

# CIP

## CAPITAL IMPROVEMENT PLAN 2021 - 2025

Appendix C - Centralized Services Projects





## Roofing Systems Replacement at Water Plants and Booster Pump Stations

- ☒ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Cancelled

Roof in need of repair



**CIP Type** Project

☐ **Project New To CIP**

**Budget** Water

**Class Lvl 1** Centralized Services

**Class Lvl 2** Facilities

**Class Lvl 3** General Purpose

**Location** Multiple Counties

**Project Engineer/Manager** Paula Anderson

**Director** Paula Anderson

**Managing Dept** Fleet and Facilities

**Date Original Business Case Prepared** 6/26/2014

**Year Project Added to CIP** 2014

**Fund and Cost Center**

**Problem Statement** This CIP provides funds to replace roofing systems that are past their useful service life and thus too costly to repair. Sound roofing systems are important to protect the process infrastructure inside GLWA's buildings.

**Scope of Work / Project Alternatives** This project encompasses the evaluation of all Water Treatment Plant and Booster Pump Station roofs to determine their current condition and to prioritize their repair or replacement. The project will evaluate the type of roof, built-up roofing material, flashing, roof drains/conductors and sealing materials that comprise the building envelope. The findings of the roof survey and evaluation will be used to prioritize roof repair and replacement projects for design and construction.

**Other Important Info** \*Innovation note: use cool roofs.

Project History: Majority of GLWA Water Plant facilities have Built-Up-Roof (BUR) membranes systems commonly referred as "tar and gravel" roofs. Majority of the more than 70 roofs, are over 15 years old and few are even older up to 30 years old. In many instances, inadequate roof system maintenance has been provided.

Challenges: Weather dependent and seasonal work. May require management of several construction projects simultaneously to complete the work. The project should include but, not be limited to the following, material testing for hazardous materials, thermal scans and condition analysis.

**Related Project** none

**Primary Driver** 1 - Condition

**Driver Explanation** Not provided.

**PM Weighted  
Score**

**71.4**

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

**RC Weighted  
Score**

**61**

Criteria	Score	Comment
Condition	5	
Public Benefit	1	
Public Health and Safety	2	
Operations and Maintenance	5	
Regulatory (Environmental/Legal)	3	
Financial	1	
Performance (Service Level/Reliability)	5	
Efficiency and Innovation	1	



Roofing Systems Replacement at Water Plants and Booster Pump Stations

**Phase** GLWA Employees Project management

**Contract** NA

**Status** Cancelled

**Title** GLWA Salaries

**Phase Budget**

**Cost Allocation**

**Phase Status**

**Funding Source**

**Start Date**

**Fund**

**End Date**

**Useful Life >20Yrs?**

**Tot. Federal Loan Amount**

**Cost Estimation Information**

**Cost Est. Class**

**Cost Est. Date**

**Cost Est. Source**

**Cost Est. Prepared By**

**Program/Allowance Task Information**

**Project Manager**

**CIP Number**

**Description**

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

**Phase Task Dates**





# Roofing Systems Replacement at Water Plants and Booster Pump Stations

**Phase** Construction

**Contract** NA

**Status** Cancelled

**Title** Roofing Systems Replacement at Water Plants and Booster Pump Stations

**Phase Budget** Water

**Cost Allocation** CTA

**Phase Status** Cancelled

**Funding Source** Bond Proceeds

**Start Date**

**Fund** Construction Bond Fund

**End Date**

**Useful Life >20Yrs?** Yes

**Tot. Federal Loan Amount**

## Cost Estimation Information

**Cost Est. Class**

**Cost Est. Date**

**Cost Est. Source**

**Cost Est. Prepared By**

## Program/Allowance Task Information

**Project Manager**

**CIP Number**

**Description**

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total	
0	0	0	0	0	0	0	0	0	0	

## Phase Task Dates



Roofing Systems Replacement at Water Plants and Booster Pump Stations

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0	0	0	0	0	0	0	0	0	0	0
2020	0	0		0	0	225	375	1,625	1,825	1,375	0	5,425	4,050
2019	0				128	169	809	1,243	4,844	0	0	7,193	2,349
2018		3,000	3,000	3,000	2,500				0	0	0	11,500	8,500

Description of CIP  
Changes

Project status changed to cancelled due to other projects within Water Eng group.

# Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

- ☒ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☒ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Active

**CIP Type** Program

☐ **Project New To CIP**

Photo of Complex – I  
Dewatering Roof at the  
WRRF.



**Budget** Wastewater

**Class Lvl 1** Centralized Services

**Class Lvl 2** Facilities

**Class Lvl 3** General Purpose

**Location** Multiple Counties

**Project Engineer/Manager** Beena Chackunkal

**Director** Dan Alford

**Managing Dept** WW Design Eng

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

**Year Project Added to CIP** 2017

**Fund and Cost Center**

**Problem Statement** Some of the roofs at GLWA WRRF facilities are near its end of useful life. The roofs help to protect the expensive equipment by preventing rain water entering through roofs into the facilities.

**Scope of Work / Project Alternatives** Inspect the roofing system conditions and assess drainage conditions on all the GLWA wastewater related facility buildings. Document the roofing systems inspections by taking and submitting high-quality photographs, scaled drawings, sketches, and inspection notes to adequately describe the conditions and deficiencies of the roofing systems and their drainage facilities. Recommend the extent of the roofing repairs and replacements required. Document the roof for each building inspected on the project. Classify the roofs into three (3) main categories, such as, 1) Roofs that require complete replacement, 2) Roofs that only require repair, and 3) Roofs that require no action within the next 10 years. Develop a recommended implementation/planning schedule with budgetary costs tied to the schedule for roofing system repairs and replacements that GLWA should plan for over the next 10 years. Provide preventative care suggestions for the GLWA's roofing systems evaluated under this contract. Provide any OSHA compliance suggestions that may be applicable for the GLWA's roofing systems evaluated under this contract.

**Other Important Info** \*Innovation note: Use cool roofs.  
Complex – II Incinerator (\$1.8M) and Complex – II Dewatering (\$1.0 M) replacement are under consideration to be part of fire remediation project.

Challenges: Roof material testing for asbestos before demolition and flashing will be challenge to manage as low levels of asbestos are very common in the GLWA's old roof type systems.





Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

Project History: Majority of GLWA WRRF facilities have Built-Up-Roof (BUR) membranes systems commonly referred as "tar and gravel" roofs. The old Administration buildings and the Newer Administration buildings have tar and gravel type of roof systems. The CSO RTB's and SDF's have metal and shingle type of roof systems. Majority of the roofs are over 15 years old and few are even older up to 30 years. These roof systems has been maintained through regular maintenance and repair or patch work performed to fix the leaking roof spots.

**Related Project** CON 143:Complex-II Incineration Building Roof Replacement.

**Primary Driver** 1 - Condition

**Driver Explanation** GLWA wastewater roof systems are old and some are near end of its useful life.

**Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and**
**PM Weighted  
Score**
**54.6**

Criteria	Score	Comment
Condition	4	Asset has <25% of its design service life remain
Performance (Service Level/Reliability)	4	Significant positive impact on system reliability
Regulatory (Environmental/Legal)	4	Risk of non compliance in near term
Operations and Maintenance	2	Low impact on O&M
Public Health and Safety	2	Moderate positive impact
Public Benefit	1	Low impact on Public
Financial	2	Project will likely result in avoidance of fines
Efficiency and Innovation	1	low impact on energy use & conservation

**RC Weighted  
Score**
**43.8**

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



## Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

**Phase** Construction**Contract** NA**Status** Future Planned Start**Title** Roofing Systems Replacement at GLWA Wastewater Treatment Plant CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)**Phase Budget** Wastewater**Cost Allocation** CTA**Phase Status** Future Planned Start**Funding Source** Bond Proceeds**Start Date** 7/3/2020**Fund** Construction Bond Fund**End Date** 6/23/2022**Useful Life >20Yrs?** Yes**Tot. Federal Loan Amount****Cost Estimation Information**

4	<b>Cost Est. Class</b>
10/2/2017	<b>Cost Est. Date</b>
	<b>Cost Est. Source</b>
Ali Khraizat	<b>Cost Est. Prepared By</b>

**Program/Allowance Task Information**

<b>Project Manager</b>	
<b>CIP Number</b>	
<b>Description</b>	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY19-	\$795			2021 CIP
Construction	FY20	\$321			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
795	321	0	0	0	0	0	0	1,116	0

**Phase Task Dates**

Phase Task Name	Start Date	End Date	Duration
Procurement	1/1/2019	3/31/2019	89
Project Execution	4/1/2019	7/2/2019	92
Project Closeout	7/3/2019	9/30/2019	89





## Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

**Phase** Study and Design and Construction Assistance**Contract** NA**Status** Active**Title** Roofing Systems Replacement at GLWA Wastewater Treatment Plant CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)**Phase Budget** Wastewater**Cost Allocation** CTA**Phase Status** Active**Funding Source** Bond Proceeds**Start Date** 11/8/2018**Fund** Construction Bond Fund**End Date** 6/23/2022**Useful Life >20Yrs?** Yes**Tot. Federal Loan Amount****Cost Estimation Information** **Cost Est. Class** **Cost Est. Date** **Cost Est. Source** **Cost Est. Prepared By****Program/Allowance Task Information****Project Manager** **CIP Number** **Description** 

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY19-	\$2			2021 CIP
Engineering Services	FY21	\$91			2021 CIP
Engineering Services	FY22	\$121			2021 CIP
Engineering Services	FY23	\$100			2021 CIP
Engineering Services	FY24	\$79			2021 CIP
Engineering Services	FY25	\$78			2021 CIP
Engineering Services	FY26+	\$32			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
2	0	91	121	100	79	78	32	503	469

**Phase Task Dates**

Phase Task Name	Start Date	End Date	Duration



Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

Phase Task Name	Start Date	End Date	Duration
Procurement	10/31/2018	3/31/2019	151
Project Execution	7/1/2020	7/29/2026	2219



## Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

**Phase** Construction**Contract** TBD**Status** Future Planned Start**Title** new construction phase**Phase Budget** Wastewater**Cost Allocation** CTA**Phase Status** Future Planned Start**Funding Source** Bond Proceeds**Start Date****Fund** Construction Bond Fund**End Date****Useful Life >20Yrs?** No**Tot. Federal Loan Amount** \$0**Cost Estimation Information**

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

**Program/Allowance Task Information**

<b>Project Manager</b>	
<b>CIP Number</b>	
<b>Description</b>	

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY22	\$1,624			2021 CIP
Construction	FY23	\$1,624			2021 CIP
Construction	FY24	\$1,629			2021 CIP
Construction	FY25	\$1,624			2021 CIP
Construction	FY26+	\$1,620			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	0	0	1,624	1,624	1,629	1,624	1,620	8,121	6,501

**Phase Task Dates**

Phase Task Name	Start Date	End Date	Duration
Project Execution	7/1/2021	6/29/2026	1824
Project Closeout	6/30/2026	7/29/2026	29





## Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

**Phase** GLWA Employees Project management**Contract** NA**Status** Active**Title** GLWA Salaries**Phase Budget** Wastewater**Cost Allocation** CTA**Phase Status** Active**Funding Source** Bond Proceeds**Start Date****Fund** Construction Bond Fund**End Date****Useful Life >20Yrs?** No**Tot. Federal Loan Amount** \$0**Cost Estimation Information** **Cost Est. Class** **Cost Est. Date** **Cost Est. Source** **Cost Est. Prepared By****Program/Allowance Task Information****Project Manager** **CIP Number** **Description** 

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2021	FY19-	\$5			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
5	0	0	0	0	0	0	0	5	0

**Phase Task Dates**



Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0	802	321	91	1,745	1,724	1,708	1,702	1,652	9,745	6,970
2020	0	0		278	1,092	4,142	4,114	41	42	0	0	9,709	9,431
2019	0			286	709	5,575	5,114			0	0	11,684	11,684
2018			2,200	2,060	1,060	1,050	540	2,140	0	0	0	9,050	6,910



GLWA FY 2021-2025 CIP  
Security Infrastructure Improvements on Water Facilities

341001 CIP#

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Active

**CIP Type** Project

☒ **Project New To CIP**

**Project Engineer/Manager** Michael Lewis

**Director** W. Barnett Jones

**Managing Dept** Security and Integrity

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

**Year Project Added to CIP** 2019

**Budget** Water

**Class Lvl 1** Centralized Services

**Class Lvl 2** Security

**Class Lvl 3** General Purpose

**Location** Multiple Counties

**Fund and Cost Center** Water - 5519-882111

<b>Problem Statement</b>	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.
<b>Scope of Work / Project Alternatives</b>	<p>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</p> <p>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.</p>



Springwells Water Plant: Enhanced access control 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.

**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 foot print can reduce our vulnerabilities and enhance our response to known threats.

**Primary Driver** 5 - Public Health & Safety



GLWA FY 2021-2025 CIP  
Security Infrastructure Improvements on Water Facilities

341001 CIP#

**PM Weighted  
Score**

Criteria	Score	Comment
Performance (Service Level/Reliability)		
Public Health and Safety		
Public Benefit		
Condition		
Efficiency and Innovation		
Financial		
Operations and Maintenance		
Regulatory (Environmental/Legal)		

**RC Weighted  
Score**

Criteria	Score	Comment
Performance (Service Level/Reliability)		
Operations and Maintenance		
Regulatory (Environmental/Legal)		
Efficiency and Innovation		
Condition		
Public Health and Safety		
Public Benefit		
Financial		



GLWA FY 2021-2025 CIP  
Security Infrastructure Improvements on Water Facilities

341001 CIP#

Phase GLWA Employees Project management Contract NA Status Active  
Title Salaries-Wtr

Phase Budget	<input type="text" value="Water"/>	Cost Allocation	<input type="text" value="CTA"/>								
Phase Status	<input type="text" value="Active"/>	Funding Source	<input type="text" value="Revenue Financed Capital"/>								
Start Date	<input type="text"/>	Fund	<input type="text" value="Improvement &amp; Extension Fun"/>								
End Date	<input type="text"/>	Useful Life >20Yrs?	<input type="text" value="Yes"/>								
<div>Cost Estimation Information</div> <table><tr><td><input type="text"/></td><td>Cost Est. Class</td></tr><tr><td><input type="text"/></td><td>Cost Est. Date</td></tr><tr><td><input type="text"/></td><td>Cost Est. Source</td></tr><tr><td><input type="text"/></td><td>Cost Est. Prepared By</td></tr></table>		<input type="text"/>	Cost Est. Class	<input type="text"/>	Cost Est. Date	<input type="text"/>	Cost Est. Source	<input type="text"/>	Cost Est. Prepared By	Tot. Federal Loan Amount <input type="text" value="\$0"/>	
<input type="text"/>	Cost Est. Class										
<input type="text"/>	Cost Est. Date										
<input type="text"/>	Cost Est. Source										
<input type="text"/>	Cost Est. Prepared By										
<div>Program/Allowance Task Information</div> <table><tr><td>Project Manager</td><td><input type="text"/></td></tr><tr><td>CIP Number</td><td><input type="text"/></td></tr><tr><td>Description</td><td><input type="text"/></td></tr></table>				Project Manager	<input type="text"/>	CIP Number	<input type="text"/>	Description	<input type="text"/>		
Project Manager	<input type="text"/>										
CIP Number	<input type="text"/>										
Description	<input type="text"/>										

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2021	FY20	\$111			2021 CIP
GLWA Salaries CIP2021	FY21	\$110			2021 CIP
GLWA Salaries CIP2021	FY22	\$98			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	111	110	98	0	0	0	0	319	208

Phase Task Dates



GLWA FY 2021-2025 CIP  
Security Infrastructure Improvements on Water Facilities

341001 CIP#

Phase Design and Build

Contract SOQ-135A

Status Active

Title DB-Wtr

Phase Budget Water

Cost Allocation CTA

Phase Status Active

Funding Source Revenue Financed Capital

Start Date

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? Yes

Tot. Federal Loan Amount \$0

Cost Estimation Information

1 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY20	\$3,918			2021 CIP
Design-Build	FY21	\$3,908			2021 CIP
Design-Build	FY22	\$2,505			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	3,918	3,908	2,505	0	0	0	0	10,331	6,413

Phase Task Dates

Phase Task Name	Start Date	End Date	Duration
Pre-Procurement	6/1/2017	8/29/2017	89
Procurement	8/30/2017	2/21/2018	175
Project Execution	2/26/2018	2/19/2022	1454
Project Closeout	2/20/2022	5/20/2022	89



GLWA FY 2021-2025 CIP  
Security Infrastructure Improvements on Water Facilities

341001 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total	
2021	0	0	0	0	4,029	4,018	2,603	0	0	0	0	10,650	6,621	

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Active

**CIP Type** Project

☒ **Project New To CIP**

**Project Engineer/Manager** Michael Lewis

**Director** W. Barnett Jones

**Managing Dept** Security and Integrity

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

**Year Project Added to CIP** 2019

**Budget** Wastewater

**Class Lvl 1** Centralized Services

**Class Lvl 2** Security

**Class Lvl 3** General Purpose

**Location** Multiple Counties

**Fund 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

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.



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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

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

**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 foot print can reduce our vulnerabilities and enhance our response to known threats.

**Primary Driver** 5 - Public Health & Safety



GLWA FY 2021-2025 CIP  
Security Infrastructure Improvements for Wastewater Facilities

341002 CIP#

Phase GLWA Employees Project management

Contract NA

Status Active

Title Salaries-WW

Phase Budget Wastewater

Cost Allocation CTA

Phase Status Active

Funding Source Revenue Financed Capital

Start Date

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? Yes

Tot. Federal Loan Amount \$0

Cost Estimation Information

Cost Est. Class  
Cost Est. Date  
Cost Est. Source  
Cost Est. Prepared By

Program/Allowance Task Information

Project Manager  
CIP Number  
Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2021	FY20	\$169			2021 CIP
GLWA Salaries CIP2021	FY21	\$150			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	169	150	0	0	0	0	0	319	150

Phase Task Dates



GLWA FY 2021-2025 CIP  
Security Infrastructure Improvements for Wastewater Facilities

341002 CIP#

Phase Design and Build

Contract SOQ-135A

Status Active

Title DB-WW

Phase Budget Wastewater

Cost Allocation CTA

Phase Status Active

Funding Source Revenue Financed Capital

Start Date

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? Yes

Tot. Federal Loan Amount \$0

Cost Estimation Information

1 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY20	\$1,410			2021 CIP
Design-Build	FY21	\$901			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	1,410	901	0	0	0	0	0	2,311	901

Phase Task Dates

Phase Task Name	Start Date	End Date	Duration
Pre-Procurement	6/1/2017	8/29/2017	89
Procurement	8/30/2017	2/21/2018	175
Project Execution	2/26/2018	2/19/2021	1089
Project Closeout	2/20/2021	5/20/2021	89



GLWA FY 2021-2025 CIP  
Security Infrastructure Improvements for Wastewater Facilities

341002 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total	
2021	0	0	0	0	1,579	1,051	0	0	0	0	0	2,630	1,051	

- ☒ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Active

Example LED light fixture



**CIP Type** Program

☐ **Project New To CIP**

**Budget** Split

**Class Lvl 1** Centralized Services

**Class Lvl 2** Energy Management

**Class Lvl 3** General Purpose

**Location** Multiple Counties

**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

**Fund and Cost Center**

**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

**Related Project** Re lamp of Conner Creek and part of Northeast for safety issues.

**Primary Driver** 8 - Efficiency

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

**PM Weighted  
Score**

**58**

Criteria	Score	Comment
Condition	4	
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	3	
Operations and Maintenance	1	
Public Health and Safety	3	
Public Benefit	3	
Financial	3	
Efficiency and Innovation	3	

**RC Weighted  
Score**

**60.8**

Criteria	Score	Comment
Condition	3	
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	3	
Operations and Maintenance	4	
Public Health and Safety	3	
Public Benefit	1	
Financial	3	
Efficiency and Innovation	4	





GLWA FY 2021-2025 CIP  
LED Lighting and Lighting Control Improvements

351001 CIP#

Phase GLWA Employees Project management

Contract NA

Status Active

Title GLWA Salaries

Phase Budget Water

Cost Allocation CTA

Phase Status Active

Funding Source Bond Proceeds

Start Date

Fund Construction Bond Fund

End Date

Useful Life >20Yrs? No

Tot. Federal Loan Amount \$0

Cost Estimation Information

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2021	FY19-	\$6			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
6	0	0	0	0	0	0	0	6	0

Phase Task Dates



GLWA FY 2021-2025 CIP  
LED Lighting and Lighting Control Improvements

351001 CIP#

**Phase** not applicable

**Contract** NA

**Status** Closed Out

**Title** Prior Year Actual Expenses

**Phase Budget** Water

**Cost Allocation** CTA

**Phase Status** Closed Out

**Funding Source** Bond Proceeds

**Start Date**

**Fund** Construction Bond Fund

**End Date**

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount** \$0

**Cost Estimation Information**

**Cost Est. Class**

**Cost Est. Date**

**Cost Est. Source**

**Cost Est. Prepared By**

**Program/Allowance Task Information**

**Project Manager**

**CIP Number**

**Description**

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

**Phase Task Dates**



GLWA FY 2021-2025 CIP  
LED Lighting and Lighting Control Improvements

351001 CIP#

**Phase** Design and Build

**Contract** TBD

**Status** Future Planned Start

**Title** DB-WW Lighting Improvements

**Phase Budget** Wastewater

**Cost Allocation** CTA

**Phase Status** Future Planned Start

**Funding Source** Revenue Financed Capital

**Start Date**

**Fund** Improvement & Extension Fun

**End Date**

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount** \$0

**Cost Estimation Information**

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

**Program/Allowance Task Information**

**Project Manager**

**CIP Number**

**Description**

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

**Phase Task Dates**



GLWA FY 2021-2025 CIP  
LED Lighting and Lighting Control Improvements

351001 CIP#

Phase Design and Build

Contract TBD

Status Active

Title Water Facility Lighting Renovations

Phase Budget Water

Cost Allocation CTA

Phase Status Active

Funding Source Revenue Financed Capital

Start Date 5/24/2016

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? No

Tot. Federal Loan Amount

Cost Estimation Information

2 Cost Est. Class  
Cost Est. Date  
Cost Est. Source  
Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Design-Build	FY22	\$248			2021 CIP
Design-Build	FY23	\$252			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	0	0	248	252	0	0	0	500	500

Phase Task Dates

Phase Task Name	Start Date	End Date	Duration
Pre-Procurement	3/31/2021	6/30/2021	91
Procurement	7/1/2021	12/28/2021	180
Project Execution	12/29/2021	10/6/2022	281
Project Closeout	10/7/2022	1/4/2023	89



GLWA FY 2021-2025 CIP  
LED Lighting and Lighting Control Improvements

351001 CIP#

Phase Study

Contract TBD

Status Active

Title Study-WW

Phase Budget Wastewater

Cost Allocation CTA

Phase Status Active

Funding Source Revenue Financed Capital

Start Date

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? No

Tot. Federal Loan Amount \$0

Cost Estimation Information

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
LED Lighting and Lighting Control Improvements

351001 CIP#

Phase Study

Contract TBD

Status Active

Title Study-Wtr

Phase Budget Water

Cost Allocation CTA

Phase Status Active

Funding Source Revenue Financed Capital

Start Date

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? No

Tot. Federal Loan Amount \$0

Cost Estimation Information

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY21	\$50			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	0	50	0	0	0	0	0	50	50

Phase Task Dates

Phase Task Name	Start Date	End Date	Duration
Pre-Procurement	7/1/2019	9/28/2019	89
Procurement	9/29/2019	6/30/2020	275
Project Execution	7/1/2020	3/30/2021	272
Project Closeout	3/31/2021	6/28/2021	89





GLWA FY 2021-2025 CIP  
LED Lighting and Lighting Control Improvements

351001 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0	6	0	50	248	252	0	0	0	556	550
2020	0	0		250	250	0	0	0	0	0	0	500	250
2019	0		2	1,172	1,600					0	0	2,774	2,772
2018			933	933	933				0	0	0	2,799	2,799

**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

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Closed

**CIP Type** Allowance

☐ **Project New To CIP**

Make a Plan



**Budget** Split

**Class Lvl 1** Centralized Services

**Class Lvl 2** Programs

**Class Lvl 3** Programs

**Location** Multiple Counties

**Fund and Cost Center** Wastewater - 5421-892111

**Project Engineer/Manager** Gaylor Johnson / Dan Edwards

**Director** Dan Alford

**Managing Dept** WW Design Eng

**Date Original Business Case Prepared**

**Year Project Added to CIP** 2002

**Problem Statement** The purpose of this proposed contract is to provide implementation assistance and related services on a task order basis to support the GLWA.

**Scope of Work / Project Alternatives** This project provides for multi-discipline Engineering services on an "as-needed basis" to support GLWA's Water & Sewer Systems. The purpose of this proposed contract is to provide implementation assistance and related services on a task order basis to support the GLWA. The services provided under this contract include assistance in capital projects definition and planning, design and construction phase procurement assistance and monitoring; third party contract administration/oversight assistance/scheduling services; claims/changes analysis and resolution; technical training; value engineering (VE) services on selected design projects; develop engineering study reports; identify minimum requirements, scope of work, basis of process design, performance criteria, minimum standards of quality, and preliminary design and oversight services for design/build contracts; proposal analysis assistance; engineering forensic analysis, and additional program support services.

**Other Important Info** Challenges: N/A - Active

**Related Project** CS-1433, CS-166, CS-189

**Primary Driver** N/A - Active

**Driver Explanation** N/A - Active



## As-needed CIP Implementation Assistance and Related Services

**Phase** Study and Design and Construction Assistance**Contract** CS-166**Status** Cancelled**Title** CS-166 WW - Capital Improvement Program (CIP) Implementation Assistance and Related Services

Services on proposed GLWA Contract No. CS 166 will be provided on a task order basis, over a three (3) year period. A task order contract is a contract for services that does not procure or specify a firm quantity of services (other than a minimum or maximum quantity) and that provides for the issuance of orders for the performance of tasks during the period of the contract. The services provided under this contract support GLWA in consistently honoring the commitments it makes to regulatory agencies, customers, and others. The services provided by the consultant will supplement existing GLWA staff or consultant activities, which are focused on procuring and administering contracts for individual capital projects. The consultant secured for this contract will act as an Agent for GLWA. For that reason, the consultant is precluded from bidding/proposing as a prime or sub-contractor on any GLWA projects that the consultant participates in the scope development for the duration of this contract. GLWA Contract No. CS-166 will replace CS-1433, As-Needed Capital Improvement Program (CIP) Implementation Assistance and Related Services, which expired on July 24, 2017. Contract No. CS-189, Job Order Contracting – Project Delivery Assistance, scheduled to expire July 24, 2018, was executed as a short term solution to assure tasks under CS-1433 were completed seamlessly, allowing time to competitively bid the request for services. GLWA required these consulting services contract, to provide specialized expertise in rapid and flexible project delivery methods such as design/build, program management, and job order contracting.

**Phase Budget** Wastewater**Phase Status** Cancelled**Start Date****End Date****Cost Allocation** CTA**Funding Source** Revenue Financed Capital**Fund** Improvement & Extension Fun**Useful Life >20Yrs?** No**Tot. Federal Loan Amount****Cost Estimation Information**

1

**Cost Est. Class****Cost Est. Date****Cost Est. Source****Cost Est. Prepared By****Program/Allowance Task Information****Project Manager** Ali Khraizat**CIP Number** 380402**Description**

The purpose of this proposed contract is to provide implementation assistance and related services on a task order basis to support the GLWA. The services provided under this contract include assistance in capital projects definition and planning, design and construction phase procurement assistance



As-needed CIP Implementation Assistance and Related Services

and monitoring; third party contract administration/oversight assistance/scheduling services; claims/changes analysis and resolution; technical training; value engineering (VE) services on selected design projects; develop engineering study reports; identify minimum requirements, scope of work, basis of process design, performance criteria, minimum standards of quality, and preliminary design and oversight services for design/build contracts; proposal analysis assistance; engineering forensic analysis, and additional program support services.  
Projected Expenses based upon historical percentage of use for CIP projects split 50/50 for water & Wastewater.

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-needed CIP Implementation Assistance and Related Services

380400 CIP#

Phase GLWA Employees Project management Contract NA Status Cancelled  
Title GLWA Salaries Wtr

Phase Budget	Water	Cost Allocation	CTA								
Phase Status	Cancelled	Funding Source	Revenue Financed Capital								
Start Date		Fund	Improvement & Extension Fun								
End Date		Useful Life >20Yrs?	No								
<div>Cost Estimation Information</div> <table><tr><td>1</td><td>Cost Est. Class</td></tr><tr><td></td><td>Cost Est. Date</td></tr><tr><td></td><td>Cost Est. Source</td></tr><tr><td></td><td>Cost Est. Prepared By</td></tr></table>		1	Cost Est. Class		Cost Est. Date		Cost Est. Source		Cost Est. Prepared By	Tot. Federal Loan Amount	\$0
1	Cost Est. Class										
	Cost Est. Date										
	Cost Est. Source										
	Cost Est. Prepared By										
<div>Program/Allowance Task Information</div> <table><tr><td>Project Manager</td><td></td></tr><tr><td>CIP Number</td><td></td></tr><tr><td>Description</td><td></td></tr></table>				Project Manager		CIP Number		Description			
Project Manager											
CIP Number											
Description											

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total	
	0							0	0	

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-needed CIP Implementation Assistance and Related Services

380400 CIP#

**Phase** not applicable      **Contract** NA      **Status** Closed Out  
**Title** Prior Year Actual Expenses-Wtr

As needed contract. Accumulated task expenditures reclassified to projects or O&M - \$(-105K)

<b>Phase Budget</b>	<input type="text" value="Water"/>	<b>Cost Allocation</b>	<input type="text" value="CTA"/>								
<b>Phase Status</b>	<input type="text" value="Closed Out"/>	<b>Funding Source</b>	<input type="text"/>								
<b>Start Date</b>	<input type="text"/>	<b>Fund</b>	<input type="text"/>								
<b>End Date</b>	<input type="text"/>	<b>Useful Life &gt;20Yrs?</b>	<input type="text" value="No"/>								
<div><div><b>Cost Estimation Information</b></div><table><tr><td><input type="text" value="1"/></td><td>Cost Est. Class</td></tr><tr><td><input type="text"/></td><td>Cost Est. Date</td></tr><tr><td><input type="text"/></td><td>Cost Est. Source</td></tr><tr><td><input type="text"/></td><td>Cost Est. Prepared By</td></tr></table></div>		<input type="text" value="1"/>	Cost Est. Class	<input type="text"/>	Cost Est. Date	<input type="text"/>	Cost Est. Source	<input type="text"/>	Cost Est. Prepared By	<b>Tot. Federal Loan Amount</b>	<input type="text"/>
<input type="text" value="1"/>	Cost Est. Class										
<input type="text"/>	Cost Est. Date										
<input type="text"/>	Cost Est. Source										
<input type="text"/>	Cost Est. Prepared By										
<div><div><b>Program/Allowance Task Information</b></div><table><tr><td><b>Project Manager</b></td><td><input type="text"/></td></tr><tr><td><b>CIP Number</b></td><td><input type="text"/></td></tr><tr><td><b>Description</b></td><td><input type="text"/></td></tr></table></div>				<b>Project Manager</b>	<input type="text"/>	<b>CIP Number</b>	<input type="text"/>	<b>Description</b>	<input type="text"/>		
<b>Project Manager</b>	<input type="text"/>										
<b>CIP Number</b>	<input type="text"/>										
<b>Description</b>	<input type="text"/>										

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

Phase Task Dates



GLWA FY 2021-2025 CIP

As-needed CIP Implementation Assistance and Related Services

380400 CIP#

Phase not applicable

Contract NA

Status Closed Out

Title Prior Year Actual Expenses-WW

As needed contract. Accumulated task expenditures reclassified to projects or O&M - \$(-105K)

Phase Budget	Wastewater	Cost Allocation	CTA
Phase Status	Closed Out	Funding Source	
Start Date		Fund	
End Date		Useful Life >20Yrs?	No
Cost Estimation Information		Tot. Federal Loan Amount	
<div>1</div>	Cost Est. Class	Program/Allowance Task Information	
	Cost Est. Date	Project Manager	
	Cost Est. Source	CIP Number	
	Cost Est. Prepared By	Description	

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

Phase Task Dates





## As-needed CIP Implementation Assistance and Related Services

**Phase** Study and Design and Construction Management**Contract** CS-1433**Status** Closed Out**Title** CS-1433 As-needed CIP Implementation Assistance and Related Services**Phase Budget** Wastewater**Cost Allocation** CTA**Phase Status** Closed Out**Funding Source** Revenue Financed Capital**Start Date** 3/24/2006**Fund** Improvement & Extension Fun**End Date** 7/24/2017**Useful Life >20Yrs?** No**Tot. Federal Loan Amount****Cost Estimation Information** **Cost Est. Class** **Cost Est. Date** **Cost Est. Source** **Cost Est. Prepared By****Program/Allowance Task Information****Project Manager** **CIP Number** 380401**Description** **Phase Total Expenses By FY (All figures are in \$1,000's)****Phase Task Dates**



## As-needed CIP Implementation Assistance and Related Services

**Phase** Study and Design and Construction Assistance**Contract** CS-166**Status** Cancelled**Title** CS-166 Wtr - Capital Improvement Program (CIP) Implementation Assistance and Related Services

Services on proposed GLWA Contract No. CS 166 will be provided on a task order basis, over a three (3) year period. A task order contract is a contract for services that does not procure or specify a firm quantity of services (other than a minimum or maximum quantity) and that provides for the issuance of orders for the performance of tasks during the period of the contract. The services provided under this contract support GLWA in consistently honoring the commitments it makes to regulatory agencies, customers, and others. The services provided by the consultant will supplement existing GLWA staff or consultant activities, which are focused on procuring and administering contracts for individual capital projects. The consultant secured for this contract will act as an Agent for GLWA. For that reason, the consultant is precluded from bidding/proposing as a prime or sub-contractor on any GLWA projects that the consultant participates in the scope development for the duration of this contract. GLWA Contract No. CS-166 will replace CS-1433, As-Needed Capital Improvement Program (CIP) Implementation Assistance and Related Services, which expired on July 24, 2017. Contract No. CS-189, Job Order Contracting – Project Delivery Assistance, scheduled to expire July 24, 2018, was executed as a short term solution to assure tasks under CS-1433 were completed seamlessly, allowing time to competitively bid the request for services. GLWA required these consulting services contract, to provide specialized expertise in rapid and flexible project delivery methods such as design/build, program management, and job order contracting.

**Phase Budget** Water**Phase Status** Cancelled**Start Date****End Date****Cost Allocation** CTA**Funding Source** Revenue Financed Capital**Fund** Improvement & Extension Fun**Useful Life >20Yrs?** No**Tot. Federal Loan Amount****Cost Estimation Information**

1

**Cost Est. Class****Cost Est. Date****Cost Est. Source****Cost Est. Prepared By****Program/Allowance Task Information****Project Manager** Grant Gartrell**CIP Number** 380402**Description**

The purpose of this proposed contract is to provide implementation assistance and related services on a task order basis to support the GLWA. The services provided under this contract include assistance in capital projects definition and planning, design and construction phase procurement assistance and monitoring; third party contract



As-needed CIP Implementation Assistance and Related Services

administration/oversight assistance/scheduling services; claims/changes analysis and resolution; technical training; value engineering (VE) services on selected design projects; develop engineering study reports; identify minimum requirements, scope of work, basis of process design, performance criteria, minimum standards of quality, and preliminary design and oversight services for design/build contracts; proposal analysis assistance; engineering forensic analysis, and additional program support services.  
Projected Expenses based upon historical percentage of use for CIP projects split 50/50 for water & Wastewater.

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-needed CIP Implementation Assistance and Related Services

380400 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0		0							0	0
2020	0	0	0	0	0	0	0	0	0	0	0	0	0
2019	0	210	500	1,606	1,606	1,606				0	0	5,528	4,818
2018	4770	1,400	100						0	0	0	6,270	100

Description of CIP Changes

Not being used by WRRF Design for PMA services instead the PMA services are being properly allocated to their assigned CIP's. For non CIP related work the WRRF design engineering group is using O&M budget.

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Closed

**CIP Type** Allowance

☐ **Project New To CIP**

Example of pipe being  
laid



**Budget** Split

**Class Lvl 1** Centralized Services

**Class Lvl 2** Programs

**Class Lvl 3** Programs

**Location** Multiple Counties

**Project Engineer/Manager** Beena Chackunkal

**Director** Dan Alford

**Managing Dept** WW Design Eng

**Date Original Business Case Prepared**

**Year Project Added to CIP** 2004

**Fund and Cost Center**

**Problem Statement** Various engineering as needed services for design and replacement of aging water and sewer lines.

**Scope of Work / Project Alternatives** This project involves designing water main and lateral sewer replacement projects for aging and dysfunctional water mains and sewers throughout the system and several projects at the WRRF under different tasks on an as-needed basis. The work also includes civil, structural, architectural, hydraulics, mechanical, electrical, surveying, instrumentation and piping design services.

**Primary Driver** N/A - Active

**Driver Explanation** N/A - Active



GLWA FY 2021-2025 CIP  
Wastewater General Engineering Services on an As-needed Basis

380500 CIP#

**PM Weighted  
Score**

**20**

Criteria	Score	Comment
Performance (Service Level/Reliability)	1	
Regulatory (Environmental/Legal)	1	
Public Benefit	1	
Efficiency and Innovation	1	
Financial	1	
Operations and Maintenance	1	
Public Health and Safety	1	
Condition	1	

**RC Weighted  
Score**

Criteria	Score	Comment
Performance (Service Level/Reliability)		
Efficiency and Innovation		
Public Benefit		
Operations and Maintenance		
Regulatory (Environmental/Legal)		
Public Health and Safety		
Financial		
Condition		



GLWA FY 2021-2025 CIP  
Wastewater General Engineering Services on an As-needed Basis

380500 CIP#

**Phase** GLWA Employees Project management

**Contract** NA

**Status** Closed Out

**Title** GLWA Salaries

**Phase Budget** Water

**Cost Allocation** CTA

**Phase Status** Closed Out

**Funding Source** Revenue Financed Capital

**Start Date**

**Fund** Improvement & Extension Fun

**End Date**

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount** \$0

**Cost Estimation Information**

3 **Cost Est. Class**

**Cost Est. Date**

**Cost Est. Source**

**Cost Est. Prepared By**

**Program/Allowance Task Information**

**Project Manager**

**CIP Number**

**Description**

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2021	FY19-	\$148			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
148	0	0	0	0	0	0	0	148	0

**Phase Task Dates**



GLWA FY 2021-2025 CIP  
Wastewater General Engineering Services on an As-needed Basis

380500 CIP#

**Phase** not applicable

**Contract** NA

**Status** Closed Out

**Title** Prior Year Actual Expenses-Wtr

As needed contract. Accumulated task expenditures reclassified to projects or O&M - \$(-132K)			
Phase Budget	Water	Cost Allocation	CTA
Phase Status	Closed Out	Funding Source	
Start Date		Fund	
End Date		Useful Life >20Yrs?	
Tot. Federal Loan Amount			
<b>Cost Estimation Information</b>			
	1	Cost Est. Class	
		Cost Est. Date	
		Cost Est. Source	
		Cost Est. Prepared By	
<b>Program/Allowance Task Information</b>			
Project Manager			
CIP Number			
Description			

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

Phase Task Dates





GLWA FY 2021-2025 CIP  
Wastewater General Engineering Services on an As-needed Basis

380500 CIP#

Phase not applicable

Contract NA

Status Closed Out

Title Prior Year Actual Expenses-WW

\$148K FY18 (380501) Backed out due to reclassification to O&M

Phase Budget Wastewater

Cost Allocation CTA

Phase Status Closed Out

Funding Source

Start Date

Fund

End Date

Useful Life >20Yrs?

Tot. Federal Loan Amount

Cost Estimation Information

1 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
Wastewater General Engineering Services on an As-needed Basis

380500 CIP#

**Phase** Study and Design and Construction Assistance

**Contract** CS-1499

**Status** Closed Out

**Title** CS-1499 Wastewater General Engineering Services on an As-needed Basis (CS-1499 METCO)

380501 - Currently most of the tasks are for Wastewater projects.

**Phase Budget** Wastewater

**Cost Allocation** CTA

**Phase Status** Closed Out

**Funding Source** Revenue Financed Capital

**Start Date** 5/12/2010

**Fund** Improvement & Extension Fun

**End Date** 6/2/2018

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount**

**Cost Estimation Information**

2 Cost Est. Class

Cost Est. Date

Contract Cost Est. Source

Cost Est. Prepared By

**Program/Allowance Task Information**

**Project Manager** Ali Khraizat

**CIP Number** 380501

**Description**

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

**Phase Task Dates**



GLWA FY 2021-2025 CIP  
Wastewater General Engineering Services on an As-needed Basis

380500 CIP#

Phase Design

Contract NA

Status Closed Out

Title Department-wide General Engineering Services on an As-needed Basis

Phase Budget Water

Cost Allocation CTA

Phase Status Closed Out

Funding Source Revenue Financed Capital

Start Date 5/12/2010

Fund Improvement & Extension Fun

End Date 6/2/2018

Useful Life >20Yrs? No

Tot. Federal Loan Amount \$0

Cost Estimation Information

1 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total	
-148	0	0	0	0	0	0	0	-148	0	

Phase Task Dates



GLWA FY 2021-2025 CIP  
Wastewater General Engineering Services on an As-needed Basis

380500 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	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
2019	0	282	114	114	91					0	0	601	205
2018	10064	228	228						0	0	0	10,520	228

Description of CIP  
Changes

CS-1499 has been closed remaining tasks to be complete under CS-292.

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Active

**CIP Type** Allowance

☐ **Project New To CIP**



**Project Engineer/Manager** Grant Gartrell

**Director** Grant Gartrell

**Managing Dept** Water Eng

**Date Original Business Case Prepared**

**Year Project Added to CIP** 2004

**Budget** Split

**Class Lvl 1** Centralized Services

**Class Lvl 2** Programs

**Class Lvl 3** Programs

**Location** Multiple Counties

**Fund and Cost Center**

**Problem Statement** Allowance for the study and design of critical projects throughout the system prior to bidding and construction.

**Scope of Work / Project Alternatives** As-needed engineering services for water and wastewater engineering.

**Other Important Info** Challenges: N/A - Active

**Primary Driver** N/A - Active

**Driver Explanation** N/A - Active



GLWA FY 2021-2025 CIP  
As-Needed General Engineering Services

380600 CIP#

**PM Weighted  
Score**

**39.8**

Criteria	Score	Comment
Performance (Service Level/Reliability)	3	
Regulatory (Environmental/Legal)	1	
Public Benefit	1	
Efficiency and Innovation	1	
Financial	1	
Operations and Maintenance	2	
Public Health and Safety	3	
Condition	3	

**RC Weighted  
Score**

Criteria	Score	Comment
Condition		
Financial		
Regulatory (Environmental/Legal)		
Public Benefit		
Operations and Maintenance		
Public Health and Safety		
Efficiency and Innovation		
Performance (Service Level/Reliability)		



GLWA FY 2021-2025 CIP  
As-Needed General Engineering Services

380600 CIP#

Phase GLWA Employees Project management Contract NA Status Active  
Title GLWA Salaries

Phase Budget

Phase Status

Start Date

End Date

Cost Allocation

Funding Source

Fund

Useful Life >20Yrs?

Tot. Federal Loan Amount

**Cost Estimation Information**

<input type="text" value="5"/>	Cost Est. Class
<input type="text"/>	Cost Est. Date
<input type="text"/>	Cost Est. Source
<input type="text"/>	Cost Est. Prepared By

**Program/Allowance Task Information**

Project Manager

CIP Number

Description

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total	
-51	0	0	0	0	0	0	0	-51	0	

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-Needed General Engineering Services

380600 CIP#

Phase not applicable Contract NA Status Closed Out

Title Prior Year Actual Expenses-WW

\$157K FY18 (380601) Backed out to reconcile LTD

Phase BudgetWastewater

Phase StatusClosed Out

Start Date

End Date

Cost AllocationCTA

Funding Source

Fund

Useful Life >20Yrs?

Tot. Federal Loan Amount

Cost Estimation Information

1

Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Phase Task Dates





GLWA FY 2021-2025 CIP  
As-Needed General Engineering Services

380600 CIP#

Phase Design

Contract CS-1432A

Status Active

Title CS-1432A Water As-Needed Engineering Services

380601

Phase Budget Water

Cost Allocation CTA

Phase Status Active

Funding Source Revenue Financed Capital

Start Date 1/23/2008

Fund Improvement & Extension Fun

End Date 12/12/2018

Useful Life >20Yrs? No

Tot. Federal Loan Amount

Cost Estimation Information

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager Beena Chackunkal

CIP Number 380601

Description Alfred Benesh

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY19-	\$56			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
56	0	0	0	0	0	0	0	56	0

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-Needed General Engineering Services

380600 CIP#

Phase Design Contract CS-1432A Status Active

Title CS-1432A Wastewater As-Needed Engineering Services

380601	
Phase Budget	Wastewater
Phase Status	Active
Start Date	1/23/2008
End Date	12/12/2018
Cost Allocation	CTA
Funding Source	Revenue Financed Capital
Fund	Improvement & Extension Fun
Useful Life >20Yrs?	No
Tot. Federal Loan Amount	
Cost Estimation Information	
5	Cost Est. Class
	Cost Est. Date
	Cost Est. Source
	Cost Est. Prepared By
Program/Allowance Task Information	
Project Manager	Beena Chackunkal
CIP Number	380601
Description	Alfred Benesh

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-Needed General Engineering Services

380600 CIP#

Phase not applicable Contract NA Status Closed Out

Title Prior Year Actual Expenses-Wtr

As needed contract. Accumulated task expenditures reclassified to projects or O&M - \$(-157K)

Phase Budget	<input type="text" value="Water"/>	Cost Allocation	<input type="text" value="CTA"/>
Phase Status	<input type="text" value="Closed Out"/>	Funding Source	<input type="text"/>
Start Date	<input type="text"/>	Fund	<input type="text"/>
End Date	<input type="text"/>	Useful Life >20Yrs?	<input type="text"/>
		Tot. Federal Loan Amount	<input type="text"/>

Cost Estimation Information

<input type="text" value="1"/>	Cost Est. Class
<input type="text"/>	Cost Est. Date
<input type="text"/>	Cost Est. Source
<input type="text"/>	Cost Est. Prepared By

Program/Allowance Task Information

Project Manager	<input type="text"/>
CIP Number	<input type="text"/>
Description	<input type="text"/>

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-Needed General Engineering Services

380600 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0	5	0	0	0	0	0	0	0	5	0
2020	0	0	2	94	0	0	0	0	0	0	0	96	0
2019	0	316	406	327	50					0	0	1,099	377
2018	14012	446	436	386					0	0	0	15,280	822

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Active

**CIP Type** Allowance

☐ **Project New To CIP**

Example of testing  
being performed



**Project Engineer/Manager** Peter Fromm

**Director** Grant Gartrell

**Managing Dept** Water Eng

**Date Original Business Case Prepared**

**Year Project Added to CIP** 2006

**Budget** Water

**Class Lvl 1** Centralized Services

**Class Lvl 2** Programs

**Class Lvl 3** Programs

**Location** Multiple Counties

**Fund and Cost Center**

**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

**Primary Driver** Varies



GLWA FY 2021-2025 CIP  
As-Needed Geotechnical and Related Engineering Services

380700 CIP#

PM Weighted  
Score

20

Criteria	Score	Comment
Regulatory (Environmental/Legal)	1	
Performance (Service Level/Reliability)	1	
Condition	1	
Public Benefit	1	
Operations and Maintenance	1	
Efficiency and Innovation	1	
Public Health and Safety	1	
Financial	1	



GLWA FY 2021-2025 CIP  
As-Needed Geotechnical and Related Engineering Services

380700 CIP#

Phase not applicable

Contract NA

Status Closed Out

Title Prior Year Actual Expenses-Wtr

As needed contract. Accumulated task expenditures reclassified to projects or O&M (\$-115K)

Phase Budget Water

Cost Allocation CTA

Phase Status Closed Out

Funding Source

Start Date

Fund

End Date

Useful Life >20Yrs?

Tot. Federal Loan Amount

Cost Estimation Information

1

Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-Needed Geotechnical and Related Engineering Services

380700 CIP#

**Phase** Design & Construction Assistance

**Contract** CS-259

**Status** Active

**Title** Design/Construction Administration

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

**Phase Budget** Water

**Cost Allocation** CTA

**Phase Status** Active

**Funding Source** Revenue Financed Capital

**Start Date** 4/8/2009

**Fund** Improvement & Extension Fun

**End Date** 4/8/2021

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount**

**Cost Estimation Information**

**Cost Est. Class**  
 **Cost Est. Date**  
 **Cost Est. Source**  
 **Cost Est. Prepared By**

**Program/Allowance Task Information**

**Project Manager** Grant Gartrell

**CIP Number** 380701

**Description** Engineering Services, Concrete Testing and Soil Borings (CS-1488)

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Engineering Services	FY20	\$1,415			2021 CIP
Engineering Services	FY21	\$715			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	1,415	715	0	0	0	0	0	2,130	715

**Phase Task Dates**

Phase Task Name	Start Date	End Date	Duration
Project Execution	6/1/2016	1/1/2021	1675
Project Closeout	1/2/2021	4/2/2021	90





GLWA FY 2021-2025 CIP  
As-Needed Geotechnical and Related Engineering Services

380700 CIP#

**Phase** GLWA Employees Project management

**Contract** NA

**Status** Active

**Title** GLWA Salaries

**Phase Budget** Wastewater

**Cost Allocation** CTA

**Phase Status** Active

**Funding Source** Revenue Financed Capital

**Start Date**

**Fund** Improvement & Extension Fun

**End Date**

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount** \$0

**Cost Estimation Information**

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

**Program/Allowance Task Information**

**Project Manager**

**CIP Number**

**Description**

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

**Phase Task Dates**



GLWA FY 2021-2025 CIP  
As-Needed Geotechnical and Related Engineering Services

380700 CIP#

Phase not applicable

Contract NA

Status Closed Out

Title Prior Year Actual Expenses-WW

Phase Budget Wastewater

Cost Allocation CTA

Phase Status Closed Out

Funding Source

Start Date

Fund

End Date

Useful Life >20Yrs?

Tot. Federal Loan Amount

Cost Estimation Information

1 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
As-Needed Geotechnical and Related Engineering Services

380700 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0	0	1,415	715	0	0	0	0	0	2,130	715
2020	0	0	0	620	0	0	0	0	0	0	0	620	0
2019	0	230	238	477	477	477	238			0	0	2,137	1,669
2018		650	907	333	333	333			0	0	0	2,556	1,906

**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

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Closed

**CIP Type** Allowance

☐ **Project New To CIP**



**Budget** Split

**Class Lvl 1** Centralized Services

**Class Lvl 2** Programs

**Class Lvl 3** Programs

**Location** Multiple Counties

**Project Engineer/Manager** Grant Gartrell

**Director** Grant Gartrell

**Managing Dept** Water Eng

**Date Original Business Case Prepared**

**Year Project Added to CIP** 2007

**Fund and Cost Center**

**Problem Statement** As Needed geotechnical consulting services.

**Scope of Work / Project Alternatives** The work includes consultant services for geotechnical work on as-needed basis. The work also provides for additional engineering/ technical services as requested.

**Primary Driver**



GLWA FY 2021-2025 CIP  
Geotechnical and Related Services on an As-Needed Basis

380800 CIP#

Phase not applicable

Contract NA

Status Closed Out

Title Prior Year Actual Expenses-Wtr

As needed contract. Accumulated task expenditures reclassified to projects or O&M - \$(-82K)

Phase Budget Water

Cost Allocation CTA

Phase Status Closed Out

Funding Source

Start Date

Fund

End Date

Useful Life >20Yrs? No

Tot. Federal Loan Amount

Cost Estimation Information

1

Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
Geotechnical and Related Services on an As-Needed Basis

380800 CIP#

Phase Design

Contract CS-1490

Status Closed Out

Title CS-1490: NTH Consultants: As-Needed Geotechnical Services:Wtr

Phase Budget Water

Cost Allocation CTA

Phase Status Closed Out

Funding Source Revenue Financed Capital

Start Date 1/14/2010

Fund Improvement & Extension Fun

End Date 7/14/2016

Useful Life >20Yrs? No

Tot. Federal Loan Amount

Cost Estimation Information

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager Grant Gartrell

CIP Number 380801

Description As-Needed Geotechnical Services

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
Geotechnical and Related Services on an As-Needed Basis

380800 CIP#

Phase Design

Contract CS-1490

Status Closed Out

Title CS-1490: NTH Consultants: As-Needed Geotechnical Services:WW

Phase Budget Wastewater

Cost Allocation CTA

Phase Status Closed Out

Funding Source Revenue Financed Capital

Start Date 1/14/2010

Fund Improvement & Extension Fun

End Date 7/14/2016

Useful Life >20Yrs? No

Tot. Federal Loan Amount

Cost Estimation Information

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager Grant Gartrell

CIP Number 380801

Description As-Needed Geotechnical Services

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
Geotechnical and Related Services on an As-Needed Basis

380800 CIP#

Phase GLWA Employees Project management

Contract NA

Status Closed Out

Title GLWA Salaries

Phase Budget Water

Cost Allocation CTA

Phase Status Closed Out

Funding Source Revenue Financed Capital

Start Date

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? No

Tot. Federal Loan Amount \$0

Cost Estimation Information

5 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total	
	0							0	0	

Phase Task Dates





GLWA FY 2021-2025 CIP  
Geotechnical and Related Services on an As-Needed Basis

380800 CIP#

**Phase** not applicable

**Contract** NA

**Status** Closed Out

**Title** Prior Year Actual Expenses-WW

\$82K FY18 (380801) Backed out to reconcile LTD

**Phase Budget** Wastewater

**Cost Allocation** CTA

**Phase Status** Closed Out

**Funding Source**

**Start Date**

**Fund**

**End Date**

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount**

**Cost Estimation Information**

**Cost Est. Class**

**Cost Est. Date**

**Cost Est. Source**

**Cost Est. Prepared By**

**Program/Allowance Task Information**

**Project Manager**

**CIP Number**

**Description**

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

**Phase Task Dates**



GLWA FY 2021-2025 CIP  
Geotechnical and Related Services on an As-Needed Basis

380800 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0		0							0	0
2020	0	0	0	0							0	0	0
2019	0	164								0	0	164	0
2018	2441	132							0	0	0	2,573	0

Description of CIP  
Changes

The contract (Contract CS-1490) associated with this CIP is closed out. GAG 8/8/2019

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☐ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Closed

**CIP Type** Allowance

☐ **Project New To CIP**

Analytical Lab



**Budget** Wastewater

**Class Lvl 1** Centralized Services

**Class Lvl 2** Programs

**Class Lvl 3** Programs

**Location** Multiple Counties

**Project Engineer/Manager** Beena Chackunkal

**Director** Dan Alford

**Managing Dept** WW Design Eng

**Date Original Business Case Prepared**

**Year Project Added to CIP** 2007

**Fund and Cost Center**

**Problem Statement** As needed multi-discipline engineering services for various small scale projects at WTP and WRRF.

**Scope of Work / Project Alternatives** This project provides for rapid design turn-around for a variety of projects on an as-needed basis providing multi-disciplinary professional services including meter pit improvement services.

**Other Important Info** Challenges: N/A - Active

**Primary Driver** N/A - Active

**Driver Explanation** N/A - Active

**PM Weighted  
Score**

**100**

Criteria	Score	Comment
Performance (Service Level/Reliability)	5	
Regulatory (Environmental/Legal)	5	
Public Benefit	5	
Efficiency and Innovation	5	
Financial	5	
Operations and Maintenance	5	
Public Health and Safety	5	
Condition	5	

**RC Weighted  
Score**

Criteria	Score	Comment
Financial		
Performance (Service Level/Reliability)		
Condition		
Public Health and Safety		
Efficiency and Innovation		
Public Benefit		
Operations and Maintenance		
Regulatory (Environmental/Legal)		



GLWA FY 2021-2025 CIP  
General Engineering Services

380900 CIP#

Phase not applicable Contract NA Status Closed Out

Title Prior Year Actual Expenses-Wtr

As needed contract. Accumulated task expenditures reclassified to projects or O&M - (\$-75K)

Phase Budget	Water	Cost Allocation	CTA
Phase Status	Closed Out	Funding Source	
Start Date		Fund	
End Date		Useful Life >20Yrs?	
		Tot. Federal Loan Amount	

Cost Estimation Information

	1	Cost Est. Class
		Cost Est. Date
		Cost Est. Source
		Cost Est. Prepared By

Program/Allowance Task Information

Project Manager	
CIP Number	
Description	

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
General Engineering Services

380900 CIP#

Phase Study and Design and Construction Assistance

Contract NA

Status Closed Out

Title General Engineering Services

Phase Budget	Water
Phase Status	Closed Out
Start Date	3/27/2008
End Date	3/27/2018

Cost Allocation	CTA
Funding Source	Revenue Financed Capital
Fund	Improvement & Extension Fun
Useful Life >20Yrs?	No

Tot. Federal Loan Amount	\$0
--------------------------	-----

Cost Estimation Information	
1	Cost Est. Class
	Cost Est. Date
	Cost Est. Source
	Cost Est. Prepared By

Program/Allowance Task Information

Project Manager	
CIP Number	
Description	

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
General Engineering Services

380900 CIP#

**Phase** Study and Design and Construction Assistance      **Contract** CS-1481      **Status** Closed Out  
**Title** CS-1481 Sigma General Engineering Services

Currently most of the projects are for Wastewater Services.

<b>Phase Budget</b>	<input type="text" value="Wastewater"/>	<b>Cost Allocation</b>	<input type="text" value="CTA"/>
<b>Phase Status</b>	<input type="text" value="Closed Out"/>	<b>Funding Source</b>	<input type="text" value="Revenue Financed Capital"/>
<b>Start Date</b>	<input type="text" value="3/27/2008"/>	<b>Fund</b>	<input type="text" value="Improvement &amp; Extension Fun"/>
<b>End Date</b>	<input type="text" value="3/27/2018"/>	<b>Useful Life &gt;20Yrs?</b>	<input type="text" value="No"/>

**Tot. Federal Loan Amount**

**Cost Estimation Information**

<input type="text" value="2"/>	<b>Cost Est. Class</b>
<input type="text"/>	<b>Cost Est. Date</b>
<input type="text" value="Contract"/>	<b>Cost Est. Source</b>
<input type="text"/>	<b>Cost Est. Prepared By</b>

**Program/Allowance Task Information**

<b>Project Manager</b>	<input type="text" value="Beena Chackunkal"/>
<b>CIP Number</b>	<input type="text" value="380901"/>
<b>Description</b>	<input type="text"/>

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

Phase Task Dates



GLWA FY 2021-2025 CIP  
General Engineering Services

380900 CIP#

Phase not applicable Contract NA Status Closed Out

Title Prior Year Actual Expenses-WW

\$63K FY18 (380901) Backed out to reconcile LTD

Phase BudgetWastewater

Phase StatusClosed Out

Start Date

End Date

Cost AllocationCTA

Funding Source

Fund

Useful Life >20Yrs?

Tot. Federal Loan Amount

Cost Estimation Information

1

Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Phase Task Dates





GLWA FY 2021-2025 CIP  
General Engineering Services

380900 CIP#

Phase GLWA Employees Project management

Contract NA

Status Closed Out

Title GLWA Salaries

Phase Budget

Phase Status

Start Date

End Date

Cost Allocation

Funding Source

Fund

Useful Life >20Yrs?

Tot. Federal Loan Amount

**Cost Estimation Information**

Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total	
	0							0	0	

Phase Task Dates



GLWA FY 2021-2025 CIP  
General Engineering Services

380900 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0		0							0	0
2020	0	0	0	0	0	0	0	0	0	0	0	0	0
2019	0	138	572	916	425					0	0	2,051	1,341
2018	28	1,250	1,154						0	0	0	2,432	1,154

Description of CIP Changes

CS-1481 has been closed out and the remaining work was transferred to CS-301.

- ☐ Innovation
- ☐ Conceptual WW MP
- ☐ Water MP Right Sizing
- ☒ Reliability/Redundancy
- ☐ NEWTP Repurposing

**Project Status** Future Planned

**CIP Type** Program

☐ **Project New To CIP**

Example of an electric meter



**Budget** Split

**Class Lvl 1** Centralized Services

**Class Lvl 2** Programs

**Class Lvl 3** Programs

**Location** Multiple Counties

**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

**Fund and Cost Center**

**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 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

**Related Project** Completed Adams Road booster station install as a pilot piece

**Primary Driver** 2 - Performance

**Driver Explanation** The outages we are having are affecting our preassuers that are causing water main breaks and boil water



GLWA FY 2021-2025 CIP

**Power Quality: Electric Metering Improvement Program**

**381000** CIP#

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.



GLWA FY 2021-2025 CIP  
Power Quality: Electric Metering Improvement Program

381000 CIP#

PM Weighted  
Score

74.8

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

RC Weighted  
Score

Criteria	Score	Comment
Performance (Service Level/Reliability)		
Public Health and Safety		
Condition		
Regulatory (Environmental/Legal)		
Public Benefit		
Financial		
Operations and Maintenance		
Efficiency and Innovation		



GLWA FY 2021-2025 CIP  
Power Quality: Electric Metering Improvement Program

381000 CIP#

Phase Construction

Contract NA

Status Future Planned Start

Title Energy Management: Wtr - Electric Metering Improvement Program

Phase Budget Water

Cost Allocation CTA

Phase Status Future Planned Start

Funding Source Revenue Financed Capital

Start Date

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? No

Tot. Federal Loan Amount

Cost Estimation Information

1 Cost Est. Class

Cost Est. Date

Cost Est. Source

Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY25	\$313			2021 CIP
Construction	FY26+	\$2,187			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	0	0	0	0	0	313	2,187	2,500	313

Phase Task Dates

Phase Task Name	Start Date	End Date	Duration
Pre-Procurement	7/1/2023	12/31/2023	183
Procurement	1/1/2024	7/31/2024	212
Project Execution	8/1/2024	4/29/2027	1001
Project Closeout	4/30/2027	7/29/2027	90



GLWA FY 2021-2025 CIP  
Power Quality: Electric Metering Improvement Program

381000 CIP#

Phase Construction

Contract NA

Status Future Planned Start

Title Energy Management: WW - Electric Metering Improvement Program

Phase Budget Wastewater

Cost Allocation CTA

Phase Status Future Planned Start

Funding Source Revenue Financed Capital

Start Date

Fund Improvement & Extension Fun

End Date

Useful Life >20Yrs? No

Cost Estimation Information

Tot. Federal Loan Amount

5 Cost Est. Class

7/24/2019 Cost Est. Date

Engineering Cost Est. Source

Michael Graham Cost Est. Prepared By

Program/Allowance Task Information

Project Manager

CIP Number

Description

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
Construction	FY21	\$313			2021 CIP
Construction	FY22	\$1,195			2021 CIP
Construction	FY23	\$992			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	0	313	1,195	992	0	0	0	2,500	2,500

Phase Task Dates

Phase Task Name	Start Date	End Date	Duration
Pre-Procurement	7/1/2019	12/31/2019	183
Procurement	1/1/2020	7/31/2020	212
Project Execution	8/1/2020	4/29/2023	1001
Project Closeout	4/30/2023	7/29/2023	90



GLWA FY 2021-2025 CIP  
Power Quality: Electric Metering Improvement Program

381000 CIP#

**Phase** GLWA Employees Project management

**Contract** NA

**Status** Future Planned Start

**Title** GLWA Salaries

**Phase Budget** Water

**Cost Allocation** CTA

**Phase Status** Future Planned Start

**Funding Source** Bond Proceeds

**Start Date**

**Fund** Construction Bond Fund

**End Date**

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount** \$0

**Cost Estimation Information**

5 **Cost Est. Class**

**Cost Est. Date**

**Cost Est. Source**

**Cost Est. Prepared By**

**Program/Allowance Task Information**

**Project Manager**

**CIP Number**

**Description**

Cost Type	Fiscal Year	Expense	Fringe Benefit	NonPersonne	Comment
GLWA Salaries CIP2021	FY20	\$86			2021 CIP
GLWA Salaries CIP2021	FY21	\$133			2021 CIP
GLWA Salaries CIP2021	FY22	\$345			2021 CIP
GLWA Salaries CIP2021	FY23	\$345			2021 CIP
GLWA Salaries CIP2021	FY24	\$112			2021 CIP
GLWA Salaries CIP2021	FY25	\$132			2021 CIP
GLWA Salaries CIP2021	FY26+	\$717			2021 CIP

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

Prior Yr Actual	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	86	133	345	345	112	132	717	1,870	1,067

**Phase Task Dates**





GLWA FY 2021-2025 CIP  
Power Quality: Electric Metering Improvement Program

381000 CIP#

**Phase** Design and Build

**Contract** TBD

**Status** Future Planned Start

**Title** Design Build 30% for RFP

**Phase Budget** Water

**Cost Allocation** CTA

**Phase Status** Future Planned Start

**Funding Source**

**Start Date**

**Fund**

**End Date**

**Useful Life >20Yrs?** No

**Tot. Federal Loan Amount** \$0

**Cost Estimation Information**

5 **Cost Est. Class**

7/25/2019 **Cost Est. Date**

Engineering **Cost Est. Source**

Michael Graham **Cost Est. Prepared By**

**Program/Allowance Task Information**

**Project Manager**

**CIP Number**

**Description**

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

**Phase Task Dates**



GLWA FY 2021-2025 CIP  
Power Quality: Electric Metering Improvement Program

381000 CIP#

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

CIP Alias	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total	5-Yr Total
2021	0	0	0	0	86	446	1,540	1,337	112	445	2,904	6,870	3,880
2020	0	0		0	0	0	0	0	0	5,000	0	5,000	0
2019	0				120	120	510	878	4,372	0	0	6,000	1,628
2018		1,000	1,000	1,000	1,000	1,000	1,000		0	0	0	6,000	5,000

**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