

# APPENDIX C:

# CENTRALIZED SERVICES

## BUSINESS CASE EVALUATIONS



### 7 ONE- PAGERS

2 ACTIVE PROJECTS  
1 FUTURE PLANNED  
2 PENDING CLOSEOUT  
*1 RECLASSIFIED*  
*1 CANCELLED*



### CENTRALIZED SERVICES

PROJECTS ARE FUNDED BY THE WATER OR THE WASTEWATER SPEND PLANS, OR IN THE PAST COULD BE SPLIT BETWEEN THE TWO.



### FOR MORE: SECTION 7

FIND THE ONE-PAGERS FOR CENTRALIZED SERVICES PROJECTS SEE SECTION 7 IN THE CIP REPORT.

**Project Title:** Masonry Replacement and Rehabilitation

**Project Status:** Reclassified

**CIP Type:** Project

**Class Lvl 1:** Centralized Services

**Class Lvl 2:** General Purpose

**Class Lvl 3:** General Purpose

 **Project New to CIP**

- Innovation**
- WW Master Plan**
- Water Master Plan Right Sizing**
- Redundancy**
- NE WTP Repurposing**
- Linear Assets Outside of Facilities**
- Predecessor Project(s)**



Northeast Facility

**Project Engineer/Manager:** Douglas Atkinson

**Director:** Paula Anderson

**Managing Dept.:** Fleet and Facilities

**Date Original Business Case Prepared:**
**Year Project Added to CIP:** 2020

**CIP Budget:** Water

**Project Jurisdiction:** Multiple Counties

**Lookup Location:** Multiple Counties

**Funds and Cost Center:** Water - 5519-882111

**Problem Statement:**

Cracks and deterioration in masonry walls, exterior concrete, retaining walls, concrete decks and floors needing repair or replacement causing concern for safety due to poor conditions.

**Scope of Work/Project Alternatives:**

For NE WTP: Assess, solve the movement and moisture penetration problem, rebuild portions of masonry and concrete walls, floors, roof parapets and deck elements.

For SW WTP: Assess the panels and support structure, replace panels, repair/restore rusted steel members.

For Imlay City: Remove or rebuild retaining walls to withstand soils pressure.

**Other Important Info:**

3 sites have been identified for this project all have some failing concrete.

- 1) Northeast WTP
- 2) Southwest WTP
- 3) Imlay City Pumping Station

**Primary Driver:** 1 - Condition

**Driver Explanation:**

Poor condition.

**Project Title:** Masonry Replacement and Rehabilitation
 

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**Scoring**
**Project Manager Weighted Score:** 0.00

Criteria Name	Score	Comment
Condition	0	Scoring not applicable to Programs
Performance (Service Level/Reliability)	0	Scoring not applicable to Programs
Regulatory (Environmental/Legal)	0	Scoring not applicable to Programs
Operations and Maintenance	0	Scoring not applicable to Programs
Health and Safety	0	Scoring not applicable to Programs
Public Benefit	0	Scoring not applicable to Programs
Financial	0	Scoring not applicable to Programs
Efficiency and Innovation	0	Scoring not applicable to Programs

**Risk Committee Weighted Score:** 0.00

Criteria Name	Score	Comment
Condition	0	Scoring not applicable to Programs
Performance (Service Level/Reliability)	0	Scoring not applicable to Programs
Regulatory (Environmental/Legal)	0	Scoring not applicable to Programs
Operations and Maintenance	0	Scoring not applicable to Programs
Health and Safety	0	Scoring not applicable to Programs
Public Benefit	0	Scoring not applicable to Programs
Financial	0	Scoring not applicable to Programs
Efficiency and Innovation	0	Scoring not applicable to Programs

**Project Title:** Masonry Replacement and Rehabilitation

**Phase:** GLWA Salaries

**Phase Title:** GLWA Salaries

**Phase Budget:** Water

**Start Date:** 7/1/2027

**Phase Status:**
**End Date:** 6/30/2032

**Useful Life > 20 Yrs:** No

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY28-32
<b>GLWA Salaries</b>	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Capital Delivery Salary - RECLASSIFIED to 383300	7/1/2027	6/30/2032
Capital Delivery Salary - RECLASSIFIED to 383300	7/1/2027	6/30/2032
Contractual Professional Services - RECLASSIFIED to 383300	7/1/2027	6/30/2032
Other Capital Improvement Costs - RECLASSIFIED to 383300	7/1/2027	6/30/2032
Capitalized Interest - RECLASSIFIED to 383300	7/1/2027	6/30/2032



**Project Title:** Masonry Replacement and Rehabilitation

**Phase:** TBD / Future Allocation / General Holding

**Phase Title:** TBD / Future Allocation / General Holding

**Phase Budget:**
**Start Date:** 7/1/2027

**Phase Status:**
**End Date:** 6/30/2032

**Useful Life > 20 Yrs:** No

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
<b>TBD / Future Allocation / General Holding</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
TBD/Unallocated - RECLASSIFIED to 383300	7/1/2027	6/30/2032

**Project Title:** Masonry Replacement and Rehabilitation

**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	Total
2022	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$25,000

**Reporting Period 38: Ending FY22 M05 Nov**

Total Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description of CIP Changes:**

Reclassified to 383300

RECLASSIFIED  
 383300

**Project Title:** Security Infrastructure Improvements on Water Facilities

**Project Status:** Pending Closeout

**CIP Type:** Project

**Class Lvl 1:** Centralized Services

**Class Lvl 2:** Security

**Class Lvl 3:** General Purpose

**Project New to CIP**

- Innovation**
- WW Master Plan**
- Water Master Plan Right Sizing**
- Redundancy**
- NE WTP Repurposing**
- Linear Assets Outside of Facilities**
- Predecessor Project(s)**



Project Photo

**Project Engineer/Manager:** Charnele Sanders

**Director:** W. Barnett Jones

**Managing Dept.:** Security and Integrity

**Date Original Business Case Prepared:** 8/28/2019

**Year Project Added to CIP:** 2019

**CIP Budget:** Water

**Project Jurisdiction:** Multiple Counties

**Lookup Location:** System Wide

**Funds and Cost Center:** Water - 5519-882111

**Problem Statement:**

GLWA facilities have been designated as "Critical Infrastructure" by the United States Department of Homeland Security (OHS). Critical Infrastructure is under constant threat by malicious people intent on disruption and destruction. GLWA staff is engaged in a continual process of threat and vulnerability assessment to our facilities, operations, and staff. Using several assessment tools including, OHS Site Assessments, incorporating AWWA security recommendations, and utilizing GLWA's historical assessment data, we have the basis for initiating a strategic plan for security infrastructure improvements. The resulting data from these assessments formulate recommendations for mitigating vulnerabilities. The implementation of these recommendations requires an efficient and effective design, procurement, and construction process.

**Scope of Work/Project Alternatives:**

Water Works Park: Additional coverage where boats dock and by the screening house. Video assessment wherever there are alarm points. Primary Building needs to be secured. Need video coverage. Switchgear room needs to be secured. Exterior video coverage of oxygen tanks and entrance to chlorine room. Secure transformer enclosures -Raw water Booster Station. Interior intrusion detection devices need to be installed at high lift building- glass break, motion sensors, etc. Install Card readers to interior of the new plant where critical assets are located. Enhanced perimeter fencing and gates. Enhanced perimeter detection system Replacement of analog cameras

Northeast Water Plant: Chemical building needs access control intrusion devices. Video assessment wherever there are alarm points. Flocculate building needs intrusion devices. Interior intrusion devices for uncovered areas. Enhanced perimeter fencing and gates Replacement of analog cameras. Enhanced perimeter detection system.

Springwells Water Plant: Enhanced access control

**Other Important Info:**

GLWA has a responsibility in the layered approach to critical infrastructure security; partnering with Federal, State, and Local law enforcement entities to minimize and respond to threats. This partnership required GLWA to maintain a minimum security posture equating to the Critical Infrastructure designation. Implementation of the security protocols were none existent, and improving the GLWA security footprint can reduce our vulnerabilities and enhance our response to known threats.

**Primary Driver:** 5 - Public Health and Safety

**Driver Explanation:**

**Project Title: Security Infrastructure Improvements on Water Facilities**

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system Chemical Building, basins and tunnel not secured. Video assessment wherever there are alarm points Enhanced perimeter detection system. Enhanced perimeter fencing and gates Replacement of analog cameras

Lake Huron Water Treatment Plant: Cameras at the Clear Well, Main Transformer Station and the Emergency Generators. Enhanced perimeter fencing and gates. Replacement of analog cameras. Enhanced perimeter detection system.

Southwest Water Plant: Video assessment wherever there are alarm points. Replace door closures to chlorine room so the doors swing shut and lock automatically. Install card readers to chlorine room and chlorine evaporation room. Enhanced perimeter fencing and gates. Replacement of analog cameras. Enhanced perimeter detection system.

Southwest Water Treatment Intake: Provide security for the intake platform. Enhanced perimeter fencing and gates. Replacement of analog cameras

Belle Isle Intake: Enhanced Access Control. Perimeter fencing and gates. Intrusion detection. Video assessment and surveillance.

Chlorine Storage Areas at all Plants: Enhanced Access Control. Intrusion detection. Video assessment and surveillance.

**Project Title:** Security Infrastructure Improvements on Water Facilities

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**Scoring**

**Project Manager Weighted Score:** 0.00

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	

**Risk Committee Weighted Score:** 0.00

Criteria Name	Score	Comment
Condition	0	Not scored. Pending Closeout.
Performance (Service Level/Reliability)	0	Not scored. Pending Closeout.
Regulatory (Environmental/Legal)	0	Not scored. Pending Closeout.
Operations and Maintenance	0	Not scored. Pending Closeout.
Health and Safety	0	Not scored. Pending Closeout.
Public Benefit	0	Not scored. Pending Closeout.
Financial	0	Not scored. Pending Closeout.
Efficiency and Innovation	0	Not scored. Pending Closeout.

**Project Title:** Security Infrastructure Improvements on Water Facilities

**Phase:** GLWA Salaries

**Phase Title:** Salaries-Wtr

**Phase Budget:** Water

**Start Date:** 2/26/2018

**Phase Status:** Active

**End Date:** 10/29/2021

**Useful Life > 20 Yrs:** Yes

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
<b>GLWA Salaries</b>	\$774	\$714	\$714	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Capital Delivery Salary (Water)	2/26/2018	9/27/2021
Capital Delivery Salary (Sewer)	2/26/2018	9/27/2021
Capital Delivery Salary (Water)	2/26/2018	9/27/2021
Capital Delivery Salary (Sewer)	2/26/2018	9/27/2021
Professional Services (CS-272 - 71004A.01 / 71004B.01 / 71004C.01)	8/23/2019	10/29/2021
Contractual Professional Services	2/26/2018	9/27/2021
Other Capital Improvement Costs	2/26/2018	9/27/2021
Capitalized Interest	2/26/2018	9/27/2021

**Project Title:** Security Infrastructure Improvements on Water Facilities

**Phase:** Design-Build # 1 (SOQ-135A)

**Phase Title:** DB-Wtr

**Phase Budget:** Water **Start Date:** 2/26/2018

**Phase Status:** Active **End Date:** 4/23/2022

**Useful Life > 20 Yrs:** Yes

**Phase Comments/Description:**
**Cost Est. Class:** Class 1

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
<b>Design-Build # 1 (SOQ-135A)</b>	\$9,545	\$9,545	\$9,545	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Design/Engineering	2/26/2018	4/12/2019
Construction (Water) (SOQ-135A)	4/15/2019	9/27/2021
Construction (Sewer) (RECLASSIFICATION)	4/15/2019	4/23/2022
Construction (Water) (CS-201)	7/1/2018	6/30/2019
Construction (Water) (RECLASSIFICATION)	7/1/2018	6/30/2021

**Project Title:** Security Infrastructure Improvements on Water Facilities

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**Phase:** Miscellaneous

**Phase Title:** Miscellaneous

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**Phase Budget:** Water

**Start Date:** 5/1/2010

**Phase Status:**

**End Date:** 6/30/2015

**Useful Life > 20 Yrs:** Yes

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**Phase Comments/Description:**

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**Cost Est. Class:**

**Cost Est. Source:**

**Cost Est. Date:**

**Cost Est. Prepared By:**

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

“Total Costs” include costs outside of the 10 year planning window

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

	<b>Total Costs</b>	<b>Actual Costs</b>	<b>Prior FYs</b>
<b>Miscellaneous</b>	(\$6,081)	(\$6,081)	(\$6,081)

**Phase Dates**

<b>Activity Name</b>	<b>Start Date</b>	<b>End Date</b>
Pre-CAFR Actuals - Water	5/1/2010	6/30/2015
Pre-CAFR Actuals - Sewer	5/1/2010	6/30/2015



**Project Title:** Security Infrastructure Improvements on Water Facilities

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

<b>CIP</b>	<b>5 Year Total</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>	<b>FY27</b>	<b>Total</b>
2021	\$6,621	\$4,029	\$4,018	\$2,603	\$0	\$0	\$0	\$0	\$0	\$10,650
2022	\$569	\$3,944	\$4,656	\$567	\$2	\$0	\$0	\$0	\$0	\$9,170

**Reporting Period 38: Ending FY22 M05 Nov**

<b>Total Costs</b>	<b>Prior FYs</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>	<b>FY27</b>	<b>5 Year Total</b>	<b>FY28-32</b>
\$4,238,914	\$4,178,728	\$60,186	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description of CIP Changes:**

**Project Title:** Security Infrastructure Improvements for Wastewater Facilities

**Project Status:** Pending Closeout

**CIP Type:** Project

**Class Lvl 1:** Centralized Services

**Class Lvl 2:** Security

**Class Lvl 3:** General Purpose

**Project New to CIP**

- Innovation**
- WW Master Plan**
- Water Master Plan Right Sizing**
- Redundancy**
- NE WTP Repurposing**
- Linear Assets Outside of Facilities**
- Predecessor Project(s)**



Project Photo

**Project Engineer/Manager:** Charnele Sanders

**Director:** W. Barnett Jones

**Managing Dept.:** Security and Integrity

**Date Original Business Case Prepared:** 8/28/2019

**Year Project Added to CIP:** 2019

**CIP Budget:** Wastewater

**Project Jurisdiction:** Multiple Counties

**Lookup Location:** System Wide

**Funds and Cost Center:** Wastewater - 5421-892211

**Problem Statement:**

GLWA facilities have been designated as "Critical Infrastructure" by the United States Department of Homeland Security (OHS). Critical Infrastructure is under constant threat by malicious people intent on disruption and destruction. GLWA staff is engaged in a continual process of threat and vulnerability assessment to our facilities, operations, and staff. Using several assessment tools including, OHS Site Assessments, incorporating AWWA security recommendations, and utilizing GLWA's historical assessment data, we have the basis for initiating a strategic plan for security infrastructure improvements. The resulting data from these assessments formulate recommendations for mitigating vulnerabilities. The implementation of these recommendations requires an efficient and effective design, procurement, and construction process.

**Scope of Work/Project Alternatives:**

Water Works Park: Additional coverage where boats dock and by the screening house. Video assessment wherever there are alarm points. Primary Building needs to be secured. Need video coverage. Switchgear room needs to be secured. Exterior video coverage of oxygen tanks and entrance to chlorine room. Secure transformer enclosures -Raw water Booster Station. Interior intrusion detection devices need to be installed at high lift building- glass break, motion sensors, etc. Install Card readers to interior of the new plant where critical assets are located. Enhanced perimeter fencing and gates. Enhanced perimeter detection system Replacement of analog cameras

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Springwells Water Plant: Enhanced access control

**Other Important Info:**

GLWA has a responsibility in the layered approach to critical infrastructure security; partnering with Federal, State, and Local law enforcement entities to minimize and respond to threats. This partnership required GLWA to maintain a minimum security posture equating to the Critical Infrastructure designation. Implementation of the security protocols were none existent, and improving the GLWA security footprint can reduce our vulnerabilities and enhance our response to known threats.

**Primary Driver:** 5 - Public Health and Safety

**Driver Explanation:**

**Project Title: Security Infrastructure Improvements for Wastewater Facilities**

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system Chemical Building, basins and tunnel not secured. Video assessment wherever there are alarm points Enhanced perimeter detection system. Enhanced perimeter fencing and gates Replacement of analog cameras

Lake Huron Water Treatment Plant: Cameras at the Clear Well, Main Transformer Station and the Emergency Generators. Enhanced perimeter fencing and gates. Replacement of analog cameras. Enhanced perimeter detection system.

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Southwest Water Treatment Intake: Provide security for the intake platform. Enhanced perimeter fencing and gates. Replacement of analog cameras

Belle Isle Intake: Enhanced Access Control. Perimeter fencing and gates. Intrusion detection. Video assessment and surveillance.

Chlorine Storage Areas at all Plants: Enhanced Access Control. Intrusion detection. Video assessment and surveillance.

**Project Title:** Security Infrastructure Improvements for Wastewater Facilities

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**Scoring**

**Project Manager Weighted Score:** 0.00

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
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	

**Risk Committee Weighted Score:** 0.00

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	0	Not Scored. Pending closeout.
Performance (Service Level/Reliability)	0	Not Scored. Pending closeout.
Regulatory (Environmental/Legal)	0	Not Scored. Pending closeout.
Operations and Maintenance	0	Not Scored. Pending closeout.
Health and Safety	0	Not Scored. Pending closeout.
Public Benefit	0	Not Scored. Pending closeout.
Financial	0	Not Scored. Pending closeout.
Efficiency and Innovation	0	Not Scored. Pending closeout.

**Project Title:** Security Infrastructure Improvements for Wastewater Facilities

**Phase:** GLWA Salaries

**Phase Title:** Salaries-WW

**Phase Budget:** Wastewater

**Start Date:** 2/26/2018

**Phase Status:** Active

**End Date:** 10/29/2021

**Useful Life > 20 Yrs:** Yes

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
<b>GLWA Salaries</b>	\$31	\$31	\$31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Capital Delivery Salary	2/26/2018	9/27/2021
Capital Delivery Salary	2/26/2018	9/27/2021
Professional Services (CS-272 - 71004A.02 / 71004B.02 / 71004C.02)	2/26/2018	10/29/2021
Contractual Professional Services	2/26/2018	9/27/2021
Other Capital Improvement Costs	2/26/2018	9/27/2021
Capitalized Interest	2/26/2018	9/27/2021

**Project Title:** Security Infrastructure Improvements for Wastewater Facilities

**Phase:** Design-Build # 1 (SOQ-135A)

**Phase Title:** DB-WW

**Phase Budget:** Wastewater

**Start Date:** 2/26/2018

**Phase Status:** Active

**End Date:** 9/27/2021

**Useful Life > 20 Yrs:** Yes

**Phase Comments/Description:**
**Cost Est. Class:** Class 1

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
<b>Design-Build # 1 (SOQ-135A)</b>	\$1,869	\$1,869	\$1,869	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Design/Engineering	2/26/2018	4/12/2019
Construction	4/15/2019	9/27/2021

**Project Title:** Security Infrastructure Improvements for Wastewater Facilities

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

<b>CIP</b>	<b>5 Year Total</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>	<b>FY27</b>	<b>Total</b>
2021	\$1,051	\$1,579	\$1,051	\$0	\$0	\$0	\$0	\$0	\$0	\$2,630
2022	\$722	\$1,015	\$1,797	\$722	\$0	\$0	\$0	\$0	\$0	\$3,534

**Reporting Period 38: Ending FY22 M05 Nov**

<b>Total Costs</b>	<b>Prior FYs</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>	<b>FY27</b>	<b>5 Year Total</b>	<b>FY28-32</b>
\$1,900,797	\$1,900,797	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description of CIP Changes:**

**Project Title:** LED Lighting and Lighting Control Improvements

**Project Status:** Cancelled

**CIP Type:** Project

**Class Lvl 1:** Centralized Services

**Class Lvl 2:** Energy Management

**Class Lvl 3:** General Purpose

 **Project New to CIP**

- Innovation**
- WW Master Plan**
- Water Master Plan Right Sizing**
- Redundancy**
- NE WTP Repurposing**
- Linear Assets Outside of Facilities**
- Predecessor Project(s)**



LED Light

**Project Engineer/Manager:** Eric Griffin

**Director:** John Norton

**Managing Dept.:** Energy Management

**Date Original Business Case Prepared:**  
 8/4/2016

**Year Project Added to CIP:** 2017

**CIP Budget:** Water

**Project Jurisdiction:** Multiple Counties

**Lookup Location:** System Wide

**Funds and Cost Center:** Water - 5519-882111

**Problem Statement:**

Energy savings, demand reduction improved visibility, safety, operational efficiency and worker productivity. Budget was cut to \$500,000.00 we plan on reducing scope to 4 Booster stations only under this CIP.MFG 7/25/2019

**Scope of Work/Project Alternatives:**

Remove identified old fixtures and replace with new LED lamps and advanced control systems.

**Other Important Info:**

Challenges: Some outfalls are below the river elevation; installation may be challenging.

Project History: An audit was completed in 2010/2011 but little action was taken. Advancement in lighting technology since this audit has rendered it obsolete as to recent innovations, technology and cost. Across the system, equipment is in poor condition and exceeds its end of life. Some existing fixtures are antiques and compared to today's lighting, cannot meet minimum lighting standards.

A well detailed audit is to be carried out to determine the best suitable replacement lamps based on a set performance criteria, lighting controls to be incorporated and in cases where delamping might be an option, equivalent/appropriate lighting output and level is to be maintained per task/space requirements

**Primary Driver:** 8 - Efficiency

**Driver Explanation:**

Technology of LED lamps and associated fixtures will reduce electrical operating expenses and improve worker safety.



**Project Title:** LED Lighting and Lighting Control Improvements
 

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**Scoring**
**Project Manager Weighted Score:** 59.40

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	4	Scores carried over from 2021-2025 CIP
Performance (Service Level/Reliability)	3	Scores carried over from 2021-2025 CIP
Regulatory (Environmental/Legal)	3	Scores carried over from 2021-2025 CIP
Operations and Maintenance	1	Scores carried over from 2021-2025 CIP
Health and Safety	3	Scores carried over from 2021-2025 CIP
Public Benefit	3	Scores carried over from 2021-2025 CIP
Financial	3	Scores carried over from 2021-2025 CIP
Efficiency and Innovation	3	Scores carried over from 2021-2025 CIP

**Risk Committee Weighted Score:** 60.20

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	3	Scores carried over from 2021-2025 CIP
Performance (Service Level/Reliability)	3	Scores carried over from 2021-2025 CIP
Regulatory (Environmental/Legal)	3	Scores carried over from 2021-2025 CIP
Operations and Maintenance	4	Scores carried over from 2021-2025 CIP
Health and Safety	3	Scores carried over from 2021-2025 CIP
Public Benefit	1	Scores carried over from 2021-2025 CIP
Financial	3	Scores carried over from 2021-2025 CIP
Efficiency and Innovation	4	Scores carried over from 2021-2025 CIP

**Project Title:** LED Lighting and Lighting Control Improvements

**Phase:** GLWA Salaries

**Phase Title:** GLWA Salaries

<b>Phase Budget:</b> Water	<b>Start Date:</b> 12/30/2021
<b>Phase Status:</b> Active	<b>End Date:</b> 9/30/2022
<b>Useful Life &gt; 20 Yrs:</b> No	

**Phase Comments/Description:**
**Cost Est. Class:** Class 5

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	5 Year Total
<b>GLWA Salaries</b>	\$7	\$7	\$7	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Capital Delivery Salary	12/30/2021	9/30/2022
Capital Delivery Salary	12/30/2021	9/30/2022
Contractual Professional Services	12/30/2021	9/30/2022
Other Capital Improvement Costs	12/30/2021	9/30/2022
Capitalized Interest	12/30/2021	9/30/2022

**Project Title:** LED Lighting and Lighting Control Improvements

**Phase:** Design/Engineering

**Phase Title:** Study-Wtr

**Phase Budget:** Water

**Start Date:** 7/1/2022

**Phase Status:** Active

**End Date:** 6/30/2025

**Useful Life > 20 Yrs:** No

**Phase Comments/Description:**
**Cost Est. Class:** Class 5

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY23	FY24	FY25	5 Year Total
<b>Design/Engineering</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Design/Engineering	7/1/2022	6/30/2025

**Project Title:** LED Lighting and Lighting Control Improvements

**Phase:** Design/Engineering

**Phase Title:** Water Facility Lighting Renovations

**Phase Budget:** Water **Start Date:** 9/22/2021

**Phase Status:** Active **End Date:** 9/30/2022

**Useful Life > 20 Yrs:** No

**Phase Comments/Description:**
**Cost Est. Class:** Class 2

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	5 Year Total
<b>Design/Engineering</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Design/Engineering	9/22/2021	6/30/2022
Construction	12/30/2021	9/30/2022

**Project Title:** LED Lighting and Lighting Control Improvements

**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	Total
2018	\$2,799	\$933	\$933	\$933	\$0	\$0	\$0	\$0	\$0	\$2,799
2019	\$2,772	\$2	\$1,172	\$1,600	\$0	\$0	\$0	\$0	\$0	\$2,774
2020	\$250	\$0	\$250	\$250	\$0	\$0	\$0	\$0	\$0	\$500
2021	\$550	\$0	\$6	\$0	\$50	\$248	\$252	\$0	\$0	\$556
2022	\$693	\$0	\$6	\$0	\$0	\$38	\$222	\$222	\$214	\$700


**Reporting Period 38: Ending FY22 M05 Nov**

Total Costs	Prior FYs	FY22	FY23	FY24	FY25	5 Year Total
\$6,667	\$6,667	\$0	\$0	\$0	\$0	\$0

**Description of CIP Changes:**

Budget was cut down to \$500,000.00 We plan on doing 4 Booster Stations only with this CIP. MFG 7/25/2019  
 Budget increased due to Sewer Pumping station add-on EG 08/25/2020

**Project Title:** As-Needed Geotechnical and Related Engineering Services

<p><b>Project Status:</b> Project Execution - Design</p> <p><b>CIP Type:</b> Allowance</p> <p><b>Class Lvl 1:</b> Centralized Services</p> <p><b>Class Lvl 2:</b> Programs</p> <p><b>Class Lvl 3:</b> Programs</p> <p><input type="checkbox"/> <b>Project New to CIP</b></p>	<p><input type="checkbox"/> <b>Innovation</b></p> <p><input type="checkbox"/> <b>WW Master Plan</b></p> <p><input type="checkbox"/> <b>Water Master Plan Right Sizing</b></p> <p><input type="checkbox"/> <b>Redundancy</b></p> <p><input type="checkbox"/> <b>NE WTP Repurposing</b></p> <p><input type="checkbox"/> <b>Linear Assets Outside of Facilities</b></p> <p><input type="checkbox"/> <b>Predecessor Project(s)</b></p>	
<p><b>Project Engineer/Manager:</b> Peter Fromm</p> <p><b>Director:</b> Grant Gartrell</p> <p><b>Managing Dept.:</b> Water Eng</p>	<p><b>Date Original Business Case Prepared:</b></p> <p><b>Year Project Added to CIP:</b> 2006</p> <p><b>CIP Budget:</b> Water</p>	<p><b>Project Jurisdiction:</b> Multiple Counties</p> <p><b>Lookup Location:</b> System-wide</p> <p><b>Funds and Cost Center:</b> Water - 5519-882411</p>

**Problem Statement:**

GLWA engineering and operations need a contract mechanism to obtain professional engineering services in a timely manner to investigate environmental, geotechnical and specialized engineering problems that occur on a regular basis throughout the system.

**Scope of Work/Project Alternatives:**

This engineering/technical services contract involves as-needed engineering and technical services related to geotechnical investigations and related geotechnical engineering, construction materials sampling and testing, environmental media sampling and testing, soils sampling and testing, land surveying, corrosion testing and inspection, computer-aided design, and construction inspection. This contract includes design, construction services, and resident project representation for the follow transmission main projects:

1. 1802775 Park-Merriman 24-inch Water Main
2. 1803621 Wick Road 48-inch Transmission Main
3. 1804129 Schoolcraft Road 48-inch Transmission Main

**Other Important Info:**

N/A

**Primary Driver:** Varies

**Driver Explanation:**

Due to the nature, size and complexity of the GLWA water system, this CIP provides timely access to specialized engineering Services.

**Project Title:** As-Needed Geotechnical and Related Engineering Services

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**Scoring**

**Project Manager Weighted Score:** 0.00

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	0	Scoring not applicable to Programs
Performance (Service Level/Reliability)	0	Scoring not applicable to Programs
Regulatory (Environmental/Legal)	0	Scoring not applicable to Programs
Operations and Maintenance	0	Scoring not applicable to Programs
Health and Safety	0	Scoring not applicable to Programs
Public Benefit	0	Scoring not applicable to Programs
Financial	0	Scoring not applicable to Programs
Efficiency and Innovation	0	Scoring not applicable to Programs

**Risk Committee Weighted Score:** 0.00

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	0	Scoring not applicable to Programs
Performance (Service Level/Reliability)	0	Scoring not applicable to Programs
Regulatory (Environmental/Legal)	0	Scoring not applicable to Programs
Operations and Maintenance	0	Scoring not applicable to Programs
Health and Safety	0	Scoring not applicable to Programs
Public Benefit	0	Scoring not applicable to Programs
Financial	0	Scoring not applicable to Programs
Efficiency and Innovation	0	Scoring not applicable to Programs

**Project Title:** As-Needed Geotechnical and Related Engineering Services

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**Phase:** GLWA Salaries

**Phase Title:** GLWA Salaries

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**Phase Budget:** Water

**Start Date:** 10/1/2018

**Phase Status:**

**End Date:** 12/31/2021

**Useful Life > 20 Yrs:** No

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**Phase Comments/Description:**

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**Cost Est. Class:**

**Cost Est. Source:**

**Cost Est. Date:**

**Cost Est. Prepared By:**

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

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

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

	<b>Total Costs</b>	<b>Actual Costs</b>	<b>Prior FYs</b>
<b>GLWA Salaries</b>	\$0	\$0	\$0

**Phase Dates**

<b>Activity Name</b>	<b>Start Date</b>	<b>End Date</b>
Capital Delivery Salary	10/1/2018	12/31/2021
Capital Delivery Salary	10/1/2018	12/31/2021
Contractual Professional Services	10/1/2018	12/31/2021
Other Capital Improvement Costs	10/1/2018	12/31/2021
Capitalized Interest	10/1/2018	12/31/2021



**Project Title:** As-Needed Geotechnical and Related Engineering Services

**Phase:** Construction (Build) # 1 (CS-259)

**Phase Title:** Design/Construction Administration

<b>Phase Budget:</b> Water	<b>Start Date:</b> 10/1/2018
<b>Phase Status:</b> Active	<b>End Date:</b> 12/31/2021
<b>Useful Life &gt; 20 Yrs:</b> No	

**Phase Comments/Description:**

Engineering Services Contract CS-259, Somat Engineering (active)

**Cost Est. Class:** Class 2

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
<b>Construction (Build) # 1 (CS-259)</b>	\$602	\$0	\$0	\$602	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Construction	10/1/2018	12/31/2021

**Project Title:** As-Needed Geotechnical and Related Engineering Services

**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	Total
2018	\$1,906	\$650	\$907	\$333	\$333	\$333	\$0	\$0	\$0	\$0	\$0	\$0	\$2,556
2019	\$1,669	\$230	\$238	\$477	\$477	\$477	\$238	\$0	\$0	\$0	\$0	\$0	\$2,137
2020	\$0	\$0	\$0	\$620	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$620
2021	\$715	\$0	\$0	\$0	\$1,415	\$715	\$0	\$0	\$0	\$0	\$0	\$0	\$2,130
2022	\$456	\$0	\$0	\$0	\$771	\$904	\$456	\$0	\$0	\$0	\$0	\$0	\$2,131

**Reporting Period 38: Ending FY22 M05 Nov**

Total Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
\$601,603	\$0	\$601,603	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Description of CIP Changes:**

Updated this CIP to reflect the work being conducted under its associated engineering contract, CS-259 (formerly CS-1488) PF 8/9/2019

**Project Title:** Power Quality: Electric Metering Improvement Program

**Project Status:** Active - Pre-Procurement - Design

**CIP Type:** Program

**Class Lvl 1:** Centralized Services

**Class Lvl 2:** Programs

**Class Lvl 3:** Programs

**Project New to CIP**

- Innovation**
- WW Master Plan**
- Water Master Plan Right Sizing**
- Redundancy**
- NE WTP Repurposing**
- Linear Assets Outside of Facilities**
- Predecessor Project(s)**



Power Quality Meters

**Project Engineer/Manager:** Eric Griffin

**Director:** John Norton

**Managing Dept.:** Energy Management

**Date Original Business Case Prepared:** 8/18/2016

**Year Project Added to CIP:** 2016

**CIP Budget:** Water

**Project Jurisdiction:** Multiple Counties

**Lookup Location:** System-wide

**Funds and Cost Center:** Water - 5519-882111

**Problem Statement:**

Advanced meters for measuring power usage in real-time to reduce the electrical demands and further optimize load management practices, GLWA is experiencing a lot of power outages at our facilities. The installation of the New Power Monitors will give us real wave form data to determine why we are having outages and the time period of sagging or swelling voltage which effects the integrity of our equipment. MFG 7/25/2019

**Scope of Work/Project Alternatives:**

This program will increase the number of electric meters at pumping stations and treatment facilities to allow for active demand management to reduce electricity rates. The meters can be tied to the existing data management system for data archiving and use. The installation of the New Power Monitors will give us real wave form data to determine why we are having outages and the time period of sagging or swelling voltage which effects the integrity of our equipment. MFG 07/25/2019

**Other Important Info:**

Project History: Project is in the works targeting high demand (kW) sites - all the water treatment plants (Phase 1)  
We would like to change the project to design build and move up on the CIP. The outages we are having are affecting our preassurers that are causing water main breaks and boil water advisories, We need this to better communicate DTE problems that we are faced with and come up with solutions to improve the process or equipment. MFG 7/25/2019

**Primary Driver:** 2 - Performance

**Driver Explanation:**

The outages we are having are affecting our preassurers that are causing water main breaks and boil water advisories, We need this to better communicate DTE problems that we are faced with and come up with solutions to improve the process or equipment.

**Project Title:** Power Quality: Electric Metering Improvement Program

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**Scoring**

**Project Manager Weighted Score:** 0.00

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	0	Scoring not applicable to Programs
Performance (Service Level/Reliability)	0	Scoring not applicable to Programs
Regulatory (Environmental/Legal)	0	Scoring not applicable to Programs
Operations and Maintenance	0	Scoring not applicable to Programs
Health and Safety	0	Scoring not applicable to Programs
Public Benefit	0	Scoring not applicable to Programs
Financial	0	Scoring not applicable to Programs
Efficiency and Innovation	0	Scoring not applicable to Programs

**Risk Committee Weighted Score:** 0.00

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	0	Scoring not applicable to Programs
Performance (Service Level/Reliability)	0	Scoring not applicable to Programs
Regulatory (Environmental/Legal)	0	Scoring not applicable to Programs
Operations and Maintenance	0	Scoring not applicable to Programs
Health and Safety	0	Scoring not applicable to Programs
Public Benefit	0	Scoring not applicable to Programs
Financial	0	Scoring not applicable to Programs
Efficiency and Innovation	0	Scoring not applicable to Programs

**Project Title:** Power Quality: Electric Metering Improvement Program

**Phase:** GLWA Salaries

**Phase Title:** GLWA Salaries

**Phase Budget:** Water

**Start Date:** 7/2/2022

**Phase Status:**
**End Date:** 6/30/2025

**Useful Life > 20 Yrs:** No

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
<b>GLWA Salaries</b>	\$125	\$0	\$0	\$0	\$42	\$42	\$42	\$0	\$0	\$125	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Capital Delivery Salary	7/2/2022	6/30/2025
Capital Delivery Salary	7/2/2022	6/30/2025

**Project Title:** Power Quality: Electric Metering Improvement Program

**Phase:** Design/Engineering

**Phase Title:** Energy Management: Wtr - Electric Metering Improvement Program

<b>Phase Budget:</b> Water	<b>Start Date:</b> 7/2/2022
<b>Phase Status:</b> Future Planned Start	<b>End Date:</b> 6/30/2025
<b>Useful Life &gt; 20 Yrs:</b> No	

**Phase Comments/Description:**
**Cost Est. Class:** Class 1

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
<b>Design/Engineering</b>	\$2,498	\$0	\$0	\$525	\$1,256	\$717	\$0	\$0	\$2,498	\$0

**Phase Dates**

Activity Name	Start Date	End Date
Design/Engineering	7/2/2022	1/30/2023
Construction (DB)	1/31/2023	6/30/2025

**Project Title:** Power Quality: Electric Metering Improvement Program

**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	Total
2018	\$5,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$0	\$6,000
2019	\$1,628	\$0	\$0	\$0	\$120	\$120	\$510	\$878	\$4,372	\$0	\$0	\$0	\$6,000
2020	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0	\$5,000
2021	\$3,880	\$0	\$0	\$0	\$86	\$446	\$1,540	\$1,337	\$112	\$445	\$2,904	\$0	\$6,870
2022	\$1,379	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27	\$223	\$1,129	\$1,153	\$2,624

**Reporting Period 38: Ending FY22 M05 Nov**


Total Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	FY27	5 Year Total	FY28-32
\$2,623,926	\$0	\$0	\$566,991	\$1,297,997	\$758,938	\$0	\$0	\$2,623,926	\$0

**Description of CIP Changes:**

Other initiatives are presenting themselves. Wastewater and water deferred this project to 2025. Standard installation of electric meters in WW CIP programs. Better understanding of Snyder electrical monitoring system and Aquasight projects. The need for this project has changed due to DTE power outages. The outages we are having are affecting our preassuers that are causing water main breaks and boil water advisories, We need this to better communicate DTE problems that we are faced with and come up with solutions to improve the process or equipment. MFG 7/25/2019

The program will be utilized for water powering electric metering only. The change will remove Wastewater from scope of program unless determined in the future the need. EG 8/25/2020.

**Project Title:** Masonry Replacement and Rehabilitation Program

<p><b>Project Status:</b> Future Planned - Ten-Year CIP</p> <p><b>CIP Type:</b> Program</p> <p><b>Class Lvl 1:</b> Centralized Services</p> <p><b>Class Lvl 2:</b> General Purpose</p> <p><b>Class Lvl 3:</b> General Purpose</p> <p><input checked="" type="checkbox"/> <b>Project New to CIP</b></p>	<p><input type="checkbox"/> <b>Innovation</b></p> <p><input type="checkbox"/> <b>WW Master Plan</b></p> <p><input type="checkbox"/> <b>Water Master Plan Right Sizing</b></p> <p><input type="checkbox"/> <b>Redundancy</b></p> <p><input type="checkbox"/> <b>NE WTP Repurposing</b></p> <p><input type="checkbox"/> <b>Linear Assets Outside of Facilities</b></p> <p><input type="checkbox"/> <b>Predecessor Project(s)</b></p>	
<p><b>Project Engineer/Manager:</b> Douglas Atkinson</p> <p><b>Director:</b> Paula Anderson</p> <p><b>Managing Dept.:</b> Fleet and Facilities</p>	<p><b>Date Original Business Case Prepared:</b></p> <p><b>Year Project Added to CIP:</b> 2020</p> <p><b>CIP Budget:</b> Water</p>	<p><b>Project Jurisdiction:</b> Multiple Counties</p> <p><b>Lookup Location:</b> Multiple Counties</p> <p><b>Funds and Cost Center:</b> Water - 5519-882111</p>

**Problem Statement:**

Cracks and deterioration in masonry walls, exterior concrete, retaining walls, concrete decks and floors needing repair or replacement causing concern for safety due to poor conditions.

**Scope of Work/Project Alternatives:**

For NE WTP: Assess, solve the movement and moisture penetration problem, rebuild portions of masonry and concrete walls, floors, roof parapets and deck elements.

For SW WTP: Assess the panels and support structure, replace panels, repair/restore rusted steel members.

For Imlay City: Remove or rebuild retaining walls to withstand soils pressure.

**Other Important Info:**

3 sites have been identified for this project all have some failing concrete.

- 1) Northeast WTP
- 2) Southwest WTP
- 3) Imlay City Pumping Station

**Primary Driver:** 1 - Condition

**Driver Explanation:**

Poor condition.



**Project Title:** Masonry Replacement and Rehabilitation Program

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**Scoring**

**Project Manager Weighted Score:** 0.00

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	0	Scoring not applicable to Programs
Performance (Service Level/Reliability)	0	Scoring not applicable to Programs
Regulatory (Environmental/Legal)	0	Scoring not applicable to Programs
Operations and Maintenance	0	Scoring not applicable to Programs
Health and Safety	0	Scoring not applicable to Programs
Public Benefit	0	Scoring not applicable to Programs
Financial	0	Scoring not applicable to Programs
Efficiency and Innovation	0	Scoring not applicable to Programs

**Risk Committee Weighted Score:** 0.00

<b>Criteria Name</b>	<b>Score</b>	<b>Comment</b>
Condition	0	Scoring not applicable to Programs
Performance (Service Level/Reliability)	0	Scoring not applicable to Programs
Regulatory (Environmental/Legal)	0	Scoring not applicable to Programs
Operations and Maintenance	0	Scoring not applicable to Programs
Health and Safety	0	Scoring not applicable to Programs
Public Benefit	0	Scoring not applicable to Programs
Financial	0	Scoring not applicable to Programs
Efficiency and Innovation	0	Scoring not applicable to Programs

**Project Title:** Masonry Replacement and Rehabilitation Program

**Phase:** GLWA Salaries

**Phase Title:** GLWA Salaries

<b>Phase Budget:</b>	<b>Start Date:</b>	7/1/2027
<b>Phase Status:</b>	<b>End Date:</b>	6/30/2032
<b>Useful Life &gt; 20 Yrs:</b>	No	

**Phase Comments/Description:**

<b>Cost Est. Class:</b>	<b>Cost Est. Source:</b>
<b>Cost Est. Date:</b>	<b>Cost Est. Prepared By:</b>

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

	<b>Total Costs</b>	<b>Actual Costs</b>	<b>Prior FYs</b>	<b>FY28-32</b>
<b>GLWA Salaries</b>	\$230	\$0	\$0	\$230

**Phase Dates**

<b>Activity Name</b>	<b>Start Date</b>	<b>End Date</b>
Capital Delivery Salary	7/1/2027	6/30/2032

**Project Title:** Masonry Replacement and Rehabilitation Program

**Phase:** TBD/Unallocated

**Phase Title:** TBD/Unallocated

**Phase Budget:**
**Start Date:** 7/1/2027

**Phase Status:**
**End Date:** 6/30/2032

**Useful Life > 20 Yrs:** Yes

**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 &amp; Construction costs are inclusive of salaries where salaries are not defined

	Total Costs	Actual Costs	Prior FYs	FY28-32
TBD/Unallocated	\$24,770	\$0	\$0	\$24,770

**Phase Dates**

Activity Name	Start Date	End Date
TBD/Unallocated	7/1/2027	6/30/2032

**Project Title:** Masonry Replacement and Rehabilitation Program

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

**CIP**

**Reporting Period 38: Ending FY22 M05 Nov**

<b>Total Costs</b>	<b>Prior FYs</b>	<b>FY28-32</b>
\$25,000,001	\$0	\$25,000,001

**Description of CIP Changes:**

This program is new to the CIP. DA 9/1/20.

