020	$5,239	$0	$0	$0	$0	$0	$0	$30	$5,209	$0	$0	$0	$0	$0	$5,239
2021	$1,702	$0	$0	$0	$0	$0	$0	$15	$390	$1,297	$19,755	$0	$0	$0	$21,457
2022	$2,107	$0	$0	$0	$2	$57	$27	$27	$273	$890	$890	$4,810	$4,823	$4,810	$22,155
2023	$0	$0	$0	$1	$1	$0	$0	$0	$0	$0	$0	$0	$184	$647	$22,155
2024	$1,008	$0	$0	$1	$1	$0	($2)	$0	$0	$0	$0	$0	$1,008	$1,005	$26,209

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$26,209,246	$0	$0	$0	$0	$0	$1,008,286	$1,005,531	$2,013,817	$19,275,398

Description of CIP Changes:

Name changed to Merriman Road from Newburgh Rd. due to better route along Merriman Road (instead of Hannon Road) to create the loop. JEM 8/6/2019

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

44.1

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Updated photo

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 4/12/2017

Year Project Added to CIP: 2015

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Venoy Road to Merriman Road to Michigan Ave. Booster Station.

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Problem Statement:

Currently, most of the wholesale master meters serving the cities of Wayne and Westland are fed off a single, "dead-end" transmission main, which provides no redundancy in service. Additionally, Wayne, Westland and Inkster have deduct wholesale meters that are fed off the single, "dead-end" transmission main. Construction of this new 24-inch water main will create a loop for these member partners and thereby eliminate the single, "dead-end" main. Direct meter connections will be made to the new 24-inch transmission main so that all deduct water meters will be eliminated as a result of this CIP project.

Scope of Work/Project Alternatives:

This CIP project is being delivered under a design-bid-build project delivery method and generally includes the following scope of work:
1. Construction of 7,000 linear feet of 24-inch diameter ductile iron water transmission main, which includes 2 directional drills to install this main under the lower Rouge River, and 1 jack-and-bore to install this main under Michigan Avenue.
2. Constructing two new wholesale master meters and associated vaults for the city of Wayne.
3. Associated park improvements where the new transmission main will pass through the Wayne County Venoy-Dorsey Park.

Other Important Info:

Challenges: Shutdowns to connect the two new meters with the City of Wayne. The water pressure during these two shutdowns will be reducers and coordination will need to take place with the City of Wayne, their residents and local businesses.

Primary Driver: 2 - Performance

Driver Explanation:

Completion of this loop will improve system redundancy for two member partners and eliminate deduct meters for three other member partners.

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Scoring

Project Manager Weighted Score:	**76.9**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	D. Replacement or major rehab needed in the short term	
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*	
Regulatory (Environmental/Legal)	1	A. No risk of causing	
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	
Health and Safety	4	B. Project significant positive impact on staff/public H&S‡; Likely to address significant hazard issues or concerns	
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers, D. May not receive media coverage; positive influence on community	
Financial	2	A. Low financial impact to GLWA; No grants/other external funding	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**44.1**	
Criteria Name	**Score**	**Comment**
Condition	1	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	2	Scores carried over from previous year
Health and Safety	1	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	1	Scores carried over from previous year

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Closed Out

Start Date: 11/27/2017

End Date: 12/29/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$272	$272	$272	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	11/27/2017	12/29/2022
Capital Delivery Salary (Fringes)	11/27/2017	12/29/2022

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 10/16/2020

End Date: 12/30/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$134	$134	$134	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71024A.01)	10/16/2020	12/30/2022

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Phase: Contractual Professional Services (Water I&E)

Phase Title: Contractual Professional Services (Water I&E)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2021

End Date: 6/30/2021

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Contractual Professional Services (Water I&E)	$1,287	$1,287	$1,287	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Contractual Professional Services (Water I&E - 1802775)	6/1/2021	6/30/2021

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Phase: Design & Construction Assistance # 1 (CS-259, CS-1488)

Phase Title: Design & Construction Assistance # 1 (CS-259, CS-1488)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 11/27/2017

End Date: 12/29/2022

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/11/2019

Cost Est. Source: Somat- Executed Contract

Cost Est. Prepared By: Somat

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (CS-259, CS-1488)	$282	$282	$282	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-259)	11/27/2017	12/29/2022

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Phase: Design/Engineering (CS-1488)

Phase Title: Design/Engineering (CS-1488)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2017

End Date: 6/28/2019

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/11/2019

Cost Est. Source: Somat- Executed Contract

Cost Est. Prepared By: Somat

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-1488)	$253	$253	$253	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-1488)	7/1/2017	6/28/2019

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Phase: Construction (Build) # 1 (1802775)

Phase Title: Construction (Build) # 1 (1802775)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/11/2019

End Date: 12/29/2022

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/11/2019

Cost Est. Source: Salenbien- Executed Contract

Cost Est. Prepared By: Salenbien

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (1802775)	$5,892	$5,892	$5,892	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1802775)	3/11/2019	12/29/2022

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$272	$272	$272	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$134	$134	$134	$0	$0	$0	$0	$0	$0	$0	$0
Contractual Professional Services (Water I&E)	$1,287	$1,287	$1,287	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1 (CS-259, CS-1488)	$282	$282	$282	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-1488)	$253	$253	$253	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1 (1802775)	$5,892	$5,892	$5,892	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$8,119	$8,119	$8,120	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$4,000	$0	$1,800	$2,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,000
2019	$6,186	$0	$23	$955	$3,676	$1,549	$6	$0	$0	$0	$0	$0	$0	$0	$6,209
2020	$6,980	$0	$156	$1,067	$4,737	$2,237	$6	$0	$0	$0	$0	$0	$0	$0	$8,203
2021	$2,163	$0	$0	$988	$4,474	$2,163	$0	$0	$0	$0	$0	$0	$0	$0	$7,625
2022	$8	$0	$0	$832	$4,390	$4,370	$8	$0	$0	$0	$0	$0	$0	$0	$9,601
2023	$0	$0	$156	$829	$4,236	$2,717	$1,380	$0	$0	$0	$0	$0	$0	$0	$9,318
2024	$0	$0	$156	$829	$4,236	$2,717	$430	$918	$0	$0	$0	$0	$0	$0	$9,286

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$8,119,713	$8,119,713	$0	$0	$0	$0	$0	$0	$0	$0

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Description of CIP Changes:

Up-dated the procurement start date and the construction start/finish date. Up-dated the Contract numbers for Engineering and Construction. PF 2018
Cost of CIP updated this fiscal year to account for the actual cost of construction contract award that occurred in FY19. PF 2019
Updated project title for clarity. 8/19/2019 GAG

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

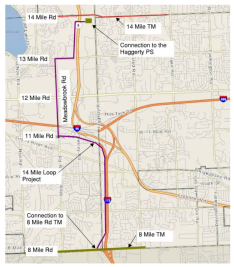
Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

76

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment



14 Mile Loop Project Location

Project Manager: Vittoria Hogue

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/28/2016

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Oakland County

Lookup Location: 8 Mile Rd/ I-275 to 14 Mile Rd/ Haggerty PS

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Problem Statement:

The 14 Mile Transmission Main that currently serves West Bloomfield Township, Farmington Hills, Commerce Township, Novi, Walled Lake, and Wixom is a single feed transmission system. If a disruption to service were to occur on this transmission main, many of the users along this main would experience a complete loss of pressure and flow. This project would provide a transmission main loop to the 14 Mile system to increase redundancy on this branch of the system.

Scope of Work/Project Alternatives:

Install approximately 8 Miles of 54-inch transmission main from 8 Mile Road to 14 Mile Road. It also includes construction of approximately 1 mile of new 24-inch parallel transmission main along 14 Mile from M-5 to west of Decker Road to reinforce the 14 Mile Transmission System.

The work will also include connections to the yard piping and reservoir fill line at the Haggerty Booster Station as well as control valves to regulate flows to and from the 14 Mile transmission main.

Other Important Info:

Project History: The 2015 Water Master Plan Update included a recommendation to evaluate options along this branch of the system to increase redundancy. Since that recommendation, GLWA Water Supply Operations Engineering performed a hydraulic analysis of redundancy alternatives for the 14 Mile Transmission System. The results of the hydraulic analysis was presented at the May 15, 2017 and September 19, 2017 Analytical Work Group Meetings and based on the discussion at these meetings, the Haggerty Loop Option described in the scope of work appears to be the preferred alternative.

Primary Driver: 2 - Performance

Driver Explanation:

Completion of the 14 Mile Road Transmission Loop will eliminate a single feed to over 250,000 people.

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Scoring

Project Manager Weighted Score:	**77.4**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	C. May have minor failures or diminished efficiency; some performance deterioration	Parts of the existing 14-Mile transmission main are in poor condition. We have had annual breaks on this line. Other portions of the line are likely to break as well in the near term.
Performance (Service Level/Reliability)	5	B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, D. Canceling project significant, persistent, ongoing, continuous service interruption and/or reliability issues†, F. No redundancy or feasible temporary options	This area has no redundancy. Main break have a significant impact on water service to this area. Main breaks are common and imminent.
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	
Operations and Maintenance	3	C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues, E. Reduction (25% to 49%) in reactive maintenance	With redundant transmission mains in place, if a break occurs on the existing line it will reduce the
Health and Safety	4	A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years	
Public Benefit	5	A. Project is key part of a strategic plan* for GLWA or politically driven, B. Project will have a major and measurable positive impact by supporting member partners; coordination/ shared outcomes w/ other agencies/departments; project has a major impact on quality of life/aesthetics; Major positive impact on public	
Financial	1	A. Minimal to no impact to GLWA	
Efficiency and Innovation	2	C. Low positive impact on water use, effluent reuse/recycling or other GLWA strategic initiative*; business process optimization and institutional knowledge; O&M process/operational efficiency	

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Review Committee Weighted Score:	**76**	
Criteria Name	**Score**	**Comment**
Condition	1	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/20/2019

End Date: 1/12/2025

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2017

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,760	$991	$959	$457	$343	$0	$0	$0	$0	$343	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	3/20/2019	1/12/2025
Capital Delivery Salary (Fringes)	3/20/2019	1/12/2025
Other Capital Improvement Costs (net-zero cost account to be archived)	3/20/2019	1/12/2025
Other Capital Improvement Costs	3/20/2019	1/12/2025
Interlocal Agreement or Intergovernmental Agreement	3/20/2019	1/12/2025

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Phase: Design & Construction Assistance # 1 (1802448)

Phase Title: Design & Construction Assistance # 1 (1802448)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/20/2019

End Date: 1/12/2025

Phase Comments/Description:

Brown & Caldwell is the engineering consultant for the design, construction administration, and RPR services.

Cost Est. Class: Class 1

Cost Est. Date: 3/12/2019

Cost Est. Source: Brown and Caldwell

Cost Est. Prepared By: Brown and Caldwell

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (1802448)	$9,883	$8,860	$8,391	$1,036	$456	$0	$0	$0	$0	$456	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1802448)	3/20/2019	1/12/2025

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Phase: Construction (Build) # 1 (1803258)

Phase Title: Construction (Build) # 1 (1803258)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 8/11/2020

End Date: 12/15/2022

Phase Comments/Description:

Construction of approximately 1 mile of a new parallel 24-inch transmission main along 14 Mile from M-5 to west of Decker Road to reinforce the 14 Mile Transmission Main.

Cost Est. Class: Class 1

Cost Est. Date: 10/18/2021

Cost Est. Source: Ric-Man/Clark- Executed Contract

Cost Est. Prepared By: Ric-Man/Clark

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (1803258)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1803258) (net-zero cost account to be archived)	8/11/2020	12/15/2022

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Phase: Construction Phase #3 (1903312)

Phase Title: Construction Phase #3 (1903312)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 12/12/2019

End Date: 12/14/2022

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 8/10/2020

Cost Est. Source: Major- Executed Contract

Cost Est. Prepared By: Major

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction Phase #3 (1903312)	$6,611	$6,611	$6,611	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1903312)	8/10/2020	12/14/2022
Construction Materials (Phase 2) (1903312)	12/12/2019	2/1/2021

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Phase: Construction Materials (2002038)

Phase Title: Construction Materials (2002038)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/11/2020

End Date: 9/30/2021

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction Materials (2002038)	$691	$691	$691	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction Materials (2002038)	8/11/2020	9/30/2021

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Phase: Construction (2004456)

Phase Title: Construction (2004456)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 10/18/2021

End Date: 2/20/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/18/2021

Cost Est. Source: Ric-Man/Clark- Executed Contract

Cost Est. Prepared By: Ric-Man/Clark

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (2004456)	$93,069	$68,024	$57,684	$35,385	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2004456)	10/18/2021	2/20/2024
Construction Materials (2004456)	10/18/2021	2/20/2024
Interlocal Agreement or Intergovernmental Agreement (2004456)	7/1/2023	2/20/2024

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Phase: Construction Materials (2002047)

Phase Title: Construction Materials (2002047)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 11/25/2020

End Date: 10/14/2022

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 11/25/2020

Cost Est. Source: Cascade- Executed Contract

Cost Est. Prepared By: Cascade

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction Materials (2002047)	$284	$284	$284	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction Materials (2002047)	11/25/2020	10/14/2022

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Phase: Construction Materials (2002048)

Phase Title: Construction Materials (2002048)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 4/14/2021

End Date: 3/8/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 4/14/2021

Cost Est. Source: Kennedy- executed Contract

Cost Est. Prepared By: Kennedy

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction Materials (2002048)	$1,178	$1,040	$749	$429	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2002048)	4/14/2021	3/8/2024
Construction Materials (2002048)	4/14/2021	3/8/2024

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

*Design & Construction costs are inclusive of salaries where salaries are not defined

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,760	$991	$959	$457	$343	$0	$0	$0	$0	$343	$0
Design & Construction Assistance # 1 (1802448)	$9,883	$8,860	$8,391	$1,036	$456	$0	$0	$0	$0	$456	$0
Construction (Build) # 1 (1803258)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction Phase #3 (1903312)	$6,611	$6,611	$6,611	$0	$0	$0	$0	$0	$0	$0	$0
Construction Materials (2002038)	$691	$691	$691	$0	$0	$0	$0	$0	$0	$0	$0
Construction (2004456)	$93,069	$68,024	$57,684	$35,385	$0	$0	$0	$0	$0	$0	$0
Construction Materials (2002047)	$284	$284	$284	$0	$0	$0	$0	$0	$0	$0	$0
Construction Materials (2002048)	$1,178	$1,040	$749	$429	$0	$0	$0	$0	$0	$0	$0
Totals	$113,474	$86,500	$75,368	$37,307	$800	$0	$0	$0	$0	$800	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$28,500	$1,300	$10,500	$12,000	$6,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$29,800
2019	$16,993	$0	$0	$0	$751	$1,315	$1,507	$13,420	$37,433	$0	$0	$0	$0	$0	$54,426
2020	$28,993	$0	$0	$0	$751	$1,315	$1,507	$13,420	$12,000	$25,433	$0	$0	$0	$0	$54,426
2021	$69,534	$0	$0	$638	$3,762	$1,194	$17,085	$17,085	$17,085	$17,085	$7	$0	$0	$0	$73,941
2022	$95,356	$0	$0	$638	$3,122	$6,064	$37,593	$36,390	$21,374	$0	$0	$0	$0	$0	$105,180
2023	$74,074	$0	$0	$638	$3,006	$6,821	$26,883	$29,635	$29,216	$15,223	$0	$0	$0	$0	$111,421
2024	$27,027	$0	$0	$638	$3,006	$6,821	$18,216	$57,077	$27,027	$0	$0	$0	$0	$0	$112,786

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$113,474,523	$75,367,737	$37,307,070	$799,716	$0	$0	$0	$0	$799,716	$0

Description of CIP Changes:

The engineering services contract (180244) had a change order- the CIP is updated to reflect that; Phase I construction (1903312) is awarded and now has actual contract costs; Phase II of the project is at 60% design and costs are updated based on the recent estimate.

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Project Status: Active - Procurement - Board Approved - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

76

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Vittoria Hogue

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/12/2017

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Will be located on Inkster between Wick and Pennsylvania Road; on Allen Road/Dixie Highway between Pennsylvania Rd. and Ready Rd; and also at Electric Avenue.

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

☐ **From Program?**

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Problem Statement:

The Downriver Transmission Main that currently serves Brownstown, Riverview, Woodhaven, Trenton, Flat Rock, Gibraltar, Rockwood, South Rockwood, Berlin Township, and Grosse Isle is a single feed transmission system. If a disruption to service were to occur on this transmission main, many of the users along this main would experience a complete loss of pressure and flow. The number of users experiencing pressure loss would depend on the location of the break. This project would provide a transmission main loop to the Downriver system to provide redundancy on this branch of the system.

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work generally includes: installing approximately 4 miles of 16-inch transmission main and 5 mile of 24-inch transmission main paralleling the existing Allen Road/Dixie Highway transmission main and 4 miles of 30-inch transmission main along Inkster road between Wick and Pennsylvania road. This will provide redundancy to the Downriver communities of Brownstown, Riverview, Woodhaven, Trenton, Flat Rock, Gibraltar, Rockwood, South Rockwood, Berlin Township, and Grosse Isle. The project's scope will also include the demolition of the Electric Avenue Booster Pumping Station reservoirs, as well as replacement of the city of Trenton's billing meters.

Other Important Info:

Completion of the Downriver Transmission main loop was predicated on acquiring ownership of a portion of 24-inch transmission main owned but not used by the City of Trenton. The acquisition of this Trenton main has been completed.

Project History: The 2015 Water Master Plan Update included a recommendation to evaluate options along this branch of the system to increase redundancy. GLWA Water Supply Operations Engineering performed a hydraulic analysis of redundancy alternatives. The results of the hydraulic analysis were presented and the approach described in the scope of work was determined as the best alternative.

Primary Driver: 2 - Performance

Driver Explanation:

This transmission main project will complete a loop to provide redundancy to numerous GLWA member partners.

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Scoring

Project Manager Weighted Score:	**79.6**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	C. May have minor failures or diminished efficiency; some performance deterioration	
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, F. No redundancy or feasible temporary options	
Regulatory (Environmental/Legal)	3	A. Moderate risk of causing	
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	
Health and Safety	4	A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years	
Public Benefit	5	A. Project is key part of a strategic plan* for GLWA or politically driven	
Financial	2	A. Low financial impact to GLWA; No grants/other external funding	
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	

Review Committee Weighted Score:	**76**	
Criteria Name	**Score**	**Comment**
Condition	1	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	2	Scores carried over from previous year

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 5/1/2020

End Date: 6/30/2030

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$607	$110	$103	$57	$75	$75	$75	$75	$75	$373	$75

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	5/1/2020	6/30/2030
Capital Delivery Salary (Fringes)	5/1/2020	6/30/2030

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Phase: Professional Services (CS-272)

Phase Title: Professional Services (CS-272)

Phase Budget:

Phase Status: Closed Out

Start Date: 8/17/2020

End Date: 12/31/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-272)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272)	8/17/2020	12/31/2020

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Phase: Professional Services (CS-201)

Phase Title: Professional Services (CS-201)

Phase Budget:

Phase Status: Closed Out

Start Date: 8/17/2020

End Date: 12/31/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services (CS-201)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-201)	8/17/2020	12/31/2020

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Phase: Design & Construction Assistance # 1 (1803942)

Phase Title: Design & Construction Assistance # 1 (1803942)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 5/1/2020

End Date: 6/30/2030

Phase Comments/Description:

Award of this engineering services contract is in the negotiation stage

Cost Est. Class: Class 1

Cost Est. Date: 5/1/2020

Cost Est. Source: OHM/WSP

Cost Est. Prepared By: OHM-WSP

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (1803942)	$5,165	$2,652	$2,509	$535	$745	$745	$419	$211	$0	$2,120	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1803942)	5/1/2020	6/30/2030

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Active - Procurement

Start Date: 4/1/2024

End Date: 6/30/2026

Phase Comments/Description:

Cost Est. Class: Class 3

Cost Est. Date: 3/31/2023

Cost Est. Source: OHM/WSP- 60% OPCC

Cost Est. Prepared By: OHM/WSP

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$20,700	$0	$0	$2,294	$9,203	$9,203	$0	$0	$0	$18,406	$0

Phase Dates

Activity Name	Start Date	End Date
Construction #1	4/1/2024	6/30/2026

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Phase: Construction (Build) # 2

Phase Title: Construction (Build) # 2

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/1/2024

End Date: 12/31/2027

Phase Comments/Description:

Cost Est. Class: Class 3

Cost Est. Date: 3/31/2023

Cost Est. Source: OHM/WSP- 60% OPCC

Cost Est. Prepared By: OHM/WSP

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 2	$17,900	$0	$0	$0	$5,108	$5,108	$5,108	$2,575	$0	$17,900	$0

Phase Dates

Activity Name	Start Date	End Date
Construction #2	7/1/2024	12/31/2027

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Phase: Construction (Build) # 3

Phase Title: Construction (Build) # 3

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2030

Phase Comments/Description:

Cost Est. Class: Class 3

Cost Est. Date: 3/31/2023

Cost Est. Source: OHM/WSP- 60% OPCC

Cost Est. Prepared By: OHM/WSP

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 3	$25,400	$0	$0	$0	$0	$0	$0	$8,482	$8,459	$16,941	$8,459

Phase Dates

Activity Name	Start Date	End Date
Construction #3	7/1/2027	6/30/2030

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$607	$110	$103	$57	$75	$75	$75	$75	$75	$373	$75
Professional Services (CS-272)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services (CS-201)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1 (1803942)	$5,165	$2,652	$2,509	$535	$745	$745	$419	$211	$0	$2,120	$0
Construction (Build) # 1	$20,700	$0	$0	$2,294	$9,203	$9,203	$0	$0	$0	$18,406	$0
Construction (Build) # 2	$17,900	$0	$0	$0	$5,108	$5,108	$5,108	$2,575	$0	$17,900	$0
Construction (Build) # 3	$25,400	$0	$0	$0	$0	$0	$0	$8,482	$8,459	$16,941	$8,459
Totals	$69,771	$2,762	$2,612	$2,886	$15,131	$15,131	$5,601	$11,343	$8,534	$55,740	$8,534

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$15,075	$0	$0	$297	$964	$3,051	$10,763	$22,122	$0	$0	$0	$0	$0	$37,197
2020	$37,197	$0	$0	$297	$964	$3,051	$10,763	$22,122	$0	$0	$0	$0	$0	$37,197
2021	$29,516	$0	$24	$1,398	$1,748	$3,793	$7,984	$8,007	$7,984	$6,806	$0	$0	$0	$37,744
2022	$32,235	$0	$24	$201	$1,682	$664	$7,483	$8,074	$8,544	$7,470	$2,924	$0	$0	$37,067
2023	$47,500	$0	$24	$201	$1,395	$2,226	$7,500	$15,000	$15,000	$5,000	$5,000	$11,615	$0	$62,961
2024	$47,638	$0	$24	$201	$1,395	$830	$558	$5,309	$10,575	$10,575	$10,575	$10,603	$10,575	$66,552

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$69,771,633	$2,612,070	$2,886,267	$15,130,878	$15,130,878	$5,601,480	$11,343,055	$8,533,504	$55,739,793	$8,533,504

CIP Delivery Team

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Description of CIP Changes:

CIP cost increased to account for the anticipated award amount for the engineering services contract (Contract No. 1803942). In addition, the estimated cost to construct the new tranmission mains to complete the loop was increased from last fiscal year based on construction cost data received on other projects over the past year. SM 8/6/2019

VNH 7/7/2022 - Cost for construction increased due to the number that came back on the 60% design cost estimate.

The scope was updated to state that four miles of the transmission main that was planned to be 16 inches in diameter will now be 24 inches in diameter to accommodate future loss of capacity that could result from slip lining and to better maintain customer meter contract pressures during an emergency condition. In addition, the estimated cost to construct the new transmission mains to complete the loop was increased from last fiscal year based on the most current construction cost estimate received from contract 1803942. VNH 7/28/2021

CIP Number: 122017

Project Title: 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

81.2

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/21/2018

Year Project Added to CIP: 2019

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: City of Detroit

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 122017

Project Title: 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Problem Statement:

The primary driver of this project is to provide pipeline renewal of a short section of PCCP under the I-75 freeway at Grixdale in the City of Detroit. Field inspection revealed this segment of pipeline is in need of renewal.

Scope of Work/Project Alternatives:

Project includes inspection and rehab of a short I-75 freeway crossing of 7 Mile/Nevada Transmission System.

Other Important Info:

NA

Primary Driver: 1 - Condition

Driver Explanation:

This project will address a distressed segment of PCCP under I-75 in the CIty of Detroit.

CIP Number: 122017

Project Title: 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Scoring

Project Manager Weighted Score:	**51.9**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	1	A. Asset has >75% of its design service life remaining	
Performance (Service Level/Reliability)	1	E. Ample redundancy in the area to limit impacts	
Regulatory (Environmental/Legal)	3	B. Project will have a moderate positive impact on reg. issues	
Operations and Maintenance	2	A. Low levels of O/M keeps meantime between failure standard	
Health and Safety	1	C. Staff/public safety/hazard issues not a concern	
Public Benefit	2	C. Additional revenue/savings for GLWA (<$100K/yr)	
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**81.2**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	4	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	4	Scores carried over from previous year
Financial	4	Scores carried over from previous year
Efficiency and Innovation	5	Scores carried over from previous year

CIP Number: 122017

Project Title: 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 3/12/2021

End Date: 3/1/2024

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2018

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$589	$38	$37	$552	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	3/12/2021	3/1/2024
Capital Delivery Salary (Fringes)	3/12/2021	3/1/2024

CIP Number: 122017

Project Title: 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Phase: Design/Engineering #2

Phase Title: Design/Engineering #2

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 3/10/2022

End Date: 5/2/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/10/2022

Cost Est. Source: Stantec- Executed Contract

Cost Est. Prepared By: Stantec

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering #2	$86	$47	$47	$39	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (RPR 2103091)	3/10/2022	5/2/2024

CIP Number: 122017

Project Title: 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Phase: Design/Engineering #1

Phase Title: Design/Engineering #1

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/12/2021

End Date: 3/21/2029

Phase Comments/Description:

Cost Est. Class: Class 3

Cost Est. Date: 6/1/2023

Cost Est. Source: Pullman

Cost Est. Prepared By: Pullman

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering #1	$13,036	$9,455	$9,140	$2,877	$216	$216	$216	$216	$156	$1,019	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (2001488) (net-zero cost account to be archived)	1/1/2024	3/21/2029
Construction (2001488)	3/12/2021	3/21/2029

CIP Number: 122017

Project Title: 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$589	$38	$37	$552	$0	$0	$0	$0	$0	$0	$0
Design/Engineering #2	$86	$47	$47	$39	$0	$0	$0	$0	$0	$0	$0
Design/Engineering #1	$13,036	$9,455	$9,140	$2,877	$216	$216	$216	$216	$156	$1,019	$0
Totals	$13,711	$9,539	$9,224	$3,468	$216	$216	$216	$216	$156	$1,019	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2020	$20,500	$0	$1,040	$6,050	$6,910	$3,750	$2,750	$0	$0	$0	$0	$0	$20,500
2021	$29,719	$0	$74	$1,794	$3,510	$9,223	$7,620	$7,572	$30,784	$0	$0	$0	$60,577
2022	$25,539	$0	$3	$1,167	$1,944	$1,944	$4,784	$3,505	$13,363	$13,387	$13,387	$6,705	$60,189
2023	$39,995	$0	$3	$1,451	$1,023	$1,023	$3,401	$11,857	$11,857	$11,857	$11,889	$6,367	$60,729
2024	$38,863	$0	$3	$1,451	$4,592	$3,972	$3,389	$5,060	$10,128	$10,128	$10,156	$10,128	$66,364

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$13,711,300	$9,224,163	$3,468,146	$215,612	$215,612	$215,612	$216,203	$155,950	$1,018,990	$0

Description of CIP Changes:

Project costs were adjusted to account for recent bid prices received by GLWA on other pipeline projects.
T. Kuhns 8-26-23 - This project was adjusted from full renewal of the 7 Mile transmission system to a partial rehab of the transmission system under I-75 as the plans to decommission treatment at NE have been shelved.

CIP Number: 122018

Project Title: Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

Project Status: Cancelled

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

85

- [x] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 8/15/2019

Year Project Added to CIP: 2019

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Transmission Mains

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 122018

Project Title: Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

Problem Statement:

A large proportion of the water transmission mains (WTMs) within the City of Detroit were constructed between the decades of 1870 and 1930. Mains constructed during this period have exceeded their service life and require replacement in the near term. Because NE Decommissioning was put on hold indefinitely and these pipes are not as critical if NE treatment is not decommissioned, this project was put on hold. These pipes are under review to determine if they should be rehabilitated or abandoned.

Scope of Work/Project Alternatives:

This project involves rehab of WTM along Garland Street, Hurlbut Street, and Bewick Street between Jefferson Avenue and I-94 within the east side of the City of Detroit. This project will include a detailed condition assessment of these WTM to evaluate the appropriate rehabilitation method. Because NE Decommissioning was put on hold indefinitely and these pipes are not as critical if NE treatment is not decommissioned, this project was put on hold. These pipes are under review to determine if they should be rehabilitated or abandoned.

Other Important Info:

This project will be implemented concurrently with Phase 3 of CIP:122003 WWP to NE Transmision Main Project. Because NE Decommissioning was put on hold indefinitely and these pipes are not as critical if NE treatment is not decommissioned, this project was put on hold. These pipes are under review to determine if they should be rehabilitated or abandoned.

Primary Driver: 1 - Condition

Driver Explanation:

WTM described for this CIP project are aged and at the end of their service life.

CIP Number: 122018

Project Title: Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

Scoring

Project Manager Weighted Score:	**37.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	2	A. Asset has <75% of its design service life remaining	
Performance (Service Level/Reliability)	1	C. Meets all design requirements	
Regulatory (Environmental/Legal)	1	A. No risk of causing	
Operations and Maintenance	1	A. O&M levels are routine;	
Health and Safety	2	B. Project limited positive impact on staff/public H&S‡; No major staff or hazard issues or concerns addressed	
Public Benefit	4	C. Significant additional revenue/savings for GLWA ($500K-$999K /yr); Better utilize existing & new infrastructure	
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**85**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	4	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	4	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	5	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 122018

Project Title: Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 11/17/2021

End Date: 7/1/2038

Phase Comments/Description:
GLWA salaries

Cost Est. Class: Class 5

Cost Est. Date: 8/15/2019

Cost Est. Source: Water Engineering

Cost Est. Prepared By: Tim Kuhns

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$9	$9	$9	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	11/17/2021	7/1/2038
Capital Delivery Salary (Fringes)	11/17/2021	7/1/2038

CIP Number: 122018

Project Title: Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

Phase: Design/Engineering (C.A.)

Phase Title: Design/Engineering (C.A.)

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 3/10/2022

End Date: 5/2/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/10/2022

Cost Est. Source: Stantec- Executed Contract

Cost Est. Prepared By: Stantec

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (C.A.)	$10	$10	$10	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (C.A.)	3/10/2022	5/2/2024

CIP Number: 122018

Project Title: Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

Phase: Design-Build

Phase Title: Design-Build

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 11/17/2021

End Date: 7/1/2038

Phase Comments/Description:
Progressive Design Build for design and rehab of WTM described in this CIP project.

Cost Est. Class: Class 5

Cost Est. Date: 8/15/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build	$2,708	$2,708	$2,708	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	11/17/2021	5/18/2029
Construction (2003102)	11/17/2021	7/1/2038

CIP Number: 122018

Project Title: Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$9	$9	$9	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (C.A.)	$10	$10	$10	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build	$2,708	$2,708	$2,708	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$2,726	$2,726	$2,726	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2021	$14,456	$121	$1,717	$2,037	$2,690	$4,006	$4,006	$30,000	$0	$0	$0	$44,577
2022	$12,577	$0	$1,578	$1,530	$1,528	$1,528	$3,995	$3,995	$15,960	$15,960	$7,995	$54,102
2023	$32,750	$0	$0	$1,999	$1,999	$2,004	$9,582	$9,582	$9,582	$9,608	$9,582	$53,938
2024	$30	$0	$0	$1,381	$1,681	$30	$0	$0	$0	$0	$4,677	$35,422

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$2,726,152	$2,726,152	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

T. Kuhns - 8/26/23 - Because NE Decommissioning was put on hold indefinitely and these pipes are not as critical if NE treatment is not decommissioned, this project was put on hold. These pipes are under review to determine if they should be rehabilitated or abandoned.

CIP Number: 122019

Project Title: Jefferson Main Replacement Project

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

37.2

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/30/2021

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: City of Detroit

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: Yes

Partners: Other

Collaboration Entity: DWSD

CIP Number: 122019

Project Title: Jefferson Main Replacement Project

Problem Statement:

The City of Detroit is planning on performing a complete reconstruction of Jefferson Avenue from I-375 to Alter Street in 2023. The existing GLWA 48-inch cast iron transmission main that is within Jefferson Avenue from Water Works Park to I-375 was constructed in 1915 and is beyond its service life. Given that Jefferson Avenue will be reconstructed, GLWA would like to replace the 48-inch Jefferson Main at the same time as Jefferson Avenue is being reconstructed. Replacing the Jefferson Main now avoids duplication of restoration.

Scope of Work/Project Alternatives:

Scope of work for this project involves replacement of approximately 17,650 linear feet of 48-inch transmission main within Jefferson Avenue from Water Works Park to I-375.

Other Important Info:

This work will be included with the overall Jefferson Avenue Streetscape project. GLWA will cost share for their portion of the work associated with the 48-inch transmission main replacement.

Primary Driver: 7 - Financial

Driver Explanation:

GLWA 48-inch cast iron main in Jefferson is over 100 years old and is in need of replacement.

CIP Number: 122019

Project Title: Jefferson Main Replacement Project

Scoring

Project Manager Weighted Score:	**36.2**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	1	C. Little to no wear shown and no repairs outside of regular maint.	
Performance (Service Level/Reliability)	1	D. Project will have low to no measurable positive impact on service levels and/or system reliability / decreased overall risk	
Regulatory (Environmental/Legal)	2	A. Low risk of causing, B. Project will have a moderate to low impact on reg. issues	
Operations and Maintenance	1	A. O&M levels are routine;	
Health and Safety	1	C. Staff/public safety/hazard issues not a concern	
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	

Review Committee Weighted Score:	**37.2**	
Criteria Name	**Score**	**Comment**
Condition	1	
Performance (Service Level/Reliability)	1	
Regulatory (Environmental/Legal)	2	
Operations and Maintenance	1	
Health and Safety	1	
Public Benefit	2	
Financial	3	
Efficiency and Innovation	2	

CIP Number: 122019

Project Title: Jefferson Main Replacement Project

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/1/2021

End Date: 6/30/2026

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$368	$0	$0	$0	$184	$184	$0	$0	$0	$368	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	9/1/2021	6/30/2026
Capital Delivery Salary (Fringes)	9/1/2021	6/30/2026

CIP Number: 122019

Project Title: Jefferson Main Replacement Project

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/1/2021

End Date: 6/30/2026

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date:

Cost Est. Source: DWSD

Cost Est. Prepared By: DWSD

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$3,481	$1,134	$1,098	$36	$1,173	$1,173	$0	$0	$0	$2,347	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	9/1/2021	6/30/2026

CIP Number: 122019

Project Title: Jefferson Main Replacement Project

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2024

End Date: 6/30/2026

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: AECOM

Cost Est. Prepared By: AECOM

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$36,287	$0	$0	$0	$18,144	$18,144	$0	$0	$0	$36,287	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2024	6/30/2026

CIP Number: 122019

Project Title: Jefferson Main Replacement Project

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$368	$0	$0	$0	$184	$184	$0	$0	$0	$368	$0
Design/Engineering	$3,481	$1,134	$1,098	$36	$1,173	$1,173	$0	$0	$0	$2,347	$0
Construction	$36,287	$0	$0	$0	$18,144	$18,144	$0	$0	$0	$36,287	$0
Totals	$40,135	$1,133	$1,098	$36	$19,501	$19,501	$0	$0	$0	$39,002	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$29,046	$655	$827	$5,559	$11,102	$11,102	$456	$0	$0	$29,701
2024	$39,798	$0	$338	$0	$19,899	$19,899	$0	$0	$0	$40,136

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$40,135,982	$1,097,554	$36,397	$19,501,015	$19,501,015	$0	$0	$0	$39,002,031	$0

Description of CIP Changes:

A new project added to the CIP FY 2023-2027 7/27/2021 AC.

CIP Number: 132007

Project Title: Energy Management: Freeze Protection Pump Installation at Imlay Pump Station

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

35.1

- [x] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Vittoria Hogue

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 6/26/2014

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: Lapeer County

Lookup Location: Imlay Pumping Station

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 132007

Project Title: Energy Management: Freeze Protection Pump Installation at Imlay Pump Station

Problem Statement:

This CIP project will address two principle needs. The first is to replace an existing large pumping unit with a smaller pumping unit for the purpose of recirculating finished water inside the station's reservoir. Recirculation of reservoir water is required during the low-demand season to maintain water quality. Recirculation of reservoir water using a smaller suitability sized pumping unit will reduce operating complexity and the possibility for damage to the larger pump units. The second need is for a new smaller pumping unit to meet the lower station demands for customers served west of Imlay Station. The lower station demands are a result of Genesee County communities (outside the city of Flint) leaving the GLWA's system.

Scope of Work/Project Alternatives:

This project is being delivered using a design-build project delivery method. The scope of work generally includes replacing one of Imlay Station's 75 MGD pump's and 6,000 HP motor with a smaller 22.5 MGD pump with 1,100 HP motor. The associated VFD, valves, piping and appurtenances will also be removed and replaced to accommodate the new smaller pump. VHN 7/29/2021

Other Important Info:

N/A

Primary Driver: 8 - Efficiency

Driver Explanation:

Replacement of an existing 75 MGD pumping unit with a 22.5 MGD unit to right size the pump that normally serves communities to the west of Imlay Station.

CIP Number: 132007

Project Title: Energy Management: Freeze Protection Pump Installation at Imlay Pump Station

Scoring

Project Manager Weighted Score:	**35.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	1	B. Fully operable, well maint'd, up to current standards	
Performance (Service Level/Reliability)	1	A. Fully operable, well maintained	
Regulatory (Environmental/Legal)	1	A. No risk of causing	
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	
Health and Safety	1	A. No failure reasonably expected to occur	
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA.	
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	

Review Committee Weighted Score:	**35.1**	
Criteria Name	**Score**	**Comment**
Condition	1	Scores carried over from previous year
Performance (Service Level/Reliability)	1	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	1	Scores carried over from previous year
Public Benefit	1	Scores carried over from previous year
Financial	3	Scores carried over from previous year
Efficiency and Innovation	3	Scores carried over from previous year

CIP Number: 132007

Project Title: Energy Management: Freeze Protection Pump Installation at Imlay Pump Station

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 6/1/2020

End Date: 2/28/2024

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$226	$226	$218	$8	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	6/1/2020	2/28/2024
Capital Delivery Salary (Fringes)	6/1/2020	2/28/2024

CIP Number: 132007

Project Title: Energy Management: Freeze Protection Pump Installation at Imlay Pump Station

Phase: Design-Build # 1 (1900516)

Phase Title: Design-Build # 1 (1900516)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 6/1/2020

End Date: 2/28/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 6/1/2020

Cost Est. Source: CCC-Executed Contract

Cost Est. Prepared By: CCC

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1 (1900516)	$5,534	$4,853	$4,963	$571	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (JOC Contract)	6/1/2020	11/30/2023
Construction (1900516)	10/1/2022	2/28/2024

CIP Number: 132007

Project Title: Energy Management: Freeze Protection Pump Installation at Imlay Pump Station

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$226	$226	$218	$8	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1 (1900516)	$5,534	$4,853	$4,963	$571	$0	$0	$0	$0	$0	$0	$0
Totals	$5,759	$5,078	$5,181	$579	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$1,000	$0	$200	$500	$300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,000
2019	$557	$0	$0	$38	$385	$134	$0	$0	$0	$0	$0	$0	$0	$0	$557
2020	$2,137	$0	$9	$14	$592	$1,315	$230	$0	$0	$0	$0	$0	$0	$0	$2,160
2021	$4,417	$0	$0	$97	$685	$4,211	$206	$0	$0	$0	$0	$0	$0	$0	$5,199
2022	$4,046	$0	$0	$88	$80	$974	$3,963	$84	$0	$0	$0	$0	$0	$0	$5,188
2023	$115	$0	$9	$88	$70	$759	$4,104	$115	$0	$0	$0	$0	$0	$0	$5,146
2024	$902	$0	$9	$88	$70	$759	$178	$3,739	$902	$0	$0	$0	$0	$0	$5,746

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$5,759,846	$5,180,944	$578,902	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Under SCC direction, the pumping unit P3 is being expanded from Freeze Protection Pump to a winter service pump. It is designed to address the entire load of the 72-inch water main during base load conditions. Consequently, the overall budget has increased. TDK 7/15/2018

The during design the size of the motor needed for the new pump was changed from 1500 HP to 1100 HP. This was modified in the scope of work section. VNH 7/29/2021

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

62.6

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Mike Garrett

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/11/2016

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Oakland County

Lookup Location: West Service Center

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Problem Statement:

Construction of West Service Center Division Valves is needed to convey flows originating from the Lake Huron Water Treatment Plant through the West Service Center to the Springwells high-pressure service area while the Springwells raw water tunnel is out of service for repairs. The existing reservoirs at the West Service Center are in poor condition and continue to require periodic structural repairs despite numerous previous repairs. Additionally, half of the existing reservoir pumps experience suction hydraulic issues when the reservoir level falls below half full.

Scope of Work/Project Alternatives:

This project is being delivered using a design-build project delivery method. The scope of work generally involves:
1. Rehabilitating Valve Vaults #1, #4, and #7.
2. Demolishing existing Valve Vault #3.
3. Constructing a new Valve Vault #3 containing a new 30-inch cone valve.
4. Demolishing two existing 10 MG reservoirs and the associated Reservoir Pump Houses #1 and #2, with associated yard piping.
5. Constructing two new 5 MG reservoirs.
6. Constructing a new Reservoir Pump House, including three new reservoir pumping units and two new reservoir fill valves.
7. Installing new local valve control panel and instrumentation.
8. Testing and commissioning the new pumping facilities and finished water reservoirs.
9. Restoring the site.

Other Important Info:

Challenges: Water storage capacity and reservoir pumping capacity need to be maintained during construction. Sequence of construction and meeting system demands will need to be coordinated with operations. Construction of the new reservoirs is subject to the city of Southfield's zoning ordinances especially related to the height of the reservoirs.

Primary Driver: 8 - Efficiency

Driver Explanation:

This project will provide new reservoirs with a reservoir pumping system capable of pumping from the reservoirs to the station suction header under all operational conditions.

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Scoring

Project Manager Weighted Score:	**64.4**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	C. May have minor failures or diminished efficiency; some performance deterioration	
Performance (Service Level/Reliability)	4	D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*	
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	
Public Benefit	2	B. Measurable impact on economic development; minor & indirect impact on quality of life/aesthetics; Mostly requires new infrastructure	
Financial	1	A. Minimal to no impact to GLWA	
Efficiency and Innovation	5	B. Project removes major operational hurdles or obstacles on critical equipment/process; major time & cost savings	

Review Committee Weighted Score:	**62.6**	
Criteria Name	**Score**	**Comment**
Condition	3	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	1	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	1	Scores carried over from previous year
Public Benefit	5	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	5	Scores carried over from previous year

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 9/11/2018

End Date: 12/30/2024

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$289	$232	$221	$43	$25	$0	$0	$0	$0	$25	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	3/15/2020	12/30/2024
Capital Delivery Salary (Direct Labor)	9/11/2018	12/30/2024
Capital Delivery Salary (Fringes)	3/15/2020	12/30/2024
Capital Delivery Salary (Fringes)	9/11/2018	12/30/2024

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Phase: Design/Engineering (CS-1772)

Phase Title: Design/Engineering (CS-1772)

Phase Budget:

Phase Status: Closed Out

Start Date: 9/11/2018

End Date: 12/4/2018

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-1772)	$214	$214	$214	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-1772)	9/11/2018	12/4/2018

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Phase: Design/Engineering (CS-052)

Phase Title: Design/Engineering (CS-052)

Phase Budget:

Phase Status: Closed Out

Start Date: 9/11/2018

End Date: 12/4/2018

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-052)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	9/11/2018	12/4/2018

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Phase: Design-Build # 1 (1803312)

Phase Title: Design-Build # 1 (1803312)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 3/15/2020

End Date: 12/30/2024

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 3/15/2020

Cost Est. Source: Kokosing- Executed Contract

Cost Est. Prepared By: Kokosing

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1 (1803312)	$46,610	$43,121	$42,161	$2,950	$1,499	$0	$0	$0	$0	$1,499	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	3/15/2020	12/30/2024
Construction (882111.000) (net-zero cost account to be archived)	3/15/2020	12/30/2024
Construction (882411.000) (1803312)	3/15/2020	12/30/2024

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Phase: Miscellaneous

Phase Title: Miscellaneous

Phase Budget: Water

Phase Status: Closed Out

Start Date: 5/1/2010

End Date: 6/30/2015

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Miscellaneous	$311	$311	$311	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Pre-CAFR Actuals	5/1/2010	6/30/2015

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$289	$232	$221	$43	$25	$0	$0	$0	$0	$25	$0
Design/Engineering (CS-1772)	$214	$214	$214	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-052)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1 (1803312)	$46,610	$43,121	$42,161	$2,950	$1,499	$0	$0	$0	$0	$1,499	$0
Miscellaneous	$311	$311	$311	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$47,424	$43,877	$42,907	$2,993	$1,524	$0	$0	$0	$0	$1,524	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$11,800	$0	$7,600	$4,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,800
2019	$34,530	$0	$0	$0	$2,620	$7,430	$15,570	$8,910	$2,606	$0	$0	$0	$0	$0	$37,136
2020	$37,136	$0	$0	$0	$2,620	$7,430	$15,570	$8,910	$2,606	$0	$0	$0	$0	$0	$37,136
2021	$36,746	$0	$0	$296	$663	$4,323	$12,209	$11,853	$8,361	$0	$0	$0	$0	$0	$37,705
2022	$37,727	$0	$0	$296	$1,853	$5,267	$17,149	$19,927	$650	$0	$0	$0	$0	$0	$45,142
2023	$17,131	$0	$0	$296	$1,853	$6,598	$19,398	$16,689	$442	$0	$0	$0	$0	$0	$45,589
2024	$4,914	$0	$0	$296	$1,853	$6,598	$19,118	$12,745	$4,758	$156	$0	$0	$0	$0	$45,835

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$47,424,147	$42,907,101	$2,993,362	$1,523,683	$0	$0	$0	$0	$1,523,683	$0

Description of CIP Changes:

Updated cost projections & schedule. AJ - 7/7/2021

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

47.6

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Existing Ypsi station

Project Manager: Jorge Nicolas

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 9/28/2017

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Water Plants & Booster Pump Stations

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Problem Statement:

The Ypsilanti Booster Pumping Station does not have backup power generation and needs it in the event of a power loss so that system pressure loss is avoided during these conditions. The entire station and its pumping and electrical system equipment are original to the facility and are past their useful service life. The existing electrical system requires substantial maintenance to keep it in service. The existing pumps and motors are in poor condition and require cumbersome maintenance to keep in service.

Scope of Work/Project Alternatives:

This project is being delivered using a design-bid-build project delivery method. The scope of work generally includes building a new booster pumping station that meets current water system demands, current building and electrical codes, and best industry practices for water pumping station design, operation and maintenance. The new station will be equipped with all new pumps, motors, drives, electrical switchgear, power distribution system, building mechanical, station passive bypass, and electrical backup power generation.

Other Important Info:

Impact to member partners

Primary Driver: 1 - Condition

Driver Explanation:

Existing station mechanical and electrical equipment is original and past its useful life.

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**61.4**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining	
Performance (Service Level/Reliability)	4	D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*	
Regulatory (Environmental/Legal)	1	B. Low/no impact on specific reg. compliance issues	
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	
Health and Safety	1	C. Staff/public safety/hazard issues not a concern	
Public Benefit	4	A. Project key part of a strategic plan* for GLWA (i.e. good probability leads to new customers)	
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	

Review Committee Weighted Score:	**47.6**	
Criteria Name	**Score**	**Comment**
Condition	3	
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	1	
Operations and Maintenance	3	
Health and Safety	1	
Public Benefit	3	
Financial	2	
Efficiency and Innovation	2	

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 1/15/2020

End Date: 8/23/2035

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$391	$97	$88	$9	$0	$0	$0	$0	$0	$0	$179

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/15/2020	8/23/2035
Capital Delivery Salary (Fringes)	1/15/2020	8/23/2035

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Phase: Design/Engineering (CS-267)

Phase Title: Design/Engineering (CS-267)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 1/15/2020

End Date: 8/23/2035

Phase Comments/Description:
Design phase/scope of work design

Cost Est. Class: Class 1

Cost Est. Date: 1/15/2020

Cost Est. Source: Consultant Brown & Caldwell (CS-267)

Cost Est. Prepared By: Consultant Brown & Caldwell

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-267)	$1,382	$693	$657	$725	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-267)	1/15/2020	8/23/2035

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Phase: Design/Engineering (CS-052)

Phase Title: Design/Engineering (CS-052)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2020

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 11/13/2019

Cost Est. Source: Tetratech CS-052

Cost Est. Prepared By: Tetratech

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-052)	$89	$89	$89	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	6/1/2020	6/30/2020

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Phase: Design/Engineering (1902063)

Phase Title: Design/Engineering (1902063)

Phase Budget: Water

Phase Status: Active - Procurement - Board Approved

Start Date: 7/30/2030

End Date: 4/8/2035

Phase Comments/Description:

Not sure what is "Design/Engineering (1902063) is? if same as CS-267 then data would be same.

Cost Est. Class: Class 4

Cost Est. Date: 5/25/2023

Cost Est. Source: Consultant Brown & Caldwell (CS-267)

Cost Est. Prepared By: Consultant Brown & Caldwell

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (1902063)	$70	$32	$1	$31	$0	$0	$0	$0	$0	$0	$32

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1902063)	7/30/2030	4/8/2035

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget:

Phase Status: Future Planned Start

Start Date: 8/30/2029

End Date: 8/23/2035

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$3,714	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,873

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1902063)	8/30/2029	8/23/2035

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 11/5/2032

End Date: 8/23/2035

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 5/1/2023

Cost Est. Source: Brown and Caldwell OOPC

Cost Est. Prepared By: Brown and Caldwell

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$36,195	$0	$0	$0	$0	$0	$0	$0	$0	$0	$21,356

Phase Dates

Activity Name	Start Date	End Date
Construction	11/5/2032	8/23/2035

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Phase: Construction Property Acquisition

Phase Title: Construction Property Acquisition

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2022

End Date: 8/29/2022

Phase Comments/Description:
Design phase / Property acquisition phase

Cost Est. Class: Class 1

Cost Est. Date: 7/15/2022

Cost Est. Source: real estate agent

Cost Est. Prepared By: realtor

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction Property Acquisition	$1,596	$1,596	$1,596	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction - Property Aquisition	7/1/2022	8/29/2022

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$391	$97	$88	$9	$0	$0	$0	$0	$0	$0	$179
Design/Engineering (CS-267)	$1,382	$693	$657	$725	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-052)	$89	$89	$89	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (1902063)	$70	$32	$1	$31	$0	$0	$0	$0	$0	$0	$32
Design/Engineering	$3,714	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,873
Construction (Build) # 1	$36,195	$0	$0	$0	$0	$0	$0	$0	$0	$0	$21,356
Construction Property Acquisition	$1,596	$1,596	$1,596	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$43,436	$2,507	$2,431	$765	$0	$0	$0	$0	$0	$0	$24,439

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$8,247	$0	$93	$606	$820	$2,594	$4,134	$900	$0	$0	$0	$0	$0	$9,147
2020	$9,829	$4	$28	$585	$865	$2,855	$4,205	$1,319	$0	$0	$0	$0	$0	$9,861
2021	$27,176	$0	$21	$712	$846	$846	$3,827	$9,721	$11,936	$3,708	$0	$0	$0	$31,617
2022	$29,445	$0	$17	$316	$614	$584	$6,718	$9,797	$9,771	$2,575	$5,000	$0	$0	$35,394
2023	$10,980	$4	$17	$313	$182	$2,589	$200	$200	$2,580	$3,000	$5,000	$13,000	$12,000	$39,085
2024	$818	$4	$17	$313	$182	$143	$2,107	$701	$117	$0	$0	$0	$0	$41,970

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$43,436,545	$2,431,001	$764,847	$0	$0	$0	$0	$0	$0	$24,439,283

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Description of CIP Changes:

Updated projected expenditures based on the current status of procurement of the consultant services contract (CS 267) as of September 25, 2018.

The scope of improvements to the Ypsilanti Station in prior years only focused on rehabilitation of the existing station's mechanical and electrical equipment. Contract CS-052A, Comprehensive Booster Station Needs Assessment, was completed last fiscal year and showed that the cost to rehabilitate the existing station is comparable to building a new station. Therefore, the cost included in this fiscal year's CIP update reflects the cost of a new station. JN 8/7/2019

T. Kuhns - 8-26-23 - GLWA has reprioritized the Booster Station work. Recent investigations at other stations (NWB) has revealed the need to do work on these other stations in advance of completing YPS improvements. For this reason, GLWA has elected to adjust start time of this work to FY30.

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

97.8

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/4/2018

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Oakland County

Lookup Location: Adams Road BPS

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Problem Statement:

Adams Road booster pumping station was constructed in 1971 and is nearing the end of its service life. Recent condition assessment of the station indicates that there are several needs at the site that need to be addressed due to aging infrastructure. Improvements required at the site include site drive improvements, site valve replacements, building sump replacement, site drain PS replacement, structural improvements, pumping system improvements, flow metering improvements, bypass upgrades, interior valve replacement, control valve replacement, valve actuator replacement, air-vacuum valve replacement, station piping improvements, service water system improvements, HVAC upgrades, plumbing upgrades, and various electrical system improvements. Cost estimates for these site improvements indicate construction cost to build a new station adjacent to the current site may be cost comparable.

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work generally includes reconstructing a new pumping station next to the existing on the current site. The new station will be designed to current building and electrical codes, industry standards, and best practices for operation and maintenance of pumping stations.

Other Important Info:

N/A

Primary Driver: 1 - Condition

Driver Explanation:

Station is approaching the end of its service life

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**97.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	B. Excessive maint. levels for the equipment/process area, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance	Condition from previous year remains and issue due to condition of electrical system and status of VFD.
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures, A. Will cause, or IS causing significant capacity problems	Pumps are oversized for the majority of the yearly demands. Existing VFD is no longer serviceable.
Regulatory (Environmental/Legal)	4	B. Project not part of mandated or enforceable program, but directly related to know expected future requirements; will increase compliance	Project will right-size the station and provide VFDs to reduce strain on transmission system thereby preventing issues with aging pipeline appurtenances.
Operations and Maintenance	5	E. Measurable cost reductions (labor, materials) >=25%/year of current budget for that function/area, D. Project major, measurable positive impact on O&M; will completely alleviate ongoing O&M issues, A. Unsustainable levels of O/M required to keep in service that will still not ensure future stable/proper operation	Oversized equipment and non-functioning VFD continue to increased O&M and increased strain on pump discharge control valves due to the pumping units being oversized.
Health and Safety	5	D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for	Access to the pump station for rehabbing anything is via hatches requiring cranes to lift and is hazardous to GLWA staff due to the condition of the hatches and station top slab.
Public Benefit	4	D. Significant, noticeable impact on the public & GLWA image; seen as achievement for GLWA/communities/regions served, C. Significant additional revenue/savings for GLWA ($500K-$999K /yr); Better utilize existing & new infrastructure	Right-sizing the pumping equipment and furnishing the new pumping equipment with variable speed capability will allow demands to be met efficiently, thereby reducing operating costs. This will be an overall benefit to the users of the system.

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Financial	4	D. Significant financial implications $1M - $5M or ROI of 5-10 yrs	Right-sizing will reduce the motor loads and optimize energy consumption with demands of the station.
Efficiency and Innovation	5	B. Project removes major operational hurdles or obstacles on critical equipment/process; major time & cost savings, A. Right-sizing system results in substantial operational efficiencies, significantly increasing revenue/savings., C. Major & measurable positive impact on: Energy use & conservation/environmental responsibility & sustainability i.e. >=20% energy reduction, stabilizing demand; net financial; Wear & tear, D. efficiency; Water use, effluent reuse/recycling or other GLWA strategic initiatives*; Business process optimization and institutional knowledge; Process efficiency for a more robust system and less O&M; knowledge capture; or time & cost savings	The project will right-size the station, provide variable speed pumping capability and modernize the control system to provide equipment diagnostics to align with GLWA's goals for asset management and being proactive in maintaining the equipment.

Review Committee Weighted Score: 97.8

Criteria Name	Score	Comment
Condition	5	
Performance (Service Level/Reliability)	5	
Regulatory (Environmental/Legal)	4	
Operations and Maintenance	5	
Health and Safety	5	
Public Benefit	4	
Financial	4	
Efficiency and Innovation	5	

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2035

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$575	$0	$0	$0	$0	$0	$0	$72	$72	$144	$360

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2027	6/30/2035
Capital Delivery Salary (Fringes)	7/1/2027	6/30/2035

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Phase: Design & Construction Assistance # 1 (CS-052A, TBD)

Phase Title: Design & Construction Assistance # 1 (CS-052A, TBD)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2035

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/15/2015

Cost Est. Source: CS-052A

Cost Est. Prepared By: Tim Kuhns

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (CS-052A, TBD)	$8,500	$0	$0	$0	$0	$0	$0	$1,192	$1,189	$2,381	$5,566

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2027	6/30/2035

CIP Delivery Team

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Phase: Design/Engineering (CS-052)

Phase Title: Design/Engineering (CS-052)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-052)	$83	$83	$83	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	6/1/2020	6/30/2020

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 11/23/2030

End Date: 6/30/2035

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/15/2019

Cost Est. Source: CS-052 Needs Assessment

Cost Est. Prepared By: Tim Kuhns

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$52,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$40,708

Phase Dates

Activity Name	Start Date	End Date
Construction	11/23/2030	6/30/2035

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$575	$0	$0	$0	$0	$0	$0	$72	$72	$144	$360
Design & Construction Assistance # 1 (CS-052A, TBD)	$8,500	$0	$0	$0	$0	$0	$0	$1,192	$1,189	$2,381	$5,566
Design/Engineering (CS-052)	$83	$83	$83	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$52,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$40,708
Totals	$61,758	$83	$83	$0	$0	$0	$0	$1,264	$1,261	$2,525	$46,633

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$1,051	$0	$0	$0	$0	$21	$1,030	$4,625	$0	$0	$0	$0	$0	$5,676
2020	$3,362	$0	$0	$0	$0	$21	$1,029	$2,312	$2,312	$0	$0	$0	$0	$5,674
2021	$1,143	$0	$0	$0	$0	$0	$13	$205	$925	$26,393	$0	$0	$0	$27,536
2022	$4,951	$0	$0	$83	$0	$203	$1,332	$1,157	$1,130	$1,130	$1,459	$15,918	$15,879	$52,864
2023	$0	$0	$0	$83	$0	$0	$0	$0	$0	$0	$0	$882	$882	$52,876
2024	$1,264	$0	$0	$83	$0	$0	$0	$0	$0	$0	$0	$1,264	$1,261	$61,758

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$61,758,616	$83,262	$0	$0	$0	$0	$1,264,021	$1,260,567	$2,524,588	$46,633,352

Description of CIP Changes:

Project costs for this project have been updated based on CS-052A Needs Assessment Report.

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

58.9

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/4/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Newburgh Road Booster Pumping Station

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Problem Statement:

Existing pumps, motors and electrical gear are beyond useful service life. The existing pump manufacturer has discontinued maintenance support of the pumps, increasing the difficulty and cost of maintenance. Additionally, a new transmission main will be designed to allow the Newburgh Station to pump flows to the Haggerty Station reservoir. The Haggerty reservoir fill operation may require additional pumps at the Newburgh Station that are rated to higher discharge pressures.

Scope of Work/Project Alternatives:

Construct a new Newburgh Road Booster Pumping Station, including new pumps, motors, VFDs, electrical gear, building mechanical equipment, and backup power generation. Alternatives include constructing a new Newburgh Road Booster Pumping Station on the existing site, expanding the existing site to accommodate a new station, or construction of the new station on a new site.

Other Important Info:

Challenges: The existing site is not large enough to construct the new Newburgh Station. Coordination with the 14-Mile Road Transmission Main Loop Contract will be required.

Primary Driver: 1 - Condition

Driver Explanation:

New pumps at the Newburgh Road Booster Pumping Station are required to pump flows to the Haggerty Station reservoir through the new 14-Mile Transmission Main Loop.

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**79.2**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	B. Excessive maint. levels for the equipment/process area	
Performance (Service Level/Reliability)	5	C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, D. Canceling project significant, persistent, ongoing, continuous service interruption and/or reliability issues†	
Regulatory (Environmental/Legal)	2	A. Low risk of causing	
Operations and Maintenance	5	C. Repairs total >=60% of the asset/process original value	
Health and Safety	2	A. Low chance of failure occurring; failure easily mitigated w/ no safety/health/env. impacts	
Public Benefit	3	B. Project moderate positive impact by supporting member partner growth; measurable impact on community economic development; somewhat likely to impact quality of life & aesthetics; requires mostly new infrastructure; Moderate impact on public/ GLWA image	
Financial	3	F. Total financial consequence of $250,000 - $999,999	
Efficiency and Innovation	4	A. Right-sizing system significant operational efficiency, moderately increasing revenue/savings	

Review Committee Weighted Score:	**58.9**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	3	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 2/5/2020

End Date: 6/30/2030

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$411	$18	$18	$0	$0	$78	$78	$79	$78	$314	$78

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	2/5/2020	6/30/2030
Capital Delivery Salary (Fringes)	2/5/2020	6/30/2030

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Phase: Design & Construction Assistance # 1 (1901767, CS-052)

Phase Title: Design & Construction Assistance # 1 (1901767, CS-052)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 2/5/2020

End Date: 6/30/2030

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 2/5/2020

Cost Est. Source: Brown and Caldwell- Executed Contract

Cost Est. Prepared By: Brown and Caldwell

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (1901767, CS-052)	$3,503	$426	$426	$0	$0	$615	$615	$617	$615	$2,463	$615

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1901767)	2/5/2020	6/30/2030

CIP Delivery Team

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Phase: Design/Engineering (CS-052)

Phase Title: Design/Engineering (CS-052)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2020

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/31/2018

Cost Est. Source: Invoice

Cost Est. Prepared By: TetraTech

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-052)	$83	$83	$83	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	6/1/2020	6/30/2020

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned New

Start Date: 7/1/2025

End Date: 6/29/2033

Phase Comments/Description:

Cost Est. Class: Class 4

Cost Est. Date: 6/9/2020

Cost Est. Source: Brown and Caldwell OOPC

Cost Est. Prepared By: Brown and Caldwell

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$42,385	$722	$722	$0	$0	$8,328	$8,328	$8,351	$8,328	$33,335	$8,328

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2025	6/30/2030
Land Acquisition	12/4/2028	6/29/2033

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$411	$18	$18	$0	$0	$78	$78	$79	$78	$314	$78
Design & Construction Assistance # 1 (1901767, CS-052)	$3,503	$426	$426	$0	$0	$615	$615	$617	$615	$2,463	$615
Design/Engineering (CS-052)	$83	$83	$83	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$42,385	$722	$722	$0	$0	$8,328	$8,328	$8,351	$8,328	$33,335	$8,328
Totals	$46,381	$1,248	$1,249	$0	$0	$9,022	$9,022	$9,046	$9,022	$36,111	$9,022

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$7,795	$0	$0	$607	$2,396	$2,396	$2,396	$4,375	$0	$0	$0	$0	$0	$12,170
2020	$7,858	$0	$0	$16	$621	$2,396	$2,396	$2,429	$4,311	$0	$0	$0	$0	$12,169
2021	$23,203	$0	$3	$581	$973	$1,595	$5,216	$6,286	$9,133	$6,890	$0	$0	$0	$30,677
2022	$36,462	$0	$3	$348	$851	$733	$2,366	$8,839	$12,525	$12,000	$7,380	$0	$0	$45,044
2023	$0	$0	$3	$348	$94	$542	$0	$0	$0	$0	$0	$543	$6,881	$45,084
2024	$0	$0	$3	$348	$94	$50	$30	$0	$0	$0	$0	$0	$5,655	$45,690

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$46,381,942	$1,248,730	$218	$0	$9,021,656	$9,021,656	$9,046,372	$9,021,656	$36,111,339	$9,021,656

Description of CIP Changes:

Updated the schedule to align with the design schedule. - AJ 7/27/2021

T. Kuhns - 8/26/23 - This project was prioritized over other booster station projects due to recent operations at the site that revealed that it would be very difficult to maintain operations at this site beyond the next five years due to maintenance issues noted in the CS-052A report.

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

98.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Mike Garrett

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/4/2018

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Oakland County

Lookup Location: North Service Center

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Problem Statement:

The North Service Center was constructed in 1962 and is nearing the end of its service life.

Recent condition assessment of the station indicates that there are several needs that need to be addressed. Improvements include site drive improvements, valve replacements, septic tank and well field replacement, electric room improvements, building structure improvements, line and reservoir pump upgrades, interior valve upgrades, station piping improvements, sump pump upgrades, and various electrical improvements. Reservoirs are also at end of useful service life and in need of significant repair.

Scope of Work/Project Alternatives:

This project includes rehabilitation of the North Service Center Pumping Station, and replacement of two ten-million-gallon reservoirs.

Other Important Info:

Proposed changes focus on optimization of energy efficiency in the system by removing waste and conserving energy already input the system.

Primary Driver: 1 - Condition

Driver Explanation:

The North Service Center was constructed in 1962 and is nearing the end of its service life.

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**98.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	C. High risk of breakdown or imminent failure with serious impact on performance	
Performance (Service Level/Reliability)	5	B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*	
Regulatory (Environmental/Legal)	5	F. Compliance failure significant fines, enforcement actions, measurable environmental impact	
Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	5	A. Catastrophic failure w/ safety/health/environmental impacts imminent (2 years or less) as supported by engineering reports, studies, inspections, historical evidence, etc., B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents	
Public Benefit	5	B. Project will have a major and measurable positive impact by supporting member partners; coordination/ shared outcomes w/ other agencies/departments; project has a major impact on quality of life/aesthetics; Major positive impact on public	
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA.	
Efficiency and Innovation	5	B. Project removes major operational hurdles or obstacles on critical equipment/process; major time & cost savings	

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Review Committee Weighted Score:	**98.7**	
Criteria Name	**Score**	**Comment**
Condition	5	
Performance (Service Level/Reliability)	5	
Regulatory (Environmental/Legal)	5	
Operations and Maintenance	4	
Health and Safety	5	
Public Benefit	5	
Financial	4	
Efficiency and Innovation	5	

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 10/28/2022

End Date: 8/8/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,587	$55	$52	$97	$142	$142	$142	$143	$142	$711	$711

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	10/28/2022	8/8/2034
Capital Delivery Salary (Direct Labor)	10/28/2022	8/8/2034
Capital Delivery Salary (Fringes)	10/28/2022	8/8/2034
Capital Delivery Salary (Fringes)	10/28/2022	8/8/2034

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/17/2020

End Date: 12/31/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$72	$72	$72	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71019A.01)	8/17/2020	12/31/2020

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: Design & Construction Assistance # 1

Phase Title: Design & Construction Assistance # 1

Phase Budget: Water

Phase Status: Project Execution

Start Date: 9/19/2025

End Date: 3/31/2029

Phase Comments/Description:
North Service Center BPS Improvements

Cost Est. Class: Class 1

Cost Est. Date: 10/28/2022

Cost Est. Source: CDM Smith- Executed Contract

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1	$283	$257	$257	$0	$0	$6	$7	$7	$6	$26	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	9/19/2025	3/31/2029

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: Design & Construction Assistance # 2

Phase Title: Design & Construction Assistance # 2

Phase Budget: Water

Phase Status: Project Execution

Start Date: 10/28/2022

End Date: 1/15/2030

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 2	$14,831	$1,323	$788	$3,641	$2,390	$1,445	$1,851	$1,856	$1,851	$9,393	$1,009

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (D&CA)	10/28/2022	1/15/2030

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 8/8/2034

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/28/2022

Cost Est. Source: CDM Smith- Executed Contract

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$17,811	$0	$0	$0	$0	$0	$0	$2,505	$2,498	$5,003	$12,638

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2027	8/8/2034

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 9/19/2025

End Date: 9/9/2027

Phase Comments/Description:
North Service Center BPS Improvements

Cost Est. Class: Class 5

Cost Est. Date: 6/24/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$22,000	$0	$0	$0	$0	$8,696	$11,137	$2,166	$0	$22,000	$0

Phase Dates

Activity Name	Start Date	End Date
Construction #1	9/19/2025	9/9/2027

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: Construction (Build) # 2

Phase Title: Construction (Build) # 2

Phase Budget:

Phase Status: Future Planned Start

Start Date: 9/19/2026

End Date: 9/3/2029

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 6/24/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 2	$53,000	$0	$0	$0	$0	$0	$13,973	$17,944	$17,895	$49,813	$3,187

Phase Dates

Activity Name	Start Date	End Date
Construction #2	9/19/2026	9/3/2029

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: Construction (Build) # 3

Phase Title: Construction (Build) # 3

Phase Budget:

Phase Status: Future Planned Start

Start Date: 9/3/2029

End Date: 8/24/2031

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 3	$30,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$30,000

Phase Dates

Activity Name	Start Date	End Date
Construction #3	9/3/2029	8/24/2031

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Phase: Construction (Build) # 4

Phase Title: Construction (Build) # 4

Phase Budget:

Phase Status: Future Planned Start

Start Date: 8/24/2031

End Date: 8/8/2034

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 4	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$96,392

Phase Dates

Activity Name	Start Date	End Date
Construction #4	8/24/2031	8/8/2034

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,587	$55	$52	$97	$142	$142	$142	$143	$142	$711	$711
Professional Services	$72	$72	$72	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$283	$257	$257	$0	$0	$6	$7	$7	$6	$26	$0
Design & Construction Assistance # 2	$14,831	$1,323	$788	$3,641	$2,390	$1,445	$1,851	$1,856	$1,851	$9,393	$1,009
Design/Engineering	$17,811	$0	$0	$0	$0	$0	$0	$2,505	$2,498	$5,003	$12,638
Construction (Build) # 1	$22,000	$0	$0	$0	$0	$8,696	$11,137	$2,166	$0	$22,000	$0
Construction (Build) # 2	$53,000	$0	$0	$0	$0	$0	$13,973	$17,944	$17,895	$49,813	$3,187
Construction (Build) # 3	$30,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$30,000
Construction (Build) # 4	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$96,392
Totals	$239,583	$1,707	$1,170	$3,738	$2,532	$10,289	$27,111	$24,622	$22,392	$86,947	$143,937

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$4,526	$0	$0	$0	$0	$6	$4,520	$20,394	$0	$0	$0	$0	$0	$24,920
2020	$6,331	$0	$0	$0	$0	$0	$6	$6,325	$18,589	$0	$0	$0	$0	$24,920
2021	$4,517	$0	$0	$0	$0	$21	$279	$2,385	$1,832	$40,825	$0	$0	$0	$45,342
2022	$15,500	$0	$0	$266	$282	$673	$1,727	$2,351	$2,247	$8,503	$20,804	$20,803	$10,600	$68,254
2023	$9,500	$0	$0	$266	$97	$0	$500	$1,000	$1,000	$2,000	$5,000	$20,000	$20,000	$82,264
2024	$48,953	$0	$0	$266	$97	$8	$2,662	$4,024	$2,155	$8,497	$17,114	$17,161	$17,114	$83,402

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$239,583,663	$1,169,551	$3,738,295	$2,532,090	$10,289,340	$27,110,858	$24,621,922	$22,392,304	$86,946,515	$143,937,209

Description of CIP Changes:

CIP 132017 entry has been deleted and the work associated with CIP 132017 has been moved to the CIP 132016 project entry. Project costs were updated based on CS-052A Needs Assessment Report.
Replacement of two ten million gallon reservoirs added to scope of work during August 2020 review by Mike Garrett per request by Grant Gartrell.
Schedule updates, which in turn changed escalation of costs.
T. Kuhns - 8/26/23 - NSC costs escalated based on updated conceptual costs provided during the design phase of the project. Cost estimates indicate a station rehab will be favorable to complete station reconstruction.

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Project Status: Future Planned - Ten Year CIP

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

58.9

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Eric Kramp

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/4/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Booster Pumping Stations

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Problem Statement:

Following the Pump Station Condition Survey and Needs Assessment, significant issues were observed in the Schoolcraft Pumping Station. This needs assessment has found several significant areas of necessary improvement to the station as described in the project scope of work:

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work will generally include replacing existing pumps, motors, drives, electrical switchgear, motor control centers, valves, valve operators, yard piping, and yard valves with new infrastructure. Additionally, the underdrain system that serves the finished water reservoirs will either be rehabilitated or replaced.

Other Important Info:

This project is scheduled to begin beyond the 10 year time period.

Primary Driver: 1 - Condition

Driver Explanation:

Existing pumping equipment including electrical gear is nearing end of useful service life and will need to be replaced to provide continued adequate performance.

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**56.9**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	A. Asset has <50% of its design service life remaining	
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure	
Regulatory (Environmental/Legal)	1	B. Low/no impact on specific reg. compliance issues, E. Opinions/experience of O&M staff but not supported by data	
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	
Public Benefit	2	A. Low to moderate impact by supporting City/region/neighborhood growth	
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies, B. Low – moderate positive impact on energy use, conservation, environmental responsibility& sustainability i.e. 1-5% energy reduction	

Review Committee Weighted Score:	**58.9**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	3	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 6/30/2034

End Date: 6/6/2039

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$222	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	6/30/2034	6/6/2039
Capital Delivery Salary (Fringes)	6/30/2034	6/6/2039

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 6/30/2034

End Date: 6/6/2039

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$3,265	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2

Phase Dates

Activity Name	Start Date	End Date
Professional Services	6/30/2034	6/6/2039

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2020

Phase Comments/Description:

Cost Est. Class: Class 4

Cost Est. Date: 7/25/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$47	$47	$47	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	6/1/2020	6/30/2020

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned New

Start Date: 2/22/2036

End Date: 6/6/2039

Phase Comments/Description:

Cost Est. Class: Class 4

Cost Est. Date: 7/25/2019

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$21,156	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	2/22/2036	6/6/2039

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$222	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$3,265	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2
Design/Engineering	$47	$47	$47	$0	$0	$0	$0	$0	$0	$0	$0
Construction	$21,156	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$24,690	$47	$47	$0	$0	$0	$0	$0	$0	$0	$2

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$4,011	$0	$0	$0	$10	$1,916	$2,085	$6,553	$0	$0	$0	$0	$0	$10,564
2020	$7,064	$0	$0	$0	$10	$1,958	$2,048	$3,048	$3,500	$0	$0	$0	$0	$10,564
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2022	$0	$0	$0	$47	$0	$0	$0	$0	$0	$0	$0	$0	$0	$47
2023	$0	$0	$0	$47	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,468
2024	$0	$0	$0	$47	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,690

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$24,690,695	$47,317	$0	$0	$0	$0	$0	$0	$0	$1,935

Description of CIP Changes:

On December 2018, the Booster Station Condition & Needs Assessment was published. The review of this station indicated that significant upgrades, above those listed in the FY 2020 CIP, were needed. This revised CIP captures the additional work at this site. 7/23/2019 ECK

Contract phases changed from DB to DBB. 8/15/2019 ECK

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Project Status: Future Planned - Ten Year CIP

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

67.2

- [ ] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Vittoria Hogue

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/4/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Romulus

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Problem Statement:

Wick Pump Station is currently oversized based on the demands, has poor valve isolation capabilities and much of its equipment which was installed in 1981 is passed its useful service life. This project's intent is to right size the station and replace valves and other aging equipment.

Scope of Work/Project Alternatives:

This project will be delivered under a design-bid-build delivery method. This project's scope of work will be rightsizing the station's pumping capacity, improving valve control and isolation, and replacing or upgrading equipment. The improvements to right size the station include replacing reservoir pumping units and installing another small line pump (jockey pump) to accommodate low flow conditions. Valve control and isolation work will involve replacing existing station valves and replacing the hydraulic actuator control system with an electrically motor actuated system. The equipment that will be replaced are as follows: effluent flow meter, the pressure reducing station for the service water system, the sump pumps, the service entrance transformers, the grounding ring, and the medium and low voltage equipment. Other miscellaneous work that will be conducted under this project will be improving the heating and ventilation, isolating potable water supply from non-potable water supply, installing lighting improvements, upgrading the existing generators and reconfiguring the station's discharge piping.

Other Important Info:

CS-052A Condition Assessment provides additional details on the scope of project.

Primary Driver: 1 - Condition

Driver Explanation:

The reservoir pumping units and switchgear are at end of service life.

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**67.2**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life	
Performance (Service Level/Reliability)	4	A. Expected performance failures under normal conditions	
Regulatory (Environmental/Legal)	2	A. Low risk of causing	
Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	
Public Benefit	3	B. Project moderate positive impact by supporting member partner growth; measurable impact on community economic development; somewhat likely to impact quality of life & aesthetics; requires mostly new infrastructure; Moderate impact on public/ GLWA image	
Financial	4	E. Canceling project significant financial consequences from revenue loss, repair /restoration/O&M cost, downtime, potential litigation, fines, damage, etc.; some budget implications requiring deferral or cutbacks in other areas.	
Efficiency and Innovation	3	B. Moderate positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	

Review Committee Weighted Score:	**67.2**	
Criteria Name	**Score**	**Comment**
Condition	5	Scores carried over from previous year
Performance (Service Level/Reliability)	4	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	4	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	3	Scores carried over from previous year
Financial	4	Scores carried over from previous year
Efficiency and Innovation	3	Scores carried over from previous year

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 7/1/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 12/27/2017

Cost Est. Source: 2015 Water Master Plan Update

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$372	$0	$0	$0	$0	$0	$0	$0	$0	$0	$372

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2029	7/1/2034
Capital Delivery Salary (Fringes)	7/1/2029	7/1/2034

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Phase: Design & Construction Assistance # 1 (TBD, CS-052A)

Phase Title: Design & Construction Assistance # 1 (TBD, CS-052A)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2029

End Date: 7/1/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 10/30/2018

Cost Est. Source: GLWA: CS-052A

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (TBD, CS-052A)	$4,361	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,361

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2029	7/1/2034

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Phase: Design/Engineering (CS-052)

Phase Title: Design/Engineering (CS-052)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-052)	$57	$57	$57	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	6/1/2020	6/30/2020

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 4/29/2032

End Date: 7/1/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 10/30/2018

Cost Est. Source: GLWA: CS-052A

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$19,990	$0	$0	$0	$0	$0	$0	$0	$0	$0	$19,965

Phase Dates

Activity Name	Start Date	End Date
Construction	4/29/2032	7/1/2034

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$372	$0	$0	$0	$0	$0	$0	$0	$0	$0	$372
Design & Construction Assistance # 1 (TBD, CS-052A)	$4,361	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,361
Design/Engineering (CS-052)	$57	$57	$57	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$19,990	$0	$0	$0	$0	$0	$0	$0	$0	$0	$19,965
Totals	$24,780	$56	$57	$0	$0	$0	$0	$0	$0	$0	$24,698

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$1,015	$0	$0	$0	$0	$6	$1,009	$4,555	$0	$0	$0	$0	$0	$5,570
2020	$5,569	$0	$0	$0	$0	$6	$1,009	$4,554	$0	$0	$0	$0	$0	$5,569
2021	$15	$0	$0	$0	$0	$0	$0	$0	$15	$2,925	$0	$0	$0	$2,940
2022	$13	$0	$0	$57	$0	$0	$0	$0	$0	$13	$549	$552	$551	$9,358
2023	$0	$0	$0	$57	$0	$0	$0	$0	$0	$0	$0	$183	$711	$24,661
2024	$6	$0	$0	$57	$0	$0	$0	$0	$0	$0	$0	$6	$2,249	$24,780

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$24,780,366	$56,912	$0	$0	$0	$0	$0	$0	$0	$24,698,074

Description of CIP Changes:

On December 2018, the Booster Station Condition & Needs Assessment was published under Contract CS-052a. The review of this station indicated that significant upgrades, above those listed in the FY 2020 CIP, are needed. This revised CIP captures the additional work needed the Wick Station. 7/23/2019 ECK

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Project Status: Future Planned - Ten Year CIP

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

77.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/4/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Oakland County

Lookup Location: Franklin Pump Station

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Problem Statement:

The Franklin Booster Pumping Station was constructed in 1968 and is nearing the end of its service life.

Recent condition assessment of the station indicates that there are several needs that need to be addressed due to aging infrastructure. Improvements required at the site include site drive improvements, sanitary holding tank improvements, site valve replacements, mezzanine valve access improvements, electrical room upgrades, building structure improvements, pumping improvements, flow metering improvements, station bypass upgrades, interior valve upgrades, control valve replacement and rehabilitation, valve actuator system improvements, station piping improvements, service water system upgrades, sampling system upgrades, HVAC upgrades, plumbing upgrades, and various electrical improvements.

Scope of Work/Project Alternatives:

This project includes complete rehab or reconstruction of the Franklin Booster Station.

Other Important Info:

Project will include alternatives evaluation to determine building new station versus rehabilitating existing.

Primary Driver: 1 - Condition

Driver Explanation:

The Franklin Booster Pumping Station was constructed in 1968 and is nearing the end of its service life.

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**78.4**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational, C. Shows abnormal wear and is likely to cause significant performance deterioration in the near term	Reservoir pumps are original that require replacement including the reservoir fill valve. The VFD's will require replacement too. The original line pumps have been replaced but will need to be replaced under this project.
Performance (Service Level/Reliability)	5	A. Will cause, or IS causing significant capacity problems	
Regulatory (Environmental/Legal)	3	A. Moderate risk of causing, B. Project will have a moderate positive impact on reg. issues	
Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	2	A. Low chance of failure occurring; failure easily mitigated w/ no safety/health/env. impacts	
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers, B. Project moderate positive impact by supporting member partner growth; measurable impact on community economic development; somewhat likely to impact quality of life & aesthetics; requires mostly new infrastructure; Moderate impact on public/ GLWA image	
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA.	
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Review Committee Weighted Score:	**77.7**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	5	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	3	Scores carried over from previous year
Financial	2	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 1/3/2030

End Date: 6/29/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$132	$0	$0	$0	$0	$0	$0	$0	$0	$0	$132

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/3/2030	6/29/2034
Capital Delivery Salary (Fringes)	1/3/2030	6/29/2034

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Phase: Design/Engineering (TBD)

Phase Title: Design/Engineering (TBD)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 1/3/2030

End Date: 6/29/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 7/30/2021

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (TBD)	$4,693	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,693

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (TBD)	1/3/2030	6/29/2034

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Phase: Design/Engineering (CS-052)

Phase Title: Design/Engineering (CS-052)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-052)	$93	$93	$93	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	6/1/2020	6/30/2020

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Phase: Construction (Build) #1

Phase Title: Construction (Build) #1

Phase Budget:

Phase Status: Future Planned Start

Start Date: 10/29/2031

End Date: 6/29/2034

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) #1	$56,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$56,000

Phase Dates

Activity Name	Start Date	End Date
Construction	10/29/2031	6/29/2034

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$132	$0	$0	$0	$0	$0	$0	$0	$0	$0	$132
Design/Engineering (TBD)	$4,693	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,693
Design/Engineering (CS-052)	$93	$93	$93	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) #1	$56,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$56,000
Totals	$60,917	$93	$93	$0	$0	$0	$0	$0	$0	$0	$60,825

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$2,855	$0	$0	$0	$0	$846	$2,009	$7,315	$0	$0	$0	$0	$0	$10,170
2020	$0	$0	$0	$0	$0	$0	$0	$0	$10,109	$0	$0	$0	$0	$10,109
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,442	$0	$0	$0	$2,442
2022	$0	$0	$0	$93	$0	$0	$0	$0	$0	$0	$42	$364	$681	$2,545
2023	$0	$0	$0	$93	$0	$0	$0	$0	$0	$0	$0	$663	$1,352	$4,812
2024	$723	$0	$0	$93	$0	$0	$0	$0	$0	$0	$0	$723	$1,398	$4,918

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$60,917,720	$93,160	$0	$0	$0	$0	$0	$0	$0	$60,824,560

Description of CIP Changes:

Project budget updated based on CS-052A Needs Assessment Report.
T. Kuhns 8/26/23 - Recent investigations at the NWB and NSC stations has revealed the need to focus upgrades at these stations instead of doing work at the Franklin Station. For this reason, start work on Franklin Station has been delayed to FY30.

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Project Status: Future Planned - Ten Year CIP

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

59.4

- [x] Innovation
- [ ] WW Master Plan
- [x] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Eric Kramp

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/4/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Lapeer County

Lookup Location: Imlay Pumping Station

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Problem Statement:

The 2018 Booster Station Condition Assessment identified several significant issues have been documented at the Imlay Booster Station. In addition to the updates to the VFD systems identified in the FY 2020 CIP. Site/civil, mechanical, and electrical improvements have been identified far in excess of the initial assessment, including the complete replacement of all outdated electrical switchgear.

It was recently documented that approximately half of the reservoir fill system is working at less than full capacity.

Scope of Work/Project Alternatives:

Significant improvements to the site/civil, mechanical, and electrical systems at the Imlay Booster Station are required as follows:
Site/Civil -- Replace crumbling retaining walls. Roofing rehabilitation
Pumping -- "Right size" remaining pump and motor units based on 2015 WMPU. Rehabilitate any pumping units that are correctly sized.
Mechanical -- Improvements to HVAC. Replacement or rehabilitation of all station isolation gate, butterfly valves and reservoir fill valves.
Electrical -- Additional and replacement of existing generators. Replacement of double-ended 13.2 KVA switch-gear. Rehabilitation or replacement of existing VFDs

Other Important Info:

VFD size is unusual in the marketplace and cooling systems are complex for the VFDs.

Primary Driver: 1 - Condition

Driver Explanation:

Performance of the existing station pumps, motors and drives is cumbersome and in the case of the drives reliability is costly to maintain.

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**65.3**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining	The VFDs are significantly past their expected life, as are their chiller units.
Performance (Service Level/Reliability)	4	D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*	Imlay pumps are wrongly sized for reservoir use -- they are optimized for line pumping. This is not how the pumps are operated.
Regulatory (Environmental/Legal)	1	B. Low/no impact on specific reg. compliance issues	
Operations and Maintenance	4	B. Asset can run in automatic operation, but frequently trips out unless it is manually operated due to component failure	Imlay has never been run in automatic operation.
Health and Safety	3	C. Likely to address minor hazard issues or concerns	There are many minor issues at Imlay that will be corrected by this project. These issues include failures in the retaining wall, some trip hazards, inappropriate clearances in the pipe gallery, etc.
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers, C. Moderate additional revenue/savings for GLWA ($100K-$499K/yr)	Plant does not operate in an efficient place for the pumps. The intent of this project will address this.
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA.	Pumps are wrong sized for reservoir operation.
Efficiency and Innovation	4	A. Right-sizing system significant operational efficiency, moderately increasing revenue/savings, C. Significant positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	Pumps were designed on the assumption of line pumping being the norm, which was found to be extremely hazardous to the 120-inch water main. As such, they generally operate at a much higher casing pressure than intended, decreasing efficiency. Reservoir is generally in poor shape, and a systematic repair wo

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Review Committee Weighted Score:	**59.4**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	4	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 4/26/2031

End Date: 6/30/2038

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,241	$0	$0	$0	$0	$0	$0	$0	$0	$0	$550

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	4/26/2031	6/30/2038
Capital Delivery Salary (Fringes)	4/26/2031	6/30/2038

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Phase: Design (TBD, CS-052A)

Phase Title: Design (TBD, CS-052A)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 4/26/2031

End Date: 6/30/2038

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/14/2020

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design (TBD, CS-052A)	$136,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$66,307

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (TBD)	4/26/2031	6/30/2038

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Phase: Design/Engineering (CS-052)

Phase Title: Design/Engineering (CS-052)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2020

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/31/2018

Cost Est. Source: Invoice

Cost Est. Prepared By: TetraTech

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-052)	$227	$227	$227	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	6/1/2020	6/30/2020

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$1,241	$0	$0	$0	$0	$0	$0	$0	$0	$0	$550
Design (TBD, CS-052A)	$136,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$66,307
Design/Engineering (CS-052)	$227	$227	$227	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$137,968	$227	$227	$0	$0	$0	$0	$0	$0	$0	$66,856

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$6	$0	$0	$0	$0	$0	$6	$12,103	$0	$0	$0	$0	$0	$12,109
2020	$2,109	$0	$0	$0	$0	$0	$6	$2,103	$10,000	$0	$0	$0	$0	$12,109
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$13	$0	$0	$0	$13
2022	$0	$0	$0	$227	$0	$0	$0	$0	$0	$0	$0	$0	$0	$750
2023	$0	$0	$0	$227	$0	$0	$0	$0	$0	$0	$0	$0	$0	$227
2024	$0	$0	$0	$227	$0	$0	$0	$0	$0	$0	$0	$0	$0	$137,968

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$137,968,010	$227,346	$0	$0	$0	$0	$0	$0	$0	$66,856,483

Description of CIP Changes:

n/a

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Project Status: Future Planned - Ten Year CIP

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Systems Control Center

Class Lvl 3: Pump Station/Reservoir

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

58.9

- [x] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [x] Pumps
- [ ] Storage
- [ ] Treatment

Inside Joy Road Pumping Station

Project Manager: Tim Kuhns

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/4/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Joy Rd Water Pumping Station

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: TBD

Partners:

Collaboration Entity:

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Problem Statement:

The station is undersized with limited space for maintenance and personnel access. The main walkway inside the station is built on top of the discharge header and six stairways connected to it are non-code compliant. There is not enough room to install standard stairs. The electrical room addition was partially built on top of the pump station top slab and blocks access to the reservoir fill line valves. The pump station roof hatches leak and drip onto equipment below. The discharge header is heavily corroded and is in need of replacement. Three reservoir pumps, motors and valves are past their useful service life. Two additional VFDs and associated new motors are needed to provide operational flexibility. The station is without a flow meter or a station bypass.

Scope of Work/Project Alternatives:

Design contract will consider life-cycle costs of rehabilitating the current station versus building a new station on available land located to the south. Station improvements include:
Existing site drive geometry needs to be improved to allow for a mobile crane or semi-trailer truck.
Installation of a new site drain pump station next to existing
A new electrical room addition
The existing building structures require maintenance and repair.
Rehabilitate the existing line and reservoir pumps with the addition of 2 new VFD and associated motors
Construction of a new effluent flow magmeter within the existing station
A station bypass
Replace Interior Valves
Rehabilitate pump control valves
Replace the existing control valve actuator system with a new electric motor actuator system
Updates to the service water system
Improvements to separate the potable water supply from the service water piping
Provide new grounding ring along the outside parameter of the building
New VFD drives for all three line pumps
Replace lighting with LED lighting
Provide new field instruments for the station
Update the existing generator with new fuel and bulk storage tank

Other Important Info:

There is space on the site for building a new pump station to the south of the existing.

Primary Driver: 1 - Condition

Driver Explanation:

Reservoir pumps and motors are beyond their service life. The discharge header is heavily corroded and the station is undersized with limited space for maintenance

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Scoring

Project Manager Weighted Score:	**63.6**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational	Scores same as last year. JEM 7/7/2022
Performance (Service Level/Reliability)	4	D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*	Scores same as last year. JEM 7/7/2022
Regulatory (Environmental/Legal)	1	A. No risk of causing	Scores same as last year. JEM 7/7/2022
Operations and Maintenance	3	C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues	Scores same as last year. JEM 7/7/2022
Health and Safety	3	B. Project moderate positive impact on staff/public H&S‡	Scores same as last year. JEM 7/7/2022
Public Benefit	2	A. Low to moderate impact by supporting City/region/neighborhood growth	Scores same as last year. JEM 7/7/2022
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Scores same as last year. JEM 7/7/2022
Efficiency and Innovation	3	B. Moderate positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	Scores same as last year. JEM 7/7/2022

Review Committee Weighted Score:	**58.9**	
Criteria Name	**Score**	**Comment**
Condition	4	Scores carried over from previous year
Performance (Service Level/Reliability)	3	Scores carried over from previous year
Regulatory (Environmental/Legal)	2	Scores carried over from previous year
Operations and Maintenance	3	Scores carried over from previous year
Health and Safety	3	Scores carried over from previous year
Public Benefit	3	Scores carried over from previous year
Financial	1	Scores carried over from previous year
Efficiency and Innovation	4	Scores carried over from previous year

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 4/4/2034

End Date: 11/2/2040

Phase Comments/Description:

6.5 yrs.

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$469	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	4/4/2034	11/2/2040
Capital Delivery Salary (Fringes)	4/4/2034	11/2/2040

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Phase: Design & Construction Assistance # 1 (TBD, CS-052A)

Phase Title: Design & Construction Assistance # 1 (TBD, CS-052A)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 4/4/2034

End Date: 11/2/2040

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/6/2019

Cost Est. Source: GLWA: CS-052A

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance # 1 (TBD, CS-052A)	$3,536	$0	$0	$0	$0	$0	$0	$0	$0	$0	$223

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (TBD)	4/4/2034	11/2/2040

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Phase: Design/Engineering (CS-052)

Phase Title: Design/Engineering (CS-052)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/1/2020

End Date: 6/30/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-052)	$71	$71	$71	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-052)	6/1/2020	6/30/2020

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 2/2/2037

End Date: 11/2/2040

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/6/2019

Cost Est. Source: GLWA: CS-052A

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$35,781	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	2/2/2037	11/2/2040

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$469	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17
Design & Construction Assistance # 1 (TBD, CS-052A)	$3,536	$0	$0	$0	$0	$0	$0	$0	$0	$0	$223
Design/Engineering (CS-052)	$71	$71	$71	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$35,781	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$39,857	$71	$71	$0	$0	$0	$0	$0	$0	$0	$240

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$6	$0	$0	$0	$0	$0	$6	$6,103	$0	$0	$0	$0	$0	$6,109
2020	$6,109	$0	$0	$0	$0	$0	$6	$6,103	$0	$0	$0	$0	$0	$6,109
2021	$0	$0	$7	$0	$0	$0	$0	$0	$0	$48	$0	$0	$0	$55
2022	$1,527	$0	$0	$71	$57	$277	$527	$527	$122	$74	$1,046	$5,034	$15,000	$39,613
2023	$0	$0	$0	$71	$0	$0	$0	$0	$0	$0	$0	$0	$0	$39,684
2024	$0	$0	$0	$71	$0	$0	$0	$0	$0	$0	$0	$0	$0	$39,857

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$39,857,254	$71,380	$0	$0	$0	$0	$0	$0	$0	$240,446

Description of CIP Changes:

On December 2018, the Booster Station Condition & Needs Assessment done under Contract CS-052A was published. The review of this station indicated that significant upgrades, above those listed in the FY 2020 CIP, were needed. This revised CIP captures the additional work at this site. 7/25/2018 JEM

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

0

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/11/2016

Year Project Added to CIP: 2012

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: WTPs and Boosters

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Problem Statement:

This allowance is reserved for unplanned, emergency and critical project needs that need to be addressed quickly.

Scope of Work/Project Alternatives:

This project is an allowance for unplanned, critical projects that may occur at the Water Treatment Plants and Booster Pump Stations throughout the system. These projects may include repair, replacement or rehabilitation of key assets as required to allow the Authority to provide sufficient water quality, quantity and pressure to meet customer demands in accordance with federal and state requirements under the Safe Drinking Water Act.

Other Important Info:

Challenges: Close coordination with operations and ability to meet on needs.

Primary Driver: Varies

Driver Explanation:

Not provided.

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Scoring

Project Manager Weighted Score:	**26.6**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	2	C. Delivering full efficiency; little/no performance deterioration	
Performance (Service Level/Reliability)	1	B. Consistent with current standards and technology	
Regulatory (Environmental/Legal)	1	C. Not part of mandated/enforceable program	
Operations and Maintenance	2	F. Reduction (<25%) in reactive maintenance	
Health and Safety	1	A. No failure reasonably expected to occur	
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	
Financial	2	A. Low financial impact to GLWA; No grants/other external funding	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**0**	
Criteria Name	**Score**	**Comment**
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/17/2017

End Date: 4/1/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$181	$181	$181	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	6/17/2017	4/1/2022
Capital Delivery Salary (Fringes)	6/17/2017	4/1/2022
Capitalized Interest	6/17/2017	4/1/2022

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2018

End Date: 6/13/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$11	$11	$11	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services	7/1/2018	6/13/2020

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Phase: Design/Engineering (CS-187)

Phase Title: Design/Engineering (CS-187)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 6/17/2017

End Date: 4/1/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-187)	$305	$305	$305	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-187)	6/17/2017	4/1/2022

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Phase: Design/Engineering (CS-1623)

Phase Title: Design/Engineering (CS-1623)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2015

End Date: 6/16/2017

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-1623)	$1,159	$1,159	$1,159	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-1623)	7/1/2015	6/16/2017

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$181	$181	$181	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$11	$11	$11	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-187)	$305	$305	$305	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-1623)	$1,159	$1,159	$1,159	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$1,656	$1,656	$1,656	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2019	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2020	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2022	$0	$0	$0	$49	$1,608	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,656
2023	$68	$1,126	$134	$49	$0	$0	$49	$68	$0	$0	$0	$0	$0	$0	$1,773
2024	$0	$1,126	$134	$48	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,656

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$1,656,069	$1,656,069	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Contract closeout is ongoing. No additional spend on the project.

CIP Number: 170300

Project Title: Water Treatment Plant Automation Program

Project Status: Future Planned - Within Five Year Plan

CIP Type: Program

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] **Project New to CIP**
- [ ] **Useful Life > 20 Yrs**
- [ ] **Multiple Phases**

Project Score

0

- [ ] **Innovation**
- [ ] **WW Master Plan**
- [ ] **Water Master Plan Right Sizing**
- [ ] **Wet Weather Resiliency**
- [ ] **Redundancy**
- [ ] **Predecessor Project(s)**
- [ ] **Linear Assets Outside of Facilities**
- [ ] **CSO**
- [ ] **Pumps**
- [ ] **Storage**
- [x] **Treatment**

Project Manager: Jeffrey Dorsey

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 4/27/2017

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Water Treatment Plants

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] **From Program?**

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] **Is a Predecessor Project?**

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170300

Project Title: Water Treatment Plant Automation Program

Problem Statement:

This automation design and construction project comes from recommendations that identified existing station process data conditions and needs, GLWA mission critical assets, alternative improvement options to address identified needs, recommended improvements to address the needs, prioritized projects based on the GLWA CIP scoring tool, and schedule for making the improvements along with budgets for each project established under CS-108.

Scope of Work/Project Alternatives:

The purpose of this project is to implement the recommendations from CS-108 that are prioritized in five (5) year increments with an estimated cost of $1 million dollars per year over a twenty (20) year span.

Other Important Info:

Challenge: Standardization of multiple different data process equipment already installed throughout the 5 plants is problematic.

Project History: Each water treatment plant has process areas ranging from intake, sedimentation, chlorination, filtration and distribution systems. One of the directives from the organizational objectives is to provide the treatment plants with automation. This automation is one of the main drivers for increased efficiency in data monitoring and regulatory reporting and reduced workload and maintenance cost. The recommendations from this assessment will be the catalyst for automation projects at the pumping stations over the next 20-year planning period to be prioritized in 5-year increments with estimated costs.

Primary Driver: 8 - Efficiency

Driver Explanation:

This automation is one of the main drivers for increased efficiency in data monitoring, regulatory reporting and reduced workload and maintenance cost.

CIP Number: 170300

Project Title: Water Treatment Plant Automation Program

Scoring

Project Manager Weighted Score:	**0**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	0		
Performance (Service Level/Reliability)	0		
Regulatory (Environmental/Legal)	0		
Operations and Maintenance	0		
Health and Safety	0		
Public Benefit	0		
Financial	0		
Efficiency and Innovation	0		

Review Committee Weighted Score:	**0**	
Criteria Name	**Score**	**Comment**
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 170300

Project Title: Water Treatment Plant Automation Program

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 1/1/2032

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$243	$0	$0	$0	$0	$0	$0	$0	$69	$69	$174

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2028	1/1/2032
Capital Delivery Salary (Fringes)	7/1/2028	1/1/2032

CIP Number: 170300

Project Title: Water Treatment Plant Automation Program

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2037

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$9	$0	$0	$0	$0	$0	$0	$0	$9	$9	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1900318)	7/1/2027	6/30/2037

CIP Number: 170300

Project Title: Water Treatment Plant Automation Program

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 1/1/2032

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$23,065	$0	$0	$0	$0	$0	$0	$0	$6,141	$6,141	$16,925

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2027	1/1/2032

CIP Number: 170300

Project Title: Water Treatment Plant Automation Program

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$243	$0	$0	$0	$0	$0	$0	$0	$69	$69	$174
Design/Engineering	$9	$0	$0	$0	$0	$0	$0	$0	$9	$9	$0
Construction	$23,065	$0	$0	$0	$0	$0	$0	$0	$6,141	$6,141	$16,925
Totals	$23,317	$0	$0	$0	$0	$0	$0	$0	$6,219	$6,219	$17,098

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$7,500	$0	$1,500	$1,500	$1,500	$1,500	$1,500	$0	$0	$0	$0	$0	$0	$0	$7,500
2019	$6,258	$13	$1,425	$61	$1,561	$1,561	$1,561	$1,514	$105	$0	$0	$0	$0	$0	$7,801
2020	$6,302	$0	$1,377	$61	$1,561	$1,561	$1,561	$1,514	$105	$0	$0	$0	$0	$0	$7,740
2021	$13,862	$0	$0	$1,658	$3,208	$5,440	$2,943	$1,211	$3,117	$1,151	$0	$0	$0	$0	$18,728
2022	$6,151	$0	$0	$0	$0	$7,098	$6,151	$0	$0	$0	$0	$0	$0	$0	$13,249
2023	$0	$0	$0	$0	$0	$9	$0	$0	$0	$0	$0	$0	$7,025	$7,044	$23,258
2024	$0	$0	$0	$0	$0	$9	($9)	$0	$0	$0	$0	$0	$0	$6,219	$23,317

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$23,317,393	$0	$0	$0	$0	$0	$0	$6,219,199	$6,219,199	$17,098,194

Description of CIP Changes:

N/A

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] **Project New to CIP**
- [ ] **Useful Life > 20 Yrs**
- [ ] **Multiple Phases**

Project Score

67.4

- [ ] **Innovation**
- [ ] **WW Master Plan**
- [ ] **Water Master Plan Right Sizing**
- [ ] **Wet Weather Resiliency**
- [ ] **Redundancy**
- [ ] **Predecessor Project(s)**
- [ ] **Linear Assets Outside of Facilities**
- [ ] **CSO**
- [ ] **Pumps**
- [ ] **Storage**
- [x] **Treatment**

SW SCADA System Upgrade

Project Manager: Jeffrey Dorsey

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 4/27/2017

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Southwest Water Treatment Plant

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [x] **From Program?**

Program Number: 170300

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] **Is a Predecessor Project?**

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Problem Statement:

This project will upgrade the Southwest WTP SCADA system.

Scope of Work/Project Alternatives:

The upgrade of network devices, controllers and removal of device net for the SCADA system.

Other Important Info:

This project will also upgrade Ovation to version 3.8

Primary Driver: 8 - Efficiency

Driver Explanation:

This automation will be one of the main drivers for increased efficiency in data monitoring, regulatory reporting and reduced workload and maintenance cost.

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Scoring

Project Manager Weighted Score:	**67.4**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining, D. Replacement or major rehab needed in the short term, B. Equipment/process functions but requires high level of maintenance to remain operational	An assessment was done under CS-108 that scored the Southwest SCADA system in poor condition.
Performance (Service Level/Reliability)	4	G. Limited redundancy, E. Not doing the project frequent and repetitive service interruption and/or reliability issues†, D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*, B. High risk of performance failure; doesn't meet future requirements, A. Expected performance failures under normal conditions	
Regulatory (Environmental/Legal)	2	E. Deferring/canceling project non-compliance risk in 4-6 yrs, B. Project will have a moderate to low impact on reg. issues, D. Project not part of mandated/enforceable program but related to expected future requirements	
Operations and Maintenance	4	F. Measurable reduction (50% - 74%) in reactive maintenance, D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues, A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	3	C. Likely to address minor hazard issues or concerns, B. Project moderate positive impact on staff/public H&S‡	
Public Benefit	4	D. Significant, noticeable impact on the public & GLWA image; seen as achievement for GLWA/communities/regions served, A. Project key part of a strategic plan* for GLWA (i.e. good probability leads to new customers)	
Financial	4	B. Project will likely result in avoidance of fines, potential litigation, emergency repairs or damage to asset/public, E. Canceling project significant financial consequences from revenue loss, repair /restoration/O&M cost, downtime, potential litigation, fines, damage, etc.; some budget implications requiring deferral or cutbacks in other areas.	
Efficiency and Innovation	4	B. Project will remove significant operational hurdles/ obstacles for significant equipment/process	

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Review Committee Weighted Score:	**67.4**	
Criteria Name	**Score**	**Comment**
Condition	4	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	4	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	2	Committee score carried over from current year Project Manager score
Operations and Maintenance	4	Committee score carried over from current year Project Manager score
Health and Safety	3	Committee score carried over from current year Project Manager score
Public Benefit	4	Committee score carried over from current year Project Manager score
Financial	4	Committee score carried over from current year Project Manager score
Efficiency and Innovation	4	Committee score carried over from current year Project Manager score

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Phase: Capital Delivery Salary

Phase Title: Capital Delivery Salary

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/7/2020

End Date: 1/29/2025

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Capital Delivery Salary	$113	$7	$7	$56	$49	$0	$0	$0	$0	$49	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/7/2020	1/29/2025
Capital Delivery Salary (Fringes)	7/7/2020	1/29/2025

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/7/2020

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$262	$262	$279	($17)	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71014A.01 / 71014B.01)	7/7/2020	12/31/2022

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Phase: Design-Build (2001051)

Phase Title: Design-Build (2001051)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2021

End Date: 1/29/2025

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 7/20/2021

Cost Est. Source: Burns & McDonnel- Executed Contract

Cost Est. Prepared By: Burns & McDonnel

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build (2001051)	$7,892	$4,472	$3,715	$1,190	$2,988	$0	$0	$0	$0	$2,988	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2001051)	7/1/2021	1/29/2025

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Capital Delivery Salary	$113	$7	$7	$56	$49	$0	$0	$0	$0	$49	$0
Professional Services	$262	$262	$279	($17)	$0	$0	$0	$0	$0	$0	$0
Design-Build (2001051)	$7,892	$4,472	$3,715	$1,190	$2,988	$0	$0	$0	$0	$2,988	$0
Totals	$8,267	$4,741	$4,001	$1,229	$3,037	$0	$0	$0	$0	$3,037	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2022	$7,212	$1,788	$3,606	$3,606	$0	$0	$0	$0	$0	$0	$9,000
2023	$4,000	$74	$3,905	$4,000	$0	$0	$0	$0	$0	$0	$7,979
2024	$4,732	$74	$1,066	$2,330	$4,732	$0	$0	$0	$0	$0	$8,203

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$8,267,097	$4,001,199	$1,228,930	$3,036,968	$0	$0	$0	$0	$3,036,968	$0

Description of CIP Changes:

Change title to reflect correct project: SW SCADA system upgrade. JD 8/25/2020.

CIP Number: 170303

Project Title: Power Monitoring Installation for Water Treatment Plants

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

58.6

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Jeffrey Dorsey

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 7/13/2020

Year Project Added to CIP: 2020

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Northeast, Southwest and Water Works Park

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [x] From Program?

Program Number: 170300

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170303

Project Title: Power Monitoring Installation for Water Treatment Plants

Problem Statement:

Looking to achieve efficiency of our power usage at our water treatment plants.

Scope of Work/Project Alternatives:

This project will install power monitoring meters on electrical switch gear for critical pumping units at Water Works Park, Northeast, and Southwest.

Other Important Info:

Power monitoring will be installed on critical pumping units and switchgear mains.

Primary Driver: 8 - Efficiency

Driver Explanation:

This will provide valuable power data.

CIP Number: 170303

Project Title: Power Monitoring Installation for Water Treatment Plants

Scoring

Project Manager Weighted Score:	**58.6**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	2	D. Only minor renewal or rehab may be needed in the near term	
Performance (Service Level/Reliability)	3	E. Canceling project potential for service/reliability issues† a few times/yr	
Regulatory (Environmental/Legal)	3	D. Project not part of mandated or enforceable program but directly or indirectly related to expected future requirements	
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	
Health and Safety	1	B. Project minimal positive impact on staff/public H&S; No major hazard issues/concerns to addressed	
Public Benefit	4	A. Project key part of a strategic plan* for GLWA (i.e. good probability leads to new customers), C. Significant additional revenue/savings for GLWA ($500K-$999K /yr); Better utilize existing & new infrastructure, D. Significant, noticeable impact on the public & GLWA image; seen as achievement for GLWA/communities/regions served	
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	
Efficiency and Innovation	5	C. Major & measurable positive impact on: Energy use & conservation/environmental responsibility & sustainability i.e. >=20% energy reduction, stabilizing demand; net financial; Wear & tear, D. efficiency; Water use, effluent reuse/recycling or other GLWA strategic initiatives*; Business process optimization and institutional knowledge; Process efficiency for a more robust system and less O&M; knowledge capture; or time & cost savings	

Review Committee Weighted Score:	**58.6**	
Criteria Name	**Score**	**Comment**
Condition	2	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	3	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	3	Committee score carried over from current year Project Manager score
Operations and Maintenance	3	Committee score carried over from current year Project Manager score
Health and Safety	1	Committee score carried over from current year Project Manager score
Public Benefit	4	Committee score carried over from current year Project Manager score
Financial	3	Committee score carried over from current year Project Manager score
Efficiency and Innovation	5	Committee score carried over from current year Project Manager score

CIP Number: 170303

Project Title: Power Monitoring Installation for Water Treatment Plants

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/23/2021

End Date: 10/24/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	3/23/2021	10/24/2022
Capital Delivery Salary (Fringes)	3/23/2021	10/24/2022

CIP Number: 170303

Project Title: Power Monitoring Installation for Water Treatment Plants

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/13/2020

End Date: 12/30/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$219	$219	$219	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71016A.01)	7/13/2020	12/30/2022

CIP Number: 170303

Project Title: Power Monitoring Installation for Water Treatment Plants

Phase: Design-Build (2000644)

Phase Title: Design-Build (2000644)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 3/23/2021

End Date: 10/24/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build (2000644)	$1,593	$1,593	$1,593	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design-Build (2000644)	3/23/2021	10/24/2022

CIP Number: 170303

Project Title: Power Monitoring Installation for Water Treatment Plants

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$219	$219	$219	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build (2000644)	$1,593	$1,593	$1,593	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$1,811	$1,811	$1,811	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2022	$514	$1,186	$514	$0	$0	$0	$0	$0	$0	$0	$1,700
2023	$438	$204	$1,186	$438	$0	$0	$0	$0	$438	$0	$2,265
2024	$0	$204	$1,513	$126	$0	$0	$0	$0	$0	$0	$1,842

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$1,811,356	$1,811,356	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

New project from program JD 8/25/2020.

CIP Number: 170304

Project Title: WWP Scada Infrastructure Upgrade

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

59.5

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Jeffrey Dorsey

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 4/12/2021

Year Project Added to CIP: 2022

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Water Works Park

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [x] From Program?

Program Number: 170300

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170304

Project Title: WWP Scada Infrastructure Upgrade

Problem Statement:

Of paramount concern is the need to have a reliable and secure SCADA platform that will satisfy GLWA's needs for the next 10-15 years. The purpose is to upgrade the SCADA system to an Ovation DCS controlled network utilizing Ovation and PLC controllers and I/O (3rd part network design will be supplied) for implementation at WWP. It will include the following:

A. A complete SCADA network, replacement of all field devices at the facility.

B. Complete engineering design of a new process.
control system, networks and communication requirements, system integration of a complete SCADA network, preparation of a final basis of design report, design and related services engineering. Provide quality control, inspections, training for operating and maintenance staff, and construction close-out documentation,

Scope of Work/Project Alternatives:

The scope of this project is to provide a design for SCADA upgrade of Water Works Park water treatment plant incorporating the following:
• Upgrade of all plant PLCs
• Network extension upgrades to integrate new process areas/controllers within the process control network
• Emerson Ovation upgrades
• Implement alarm management.
• Migrate all SCADA graphics, alarms, historical data configuration to a single platform
• Upgrade/integration into the central Historians.
• Upgrade network backbone to ensure its capable with a 1Gbps data transmission rate.
• Administration building control room network upgrades and setup a new communication cabinet to properly accommodate all the network equipment
• Design of network cabinets at strategic locations
• Upgrade network monitoring tools/software

Other Important Info:

This project will upgrade the SCADA network. Project not scored by review committee because it is professional services only.

Primary Driver: 1 - Condition

Driver Explanation:

The primary driver for this project is the CS-108 Needs Assessment done for the 5 water treatment plants. Part of the scope for that project was to develop a 10-year CIP plan to rehab critical automation processes within the plants. 170300 Water Plant Automation Program was created to accomplish this objective.

CIP Number: 170304

Project Title: WWP Scada Infrastructure Upgrade

Scoring

Project Manager Weighted Score:	**59.5**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	A. Asset has <50% of its design service life remaining	
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure, E. Canceling project potential for service/reliability issues† a few times/yr	
Regulatory (Environmental/Legal)	3	E. Moderate historical evidence gives minor support for project	
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value, D. Measurable cost reductions 5% to 9%/year of current budget for function/area	
Health and Safety	3	C. Likely to address minor hazard issues or concerns	
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers	
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies	

Review Committee Weighted Score:	**59.5**	
Criteria Name	**Score**	**Comment**
Condition	3	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	3	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	3	Committee score carried over from current year Project Manager score
Operations and Maintenance	3	Committee score carried over from current year Project Manager score
Health and Safety	3	Committee score carried over from current year Project Manager score
Public Benefit	3	Committee score carried over from current year Project Manager score
Financial	3	Committee score carried over from current year Project Manager score
Efficiency and Innovation	2	Committee score carried over from current year Project Manager score

CIP Number: 170304

Project Title: WWP Scada Infrastructure Upgrade

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/20/2021

End Date: 6/30/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/20/2021	6/30/2022
Capital Delivery Salary (Fringes)	7/20/2021	6/30/2022

CIP Number: 170304

Project Title: WWP Scada Infrastructure Upgrade

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 4/29/2021

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$149	$149	$153	($4)	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71029A.01)	4/29/2021	12/31/2022

CIP Number: 170304

Project Title: WWP Scada Infrastructure Upgrade

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/20/2021

End Date: 6/30/2022

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 11/17/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$288	$288	$288	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1900318)	7/20/2021	6/30/2022

CIP Number: 170304

Project Title: WWP Scada Infrastructure Upgrade

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Cancelled

Start Date: 12/27/2022

End Date: 6/30/2025

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 11/17/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	12/27/2022	6/30/2025
Construction Equiment / Material Purchase	2/1/2024	10/31/2024

CIP Number: 170304

Project Title: WWP Scada Infrastructure Upgrade

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$149	$149	$153	($4)	$0	$0	$0	$0	$0	$0	$0
Design/Engineering	$288	$288	$288	$0	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$436	$436	$441	($4)	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$118	$187	$78	$33	$7	$0	$0	$0	$0	$319
2024	$0	$247	$46	$0	$0	$0	$0	$0	$0	$308

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$436,619	$440,575	($3,956)	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

N/A

CIP Number: 170305

Project Title: WWP SCADA Network Upgrade

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] **Project New to CIP**
- [ ] **Useful Life > 20 Yrs**
- [ ] **Multiple Phases**

Project Score

65

- [ ] **Innovation**
- [ ] **WW Master Plan**
- [ ] **Water Master Plan Right Sizing**
- [ ] **Wet Weather Resiliency**
- [ ] **Redundancy**
- [ ] **Predecessor Project(s)**
- [ ] **Linear Assets Outside of Facilities**
- [ ] **CSO**
- [ ] **Pumps**
- [ ] **Storage**
- [x] **Treatment**

Project Manager: Jeffrey Dorsey

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 7/29/2021

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Water Works Park

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [x] **From Program?**

Program Number: 170300

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] **Is a Predecessor Project?**

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170305

Project Title: WWP SCADA Network Upgrade

Problem Statement:

Provide a robust SCADA network solution with installed capacity to accommodate future SCADA expansion and fully manageable network capabilities. Adhere to network standards put together in the SGD document.

Scope of Work/Project Alternatives:

This project will be the construction phase of the design done under CIP 170304.

Other Important Info:

This project may be delayed.

Primary Driver: 8 - Efficiency

Driver Explanation:

This automation will be one of the main drivers for increased efficiency in data monitoring regulatory reporting and reduced workload and maintenance cost.

CIP Number: 170305

Project Title: WWP SCADA Network Upgrade

Scoring

Project Manager Weighted Score:	**60**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	A. Asset has <50% of its design service life remaining	
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure, E. Canceling project potential for service/reliability issues† a few times/yr	
Regulatory (Environmental/Legal)	3	A. Moderate risk of causing, B. Project will have a moderate positive impact on reg. issues	
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value, D. Measurable cost reductions 5% to 9%/year of current budget for function/area	
Health and Safety	3	B. Project moderate positive impact on staff/public H&S‡	
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers	
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	

Review Committee Weighted Score:	**65**	
Criteria Name	**Score**	**Comment**
Condition	3	
Performance (Service Level/Reliability)	4	
Regulatory (Environmental/Legal)	3	
Operations and Maintenance	3	
Health and Safety	2	
Public Benefit	3	
Financial	3	
Efficiency and Innovation	4	

CIP Number: 170305

Project Title: WWP SCADA Network Upgrade

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 2/4/2030

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$157	$0	$0	$0	$0	$0	$0	$0	$98	$98	$59

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2028	2/4/2030
Capital Delivery Salary (Fringes)	7/1/2028	2/4/2030

CIP Number: 170305

Project Title: WWP SCADA Network Upgrade

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 2/4/2030

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$187	$0	$0	$0	$0	$0	$0	$0	$117	$117	$70

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2028	2/4/2030

CIP Number: 170305

Project Title: WWP SCADA Network Upgrade

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 2/4/2030

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$7,198	$0	$0	$0	$0	$0	$0	$0	$4,499	$4,499	$2,699

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2028	2/4/2030

CIP Number: 170305

Project Title: WWP SCADA Network Upgrade

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$157	$0	$0	$0	$0	$0	$0	$0	$98	$98	$59
Design/Engineering	$187	$0	$0	$0	$0	$0	$0	$0	$117	$117	$70
Construction	$7,198	$0	$0	$0	$0	$0	$0	$0	$4,499	$4,499	$2,699
Totals	$7,542	$0	$0	$0	$0	$0	$0	$0	$4,714	$4,714	$2,828

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$0	$0	$0	$0	$0	$0	$0	$1,834	$3,668	$7,336
2024	$0	$0	$0	$0	$0	$0	$0	$0	$4,714	$7,542

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$7,542,009	$0	$0	$0	$0	$0	$0	$4,713,756	$4,713,756	$2,828,254

Description of CIP Changes:

This is a new project to the CIP Plan FY 2023-2027. 7/29/2021 AC

CIP Number: 170306

Project Title: SPW SCADA PLC Network Upgrade

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] **Project New to CIP**
- [ ] **Useful Life > 20 Yrs**
- [ ] **Multiple Phases**

Project Score

78.4

- [ ] **Innovation**
- [ ] **WW Master Plan**
- [ ] **Water Master Plan Right Sizing**
- [ ] **Wet Weather Resiliency**
- [ ] **Redundancy**
- [ ] **Predecessor Project(s)**
- [ ] **Linear Assets Outside of Facilities**
- [ ] **CSO**
- [ ] **Pumps**
- [ ] **Storage**
- [x] **Treatment**

Project Manager: Jeffrey Dorsey

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 7/30/2021

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Springwells Plant

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [x] **From Program?**

Program Number: 170300

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] **Is a Predecessor Project?**

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170306

Project Title: SPW SCADA PLC Network Upgrade

Problem Statement:

This project will upgrade current plant PLCs providing Asset Center management and install network cabinets in strategic locations for future expandability of both Springwells and Northeast Water Treatment Plants.

Scope of Work/Project Alternatives:

Provide a robust SCADA network solution with installed capacity to accommodate future SCADA expansion and fully manageable network capabilities. Adhere to network standards put together in the SGD document.

Other Important Info:

This project will upgrade the 3rd party network.

Primary Driver: 1 - Condition

Driver Explanation:

This automation will be one of the main drivers for increased efficiency in data monitoring regulatory reporting and reduced workload and maintenance cost.

CIP Number: 170306

Project Title: SPW SCADA PLC Network Upgrade

Scoring

Project Manager Weighted Score:	**79.6**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, C. High risk of breakdown or imminent failure with serious impact on performance, D. Immediate replacement or rehabilitation required, E. Could initiate immediate funding request b/c "Urgent Necessity" in near term, F. Replace. or major rehab needed immediately	
Performance (Service Level/Reliability)	4	A. Expected performance failures under normal conditions, B. High risk of performance failure; doesn't meet future requirements, D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*	
Regulatory (Environmental/Legal)	4	B. Project not part of mandated or enforceable program, but directly related to know expected future requirements; will increase compliance, C. Canceling project risk of non-compliance in near term; potential permit violations; regulatory scrutiny; sig. measurable negative environmental impact to wide area	
Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	4	A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years	
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers, E. /stakeholder relationships/confidence in GLWA	
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	
Efficiency and Innovation	4	B. Project will remove significant operational hurdles/ obstacles for significant equipment/process	

Review Committee Weighted Score:	**78.4**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	4	
Regulatory (Environmental/Legal)	4	
Operations and Maintenance	4	
Health and Safety	4	
Public Benefit	3	
Financial	3	
Efficiency and Innovation	3	

CIP Number: 170306

Project Title: SPW SCADA PLC Network Upgrade

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 11/1/2024

End Date: 11/1/2026

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$100	$0	$0	$0	$33	$50	$17	$0	$0	$100	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	11/1/2024	11/1/2026
Capital Delivery Salary (Fringes)	11/1/2024	11/1/2026

CIP Number: 170306

Project Title: SPW SCADA PLC Network Upgrade

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 11/1/2024

End Date: 11/1/2026

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$3,340	$0	$0	$0	$1,106	$1,668	$567	$0	$0	$3,340	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	11/1/2024	11/1/2026

CIP Number: 170306

Project Title: SPW SCADA PLC Network Upgrade

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 11/1/2024

End Date: 11/1/2026

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$3,340	$0	$0	$0	$1,106	$1,668	$567	$0	$0	$3,340	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	11/1/2024	11/1/2026

CIP Delivery Team

CIP Number: 170306

Project Title: SPW SCADA PLC Network Upgrade

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$100	$0	$0	$0	$33	$50	$17	$0	$0	$100	$0
Design/Engineering	$3,340	$0	$0	$0	$1,106	$1,668	$567	$0	$0	$3,340	$0
Construction	$3,340	$0	$0	$0	$1,106	$1,668	$567	$0	$0	$3,340	$0
Totals	$6,780	$0	$0	$0	$2,245	$3,385	$1,150	$0	$0	$6,780	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$3,146	$0	$1,573	$1,573	$0	$0	$0	$0	$0	$3,146
2024	$3,341	$0	$0	$0	$3,341	$0	$0	$0	$0	$3,341

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$6,780,215	$0	$0	$2,244,612	$3,385,469	$1,150,131	$0	$0	$6,780,215	$0

Description of CIP Changes:

New Project added to CIP Plan FY 2023-2027 7/29/2021 AC. This project was combined with 170307. After finishing the preliminary design for Northeast and Springwells, it was found that the overall cost for upgrading the SCADA systems of both plants could be captured under one pr.

CIP Number: 170307

Project Title: NE SCADA Network Upgrade

Project Status: Reclassified

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

59.6

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Jeffrey Dorsey

Director: Terry Daniel

Managing Dept.: Water Operations

Date Original Business Case Prepared: 7/30/2021

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: Northeast Plant

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [x] From Program?

Program Number: 170300

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170307

Project Title: NE SCADA Network Upgrade

Problem Statement:

Provide a robust SCADA network solution with installed capacity to accommodate future SCADA expansion and fully manageable network capabilities. Adhere to network standards put together in the SGD document.

Scope of Work/Project Alternatives:

This project will update the 3rd party network for this site.

Other Important Info:

This project may be delayed.

Primary Driver: 1 - Condition

Driver Explanation:

This automation will be one of the main drivers for increased efficiency in data monitoring, regulatory reporting and reduced workload and maintenance cost.

CIP Number: 170307

Project Title: NE SCADA Network Upgrade

Scoring

Project Manager Weighted Score:	**67**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, C. High risk of breakdown or imminent failure with serious impact on performance, E. Could initiate immediate funding request b/c "Urgent Necessity" in near term	
Performance (Service Level/Reliability)	4	B. High risk of performance failure; doesn't meet future requirements, D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*	
Regulatory (Environmental/Legal)	3	D. Project not part of mandated or enforceable program but directly or indirectly related to expected future requirements	
Operations and Maintenance	3	A. Moderate levels of O/M will keep mean times between failures frequent but tolerable; Repairs total >=20%original value	
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	
Public Benefit	3	A. Project part of GLWA strategic plan*, but no new customers	
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA.	
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	

Review Committee Weighted Score:	**59.6**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	3	
Operations and Maintenance	3	
Health and Safety	2	
Public Benefit	3	
Financial	3	
Efficiency and Innovation	3	

CIP Number: 170307

Project Title: NE SCADA Network Upgrade

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Cancelled

Start Date: 4/7/2030

End Date: 6/26/2031

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	4/7/2030	6/26/2031
Capital Delivery Salary (Fringes)	4/7/2030	6/26/2031

CIP Number: 170307

Project Title: NE SCADA Network Upgrade

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 4/7/2030

End Date: 6/26/2031

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	4/7/2030	6/26/2031

CIP Delivery Team

CIP Number: 170307

Project Title: NE SCADA Network Upgrade

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2021

End Date: 6/26/2031

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	4/7/2030	6/26/2031
Construction Material / Equipment Purchase	7/1/2021	7/31/2021

CIP Number: 170307

Project Title: NE SCADA Network Upgrade

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,917
2024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,112

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

New Project added to CIP FY 2023-2027 7/29/2021 AC. Project combined with 170306 (FY25-29).

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Project Status: Future Planned - Within Five Year Plan

CIP Type: Program

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

0

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Todd King

Director: Todd King

Managing Dept.: Field Services

Date Original Business Case Prepared: 4/27/2017

Year Project Added to CIP: 2010

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Transmission System

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Problem Statement:

Assessing, rehabilitating or replacing aging transmission mains in the water system

Scope of Work/Project Alternatives:

This project is a yearly funding allocation for the design and/or construction work for the rehabilitation or replacement of aging water transmission lines and all appurtenances, connections and related structures.

Other Important Info:

O&M manuals, GIS, Section Maps and Gate Books are available for reference.

Project History: There are many critical assets that are required to be operated in the transmission system and this yearly allowance is needed to meet the critical needs of these assets.

Challenges: May require shut down of large pumps and isolation or shutdown of large mains etc.

Primary Driver: N/A - Allowance

Driver Explanation:

none

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Scoring

Project Manager Weighted Score:	**0**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	0		
Performance (Service Level/Reliability)	0		
Regulatory (Environmental/Legal)	0		
Operations and Maintenance	0		
Health and Safety	0		
Public Benefit	0		
Financial	0		
Efficiency and Innovation	0		

Review Committee Weighted Score:	**0**	
Criteria Name	**Score**	**Comment**
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/26/2027

End Date: 6/30/2036

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$495	$0	$0	$0	$0	$0	$0	$52	$55	$107	$277

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/26/2027	6/30/2036
Capital Delivery Salary (Fringes)	7/26/2027	6/30/2036

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Phase: Design/Engineering #1

Phase Title: Design/Engineering #1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 6/30/2027

End Date: 6/30/2036

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering #1	$141	$0	$0	$0	$0	$0	$0	$37	$17	$55	$7

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	6/30/2027	6/30/2036

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Phase: Design/Engineering #2

Phase Title: Design/Engineering #2

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2027

End Date: 6/30/2033

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering #2	$2,975	$0	$0	$0	$0	$0	$0	$468	$501	$969	$2,005

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2027	6/30/2033

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Phase: Construction (Build) # 2

Phase Title: Construction (Build) # 2

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2033

End Date: 6/30/2036

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 2	$10,900	$0	$0	$0	$0	$0	$0	$0	$0	$0	$865

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2033	6/30/2036

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Phase: Construction (Build) # 6

Phase Title: Construction (Build) # 6

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2033

End Date: 6/30/2036

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 6	$17,664	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,402

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2033	6/30/2036

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$495	$0	$0	$0	$0	$0	$0	$52	$55	$107	$277
Design/Engineering #1	$141	$0	$0	$0	$0	$0	$0	$37	$17	$55	$7
Design/Engineering #2	$2,975	$0	$0	$0	$0	$0	$0	$468	$501	$969	$2,005
Construction (Build) # 2	$10,900	$0	$0	$0	$0	$0	$0	$0	$0	$0	$865
Construction (Build) # 6	$17,664	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,402
Totals	$32,174	$0	$0	$0	$0	$0	$0	$557	$574	$1,131	$4,556

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$50,000	$0	$10,000	$11,000	$9,000	$11,000	$9,000	$0	$0	$0	$0	$0	$0	$0	$50,000
2019	$8,500	$1,075	$229	$1,000	$1,500	$2,000	$2,000	$2,000	$2,000	$0	$0	$0	$0	$0	$11,804
2020	$9,500	$0	$156	$1,000	$1,500	$2,000	$2,000	$2,000	$2,000	$100,000	$0	$0	$0	$0	$110,656
2021	$8,155	$0	$0	$1,643	$1,781	$1,776	$1,776	$1,776	$1,781	$1,046	$16,578	$0	$0	$0	$28,157
2022	$4,175	$0	$0	$34	($34)	$49	$1,034	$1,034	$1,034	$1,034	$39	$72	$98	$7,685	$33,171
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,037	$1,040	$32,048
2024	$557	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$557	$573	$32,175

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$32,174,787	$0	$0	$0	$0	$0	$557,002	$573,736	$1,130,739	$4,555,658

Description of CIP Changes:

No changes per Todd K. 8/1/2021. AC

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Project Status: Future Planned - Within Five Year Plan

CIP Type: Program

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

0

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [x] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Todd King

Director: Todd King

Managing Dept.: Field Services

Date Original Business Case Prepared: 7/29/2016

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Transmission System Gate Valves

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Problem Statement:

Replacement or 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.

Scope of Work/Project Alternatives:

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

Other Important Info:

GIS, Section Maps and Gate Books are available for reference.

Project History: There are critical valves that are required to be closed during a main break or an emergency situation. There has not been a regular valve exercising program in the past 15 years in the DWSD/GLWA System.

Challenges: May require shutdown of large transmission mains.

Primary Driver: 1 - Condition

Driver Explanation:

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

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Scoring

Project Manager Weighted Score:	**0**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	0		
Performance (Service Level/Reliability)	0		
Regulatory (Environmental/Legal)	0		
Operations and Maintenance	0		
Health and Safety	0		
Public Benefit	0		
Financial	0		
Efficiency and Innovation	0		

Review Committee Weighted Score:	**0**	
Criteria Name	**Score**	**Comment**
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 6/30/2040

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$296	$0	$0	$12	$18	$18	$18	$18	$18	$89	$89

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2023	6/30/2040
Capital Delivery Salary (Fringes)	7/1/2023	6/30/2040

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Phase: Design/Engineering #1

Phase Title: Design/Engineering #1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2025

End Date: 6/30/2036

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering #1	$1,500	$0	$0	$0	$0	$0	$150	$150	$150	$450	$750

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2025	6/30/2036

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Phase: Design/Engineering #3

Phase Title: Design/Engineering #3

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2023

End Date: 6/30/2040

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering #3	$32,500	$0	$0	$0	$0	$0	$0	$2,505	$2,498	$5,003	$12,496

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (net-zero cost account to be archived)	7/1/2023	6/30/2036
Construction	7/1/2027	6/30/2040

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Phase: Construction (Build) # 3

Phase Title: Construction (Build) # 3

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 7/1/2038

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 3	$25,000	$0	$0	$0	$0	$0	$0	$0	$2,498	$2,498	$12,497

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2028	7/1/2038

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$296	$0	$0	$12	$18	$18	$18	$18	$18	$89	$89
Design/Engineering #1	$1,500	$0	$0	$0	$0	$0	$150	$150	$150	$450	$750
Design/Engineering #3	$32,500	$0	$0	$0	$0	$0	$0	$2,505	$2,498	$5,003	$12,496
Construction (Build) # 3	$25,000	$0	$0	$0	$0	$0	$0	$0	$2,498	$2,498	$12,497
Totals	$59,296	$0	$0	$12	$18	$18	$168	$2,673	$5,163	$8,040	$25,832

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$15,330	$0	$2,930	$3,100	$3,100	$3,100	$3,100	$0	$0	$0	$0	$0	$0	$0	$15,330
2019	$16,000	$0	$2,000	$4,000	$4,000	$3,274	$726	$4,000	$4,000	$0	$0	$0	$0	$0	$22,000
2020	$19,274	$0	$3,430	$4,000	$4,000	$3,274	$4,000	$4,000	$4,000	$10,000	$0	$0	$0	$0	$36,704
2021	$13,884	$0	$0	$7,159	$642	$1,177	$3,119	$3,175	$3,210	$3,203	$4,784	$0	$0	$0	$26,469
2022	$1,080	$0	$0	$316	($316)	$281	$232	$232	$232	$232	$151	$45	$378	$1,153	$5,350
2023	$1,081	$0	$0	$0	$0	$0	$277	$277	$278	$277	$200	$51	$367	$1,163	$5,327
2024	$11,371	$0	$0	$0	$0	$0	$0	$0	$1,617	$1,612	$1,612	$3,261	$3,270	$3,261	$32,969

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$59,296,473	$0	$11,836	$17,778	$17,778	$167,655	$2,672,851	$5,163,496	$8,039,557	$25,831,625

Description of CIP Changes:

none

CIP Number: 170502

Project Title: Transmission System Valve Rehabilitation and Replacement Phase I

Project Status: Closed

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

25.4

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Todd King

Director: Todd King

Managing Dept.: Field Services

Date Original Business Case Prepared: 7/29/2016

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Transmission System Gate Valves

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [x] From Program?

Program Number: 170500

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170502

Project Title: Transmission System Valve Rehabilitation and Replacement Phase I

Problem Statement:

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.

Scope of Work/Project Alternatives:

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

Other Important Info:

GIS, Section Maps and Gate Books are available for reference.

Project History: There are critical valves that are required to be closed during a main break or an emergency situation. There has not been a regular valve exercising program during the past 15 years in the DWSD/GLWA System.

Challenges: May require shutdown of large transmission mains.

Primary Driver: 1 - Condition

Driver Explanation:

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

CIP Number: 170502

Project Title: Transmission System Valve Rehabilitation and Replacement Phase I

Scoring

Project Manager Weighted Score:	**25.4**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	2	D. Only minor renewal or rehab may be needed in the near term, E. Could be addressed with preventative measures	
Performance (Service Level/Reliability)	1	D. Project will have low to no measurable positive impact on service levels and/or system reliability / decreased overall risk	
Regulatory (Environmental/Legal)	1	B. Low/no impact on specific reg. compliance issues	
Operations and Maintenance	1	A. O&M levels are routine;	
Health and Safety	1	B. Project minimal positive impact on staff/public H&S; No major hazard issues/concerns to addressed	
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	
Financial	1	A. Minimal to no impact to GLWA	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**25.4**	
Criteria Name	**Score**	**Comment**
Condition	2	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	1	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	1	Committee score carried over from current year Project Manager score
Operations and Maintenance	1	Committee score carried over from current year Project Manager score
Health and Safety	1	Committee score carried over from current year Project Manager score
Public Benefit	1	Committee score carried over from current year Project Manager score
Financial	1	Committee score carried over from current year Project Manager score
Efficiency and Innovation	1	Committee score carried over from current year Project Manager score

CIP Number: 170502

Project Title: Transmission System Valve Rehabilitation and Replacement Phase I

Phase: Capital Delivery Salary

Phase Title: Capital Delivery Salary

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/22/2019

End Date: 10/13/2021

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Capital Delivery Salary	$6	$6	$6	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/22/2019	10/13/2021
Capital Delivery Salary (Fringes)	7/22/2019	10/13/2021

CIP Number: 170502

Project Title: Transmission System Valve Rehabilitation and Replacement Phase I

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/22/2019

End Date: 7/26/2019

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$385	$385	$385	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71003A.02)	7/22/2019	7/26/2019

CIP Number: 170502

Project Title: Transmission System Valve Rehabilitation and Replacement Phase I

Phase: Construction (Build) # 1 (CON-181)

Phase Title: Construction (Build) # 1 (CON-181)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 7/1/2021

End Date: 10/13/2021

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1 (CON-181)	$5,218	$5,218	$5,218	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (CON-181)	7/1/2021	10/13/2021

CIP Number: 170502

Project Title: Transmission System Valve Rehabilitation and Replacement Phase I

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Capital Delivery Salary	$6	$6	$6	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$385	$385	$385	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1 (CON-181)	$5,218	$5,218	$5,218	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$5,608	$5,608	$5,609	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2019	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2020	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2022	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2023	$0	$0	$3,431	$2,599	$307	($726)	$9,782	$0	$0	$0	$0	$0	$0	$0	$15,392
2024	$0	$0	$3,431	$2,599	$307	($726)	($1)	$0	$0	$0	$0	$0	$0	$0	$5,609

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$5,608,710	$5,608,710	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

N.A.

CIP Number: 170503

Project Title: Transmission Mains Valves and Urgent Repairs Contract 2

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

44.5

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Todd King

Director: Todd King

Managing Dept.: Field Services

Date Original Business Case Prepared: 7/29/2016

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Transmission System Gate Valves

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [x] From Program?

Program Number: 170500

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170503

Project Title: Transmission Mains Valves and Urgent Repairs Contract 2

Problem Statement:

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.

Scope of Work/Project Alternatives:

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

Other Important Info:

GIS, Section Maps and Gate Books are available for reference.

Project History: There are critical valves that are required to be closed during a main break or an emergency situation. There has not been a regular valve exercising program during the past 15 years in the DWSD/GLWA System.

Challenges: May require shutdown of large transmission mains.

Primary Driver: 4 - O and M

Driver Explanation:

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

CIP Number: 170503

Project Title: Transmission Mains Valves and Urgent Repairs Contract 2

Scoring

Project Manager Weighted Score:	**44.5**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	2	D. Only minor renewal or rehab may be needed in the near term	
Performance (Service Level/Reliability)	1	D. Project will have low to no measurable positive impact on service levels and/or system reliability / decreased overall risk	
Regulatory (Environmental/Legal)	2	A. Low risk of causing	
Operations and Maintenance	4	A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	
Health and Safety	1	A. No failure reasonably expected to occur	
Public Benefit	1	A. Low/no measurable impact on City/regional/neighborhood growth; will not impact a GLWA strategic plan* area	
Financial	1	A. Minimal to no impact to GLWA	
Efficiency and Innovation	2	D. Little to no time and cost saving	

Review Committee Weighted Score:	**44.5**	
Criteria Name	**Score**	**Comment**
Condition	2	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	1	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	2	Committee score carried over from current year Project Manager score
Operations and Maintenance	4	Committee score carried over from current year Project Manager score
Health and Safety	1	Committee score carried over from current year Project Manager score
Public Benefit	1	Committee score carried over from current year Project Manager score
Financial	1	Committee score carried over from current year Project Manager score
Efficiency and Innovation	2	Committee score carried over from current year Project Manager score

CIP Number: 170503

Project Title: Transmission Mains Valves and Urgent Repairs Contract 2

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 5/1/2020

End Date: 10/21/2025

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$166	$34	$34	$45	$67	$21	$0	$0	$0	$88	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	5/1/2020	10/21/2025
Capital Delivery Salary (Fringes)	5/1/2020	10/21/2025

CIP Number: 170503

Project Title: Transmission Mains Valves and Urgent Repairs Contract 2

Phase: Construction (Build) (1802745)

Phase Title: Construction (Build) (1802745)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 5/1/2020

End Date: 10/21/2025

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 8/26/2019

Cost Est. Source: Ric-Man- Executed Contract

Cost Est. Prepared By: Ric-Man

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) (1802745)	$14,800	$14,010	$13,146	$1,204	$350	$99	$0	$0	$0	$450	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1802745)	5/1/2020	10/21/2025

CIP Number: 170503

Project Title: Transmission Mains Valves and Urgent Repairs Contract 2

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$166	$34	$34	$45	$67	$21	$0	$0	$0	$88	$0
Construction (Build) (1802745)	$14,800	$14,010	$13,146	$1,204	$350	$99	$0	$0	$0	$450	$0
Totals	$14,966	$14,044	$13,180	$1,249	$417	$120	$0	$0	$0	$537	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2019	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2020	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2022	$1,305	$0	$0	$0	$394	$8,373	$1,305	$0	$0	$0	$0	$0	$0	$0	$10,072
2023	$6,575	$0	$0	$0	$394	$1,717	$1,315	$1,315	$1,315	$1,315	$1,315	$1,315	$0	$0	$10,000
2024	$1,063	$0	$0	$0	$394	$1,717	$1,053	$7,940	$920	$143	$0	$0	$0	$0	$12,166

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$14,966,270	$13,180,210	$1,248,669	$417,361	$120,029	$0	$0	$0	$537,390	$0

Description of CIP Changes:

na

CIP Number: 170504

Project Title: Transmission Mains Valves and Urgent Repairs Contract 1

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

34.3

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Todd King

Director: Todd King

Managing Dept.: Field Services

Date Original Business Case Prepared: 9/30/2021

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Multiple Locations

Funds and Cost Center: Water - 5519-882431

- [x] From Program?

Program Number: 170500

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 170504

Project Title: Transmission Mains Valves and Urgent Repairs Contract 1

Problem Statement:

Ongoing project to address water main transmission mains, valves, pumping stations, and plants on an emergency or urgent basis.

Scope of Work/Project Alternatives:

Work shall be as required by GLWA Field Services to address and support maintenance and repairs and capital improvements to the water main, valves, booster stations, and/or other urgent tasks.

Other Important Info:

na

Primary Driver: Varies

Driver Explanation:

As needed work

CIP Number: 170504

Project Title: Transmission Mains Valves and Urgent Repairs Contract 1

Scoring

Project Manager Weighted Score:	**35.1**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	1	C. Little to no wear shown and no repairs outside of regular maint.	
Performance (Service Level/Reliability)	2	C. Project moderate to low positive impact on service levels and/or system reliability	
Regulatory (Environmental/Legal)	1	A. No risk of causing	
Operations and Maintenance	2	A. Low levels of O/M keeps meantime between failure standard	
Health and Safety	1	A. No failure reasonably expected to occur	
Public Benefit	4	B. Supports City/regional/neighborhood growth (i.e. measurable impact on public/community through economic development)	
Financial	3	E. Unlikely to have wider budget implications.	
Efficiency and Innovation	1	B. Low impact on business process optimization; no time/cost saving	

Review Committee Weighted Score:	**34.3**	
Criteria Name	**Score**	**Comment**
Condition	2	
Performance (Service Level/Reliability)	2	
Regulatory (Environmental/Legal)	1	
Operations and Maintenance	2	
Health and Safety	1	
Public Benefit	3	
Financial	3	
Efficiency and Innovation	2	

CIP Number: 170504

Project Title: Transmission Mains Valves and Urgent Repairs Contract 1

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Project Execution

Start Date: 10/8/2021

End Date: 10/7/2026

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 10/8/2021

Cost Est. Source: LGC-Executed Contract

Cost Est. Prepared By: LGC

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$18,400	$9,691	$9,220	$2,445	$2,965	$2,965	$804	$0	$0	$6,735	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (2003720 - CON-181 Replacement)	10/8/2021	10/7/2026

CIP Delivery Team

CIP Number: 170504

Project Title: Transmission Mains Valves and Urgent Repairs Contract 1

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$18,400	$9,691	$9,220	$2,445	$2,965	$2,965	$804	$0	$0	$6,735	$0
Totals	$18,400	$9,690	$9,220	$2,445	$2,965	$2,965	$804	$0	$0	$6,735	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$6,250	$1,250	$1,250	$1,250	$1,250	$1,250	$1,250	$0	$0	$7,500
2024	$1,795	$8,514	$691	$549	$548	$548	$150	$0	$0	$11,000

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$18,400,000	$9,219,808	$2,445,165	$2,965,362	$2,965,362	$804,304	$0	$0	$6,735,028	$0

Description of CIP Changes:

Added project as part of ongoing program

CIP Number: 170506

Project Title: Water Transmission, Valve, Emergency and Other Urgent Repairs

Project Status: Active - Pre-Procurement - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [x] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

57.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Todd King

Director: Todd King

Managing Dept.: Field Services

Date Original Business Case Prepared: 1/1/2016

Year Project Added to CIP: 2024

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: --

Funds and Cost Center: Water - 5519-882431

- [x] From Program?

Program Number: 170500

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: Yes

Partners: Private Utilities,Other,Municipalities,MDOT,EGLE

Collaboration Entity: GLWA

CIP Delivery Team

CIP Number: 170506

Project Title: Water Transmission, Valve, Emergency and Other Urgent Repairs

Problem Statement:

This is the Water Transmission project that is serving the Water Transmission and Valve programs. This contract is also used to support other urgent work as necessary due to system reliability and
health and safety issues.

Scope of Work/Project Alternatives:

Emergency, urgent, and normal maintenance and repair of transmission mains, valves, and appurtenances. Also includes urgent work necessary for system reliability and public and GLWA health and safety concerns.

Other Important Info:

Necessary for the reliable operation of the water system and response to emergency conditions.

Primary Driver: Varies

Driver Explanation:

Many drivers for the covered work. Split between capital and O&M based on assigned tasks.

CIP Number: 170506

Project Title: Water Transmission, Valve, Emergency and Other Urgent Repairs

Scoring

Project Manager Weighted Score:	**100**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	A. Asset has exceeded its design service life, B. Excessive maint. levels for the equipment/process area, C. High risk of breakdown or imminent failure with serious impact on performance, D. Immediate replacement or rehabilitation required, E. Could initiate immediate funding request b/c "Urgent Necessity" in near term, F. Replace. or major rehab needed immediately	Varies
Performance (Service Level/Reliability)	5	A. Will cause, or IS causing significant capacity problems, B. Current performance unacceptable, does not meet current requirements/demands; equipment obsolete/extremely difficult to maintain or find spare parts/repair service; Asset/process OOS 50% or more of the time; Recurring, expected failures, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*, D. Canceling project significant, persistent, ongoing, continuous service interruption and/or reliability issues†, E. Project impact >11 wholesale, 1M retail, or critical customer, F. No redundancy or feasible temporary options	Varies
Regulatory (Environmental/Legal)	5	F. Compliance failure significant fines, enforcement actions, measurable environmental impact, E. Deferring/canceling project immediate risk of non-compliance, major permit violations, regulatory scrutiny; sig. measurable negative environmental impact on a regional or statewide level w/ lingering or permanent/irreversible impact on wider ecosystem, A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public, B. Project part of a mandated or otherwise enforceable program, C. Measurable positive regulatory/compliance impact (CSO, permits), D. Numerous historical evidence of permit/regulatory violations	Varies
Operations and Maintenance	5	C. Repairs total >=60% of the asset/process original value, D. Project major, measurable positive impact on O&M; will completely alleviate ongoing O&M issues, E. Measurable cost reductions (labor, materials) >=25%/year of current budget for that function/area, F. Measurable reduction (>=75%) in reactive maint., B. Requires constant monitoring/manual operation because it is unable to be run automatically, A. Unsustainable levels of O/M required to keep in service that will still not ensure future stable/proper operation	Varies
Health and Safety	5	A. Catastrophic failure w/ safety/health/environmental impacts imminent (2 years or less) as supported by engineering reports, studies, inspections, historical evidence, etc., B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents, C. Likely to address major hazard issues or concerns, D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for	Varies

CIP Number: 170506

Project Title: Water Transmission, Valve, Emergency and Other Urgent Repairs

Public Benefit	5	B. Project will have a major and measurable positive impact by supporting member partners; coordination/ shared outcomes w/ other agencies/departments; project has a major impact on quality of life/aesthetics; Major positive impact on public, D. Seen as sig. positive achievement for GLWA/communities/regions served; improve community/stakeholder relationships/confidence, E. Canceling project very likely causes catastrophic negative public impact (major gov't/regulatory investigation; widespread negative media	Varies
Financial	5	A. Prevent higher cost projects; Substantial increase in revenue or savings; New customer acquisition for GLWA, B. Project will result in avoidance of fines, litigation, emergency repairs or damage to asset/public., E. Canceling project major/extensive financial consequences from revenue loss, repair/restoration/O&M cost, downtime, fines, damages, litigation etc.; major budget implications requiring deferral or cutbacks in other areas, F. Total financial consequence >$5,000,000	Varies
Efficiency and Innovation	5	D. efficiency; Water use, effluent reuse/recycling or other GLWA strategic initiatives*; Business process optimization and institutional knowledge; Process efficiency for a more robust system and less O&M; knowledge capture; or time & cost savings	Varies

Review Committee Weighted Score: 57.7

Criteria Name	Score	Comment
Condition	2	
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	2	
Operations and Maintenance	3	
Health and Safety	3	
Public Benefit	3	
Financial	3	
Efficiency and Innovation	2	

CIP Number: 170506

Project Title: Water Transmission, Valve, Emergency and Other Urgent Repairs

Phase: Construction

Phase Title: Construction

Phase Budget:

Phase Status: Future Planned Start

Start Date: 8/1/2024

End Date: 7/31/2029

Phase Comments/Description:

Cost Est. Class: Class 2

Cost Est. Date:

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$15,000	$0	$0	$0	$2,744	$2,998	$2,998	$3,007	$2,998	$14,745	$255

Phase Dates

Activity Name	Start Date	End Date
Construction	8/1/2024	7/31/2029

CIP Number: 170506

Project Title: Water Transmission, Valve, Emergency and Other Urgent Repairs

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$15,000	$0	$0	$0	$2,744	$2,998	$2,998	$3,007	$2,998	$14,745	$255
Totals	$15,000	$0	$0	$0	$2,744	$2,998	$2,998	$3,007	$2,998	$14,745	$255

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$15,000,000	$0	$0	$2,743,702	$2,998,357	$2,998,357	$3,006,572	$2,998,357	$14,745,345	$254,655

Description of CIP Changes:

--

CIP Number: 170600

Project Title: Linear System Integrity Program

Project Status: Project Execution - Design

CIP Type: Program

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

0

- [x] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Olivia Olsztyn-Budry

Director: Jody Caldwell

Managing Dept.: AM/CIP

Date Original Business Case Prepared: 8/2/2016

Year Project Added to CIP: 2017

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Transmission Mains

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170600

Project Title: Linear System Integrity Program

Problem Statement:

Many of the water mains serving the GLWA service area were installed in the early part of the 20th century or the later part of the 19th century, and are now reaching the end of their useful life. This project will pilot and utilize new technologies to accurately identify the condition of these buried assets by constructing access ways for inspection and the installation of sensors and fiber optic cables for real-time monitoring of condition. It's essential for cost-efficient repair and replacement programs which will increase the reliability and performance of the system.

Scope of Work/Project Alternatives:

Construct access structures and utilize new technology to evaluate the existing conditions of the transmission system. Construction of in place sensors and cables may be necessary to adequately access condition. Provide the necessary recommendation for replacement and rehabilitation.

Other Important Info:

*Innovation Note: Consider new techniques for water main assessment.
GIS, Section Maps and Gate Books are available for reference.
Challenges: Gaining access to inspect buried pipes is difficult, disruptive and costly. However, there are ways to monitor and test the condition of the piping and methods of performing condition assessment.
Project History: There are many critical assets that are required to be operated in the transmission main the existing conditions is unknown. For planning purposes, information about the condition of pipes is needed since there has not been a regular condition assessment program related to the transmission System (pipes greater than 24").

Primary Driver: 1 - Condition

Driver Explanation:

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

CIP Number: 170600

Project Title: Linear System Integrity Program

Scoring

Project Manager Weighted Score:	**0**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	0		
Performance (Service Level/Reliability)	0		
Regulatory (Environmental/Legal)	0		
Operations and Maintenance	0		
Health and Safety	0		
Public Benefit	0		
Financial	0		
Efficiency and Innovation	0		

Review Committee Weighted Score:	**0**	
Criteria Name	**Score**	**Comment**
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 170600

Project Title: Linear System Integrity Program

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 6/30/2034

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$312	$0	$0	$19	$29	$29	$29	$29	$29	$146	$146

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2023	6/30/2034
Capital Delivery Salary (Fringes)	7/1/2023	6/30/2034

CIP Number: 170600

Project Title: Linear System Integrity Program

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2024

End Date: 6/29/2037

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/1/2018

Cost Est. Source: TBD

Cost Est. Prepared By: TBD

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$22,535	$0	$0	$0	$365	$2,546	$2,546	$2,553	$2,546	$10,554	$11,981

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2024	6/29/2037

CIP Number: 170600

Project Title: Linear System Integrity Program

Phase: Construction (Pipeline Modifications)

Phase Title: Construction (Pipeline Modifications)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2023

End Date: 3/3/2033

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/1/2023

Cost Est. Source: HDR

Cost Est. Prepared By: HDR

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Pipeline Modifications)	$27,833	$0	$0	$0	$1,980	$3,511	$0	$2,188	$2,182	$9,861	$17,972

Phase Dates

Activity Name	Start Date	End Date
Construction (Pipeline Modifications)	7/1/2023	3/3/2033

CIP Number: 170600

Project Title: Linear System Integrity Program

Phase: Construction (Pipeline Modifications #2)

Phase Title: Construction (Pipeline Modifications #2)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2023

End Date: 6/30/2033

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/1/2023

Cost Est. Source: HDR

Cost Est. Prepared By: HDR

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Pipeline Modifications #2)	$27,211	$0	$0	$0	$1,764	$3,105	$0	$2,188	$2,182	$9,239	$17,972

Phase Dates

Activity Name	Start Date	End Date
Construction (Pipeline Modificationst #2)	7/1/2023	6/30/2033

CIP Number: 170600

Project Title: Linear System Integrity Program

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$312	$0	$0	$19	$29	$29	$29	$29	$29	$146	$146
Design/Engineering	$22,535	$0	$0	$0	$365	$2,546	$2,546	$2,553	$2,546	$10,554	$11,981
Construction (Pipeline Modifications)	$27,833	$0	$0	$0	$1,980	$3,511	$0	$2,188	$2,182	$9,861	$17,972
Construction (Pipeline Modifications #2)	$27,211	$0	$0	$0	$1,764	$3,105	$0	$2,188	$2,182	$9,239	$17,972
Totals	$77,889	$0	$0	$19	$4,138	$9,191	$2,575	$6,958	$6,939	$29,800	$48,070

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$10,626	$0	$2,626	$2,000	$2,000	$2,000	$2,000	$0	$0	$0	$0	$0	$0	$0	$10,626
2019	$18,505	$0	$2,627	$2,501	$3,001	$4,001	$4,001	$5,001	$5,001	$0	$0	$0	$0	$0	$26,133
2020	$21,000	$0	$0	$2,500	$3,000	$4,000	$4,000	$5,000	$5,000	$25,000	$0	$0	$0	$0	$48,500
2021	$7,249	$0	$0	$0	$54	$54	$54	$775	$2,183	$4,183	$23,450	$0	$0	$0	$30,753
2022	$5,627	$0	$0	$0	$0	$52	$24	$525	$525	$2,025	$2,525	$2,553	$52	$51	$8,438
2023	$126	$0	$0	$0	$0	$0	$0	$10	$29	$29	$29	$29	$29	$29	$242
2024	$4,662	$0	$0	$0	$0	$0	$0	$3	$31	$31	$31	$31	$4,539	$4,527	$27,312

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$77,889,552	$0	$19,437	$4,138,163	$9,190,585	$2,574,752	$6,957,784	$6,938,774	$29,800,058	$48,070,058

Description of CIP Changes:

New LSIP Project was implemented in FY22. 7/30/21 AC
Project duration change for Renewals: Construction (No Engineering) changed duration from FY24-FY34 to FY24-FY41. ONO 8/23/23

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Field Services

Class Lvl 3: Transmission System

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

76.8

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Olivia Olsztyn-Budry

Director: Jody Caldwell

Managing Dept.: AM/CIP

Date Original Business Case Prepared: 2/14/2020

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Entire Linear System - Water & Wastewater

Funds and Cost Center: Water - 5519-882431

- [x] From Program?

Program Number: 170600

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Problem Statement:

GLWA seeks to apply asset management principles to proactively evaluate and manage the linear system (water transmission and sewer interceptor systems). Because the water transmission system is a closed system gaining access to assess the condition of the pipes is challenging requiring coordination with operations and member partners, and the construction of access points to introduce and extract equipment. LSIP is a data and risk-based approach.
This project uses the previous work performed to prioritize the risk of all transmission mains within the GLWA system to perform condition assessments, possible real time monitoring of pipe degradation and plan renewals for three of the highest priority mains. The pipelines with the highest risk are PCCP pipe constructed in the 1960's and 1970's with questionable manufacturing practices. In addition, if a failure would occur within these pipelines significant impact on water services levels and public health could exist. Pilot projects related to the condition assessment of other mains have revealed pipe segments that have degraded past their yield and strength thresholds. Understanding these mains true condition and potentially monitoring pipe degradation in real time allows GLWA to strategically identify individual pipe segments in need of renewal and plan capital projects to proactively replace them prior to failure.

Scope of Work/Project Alternatives:

Scope of work is broken into 6 Tasks: Task 1 - Program Management - Water; Task 2 - Development of Water Program Framework; Task 3 - Planning of Water Pipeline Condition Assessments; Task 4 - Implementation of Water Pipeline Condition Assessments; Task 5 - Wastewater Program Planning and Implementation; Task 6 - Program Management - Wastewater

The overall project consists of both Capital and Operating Budget expenses. The capital portion of this project includes the improvements necessary to install acoustic fiber optic (AFO) real-time monitoring cable within the section of main being inspected, the cost for the AFO cable and the cost for data acquisition units to continuously transmit and monitor the pipe condition. Costs for pipe access modifications and renewal are not included in this CIP project and are identified under other existing CIP projects.

Other Important Info:

None

Primary Driver: 1 - Condition

Driver Explanation:

There is a need to develop a framework and program to prioritize condition assessment and renewal strategies for GLWA's linear system. This will prioritize condition assessments based on probability and consequence of failure and plan for replacement of specific lengths of pipe only.

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Scoring

Project Manager Weighted Score:	**93.3**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining, C. Shows abnormal wear and is likely to cause significant performance deterioration in the near term	Project aligns prioritization of risk for transmission mains within the GLWA system to perform condition assessments, real-time monitoring and plan renewals for 3 of the highest priority mains. If failure occurs, community impact would exist. Pilot projects in condition assessment of mains revealed pipe segments degraded past the yield & strength thresholds. Knowledge of the condition and monitoring pipe degradation isolates pipe segments for renewal for proactive CIP planning.
Performance (Service Level/Reliability)	5	F. No redundancy or feasible temporary options, E. Project impact >11 wholesale, 1M retail, or critical customer, D. Canceling project significant, persistent, ongoing, continuous service interruption and/or reliability issues†	The three transmission mains needing condition assessment have limited redundancy and would cause significant water outages and wide-spread boil water advisories for many wholesale customers, retail and critical customers.
Regulatory (Environmental/Legal)	1	C. Not part of mandated/enforceable program, B. Low/no impact on specific reg. compliance issues	No regulatory issues now, however, repeated failures on critical transmission mains causing outages and boil water advisories could cause future regulatory requirements.

Operations and Maintenance	4	F. Measurable reduction (50% - 74%) in reactive maintenance	When failures occur, significant disruption to normal O&M and other CIP projects occur due to reprioritization of resources and the inability to take equipment out of service at nearby water treatment facilities or pump stations due to the need for redundant supply to the impacted area.
Health and Safety	5	E. serious injury/death, & major safety reg. violations., D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for, C. Likely to address major hazard issues or concerns, B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents	When a failure occurs, this type of pipe failures catastrophically and very quickly causing significant roadway and property damage. Depending on the location of an event possible personal injury may occur. Failures cause significant water service level disruptions that could impact fire protection and boil water advisories that could have adverse health impacts.
Public Benefit	5	F. coverage/rulings/damage to community confidence in the utility & mgmt., E. Canceling project very likely causes catastrophic negative public impact (major gov't/regulatory investigation; widespread negative media, D. Seen as sig. positive achievement for GLWA/communities/regions served; improve community/stakeholder relationships/confidence, C. Additional revenue/savings for GLWA($1M+ per year) w/ minimal risk; better utilize existing infrastructure, B. Project will have a major and measurable positive impact by supporting member partners; coordination/ shared outcomes w/ other agencies/departments; project has a major impact on quality of life/aesthetics; Major positive impact on public	Significant negative press has occurred with past failures due to water outages, boil water advisories, property damage, traffic disruption, retail, commercial and critical customer disruption. The planned, proactive approach to assessing condition and planning renewals will help to minimize these issues.
Financial	5	E. Canceling project major/extensive financial consequences from revenue loss, repair/restoration/O&M cost, downtime, fines, damages, litigation etc.; major budget implications requiring deferral or cutbacks in other areas, F. Total financial consequence >$5,000,000	Past failures have cost GLWA between $5-10M dollars. This excludes the customer private expenses related to bottled water, hotels, delays, etc.
Efficiency and Innovation	3	B. Moderate positive impact on Energy use conservation i.e. 10-20% energy reduction; Water use, effluent reuse; Business process optimization, process efficiency for a more robust system and less O&M; time & cost savings	The condition assessment technology is ever evolving. New technology allows for leak detection and pipe condition assessment while the pipe segment is "live" with minimal disruption to service.

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Review Committee Weighted Score:	**76.8**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	4	
Regulatory (Environmental/Legal)	1	
Operations and Maintenance	4	
Health and Safety	4	
Public Benefit	4	
Financial	4	
Efficiency and Innovation	4	

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 11/1/2020

End Date: 1/22/2036

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 7/21/2021

Cost Est. Source: Estimate

Cost Est. Prepared By: Ashley Jacqmain

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$249	$0	$0	$14	$20	$20	$20	$20	$20	$102	$102

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	11/1/2020	1/22/2036
Capital Delivery Salary (Fringes)	11/1/2020	1/22/2036

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2022

End Date: 1/22/2036

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 9/1/2021

Cost Est. Source: HDR Contract

Cost Est. Prepared By: HDR of Michigan

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$12,934	$0	$0	$2,842	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (1902659)	7/1/2022	1/22/2036

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Phase: Construction (Phase #1)

Phase Title: Construction (Phase #1)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 8/1/2023

Cost Est. Source: HDR Cost Loaded Schedule

Cost Est. Prepared By: HDR

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Phase #1)	$13,549	$0	$0	$2,190	$0	$0	$10,731	$0	$0	$10,731	$629

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2023	6/30/2031

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Phase: Construction (Phase #2)

Phase Title: Construction (Phase #2)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 6/30/2024

Phase Comments/Description:

Cost estimate to be refined upon completion of condition assessment

Cost Est. Class: Class 5

Cost Est. Date: 8/1/2023

Cost Est. Source: HDR Class loaded schedule

Cost Est. Prepared By: Olivia Olsztyn-Budry

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Phase #2)	$2,776	$0	$0	$2,776	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (Phase #2)	7/1/2023	6/30/2024

CIP Number: 170601

Project Title: Linear System Integrity Program - Contract 1

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$249	$0	$0	$14	$20	$20	$20	$20	$20	$102	$102
Design/Engineering	$12,934	$0	$0	$2,842	$0	$0	$0	$0	$0	$0	$0
Construction (Phase #1)	$13,549	$0	$0	$2,190	$0	$0	$10,731	$0	$0	$10,731	$629
Construction (Phase #2)	$2,776	$0	$0	$2,776	$0	$0	$0	$0	$0	$0	$0
Totals	$29,507	$0	$0	$7,821	$20	$20	$10,751	$20	$20	$10,832	$730

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$7,266	$1,816	$1,816	$1,820	$1,816	$1,816	$0	$0	$0	$9,082
2024	$9,457	$0	$381	$112	$112	$5,902	$3,331	$0	$0	$9,838

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$29,507,411	$0	$7,821,399	$20,317	$20,317	$10,750,828	$20,372	$20,317	$10,832,150	$730,173

Description of CIP Changes:

Previous versions of CIP had CIP budget for FY2022 and FY2023. Contract budget has CIP work starting in FY2024.

CIP Number: 170602

Project Title: 36-inch 24 Mile Road Transmission Main Condition Assessment

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [x] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

0

- [x] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Olivia Olsztyn-Budry

Director: Steven Dutschke

Managing Dept.: AM/CIP

Date Original Business Case Prepared: 8/28/2023

Year Project Added to CIP: 2023

CIP Budget: Water

Project Jurisdiction: Macomb County

Lookup Location: 36-inch transmission main along 24 Mile Road between Rochester Pumping Station and 24-mile & Fairchild intersection.

Funds and Cost Center: Water - 5519-882431

- [x] From Program?

Program Number: 170600

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170602

Project Title: 36-inch 24 Mile Road Transmission Main Condition Assessment

Problem Statement:

The 36-inch transmission main along 24 Mile Road starting at the Rochester Pumping Station easterly to the intersection of 14-Mile Road and Fairchild Road has experienced several breaks over the years. More recently, two breaks occurred, one in July 2023 and the other August 2023. The latter requiring that GLWA issues a BWA. The majority of the breaks occurred in two contracts: WS-321 and WS-322. All but one break is within the section of 36-inch that is parallel to the 42-inch transmission main.

The 36-inch transmission main extends from the Rochester Pumping Station, easterly to Gratiot Ave, then north to 26 Mile Road, and along 26 Mile Road to just east of I-94. This entire transmission main was identified in the Transmission System Integrity Program (TSIP) in the top ten transmission mains. There is a parallel 42" transmission main that runs parallel to the 36-inch transmission main starting about 270 feet east of the Rochester Pumping Station and ending about 600 feet west of Fairchild Road. The 42-inch transmission main is not designed to meet the max demand of the system; therefore the 36-inch transmission main is needed. Abandoning the portion of the 36-inch transmission main that is parallel to the 42-inch transmission main is not feasible.

Additionally, Water Engineering is evaluating the impact to the water supply plan for Phase III of the 96-inch transmission main installation and the criticality of the 36-inch and 42-inch transmission mains. Based on preliminary information, water supply from the Rochester Pumping station supplied to the 36-inch and 42-inch transmission mains is part of the plan for providing water to member partners.

Scope of Work/Project Alternatives:

The LSIP contract identified three transmission mains: 96-inch between IBPS and NSC, the 84-inch/72-inch between NSC and franklin, and the 120-inch between LHWTP and IBPS, as well as two pipelines to be determined. Per the LSIP contract, Condition Assessment Planning tasks 3.4 and 3.5; and Implementation of Condition Assessments tasks 4.4.

Other Important Info:

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Primary Driver: 1 - Condition

Driver Explanation:

This transmission main experienced two breaks in 2023. Although there is a parallel transmission main it cannot meet peak demand.

CIP Number: 170602

Project Title: 36-inch 24 Mile Road Transmission Main Condition Assessment

Scoring

Project Manager Weighted Score:	**73.6**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	A. Asset has <25% of its design service life remaining, D. Replacement or major rehab needed in the short term, C. Shows abnormal wear and is likely to cause significant performance deterioration in the near term	PCCP useful life 50-70 years. Transmission main has 12 documented breaks since installation (1970's). Other concerns of condition of 36-inch PCCP include transient pressures, high operating pressures, pipe pressure class 150 psi, and oil & gas pipeline cathodic protection interference.
Performance (Service Level/Reliability)	3	F. Some likelihood for noticeable inconveniencies for 2-5 wholesale, 10K retail, but no critical customers, D. Project moderate positive impact on service levels/reliability/lower risk, A. Generally meets design needs; moderate risk of perf. failure	42-inch parallel main cannot meet peak demand. There is the potential for water demand restrictions if a break were to occur during peak demand.
Regulatory (Environmental/Legal)	1	C. Not part of mandated/enforceable program, B. Low/no impact on specific reg. compliance issues	No regulatory issues, but continued failures result in the potential for water outages and BWAs. Potential for chlorinated water from transmission breaks entering surface water ways during catastrophic failures.
Operations and Maintenance	3	E. Reduction (25% to 49%) in reactive maintenance, C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues	Condition assessment will identify pipes at risk for failure. Renewal/rehab will reduce O&M costs and demand. Catastrophic failures have the potential to impact roadways and private properties. Failures may also result in the reprioritization of other capital projects.
Health and Safety	4	C. Canceling project continue to pose significant staff/public safety/hazard issues, some potential for significant injury and significant regulatory violations (i.e. OSHA)., B. Project significant positive impact on staff/public H&S‡; Likely to address significant hazard issues or concerns, A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years	PCCP fails catastrophically. Potential for BWAs likely when water main breaks occur, and reduction of fire protection. Catastrophic failures can cause significant damage to roadways, and private property.

CIP Number: 170602

Project Title: 36-inch 24 Mile Road Transmission Main Condition Assessment

Public Benefit	4	E. Canceling project chance to have major negative public impact, D. Significant, noticeable impact on the public & GLWA image; seen as achievement for GLWA/communities/regions served	Two failures have occured on this transmission main in 2023, one resulting in a BWA. There is a high break record on this transmission main. Significant negative press has occurred with past failures due to BWAs, property damage, water outages, and damages to member partner systems (i.e. water main breaks).
Financial	3	F. Total financial consequence of $250,000 - $999,999, D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)	Past failures have cost GLWA millions of dollars. This excludes the impact to customer private expenses related to bottled water, loss of work, and delays. This also excludes impacts to member partners that experience breaks on their distribution systems related to the loss or sudden increase of pressures during a failure.
Efficiency and Innovation	2	A. Project improves O&M/other process efficiencies, C. Low positive impact on water use, effluent reuse/recycling or other GLWA strategic initiative*; business process optimization and institutional knowledge; O&M process/operational efficiency, D. Little to no time and cost saving	Reduction in water loss; O&M savings & reduction on O&M demand.

Review Committee Weighted Score: **0**

Criteria Name	Score	Comment
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 170602

Project Title: 36-inch 24 Mile Road Transmission Main Condition Assessment

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 1/22/2027

Phase Comments/Description:

Will attain proposals from contractors.

Cost Est. Class: Class 5

Cost Est. Date: 8/1/2023

Cost Est. Source: HDR Class loaded schedule

Cost Est. Prepared By: Olivia Olsztyn-Budry

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$749	$0	$0	$749	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2023	1/22/2027

CIP Number: 170602

Project Title: 36-inch 24 Mile Road Transmission Main Condition Assessment

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Project Execution

Start Date: 7/1/2023

End Date: 6/30/2031

Phase Comments/Description:
Cost estimate to be refined upon completion of condition assessment

Cost Est. Class: Class 5

Cost Est. Date: 8/1/2023

Cost Est. Source: HDR Class loaded schedule

Cost Est. Prepared By: Olivia Olsztyn-Budry

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$2,180	$0	$0	$1,208	$0	$0	$972	$0	$0	$972	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2023	6/30/2031

CIP Number: 170602

Project Title: 36-inch 24 Mile Road Transmission Main Condition Assessment

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$749	$0	$0	$749	$0	$0	$0	$0	$0	$0	$0
Construction	$2,180	$0	$0	$1,208	$0	$0	$972	$0	$0	$972	$0
Totals	$2,929	$0	$0	$1,957	$0	$0	$972	$0	$0	$972	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$2,929,000	$0	$1,957,095	$0	$0	$971,905	$0	$0	$971,905	$0

Description of CIP Changes:

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CIP Number: 170800

Project Title: System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Project Status: Project Execution - Design

CIP Type: Program

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

0

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [x] Storage
- [ ] Treatment

Lake Huron Plant Reservoir No. 3: Interior concrete repair.

Project Manager: John McCallum

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/12/2016

Year Project Added to CIP: 2016

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: LHP, SPP, SWP, NEP, WWP, Booster Stations

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170800

Project Title: System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Problem Statement:

This program CIP merges former reservoir inspection and repair programs and umbrella's all subsequent CIP's associated with the program under the 17080X category. This program manages the continuous inspection and repair required to all 31 active reservoirs on a 5 year year cycle. The program manages the overall repair schedule to mitigate conflicts in the transmission system to minimize the impact for EGLE mandated inspections and repairs to GLWA reservoirs at Booster Stations and Water Treatment Plants.

Scope of Work/Project Alternatives:

The program will provide inspection, rehabilitation, and maintenance on all 31 finished (potable) reservoirs in the GLWA system on a ELGE mandated five year revolving inspection cycle.

Other Important Info:

The CIP 170800 program is broken down into subset CIP numbers starting at 170801. CIP 170801 is currently in construction and is supported by two contracts. Engineering contract CS-151A and construction contract 1900744. The second phase of the program CIP 170802 is in the procurement phase and the engineering contract number will be 2100236. The third phase of the program CIP 170803 will begin pre-procurement activities in 2022.

Primary Driver: 3 - Regulatory

Driver Explanation:

EGLE requires inspection of potable water storage tanks on a five year fixed revolving schedule.

CIP Number: 170800

Project Title: System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Scoring

Project Manager Weighted Score:	**0**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	0		
Performance (Service Level/Reliability)	0		
Regulatory (Environmental/Legal)	0		
Operations and Maintenance	0		
Health and Safety	0		
Public Benefit	0		
Financial	0		
Efficiency and Innovation	0		

Review Committee Weighted Score:	**0**	
Criteria Name	**Score**	**Comment**
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 170800

Project Title: System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 11/19/2018

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (net-zero cost account to be archived) (Direct Labor)	11/19/2018	6/30/2031
Capital Delivery Salary (Fringes)	11/19/2018	6/30/2031

CIP Number: 170800

Project Title: System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 11/19/2018

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (net-zero cost account to be archived)	11/19/2018	6/30/2031

CIP Number: 170800

Project Title: System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Phase: Construction (Build) # 1

Phase Title: Construction (Build) # 1

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 10/27/2024

End Date: 6/30/2031

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 1/1/2015

Cost Est. Source: CDM Smith

Cost Est. Prepared By: CDM Smith

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) # 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (net-zero cost account to be archived)	10/27/2024	6/30/2031

CIP Number: 170800

Project Title: System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$10,950	$50	$3,300	$2,550	$2,550	$2,550	$0	$0	$0	$0	$0	$0	$0	$0	$11,000
2019	$14,415	$0	$39	$472	$753	$4,510	$4,340	$4,340	$4,645	$0	$0	$0	$0	$0	$19,099
2020	$24,904	$0	$0	$482	$5,128	$5,211	$5,182	$3,888	$5,495	$33,778	$0	$0	$0	$0	$59,164
2021	$33,727	$0	$0	$457	$2,160	$6,087	$6,087	$6,087	$4,100	$11,366	$22,732	$0	$0	$0	$59,076
2022	$12,581	$0	$0	$457	($457)	$46	$322	$2,322	$3,321	$3,317	$3,300	$3,600	$2,600	$2,000	$23,827
2023	$64	$0	$0	$0	$0	$0	$13	$13	$13	$13	$13	$13	$13	$13	$127
2024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Redirected to J. McCallum 7/19/2019 -- ECK

CIP projected funding requirements updated to reflect actual bid pricing obtained for CS-151A (170801) JPM 8/8/2019, JPM 7/21/2021

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Project Status: Project Execution - Design

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

94

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [x] Storage
- [ ] Treatment

Imlay Booster Station: Sealing interior wall cracks

Project Manager: John McCallum

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/12/2016

Year Project Added to CIP: 2020

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: LHP, SPP, SWP, WWP, North Service Center, Imlay Booster Station

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [x] From Program?

Program Number: 170800

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Problem Statement:

CIP 170801 is the first in a series of facility improvements to reservoirs at the water treatment plants and booster stations assigned to the System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation Program under CIP 170800.

Scope of Work/Project Alternatives:

This project is specific to inspection, design and construction of improvements to the reservoirs at the Springwells WTP, Southwest WTP, Lake Huron WTP and Imlay Station. It is currently being executed and is expected to be closed in January of 2025.

Other Important Info:

Inspection, design, and RPR services are performed under contract CS-151A .
Construction of improvements are performed under contract 1900744.
WWP reservoir 2A and North Service Center reservoirs have been added to contract 1900744 to perform emergency repairs.
Project not scored by risk committee since it is far advanced

Primary Driver: 2 - Performance

Driver Explanation:

Program is a requirement of the State of Michigan Department of Environment, Great Lakes and Energy.

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Scoring

Project Manager Weighted Score:	**94**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational	
Performance (Service Level/Reliability)	5	A. Will cause, or IS causing significant capacity problems, C. Project Will have major, measurable positive impact on service levels and/or system reliability; aligns w/ GLWA strategic goals*	
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	
Operations and Maintenance	5	D. Project major, measurable positive impact on O&M; will completely alleviate ongoing O&M issues	
Health and Safety	5	A. Catastrophic failure w/ safety/health/environmental impacts imminent (2 years or less) as supported by engineering reports, studies, inspections, historical evidence, etc.	
Public Benefit	4	B. Supports City/regional/neighborhood growth (i.e. measurable impact on public/community through economic development)	
Financial	4	B. Project will likely result in avoidance of fines, potential litigation, emergency repairs or damage to asset/public	
Efficiency and Innovation	3	A. Project attempts to right-size system; small operational efficiencies and increasing revenue/savings	

Review Committee Weighted Score:	**94**	
Criteria Name	**Score**	**Comment**
Condition	4	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	5	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	2	Committee score carried over from current year Project Manager score
Operations and Maintenance	5	Committee score carried over from current year Project Manager score
Health and Safety	5	Committee score carried over from current year Project Manager score
Public Benefit	4	Committee score carried over from current year Project Manager score
Financial	4	Committee score carried over from current year Project Manager score
Efficiency and Innovation	3	Committee score carried over from current year Project Manager score

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 12/7/2018

End Date: 1/19/2025

Phase Comments/Description:

Cost Est. Class: Class 5

Cost Est. Date: 11/17/2023

Cost Est. Source: TBD

Cost Est. Prepared By: TBD

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$805	$649	$602	$132	$71	$0	$0	$0	$0	$71	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	12/7/2018	1/19/2025
Capital Delivery Salary (Fringes)	12/7/2018	1/19/2025

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 9/13/2021

End Date: 12/31/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$206	$206	$207	($1)	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272)	9/13/2021	12/31/2022

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Phase: Contractual Professional Services

Phase Title: Contractual Professional Services

Phase Budget:

Phase Status:

Start Date: 12/7/2018

End Date: 8/1/2023

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Contractual Professional Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services	12/7/2018	8/1/2023

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Phase: Design/Engineering (CS-151A)

Phase Title: Design/Engineering (CS-151A)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 12/7/2018

End Date: 1/19/2025

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 12/7/2018

Cost Est. Source: Hazen- Executed Contract

Cost Est. Prepared By: Hazen

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering (CS-151A)	$2,775	$2,690	$2,656	$80	$39	$0	$0	$0	$0	$39	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-151)	12/7/2018	1/19/2025

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Phase: Construction (1900744)

Phase Title: Construction (1900744)

Phase Budget: Water

Phase Status: Project Execution

Start Date: 11/21/2019

End Date: 1/19/2025

Phase Comments/Description:

Mostly crack repair and this will be ongoing over the next decade

Cost Est. Class: Class 1

Cost Est. Date: 11/21/2019

Cost Est. Source: Pullman- Executed Contract

Cost Est. Prepared By: Pullman

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (1900744)	$21,598	$21,192	$19,797	$1,617	$185	$0	$0	$0	$0	$185	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (1900744)	11/21/2019	1/19/2025

CIP Number: 170801

Project Title: Reservoir Inspection, Design and Construction Project at Imlay Station, Lake Huron Water Treatment Plant, Springwells Water Treatment Plant, And Southwest Water Treatment Plant

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$805	$649	$602	$132	$71	$0	$0	$0	$0	$71	$0
Professional Services	$206	$206	$207	($1)	$0	$0	$0	$0	$0	$0	$0
Contractual Professional Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering (CS-151A)	$2,775	$2,690	$2,656	$80	$39	$0	$0	$0	$0	$39	$0
Construction (1900744)	$21,598	$21,192	$19,797	$1,617	$185	$0	$0	$0	$0	$185	$0
Totals	$25,384	$24,737	$23,261	$1,828	$295	$0	$0	$0	$0	$295	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2022	$5,538	$8,420	$463	$2,075	$1,000	$1,000	$1,000	$1,000	$132	$0	$15,090
2023	$7,295	$8,842	$6,004	$6,829	$464	$0	$0	$0	$0	$0	$24,758
2024	$3,997	$8,842	$6,623	$2,909	$2,570	$1,426	$0	$0	$0	$0	$24,985

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$25,384,330	$23,261,371	$1,828,333	$294,628	$0	$0	$0	$0	$294,628	$0

Description of CIP Changes:

Financial forecasting, change order forecasted to increase the engineering contract.
WWP and North Services Center were added to the scope of contract 1900744.

CIP Number: 170802

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase II

Project Status: Active - Procurement - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

74.2

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [x] Storage
- [ ] Treatment

Project Manager: John McCallum

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/12/2016

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: LHP, SPP, SWP, WWP, North Service Center, Imlay Booster Station

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [x] From Program?

Program Number: 170800

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 170802

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase II

Problem Statement:

CIP 170802 is the second in a series of facility improvements to reservoirs at the water treatment plants and booster stations assigned to the System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation under the umbrella CIP 170800 program.

Scope of Work/Project Alternatives:

This project is specific to the inspection, design/engineering, and construction improvements to 15 reservoirs.

Other Important Info:

Inspection and design of improvements is being executed under future contract 2100236

Primary Driver: 3 - Regulatory

Driver Explanation:

Program is a requirement of the State of Michigan department of department of Environment, Great Lake and Energy (EGLE)

CIP Number: 170802

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase II

Scoring

Project Manager Weighted Score:	**93.2**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	B. Excessive maint. levels for the equipment/process area, D. Immediate replacement or rehabilitation required	
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure, B. Performance acceptable–marginal; likely not to meet future req's	
Regulatory (Environmental/Legal)	5	A. Imminent risk of/is causing Permit/reg. violations; Legal obligation; Unregulated discharges; Health risks to staff/public	This program is a regulatory mandated by EGLE to inspect our 30 reservoirs on a 5 year cycle.
Operations and Maintenance	2	A. Low levels of O/M keeps meantime between failure standard, C. Repairs total >=10% of asset original value	
Health and Safety	4	A. High probability of catastrophic failure and safety/health/env. issues probable within 2-5 years, C. Canceling project continue to pose significant staff/public safety/hazard issues, some potential for significant injury and significant regulatory violations (i.e. OSHA).	
Public Benefit	5	A. Project is key part of a strategic plan* for GLWA or politically driven, D. Seen as sig. positive achievement for GLWA/communities/regions served; improve community/stakeholder relationships/confidence, E. Canceling project very likely causes catastrophic negative public impact (major gov't/regulatory investigation; widespread negative media	
Financial	5	B. Project will result in avoidance of fines, litigation, emergency repairs or damage to asset/public., E. Canceling project major/extensive financial consequences from revenue loss, repair/restoration/O&M cost, downtime, fines, damages, litigation etc.; major budget implications requiring deferral or cutbacks in other areas	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

CIP Number: 170802

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase II

Review Committee Weighted Score:	**74.2**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	4	
Operations and Maintenance	2	
Health and Safety	3	
Public Benefit	3	
Financial	3	
Efficiency and Innovation	1	

CIP Number: 170802

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase II

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Project Execution

Start Date: 6/6/2022

End Date: 9/12/2028

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$424	$57	$45	$62	$75	$75	$75	$76	$15	$317	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	6/6/2022	9/12/2028
Capital Delivery Salary (Fringes)	6/6/2022	9/12/2028

CIP Number: 170802

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase II

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Project Execution

Start Date: 6/6/2022

End Date: 9/12/2028

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 7/15/2022

Cost Est. Source: Brown & Caldwell

Cost Est. Prepared By: Brown & Caldwell

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$10,779	$2,604	$2,415	$1,189	$1,706	$1,706	$1,706	$1,711	$346	$7,175	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	6/6/2022	9/12/2028

CIP Number: 170802

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase II

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Active - Procurement

Start Date: 11/30/2023

End Date: 6/14/2028

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 2/21/2023

Cost Est. Source: Brown & Caldwell- 100%OPCC

Cost Est. Prepared By: Brown & Caldwell- 100%OPCC

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$35,574	$0	$0	$4,589	$7,827	$7,827	$7,827	$7,505	$0	$30,985	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	11/30/2023	6/14/2028

CIP Number: 170802

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase II

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$424	$57	$45	$62	$75	$75	$75	$76	$15	$317	$0
Design/Engineering	$10,779	$2,604	$2,415	$1,189	$1,706	$1,706	$1,706	$1,711	$346	$7,175	$0
Construction	$35,574	$0	$0	$4,589	$7,827	$7,827	$7,827	$7,505	$0	$30,985	$0
Totals	$46,776	$2,660	$2,460	$5,840	$9,608	$9,608	$9,608	$9,291	$361	$38,477	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$41,000	$500	$8,000	$9,001	$8,000	$8,000	$8,000	$0	$0	$41,500
2024	$43,692	$0	$3,482	$9,292	$9,266	$9,266	$9,266	$6,601	$0	$47,175

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$46,776,566	$2,460,276	$5,839,680	$9,608,050	$9,608,050	$9,608,050	$9,291,290	$361,169	$38,476,609	$0

Description of CIP Changes:

New CIP added to FY 2023-2027 7/28/2021 AC.

CIP Number: 170803

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase III

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

90.3

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [x] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [x] Storage
- [ ] Treatment

Project Manager: John McCallum

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/16/2016

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: City of Detroit

Lookup Location: LHP, SPP, SWP, WWP, North Service Center, Imlay Booster Station

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [x] From Program?

Program Number: 170800

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 170803

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase III

Problem Statement:

CIP 170803 is the third in a series of facility improvements related to reservoirs at the water treatment plants and booster stations assigned to the System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation Program CIP 170800.

Scope of Work/Project Alternatives:

This project is specifically related to inspection, design, and construction of improvements to the reservoirs in our system as planned in future contracts.

Other Important Info:

n/a

Primary Driver: 3 - Regulatory

Driver Explanation:

The program is driven by the requirement to inspect reservoirs every five years as mandated by the State of Michigan department of Environment, Great Lakes and Energy (EGLE)

CIP Number: 170803

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase III

Scoring

Project Manager Weighted Score:	**93.2**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	5	B. Excessive maint. levels for the equipment/process area, E. Could initiate immediate funding request b/c "Urgent Necessity" in near term	
Performance (Service Level/Reliability)	3	A. Generally meets design needs; moderate risk of perf. failure	
Regulatory (Environmental/Legal)	5	B. Project part of a mandated or otherwise enforceable program	
Operations and Maintenance	2	A. Low levels of O/M keeps meantime between failure standard	
Health and Safety	4	C. Canceling project continue to pose significant staff/public safety/hazard issues, some potential for significant injury and significant regulatory violations (i.e. OSHA).	
Public Benefit	5	E. Canceling project very likely causes catastrophic negative public impact (major gov't/regulatory investigation; widespread negative media	
Financial	5	B. Project will result in avoidance of fines, litigation, emergency repairs or damage to asset/public.	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency, B. Low impact on business process optimization; no time/cost saving	

Review Committee Weighted Score:	**90.3**	
Criteria Name	**Score**	**Comment**
Condition	4	
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	5	
Operations and Maintenance	2	
Health and Safety	3	
Public Benefit	4	
Financial	4	
Efficiency and Innovation	1	

CIP Number: 170803

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase III

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 4/1/2026

End Date: 1/13/2035

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$849	$0	$0	$0	$0	$24	$97	$97	$97	$314	$483

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	4/1/2026	1/13/2035
Capital Delivery Salary (Fringes)	4/1/2026	1/13/2035

CIP Number: 170803

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase III

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 4/1/2026

End Date: 1/13/2035

Phase Comments/Description:

Cost Est. Class: Class 3

Cost Est. Date: 6/1/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$16,214	$0	$0	$0	$0	$873	$2,764	$1,671	$1,667	$6,975	$8,339

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	4/1/2026	1/13/2035

CIP Number: 170803

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase III

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 6/1/2027

End Date: 1/13/2035

Phase Comments/Description:

Cost Est. Class: Class 3

Cost Est. Date: 6/1/2023

Cost Est. Source: GLWA

Cost Est. Prepared By: GLWA

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$77,369	$0	$0	$0	$0	$0	$834	$10,171	$10,144	$21,149	$50,746

Phase Dates

Activity Name	Start Date	End Date
Construction	6/1/2027	1/13/2035

CIP Number: 170803

Project Title: Reservoir Inspection, Design, and Construction Management Services Phase III

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$849	$0	$0	$0	$0	$24	$97	$97	$97	$314	$483
Design/Engineering	$16,214	$0	$0	$0	$0	$873	$2,764	$1,671	$1,667	$6,975	$8,339
Construction	$77,369	$0	$0	$0	$0	$0	$834	$10,171	$10,144	$21,149	$50,746
Totals	$94,432	$0	$0	$0	$0	$897	$3,695	$11,940	$11,907	$28,438	$59,568

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$500	$0	$0	$0	$0	$0	$500	$7,488	$17,900	$93,916
2024	$16,530	$0	$0	$0	$0	$897	$3,695	$11,939	$11,908	$94,432

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$94,432,172	$0	$0	$0	$896,676	$3,694,677	$11,939,631	$11,907,008	$28,437,989	$59,567,661

Description of CIP Changes:

New CIP project added to FY 2023-2027 CIP Plan. 7/30/2021 AC

CIP Number: 170900

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Project Status: Future Planned - Within Five Year Plan

CIP Type: Program

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

0

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Chandan Sood

Director: Chandan Sood

Managing Dept.: Systems Planning

Date Original Business Case Prepared: 1/26/2016

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Various meter locations in Transmission System

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: Yes

Partners: Other

Collaboration Entity: Other

CIP Number: 170900

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Problem Statement:

Improving meter data reliability, ensuring accurate billing, improving customer service enabling high quality analysis of the system

Scope of Work/Project Alternatives:

The Proposed improvements should include the following; The replacements of meters that have surpassed their life expectancy, and or the current flow rates exceed the mechanical limits of the meter. Installing entrance hatches that allow safer ingress, and egress, and that can be locked for security. Sand blasting and painting of piping and walls. Waterproofing meter vaults to keep the ground water out. Providing a proper floor slope in meter chambers that allows water to settle. Repairing damaged sump pump discharge lines. Repairing structural deficiencies in the meter chambers. Installing access tunnels for the meter location that require extensive traffic control, or are very dangerous to enter because of the location. Repairing damaged electrical fixtures in the meter vaults. Weather proofing the meter control cabinets, replacing upgrading cabinet heaters, repairing damaged locking mechanisms. Paving the access roads, and or parking for meter locations that have limited parking or get overgrown with foliage.

Other Important Info:

Challenges: Requires temporary shutdown of the water supply through the meter.

Project History: Currently GLWA provides water service to 126 communities, and measures flows and volumes by the utilization of 290 wholesale water meters now in service; 17 of these meters are venturi-orifice type meters, 26 of these are dual venturi type meters, 48 of these single venturi type meters, 97 of these are magnetic flow type meters, and 102 of these are turbine or mechanical type meters. Meters were installed between 1945 through 1975 under various projects and tasks.

Primary Driver: 2 - Performance

Driver Explanation:

Not provided.

CIP Number: 170900

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Scoring

Project Manager Weighted Score:	**0**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	0		
Performance (Service Level/Reliability)	0		
Regulatory (Environmental/Legal)	0		
Operations and Maintenance	0		
Health and Safety	0		
Public Benefit	0		
Financial	0		
Efficiency and Innovation	0		

Review Committee Weighted Score:	**0**	
Criteria Name	**Score**	**Comment**
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 170900

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2024

End Date: 6/30/2037

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$301	$0	$0	$0	$23	$23	$23	$23	$23	$116	$116

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2024	6/30/2037
Capital Delivery Salary (Fringes)	7/1/2024	6/30/2037

CIP Number: 170900

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2024

End Date: 6/30/2037

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$32,807	$0	$0	$0	$2,500	$2,500	$2,000	$4,000	$2,724	$13,724	$12,948

Phase Dates

Activity Name	Start Date	End Date
Construction	7/1/2024	6/30/2037

CIP Number: 170900

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$301	$0	$0	$0	$23	$23	$23	$23	$23	$116	$116
Construction	$32,807	$0	$0	$0	$2,500	$2,500	$2,000	$4,000	$2,724	$13,724	$12,948
Totals	$33,108	$0	$0	$0	$2,523	$2,523	$2,023	$4,023	$2,748	$13,840	$13,064

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$20,000	$500	$4,000	$4,000	$4,000	$4,000	$4,000	$0	$0	$0	$0	$0	$0	$0	$20,500
2019	$20,090	$0	$410	$4,613	$3,690	$3,690	$3,997	$4,100	$0	$0	$0	$0	$0	$0	$20,500
2020	$20,297	$0	$0	$3,000	$4,000	$4,000	$3,997	$4,100	$4,200	$20,500	$0	$0	$0	$0	$43,797
2021	$6,450	$0	$0	$1,238	$2,542	$2,535	$2,535	$1,139	$121	$120	$71	$0	$0	$0	$10,301
2022	$17,610	$0	$0	$0	$0	$2,535	$1,159	$4,112	$4,113	$4,113	$4,113	$4,115	$4,115	$4,115	$40,719
2023	$0	$0	$0	$0	$0	$0	$4,037	$0	$0	$0	$0	$0	$4,000	$4,000	$44,037
2024	$6,055	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,027	$4,027	$2,751	$28,108

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$33,108,255	$0	$0	$2,523,159	$2,523,159	$2,023,159	$4,023,222	$2,747,541	$13,840,240	$13,063,858

Description of CIP Changes:

No changes to CIP per Ali email BF 2019-08-21
Corrected changes to CIP per Chandan. 2020-08-24

CIP Number: 170901

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Project Status: Project Execution - Pending Closeout

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Metering

Class Lvl 3: General Purpose

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

48.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Chandan Sood

Director: Chandan Sood

Managing Dept.: Systems Planning

Date Original Business Case Prepared: 1/26/2016

Year Project Added to CIP: 2014

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Various meter locations in Transmission System

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [x] From Program?

Program Number: 170900

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: Yes

Partners: Municipalities

Collaboration Entity:

CIP Number: 170901

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Problem Statement:

Improving meter data reliability, ensuring accurate billing, improving customer service enabling high quality analysis of the system

Scope of Work/Project Alternatives:

The Proposed improvements should include the following; The replacements of meters that have surpassed their life expectancy, and or the current flow rates exceed the mechanical limits of the meter. Installing entrance hatches that allow safer ingress, and egress, and that can be locked for security. Sand blasting and painting of piping and walls. Waterproofing meter vaults to keep the ground water out. Providing a proper floor slope in meter chambers that allow water to settle. Repairing damaged sump pump discharge lines. Repairing structural deficiencies in the meter chambers. Installing access tunnels for the meter location that require extensive traffic control, or are very dangerous to enter because of the location. Repairing damaged electrical fixtures in the meter vaults. Weather proofing the meter control cabinets, replacing upgrading cabinet heaters, repairing damaged locking mechanisms. Paving the access roads, and or parking for meter locations that have limited parking or get overgrown with foliage.

Other Important Info:

Challenges: Requires temporary shutdown of the water supply through the meter.

Project History: Currently GLWA provides water service to 126 communities, and measures flows and volumes by the utilization of 290 wholesale water meters now in service; 17 of these meters are venturi-orifice type meters, 26 of these are dual venturi type meters, 48 of these single venturi type meters, 97 of these are magnetic flow type meters, and 102 of these are turbine or mechanical type meters. Meters were installed between 1945 through 1975 under various projects and tasks.
Project not scored by risk committee since it is far advanced

Primary Driver: 1 - Condition

Driver Explanation:

Not provided.

CIP Number: 170901

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Scoring

Project Manager Weighted Score:	**48.7**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	4	B. Equipment/process functions but requires high level of maintenance to remain operational, C. Shows abnormal wear and is likely to cause significant performance deterioration in the near term	
Performance (Service Level/Reliability)	1	E. Ample redundancy in the area to limit impacts	
Regulatory (Environmental/Legal)	2	B. Project will have a moderate to low impact on reg. issues	
Operations and Maintenance	2	A. Low levels of O/M keeps meantime between failure standard, B. Will run in automatic mode	
Health and Safety	1	A. No failure reasonably expected to occur	
Public Benefit	4	B. Supports City/regional/neighborhood growth (i.e. measurable impact on public/community through economic development)	
Financial	1	B. Minimal/no positive financial implications of <$100K/ROI >= 20 yrs	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**48.7**	
Criteria Name	**Score**	**Comment**
Condition	4	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	1	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	2	Committee score carried over from current year Project Manager score
Operations and Maintenance	2	Committee score carried over from current year Project Manager score
Health and Safety	1	Committee score carried over from current year Project Manager score
Public Benefit	4	Committee score carried over from current year Project Manager score
Financial	1	Committee score carried over from current year Project Manager score
Efficiency and Innovation	1	Committee score carried over from current year Project Manager score

CIP Number: 170901

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Closed Out

Start Date: 1/1/2018

End Date: 5/19/2023

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$2	$2	$2	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	1/1/2018	5/19/2023
Capital Delivery Salary (Fringes)	1/1/2018	5/19/2023

CIP Number: 170901

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Phase: Construction (Build) (CON-285)

Phase Title: Construction (Build) (CON-285)

Phase Budget: Water

Phase Status: Pending Close-out

Start Date: 1/1/2018

End Date: 5/19/2023

Phase Comments/Description:

Cost Est. Class: Class 1

Cost Est. Date: 11/21/2018

Cost Est. Source: LGC- Executed Contract

Cost Est. Prepared By: LGC

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build) (CON-285)	$12,409	$12,409	$12,409	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (CON-285)	1/1/2018	5/19/2023

CIP Number: 170901

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$2	$2	$2	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) (CON-285)	$12,409	$12,409	$12,409	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$12,410	$12,410	$12,411	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2018	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2019	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2020	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2022	$2,838	$0	$0	$1,238	$3,293	$3,249	$2,838	$0	$0	$0	$0	$0	$0	$0	$10,616
2023	$0	$0	$0	$1,238	$3,293	$4,001	$2,106	$0	$0	$0	$0	$0	$0	$0	$10,636
2024	$0	$0	$0	$1,238	$3,293	$4,001	$1,484	$2,506	$0	$0	$0	$0	$0	$0	$12,522

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$12,410,575	$12,410,575	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

No changes to CIP per Ali email BF 2019-08-21

CIP Number: 170902

Project Title: Brownstown Meter Pit

Project Status: Reclassified

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Metering

Class Lvl 3: General Purpose

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

63.8

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Peter Fromm

Director: Chandan Sood

Managing Dept.: Water Eng

Date Original Business Case Prepared: 10/7/2022

Year Project Added to CIP: 2020

CIP Budget: Water

Project Jurisdiction: Wayne County - Outside Detroit

Lookup Location: Brownstown Township

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [x] From Program?

Program Number: 170900

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: Yes

Partners: Other

Collaboration Entity: Other

CIP Delivery Team

CIP Number: 170902

Project Title: Brownstown Meter Pit

Problem Statement:

BR-01 is a deduct meter pit that serves Brownstown Charter Township. Deduct meter pits are more difficult to track water usage. BR-01 will be abandoned and BR-08 will be installed as a direct meter pit to Brownstown Charter Township.

Scope of Work/Project Alternatives:

Abandoning the existing BR-01 deduct meter pit and constructing a new direct meter pit BR-08 for serving Brownstown Charter Township. The new direct meter pit (BR-08) will have a new magnetic flow meter, 12-inch gate valves, and 8-inch check valve. There will be installation of 6-inch, 8-inch, and 12-inch piping for the new meter pit. There will be a new water pressure reducing valve vault for Brownstown Charter Township by installing the necessary piping in the vault.

Other Important Info:

None at this time.

Primary Driver: 2 - Performance

Driver Explanation:

Currently BR-01 is a deduct meter pit and this project will replace with a direct meter pit.

CIP Number: 170902

Project Title: Brownstown Meter Pit

Scoring

Project Manager Weighted Score:	**63.8**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	2	B. Sound and well maintained, slight signs of normal wear	
Performance (Service Level/Reliability)	4	D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*	
Regulatory (Environmental/Legal)	2	A. Low risk of causing, B. Project will have a moderate to low impact on reg. issues	
Operations and Maintenance	4	D. Project significant positive impact on O&M; will alleviate most ongoing O&M issues	
Health and Safety	2	A. Low chance of failure occurring; failure easily mitigated w/ no safety/health/env. impacts	
Public Benefit	3	B. Project moderate positive impact by supporting member partner growth; measurable impact on community economic development; somewhat likely to impact quality of life & aesthetics; requires mostly new infrastructure; Moderate impact on public/ GLWA image, E. /stakeholder relationships/confidence in GLWA	
Financial	3	A. Implementing the project will generate moderate increase revenue or savings for GLWA.	
Efficiency and Innovation	4	B. Project will remove significant operational hurdles/ obstacles for significant equipment/process	

Review Committee Weighted Score:	**63.8**	
Criteria Name	**Score**	**Comment**
Condition	2	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	4	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	2	Committee score carried over from current year Project Manager score
Operations and Maintenance	4	Committee score carried over from current year Project Manager score
Health and Safety	2	Committee score carried over from current year Project Manager score
Public Benefit	3	Committee score carried over from current year Project Manager score
Financial	3	Committee score carried over from current year Project Manager score
Efficiency and Innovation	4	Committee score carried over from current year Project Manager score

CIP Number: 170902

Project Title: Brownstown Meter Pit

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/8/2018

End Date: 7/5/2021

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	8/8/2018	7/5/2021
Capital Delivery Salary (Fringes)	8/8/2018	7/5/2021

CIP Number: 170902

Project Title: Brownstown Meter Pit

Phase: Professional Services

Phase Title: Professional Services

Phase Budget: Water

Phase Status: Closed Out

Start Date: 2/3/2020

End Date: 5/8/2020

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Professional Services	$8	$8	$8	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Professional Services (CS-272 - 71007A.01)	2/3/2020	5/8/2020

CIP Number: 170902

Project Title: Brownstown Meter Pit

Phase: Design & Construction Assistance (CS-201)

Phase Title: Design & Construction Assistance (CS-201)

Phase Budget: Water

Phase Status: Closed Out

Start Date: 8/8/2018

End Date: 3/1/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design & Construction Assistance (CS-201)	$79	$79	$79	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering (CS-201)	8/8/2018	3/1/2022

CIP Number: 170902

Project Title: Brownstown Meter Pit

Phase: Construction (Build)

Phase Title: Construction (Build)

Phase Budget: Water

Phase Status: Cancelled

Start Date: 3/1/2022

End Date: 3/1/2022

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Construction	3/1/2022	3/1/2022

CIP Number: 170902

Project Title: Brownstown Meter Pit

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Professional Services	$8	$8	$8	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance (CS-201)	$79	$79	$79	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Totals	$86	$86	$87	$0	$0	$0	$0	$0	$0	$0	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2022	$599	$570	$594	$5	$0	$0	$0	$0	$0	$0	$1,246
2023	$545	$10	$390	$545	$0	$0	$0	$0	$0	$0	$1,021
2024	$0	$10	$0	$0	$0	$0	$0	$0	$0	$0	$87

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$86,567	$86,567	$0	$0	$0	$0	$0	$0	$0	$0

Description of CIP Changes:

Updated description and cost.

CIP Number: 170904

Project Title: Wholesale Water Meterpit Rehabilitation and Meter Upgrade - Phase II

Project Status: Project Execution - Construction

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Metering

Class Lvl 3: General Purpose

- [ ] Project New to CIP
- [x] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

95.7

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [x] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [ ] Treatment

Project Manager: Chandan Sood

Director: Chandan Sood

Managing Dept.: Systems Planning

Date Original Business Case Prepared: 1/1/2016

Year Project Added to CIP: 2022

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: --

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [x] From Program?

Program Number: 170900

Delivery Method: Other (Design In-house and Bid Out for Construction)

Delivery Method Details: --

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: Yes

Partners: Municipalities

Collaboration Entity:

CIP Delivery Team

CIP Number: 170904

Project Title: Wholesale Water Meterpit Rehabilitation and Meter Upgrade - Phase II

Problem Statement:

The Great Lakes Water Authority (GLWA) operates two hundred ninety (290) wholesale water metering facilities to collect flow data for correct billing and analysis of the water system and has embarked upon a water metering improvement program. The first project of this program was Contract No. GLWA-CON-285 that started in November 2018 to complete fifty (50) sites. The WHOLESALE WATER METER PIT REHABILATATION AND METER REPLACEMENT PHASE II, is the second contract of the program. This contract is to provide metering and instrumentation upgrade and complete meter pit rehabilitation at sixty (60) meter pit facilities. It will also provide as needed corrective and emergency maintenance for remaining metering locations. Most of the metering vaults were installed between 1945 through 1975 and have exceeded their life expectancy for accurate metering, and need to be replaced with new metering technology. Several of the meter vaults are in need of improvements to provide an environment that protects the meter equipment and a safer work environment. This project will assure accurate billing to the GLWA's customers, a decrease in the number of man hours required for maintenance and will repair structural deficiencies within the metering locations.

Scope of Work/Project Alternatives:

Work includes the demolition and removal of the existing flow metering system and components and replacement with new and upgraded flow metering technology, equipment and instrumentations as well as complete rehab of the existing pits. Flow metering equipment and instrumentation includes new flow meters, check valves, gate valves, reducers, new supports for meter, valves, piping, electrical systems, SCADA systems and cabinets. The work will consist of two main Tasks: Task 1 - Meter upgrade and meter pit improvements at 60 sites. Task 2 - As-Needed Corrective and Emergency Maintenance.

Other Important Info:

New/advanced metering, accurate billing, impact to Member Partners charges, impact on GLWA's water balance program

Primary Driver: 5 - Public Health and Safety

Driver Explanation:

--

CIP Number: 170904

Project Title: Wholesale Water Meterpit Rehabilitation and Meter Upgrade - Phase II

Scoring

Project Manager Weighted Score: **95.7**

Criteria Name	Score	Score Criteria	Comment
Condition	5	A. Asset has exceeded its design service life, D. Immediate replacement or rehabilitation required, C. High risk of breakdown or imminent failure with serious impact on performance, B. Excessive maint. levels for the equipment/process area	Meters were installed between 1945 through 1975; most of these meters have surpassed their life expectancy for accurate metering, and need to be replaced with new metering technology. Several the meter vaults are in need of improvements to provide an environment that would protect the meter equipment and provide a safer work location for GLWA
Performance (Service Level/Reliability)	4	F. Likelihood of serious inconveniencies and business impacts for affected customers; impact 6-10 wholesale, 100K retail, critical customers, D. Project will have a significant positive impact on service levels and/or system reliability; related to GLWA strategic goals*, B. High risk of performance failure; doesn't meet future requirements, A. Expected performance failures under normal conditions	Meters are oversized for current flow needs. Meterpits are in need of rehabilitation.
Regulatory (Environmental/Legal)	3	A. Moderate risk of causing	OSHA - Safe work environment violation
Operations and Maintenance	4	E. Measurable cost reductions 10%to 24%/year of current budget for function/area, A. High levels of O/M required to keep in service will only marginally ensure future stable/proper operation	Meters are in need to be right sized for current and future flow requirements
Health and Safety	5	E. serious injury/death, & major safety reg. violations., D. Canceling project continue posing sig. employee/ public H&S issues with increased potential for, B. Project will have a major & measurable positive impact on staff or public H&S‡ including working conditions, use and exposure to hazardous materials, exposure to potential accidents	Several meter pits are in poor condition, need new access hatches and ladders. The water mains in the pits need new restraining system
Public Benefit	5	E. Canceling project very likely causes catastrophic negative public impact (major gov't/regulatory investigation; widespread negative media, D. Seen as sig. positive achievement for GLWA/communities/regions served; improve community/stakeholder relationships/confidence, C. Additional revenue/savings for GLWA($1M+ per year) w/ minimal risk; better utilize existing infrastructure, A. Project is key part of a strategic plan* for GLWA or politically driven	Program/Project requested by AWG (Member Outreach Technical Group)

CIP Number: 170904

Project Title: Wholesale Water Meterpit Rehabilitation and Meter Upgrade - Phase II

Financial	4	F. Total financial consequence of $1,000,000 - $5,000,000, A. Project will generate significant increased revenue/savings	This project will assure accurate billing to the GLWA's customers, a decrease in the number of man hours required for routine and corrective maintenance, as well as repair of structural deficiencies within the metering locations.
Efficiency and Innovation	5	A. Right-sizing system results in substantial operational efficiencies, significantly increasing revenue/savings., D. efficiency; Water use, effluent reuse/recycling or other GLWA strategic initiatives*; Business process optimization and institutional knowledge; Process efficiency for a more robust system and less O&M; knowledge capture; or time & cost savings	Right-Sizing meters will improve the data collection. New meters also provide Member Partners' opportunity to directly connect with the meters for operational needs.

Review Committee Weighted Score: 95.7

Criteria Name	Score	Comment
Condition	5	Committee score carried over from current year Project Manager score
Performance (Service Level/Reliability)	4	Committee score carried over from current year Project Manager score
Regulatory (Environmental/Legal)	3	Committee score carried over from current year Project Manager score
Operations and Maintenance	4	Committee score carried over from current year Project Manager score
Health and Safety	5	Committee score carried over from current year Project Manager score
Public Benefit	5	Committee score carried over from current year Project Manager score
Financial	4	Committee score carried over from current year Project Manager score
Efficiency and Innovation	5	Committee score carried over from current year Project Manager score

CIP Number: 170904

Project Title: Wholesale Water Meterpit Rehabilitation and Meter Upgrade - Phase II

Phase:

Phase Title:

Phase Budget:

Phase Status: Future Planned Start

Start Date: 7/1/2023

End Date: 6/30/2028

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
	$7	$7	$0	$7	$0	$0	$0	$0	$0	$0	$0

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2023	6/30/2028
Capital Delivery Salary (Fringes)	7/1/2023	6/30/2028
Other Capital Imrpovement Costs	7/1/2023	6/30/2028

CIP Number: 170904

Project Title: Wholesale Water Meterpit Rehabilitation and Meter Upgrade - Phase II

Phase: Construction (Build)

Phase Title: Construction (Build)

Phase Budget: Water

Phase Status: Active - Procurement - Board Approved

Start Date: 7/1/2023

End Date: 6/30/2028

Phase Comments/Description:
Contract No. 2201848

Cost Est. Class: Class 3

Cost Est. Date: 7/1/2022

Cost Est. Source: SAMO Group

Cost Est. Prepared By: Ali Ghanavi

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction (Build)	$15,679	$0	$0	$1,100	$3,642	$3,642	$3,642	$3,652	$0	$14,579	$0

Phase Dates

Activity Name	Start Date	End Date
Construction (Build)	7/1/2023	6/30/2028

CIP Number: 170904

Project Title: Wholesale Water Meterpit Rehabilitation and Meter Upgrade - Phase II

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
	$7	$7	$0	$7	$0	$0	$0	$0	$0	$0	$0
Construction (Build)	$15,679	$0	$0	$1,100	$3,642	$3,642	$3,642	$3,652	$0	$14,579	$0
Totals	$15,686	$7	$0	$1,107	$3,642	$3,642	$3,642	$3,652	$0	$14,579	$0

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2024	$16,000	$0	$1,600	$3,598	$3,598	$3,598	$3,607	$0	$16,000

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$15,686,352	$0	$1,107,219	$3,642,288	$3,642,288	$3,642,288	$3,652,267	$0	$14,579,133	$0

Description of CIP Changes:

--

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Project Status: Future Planned - Within Five Year Plan

CIP Type: Program

Class Lvl 1: Water

Class Lvl 2: Programs

Class Lvl 3: Programs

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [x] Multiple Phases

Project Score

0

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 1/5/2018

Year Project Added to CIP: 2018

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: All Water Facilities

Funds and Cost Center: Water - 5519-882111 (Water Treatment Plants (WTP))

- [ ] From Program?

Program Number:

Delivery Method: DB (Design-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Problem Statement:

This design build project will replace roofing systems on GLWA water plants, water booster pumping stations and sewage pumping stations that were determined to need replacement over the next 5 to 7 years based on the CS-1674 Roofing Assesment Contract. Replacement is needed to protect the facilities interigty with regards to interiors, sensitive electrical equipment and process mechanical equipment vital to operations.

Scope of Work/Project Alternatives:

Remove existing roofing systems and replace with new roofing systems

Other Important Info:

The total estimated replacement value (2016 dollars) of the 1,682,727 square feet of roofing at the water treatment plants, sewage pumping stations and water booster pumping stations at $33,142,054.

Project History: A condition assessment was performed and completed under Contract No. CS-1674 in 2016 that included all roofs located at GLWA's 5 water treatment plants, 19 water booster pumping stations and 11 sewage pumping stations. There were 268 separate roof sections totaling 1,682,727 square feet of roof inspected during this condition assessment project.

Primary Driver: 1 - Condition

Driver Explanation:

Roofs are well past their useful service life and showing significant deterioration, and in some places leaking.

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Scoring

Project Manager Weighted Score:	**0**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	0		
Performance (Service Level/Reliability)	0		
Regulatory (Environmental/Legal)	0		
Operations and Maintenance	0		
Health and Safety	0		
Public Benefit	0		
Financial	0		
Efficiency and Innovation	0		

Review Committee Weighted Score:	**0**	
Criteria Name	**Score**	**Comment**
Condition	0	
Performance (Service Level/Reliability)	0	
Regulatory (Environmental/Legal)	0	
Operations and Maintenance	0	
Health and Safety	0	
Public Benefit	0	
Financial	0	
Efficiency and Innovation	0	

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 7/2/2035

Phase Comments/Description:

Cost Est. Class: Class 4

Cost Est. Date: 1/1/2016

Cost Est. Source: Testing Engineers and Consultants

Cost Est. Prepared By: Testing Engineers and Consultants

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$407	$0	$0	$0	$0	$0	$0	$0	$58	$58	$291

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2028	7/2/2035
Capital Delivery Salary (Fringes)	7/1/2028	7/2/2035

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 9/30/2028

End Date: 6/28/2032

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$1,692	$0	$0	$0	$0	$0	$0	$0	$339	$339	$1,353

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	9/30/2028	6/28/2032

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Phase: Design-Build # 1 (1803483)

Phase Title: Design-Build # 1 (1803483)

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 11/8/2030

Phase Comments/Description:

Contract No. 1803483, Schreiber Corp. - SP, WWP, Orion, Franklin, and Conner Creek Facilities

Cost Est. Class: Class 4

Cost Est. Date: 1/1/2016

Cost Est. Source: Testing Engineers and Consultants

Cost Est. Prepared By: Testing Engineers and Consultants

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 1 (1803483)	$33	$0	$0	$0	$0	$0	$0	$0	$12	$12	$21

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2028	6/28/2030
Construction (net-zero cost account to be archived)	1/16/2030	11/8/2030

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Phase: Design-Build # 2

Phase Title: Design-Build # 2

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 7/2/2035

Phase Comments/Description:
SW, LH, SP Chemical Bldg, SP Boiler House, SP 1958 Service Bldg., NE Admin, NE Switch House, NE Filters, NE LowLift, WWP Treatment Bldg, and NSC

Cost Est. Class: Class 4

Cost Est. Date: 12/9/2016

Cost Est. Source: CS-1674 roofing CA contract

Cost Est. Prepared By: Testing Engineers and Consultants

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design-Build # 2	$13,816	$0	$0	$0	$0	$0	$0	$0	$2,120	$2,120	$9,824

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2028	6/30/2031
Construction	7/1/2030	7/2/2035

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$407	$0	$0	$0	$0	$0	$0	$0	$58	$58	$291
Design/Engineering	$1,692	$0	$0	$0	$0	$0	$0	$0	$339	$339	$1,353
Design-Build # 1 (1803483)	$33	$0	$0	$0	$0	$0	$0	$0	$12	$12	$21
Design-Build # 2	$13,816	$0	$0	$0	$0	$0	$0	$0	$2,120	$2,120	$9,824
Totals	$15,948	$0	$0	$0	$0	$0	$0	$0	$2,529	$2,529	$11,489

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2019	$2,490	$0	$111	$986	$210	$24	$1,159	$24,756	$0	$0	$0	$0	$0	$27,246
2020	$4,657	$50	$0	$2,657	$0	$0	$0	$2,000	$2,000	$0	$0	$0	$0	$6,707
2021	$8,778	$0	$71	$2,828	$173	$317	$2,907	$3,126	$2,255	$11,996	$0	$0	$0	$23,673
2022	$8,199	$0	$21	($21)	$386	$11	$3,091	$1,808	$370	$2,921	$3,961	$2,810	$2,452	$22,711
2023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$825	$2,431	$15,908
2024	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,529	$15,948

Reporting Period 61: Ending FY24 M04 Oct

Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$15,948,441	$0	$0	$0	$0	$0	$0	$2,529,320	$2,529,320	$11,489,287

Description of CIP Changes:

Project 171502 cost have been pulled from CIP 171500 Program

CIP Number: 171502

Project Title: Lake Huron and Southwest Roof Replacement

Project Status: Future Planned - Within Five Year Plan

CIP Type: Project

Class Lvl 1: Water

Class Lvl 2: Treatment Plants and Facilities

Class Lvl 3: Lake Huron

- [ ] Project New to CIP
- [ ] Useful Life > 20 Yrs
- [ ] Multiple Phases

Project Score

61.3

- [ ] Innovation
- [ ] WW Master Plan
- [ ] Water Master Plan Right Sizing
- [ ] Wet Weather Resiliency
- [ ] Redundancy
- [ ] Predecessor Project(s)
- [ ] Linear Assets Outside of Facilities
- [ ] CSO
- [ ] Pumps
- [ ] Storage
- [x] Treatment

Project Manager: Peter Fromm

Director: Tim Kuhns

Managing Dept.: Water Eng

Date Original Business Case Prepared: 7/1/2021

Year Project Added to CIP: 2021

CIP Budget: Water

Project Jurisdiction: Multiple Counties

Lookup Location: Wayne County outside of Detroit/ Saint Clair County

Funds and Cost Center: Water - 5519-882411 (Field Engineering)

- [x] From Program?

Program Number: 171500

Delivery Method: DBB (Design-Bid-Build)

Delivery Method Details:

- [ ] Is a Predecessor Project?

Successor Projects:

Predecessor Projects:

Collaboration Opportunities: No

Partners:

Collaboration Entity:

CIP Delivery Team

CIP Number: 171502

Project Title: Lake Huron and Southwest Roof Replacement

Problem Statement:

This Design-Bid-Build project will replace identified roofing systems at GLWA Water Treatment Plants: Lake Huron and Southwest which were determined to need replacement over the next 6 to 8 years based on the CS-1674 Roofing Assessment Contract. Replacement is needed to protect the facilities integrity with regards to interiors, sensitive electrical equipment and process mechanical equipment vital to treatment and distribution operations.

Scope of Work/Project Alternatives:

Remove existing roofing system and replace with new built-up roofing systems as follows:
Lake Huron Water Treatment Plant: Flocculator Building A & B, Chlorine Room, Low Lift Building, Chemical Building A & B,
Southwest Water Treatment Plant: Lab and Office Building A & B, Administration Building A & B,

Other Important Info:

A condition assessment was performed and completed under Contract No. CS-1674 in 2016 that included all roofs located at GLWA's 5 water treatment plants, 19 water booster pumping stations and 11 sewage pumping stations. There were 268 separate roof sections totaling 1,682,727 square feet of roof inspected during this condition assessment project.

Primary Driver: 2 - Performance

Driver Explanation:

Identified roofs are well past their useful service life and showing significant deterioration, and in some places leaking.

CIP Number: 171502

Project Title: Lake Huron and Southwest Roof Replacement

Scoring

Project Manager Weighted Score:	**60.2**		
Criteria Name	**Score**	**Score Criteria**	**Comment**
Condition	3	A. Asset has <50% of its design service life remaining	
Performance (Service Level/Reliability)	4	A. Expected performance failures under normal conditions	
Regulatory (Environmental/Legal)	1	A. No risk of causing	
Operations and Maintenance	2	A. Low levels of O/M keeps meantime between failure standard	
Health and Safety	3	A. Failure not catastrophic, has moderate chance of occurring; failure may be mitigated to minimize safety/health/environmental impacts	
Public Benefit	1	C. Minimal/no impact on public/GLWA image & relationships	
Financial	2	B. Low positive financial implications$100K-$250K or ROI 15-20 yrs	
Efficiency and Innovation	1	A. Minimal/no impact on operational efficiencies; energy use (<1% reduction), conservation, environmental responsibility/sustainability; GLWA strategic initiatives* related to efficiency	

Review Committee Weighted Score:	**61.3**	
Criteria Name	**Score**	**Comment**
Condition	3	
Performance (Service Level/Reliability)	4	
Regulatory (Environmental/Legal)	2	
Operations and Maintenance	2	
Health and Safety	3	
Public Benefit	1	
Financial	2	
Efficiency and Innovation	1	

CIP Number: 171502

Project Title: Lake Huron and Southwest Roof Replacement

Phase: GLWA Salaries

Phase Title: GLWA Salaries

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 7/1/2030

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)
"Total Costs" include costs outside of the 10 year planning window
***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$99	$0	$0	$0	$0	$0	$0	$0	$49	$49	$49

Phase Dates

Activity Name	Start Date	End Date
Capital Delivery Salary (Direct Labor)	7/1/2028	7/1/2030
Capital Delivery Salary (Fringes)	7/1/2028	7/1/2030

CIP Number: 171502

Project Title: Lake Huron and Southwest Roof Replacement

Phase: Design/Engineering

Phase Title: Design/Engineering

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 7/1/2028

End Date: 11/27/2028

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Design/Engineering	$400	$0	$0	$0	$0	$0	$0	$0	$400	$400	$0

Phase Dates

Activity Name	Start Date	End Date
Design/Engineering	7/1/2028	11/27/2028

CIP Number: 171502

Project Title: Lake Huron and Southwest Roof Replacement

Phase: Construction

Phase Title: Construction

Phase Budget: Water

Phase Status: Future Planned Start

Start Date: 2/16/2029

End Date: 7/1/2030

Phase Comments/Description:

Cost Est. Class:

Cost Est. Date:

Cost Est. Source:

Cost Est. Prepared By:

Phase Total Expenses By FY (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
Construction	$2,211	$0	$0	$0	$0	$0	$0	$0	$596	$596	$1,615

Phase Dates

Activity Name	Start Date	End Date
Construction	2/16/2029	7/1/2030

CIP Number: 171502

Project Title: Lake Huron and Southwest Roof Replacement

Current Expenses (All figures are in $1,000's)

"Total Costs" include costs outside of the 10 year planning window

***Design & Construction costs are inclusive of salaries where salaries are not defined**

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
GLWA Salaries	$99	$0	$0	$0	$0	$0	$0	$0	$49	$49	$49
Design/Engineering	$400	$0	$0	$0	$0	$0	$0	$0	$400	$400	$0
Construction	$2,211	$0	$0	$0	$0	$0	$0	$0	$596	$596	$1,615
Totals	$2,709	$0	$0	$0	$0	$0	$0	$0	$1,045	$1,045	$1,665

Project Total Expenses by FY Compared to Prior CIPs (All figures are in $1,000's)

CIP	5 Year Total	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Total
2023	$0	$0	$0	$0	$0	$0	$0	$0	$1,622	$2,703
2024	$0	$0	$0	$0	$0	$0	$0	$0	$1,045	$2,710

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Total Costs	Prior FYs	FY24	FY25	FY26	FY27	FY28	FY29	5 Year Total	FY30-34
$2,709,759	$0	$0	$0	$0	$0	$0	$1,045,052	$1,045,052	$1,664,707

Description of CIP Changes:

New CIP added to FY 2023-2027 7/27/2021. AC