



331001 CIP#

Roofing Systems Replacement at Water Plants and Booster Pump Stations

✓ Innovation	Project Status Cancelled	Roof in need of repo	air
☐ Conceptual WW I	CIP Type Project		N N
☐ Water MP Right Siz			
☐ Reliability/Redund	dancy Project New To CIP		
☐ NEWTP Repurposin	ng		
Project Engineer/May	nagor Paula Andorson	Budget	
	nager Paula Anderson rector Paula Anderson		Centralized Services
		Class Lvl 2	
	Dept Fleet and Facilities		General Purpose
	ss Case Prepared 6/26/2014		Multiple Counties
rear Proje	ect Added to CIP 2014	Fund and Cost Center	
Problem Statement	This CIP provides funds to replace roofing systems repair. Sound roofing systems are important to pro	•	•
	This project encompasses the evaluation of all Wadetermine their current condition and to prioritize of roof, built-up roofing material, flashing, roof droenvelope. The findings of the roof survey and evaluation of the roof survey and evaluation of the roof survey and evaluation.	e their repair or replacem ains/conductors and sea	ent. The project will evaluate the type ling materials that comprise the building
Other Important Info	*Innovation note: use cool roofs.		
	Project History: Majority of GLWA Water Plant facing referred as "tar and gravel" roofs. Majority of the older up to 30 years old. In many instances, inade Challenges: Weather dependent and seasonal water simultaneously to complete the work. The project testing for hazardous materials, thermal scans an	more than 70 roofs, are dequate roof system mains work. May require manages to should include but, not be	over 15 years old and few are even tenance has been provided. gement of several construction projects
Related Project	none		
Primary Driver	1 - Condition		
Driver Explanation	Not provided.		



331001 CIP#

Roofing Systems Replacement at Water Plants and Booster Pump Stations

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	



331001 CIP#

Roofing Systems Replacement at Water Plants and Booster Pump Stations

ise Budget	Water			Cost Allocation	CTA	
hase Status	Cancelled			Funding Source	Bond Pro	oceeds
Start Date				Fund	Constru	ction Bond Fund
End Date			Us	eful Life >20Yrs?	No	
Co	ost Estimation	Information	Tot. Feder	al Loan Amount		\$0
	5	Cost Est. Class	Prog	ram/Allowance	Task Info	ormation
		Cost Est. Date	Project Manager			
		Cost Est. Source	CIP Number			
		Cost Est. Prepared By	Description			



331001 CIP#

Roofing Systems Replacement at Water Plants and Booster Pump Stations

Phase Budget	Water				Cost Allocation			СТА	
Phase Status								Bond Procee	eds
Start Date							Fund	Construction	n Bond Fund
End Date						Useful Li	fe >20Yrs?	Yes	
Co	ost Estimat	ion Informo	ation		To	. Federal Loa	n Amount		
	5	Cost	Est. Class			Program/A	Allowance	Task Informa	ition
		Cost	Est. Date		Project Man	ager			
		Cost	Est. Source	,	CIP Number				
		Cost	Est. Prepare	ed By	Description				
			Phase Total	al Expense	s By FY (All	figures are	in \$1,000's)	
ior Yr Actua	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
0	0	0	0	0	0	0	0	0	0

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

Changes

331002 CIP#

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

Fund and Cost Center

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

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 / Inspect the roofing system conditions and assess drainage conditions on all the GLWA wastewater related facility **Project Alternatives** 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.



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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	

331002 CIP#

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

Phase Construction	Contract NA	Status	Future Planned Start
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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 7/3/2020			Bond Proceeds		
Start Date				Construction Bond Fund		
End Date		6/23/2022	Us	eful Life >20Yrs?	Yes	
Co	ost Estimation	Information	Tot. Feder	al Loan Amount		
	4	Cost Est. Class	Prog	ram/Allowance	Task Information	
1	0/2/2017	Cost Est. Date	Project Manager			
		Cost Est. Source	CIP Number			
Ali Khraizat		Cost Est Prepared By	Description			

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 Y	'r Actua	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total
	795	321	0	0	0	0	0	0	1,116	0

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

331002 CIP#

GLWA FY 2021-2025 CIP 331002 CIP Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and

2021 CIP

2021 CIP

	Great Lakes Water	Authority KC	olling system	iis kepiac	eme	ill di GLWA	WKKF, C3C) kelelilloli	nealment bas	ilis (KIB) d
Phase	Study and	d Design ar	nd Constructior	n Assistance		Contract	NA	Status	Active	
		stems Repl n Facilities		.WA Wastew	ater Ti	reatment Plant	CSO Retention	on Treatment B	asins (RTB) and Sc	reening
Pha	se Budget	Wastewate	er				Cost Allo	cation CTA		
Ph	ase Status	Active					Funding S	Source Bond Pr	oceeds	
	Start Date		11/8	/2018				Fund Constru	ction Bond Fund	
	End Date		6/23	/2022			Useful Life >	20Yrs? Yes		
	Co	ost Estimatio	on Information			Tot. Fe	ederal Loan A	mount		
		3	Cost Est. C	Class		F	Program/Allov	wance Task Info	ormation	
	1	0/1/2017	Cost Est. D	ate	F	Project Manage	er			
			Cost Est. S	ource	(CIP Number				
			Cost Est. P	repared By		Description				
	Cost Ty	pe	Fiscal Year	Expens	e	Fringe Benefit	NonPersonne	Cor	nment	
Engin	eering Serv		FY19-	,	\$2	U		2021 CIP		
Engin	eering Serv	vices	FY21		\$91			2021 CIP		
Engin	eering Serv	vices .	FY22		\$121			2021 CIP		
Engin	eering Serv	vices .	FY23		\$100			2021 CIP		
Engin	eering Serv	vices	FY24		\$79			2021 CIP		

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

\$78

\$32

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

Phase Task Dates

Engineering Services Engineering Services FY25

FY26+

Phase To	ask Name	Start Date	End Date	Duration



331002 CIP#

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 Construc	tion				Contract	TBD	Statu	S	Future Planned S	tart	
Title new const	ruction ph	ase									
Phase Budget	Wastewat	er		Cost Allocation CTA							
Phase Status	Future Plai	nned Start				Funding S	ource Bond I	^o ro	ceeds		
Start Date							Fund Constr	UC	tion Bond Fund		
End Date						Useful Life >2	20Yrs? No				
Co	ost Estimati	on Information			Tot. Fe	deral Loan Ar	mount			\$0	
	Cost Est. Class				P	rogram/Allow	vance Task In	ıfor	mation		
		Cost Est. D	ate	F	Project Manage	er					
		Cost Est. So	ource	(CIP Number						
		Cost Est. Pi	repared By	[Description						
Cost Ty	ne	Fiscal Year	Expense)	Fringe Benefil	VonPersonne	Co	om	ment		
Construction	P O	FY22	-	,624	111190 20110111		2021 CIP				
Construction		FY23	•	,624			2021 CIP				
Construction		FY24	\$1,	,629		2	2021 CIP				
Construction	Construction FY25		\$1,	,624		1	2021 CIP				
Construction		FY26+	\$1,	,620			2021 CIP				

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

F	Prior Yr Actua	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 Name	Start Date	End Date	Duration
Project Execution	7/1/2021	6/29/2026	1824
Project Closeout	6/30/2026	7/29/2026	29



331002 CIP#

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

Phase GLWA En	nployees Pr	ent	Contract NA				Status Ad	ctive				
Title GLWA Sale	aries											
Phase Budget	Wastewate	er			Cost Allocation CTA							
Phase Status	Active							Fundir	ng Source	Bond Proce	eds	
Start Date									Fund	Constructic	n Bond Fund	
End Date							Us	eful Lif	e >20Yrs?	No		
С	ost Estimatio	on Inform	ation			To	t. Feder	al Loa	n Amount			\$0
	5	Cos	t Est. Clo	ass			Prog	ram/A	llowance 1	Task Inform	ation	
		Cos	t Est. Da	te	Project Manager							
		Cos	t Est. Sou	urce	CIP Number							
		Cos	t Est. Pre	pared B	d By Description							
Cost Ty	'pe	Fiscal	Year	Ехре	ense	Fringe Ben	efitNon	Persor	nne	Comme		
GLWA Salaries (CIP2021	FY19-			\$5 2021C				2021 CIF)		
			Phase	e Total E	xpense	s By FY (All	figure	s are i	n \$1,000's)		
Prior Yr Actua	FY20	FY21	FY2	2	FY23	FY24	FY2	25	FY26+	Total	5-Yr Total	
5	0	С	1	0	0	0		0	0	5	0	
Phase Task Da	tes											



331002 CIP#

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



Security Infrastructure Improvements on Water Facilities

□ 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

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 / Water Works Park: Additional coverage where boats dock and by the screening house. Video assessment **Project Alternatives** 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.



Security Infrastructure Improvements on Water Facilities

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



Security Infrastructure Improvements on Water Facilities

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		



Security Infrastructure Improvements on Water Facilities

hase GLWA E		Project mai	nageme	nt		Contro	ict N	A		Status Ac	ctive	
Phase Budge	t Water							Cost A	llocation	СТА		
Phase Statu	s Active				Funding Source Revenue Financed Capit						nanced Capito	lc
Start Date	è				Fund Improvement & Extension Fu						Fun	
End Date	è				Useful Life >20Yrs? Yes							
(Cost Estimat	ion Inform	ation			Tot. Federal Loan Amount \$0						\$0
	Cost Est. Class				Program/Allowance Task Information							
Cost Est. Da			Est. Date	Э	Р	roject Man	ager					
		Cost	Est. Sou	rce	C	CIP Number						
		Cost	Est. Prep	oared By	D	escription						
Cost T	уре	Fiscal Y	/ear	Expens	e	Fringe Ben	efitNo	nPerson	ne	Comme	ent	
GLWA Salaries	CIP2021	FY20			\$111				2021CI	Р		
GLWA Salaries	CIP2021	FY21			\$110				2021CI	Р		
GLWA Salaries	CIP2021	FY22			\$98				2021CI	Р		
			Phase	Total Exp	enses	By FY (All	figure	es are ir	\$1,000's	s)		
Prior Yr Actua	FY20	FY21	FY22	FY2	23	FY24	FΥ	/25	FY26+	Total	5-Yr Total	
0	111	110		98	0	0		0	C	319	208	



Security Infrastructure Improvements on Water Facilities

Phase Design and	d Build						Contro	act S	OQ-135	A	Status /	ctive	
itle DB-Wtr													
Phase Budget V	Vater					Cost Allocation CTA							
Phase Status A	ctive								Fundiı	ng Source	Revenue F	inanced Capit	al
Start Date	te									Fund	Improvem	ent & Extension	ı Fun
End Date	End Date							Į	Jseful Lif	ie >20Yrs?	Yes		
Cost Estimation Information						То	t. Fed	eral Loa	n Amount			\$0	
	1 Cost Est. Class							Pro	gram/A	llowance	Task Inforn	nation	
	Cost Est. Date			ate		P	roject Mar						
	Cost Est. Source			ource		CIP Number							
Cost Est. Prepa					By Description								
Cosi Esi. Frepuie			cu by		·								
Cost Typ	е	Fisc	al Year	E	Expense	!	Fringe Ber	efitNo	nPersor	nne	Comm	ent	
Design-Build		FY20			\$3,918					2021 CI	Р		
Design-Build		FY21			\$3,	908				2021CI	Р		
Design-Build		FY22			\$2,	505				2021CI	Р		
			Pha	se Tot	al Expe	ense	s By FY (Al	l figur	es are i	n \$1,000's	3)		
Prior Yr Actua	FY20	FY21	FY	′22	FY23	3	FY24	F`	/25	FY26+	Total	5-Yr Total	
0	3,918	3,9	809	2,505		0	0		0	(10,33	1 6,413	
Phase Task Date	es												
Phase Task Name	e Start D	Date	End Da	te	Duration	n							
Pre-Procurement	6/1	/2017	8/29/2	2017		89							
Procurement	8/30	8/30/2017 2/21/2018		2018	1	175							
Project Execution	2/26	/2018	2/19/2	2022	14	154							
Project Closeout			2022		89								

Security Infrastructure Improvements on Water Facilities

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



Security Infrastructure Improvements for Wastewater Facilities

□ 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.

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Security Infrastructure Improvements for Wastewater Facilities

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



Security Infrastructure Improvements for Wastewater Facilities

Phase GLWA Er Title Salaries-W		Project mar	nagement		Contro	act NA		Status Ac	tive		
Phase Budget	Wastewa	ter				Cost	Allocation	СТА			
Phase Status	Active			Funding Source Revenue Financed Capit						al	
Start Date	•				Fund Improvement & Extension Fun						
End Date					Useful Life >20Yrs? Yes						
С	ost Estimat	ion Informo	ıtion		To	t. Federal Loa	n Amount			\$0	
		Cost	Est. Class			Program/A	Allowance	Task Informa	ıtion		
		Cost	Est. Date		Project Man	ager					
		Cost	Est. Source		CIP Number	,					
		Cost	Est. Prepare	ed By	Description						
Cost Ty	/pe	Fiscal Y	ear E	xpense	Fringe Ben	efitNonPersoi	nne	Comme	nt		
GLWA Salaries (CIP2021	FY20		\$169			2021 CII	Р			
GLWA Salaries (CIP2021	FY21		\$150			2021 CII	Р			
			Phase Tot	al Expense	s By FY (All	figures are	in \$1,000's)			
Prior Yr Actua	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total		
0	169	150	0	0	0	0	0	319	150		



Security Infrastructure Improvements for Wastewater Facilities

Build	uild				Contro	act S	OQ-135	iΑ	Status	Act	ive		
													I
astewate	er							Cost	Allocation	СТА			
ctive					Funding Source Revenue Financed Capit						al		
									Fund	Improve	men	t & Extension	Fun
End Date						ı	Useful Li	fe >20Yrs?	Yes				
Cost Estimation Information					То	t. Fed	eral Loa	ın Amount				\$0	
1 Cost Est. Class			lass				Pro	gram/ <i>k</i>	Allowance	Task Info	rmat	ion	
Cost Est. Date			ate		P	roject Man	ager						
Cost Est. Source		ource		CIP Number									
Cost Est. Prepar		epare	d By	d By Description									
	Fisca	l Year	Ex	xpense		Fringe Ben	efitNo	onPerso	nne	Con	nmer	n†	
	FY20			\$1,4				IP					
	FY21			\$9	901				2021CI	IP			
		Phas	e Toto	al Expe	nse	By FY (All	l figur	es are	in \$1,000's	s)			
Y20	FY21	FY:	22	FY23		FY24	F'	Y25	FY26+	Tota	ıl	5-Yr Total	
1,410	90)1	0		0	0		0	(2,	311	901	
Start D	ate	End Dat	е С	Duration	١								
6/1	/2017	8/29/20	017		89								
8/30	/2017	2/21/20	018	18 17									
2/26	/2018	2/19/20	021	10	89								
2/20	/2021	5/20/20	021		89								
	20 1,410 Start D 6/1,8/30, 2/26	Estimation Information Control	Estimation Information 1 Cost Est. C Cost Est. Do Cost Est. Pr	Estimation Information 1 Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepare Fiscal Year Fy20 Fy21 Fy21 Fy21 Fy22 1,410 901 0 0 Start Date End Date End Date 6/1/2017 8/29/2017 8/30/2017 2/21/2018 2/26/2018 2/19/2021	Estimation Information	Estimation Information	Estimation Information Cost Est. Class	Estimation Information	Cost Estimation Information Tot. Federal Local	Cost Allocation Funding Source Fund Useful Life > 20Yrs?	Cost Allocation CTA Funding Source Revenue Fund Improve Useful Life > 20Yrs? Yes	Cost Allocation CTA Funding Source Revenue Find Improvement Useful Life > 20Yrs? Yes	Cost Allocation CTA Funding Source Revenue Financed Capito Fund Improvement & Extension Useful Life >20Yrs? Yes

Security Infrastructure Improvements for Wastewater Facilities

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



safety.

GLWA FY 2021-2025 CIP

LED Lighting and Lighting Control Improvements

✓ Innovation ☐ Conceptual WW ☐ Water MP Right Si ☐ Reliability/Redund	zing dancy CIP Type Program Project New To CIP	Example LED light fixture	
☐ NEWTP Repurposi	ng	Dudad Colit	
Project Engineer/Ma	nager Fric Griffin	Budget Split Class Lvl 1 Cent	ralized Services
	rector John Norton	Class Lvl 2 Energ	
	Dept Energy Management	Class Lvl 3 Gene	-
	ss Case Prepared 8/4/2016	Location Multi	
Year Proj	ect Added to CIP 2017	Fund and Cost Center	p.o 00000
	Energy savings, demand reduction improved visik Budget was cut to \$500,000.00 we plan on reduci Remove identified old fixtures and replace with n	ng scope to 4 Booster stations	only under this CIP.MFG 7/25/2019
Other Important Info	Challenges: Some outfalls are below the river electroper History: An audit was completed in 2010/2 technology since this audit has rendered it obsoles system, equipment is in poor condition and exceed compared to today's lighting, cannot meet mining. A well detailed audit is to be carried out to determine the performance criteria, lighting controls to be incorrequivalent/appropriate lighting output and level	011 but little action was takenete as to recent innovations, teeds its end of life. Some existing num lighting standards. mine the best suitable replace porated and in cases where contains and the second in cases where contains and cases w	a. Advancement in lighting echnology and cost. Across the g fixtures are antiques and ement lamps based on a set delamping might be an option,
Related Project	Re lamp of Conner Creek and part of Northeast f	or safety issues.	
Primary Driver	8 - Efficiency		
Driver Explanation	Technology of LED lamps and associated fixtures	will reduce electrical operatin	g expenses and improve worker



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

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

8.08

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	



LED Lighting and Lighting Control Improvements

Phase GLWA En Title GLWA Sal		roject mar	agement		Contrac	t NA	S	Status Ac	tive		
Phase Budge						Cost Allo	ocation C1	ГА			
Phase Status	Active				Funding Source Bond Proceeds						
Start Date	•				Fund Construction Bond Fund						
End Date	À					Useful Life >	>20Yrs? No)			
C	ost Estimat	ion Informo	ıtion		Tot.	Federal Loan <i>A</i>	Amount			\$0	
	5	Cost	Est. Class			Program/Allo	wance Ta	sk Informo	ition		
		Cost	Est. Date		Project Mana	ger					
		Cost	Est. Source		CIP Number						
		Cost	Est. Prepare	ed By	Description						
Cost Ty	/pe	Fiscal Y	ear E	xpense	Fringe Bene	fitNonPersonne	e	Comme	nt		
GLWA Salaries	CIP2021	FY19-		\$6			2021 CIP				
			Phase Tot	al Expense	es By FY (All f	gures are in S	\$1,000's)				
Prior Yr Actua	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total		
6	0	0	0	0	0	0	0	6	0		



LED Lighting and Lighting Control Improvements

ase not applic	able		Contract NA	Status	Closed Out
e Prior Year A	ctual Expens	es			
Phase Budget V	Water		Cost Allocation	СТА	
Phase Status (Closed Out		Funding Source	oceeds	
Start Date			Fund	Constru	ction Bond Fund
End Date			Useful Life >20Yrs?	No	
Cos	st Estimation	Information	Tot. Federal Loan Amount		\$0
	1	Cost Est. Class	Program/Allowance	Task Info	ormation
		Cost Est. Date	Project Manager		
		Cost Est. Source	CIP Number		
		Cost Est. Prepared By	Description		



LED Lighting and Lighting Control Improvements

ase Design an	nd Build		Contract TBD	Status Future Planned Start
e DB-WW Lig	hting Improv	vements		
Phase Budget	Wastewater		Cost Allocation	CTA
Phase Status	Future Plann	ned Start	Funding Source	Revenue Financed Capital
Start Date			Fund	Improvement & Extension Fun
End Date			Useful Life >20Yrs?	No
Со	ost Estimation	n Information	Tot. Federal Loan Amount	\$0
	5	Cost Est. Class	Program/Allowance	Task Information
		Cost Est. Date	Project Manager	
		Cost Est. Source	CIP Number	
		Cost Est. Prepared By	Description	

GLWA FY 2021-2025 CIP

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



Project Execution

Project Closeout

12/29/2021

10/7/2022

10/6/2022

1/4/2023

281

89

GLWA FY 2021-2025 CIP

LED Lighting and Lighting Control Improvements

Phase Design and Build							Contro	act TB	D		Status	Act	ive	
Title Water Fac	ility Lighti	ing Ren	ovation:	;										
Phase Budget Water					Cost Allocation CTA									
Phase Status Active						Funding Source Revenue Financed Capital							lc lc	
Start Date	5/24/2016						Fund Improvement & Extension Fun							Fun
End Date							Useful Life >20Yrs? No							
Cost Estimation Information					Tot. Federal Loan Amount									
2 Cost Est. Class					Program/Allowance Task Information									
Cost Est. Date					Project Manager									
Cost Est. Source			:e	CIP Number										
Cost Est. Prepared By					ared By	[Description							
Cost Type Fiscal Year Expe				Expens	е	e Fringe BenefitNonPersonne C					Comment			
Design-Build FY22				\$248 2021C				2021 CIF	P					
Design-Build	esign-Build FY23				\$252	2021CIP								
			Ph	ase T	otal Exp	ense	s By FY (Al	l figure	s are in	\$1,000's)			
Prior Yr Actua	Prior Yr Actual FY20 FY21 FY22 FY			FY2	23	FY24	FY:	25	FY26+	Total		5-Yr Total		
0	0		0	24	18	252	0		0	0	5	500	500	
Phase Task Dat	es													
Phase Task Nan	ne Start	t Date	End D	ate	Duratio	on								
Pre-Procuremen	it 3/3	31/2021	6/30	/2021		91								
Procurement	Procurement 7/1/2021 12/28/2021			180										



LED Lighting and Lighting Control Improvements

Cost Allocation CTA Funding Source Revenue Financed Capital Fund Improvement & Extension Fun
Funding Source Revenue Financed Capital Fund Improvement & Extension Fun
Fund Improvement & Extension Fun
·
Useful Life >20Yrs? No
Tot. Federal Loan Amount \$0
Program/Allowance Task Information
Manager
nber
ion

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



LED Lighting and Lighting Control Improvements

Phase Study						Contro	act TB	D		Status Ac	tive			
Title Study-Wtr														
Phase Budget Water					Cost Allocation CTA									
Phase Status Active					Funding Source Revenue Financed Capital									
Start Date					Fund Improvement & Extension Fund									
End Date	End Date				Useful Life >20Yrs? No									
Cost Estimation Information					1	Tot. Federal Loan Amount \$						\$0		
	5 Cost Est. Class					Program/Allowance Task Information								
	Cost Est. Date			le	Project Manager									
Cost Est. Source			ırce	CIP Number										
Cost Est. Prepare				pared By	ed By Description									
Cost Type Fiscal Year E			Exper	Expense Fringe Benefit NonPersonne Comment										
Engineering Services FY21			\$50 2021CI					Р						
	Phase Total Expenses By FY (All figures are in \$1,000's)													
Prior Yr Actua F	Y20	FY21	FY22	2 F	Y23	FY24	FY	25	FY26+	Total	5-Yr Total			
0	0		50	0	0	0		0	0	50	50			
Phase Task Dates														
Phase Task Name Start Date		Date	End Date Du		tion									
Pre-Procurement	7/	1/2019	9/28/20	19	89									
Procurement					275									
Project Execution		1/2020	3/30/202		272									
Project Closeout	3/3	1/2021	6/28/202	<u> </u>	89									





LED Lighting and Lighting Control Improvements

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 Budget was cut down to \$500,000.00 We plan on doing 4 Booster Stations only with this CIP. MFG 7/25/2019

Changes



As-needed CIP Implementation Assistance and Related Services

☐ Innovation ☐ Conceptual WW	CIP Type Allowance	Make a Pla						
□ Water MP Right Siz□ Reliability/Redunct□ NEWTP Repurposin	dancy Project New To CIP							
	nager Gaylor Johnson / Dan Edwards	Budget Split Class Lvl 1 Centralized Services						
	rector Dan Alford Dept WW Design Eng S Case Prepared	Class Lvl 2 Programs Class Lvl 3 Programs Location Multiple Counties						
Year Proje	ect Added to CIP 2002	Fund and Cost Center	Wastewater - 5421-892111					
	The purpose of this proposed contract is to proorder basis to support the GLWA.	ovide implementation assista	nce and related services on a task					
Project Alternatives	This project provides for multi-discipline Engine Sewer Systems. The purpose of this proposed a services on a task order basis to support the Gin capital projects definition and planning, de monitoring; third party contract administration and resolution; technical training; value enginengineering study reports; identify minimum recriteria, minimum standards of quality, and proposal analysis assistance; engineering fore	contract is to provide implem SLWA. The services provided sign and construction phase n/oversight assistance/sched neering (VE) services on select equirements, scope of work, be eliminary design and oversigl	nentation assistance and related under this contract include assistance procurement assistance and uling services; claims/changes analysis ted design projects; develop pasis of process design, performance and services for design/build contracts;					
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

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.

Description

Start Date End Date				
Co	st Estimo	ation Ir	formation	
	1		Cost Est. Class	
			Cost Est. Date	
			Cost Est. Source	<u> </u>
			Cost Est. Prepar	ed By

Phase Budget Wastewater

Phase Status Cancelled

Cost Allocation	СТА
Funding Source	Revenue Financed Capital
Fund	Improvement & Extension Fun
Useful Life >20Yrs?	No
Tot. Federal Loan Amount	

Program/Allowance Task Information

roject Manager	Ali Khraizat
CIP Number	380402

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

380400 CIP#

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)

As-needed CIP Implementation Assistance and Related Services

Phase GLWA Em	nployees Projec	ct management		Contract NA			Status Cancelled		
Title GLWA Salo	aries Wtr								
Phase Budget	Phase Budget Water						СТА		
Phase Status	Cancelled				Fundi	ng Source	Revenue Fi	nanced Capita	
Start Date						Fund	Improveme	ent & Extension F	un
End Date					Useful Li	No			
Co	ost Estimation Ir		Tot. Federal Loan Amount					\$0	
	1	Cost Est. Class		Program/Allowance Task Information					
		Cost Est. Date		Project Mar	nager				
		Cost Est. Source		CIP Numbe	r				
		Cost Est. Prepare	ed By	Description					
		Phase Tot	al Expens	ses By FY (Al	I figures are	in \$1,000's)		
Prior Yr Actua	FY20 FY	21 FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total	
	0						0	0	



380400 CIP#

As-needed CIP Implementation Assistance and Related Services

Phase not applicable		Contract NA	:	Status	Closed Out	
Title Prior Year Actual Expe	nses-Wtr					
As needed contract. Accu	mulated task expenditures i	reclassed to projects or	O&M - \$(-105K)			
Phase Budget Water			Cost Allocation C	TA		
Phase Status Closed Out			Funding Source			
Start Date			Fund			
End Date		Us	eful Life >20Yrs? N	0		
Cost Estimatio	n Information	Tot. Federal Loan Amount				
1	Cost Est. Class	Program/Allowance Task Information				
	Cost Est. Date	Project Manager				
	Cost Est. Source	CIP Number				
	Cost Est. Prepared By	Description				
	Phase Total Expe	enses By FY (All figures	are in \$1,000's)			
Phase Task Dates						



380400 CIP#

As-needed CIP Implementation Assistance and Related Services

Phase not applic	cable		Contract	NA	Status	Closed Out	
Title Prior Year A	Actual Expense	s-WW					
As needed cont	tract. Accumu	lated task expenditures	reclassed to projec	ts 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. Fe				
	1	Cost Est. Class	Program/Allowance Task Information				
		Cost Est. Date	Project Manage	er			
		Cost Est. Source	CIP Number				
		Cost Est. Prepared By	Description				
		Phase Total Exp	enses By FY (All fig	ures are in \$1,000's	s)		
Phase Task Date							
Tildse lask bale							



380400 CIP#

As-needed CIP Implementation Assistance and Related Services

hase Budget	Wastewater			Cost Allocation	СТА		
Phase Status	Closed Out			Funding Source	Revenue Financed Capital		
Start Date		3/24/2006		Fund	Improvement & Extension Fun		
End Date		7/24/2017	Us	eful Life >20Yrs?	No		
Co	ost Estimation	Information	Tot. Feder	al Loan Amount			
	1 Cost Est. Class		Program/Allowance Task Information				
		Cost Est. Date	Project Manager				
		Cost Est. Source	CIP Number	380401			
		Cost Est. Prepared By	Description				

GLWA Great Lakes Water Authority As-ne

As-needed CIP Implementation Assistance and Related Services

GLWA FY 2021-2025 CIP

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.

End Date	
Cost Estima	ition Information
1	Cost Est. Class
	Cost Est. Date
	Cost Est. Source
	Cost Est. Prepared By

Phase Budget Water

Start Date

Phase Status Cancelled

Cost Allocation	СТА
Funding Source	Revenue Financed Capital
Fund	Improvement & Extension Fun
Useful Life >20Yrs?	No
Tot. Federal Loan Amount	

Program/Allowance Task Information

Project Manager	Grant Gartrell				
CIP Number	380402				
Description	The purpose of this proposed contract is to				

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

380400 CIP#

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)

As-needed CIP Implementation Assistance and Related Services

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

Driver Explanation N/A - Active

GLWA FY 2021-2025 CIP

380500 CIP#

☐ Innovation ☐ Conceptual WW N ☐ Water MP Right Siz ☐ Reliability/Redund ☐ NEWTP Repurposir	ing	Example of pipe being laid						
		Budget	Split					
Project Engineer/Mar	nager Beena Chackunkal	Class LvI 1	Centralized Services					
Dir	ector Dan Alford	Class Lvl 2	Programs					
Managing	Dept WW Design Eng	Class Lvl 3	Programs					
Date Original Busines	s Case Prepared	Location	Multiple Counties					
Year Proje	ect Added to CIP 2004	Fund and Cost Center						
Problem Statement	Various engineering as needed services t	for design and replacement of a	iging water and sewer lines.					
Project Alternatives	water mains and sewers throughout the s	roject involves designing water main and lateral sewer replacement projects for aging and dysfunctional mains and sewers throughout the system and several projects at the WRRF under different tasks on an ased basis. The work also includes civil, structural, architectural, hydraulics, mechanical, electrical, surveying, mentation and piping design services.						
Primary Driver	N/A - Active							

Wastewater General Engineering Services on an As-needed Basis

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		

380500 CIP#

hase GLWA Er He GLWA Sal	. ,	roject man	agement		Contro	ict NA		Status Clo	osed Out		
Phase Budget	Water					Cost A	Allocation C	CTA			
Phase Status	Closed O	ut				Fundir	ng Source R	Revenue Financed Capital			
Start Date							Fund Ir	mproveme	nt & Extension Fur		
End Date						Useful Lif	e >20Yrs?	10			
С	ost Estimat	ion Informa	tion		Tof	. Federal Loa	n Amount		\$0		
3 Cost Est. Class					Program/Allowance Task Information						
	Cost Est. Date				Project Man	ager					
		Cost	Est. Source		CIP Number						
		Cost	Est. Prepare	d By	Description						
Cost Ty	/pe	Fiscal Ye	ear E	xpense	Fringe Ben	efitNonPersor	nne	Comme	nt		
GLWA Salaries (CIP2021	FY19-		\$148			2021 CIP				
			Phase Tota	al Expense	es By FY (All	figures are i	n \$1,000's)				
rior Yr Actua	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total		
148	0	0	0	0	0	0	0	148	0		



380500 CIP#

Phase not appli	cable		Contract NA	Status Closed Out	
Title Prior Year.	Actual Ex	penses-Wtr			
As needed con	ntract. Ac	cumulated task expenditures	reclassed to projects or O&M - \$(-132K)	
Phase Budget	Water		Cost Alloc	cation CTA	
Phase Status	Closed C	Dut	Funding S	ource	
Start Date				Fund	
End Date			Useful Life >2	20Yrs?	
Co	ost Estima	ition Information	Tot. Federal Loan Ar	mount	
	1	Cost Est. Class	Program/Allow	vance Task Information	
		Cost Est. Date	Project Manager		
		Cost Est. Source	CIP Number		
		Cost Est. Prepared By	Description		
		Phase Total Expe	enses By FY (All figures are in \$1	1,000's)	
Phase Task Da	tes				



Phase Task Dates

GLWA FY 2021-2025 CIP

380500 CIP#

Phase not applicable		Contract NA	Α	Status	Closed Out
Title Prior Year Actual Expenses-WW					
\$148K FY18 (380501) Backed out due to	o reclassification t	to O&M			
Phase Budget Wastewater			Cost Allocation	СТА	
Phase Status Closed Out			Funding Source		
Start Date			Fund		
End Date		Us	seful Life >20Yrs?		
Cost Estimation Information	on	Tot. Fede	ral Loan Amount		
1 Cost Es	t. Class	Prog	gram/Allowance 1	Task Info	ormation
Cost Es	t. Date	Project Manager			
Cost Es	t. Source	CIP Number			
Cost Es	t. Prepared By	Description			
					,
P	hase Total Expe	nses By FY (All figure	s are in \$1,000's)	



380500 CIP#

Wastewater General Engineering Services on an As-needed Basis

Contract CS-1499 Status Closed Out **Phase** Study and Design and Construction Assistance CS-1499 Wastewater General Engineering Services on an As-needed Basis (CS-1499 METCO) 380501 - Currently most of the tasks are for Wastewater projects. Cost Allocation CTA Phase Budget Wastewater Phase Status Closed Out Funding Source Revenue Financed Capital Fund Improvement & Extension Fun Start Date 5/12/2010 6/2/2018 Useful Life >20Yrs? No **End Date** Tot. Federal Loan Amount **Cost Estimation Information Program/Allowance Task Information** Cost Est. Class **Project Manager** Ali Khraizat Cost Est. Date **CIP Number** 380501 Cost Est. Source Contract Description Cost Est. Prepared By

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



380500 CIP#

Phase Budget	Water					Cost	Allocation	CTA			
Phase Status	Closed Ou	J†				Fundi	Revenue Financed Capital				
Start Date 5/12/2010							Fund	Improvemer	nt & Extension Fu		
End Date 6/2/2018						Useful Li	fe >20Yrs?	No			
C	ost Estimati	on Informo	ation		То	t. Federal Loc	an Amount		\$0		
1 Cost Est. Class					Program/Allowance Task Information						
	Cost Est. Date				Project Manager						
		Cost	Est. Source	,	CIP Number						
		Cost	Est. Prepare	ed By	Description						
			Phase Total	al Expense	es By FY (All	figures are	in \$1,000's)			
rior Yr Actua	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total		
-148	0	0	0	0	0	0	C	-148	0		

Wastewater General Engineering Services on an As-needed Basis

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

Changes



As-Needed General Engineering Services

 □ Innovation □ Conceptual WW I □ Water MP Right Siz □ Reliability/Redunce □ NEWTP Repurposin 	zing dancy CIP Type Allowance Project New To CIP		
Project Engineer/Mai Dir Managing Date Original Busines	nager Grant Gartrell rector Grant Gartrell J Dept Water Eng	Class Lvl 2 Class Lvl 3	Centralized Services Programs
Problem Statement	Allowance for the study and design of critical	projects throughout the sys	tem prior to bidding and construction.
Scope of Work / Project Alternatives	As-needed engineering services for water and	d wastewater engineering.	
_	Challenges: N/A - Active		
Primary Driver	N/A - Active		
Driver Explanation	N/A - Active		

GLWA FY 2021-2025 CIP Great Lakes Water Authority As-Needed General Engine

As-Needed General Engineering Services

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)		



As-Needed General Engineering Services

ase Budget	Wastewate	r		Cost Allocation	CTA	
hase Status Active				Funding Source	Revenue Financed	Capital
Start Date				Fund	Improvement & Ext	ension Fun
End Date			Us	seful Life >20Yrs?	No	
Co	ost Estimatio	n Information	Tot. Feder	al Loan Amount		\$0
	5	Cost Est. Class	Prog	ram/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)

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



As-Needed General Engineering Services

hase not applicable	Contract NA	Status Closed Out
itle Prior Year Actual Expenses-WW		
\$157K FY18 (380601) Backed out to reconcile LT	D	
Phase Budget Wastewater	Cost Allo	ocation CTA
Phase Status Closed Out	Funding S	Source
Start Date		Fund
End Date	Useful Life >	>20Yrs?
Cost Estimation Information	Tot. Federal Loan A	Amount
1 Cost Est. Class	Program/Allov	wance Task Information
Cost Est. Date	Project Manager	
Cost Est. Source	CIP Number	
Cost Est. Prepare	ed By Description	



As-Needed General Engineering Services

Phase Design Contract CS-1432A Status Active

Title CS-1432A Water As-Needed Engineering Services

380601						
Phase Budget	Water			Cost Allocation	СТА	
Phase Status	Active			Funding Source	Revenue Financed Capital	
Start Date	7,200			Fund	Improvement & Extension Fun	
End Date 12/12/2018		Useful Life >20Yrs?		No		
Co	ost Estimatio	on Information	Tot. Fede	eral Loan Amount		
	5	Cost Est. Class	Program/Allowance Task Information			
		Cost Est. Date	Project Manager	Beena Chackun	ıkal	
		Cost Est. Source	CIP Number	380601		
		Cost Est. Prepared By	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)

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



As-Needed General Engineering Services

Phase Design Contract CS-1432A Status Active

CS-1432A Wastewater As-Needed Engineering Services 380601 Phase Budget Wastewater Cost Allocation CTA **Phase Status** Active Funding Source Revenue Financed Capital **Start Date** Fund Improvement & Extension Fun 1/23/2008 **End Date** 12/12/2018 Useful Life >20Yrs? No Tot. Federal Loan Amount **Cost Estimation Information** Cost Est. Class Program/Allowance Task Information **Project Manager** Beena Chackunkal Cost Est. Date **CIP Number** 380601 Cost Est. Source Description Alfred Benesh Cost Est. Prepared By

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



As-Needed General Engineering Services

Phase not appli	cable		Contract NA	Status	Status Closed Out		
Title Prior Year	Actual Expense	es-Wtr					
As needed con	tract. Accumi	ulated task expenditures	reclassed to projects or O&M - \$(-157K)				
Phase Budget	Water		Cost Allocation	CTA			
Phase Status	Closed Out		Funding Source				
Start Date			Fund				
End Date			Useful Life >20Yrs?				
Co	ost Estimation I	nformation	Tot. Federal Loan Amount				
	1	Cost Est. Class	Program/Allowance	Task Info	ormation		
		Cost Est. Date	Project Manager				
		Cost Est. Source	CIP Number				
		Cost Est. Prepared By	Description				
		Phase Total Expo	enses By FY (All figures are in \$1,000's	s)			
Phase Task Date	tes						



As-Needed General Engineering Services

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



As-Needed Geotechnical and Related Engineering Services

 □ 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 performe	The second secon
TILITI Reporposing		Budget	Water
Project Engineer/Manager	Peter Fromm	Class Lvl 1	Centralized Services
Director (Grant Gartrell	Class Lvl 2	Programs
Managing Dept $ \lor $	Water Eng	Class Lvl 3	Programs
Date Original Business Case	Prepared	Location	Multiple Counties
Year Project Add	led to CIP 2006	Fund and Cost Center	
timely r	•		n professional engineering services in a ed engineering problems that occur on a
Project Alternatives geotection environ inspect service 1. 1802 2. 1803		eotechnical engineering, cons , soils sampling and testing, lar onstruction inspection. This con n for the follow transmission ma sin	ntract includes design, construction
Primary Driver Varies			

GLWA Great Lakes Water Authority

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

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	

Phase Task Dates

GLWA FY 2021-2025 CIP

380700 CIP#

As-Needed Geotechnical and Related Engineering Services

Phase not appli	cable		Contract	NA	Status	Closed Out
Title Prior Year	Actual Expense	es-Wtr				
As needed con	tract. Accumu	ulated task expenditures	reclassed to project	s or O&M (\$-115K)		
Phase Budget	Water			Cost Allocation	СТА	
Phase Status	Closed Out			Funding Source		
Start Date				Fund		
End Date				Useful Life >20Yrs?		
Co	ost Estimation Ir	nformation	Tot. Fe	deral Loan Amount		
	1	Cost Est. Class	P	rogram/Allowance	Task Info	rmation
		Cost Est. Date	Project Manage	r		
		Cost Est. Source	CIP Number			
		Cost Est. Prepared By	Description			
		-				
		Phase Total Expe	enses By FY (All figu	res are in \$1,000's)	



As-Needed Geotechnical and Related Engineering Services

Phase Design & Construction Assistance

Contract CS-259

Status Active

Title Design/Construction Administration

Engineering Ser	rvice	es Contrac	ct CS-259, Somat Er	ngineerin	g (active)		
Phase Budget	Wa	iter				Cost Allocation	CTA
Phase Status	Act	tive			Funding Source		Revenue Financed Capital
Start Date		4/8/2009			Fund Ir		Improvement & Extension Fun
End Date	4/8/2021				U	No	
Co	ost E	stimation	Information		Tot. Fede	ral Loan Amount	
		2	Cost Est. Class		Prog	gram/Allowance	Task Information
			Cost Est. Date		Project Manager	Grant Gartrell	
			Cost Est. Source		CIP Number	380701	
			Cost Est. Prepare	ed By	Description	Engineering Ser Soil Borings (CS-1	vices, Concrete Testing and 488)

Cost Type	Fiscal Year	Expense	Fringe BenefitNo	onPersonne	Comment
Engineering Services	FY20	\$1,415		2	2021 CIP
Engineering Services	FY21	\$715		1	2021 CIP

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

Prior Yr Actua	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 Name	Start Date	hase Task Name	End Date	Duration
Project Execution	6/1/2016	oject Execution	1/1/2021	1675
Project Closeout	1/2/2021	oject Closeout	4/2/2021	90

380700 CIP#

As-Needed Geotechnical and Related Engineering Services

ıse Budget	Wastewater		Cost Allocat	tion CTA	
Phase Status	Active		Funding Sou	rce Revenue Financed Capital	
Start Date			Fo	Improvement & Extension Fun	
End Date			Useful Life >20\	No	
Co	ost Estimatio	n Information	Tot. Federal Loan Amo	ount \$0	
	5	Cost Est. Class	Program/Allowar	nce 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)

380700 CIP#

As-Needed Geotechnical and Related Engineering Services

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As-Needed Geotechnical and Related Engineering Services

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



Geotechnical and Related Services on an As-Needed Basis

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

Fund and Cost Center

Project Engineer/Manager Grant Gartrell

Director Grant Gartrell

Managing Dept Water Eng

Date Original Business Case Prepared

Year Project Added to CIP 2007

Problem Statement As Needed geotechnical consulting services.

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

Primary Driver

380800 CIP#

Geotechnical and Related Services on an As-Needed Basis

hase not applicable			Contract NA	Status (Status Closed Out		
Title Prior Year	Actual Exp	oenses-Wtr					
As needed con	ntract. Ac	cumulated task expenditures i	reclassed to projects or O&M - \$(-82K)				
Phase Budget	Water		Cost Allocation	n CTA			
Phase Status			Funding Source	9			
Start Date			Fund	d			
End Date			Useful Life >20Yrs?	? No			
Co	ost Estimat	tion Information	Tot. Federal Loan Amoun	t			
	1	Cost Est. Class Cost Est. Date Cost Est. Source Cost Est. Prepared By	Program/Allowance Project Manager CIP Number Description	e Task Inforn	nation		
Phase Task Dat		Phase Total Expe	enses By FY (All figures are in \$1,000	's)			

380800 CIP#

Geotechnical and Related Services on an As-Needed Basis

	Contract C	:S-1490	Status Closed Out			
tants: As-Needed Geotechni	cal Services:Wtr					
	Cost Allocation CTA					
Jt	Funding Source Revenue Financed Capi					
1/14/2010		Improvement & Extension Fun				
End Date 7/14/2016		Jseful Life >20Yrs?	No			
on Information	Tot. Fede	eral Loan Amount				
Cost Est. Class	Program/Allowance Task Information					
Cost Est. Date	Project Manager	Grant Gartrell				
Cost Est. Source	CIP Number	380801				
Cost Est. Prepared By	Description As-Needed Geotechnical Services					
	1/14/2010 7/14/2016 ion Information Cost Est. Class Cost Est. Date Cost Est. Source	tants: As-Needed Geotechnical Services:Wtr 1/14/2010 7/14/2016 Tot. Fede Cost Est. Class Pro Cost Est. Date Cost Est. Source CIP Number	Cost Allocation Funding Source 1/14/2010 7/14/2016 Useful Life >20Yrs? Tot. Federal Loan Amount Cost Est. Class Program/Allowance Cost Est. Date Cost Est. Source Project Manager CIP Number 380801			

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

Geotechnical and Related Services on an As-Needed Basis

nase Design		Contract C	:S-1490	Status Closed Out			
le CS-1490: NTH Consul	tants: As-Needed Geotechni	cal Services:WW					
Phase Budget Wastewa	ter	Cost Allocation CTA					
Phase Status Closed O	ut		Funding Source	Revenue Financed Capital			
Start Date	1/14/2010		Fund Improvement				
End Date	7/14/2016	U	Jseful Life >20Yrs?	No			
Cost Estimat	ion Information	Tot. Fede	eral Loan Amount				
5	Cost Est. Class	Program/Allowance Task Information					
	Cost Est. Date	Project Manager	Grant Gartrell				
	Cost Est. Source	CIP Number	380801				
	Cost Est. Prepared By	Description As-Needed Geotechnical Services					

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

Geotechnical and Related Services on an As-Needed Basis

Phase GLWA En	nployees Pr	oject mai	nagement		Contro	act NA		Status	Closed (Dut		
itle GLWA Salo	aries											
Phase Budget	Water					(Cost Allocatio	n CTA	CTA			
Phase Status	Closed Ou	Closed Out				I	unding Sourc	e Revenue	e Finance	d Capita		
Start Date							Fun	d Improve	Improvement & Extension Fun			
End Date						Use	eful Life >20Yrs	? No				
C	ost Estimati	on Inform	ation		To	t. Federo	ıl Loan Amour	nt			\$0	
	5	Cost	Est. Class		Program/Allowance Task Information							
		Cost	Est. Date		Project Mar	nager						
		Cost	Est. Source		CIP Numbe	r						
		Cost	Est. Prepare	ed By	Description							
			Phase Tot	al Expe	nses By FY (Al	l figures	are in \$1,000)'s)				
Prior Yr Actua	FY20	FY21	FY22	FY23	FY24	FY2	5 FY26+	Tota	ıl 5-Y	r Total		
	0								0	0		

380800 CIP#

Geotechnical and Related Services on an As-Needed Basis

Phase not appli	cable		Contract NA	Status	Closed Out	
Title Prior Year	Actual Expens	es-WW				
\$82K FY18 (3808	301) Backed o	ut to reconcile LTD				
Phase Budget	Wastewater		Cost Allocation	CTA		
Phase Status	Closed Out		Funding Source			
Start Date			Fund			
End Date			Useful Life >20Yrs?	No		
Co	ost Estimation	Information	Tot. Federal Loan Amount			
	1	Cost Est. Class	Program/Allowance	Task Information		
		Cost Est. Date	Project Manager			
		Cost Est. Source	CIP Number			
		Cost Est. Prepared By	Description			
		Phase Total Expe	enses By FY (All figures are in \$1,000's	s)		
Phase Task Dat	tes					

Geotechnical and Related Services on an As-Needed Basis

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

GLWA Great Lakes Water Authority

GLWA FY 2021-2025 CIP

General Engineering Services

 □ Innovation □ Conceptual WW I □ Water MP Right Siz □ Reliability/Redunce □ NEWTP Repurposir 	zing dancy CIP Type Allowance Project New To CIP	Analytical Lo	
Project Engineer/Mar Dir Managing Date Original Busines	nager Beena Chackunkal rector Dan Alford Dept WW Design Eng	Class Lvl 1 Class Lvl 2 Class Lvl 3	
Problem Statement	As needed multi-discipline engineering se	rvices for various small scale pro	ojects at WTP and WRRF.
•	This project provides for rapid design turn- disciplinary professional services including		, , , , , , , , , , , , , , , , , , , ,
Other Important Info	Challenges: N/A - Active		
Primary Driver	N/A - Active		
Driver Explanation	N/A - Active		



General Engineering Services

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)		



General Engineering Services

Phase not appli	cable		Contract	NA	Status	Closed Out		
Title Prior Year A	Actual Expe	nses-Wtr						
As needed con	ntract. Accu	mulated task expenditures	reclassed to project	s or 0&M - (\$-75K)				
Phase Budget	Water			Cost Allocation	СТА			
Phase Status	Closed Out			Funding Source				
Start Date				Fund				
End Date			Useful Life >20Yrs?					
Co	ost Estimatio	n Information	Tot. Fe					
	1	Cost Est. Class	P	ormation				
		Cost Est. Date	Project Manage	r				
		Cost Est. Source	CIP Number					
		Cost Est. Prepared By	Description					
		Phase Total Expo	enses By FY (All figu	res are in \$1,000's)			
Phase Task Dat	tes .							

General Engineering Services

ase Study and Design	and Construction Assistance	Contract NA	Status Closed Out
e General Engineeri	ng Services		
Phase Budget Water		Cost Allo	ocation CTA
Phase Status Closed	Out	Funding 9	Source Revenue Financed Capital
Start Date	3/27/2008		Fund Improvement & Extension Fun
End Date	3/27/2018	Useful Life >	20Yrs? No
Cost Estim	ation Information	Tot. Federal Loan A	smount \$0
	Cost Est. Class	Program/Allo	wance 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)



General Engineering Services

and Construction Assistance	Contract C	S-1481	Status Closed Out
eral Engineering Services			
jects are for Wastewater Serv	ices.		
ter		Cost Allocation	СТА
put		Funding Source	Revenue Financed Capital
3/27/2008		Fund	Improvement & Extension Fun
3/27/2018	U	No	
tion Information	Tot. Fede	eral Loan Amount	
Cost Est. Class	Pro	gram/Allowance	Task Information
Cost Est. Date	Project Manager	Beena Chackun	nkal
Cost Est. Source	CIP Number	380901	
Cost Est. Prepared By	Description		
	eral Engineering Services jects are for Wastewater Serviter jut 3/27/2008 3/27/2018 tion Information Cost Est. Class Cost Est. Date Cost Est. Source	teral Engineering Services jects are for Wastewater Services. ter ut 3/27/2008 3/27/2018 Ution Information Cost Est. Class Pro Cost Est. Date Cost Est. Source CIP Number	recal Engineering Services iects are for Wastewater Services. ter Cost Allocation Funding Source 3/27/2008 Fund 3/27/2018 Useful Life >20Yrs? Tot. Federal Loan Amount Cost Est. Class Program/Allowance Cost Est. Date Cost Est. Source CIP Number 380901

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

380900 CIP#

General Engineering Services

hase not applicat	ble	Contract NA	Status Closed Out			
itle Prior Year Act	tual Expenses-WW					
\$63K FY18 (380901)) Backed out to reconcile LTD					
Phase Budget Wo	astewater	Cost Allocation	CTA			
Phase Status Cla	osed Out	Funding Source				
Start Date		Fund				
End Date		Useful Life >20Yrs?				
Cost	Estimation Information	Tot. Federal Loan Amount				
	1 Cost Est. Class	Program/Allowance Task Information				
	Cost Est. Date	Project Manager				
	Cost Est. Source	CIP Number				
	Cost Est. Prepared By	Description				
	Phase Total Evo	enses By EV (All figures are in \$1,000's	c)			

Phase lotal expenses by FT (All figures are in \$1,000 s)

General Engineering Services

Phase GLWA Em	nployees Pro	ject mar	nagement		Contro	act NA		Status Closed Out			
Title GLWA Salo	aries										
Phase Budget	Water					C	ost Allocation	СТА			
Phase Status	Closed Out					Fu	ınding Source	Revenue Fi	nanced Capital		
Start Date							Fund	Improveme	ent & Extension Fu	n	
End Date						Usef	ul Life >20Yrs?	No			
Co	ost Estimatio	n Informo	ation		To	t. Federal	Loan Amount		\$0)	
	5	Cost	Est. Class			Progra	m/Allowance	Task Information			
		Cost	Est. Date		Project Mar	nager					
		Cost	Est. Source		CIP Numbe	r					
		Cost	Est. Prepare	ed By	Description						
			Phase Tot	al Expe	nses By FY (Al	I figures c	are in \$1,000's	5)			
Prior Yr Actua	FY20	FY21	FY22	FY23	FY24	FY25	FY26+	Total	5-Yr Total		
	0							0	0		
Phase Task Dat	les										





General Engineering Services

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

GLWA Great Lakes Water Authority

GLWA FY 2021-2025 CIP

Power Quality: Electric Metering Improvement Program

 □ Innovation □ Conceptual WW □ Water MP Right Si ☑ Reliability/Redund □ NEWTP Repurposi 	zing dancy CIP Type Program Project New To CIP	Example of an electri met	Schneider PowerLogic 10M5500
Managing Date Original Busines	nager Eric Griffin rector John Norton g Dept Energy Management ss Case Prepared 8/18/2016 ect Added to CIP 2016	Class Lvl 2 Class Lvl 3	Centralized Services Programs
Problem Statement	Advanced meters for measuring power usage load management practices, GLWA is experiencing a lot of power outages of us real wave form data to determine why we doubt age which effects the integrity of our equip	at our facilities. The installations and the	on of the New Power Monitors will give
	This program will increase the number of electractive demand management to reduce electrangement system for data archiving and u. The installation of the New Power Monitors will outages and the time period of sagging or swe 07/25/2019	ricity rates. The meters can se. give us real wave form dat	a to determine why we are having
Other Important Info	Project History: Project is in the works targeting We would like to change the project to design affecting our preassuers that are causing water communicate DTE problems that we are faced equipment.MFG 7/25/2019	build and move up on the er main breaks and boil wat	CIP. The outages we are having are er advisories, We need this to better
Related Project	Completed Adams Road booster station install	l 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

Power Quality: Electric Metering Improvement Program

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 Great Lakes Water Authority

GLWA FY 2021-2025 CIP

Power Quality: Electric Metering Improvement Program

PM Weighted Score

74.8

Critoria	Cooro	Commont
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		



Power Quality: Electric Metering Improvement Program

						•			•				
hase Construction						Contro	act NA	\		Status	Futi	ure Planned S	start
itle Energy Manag	ement:	Wtr - Elec	ctric Met	ering Imp	orove	ment Progr	am						
Phase Budget Wate	er							Cost A	Allocation	СТА			
Phase Status Futu	re Plann	ed Start						Fundin	ng Source	Revenue	e Find	anced Capito	al
Start Date									Fund	Improve	men	nt & Extension	Fun
End Date							Us	eful Life	e >20Yrs?	No			
Cost Es	timation	n Informa	ıtion			То	t. Fede	al Loai	n Amount				
	1	Cost	Est. Class	3			Prog	ıram/A	llowance 1	Task Info	rma	tion	
		Cost	Est. Date		F	Project Mar	nager						
		Cost	Est. Sour	ce	(CIP Numbe	r						
		Cost	Est. Prep	ared By	[Description							
Cost Type		Fiscal Ye	ear	Expens	<u> </u>	Fringe Ber	nefitNor	ıPerson	ine	Com	nmer	nt	
Construction	F	Y25			\$313				2021 CIF)			
Construction	F	Y26+		\$2	2,187				2021 CIF)			
			Phase T	otal Exp	ense	s By FY (Al	l figure	s are ii	n \$1,000's)			
Prior Yr Actua FY2	0	FY21	FY22	FY2	23	FY24	FY2	25	FY26+	Tota	I	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



Power Quality: Electric Metering Improvement Program

Phase Construction Contract NA Status Future Planned Start

Title Energy Management: WW - Electric Metering Improvement Program

Phase Budget	Wastewater
Phase Status	Future Planned Start
Start Date	
End Date	

Cost Estimation	Information
5	Cost Est. Class
7/24/2019	Cost Est. Date
Engineering	Cost Est. Source
Michael Graham	Cost Est. Prepared By

Cost Allocation	СТА
Funding Source	Revenue Financed Capital
Fund	Improvement & Extension Fun
Useful Life >20Yrs?	No
Tot. Federal Loan Amount	

Program/Allowance Task Information

1109	Juni/Allowance rask illionnation
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 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





Power Quality: Electric Metering Improvement Program

Phase GLWA Em	nployees Pro	oject manager	nent		Contract	NA	Status	Future Planned	Start		
Title GLWA Sala	aries										
Phase Budget	Water					Cost Allo	cation CTA				
Phase Status Future Planned Start					oceeds						
Start Date	Start Date				Fund Construction Bond Fund						
End Date				Useful Life >20Yrs? No							
Cost Estimation Information					Tot. Fe		\$0				
	5 Cost Est. Class Cost Est. Date					Program/Allov	wance Task Info	ormation			
					roject Manag	er					
Cost Est. Source				CIP Number							
		Cost Est. P	repared By		Description						
		I				1					
Cost Ty	pe	Fiscal Year	Expense)	Fringe Benefit	NonPersonne	Cor	nment			
GLWA Salaries C	CIP2021	FY20		\$86			2021 CIP				
	2100001	EVO1	Φ.	100			0001 CID		1		

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

381000 CIP#

Power Quality: Electric Metering Improvement Program

vild		Contract TBD	Status	Status Future Planned Start		
% for RFP						
er		Cost Allocation	СТА			
re Planned	Start	Funding Source				
		Fund				
		Useful Life >20Yrs?	No			
timation In	ormation	Tot. Federal Loan Amount		\$0		
5	Cost Est. Class	Program/Allowance	Task Info	ormation		
2019	Cost Est. Date	Project Manager				
	Cost Est. Source	CIP Number				
	Cost Est. Prepared By	Description				
	Phase Total Exp	enses By FY (All figures are in \$1,000's	5)			
r	% for RFP er ee Planned timation Inf	timation Information Cost Est. Class Cost Est. Source Cost Est. Prepared By	Cost Allocation Funding Source Fund Useful Life >20Yrs? timation Information Cost Est. Class Program/Allowance Project Manager Cost Est. Source Cost Est. Prepared By Cost Est. Prepared By	Cost Allocation CTA Funding Source Fund Useful Life >20Yrs? No Tot. Federal Loan Amount Cost Est. Class Cost Est. Date Cost Est. Source CIP Number		



Power Quality: Electric Metering Improvement Program

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 Other initiatives are presenting themselves. Wastewater and water deferred this project to 2025. Standard Changes 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